



MICHIGAN STATE WATERWAYS PROGRAM
STATEWIDE FACILITIES ASSESSMENT
Harbors, Boating Access Sites, and Lock & Dam Facilities

February 24, 2020



MICHIGAN STATE WATERWAYS PROGRAM STATEWIDE FACILITIES ASSESSMENT

Harbors, Boating Access Sites, and Lock & Dam Facilities

February 24, 2020

Prepared by:
Edgewater Resources, LLC

TABLE OF CONTENTS

SECTION ONE – INTRODUCTION and PROJECT GOALS.....	1
LIMITATIONS OF REPORT	3
SECTION TWO – DATA COLLECTION METHODOLOGY	5
HARBORS and BOATING ACCESS SITES	5
LOCK and DAM FACILITIES	6
DETAILED INVENTORY METHODOLOGY – Harbors and Boating Access Sites	7
Docks	7
Shoreline and Breakwater Structures	8
Boat Launch and Paddle Sports Access.....	8
Utilities	9
Boat Storage and Haul Out Systems	9
Dredging.....	10
Site Features.....	10
Buildings.....	10
DETAILED INVENTORY METHODOLOGY – Locks and Dams	10
SECTION THREE – COST ESTIMATING METHODOLOGY	11
HARBORS and BOATING ACCESS SITES	11
LIFE SPAN and REPLACEMENT SCHEDULE PROJECTIONS	11
LOCK & DAM FACILITIES	12
DETAILED COST ESTIMATE METHODOLOGY	12
Docks	12
Shoreline and Breakwater Structures	13
Boat Launch and Paddle Sports Access.....	13
Utilities	14
Boat Storage and Haul Out Systems	15
Dredging.....	15
Site Features.....	15
Buildings.....	15
SECTION FOUR – DATA ANALYSIS.....	17
HARBOR FACILITIES DATA ANALYSIS SUMMARY	17
Grant-In-Aid Communities	17
MDNR State Harbors	18

Overall.....	18
BOATING ACCESS SITE FACILITIES DATA ANALYSIS SUMMARY	19
LOCK AND DAM FACILITIES DATA ANALYSIS SUMMARY	20
Cheboygan	20
Crooked River Lock	21
SECTION FIVE – RECREATIONAL BOATING TRENDS ANALYSIS.....	23
FACILITY OPERATOR SURVEY SUMMARY	23
HARBOR SPECIFIC SECTION.....	24
BOATING ACCESS SITE SPECIFIC SECTION.....	44
LOCK and DAM SPECIFIC SECTION	55
SECTION SIX - STRATEGIC PLANNING AND ESTABLISHING PRIORITIES.....	95
CURRENT WATERWAYS PROGRAM FUNDING.....	95
FY 2020 Waterways Revenue Projections.....	97
Projected MDNR Waterways Program Infrastructure Expenditures.....	98
FY 2020 Waterways Revenue	98
Projected Revenues and Budget Shortfall.....	99
PROPOSED SHORTFALL RESPONSE STRATEGIES.....	100
Increase State Funding.....	100
Registration Rate Inflation	101
Harbor Reservations & Lease Revenues	104
Marine Fuel & Tax Revenues.....	105
Recreation Passport Revenues	105
Other Revenue Sources	105
Improve Operational Performance	107
Decrease Capital Outlay Costs	109
Leverage Available Funding Sources	111
Increase Federal Grant Funding Sources	113
PHASING AND PRIORITIES.....	115
Safety	115
Financial Sustainability.....	117
Regional Parity	118
Competitive Application Process	118
Phasing and Priority Summary.....	119

SECTION SEVEN – PLANNING AND DEVELOPMENT GUIDELINES	121
Harbors	121
LOCATION AND COMMUNITY INTERACTION	121
UNIVERSAL DESIGN – GOING BEYOND ADA	123
DOCK SYSTEMS AND MARKET RELEVANCE	124
Fixed Dock Systems	124
Floating Dock Systems.....	125
Market Relevance	127
Phasing.....	127
Flexible Slip Layout	128
RESILIENCE – DESIGN FOR CHANGING WATER LEVELS AND SUSTAINABILITY	129
Water Levels.....	129
Energy and Water Use Reduction	129
Habitat Enhancement	130
Clean Marina Standards.....	130
Amenities	131
EXPANDING THE LIMITS OF BOATING	131
Paddlecraft	131
Superyachts.....	131
Boating Access Site (BAS) Facilities.....	133
ACCESSIBILITY	133
PARKING CONSIDERATIONS.....	134
Parking Dimensions	134
Parking Types and Quantity	134
PADDLECRAFT	135
OPERATIONS and MAINTENANCE.....	136
AQUATIC INVASIVE SPECIES.....	137
Locks & Dams	138
Data Collection & Future Research	139
BIBLIOGRAPHY	141

APPENDICES

APPENDIX A – Key Terms

APPENDIX B – Survey Question Summary

APPENDIX C – Individual Site Summaries and Cost Estimates

APPENDIX D – Detailed Cost Projections per Facility Type

APPENDIX E – Total Cost Summaries per Facility Type

APPENDIX F – USACE Structures Cost Estimate

APPENDIX G – Unit Rates

APPENDIX H – Sample Calculations

APPENDIX I – Supplemental Charts and Tables

APPENDIX J- Lock & Dam Assessments

APPENDIX K – MDNR Operator Trends Survey

APPENDIX L – MDNR Boater Trends Survey



SECTION ONE – INTRODUCTION and PROJECT GOALS

Over the past seventy years, the State of Michigan has built an extensive network of recreational boating facilities across the state, both owned and operated directly by the State of Michigan through the Department of Natural Resources (MDNR) and in partnership with local communities through the Grant-in-Aid funding program. These facilities include 83 Great Lakes harbors; hundreds of boating access sites (BAS) located throughout the state on inland lakes, the Great Lakes, and rivers; and two Lock and Dam facilities. The Lock and Dam facilities support recreational boating activities on the Inland Waterway, which connects Lake Huron via the Cheboygan River from Cheboygan to Conway near Petoskey. The purpose of this study is to document the existing conditions of the facilities, identify immediate facility needs and associated costs, document future needs and associated costs, report trends in recreational boating activities, establish priorities for improvement investments, and develop a strategic capital improvement plan for the future of Michigan’s public recreational boating infrastructure.

The first step in the process is the completion of a facility inventory for 83 harbors and 212 of the larger and/or more prominent boating access sites owned by MDNR or Grant-in-Aid partner communities. Additionally, both the Alanson and Cheboygan Lock and Dam facilities are also included in the facility inventory. The Alanson Dam is owned by the United States Army Corps of Engineers (USACE) but operated by the county. The Cheboygan Dam is owned and operated by MDNR. A facility inventory is the identification, quantification, and physical condition assessment of the infrastructure elements of the facility. With the data collected, immediate improvements needed within the next five years were identified and associated cost estimates were generated for each individual site. The same process was completed for projected future improvements needed within the next 5 - 10 years and 10 – 20 years. The facility inventory and cost estimation tools are structured so that all individual reports within this document can be updated as facilities are renovated. Additionally, by updating the facility inventory and unit pricing data on a regular basis, the tools developed for this effort can effectively identify an overview capital improvement budget for any year into the foreseeable future.

The facility inventory results were aggregated to quantify the total scope of work as a starting point. As priorities are established and refined on a yearly basis, more detailed budgets can be established on an individual facility, regional, or statewide basis. The establishment of a scoring system will establish recommended improvement priorities and guide strategic investments in our recreational boating infrastructure over time.

Recreational boating activities continue to evolve, and our facilities must evolve to accommodate these changes in the market. The purpose of responding to the changes are to maintain safe and effective facilities, comply with regulatory changes, and ensure that our facilities meet the needs of the boating community in order to maintain financially responsible operations. Overall, a consistent trend across all facilities is aging infrastructure that requires ongoing maintenance and/or replacement in addition to achieving compliance with the American’s with Disabilities Act (ADA). In 2010, the ADA was revised to incorporate standards for recreational boating facilities. Since no standards were previously in place within ADA, existing facilities were not “grandfathered” and **all** recreational boating facilities that serve the public are required to immediately comply with the new standards.



The facility inventories were conducted in the spring of 2019 during near record high water levels, which is causing severe erosion along the shoreline, as well as complete or partial submersion of harbor structures and marina utilities. The damages to structures from high water levels require immediate action and are apparent in the 0-5 year cost estimates. High water levels also mean many facilities do not currently require dredging, but facilities may require dredging during lower water levels, which would imply a greater dredging cost in the future than what was reported during this survey period.

Broad changes affecting Michigan's harbors identified by harbor operators and supported by NMMA statistics include increase in the use of larger boats with ever increasing electrical power demand, requiring renovation of facilities to provide safe navigation and more robust electrical infrastructure. Additionally, New National Electrical Codes (NEC) related to the prevention of Electric Shock Drowning (ESD) will continue to change as the trends towards electrification of boats start to take hold in recreational boating.

For boating access sites, significant trends that impact infrastructure investments include ongoing concerns related to prevention of the spread of aquatic invasive species and the increase in the use of boating access site facilities to support paddle sports such as canoes, kayaks, and stand up paddleboards. While MDNR currently provides information on how to prevent the spread of aquatic invasive species at boat launches, some states now require dedicated hull/trailer wash down facilities, and in some extreme cases, require physical inspection of each boat prior to launch and upon retrieval. The increasing use of traditional boating access sites for car top paddle sports means that MDNR may need to provide more dedicated vehicular parking (non-trailer parking) in addition to the traditional vehicle/trailer parking spaces. The increase in demand for paddle sports use of boating access sites does not necessarily correlate with a reduction in the demand for traditional vehicles with trailers, which is confirmed through BAS operator feedback and registration data from the Michigan Secretary of State. Boating access sites are also affected by trends in increasing boat sizes, therefore, boat launches will need to consider design strategies to accommodate the larger boats.

The Lock and Dam facilities are instrumental to recreational boating along the Inland Waterway. Trends that generally affect these facilities are the necessity to improve daily operation and maintenance during the boating season. The Cheboygan River Lock was last modernized in 1951 and the Alanson Lock was opened in 1969, meaning the infrastructure will likely need to be modernized for safe and efficient recreational use. Like all of our public transportation infrastructure, our facilities are aging and require ongoing maintenance and/or replacement. Also like our roads and bridges, there is not sufficient funding in place currently to make all the necessary improvements as soon as we would like.

In order to respond to the needs identified in this study with a responsible, consistent, and cost-effective method, recommended guidelines and standards for facility renovations are provided. The facility inventories and resultant cost estimates are based on responses from individuals that manage the facilities. The replacement and maintenance costs are generated by the existing infrastructure and proposed replacement is in-kind. The cost estimates and schedule are not all inclusive and there may be additional costs for elements not covered by the inventory survey. The costs also do not consider any new projects, such as new facilities, breakwater structures, additional slips/marina reconfiguration, fuel dock, upgrade from floating to fixed docks, etc. or preventative maintenance.



LIMITATIONS OF REPORT

The intent of this report is to gather a comprehensive collection of facility inventory data coupled with boater and operator trend data with the goal of identifying improvement priorities and guide strategic investments in recreational boating infrastructure for the State of Michigan. This report does not replace the MDNR Phase 100 Study process, wherein individual facilities are studied in much greater detail to determine the specific needs of that facility, along with more detailed condition assessments, concept plans, and cost estimates prepared by licensed professionals with extensive experience in recreational boating facility design, engineering, and construction. The timeframe and budget allocated for this effort required the use of strategies that relied to a large extent on self-reported user data, with associated limitations described below.

Input Error

The data included herein was collected and reported by nearly 200 individuals that manage facilities across the state. There was a large variability in familiarity with recreational boating infrastructure among these individuals, which creates the potential for inconsistent interpretation and responses to the survey tools. The project team provided specific training to respondents via web-based training and online videos, however not all participants engaged in the training, and in some cases reported incorrect data. The survey tools were organized to minimize subjective judgment by the participants where possible, but elimination of all subjective analysis was not possible. Many GIA facilities did not respond to the survey (often due to high turnover rates, resulting in new employees that did not feel comfortable completing the survey), and some surveys were completed by individuals with little familiarity with recreational boating infrastructure, resulting in less accurate data. Individual responses were evaluated for general accuracy and consistency and where possible major input errors were corrected. In order to identify significant outliers, average costs for BAS and harbor facilities were established in the data, and then individual facilities with average costs significantly higher or lower than the averages were checked. In many cases, the outlier facilities had significantly more included infrastructure compared to peer facilities, meaning that while they were well outside the average costs, documented and definable data support the reported data. In other cases, respondents were asked to make corrections to their survey responses. In summary, while the individual responses varied in accuracy and individual results are only as precise as the input data, the aggregate of the individual responses allows for a reasonably accurate projection of future recreational boating facility needs for the State of Michigan.

Infrastructure Elements Excluded

The facility inventory survey covered the most important and common infrastructure elements, however there are many elements that were not accounted for including, but not limited to, upland utilities (sewer, water, irrigation, electric, etc.), boat lifts, fishing piers, playgrounds, fish cleaning stations, and pools.

Additionally, due to abnormally high-water levels, reported dredging needs were lower than would be expected for normal conditions at average water levels, and extremely low compared to the dredging requirements during record low waters in 2013.



Generalized Costs and Assumptions

The cost estimates generated in this report utilize actual construction costs from recent similar projects wherever possible, collected from MDNR and DTMB records. Dredging costs, for example, were estimated based on actual expenditures from more than twenty projects completed during the recent MDNR emergency dredging program. These projects were highly variable in size, location, and dredge and disposal methodology, resulting in an average cost we feel is representative of actual costs for planning purposes once they are adjusted for annual inflation.

Many assumptions outlined in the final report were applied to the unit costs and are not representative on an individual facility basis. There are many factors that affect a cost estimate on an individual basis which include location, material availability, contractor availability, construction scope, time, etc. For example, mobilization costs for a facility located in the northern tip of the Keweenaw Peninsula could reasonably be expected to be higher than a project in the metro Detroit area. This report does not account for regional variances such as these, which will be accounted for in a Phase 100 Study.

These projected costs also assume replacement in-kind materials. For example, this report includes the cost of replacing a gravel boat launch with a gravel boat launch, when it is possible that facilities will improve their facilities i.e. replacing a gravel boat launch with a pre-cast concrete plank launch. The cost of demolition, construction oversight, mobilization, demobilization, design and permitting, and contingency were purposefully excluded from this study, all of which will be more accurately defined in the Phase 100 Study of any individual project.

It should be noted that while the collected data may include various facility improvement needs, there is to be no assumption that all elements identified are considered fundable under the DNR Waterways Program per legislation and other program limitations.

Boater and Operator Survey Limitations

This report includes the analysis of separate surveys of facility operators and the general boating public. These surveys included opportunities for the survey participants to provide open ended feedback, and it is important to note that the views expressed by both the operator and boating public survey participants represent their individual thoughts and opinions. These individual thoughts and opinions, while representing the individual perceptions of these individuals, may include factually inaccurate statements as it relates to specific operational aspects of the harbors, boating access sites, and lock and dam systems.

Where identified, factually inaccurate statements have been excluded from the analysis included herein. The complete unedited comments, including known factual inaccuracies, however, are included in the appendices of this document in order to document the complete summary of survey responses. The reader is cautioned to bear this in mind when reviewing the raw survey data.



SECTION TWO – DATA COLLECTION METHODOLOGY

HARBORS and BOATING ACCESS SITES

Given the large number of facilities inventoried for this effort, the process relied heavily on the individual staff associated with each facility. More than 200 individuals, both staff from the State of Michigan and Local Municipalities completed facility inventories for 267 individual facilities. The project team determined that in order to complete the facility inventories with the highest level of consistency, an online survey would be utilized for data collection, which was then used to generate the resulting reports included in this study.

Since there were nearly 300 facilities proposed for inclusion in the study, located at various location across the state, with varying levels of experience, time availability, and resources to invest in this effort, it rapidly became clear that conducting individual facility inventories through an interview-like process with individual site visits to achieve precise data was not a feasible approach. The project team created a detailed survey that was distributed to the survey participants using Survey Monkey (an online survey creation/distribution tool). The online survey was accessible to participants on both computers and smartphones. The survey itself was designed to make the inventory simple, reasonably fast, efficient, and provide consistency across all facilities. During the development of the survey, the decision to focus on achieving consistency in reporting and measuring was determined to be more important than absolute precision in determining quantities. Many assumptions were established through this approach, which allows for an approximation of improvement costs for facilities on an individual basis and timeline as to when these costs may occur.

For example, in order to quantify the total square footage of floating docks, we could require qualified individuals to physically measure each dock in the field, report the age, and determine the remaining life-span. This process would be very time consuming, prone to human error, and result in low participation rates, despite the best efforts of well-meaning staff. The alternative approach developed by the project team recognized the fact that most of our facilities were constructed utilizing the State of Michigan guidelines (and any future renovations will be constructed utilizing these guidelines), resulting in reasonably consistent dimensions for main piers, finger piers, etc. which can then be applied across all facilities given slip counts and main pier dimensions to quantify total square footage of floating docks. Cost estimate unit pricing was established per various units including areas, linear footages, and number of elements, and reported on a per slip basis.

For example, a typical main pier is 8' wide, and a typical finger pier is 3' wide. For a typical 30' long, double loaded slip, the MDNR guidelines call for a slip width of 15' per boat. Therefore, the total area of dock required to provide a standard 30' slip would include half the width of a 30' long finger (45sf) plus half the width of 16.5' (width of the slip plus half the width of the finger pier) of main pier (66sf), for a total of 111sf per 30' slip. In this way, a standard quantity of dock can be estimated for any slip size and set in the database. All we then need from the survey participants is the total quantities of slips of each size, and the database tool can estimate the total square footage of docks with a high degree of consistency and reasonable level of accuracy.



In addition to simplifying the collection of quantity data, the age and conditions of the various elements were completed by making options for giving exact ages or choosing an approximate age of the elements and/or choosing between three condition options; Very Good, Functional, and Bad (in need of replacement). The age indicates the remaining lifespan of the infrastructure. Our goal with using age as the primary factor for estimating the replacement schedule is to minimize individual subjectivity to maintain consistency. For example, we know from experience that floating docks generally have a lifespan of 20-30 years. We can say with reasonable certainty for long term budgeting purposes that a floating dock over 20 years old will likely need to be replaced within 5 – 10 years. While we know there will be more facilities that require investment than budget will allow, this method will also help identify priorities for improvements.

Many elements with dimensional quantities required the use of supplemental tools including Google Earth Pro (a free online tool that anyone can use easily). The participants were encouraged to use this tool to calculate areas for elements such as pavement and landscape and measure linear dimensions for structures such as rock revetment breakwaters and sheet pile walls. This tool also eliminated the need for physical measuring in the field.

Training for completing the survey via Survey Monkey and Google Earth was provided through two separate web conference seminars. Both seminars were recorded and posted online so anyone who was unable to attend the live seminar could review the training sessions anytime.

The survey was available to be completed by the participants for approximately four weeks. At the completion of the formal survey period we achieved a response rate of nearly 75%. The survey team contacted the facilities that did not respond and were able to increase the response rate to over 90%, with only 28 out of 295 facilities not responding. All of the state facilities completed the surveys. The remaining 28 sites are all Grant-In-Aid Communities.

LOCK and DAM FACILITIES

Michigan's recreational boating infrastructure includes two Lock and Dam facilities, located in Cheboygan and Alanson on the Inland Waterway. The Inland Waterway is a 38-mile long waterway connecting Lake Huron in Cheboygan to Crooked Lake in Petoskey. While the Lock and Dam facilities provide access to the Inland Waterway, they act primarily as transportation infrastructure rather than as boating destinations. The current infrastructure is entirely associated with the logistics of lifting and lowering boats from one water body to another and does not provide public amenities such as docks or restrooms. Rather than develop a separate survey tool, the project team visited both facilities in Alanson and Cheboygan and discussed the operational needs and considerations with staff to gather an inventory and conditions assessment of the facilities.



DETAILED INVENTORY METHODOLOGY – Harbors and Boating Access Sites

The infrastructure elements that make up harbors and boating access sites were separated into a series of categories in the survey tool to facilitate cost estimating and strategic planning. These categories included Docks, Structures, Boat Launch & Paddle Sport Access, Utilities, Boat Storage, Dredging, Site Features, and Buildings.

The survey team intentionally used a single tool for both harbors and boating access sites so a single database can be utilized, since many of the infrastructure elements are applicable for both sites. While some harbors do not have boat launches like a traditional boating access site (eg, West Basin Marina in Saint Joseph or Edward C. Grace Memorial Harbor in Elk Rapids), many harbors do include boating access sites, either separate standalone facilities or co-located with the marina. Similarly, while many boating access sites do not include slips of any kind, some do. More importantly, the infrastructure database is designed to be updated over time. By using a single database, individual facility information can easily be updated over time by simply resubmitting a survey as facilities are renovated and amenities added.

The variance of construction systems, dock layout configurations, and materials used is quite extensive, and the survey tool allowed for nearly all options to be covered and considered in the inventory assessment. A Survey Guide and Glossary was prepared to provide definitions for key terms, an outline of the survey questions, and introduce the methodology of the questions. The survey guide is included in the appendices of this report and may also be referenced for terms within this report.

Docks

The survey tool included options that participants could select based on the type of moorings provided in their facility, including options for multiple mooring types in a single facility. These mooring types included traditional perpendicular slips on both sides of piers that project out into the water, head pier slips (where slips are located on a single side perpendicular to a fixed wall or pier), or broadside mooring (where boats are moored parallel to walls or docks).

These options included both fixed and floating docks, with fixed dock options including pile structures, sheet pile structures, and timber or steel crib structures. Floating dock options included MDNR standard timber framing, steel framing, aluminum framing, and monolithic concrete construction.

Material options for fixed dock decking include timber, composite (Trex or similar), and concrete decking. Material options for fixed pile dock structures include timber frame and timber piles, timber frame and steel piles, steel frame and steel piles, and steel frame with timber piles. Fixed crib construction options included timber framed, steel framed, and steel sheet pile.

Material options for interior harbor mooring walls included steel sheet pile, steel sheet pile with timber fendering, concrete panel walls, and concrete panel walls with timber fendering. Materials for the decking adjacent to harbor walls include concrete and asphalt.



Shoreline and Breakwater Structures

For the purposes of the facility inventory, shoreline and breakwater structures are elements that make up and define the harbor edges, such as interior harbor walls and offshore breakwaters or floating wave attenuators. For the most part, these structures are not used for mooring boats. In the case of the offshore breakwater structures, they are often owned by the US Army Corps of Engineers (USACE). While a critical part of the infrastructure that makes up our harbors, MDNR and local government partners are often not financially responsible for the maintenance and upkeep of the structures. The survey tool documented all structures critical to the operation of the surveyed facilities, asked participants to identify which structures they are responsible for, and which are controlled by USACE or some other entity. Only the replacement costs for structures owned by the State of Michigan or Grant-in-Aid communities are included in the individual facility cost estimates and summary cost estimates. Replacement costs for all other structures have been identified separately for planning purposes and are available in the appendices.

The elements identified in the survey tool for shoreline structures (those structures that form the interior edge of a harbor basin and have water on one side and land on the other) include steel sheet pile walls, concrete wall systems, and rock revetment shorelines. The categories established in the survey tool for offshore structures (those structures that are not adjacent to land but rather have water on both sides) include rock revetment offshore breakwaters, single wall steel sheet pile walls, crib structures composed of a double row of sheet pile (similar to a traditional USACE style pier), caissons (a series of circular sheet pile and concrete structures linked adjacent to one another, as found in Leland or Whitefish Point for example), and floating wave attenuators (floating dock structures with a deep draft or curtain of panels below the surface of the water that diffuse wave energy).

Boat Launch and Paddle Sports Access

For the purposes of the survey tool, this category collected data specifically on the launch elements, including boat ramp construction materials, launch piers, and purpose-built infrastructure for paddle sports launching. Upland elements of boating access sites such as parking, toilets, etc are included in the site-features section.

The ramp material options for the traditional vehicular boat launches included cast-in-place concrete, precast concrete planks, and gravel. The launch pier options included removable skid piers, fixed piers, and floating piers.

The paddle sport launch inventory includes the quantity of fixed or floating dock launch system other than the traditional boat launch was available and if the system is ADA compliant. Paddle sports generally launch by walk-in access from the shoreline or may even use the boat launch ramps and piers for launching. Additionally, a determination as to whether there was adequate parking for paddle sport users was a part of this section of the survey.



Utilities

For the purposes of the survey, the utilities inventoried are those specific to providing utility service to the docks and boats, such as electrical shore power, potable water, fire suppression, ice suppression, fuel lines, fuel dispensers, fuel tanks, pumpout systems, and Wi-Fi. Upland utility costs including water, sewer, storm, and electrical were not inventoried, but considered in the cost estimates for facilities with buildings (see the cost estimate methods section).

Some of the dock utility costs were estimated based on a per slip basis, including compliance with new National Electric Codes, potable water system, dry fire standpipe system, wet fire hydrant system, ice suppression compressor system. The other utility costs were based on quantities that were indicated in the survey such as pedestals, dock box integrated utilities, Wi-Fi (lump sum), fuel system, and flow inducer units.

It is important to note that our cost estimates include an independent section on upgrading the facilities to comply with new ESD prevention code requirements. The inventory section requires participants to indicate if their facility is compliant with ESD prevention code requirements. The inventory section also identifies the quantities of pedestals, for example, and the cost and schedule to replace those pedestals is clearly indicated. Upgrades to ESD standards are independent of pedestal replacement.

Fuel system inventories include fuel dock information, above or below ground storage tanks, single or dual product tanks, tank capacities, fuel lines, and dispenser quantities. Fuel attendant buildings are included in the Buildings section of the report.

Sanitary pumpout facilities are inventoried as complete systems, including the pumpout unit itself and the force main sanitary line that connects to the site sanitary infrastructure.

Boat Storage and Haul Out Systems

Boat storage and haul out systems include elements such as lift well structures for travel lifts, the travel lift itself, hydraulic trailers and tractors (but not the launch ramp if it is used by the general public as part of a boating access site), and fork lifts.

Boat storage systems that support daily use during the boating season include indoor and outdoor racks, and parking areas for summer use in and out service. These systems are used to launch and retrieve boats on demand for use during the boating season rather than for long term storage, however, they are also generally used for winter storage as well. Separate long-term off-season storage for boats is often provided in the marina parking lot, which is unused during the off season. In that case, the parking lot infrastructure is not considered separately as boat storage infrastructure. A purpose-built parking lot used specifically for summer in and out service is included as boat storage infrastructure.



Dredging

For many harbor facilities, dredging demands vary significantly depending on the water levels of the Great Lakes. During record low water levels five years ago, the State of Michigan invested more than \$21 million in emergency dredging across the state. In 2019, water levels exceeded monthly mean record highs not seen since the 1980s, so dredging demand is significantly reduced. For other facilities, site conditions that require regular maintenance dredging may be well known and reasonably predictable. Where conditions exist that regular maintenance dredging can be anticipated, the survey respondents provided their best information on regular dredging demand. Areas within Federal Navigation Channels are excluded.

As no bathymetric surveys were performed, the dredging volumes included in this report must be considered preliminary estimates to indicate the general scope of the quantity and associated costs. Additional surveys and studies will be required to provide accurate information.

Site Features

Site features include upland elements such as approaches (access drives), parking lots, walkways, as well as site landscaping. Material options for the approaches, parking lot, and walkways include asphalt, concrete, gravel/unpaved, and an additional unit paver option for walkways.

Buildings

Buildings include all structures typically found at harbors and boating access site facilities, including boater service/harbormaster buildings (generally including boater lounge, harbormaster office, restrooms, laundry, showers, etc), dedicated restroom/shower buildings, storage buildings, shop buildings, covered picnic shelters (without walls), and prefabricated vault toilet structures. Fish cleaning stations were not included as a building function option, but multiple facilities indicated in the comments that their buildings contained dedicated fish cleaning stations.

DETAILED INVENTORY METHODOLOGY – Locks and Dams

As there are only two Lock and Dam facilities in the system, the project team visited both facilities and discussed the needs of each facility with local operational staff. The Cheboygan Lock and Dam has been the subject of a recent Phase 100 study and Phase 400 and 500 studies will commence in the coming months. As no additional recreational amenities are provided at either facility beyond the Lock and Dam lifting infrastructure, the focus of inventory and needs analysis for these facilities is more focused on operational issues and consider expanding recreational amenities. For example, the most significant issue affecting the operation of the Cheboygan Lock and Dam is related to the role of the facility in managing water levels upstream on Mullet Lake, particularly in advance of or responding to significant weather events. Local staff have some ability to anticipate weather events and draw down water levels to create capacity for expected stormwater volumes, however, constrictions in the river between Mullet Lake and the dam make the river capacity insufficient to reduce water levels in the lake without reducing downstream river levels to the point where significant navigation hazards are created. A summary of the Lock and Dam assessments can be found in the appendices.



SECTION THREE – COST ESTIMATING METHODOLOGY

HARBORS and BOATING ACCESS SITES

As outlined above, the elements that make up harbors and boating access sites were separated into a series of categories in the survey tool to facilitate cost estimating and strategic planning. The categories include Docks, Structures, Boat Launch & Paddle Sport Access, Utilities, Boat Storage, Dredging, Site Features, and Buildings. Within these categories, specific unit pricing was established for a range of different materials or construction methods. For the immediate need (five-year) cost estimates, the base unit prices were based on current 2019 construction pricing for active MDNR or Grant-in-Aid Harbor and Boating Access Site projects in Lexington, East Tawas, Harrisville, and Prairieville Township, as well as ongoing marina projects in Ottawa County and extensive shoreline armoring projects across the state. Additional construction cost data was gathered from ongoing marina and shoreline infrastructure projects across the Great Lakes, as well as RS Means where appropriate.

For the five-ten and ten-twenty-year cost estimates, the future value cost was calculated using an escalation rate of 3%:

$$\text{Future Value} = \text{Cost of Project Based on Today's Costs} * (1.03)^{10 \text{ or } 20}$$

The database tool utilizes Microsoft Excel and is sufficiently versatile to allow the individual reports and other associated reports to be updated on a regular basis to improve the accuracy of future forecasting.

LIFE SPAN and REPLACEMENT SCHEDULE PROJECTIONS

In order to determine the anticipated timing of replacement of specific elements, the project team determined the average design life of each item. With the exception of some technology related items such as Wi-Fi, which are essentially obsolete within five years, nearly all elements that make up the infrastructure of our harbors and boating access sites fall into one of four design life periods:

1. Elements that have an expected design life of 10-20 years and include movable skid piers, ADA kayak launches, vault toilets, and others.
2. Elements that have an expected design life of 20-30 years and include floating docks, most buildings, and others.
3. Elements that have an expected design life of 30-40 years and include fixed docks.
4. Elements that have an expected design life of over 50 years and include most heavy site infrastructure such as breakwaters and sheet pile structures.

Within these categories, some elements, such as decking on fixed docks, can be expected to require replacement of significant maintenance at predictable points in the lifespan of the infrastructure. The cost estimates factor these lifespans based on today's infrastructure age into the cost and schedule projections. Other element schedule projections are based on today's condition, independent of age, and include most utility infrastructure, parking lots and approaches, landscaping, walkways, and other elements.

In practice, if a harbor facility indicates their floating docks are 25 years old, the immediate needs five-year estimate assumes complete replacement in that time frame. If the docks are ten years old, the cost is



allocated in the 20-year budget. Where elements (primarily heavy rock revetment structures) have longer life spans but need ongoing maintenance, we have prorated the long-term replacement costs at appropriate intervals in the ten- and twenty-year budgets. Those elements that were indicated as needing immediate replacement are included in the immediate needs cost estimate, those indicated as functional are included as needing replacement within the 5-10 year cost projections, and those indicated as very good are generally needing replacement within the 10-20 year cost projection.

LOCK & DAM FACILITIES

The calculations for the near future cost estimates for both lock and dam facilities are preliminary estimates based on past studies and infrastructure elements unique to lock and dam facilities. The cost estimates can be found in the Appendices. It is determined that lock and dams are specialized with many mechanical equipment upgrades that would require a Phase 100 study in order to accurately project future needs, which was not included as a part of this study.

DETAILED COST ESTIMATE METHODOLOGY

As mentioned earlier, the survey was broken into multiple categories. Each category has multiple elements associated with specific unit pricing. The unit pricing was determined based on the construction type and materials of each element. The cost estimate methodology is discussed for each category below. The unit pricing, life-span and replacement schedule, and sample calculations for each infrastructure element can be found in the Appendices.

Docks

The cost of replacement for each type of dock structure and construction was developed on a per square foot (SF) basis. The cost of redecking for the fixed dock structures was also developed on a per SF basis. Given the slip count and length and width of the main piers, a 3-foot-wide finger pier is assumed, resulting in the total SF of docks. The replacement schedule for docks is based solely on which age group was indicated. Fixed docks have a 30-40 year life span. Floating docks have a 20-30 year life span. The schedule for replacement is as follows:

30-40 Year Life Span					
Cost Estimate Projection	Age Group				
	<10	10-20	20-30	30-40	40+
0-5 Year				Replace	
5-10 Year			Replace		
10-20 Year		Replace			

20-30 Year Life Span					
Cost Estimate Projection	Age Group				
	<10	10-20	20-30	30-40	40+
0-5 Year			Replace		
5-10 Year		Replace			
10-20 Year	Replace				



Shoreline and Breakwater Structures

Almost all of the shoreline and breakwater structures have a 50+ year life span with exception of a single sheet pile offshore wall and a floating wave attenuator, which fall under the 20-30 year life span. The unit costs for these structures assumes a water depth of 15 feet. The projected maintenance and replacement costs for structures is per linear foot of structure. Primarily, the linear footage of structure that was indicated as needing replacement was calculated and included within the 0-5 year cost projection. Following the indicated percentage of immediate replacement, the costs assume only a percentage of the structure will be replaced or require maintenance based on the current age and condition. Additionally, costs for structures were only included in cost estimates which indicated their facilities were responsible for maintenance and replacement. There is a supplemental document in the appendices which outlines the replacement costs of structures for which the USACE or other entity is responsible, for reference.

For example, an offshore rock revetment breakwater that is in very good condition and 35 years old will likely have an associated maintenance cost that is 10% of the cost of replacement within 0-5 years. The schedule and percentage of replacement cost is as follows:

50 Year Life Span- Type A ¹					
Cost Estimate Projection	Age Group				
	<10	10-20	20-30	30-40	40+
0-5 Year			10%	25%	50%
5-10 Year		10%	25%	50%	75%
10-20 Year	10%	25%	50%	75%	100%

50 Year Life Span- Type B ²					
Cost Estimate Projection	Age Group				
	<10	10-20	20-30	30-40	40+
0-5 Year				10%	25%
5-10 Year			10%	25%	50%
10-20 Year		10%	25%	50%	75%

Notes

1. Type A - Functional Condition Today
2. Type B - Very Good Condition Today

Boat Launch and Paddle Sports Access

The boat launch ramps (both cast in place concrete paving, concrete planks, and gravel) are assumed to need immediate replacement if the launch ramp is over 20 years old. Skid piers need replacement after 10 years, fixed piers need replacement after 30 years, floating piers need replacement after 20 years. Paddle sport launch platforms need to be replaced every 10 years. Since we asked for an exact age of these



elements, their replacement schedule is based on age. The boat launch ramp replacement costs are per existing square footage of boat launch ramp. The boat launch piers are priced by number of piers not size of piers.

Utilities

The utilities are based on marina utility systems. Facilities that offer electric shore power that indicated that are not updated to NEC standards will have a per slip cost associated with it would entail rewiring of the marina. Additionally, replacement of pedestals does not ensure NEC compliance. Pedestals, dock box integrated units, and flow inducers are replaced based on their condition and priced on a per unit basis. The potable water systems, fire suppression systems and ice suppression systems are priced a per slip basis and the replacement schedule is based on the current condition. See the matrix for the replacement schedule based on condition below:

Conditional Assessment			
Cost Estimate Projection	Today's Condition		
	Replace	Functional	Very Good
0-5 Year	Replace		
5-10 Year		Replace	
10-20 Year			Replace

The fuel system is priced by each item within the system including fuel docks, dispensers, fuel lines, and tanks. The overall cost and replacement schedule is based on the assumption that primarily, if indicated that the system must be replaced, to replace it, and secondly, that the overall system must be replaced after 20-30 years.

Wi-Fi systems are typically outdated after 5 years and will be completely replaced at least once within the 20-year time frame.

Pumpout system replacement schedule and cost is determined by a 10-20 year life span. See the matrix below:

10-20 Year Life Span					
Cost Estimate Projection	Age Group				
	<10	10-20	20-30	30-40	40+
0-5 Year		Replace			
5-10 Year	Replace				
10-20 Year					



Boat Storage and Haul Out Systems

The cost estimates include complete replacement cost for a travel lift well and a hydraulic trailer. The replacement schedule assumes that these systems only last 20-30 years. Only a few sites had these systems and more direct maintenance costs could be calculated with a more in-depth review of the systems.

Costs not included in the cost estimate are boat storage building costs and cost for replacing forklift, since there was no data collected as to the age or condition of these elements. Unit pricing is available for reference.

Dredging

Dredging costs are determined per cubic yard and include the immediate needs of the facilities as well as regular maintenance dredging. The schedule is dictated by when regular maintenance dredging occurs assuming a regular maintenance dredging period will start within 0-5 years.

Site Features

All of the site feature cost schedules are determined by the current condition. The replacement cost for parking and walkway materials are for complete replacement. The cost for landscape does not entail replacement necessarily, but regular maintenance including seeding, mowing, planting, weeding, etc.

Buildings

Picnic shelters have a 20-30 year life span and the replacement cost schedule is based on the age matrix. Vault Toilets have a 10-20 year life span, similar to that of the pumpout systems. Both vault toilets and picnic shelters have a cost per toilet/shelter and are not based on size. Harbormaster and Boater Services Buildings have a 20-30 year life span and have a complete replacement cost per square footage.





SECTION FOUR – DATA ANALYSIS

Overall, the projected total cost over the next 20-30 years will equate to approximately \$755,900,00 for infrastructure improvements for 267 facilities. The table below presents the total cost of all sites and the average cost per site for each time period under this study. This method assumes that the cost and replacement needs are accomplished within the time frame and therefore not cumulative i.e. adding the 0-5 Year, 5-10 Year, and 10-20 Year costs will equate the total cost projected over the next 20 years.

Total Projected Costs per Facility Type

Facility Type	No. of Facilities	0-5 Year Total Cost	5-10 Year Total Cost	10-20 Year Total Cost	Cumulative Projected Cost (0-20 Years)
GIA BAS	62	\$ 21,967,910	\$ 32,733,862	\$ 44,280,134	\$ 98,981,906
MDNR BAS	130	\$ 21,183,647	\$ 56,135,541	\$ 100,520,815	\$ 177,840,003
BAS Total	192	\$ 43,151,557	\$ 88,869,403	\$ 144,800,949	\$ 276,821,909
GIA Harbors	56	\$ 73,608,953	\$ 129,640,758	\$ 173,083,622	\$ 376,333,333
MDNR Harbors	19	\$ 11,322,915	\$ 23,591,741	\$ 67,807,094	\$ 102,721,750
Harbors Total	75	\$ 84,931,868	\$ 153,232,499	\$ 240,890,716	\$ 479,055,083
Total	267	\$ 128,083,425	\$ 242,101,902	\$ 385,691,665	\$ 755,876,992

The calculations for costs per slip or lane are isolated to infrastructure specific to harbor or boating access sites. For harbors, only docks and utility costs are included. For boating access sites, only boating access site costs are included (boat launch, ramp, and piers).

Average Cost per Slip or Lane

Facility Type	0-5 Year	5-10 Year	10-20 Year	Cumulative Projected
GIA BAS (Avg Cost/Lane)	\$ 74,739	\$ 58,618	\$ 37,897	\$ 171,254
MDNR BAS (Avg Cost/Lane)	\$ 25,108	\$ 50,258	\$ 38,312	\$ 113,678
BAS Overall (Avg Cost/Lane)	\$ 44,000	\$ 53,073	\$ 38,157	\$ 135,230
GIA Harbors (Avg Cost/Slip)	\$ 10,230	\$ 5,863	\$ 9,950	\$ 26,043
MDNR Harbors (Avg Cost/Slip)	\$ 7,884	\$ 8,073	\$ 27,778	\$ 43,735
Harbors Overall (Avg Cost/Slip)	\$ 9,700	\$ 6,271	\$ 13,850	\$ 29,821

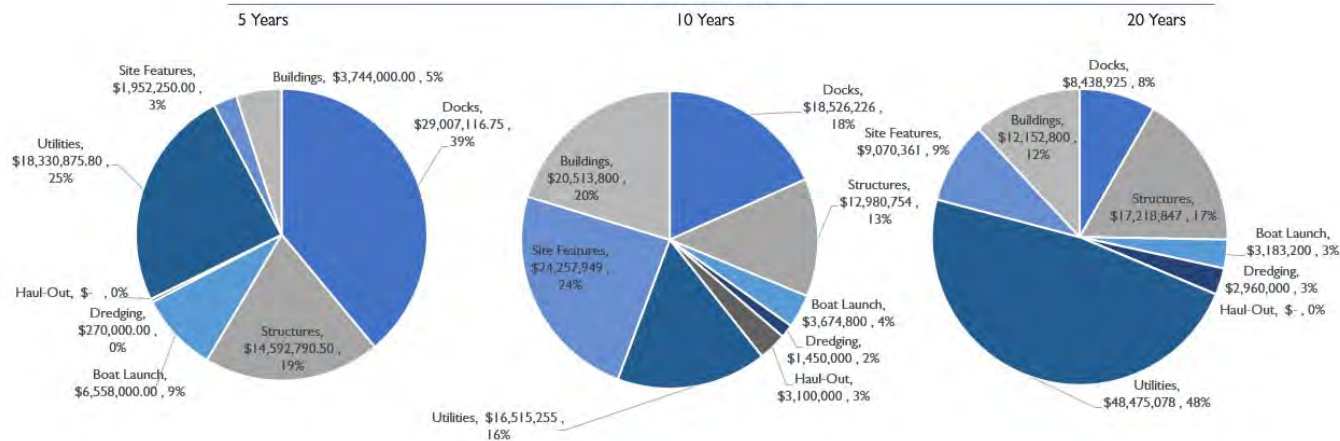
HARBOR FACILITIES DATA ANALYSIS SUMMARY

Grant-In-Aid Communities

The cumulative cost for GIA harbors is approximately \$376 Million. In reference to the pie charts below, the largest projected costs are for dock replacement within the next five years. Within 5-10 years site features account for 24% of the total costs which includes parking and walkways. Within 10-20 years utilities will account for 48% of improvement costs at facilities, which is primarily due to electrical standard compliance requirements.



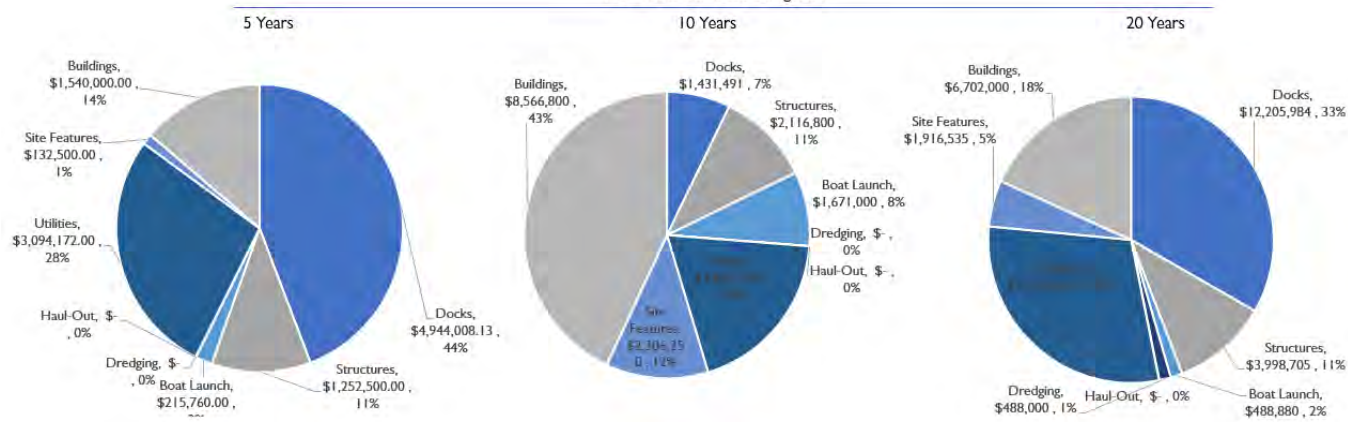
GIA Harbor Cost Categories



MDNR State Harbors

For MDNR State Harbors dock replacement is the majority of cost for the immediate needs, followed by buildings in the 5-10 year scope and lastly dock replacement in the 10-20 year scope. There are more sites with aged buildings that will need to be replaced and updated. There are a few large marinas that were recently renovated (within the last five years) that fall into needing replacement in the next 10-20 years, that may more realistically need to be replaced after 25+ years.

MDNR Harbor Cost Categories



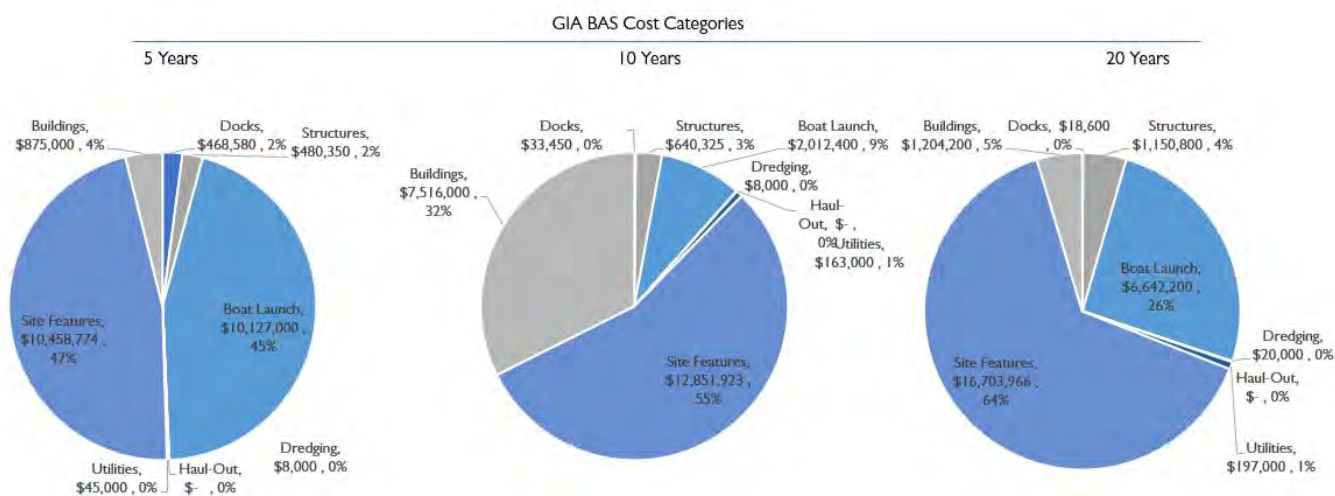
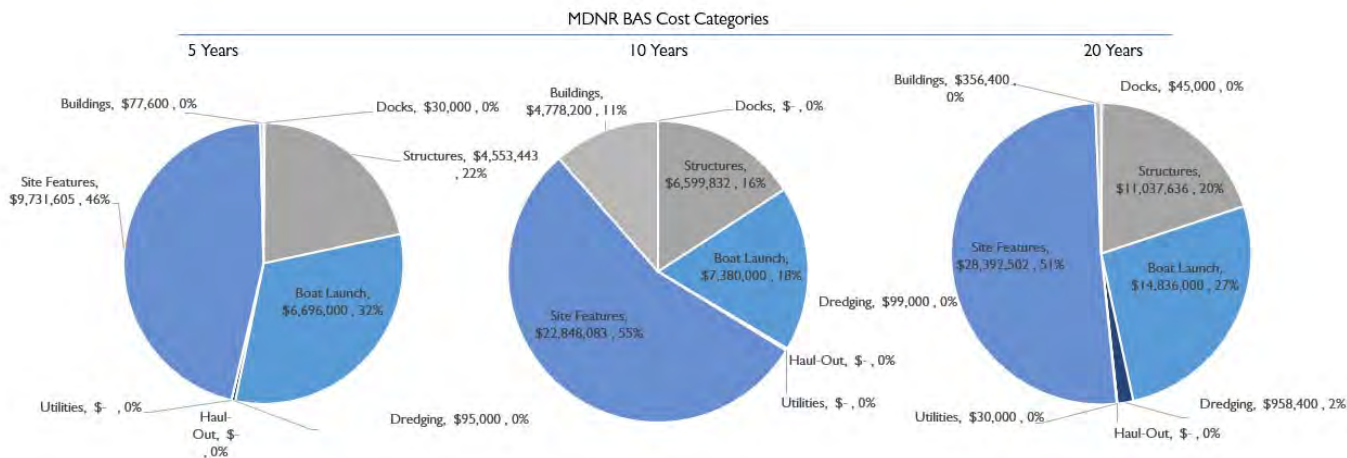
Overall

We expect that more facilities will need to rewire their shore power electrical systems to comply with NEC standards for ESDP than those indicated in the survey and reflect in the cost estimate. A majority of facility's infrastructure has not been updated since new standards have been released. There are more detailed cost estimates with average costs in the appendices.



BOATING ACCESS SITE FACILITIES DATA ANALYSIS SUMMARY

The major costs within the immediate future is consistent with the future projections for all boating access sites. The costs are mainly for parking lots and approaches which fall under the Site Features category as well as the Boat Launch system which includes piers and launch ramp. The Building category costs primarily are for vault toilets and picnic shelters, which is expected. The charts below display the cost distributions expected over the next twenty years.





LOCK AND DAM FACILITIES DATA ANALYSIS SUMMARY

Cheboygan

The table below is the projected near future needs for the Cheboygan lock from the 2014 Bergman study.

Table 1.5. Lock Renovation Work Item Costs		
Item	Description	Bare Cost
L1	Concrete Rehabilitation & Resurfacing	\$ 825,000
L2	Gate Leaf Removal & Setting	\$ 100,000
L3	Miter Gates Clean & Paint	\$ 80,000
L4	Miter Gate Seals	\$ 91,000
L5	Miter Gate Walkways & Railing Upgrades	\$ 22,500
L6	Bypass Valves Rehabilitation	\$ 75,000
L7	Operating Machinery	\$ -
L8	Cofferdam Systems, U/S & D/S	\$ 94,000
L9	Lower Approach Wall Reconstruction (west side only)	\$ 200,000
L10	Lock Wall Safety Improvements	\$ 70,000
L11	Sill Timber Replacement	\$ 67,500
L12	Pintles and Bushings Replacement	\$ 40,000
L13	Gate Anchorages Improvements	\$ 30,000
L14	Fill Scour Hole Downstream of Lock	\$ 45,000
L15	Bridge Retrofit	\$ 70,000
Bare Cost Subtotal =		\$ 1,810,000
Mobilization (8%) =		\$ 145,000
Winter Covering/Tenting and Heating of Lock =		\$ 60,000
Preliminary Design Level Estimating Contingency (25%) =		\$ 453,000
Assumed Engineering Design Fee (20%) =		\$ 362,000
Construction Contingency (10%) =		\$ 181,000
Extended Total =		\$ 3,011,000
Budgetary Project Cost Total (Rounded) =		\$ 3,000,000

Using an inflation rate from 2014 costs to 2019 costs would equate to approximately \$3.25 Million. This cost estimate does not account for the necessity for improved staff and boater facilities including bathrooms. There are no restroom facilities on the island where the staff operates. Therefore staff, must either cross over the lock to access portable toilet near Great Lakes Tissue or walk across the dam to the boating access site (900'+) in order to use the facilities. This makes staffing the lock a challenge for MDNR staff.

Another issue that will have associated costs is mitigating the outflow hazards. The adjacent facility, Great Lakes Tissue, controls the rate of discharge from their generator outflows. This outflow can cause a hazard for boaters unfamiliar with the area.

Lastly, the staff at this facility are required to maintain navigation depths along the river channel while also maintaining the water levels to nearby Mullett Lake. This process is further complicated by the presence of obstructions and pinch-points along the upstream portions of the river between the dam and the lake, such as the M-33 bridge. The regulation of these water levels is currently performed manually through continued monitoring of available water gauge and weather forecast information. We understand that the manual operation of the dam gates is being evaluated as part of the ongoing study. We recommend that a study of the greater watershed area be performed in order to help design a better flow monitoring and control system in order to assist MDNR staff in operations.



Crooked River Lock

The table below is the projected near future needs for the Alanson Dam.

Projected Cost Estimate

Preliminary 0-5 Year Cost Estimate			
Item	Description	Cost	Notes
1	Water Well Repairs	\$1,400	Assumes existing well can be repaired with jetting and new pump
2	Repaint Building	\$500	Assumes building dimensions are 16x12x8
3	New Portable Toilet	\$1,500	Assumes 1 new portable toilet for staff is warranted
4	Gate Arm Repair	\$1,000	Assumes landside access to repair area
5	Boater Accomodations	\$35,000	Assumes a skid pier, vault toilet, and small picnic shelter at road end is warranted
Total		\$39,400	

In discussion with County staff, the following items are deemed immediate needs (within the next 5 years) of the facility:

1. Potable water well is non-functional, this water source provides drinking water to staff and a hose connection to facilitate cleaning of the lock gates annually.
2. The building at the lock needs to be repainted.
3. There are no permanent bathrooms available to staff, staff currently uses an outdated portable toilet.
4. One of the arms on the southern lock gate is cracked and needs to be welded.
5. There are no means for users to stop at the lock if needed, nor any amenities.





SECTION FIVE – RECREATIONAL BOATING TRENDS ANALYSIS

Recreational boating activities are constantly evolving, and the harbor and BAS facilities that were built in the past may not serve the recreational boating community as well today as they once did. For example, boats have become noticeably longer and wider over the last twenty years, resulting in the need for longer slips with increased spacing between finger piers. This is supported both by the responses from Harbor Operators in the survey summaries that follow, registration data from the Michigan Secretary of State, and NMMA Powerboat Sales Trends 2006-2018 statistics indicating a growing percentage of boats in the larger size categories (NMMA, 2018). As more and more electronic devices are added to boats, shore power demand continues to increase according to Harbor Operators in the survey, leading marine electrical industry experts Chris Dolan and Gary Loftis, and the article “An Introduction to Electrical System Design for Cruising Vessels” (OutbackMarine.com, 2020). The general session on boating trends at the October 2018 ICOMIA Conference (International Council for Marine Industry Associations) in Athens, Greece indicated that, in the future, the boating industry will very likely see more and more boats relying on electric motors rather than traditional gas or diesel engines. At the same time, marine utility technology has advanced to include individual metering of electrical power so individual boaters can now pay directly for the power they use rather than a one size fits all utility fee. Individual metering has been proven to reduce energy usage, saving money and reducing environmental impacts to the point that the most current version of the National Electrical Code allows a 10% reduction in energy demand calculations in marinas that utilize individual metering. Other trends for consideration include the increase in boat clubs and boat sharing, which means fewer boats can be used more often by more boaters, and a significant increase in the number of paddlecraft on the water and utilizing BAS facilities.

In order to gauge how these and other national trends are impacting state-funded facilities in Michigan, the project team prepared two separate surveys. One survey was sent to the operators of the 295 facilities that participated in the facility assessment process and was designed to gather feedback and help understand historic and current trends and how they will affect future use of the facilities. The second survey was sent to boaters across the state utilizing MDNR boater databases and was designed to learn as much as possible about how boaters view existing facilities and what they are looking for as MDNR plans for the future of the State of Michigan’s recreational boating infrastructure.

FACILITY OPERATOR SURVEY SUMMARY

The MDNR Statewide Facility Assessment Operator Trend Survey was completed on September 30, 2019. Statewide, 74% of the 295 facilities responded. The complete survey response summary is included in the appendices of this report.

Question 1: Does your facility include Harbor, Boating Access Site, and/or Lock & Dam facilities?

Question 1 of the survey asked participants to indicate what type of facilities they had. There were 90 responses from operators who indicated their facilities included a Harbor, 192 responses from operators who indicated their facilities included a Boating Access Site, and three responses from operators of Lock & Dam facilities.



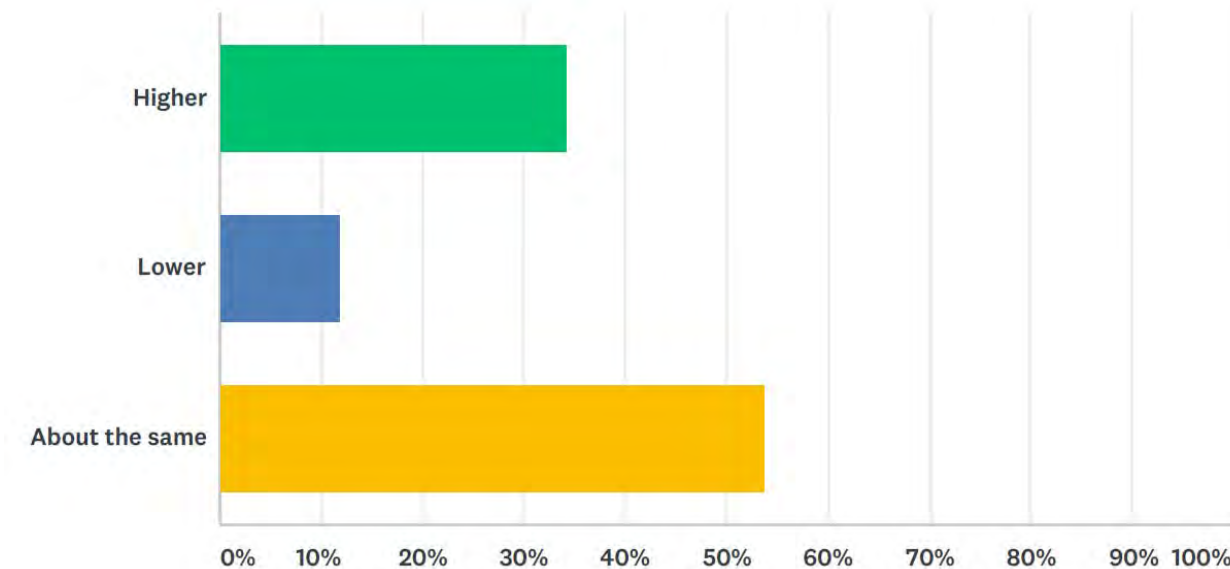
HARBOR SPECIFIC SECTION

Questions 2 through 16 were Harbor specific questions, so only those indicating their facility includes a Harbor in Question 1 were asked these questions. There were generally around 65 responses to these questions.

Question 2: Please indicate which harbor you operate:

Question 2 provided a menu listing all harbor sites included in the original facility assessment survey. A complete list of the facilities that responded and identified their facility as a participant is included in the full survey document in the appendices.

Question 3: Is your harbor seasonal occupancy higher, lower, or about the same as last year?



Of the 67 participants who responded to this question, 34.33% (23) indicated that their seasonal occupancy was higher in 2019 than last year, while only 11.94% (8) indicated that their seasonal occupancy was lower in 2019 than last year. While the remaining 36 facilities (53.73%) indicated “about the same” occupancy, it should be noted that a number of these facilities, such as Leland, offer no seasonal slips. Additionally, a number of these facilities are already at 100% occupancy and therefore could not support any increased demand if it existed. Questions 5 and 6 address this issue.

This question provided the opportunity for participants to offer comments related to their response, which are listed in full in the complete survey report in the appendix. All eight participants who indicated that their occupancy was lower in 2019 provided reasons suggesting why demand was down in their facility this year, which included:

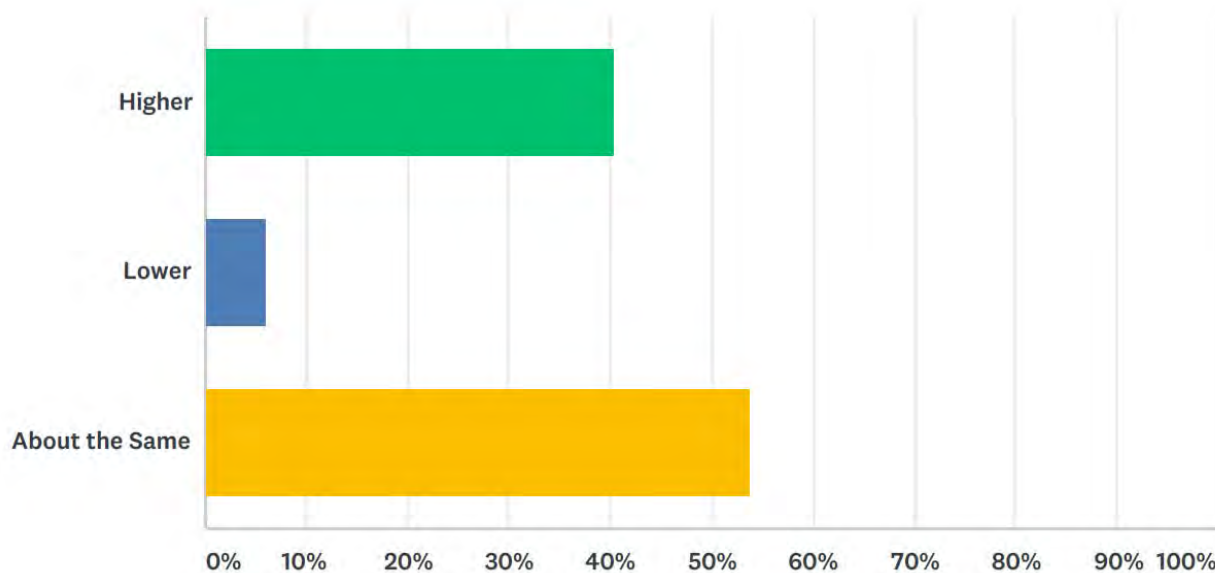
- Reduced slip/service availability due to construction activities (3 facilities)
- Poor weather caused a late start to the season (2 facilities)



- Adjacent restaurant closed
- Loss of slips due to storm damage (now repaired)
- High water levels flooded some docks

In all cases, seasonal occupancy only declined due to external issues such as weather, flooding, damage, or ongoing construction activities. It is important to note that no facilities indicated any decrease in *demand* for slips. Rather occupancy decreased most often due to existing slips being inaccessible for some reason. This suggests that demand across nearly all facilities was therefore higher or at least the same as in past years, and none of the facilities experienced any type of decrease in demand.

Questions 4: Is there a discernable trend in your seasonal occupancy (higher, lower, or consistent) over the last five years?



Of the 67 participants who responded to this question, 40.3% (27) indicated that their seasonal occupancy is trending upwards over the last five years, while only 5.97% (4) indicated that their seasonal occupancy was trending downwards over the last five years. While the remaining 36 facilities (53.73%) indicated “about the same” occupancy, it should be noted that a number of these facilities are already at 100% occupancy and therefore could not support any increased demand if it existed. Questions 5 and 6 address this issue.

This question provided the opportunity for participants to provide comments related to their response, which are listed in full in the complete survey report in the appendix. Six of the respondents indicated that their facilities have been 100% full for many years, so no increase was possible. Of the four participants who indicated a downward trend, none indicated any specific reasons, but Question 14 provides some insight. Several participants who indicated that their occupancy has been trending higher provided reasons suggesting why occupancy has been increasing, which included:

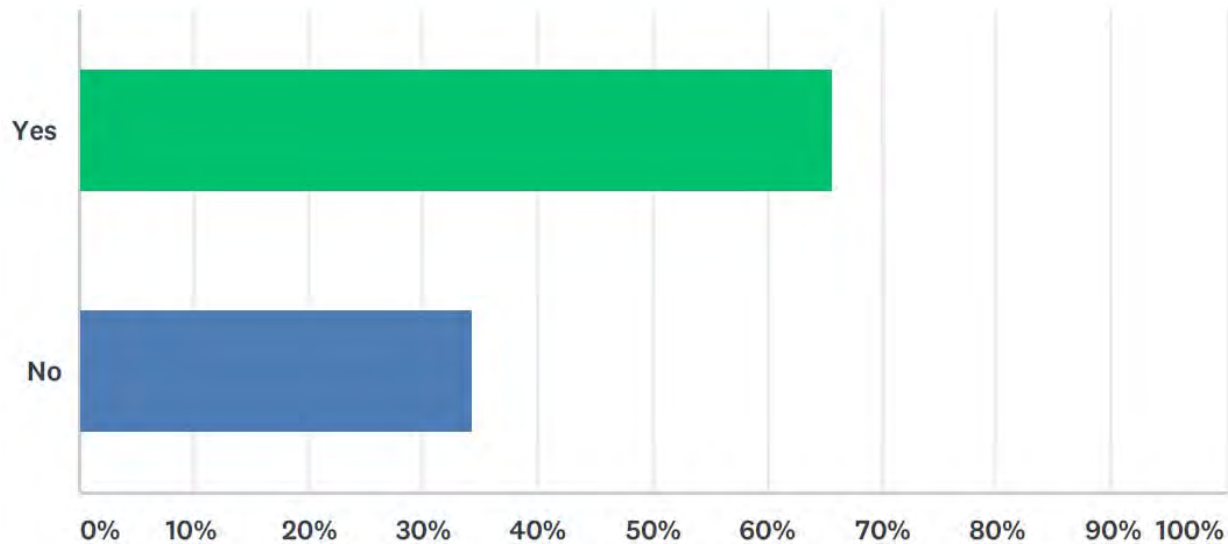
- An increase in the number seasonal slips available



- Improved facilities and marina infrastructure
- Increased awareness of the facility – marketing
- Higher water levels make facilities accessible to more boats

These responses suggest that demand across nearly all facilities remains stable and is growing steadily over time in over 40% of facilities.

Question 5: Do you have a waiting list to lease a slip in your facility?



Of the 67 participants who responded, 65.67% (44) indicated they have a waiting list to lease a slip in their harbor, and 34.33% (23) indicated they do not have a waiting list. This suggests that while approximately 54% (36) of facilities indicated “about the same” or “consistent” seasonal occupancy in questions 3 and 4, roughly two thirds of those facilities (24) are full and have waiting lists and therefore cannot indicate any increase in seasonal occupancy or demand unless they were to increase the number of seasonal slips in their facilities.

Question 6: If there is a waiting list for your facility:

- How many names are on the list?
- How long is the usual wait?
- What types of slips are most in demand?

Question 6 asked for more detailed information from the facilities with waiting lists in three subquestions.

How many names are on the list?

Of the 44 who responded to this question:

- 43.18% (19) indicated a waiting list of more than twenty names
- 25% (11) indicated a waiting list of five names or less



- 20.45% (9) indicated a waiting list of eleven to twenty names
- 11.36% (5) indicated a waiting list of six to ten names

How long is the usual wait?

Of the 42 who responded to this question:

- 28.57% (12) indicated a wait time one season
- 26.19% (11) indicated a wait time of five or more seasons
- 19.05% (8) indicated a wait time of two seasons
- 9.52% (4) indicated a wait time of three seasons
- 9.52% (4) indicated a wait time of four seasons
- 7.14% (3) indicated a wait time of less than one season

What types of slips are most in demand?

Of the 39 who responded to this question:

- 64.1% (25) indicated a demand for floating docks 26'-39' in length
- 23.08% (9) indicated a demand for fixed docks 26'-39' in length
- 10.26% (4) indicated a demand for fixed docks over 40' in length
- 2.56% (1) indicated a demand for floating docks less than 26' in length

This question provided the opportunity for participants to provide comments related to their response, which are listed in full in the complete survey report in the appendix. Comments of particular interest suggest the following:

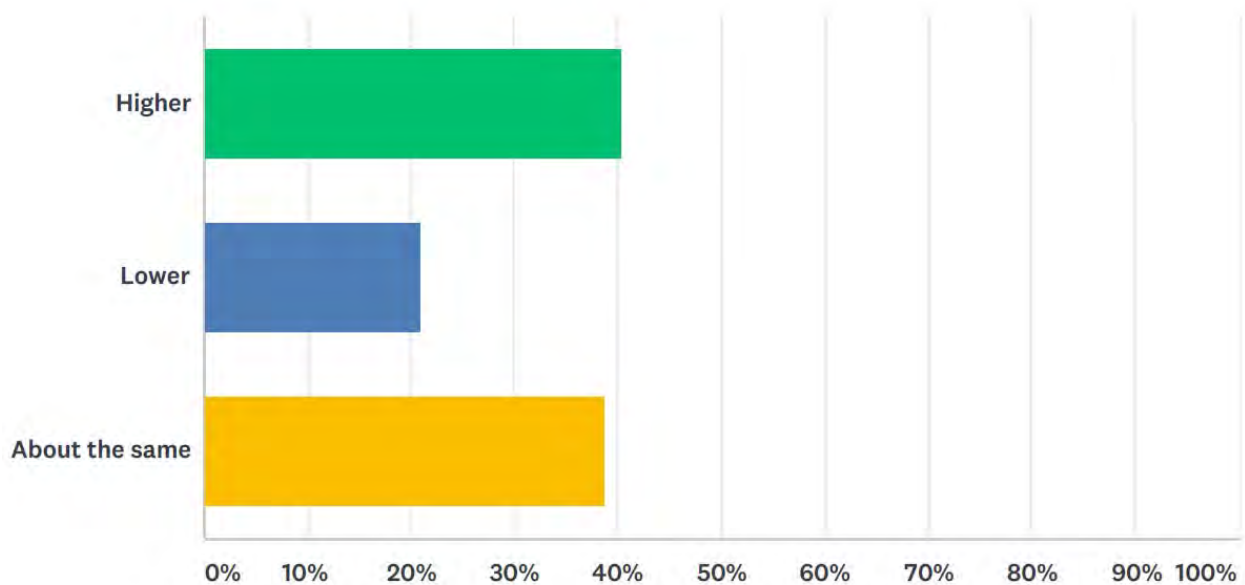
- The demand indicated for fixed docks should not be interpreted as a preference for fixed over floating docks (which are generally preferred by boaters, as indicated in the separate boater survey), rather the facilities in question only offer fixed docks for seasonal leasing and therefore the waiting lists are for fixed rather than floating. One facility suggested their waiting list would be significantly longer if they offered floating seasonal docks.
- One facility indicated a waiting list of 161 names with a wait of over five years for a slip.

Seasonal Demand Summary

Questions 3 through 6 provide clear indication that demand for seasonal slips is generally strong and increasing in many facilities, and very stable in nearly all others. With roughly two thirds of the facilities (44 of 67) indicating 100% seasonal occupancy with waiting lists, some as long as 161 names, there is ample evidence that recreational boating demand remains strong.



Question 7: Is your transient/guest occupancy higher, lower, or about the same as last year?



Of the 67 participants who responded to this question, 40.3% (27) indicated that their transient occupancy was higher in 2019 than last year, while roughly half that number 20.9% (14) indicated that their transient occupancy was lower in 2019 than last year. The remaining 26 facilities (38.81%) indicated “about the same” occupancy.

Several of the participants who indicated that their occupancy was lower in 2019 provided reasons suggesting why occupancy was down in their facility this year, which included:

- Reduced slip/service availability due to construction activities
- Poor weather caused a late start to the season
- Adjacent restaurant and fuel docks closed (Presque Isle)
- Loss of two thirds of slips due to storm damage (now repaired)
- High water levels flooded some docks and required power to be shut off
- Low quality of facility

Where demand was up, reasons provided by survey participants included:

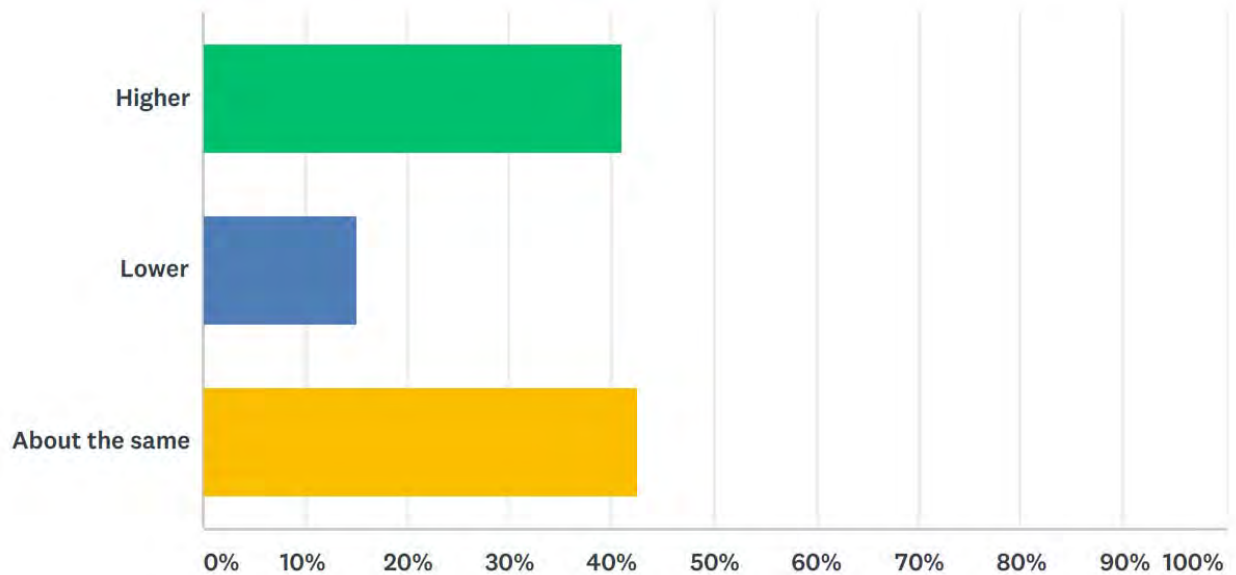
- More boat club activity
- Increase in demand at facilities near Presque Isle due to their fuel issues.

Additional comments on occupancy included”

- More boats in the marina, but staying fewer days
- Fewer, but larger, boats than in years past, resulting in higher revenues
- More Loopers due to anticipated Lock closure next season
- New ESD standards are causing boater frustration, requiring more boater education



Question 8: Is there a discernable trend in your transient/guest occupancy (higher, lower, or consistent) over the last five years?



Of the 66 participants who responded to this question, 40.91% (27) indicated that their transient occupancy is trending upwards over the last five years, while only 15.15% (10) indicated that their transient occupancy was trending downwards over the last five years. The remaining 28 facilities (42.42%) indicated “about the same” occupancy. Harbor operators have indicated anecdotally that transient occupancy is significantly higher on weekends and holidays, with many facilities completely occupied (sometimes rafting beyond standard capacity), while experiencing much lower occupancy during other parts of the season or mid-week. Data is currently being collected that would help MDNR better understand and document these variations in the future.

Several of the participants who indicated that their occupancy has been trending lower provided reasons suggesting why occupancy was down in their facility this year, which included:

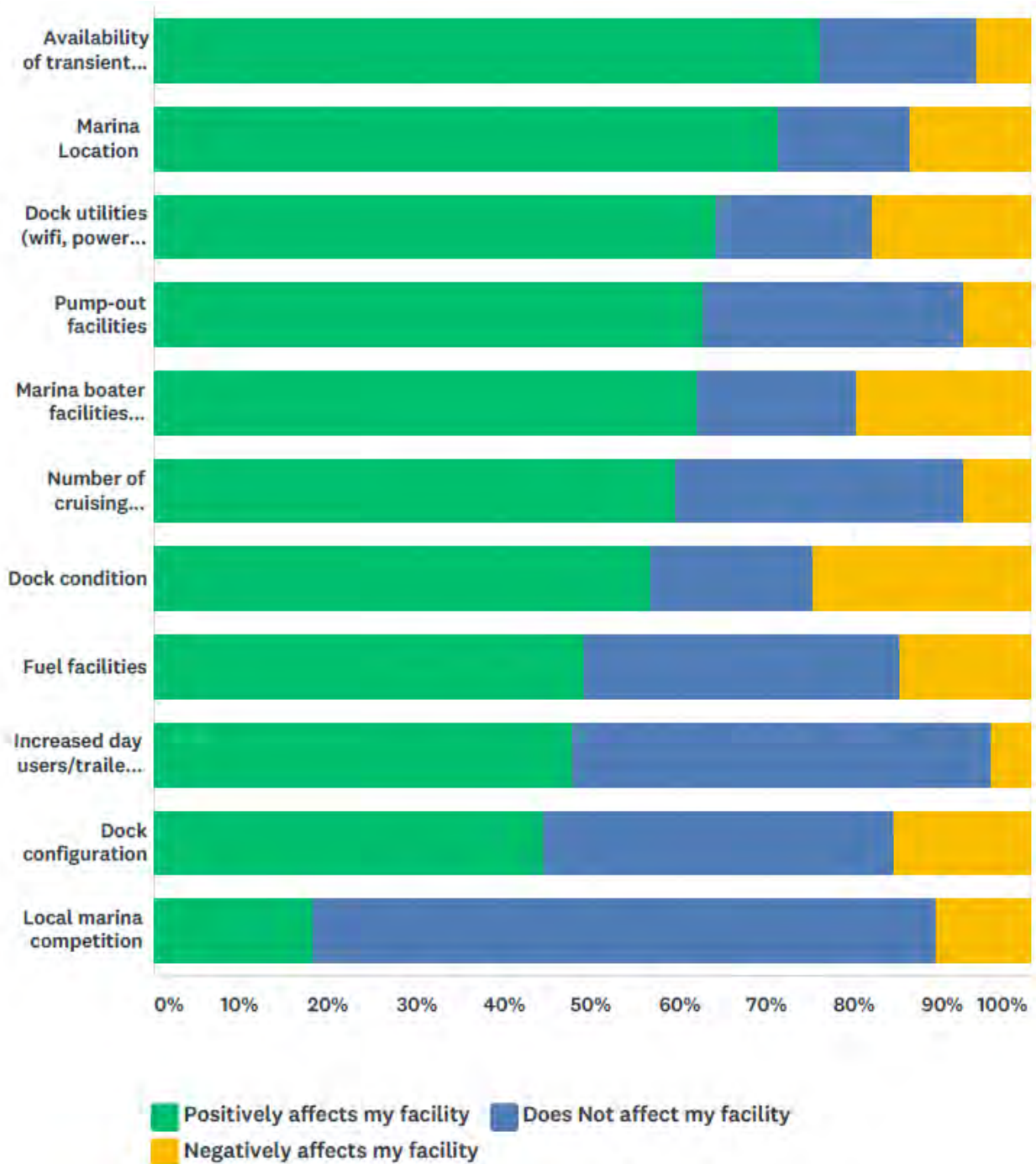
- Poor early season weather trends
- Higher water levels flooded some docks
- Boater frustration with ESD standards preventing boats with electrical leaks from using shore power

Where demand was up, reasons provided by survey participants included:

- Harbor Condition improvements
- Operational Staff improvements
- Dredging and higher water increase accessibility of slips to larger/deeper draft boats



Question 9: What factors are most affecting your transient/guest occupancy?



This question offered a list of eleven factors and asked participants to indicate if those factors had a negative, positive, or no effect on their transient occupancy. Of these eleven factors, five are entirely (or



nearly so) outside the control of the operator. These include Marina Location, Availability of Transient Slips, Local Marina Competition, Number of Cruising Boats, and Increased Number of Day Users.

Availability of Transient Slips

Many transient boating facility operators indicate anecdotally that they do not have enough slips to respond to peak demand on summer weekends and holidays, while often experiencing low transient demand during off-peak times. There is often pressure to increase the number of seasonal slips where demand warrants, which further reduces transient availability at peak times, but improves overall financial performance. Strategies that offer more flexible transient mooring options, and potentially greater transient density, such as increasing linear broadside mooring rather than traditional slips may help address this issue.

With 76.12% (51) of the 67 facilities indicating availability of slips as positively affecting their facility, and only 5.97% (4) indicating a negative affect, the data suggests that the majority of facilities have a sufficient number of transient slips most of the time.

Marina Location

Geographic location has a significant impact on transient boater demand, with transient demand driven largely by a facility's location along a well-travelled transient cruising route, such as Leland, or the facility's location near a highly desirable destination, such as Traverse City. The best of all worlds of course is to be both a highly desirable destination and situated at the cross roads of multiple cruising routes, such as Mackinac Island. Somewhat less important, but still relevant, is the general proximity to high density boating areas such as Detroit or Chicago, which benefit both southern Lake Huron and Lake Michigan. Lake Superior facilities generally suffer from the great distances from high density areas.

Since the majority of harbor facilities are located in highly desirable destinations, it is no surprise that 71.27% (47) of the 67 responses indicated their location positively affects their facility, and only 13.64% (9) indicate their location negatively affects their facility.

Dock Utilities (Wi-Fi, Power, and Water)

Nearly two thirds of participants, 64.18% (43), indicated that their Dock Utilities create a positive effect. Equal numbers, 17.91% (12) each, indicate their Dock Utilities either no effect or a negative effect. As electrical utility infrastructure is upgraded to comply with new NEC requirements, a significant effort to educate boaters on ESD and how their boats may be leaking harmful current into the water is needed to reduce the frustration that some boaters are expressing. Wi-Fi is becoming more and more important to boaters, and where some facilities may have suggested in the past that the lack of Wi-Fi is a positive (get away from it all!), the reality is that Wi-Fi is generally considered nearly essential to boaters.

Pumpout Facilities

With Clean Vessel Act grant funds available to support installation of new or replacement of old marine pumpout units, it is little surprise that a significant majority of state-funded facilities, 62.69% (42) indicate a positive effect, and only 7.46% (5) indicate a negative effect. The CVA program limits the price that can be charged for a pump-out (currently \$5). Somewhat like fuel facilities, the ability to offer pumpout facilities in



remote areas can be a challenge due to staffing and often the lack of sanitary utility infrastructure to accept the waste limits the ability to provide pumpout facilities.

Marina Boater Facilities (Restrooms, Showers, Laundry, and Lounge)

A significant majority, 62.12% (41) of operators indicate that their Marina Boater Facilities create a positive effect on their facility, while nearly equal numbers of 12 and 13 (18.18% and 19.7%) indicate that their Marina Boater Facilities have either no effect or a negative effect. This is somewhat surprising, as boater surveys generally rate the presence and quality of Boater Facilities as very important. However, there is also some indication from other recent boater surveys for individual facilities at Whitefish Point State Harbor, for example, that suggests that boater expectations can vary depending on the type of facility and their individual expectations. At Whitefish Point State Harbor, where Boater Facilities are limited to a Vault Toilet, boater satisfaction with the facilities provided is higher than one might expect. This in no way suggests that improved facilities are unimportant to these boaters, but rather that they may not be as high a priority as other elements.

Number of Cruising Boats

Obviously, the number of potential transient guests has a major impact on the performance of a facility, as is most readily seen on the low end in Lake Superior. Again, the quality and location of the facility can minimize the impact of a smaller number of potential customers or make an out of the way facility in poor condition very difficult to operate successfully.

With only 7.46% (5) of facilities indicating a negative effect from the number of cruising boats, and 59.7% (40) indicating a positive effect, the data suggest that the number of potential customers is generally in line or exceeding available slip supply.

Dock Condition

As existing harbor facilities age, the condition of the docks becomes more difficult to maintain at an acceptable level. While the overall age of the MDNR Harbor system might suggest that many of the existing facilities may be starting to decline, the majority of operators, 56.92% (37) indicate that the condition of their docks positively affects their facility. On the other hand, nearly a quarter of facilities, 24.62% (16) indicate that the condition of their docks negatively affects their facility.

Fuel Facilities

Fuel facilities are provided at most facilities, resulting in 48.25% (33) of facilities indicating fuel as a positive effect and only 14.93% (10) indicating fuel facilities as a negative effect. While the presence of fuel would rarely be considered a negative effect, it is possible that existing fuel facilities are in poor condition, or that demand for fuel is so low that problems with fuel contamination begin to occur due to extended time in the harbor fuel storage tanks. The requirement that all marine fuel facilities be operated by harbor staff limits the number of facilities where fuel can be offered, in particular in relatively remote areas on Lake Superior such as Whitefish Point or Eagle Harbor State Harbors.



Increasing Number of Day Users

As day users by definition do not spend the night in transient boating facilities, their impact on transient facilities is limited to hourly or shopper dock usage.

Increasing Day Use boaters are generating a positive effect on 47.76% (32) of the participating facilities, with only 3 facilities (4.48%) indicating a negative effect.

The remaining seven factors are more or less within the control of the facilities, given adequate funding to improve and/or maintain the harbor infrastructure. These elements all relate to the marina design and layout, quality of infrastructure, and presence or lack thereof of key amenities. These include Dock Condition, Dock Configuration, Boater Facility Buildings, Fuel, Pumpout, and Dock Utilities. Questions about the value of these elements were also asked in the Boater Survey, which will identify any variance in the perceived value of these elements between the harbor operators and the boaters.

Dock Configuration

As the survey responses indicate the average size of boats is growing longer and wider over time, the configuration of marinas can sometimes create issues if the facility was built with narrower boats in mind. Other configuration issues can include wave climate and accumulation of sediment, or other functional issues. Dock Configuration generates negative effects in only 15.38% (10) of the participating facilities, and positive effects in 44.62% (29) of facilities.

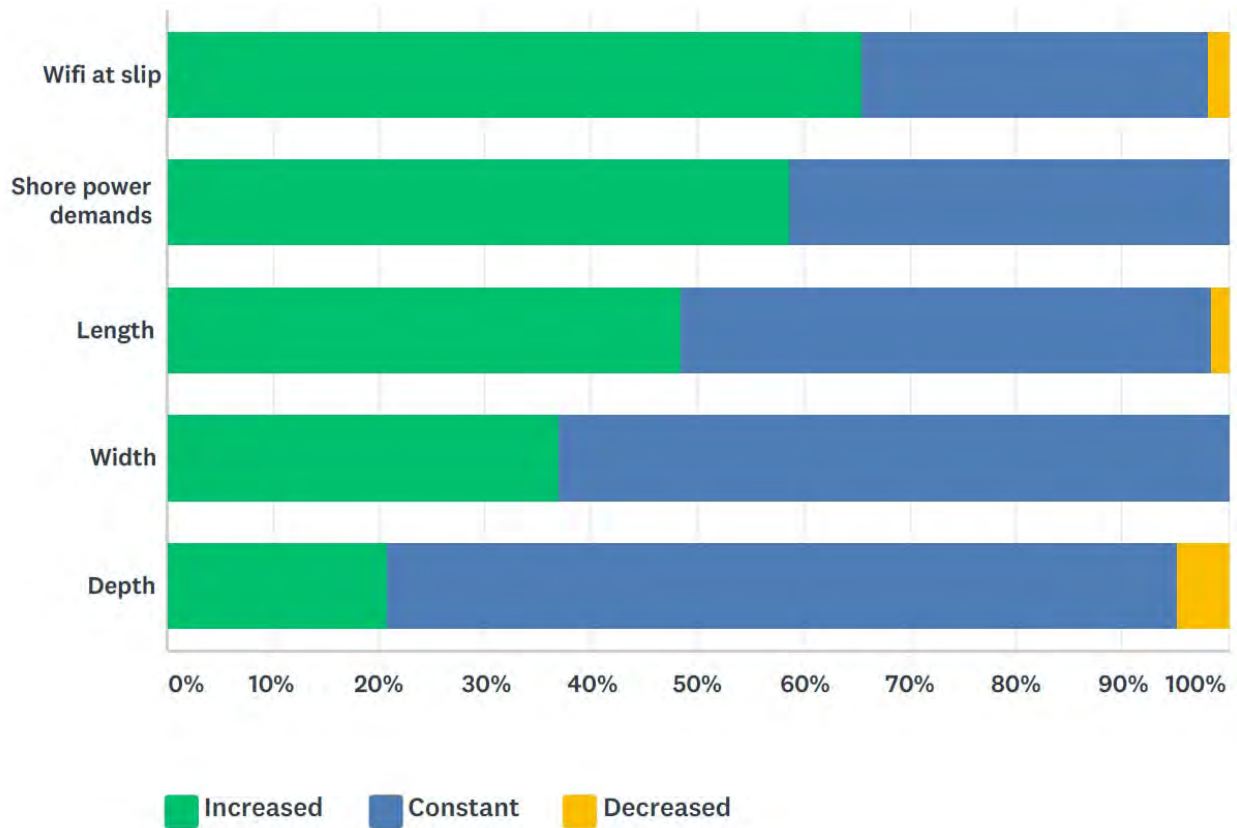
Local Marina Competition

Obviously, facilities in more remote areas such as Whitefish Point or Leland Harbor face little or no competition from nearby facilities, whereas facilities in Grand Traverse Bay face more competition from nearby facilities. In an area of extremely high demand like Grand Traverse Bay this isn't much of an issue since a marina market analysis completed in 2011 and updated in 2018 (Edgewater Resources, 2011/2018) indicates that there is much more demand than all of the facilities in the region can supply, but the quality of the facility and operations staff is very important to the success of the facility.

The majority of facilities, 71.21% (47) indicate that Local Competition does not affect their facility, and 18.18% (12) indicate a positive effect. This suggests that most facilities do not face significant local competition.



Question 10: What changes do you see in the boats in your facility?



This question offered a list factors related to the size and utility needs of the boats utilizing harbors, and asked participants to indicate if these factors are increasing, decreasing, or remaining constant. These factors included boat Length, Width (beam), Depth (draft), Shore Power Demand, and Wi-Fi at Slip Demand.

Length

Of the 67 participants, 48.48% (32) indicated that they are seeing longer boats than in the past, and only one participant indicated they are seeing more shorter boats. This corresponds with national statistics from the National Marine Manufacturers Association (NMMA).

Width

A smaller number, but still significant at 36.92% (24) of operators indicated that they are seeing more wider boats than in the past, with none indicating any increase in narrower boats.

Depth

The majority of operators, 74.6% (47), saw no increase in the depth of boats, however 20.63% (13) did note an increase in depth and 4.76% (3) noted a decrease. This too corresponds with NMMA statistics, as



boat depth (draft) has remained relatively constant for the length of a given boat. The increased draft noted is likely associated with the presence of larger powerboats rather than sailboats.

Shore Power Demand

Shore power demand is increasing along with boat size, but even boats in the 26'-40' range are seeing significant increases in power demand due to the addition of televisions, stereo systems, microwaves, and refrigerators. 58.73% (37) of participants indicated an increase in power demand, with none indicating any decrease. As more and more electronic devices are added to boats, shore power demand continues to increase according to both leading marine electrical industry experts Chris Dolan and Gary Loftis, and the article “An Introduction to Electrical System Design for Cruising Vessels” in *OutbackMarine.com*. While not currently a significant factor here in the United States, the European boating market is experiencing the beginning of the electrification of powerboats. When that trend inevitably reaches the US market, the impact will more likely be felt on fuel sales rather than electrical infrastructure, as existing current marine systems are reasonably well suited to battery charging.

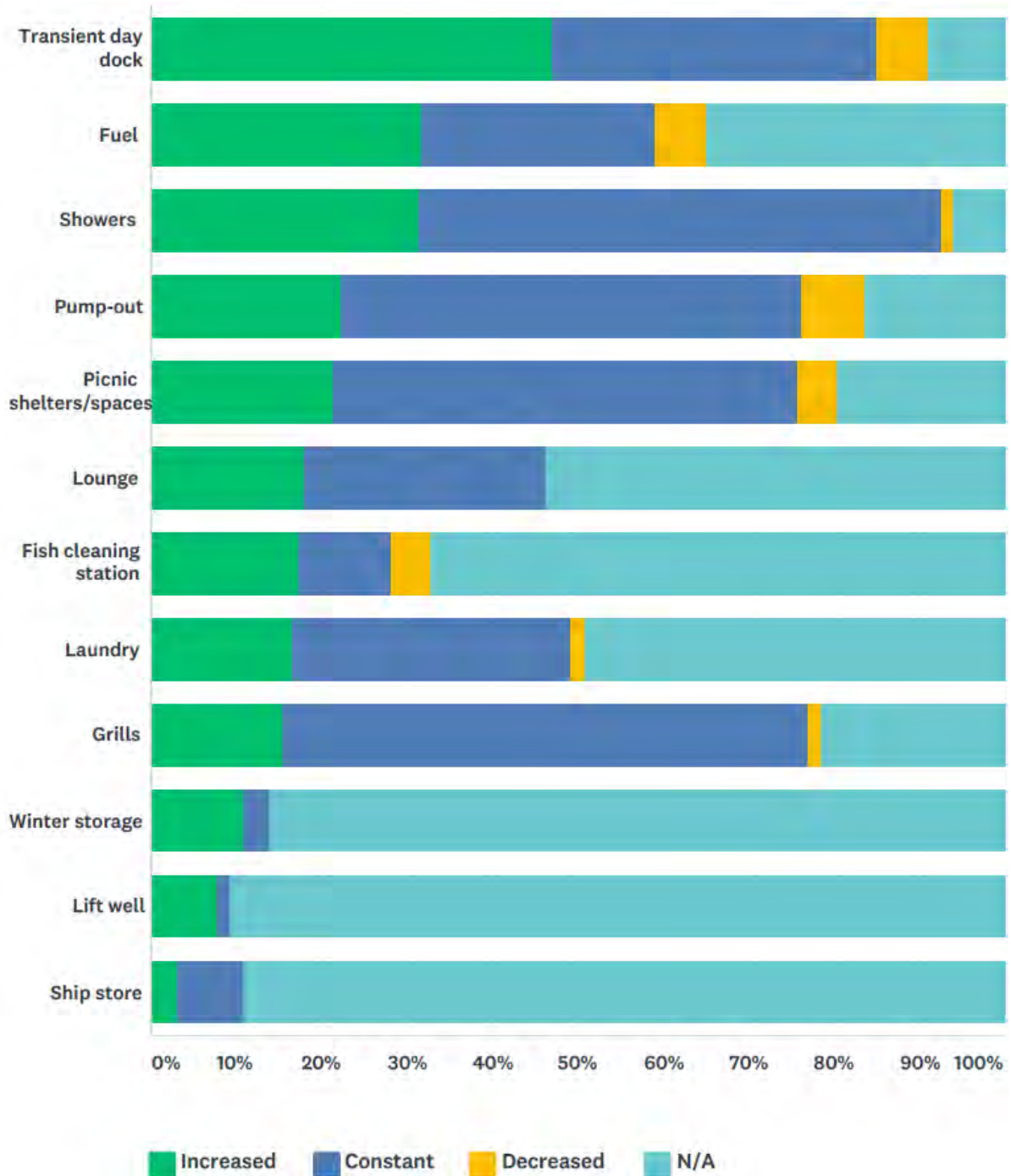
Wi-Fi at the Slip

Wi-Fi at the slip is becoming all but essential in modern marinas and has replaced hardwired communication in nearly all new marina construction. Wi-Fi is a technology that is relatively easy to upgrade, and private companies now offer turnkey Wi-Fi services that relieve marina operators of the responsibility to maintain and troubleshoot the technology. 65.52% of survey participants noted an increase in demand for Wi-Fi in the slip, with only one noting a decrease. It is likely that many of the 32.76% (19) participants who indicated no change already have effective Wi-Fi systems.



Question 11: What changes do you see in the way boaters are using your facility?

This question offered a list of elements related to the amenities provided in MDNR harbors, and asked participants to indicate if the use of these elements are increasing, decreasing, or remaining constant. If a facility does not offer the element, the indicated N/A. The elements identified in the survey included Transient Day Docks, Fuel, Pumpout, Picnic Shelters, Grills, Fish Cleaning Stations, Showers, Laundry, Lounge, Ship Store, Winter Storage, and Lift Well.





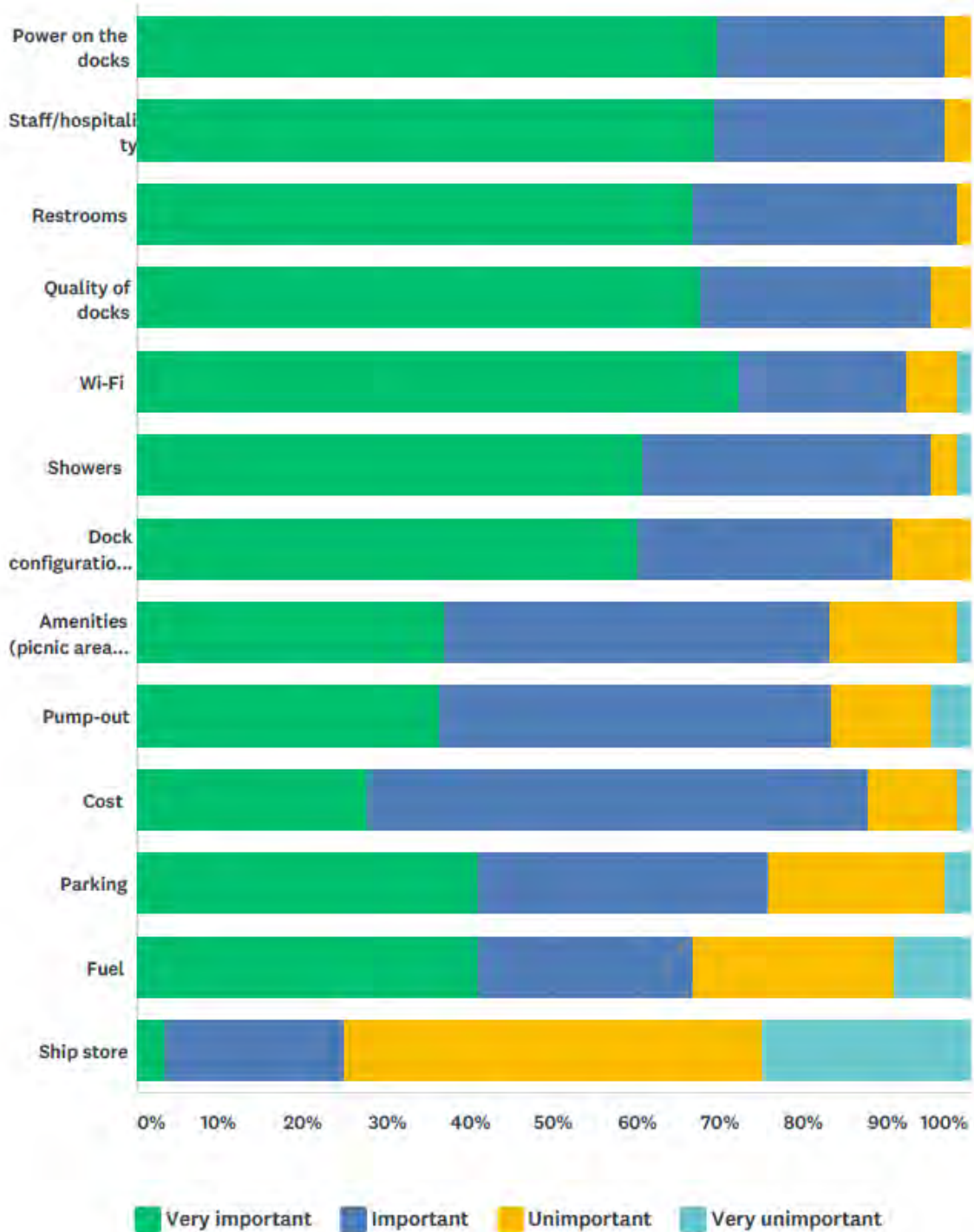
	INCREASED	CONSTANT	DECREASED	N/A	TOTAL
Transient day dock	46.97% 31	37.88% 25	6.06% 4	9.09% 6	66
Fuel	31.82% 21	27.27% 18	6.06% 4	34.85% 23	66
Pump-out	22.39% 15	53.73% 36	7.46% 5	16.42% 11	67
Picnic shelters/spaces	21.21% 14	54.55% 36	4.55% 3	19.70% 13	66
Grills	15.38% 10	61.54% 40	1.54% 1	21.54% 14	65
Fish cleaning station	17.19% 11	10.94% 7	4.69% 3	67.19% 43	64
Showers	31.34% 21	61.19% 41	1.49% 1	5.97% 4	67
Laundry	16.42% 11	32.84% 22	1.49% 1	49.25% 33	67
Lounge	17.91% 12	28.36% 19	0.00% 0	53.73% 36	67
Ship store	3.08% 2	7.69% 5	0.00% 0	89.23% 58	65
Winter storage	10.77% 7	3.08% 2	0.00% 0	86.15% 56	65

While a small number of respondents indicated a decrease in demand in a few of these categories, in no case did any more than five of the 67 survey participants note a decrease in demand for any of the elements. On the other hand, increased use of Transient Day Docks was noted by 46.97% (31) of the participants. Increase in the use of Fuel and Showers was noted by 31.82% (21) each, followed by Pumpout and Picnic Shelters, at approximately 22% each. Increased use of Laundry, Lounge, Grills, and Fish Cleaning Stations was noted by approximately 15%-18% of participants.



Question 12: Please indicate how important these potential changes are to your facility to benefit your boaters.

This question offered a list of elements from questions 10 and 11 and asked participants to indicate how important improvements to these elements would benefit the boaters. They were asked to indicate if the element would be Very Important, Important, Unimportant, or Very Unimportant. Very few elements were rated as Very Unimportant, usually by only one or two participants. The notable exception was the Ships Store, which was rated Very Unimportant by 25% (16) of the participants.



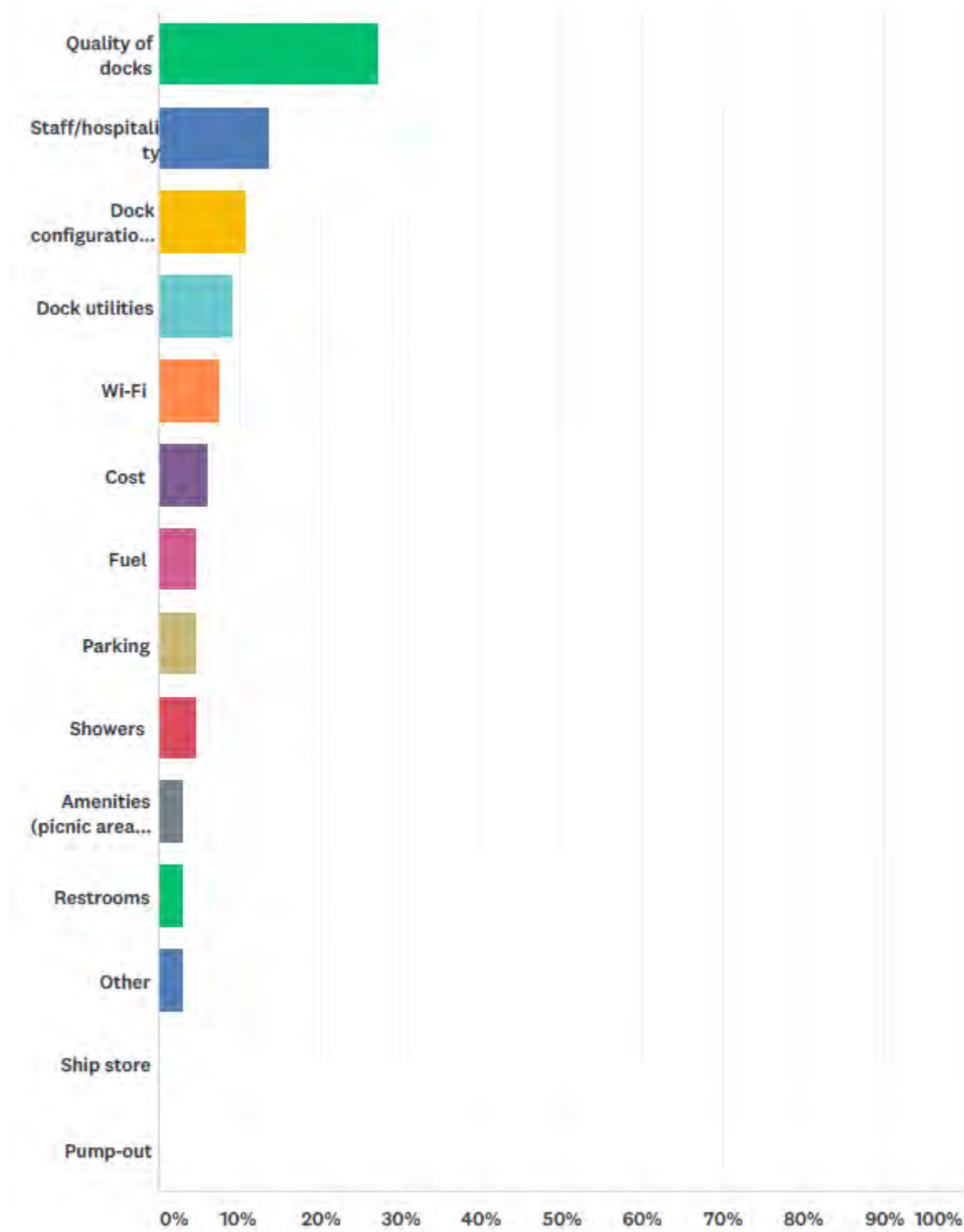


	VERY IMPORTANT	IMPORTANT	UNIMPORTANT	VERY UNIMPORTANT	TOTAL	WEIGHTED AVERAGE
Power on the docks	69.70% 46	27.27% 18	3.03% 2	0.00% 0	66	1.33
Staff/hospitality	69.23% 45	27.69% 18	3.08% 2	0.00% 0	65	1.34
Restrooms	66.67% 44	31.82% 21	1.52% 1	0.00% 0	66	1.35
Quality of docks	67.69% 44	27.69% 18	4.62% 3	0.00% 0	65	1.37
Wi-Fi	72.31% 47	20.00% 13	6.15% 4	1.54% 1	65	1.37
Showers	60.61% 40	34.85% 23	3.03% 2	1.52% 1	66	1.45
Dock configuration/sizes	60.00% 39	30.77% 20	9.23% 6	0.00% 0	65	1.49
Amenities (picnic areas, play areas, etc)	36.92% 24	46.15% 30	15.38% 10	1.54% 1	65	1.82
Pump-out	36.36% 24	46.97% 31	12.12% 8	4.55% 3	66	1.85
Cost	27.69% 18	60.00% 39	10.77% 7	1.54% 1	65	1.86
Parking	40.91% 27	34.85% 23	21.21% 14	3.03% 2	66	1.86
Fuel	40.91% 27	25.76% 17	24.24% 16	9.09% 6	66	2.02
Ship store	3.13% 2	21.88% 14	50.00% 32	25.00% 16	64	2.97

The element identified as most important was Wi-Fi by 72.31% (47) of participants, however the overall weighted average places Power on the Docks, Staff Hospitality, Quality of Docks, and Restrooms as more important overall. The weighted average noted in the right column of the figure above indicates an overall score that averages the combined responses, with the lowest number representing the highest overall importance. By weighted average, the order of importance in these elements to boaters would be Power on the Docks, Staff/Hospitality, Restrooms, Quality of Docks, Wi-Fi, Showers, Dock Size/Configuration, Site Amenities, Pumpout, Parking, Cost, Fuel, and finally Ship Store. While this data was reported by the staff and operators of the facilities, which might suggest to some that this might place the value of Staff/Hospitality higher in importance than boaters would, recent boater surveys for MDNR suggest that the quality of staff is indeed one of the most important keys to the success of a marina.



Question 13: Please choose which of the changes listed below is the most important and indicate why



This question asked participants to indicate which of the elements in Question 12 was most important. When asked to choose a single element, some differences in importance and priorities exist when



compared to the weighted average comparison. At the top of the list by a wide margin is Quality of Docks, which received eighteen votes, double Staff/Hospitality, which came in second. Dock Configuration was third with seven votes, then Dock Utilities with six, and Wi-Fi with five. Cost was noted as most important by only 6% (4) of participants, while all of the others received two or three votes except Pumpout and Ship Store which received no votes.

Question 14: What is the biggest challenge you face in your facility on a regular basis?

This question provided the opportunity for facility operators to provide open ended comments. In addition to the summary of comments provided below, the full text of each comment is included in the appendices of this report. 66 participants provided comments, which fell generally into one of two categories: Operational Challenges and Infrastructure Challenges.

Operational Challenges

The most common operational concern raised was the challenge of finding, hiring, and retaining qualified staff, with seven facilities mentioning the issue. This is particularly important, since boaters generally rate the quality of staff among the most important elements in a marina. The next most often mentioned challenge is dealing with waterfowl, in particular cleaning up after them every morning. Only three facilities mentioned improving occupancy and finding customers, often related to challenges associated with facilities located in more remote areas. Funding for infrastructure improvements and improving financial performance of the facility, as well as managing boaters and preventing boaters from using the facility without registering were also mentioned.

What is notable about this list of elements is how many of them are interrelated and have a greater effect on less active, out of the way facilities. Being located in a remote area often has a negative impact on occupancy and makes staffing the facility more challenging, which together lead to lower occupancy and financial performance.



Infrastructure Challenges

Operators identified more challenges associated with infrastructure elements than operations, and not surprisingly indicated high water was the biggest challenge in the summer of 2019. With eleven facilities listing this issue, it was the most commonly identified challenge. Close behind high water were three interrelated elements including not having enough slips to serve boaters, inadequate power utilities, and issues associated with aging docks and utilities. As addressed above in the sections on occupancy trends, older facilities often have slip sizing and configuration that no longer corresponds well with the current boating market. As these facilities age, they cost more to maintain and can serve fewer boaters, creating an expense downward cycle. Inadequate Wi-Fi was mentioned by several facilities, along with a desire to replace fixed docks with floating. Only one facility mentioned the need to dredge in the near future, which is obviously due to current record high water levels. Had this survey been performed in 2013, it is likely that many more facilities would have indicated the need to dredge due to record low water conditions.

Question 15: What would be the most important change to your facility to benefit your staff/operations?

This question provided the opportunity for facility operators to provide open ended comments. In addition to the summary of comments provided below, the full text of each comment is included in the appendices of this report. 62 participants provided comments, which fell generally into one of two categories: Operational Changes and Infrastructure Changes

Operational Changes

While the vast majority of comments were focused on Site Infrastructure elements, several facilities mentioned the need for up to date equipment and technology in their offices, in particular Wi-Fi and internet service. While operators most often associate the need for Wi-Fi with boaters, harbor staff also rely on Wi-Fi for daily operational activities. Increasing the number of staff, improving training, and raising staff pay to attract more and better employees was also mentioned. One participant from Leland Harbor noted that excessive demand for slips in the harbor is the biggest operational challenge.

Infrastructure Changes

The most important changes to benefit the staff and operations noted by fourteen participants each were equally focused on the need to modernize upland buildings and upgrade the dock infrastructure, followed by five participants each identifying Wi-Fi, Showers/Restrooms, enlarging/updating Fuel Dock, and updating Utilities on the docks. Overall, more comments associated with landside building improvements were provided than any other element.



Question 16: What trends do you see evolving in your facility that we need to plan for in the future?

This question provided the opportunity for facility operators to provide open ended comments. In addition to the summary of comments provided below, the full text of each comment is included in the appendices of this report. 60 participants provided comments, and more than one third of them indicated that operators need to plan for longer and wider boats with higher power demands, preferably on floating docks to better respond to more rapidly changing water levels. 20% of the facilities indicated that operators need to plan for complete renovation and/or major upgrades to existing facilities to meet rising boater expectations, along with increasing the type and quality of landside boater amenities. One strategy to consider in response to the evolving boating market is to increase the amount of broadside docking, which offers much greater flexibility in the operation of the facility. A single 300' long broadside pier offers much greater operational flexibility than ten traditional 30' slips, and a number of modern marinas, particularly those focusing on transient boaters, are shifting towards a model with nearly all broadside docking where possible.

With the rising cost of waterfront property, one growing trend across the Great Lakes is the rise of the “cottage boater”, which is a boater that invests in a larger boat rather than a waterfront second home. These boaters spend the weekends on their boats rather than a cottage, and they tend to spend more time in the marina than a traditional boater according to Dave Brown, Director of Marina Operations at Desmond Marine in Port Huron, Michigan. They tend to have higher expectations for the quality of the facilities and amenities, and with all the additional time spent on the boat, they have very high expectations for Wi-Fi in the slip. This also increases parking demands, adds visitors to the marina, and increases the need for security in the harbor. While not necessarily associated with the cottage boater, more and more boaters are bringing their pets on board, which increases the need for pet friendly facilities.

A number of comments related to the impacts of climate change include responding to higher and more rapidly changing water levels, adding wave attenuation and/or breakwaters, and preparing for increased winter damage. At times of record high water levels, many more emergency shoreline projects are underway, which has led to increased costs due to the high demand for marine contractors and shoreline armoring materials. If high water levels persist for many years as the period of low water did from 1999-2013, significant investments in shoreline protection and raising utility systems may be necessary.



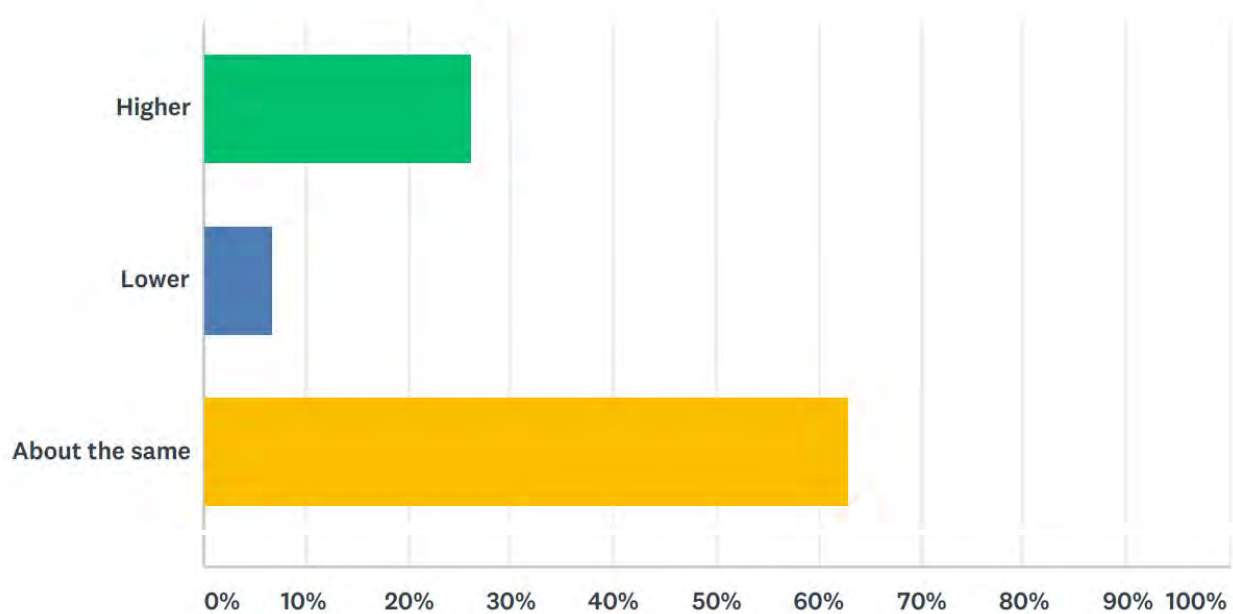
BOATING ACCESS SITE SPECIFIC SECTION

Questions 17 through 26 were Boating Access Site specific questions, so only those indicating their facility includes a Boating Access Site in Question 1 were asked these questions. There were generally around 165 responses to these questions. As some of the Harbors also have Boating Access Sites, there will be some overlap in the responses.

Question 17: Please indicate which Boating Access Site you operate:

Question 17 provided a menu listing of the Boating Access Sites included in the original facility assessment survey. A complete list of the facilities that responded and identified their facility as a participant is included in the full survey document in the appendices.

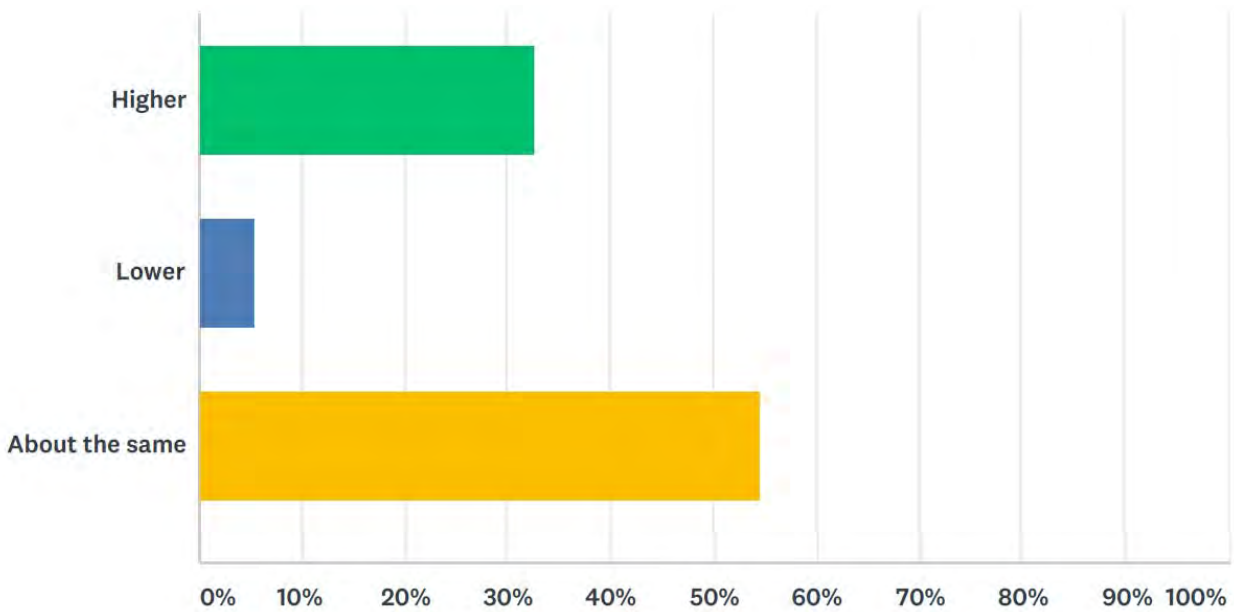
Question 18: Is your facility usage higher, lower, or about the same over last year?



Of the 165 participants who responded to this question, 26.06% (43) indicated that their facility saw higher usage in 2019 over last year, while only 6.67% (11) saw lower usage. Several comments provided suggest that the likely reasons for lower usage in some facilities was related to damage and flooding from high water levels.



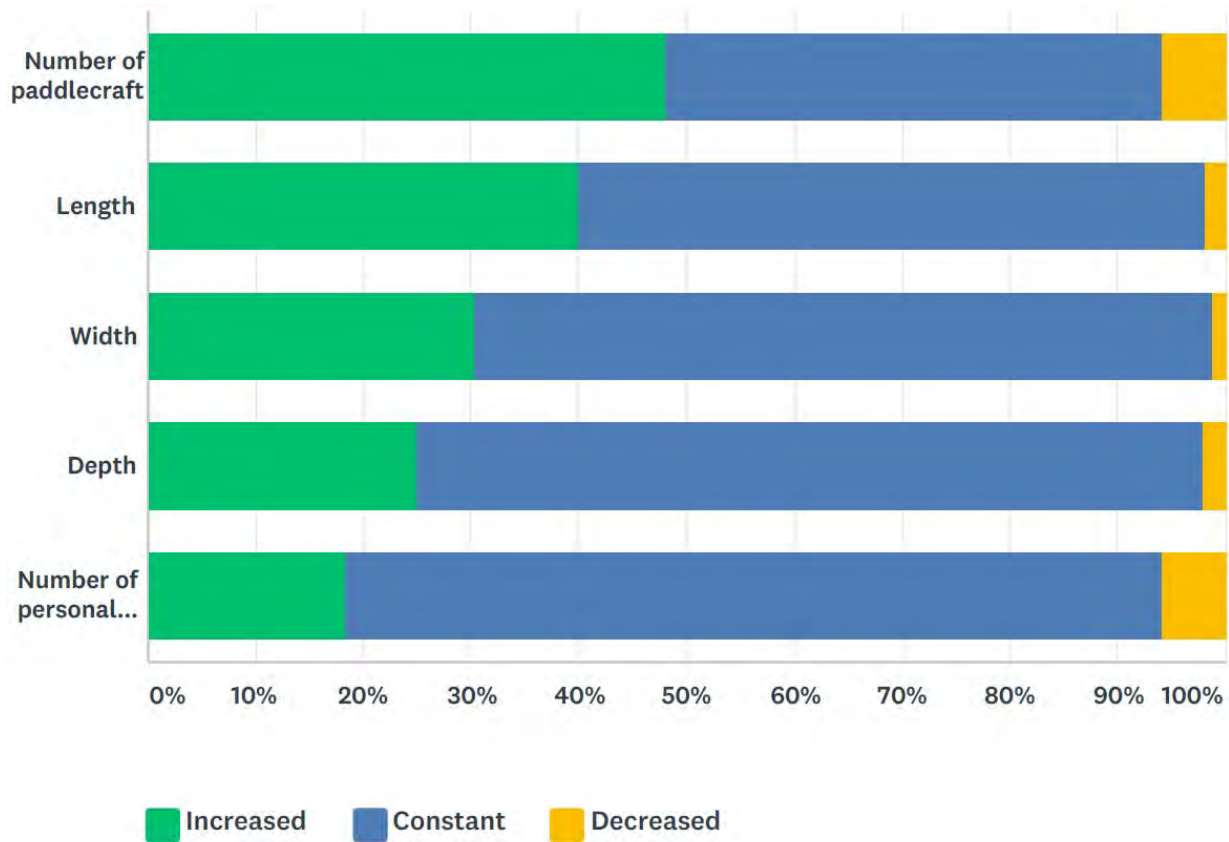
Question 19: Is there a discernable trend in your facility usage (higher, lower, or consistent) over the last five years?



Of the 165 participants who responded to this question, 32.73% (54) indicated that their facility has experienced a trend towards higher usage over the last five years, while only 5.45% (9) saw lower usage. Several comments provided suggest that the likely reasons for higher usage in some facilities was related to recent facility renovations and higher water attracting more boaters.



Question 20: What changes do you see in the boats in your facility?



This question offered a list of factors related to the size and utility needs of the boats utilizing BAS facilities, and asked participants to indicate if these factors are increasing, decreasing, or remaining constant. These factors included boat Length, Width (beam), Depth (draft), Number of Personal Watercraft, and Number of Paddlecraft.

Number of Paddlecraft

Nearly half of all facilities, 48.39% (75) noted an increase in the number of paddlecraft using their facilities, while only 5.81% (9) indicated a decrease in the number of paddlecraft. 40% of the comments provided in response to this question were associated with kayaks and paddlecraft impacts on BAS facilities, with several facilities noting that paddlecraft users are occupying vehicle/trailer parking spaces, and in at least one case increasing at an “overwhelming” rate.

Length

Of the 162 participants, 39.62% (63) indicated that they are seeing longer boats than in the past, and only three participants indicated they are seeing more shorter boats. This corresponds with national statistics from the National Marine Manufacturers Association (NMMA) in their Powerboat Sales Trends 2006-2018 report. With recent record high water levels, some facilities are seeing more larger boats that could not use the facilities at lower water levels.



Width

A smaller number, but still significant at 29.94% (47) of operators indicated that they are seeing more wider boats than in the past, with only two indicating any increase in narrower boats. Multiple facilities commented on the increase in the number of wider tri-toon pontoon boats.

Depth

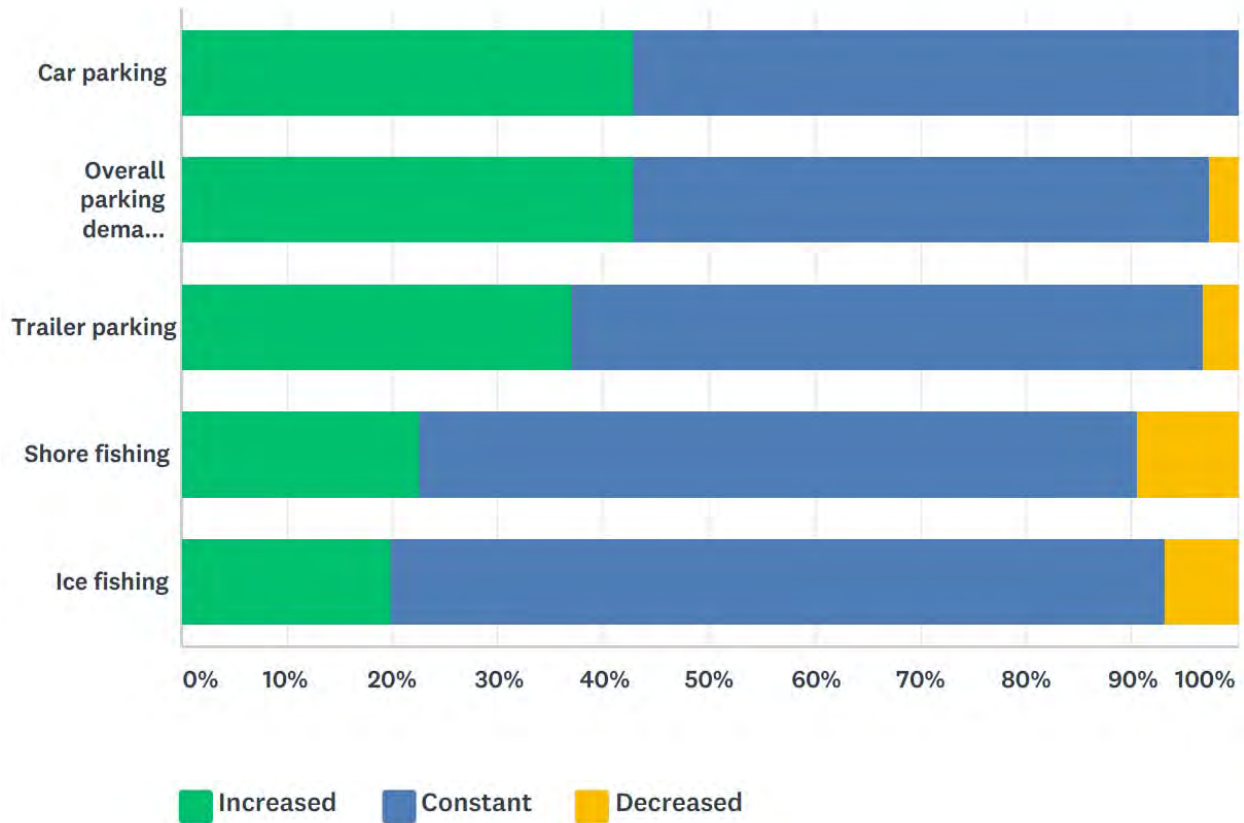
The majority of operators, 73.03% (111), saw no increase in the depth of boats, however 25% (38) did note an increase in depth only 1.97% (3) noted a decrease. This corresponds with both the Harbor Use Data and NMMA statistics, as boat depth (draft) has remained relatively constant for the length of a given boat.

Number of Personal Watercraft

Of the 162 participants, 18.42% (28) saw an increase in the number of Personal Watercraft using their facilities, and 5.92% (9) indicated a reduction.



Question 21: What changes do you see in the use of your landside facilities?



This question offered a list of activities related to the use of MDNR BAS landside facilities, and asked participants to indicate if these factors are increasing, decreasing, or remaining constant. These activities included Car Parking, Trailer Parking, Overall Parking Demand, Shore Fishing, and Ice Fishing.

Car Parking

Of the 163 participants, 42.41% (67) indicated an increase in demand, while none indicated any decrease. The increase in parking demand is associated with both an increase in paddlecraft use and adjacent non-boating activities.

Trailer Parking

36.48% (58) indicated an increase in trailer parking demand, while only 3.14% (5) indicated a decrease in demand. Along with an increase in boat size, tow vehicle sizes are also increasing.



Overall Parking Demand

42.41% (67) indicated an increase in overall parking demand, while only 2.53% (4) indicated a decrease in demand. A number of facilities indicated that overall parking demand is increasing due to activities unrelated to boat launching, such as nearby parks, waterfowl hunting, fishing tournaments, festivals, etc.

Shore Fishing

22.45% (33) indicated an increase in shore fishing demand, while 9.52% (14) indicated a decrease in demand. Fishing and boating facilities can sometimes be in conflict with one another, so some facilities ban fishing from launch piers and nearby shoreline areas.

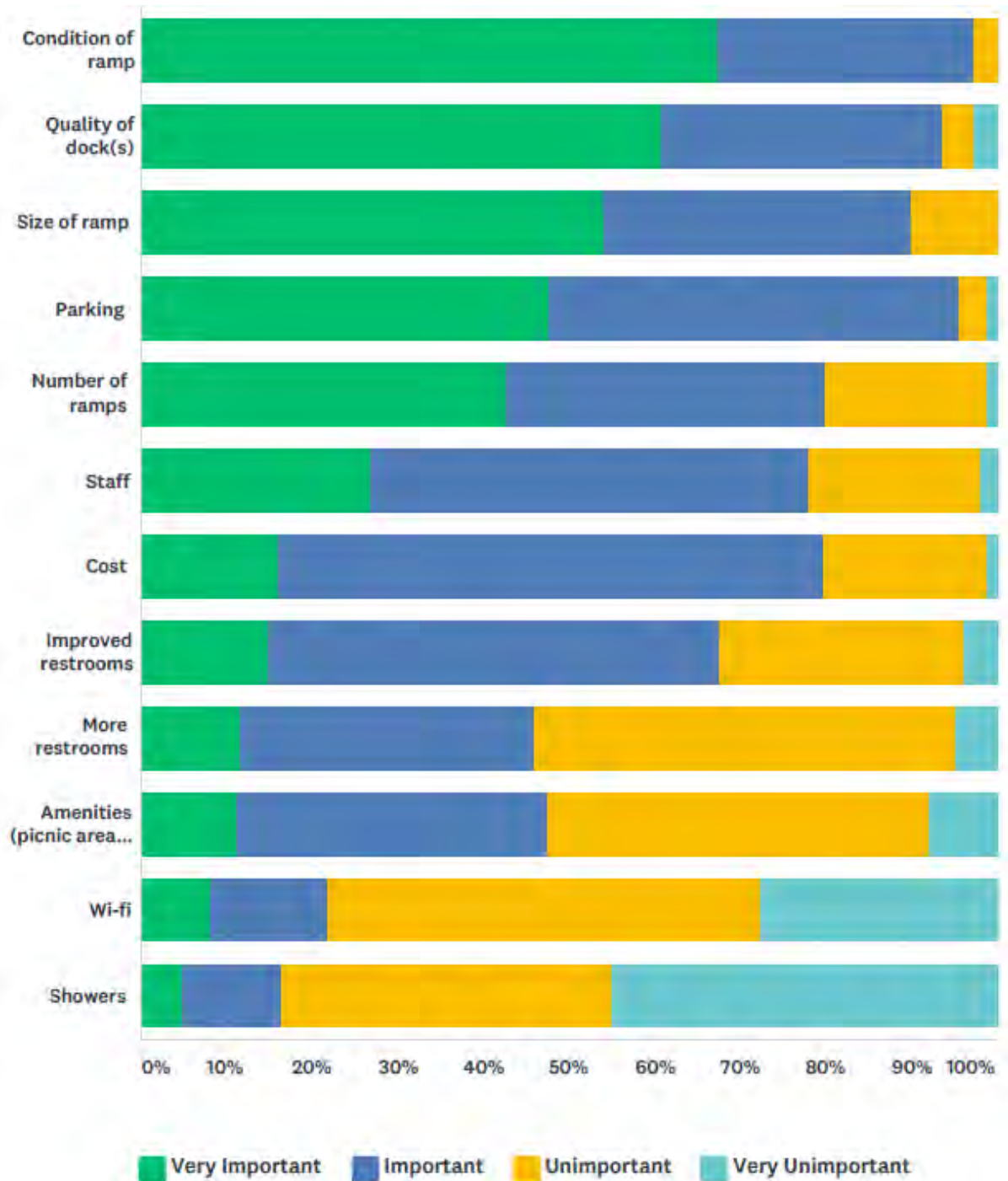
Ice Fishing

19.31% (28) indicated an increase in ice fishing demand, while 6.9% (10) indicated a decrease in demand. At least one facility (Harrisville Harbor) has seen an increase in ice fishing activity to the point where requests to plow the parking lot more often in the winter are being made.



Question 22: Please indicate how important these potential changes are to your facility to benefit your boaters.

This question offered a list of elements from questions 20 and 21 and asked participants to indicate how important improvements to these elements would benefit the boaters. They were asked to indicate if the element would be Very Important, Important, Unimportant, or Very Unimportant. Very few elements were rated as Very Unimportant, and with the exception of Wi-Fi, usually by fewer than five participants.





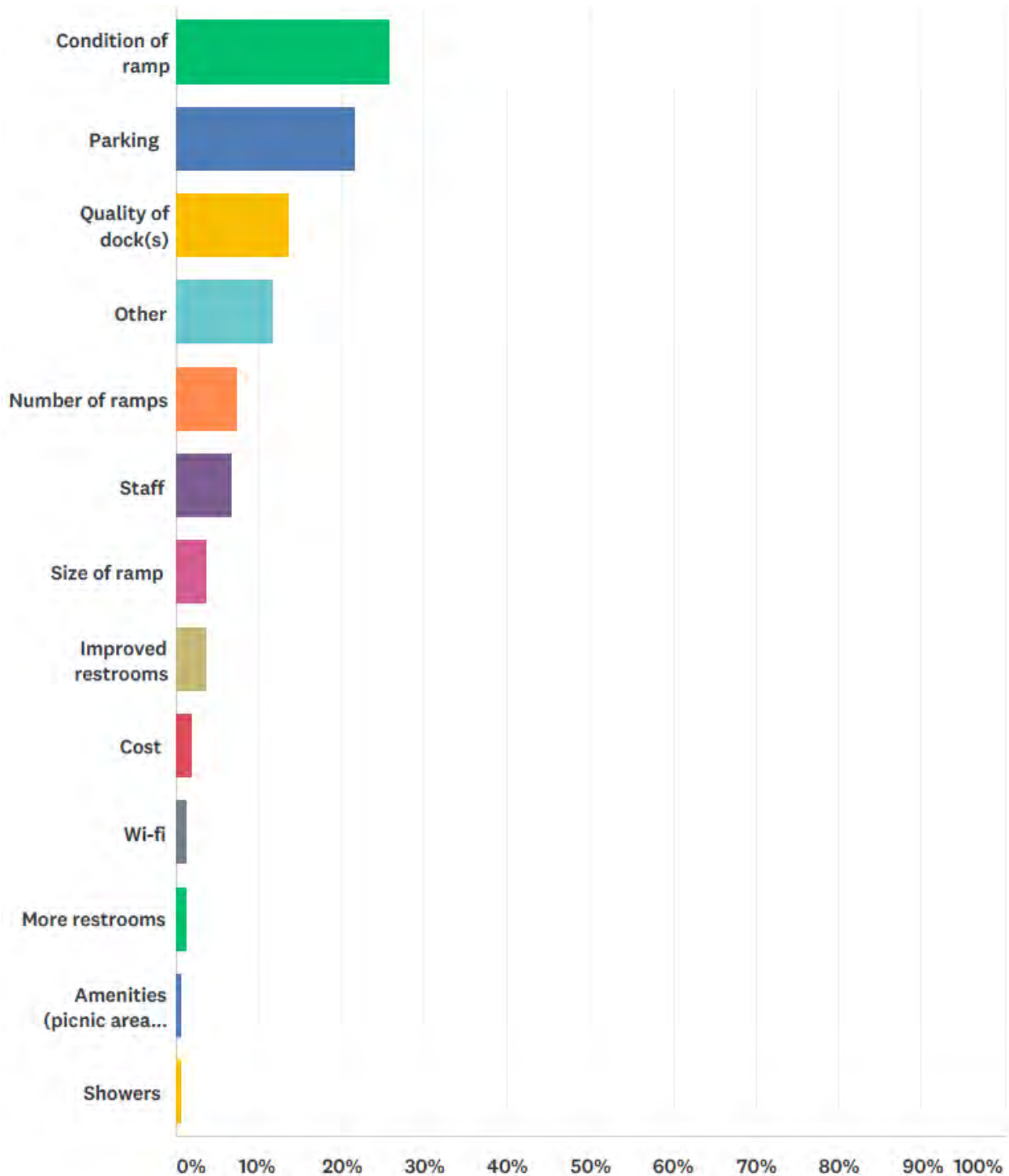
	VERY IMPORTANT	IMPORTANT	UNIMPORTANT	VERY UNIMPORTANT	TOTAL	WEIGHTED AVERAGE
Condition of ramp	67.30% 107	30.19% 48	2.52% 4	0.00% 0	159	1.35
Quality of dock(s)	60.76% 96	32.91% 52	3.80% 6	2.53% 4	158	1.48
Size of ramp	54.09% 86	35.85% 57	10.06% 16	0.00% 0	159	1.56
Parking	47.50% 76	48.13% 77	3.13% 5	1.25% 2	160	1.58
Number of ramps	42.58% 66	37.42% 58	18.71% 29	1.29% 2	155	1.79
Staff	26.62% 41	51.30% 79	20.13% 31	1.95% 3	154	1.97
Cost	15.82% 25	63.92% 101	18.99% 30	1.27% 2	158	2.06
Improved restrooms	14.94% 23	52.60% 81	28.57% 44	3.90% 6	154	2.21
More restrooms	11.49% 17	34.46% 51	49.32% 73	4.73% 7	148	2.47
Amenities (picnic areas, play areas, etc)	11.04% 17	36.36% 56	44.81% 69	7.79% 12	154	2.49
Wi-fi	8.11% 12	13.51% 20	50.68% 75	27.70% 41	148	2.98
Showers	4.76% 7	11.56% 17	38.78% 57	44.90% 66	147	3.24

Not surprisingly, the element identified as most important was the condition of the ramp by 67.3% (107) of participants, followed closely by Quality of Docks, Size of Ramp, Parking, and Number of Ramps all noted by 42% or more of participants. The weighted average noted in the right column of the figure above indicates an overall score that averages the combined responses, with the lowest number representing the highest overall importance. By weighted average, the order of importance in these elements to boaters would be Condition of Ramp, Quality of Docks, Size of Ramp, Parking, Number of Ramps, Staff, Cost, Improved Restrooms, More Restrooms, Amenities, Wi-Fi, and finally Showers.

Half of the participants submitting comments indicated the need for a boat wash station in the supplemental comments, with others mentioning the need for additional docking space while boaters retrieve their vehicles.



Question 23: Please choose which of the above changes is the most important and indicate why



This question asked participants to indicate which of the elements in Question 22 was most important. When asked to choose a single element, some differences in importance and priorities exist when compared to the weighted average comparison. At the top of the list by a wide margin is Condition of the



Ramp, which received 42 votes, over Parking, which came in second with 34 votes. The Quality of Docks came in third with 22 votes, followed by Number of Ramps, Staff, Size of Ramp, and Improved Restrooms. Dock Configuration was third with seven votes, then Dock Utilities with six, and Wi-Fi with five. All of the others received one to three votes. A large number of participants noted that boat wash facilities would be very helpful in addressing aquatic invasive species, and several mentioned the need for fish cleaning stations.

Question 24: What is the biggest challenge you face in your facility on a regular basis?

This question provided the opportunity for facility operators to provide open ended comments. In addition to the summary of comments provided below, the full text of each comment is included in the appendices of this report. 139 participants provided comments, which fell generally into one of two categories: Operational Challenges and Infrastructure Challenges.

Operational Challenges

The most common operational challenge by far is adequate staffing, followed by funding, and management of congestion and traffic. Keeping up with trash, restroom cleanliness, and bird dropping removal. A demand for greater law enforcement to reduce operating under the influence and speeding through congested areas on the water were all listed as significant challenges.

Infrastructure Challenges

The most common infrastructure challenges revolved around parking, including capacity, condition of the lots, and managing conflicts between car top parking (vehicles that carry boats or paddlecraft to the site on the roof instead of using a trailer) vs vehicles with trailers. After parking, maintenance and all the issues associated with keeping an aging/outdated facility working well was the next biggest challenge. The current high water levels were the next most common challenge identified, followed by concerns about the configuration of facilities and the need to expand facilities that are simply too small to meet current demand. A small number of facilities noted they regularly need to close or turn away boaters when parking areas are full.

Question 25: What would be the most important change to your facility to benefit your staff/operations?

This question provided the opportunity for facility operators to provide open ended comments. In addition to the summary of comments provided below, the full text of each comment is included in the appendices of this report. 131 participants provided comments, which fell generally into one of two categories: Operational Changes and Infrastructure Changes.

Operational Changes

While the majority of comments were focused on Site Infrastructure elements, several operational elements were noted, nearly all of them focused on the need to hire additional staff, increase funding, offer higher pay, and provide better training. Several facilities indicated the need for automated pay stations to reduce staff needs.



Infrastructure Changes

The most important changes to Boating Access Sites noted by twenty of the participants focused on adding parking, with a subset of this group specifically mentioning adding separate parking for vehicles without trailers. The next most often mentioned element was updating the overall facility, with several noting the need to expand or reconfigure the facility. Nearly as many participants (fourteen) noted the need to resurface the roadways, parking, and other asphalt surfaces. A few other items were mentioned, including adding a dedicated kayak launch, power, fishing piers, restrooms, and additional staging areas.

Question 26: What trends do you see evolving in your facility that we need to plan for in the future?

This question provided the opportunity for facility operators to provide open ended comments. In addition to the summary of comments provided below, the full text of each comment is included in the appendices of this report. 123 participants provided comments, which are categorized and summarized below:

Paddlesports

Making up approximately 25% of responses, by far the trend most often noted was the increase in use of BAS facilities by paddlers of all types. Twenty-five facilities noted that they expect use to continue increasing significantly, with many noting the need to provide ADA compliant kayak launching facilities. The parking issues associated with this use include the need for more dedicated car (non-trailer) parking to reduce conflicts with trailer boaters, and the need to provide “drop and go” access for car top paddlers who do not park.

Increasing Boat Size and Use

Next in frequency at around 16% of responses was the increasing size and length of boats, along with greatly increasing demand bringing more and more boats into the facility. Some areas noted the need to add more BAS facilities in the area to reduce congestion at existing launches, and some noted significant increase in Personal Watercraft (PWC) use.

Fishing and More Diverse Uses

The next category of uses involve increases in fishing activities such as shore fishing and potential conflicts with people fishing from launch docks, and increased congestion in BAS facilities due to fishing tournaments. Some participants suggested the need to add fish cleaning stations to all BAS facilities. A number of facilities noted that they are seeing much more use of their facilities for non-boating related activities, and suggest that MDNR should prepare for a greater diversity of users looking to access the waterfront even if they don't have a boat. Other uses noted include hunting, hiking, and events in adjacent parks.



Other

A few other elements were noted by one or two participants. These included an expectation that MDNR will need to be more responsive to environmental concerns, Aquatic Invasive Species (AIS), and shoreline habitat improvements. Several facilities noted a need for more access to boat wash stations and mentioned increased property owner interest in AIS issues.

LOCK and DAM SPECIFIC SECTION

Questions 27 through 33 were Lock and Dam Site specific questions, so only those indicating their facility includes a Lock and Dam in Question 1 were asked these questions. Two Lock and Dam facilities are considered in this report. The Cheboygan Lock and Dam, which is owned and operated by MDNR, and the Crooked River Lock in Alanson, which has been under operational management by Emmet County since 2012, in partnership with the MDNR. Approximately 30 individuals at other facilities mistakenly participated in this section and provided responses oriented to BAS or Harbor facilities rather than Lock & Dam specific comments. In order to avoid including this potentially misleading feedback, the information provided below is from the one operator response from Cheboygan Lock and Dam, as well as direct feedback from interviews with the Lock and Dam operations staff at both Cheboygan and Alanson to ensure the survey results are focused on the feedback from the Lock and Dam operators only.

Both Lock facilities at Cheboygan and Alanson are currently focused primarily on navigation and water level management functions. There are picnic facilities, a fishing pier, and portage access around the Cheboygan Dam, which some boaters access by using the temporary mooring facilities along the staging area upriver of the lock. This can cause confusion when boats begin to enter the lock, as this area is not intended to provide any mooring except lock staging. Vehicular parking is provided at the adjacent BAS for the facilities at the Cheboygan Lock.

While the lock structures (distinct from the Cheboygan Dam) provide access and support to recreational boating activities, they provide no direct recreational amenities immediately on site. As no recreational amenities are provided at either facility beyond the lifting infrastructure, the focus of improvements noted has been on functional infrastructure for the locks themselves, and improvements to support staff comfort and efficiency. Neither facility currently provides restrooms for lock operators in the immediate area where they work due to the logistics of either plumbing or servicing of portable toilet facilities.

While recreational boating in general is increasing in use, and the inland waterway system is seeing a similar increase in paddlecraft activity, the operators of Cheboygan Lock and Dam indicate that the overall use of the facilities, the size of boats (length, beam, and draft), and number of paddlecraft using the facilities has remained generally constant over the past five years. No consistent data on the number of craft utilizing the Alanson facility year by year was available, however the operator of the Cheboygan Lock facility indicated that passages have decreased over the last twenty years from a high of 7,000-9,000 per year to around 4,000 per year in 2019. No data on boat size is collected.



A far more important issue affecting the operation of the Cheboygan Lock and Dam is related to the role of the facility in managing water levels upstream on Mullet Lake, particularly in advance of or responding to significant weather events. Local staff have some ability to anticipate weather events and draw down water levels to create capacity for expected stormwater volumes, however, constrictions in the river between Mullet Lake and the dam make the river capacity insufficient to reduce water levels in the lake without reducing downstream river levels to the point where significant navigation hazards are created.

In discussion with County staff at Alanson, the facility is in need of maintenance (painting, welding, repairs, etc), and improvements in site potable water and restroom facilities for staff. As there are no recreational amenities for boaters at the lock, and unlike Cheboygan there are no other recreational facilities in the immediate area to provide amenities for boaters, improvements at this site could support both staff and the boating public.



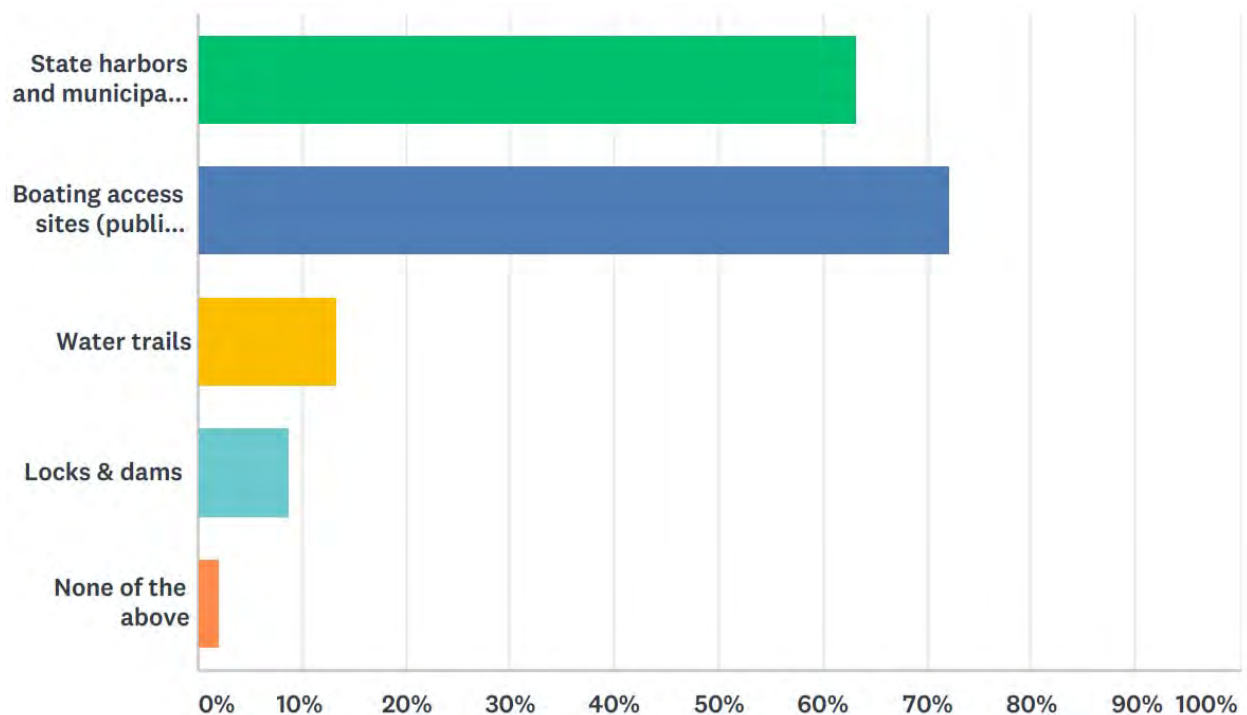
MDNR STATEWIDE BOATER TRENDS SURVEY

The MDNR Statewide Facility Assessment Boater Trend Survey was completed from September 26 through October 7, 2019. The survey was distributed by MDNR staff by DNR email bulletin and by DNR news digest.

The goal of the Boater Survey was to complement the Facility Operator survey with direct feedback from boaters. A 27-question survey was prepared, which included both multiple choice questions and the opportunity for each boater to provide open ended comments on anything they desired. The survey was conducted using the online Survey Monkey tool, and approximately 3,748 people responded to the survey. A detailed report of the survey responses may be found in the appendix.

Question 1: Please indicate the facility type(s) you use:

The purpose of this question was to provide context on how the survey participants used a variety of facilities, including Harbors, Boating Access Sites, Water Trails, Locks and Dams, or None of the Above. As some participants use more than one type of facility, the total number of use types indicated was 5,926.



The most used facilities are Boating Access Sites, with 72.19% (2,681) of participants indicating use, and 63.14% (2,345) of participants indicated they use Harbors. Comparatively smaller fractions of users, 13.33% (495) indicated they use water trails and 8.89% (330) indicated they use Lock and Dam facilities. Just over 2% (75) of participants indicated they use none of the above facilities.

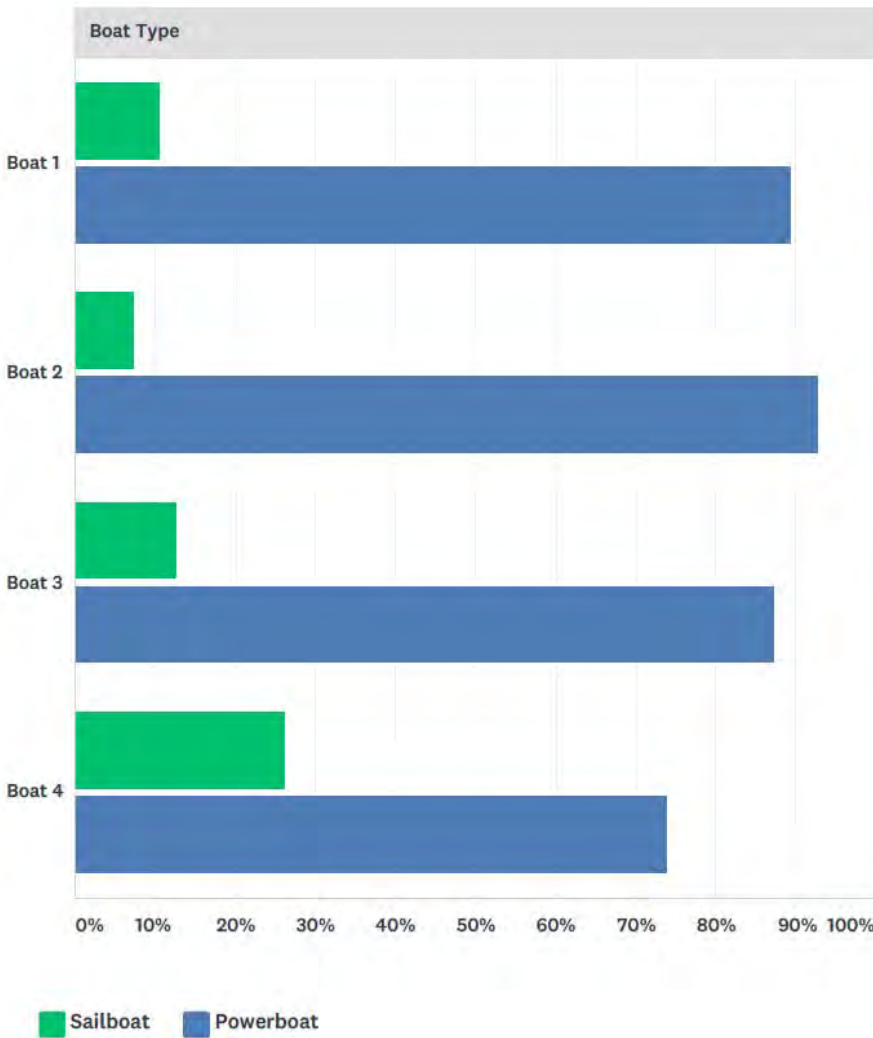


Question 2: What type(s) of boat(s) do you own? Please indicate length, draft, beam, and storage location for each. Skip question if you do not own.

Participants were able to indicate ownership and provide detail on up to four boats. 3,430 participants responded.

Boat Type

The first part of the question identifies the mix of powerboats and sailboats.



Overall Summary Results

	Sailboat		Powerboat		Total
Boat 1	10.64%	362	89.36%	3040	3402
Boat 2	7.23%	85	92.77%	1090	1175
Boat 3	12.82%	40	87.18%	272	312
Boat 4	26.19%	22	73.81%	62	84
	10.24%	509	89.76%	4464	4973



As indicated in the chart that combines the overall summary results above, 89.76% of respondents indicated they own powerboats, and 10.24% indicated they own sailboats. The chart below summarizes the responses received only from those participants who identified as Port to Port Cruisers in Question 4, resulting in a ratio of 81.9% power/18.1% sail, which corresponds rather closely with the results of 80/20 power to sail observed in other harbor surveys for MDNR Harbor Facilities over the last ten years.

Summary Results for Particants Who Identified Themselves as Port to Port Cruisers in Question 4

	Sailboat		Powerboat		Total
Boat 1	22.27%	235	77.73%	820	1055
Boat 2	8.86%	35	91.14%	360	395
Boat 3	10.78%	11	89.22%	91	102
Boat 4	17.39%	4	82.61%	19	23
	18.10%	285	81.90%	1290	1575

Multiple Boat Ownership

The total number of boats identified in the survey was 4,973. 68.4% (3,402) of these were listed as “Boat 1”, and 23.6% (1,175) were listed as “Boat 2”, making up 92% of the boats in the survey. “Boat 3” represented 6.3% (312), and only 1.7% (84) indicated ownership of at least four boats. 92% of boat owners own at least two boats, not including personal watercraft or paddlecraft, which are addressed in Question 3.

Boat Length

Boat lengths were identified and categorized to improve MDNR understanding of boat sizes in 2019, and establish a baseline for future surveys to track changes in boat size over time.

	< 8'		8' - 10'		11' - 15'		16' - 25'				Total
Boat 1	0.23%	8	0.56%	19	8.32%	284	52.36%	1788			1788
Boat 2	2.65%	31	6.68%	78	31.08%	363	49.40%	577			577
Boat 3	4.55%	14	16.56%	51	34.42%	106	37.34%	115			115
Boat 4	6.02%	5	10.84%	9	44.58%	37	33.73%	28			28
	1.17%	68	3.16%	157	16.88%	790	50.42%	2608			2608

	26' - 29'		30' - 34'		35' - 39'		40' - 44'		45' - 49'		50' - 60'		>60'		Total
9.03%	329	9.43%	322	8.90%	304	5.30%	181	3.05%	104	1.82%	62	0.41%	14	3415	
4.54%	53	2.48%	29	1.54%	18	1.11%	13	0.17%	2	0.26%	3	0.09%	1	1168	
3.90%	12	0.32%	1	1.30%	4	0.65%	2	0.65%	2	0.00%	0	0.32%	1	308	
1.20%	1	1.20%	1	1.20%	1	1.20%	1	0.00%	0	0.00%	0	0.00%	0	83	
7.94%	396	7.10%	353	6.57%	327	3.96%	197	2.17%	108	1.31%	65	0.32%	16	4974	

By far, the majority of boats are within the 16'-25' length, with just over half (50.4%, 2,499) of the boats in this category. The next largest category is 11'-15' length, with 15.9% (790) boats reported, and another 4.3% (214) 10' in length or less reported. These categories represent the majority of boats in the survey at 70.6% of all boats, and are most likely used as trailerable boats. USFWS uses 26' as the defining point between trailerable and non-trailerable boats for purposes of the USFWS Boating Infrastructure Grant Program that funds transient boating facilities for “non-trailerable” boats 26' and longer. While there are boats over this length that are used primarily from trailers and BAS facilities, the vast majority of boats 26' and longer are located in Harbors or kept in the water in other locations.

For boats kept primarily in the water, the majority included in this survey are 39' in length or less, including 26'-29' at 7.9% (393) of boats; 30'-34' at 7.1% (353) of boats; and 35'-39' at 6.5% (325) of boats. The numbers drop off rapidly from here as the length of boat increases, with 4% of boats between 40' and 44',



2.2% between 45' and 49', and 1.3% of boats 50'-60' in length. Boats over 60' in length represent approximately 0.3% of all boats included in the survey. For the purposes of assessing boat size relative to harbor slip demand, the percentage breakdown of just those boats 26' and longer (29.4% or 1,456 boats) is as follows:

- 26'-29': 27% (393)
- 30'-34': 24.2% (353)
- 35'-39': 22.3% (325)
- 40'-44': 13.5% (197)
- 45'-49': 7.4% (108)
- 50'-60': 4.4% (64)
- >60': 1.2% (16)

Boat Draft

Boat Draft, or the depth of the boat below the waterline, determines the depth of water necessary for a boat to safely navigate in a given area. Draft is critically important during times of low water, when many boats drawing 8' or more may have trouble entering harbors during storm conditions. While this category of boats is very small, they represent a meaningful portion of marina revenues as they tend to be larger and pay the highest slip rates.

	< 5'	5'-8'	>8'	Total			
Boat 1	82.04%	2165	16.60%	438	1.36%	36	2639
Boat 2	94.61%	842	4.72%	42	0.67%	6	890
Boat 3	93.56%	218	4.29%	10	2.15%	5	233
Boat 4	93.44%	57	6.56%	4	0.00%	0	61
	85.85%	3282	12.92%	494	1.23%	47	3823

The vast majority of boats have a draft of less than five feet, representing 85.85% (3,282) of the boats indicated draft in the survey (3,441 responses provided). 12.92% (494) boats reported a draft of 5'-8', and the remaining 1.23% (47) boats reported a draft greater than 8'. It is likely that nearly all of the boats reporting a draft of 8' or more are sailboats located on the Great Lakes. For reference, the deepest draft recreational boats on the lake are maxi class racing sailboats that draw 15' or more.

With current record high monthly mean water levels occurring throughout the summer of 2019, water depth is not nearly as big an issue as when water levels were at record lows just a few years ago in 2013.



Boat Beam

The “beam” of a boat is the measure of the width of a boat at its widest point. This dimension is critical in the design and layout of Harbor facilities, impacting primarily the spacing of finger piers to allow safe navigation in and out of slips. There can also be an impact to the design of Boating Access Site facilities, however the impact is limited to the Michigan Department of Transportation’s maximum allowable trailer width of 8’ on non-designated highways and 8’-6” on designated highways. Anything over that width requires an oversize load permit and chase/follow vehicles, and would apply only to those BAS facilities that are also used for commercial launching of oversize boats such as Charlevoix Municipal BAS.

	< 10'	10'-12'	13'-15'	>15'	Total				
Boat 1	63.43%	1554	18.82%	461	13.59%	333	4.16%	102	2450
Boat 2	88.27%	730	8.34%	69	2.42%	20	0.97%	8	827
Boat 3	95.81%	206	1.86%	4	2.33%	5	0.00%	0	215
Boat 4	89.29%	50	5.36%	3	1.79%	1	3.57%	2	56
	71.59%	2540	15.14%	537	10.12%	359	3.16%	112	3548

The majority of boats have a beam less than 10’, including 71.59%, (2,540) of the 3,441 boats reporting beam. 15.14% (537) reported a beam of 10’-12’, 10.12% (359) reported a beam of 13’-15’, and the remaining 3.16% (112) reported a beam greater than 15’.

Boat Storage

This question asked participants to indicate where their boat is stored during the boating season.

	State harbor or municipal marina	Private marina	Trailer	In water at private residence	Home / garage storage	Total					
Boat 1	5.45%	135	28.77%	712	20.20%	500	8.61%	213	36.97%	915	2475
Boat 2	2.24%	19	14.94%	127	24.35%	207	14.24%	121	44.24%	376	850
Boat 3	1.81%	4	3.62%	8	24.89%	55	17.19%	38	52.49%	116	221
Boat 4	5.26%	3	3.51%	2	26.32%	15	21.05%	12	43.86%	25	57
	4.47%	161	23.56%	849	21.57%	777	10.66%	384	39.74%	1432	3603

Approximately 61.31% (2,209) of participants keep their boat in a garage at home or on a trailer, while the rest, 38.69% (1,394) keep their boats in the water either at a private residence or a public or private marina.



Question 3: Please provide information on any personal watercraft or paddlecraft you own. Please skip question if you do not own any.

This question is intended to improve MDNR understanding of ownership patterns among PWC and paddlecraft users.

	1	2	3	4	5 or more	Total
Personal Watercraft (jet skis)	63.11%	260 29.85%	123 4.61%	19 1.46%	6 0.97%	4 412
Kayaks	25.02%	331 46.33%	613 12.09%	160 9.90%	131 6.65%	88 1323
Paddleboards	60.59%	206 31.18%	106 5.00%	17 2.06%	7 1.18%	4 340
Canoes	77.04%	547 15.49%	110 4.65%	33 1.69%	12 1.13%	8 710
Other (please specify)						198

PWCs make up 13.82% (412) of the survey sample, with 29.85% of those owning at least two or more personal watercraft such as a jet ski or similar. Non-motorized kayaks, stand up paddleboards, and canoes make up the remaining 86.18% (2,571) boats in this category, with more than half of those noted as kayaks. 80.61% (1,913) of the 2,373 paddlecraft users responding indicating they own two or more boats, with just over 4.21% (100) of them indicating they own five or more boats.

PWC or Paddlecraft Length

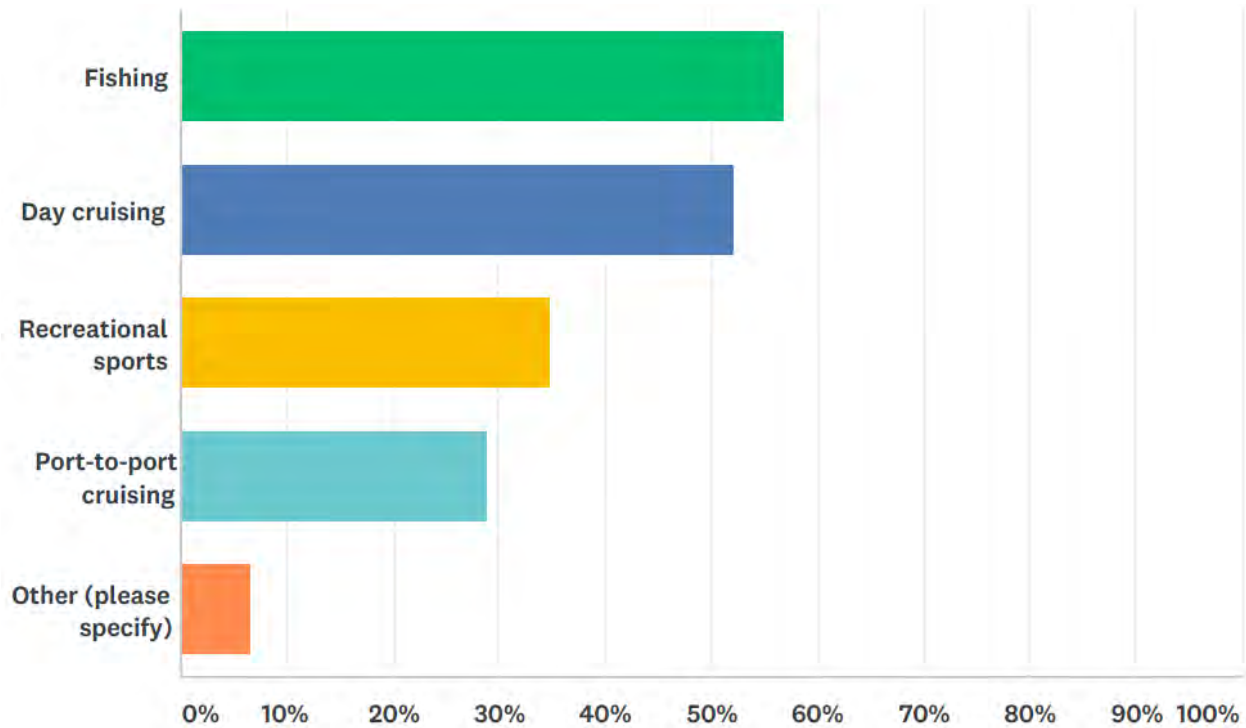
	Less than 8'	8'-10'	11'-13'	14'-20'	More than 20'	Total
Personal Watercraft (jet skis)	19.09%	71 44.62%	166 22.31%	83 9.14%	34 4.84%	18 372
Kayaks	7.59%	83 46.48%	508 35.04%	383 10.43%	114 0.46%	5 1093
Paddleboards	9.39%	26 44.77%	124 41.52%	115 4.33%	12 0.00%	0 277
Canoes	1.19%	7 10.54%	62 23.81%	140 64.12%	377 0.34%	2 588
Other (please specify)						198

PWC or Paddlecraft Storage Location

	State harbors and municipal marinas		Private marina		Trailer	In water at private residence		Home / garage storage		Multiple locations	Total		
Personal Watercraft (jet skis)	1.72%	6	10.92%	38	12.93%	45	20.11%	70	51.44%	179	2.87%	10	348
Kayaks	0.60%	6	0.91%	9	2.41%	24	5.73%	57	88.23%	877	2.11%	21	994
Paddleboards	2.01%	5	5.22%	13	0.80%	2	11.24%	28	79.12%	197	1.61%	4	249
Canoes	0.00%	0	0.38%	2	2.63%	14	3.76%	20	89.85%	478	3.38%	18	532
Other (please specify)													198



Question 4: What are your primary reasons for boating?



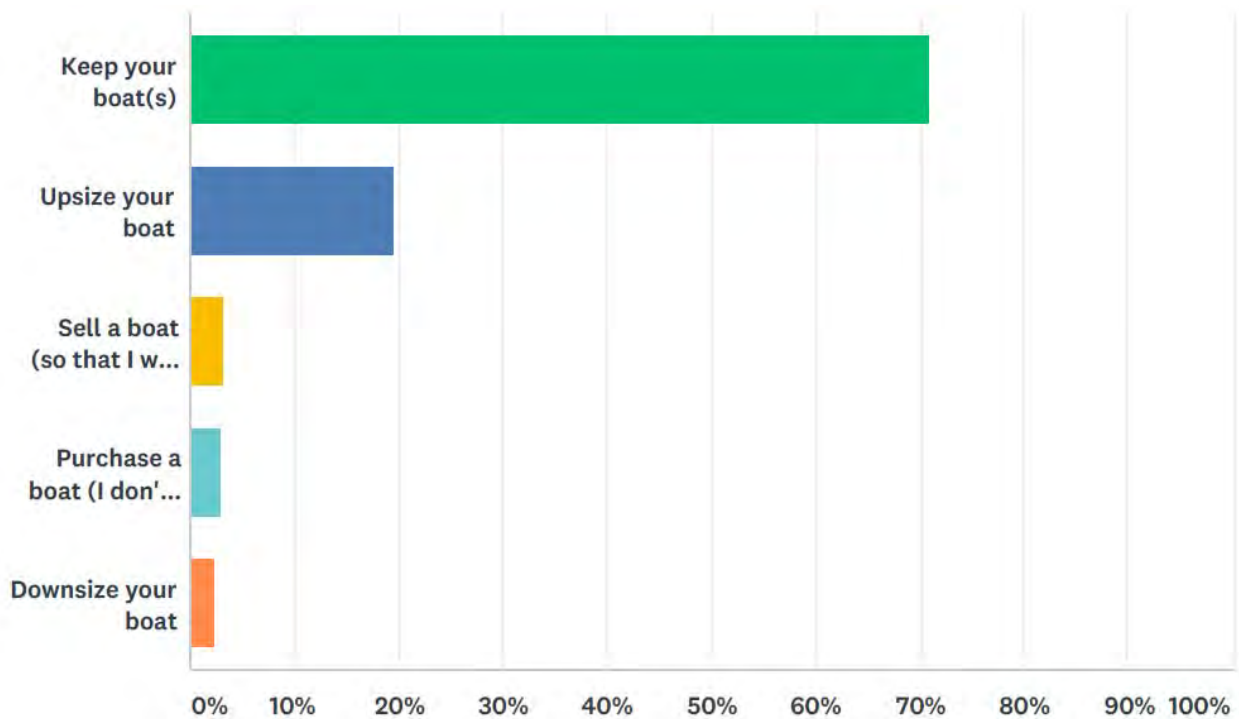
ANSWER CHOICES	RESPONSES	
Fishing	56.81%	2,116
Day cruising	52.00%	1,937
Recreational sports	34.79%	1,296
Port-to-port cruising	28.86%	1,075
Other (please specify)	6.50%	242
Total Respondents: 3,725		

An analysis of the responses provided under the “Other” category suggest that boaters are engaged in boating as part of a wide range of other activities. These include:

- Racing
- Hunting
- Great Loop Touring (“Loopers”)
- Scuba Diving
- Liveaboard
- Exercise, and Exercise for Disabled Boaters
- Boat Camping
- Environmental Survey Work, AIS Surveys, Water Quality Sampling, Bathymetric Surveys



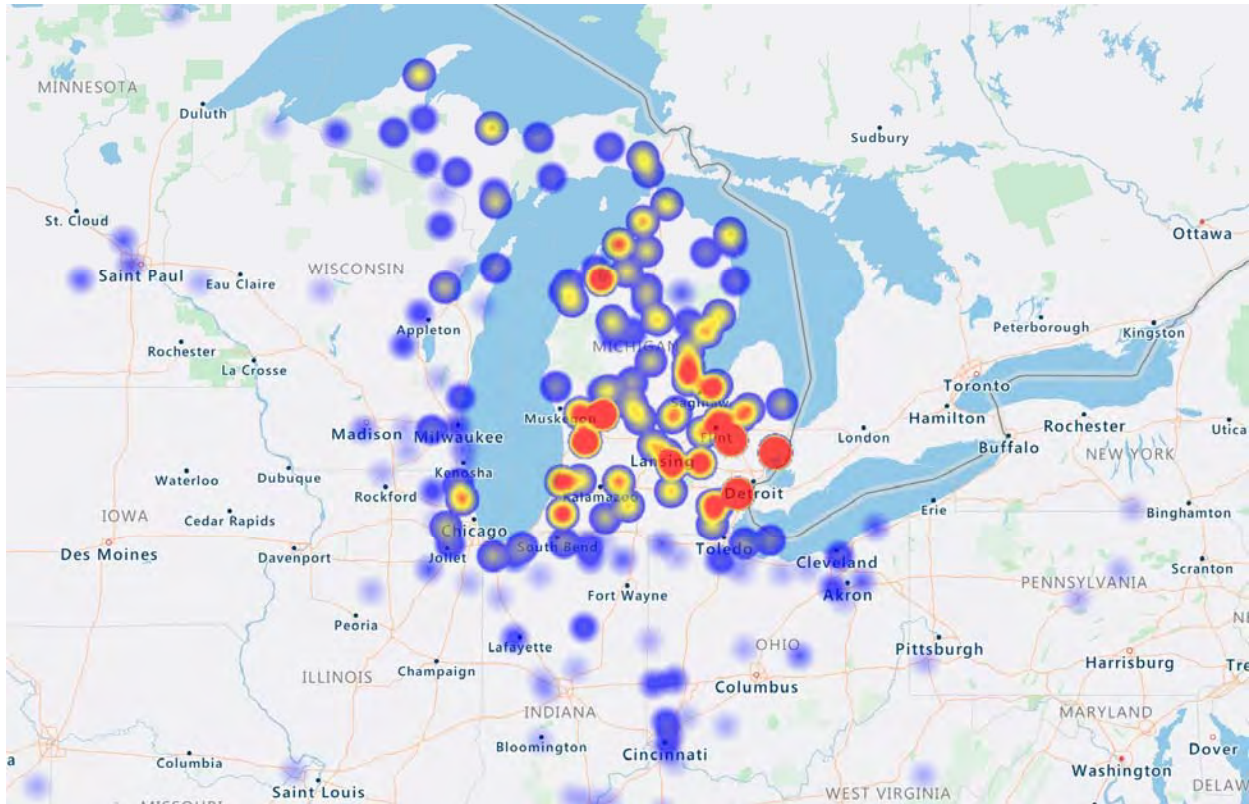
Question 5: In the next five years, do you plan to: Upsize your boat, Downsize your boat, Purchase a boat, Sell a boat, or Keep your boat?



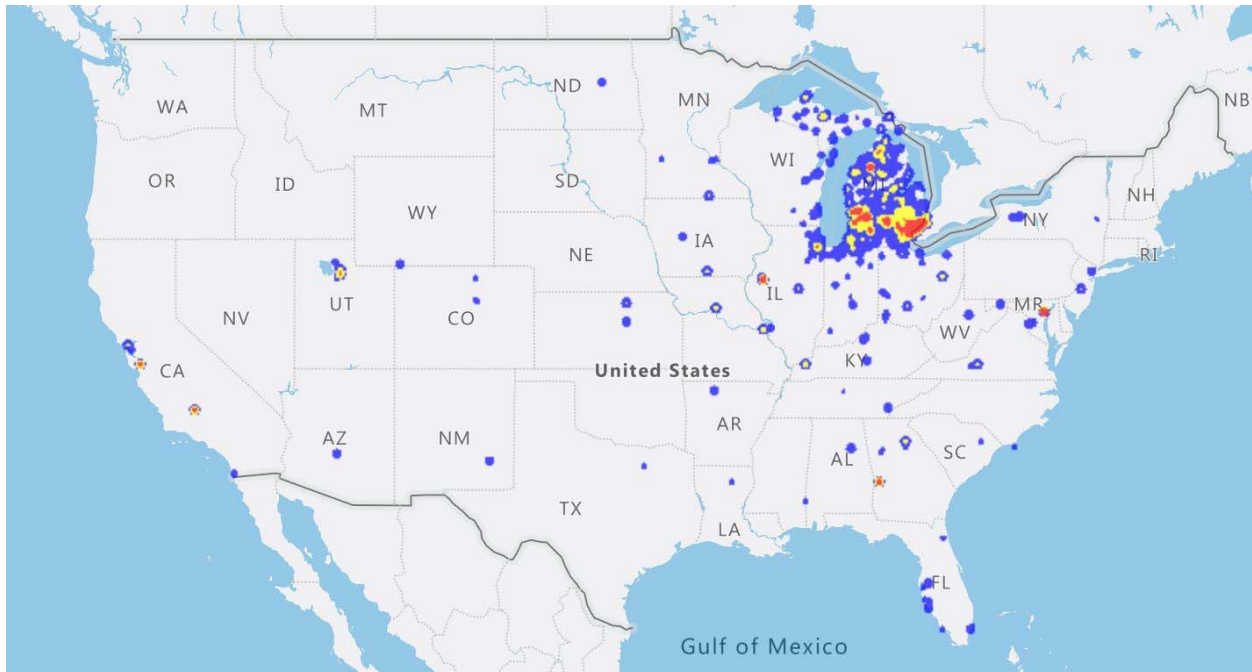
ANSWER CHOICES	RESPONSES
Keep your boat(s)	70.86% 2,602
Upsize your boat	19.42% 713
Sell a boat (so that I will not own a boat)	3.19% 117
Purchase a boat (I don't have one currently)	2.89% 106
Downsize your boat	2.29% 84
TOTAL	3,672

The goal of this question is to provide data that can support or dispute the anecdotal observations of facility operators that boats are getting larger, and facilities are getting busier with more users. With 19.42% (713) of current boaters planning to buy a larger boat compared to just 2.29% (84) indicating they plan to downsize, the data supports the anecdotal observations related to larger boats. The data is somewhat equivocal on whether or not there are more boaters, and in fact suggest that a slightly higher number of people plan to sell and no longer own a boat compared to those buying their first boat. However, one reason people are selling boats is due to the increasing availability of boat clubs, where they have the ability to use multiple boats as part of a club, but have none of the headaches and costs associated with owning a boat.

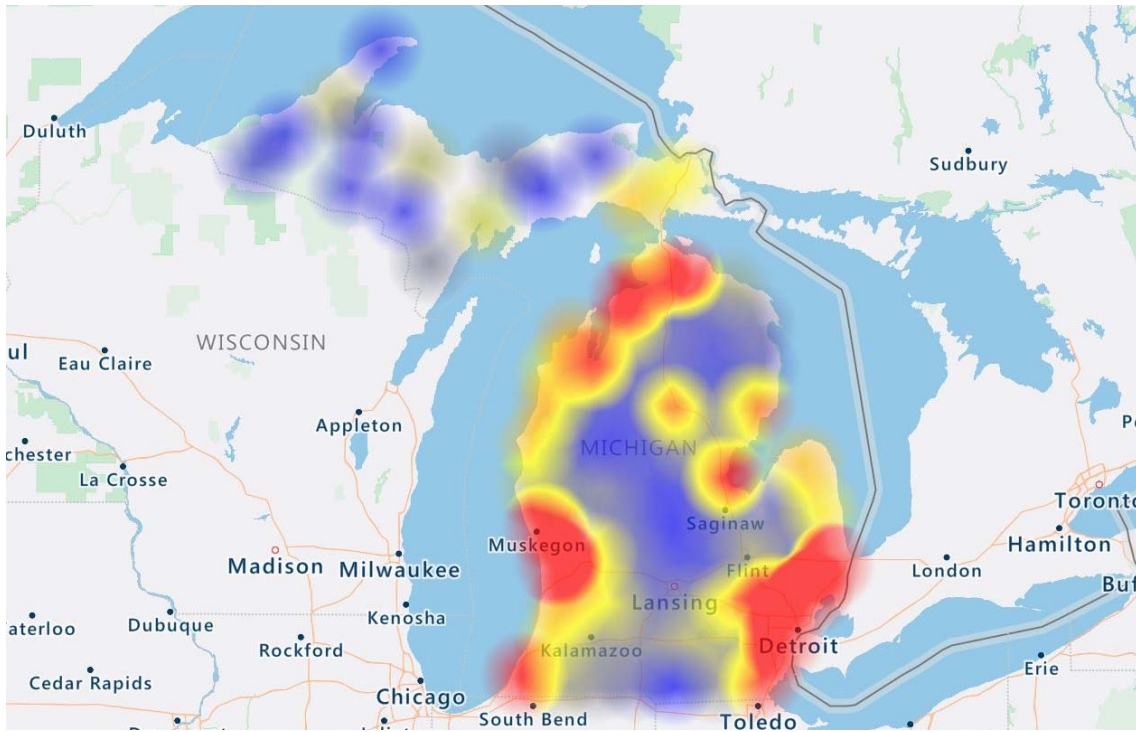
Question 6: Please indicate the zip code of your primary residence:



The heat map above displays the concentration of survey participant responses across the Great Lakes graphically, with red illustrating the highest density of participants. The map below shows participant responses across the continental United States.



Question 7: Please choose the county of your primary boating area using map below for reference:



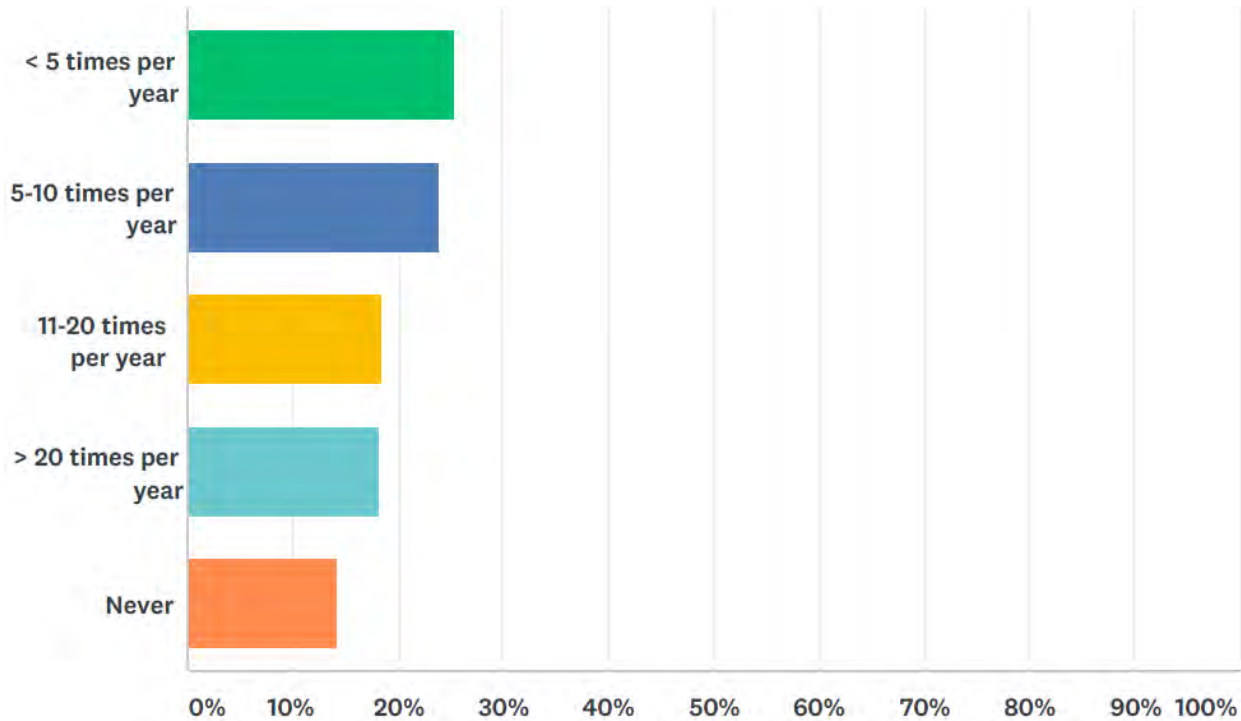
The heat map above displays the concentration of survey participant responses across the state graphically, with red illustrating the highest density of participants and blue the lowest density of participants.

The list of counties to the right represent the twenty-nine counties that were indicated by at least 1% of survey participants.

Macomb County	9.47%	340
St. Clair County	5.85%	210
Ottawa County	4.79%	172
Wayne County	4.73%	170
Muskegon County	3.65%	131
Oakland County	3.31%	119
Cheboygan County	3.20%	115
Charlevoix County	3.17%	114
Bay County	3.01%	108
Grand Traverse County	2.92%	105
Berrien County	2.64%	95
Roscommon County	2.31%	83
Monroe County	2.28%	82
Iosco County	2.03%	73
Livingston County	1.73%	62
Leelanau County	1.64%	59
Allegan County	1.61%	58
Antrim County	1.61%	58
Manistee County	1.61%	58
Kent County	1.56%	56
Huron County	1.50%	54
Mason County	1.48%	53
Mackinac County	1.45%	52
Benzie County	1.28%	46
Sanilac County	1.28%	46
Van Buren County	1.25%	45
Chippewa County	1.22%	44
Barry County	1.17%	42
Emmet County	1.03%	37



Question 8: How often do you use boating access sites (public boat launches)?

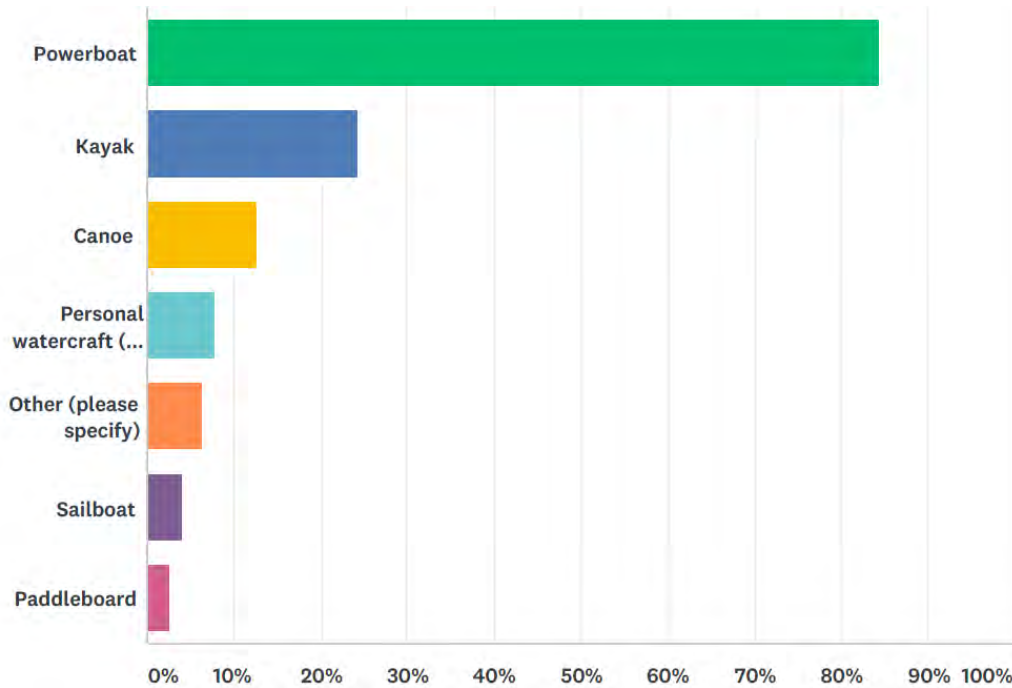


ANSWER CHOICES	RESPONSES	
< 5 times per year	25.25%	848
5-10 times per year	23.91%	803
11-20 times per year	18.49%	621
> 20 times per year	18.17%	610
Never	14.18%	476
TOTAL		3,358

For the 14.18% (476) boaters who never use a BAS facility, it can be assumed they are mostly larger vessels utilizing public or private marinas to launch larger, non-trailerable boats. While it is possible some of these boaters are launching small craft from public beaches or private property, there are at least 1,575 boats 26' and longer identified in Question 2 that meet this description, with 710 of those 35' or longer in length.



Question 9: What type of boat(s) do you launch at boating access sites (check all that apply)?

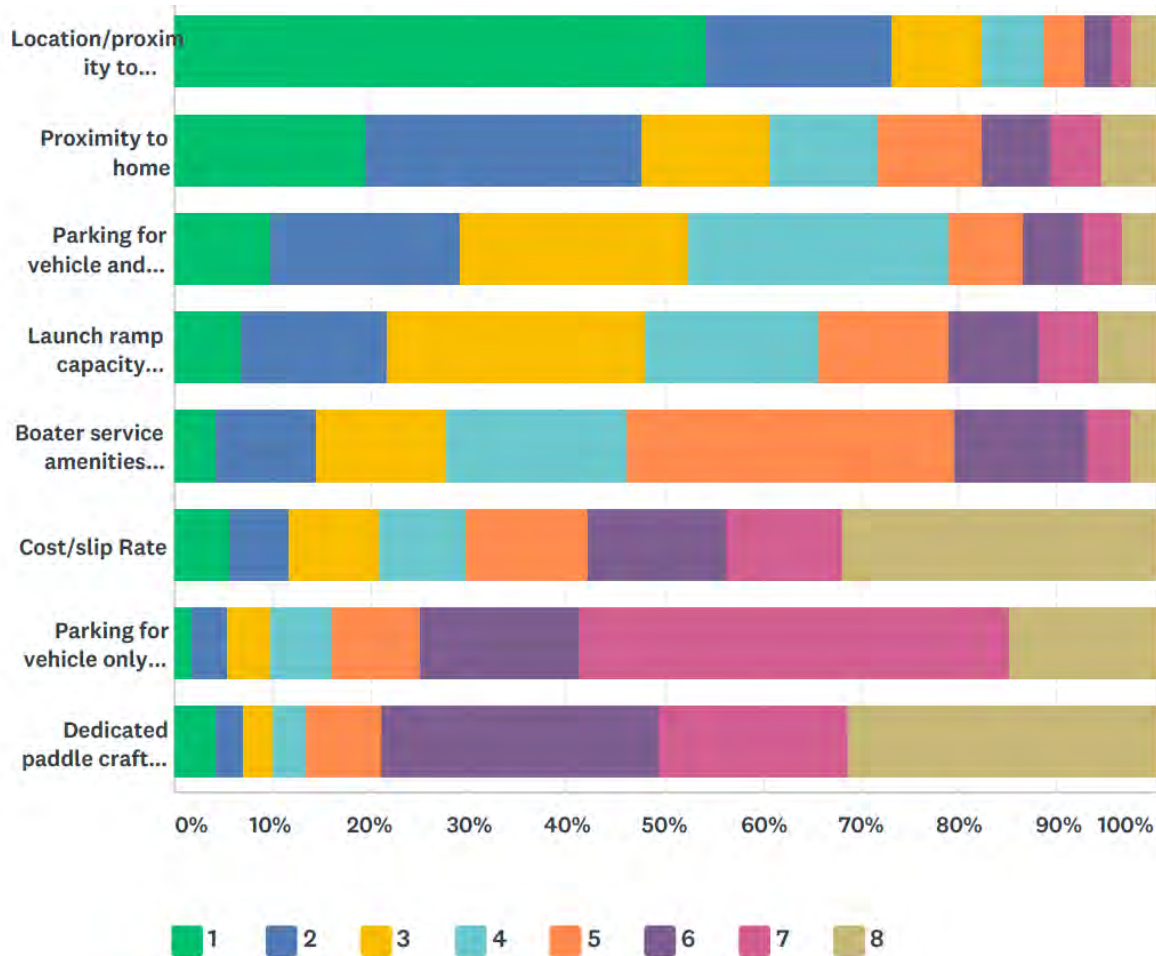


ANSWER CHOICES	RESPONSES
Powerboat	84.41% 2,474
Kayak	24.22% 710
Canoe	12.62% 370
Personal watercraft (jet ski)	7.81% 229
Other (please specify)	6.35% 186
Sailboat	3.99% 117
Paddleboard	2.56% 75
Total Respondents: 2,931	

Since many boaters own multiple boats, the percentages shown indicate how many of the participants launch the specific type of boat in question rather than the actual percentage of total boats launched. While it is little surprise that nearly 85% of survey participants launch powerboats at BAS facilities, it is interesting to note that 39.4% of participants indicated they have launched some type of paddlecraft from BAS facilities. That percentage is significant since the majority of BAS facilities were not originally designed for this purpose, nor do they usually provide dedicated paddlecraft launch docks or dedicated parking for vehicles without trailers. As few facilities restrict parking in vehicle trailer spaces to only those vehicles with trailers, there can be conflict between traditional boat/trailer users and this influx of new users in BAS facilities when parking facilities reach capacity. Due to the fact that very little infrastructure is required to launch paddlecraft, nearly any MDNR facility located adjacent to water could be utilized to launch paddlecraft if sufficient parking and access is provided. An analysis of the “Other” category suggests that most of these boats are either rowboats, pontoon boats, or inflatables/dinghies of some sort. A pontoon boat would be more accurately described as a powerboat.



Question 10: Please rank the following criteria in order of importance in your preference for boating access sites:



	1	2	3	4	5	6	7	8	TOTAL	SCORE
Location/proximity to preferred boating area	54.24% 1,548	18.85% 538	9.15% 261	6.38% 182	4.17% 119	2.87% 82	1.96% 56	2.38% 68	2,854	6.84
Proximity to home	19.46% 543	28.17% 786	13.01% 363	10.97% 306	10.72% 299	7.06% 197	5.09% 142	5.52% 154	2,790	5.66
Parking for vehicle and trailer (number, ease of parking)	9.82% 273	19.21% 534	23.35% 649	26.47% 736	7.77% 216	5.94% 165	4.10% 114	3.35% 93	2,780	5.46
Launch ramp capacity (number of launch lanes)	6.90% 188	14.84% 404	26.18% 713	17.81% 485	13.15% 358	9.36% 255	5.99% 163	5.77% 157	2,723	5.04
Boater service amenities (restrooms, etc)	4.31% 118	10.15% 278	13.18% 361	18.47% 506	33.48% 917	13.29% 364	4.45% 122	2.67% 73	2,739	4.62
Cost/slip Rate	5.63% 155	5.92% 163	9.26% 255	8.97% 247	12.31% 339	14.17% 390	11.84% 326	31.89% 878	2,753	3.34
Parking for vehicle only (no trailer) (number, ease of parking)	1.78% 47	3.61% 95	4.48% 118	6.11% 161	9.07% 239	16.25% 428	43.81% 1,154	14.88% 392	2,634	2.85
Dedicated paddle craft facilities (launch and slips)	4.18% 109	2.88% 75	2.99% 78	3.49% 91	7.45% 194	28.37% 739	19.23% 501	31.40% 818	2,605	2.74



As with transient boating, the geographic location of the BAS facility is the most important feature, with the location of the facility relative to the preferred boating area being most important, followed by the proximity of the facility to the boater's home. After location, the most important factor is parking for their vehicle and trailer, which corresponds with the slip availability when compared to transient boating. If a boater requires parking but has no room to park, they can't use the facility. Only then do the factors of the number of launch lanes, and the quality and type of amenities offered start to matter significantly.

Next on the list is cost, which while always a topic of concern and conversation nearly always comes closer to the bottom of the list of concerns in boater surveys of all types. The conclusion this suggests is that cost is not a significantly limiting factor in the use and popularity of recreational boating facilities. As a percentage of the total cost of boating, launch and/or slip lease fees are a relatively small fraction. While any increase in fees is likely to draw complaints from the boaters, as the stewards of the water resources for all residents of the state, it would be reasonable to suggest that the operators charge sufficient fees to cover the cost of the services and amenities provided.

At the bottom of this list of priorities are dedicated facilities for vehicle only parking and paddlecraft launching. This is likely due to the fact that while almost 40% of participants indicated they use BAS sites for paddlecraft launching, they are able to do so using facilities designed for traditional boats on trailers. According to the Operator Survey, this is leading to conflicts between users and inefficient use of the existing infrastructure (especially parking).

Question 11: What is the single most important improvement that could be made to state-managed or municipal boating access sites to make them more desirable to you?

This question provided the opportunity for boaters to provide open ended comments. In addition to the summary of comments provided below, the full text of each comment is included in the appendices of this report. The comments fell into four general categories: Enforcement, Maintenance, Amenities, and Infrastructure.

Enforcement

Enforcement topics covered use payment, communication of proper procedures for using launch facilities and enforcement of rules for both access site as well as water body rules. Payment concerns included those with a recreation passport sticker on their license plate or other identifying use permit. Consistent payment identification, signage or enforcement could help the users pay for boating access site when required.

Proper procedure concerns include "power loading", cars in trailer parking, use of docks for extended time or other than loading/unloading. Education campaign and updated signage is needed to improve the issue.

Enforcement issues include monitoring the proper launch procedures as well as water body rules. In larger access sites or those adjacent to state harbors/marinas, on-site personnel could help educate and inform user of rules and regulations. Staff could also help enforce rules when needed. Remote sites would be best served by better signage.



Maintenance

Maintenance topics focused on facilities and the adjacent water bodies, with the most common items mentioned including pavement condition and general maintenance of bathrooms and docks. Environmental issues such as Aquatic Invasive Species, weed control in the water, and bird droppings on docks garnered several mentions.

Amenities

The elements mentioned related to amenities included both recreational amenities and environmental quality items. The most commonly mentioned landside amenities included restrooms, fish cleaning stations, and picnic areas. Boat wash down facilities were indicated as a high priority by many participants, and several mentioned the lack of trash and recycling bins at BAS facilities.

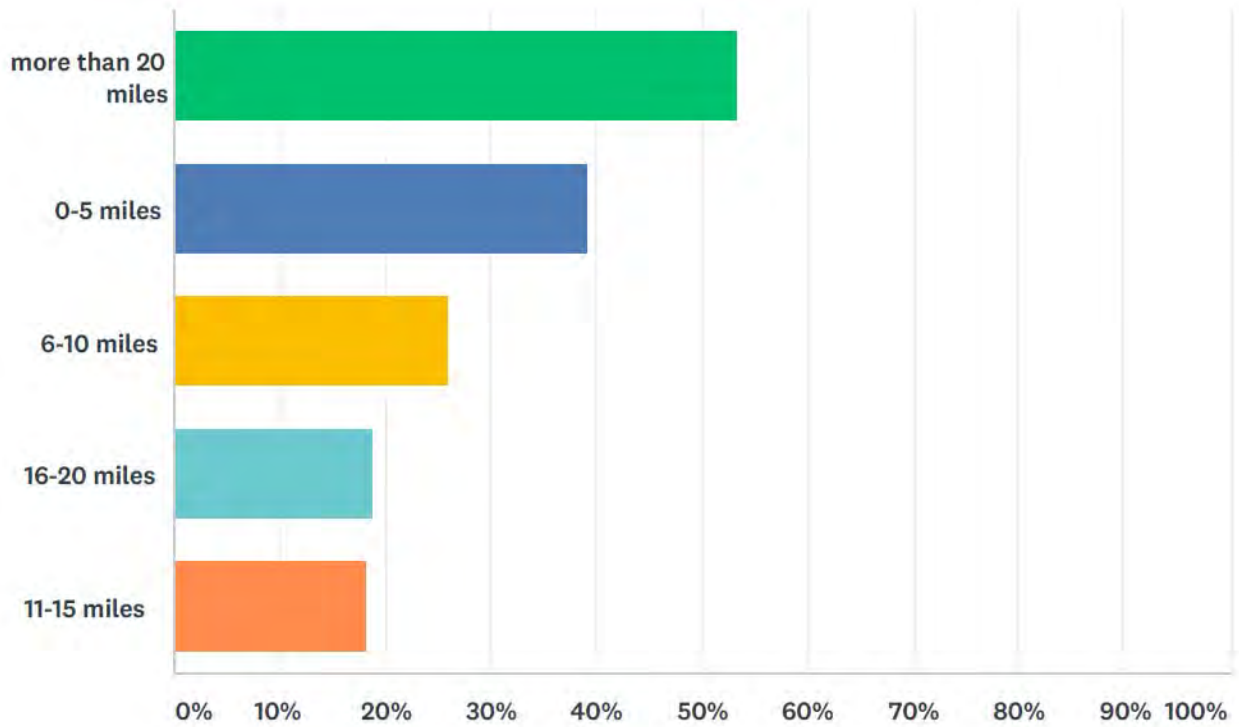
Infrastructure

Infrastructure issues were listed more often than the other categories, and include the following items in the general order of frequency of mentions

- Increasing the length of docks, related to water depth, boat length, temporary tie-ups
- Adjusting the height of dock in relationship to higher water levels, and frequently suggested use of floating docks
- Extending the length and depth of ramp, for longer boats
- Increasing the number of docks at ramp locations, as many locations lack a dock
- Increasing the number of ramps/lanes at busy sites
- Enhancing the accessibility of the facilities by adding ADA compliant kayak launches, and vertical posts and/or additional docks at ramps to make facilities easier for older boaters to access their boats.
- Extending the operating season later into Fall
- Adding wave attenuation where necessary
- Increasing the number of kayak, canoe, and paddlecraft launches
- Increasing the number of BAS facilities around State
- Improving lighting



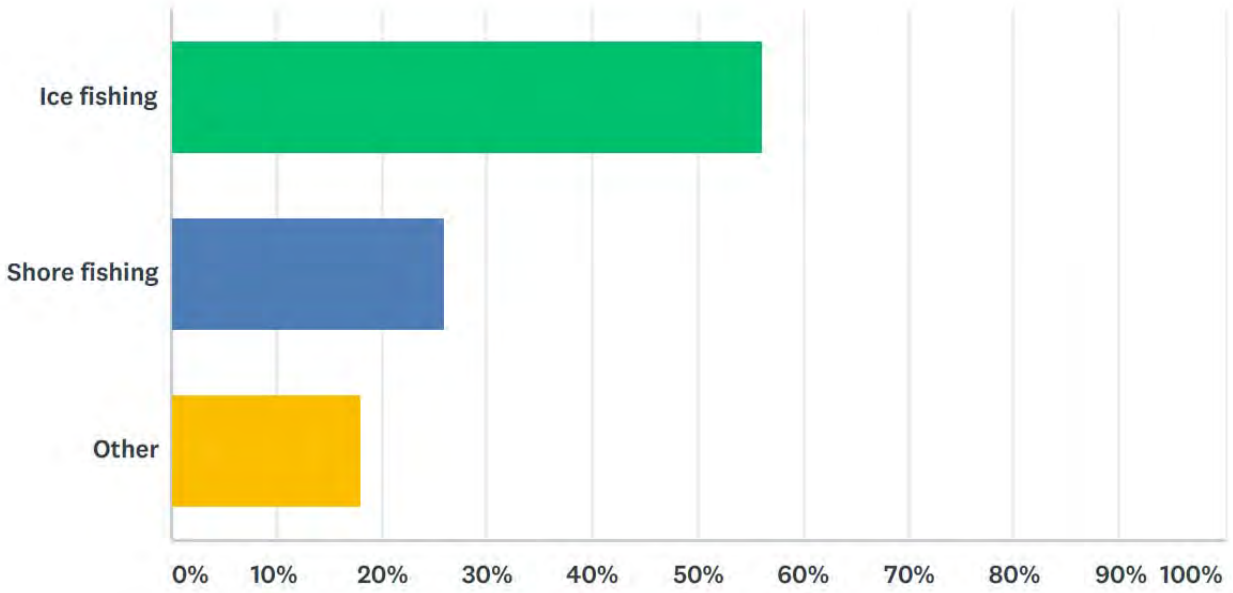
Question 12: How far do you drive to get to a boating access site?



ANSWER CHOICES	RESPONSES	
more than 20 miles	53.40%	1,612
0-5 miles	39.02%	1,178
6-10 miles	25.87%	781
16-20 miles	18.78%	567
11-15 miles	18.15%	548
Total Respondents: 3,019		



Question 13: Do you use boating access site(s) for ice fishing or other non-boating purposes?



ANSWER CHOICES	RESPONSES	
Ice fishing	56.03%	999
Shore fishing	26.02%	464
Other	17.95%	320
Total Respondents: 1,783		

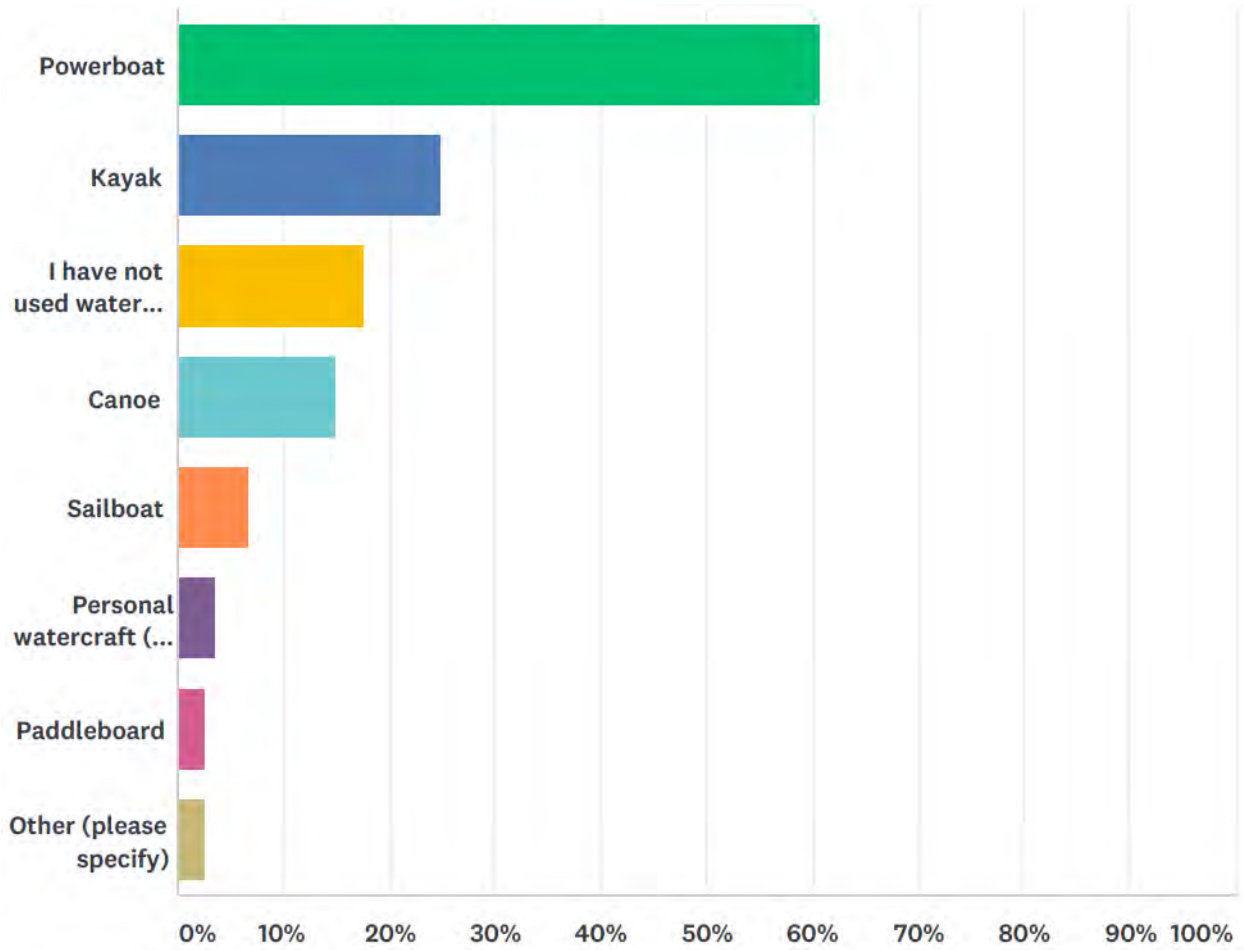


Question 14: Using the map as reference, please indicate the water trail(s) you have used:

Waterway	Responses
Lake Michigan	934
Lake St. Clair Coastal	595
Detroit Heritage River	573
Inland Waterway	520
Blueways of St. Clair	506
Lake Huron North Shore	480
Lake Huron Blueways	460
Saginaw Bay	442
Thumb Heritage	369
Chain of Lakes	369
Huron River	291
Lake Michigan (WMEAC)	274
St. Marys River Island Explorer	261
Clinton River	248
Beaver Island	237
Monroe County	216
Kalamazoo River	211
St. Joseph River	209
Lake Michigan (Mason-Lake)	205
Spring Lake	196
Grand River Heritage	178
Hiawatha	171
White Lake	170
Boardman River	170
Lake Superior East	169
Pentwater Lake Loop	162
Lake Macatawa Loop	148
Pine River Canoe	147
Western U.P.	138
Keweenaw	124
Isle Royale National Park	114
Middle Grand River Heritage	111
White River	95
Shiawassee Heritage River	83
Rouge River	80
Bangor-South Haven Heritage	73
Mona Lake Loop	73
Silver Lake Loop	71
Flint River	61
Cass River	47
Paw Paw River	47
Galien River Marsh	29
White Cloud Blue	27



Question 15: If you have used water trails, what type of boat were you using?

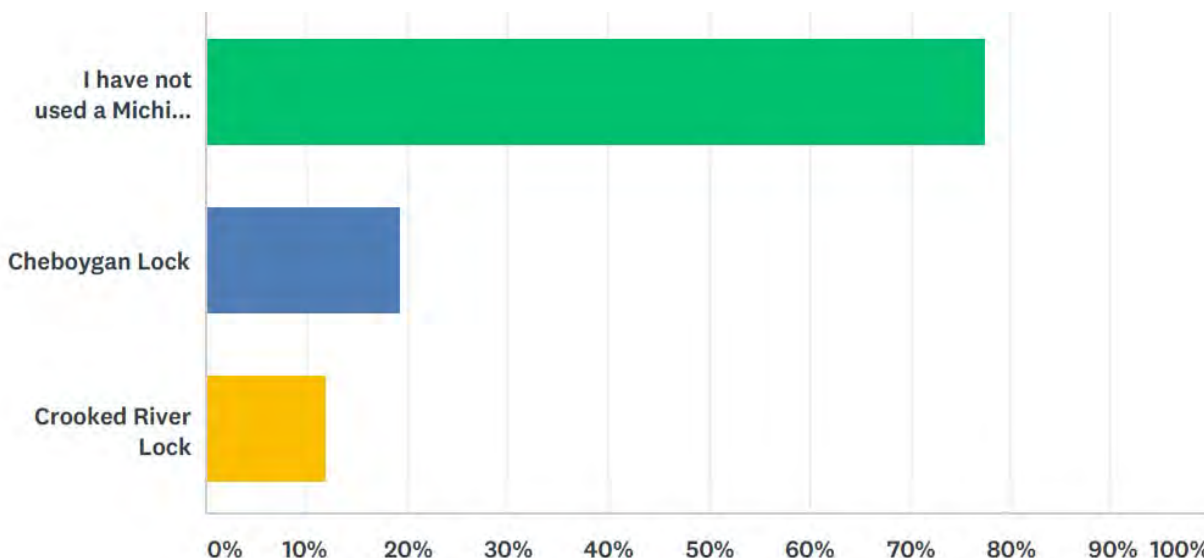


ANSWER CHOICES	RESPONSES	
Powerboat	60.60%	1,578
Kayak	24.88%	648
I have not used water trails	17.63%	459
Canoe	14.78%	385
Sailboat	6.64%	173
Personal watercraft (jet ski)	3.46%	90
Paddleboard	2.53%	66
Other (please specify)	2.42%	63
Total Respondents: 2,604		

An analysis of the comments provided in response to this question indicates that the vessels used in the “Other” category include rowboats, inflatables/tubes, dinghies, drift boats, a jet boat, and a windsurfer.



Question 16: Which Michigan Lock and Dam facilities have you used?



ANSWER CHOICES	RESPONSES
I have not used a Michigan lock and dam facility	77.50% 2,205
Cheboygan Lock	19.26% 548
Crooked River Lock	11.95% 340
Total Respondents: 2,845	

Question 17: What is the most important improvement that could be made to the lock and dam facilities?

This question provided the opportunity for boaters to provide open ended comments. In addition to the summary of comments provided below, the full text of each comment is included in the appendices of this report. With 415 responses, the comments provide a wide-ranging list of comments and suggestions related to the use and functionality of the Locks and Dams, however this question elicited a larger number of “no comments or complaints” type responses than any of the other open-ended questions. This may well be because the Lock and Dam facilities themselves are viewed primarily as lifting mechanism rather than a recreational amenity, and the boaters for the most part do not engage much with the facilities other than through the lifting process itself. Therefore, most of the comments relate to specific operational and functional aspects. These include:

- Focus on maintenance and keeping them safe and functional
- Improve navigational signage, mooring, cleats, and lines
- Consider expanded staging areas for use while waiting for the lock
- Extend the hours of operation and improve boat to operator communications system
- Consider the addition of landside pullout, toilets, and amenities at Alanson
- Consider the addition of timber fendering inside the locks to protect boats
- Lower prices and easier methods of payment (venmo, credit cards, etc)



Question 18: If you store a boat at a state harbor or municipal marina, please select your storage location from the dropdown menu:

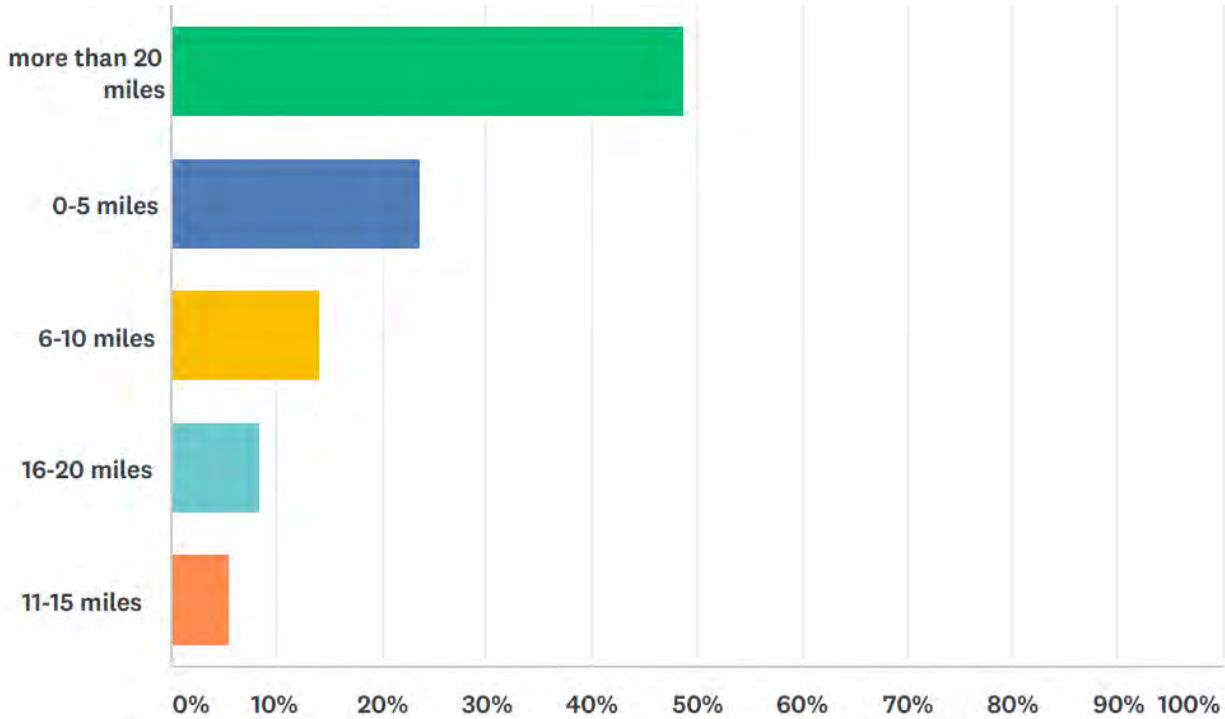
Answer Choices	Responses	Answer Choices	Responses
Elk-Rapids • E. C. Grace Memorial Harbor	10	Bay City • Liberty Harbor	1
Ludington Municipal Marina	10	Beaver Island Marina	1
St. Joseph • West Basin Marina	9	Black River • U.S. National Forest	1
East Tawas State Harbor	8	Cheboygan County Marina	1
Greilickville • Elmwood Twp. Marina	7	Detroit • Erma Henderson Park	1
Saint Clair • Charles F. Moore Harbor	7	Escanaba Municipal Marina	1
Charlevoix City Marina	6	Grand Marais Marina	1
East Jordan City Marina	6	Grand Traverse Bay • Schoolcraft Twp. Marina	1
Frankfort Municipal Marina	6	Grayhaven State Harbor	1
Grand Haven Municipal Marina	6	L'Anse Municipal Marina	1
Lexington State Harbor	6	Mackinac Island State Harbor	1
Muskegon • Hartshorn Marina	6	Metro Beach Metropark Marina	1
Port Huron River Street Marina	6	Monroe Harbor of Refuge	1
Traverse City • Duncan L. Clinch Marina	6	Ontonagon Village Marina	1
Au Gres State Harbor	5	Oscoda Harbor of Refuge	1
Detroit • William G. Milliken State Park and Harbor	5	Sault Ste. Marie • Charles T. Harvey Marina	1
Mackinaw City Municipal Marina	5	Sebewaing Marina	1
Manistee Marina	5	Trenton • Elizabeth Park Marina	1
St. Ignace Marina	5	Whitefish Point State Harbor	1
Whitehall • White Lake Municipal Marina	5	Baraga Municipal Marina	0
Leland Township Marina	4	Bay Port Harbor of Refuge	0
New Buffalo Marina	4	Big Bay Harbor • Marquette County	0
Pentwater Municipal Marina	4	Bois Blanc Island Marina	0
Straits State Harbor	4	Eagle Harbor State Harbor	0
Arcadia Veterans Memorial Marina	3	Fayette Historic State Park • Snail Shell Harbor	0
Bolles Harbor of Refuge	3	Gladstone Marina	0
Cedar River State Harbor	3	Harbor Springs Municipal Marina	0
Hammond Bay State Harbor	3	Hessel (Clark Township) Marina	0
Harbor Beach Marina	3	Isle Royale • Rock Harbor • Harbor of Refuge	0
Menominee Marina	3	Isle Royale • Washington Harbor • Harbor of Refuge	0
Munising • Bayshore Marina	3	Lac La Belle State Harbor	0
Northport • G. Martsen Dame Marina	3	Lime Island State Harbor	0
Petoskey Marina	3	Little Lake State Harbor	0
Rogers City Marina	3	Ludington Harbor View	0
South Haven Municipal Marina	3	Manistique Marina	0
Suttons Bay Marina	3	Marquette • Cinder Pond Marina	0
Alpena Municipal Harbor	2	Marquette • Presque Isle Marina	0
Boyne City • F. G. Moore Municipal Marina	2	Mt. Clemens Harbor of Refuge	0
Caseville Marina	2	Naubinway • Garfield Township Marina	0
Cedarville Marina	2	Port Sanilac Harbor	0
Cheboygan Municipal Marina	2	Portage Lake Harbor of Refuge	0
Copper Harbor State Harbor	2	Saugatuck Harbor of Refuge	0
De Tour State Harbor	2	Sault Ste. Marie • George Kemp Marina	0
Hancock • Houghton County Marina	2	South Manitou Island Harbor of Refuge	0
Harrisville Municipal Marina	2		
Holland Harbor of Refuge	2		
Houghton City Marina	2		
Lake Erie Metropark Harbor of Refuge	2		
Port Austin State Harbor	2		
Presque Isle State Harbor	2		
St. Clair Shores Harbor of Refuge	2		

This question provided the opportunity for boaters to indicate in which Harbor facility they keep their boat in during the boating season. Please see the appendix for more detail



Question 19: If you store a boat at a state harbor or municipal marina, how far away do you live?

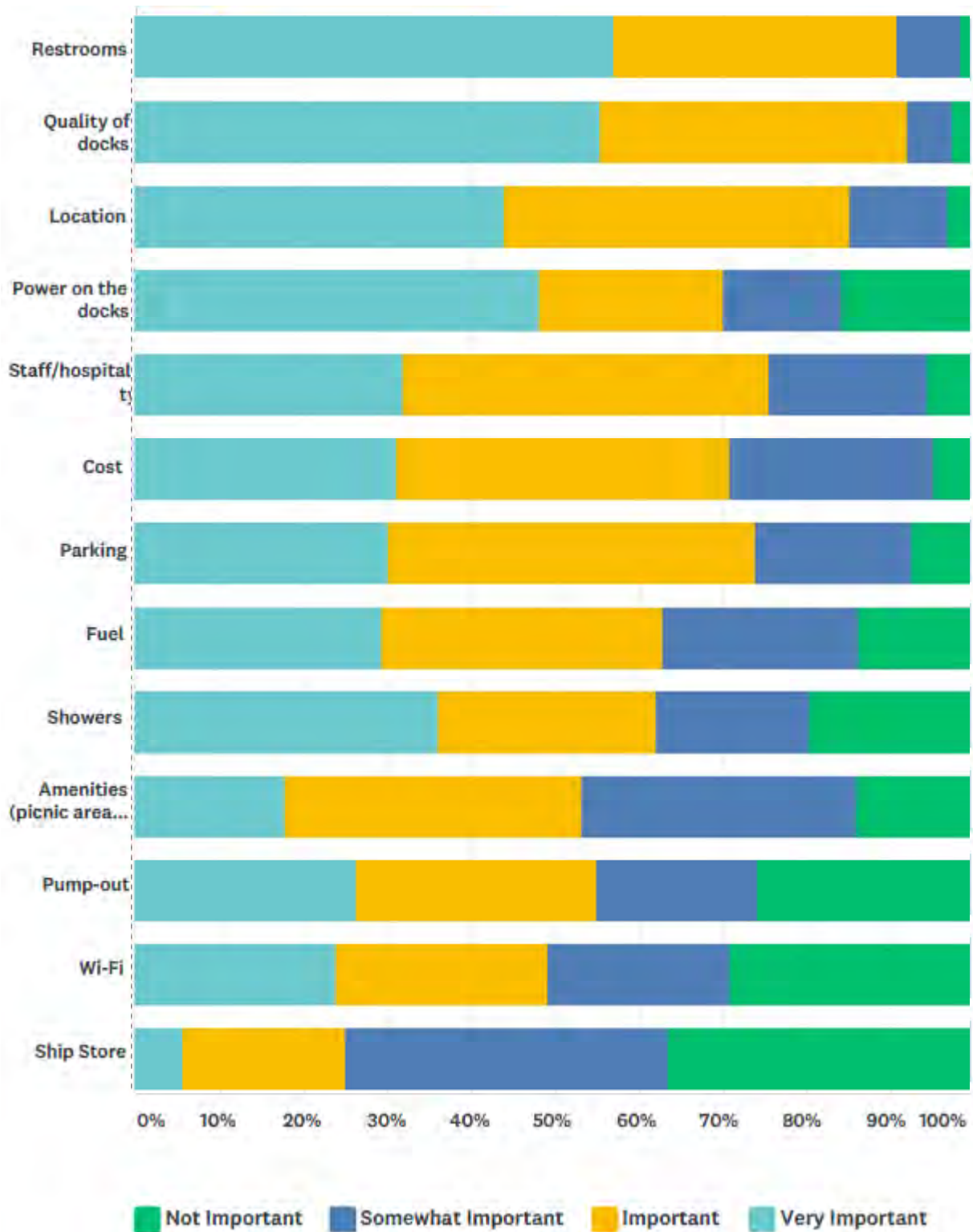
This question provided the opportunity for boaters to indicate in how far they drive to reach the harbor or municipal marina where they keep their boat in during the boating season.



ANSWER CHOICES	RESPONSES	
more than 20 miles	48.66%	164
0-5 miles	23.74%	80
6-10 miles	13.95%	47
16-20 miles	8.31%	28
11-15 miles	5.34%	18
TOTAL		337



Question 20: Please rate the importance of the following marina features in choosing a home state harbor or municipal marina:





This question was answered by 1,801 survey participants and provides very clear insight into the priorities of the boaters. Facility operators were also asked to rank these features based on what they believe the boater preferences are from the questions, comments, requests and complaints they hear from boaters in their facilities, and the differences between the two surveys will be discussed later in this section.

As indicated in nearly all boater preference surveys recently completed in Michigan and across the Great Lakes, restrooms are at the top of the list. It is difficult to overstate the importance of attractive, clean, functional, and plentiful restrooms in a marina. All else being equal, the marina with the better restrooms will nearly always be more desirable to boaters. Efforts to keep the restroom facilities clean at all times are very important.

The quality of docks is ranked very nearly equal to restrooms in the survey results, followed by location, and power on the docks. As new boats continue to get larger and have higher power demands, older facilities are less and less able to accommodate them and meet their needs.

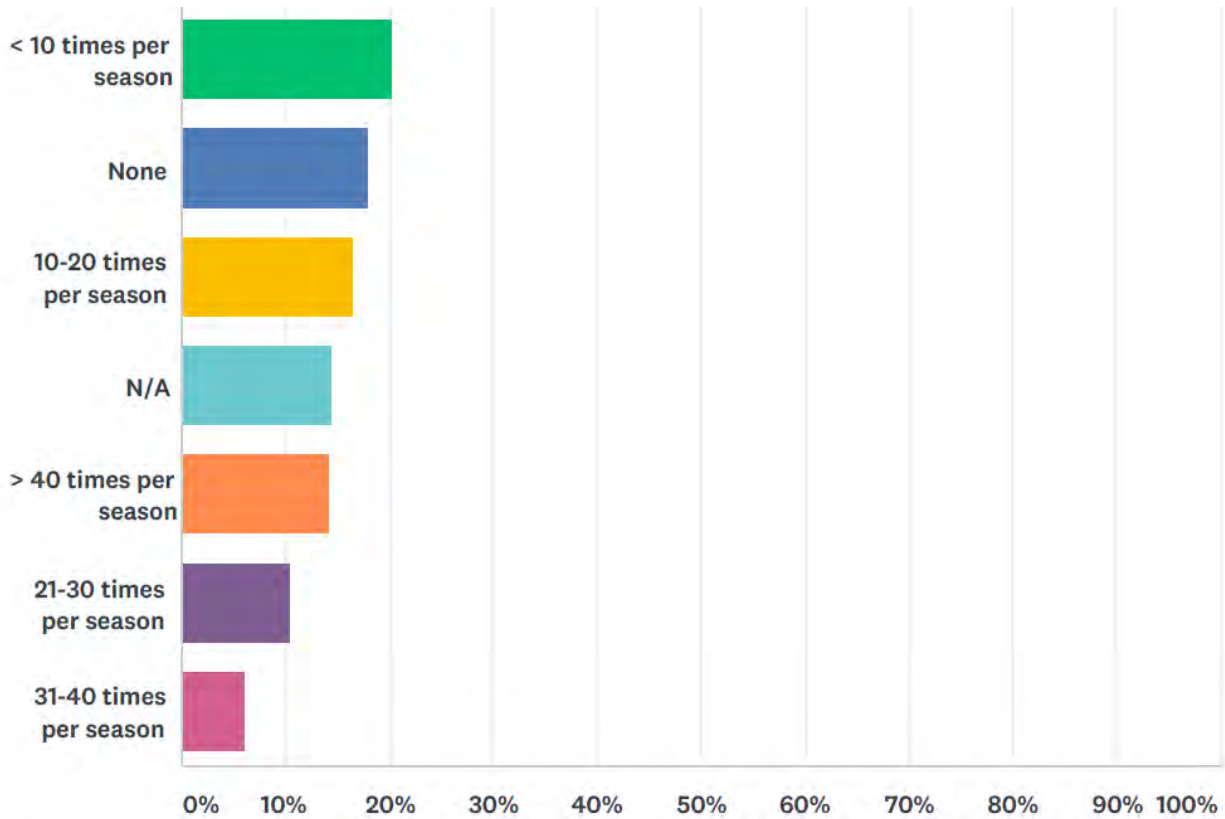
Next on the list, but arguably the element that has the most to do with overcoming limitations in the other elements, is staffing and hospitality. The value of very good harbor staff is in making boaters feel welcome and valued. Experience in older run-down facilities with deteriorating docks and poorly functioning utilities, but a first-class staff that makes the very best of what they have has shown that keeping everything as clean and ship shape as they can manage, is very well received by the boaters. The trash is always emptied, restrooms are clean, and the grass is mowed. They meet you at the dock to help with the lines when you arrive, and help you find your way around town and find a place for the kids to run free. The boaters surely notice the run-down docks and the problems, but they remember the staff who did their best with what they have, and that brings boaters back.

While it is no surprise to find the Ships Store at the bottom of the list, which is very common, it is surprising to see Wi-Fi ranked so close to the bottom on this list. From the Operator's perspective, they hear many complaints about Wi-Fi and place it much higher on the list in importance. So, while it is lower on the list than other elements, it is surely still very high on the list of priorities for the boaters.

An analysis of the comments section of this question indicates that other elements of interest to boaters not included in the original list include proximity to nearby shops and restaurants, pet play/relief areas, courtesy vehicles/shuttles, boat wash down, laundry, lounge, and security.



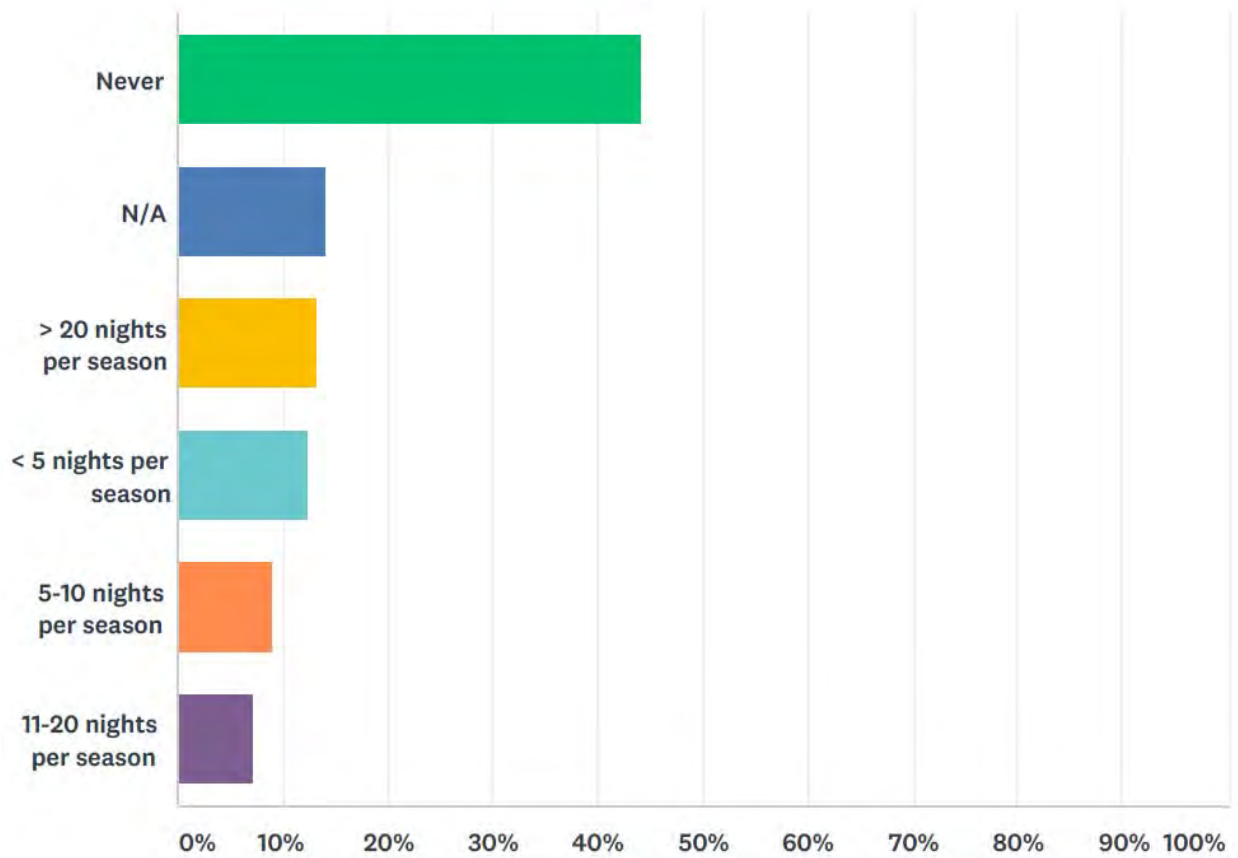
Question 21: How many days per season do you use your boat from your home state harbor or municipal marina?



ANSWER CHOICES	RESPONSES	
< 10 times per season	20.38%	469
None	18.04%	415
10-20 times per season	16.47%	379
N/A	14.52%	334
> 40 times per season	14.21%	327
21-30 times per season	10.39%	239
31-40 times per season	6.00%	138
TOTAL		2,301



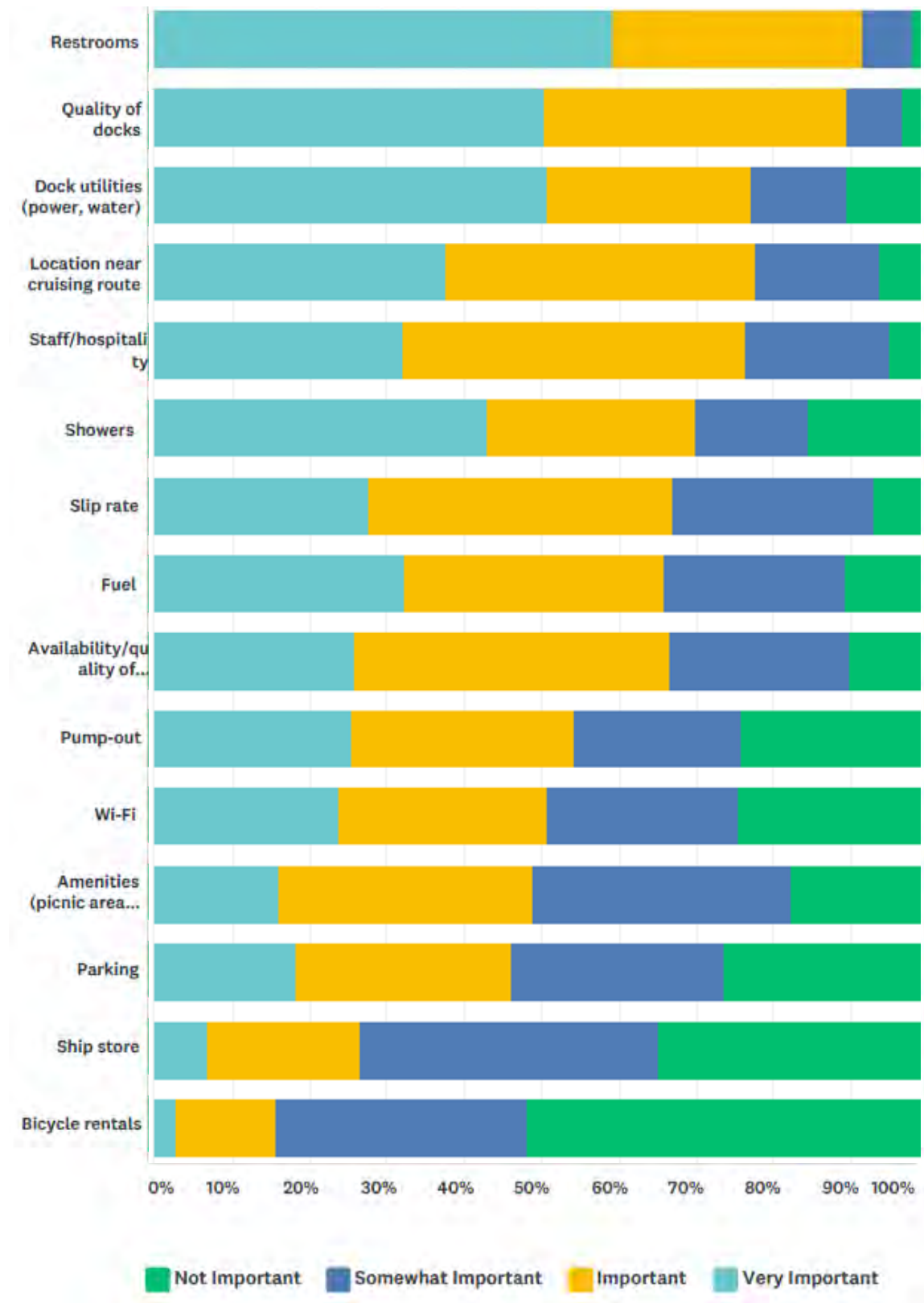
Question 22: How often do you spend the night on your boat at your home state harbor or municipal marina?



ANSWER CHOICES	RESPONSES	
Never	44.18%	1,032
N/A	14.08%	329
> 20 nights per season	13.18%	308
< 5 nights per season	12.33%	288
5-10 nights per season	9.03%	211
11-20 nights per season	7.19%	168
TOTAL		2,336



Question 23: For transient (short-term slip rental) state harbor or municipal marinas, please rate the importance of the following marina features:





This question was answered by 1,863 survey participants and provides very clear insight into the priorities of boaters when selecting a transient destination marina.

As with the question earlier on home port marinas, restrooms are at the top of the list. For transient marinas, however, showers are considerably more important than they are at home port marinas.

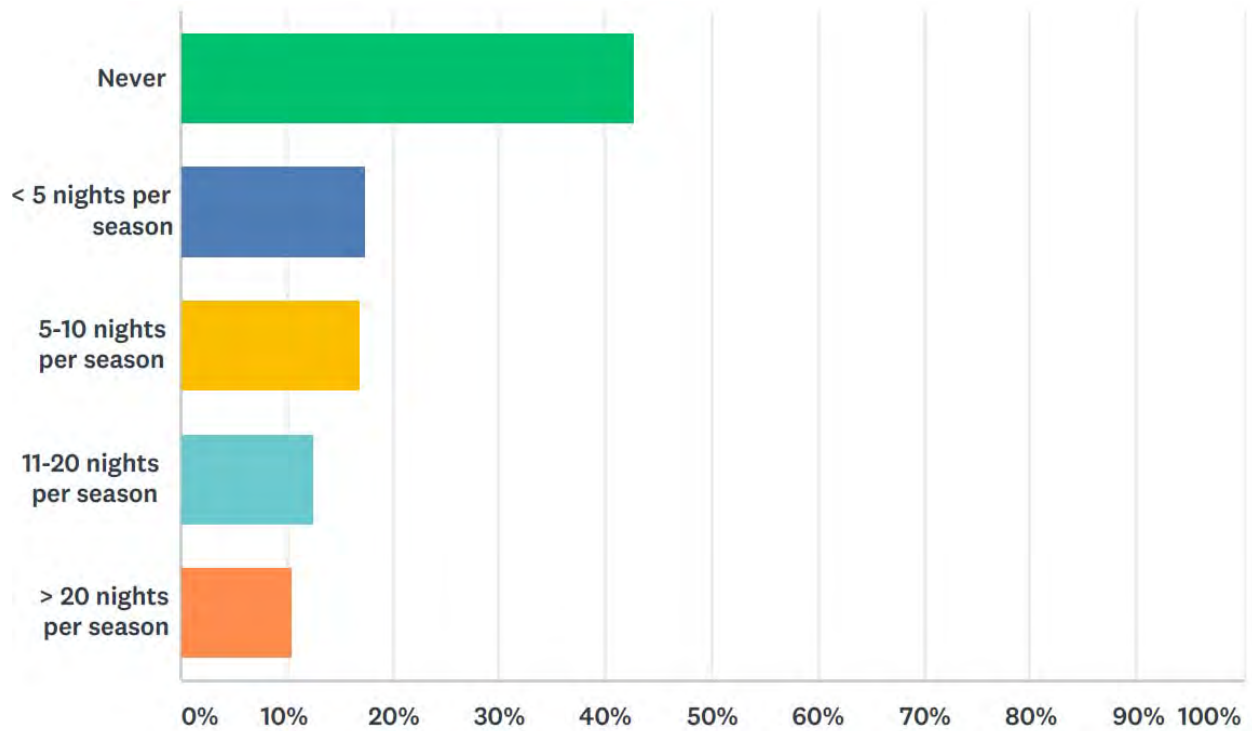
The quality of docks is ranked second to restrooms, but not as close in importance to restrooms as it is in home port marinas. Power and utilities on the docks is ranked higher for transient facilities compared to home port facilities, but location near a cruising route is often more fundamental to choosing which facility to visit. The two main geographic factors that drive transient occupancy are locations adjacent to very popular destinations and location along a well-traveled cruising route between multiple popular destinations. As noted earlier in this report, Traverse City is a good example of the first but not second criteria, and Leland is a good example of the second, while Mackinac Island has the best of both.

Next on the list, and just as important in transient marinas – if not more so – than home port facilities is high quality staffing and hospitality. Wi-Fi, Fuel, and Pumpout all move up the list of priorities, while cost, parking, and amenities slip down the list somewhat.

An analysis of the comments section of this question indicates that other elements of interest to transient boaters not included in the original list include the availability of slips, staff training, proximity to nearby shops and restaurants, pet play/relief areas, courtesy vehicles/shuttles, laundry, lounge, and security.



Question 24: At transient (short-term slip rental) state harbor or municipal marinas, how often do you spend the night on your boat?



ANSWER CHOICES	RESPONSES	
Never	42.71%	934
< 5 nights per season	17.38%	380
5-10 nights per season	17.01%	372
11-20 nights per season	12.53%	274
> 20 nights per season	10.38%	227
TOTAL		2,187



Question 25: What is the best state harbor or municipal marina you have visited?

The top 25 facilities are listed below in descending order:

ANSWER CHOICES	RESPONSES	
Charlevoix City Marina	9.57%	166
Mackinac Island State Harbor	5.24%	91
Lexington State Harbor	4.38%	76
Ludington Municipal Marina	3.80%	66
Port Austin State Harbor	3.52%	61
Elk-Rapids • E. C. Grace Memorial Harbor	3.46%	60
Saint Clair • Charles F. Moore Harbor	3.34%	58
Leland Township Marina	3.29%	57
Grand Haven Municipal Marina	3.05%	53
East Tawas State Harbor	2.82%	49
Metro Beach Metropark Marina	2.65%	46
Mackinaw City Municipal Marina	2.59%	45
Traverse City • Duncan L. Clinch Marina	2.54%	44
Detroit • William G. Milliken State Park and Harbor	2.42%	42
Petoskey Marina	2.42%	42
Presque Isle State Harbor	2.25%	39
South Haven Municipal Marina	2.19%	38
Frankfort Municipal Marina	1.96%	34
Straits State Harbor	1.96%	34
Manistee Marina	1.84%	32
Harrisville Municipal Marina	1.61%	28
St. Ignace Marina	1.56%	27
De Tour State Harbor	1.44%	25
Fayette Historic State Park • Snail Shell Harbor	1.27%	22
Port Sanilac Harbor	1.15%	20

The question also asked participants to indicate why they chose the facility they did. The summaries below explore three very different facilities to provide a sense of what makes a marina truly special, including the intangible factors that go beyond the nuts and bolts of marinas and harbors. The first facility summarized is Charlevoix City Marina, which ranked first overall and is a relatively new facility on Lake Michigan. The second facility summarized is Lexington State Harbor, which is a much older facility on Lake Huron, which while the number three facility in the survey is in need of modernization. The third facility is East Tawas State Harbor, which was recently modernized and provides insight into how improvements to an older facility affect the perception of the facility by boaters.

Charlevoix City Marina



Charlevoix City Marina was far and away the most highly rated marina in the survey, with nearly 10% of the participants (166) selecting this facility, and coming well ahead of the 91 votes for second place facility at Mackinac Island. The comments provided by survey participants make it clear that Charlevoix benefits from its location in the very heart of downtown Charlevoix, with docks literally just a few steps away from nice shops, a park, and restaurants. While the marina can't take credit for the beautiful downtown and Charlevoix's location, what is most helpful to share with other state and municipal harbor facilities is that the number one reason boaters chose Charlevoix was the quality, friendliness, and professionalism of the marina staff. Many participants also noted the quality of the docks and amenities, but the staff were mentioned more than anything else.

Mackinac Island State Harbor



Mackinac Island State Harbor was the second most highly rated marina in the survey, with 91 votes for the facility at Mackinac Island. The comments provided by survey participants make it clear that Mackinac Island State benefits from its location on the waterfront of one of Michigan’s most popular tourist destinations, with docks located directly adjacent to the historic fort, a park, shops, and restaurants. The quality of the island as a destination was cited nearly as often as all of the other factors combined.

After the location itself, the reason most often noted that boaters selected Mackinac Island State Harbor was the quality, friendliness, and professionalism of the marina staff. The quality and cleanliness of the docks and restrooms was also mentioned. The only negatives mentioned, and only by a few boaters, were concerns related to the wakes from the ferry boats mooring nearby. Mackinac Island State Harbor does not offer fuel services of any type, but that was not noted as a concern by any of the boater since fuel is available nearby in Saint Ignace and Mackinaw City.

Lexington State Harbor



Lexington State Harbor came in third place with 76 votes. What makes this particularly interesting is that the facility itself is quite dated and is currently the subject of a Phase 100 study for future renovations. Lexington State Harbor benefits from its location and proximity to the Detroit area, which was mentioned equally often as the quality of the town itself and the proximity of the marina being well within easy walking distance of the shops. Many participants noted the quality of shopping and restaurants.

While the quality of the staff was not the primary reason people selected this harbor, it was noted as the most important element after the location factors, along with the cleanliness of the facility. This is particularly noteworthy in that a similar boater survey specifically for Lexington State Harbor was completed in 2018 with different results. In 2018, the facility experienced staff turnover and was without a harbormaster for much of the season, and the survey results at that time listed the quality of the staff, service, and cleanliness of the facility as significant problems with the marina. With the new harbormaster in place for the 2019 season, staffing has turned around in a single season and the problems from the year before are now listed as the strengths this year. This highlights the importance and impact quality staff can have on a facility in a short amount of time.

East Tawas State Harbor



East Tawas State Harbor came in tenth place on this list with 49 votes, and it is included here to gauge how the ongoing renovations of the facility impact the boater experience. The reason most often mentioned for selecting East Tawas State Harbor as the best facility was the newly renovated facilities, and the quality of the docks. Sixteen people specifically mentioned the “new”, “renovated”, or “improved” docks and amenities, and another eight simply mentioned the quality of the new floating docks without specifically calling out the renovation. Immediately after the renovation of the facilities, participants again noted the quality and helpfulness of the staff. Similar to Charlevoix, the location and proximity to downtown was noted as a major reason boaters visit East Tawas.



Question 26: What is the most important improvement to a particular state harbor or municipal marina to make it more desirable to you?

This question provided the opportunity for boaters to provide open ended comments related to specific marinas. In addition to the summary of comments provided below, the full text of each comment is included in the appendices of this report. With 1,052 responses, the comments provide a thorough and wide-ranging list of ideas, compliments, complaints, and suggestions on nearly every element to be found in a marina. The comments received in Question 26 closely align with the responses in Question 27, which asked for comments on the overall harbor system instead of individual facilities. Those comments are summarized in order of frequency under Question 27. While the summary that follows there does not identify which specific harbor the improvement was suggested for, that information is available in the appendices of this document and will be provided to appropriate MDNR operations staff.

Question 27: What is the most important improvement to the overall state harbor or municipal marina system that would enhance your experience?

This question provided the opportunity for boaters to provide open ended comments. In addition to the summary of comments provided below, the full text of each comment is included in the appendices of this report. With 959 responses, the comments provide a thorough and wide-ranging list of ideas, compliments, complaints, and suggestions on nearly every element to be found in a marina.

Restrooms/Showers

The analysis of those comments that follows is based on the frequency with the topics were raised, and not surprisingly, restrooms and showers top the list with 74 comments referencing the need to continually clean, maintain, and upgrade restroom facilities as discussed throughout this survey analysis.

Docks, Launches, and Marina Expansion

An equal number of comments, 51 each, referenced the general condition of docks and launch facilities, with comments ranging from the highly complimentary to calling for the need for complete rebuilding of facilities. On the positive side, many boaters, particularly those from out of state, provided very complimentary comments on the quality of docks, marina staff, and harbor communities. There is no question that the State of Michigan has built an exceptional system of harbors, and the challenge lies in keeping up with the maintenance and modernization of so many facilities.

There are clearly harbors that are simply not large enough to serve all of the boaters who would like to utilize them, with Leland, Charlevoix, and Mackinac Island among the facilities most often receiving complaints because they are simply so good it can be hard to get a slip. Others commented on the need for expanding the size and number of Boating Access Sites in particularly dense areas like the Detroit region (even though this question was specifically asking about Harbor facilities, which highlights the fact that boaters often engage in a variety of boating activities).

Many boaters (23) specifically called for replacing older fixed docks with floating dock systems. While 23 out of nearly 1,000 comments may not seem that large a number, not a single request was made for



keeping existing fixed docks or replacing any floating docks with fixed docks. The bottom line is that boaters clearly prefer floating docks whenever harbor conditions allow, and even more so now with the very high water levels. With climate scientists at NOAA and USACE now predicting that the Great Lakes will likely experience more frequent water level fluctuations, floating docks may make more sense than ever.

Staffing

Next in frequency at 45 comments is staffing, with many boaters noting the really significant difference good staff can have on the boating experience. Providing better training for seasonal dock hands so they can better assist boaters with lines was a common request, along with suggestions for providing assistance with directing marine traffic during peak times and providing more assistance as a host or ambassador for the local community.

Maintenance

Maintenance comes in just after staffing in frequency of comments, and as marinas are a part of the hospitality business, friendly, competent staff who keep a facility neat and clean can greatly reduce boater concerns over outdated facilities in the boater experience.

Wi-Fi

Wi-Fi was mentioned 44 times, the same as maintenance and only one less than staffing. Wi-Fi is simply becoming an essential part of marina infrastructure, with the expectation of reliable, high-quality, fast Wi-Fi service in the slip becoming the norm.

Parking

Parking concerns were mentioned 37 times, with the most common request calling for dedicated parking for boaters. This issue is most important in facilities such as Clinch Marina in Traverse City, where adjacent public park facilities host major events and parking conflicts seem inevitable. Parking conflicts at BAS facilities between vehicles with trailers and those without were also mentioned.

Cost

The price of seasonal and transient slip rental was mentioned by 34 participants, all of them calling for lower prices and/or discounts for Michigan residents, veterans, or senior citizens. While a thoughtful pricing structure that considers the needs of lower income boaters within a publicly financed harbor system is important, so too is the need for MDNR to represent the interests of all residents of Michigan as the stewards of limited, precious waterfront resources. This stewardship must include a pricing structure that provides adequate funding to maintain facilities in a safe and environmentally sound manner, and to provide the staffing and quality of facilities the boaters in this survey are asking for.



Fish Cleaning Stations

Fish cleaning stations, and to a lesser extent boat wash down facilities, are highly popular and 32 participants identified them as the most important improvement that could be made.

Electrical Power

Two main categories of comments were received. The first is the call for higher quality infrastructure and more available power, and the second was a number of comments regarding boater frustration with the new ESD compliant facilities. There is a significant need for boater education regarding ESD to help boaters understand that if the system is tripping when their boat is connected, there is a potentially life-threatening problem with their boat. No boater wants to hear or believe this, which is understandable. However, the new electrical codes require a reasonable balance between safety and convenience and minimizing the risk of electric shock drowning to boaters and their children must be considered.

Other

A range of other elements were mentioned a small number of times but have come up throughout the survey. These include the increasing presence of paddlecraft in BAS and Harbor facilities, and the need to provide dedicated parking and ADA compliant launch facilities for them. Lighting and security in facilities were mentioned seven times each, and the idea of utilizing web cameras for both security and boater convenience was suggested. Finally, a focus on managing pests, most often meaning bird droppings and spiders, eliminating weeds in the harbors, and managing water quality round out the general need to maintain facilities in a neat and orderly manner.





SECTION SIX - STRATEGIC PLANNING AND ESTABLISHING PRIORITIES

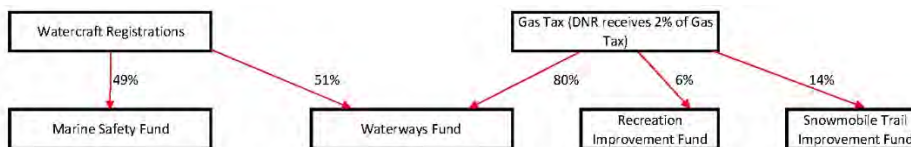
The primary challenge facing MDNR is how to manage, maintain, and expand where appropriate this truly exceptional recreational boating system in an environment where funding seems to be harder to find every year. In addition to the funding sources described below, local communities with Grant-In-Aid funded facilities also provide a significant source of funds and in general play a 50% supporting role in the development of facilities. While not a specific topic of the operator survey, a variety of survey responses indicated challenges with obtaining funds for local match requirements.

CURRENT WATERWAYS PROGRAM FUNDING

This section outlines the current funding levels, sources, and expenditures, and projections. The Waterways Program receives the majority of its funding from State of Michigan sources, with a significantly smaller portion from Federal Sources. In 2019, approximately 90% of Waterways Program funds (\$27.81 million) came from State of Michigan sources, and approximately 10% (\$3.02 million) came from Federal sources.

Michigan State Waterways Revenue Summary – State Funding Sources

1. Gas Tax Revenue from MDOT
2. Watercraft Registrations



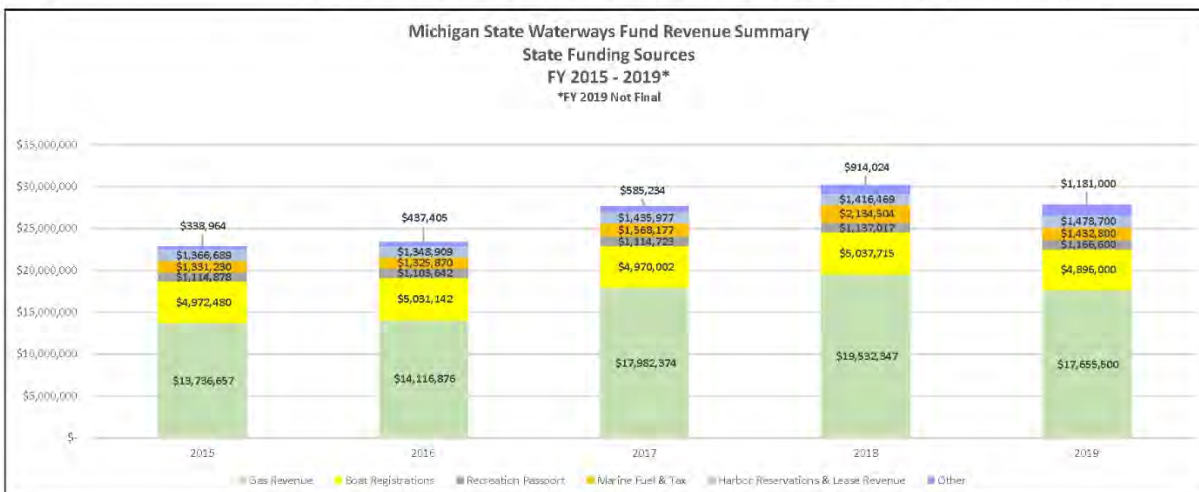
Note: PA 176 of 2015 increased the gasoline tax from \$0.19 per gallon to \$0.263 per gallon beginning January 1, 2017.

3. Recreation Passport

An annual threshold of \$1,030,000 was established beginning in FY 2011 to replace revenue that was lost with the elimination of state boating access site permits. This threshold is adjusted annually based on the cumulative percentage change in the Consumer Price Index for the most recent 1-year period.

4. Marine Fuel and Tax
5. Harbor Reservations & Lease Revenue
6. Other

Other revenue sources include interest on common cash, federal revenue, revenue from surplus and salvage, concessions, and permits.

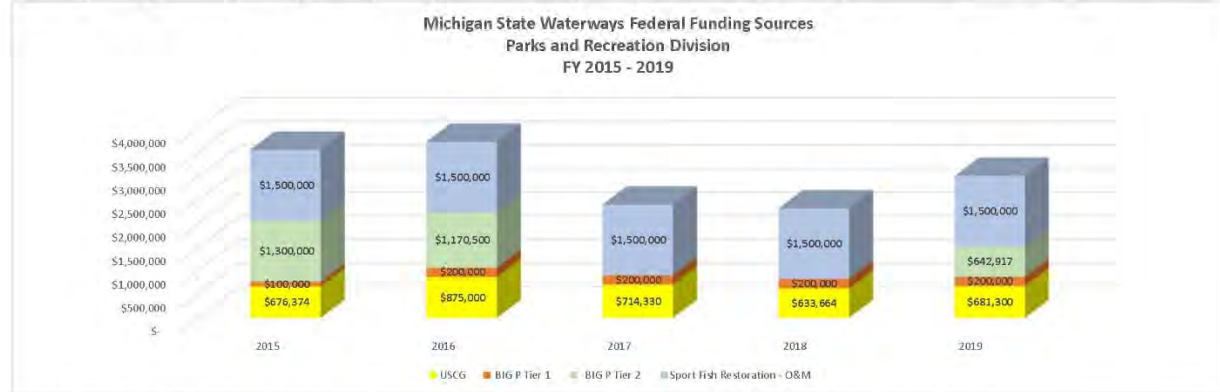
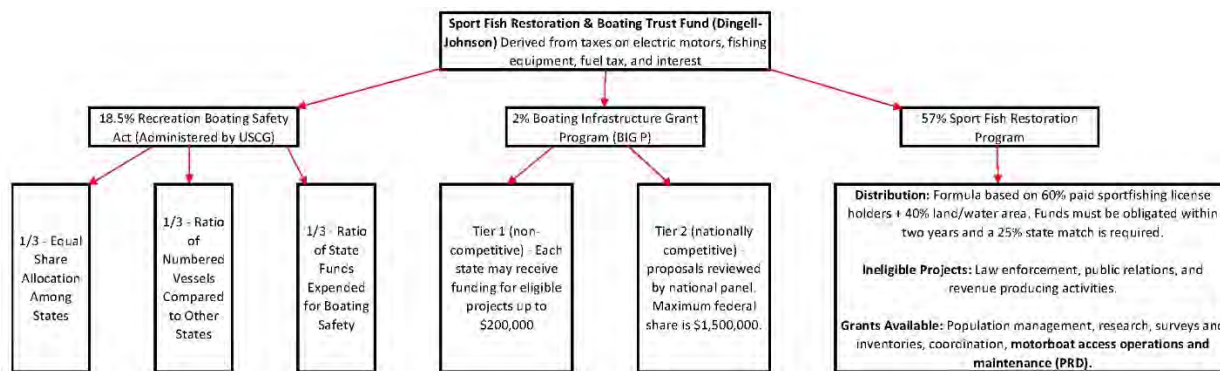


As shown on the chart above, the majority of the State funding comes from Gas Tax Revenues (63.5% in 2019), followed by Boat Registrations (17.6%), Harbor Reservations/Leases (5.3%), Marine Fuel & Tax (5.2%), Recreation Passport (4.2%), and finally “Other” (4.2%). While revenues vary year by year, the



proportion of funds from these separate sources has remained reasonably consistent from 2015 through 2019. Note that figures indicated for the years 2015-2018 are actual figures, and the figures for 2019 are budget projections.

Michigan State Waterways Revenue Summary – Federal Funding Sources



- Notes: 1) Full distribution for Dingell-Johnson also includes: 18.5% Coastal Wetlands Act, 2% Clean Vessel Act, 2% National Outreach & Communications Program.
- 2) BIG P Tier 1 - Funding for eligible projects increased from \$100,000 to \$200,000 in FY 2016.
- 3) BIG P Tier 2 - Based on the state appropriation year, not the federal award year.
- 4) Other divisions within the DNR also receive Dingell-Johnson funds.

The chart above outlines the various sources of Federal funding for the Waterways Program. In 2019, these funds amounted to \$3,024,217, with the very nearly half (49.6%) coming from the Sport Fish Restoration Operations & Maintenance (O&M) budget, 22.5% from the US Coast Guard, 21.3% from US Fish and Wildlife Service Boating Infrastructure Grant Program (BIG-P) Tier 2, and 6.6% from the USFWS BIG-P Tier I program.

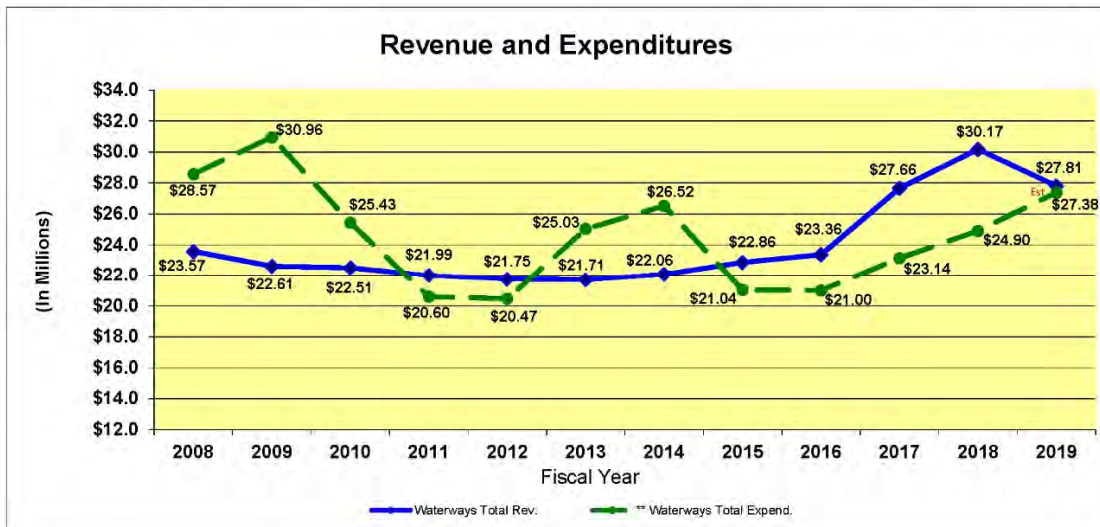
Note that figures indicated for the years 2015-2018 are actual figures, and the figures for 2019 are budget projections. Actual figures for 2019 will be determined through the appropriations process, however these projections are used as the basis for the analysis that follows throughout this section.



As shown on the chart below, Waterways Program revenues were reasonably stable through the period of 2008 through 2016, declining slightly as the Great Recession took hold, and nearly rebounding to 2008 levels by 2016. Revenues increased significantly from 2016 through 2018, largely due to an increase in gas tax revenue from \$14.12 million in 2016 to \$19.53 million in 2018.

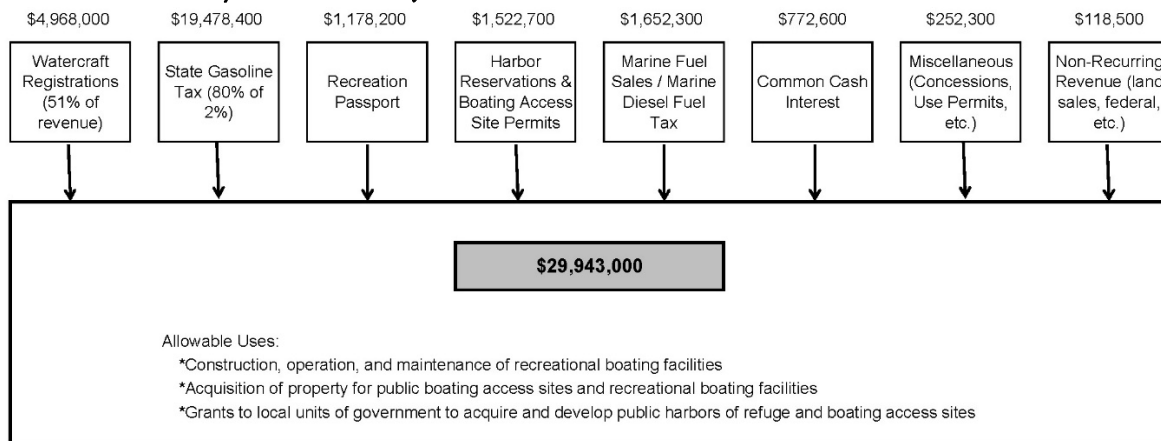
FY 2008-2019 Waterways Total Revenue and Expenditures

Fiscal Years	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Waterways Total Rev.	\$23.57	\$22.61	\$22.51	\$21.99	\$21.75	\$21.71	\$22.06	\$22.86	\$23.36	\$27.66	\$30.17	\$27.81
** Waterways Total Expend.	\$28.57	\$30.96	\$25.43	\$20.60	\$20.47	\$25.03	\$26.52	\$21.04	\$21.00	\$23.14	\$24.90	\$27.38



NOTE:
 ** Includes capital outlay expenditures
 ** May include expenditures from previous fiscal year appropriations
 † Jan 1, 2017 - Increase in Gas Tax: 19¢ to 26.3¢

FY 2020 Waterways Revenue Projections



As indicated above, the total **projected** revenues for the Waterways Program for 2020 are \$29,943,000, which is very nearly as high as the peak funding in 2018 of \$30,170,000. There are a number of potential changes to the funding structures summarized above that could have significant impacts on the revenue projects for 2021 and beyond, in particular potential changes to the gas tax revenue allocation. As those potential changes cannot be predicted at this time, the following analysis assumes the historic allocation of funding sources will remain constant and focus on potential strategies that could be influenced by MSWC.



Projected MDNR Waterways Program Infrastructure Expenditures

The chart below summarizes the anticipated capital costs to maintain the 192 BAS and 75 Harbor facilities included in this study, either owned by MDNR or funded through the Grant-In-Aid program. Grant-In-Aid funded facilities are administered by local units of government. The chart below indicates a total cost to maintain the infrastructure for years 0-5 is \$96,592,822, or approximately \$25.6 million (\$25,616,685) on average per year. The yearly cost for the 5-10 year period increases significantly to approximately \$48.4 million (\$48,420,380) per year, and then decreases to approximately \$38.6 million (\$38,569,167) per year for years 10-20. As outlined earlier in this report, these figures utilize a 3% yearly escalation factor to approximate construction costs over the period of 2020 through 2039. The average projected capital cost per year over the next twenty years is \$37.8 million (\$37,793,850).

Facility Type	No. of Facilities	0-5 Year Total Cost	5-10 Year Total Cost	10-20 Year Total Cost	Cummulative Projected Cost (0-20 Years)
GIA BAS	62	\$ 21,967,910	\$ 32,733,863	\$ 44,280,135	\$ 98,981,907
MDNR BAS	130	\$ 21,183,647	\$ 56,135,541	\$ 100,520,815	\$ 177,840,004
BAS Total	192	\$ 43,151,557	\$ 88,869,404	\$ 144,800,950	\$ 276,821,911
GIA Harbors	56	\$ 73,608,953	\$ 129,640,758	\$ 173,083,623	\$ 376,333,334
MDNR Harbors	19	\$ 11,322,915	\$ 23,591,741	\$ 67,807,095	\$ 102,721,751
Harbors Total	75	\$ 84,931,868	\$ 153,232,500	\$ 240,890,718	\$ 479,055,085
Total	267	\$ 128,083,426	\$ 242,101,903	\$ 385,691,668	\$ 755,876,997

FY 2020 Waterways Revenue

Over the past five years, Capital Outlay Appropriations have ranged from a low of approximately 30% of the total Waterways Program Budget to a high of 46.5% of the budget in 2016, with the last few years closer to 35% of the budget. Of the projected \$29,943,000 Waterways Program budget for 2020, \$11,075,000 has been allocated for Capital Outlay Appropriations, or 37%. Projected Capital Outlay Budgets for 2021 and 2022 are \$11,575,000.

MDNR P&R Division Capital Outlay Budgets:

- FY20: \$11,075,000 (projected)
- FY19: \$10,218,000
- FY18: \$9,575,000
- FY17: \$10,875,100
- FY16: \$6,820,500



Projected Revenues and Budget Shortfall

For the purposes of estimating the yearly annual budget shortfall in comparison with the CPI escalated cost estimates identified above, the summary table to the right is based on the FY2020 Capital Outlay projected Budget of \$11,075,000 and projected FY2021 and FY2022 Capital Outlay Budgets of \$11,575,000. The projected FY 2022 budget is then increased by an annual inflation percentage of 2.5% based on the projected Consumer Price Index forecast from the Organization for Economic Cooperation and Development (OECD). Using a lower escalation factor for revenue increases of 2.5% compared to the construction cost escalation estimate of 3% provides a more conservative estimate of the currently projected budget shortfall. It is important to note that these Capital Budget Outlay Projects are not based on actual MDNR projections but are simply the FY2022 Budget increased by CPI.

Year	Projected Yearly Capital Expense	Projected Yearly Capital Outlay Budget	Projected Yearly Budget Shortfall
2020	\$ 25,616,685	\$ 11,075,000	\$ 14,541,685
2021	\$ 25,616,685	\$ 11,575,000	\$ 14,041,685
2022	\$ 25,616,685	\$ 11,575,000	\$ 14,041,685
2023	\$ 25,616,685	\$ 11,864,375	\$ 13,752,310
2024	\$ 25,616,685	\$ 12,160,984	\$ 13,455,701
2025	\$ 48,420,380	\$ 12,465,009	\$ 35,955,371
2026	\$ 48,420,380	\$ 12,776,634	\$ 35,643,746
2027	\$ 48,420,380	\$ 13,096,050	\$ 35,324,330
2028	\$ 48,420,380	\$ 13,423,451	\$ 34,996,929
2029	\$ 48,420,380	\$ 13,759,038	\$ 34,661,342
2030	\$ 38,569,167	\$ 14,103,014	\$ 24,466,153
2031	\$ 38,569,167	\$ 14,455,589	\$ 24,113,578
2032	\$ 38,569,167	\$ 14,816,979	\$ 23,752,188
2033	\$ 38,569,167	\$ 15,187,403	\$ 23,381,764
2034	\$ 38,569,167	\$ 15,567,088	\$ 23,002,079
2035	\$ 38,569,167	\$ 15,956,265	\$ 22,612,902
2036	\$ 38,569,167	\$ 16,355,172	\$ 22,213,995
2037	\$ 38,569,167	\$ 16,764,051	\$ 21,805,116
2038	\$ 38,569,167	\$ 17,183,153	\$ 21,386,014
2039	\$ 38,569,169	\$ 17,612,731	\$ 20,956,438
Total:	\$ 755,876,997	\$ 281,771,986	\$ 474,105,011

On average, the current yearly projected budget shortfalls are:

- FY2020 - 2024: \$25.6m - \$11.65m = \$13.95 million shortfall
- FY2025 - 2029: \$48.4m - \$13.1m = \$35.3 million shortfall
- FY2030 – 2040: \$38.6m - \$15.8m = \$22.8 million shortfall

In summary, with a total projected capital outlay over the next 20 years of approximately \$755.9 million and projected capital budgets of approximately \$281.8 million, the projected shortfall over the next 20 years is approximately \$474.1 million. In simple terms, while the projected shortfall over the next five years is \$13.95 million annually, the average shortfall over the full 20-year period is \$23.7 million annually through 2039.



PROPOSED SHORTFALL RESPONSE STRATEGIES

The projections outlined above clearly express the need for immediate action wherever possible to either increase revenue funding sources, decrease capital outlay costs, or leverage available funds to increase the effective use of the available funds.

Increase State Funding

Current State funding sources include Gas Tax Revenues, Watercraft Registrations, Recreation Passport, Marine Fuel & Tax, Harbor Reservations & Lease Revenue, and “Other”.

Gas Tax Revenues

As the largest source of State funds, representing approximately 63.5% of the Waterways Program budget with \$17,655,500 in projected revenues in 2019, Gas Tax Revenues are critical to the Waterways Program. Unfortunately, these funds are entirely under the control of the legislature, so there is little direct action that MDNR or MSWC can take short of communicating the importance of these funds to the long-term sustainability of the Waterways Program to the legislature.

Watercraft Registrations

As the second largest component of the Waterways Program, representing 17.6% of the budget with \$4,896,000 in revenue in 2019, there are several opportunities to modernize the watercraft registration system to address major changes in the recreational boats and usage patterns on Michigan’s waterways.

Current watercraft registration pricing (Michigan Secretary of State, 2020):

- Non-motorized sailboats: \$9 (original fee and 3-year renewal), or \$3 per year
- Non-motorized canoes and kayaks used commercially: \$5 (original fee and 3-year renewal), or \$1.66 per year
- Non-motorized canoes and kayaks in private use: Free (no registration)
- Motorboats* less than 12’ and motorized canoes of all sizes: \$14 (original fee and 3-year renewal), or \$4.66 per year
- Motorboats 12’ or more but less than 16’: \$17 (original fee and 3-year renewal), or \$5.66 per year
- Motorboats 16’ or more but less than 21’: \$42 (original fee and 3-year renewal), or \$14 per year
- Motorboats 21’ or more but less than 28’: \$115 (original fee and 3-year renewal), or \$38.33 per year
- Motorboats 28’ or more but less than 35’: \$168 (original fee and 3-year renewal), or \$56 per year
- Motorboats 35’ or more but less than 42’: \$244 (original fee and 3-year renewal), or \$81.33 per year
- Motorboats 42’ or more but less than 50’: \$280 (original fee and 3-year renewal), or \$93.33 per year
- Motorboats 50’ or more: \$42 (original fee and 3-year renewal), or \$149.33 per year
- Pontoon Boats regardless of size: \$23 (original fee and 3-year renewal), or \$7.66 per year

*”Motorboats” include all sailboats with permanently installed auxiliary motors

Modernizing the watercraft registration system will both increase total registration revenues and more fairly allocate the costs of operating the Waterways Program to boaters of all types. Registration program elements to consider include aligning the historic base registration rates with yearly inflation, modernizing the classification and rates for pontoon boats, and adding paddlecraft of all types to the registration system.

Registration Rate Inflation

The registration rates identified in the table above were established in 1993 and have not increased at any point over the last 27 years to adjust for inflation. Utilizing the average annual CPI data in the US from 1993 to 2020 of 2.24932%, and the total inflation rate from 1993 to 2020 is 82.31903% (source: Bureau of Labor Statistics). In context, the average 40' boat in Michigan paid \$244 in 1993. If watercraft registration rates were simply increased annually with CPI, the average 40' boat would pay \$444.86 in 2020. If applied to the actual Watercraft Registration revenue included in the FY2019 Waterways Program Budget, the \$4,896,000 collected in 2019 would have been \$8,767,645. This alone would have provided an additional \$3,871,645 in the 2019 budget, or more than a quarter (26.5%) of the \$13.95 million projected budget shortfall for the next five years, and 16.33% of the average \$23.7 million shortfall projected over the next 20 years.

Additionally, with boat sizes continuing to increase on the Great Lakes, up to and including superyachts over 200' in length, additional size categories with appropriately higher rates for boats over 50' in length should be introduced. There is little justification for a 150' superyacht paying the same watercraft registration rate as a 50' boat.

Modernize Pontoon Boat Classification

Pontoon boats have changed dramatically over the past 23 years, with boat lengths now approaching 30' or more. Whereas pontoon boats used to be powered by small outboards generally 50hp or less, they can now be found with stock twin 300hp outboards for a total of 600hp, capable of reaching speeds in excess of 60mph at a cost of well over \$200,000.



Bennington Model 27RFBX2 28'3"LOA, twin 300hp outboards, MSRP \$214,917 2020 Chicago Boat Show



Utilizing the current registration rates, the boat above would pay just \$7.66 registration fee per year. If this boat were simply classified as a motorboat, the current rate would be \$56 per year. Adjusted for CPI, the current rate would be \$102.10 per year. Even at the highest rate adjusted for CPI, this equates to 0.000475% of MSRP per year.



The 23' Sea Ray SPX230 on the left currently pays \$38.33 per year, while the 28' Bennington Pontoon boat on the right pays \$7.66 per year. Based on the reality of the performance of these craft, there is no justification to have separate and dramatically lower registration prices for pontoon boats. If there is a concern about unfairly increasing rates on older traditional pontoon boats, the simple resolution is to maintain the "pontoon boat" category with a reasonable maximum horsepower limit of 50hp for example. Any vessel with more than 50hp would fall under the standard "motorboat" categories based on size.

According to NMMA statistics, pontoon boats currently make up 1/3 of the total powerboat market in the United States, with 55,515 pontoon boats registered in Michigan in 2018. At the current rates, these boats generate \$425,245 per year in watercraft registration revenue. With an average length of pontoon boats in the United States at 22', these same 55,515 pontoon boats would generate \$2,127,890 per year for an additional \$1,702,645 annually. If annual CPI inflation were applied, this would equal \$3,810,577 per year, or \$3,385,332 more per year than currently generated by pontoon boat registrations.

This amount, combined with the increased revenues from simply increasing watercraft registration rates across the board as outlined above, would have provided an additional \$7,256,977 in the 2019 budget. This amounts to more than half of the \$13.95 million projected budget shortfall for the next five years, and approximately 30% of the average \$23.7 million shortfall projected over the next 20 years.

Paddlecraft Registration

According to a May 9, 2018 article *Debate on Kayak, Canoe Registration Makes Waves in Michigan* (Detroit News, 2018), the US Coast Guard estimates that there are approximately 650,000 paddle sports vessels in the State of Michigan. Unlike the states of Minnesota and Ohio, there is currently no watercraft registration requirement for non-motorized paddlecraft of any type in the State of Michigan.

Opponents of paddlecraft registration offer several arguments they believe justify continuing the existing system of completely free access to the State of Michigan's waterways, including the suggestion that they use less boating infrastructure than other boaters. As documented through the operator surveys completed in this report, BAS and Harbor facilities are seeing dramatic increases in the number of paddlecraft users in BAS facilities, with particular impacts on demand for car top parking access and increasing conflicts between vehicle/trailer and car top only parking demand. In addition to the use of

physical infrastructure for parking, the BAS facilities are often used by first responders and emergency personnel engaged in search and rescue operations for paddlecraft users. The article cited above indicates there were 152 fatalities of kayak and canoe users in 2016 according to the US Coast Guard. A single incident in Mackinac County incurred a cost of \$1,300-\$1,500 in emergency personnel for the one-hour rescue of a grandfather and his two grandchildren.

Some paddlecraft users suggest that since they often have more than one paddlecraft they would be “over-taxed” if they have to register more than one vessel. As the Boater Trends Survey completed as part of this study identified, over 92% of the 3,748 respondents indicated they own more than one boat, so this argument would apply to the vast majority of boaters if valid. The images below represent a compelling comparison:



The two small sailboats above each pay \$3 per year. Neither uses any more waterway infrastructure than any type of paddlecraft, and possibly less since very few people car top launch vessels of this type. Yet no one is arguing that these boats should be exempt from Watercraft Registration. None of the vessels in the lower image pay any watercraft registration fees, and there is little valid justification supporting the argument that some boaters should have to pay registration fees and others should not. The State of Minnesota charges \$3.50 per year for non-motorized canoes, kayaks, sailboats, sailboards, rowing shells, paddleboards, and paddleboats 10' and longer. The State of Ohio charges \$6.66 per year for any length



hand-powered canoe, kayak, rowboat, inflatable, racing shell, rowing skull, or pedal boat. If the State of Michigan applied the same \$3 registration fee to paddlecraft that is applied to small non-motorized sailboats as shown above, it would generate \$1,950,000 in additional revenue, or \$3,492,015 dollars if the CPI inflation adjusted rates were utilized. This represents 14.73% of the projected average annual budget shortfall.

Aquatic Invasive Species (AIS) Surcharge

The State of Minnesota charges an Aquatic Invasive Species (AIS) Surcharge of \$10.60 to all vessels required to register. With 819,317 boats registered in 2018 (second only to Florida, and just ahead of Michigan), this surcharge should generate \$2,894,920 per year. If a similar surcharge was applied to Michigan's 795,374 registered boats in 2018, it would generate \$2,810,321 per year, or approximately 11.86% of the estimated \$23.7 million annual budget shortfall.

Harbor Reservations & Lease Revenues

As the third largest source of State funds, Harbor Reservations & Lease Revenues represent approximately 5.3% of the Waterways Program budget with \$1,478,700 in revenues in 2019. These revenues are generated solely within the MDNR owned harbor facilities, as there is currently no mechanism for revenue sharing between the Waterways Program and the Grant-In-Aid funded harbors.

The Waterways Program has separate rate tables for transient and seasonal slips. Each of these tables is then broken down into a series of zones with ascending price structures to address differences in the market demand based on geography. The most popular destinations, such as Mackinac Island, charge the most, and the lowest demand facilities charge the least. In some cases, such as Whitefish Point State Harbor, there is no charge at all due to the small size and remoteness of the facility. This is most often the case in basic Harbors of Refuge, which while not economically self-sufficient on their own, are nevertheless critical to the overall harbor system by providing safe harbors throughout the state in order to achieve the goal of a safe harbor within 15 miles of any point along the shores of the Great Lakes. It is important to consider the value of these facilities in the context of their value to the system overall, and to the adjacent facilities in more populated areas. Whitefish Point State Harbor, for example, increases the value and usefulness of the facilities in Sault Ste Marie, Grand Marais, and Munising by making it easier and safer for boaters to attempt the 90-mile trip between them.

An example of the typical rates charged at State Harbors is shown below. Similar to the Watercraft Registration system, these overall rates – while adjusted within categories for the 2020 season - have not increased since 2013 and have not been adjusted to respond to annual CPI inflation.

Zone 2 Seasonal Rates:

30' Slip = \$2,580
35' Slip = \$3,080
40' Slip = \$3,680
45' Slip = \$4,275
50' Slip = \$4,900
60' Slip = \$6,120

Zone B Transient Slip Daily Rates:

30' Slip = \$26
35' Slip = \$31
40' Slip = \$35
45' Slip = \$40
50' Slip = \$44
60' Slip = \$53



If the 2019 Lease and Harbor Revenues of \$1,478,700 in 2019 were adjusted upward at CPI from 2013, the Waterways Program funding would have been \$167,827 higher to \$1,646,527 in 2020. According to the US Department of Labor, the total inflation rate from 2013 to 2020 is 11.35%, which amounts to an average inflation rate from 2010 to 2020 of 1.55%. Note also that individual facilities can shift their rates to higher rates within the existing system.

Marine Fuel & Tax Revenues

As the fourth largest source of State funds, representing approximately 5.2% of the Waterways Program budget with \$1,432,800 in revenues in 2019, Marine Fuel & Tax Revenues are critical to the Waterways Program. Unfortunately, these funds are entirely under the control of the legislature, so there is little direct action that MDNR or MSWC can take short of communicating the importance of these funds to the long-term sustainability of the Waterways Program to the legislature.

Recreation Passport Revenues

As the fifth largest source of State funds, the Recreation Passport revenues represent approximately 4.2% of the Waterways Program budget with \$1,166,600 in revenues in 2019. The cost of a recreation passport has been \$11 per year, but that is rising to \$12 per year on March 1, 2020 due to a statutory provision in the legislation requiring the rate to rise automatically with CPI. That equates to a 9% increase, which could result in an increase in annual funding for the Waterways Program of just under \$105,000 per year if the distribution model remains unchanged. The automatic CPI increase built into the legislation should serve as a model for modernizing the waterways registration structure described above. This increase would represent approximately 0.44% of the projected annual shortfall of \$23.7 million.

Other Revenue Sources

The sixth largest source of state revenue is the “Other” category at \$1,181,000 in 2019, representing approximately 4.2% of the total state revenues. Revenue sources in the “Other” category include interest on common cash, federal revenue, revenue from surplus and salvage, concessions, and permits.

In addition to the miscellaneous funds outlined above, there are a number of additional opportunities for generating revenue in existing marinas, expanding access to boating, reducing energy demand while recovering utility costs, and providing improved services at no cost to the Waterways Program. These strategies include boat rentals or boat clubs, individual metering of power, and third-party Wi-Fi providers.

Boat Clubs and/or Boat Rentals

As described in greater detail in the following section, boat clubs and boat sharing programs are a major trend that is growing rapidly in the marina market. They are organizations that own boats that are either rented to the general public or to club members. They allow many more boaters to access the water at a much lower cost, while using far fewer boats. An average seasonal renter may take their boat out once or twice per week, while a boat club vessel will likely leave the slip five or six days of the week, and often multiple times per day on weekends and holidays. As these are commercial businesses that utilize public



marina facilities, as well as adding a significantly higher demand for parking and harbor amenities, it is reasonable to charge significantly more for the slip rental than to a typical private boater. Another approach would be to negotiate a contract that pays a fixed percentage of gross revenues each year, similar to what some marine service providers pay to repair boats in the marina.

Some public marinas, recognizing the revenue potential of renting boats and paddlecraft directly to the public, have embraced the rental program internally with significant success. A typical 180 slip municipal marina, operated on a reservoir in Colorado generates more than \$500,000 gross revenue per year through the rental of small powerboats, kayaks, canoes, and paddleboards.

Individual Power Metering

As MDNR upgrades the electric power infrastructure in the harbors, most new marina utility pedestals come standard with the ability to individually meter power usage by individual boaters at no additional cost. Many modern marinas now charge seasonal boater directly for the actual power used on a monthly basis rather than bundling the electrical costs into the slip lease fee. The best reason to do this is to encourage individual boater responsibility and conserve energy, as it has been proven that boaters use significantly less energy (as much as 30% less) on average when individually metered according to Chris Dolan, a nationally recognized marine electrical engineer of Marina Electrical Equipment. This has been proven to the point that the most current National Electric Code allows a reduction of 10% in energy demand calculations when metering is present. These means a direct reduction in construction costs as well. The marina charges the same rate as the utility provider, as well as a small upcharge to cover management and billing costs if allowed by state law.

While it can vary from marina to marina, an analysis of hundreds of marina operational budgets performed by Bogner & Associates has found that total individual utility costs generally run approximately \$100 per slip per year. If a 30% reduction in that cost is applied to a typical 150 slip marina, it would result in a savings of \$4,500 per year. Applied across the system as a whole, it could result in savings of hundreds of thousands of dollars per year.

Third Party Wi-Fi Services

The boater and operator surveys indicate significant demand for high-speed Wi-Fi in the slip. As most MDNR and GIA harbor staff are not IT experts, installing, operating, and maintaining this type of system can be costly and difficult. Engaging a third-party provider such as Jabba Communications or Beacon Wi-Fi (among several others) rather than operating these services in-house may be a more effective strategy. These providers will design, install, maintain, and operate in-slip Wi-Fi systems, sometimes at no charge to the marina owner or at greatly reduced rates. They can offer the service directly to the boater, including direct billing similar to cable TV charges. If desired, they can offer the service to the marina owner, who collects the fees to collect some of the potential revenues, while the third-party operator provides and bills the service directly to the boaters with little to no involvement from harbor staff. While the revenues generated for the harbor system will vary depending on the provider and contract negotiated, at minimum it provides a very desirable amenity at low or no cost to the Waterways Program.



Events

With the trend towards “cottage boaters” leading some boaters to treat their boats more like floating cottages – meaning they often spend more time on their boats in the marinas and overnighting on weekends rather than leaving the slip - some private operators such as Desmond Marine in Port Huron are providing more landside amenities such as pools and event spaces. The Marina at the Inn at Harbor Shores in Saint Joseph has been the site of weddings, with wedding receptions held in the adjacent amenity areas. Eagle Harbor State Harbor in the upper peninsula has identified similar customer demand for private events on site. These activities can become a source of significant revenue.

Recommendations:

- **Modernize the Watercraft Registration Rates**
 - *Increase the current Watercraft Registration rates by the average CPI since 1993 and incorporate annual CPI increases moving forward*
 - *Provide additional watercraft registration rate size categories with appropriately higher rates for boats over 50' in length*
 - *Classify any pontoon boat with more than 50hp as a standard motorboat*
 - *Require registration of non-motorized paddlecraft the same as small non-motorized sailboats*
- **Consider an AIS Surcharge**
- **Increase the Seasonal and Transient lease rates by the average CPI since 2010 and incorporate annual CPI increases moving forward**
- **Consider partnering with private boat clubs and/or directly offering boat and paddlesports rentals to generate significant direct revenues**
- **Implement individual power metering to reduce energy use, construction costs, and recover utility costs**
- **Consider offering more leasable space for private events**

Improve Operational Performance

Like any business, marinas can improve their financial bottom line by increasing both seasonal and transient occupancy and reducing operating expenses. The elements within the marina operator’s control that can make a significant improvement in occupancy generally including renovating or updating the facilities, expanding the facility, enhancing the amenities offered, and/or significantly improving customer service through hiring or staff training.

A good example would be East Tawas State Harbor, which reported 35% seasonal occupancy in 2012 when renovation planning began. Following completion of major renovations and conversion of fixed docks to floating docks, seasonal occupancy reached 100% with a waiting list. The strategies utilized in the renovation of the marina followed the design principles boaters identified in the Boater Survey in the question asking them to identify the best harbor in the state of Michigan, and why they chose the harbor they did. Those strategies are described in detail in the following section of this report. When existing budgets do not support immediate physical renovations, focusing on improving customer service is a sound strategy. Boater survey results for Lexington State Harbor performed in consecutive years with a change



in management staff between survey years indicated major improvements in boater satisfaction with not just the staff but the facility overall.

When planning major renovation projects, it is important to complete a sound market analysis and financial feasibility study. As slip rates for larger sized boats are significantly higher than smaller slips, a marina with a greater proportion of larger slips will generally generate more revenue with the same or less operational expense. This is only a valid strategy when the market demand for larger slips exists of course.

The final consideration in improving the financial performance of the harbors is to consider going beyond the current standard Waterways Program rate structure to a market rate-based strategy. This concept would be appropriate only in high demand facilities with significant waiting lists, and the idea would be to raise rates in the way a private operator would. Clinch Marina in Traverse City, for example, has 119 total slips with 71 seasonal slips which have been at 100% occupancy for many years. In the summer of 2019, they had a waiting list of 250 names, which is 350% of their available seasonal capacity. If a private operator were to purchase the facility, they would likely raise rates immediately. This would naturally cause some boaters to relocate to other facilities, and the waiting list would start to shrink. A private operator intent on maximizing the value of the demand for their facility would likely increase rates to the point where their waiting list is no more than 10-20% of their seasonal capacity, if that. This alone could see revenues increase 20%-30% or more, which at Clinch Marina would equate to tens of thousands of additional dollars per year.

The displaced boaters would then increase occupancy at other nearby facilities, or better yet support the expansion of existing MDNR and/or GIA facilities. While some might argue that tax-payer funded facilities have an obligation to keep rates low, another valid perspective is that the Waterways Program and MDNR are the stewards of the State of Michigan's waterway resources for all 10,000,000 residents of the state, and the 90% of the state's population who are not boaters could reasonably demand that the state charge the going market rate for the use of the public waterways. Equally important, publicly owned facilities should not charge less than nearby private facilities with reasonably equal amenities and infrastructure, which would amount to a taxpayer funded public marina unfairly competing with the private sector. The bottom line is that some high-demand facilities could be entirely financially self-sufficient by raising rates to match the actual market demand value, either by moving to higher existing rate categories or more.

A key point would be that most of the existing harbors with high enough demand to justify this approach are Grant-In-Aid facilities who do not currently share any revenues with the State of Michigan, even though they were constructed with significant state funding. This issue will be addressed in more detail below.

Recommendations:

- ***Improve occupancy and financial performance by renovating marinas considering the design principles that boaters identified make for the best harbors***
- ***Improve occupancy by focusing on customer service and staff training where renovation funds are not available***
- ***Consider increasing rates to true market levels in very high demand facilities***



Decrease Capital Outlay Costs

Reducing overall capital outlay costs can be achieved through a variety of strategies. This includes site specific strategies at individual facilities, systemwide strategies to reduce costs for standard items, consideration of partnerships to share costs, and finally consideration of closing or transferring underperforming facilities.

Site Specific Strategies

Site specific design strategies to reduce capital outlay costs will vary widely from one site to another, and are generally developed through a collaborative process between the design professional and operational staff, including:

- Completion of a sound marina market analysis to ensure the infrastructure to be constructed will be effectively utilized and occupied
- Development of the most efficient dock layout possible, including:
 - Eliminating single loaded docks wherever possible
 - Consideration of flexible broadside mooring where appropriate rather than traditional slips to allow harbor staff to fit more boats into the same space, while also improving the boater experience by allowing boats of different sizes to moor closely to one another as many transient boaters prefer
 - Collaborating with adjacent public or private facilities to share fairways to maximize efficient use of the waterway and reduce dredging costs
 - Consideration of life-cycle cost analysis of project materials to reduce long-term maintenance and replacement costs.
- Phase projects where appropriate based on actual market demand – it can be a sound strategy to build somewhat less infrastructure than projections may suggest in facilities with historically low demand to ensure the projected demand is realized. It is better to build less than what is needed and disappoint a few boaters until more infrastructure can be constructed in the next phase than to build too much and have unoccupied slips.

Systemwide Strategies

Systemwide strategies to reduce construction costs could include statewide negotiated contracts with suppliers of standard items. For example, recognizing the need to make major improvements to the marina electrical infrastructure for over 80 harbors, the state could consider offering a competitive Request for Proposal (RFP) for supply of marina utility pedestals, resulting in a lower negotiated rate for marina electrical equipment over a period of years. This strategy could be applied to many elements of marina infrastructure, including plumbing elements and marina management software. Standardization of marina management software would also support more consistent collection of occupancy and financial reporting.

Partnerships

Look for opportunities for Public Private Partnerships (PPP), or intergovernmental partnerships to share both construction and operational costs. Examples may include:

- Consideration of a Ludington Harbor View style PPP where non-revenue generating infrastructure such as breakwaters are constructed with public funds, and revenue generating infrastructure is constructed and operated with private funds. This approach has been implemented with mixed results by MDNR in



the past, however the ultimate success of any PPP is based on the specific conditions agreed to in the PPP agreement. There are many examples of successful PPP projects across the country which can serve as examples to emulate in the future.

- Whitefish Point State Harbor has multiple agreements with the Great Lakes Shipwreck Museum and Native American commercial fishery operations (CORA) to share harbor maintenance and infrastructure costs.

Consider Closing, Reducing Infrastructure, or Transferring Underperforming Facilities

Closing or transferring any existing harbor facility will require very careful consideration before taking any action. First and foremost should be consideration of the overall harbor system, with priority given to maintaining to the greatest extent possible the stated MDNR goal of providing a harbor within fifteen miles of any point on the Great Lakes shoreline wherever possible. Should a harbor that is the only facility providing harbor access be considered for closing, the first step should consider reducing the level of infrastructure consistent with a basic harbor of refuge (safe mooring out of the storm) rather than closing. Given the potential importance of a facility might have to a small local economy, the next step would be to transfer the facility to the local municipality or consider entering a partnership with a local business through a PPP. The last option would be to close the facility altogether.

In order to document the financial performance and occupancy conditions that might suggest or justify any of the actions outlined above, MDNR could consider the implementation of a consistent and more rigorous data tracking system than is currently in place. This process would establish a consistent reporting methodology to be used by all MDNR and GIA harbor facilities, gathering data including:

- Seasonal Occupancy, including:
 - Number of slips occupied by slip size
 - Actual size of boat occupying the designated slip size to determine effective occupancy
 - Total seasonal slip revenue
- Transient Occupancy, including by date:
 - Number of slips occupied by slip size
 - Actual size of boat occupying the designated slip size to determine effective occupancy
 - Number of linear feet of broadside mooring occupied
 - Total transient slip revenue
- Fuel Sales Information, including:
 - Total number of gallons and gross revenue of both diesel and gasoline fuel sales
 - Total fuel costs
- Incidental Sales Information, including:
 - Total gross revenues for all incidental sales, including ships store, ice, souvenirs, facility rentals, etc
 - Cost of goods sold
- Consider Improved/Automated Data Collection



Recommended Statewide Supplemental Marina Market Analysis

With the data described above collected for all harbors, future marina market analyses will be much easier to perform and more accurate than the current methodology allows. This data would also facilitate the completion of a comprehensive statewide marina market analysis that would support the completion of a comprehensive strategic master plan for the future development of the system. This effort would be helpful in establishing priorities and allocating funds to most effectively manage the system for the next twenty years. Elements could include:

- Comprehensive Statewide Marina Market Analysis utilizing accurate and consistent data collection for 1-3 years
- Identify markets that are underserved where facility expansion may be warranted
- Identify markets that are underperforming or overserved and “sustainable contraction” may be warranted
- Identify facilities that are critical to the harbor system regardless of financial performance
- Identify opportunities to transfer ownership of underperforming, non-critical facilities to local government or private entities
- Identify opportunities to invest in underperforming critical facilities, potentially through intergovernmental agreements of public private partnerships

Recommendations:

- *Implement site specific strategies and phasing to maximize the effectiveness of capital budgets*
- *Consider negotiating competitive statewide contracts for consistent equipment across the system*
- *Identify opportunities for Public Private Partnerships and explore successful models across the country*
- *Consider reducing infrastructure to basic harbor of refuge only*
- *Consider sale or transfer of facility to local partners, or closing as a last resort*
- *Improve accuracy and consistency of data collection across the entire system*
- *Complete a Statewide Marina Market Analysis and Strategic Master Plan*

Leverage Available Funding Sources

To this point, this section has focused on strategies to increase the revenues coming in to the system or reducing the costs of renovating the infrastructure and operation of facilities. The next elements to consider outlined herein are intended to leverage existing funds to make the existing budgets go farther. These include revisiting the Grant-In-Aid program to implement revenue sharing where appropriate, creation of a Grant-In-Aid Loan program to supplement the existing Grant program, and finally consideration of leveraging systemwide revenues to fund a capital investment revenue bond.

Grant-In-Aid Revenue Sharing Partnerships

Under the current system, the Waterways Program provides grant funds to communities following an application process. Waterways Grants generally require a local match, which can range from as little as 5% up to 75% or more, with most grantees contributing a 50% or higher local match. At this time there is no structure for Grant-In-Aid facilities to share any of the revenues generated within their facilities with the



Waterways Program, so granting capacity is limited to the existing funding structures. Given the number of facilities that will be needing renovation and funding over the next twenty years, it may now make sense to formalize the value of the matching structure in the scoring and prioritization of grant funding, and consider introducing a scoring system that increases the likelihood of grant award if the grantee agrees to return some percentage of the annual gross revenues generated by infrastructure constructed with grant funds. Similarly, increasing the number of points on a grant award for a defined contribution would encourage local communities to contribute more local funds, which would leave more funds in the Waterways Program budget to fund more projects. This would encourage Grant-In-Aid communities to think of the arrangement as more of a partnership than a one-way grant program and provide a new source of funds to replenish the Waterways capital budgets.

It may make sense to use these shared revenues to fund a “Harbor Maintenance Trust Fund” modeled after the USACE trust fund used to maintain commercial shipping. The USACE Harbor Maintenance Trust Fund collects 1% of all revenues from commercial shipping and allocates those funds to maintain the overall system. If Grant-In-Aid facilities contributed 1% of annual gross revenues to a Waterways trust fund, these funds could be used to maintain basic harbors of refuge or other waterway facilities that directly benefit GIA communities but have no other self-sufficient funding source.

Loans vs Grants

Another approach to leveraging existing funds would be to implement a loan program to supplement the grant program. Following the example of Clinch Marina above, there are many harbors that are under sufficient demand that they could support short term rate increases or assessments to repay a GIA loan rather than a grant. If the marina requested a loan of \$150,000 to fund an electrical upgrade or flood damage repair, at an example rate of 2% interest for ten years, the yearly loan payments would amount to \$16,560. Spread across 71 seasonal slips, that would amount to an average yearly assessment of \$233 per boater, or roughly 5% of the annual slip cost of \$4,578 for a 42' slip. While boaters would certainly not be happy with the additional charge, with 250 names on the waiting list, there is little risk of impacting harbor occupancy. These costs do not have to be placed entirely on the boaters, as Clinch Marina generated a profit of \$27,400 in 2019 according to the City's financial reports, but this example makes it clear that even a worst-case situation could be feasible in some facilities. Those loan funds would support immediate critical repairs, and then be available again (with interest) to fund future projects down the road.



Revenue Bond Funding

The final strategy to leverage the existing budget to fund more projects immediately would be to commit the existing revenues to funding a capital outlay revenue bond program. The Chicago Park District utilized this approach in the construction of the \$103 million 31st Street Harbor by committing funds from the revenues of all 6,000 of their slips to service the revenue bond debt. If the Waterways program committed \$5 million of the annual capital budget of \$11.65 million, those funds could support an immediate capital program of approximately \$68.5 million funded by a revenue bond at 4% over 20 years. Utilizing \$10 million of annual capital budget funds could support an immediate capital program of approximately \$138 million at the same terms, and a more favorable interest rate of 3% would increase that amount to \$150 million.

Recommendations:

- *Consider introducing revenue sharing options to the Grant-In-Aid program*
- *Consider the creation of a Waterways Harbor Maintenance Trust Fund funded by Grant-In-Aid community contributions or other sources*
- *Create a Waterways Loan program to supplement the existing Grant-In-Aid program*
- *Consider utilizing capital budget revenue bond funding to accelerate capital investment funding*

Increase Federal Grant Funding Sources

In 2019, approximately 10% (\$3.02 million) of the Waterways Program budget came from Federal sources, including the Sport Fish Restoration O&M budget, the US Coast Guard, and the US Fish and Wildlife Service Boating Infrastructure Grant Program (BIG-P) Tier 1 and Tier 2 programs. The funding source that can be most affected by MDNR staff is the USFWS Boating Infrastructure Grant Program. This program has two categories, with smaller Tier 1 funds used for planning and engineering, and larger Tier 2 grants up to \$1.5 million per project used for construction projects. This program helps fund the development of dedicated transient boating facilities such as docks, utilities, shoreline improvements, walkways, restrooms, etc for transient boats 26' and longer. Over the last five years, the Waterways program has secured \$900,000 in Tier 1 program funds and over \$3.2 million in funding through the Tier 2 program.

While these grants are quite competitive, MDNR has a successful track record with the program. The Boating Infrastructure Grant Program provides funding to public and private facilities in support of the development of infrastructure for non-trailerable boats 26' and longer. It will only fund improvements for transient boating infrastructure, but will cover all associated costs of development including docks, utilities, landside facilities, and predevelopment costs such as engineering and feasibility. Where transient facilities are located within a marina that also includes seasonal facilities, improvements are funded on a pro-rated basis. For example, if 50 slips of a proposed facility are designated transient and 50 slips are seasonal, landside amenities such as boater services structures, parking, walks, landscape, etc, are eligible for up to 50% funding.



Perhaps the biggest challenge with this program is that infrastructure funded by the USFWS BIG Grant program is required to remain dedicated to transient boats for the life of the project. This is an important consideration for MDNR as it has the potential to limit the flexibility of local harbor operators. Award of a BIG Grant is based in large part on the overall scoring of the project utilizing the BIG Grant criteria. Achieving the highest score possible requires careful consideration and assessment of the criteria when preparing the application. Some elements, such as proximity to attractions of local, regional, and national significance are based primarily on geography and making the most of them requires an effort to demonstrate relevance through mapping and locating means of transportation. Other categories, such as requested grant match, are much more flexible and require careful assessment of varying alternative strategies to determine the best balance of points scored and grant amount requested. Finally, a clearly written, well-crafted, and illustrated application presents a more compelling application to the review committees.

Both MDNR and Grant-In-Aid communities are potential grant recipients, however MDNR is always the grantee and the local community would be a subgrantee. This highlights the fact that administering the boating infrastructure grant program is time consuming for MDNR staff whether or not the facility receiving the award is an MDNR or Grant-In-Aid facility. This may require hiring additional state administrative staff support beyond current staffing levels if this program is used more widely, as well as incorporating the cost of this staff support as in-kind services non-federal matching funds.

Recommendations:

- *Consider increasing the number of USFWS BIG-P grant applications to take better advantage of available funds*
- *Consider the internal administrative requirements of managing this program, including the possible addition of staff to manage the program*



PHASING AND PRIORITIES

The strategies outlined above provide multiple opportunities to increase Waterways Program funding, leverage available budgets to increase the effectiveness of those funds, and potentially reduce expenditures. While these strategies have the potential to make up the projected Capital Budget shortfall, it is more likely that while some incremental changes will be made in the coming years and projected shortfalls will be less than currently anticipated, there will still be continued budget shortfalls that will limit the ability of the Waterways Program and MDNR to fully fund the projected needs in the timeframe currently proposed. Therefore, a system for phasing and setting priorities to fairly and effectively allocate the available funds to achieve the most benefit will need to be established.

In order to establish these priorities, the following elements should be considered:

Safety

The highest priority must always be the safety of the boating public and operational staff. The most important elements currently impacting safety are ADA compliance, ESD compliance, age and condition of facilities, and maintaining the Harbor network of facilities.

Harbor System

The longstanding goal of the Waterways Program has been to provide a network of Harbor facilities along the Great Lakes shoreline so that a boater is never more than fifteen miles from a Harbor and able to get off the lake in the event of a storm wherever possible. This system is well established and has provided a level of safety and confidence in the boating public that has provided immeasurable value to recreational boating in the State of Michigan. While some of these facilities have no way of becoming financially self-sufficient, the value of these facilities must be considered in the context of how they make adjacent facilities more valuable. Whitefish Point State Harbor is an excellent example. While it will not likely ever be large or busy enough to be financially self-sufficient, as the only Harbor between Sault Ste Marie and Grand Marais, Whitefish Point State Harbor makes boating on southern Lake Superior safer and therefore harbors in those adjacent communities more viable.

In terms of assessing the value of funding a harbor in comparison with other facilities, maintaining a basic harbor of refuge where no other options exist should be the highest priority.

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) established standards for recreational boating facilities in 2010. All recreational boating facilities open to the public must comply with those requirements as of 2010. Unlike a building code, or standards included in previous iterations of ADA, existing facilities are not grandfathered and must be upgraded to comply by federal law.

Electric Shock Drowning

Electric Shock Drowning occurs when a person in the water encounters stray electrical current from a fault on a boat or dock. Currents as low as 30mA can be fatal. The National Electric Code has been revised multiple times to address this issue, and standards for ESD safety continue to evolve. While the codes are



changing, if an existing marina electrical system was built and maintained per the code in effect at the time of construction, the facility is “grandfathered” until significant renovations are made. At that time, compliance with the new codes would be required.

MDNR has implemented a number of operational strategies to make the existing harbors as safe as possible, with the most important strategy banning swimming in all harbor facilities. MDNR is also implementing a program to place warning signs in all harbors and warning stickers on marina utility pedestals where possible. When harbor dock and electrical utilities are upgraded, MDNR implements appropriate ground fault protection systems.

As the utility systems are closely integrated with the fixed or floating dock infrastructure, it rarely makes sense to overhaul the electrical utilities without also overhauling the dock systems. However, if a facility requests funding for incremental repairs that can significantly and efficiently improve ground fault protection, and the project investment will not be lost when major dock renovations are made, those projects should be considered a high priority. This would generally apply in facilities that have been renovated within a period of five to fifteen years ago, meaning not recently enough to have the new standards implemented, and not old enough to need complete replacement within the next ten years. For example, a project with new docks and utilities installed in 2010 could reasonably be expected to have a useful life of the dock infrastructure through 2035-2040. A project to upgrade the harbor’s marina utility pedestals with GFCI breakers and possibly a supplemental protection system at the panel could make sense, whereas a complete rebuild of the system would not. Similarly, if a facility was constructed in 1995, it would not make sense to make an investment in an incremental upgrade project when a complete overhaul would likely occur within the next five years. Obviously, a critical system failure creating an immediate life safety hazard must either be repaired immediately by a licensed marine electrician, and/or power shut off as appropriate if repairs cannot be completed.

Age and Condition of Facilities

As facilities age, wear and tear on infrastructure can create safety hazards, such as when aging floating docks begin to list to one side, fixed dock structure connections weaken due to ice movement, or utility lines wear and crack. The older a facility’s infrastructure gets, the more expensive it is to maintain, and the less money boaters are willing to pay to use it, contributing to a downward spiral that can only be stopped through renovation.

The age of a facility and its infrastructure should be considered in setting priorities as age is a reasonable proxy for general condition and used to establish estimated capital costs in this document.



Financial Sustainability

It is very likely that there will be more aging facilities with potential safety considerations to repair and renovate than funding will allow, so the next set of considerations recommend in setting priorities among these facilities are based on the economic performance of the harbors, and their potential for achieving long term financial sustainability.

Financial Self-Sufficiency

Financial self-sufficiency in this context relates to the idea that the harbor is capable of generating sufficient revenues through harbor activities to fund the operation, maintenance, and long-term replacement of all revenue generating infrastructure. Revenue generating infrastructure are those elements such as fixed or floating docks, marina utilities, fuel docks, boater services buildings, etc that the boater directly uses. These elements generally have a useful life of approximately 25-30 years. Non-revenue generating infrastructure are those elements that are critical to the safe operation of the harbor, such as breakwaters, and generally have a useful life of 50-70 years.

In general, all privately owned marinas must be financially self-sufficient. In some cases, where the construction of necessary non-revenue generating infrastructure such as a fixed breakwater are required and cost more than a private facility could fund through boater revenues, the economic value the private marina contributes to the local economy (in terms of attracting more visitors to a community for example) provides sufficient justification for a Public Private Partnership. As described earlier in this document, a Public Private Partnership might see public funding pay for the construction of the non-revenue generating breakwater that allows a private entity to construct the revenue generating marina, to the overall benefit of both. In come cases, the funds for the public component of the PPP can come from Tax Increment Financing, or the increased taxes generated by the construction of the private elements of the partnership. When that occurs, the public infrastructure investment is repaid resulting in no cost to the taxpayer. Wherever possible, funding investments supporting projects like these have the potential to be a catalyst for a harbor system that needs much less public investment in the future.

While many of the facilities in this study generate sufficient revenues to fund their ongoing operations and maintenance, the key distinction here is generating additional revenue to also fund long term replacement. Long term replacement in this context means generating sufficient revenue to create a sinking fund capable of replacing the docks and infrastructure at the end of their useful life, rather than seeking additional state funding. Again, this is what private facilities must accomplish, and it is possible in very high demand facilities.

Operational Self-Sufficiency

Operational self-sufficiency indicates a facility's ability to generate sufficient revenues to fund normal operations and maintenance, but not enough to fully fund long term replacement. As many of the facilities in the system will achieve this level of success, additional factors to consider to differentiate among them include:

- Seasonal Occupancy:
 - Is seasonal occupancy 90% or higher?



- Is there a paid waiting list for seasonal slips?
- If so, is the wait for a seasonal slip longer than three years?
- Is expansion to capitalize on documented demand possible?
- Transient Occupancy
 - Is transient occupancy 50% or greater? as calculated by dividing the “transient night capacity” by the total number of transient nights (transient night capacity is determined by multiplying the number of dedicated transient slips by the 100-day transient boating season, ie, 20 transient slips times 100 days = a capacity of 2,000 transient night capacity. Achieving 1,000 slip nights would equal 50% occupancy)
- Occupancy Potential: if current occupancy is lower than the thresholds above:
 - Is low occupancy caused by a problem that can be fixed, such as staffing, water depths, wave climate, or quality of facilities?
 - Is low occupancy caused by a structural problem that cannot be changed, such as geographic location?

Regional Parity

Following the criteria outlined above, consideration should be given to achieving regional parity as a differentiator or tie-breaker. Consideration of Harbor of Refuge status will likely achieve some level of regional parity prior to this point.

Competitive Application Process

In order to encourage the greatest level of partnership between the Grant-In-Aid communities and the Waterways Program, thereby leveraging available funds to achieve the maximum benefit, implementing a competitive application process similar to the USFWS Boating Infrastructure Grant Program should be considered. This program is highly competitive and awards points for various elements based on how much the grantee is willing to contribute. For example, to achieve the most available points for local funding match, applicants must have a local match of at least 51%. Additional categories could include cost per slip, where lower costs get more points and encourage careful design to minimize costs, or perhaps a contribution of some percentage of gross revenues back to the Waterways Program of the previously described Harbor Maintenance Trust Fund.

Phasing and Priorities Guiding Principles:

- *The safety of the boating public and operational staff is the highest priority*
- *Maintenance of the Harbor system and distribution of facilities is critical to the overall effectiveness of the system*
- *Investments in renovation projects should prioritize projects that achieve the most effective operational benefits*
- *Assuming the Harbor system is maintained, preference should be given to funding those harbors that can become financially self-sufficient, thereby reducing future financial demands on the system*
- *Preference should then be given to facilities that are operationally self-sufficient, with the most potential for becoming fully financially self-sufficient*
- *Preference should then be given to facilities in consideration of parity in regional investment*



- *Preference should then be determined based upon a competitive application process that encourages greater financial partnership between the Grant-In-Aid communities and the Waterways Program*

Phasing and Priority Summary

As there will certainly be more demands on the capital budget than funds will support, some method of establishing priorities among the competing facilities will be necessary. The priorities outlined above are proposed with safety at the top of the list, incorporating harbor of refuge status and age of infrastructure as key drivers. Given the age of many of the facilities in the system, these criteria alone will be insufficient to prioritize projects within available funding. Therefore, a more detailed analysis of the financial performance and potential for financial self-sufficiency are proposed as a key criterion. To fairly and effectively determine potential financial performance requires more consistent data than is currently available and is therefore beyond the scope of this report.

Consideration should be given to the completion of a statewide marina market analysis and strategic financial plan as a supplement to this report that will utilize the proposed data collection system, achieve a fair and consistent financial analysis of the harbors in the system, and propose a plan for strategic investments supporting expansion where appropriate and considering the overall long term financial sustainability of the system as a whole.

Implementation of the phasing and priority strategies outlined above would require, or at least be much easier to achieve if, a more consistent data collection system as described in Section 7 was implemented. This would provide a set of consistent records that could be more easily documented and compared over time. Additionally, if the competitive application process was implemented, additional staffing resources to review and process the applications would be necessary.





SECTION SEVEN – PLANNING AND DEVELOPMENT GUIDELINES

The Michigan Department of Natural Resources is currently updating their Harbor Design Guide that includes minimum dock specifications, typical dimensions for all elements related to dock design (main and finger pier widths, standard slip spacing, fairway dimensions, etc). These guidelines, along with industry standard documents such as American Society of Civil Engineers (ASCE) Manual 50, Planning and Design Guidelines for Small Craft Harbors, have been used effectively for many years to build the harbor system boaters enjoy today. As has been documented throughout this report, the way boaters are using MDNR and GIA facilities is changing, as are the boats they are using, and this document is meant to provide planning guidelines to help guide the future development of state-funded facilities as they are renovated. It is not meant to replace the MDNR Harbor Design Guidelines, but rather to supplement them and guide the higher-level planning decisions based on evolving trends in the world of boating and the lessons learned through the completion of this MSWP Statewide Facilities Assessment of Harbors, Boating Access Sites, and Locks & Dams.

Harbors

LOCATION AND COMMUNITY INTERACTION

A key observation from the Boater Survey, in particular Question 25 where boaters identified Charlevoix as the best public harbor facility in the State of Michigan, is the importance of the relationship between the harbor facilities and the adjacent community. Keeping in mind that a large part of boating is visiting enjoyable destinations, the quality of a community in terms of shops, restaurants, parks, and other elements that attracts boaters is very important in how boaters perceive the quality of the harbor. Lexington State Harbor is a good example of this, where an aging facility was ranked third best harbor in the state in large part due to the quality of the shops and restaurants in the adjacent village.

While there is much that cannot be controlled about the quality of the community around existing harbors, MDNR can and should consider design strategies that make the most of the opportunities available and collaborate closely with neighboring communities to create the best waterfront experience possible. The following strategies to improve the connection between harbors and their downtown should be considered:

- Dock Orientation – The layout of the slips should be organized to create a more direct visual and pedestrian connection between the docks and the adjacent community destinations. As a transient boater arrives in the harbor, the main pier connection to the land should be oriented to align directly towards the village destinations and provide the shortest, most direct path. This not only makes wayfinding easier to understand and decreases the walking distance for everyone, it creates a greater sense of comfort for boaters to allow their children a little more freedom and confidence to roam, safe in the knowledge that destinations are clearly visible and easy to find. This presumes, of course, that proper engineering analyses have been completed to ensure safe navigation and wave climate characteristics will not be negatively impacted.



- Expand Public Waterfront Access – Harbors should work closely with adjacent private businesses and their communities to encourage more seamless and continuous waterfront promenades linking public parks, beaches, walking trails, and nearby private restaurants and shops.
- Collaboration – By collaborating with their communities, harbor facilities can look at overall parking demand on a community wide basis rather than individual site basis, so unnecessary paving will be removed from the water’s edge and converted to park space where appropriate. Overall infrastructure costs to the taxpayer will go down, while park space is increased. Dedicated marina parking and drop off must be provided to ensure convenience and functionality are maintained, while the overall waterfront experience could become much more park-like, similar to Charlevoix.
- Integrating BAS Facilities and Shopper Docks – Too often, the nature of boating from a trailer is to arrive at the BAS, spend the day on the water, load the boat at the BAS, and go home. Once a boater goes through the trouble of loading the boat onto the trailer and they’re in their vehicle moving out of the parking lot, it is very difficult to get them to stop in town to enjoy the shops or restaurants. Inertia, and a lack of parking space for a truck and trailer, keeps them on the road out of town. Where BAS facilities are located adjacent to the state harbor, harbors should encourage boaters using the BAS facility to use the transient docks as hourly transient slips in the harbor as a place to stop and take advantage of the shops and restaurants before loading the boat and going home. This will both make BAS boating more fun and make it easy to take a mid-day break, and draw more activity downtown, which in turn encourages more shops and restaurants in the community.

Community Interaction Design Principles

- *Orient slip facilities and landside paths to create the most direct pedestrian and visual connections between land and waterside destinations*
- *Collaborate with adjacent landowners to create continuous public waterfront access*
- *Collaborate with adjacent municipalities to share infrastructure where possible*
- *Ensure only water dependent infrastructure is placed adjacent to the water*
- *Provide short term transient docks to create destinations and encourage more diverse use*



UNIVERSAL DESIGN – GOING BEYOND ADA

In 2010, the Americans with Disabilities Act standards were updated to include specific requirements for recreational boating facilities. Since there were no standards in place prior to 2010 (only guidelines), all existing marinas were required to make necessary upgrades to comply with the new standards. Marinas constructed before 2010 are not grandfathered and must make necessary upgrades to comply. While this is a helpful beginning to make boating more accessible to those with disabilities, ADA only makes the dock accessible and does not include any standards to make boarding the boats easier.

Focusing entirely on ADA also misses the point that making boating universally accessible is often much more about the cost of boating, boater safety training, and helping new boaters feel comfortable on the water. The following strategies should be considered:

- Encourage a more diverse range of boaters by introducing boat rentals at reasonable costs. Profitable private partners can provide paddlecraft rentals for as low as \$15 per hour, and small powerboat rentals for only \$35 per hour, making boating truly accessible from a financial perspective for many more potential boaters. Providing introductory classes is a great way to both increase rental income while making new boaters feel safe and welcome. There are municipal marina facilities that generate more than 50% of their revenue from rentals of this type.
- Consider partnering with a boat club, which offers reasonably priced memberships that allow boaters access to a range of different boats, such as fishing boats, sailboats, small cruisers, and runabouts for a reasonable yearly fee. This is particularly attractive to new or younger boaters that are not familiar with, or simply don't want the hassle of boat maintenance, and removes the fear of surprise repair costs.

Universal Design Principles

- *Make boating accessible to everyone, regardless of age, income, or abilities*
- *Encourage boat rentals and the “sharing economy” to lower the cost of boating and make boating easier for newcomers*



DOCK SYSTEMS AND MARKET RELEVANCE

The State of Michigan Harbor Design Guidelines outline appropriate dimensions and design characteristics for dock systems applicable to both fixed and floating dock systems. Both fixed and floating dock systems are widely used and offer distinct advantages and disadvantages that must be considered. Selection of the most appropriate system for a given location must consider a wide range of factors including:

- Wind, wave, and ice climate
- Water depth / bathymetry
- Geotechnical conditions
- Marina layout and construction access (land- or water-based equipment required)
- ADA / Universal Accessibility considerations
- Initial cost and lifecycle cost
- Durability / maintenance
- Boater preference / local competition

Fixed Dock Systems

Fixed dock systems in Michigan are generally constructed in place utilizing driven piles and framing systems of either timber or steel, or a combination of the two materials (there are other pile types including concrete and fiberglass, but these are used more often in warmer climates). The decking systems can be of any material but are most often treated pine or composite decking. Once constructed, the dock system elevation remains “fixed” in place. While fixed dock systems are generally constructed at an elevation that attempts to balance the need to keep infrastructure dry during high water conditions and minimize the need for ladders to access boats during low water conditions (generally around LWD +6 on Lakes Michigan and Huron), there are some “fixed” dock systems that incorporate the ability to adjust the height of the fixed docks to respond to changing water levels. Fixed dock systems generally have an expected lifespan of 40-50 years, depending on materials, maintenance, and environmental factors. While most fixed docks are constructed entirely in the field, there are companies that manufacture fixed dock sections that are mounted to piles and frames driven in the field.

The primary advantages of a properly engineered fixed dock system include:

- They are generally more resistant to higher wind and wave forces. They can be constructed in areas where wave surge conditions (either during the boating season or winter months) would cause significant damage to floating dock systems.
- Fixed dock systems are more resistant to ice shove forces (wind or wave driven moving ice)
- They are most cost effective when located in water depths less than 12', with sound geotechnical subsurface conditions.
- It is easier to meet ADA requirements with fixed docks as gangways are not required
- They are generally more durable and therefore may have a lower lifecycle cost than floating docks



The primary disadvantages of a fixed dock system include:

- They generally have a higher initial cost
- The relationship between the dock elevation and water level is constantly changing
- Their durability and long life create the risk that the facility will be less responsive to the boating market (size, length, etc) as boats continue to evolve, and occupancy may suffer as the facility ages if it no longer meets the market demand
- They can be cost prohibitive when located in water depths greater than 12', or in areas with poor geotechnical subsurface conditions.
- While it is easier to meet ADA requirements with fixed docks, they can actually make it more difficult to board the boats during lower water level conditions
- While the piles and framing structures are generally more durable, most decking materials and marina utility systems will still need to be replaced at some point during the life of the fixed piles and framing system

Floating Dock Systems

Where floating dock systems are appropriate, the State of Michigan Harbor Design Guidelines have outlined the use of a timber dock system with integral floatation for several decades. Multiple local Michigan-based manufacturers build these dock systems and have installed them throughout the state. They have a functional lifespan of 25-30 years depending on site conditions and maintenance, and there have been suggestions that the state should consider some type of more durable system with a proposed lifespan of 50 years or more. There are a wide variety of alternate dock products available on the market, including systems that utilize steel or aluminum frames mounted to HDPE encased floatation tubs with a variety of decking materials available, and other systems made entirely of HDPE plastic. Other systems include monolithic concrete docks, or concrete floats, that are constructed in precast concrete production facilities.

There are multiple manufacturers of all of these dock types, and with the exception of the monolithic concrete dock systems, generally all of them have a lifespan of 25-30 years. The factors that limit the lifespan of these systems include the lifespan of the decking materials, the floatation tubs, and the hardware that connects the units to one another. Monolithic concrete systems can last 40-50 years, but at a significantly higher cost. While some manufacturers of concrete docks will not place their docks in any marina on the Great Lakes or where ice is expected, other systems are designed for heavy ice conditions and manufactured in Finland and Sweden.

The primary advantages of a properly engineered floating dock system include:

- The relationship between the dock walking surface and water level remains constant at all water levels
- They generally have a lower initial cost, and are particularly cost effective in water depths greater than 12', or in areas with poor geotechnical subsurface conditions that make piles more costly
- Their 25-30 year lifespan allows the marina to be reconfigured more often as boats continue to evolve



- While it may be harder to meet ADA requirements with floating docks due to gangway slope requirements, they make the boats themselves more easily and consistently accessible during all water level conditions

The primary disadvantages of a floating dock system include:

- They are generally less resistant to higher wind and wave forces. They cannot be constructed in areas where wave surge conditions (either during the boating season or winter months) are significant
- Floating dock systems are generally less resistant to ice shove forces (wind or wave driven moving ice)
- They are generally less durable and therefore may have a higher lifecycle cost than floating docks

An operational consideration that affects both fixed and floating systems is ice suppression. Ice suppression systems broadly in use in Michigan work by inducing currents that draw warmer water from the bottom up to the surface to inhibit the accumulation of ice at the surface. The two main systems in use in Michigan include bubbler systems and flow inducers. Bubbler systems utilize compressors that force air into a system of tubing beneath the perimeter of the docks to release a continuous stream of air bubbles that draw warmer water upward. Flow inducers, commonly called “ice eaters” are submersible electric motors with propellers that drive water currents. In general, the bubbler systems use less electricity, and the flow inducers are more versatile and can be moved at any time during the season. Both systems require maintenance and regular inspection during periods of cold weather.

Both fixed and floating docks require ice suppression. For fixed docks the primary concern is ice-jacking, which occurs when a sheet of ice forms around and adheres to a pile. As wave conditions or changing water levels move the ice sheet up and down, the pile can be “jacked” out of the ground, displacing and potentially damaging docks, frames, and utilities. The size, type, and depth of the pile, along with geotechnical conditions has a major impact on the risk of ice-jacking, so a thorough engineering assessment is required to determine the risk. Ice-jacking can be a risk to floating docks as well if they use a fixed guide pile system, however the primary risk to floating docks is where the ice binds critical junctions such as gangways, pile guides, and utility connections. It is important to note that there are many marinas around the world located in northern climates where no amount of ice suppression is effective. These facilities have turned to a strategy where the docks are allowed to freeze in place and utility and flexible anchorage systems are designed accordingly.

In summary, there is not a fixed or floating dock system that is right for all conditions and market factors. Selection of the appropriate system in a given location must consider all of the factors outlined above and a thorough analysis incorporating site conditions, life cycle and operational costs, and boater preferences should be completed.



Market Relevance

While fixed dock systems can last 40-50 years, and it is entirely possible to design and engineer a floating dock system that will last 50 years, the dock fabrication industry as a whole constructs readily available floating dock systems that all have a lifespan of around 25-30 years, since this is a very good balance of initial cost and long-term durability and the cost of these systems can be amortized at reasonable rates over a 20-year period. More important, as the results of the surveys completed in this effort show, the design of boats changes significantly over the years, and there is no reason to suspect that the boats seen today will be the same as the boats seen in 20 or 30 years. Operators are already seeing an increase in the number of multi-hull vessels for example, and the electrification of boat propulsion may have effects on hull design that cannot be predicted now.

The opportunity to cost effectively rebuild and reconfigure dock systems every 30 years or so is a reasonable time frame to allow for and address changes in the boating industry, whereas a 50 year timeframe could very well result in a facility that is much harder to adapt to changes in boating trends, as the current fixed dock systems are now.

Phasing

Anticipating future demand accurately is a challenging exercise, in particular in facilities that have been experiencing declining occupancy due to a facility that either no longer responds well to the boating market due to infrastructure issues, or where the mix of seasonal vs transient slips may not be reflective of actual demand. As experienced with the renovation of East Tawas State Harbor, new facilities that better respond to the current marina market and are oriented more closely with neighboring communities can experience improved occupancy and financial performance.

While it can be tempting to follow the “build it and they will come” model and hope for the best, that can often cause unforeseen challenges. As discussed earlier in response to Question 6 in the Operator Survey, waiting lists can be misleading. For example, our experience suggests that waiting lists that are free are longer and less likely to accurately represent demand. Even when a waiting list requires a payment, actual demand can be closer to 65%-75% of that list when a marina significantly expands in a given year, with the actual demand decreasing the longer the waiting list is. Once a list exceeds a wait time of five years, actual demand is likely closer to 50% since many of those on the list may not even have a boat at the time they add their name to the list due to the long wait. Additionally, in markets such as Grand Traverse Bay, where demand is high and multiple marinas are located in somewhat close proximity to one another, it is important to view demand from a regional perspective and compare waiting lists to eliminate duplicate names when one person signs up for multiple waiting lists so as to not artificially inflate regional demand.

It is also important to consider the net increase in slips relative to the local market supply. When too many slips are introduced into a local market at one time without adequate demand to fill them, attracting new boaters to fill the slips may require the harbor to offer discounts, which could lead to existing boaters demanding discounts. The better approach is to build projects, especially expansions, in smaller phases based on actual demand and rarely with more new slips than half or two thirds of the number of folks on the waiting list unless early contracts are signed with nonrefundable deposits to ensure demand.



Flexible Slip Layout

One of the challenges of making the most efficient use of dock space is matching the slip sizing and layout to the marina market. One of the best ways to be as efficient as possible, while also creating space for unique opportunities such as a visiting tall ship or superyacht is to construct lengths of flexible broadside mooring rather than all traditional slips. The proposed reconfiguration of Lexington State Harbor includes a new main pier that will offer nearly 450' of flexible broadside mooring. This dock can accommodate up to fifteen 26' boats, ten 45' boats, or a visiting 200' tall ship or superyacht and some mix of smaller boats depending on who arrives. This concept has been applied to entire marinas in several new facilities along the intracoastal waterway in Florida, as well as a new all transient marina designed for Navy Pier in Chicago that will provide over 7,500 linear feet of broadside mooring on twenty-five 130' long finger piers.

Market Based Design Principles

- *Perform a comprehensive life-cycle analysis of all environmental, cost, and market factors when designing or renovating a harbor or BAS facility*
- *Consider the value of the 25-30 year lifespan of floating dock infrastructure in relation to designing market responsive facilities that can adapt to evolving boat trends*
- *Improve the quality of data collection in terms of occupancy and financial performance in all state funded facilities to obtain accurate market data*
- *Construct and renovate facilities in phases where necessary based on measured, actual market demand*
- *Consider more flexible broadside mooring, especially for transient facilities*



RESILIENCE – DESIGN FOR CHANGING WATER LEVELS AND SUSTAINABILITY

“Resilience” is a concept gaining momentum as a more responsive approach to the concept of sustainability. As it relates to marinas, harbors, and shorelines, the idea behind resilience is that structures be designed to respond and adapt to the nearly inevitable changes to the climate that are just now beginning to be understood.

Water Levels

In 2013, Lake Michigan set a new record low water level since records were kept starting in 1918. Just six short years later, Lake Michigan set new monthly mean record highs throughout the entire summer boating season, coming within inches of the record high set in October of 1986. While these records were just a few inches above and below the previous record highs and lows, the length of time between the normal high and low water periods on the lake that used to average 10-15 years appears to be changing. According to presentations provided by NOAA and USACE throughout the summer of 2019, the current climate science suggests that the Great Lakes will very likely see much greater volatility in water levels in coming years, with larger and more frequent storm events that may cause increased short-term flooding in near shore areas due to wind setup.

In response to these new conditions, it is prudent to consider implementing the following design strategies:

- Install floating dock systems where suitable given wave/surge conditions. MDNR boater surveys suggest floating docks are preferred by most boaters, and they minimize the need to adjust mooring strategies due to changing water levels relative to fixed infrastructure.
- Examine local flood conditions and wind driven lake level surge (wind setup) and consider raising the level of fixed harbor edge facilities. On Lakes Michigan and Huron, fixed docks and waterfront edge elevations are frequently set at approximately +6 LWD. Consideration of +6.5LWD or more should be given depending on local conditions, but it is also necessary to consider ADA gangway slope requirements and not raise the edges too high.
- Where raising the shoreline edge may be impractical, design adjacent landside areas to withstand flooding conditions without requiring excessive maintenance or cleanup afterwards by moving structures farther inland, adding well considered paving materials, and raising electrical and other utility infrastructure as needed.
- Consider the impact of higher water levels wave transmission and propagation and add wave attenuation measures as appropriate to maintain a safe boating environment. These measures could include fixed breakwaters or floating wave attenuators, reconfiguration of harbor entries, or the addition of wave absorbing stone along the harbor edges. Further, an increase in toe stone may be an appropriate response to protecting existing infrastructure in higher storm events.

Energy and Water Use Reduction

Minimize the use of energy in harbor facilities through the use of LED lighting fixtures and Energy Star rated appliances wherever practical. Incorporate Dark Sky lighting strategies, which minimize light pollution and glare through the use of efficient light fixture selection with shielded cut-off lenses, and placement to ensure that only the areas where light is needed are lit. Dark Sky lighting strategies have been proven to



improve nighttime visual acuity (meaning people can actually see better at night than with current lighting systems), increase user comfort and safety, attract fewer insects, and reduce the negative impacts light pollution causes to migratory bird species.

When designing buildings, incorporate natural daylighting strategies to reduce the need for artificial lighting, and install motion activated and dimmer switches to reduce energy use. Alternative energy sources such as solar, wind, and geothermal should be considered,

When upgrading marina pedestals, select equipment with built-in individual metering and charge slip holders for the energy they use. This has been proven to reduce energy usage by over 30%. Consider the electrical demand requirements of ice suppression systems when selecting between fixed or floating dock systems.

Consider installation of low flow and high-efficiency fixtures for all restroom plumbing, washroom facilities, showers, and laundry facilities.

Habitat Enhancement

Where practical, harbor facilities should incorporate natural shoreline protection strategies and implement Low Impact Development (LID) stormwater strategies to manage stormwater on site and minimize negative impacts to water quality. This is particularly important in facilities with launch ramps and/or haul out wells, where hull wash down activities are performed. All facilities that perform pressure washing on hulls should have a wash down collection system to prevent wastewater from entering the waterbody.

Management strategies to minimize the spread of Aquatic Invasive Species should be incorporated into all facilities. While there are far too many facilities to implement any kind of rigorous mandatory inspection system, proper boater education on the importance of preventing the spread of AIS species should be provided wherever boaters launch vessels.

Clean Marina Standards

Incorporate the design guidelines and standards outlined in the Michigan SeaGrant Clean Marina program. All public harbor facilities should be designed with these operational practices in mind and certified to ensure compliance.

Resilience Design Principles

- *Prepare for increasingly volatile water level fluctuations in facility planning*
- *Utilize floating docks where appropriate to minimize impacts to boaters*
- *Design upland waterfront areas to be flood resilient*
- *Reduce energy demand through the use of LED and energy efficient fixtures and individual pedestal metering*
- *Utilize Dark Sky Lighting strategies to minimize light pollution and harmful impacts*
- *Incorporate natural shoreline and habitat features where possible*
- *Incorporate Michigan Clean Marina standards and certify all public harbor facilities*



Amenities

As Michigan’s waterfront communities continue to grow in popularity, and prices for waterfront properties continue to rise beyond the means of many residents, many facilities are starting to see more boaters using their boats as a weekend cottage, according to Dave Brown at Desmond Marine in Port Huron, Michigan. They’re spending more nights on the boat each year and relying more and more on the marina amenities and asking more of the marina in terms of security, Wi-Fi services, and parking for visiting friends.

While the Great Lakes are not currently a particularly popular location for “liveaboards” - people who actually reside on their boat full time - operators are starting to see similar extended stays in seasonal marinas. In time it may make sense to consider more amenities in public facilities currently only found in private facilities, such as pools and other club facilities like work-out areas, ideally provided by the private sector in a public private partnership of some type, possibly through a nearby hotel or private residential development.

MDNR may want to consider adding language to standard contracts to address the potential issues that may arise with longer stays in marinas before the issues become problems.

Amenity Design Principles

- *Prepare for increased extended stays on boats in seasonal lease harbors by providing additional landside amenities*

EXPANDING THE LIMITS OF BOATING

As boating continues to grow in popularity, the industry is seeing significant growth in both extremes of the boating market. As has been made clear in the survey results, paddlecraft of all kinds – kayaks, canoes, and stand up paddleboards – are growing popularity as they are small, affordable, and easy to store and transport. At the other end of the spectrum is the superyacht, which are private vessels larger than 100’, which are slowly but surely being seen more often as facilities to accommodate them are constructed.

Paddlecraft

Paddlecraft are helping more people become boaters than any other type of watercraft due to their low cost and the ease of accessing waters all over the state. More and more water trails are being established throughout the state, including along the Great Lakes shoreline and many interior connecting waterways. Saint Joseph County, located in the southernmost central part of the lower peninsula recently completed a River Trail Master Plan, with the stated goal of expanding access to their rivers and waterways. The challenges that need to be addressed in preparing for the continued growth of paddle sports are described in greater detail in the Boating Access Site trends section below.

Superyachts

Superyachts are the natural extension to the concept of ever-larger boats. Privately owned recreational boats over 100’ are generally considered “superyachts”, however that minimum definition is changing to 120’ or even 150’ in some markets. With over 5,000 superyachts in the world, the largest of which



measures approximately 600', the need for mooring facilities for superyachts is growing at a very fast rate. While not a traditional superyacht market, the Great Lakes are seeing more and more superyachts every year. Over the summer of 2019, a privately-owned yacht measuring 217' and valued at \$125 million visited destinations across Lakes Michigan, Huron, and Superior, according to an article mLive dated August 14, 2019 titled "\$125M super yacht is cruising Upper Peninsula Ports".

As this is still a very small part of the boating market in Michigan, it does not make sense currently to provide dedicated facilities for superyachts. It does make sense, however, to design flexible broadside mooring areas that can accommodate vessels of all sizes and change every day based on who is visiting. If the facility can support a superyacht, it can also likely support a visiting tall ship or small Great Lakes cruise ship. When none of those boats are present, a mix of 25'-60' boats can just as easily occupy the dock space.

Expanding Boating Design Principles

- *Provide dedicated paddlecraft only facilities to both expand and encourage access to water trail networks*
- *Upgrade existing BAS facilities to provide appropriate dedicated vehicle only parking (no trailer) and car-top drop-off lanes providing access to ADA compliant kayak launch facilities to reduce conflicts with existing boating activities*
- *When designing facilities that incorporate marinas, BAS, and paddlecraft access, incorporate layout strategies that naturally separate the boater types where possible to reduce on-water conflicts*
- *Recognize the dedicated facilities for paddlecraft will have clear and definable costs, and therefore paddlecraft should be registered like all other watercraft to help cover the cost of protecting the waterway, expanding access, and providing emergency rescue and law enforcement*
- *Incorporate flexible broadside mooring areas capable of handling boats of all sizes, including very large boats*



Boating Access Site (BAS) Facilities

With over 70% of the boats identified in the Boater Trends survey herein reported as having a length of less than 25', and another 7% of the total boats reported as less than 30' in length, Boating Access Sites provide access to the water for the majority of Michigan's boaters. The NMMA Total Boat Registrations 2006-2018 report indicates that boats less than 26' represented 94.8% of all powerboats in 2018, with the majority (57.6%) in the 16'-25' length. Boats in this segment increased for four consecutive years to 6.3 million units nationally in 2018.

Over 26% of the respondents of the Operator Survey reported higher use of their facilities in 2019 than in previous years, with less than 7% reporting a decline. The current record high waters led to a number of operators suggesting that the length of boat launch lanes be extended, however the current water level projections do not suggest that the Great Lakes will greatly exceed either the record highs or lows of the last 100 years, so any modifications of BAS facilities in response should be considered on a site by site basis rather than as a new standard.

ACCESSIBILITY

While accessibility generally refers to compliance with the Americans with Disabilities Act, and in fact all BAS facilities must be upgraded to comply with the 2010 ADA Standards for Recreational Boating, expanding the concept of accessibility in Boating Access Sites to consider more universally accessible facilities, with a focus on the design of launch lane docks and skid piers in particular, is recommended. Over the past several years, a focus of conversations at the annual States Organization for Boating Access (SOBA) conference has been improving the functionality of boat launch loading docks and piers to better accommodate boaters with physical disabilities and more general limitations brought on by aging.

As supported by the responses to the Boater survey, the relationship of the boarding pier height to the water elevation is critical. While movable skid piers can be adjusted to match the water levels, this is less convenient for both boaters and operators than a floating dock would be. Where feasible, use of floating docks rather than fixed or skid piers should be considered.

A simple modification to existing boarding piers that has been suggested at SOBA to make it easier for older or physically impaired boaters is the addition of vertical posts to either fixed or floating docks at 8'-10' intervals, similar to those included in the MDNR designed skid piers. These posts are similar to those found on many floating docks in the MDNR harbor system, and provide both easier mooring, and a fixed structure for a boater to hang on to when boarding or exiting the boat. This also creates a sturdy element a boater can use to pull themselves out of a boat if necessary.

The addition of dedicated ADA compliant paddlecraft launching facilities should be considered where demand warrants, recognizing that these facilities increase the demand on maintenance personnel and are often removed from the water in the winter months.

Accessibility Design Principles

- *Comply with all 2010 ADA Design Standards for Recreational Boating Facilities*



- *Consider floating docks to better accommodate changing water levels*
- *Consider the addition of structures to ease boarding and existing watercraft for elderly or physically impaired boaters*
- *Consider the addition of dedicated ADA compliant launch facilities where demand warrants*

PARKING CONSIDERATIONS

Parking Dimensions

While it is true that boats are generally getting longer and wider as indicated in both survey responses and NMAA statistics, the existing MDNR design guidelines for the ramp facilities for boating access sites remain effective for the boats themselves. The boats and trailers remain bound to the reasonable limitations on width established by standard roadway dimensions, however the length of vehicles, boats, and trailers has been growing in recent years. For example, a 1990 Chevrolet extended cab C/K 1500 had an overall length of 17'-8". According to the website VEHQq.com, an automotive information website, the average length of Ford, Chevrolet, GMC, Ram, Toyota, and Nissan full size pickup trucks in 2019 was 233.8", or just under 19'5". Current model Ford pickup trucks range in length from 17.5' at the smallest (no longer an "extended cab") up to nearly 21' in length. The standard trailer tongue length in front of the bow of a trailered boat is 4'-6' including the length of the hitch, so it would not be difficult to find a tow vehicle with a length of 20' towing a 25' long boat with an additional 5' of trailer tongue length and another 2'-3' of length for the motors and outdrive units, leading to a total length of over 50'.

For this reason, along with the growth in demand for center console sport boats, standard parking lot spaces for vehicles with trailers in Florida are now sometimes as long as 60'. Feedback from boaters at recent projects at the Charlevoix Municipal Boat Launch and Eagle Harbor State Harbor have indicated that boaters are looking for BAS facilities with longer parking spaces and more generous turning radii in the parking and launch areas. Consideration should be given to establishing standard vehicle/trailer parking space lengths of 55' or even 60' at BAS facilities serving Great Lakes or larger inland lakes, and 50' on smaller inland lakes.

Parking Types and Quantity

The current MDNR guidelines suggest that parking capacity for a high-turnover BAS site should be 20-30 vehicle/trailer spaces for launch lane, and 30-50 vehicle/trailer spaces at low-turnover sites. As there is no data to suggest an overall revision to this standard for vehicle/trailer spaces, demand at individual BAS facilities should be accurately monitored and adjustments made as needed on a site by site basis.

There is data from the Operator survey to suggest that parking and access demand for "car topped" paddlecraft is increasing. Nearly half of all survey respondents indicated an increased use of their BAS facilities by paddlecraft, with 40% of the comments referencing kayak and paddlecraft impacts on their facilities. Several noted potential conflicts between paddlecraft "car top" vehicles occupying vehicle/trailer spaces. While MDNR does not designate who can park where, this does suggest that new and renovated BAS facilities should consider providing specific parking for vehicles without trailers to respond to the increasing demand and reduce potential conflicts. As there are currently no nationally recognized



standards or recommendations for a specific number of vehicle only parking spaces per launch site, common sense and monitoring of local demand is warranted.

If a dedicated ADA kayak launch is provided for example (which suggests a high demand site), consideration should be given to providing a similar number of spaces (20-30) as the standard trailer launch lane. Where no specific dedicated paddlecraft launch facilities are provided, providing 5-10 vehicle only trailer spaces is recommended. Consideration must also be given to other non-boating users of BAS facilities, such as those shore fishing or perhaps using adjacent public park spaces. As always, prudent planning considering all actual use of the facility should guide the final design.

Further study of this issue is necessary, and completion of a parking analysis study in the coming boating seasons at several key sites across the state is recommended. This could include use of cameras to track actual parking demand and use patterns by vehicles and users of all types and generate quantifiable data for use in establishing documented use patterns to establish recommendations based on actual observations.

BAS Parking Design Principles

- *Consider increasing the length of standard vehicle/trailer parking space lengths to 55' or even 60' at BAS facilities serving Great Lakes or larger inland lakes, and 50' on smaller inland lakes*
- *Provide additional dedicated vehicle only (no trailer) parking for car top users of BAS facilities*
- *Consider completion of a parking study to document and better understand evolving use trends of vehicles without trailers in BAS facilities across the state*

PADDLECRAFT

Paddlecraft are helping more people become boaters than any other type of watercraft due to their low cost and the ease of accessing waters all over the state. More and more water trails are being established throughout the state, including along the Great Lakes shoreline and many interior connecting waterways. Saint Joseph County, located in the southernmost central part of the lower peninsula, recently completed a River Trail Master Plan, with the stated goal of expanding access to their rivers and waterways. The challenges that need to be addressed in preparing for the continued growth of paddle sports include:

- Providing more facilities to support paddlecraft to both expand and encourage access to water trail networks
- Upgrading existing BAS facilities to provide appropriate dedicated vehicle only parking (no trailer) and car-top drop-off lanes providing access to ADA compliant kayak launch facilities to reduce conflicts with trailer-based boating activities
- Configuring harbors to naturally separate larger boats, BAS activities, and paddlecraft to reduce on-water conflicts, and organizing natural navigational systems in harbors to help keep paddlecraft out of marina areas to reduce the risk of ESD
- Recognizing that the construction of carry-down BAS facilities have supported paddlecraft access for decades with no offsetting registration fees to help fund these efforts, and therefore paddlecraft should be registered like all other watercraft to help cover the cost of protecting the waterway, maintaining and expanding access, and providing emergency rescue and law enforcement.



Paddlecraft Design Principles

- *Provide dedicated paddlecraft facilities to both expand and encourage access to water trail networks*
- *Upgrade existing BAS facilities to provide appropriate dedicated vehicle only parking (no trailer) and car-top drop-off lanes providing access to ADA compliant kayak launch facilities to reduce conflicts with existing boating activities*

OPERATIONS and MAINTENANCE

The most common operational challenge identified by the Operators in the survey indicated staffing and funding, followed by a large proportion of the concerns raised by both boaters and operators in the survey relating the condition of the existing facilities, most notably the access drive and parking lot pavement and condition of the docks and ramps. Resolving these issues is most often limited by funding, which suggests the need for consideration of alternate funding and revenue generating strategies.

Currently, many BAS facilities require only the annual \$11 recreational passport (\$12 after March 1, 2020), which provides a very small fraction of overall Waterways Program funding. Common strategies to more directly recover the cost of building, maintaining, and operating boat launch facilities include charging by the launch (or by a seasonal launch pass), or making the launch ramp free but charging for parking. This of course requires some type of system to collect the fees and monitor the use of the facility, and not all facilities are busy enough to provide on-site staffing. Some municipal facilities have installed automated pay stations using a “pay and display” system that can be monitored by local staff or law enforcement who would write tickets if payment is not made.

Another revenue generating strategy is leasing space on site for a private kayak or paddlecraft rental company. This could generate passive lease revenues, while also providing a person on site. Part of the lease agreement could be a partnership where the paddlecraft operator provides staffing to monitor payment for parking for example.

Operations and Maintenance Principles

- *Consider alternate strategies for generating additional revenue to support the ongoing maintenance of BAS facilities through parking or launch fees*
- *Consider public private partnerships where private operators lease space to rent paddlecraft*



AQUATIC INVASIVE SPECIES

Managing and limiting the spread of Aquatic Invasive Species (AIS) is of particular concern at BAS facilities since a common way to transport AIS from one body of water to another is through trailerable watercraft. While extreme measures such as inspecting every boat prior to launch and after retrieval as on Dillon Reservoir in Colorado are completely impractical at Michigan's hundreds of BAS locations, providing additional boat washdown facilities at key BAS facilities was suggested in the Operator survey. Continuing and expanding the existing education program is a helpful tool that can also influence use at other vectors of AIS transmission such as road endings and private riparian properties. One strategy for consideration to provide funding for advanced AIS initiatives is the AIS Surcharge fee implemented by the State of Minnesota.

The State of Minnesota charges an Aquatic Invasive Species (AIS) Surcharge of \$10.60 to all vessels required to register. With 819,317 boats registered in 2018 this surcharge should generate \$2,894,920 per year. If a similar surcharge was applied to Michigan's 817,342 registered boats in 2019, it would generate \$2,887,942 per year which could provide funding for boat wash facilities and other strategies for managing AIS efforts.

Aquatic Invasive Species Principles

- *Consider boat wash facilities at key BAS locations to help educate boaters and reduce the spread of AIS*
- *Continue and expand the existing AIS education program*
- *Consider an AIS Surcharge to fund AIS specific initiatives*



Locks & Dams

Conversations with the Lock and Dam operations staff indicate that the lock structures (distinct from the Cheboygan Dam) provide access and support to recreational boating activities only. As no recreational amenities are provided at either facility beyond the lifting infrastructure, the focus of improvements noted has been on functional infrastructure for the locks themselves, and improvements to support staff comfort and efficiency. Neither facility currently provides restrooms for lock operators in the immediate area where they work due to the logistics of either plumbing or servicing of portable toilet facilities. The addition of basic facilities such as toilets, potable water, picnic tables, interpretive signage, etc for both the boaters and operational staff would greatly improve conditions at both facilities.

Both Lock facilities at Cheboygan and Alanson are currently focused primarily on navigation and water level management functions. There are picnic facilities, a fishing pier, and portage access around the Cheboygan Dam, which some boaters access by using the temporary mooring facilities along the staging area upriver of the lock. This can cause confusion when boats begin to enter the lock, as this area is not intended to provide any mooring except lock staging. Vehicular parking is provided at the adjacent BAS for the facilities at the Cheboygan Lock.

While recreational boating in general is increasing in use, and the inland waterway system is seeing a similar increase in paddlecraft activity, the operators of Cheboygan Lock and Dam indicate that the overall use of the facilities, the size of boats (length, beam, and draft), and number of paddlecraft using the facilities has remained generally constant over the past five years. No consistent data on the number of craft utilizing the Alanson facility year by year was available, however the operator of the Cheboygan Lock facility indicated that passages have decreased over the last twenty years from a high of 7,000-9,000 per year to around 4,000 per year in 2019. No data on boat size is collected. Improving the data collection system to provide more accurate usage data in the future is recommended.

The most important issue affecting the operation of the Cheboygan Lock and Dam according to operations staff is related to the role of the facility in managing water levels upstream on Mullet Lake, particularly in advance of or responding to significant weather events. Local staff have some ability to anticipate weather events and draw down water levels to create capacity for expected stormwater volumes, however, constrictions in the river between Mullet Lake and the dam make the river capacity insufficient to reduce water levels in the lake without reducing downstream river levels to the point where significant navigation hazards are created. A comprehensive analysis of this situation leading to the development of viable strategies to improve the ability of operations staff to manage water levels and reduce flooding impacts on Mullet Lake is recommended.

Lock and Dam Planning Principles

- *Consider the addition of basic toilet, potable water, and picnic amenities for the use of both boaters and staff to improve the functionality of Lock and Dam facilities*
- *Consider providing a system to more accurately track the usage of the facilities, including number of vessels, type, and size*
- *Complete a comprehensive analysis to identify the causes and solutions to the issues limiting the ability of operational staff to effectively manage upstream water levels and reduce flooding on Mullet Lake*



Data Collection & Future Research

The information gathered through the surveys provides the basis for a number of specific recommendations for additional research or data collection activities to guide future planning efforts that are summarized below:

Enhance Seasonal and Transient Occupancy Data Collection Process

Questions 3 through 6 of the Operator Trends Survey provide clear indication that demand for seasonal slips is generally strong and increasing in many facilities, and very stable in nearly all others. With roughly two thirds of the facilities (44 of 67) indicating 100% seasonal occupancy with waiting lists, some as long as 161 names, there is ample evidence that recreational boating demand remains strong.

As there are sure to be significant variances in demand based on the region, a useful future supplement to the existing data currently collected by MDNR would involve collecting more detailed information on occupancy and demand on a yearly basis, both for seasonal and transient occupancy. Enhancing the existing system or establishing a new system that allows for more consistent collection and comparison of the following data at all MDNR and GIA facilities is recommended:

- Actual slip occupancy in each harbor, to indicate how many slips are occupied (occupancy).
- Actual boat size in each slip, to indicate “effective occupancy”. If a 60’ slip is leased to a 40’ boat, it cannot be fairly stated that the marina is 100% occupied, rather that slip is effectively 66% occupied and it would be more efficient to provide a smaller slip. Similarly, if a 45’ boat is occupying a 40’ slip, that slip is effectively 112% occupied. This information would help guide future development and provide more accurate slip demand data for use in Phase 100 studies. Note, we recommend the use of published Length Overall (LOA) figures easily found online to establish boat size for this purpose.
- Copies of all waiting lists including names and slip size. Establishing consistent requirements for a waiting list, which would include a minimum yearly payment of \$20 to remain on the list, is recommended. Anecdotal experience suggests that waiting lists that are free are longer and less likely to accurately represent demand. Even when a waiting list requires a payment, actual demand often amounts to something closer to 65%-75% of that list when a marina significantly expands in a given year, with the actual demand decreasing the longer the waiting list is. Once a list exceeds a wait time of five years, actual demand is likely closer to 50% since many of those on the list may not even have a boat at the time they add their name to the list due to the long wait. Additionally, in markets such as Grand Traverse Bay, where demand is high and multiple marinas are located in somewhat close proximity to one another, it is important to view demand from a regional perspective and compare waiting lists to eliminate duplicate names when one person signs up for multiple waiting lists so as to not artificially inflate regional demand.
- Slip rates and yearly revenues for fuel, haul-out, etc. A simple consistent summary form completed each year would greatly simplify market analysis efforts for future Phase 100 studies and provide much greater confidence in market data when making funding decisions and establishing priorities.





BIBLIOGRAPHY

Acme Township Marina Market Analysis April 25, 2011, Edgewater Resources, LLC

“An Introduction to Electrical System Design for Cruising Vessels” *Outback Marine* January 25, 2020
<https://www.outbackmarine.com.au/applications/boat-and-yacht-electrical-systems/marine-electrical-system-designs/>

“Debate on kayak, canoe registration makes waves in Mich.” *The Detroit News* Published 12:00 a.m. ET May 9, 2018 | Updated 8:00 a.m. ET May 9, 2018

“Fees for License Plates, Registrations and Titles” *The Office of Secretary of State Jocelyn Benson* January 18, 2020 <https://www.michigan.gov/sos/o,4670,7-127-75432-.00.html>

“Managing your boat’s power consumption” *Soundings* Updated June 16, 2017, Original November 28, 2011 | <https://www.soundingsonline.com/features/managing-your-boats-power-consumption>

Tobiasson, Bruce O. and Kollmeyer, Ph.D., Ronald C. *Marinas and Small Craft Harbors*, Van Nostrand and Reinhold, New York

Michigan Department of Natural Resources Parks & Recreation Division *Harbor Development Standards Guidance*, September 2003

National Marine Manufacturers Association *US Recreational Boating Statistical Abstract: Powerboat Sales Trends 2006-2018*

National Marine Manufacturers Association *US Recreational Boating Statistical Abstract: Total Boat Registrations 2006-2018*

Planning and Design Guidelines for Small Craft Harbors Revised Edition, American Society of Civil Engineers, New York

Transient Marina Market Analysis Update, June 10, 2019, Edgewater Resources, LLC

“Watercraft licenses – registration procedures & fees” *Minnesota Department of Natural Resources*, January 18, 2020 <https://www.dnr.state.mn.us/licenses/watercraft/index.html>

“What it Costs to Register a Boat in Ohio” *ODNR Division of State Parks & Watercraft*, January 18, 2020 <https://www.watercraft.ohiodnr.gov/registrationfees.html>



MICHIGAN STATE WATERWAYS PROGRAM
STATEWIDE FACILITIES ASSESSMENT - APPENDICES
Harbors, Boating Access Sites, and Lock & Dam Facilities

February 24, 2020

APPENDIX A – Key Terms



MICHIGAN STATE WATERWAYS PROGRAM
STATEWIDE FACILITIES ASSESSMENT - APPENDICES
Harbors, Boating Access Sites, and Lock & Dam Facilities

KEY TERMS

Glossary of Terms per Category

I. DOCKS	2
DOCK TYPES.....	2
MAIN PIER.....	3
SLIP COUNT	3
HARBOR WALL/ SEAWALL.....	3
TIMBER DECKING	3
COMPOSITE DECKING.....	4
OPEN PILES.....	4
BOX CRIB	4
STEEL SHEET PILE CRIB (DOUBLE WALLED).....	4
BIN WALLED CRIB	5
ALUMINUM/STEEL FRAMED FLOATING DOCKS	5
TIMBER CONSTRUCTION FLOATING DOCKS	5
MONOLITHIC FLOATING CONCRETE.....	5
BROADSIDE	6
FLOATING MAIN PIER WITH BROADSIDE MOORING.....	6
TIMBER FENDERING.....	6
2. SHORELINE & BREAKWATER STRUCTURES	6
SHORELINE STRUCTURES.....	6
STEEL SHEET PILE WALL	7
CONCRETE PANEL WALLS	7
ROCK/STONE REVETMENT SHORELINE.....	7
OFFSHORE STRUCTURES	7
STONE REVETMENT OFFSHORE BREAKWATER.....	8
STEEL SHEET PILE (SINGLE WALLED).....	8
STEEL SHEET PILE CRIB (DOUBLE WALLED).....	8
CAISSON.....	8
CONVENTIONAL CAISSON BREAKWATER	9
STEEL SHEETING CAISSON BREAKWATER.....	9
FLOATING WAVE ATTENUATOR	9
3. BOATING ACCESS.....	10
CAST IN PLACE CONCRETE PAVING.....	10
GRAVEL	10
CONCRETE PLANKS	10

KEY TERMS

SKID PIER – REMOVABLE	10
4. PADDLE SPORT ACCESS.....	11
LAUNCH PLATFORM ON A FLOATING PIER	11
LAUNCH PLATFORM ON A FLOATING ACCESS PIER.....	11
5. MARINA UTILITIES	11
ELECTRICAL SHOCK DROWNING	11
ELECTRICAL UTILITY PEDESTAL	11
DOCK BOX WITH UTILITIES	12
VACUUM BREAKER.....	12
DRY STANDPIPE FIRE SUPPRESSION.....	12

1. DOCKS

DOCK TYPES

The questions ask about the primary materials for each type of docks – for example all of your fixed head piers may not be open pile construction. Therefore, default to the construction of most of the head piers and make a note at the end of the section about the construction of your head piers.



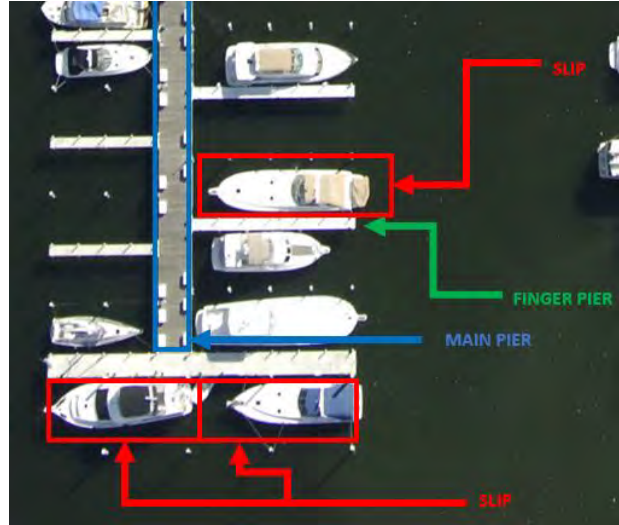
KEY TERMS

MAIN PIER

The main pier is the dock that the finger piers are attached to.

SLIP COUNT

Make sure to note the amount of slips NOT how many finger piers there are.



HARBOR WALL/ SEAWALL

A structure that is against the shoreline providing a defined structural edge. These are typically made up of concrete panels or steel sheet pile. A harbor wall can be used for broadside mooring or have finger piers attached and be considered a head pier. It is also considered a shoreline structure.



TIMBER DECKING

(ex. treated pine, cedar, lpe, Kebony, etc.)



KEY TERMS

COMPOSITE DECKING

(ex. Trex, Moisturesheild, Timbertech, etc.)



OPEN PILES

Dock Framing supported by driven timber or steel piles.



BOX CRIB

Box like structures typically filled with stone. The framing of the cribs is typically timber, but steel is also a possibility. These are usually open structures (water flowing through and in between) with spacing between each box crib.



STEEL SHEET PILE CRIB (DOUBLE WALLED)

Dock structures with steel sheet pile on both sides with sand/gravel fill



KEY TERMS

BIN WALLED CRIB

Another double walled crib structure similar to the steel sheet pile crib.



ALUMINUM/STEEL FRAMED FLOATING DOCKS



TIMBER CONSTRUCTION FLOATING DOCKS



MONOLITHIC FLOATING CONCRETE



KEY TERMS

BROADSIDE

An area designated by the marina. It is usually dockage alongside a main pier, seawall and/or sh. The example below is a floating main pier that is considered all broadside mooring.

*Exclude fuel dock/service pier information in broadside mooring section.

FLOATING MAIN PIER WITH BROADSIDE MOORING



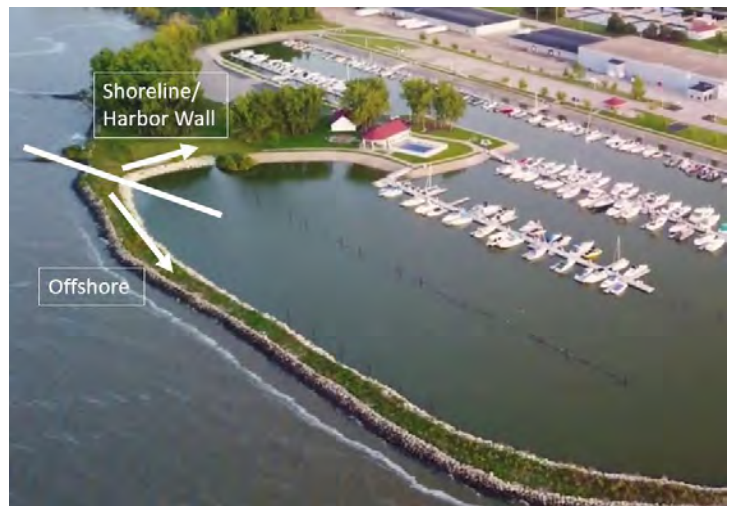
TIMBER FENDERING

For broadside mooring



2. SHORELINE & BREAKWATER STRUCTURES

Even if you may have counted structures as head piers or broadside mooring, please account for the total shoreline and breakwater structures including those used for broadside & head piers.



SHORELINE STRUCTURES – is where a natural shoreline would appear to be. Steel sheet pile wall, concrete panel wall, & a rock revetment shoreline are all considered shoreline structures.

KEY TERMS

STEEL SHEET PILE WALL



CONCRETE PANEL WALLS

Typically, driven steel h-piles with concrete panels in-between.



ROCK/STONE REVETMENT SHORELINE

Stone varies in size. Used to provide stability and diffuse wave energy along a shoreline.



OFFSHORE STRUCTURES – May be connected to the shoreline but extend out into the water. Their main purpose is for protecting a facility from wave action. Rock revetment offshore breakwater, steel sheet pile (single walled) offshore breakwater, steel sheet pile crib offshore breakwater (double walled), Caisson offshore breakwater, and a floating wave attenuator are all considered offshore structures.

KEY TERMS

STONE REVETMENT OFFSHORE BREAKWATER

Stone may vary in size. Used to provide stability and diffuse wave energy.



STEEL SHEET PILE (SINGLE WALLED)



STEEL SHEET PILE CRIB (DOUBLE WALLED)

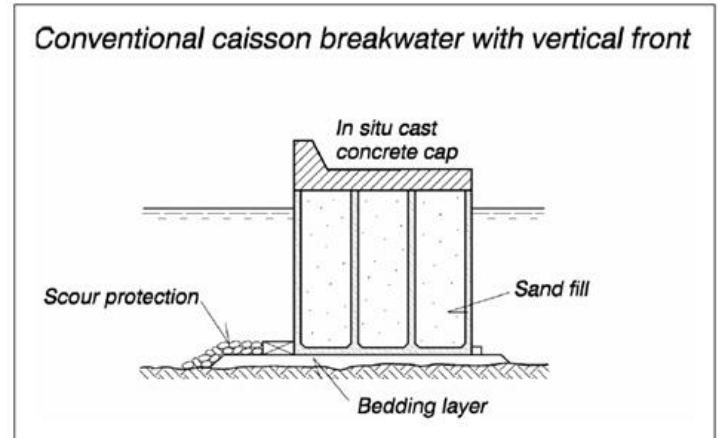


CAISSON

Typically a cell like structure with a hard outer material of concrete or steel sheeting and filled with sand, stone, or air.

KEY TERMS

CONVENTIONAL CAISSON BREAKWATER



STEEL SHEETING CAISSON BREAKWATER



FLOATING WAVE ATTENUATOR

Typically, a floating dock with a deep draft or curtain of panels below the surface that diffuse wave energy.



KEY TERMS

3. BOATING ACCESS

CAST IN PLACE CONCRETE PAVING



GRAVEL



CONCRETE PLANKS



SKID PIER – REMOVABLE



KEY TERMS

4. PADDLE SPORT ACCESS – Launching access for kayaks, canoes, paddle boards, dinghies, etc.

LAUNCH PLATFORM ON A FLOATING PIER

The main pier is primarily used for broadside mooring.

For launch platforms on floating piers: the dock was accounted for in the docks section. Only fill out information about ADA compliance, parking & the launch platform (length, width & age). Skip the questions about Fixed & Floating dock access.



LAUNCH PLATFORM ON A FLOATING ACCESS PIER

(pier only servicing paddle sport launch)

Fill out the information for **both** the floating access pier & launch platform.



5. MARINA UTILITIES

ELECTRICAL SHOCK DROWNING - When faulty wiring on a boat or in a marina causes underwater metals to become energized. If a swimmer enters the electrical field, they could be electrocuted.

ELECTRICAL UTILITY PEDESTAL



KEY TERMS

DOCK BOX WITH UTILITIES



VACUUM BREAKER



DRY STANDPIPE FIRE SUPPRESSION

Dry standpipe has no live water connection and the pipes are typically filled with air. Fire crews would have to connect the system to a water supply or open valves to charge the system.



APPENDIX B – Survey Question Summary



MICHIGAN STATE WATERWAYS PROGRAM
STATEWIDE FACILITIES ASSESSMENT - APPENDICES
Harbors, Boating Access Sites, and Lock & Dam Facilities

Title: MDNR Facility Condition Survey

Outline

1. General
2. Docks
 - a. Traditional Fixed Docks
 - b. Fixed Head Pier Docks
 - c. Traditional Floating Docks
 - d. Broadside Mooring on Harbor Walls
3. Shoreline & Breakwater Structures
 - a. Steel Sheet Pile
 - b. Concrete Panel Walls
 - c. Rock Revetment Shoreline
 - d. Rock Revetment Offshore Breakwater
 - e. Steel Sheet Pile Offshore Breakwater
 - f. Caisson Offshore Breakwater
 - g. Floating Wave Attenuator
4. Boat Launch
5. Dredging
6. Marina Utilities
 - a. Electrical Shore Power
 - b. Potable Water
 - c. Wi-Fi
 - d. Dry Standpipe Fire Suppression
 - e. Wet Fire Hydrant
 - f. Ice Suppression
 - g. Fuel
 - h. Sanitary Pump Out
7. Facility Site Information
 - a. Haul Out Services
 - b. Boat Storage
 - c. Parking
 - d. Landscaping
 - e. Buildings

PAGE I - INTRODUCTION

Thank you for taking the time to fill out this survey about your facility. This survey is intended to obtain a qualitative analysis of the current condition of your facility. You may save your work and return to the survey at any time. Please note the question number you skipped and wish to return to as you go through the survey. Please answer the questions to the best of your knowledge and read through them completely. There are opportunities to present additional information we may not have covered at the end of the sections. Please refer to the glossary guide that was attached to the email that contained your link to help answer the questions. Feel free to reach out with any questions you might have as you fill out the survey! We are happy to offer any assistance you might need.

Outline

1. General
2. Docks
3. Shoreline & Breakwater Structures
4. Boat Launch
5. Dredging
6. Marina Utilities
7. Facility Site Information

PAGE 2 - GENERAL

1. What is the name of your facility?
2. What is your facility's full address?
3. What is your name and title?
4. Who is the owner of your facility?
 - a. MDNR
 - b. Local Authority (Grant in Aid)
 - i. Please indicate ownership authority:

PAGE 3 - DOCKS

Traditional docks have a main pier with finger piers on both sides of the main pier. The main pier can be fixed or floating.

Head pier docks have a main pier with finger piers on one side of the main pier. The main pier can be fixed, floating, or along the shoreline/ a harbor wall.

Broadside mooring is usually a designated linear footage for boats to moor alongside either a dock or harbor wall. Do not count fuel docks as broadside mooring.

1. Traditional fixed docks
 2. Traditional floating docks
 3. Fixed head piers
 4. Floating head piers
 5. Harbor wall head piers
 6. Broadside Mooring
5. Does your facility offer traditional fixed docks? Y/N – If yes:

Page 4 DOCKS

6. Please indicate the number of slips at the various lengths specified below for the traditional FIXED DOCKS: round up to the nearest increment (ex: if you have a 15' slip, count it as a 20' slip)
- a. 20' Slips
 - b. 25' Slips
 - c. 30' Slips
 - d. 35' Slips
 - e. 40' Slips
 - f. 45' Slips
 - g. 50' Slips

- h. 55' Slips
 - i. 60' Slips
 - j. 70' & Longer Slips
7. Please indicate the approximate age by percentage of total area:
Chart with ages <10 years, 10-20 years, 20-30 years, 30-40 years, 40+ years fill in percentage to equal 100.
8. What is the primary decking material of your fixed docks?
- i. Standard timber decking (pine or similar)
 - ii. Composite (Trex or similar)
 - iii. Concrete
 - iv. Other
9. What is the primary framing material of your fixed docks? (Please select the pile type & framing materials if it is an open pile construction)
- i. Timber Piles
 - ii. Steel Piles
 - iii. Timber Framing
 - iv. Steel Framing
 - v. Timber Crib
 - vi. Steel Crib
 - vii. Steel Sheet Pile Crib (double walled sheet pile structure)
 - viii. Other
10. Please provide the length & width of each fixed traditional main pier
- i. Length 1
 - ii. Width 1
 - iii. Length 2
 - iv. Width 2
 - v. Length 3
 - vi. Width 3
 - vii. Length 4
 - viii. Width 4
11. Please provide any additional information about the state of your fixed head pier docks that you feel is important and not covered by the above questions
12. Does your facility offer traditional floating docks? Y/N – If yes:

Page 5 Docks

13. Please indicate the number of slips at the various lengths specified below for the FLOATING DOCKS:
round up to the nearest increment (*ex: if you have a 15' slip, count it as a 20' slip*)
- i. 20' Slips
 - ii. 25' Slips
 - iii. 30' Slips
 - iv. 35' Slips
 - v. 40' Slips
 - vi. 45' Slips
 - vii. 50' Slips

- viii. 55' Slips
 - ix. 60' Slips
 - x. 70' & Longer Slips
14. If no, please indicate the approximate age by percentage of total area:
- a. Chart with ages 10, 15, 20, 25, 30, 35, 40+ years and *answers add up to 100*
15. What is the construction type/material of your floating docks?
- a. Timber Construction (DNR Standard)
 - b. Steel Frame with Timber or Composite Decking
 - c. Aluminum Frame with Timber or Composite Decking
 - d. Monolithic Concrete
 - e. Other – Please Indicate Type/Material
16. Please indicate the brand/dock manufacturer of your docks if known:
- a. Floatation Docking Systems (FDS)
 - b. Great Lakes Docks & Materials, LLC
 - c. Other – Please specify
17. Please provide the length & width of each floating traditional main pier
- i. Length 1
 - ii. Width 1
 - iii. Length 2
 - iv. Width 2
 - v. Length 3
 - vi. Width 3
 - vii. Length 4
 - viii. Width 4
18. Please provide any additional information about the state of your floating docks that you feel is important and not covered by the above questions. (short answer response)
19. Does your facility offer fixed head pier docks Y/N – If yes:
- Page 6 Docks**
20. Please indicate the number of slips at the various lengths specified below for the FIXED DOCKS: round up to the nearest increment (*ex: if you have a 15' slip, count it as a 20' slip*)
- i. 20' Slips
 - ii. 25' Slips
 - iii. 30' Slips
 - iv. 35' Slips
 - v. 40' Slips
 - vi. 45' Slips
 - vii. 50' Slips
 - viii. 55' Slips
 - ix. 60' Slips
 - x. 70' & Longer Slips
21. Please indicate the approximate age by percentage of total area:
- i. Chart with ages 10, 15, 20, 25, 30, 35, 40+ years and 20%, 30% 40%, 50%, 60%, 70% 80%

22. What is the primary decking material of your fixed head pier docks?
- Standard timber decking (pine or similar)
 - Composite (Trex or similar)
 - Concrete
 - Other
23. What is the primary framing material of your fixed head pier docks?
- Timber Piles
 - Steel Piles
 - Timber Framing
 - Steel Framing
 - Timber Crib
 - Steel Crib
 - Steel Sheet Pile Crib (double walled sheet pile)
 - Other
24. Please provide the length & width of each fixed head pier
- Length 1
 - Width 1
 - Length 2
 - Width 2
 - Length 3
 - Width 3
 - Length 4
 - Width 4
25. Please provide any additional information about the state of your fixed docks that you feel is important and not covered by the above questions. (short answer response)
26. Does your facility offer floating head pier ? Y/N – If yes:

Page 7 Docks

27. Please indicate the number of slips at the various lengths specified below for the FLOATING DOCKS: round up to the nearest increment (*ex: if you have a 15' slip, count it as a 20' slip*)
- 20' Slips
 - 25' Slips
 - 30' Slips
 - 35' Slips
 - 40' Slips
 - 45' Slips
 - 50' Slips
 - 55' Slips
 - 60' Slips
 - 70' & Longer Slips
28. If no, please indicate the approximate age by percentage of total area:
- Chart with ages 10, 15, 20, 25, 30, 35, 40+ years and *answers add up to 100*

29. What is the construction type/material of your floating docks?
 - a. Timber Construction (DNR Standard)
 - b. Steel Frame with Timber or Composite Decking
 - c. Aluminum Frame with Timber or Composite Decking
 - d. Monolithic Concrete
 - e. Other – Please Indicate Type/Material
30. Please indicate the brand/dock manufacturer of your docks if known:
 - a. Floatation Docking Systems (FDS)
 - b. Great Lakes Docks & Materials, LLC
 - c. Other – Please specify
31. Please provide the length & width of each fixed head pier
 - i. Length 1
 - ii. Width 1
 - iii. Length 2
 - iv. Width 2
 - v. Length 3
 - vi. Width 3
 - vii. Length 4
 - viii. Width 4
32. Please provide any additional information about the state of your floating docks that you feel is important and not covered by the above questions. (short answer response)
33. Does your facility offer Head Pier docks along harbor walls/ the shoreline? Y/N – If yes:

Page 8 Docks

34. Please indicate the number of slips at the various lengths specified below for finger piers along harbor walls/ the shoreline: round up to the nearest increment (*ex: if you have a 15' slip, count it as a 20' slip*)
 - xi. 20' Slips
 - xii. 25' Slips
 - xiii. 30' Slips
 - xiv. 35' Slips
 - xv. 40' Slips
 - xvi. 45' Slips
 - xvii. 50' Slips
 - xviii. 55' Slips
 - xix. 60' Slips
 - xx. 70' & Longer Slips
35. Please indicate the approximate age by percentage of total area:
 - i. Chart with ages 10, 15, 20, 25, 30, 35, 40+ years and 20%, 30% 40%, 50%, 60%, 70% 80%
36. What is the primary decking material of the fingers?
 - e. Standard timber decking (pine or similar)
 - f. Composite (Trex or similar)
 - g. Concrete

h. Other

37. What is the primary framing material of the fingers?
- i. Fixed - Timber Framing & Timber Piles
 - ii. Fixed - Timber Framing & Steel Piles
 - iii. Fixed - Steel Framing & Steel Piles
 - iv. Fixed - Steel Framing & Timber Piles
 - v. Fixed - Crib docks
 - ii. Floating - Timber Construction (DNR Standard)
 - iii. Floating - Steel Frame with Timber or Composite Decking
 - iv. Floating - Aluminum Frame with Timber or Composite Decking
 - v. Floating - Monolithic Concrete
 - vi. Other – Please Indicate Type/Material & if floating or fixed
38. How many linear feet of harbor walls have finger piers?
39. How many linear feet of shoreline have finger piers?
40. Please provide any additional information about the state of your finger docks that you feel is important and not covered by the above questions. (short answer response)
41. Does your facility offer designated broadside mooring? Y/N – If yes:

Page 9 Does your facility offer designated BROADSIDE MOORING?

42. Please indicate the linear feet of each type of broadside mooring?
- a. Harbor Walls
 - b. Fixed Crib Dock
 - c. Fixed Open Pile Dock
 - d. Floating Dock
 - e. Other – Please specify
43. Please indicate the width in feet of each type of broadside mooring?
- a. Fixed Crib Dock
 - b. Fixed Open Pile Dock
 - c. Floating Dock
 - d. Other – Please specify
44. Please indicate the approximate age of each type of structure for designated broadside mooring?
- a. Harbor Walls
 - b. Fixed Crib Dock
 - c. Fixed Sheet Pile Crib
 - d. Fixed Open Pile Dock
 - e. Floating Dock
 - f. Other – Please specify
45. What is the construction type/material of your broadside mooring on Harbor Walls?
- i. Steel Sheet Pile Only
 - ii. Steel Sheet Pile with Timber Fendering
 - iii. Do not have harbor wall mooring
 - iv. Other – Please Indicate Type/Material

46. What is the construction type/material of your pavement/decking along your broadside mooring on Harbor Walls?
- i. Standard timber decking (pine or similar)
 - ii. Composite (Trex or similar)
 - iii. Concrete
 - iv. Asphalt
 - v. Do not have harbor wall mooring
 - vi. Other – Please Indicate Type/Material
47. For fixed crib docks, what is the primary decking material?
- a. Standard timber decking (pine or similar)
 - b. Composite (Trex or similar)
 - c. Concrete
 - d. Other
48. For fixed open pile docks, what is the primary framing material of your fixed head pier docks?
- i. Timber Piles
 - ii. Steel Piles
 - iii. Timber Framing
 - iv. Steel Framing
49. For fixed open pile docks, what is the primary decking material?
- a. Standard timber decking (pine or similar)
 - b. Composite (Trex or similar)
 - c. Concrete
 - d. Other
50. For floating docks, what is the construction type/material of your floating docks?
- a. Timber Construction (DNR Standard)
 - b. Steel Frame with Timber or Composite Decking
 - c. Aluminum Frame with Timber or Composite Decking
 - d. Monolithic Concrete
 - e. Other – Please Indicate Type/Material
51. Please indicate the brand/dock manufacturer of your docks if known:
- a. Floatation Docking Systems (FDS)
 - b. Great Lakes Docks & Materials
 - c. Other – Please specify
52. Please give us any additional information about the state of your broadside mooring that you feel is important and not covered by the above questions. (short answer response)

PAGE 10 - SHORELINE AND BREAKWATER STRUCTURES

Sections 1-3 relate to shoreline structures and 4-7 relate to breakwater/ offshore structures.

1. Steel Sheet Pile
2. Concrete Panel Walls
3. Rock Revetment Shoreline
4. Rock Revetment Offshore Breakwater
5. Steel Sheet Pile Offshore Breakwater
6. Caisson Offshore Breakwater

7. Floating Wave Attenuator

53. Please indicate the approximate linear feet of the following shoreline systems that make up your harbor:
- Steel Sheet Pile harbor wall
 - Concrete Panel harbor Walls
 - Rock Revetment Shoreline
 - Rock Revetment Offshore Breakwater
 - Steel Sheet Pile (single) Offshore Breakwater
 - Steel Sheet Pile (double) Crib Offshore Breakwater
 - Caisson Offshore Breakwater
 - Floating Wave Attenuator
54. Are there steel sheet pile walls along the shoreline at your marina?

Page 11 - Steel Sheet Pile

55. Please indicate the approximate average water depth at the base of the Steel Sheet Pile walls along the shoreline:
56. Please indicate who owns and is responsible for the maintenance of this infrastructure by percentage:
- Chart with options for My Facility Owner, USACE, Other Local Authority, Other and 20%, 30% 40%, 50%, 60%, 70% 80%
57. Please indicate the condition of the Steel Sheet Pile: *(ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)*
- Very good, no work needed
 - Functional, may require update
 - Bad, in need of replacement
58. Please indicate the approximate age of the Steel Sheet Pile by percentage of total length:
- Chart with ages 10, 20, 30, 40, 50+ years and 20%, 30% 40%, 50%, 60%, 70% 80%
59. What is the approximate water depth at the base of the concrete panel walls?
- I don't have concrete panel walls
 - The approximate water depth is:

Page 12-Concrete Panel Walls

60. Please indicate who owns and is primarily responsible for the maintenance of the concrete panel walls by percentage:
- Chart with options for My Facility, USACE, Local Authority, Other and 20%, 30% 40%, 50%, 60%, 70% 80%
61. Please indicate the condition of the Concrete Panel Walls: *(ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)*
- Very good, no work needed
 - Functional, may require update
 - Bad, in need of replacement
62. Please indicate the approximate age of the Concrete Panel Walls by percentage of total length:

- a. Chart with ages 10, 20, 30, 40, 50+ years and 20%, 30% 40%, 50%, 60%, 70% 80%
63. What is the approximate water depth at the base of the rock revetment shoreline?
- a. I don't have a rock revetment shoreline.
 - b. The approximate water depth is:

Page 13-Rock Revetment Shoreline

64. Please indicate who owns and is responsible for the maintenance of the rock revetment shoreline by percentage:
- a. Chart with options for My Facility, USACE, Local Authority, Other and 20%, 30% 40%, 50%, 60%, 70% 80%
65. Please indicate the condition of the Rock Revetment Shoreline: (ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)
- a. Very good, no work needed
 - b. Functional, may require update
 - c. Bad, in need of replacement
66. Please indicate the approximate age of the Rock Revetment Shoreline by percentage of total length:
- a. Chart with ages 10, 20, 30, 40, 50+ years and 20%, 30% 40%, 50%, 60%, 70% 80%
67. Please indicate the approximate average water depth at the base of the offshore rock revetment breakwater

Page 14 - Rock Revetment Offshore Breakwater

68. Please indicate who owns and is responsible for the maintenance of this infrastructure by percentage:
- a. Chart with options for My Facility, USACE, Local Authority, Other and 20%, 30% 40%, 50%, 60%, 70% 80%
69. Please indicate the condition of the Rock Revetment Offshore Breakwater: (ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)
- a. Very good, no work needed
 - b. Functional, may require update
 - c. Bad, in need of replacement
70. Please indicate the approximate age of the Rock Revetment Offshore Breakwater by percentage of total length:
- a. Chart with ages 10, 20, 30, 40, 50+ years and 20%, 30% 40%, 50%, 60%, 70% 80%
71. Is your Rock Revetment Offshore Breakwater providing a sufficiently calm wave environment inside your harbor?
72. Please indicate the approximate average water depth at the base of the Steel sheet Pile Offshore Breakwater?
- a. I don't have a steel sheet pile offshore breakwater
 - b. The approximate water depth is:

Page 15 - Steel Sheet Pile Offshore Breakwater

73. Please indicate who owns and is responsible for the maintenance of this infrastructure by percentage:
- Chart with options for My Facility, USACE, Local Authority, Other and 20%, 30% 40%, 50%, 60%, 70% 80%
74. Please indicate the condition of the Steel Sheet Pile Offshore Breakwater: (ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)
- Very good, no work needed
 - Functional, may require update
 - Bad, in need of replacement
75. Please indicate the approximate age of the Steel Sheet Pile Offshore Breakwater by percentage of total length:
- Chart with ages 10, 20, 30, 40, 50+ years and 20%, 30% 40%, 50%, 60%, 70% 80%
76. Is your Steel Sheet Pile Offshore Breakwater providing a sufficiently calm wave environment inside your harbor?
77. Please indicate the approximate average water depth at the base of the double walled (steel sheet pile crib) Offshore Breakwater:
- I don't have a steel sheet pile crib
 - The approximate water depth is:

Page 16 - Steel Sheet Pile Crib Offshore Breakwater

78. Please indicate who owns and is responsible for the maintenance of this infrastructure by percentage:
- Chart with options for My Facility, USACE, Local Authority, Other and 20%, 30% 40%, 50%, 60%, 70% 80%
79. Please indicate the condition of the Steel Sheet Pile Offshore Breakwater: (ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)
- Very good, no work needed
 - Functional, may require update
 - Bad, in need of replacement
80. Please indicate the approximate age of the Steel Sheet Pile Offshore Breakwater by percentage of total length:
- Chart with ages 10, 20, 30, 40, 50+ years and 20%, 30% 40%, 50%, 60%, 70% 80%
81. Is your Steel Sheet Pile Offshore Breakwater providing a sufficiently calm wave environment inside your harbor?
82. Please indicate the approximate average water depth at the base of the Caisson Offshore Breakwater:
- I don't have a caisson offshore breakwater
 - The approximate water depth is:

Page 16 - Caisson Offshore Breakwater

83. Please indicate who owns and is responsible for the maintenance of this infrastructure by percentage:

- a. Chart with options for My Facility, USACE, Local Authority, Other and 20%, 30% 40%, 50%, 60%, 70% 80%
84. Please indicate the condition of the Caisson Offshore Breakwater: (ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)
- a. Very good, no work needed
 - b. Functional, may require update
 - c. Bad, in need of replacement
85. Please indicate the approximate age of the Caisson Offshore Breakwater by percentage of total length:
- a. Chart with ages 10, 20, 30, 40, 50+ years and 20%, 30% 40%, 50%, 60%, 70% 80%
86. Is your Caisson Offshore Breakwater providing a sufficiently calm wave environment inside your harbor?
87. Please indicate the approximate average water depth at the base of the Floating Wave Attenuator:
- a. I don't have a floating wave attenuator

Page 17 - Floating Wave Attenuator

88. Please indicate who owns and is responsible for the maintenance of this infrastructure by percentage:
- a. Chart with options for My Facility, USACE, Local Authority, Other and 20%, 30% 40%, 50%, 60%, 70% 80%Please
89. What is the construction type/material of your floating wave attenuator?
- a. Timber/Steel Construction
 - b. Monolithic Concrete
 - c. Other – Please Indicate Type/Material
90. please indicate the approximate age by percentage of total area:
- i. Chart with ages 10, 15, 20, 25, 30, 35, 40+ years and 20%, 30% 40%, 50%, 60%, 70% 80%
91. Please indicate the brand(s)/dock manufacturer(s) of your docks if known:
- a. Floatation Docking Systems (FDS)
 - b. Great Lakes Docks & Materials, LLC
 - c. Other – Please specify
92. Is your floating wave attenuator providing a sufficiently calm wave environment inside your harbor?
93. Please provide any additional information about the state of your floating wave attenuator that you feel is important and not covered by the above questions.

PAGE 18 – BOATING ACCESS

94. Does your facility have a boat launch?

Page 19 Boat Launch

95. How many boat launch lanes does your facility offer?
96. What is the primary paving material of the launch ramp(s)?
- i. Cast in Place Concrete Paving
 - ii. Precast Concrete Planks (DNR standards)
 - iii. Gravel

iv. Other

97. Movable skid launch pier information

- a. How many movable skid launch piers does your facility offer?
- b. Please indicate the average length of your movable skid launch piers:
- c. Please indicate the average width of your movable skid launch piers:
- d. Please indicate the approximate of the movable skid launch piers:

98. Fixed launch pier information

- a. How many fixed launch piers does your facility offer?
- b. Please indicate the average length of your fixed launch piers:
- c. Please indicate the average width of your fixed launch piers:
- d. Please indicate the approximate age of the fixed launch piers?

99. Floating launch pier information

- a. How many floating launch piers does your facility offer?
- b. Please indicate the average length of your floating launch piers:
- c. Please indicate the average width of your floating launch piers:
- d. Please indicate the approximate age of the floating launch piers?

100. How many trailer spaces are available for the boat launch users only?

101. How many single vehicle spaces are available for the boat launch users only? (Do not count here if boat launch users park in general facility parking area)

102. Please provide any additional information about the state of your boat launch facilities that you feel is important and not covered by the above questions.

103. Does your facility offer designated launching for paddle sports or have regular paddle sport launching? (canoes, kayaks, stand up paddle boards) (an example would be an ez-dock ada accessible kayak launch, boat/dock elevator, walk-in from shoreline)

PAGE 20 – PADDLE SPORT ACCESS

We are interested in if you have specifically dedicated facilities for paddle sports. Do not count access piers for docks already accounted for in the previous dock sections, simply select platform.

104. What type of launch facilities does your marina offer for paddle sports (canoes, kayaks, stand up paddle boards)? Select all that apply

- a. Beach/walk-in
- b. Boat Launch
- c. Fixed Dock Access (main purpose is for launching or for access to a launching platform)
- d. Floating Dock Access (main purpose is for launching or for access to a launching platform)
- e. Launch platform

105. What percentage of the paddle sports dedicated launches ADA complaint?

- a. Unknown
- b. Percentage:

106. Where do the paddle sports users park?

- a. General marina parking area
- b. Not at the marina
- c. Dedicated parking spaces for Paddle Sports Users Only – How Many?

107. Do you have sufficient parking spaces for paddle sports users?

108. If you offer fixed dock access facilities specifically dedicated to launching for paddle sports: (skip question if you do not)
 - a. Please indicate the approximate length of the access pier:
 - b. Please indicate the approximate width of the access pier:
 - c. Please indicate the approximate age of the launch facilities:
109. If you offer floating dock access facilities specifically dedicated to launching for paddle sports: (skip question if you do not)
 - a. Please indicate the approximate length of the access pier:
 - b. Please indicate the approximate width of the access pier:
 - c. Please indicate the approximate age of the launch facilities:
110. If you have a launch platform: (skip question if you do not)
 - a. Please indicate the approximate length of the access pier:
 - b. Please indicate the approximate width of the access pier:
 - c. Please indicate the approximate age of the launch facilities:
111. Please provide any additional information about the state of your launching facilities that you feel is important and not covered by the above questions.

PAGE 21 - DREDGING

112. Please indicate the average current water depth in the regularly navigable for typical power and sail boats areas of by percentage to maintain operations:
- Less than 6'
 - 6'-10'
 - Greater than 10'
113. If known, how many years ago was your facility last dredged?
114. If known, how many cubic yards were removed at that time?
115. Does your facility require regular maintenance dredging?
Regular - meaning regularly scheduled dredging

Page 22 – Maintenance dredging

116. How often is regular maintenance dredging required in years?
117. If known, approximately how many cubic yards are generally removed on average?:
118. Please indicate if the location of the area requiring regular maintenance dredging by percentage: (add link to USACE maps)
- Within our harbor / riparian area
 - Within the adjacent Federal Navigation Channel
119. Please indicate who **usually** pays for maintenance dredging by percentage:
- Our facility / local funds
 - State of Michigan
 - Federal Sources
120. Please indicate who is **responsible** for funding maintenance dredging by percentage:
- Our facility / local funds
 - State of Michigan
 - Federal Sources
121. Is your facility in need of dredging for the 2019 boating season?
- If known, approximately how many cubic yards need to be removed?
122. Please provide any additional information about dredging that you feel is important and not covered by the above questions.

PAGE 23 - MARINA UTILITIES

123. Does your marina offer electrical shore power?

Page 24 – Electrical Shore Power

124. Was your electrical shore power system installed new or upgraded to comply with Electrical Shock Drowning Ground Fault Protection standards?

(If your system was installed new in the last 3 years it is most likely compliant)

125. For Freestanding Marina Utility Pedestals (skip question if you do not have any):

- a. Please indicate the number of 20amp duplex ONLY pedestals you offer:
- b. Please indicate the number of single 30amp shore power pedestals you offer:
- c. Please indicate the number of twin 30amp shore power pedestals you offer:
- d. Please indicate the number of 30amp/50amp shore power pedestals you offer:
- e. Please indicate the number of twin 50amp shore power pedestals you offer:
- f. Please indicate the number of 100amp shore power pedestals you offer:
- g. Other:

126. Please indicate the condition of your utility pedestals (skip question if you do not have any): (ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)

- a. Very good, no work needed
- b. Functional, may require update
- c. Bad, in need of replacement

127. For Dock Box Integrated Utilities (skip question if you do not have any):

- a. Please indicate the number of single 30amp dock box integrated utilities you offer:
- b. Please indicate the number of twin 30amp dock box integrated utilities you offer:
- c. Please indicate the number of 30amp/50amp dock box integrated utilities you offer:
- d. Please indicate the number of twin 50amp dock box integrated utilities you offer:

128. Please indicate the condition of your dock box utilities (skip question if you do not have any):

(ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)

- a. Very good, no work needed
- b. Functional, may require update
- c. Bad, in need of replacement

129. Does your marina offer potable water at your slips?

Page 25 – Potable Water

130. When was your potable water system installed?

- i. <10 years ago
- ii. 10 – 20 years ago
- iii. 20 - 30 years ago
- iv. 30 + years ago

131. Please indicate the condition of your potable water system: *(ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)*
- i. Very good, no work needed
 - ii. Functional, may require update
 - iii. Bad, in need of replacement
132. What percentage of hose bibs have vacuum breakers installed?
133. Does your marina offer Wi-Fi?

Page 26 – Wi-Fi

134. When was your Wi-Fi system installed?
- i. Within the last five years
 - ii. More than five years ago
135. What is the current performance of the system?
- i. Very good, no work needed
 - ii. Good, minor issues only
 - iii. Bad, the system requires a major upgrade
136. Does your marina have a dry standpipe fire suppression system?

Page 27 – Dry standpipe fire suppression system

137. When was your dry standpipe system installed?
- i. <10 years ago
 - ii. 10 – 20 years ago
 - iii. 20 - 30 years ago
 - iv. 30 + years ago
138. Please indicate the condition of your dry standpipe system: *(ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)*
- i. Very good, no work needed
 - ii. Functional, may require update
 - iii. Bad, in need of replacement
139. Does your marina have a wet fire hydrant system?

Page 28 – Wet fire hydrant system

140. When was your wet fire hydrant system installed?
- i. <10 years ago
 - ii. 10 – 20 years ago
 - iii. 20 - 30 years ago
 - iv. 30 + years ago
141. Please indicate the condition of your wet fire hydrant system: *(ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)*
- i. Very good, no work needed
 - ii. Functional, may require update
 - iii. Bad, in need of replacement
142. Does your marina have a compressor driven bubbler ice suppression system?

Page 29 - Ice Suppression

143. How many compressors do you have?
144. When was/were your ice suppression Compressor(s) installed or upgraded?
- <10 years ago
 - 10 – 20 years ago
 - 20 - 30 years ago
 - 30 + years ago
145. Please indicate the condition of your ice suppression Compressor(s): (ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)
- Very good, no work needed
 - Functional, may require update
 - Bad, in need of replacement
146. When were your ice suppression air distribution lines installed or upgraded?
- <10 years ago
 - 10 – 20 years ago
 - 20 - 30 years ago
 - 30 + years ago
147. Please indicate the condition of your ice suppression air distribution lines (ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)
- Very good, no work needed
 - Functional, may require update
 - Bad, in need of replacement
148. How many flow inducer units do you have (Ice Eater/Kasko type)?
149. Do you have enough flow inducer units?
- Does not apply
 - If not, how many additional units are needed?
150. Please indicate the condition of your flow inducer units (skip if you have no flow inducer units) (ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%):
- Very good, new
 - Functional, may require repairs
 - Bad, in need of replacement
151. Does your marina offer fuel?

Page 30 Fuel

152. Fuel Dock Information
- Please indicate the approximate length of the fuel dock area:
 - Please indicate the approximate width of the fuel dock area:
153. What is the construction of the fuel dock?
- Fixed
 - Floating
 - Alongside harbor wall
 - Other – please specify
154. What type of fuel do you offer?

- a. Gasoline
 - b. Diesel
 - c. Both
155. Please indicate the total number of fuel dispensers in your facility:
156. Please indicate the approximate length of the fuel lines connecting your tanks to your dispensers:
- a. On land:
 - b. Over water:
157. Please indicate the capacity for each above ground single product tank at your facility:
- 1. Tank 1
 - 2. Tank 2
 - 3. Tank 3
158. Please indicate the capacity for each above ground dual product tank at your facility:
- 1. Tank 1
 - 2. Tank 2
 - 3. Tank 3
159. Please indicate the capacity for each underground single product tank at your facility:
- 1. Tank 1
 - 2. Tank 2
 - 3. Tank 3
160. Please indicate the capacity for each underground dual product tank at your facility:
- 1. Tank 1
 - 2. Tank 2
 - 3. Tank 3
161. When was/were your fuel system installed or upgraded?
- i. <10 years ago
 - ii. 10 – 20 years ago
 - iii. 20 - 30 years ago
 - iv. 30 + years ago
162. Please indicate the overall condition of your fuel system (*ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%*)
- i. Very good, no work needed
 - ii. Functional, may require update
 - iii. Bad, in need of replacement
163. Does your marina offer sanitary pump-out?

Page 31 Sanitary Pump-out

164. Please indicate the total number of pump-out systems at your marina:
165. When was/were your pump-out system installed or upgraded?
- i. <10 years ago
 - ii. 10 – 20 years ago
 - iii. 20 - 30 years ago
 - iv. 30 + years ago

166. Please provide any additional information about shore power, potable water, wi-fi, fire suppression systems, ice suppression systems, fuel or sanitary pump out that you feel is important and not covered by the above questions.

PAGE 32 Other Site FEATURES

1. Haul-out Services
2. Boat Storage
3. Parking
4. Landscaping
5. Buildings

167. Do you have a collection system for hull wash down water?

168. Does your marina offer haul-out services other than a traditional boat launch?

Page 33 Haul Out

169. If your marina utilizes a Travel Lift:

- a. Please indicate the approximate length of the **lift well**:
- b. Please indicate the approximate width of the **lift well**:
- c. Please indicate the age of your **lift well**:
- d. Please indicate the capacity of your **travel lift** in tons:
- e. Please indicate the age of your **travel lift**:

170. If your marina utilizes a Hydraulic Trailer:

- a. Please approximate the max boat length capacity (ft):
- b. Please approximate the weight capacity (tons):
- c. Please indicate the age of your hydraulic trailer:

171. Please indicate the condition of your haul-out system

- i. Very good, no work needed
- ii. Functional, may require update
- iii. Bad, in need of replacement

172. Please provide any additional information about the state of your haul out facilities that you feel is important and not covered by the above questions.

173. Indicate the total area in square feet for each type of boat storage:

(skip this question if it does not apply)

- a. Summer (in and out):
- b. Winter – Indoor Heated:
- c. Winter – Indoor Unheated:
- d. Winter – Outdoor:

174. Does your marina offer dry rack boat storage (in and out service)?

Page 34 Dry rack storage

175. Please indicate the number of PWC racks you offer:

- a. 20' racks :
- b. 25' racks:

- c. 30' racks:
 - d. 35' racks:
 - e. 40' racks:
176. Please enter the capacity (in tons) and age for each forklift you utilize:
- i. Forklift 1 capacity:
 - ii. Forklift 1 age:
 - iii. Forklift 2 capacity:
 - iv. Forklift 2 age:
 - v. Forklift 3 capacity:
 - vi. Forklift 3 age:
 - vii. Forklift 4 capacity:
 - viii. Forklift 4 age:
177. Please indicate the age of your dry rack storage building:
- i. <10 years ago
 - ii. 10 – 20 years ago
 - iii. 20 - 30 years ago
 - iv. 30 + years ago
178. Please indicate the condition of your dry rack storage building
- i. Very good, no work needed
 - ii. Functional, may require update
 - iii. Bad, in need of replacement
179. Please provide any additional information about the state of your boat storage that you feel is important and not covered by the above questions.

Page 35 Parking

180. **Does your Marina offer parking in a parking lot (off-street parking)?**

Page 36 Off-Street Parking

181. Please indicate the total number of parking spaces you offer (include boating access parking):
182. Approximate the area in square feet of each type of parking:
- a. Asphalt
 - b. Concrete
 - c. Gravel / Unpaved
183. Please indicate the condition of your asphalt paving (*ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%*)
- a. Very good, no work needed
 - b. Functional, may require update
 - c. Bad, in need of replacement
184. Please indicate the condition of your concrete paving (*ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%*)
- a. Very good, no work needed
 - b. Functional, may require update
 - c. Bad, in need of replacement

185. Please indicate the condition of your gravel paving (ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)
- Very good, no work needed
 - Functional, may require update
 - Bad, in need of replacement
186. Does your offer on-street parking specifically associated with the marina (include boating access parking)?

Page 37 - On-Street Parking

187. How many on-street parking spaces are available?
188. Please indicate the condition of your on-street paving (ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)
- Very good, no work needed
 - Functional, may require update
 - Bad, in need of replacement
189. Is your marina responsible for maintaining the on-street parking spaces?
190. Please provide any additional information about the state of your parking you feel is important and not covered by the above questions.

191. Page 38 - Please indicate the approximate area of landscape / green space in your facility in square feet:

192. Please indicate the condition of your landscape / green space (ex. 50% of the system is very good, 25% is functional, 25% needs replacing – the total of selected percentages must be 100%)
Landscaping is considered any area that is maintained or required maintenance such as lawn, gardens, etc.

- Very good, no work needed
- Functional, may require update
- Bad, in need of replacement

193. Please indicate if your marina is responsible for maintaining the landscape / green spaces
194. What are your pedestrian walkways primarily made of?
- Concrete
 - Asphalt
 - Unit Pavers
 - Gravel
 - Other- Please Specify
195. Please indicate the approximate total length of your walkways.
196. Please indicate the approximate average width of your walkways.
197. What is the condition of your walkways by percentage?
- Very good, no work needed
 - Functional, may require update
 - Bad, in need of replacement
198. Please provide any additional information about the state of your landscaping and walkways that you feel is important and not covered by the above questions.

PAGE 39 – BUILDINGS

199. How many covered picnic shelters does your facility have?
200. What is the approximate average age of the picnic shelters?
201. What is the overall condition of the picnic shelters?
- Very good, no work needed
 - Functional, may require updates
 - Bad, in need of replacement
202. How many vault toilets does your facility have?
203. What is the overall condition of the vault toilets?
- Very good, no work needed
 - Functional, may require updates
 - Bad, in need of replacement
204. Does your facility have buildings other than picnic shelters or vault toilets? Y/N
205. Building 1:
- What dedicated areas does this building offer (select all that apply)
 - Office – for harbor staff
 - Boater Lounge
 - Restroom
 - Laundry
 - Store (marine supplies, etc.)
 - Harbor Shop/Maintenance/Equipment storage
 - Fuel service/ attendant
206. What is the approximate total area of the building in square feet?
207. How many toilet fixtures (toilets and urinals)?
208. How many individual showers?
209. What is the age of this building?
210. Please select the overall condition of the building:
- Very good, no work needed
 - Functional, may require update
 - Bad, in need of replacement
211. Please select specific improvements needed:
- Roof Replacement
 - Mechanical Upgrades (HVAC/Heating/Cooling)
 - ADA Upgrades
 - General Interior Renovations
 - General Exterior Renovations
 - Other – Please specify
212. Add Building 2?

Page 40 – Final

Thank you for taking this survey about your marina! Go back and change any answers at any time before April 19th!

APPENDIX C – Individual Site Summaries and Cost Estimates



MICHIGAN STATE WATERWAYS PROGRAM
STATEWIDE FACILITIES ASSESSMENT - APPENDICES
Harbors, Boating Access Sites, and Lock & Dam Facilities

12th St. Municipal BAS

Facility Owner: City of Port Huron
Address: 1131 Water St, Port Huron, MI 48060
Site ID: A-74-017

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
5	Cast-In-Place Concrete	Skid	50	3	45	5	60	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
60	49000	Functional	0	-	0	-	0	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		10000	Functional	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		50	10	Concrete	Functional			

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Very Good



12th St. Municipal BAS

Facility Owner: City of Port Huron
Address: 1131 Water St, Port Huron, MI 48060
Site ID: A-74-017

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	8000	SF	\$ 70	\$ 560,000
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 605,000
Total Cost					\$ 605,000

12th St. Municipal BAS

Facility Owner:	City of Port Huron
Address:	1131 Water St, Port Huron, MI 48060
Site ID:	A-74-017

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	49000	SF	\$ 10	\$ 490,000
Total Site-Features Cost					\$ 490,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 500,000
Total Future Value Cost					\$ 671,958

12th St. Municipal BAS

Facility Owner: City of Port Huron
 Address: 1131 Water St, Port Huron, MI 48060
 Site ID: A-74-017

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	3	EA	\$ 30,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	100%	10000	SF	\$ 1	\$ 10,000
Walkways	100%	500	SF	\$ 10	\$ 5,000
Total Site-Features Cost					\$ 15,000

Total Cost					\$ 105,000
Total Future Value Cost					\$ 189,642

Allegan Dam East BAS

Facility Owner: MDNR
Address: -
Site ID: A-03-013

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	0	1	30	5	109	0

Site Features

Off-Street Parking			Total SF Gravel/Unpaved			Access Drive		
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material
109	0	-	0	-	0	Functional	0	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		-	-	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		-	6	Gravel		Functional		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	-	-	2	Very Good



Allegheny Dam East BAS

Facility Owner: MDNR
Address: 0
Site ID: A-03-013

There are no costs projected for this site within this time period

Allegan Dam East BAS

Facility Owner:	MDNR
Address:	-
Site ID:	A-03-013

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost					\$ 65,000
Total Future Value Cost					\$ 87,355

Allegheny Dam East BAS

Facility Owner: MDNR
Address: -
Site ID: A-03-013

There are no costs projected for this site within this time period

Aloha State Park BAS

Facility Owner: MDNR
Address: 4347 Third St.
Site ID: A-16-024

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	140	30-40	Functional	6	100	0	0	NA
Rock Revetment Shoreline	140	-	Functional	0	100	0	0	NA
Rock Revetment Offshore	684	30-40	Functional	4	100	0	0	Yes

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	15	1	30	5	45	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	<6'	5 years ago	Yes	Every 3 years	10	100	0

Dredging required for 2019 boating season: 10 CY

Site Features

Landscaping	SF	Condition	Facility Responsible?	
	6500	Very Good	Yes	
Walkways	Total LF	Avg. Width	Material	Condition
	10	5	Gravel	Very Good

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Very Good



Aloha State Park BAS

Facility Owner:	MDNR
Address:	4347 Third St.
Site ID:	A-16-024

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	100%	140	LF	\$ 350	\$ 49,000
Rock Revetment Offshore Maintenance Type A	100%	684	LF	\$ 1,250	\$ 855,000
Total Structure Cost					\$ 904,000

Note: NR = Not Responsible

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000

Dredging

Item	Quantity	Unit	Unit Rate	5 Year Projection
Dredging	10	CY	\$ 40	\$ 400
Total Cost				\$ 919,400

Aloha State Park BAS

Facility Owner:	MDNR
Address:	4347 Third St.
Site ID:	A-16-024

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	100%	140	LF	\$ 700	\$ 98,000
Rock Revetment Offshore Maintenance Type A	100%	684	LF	\$ 700	\$ 478,800
Total Structure Cost					\$ 576,800

Note: NR = Not Responsible

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 683,200

Total Future Value Cost \$ 918,164

Aloha State Park BAS

Facility Owner: MDNR
 Address: 4347 Third St.
 Site ID: A-16-024

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	100%	140	LF	\$ 1,050	\$ 147,000
Rock Revetment Offshore Maintenance Type A	100%	684	LF	\$ 1,050	\$ 718,200
Total Structure Cost					\$ 865,200

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	30	CY	\$ 40	\$ 1,200

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	50	SF	\$ 5	\$ 250
Total Site-Features Cost					\$ 250

Total Cost					\$ 896,650
Total Future Value Cost					\$ 1,619,450

Alpena Municipal Marina

Facility Owner: City of Alpena
Address: 400 E. Chisholm Street, Alpena, MI 49707
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
3930	Timber	Timber Frame & Timber Piles	16	40'	80%	20-30
			20	45'	20%	40+
			18	60'		

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
12870	Traditional Timber (DNR Standard)	Unknown	41	30'	100%	20-30
			22	45'		
			6	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	2520	35	Concrete	Steel Sheet Pile

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Steel Sheet Pile Wall	600	-	-	8	100	0	0
Rock Revetment Shoreline	1625	20-30	Very Good	3	100	0	0

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Very Good	100 % have vacuum breakers installed
WIFI	<5	Functional	
Ice Suppression System	20-30	Functional	1 Units Total
Air Distribution Lines	30+	Functional	
Flow Inducers	-	Very Good	1 Units Total 20 Additional Needed
Pumpout	20-30	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
15 20 Amp	25% Very Good
42 Twin 30 Amp	70% Functional
9 30/ 50 Amp	5% Bad
Compliant with Electrical Shock Drowning Ground Fault Protection Standards	Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over Land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Floating	310	12	2	30	310	20-30	Very Good
Tank Type	Tank Capacity	No. Tanks						
Under Ground Storage	6000 Gallons	2						

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
8	Cast-In-Place Concrete	Skid	5	4	45	5	28	0

Boat Storage

Hull Wash Down	Travel Lift	Hydraulic Trailer	Summer Storage SF	Indoor Heated SF	Winter Indoor SF	Winter Outdoor SF
No	Yes	No	300	0	0	8000

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged
0%	<6'	6 years ago	No
100%	6'-10'		

Site Features

Off-Street Parking				Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF	Material	
30	100	Functional	0	-	0	-	30000 Asphalt
On-Street Parking		Spaces	Condition	Facility Responsible?			
		18	Very Good	No			
Landscaping		SF	Condition	Facility Responsible?			
		43000	Very Good	Yes			
Walkways		Total LF	Avg. Width	Material		Condition	
		2455	5	Concrete and colored asphalt		Very Good	

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	1250	7	5	40	Functional	Mechanical & ADA Upgrades, General
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Boater Lounge	720	0	0	40	Functional	Mechanical Upgrades, General
Building 3 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Store (Marine Supplies, etc.)	30	1	0	70	Replace	Mechanical & ADA Upgrades, Interior/Exterior Renovations



5 Year Projected Cost Estimate

Alpena Municipal Marina

Facility Owner:	City of Alpena
Address:	400 E. Chisholm Street, Alpena, MI 49707
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Fixed Dock	20%	3930	SF	\$ 60	\$ 47,160
Traditional Floating Dock	100%	12870	SF	\$ 75	\$ 965,250
Total Dock Cost					\$ 1,012,410

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
20 Amp Duplex Only Electric Pedestal	5%	15	EA	\$ 3,000	\$ 2,250
Twin 30 Amp Electric Pedestal	5%	42	EA	\$ 3,000	\$ 6,300
30/50 Amp Electric Pedestal	5%	9	EA	\$ 3,500	\$ 1,575
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 65,125

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building 3	100%	300	SF	\$ 400	\$ 120,000
Building 4	100%	3000	SF	\$ 400	\$ 1,200,000
Total Buildings Cost					\$ 1,320,000

Total Cost \$ 2,457,535

Alpena Municipal Marina

Facility Owner: City of Alpena
Address: 400 E. Chisholm Street, Alpena, MI 49707
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Fixed Dock	80%	3930	SF	\$ 60	\$ 188,640
Total Dock Cost					\$ 188,640

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type B	100%	1625	LF	\$ 140	\$ 227,500
Total Structure Cost					\$ 227,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
20 Amp Duplex Only Electric Pedestal	70%	15	EA	\$ 3,000	\$ 31,500
Twin 30 Amp Electric Pedestal	70%	42	EA	\$ 3,000	\$ 88,200
30/50 Amp Electric Pedestal	70%	9	EA	\$ 3,500	\$ 22,050
Potable Water	10%	123	SLIP	\$ 800	\$ 9,840
Ice Suppression Compressor System	100%	123	SLIP	\$ 1,800	\$ 221,400
Flow Inducers	100%	21	EA	\$ 1,000	\$ 21,000
Fuel Dock	100%	3720	SF	\$ 100	\$ 372,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	340	LF	\$ 100	\$ 34,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 1,029,990

Boat Storage

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Travel Lift Haul-Out System	100%	1	LS	\$ 500,000	\$ 500,000
Total Boat Storage Cost					\$ 1,000,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	30000	SF	\$ 10	\$ 300,000
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Total Site-Features Cost					\$ 301,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 1	100%	1250	SF	\$ 400	\$ 500,000
Building 2	100%	720	SF	\$ 400	\$ 288,000
Building 5	100%	320	SF	\$ 400	\$ 128,000
Total Buildings Cost					\$ 916,000
Total Cost					\$ 3,663,130
Total Future Value Cost					\$ 3,751,045

Alpena Municipal Marina

Facility Owner: City of Alpena
Address: 400 E. Chisholm Street, Alpena, MI 49707
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	1625	LF	\$ 350	\$ 568,750
Total Structure Cost					\$ 568,750

Note: NR = Not Responsible

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	123	SLIP	\$ 3,500	\$ 430,500
20 Amp Duplex Only Electric Pedestal	25%	15	EA	\$ 3,000	\$ 11,250
Twin 30 Amp Electric Pedestal	25%	42	EA	\$ 3,000	\$ 31,500
30/50 Amp Electric Pedestal	25%	9	EA	\$ 3,500	\$ 7,875
Potable Water	90%	123	SLIP	\$ 800	\$ 88,560
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Fuel Dock	100%	3720	SF	\$ 100	\$ 372,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	340	LF	\$ 100	\$ 34,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 1,210,685

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	12800	SF	\$ 70	\$ 896,000
Total Boat Launch & Paddle Sport Access Cost					\$ 1,076,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	100%	43000	SF	\$ 1	\$ 43,000
Total Site-Features Cost					\$ 43,000

Total Cost \$ 2,898,435

Total Future Value Cost \$ 5,234,896

Alpena Municipal Marina BAS

Facility Owner:	City of Alpena
Address:	120 E Fletcher Street, Alpena MI 49707
Site ID:	A-04-009

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
------	----------	-----	-----------	---------------	---------------------	------------------	------------------	---------------------------------

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	5	1	45	5	12	10

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged
0%	<6'	20 years ago	No
10%	6'-10'		
90%	>10'		

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
20	30000	Very Good	0	-	0	-	300	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		31000	-	No				

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Very Good



Alpena Municipal Marina BAS

Facility Owner:	City of Alpena
Address:	120 E Fletcher Street, Alpena MI 49707
Site ID:	A-04-009

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Alpena Municipal Marina BAS

Facility Owner:	City of Alpena
Address:	120 E Fletcher Street, Alpena MI 49707
Site ID:	A-04-009

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000
Total Cost					\$ 10,000
Total Future Value Cost					\$ 13,439

Alpena Municipal Marina BAS

Facility Owner:	City of Alpena
Address:	120 E Fletcher Street, Alpena MI 49707
Site ID:	A-04-009

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Total Boat Launch & Paddle Sport Access Cost					\$ 269,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	300	SF	\$ 10	\$ 3,000
Parking Lot - Asphalt	100%	30000	SF	\$ 10	\$ 300,000
Landscaping	100%	31000	SF	\$ 1	\$ 31,000
Total Site-Features Cost					\$ 334,000

Total Cost \$ 603,000

Total Future Value Cost \$ 1,089,085

Arcadia Township - Veterans Memorial Marina

Facility Owner: Arcadia Township
Address: 17088 First St, Arcadia Mi 49613
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
4575	Timber	Timber Frame & Steel Piles	8	25'	0%	<10
			10	30'	0%	10-20
			6	35'	67%	20-30
			4	40'	0%	30-40
			4	55'	33%	40+
			1	60'		

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
1140	Traditional Timber (DNR Standard)	Unknown	9	30'	100%	30-40
			1	35'		
			3	45'		
			1	50'		

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
810	Timber	Timber Framing & Steel Piles	8	35'	100%	40+
			4	50'		
			1	60'		

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	-	20-30	Functional	6	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Functional	100 % have vacuum breakers installed
WIFI	<5	Functional	
Flow Inducers	-	Functional	6 Units Total 0 Additional Units Needed
Pumpout	10-20	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
0 20 Amp	0% Very Good
5 Single 30 Amp	100% Functional
24 Twin 30 Amp	0% Bad
5 30/ 50 Amp	

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	LF Lines over Land	LF Lines over Water	Overall Age	Overall Condition
Gas & Diesel	Fixed	60	10	2	100	50	30+	Functional
Tank Type		Tank Capacity	No. Tanks					
Underground Dual Storage		2000 Gallons	2					

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	10	1	40	3	0	0
		Floating	25	1	50	8		

Paddle Sport Launch

Beach/Walk In	Boat Launch	ADA	Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
0	0	0	25	50	8	0	0	0	0

Dredge

% of Navigable Water Depth	% of Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
50%	<6'	1 years ago	Unknown	Yes	Every Year	Small	0	100
50%	6'-10'							
0%	>10'							

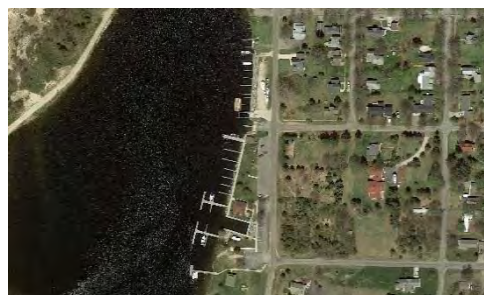
Dredging required for 2019 boating season: 0 CY

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
40	100	Functional	0	-	0	-	0	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		0	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		500	6	Concrete		Functional		

Buildings

Building 1 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office and Restroom	600	2	0	60	Replace	Mechanical & ADA upgrades
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom and Laundry	2500	6	4	3	Functional	Roof Replacement, Mechanical Upgrades, General Interior Renovations



Arcadia Township - Veterans Memorial Marina

Facility Owner: Arcadia Township
Address: 17088 First St, Arcadia Mi 49613
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Floating Dock	100%	1140	SF	\$ 75	\$ 85,500
Wall/Shoreline Head Pier Fixed Fingers	100%	810	SF	\$ 70	\$ 56,700
Total Dock Cost					\$ 142,200

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	60	SLIP	\$ 5,000	\$ 300,000
Flow Inducers	100%	6	EA	\$ 1,000	\$ 6,000
Total Utilities Cost					\$ 306,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Paddle Sport Launch Access	100%	400	SF	\$ 75	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building 1	100%	600	SF	\$ 400	\$ 240,000
Total Buildings Cost					\$ 240,000

Total Cost \$ 733,200

Arcadia Township - Veterans Memorial Marina

Facility Owner: Arcadia Township
Address: 17088 First St, Arcadia Mi 49613
Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Single 30 Amp Electric Pedestal	100%	5	EA	\$ 3,000	\$ 15,000
Twin 30 Amp Electric Pedestal	100%	24	EA	\$ 3,000	\$ 72,000
30/50 Amp Electric Pedestal	100%	5	EA	\$ 3,500	\$ 17,500
Potable Water	100%	60	SLIP	\$ 800	\$ 48,000
Flow Inducers	100%	6	EA	\$ 1,000	\$ 6,000
Fuel Dock	100%	600	SF	\$ 150	\$ 90,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	150	LF	\$ 100	\$ 15,000
Underground Dual Product Tank	100%	2	EA	\$ 120,000	\$ 240,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 573,500

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Total Boat Launch & Paddle Sport Access Cost					\$ 224,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Walkways	100%	3000	SF	\$ 10	\$ 30,000
Total Site-Features Cost					\$ 31,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 2	100%	2500	SF	\$ 400	\$ 1,000,000
Total Buildings Cost					\$ 1,000,000

Total Cost \$ 1,828,500

Total Future Value Cost \$ 2,457,351

Arcadia Township - Veterans Memorial Marina

Facility Owner: Arcadia Township
Address: 17088 First St, Arcadia Mi 49613
Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	60	SLIP	\$ 3,500	\$ 210,000
Fuel Dock	100%	600	SF	\$ 150	\$ 90,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	150	LF	\$ 100	\$ 15,000
Underground Dual Product Tank	100%	2	EA	\$ 120,000	\$ 240,000
Total Utilities Cost					\$ 585,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Paddle Sport Launch Access	100%	400	SF	\$ 105	\$ 42,000
Total Boat Launch & Paddle Sport Access Cost					\$ 72,000

Total Cost					\$ 657,000
Total Future Value Cost					\$ 1,186,615

Arvon Township Park BAS

Facility Owner:	Arvon Township
Address:	Park St. Skanee, MI
Site ID:	A-07-019

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
------	----------	-----	-----------	---------------	---------------------	------------------	------------------	---------------------------------

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	1	2	30	5	22	35

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
57	0	-	0	-	45000	Very Good	4000	Gravel/Unpaved

Landscaping	SF	Condition	Facility Responsible?
	48000	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	450	8	Gravel	Functional

Buildings

Picnic Shelters		
Amount	Age	Condition
1	25	Very Good

Vault Toilets	
Amount	Condition
1	Very Good



Arvon Township Park BAS

Facility Owner: Arvon Township
Address: Park St. Skanee, MI
Site ID: A-07-019

There are no costs projected for this site within this time period

Arvon Township Park BAS

Facility Owner:	Arvon Township
Address:	Park St. Skanee, MI
Site ID:	A-07-019

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	2	EA	\$ 45,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	10%	48000	SF	\$ 1	\$ 4,800
Total Site-Features Cost					\$ 4,800

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 25,000

Total Cost \$ 119,800

Total Future Value Cost \$ 161,001

Arvon Township Park BAS

Facility Owner: Arvon Township
 Address: Park St. Skanee, MI
 Site ID: A-07-019

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	4000	SF	\$ 5	\$ 20,000
Parking Lot - Gravel/Unpaved	100%	45000	SF	\$ 5	\$ 225,000
Landscaping	90%	48000	SF	\$ 1	\$ 43,200
Walkways	100%	3600	SF	\$ 5	\$ 18,000
Total Site-Features Cost					\$ 306,200

Total Cost					\$ 402,200
Total Future Value Cost					\$ 726,418

Au Gres River Mouth BAS

Facility Owner: MDNR
Address: 2000 South Riverside Drive Augres MI 48703
Site ID: A-06-001

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Rock Revetment Shoreline	8800	40+	Functional	8	0	100	0

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
8	Precast Concrete Planks	Skid	8	4	40	5	100	100

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	12 years ago	Unknown	Yes	Every 20 years	Unknown	100
100%	6'-10'						
0%	>10'						

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
71	65000	Very Good	0	-	0	-	95000	-
Landscaping		SF	Condition	Facility Responsible?				
		217500	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		1000	4	Concrete		Functional		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	3	Functional



Au Gres River Mouth BAS

Facility Owner: MDNR
 Address: 2000 South Riverside Drive Augres MI 48703
 Site ID: A-06-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	4	EA	\$ 15,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Walkways	10%	4000	SF	\$ 10	\$ 4,000
Total Site-Features Cost					\$ 4,000

Total Cost \$ 64,000

Au Gres River Mouth BAS

Facility Owner:	MDNR
Address:	2000 South Riverside Drive Augres MI 48703
Site ID:	A-06-001

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	90%	4000	SF	\$ 10	\$ 36,000
Total Site-Features Cost					\$ 253,500

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	3	EA	\$ 10,000	\$ 30,000
Total Buildings Cost					\$ 30,000

Total Cost					\$ 283,500
Total Future Value Cost					\$ 381,000

Au Gres River Mouth BAS

Facility Owner:	MDNR
Address:	2000 South Riverside Drive Augres MI 48703
Site ID:	A-06-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	12800	SF	\$ 30	\$ 384,000
Launch Piers	100%	4	EA	\$ 45,000	\$ 180,000
Total Boat Launch & Paddle Sport Access Cost					\$ 564,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	65000	SF	\$ 10	\$ 650,000
Total Site-Features Cost					\$ 650,000

Total Cost	\$ 1,214,000
-------------------	---------------------

Total Future Value Cost	\$ 2,192,619
--------------------------------	---------------------

Au Sable River Mouth BAS

Facility Owner: MDNR
Address: 4494 Noth US23 Oscoda Mi 48750
Site ID: A-35-001

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Steel Sheet Pile Wall	2400	40+	Functional	8	0	100	0

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
10	Precast Concrete Planks	Skid	15	5	40	5	120	60

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	12 years ago	Unknown	Yes	Every 15 years	Unknown	0
100%	6'-10'						100
0%	>10'						
Dredging required for 2019 boating season:				0	CY		

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Total Spaces	SF Asphalt						SF	Material
180	170000	Very Good	0	-	0	-	25000	-
Landscaping		SF	Condition	Facility Responsible?				
		174240	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		1200	5	Concrete		Functional		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Very Good



Au Sable River Mouth BAS

Facility Owner:	MDNR
Address:	4494 Noth US23 Oscoda Mi 48750
Site ID:	A-35-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	5	EA	\$ 15,000	\$ 75,000
Total Boat Launch & Paddle Sport Access Cost					\$ 75,000
Total Cost					\$ 75,000

Au Sable River Mouth BAS

Facility Owner:	MDNR
Address:	4494 Noth US23 Oscoda Mi 48750
Site ID:	A-35-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	16000	SF	\$ 30	\$ 480,000
Total Boat Launch & Paddle Sport Access Cost					\$ 480,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	100%	6000	SF	\$ 10	\$ 60,000
Total Site-Features Cost					\$ 60,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost	\$ 560,000
-------------------	-------------------

Total Future Value Cost	\$ 752,593
--------------------------------	-------------------

Au Sable River Mouth BAS

Facility Owner:	MDNR
Address:	4494 Noth US23 Oscoda Mi 48750
Site ID:	A-35-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	5	EA	\$ 30,000	\$ 150,000
Total Boat Launch & Paddle Sport Access Cost					\$ 150,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	170000	SF	\$ 10	\$ 1,700,000
Total Site-Features Cost					\$ 1,700,000

Total Cost					\$ 1,850,000
Total Future Value Cost					\$ 3,341,306

Austin Lake BAS

Facility Owner:	MDNR
Address:	-
Site ID:	A-39-014

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Boat Launch								

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	3	1	40	5	43	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
43	60000	Functional	0	-	0	-	2000	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	150000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	50	5	Concrete	Functional

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Fee Booth	32	0	0	3	Functional	Mechanical Upgrades and General Exterior Renovations



Austin Lake BAS

Facility Owner: MDNR
Address: 0
Site ID: A-39-014

There are no costs projected for this site within this time period

Austin Lake BAS

Facility Owner:	MDNR
Address:	-
Site ID:	A-39-014

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	60000	SF	\$ 10	\$ 600,000
Total Site-Features Cost					\$ 630,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Building 1	100%	32	SF	\$ 400	\$ 12,800
Total Buildings Cost					\$ 22,800

Total Cost \$ 697,800

Total Future Value Cost \$ 937,785

Austin Lake BAS

Facility Owner: MDNR
 Address: -
 Site ID: A-39-014

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	2000	SF	\$ 10	\$ 20,000
Landscaping	80%	150000	SF	\$ 1	\$ 120,000
Walkways	100%	250	SF	\$ 10	\$ 2,500
Total Site-Features Cost					\$ 142,500

Total Cost					\$ 238,500
Total Future Value Cost					\$ 430,758

Baraga Municipal Marina

Facility Owner: Village of Baraga
Address: 100 E State St. Baraga MI 49908
Site ID: -

Docks

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
1105.5	Traditional Timber	Custom	11	25'	100%	10-20
			4	30'		

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	360	-	Replace	10	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Functional	100 % have vacuum breakers installed
WIFI	<5	Very Good	
Pumpout	10-20	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
5 Twin 30 Amp	0% Very Good 100% Functional
Compliant with Electrical Shock Drowning Ground Fault Protection Standards	Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	LF Lines over Land	LF Lines over Water	Overall Age	Overall Condition
Gasoline	Floating	60	8	1	50	0	10-20	Functional
Tank Type		Tank Capacity		No. Tanks				
Above Ground Single Product		500 Gallons		1				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
3	Precast Concrete Planks	Skid	5	2	40	3	20	20

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
5	160	Replace	0	-	-	Replace	6000	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		18000	Functional	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		900	4	Asphalt	Replace			

Buildings

Picnic Shelters			Vault Toilets			
Amount	Age	Condition	Amount	Condition		
1	20	Functional	1	Functional		
Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office and Restroom	400	1	1	3	Replace	The building is sinking and will need to be completely redone



Baraga Municipal Marina

Facility Owner:	Village of Baraga
Address:	100 E State St. Baraga MI 49908
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Shoreline	100%	360	LF	\$ 1,000	\$ 360,000
Total Structure Cost					\$ 360,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	6000	SF	\$ 10	\$ 60,000
Parking Lot - Asphalt	100%	160	SF	\$ 10	\$ 1,600
Walkways	100%	3600	SF	\$ 7	\$ 25,200
Total Site-Features Cost					\$ 86,800

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building I	100%	400	SF	\$ 400	\$ 160,000
Total Buildings Cost					\$ 160,000

Total Cost \$ 636,800

Baraga Municipal Marina

Facility Owner: Village of Baraga
Address: 100 E State St. Baraga MI 49908
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Floating Head Pier	100%	1106	SF	\$ 75	\$ 82,913
Total Dock Cost					\$ 82,913

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Twin 30 Amp Electric Pedestal	100%	5	EA	\$ 3,000	\$ 15,000
Potable Water	100%	15	SLIP	\$ 800	\$ 12,000
Fuel Dock	100%	480	SF	\$ 100	\$ 48,000
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Fuel Lines	100%	50	LF	\$ 100	\$ 5,000
Above Ground Single Product Tank	100%	1	EA	\$ 50,000	\$ 50,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 180,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	0%	0	EA	\$ 45,000	\$ -
Total Boat Launch & Paddle Sport Access Cost					\$ -

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	100%	18000	SF	\$ 1	\$ 18,000
Total Site-Features Cost					\$ 18,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 25,000

Total Cost \$ 305,913

Total Future Value Cost \$ 411,121

Baraga Municipal Marina

Facility Owner: Village of Baraga
 Address: 100 E State St. Baraga MI 49908
 Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	15	SLIP	\$ 3,500	\$ 52,500
Fuel Dock	100%	480	SF	\$ 100	\$ 48,000
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Fuel Lines	100%	50	LF	\$ 100	\$ 5,000
Above Ground Single Product Tank	100%	1	EA	\$ 50,000	\$ 50,000
Total Utilities Cost					\$ 175,500

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	4800	SF	\$ 30	\$ 144,000
Total Boat Launch & Paddle Sport Access Cost					\$ 234,000

Total Cost					\$ 409,500
Total Future Value Cost					\$ 739,603

Barton Lake BAS

Facility Owner: MDNR
Address: -
Site ID: A-39-001

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	20	1	30	5	30	4

Site Features

Off-Street Parking		Asphalt Condition	Total		Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	SF Asphalt		SF Concrete	Concrete				SF	Material
25	41000	Functional	0	-	0	-	20000	Asphalt	
Walkways		Total LF	Avg. Width	Material		Condition			
		100	5	Concrete		Very Good			

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Barton Lake BAS

Facility Owner: MDNR
 Address: -
 Site ID: A-39-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 111,000
Total Cost					\$ 111,000

Barton Lake BAS

Facility Owner:	MDNR
Address:	-
Site ID:	A-39-001

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	41000	SF	\$ 10	\$ 410,000
Total Site-Features Cost					\$ 410,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 420,000
-------------------	-------------------

Total Future Value Cost	\$ 564,445
--------------------------------	-------------------

Barton Lake BAS

Facility Owner:	MDNR
Address:	-
Site ID:	A-39-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	20000	SF	\$ 10	\$ 200,000
Walkways	100%	500	SF	\$ 10	\$ 5,000
Total Site-Features Cost					\$ 205,000

Total Cost \$ 235,000

Total Future Value Cost \$ 424,436

Base Line Lake BAS

Facility Owner: MDNR
Address: -
Site ID: A-03-012

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	0	1	30	5	30	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
30	8400	Very Good	0	-	0	-	10800	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		7470	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		40	6	Concrete	Very Good			

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Very Good



Base Line Lake BAS

Facility Owner: MDNR
Address: 0
Site ID: A-03-012

There are no costs projected for this site within this time period

Base Line Lake BAS

Facility Owner:	MDNR
Address:	-
Site ID:	A-03-012

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 55,000
Total Future Value Cost					\$ 73,915

Base Line Lake BAS

Facility Owner: MDNR
 Address: -
 Site ID: A-03-012

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	10800	SF	\$ 10	\$ 108,000
Parking Lot - Asphalt	100%	8400	SF	\$ 10	\$ 84,000
Landscaping	100%	7470	SF	\$ 1	\$ 7,470
Walkways	100%	240	SF	\$ 10	\$ 2,400
Total Site-Features Cost					\$ 201,870
Total Cost					\$ 201,870
Total Future Value Cost					\$ 364,600

Bay Port BAS

Facility Owner: MDNR
Address: N/A
Site ID: A-32-007

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	25	1	40	5	80	75

Site Features

Off-Street Parking			Total			Gravel/Unpaved		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Condition	SF	Material	
69	100	Replace	0	-	0	-	0	Asphalt	
Landscaping		SF	Condition	Facility Responsible?					
		0	Very Good	Yes					
Walkways		Total LF	Avg. Width	Material		Condition			
		20	5	Concrete		Very Good			

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Bay Port BAS

Facility Owner:	MDNR
Address:	N/A
Site ID:	A-32-007

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 111,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Total Site-Features Cost					\$ 1,000

Total Cost \$ 112,000

Bay Port BAS

Facility Owner:	MDNR
Address:	N/A
Site ID:	A-32-007

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000
Total Cost					\$ 10,000
Total Future Value Cost					\$ 13,439

Bay Port BAS

Facility Owner:	MDNR
Address:	N/A
Site ID:	A-32-007

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	100	SF	\$ 10	\$ 1,000
Total Site-Features Cost					\$ 1,000

Total Cost					\$ 31,000
Total Future Value Cost					\$ 55,989

Beaver Island Municipal Marina - St. James Township

Facility Owner: St. James Township
Address: 26184 Main St. Beaver Island, MI 49782
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
4992.5	Timber	Timber Frame & Timber Piles	6	25'		
			9	30'		
			1	35'	100%	20-30
			9	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Fixed Open Pile Dock	425	20	Timber	Timber Frame & Timber Piles

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Rock Revetment Shoreline	200	20-30	Very Good	4	100	0	0

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Functional	100 % have vacuum breakers installed
WIFI	<5	Replace	
Dry Standpipe Fire System	20-30	Replace	
Ice Suppression System	20-30	Replace	4 Units Total
Air Distribution Lines	20-30	Replace	
Flow Inducers	-	Very Good	4 Units Total 15 Additional Units Needed
Pumpout	20-30	Replace	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
20 30/ 50 Amp	0% Very Good
	80% Functional
	20% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
6	2400	Functional	0	-	0	-	480	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		29000	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		85	8	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets				
Amount	Age	Condition	Amount	Condition			
1	20	Functional	0	-			
Building 1 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Office, Boater Lounge, Harbor Shop/Store, and Restroom	2000	6	2	20	Functional	ADA Upgrades & General Interior/Exterior Renovations	
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Restroom and Laundry	500	1	2	25	Functional	ADA Upgrades & General Interior Renovations	



Beaver Island Municipal Marina - St. James Township

Facility Owner: St. James Township
 Address: 26184 Main St. Beaver Island, MI 49782
 Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Broadside Fixed Open Pile Redecking	100%	425	SF	\$ 10	\$ 4,250
Total Dock Cost					\$ 4,250

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type A	10%	200	LF	\$ 100	\$ 2,000
Total Structure Cost					\$ 2,000

Note: NR = Not Responsible

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	25	SLIP	\$ 5,000	\$ 125,000
30/50 Amp Electric Pedestal	20%	20	EA	\$ 3,500	\$ 14,000
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Dry Standpipe Fire Suppression System	100%	25	SLIP	\$ 800	\$ 20,000
Ice Suppression Compressor System	50%	25	SLIP	\$ 1,800	\$ 22,500
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 236,500

Total Cost \$ 242,750

Beaver Island Municipal Marina - St. James Township

Facility Owner: St. James Township
 Address: 26184 Main St. Beaver Island, MI 49782
 Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Fixed Dock	100%	4993	SF	\$ 60	\$ 299,550
Broadside Fixed Open Pile Dock	0%	425	SF	\$ 60	\$ 25,500
Broadside Fixed Open Pile Redecking	100%	425	SF	\$ 10	\$ 4,250
Total Dock Cost					\$ 329,300

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	10%	200	LF	\$ 350	\$ 7,000
Rock Revetment Maintenance Type B	90%	200	LF	\$ 140	\$ 25,200
Total Structure Cost					\$ 32,200

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
30/50 Amp Electric Pedestal	80%	20	EA	\$ 3,500	\$ 56,000
Potable Water	100%	25	SLIP	\$ 800	\$ 20,000
Ice Suppression Compressor System	50%	25	SLIP	\$ 1,800	\$ 22,500
Flow Inducers	100%	19	EA	\$ 1,000	\$ 19,000
Total Utilities Cost					\$ 117,500

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	480	SF	\$ 10	\$ 4,800
Parking Lot - Asphalt	100%	2400	SF	\$ 10	\$ 24,000
Total Site-Features Cost					\$ 57,800

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Building 1	100%	2000	SF	\$ 400	\$ 800,000
Building 2	100%	500	SF	\$ 400	\$ 200,000
Building 3	100%	80	SF	\$ 400	\$ 32,000
Total Buildings Cost					\$ 1,047,000

Total Cost \$ 1,583,800
Total Future Value Cost \$ 2,122,783

Beaver Island Municipal Marina - St. James Township

Facility Owner: St. James Township
Address: 26184 Main St. Beaver Island, MI 49782
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	10%	200	LF	\$ 700	\$ 14,000
Rock Revetment Maintenance Type B	90%	200	LF	\$ 350	\$ 63,000
Total Structure Cost					\$ 77,000

Note: NR = Not Responsible

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	25	SLIP	\$ 3,500	\$ 87,500
Total Utilities Cost					\$ 87,500

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	680	SF	\$ 10	\$ 6,800
Total Site-Features Cost					\$ 6,800

Total Cost					\$ 171,300
Total Future Value Cost					\$ 309,387

Belleville Lake East BAS

Facility Owner: MDNR
Address: 765 E. Huron River Drive Belleville, MI
Site ID: A-82-003

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	220	-	-	0	0	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	10	2	20	6	73	48

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
-	185000	Very Good	0	-	0	-	7200	-
Landscaping		SF	Condition	Facility Responsible?				
		1000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		30	6	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets				
Amount	Age	Condition	Amount	Condition			
0	-	-	2	Very Good			
Building 1 Type		Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office		180	0	0	3	Very Good	None
Building 2 Type		Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office		100	0	0	3	Very Good	None



Belleville Lake East BAS

Facility Owner: MDNR
Address: 765 E. Huron River Drive Belleville, MI
Site ID: A-82-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000

Belleville Lake East BAS

Facility Owner:	MDNR
Address:	765 E. Huron River Drive Belleville, MI
Site ID:	A-82-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Total Boat Launch & Paddle Sport Access Cost					\$ 192,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost	\$ 212,000
-------------------	-------------------

Total Future Value Cost	\$ 284,910
--------------------------------	-------------------

Belleville Lake East BAS

Facility Owner:	MDNR
Address:	765 E. Huron River Drive Belleville, MI
Site ID:	A-82-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	185000	SF	\$ 10	\$ 1,850,000
Landscaping	100%	1000	SF	\$ 1	\$ 1,000
Walkways	100%	180	SF	\$ 10	\$ 1,800
Total Site-Features Cost					\$ 1,852,800

Total Cost \$ 1,912,800

Total Future Value Cost \$ 3,454,730

Belleville Lake West BAS

Facility Owner: MDNR
Address: 4651 Rawsonville Rd Belleville, MI 48111
Site ID: A-82-009

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
------	----------	-----	-----------	---------------	---------------------	------------------	------------------	---------------------------------

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Cast-In-Place Concrete	Skid	10	1	20	6	37	29

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved	Condition	SF	Material
61	52000	Very Good	0	-	0	-	13500	-

Landscaping	SF	Condition	Facility Responsible?
	23000	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	100	5	Concrete	Functional

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
2	Functional

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office/ Contact Station Building	144	0	0	10	Replace	Replace all



Belleville Lake West BAS

Facility Owner:	MDNR
Address:	4651 Rawsonville Rd Belleville, MI 48111
Site ID:	A-82-009

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Walkways	50%	500	SF	\$ 10	\$ 2,500
Total Site-Features Cost					\$ 2,500

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building 1	100%	144	SF	\$ 400	\$ 57,600
Total Buildings Cost					\$ 57,600

Total Cost	\$ 75,100
-------------------	------------------

Belleville Lake West BAS

Facility Owner:	MDNR
Address:	4651 Rawsonville Rd Belleville, MI 48111
Site ID:	A-82-009

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 70	\$ 112,000
Total Boat Launch & Paddle Sport Access Cost					\$ 112,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	50%	500	SF	\$ 10	\$ 2,500
Total Site-Features Cost					\$ 25,500

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost	\$ 157,500
-------------------	-------------------

Total Future Value Cost	\$ 211,667
--------------------------------	-------------------

Belleville Lake West BAS

Facility Owner:	MDNR
Address:	4651 Rawsonville Rd Belleville, MI 48111
Site ID:	A-82-009

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	52000	SF	\$ 10	\$ 520,000
Total Site-Features Cost					\$ 520,000

Total Cost \$ 550,000

Total Future Value Cost \$ 993,361

Benton Harbor BAS

Facility Owner: MDNR
Address: River Veiw Drive
Site ID: A-11-012

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Concrete Wall	251	20-30	Very Good	0	80	0	0	NA
Rock Revetment Shoreline	450	10-20	Functional	0	80	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
3	Precast Concrete Planks	Skid	4	3	39	5	100	99

Site Features

Off-Street Parking							Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material
100	9340	Replace	0	-	0	-	342	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	112	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	744	6	Concrete	Functional

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	42	7	0	20	Functional	Roof Replacement, ADA Update, General Interior Renovation



Benton Harbor BAS

Facility Owner:	MDNR
Address:	River Veiw Drive
Site ID:	A-11-012

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Concrete Wall Maintenance Type A	20%	251	LF	\$ 64	\$ 3,213
Total Structure Cost					\$ 3,213

Note: NR = Not Responsible

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Parking Lot - Asphalt	100%	9340	SF	\$ 10	\$ 93,400
Total Site-Features Cost					\$ 93,400

Total Cost	\$ 96,613
-------------------	------------------

Benton Harbor BAS

Facility Owner:	MDNR
Address:	River Veiw Drive
Site ID:	A-11-012

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Concrete Wall Maintenance Type A	16%	251	LF	\$ 280	\$ 11,245
Concrete Wall Maintenance Type B	64%	251	LF	\$ 112	\$ 17,992
Total Structure Cost					\$ 69,556

Note: NR = Not Responsible

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	3	EA	\$ 45,000	\$ 135,000
Total Boat Launch & Paddle Sport Access Cost					\$ 135,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	342	SF	\$ 10	\$ 3,420
Walkways	100%	4464	SF	\$ 10	\$ 44,640
Total Site-Features Cost					\$ 48,060

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Building I	100%	42	SF	\$ 400	\$ 16,800
Total Buildings Cost					\$ 26,800

Total Cost \$ 279,416

Total Future Value Cost \$ 375,512

Benton Harbor BAS

Facility Owner:	MDNR
Address:	River Veiw Drive
Site ID:	A-11-012

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Concrete Wall Maintenance Type A	16%	251	LF	\$ 560	\$ 22,490
Concrete Wall Maintenance Type B	64%	251	LF	\$ 280	\$ 44,979
Rock Revetment Maintenance Type A	80%	450	LF	\$ 280	\$ 100,800
Total Structure Cost					\$ 168,269

Note: NR = Not Responsible

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	4800	SF	\$ 30	\$ 144,000
Total Boat Launch & Paddle Sport Access Cost					\$ 144,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	100%	112	SF	\$ 1	\$ 112
Total Site-Features Cost					\$ 112

Total Cost \$ 312,381

Total Future Value Cost \$ 564,194

Bergland Dock BAS

Facility Owner: MDNR
Address: N9995 M64 marenisco Mi 49947
Site ID: A-66-001

Docks

Broadside

Type	Total LF	Age	Decking Type	Construction
Other	480	3	-	-

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	0	<10-30	Functional	4	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Cast-In-Place Concrete	Skid	3	2	40	6	22	0

Site Features

Off-Street Parking				Total Concrete	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material
14	0	-	0	-	15000	-	3300	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		6500	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		500	6	0		Functional		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Bergland Dock BAS

Facility Owner: MDNR
Address: N9995 M64 marenisco Mi 49947
Site ID: A-66-001

There are no costs projected for this site within this time period

Bergland Dock BAS

Facility Owner:	MDNR
Address:	N9995 M64 marenisco Mi 49947
Site ID:	A-66-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	2	EA	\$ 45,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	100%	6500	SF	\$ 1	\$ 6,500
Total Site-Features Cost					\$ 6,500

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 106,500
-------------------	-------------------

Total Future Value Cost	\$ 143,127
--------------------------------	-------------------

Bergland Dock BAS

Facility Owner:	MDNR
Address:	N9995 M64 marenisco Mi 49947
Site ID:	A-66-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 70	\$ 112,000
Total Boat Launch & Paddle Sport Access Cost					\$ 112,000
Total Cost					\$ 112,000
Total Future Value Cost					\$ 202,284

Big Bay Harbor - Marquette County

Facility Owner: Marquette County
Address: PO Box 143, N4156 Cty Rd KF, Big Bay, MI 49808
Site ID: -

Docks

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	1800	55	Concrete	Steel Sheet Pile

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	400	40+	Functional	6	0	100	0	NA
Rock Revetment Offshore	250	40+	Very Good	4	0	100	0	Yes
Steel Sheet Pile Single	680	40+	Functional	4	0	100	0	Yes
Caisson	270	40+	Functional	8	0	100	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Functional	0 % have vacuum breakers installed
Pumpout	30+	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
7 Twin 30 Amp	0% Very Good 0% Functional 100% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	LF Lines over Land	LF Lines over Water	Overall Age	Overall Condition
Gasoline	Harbor Wall	50	6	1	0	0	20-30	Functional
Tank Type		Tank Capacity		No. Tanks				
Above Ground Single		1000		1				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Cast-In-Place Concrete	Fixed	55	2	25	4	9	0

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	-	-	-	-	-	-	-	-	

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
60%	<6'	5 years ago	Yes	Every 5 years	15000	10	90
40%	6'-10'						
0%	>10'						
Dredging required for 2019 boating season:			15000	CY			

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/ Unpaved	Gravel/ Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
0	12600	Very Good	0	-	0	-	3150	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		33800	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		620	5	Concrete		Functional		

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
0	0	-	0	-				
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Office, Restroom	500	2	1	55	Replace	Roof Replacement, Mechanical Upgrades, ADA Update, General Interior and Exterior Renovations		



Big Bay Harbor - Marquette County

Facility Owner: Marquette County
 Address: PO Box 143, N4156 Cty Rd KF, Big Bay, MI 49808
 Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Twin 30 Amp Electric Pedestal	100%	7	EA	\$ 3,000	\$ 21,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 56,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 70	\$ 112,000
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 142,000

Dredging

Item	Quantity	Unit	Unit Rate	5 Year Projection
Dredging	1500	CY	\$ 40	\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Landscaping	20%	33800	SF	\$ 1	\$ 6,760
Walkways	10%	3100	SF	\$ 10	\$ 3,100
Total Site-Features Cost					\$ 9,860

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building I	100%	500	SF	\$ 400	\$ 200,000
Total Buildings Cost					\$ 200,000

Total Cost \$ 467,860

Big Bay Harbor - Marquette County

Facility Owner: Marquette County
 Address: PO Box 143, N4156 Cty Rd KF, Big Bay, MI 49808
 Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Fuel Dock	100%	300	SF	\$ 70	\$ 21,000
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Above Ground Single Product Tank	100%	1	EA	\$ 50,000	\$ 50,000
Total Utilities Cost					\$ 86,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	0%	0	EA	\$ 30,000	\$ -
Total Boat Launch & Paddle Sport Access Cost					\$ -

Dredging

Item	Quantity	Unit	Unit Rate	10 Year Projection
Dredging	15000	CY	\$ 40	\$ 600,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	30%	33800	SF	\$ 1	\$ 10,140
Walkways	40%	3100	SF	\$ 10	\$ 12,400
Total Site-Features Cost					\$ 22,540

Total Cost \$ 708,540

Total Future Value Cost \$ 952,219

Big Bay Harbor - Marquette County

Facility Owner: Marquette County
 Address: PO Box 143, N4156 Cty Rd KF, Big Bay, MI 49808
 Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Fuel Dock	100%	300	SF	\$ 70	\$ 21,000
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Above Ground Single Product Tank	100%	1	EA	\$ 50,000	\$ 50,000
Total Utilities Cost					\$ 86,000

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	30000	CY	\$ 40	\$ 1,200,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	3150	SF	\$ 10	\$ 31,500
Parking Lot - Asphalt	100%	12600	SF	\$ 10	\$ 126,000
Landscaping	50%	33800	SF	\$ 1	\$ 16,900
Walkways	50%	3100	SF	\$ 10	\$ 15,500
Total Site-Features Cost					\$ 189,900

Total Cost \$ 1,535,900

Total Future Value Cost \$ 2,774,006

Big Star Lake BAS

Facility Owner: MDNR
Address: N/A
Site ID: A-43-022

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	10	1	30	5	49	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
49	0	-	0	-	40000	Functional	20400	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		2500000	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		160	5	Concrete		Functional		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Big Star Lake BAS

Facility Owner:	MDNR
Address:	N/A
Site ID:	A-43-022

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Big Star Lake BAS

Facility Owner:	MDNR
Address:	N/A
Site ID:	A-43-022

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type B	100%	100	LF	\$ 140	\$ 14,000
Total Structure Cost					\$ 14,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	20400	SF	\$ 5	\$ 102,000
Parking Lot - Gravel/Unpaved	100%	40000	SF	\$ 5	\$ 200,000
Landscaping	100%	2500000	SF	\$ 1	\$ 2,500,000
Walkways	100%	800	SF	\$ 10	\$ 8,000
Total Site-Features Cost					\$ 2,810,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 2,930,000

Total Future Value Cost \$ 3,937,675

Big Star Lake BAS

Facility Owner:	MDNR
Address:	N/A
Site ID:	A-43-022

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	100	LF	\$ 350	\$ 35,000
Total Structure Cost					\$ 35,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Total Cost					\$ 65,000
Total Future Value Cost					\$ 117,397

Black River Park BAS

Facility Owner: City of South Haven
Address: 123 Dunkley Avenue South Haven MI 49090
Site ID: A-80-027

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Steel Sheet Pile Wall	250	20-30	Functional	6	100	0	0

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
10	CONCRETE/ ASPHALT PATCH	Skid	50	5	50	5	128	23

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	0	0	3	30	5	0	0	0	

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	6 years ago	23000	-	-	-	-
50%	6'-10'						
50%	>10'						

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
151	111000	Replace	10	-	0	Replace	70000	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		0	Replace	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		50	3	Asphalt		Functional		

Buildings

Picnic Shelters			Vault Toilets			
Amount	Age	Condition	Amount	Condition		
1	10	Functional	0	-		
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	800	8	4	49	Very Good	None



5 Year Projected Cost Estimate

Black River Park BAS

Facility Owner:	City of South Haven
Address:	123 Dunkley Avenue South Haven MI 49090
Site ID:	A-80-027

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	70%	250	LF	\$ 140	\$ 24,500
Total Structure Cost					\$ 24,500

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	16000	SF	\$ -	\$ -
Launch Piers	100%	5	EA	\$ 15,000	\$ 75,000
Total Boat Launch & Paddle Sport Access Cost					\$ 75,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	70000	SF	\$ 5	\$ 350,000
Parking Lot - Asphalt	100%	111000	SF	\$ 10	\$ 1,110,000
Total Site-Features Cost					\$ 1,460,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building 2	100%	100	SF	\$ 400	\$ 40,000
Total Buildings Cost					\$ 40,000
Total Cost					\$ 1,599,500

Black River Park BAS

Facility Owner:	City of South Haven
Address:	123 Dunkley Avenue South Haven MI 49090
Site ID:	A-80-027

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	70%	250	LF	\$ 350	\$ 61,250
Total Structure Cost					\$ 61,250

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Paddle Sport Launch Access	100%	150	SF	\$ 180	\$ 27,000
Total Boat Launch & Paddle Sport Access Cost					\$ 27,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	100%	150	SF	\$ 7	\$ 1,050
Total Site-Features Cost					\$ 1,050

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 1	100%	800	SF	\$ 400	\$ 320,000
Building 3	100%	1000	SF	\$ 400	\$ 400,000
Total Buildings Cost					\$ 720,000

Total Cost \$ 809,300

Total Future Value Cost \$ 1,087,632

Black River Park BAS

Facility Owner:	City of South Haven
Address:	123 Dunkley Avenue South Haven MI 49090
Site ID:	A-80-027

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	70%	250	LF	\$ 700	\$ 122,500
Total Structure Cost					\$ 122,500

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	5	EA	\$ 30,000	\$ 150,000
Total Boat Launch & Paddle Sport Access Cost					\$ 150,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Total Buildings Cost					\$ 15,000

Total Cost	\$ 287,500
-------------------	-------------------

Total Future Value Cost	\$ 519,257
--------------------------------	-------------------

Bluegill BAS

Facility Owner: Genesee County Parks and Rec
Address: 4045 Coldwater Rd, Flint, MI 48506
Site ID: A-25-005

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
3	Cast-In-Place Concrete	Fixed	30	3	20	4	40	0

Site Features

Off-Street Parking			Total			Gravel/Unpaved		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Unpaved Condition	SF	Material	
40	100000	Functional	0	-	0	-	10000	Asphalt	

Landscaping	SF	Condition	Facility Responsible?
	95000	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	40	10	Asphalt	Functional

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
0	-

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	600	4	0	15	Functional	General Interior Renovations



5 Year Projected Cost Estimate

Bluegill BAS

Facility Owner: Genesee County Parks and Rec
Address: 4045 Coldwater Rd, Flint, MI 48506
Site ID: A-25-005

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	4800	SF	\$ 70	\$ 336,000
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 381,000
Total Cost					\$ 381,000

Bluegill BAS

Facility Owner:	Genesee County Parks and Rec
Address:	4045 Coldwater Rd, Flint, MI 48506
Site ID:	A-25-005

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	10000	SF	\$ 10	\$ 100,000
Parking Lot - Asphalt	100%	100000	SF	\$ 10	\$ 1,000,000
Landscaping	100%	95000	SF	\$ 1	\$ 95,000
Walkways	100%	400	SF	\$ 7	\$ 2,800
Total Site-Features Cost					\$ 1,197,800
Total Cost					\$ 1,197,800
Total Future Value Cost					\$ 1,609,743

Bluegill BAS

Facility Owner:	Genesee County Parks and Rec
Address:	4045 Coldwater Rd, Flint, MI 48506
Site ID:	A-25-005

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	3	EA	\$ 30,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building I	100%	600	SF	\$ 400	\$ 240,000
Total Buildings Cost					\$ 240,000

Total Cost					\$ 330,000
Total Future Value Cost					\$ 596,017

Boardman River BAS

Facility Owner: City of Traverse City
Address: 311 East Grandview Parkway, Traverse City, MI. 49684
Site ID: A-28-035

Docks

Broadside

Type	Total LF	Age	Decking Type	Construction
Fixed Open Pile Dock	5280	40	Timber	Timber Frame & Timber Piles

Utilities

Type	Age	Condition	Additional Information
WIFI	<5	Functional	

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	3	1	40	5	6	40

Site Features

Off-Street Parking		Asphalt Condition	Total		Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	SF Asphalt		SF Concrete	SF				Material	
40	13000	Very Good	0	-	0	-	1900	Asphalt	



Boardman River BAS

Facility Owner: City of Traverse City
Address: 311 East Grandview Parkway, Traverse City, MI. 49684
Site ID: A-28-035

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Broadside Fixed Open Pile Dock	100%	5280	SF	\$ 60	\$ 316,800
Total Dock Cost					\$ 316,800
Total Cost					\$ 316,800

Boardman River BAS

Facility Owner:	City of Traverse City
Address:	311 East Grandview Parkway, Traverse City, MI. 49684
Site ID:	A-28-035

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Total Utilities Cost					\$ 5,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Paddle Sport Launch Access	100%	190	SF	\$ 180	\$ 34,200
Total Boat Launch & Paddle Sport Access Cost					\$ 79,200

Total Cost					\$ 84,200
Total Future Value Cost					\$ 113,158

Boardman River BAS

Facility Owner:	City of Traverse City
Address:	311 East Grandview Parkway, Traverse City, MI. 49684
Site ID:	A-28-035

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Total Boat Launch & Paddle Sport Access Cost					\$ 224,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	1900	SF	\$ 10	\$ 19,000
Parking Lot - Asphalt	100%	13000	SF	\$ 10	\$ 130,000
Total Site-Features Cost					\$ 149,000

Total Cost \$ 373,000

Total Future Value Cost \$ 673,679

Bois Blanc Island Marina

Facility Owner: Bois Blanc Township
Address: P.O. Box 898 Pointe aux Pins, Mi 49775
Site ID: -

Docks

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
1387	Traditional Timber	Floatation Docking	10	25'	60%	<10
			4	30'	40%	10-20

Head Pier along Harbor Wall/Shoreline

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	3556	54	Concrete	Timber Fendering

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	141	-	-	0	0	0	0	NA
Rock Revetment Offshore	820	40+	-	10	100	0	0	Yes
Steel Sheet Pile Double	0	40+	Very Good	8	100	0	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	10-20	Functional	100 % have vacuum breakers installed
WIFI	<5	Very Good	
Flow Inducers	-	Functional	10 Units Total 3 Additional Units Needed

Electric Shore Power

Utility Pedestals	% Condition
18 Twin 30 Amp	0% Very Good 100% Functional 0% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards Yes

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Cast-In-Place Concrete	Skid	15	1	30	6	5	15

Dredge

	% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
	0%	<6'	4 years ago	Unknown	-	-	-	-
	90%	6'-10'						
	10%	>10'						
Dredging required for 2019 boating season:				0	CY			

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
40	37661	Very Good	0	-	0	-	1080	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		2400	Functional	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		230	4	Asphalt	Functional			

Buildings

Picnic Shelters			Vault Toilets			Improvements Needed
Amount	Age	Condition	Amount	Condition		
0	0	-	2	Functional		
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Harbor Shop	200	-	-	10	Functional	-



5 Year Projected Cost Estimate

Bois Blanc Island Marina

Facility Owner:	Bois Blanc Township
Address:	P.O. Box 898 Pointe aux Pins, Mi 49775
Site ID:	-

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Flow Inducers	100%	10	EA	\$ 1,000	\$ 10,000
Additional Flow Inducers	100%	3	EA	\$ 1,000	\$ 3,000
Total Utilities Cost					\$ 13,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000

Total Cost \$ 28,000

Bois Blanc Island Marina

Facility Owner:	Bois Blanc Township
Address:	P.O. Box 898 Pointe aux Pins, Mi 49775
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Floating Head Pier	40%	1387	SF	\$ 75	\$ 41,610
Total Dock Cost					\$ 41,610

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Twin 30 Amp Electric Pedestal	100%	18	EA	\$ 3,000	\$ 54,000
Potable Water	100%	14	SLIP	\$ 800	\$ 11,200
Flow Inducers	100%	13	EA	\$ 1,000	\$ 13,000
Total Utilities Cost					\$ 78,200

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 70	\$ 112,000
Total Boat Launch & Paddle Sport Access Cost					\$ 112,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	1080	SF	\$ 10	\$ 10,800
Walkways	100%	920	SF	\$ 7	\$ 6,440
Total Site-Features Cost					\$ 19,640

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Building 2	100%	160	SF	\$ 400	\$ 64,000
Total Buildings Cost					\$ 84,000

Total Cost	\$ 335,450
-------------------	-------------------

Total Future Value Cost	\$ 450,817
--------------------------------	-------------------

Bois Blanc Island Marina

Facility Owner:	Bois Blanc Township
Address:	P.O. Box 898 Pointe aux Pins, Mi 49775
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Floating Head Pier	60%	1387	SF	\$ 75	\$ 62,415
Total Dock Cost					\$ 62,415

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	14	SLIP	\$ 3,500	\$ 49,000
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Total Utilities Cost					\$ 54,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	37661	SF	\$ 10	\$ 376,610
Total Site-Features Cost					\$ 376,610

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building I	100%	200	SF	\$ 400	\$ 80,000
Total Buildings Cost					\$ 80,000

Total Cost	\$ 603,025
-------------------	-------------------

Total Future Value Cost	\$ 1,089,130
--------------------------------	---------------------

Bolles Harbor BAS

Facility Owner: MDNR
Address: 6670 Waters Edge Road
Site ID: A-58-010

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	1050	20-30	Functional	0	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
15	Precast Concrete Planks	Skid	20	8	40	5	290	0

Site Features

Off-Street Parking			Total			Gravel/Unpaved		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Unpaved Condition	SF	Material	
290	153092	Replace	0	-	0	-	42000	Asphalt	

Landscaping	SF	Condition	Facility Responsible?
	223833	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	253	8	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
2	Very Good

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Permit Sales	-	-	-	7	Very Good	Mechanical Upgrades, General Exterior Renovations



Bolles Harbor BAS

Facility Owner:	MDNR
Address:	6670 Waters Edge Road
Site ID:	A-58-010

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type A	100%	1050	LF	\$ 100	\$ 105,000
Total Structure Cost					\$ 105,000

Note: NR = Not Responsible

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	24000	SF	\$ 30	\$ 720,000
Launch Piers	100%	8	EA	\$ 15,000	\$ 120,000
Total Boat Launch & Paddle Sport Access Cost					\$ 840,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	42000	SF	\$ 10	\$ 420,000
Parking Lot - Asphalt	100%	153092	SF	\$ 10	\$ 1,530,920
Landscaping	20%	223833	SF	\$ 1	\$ 44,767
Total Site-Features Cost					\$ 1,995,687

Total Cost	\$ 2,940,687
-------------------	---------------------

Bolles Harbor BAS

Facility Owner:	MDNR
Address:	6670 Waters Edge Road
Site ID:	A-58-010

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	100%	1050	LF	\$ 350	\$ 367,500
Total Structure Cost					\$ 367,500

Note: NR = Not Responsible

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	70%	223833	SF	\$ 1	\$ 156,683
Total Site-Features Cost					\$ 156,683

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost	\$ 544,183
-------------------	-------------------

Total Future Value Cost	\$ 731,337
--------------------------------	-------------------

Bolles Harbor BAS

Facility Owner: MDNR
 Address: 6670 Waters Edge Road
 Site ID: A-58-010

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	100%	1050	LF	\$ 700	\$ 735,000
Total Structure Cost					\$ 735,000

Note: NR = Not Responsible

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	10%	223833	SF	\$ 1	\$ 22,383
Walkways	100%	2024	SF	\$ 10	\$ 20,240
Total Site-Features Cost					\$ 42,623
Total Cost					\$ 1,017,623
Total Future Value Cost					\$ 1,837,941

Bowers Harbor BAS

Facility Owner: MDNR
Address: 3730 Mill Rd. Grawn Mi. 49637
Site ID: A-28-002

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	0	10-20	Very Good	2	100	0	0	NA
Rock Revetment Offshore	600	-	-	0	0	0	0	0

Utilities

Type	Age	Condition	Additional Information
Dry Standpipe Fire System	10-20	Very Good	

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid Fixed Floating	10	1	40	5	52	0
			10	1	96	6		

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0% <6'	8 years ago	1300	-	-	-	-	-
100% 6'-10'							

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Total Spaces	SF Asphalt						SF	Material
52	46540	Replace	0	-	0	Functional	7040	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		18000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		20	5	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Functional



Bowers Harbor BAS

Facility Owner:	MDNR
Address:	3730 Mill Rd. Grawn Mi. 49637
Site ID:	A-28-002

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	7040	SF	\$ 10	\$ 70,400
Parking Lot - Asphalt	100%	46540	SF	\$ 10	\$ 465,400
Total Site-Features Cost					\$ 535,800

Total Cost	\$ 565,800
-------------------	-------------------

Bowers Harbor BAS

Facility Owner:	MDNR
Address:	3730 Mill Rd. Grawn Mi. 49637
Site ID:	A-28-002

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	10%	18000	SF	\$ 1	\$ 1,800
Walkways	10%	100	SF	\$ 10	\$ 100
Total Site-Features Cost					\$ 1,900

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost	\$ 117,900
-------------------	-------------------

Total Future Value Cost	\$ 158,448
--------------------------------	-------------------

Bowers Harbor BAS

Facility Owner:	MDNR
Address:	3730 Mill Rd. Grawn Mi. 49637
Site ID:	A-28-002

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	90%	18000	SF	\$ 1	\$ 16,200
Walkways	90%	100	SF	\$ 10	\$ 900
Total Site-Features Cost					\$ 17,100

Total Cost	\$ 32,100
-------------------	------------------

Total Future Value Cost	\$ 57,976
--------------------------------	------------------

Boyne City F. Grant Moore Municipal Marina

Facility Owner: City of Boyne City
Address: 20 State St. Boyne City MI 49712
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
675	Timber	Steel Frame & Steel Piles	6	40'	60%	<10
			1	45'	40%	40+
			3	55'		

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
2925	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	10	30'	5%	<10
			8	40'	95%	30-40
			6	45'		
			4	50'		

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
1052	Traditional Timber	Floatation Docking	8	45'	100%	30-40

Broadside

Type	Total LF	Age	Decking Type	Construction
Floating Dock	2000	1	-	Traditional Timber by Floatation Docking Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	145	30-40	Functional	12	100	0	0	NA
Concrete Wall	216	-	-	0	0	0	0	NA
Rock Revetment Shoreline	922	40+	Functional	5	100	0	0	NA
Floating Wave Attenuator	430	<10-40	Very Good	18	100	0	0	No

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Functional	100 % have vacuum breakers installed
WIFI	5+	Functional	
Flow Inducers	-	Good	25 Units Total 0 Additional Units Needed

Electric Shore Power

Utility Pedestals	% Condition
16 Twin 30 Amp	0% Very Good 70% Functional 30% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Cast-In-Place Concrete	Skid	30	1	40	4	6	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	5 years ago	10000	-	None	-	-
30%	6'-10'						
70%	>10'						

Site Features

Off-Street Parking			Total			Access Drive		
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material
8	2800	Functional	0	-	0	-	0	-

Landscaping	SF	Condition	Facility Responsible?
	25000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	900	5	Concrete	Very Good

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
1	25	Functional	0	-

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	30	0	0	25	Functional	Expansion, General Exterior Renovations



Boyne City F. Grant Moore Municipal Marina

Facility Owner: City of Boyne City
Address: 20 State St. Boyne City MI 49712
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Fixed Dock	40%	675	SF	\$ 75	\$ 20,250
Traditional Floating Dock	95%	2925	SF	\$ 75	\$ 208,406
Floating Head Pier	100%	1052	SF	\$ 75	\$ 78,900
Total Dock Cost					\$ 307,556

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	100%	145	LF	\$ 350	\$ 50,750
Rock Revetment Maintenance Type A	100%	922	LF	\$ 175	\$ 161,350
Floating Wave Attenuator	80%	430	LF	\$ 1,500	\$ 516,000
Total Structure Cost					\$ 728,100

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	46	SLIP	\$ 5,000	\$ 230,000
Twin 30 Amp Electric Pedestal	30%	16	EA	\$ 3,000	\$ 14,400
Flow Inducers	25%	25	EA	\$ 1,000	\$ 6,250
Total Utilities Cost					\$ 250,650

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 70	\$ 112,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 127,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Walkways	60%	4500	SF	\$ 10	\$ 27,000
Total Site-Features Cost					\$ 27,000

Total Cost \$ 1,440,306

Boyne City F. Grant Moore Municipal Marina

Facility Owner: City of Boyne City
Address: 20 State St. Boyne City MI 49712
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	100%	145	LF	\$ 700	\$ 101,500
Rock Revetment Maintenance Type A	100%	922	LF	\$ 368	\$ 338,835
Total Structure Cost					\$ 440,335

Note: NR = Not Responsible

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Twin 30 Amp Electric Pedestal	70%	16	EA	\$ 3,000	\$ 33,600
Potable Water	100%	46	SLIP	\$ 800	\$ 36,800
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Flow Inducers	100%	25	EA	\$ 1,000	\$ 25,000
Total Utilities Cost					\$ 100,400

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	2800	SF	\$ 10	\$ 28,000
Landscaping	5%	25000	SF	\$ 1	\$ 1,250
Walkways	35%	4500	SF	\$ 10	\$ 15,750
Total Site-Features Cost					\$ 45,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Building 1	100%	30	SF	\$ 400	\$ 12,000
Building 2	100%	1500	SF	\$ 400	\$ 600,000
Total Buildings Cost					\$ 627,000

Total Cost \$ 1,216,785

Total Future Value Cost \$ 1,629,814

Boyne City F. Grant Moore Municipal Marina

Facility Owner: City of Boyne City
Address: 20 State St. Boyne City MI 49712
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Floating Dock	5%	2925	SF	\$ 75	\$ 10,969
Broadside Floating Dock	100%	2000	SF	\$ 75	\$ 150,000
Total Dock Cost					\$ 160,969

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	100%	145	LF	\$ 1,050	\$ 152,250
Rock Revetment Maintenance Type A	100%	922	LF	\$ 490	\$ 451,780
Floating Wave Attenuator	20%	430	LF	\$ 1,500	\$ 129,000
Total Structure Cost					\$ 733,030

Note: NR = Not Responsible

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	46	SLIP	\$ 3,500	\$ 161,000
Total Utilities Cost					\$ 161,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	95%	25000	SF	\$ 1	\$ 23,750
Walkways	5%	4500	SF	\$ 10	\$ 2,250
Total Site-Features Cost					\$ 26,000

Total Cost \$ 1,110,999

Total Future Value Cost \$ 2,006,587

Boyne City Municipal BAS

Facility Owner: City of Boyne City
Address: 525 N. Lake St
Site ID: A-15-022

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	490	-	-	0	0	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	40	1	70	5	43	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
51	50000	Very Good	0	-	0	-	0	-

Landscaping	SF	Condition	Facility Responsible?
	22800		No

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	300	2	0	30	Functional	General Interior and Exterior Renovations



Boyne City Municipal BAS

Facility Owner: City of Boyne City
 Address: 525 N. Lake St
 Site ID: A-15-022

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 239,000
Total Cost					\$ 239,000

Boyne City Municipal BAS

Facility Owner:	City of Boyne City
Address:	525 N. Lake St
Site ID:	A-15-022

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 1	100%	300	SF	\$ 400	\$ 120,000
Building 2	100%	300	SF	\$ 400	\$ 120,000
Total Buildings Cost					\$ 240,000
Total Cost					\$ 240,000
Total Future Value Cost					\$ 322,540

Boyne City Municipal BAS

Facility Owner:	City of Boyne City
Address:	525 N. Lake St
Site ID:	A-15-022

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	50000	SF	\$ 10	\$ 500,000
Landscaping	100%	22800	SF	\$ 1	\$ 22,800
Total Site-Features Cost					\$ 522,800

Total Cost					\$ 552,800
Total Future Value Cost					\$ 998,418

Brandenburg Memorial Park BAS

Facility Owner: MDNR
Address: 50050 Jefferson Chesterfield MI 48047
Site ID: A-50-002

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	750	40+	Functional	3	50	0	50	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Cast-In-Place Concrete	Skid	30	3	40	4	107	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
331	184000	Very Good	0	-	0	-	0	-

Landscaping	SF	Condition	Facility Responsible?
	100000		No

Walkways	Total LF	Avg. Width	Material	Condition
	1000	6	0	



Brandenburg Memorial Park BAS

Facility Owner:	MDNR
Address:	50050 Jefferson Chesterfield MI 48047
Site ID:	A-50-002

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Steel Sheet Pile Wall Replacement	10%	750	LF	\$ 700	\$ 52,500
Sheet Pile Wall Maintenance Type A	90%	750	LF	\$ 350	\$ 236,250
Total Structure Cost					\$ 288,750

Note: NR = Not Responsible

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 70	\$ 448,000
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 493,000

Total Cost \$ 781,750

Brandenburg Memorial Park BAS

Facility Owner: MDNR
Address: 50050 Jefferson Chesterfield MI 48047
Site ID: A-50-002

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	90%	750	LF	\$ 525	\$ 354,375
Total Structure Cost					\$ 354,375

Note: NR = Not Responsible

Total Cost	\$ 354,375
Total Future Value Cost	\$ 476,250

Brandenburg Memorial Park BAS

Facility Owner:	MDNR
Address:	50050 Jefferson Chesterfield MI 48047
Site ID:	A-50-002

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	90%	750	LF	\$ 700	\$ 472,500
Total Structure Cost					\$ 472,500

Note: NR = Not Responsible

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	3	EA	\$ 30,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	184000	SF	\$ 10	\$ 1,840,000
Landscaping	100%	100000	SF	\$ 1	\$ 100,000
Total Site-Features Cost					\$ 1,940,000

Total Cost \$ 2,502,500

Total Future Value Cost \$ 4,519,793

Brevort Lake BAS

Facility Owner: MDNR
Address: 0
Site ID: A-49-017

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	823	1	40	5	23	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
0	0	-	0	-	24090	Functional	1100	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		5350	Functional	Yes				

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Brevort Lake BAS

Facility Owner: MDNR
 Address: -
 Site ID: A-49-017

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 111,000
Total Cost					\$ 111,000

Brevort Lake BAS

Facility Owner:	MDNR
Address:	0
Site ID:	A-49-017

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	1100	SF	\$ 5	\$ 5,500
Parking Lot - Gravel/Unpaved	100%	24090	SF	\$ 5	\$ 120,450
Total Site-Features Cost					\$ 130,765

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 140,765
Total Future Value Cost					\$ 189,176

Brevort Lake BAS

Facility Owner:	MDNR
Address:	-
Site ID:	A-49-017

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	10%	5350	SF	\$ 1	\$ 535
Total Site-Features Cost					\$ 535

Total Cost					\$ 30,535
Total Future Value Cost					\$ 55,150

Bridgeton Township Park BAS

Facility Owner: Bridgeton Township
Address: 11830 S. Warner Ave, Grant, MI 49327
Site ID: A-62-032

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	100	<10	Very Good	2	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	-					12	0

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	0	100	4	20	8	4	20	8	0

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved		SF	Material
-	0	-	0	-	40000	Very Good	0	Gravel/Unpaved

Landscaping	SF	Condition	Facility Responsible?
	174240	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	300	4	Gravel	-

Buildings

Picnic Shelters			Vault Toilets			
Amount	Age	Condition	Amount	Condition		
1	4	Very Good	1	Very Good		
Building 1 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
-	1000	0	0	40	Very Good	-
Building 2 Type	Total SF	Toilets	Showers	Age	Condition	Improvements Needed
-	64	0	0	-	Very Good	-



Bridgeton Township Park BAS

Facility Owner: Bridgeton Township
Address: 11830 S. Warner Ave, Grant, MI 49327
Site ID: A-62-032

There are no costs projected for this site within this time period

Bridgeton Township Park BAS

Facility Owner:	Bridgeton Township
Address:	11830 S. Warner Ave, Grant, MI 49327
Site ID:	A-62-032

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Paddle Sport Launch Access	100%	320	SF	\$ 180	\$ 57,600
Total Boat Launch & Paddle Sport Access Cost					\$ 57,600

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Building 1	100%	1000	SF	\$ 400	\$ 400,000
Total Buildings Cost					\$ 410,000

Total Cost					\$ 467,600
Total Future Value Cost					\$ 628,415

Brevort Lake BAS

Facility Owner: MDNR
 Address: 0
 Site ID: A-49-017

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	10%	5350	SF	\$ 1	\$ 535
Total Site-Features Cost					\$ 535

Total Cost					\$ 30,535
Total Future Value Cost					\$ 55,150

Brimley State Park BAS

Facility Owner: MDNR
Address: 9200 W 6 Mile Rd. Brimley, MI. 49715
Site ID: A-17-018

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks						7	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
200	0	Functional	0	-	0	-	18000	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		16,756	Very Good	Yes				



Brimley State Park BAS

Facility Owner: MDNR
Address: 9200 W 6 Mile Rd. Brimley, MI. 49715
Site ID: A-17-018

There are no costs projected for this site within this time period

Brimley State Park BAS

Facility Owner: MDNR
Address: 9200 W 6 Mile Rd. Brimley, MI. 49715
Site ID: A-17-018

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	18000	SF	\$ 10	\$ 180,000
Total Site-Features Cost					\$ 180,000
Total Cost					\$ 180,000
Total Future Value Cost					\$ 241,905

Brimley State Park BAS

Facility Owner: MDNR
Address: 9200 W 6 Mile Rd. Brimley, MI. 49715
Site ID: A-17-018

There are no costs projected for this site within this time period

Brower Park Marina BAS

Facility Owner: Mecosta County Park - Lease by
Address: 23056 Polk Road, Stanwood MI 19346
Site ID: A-54-022

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	800	10-20	Very Good	3	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid Floating	15 1	1 1	20 60	5 6	0	70

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
50	0	-	0	-	100	Very Good	400	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		0	-	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		0	0	Gravel		-		

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
1	2	Very Good	0	Very Good				
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Restrooms	0	16	10	10	Very Good	None		



Brower Park Marina BAS

Facility Owner:	Mecosta County Park - Lease by Consumers Energy
Address:	23056 Polk Road, Stanwood MI 19346
Site ID:	A-54-022

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Total Utilities Cost					\$ 5,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Total Cost	\$ 35,000
-------------------	------------------

Brower Park Marina BAS

Facility Owner:	Mecosta County Park - Lease by Consumers Energy
Address:	23056 Polk Road, Stanwood MI 19346
Site ID:	A-54-022

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Total Boat Launch & Paddle Sport Access Cost					\$ 224,000
Total Cost					\$ 224,000
Total Future Value Cost					\$ 301,037

Brower Park Marina BAS

Facility Owner:	Mecosta County Park - Lease by Consumers Energy
Address:	23056 Polk Road, Stanwood MI 19346
Site ID:	A-54-022

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	800	LF	\$ 140	\$ 112,000
Total Structure Cost					\$ 112,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 254,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	400	SF	\$ 5	\$ 2,000
Parking Lot - Gravel/Unpaved	100%	100	SF	\$ 5	\$ 500
Total Site-Features Cost					\$ 2,500

Total Cost	\$ 368,500
-------------------	-------------------

Total Future Value Cost	\$ 665,552
--------------------------------	-------------------

Brown's Addition BAS

Facility Owner: City of Munising
Address: 1204 Commercial St.
Site ID: A-02-018

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
5	Precast Concrete Planks	Skid	25	3	35	5	52	0

Site Features

Landscaping	SF	Condition	Facility Responsible?
	20000	Very Good	Yes

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	500	6	0	8	Very Good	None



Brown's Addition BAS

Facility Owner:	City of Munising
Address:	1204 Commercial St.
Site ID:	A-02-018

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	8000	SF	\$ 30	\$ 240,000
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 285,000
Total Cost					\$ 285,000

Brown's Addition BAS

Facility Owner: City of Munising
Address: 1204 Commercial St.
Site ID: A-02-018

There are no costs projected for this site within this time period

Brown's Addition BAS

Facility Owner:	City of Munising
Address:	1204 Commercial St.
Site ID:	A-02-018

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	3	EA	\$ 30,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	38000	SF	\$ 10	\$ 380,000
Landscaping	100%	20000	SF	\$ 1	\$ 20,000
Total Site-Features Cost					\$ 400,000

Total Cost \$ 490,000

Total Future Value Cost \$ 884,995

Burt Lake State Park BAS

Facility Owner: MDNR
Address: 6635 State Park Drive, Indian River, MI 49749
Site ID: A-16-025

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	0	1	16	6	60	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	<6'	1 years ago	Unknown	Yes	Every Year	-	-
0%	6'-10'						
0%	>10'						
Dredging required for 2019 boating season:			30	CY			

Site Features

Off-Street Parking			Total			Gravel/Unpaved		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Condition	SF	Material	
60	60000	Replace	0	-	0	Replace	66000	Asphalt	
Landscaping		SF	Condition	Facility Responsible?					
		11800	Functional	Yes					

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Very Good



Burt Lake State Park BAS

Facility Owner:	MDNR
Address:	6635 State Park Drive, Indian River, MI 49749
Site ID:	A-16-025

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	66000	SF	\$ 10	\$ 660,000
Parking Lot - Asphalt	100%	60000	SF	\$ 10	\$ 600,000
Total Site-Features Cost					\$ 1,260,000
Total Cost					\$ 1,260,000

Burt Lake State Park BAS

Facility Owner:	MDNR
Address:	6635 State Park Drive, Indian River, MI 49749
Site ID:	A-16-025

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	100%	11800	SF	\$ 1	\$ 11,800
Total Site-Features Cost					\$ 11,800

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 66,800
-------------------	------------------

Total Future Value Cost	\$ 89,774
--------------------------------	------------------

Burt Lake State Park BAS

Facility Owner:

MDNR

Address:

6635 State Park Drive, Indian River, MI 49749

Site ID:

A-16-025

There are no costs projected for this site within this time period

Caribou Lake BAS

Facility Owner: MDNR
Address: DeTour Village, MI 49725
Site ID: A-17-010

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	5	1	30	5	11	3

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
40%	<6'	4 years ago	Unknown	-	-	-	-
60%	6'-10'						
0%	>10'						
Dredging required for 2019 boating season:			0	CY			

Site Features

Off-Street Parking			Total			Gravel/Unpaved		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Condition	SF	Material	
13	0	-	0	-	14000	Very Good	0	-	
Landscaping		SF	Condition	Facility Responsible?					
		10000	Very Good	Yes					

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Very Good



Caribou Lake BAS

Facility Owner: MDNR
 Address: DeTour Village, MI 49725
 Site ID: A-17-010

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Caribou Lake BAS

Facility Owner:	MDNR
Address:	DeTour Village, MI 49725
Site ID:	A-17-010

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	10%	10000	SF	\$ 1	\$ 1,000
Total Site-Features Cost					\$ 1,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 11,000
Total Future Value Cost					\$ 14,783

Caribou Lake BAS

Facility Owner:	MDNR
Address:	DeTour Village, MI 49725
Site ID:	A-17-010

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Total Boat Launch & Paddle Sport Access Cost					\$ 93,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Gravel/Unpaved	100%	14000	SF	\$ 5	\$ 70,000
Landscaping	90%	10000	SF	\$ 1	\$ 9,000
Total Site-Features Cost					\$ 79,000

Total Cost \$ 172,000

Total Future Value Cost \$ 310,651

Carronde Park BAS

Facility Owner: St. Joseph charter township
Address: 2590 Riverbend Drive
Site ID: A-11-007

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	850	-	-	0	0	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	15	2	25	4	50	74

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	YES	-	-	-	-	-	-	-	-

Site Features

Off-Street Parking			Total			Gravel/Unpaved		Access Drive	
Spaces	SF Asphalt	Asphalt Condition	SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material	
-	166000	Very Good	0	-	0	-	0	-	

Landscaping	SF	Condition	Facility Responsible?
	333000	Very Good	No



Carronde Park BAS

Facility Owner:	St. Joseph charter township
Address:	2590 Riverbend Drive
Site ID:	A-11-007

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000

Carronde Park BAS

Facility Owner: St. Joseph charter township
Address: 2590 Riverbend Drive
Site ID: A-11-007

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Total Boat Launch & Paddle Sport Access Cost					\$ 192,000
Total Cost					\$ 192,000
Total Future Value Cost					\$ 258,032

Carronde Park BAS

Facility Owner:	St. Joseph charter township
Address:	2590 Riverbend Drive
Site ID:	A-11-007

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	166000	SF	\$ 10	\$ 1,660,000
Total Site-Features Cost					\$ 1,660,000

Total Cost \$ 1,720,000

Total Future Value Cost \$ 3,106,511

Caseville Municipal Harbor

Facility Owner: Caseville Harbor Commision
Address: 6632 Main St, Caseville, Mi. 48725
Site ID: -

Docks

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
5298	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	46	30'	100%	30-40
			8	45'		

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
1740	Timber	-	6	50'	100%	40+
			5	60'		

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	480	-	-	0	0	0	0	NA
Rock Revetment Shoreline	0	-	Very Good	0	10	90	0	NA
Rock Revetment Offshore	1000	40+	Very Good	7	100	0	0	No

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Very Good	100 % have vacuum breakers installed
WIFI	<5	Functional	
Pumpout	<10	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
23 Single 30 Amp	0% Very Good
2 Twin 30 Amp	60% Functional
4 30/ 50 Amp	40% Bad

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	LF Lines over Land	LF Lines over Water	Overall Age	Overall Condition
Gas & Diesel	Floating	80	10	2	125	120	30+	Replace
	Tank Type		Tank Capacity	No. Tanks				
	Underground Single		6,000 Gallons	1				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	30	1	40	4	70	0

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
-	-	100	-	-	-	-	-	-	6

Dredge

Navigable Water Depth	% of	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	4 years ago	Unknown	-	Varies	-	-	-
100%	6'-10'							
0%	>10'							
Dredging required for 2019 boating season:				0	CY			

Site Features

Off-Street Parking			Total			Gravel/Unpaved		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Unpaved Condition	SF	Material	
64	100	Functional	0	-	0	-	264	Asphalt	
Landscaping		SF	Condition	Facility Responsible?					
		27,000	Functional	Yes					
Walkways		Total LF	Avg. Width	Material		Condition			
		600	4	Concrete		Functional			

Buildings

Building 1 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Restroom	1500	6	4	30	Functional	General Interior and Exterior Renovations
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Boater Lounge, Restroom, Laundry	1500	6	4	30	Functional	General Interior and Exterior Renovations
Building 3 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Fuel Service	80	0	0	30	Functional	General Interior and Exterior Renovations
Building 4 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Harbor Shop/Maintenance/Storage	144	0	0	30	Functional	General Interior and Exterior Renovations, Mechanical Upgrades



Caseville Municipal Harbor

Facility Owner: Caseville Harbor Commision
Address: 6632 Main St, Caseville, Mi. 48725
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Floating Dock	100%	5298	SF	\$ 75	\$ 397,350
Fixed Head Pier	100%	1740	SF	\$ 75	\$ 130,500
Total Dock Cost					\$ 527,850

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Offshore Maintenance Type A	10%	1000	LF	\$ 2,500	\$ 250,000
Rock Revetment Offshore Maintenance Type B	90%	1000	LF	\$ 1,250	\$ 1,125,000
Total Structure Cost					\$ 1,375,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	65	SLIP	\$ 5,000	\$ 325,000
Single 30 Amp Electric Pedestal	40%	23	EA	\$ 3,000	\$ 27,600
Twin 30 Amp Electric Pedestal	40%	2	EA	\$ 3,000	\$ 2,400
30/50 Amp Electric Pedestal	40%	4	EA	\$ 3,500	\$ 5,600
Fuel Dock	50%	800	SF	\$ 100	\$ 40,000
Fuel Dispenser	50%	2	EA	\$ 15,000	\$ 15,000
Fuel Lines	50%	245	LF	\$ 100	\$ 12,250
Underground Single Product Tank	50%	1	EA	\$ 100,000	\$ 50,000
Underground Dual Product Tank	50%	1	EA	\$ 120,000	\$ 60,000
Total Utilities Cost					\$ 537,850

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 111,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Walkways	30%	2400	SF	\$ 10	\$ 7,200
Total Site-Features Cost					\$ 7,200
Total Cost					\$ 2,558,900

Caseville Municipal Harbor

Facility Owner: Caseville Harbor Commision
Address: 6632 Main St, Caseville, Mi. 48725
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Offshore Maintenance Type A	10%	1000	LF	\$ 1,050	\$ 105,000
Rock Revetment Offshore Maintenance Type B	90%	1000	LF	\$ 700	\$ 630,000
Total Structure Cost					\$ 735,000

Note: NR = Not Responsible

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Single 30 Amp Electric Pedestal	60%	23	EA	\$ 3,000	\$ 41,400
Twin 30 Amp Electric Pedestal	60%	2	EA	\$ 3,000	\$ 3,600
30/50 Amp Electric Pedestal	60%	4	EA	\$ 3,500	\$ 8,400
Potable Water	100%	65	SLIP	\$ 800	\$ 52,000
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Fuel Dock	50%	800	SF	\$ 100	\$ 40,000
Fuel Dispenser	50%	2	EA	\$ 15,000	\$ 15,000
Fuel Lines	50%	245	LF	\$ 100	\$ 12,250
Underground Single Product Tank	50%	1	EA	\$ 100,000	\$ 50,000
Underground Dual Product Tank	50%	1	EA	\$ 120,000	\$ 60,000
Total Utilities Cost					\$ 287,650

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	264	SF	\$ 10	\$ 2,640
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Walkways	70%	2400	SF	\$ 10	\$ 16,800
Total Site-Features Cost					\$ 20,440

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 1	100%	1500	SF	\$ 400	\$ 600,000
Building 2	100%	900	SF	\$ 400	\$ 360,000
Building 3	100%	80	SF	\$ 400	\$ 32,000
Building 4	100%	144	SF	\$ 400	\$ 57,600
Total Buildings Cost					\$ 1,049,600

Total Cost \$ 2,092,690

Total Future Value Cost \$ 2,812,400

Caseville Municipal Harbor

Facility Owner:	Caseville Harbor Commision
Address:	6632 Main St, Caseville, Mi. 48725
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Offshore Maintenance Type A	10%	1000	LF	\$ 1,400	\$ 140,000
Rock Revetment Offshore Maintenance Type B	90%	1000	LF	\$ 1,050	\$ 945,000
Total Structure Cost					\$ 1,085,000

Note: NR = Not Responsible

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	65	SLIP	\$ 3,500	\$ 227,500
Fuel Dock	50%	800	SF	\$ 100	\$ 40,000
Fuel Dispenser	50%	2	EA	\$ 15,000	\$ 15,000
Fuel Lines	50%	245	LF	\$ 100	\$ 12,250
Underground Single Product Tank	50%	1	EA	\$ 100,000	\$ 50,000
Underground Dual Product Tank	50%	1	EA	\$ 120,000	\$ 60,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 439,750

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Total Cost					\$ 1,554,750
Total Future Value Cost					\$ 2,808,051

Cedar Lake BAS

Facility Owner: MDNR
Address: 0
Site ID: A-80-005

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	20	1	30	5	23	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
-	19000	Functional	0	-	0	-	19500	Asphalt

Landscaping	SF	Condition	Facility Responsible?
-	-	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
-	285	5	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



Cedar Lake BAS

Facility Owner: MDNR
 Address: 0
 Site ID: A-80-005

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 63,000
Total Cost					\$ 63,000

Cedar Lake BAS

Facility Owner:	MDNR
Address:	-
Site ID:	A-80-005

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	19000	SF	\$ 10	\$ 190,000
Total Site-Features Cost					\$ 190,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 200,000
-------------------	-------------------

Total Future Value Cost	\$ 268,783
--------------------------------	-------------------

Cedar Lake BAS

Facility Owner:	MDNR
Address:	-
Site ID:	A-80-005

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	19500	SF	\$ 10	\$ 195,000
Walkways	100%	1425	SF	\$ 10	\$ 14,250
Total Site-Features Cost					\$ 209,250

Total Cost \$ 239,250

Total Future Value Cost \$ 432,112

Cedar River State Harbor

Facility Owner: MDNR
Address: N8262 Old Mill Lane
Site ID: 55-201

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
4025	Timber	Steel Frame & Timber Piles	45	30'	100%	10-20

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
5625	Traditional Timber	Floatation Docking	45	30'	100%	10-20

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
2295	Timber	Timber Frame & Steel Piles	12	35'	100%	10-20
			9	40'		
			6	45'		
			8	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	6320	13	Concrete	Timber Fendering
Fixed Open Pile Dock	-	-	Concrete	Timber Frame & Steel Piles
Floating Dock	-	-	-	Traditional Timber by Floatation Docking Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	2145	10-20	-	10	100	0	0	NA
Concrete Wall	1075	10-20	Very Good	10	100	0	0	NA
Rock Revetment Shoreline	1300	10-20	Very Good	10	100	0	0	NA
Rock Revetment Offshore	1435	10-20	Very Good	10	0	100	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	10-20	Functional	100 % have vacuum breakers installed
Dry Standpipe Fire System	10-20	Very Good	
Wet Fire Hydrant System	10-20	Very Good	
Ice Suppression System	10-20	Functional	9 Units Total
Air Distribution Lines	10-20	Very Good	
Pumpout	10-20	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
31 Twin 30 Amp	100% Very Good
20 30/ 50 Amp	0% Functional
15 Twin 50 Amp	0% Bad

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	LF Lines over Land	LF Lines over Water	Overall Age	Overall Condition
Gas & Diesel	Harbor Wall	65	7	2	250	0	10-20	Very Good
Tank Type		Tank Capacity		No. Tanks				
Underground Single Product		10,000 Gallons		1				
Underground Dual Product		10,000 Gallons		1				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	13	2	45	6	92	0

Site Features

Off-Street Parking		Asphalt		Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material	
124	2600	Very Good	0	-	0	-	3000	Asphalt	
Landscaping		SF	Condition	Facility Responsible?					
		9225	Very Good	Yes					
Walkways		Total LF	Avg. Width	Material		Condition			
		4000	8	Concrete		Very Good			

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
0	0	-	1	Very Good				
Building 1 Type		Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Office, Boater Lounge, Restroom, Laundry		1754	8	4	13	Very Good	Mechanical Upgrades	
Building 2 Type		Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Harbor Store/Maintenance		700	0	0	13	Very Good	None	
Building 3 Type		Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Fuel Service		700	4	0	13	Very Good	None	



Cedar River State Harbor

Facility Owner:	MDNR
Address:	N8262 Old Mill Lane
Site ID:	55-201

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Fixed Dock Redecking	100%	4025	SF	\$ 10	\$ 40,250
Redecking Finger Piers	100%	2295	SF	\$ 10	\$ 17,213
Total Dock Cost					\$ 57,463

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	125	SLIP	\$ 5,000	\$ 625,000
Total Utilities Cost					\$ 625,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 712,463

Cedar River State Harbor

Facility Owner:	MDNR
Address:	N8262 Old Mill Lane
Site ID:	55-201

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Floating Dock	100%	5625	SF	\$ 75	\$ 421,875
Wall/Shoreline Head Pier Floating Fingers	100%	574	SF	\$ 55	\$ 31,556
Total Dock Cost					\$ 453,431

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Potable Water	100%	125	SLIP	\$ 800	\$ 100,000
Ice Suppression Compressor System	100%	125	SLIP	\$ 1,800	\$ 225,000
Fuel Dock	100%	455	SF	\$ 70	\$ 31,850
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	250	LF	\$ 100	\$ 25,000
Underground Single Product Tank	100%	1	EA	\$ 100,000	\$ 100,000
Underground Dual Product Tank	100%	1	EA	\$ 120,000	\$ 120,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 666,850

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Total Boat Launch & Paddle Sport Access Cost					\$ 192,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 1,322,281

Total Future Value Cost \$ 1,777,035

Cedar River State Harbor

Facility Owner: MDNR
Address: N8262 Old Mill Lane
Site ID: 55-201

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Fixed Dock	100%	4025	SF	\$ 67	\$ 269,675
Wall/Shoreline Head Pier Fixed Fingers	100%	1262	SF	\$ 75	\$ 94,669
Wall/Shoreline Head Pier Fixed Fingers	100%	459	SF	\$ 67	\$ 30,753
Total Dock Cost					\$ 395,097

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Concrete Wall Maintenance Type B	100%	1075	LF	\$ 140	\$ 150,500
Rock Revetment Maintenance Type B	100%	1300	LF	\$ 140	\$ 182,000
Total Structure Cost					\$ 332,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	125	SLIP	\$ 3,500	\$ 437,500
Twin 30 Amp Electric Pedestal	100%	31	EA	\$ 3,000	\$ 93,000
30/50 Amp Electric Pedestal	100%	20	EA	\$ 3,500	\$ 70,000
Twin 50 Amp Electric Pedestal	100%	15	EA	\$ 3,500	\$ 52,500
Dry Standpipe Fire Suppression System	100%	125	SLIP	\$ 800	\$ 100,000
Wet Fire Suppression System	100%	125	SLIP	\$ 1,000	\$ 125,000
Fuel Dock	100%	455	SF	\$ 70	\$ 31,850
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	250	LF	\$ 100	\$ 25,000
Underground Single Product Tank	100%	1	EA	\$ 100,000	\$ 100,000
Underground Dual Product Tank	100%	1	EA	\$ 120,000	\$ 120,000
Total Utilities Cost					\$ 1,184,850

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	3000	SF	\$ 10	\$ 30,000
Parking Lot - Asphalt	100%	2600	SF	\$ 10	\$ 26,000
Landscaping	100%	9225	SF	\$ 1	\$ 9,225
Walkways	100%	32000	SF	\$ 10	\$ 320,000
Total Site-Features Cost					\$ 385,225

10-20 Year Projected Cost Estimate

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building 1	100%	1754	SF	\$ 400	\$ 701,600
Building 2	100%	700	SF	\$ 400	\$ 280,000
Building 3	100%	700	SF	\$ 400	\$ 280,000
Total Buildings Cost					\$ 1,261,600
Total Cost					\$ 3,619,272
Total Future Value Cost					\$ 6,536,807

Center Lake BAS

Facility Owner: MDNR
Address: 1 mi SE of Michigan Center
Site ID: A-38-001

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	300	20-30	Very Good	1	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	10	1	30	5	43	0

Site Features

Off-Street Parking			Total			Gravel/Unpaved		Access Drive	
Spaces	SF Asphalt	Asphalt Condition	SF Concrete	Concrete Condition	SF Unpaved	Unpaved Condition	SF	Material	
43	50000	Very Good	0	-	0	-	4000	Asphalt	

Landscaping	SF	Condition	Facility Responsible?
	40000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	200	5	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



Center Lake BAS

Facility Owner:	MDNR
Address:	1 mi SE of Michigan Center
Site ID:	A-38-001

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type A	10%	300	LF	\$ 10	\$ 300
Total Structure Cost					\$ 300

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,300

Center Lake BAS

Facility Owner:	MDNR
Address:	1 mi SE of Michigan Center
Site ID:	A-38-001

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	10%	300	LF	\$ 35	\$ 1,050
Rock Revetment Maintenance Type B	90%	300	LF	\$ 14	\$ 3,780
Total Structure Cost					\$ 4,830

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	10%	40000	SF	\$ 1	\$ 4,000
Walkways	10%	1000	SF	\$ 10	\$ 1,000
Total Site-Features Cost					\$ 5,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 115,830
Total Future Value Cost	\$ 155,666

Center Lake BAS

Facility Owner:	MDNR
Address:	1 mi SE of Michigan Center
Site ID:	A-38-001

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	10%	300	LF	\$ 70	\$ 2,100
Rock Revetment Maintenance Type B	90%	300	LF	\$ 35	\$ 9,450
Total Structure Cost					\$ 11,550

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	4000	SF	\$ 10	\$ 40,000
Parking Lot - Asphalt	100%	50000	SF	\$ 10	\$ 500,000
Landscaping	90%	40000	SF	\$ 1	\$ 36,000
Walkways	90%	1000	SF	\$ 10	\$ 9,000
Total Site-Features Cost					\$ 585,000
Total Cost					\$ 626,550
Total Future Value Cost					\$ 1,131,619

Charlevoix City Marina

Facility Owner: City Of Charlevoix
Address: 100 E. Clinton Charlevoix Michigan 49720
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
11632.5	Treated Lumber	Floating Docks	5	25'	0%	<10
		Treated wood	15	30'	100%	10-20
			7	35'	0%	20-30
			9	40'	0%	30-40
			17	45'	0%	40+
			4	50'		
			2	60'		
	3	70' +				

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
11527.5	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	5	25'	0%	<10
			15	30'	100%	10-20
			7	35'	0%	20-30
			23	40'	0%	30-40
			3	45'	0%	40+
			4	50'		
			2	60'		
	3	70' +				

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
150	Timber	Steel Frame & Steel Piles	2	50'	100%	10-20

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	2250	12	Concrete	Concrete Wall
Floating Dock	0	0	-	Traditional Timber by Floatation Docking Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Concrete Wall	150	10-20	Very Good	12	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	10-20	Very Good	100 % have vacuum breakers installed
WIFI	<5	Very Good	
Wet Fire Hydrant System	10-20	-	
Ice Suppression System	10-20	Very Good	8 Units Total
Air Distribution Lines	10-20	Functional	

Electric Shore Power

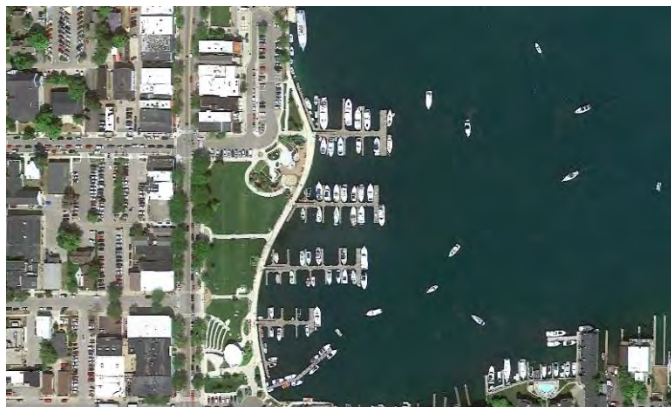
Utility Pedestals	% Condition	Dock Box Integrated	% Condition
0 20 Amp	100% Very Good	0 Single 30 Amp	100% Very Good
0 Single 30 Amp	0% Functional	0 Twin 30 Amp	0% Functional
0 Twin 30 Amp	0% Bad	70 30/ 50 Amp	0% Bad
70 30/ 50 Amp		0 Twin 50 Amp	
0 Twin 50 Amp			
1 100 Amp			
Compliant with Electrical Shock Drowning Ground Fault Protection Standards		Yes	

Site Features

Off-Street Parking				Total	Gravel/	Access Drive		
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/ Unpaved	Unpaved Condition	SF	Material
30	100	Very Good	0	-	0	-	6000	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		0	Very Good	No				
Walkways		Total LF	Avg. Width	Material	Condition			
		2500	15	Concrete	Very Good			

Buildings

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Boater Lounge, Restroom, Laundry	2500	10	8	12	Very Good	Roof Replacement



Charlevoix City Marina

Facility Owner:

City Of Charlevoix

Address:

100 E. Clinton Charlevoix Michigan 49720

Site ID:

-

There are no costs projected for this site within this time period

Charlevoix City Marina

Facility Owner:	City Of Charlevoix
Address:	100 E. Clinton Charlevoix Michigan 49720
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Floating Dock	100%	11528	SF	\$ 75	\$ 864,563
Wall/Shoreline Head Pier Floating Fingers	100%	150	SF	\$ 75	\$ 11,250
Total Dock Cost					\$ 875,813

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Concrete Wall Maintenance Type A	10%	150	LF	\$ 140	\$ 2,100
Total Structure Cost					\$ 2,100

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Ice Suppression Compressor System	100%	126	SLIP	\$ 1,800	\$ 226,800
Total Utilities Cost					\$ 226,800

Total Cost	\$ 1,104,713
Total Future Value Cost	\$ 1,484,641

Charlevoix City Marina

Facility Owner: City Of Charlevoix
Address: 100 E. Clinton Charlevoix Michigan 49720
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Concrete Wall Maintenance Type A	10%	150	LF	\$ 350	\$ 5,250
Concrete Wall Maintenance Type B	90%	150	LF	\$ 140	\$ 18,900
Total Structure Cost					\$ 24,150

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	126	SLIP	\$ 3,500	\$ 441,000
30/50 Amp Dock Box Integrated Power	100%	70	EA	\$ 3,000	\$ 210,000
30/50 Amp Electric Pedestal	100%	70	EA	\$ 3,500	\$ 245,000
100 Amp Electric Pedestal	100%	1	EA	\$ 5,000	\$ 5,000
Potable Water	100%	126	SLIP	\$ 800	\$ 100,800
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Total Utilities Cost					\$ 1,006,800

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	6000	SF	\$ 10	\$ 60,000
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Walkways	100%	37500	SF	\$ 10	\$ 375,000
Total Site-Features Cost					\$ 436,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building I	100%	2500	SF	\$ 400	\$ 1,000,000
Total Buildings Cost					\$ 1,000,000

Total Cost \$ 2,466,950

Total Future Value Cost \$ 4,455,586

Cheboygan County BAS

Facility Owner: Cheboygan County
Address: 1080 North Huron Cheboygan MI 49721
Site ID: A-16-030

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	0	20-30	Very Good	12	100	0	0	NA
Rock Revetment Offshore	1200	-	-	0	0	0	0	0

Boat Launch

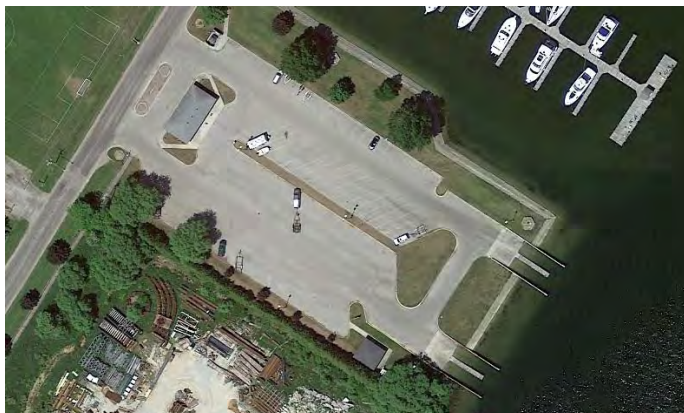
Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Cast-In-Place Concrete	Skid Floating	30 0	2 2	40 40	6 6	63	31

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	6 years ago	Unknown	-	-	-	-
15%	6'-10'						
85%	>10'						
Dredging required for 2019 boating season:			0	CY			

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
90	85000	Very Good	0	-	0	-	0	-
Landscaping		SF	Condition	Facility Responsible?				
		40000		No				
Walkways		Total LF	Avg. Width	Material		Condition		
		175	8	0				



Cheboygan County BAS

Facility Owner:	Cheboygan County
Address:	1080 North Huron Cheboygan MI 49721
Site ID:	A-16-030

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Broadside Floating Dock	100%	1000	SF	\$ 75	\$ 75,000
Total Dock Cost					\$ 75,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 70	\$ 448,000
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 478,000
Total Cost					\$ 553,000

Cheboygan County BAS

Facility Owner: Cheboygan County
Address: 1080 North Huron Cheboygan MI 49721
Site ID: A-16-030

There are no costs projected for this site within this time period

Cheboygan County BAS

Facility Owner: Cheboygan County
 Address: 1080 North Huron Cheboygan MI 49721
 Site ID: A-16-030

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	85000	SF	\$ 10	\$ 850,000
Total Site-Features Cost					\$ 850,000

Total Cost					\$ 910,000
Total Future Value Cost					\$ 1,643,561

Cheboygan County Marina

Facility Owner: Cheboygan County
Address: 1080 N. Huron Cheboygan, Mi. 49721
Site ID: -

Docks

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
11923.5	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	24	30'	100%	30-40
			24	40'		
			29	45'		
			7	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Floating Dock	3200	31	-	Traditional Timber by Floatation Docking Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Concrete Wall	1200	30-40	Functional	10	100	0	0

Utilities

Type	Age	Condition	Additional Information		
Potable Water	30+	Functional	100 % have vacuum breakers installed		
WIFI	<5	Functional			
Flow Inducers	-	Very Good	6 Units Total	4	Additional Units Needed
Pumpout	20-30	-	2 Pumpout(s)		

Electric Shore Power

Utility Pedestals	% Condition
22 Twin 30 Amp 20 30/ 50 Amp	100% Very Good

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	LF Lines over Land	LF Lines over Water	Overall Age	Overall Condition
Gas & Diesel	Floating	420	8	2	400	420	30+	Replace
Tank Type		Tank Capacity		No. Tanks				
Underground Single		12000		2				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	40	2	40	4	38	100

Dredge

% of Navigable Water Depth		Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	10 years ago	20000	-	-	-	-	-
0%	6'-10'							
100%	>10'							

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	SF Asphalt						SF	Material
0	6000	Very Good	0	-	0	-	6000	Asphalt
On-Street Parking		Spaces	Condition	Facility Responsible?				
		40	Very Good	No				
Landscaping		SF	Condition	Facility Responsible?				
		800000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		500	5	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets				
Amount	Age	Condition	Amount	Condition			
2	20	Very Good	0	-			
Building 1 Type		Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office		2052	6	4	31	Functional	General Interior Renovations
Building 2 Type		Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Harbor Store/Maintenance		1500	6	0	20	Functional	Mechanical Upgrades, General Interior Renovations
Building 3 Type		Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Fish Cleaning Station		-	-	-	15	Functional	Mechanical Upgrades



Cheboygan County Marina

Facility Owner: Cheboygan County
Address: 1080 N. Huron Cheboygan, Mi. 49721
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Floating Dock	100%	11924	SF	\$ 75	\$ 894,263
Broadside Floating Dock	100%	3200	SF	\$ 75	\$ 240,000
Total Dock Cost					\$ 1,134,263

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Concrete Wall	40%	1200	LF	\$ 800	\$ 384,000
Concrete Wall Maintenance Type A	60%	1200	LF	\$ 200	\$ 144,000
Total Structure Cost					\$ 528,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	84	SLIP	\$ 5,000	\$ 420,000
Flow Inducers	25%	6	EA	\$ 1,000	\$ 1,500
Additional Flow Inducers	100%	4	EA	\$ 1,000	\$ 4,000
Fuel Dock	100%	3360	SF	\$ 100	\$ 336,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	820	LF	\$ 100	\$ 82,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Pumpout	100%	2	EA	\$ 35,000	\$ 70,000
Total Utilities Cost					\$ 1,143,500

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 222,000
Total Cost					\$ 3,027,763

Cheboygan County Marina

Facility Owner: Cheboygan County
 Address: 1080 N. Huron Cheboygan, Mi. 49721
 Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Concrete Wall Maintenance Type A	60%	1200	LF	\$ 700	\$ 504,000
Total Structure Cost					\$ 504,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Potable Water	100%	84	SLIP	\$ 800	\$ 67,200
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Flow Inducers	100%	10	EA	\$ 1,000	\$ 10,000
Total Utilities Cost					\$ 82,200

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	2	EA	\$ 15,000	\$ 30,000
Building 1	100%	2052	SF	\$ 400	\$ 820,800
Building 2	100%	1500	SF	\$ 400	\$ 600,000
Total Buildings Cost					\$ 1,450,800

Total Cost \$ 2,037,000
Total Future Value Cost \$ 2,737,558

Cheboygan County Marina

Facility Owner: Cheboygan County
Address: 1080 N. Huron Cheboygan, Mi. 49721
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Concrete Wall Maintenance Type A	60%	1200	LF	\$ 1,050	\$ 756,000
Total Structure Cost					\$ 756,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	84	SLIP	\$ 3,500	\$ 294,000
Twin 30 Amp Electric Pedestal	100%	22	EA	\$ 3,000	\$ 66,000
30/50 Amp Electric Pedestal	100%	20	EA	\$ 3,500	\$ 70,000
Total Utilities Cost					\$ 430,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	6000	SF	\$ 10	\$ 60,000
Parking Lot - Asphalt	100%	6000	SF	\$ 10	\$ 60,000
Walkways	100%	2500	SF	\$ 10	\$ 25,000
Total Site-Features Cost					\$ 145,000

Total Cost \$ 1,391,000

Total Future Value Cost \$ 2,512,301

Cheboygan Dam BAS

Facility Owner: MDNR
Address: 101 East Lincoln Street Cheboygan Mi. 49721
Site ID: A-16-027

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	350	10-20	Very Good	3	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	15	1	40	5	100	15

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
200	100	Very Good	0	-	0	-	1875	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		21,000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		50	5	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	3	Functional



Cheboygan Dam BAS

Facility Owner: MDNR
Address: 101 East Lincoln Street Cheboygan Mi. 49721
Site ID: A-16-027

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Cheboygan Dam BAS

Facility Owner:	MDNR
Address:	101 East Lincoln Street Cheboygan Mi. 49721
Site ID:	A-16-027

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Total Boat Launch & Paddle Sport Access Cost					\$ 224,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	3	EA	\$ 10,000	\$ 30,000
Total Buildings Cost					\$ 30,000

Total Cost \$ 254,000

Total Future Value Cost \$ 341,355

Cheboygan Dam BAS

Facility Owner:	MDNR
Address:	101 East Lincoln Street Cheboygan Mi. 49721
Site ID:	A-16-027

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	350	LF	\$ 140	\$ 49,000
Total Structure Cost					\$ 49,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	1875	SF	\$ 10	\$ 18,750
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Landscaping	100%	21,000	SF	\$ 1	\$ 21,000
Walkways	100%	250	SF	\$ 10	\$ 2,500
Total Site-Features Cost					\$ 43,250

Total Cost \$ 122,250

Total Future Value Cost \$ 220,797

Cheboygan Municipal Marina

Facility Owner: City Of Cheboygan Michigan
Address: 403 N. Huron St. Cheboygan, Michigan 49721
Site ID: -

Docks

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	3000	50	Concrete	Timber Fendering

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	600	40+	Functional	6	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Functional	0 % have vacuum breakers installed
WIFI	-	Functional	
Wet Fire Hydrant System	20-30	Very Good	

Electric Shore Power

Utility Pedestals	% Condition
12 Twin 30 Amp	100% Functional

Dredge

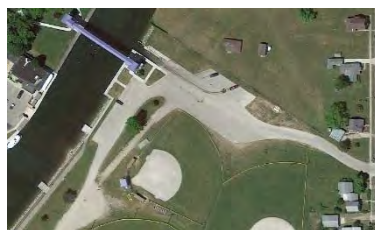
% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	6'-10'	40 years ago	Unknown	-	-	-	-

Site Features

Off-Street Parking				Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved	SF	Material
50	100	Functional	0	-	0	450	Asphalt
On-Street Parking		Spaces	Condition	Facility Responsible?			
		12	Very Good	Yes			
Landscaping		SF	Condition	Facility Responsible?			
		35	Functional	Yes			
Walkways		Total LF	Avg. Width	Material		Condition	
		600	5	Concrete		Very Good	

Buildings

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	160	5	2	60	Functional	General Interior and Exterior Renovations



Cheboygan Municipal Marina

Facility Owner:	City Of Cheboygan Michigan
Address:	403 N. Huron St. Cheboygan, Michigan 49721
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Steel Sheet Pile Wall Replacement	40%	600	LF	\$ 1,400	\$ 336,000
Sheet Pile Wall Maintenance Type A	60%	600	LF	\$ 700	\$ 252,000
				Total Structure Cost	\$ 588,000
				Total Cost	\$ 588,000

Cheboygan Municipal Marina

Facility Owner:	City Of Cheboygan Michigan
Address:	403 N. Huron St. Cheboygan, Michigan 49721
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	60%	600	LF	\$ 1,050	\$ 378,000
Total Structure Cost					\$ 378,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Twin 30 Amp Electric Pedestal	100%	12	EA	\$ 3,000	\$ 36,000
Total Utilities Cost					\$ 36,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Landscaping	40%	35	SF	\$ 1	\$ 14
Walkways	25%	3000	SF	\$ 10	\$ 7,500
Total Site-Features Cost					\$ 8,514

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building I	100%	160	SF	\$ 400	\$ 64,000
Total Buildings Cost					\$ 64,000

Total Cost \$ 486,514

Total Future Value Cost \$ 653,834

Cheboygan Municipal Marina

Facility Owner: City Of Cheboygan Michigan
Address: 403 N. Huron St. Cheboygan, Michigan 49721
Site ID: -

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	60%	600	LF	\$ 1,400	\$ 504,000
Total Structure Cost					\$ 504,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	450	SF	\$ 10	\$ 4,500
Landscaping	60%	35	SF	\$ 1	\$ 21
Walkways	75%	3000	SF	\$ 10	\$ 22,500
Total Site-Features Cost					\$ 27,021

Total Cost					\$ 531,021
Total Future Value Cost					\$ 959,083

Chippewa Lake BAS

Facility Owner: MDNR
Address: 0
Site ID: A-54-003

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	8	2	40	5	40	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	<6'	1 years ago	10	Yes	Every 1 year	10	0

Dredging required for 2019 boating season: 10 CY

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
45	0	-	0	-	100	Functional	180	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		2000	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		30	6	Concrete		Functional		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Functional



Chippewa Lake BAS

Facility Owner: MDNR
 Address: -
 Site ID: A-54-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Dredging

Item	Quantity	Unit	Unit Rate	5 Year Projection
Dredging	50	CY	\$ 40	\$ 2,000
Total Cost				\$ 32,000

Chippewa Lake BAS

Facility Owner:	MDNR
Address:	-
Site ID:	A-54-003

Dredging

Item	Quantity	Unit	Unit Rate	10 Year Projection
Dredging	50	CY	\$ 40	\$ 2,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Gravel/Unpaved	100%	100	SF	\$ 5	\$ 500
Walkways	100%	180	SF	\$ 10	\$ 1,800
Total Site-Features Cost				\$	3,200

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost				\$	20,000

Total Cost \$ 25,200

Total Future Value Cost \$ 33,867

Chippewa Lake BAS

Facility Owner: MDNR
 Address: -
 Site ID: A-54-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 186,000

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	100	CY	\$ 40	\$ 4,000
Total Cost				\$ 190,000
Total Future Value Cost				\$ 343,161

Clinton River Cut-off BAS

Facility Owner: MDNR
Address: 36110 Jefferson Avenue Harrison Township, MI 48045
Site ID: A-50-006

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
6	Cast-In-Place Concrete	Skid	8	3	40	5	70	4

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	<6'	1 years ago	1000	Yes	Every Year	1000	90
0%	6'-10'						
0%	>10'						
Dredging required for 2019 boating season:				800	CY	Site currently under a study to relocate the launch due to yearly sediment accumulation	

Site Features

Landscaping	SF	Condition	Facility Responsible?	
	170000	Very Good	Yes	
Walkways	Total LF	Avg. Width	Material	Condition
	1125	5	Concrete	Very Good

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	625	4	0	18	Very Good	None
Building I Type	Total SF	Toilets	Showers	Age	Condition	Improvements Needed
Office	36	0	0	18	Very Good	None



Clinton River Cut-off BAS

Facility Owner: MDNR
Address: 36110 Jefferson Avenue Harrison Township, MI 48045
Site ID: A-50-006

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000
Subtotal					\$ 45,000
Demo (5%)					\$ 2,250
MOB/GC (8%)					\$ 3,600
Design/Permitting (15%)					\$ 6,750
Subtotal					\$ 57,600
Contingency (20%)					\$ 11,520
Total Cost					\$ 45,000

Clinton River Cut-off BAS

Facility Owner:	MDNR
Address:	36110 Jefferson Avenue Harrison Township, MI 48045
Site ID:	A-50-006

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	5%	5625	SF	\$ 10	\$ 2,813
Total Site-Features Cost					\$ 2,813
Total Cost					\$ 2,813
Total Future Value Cost					\$ 3,780

Clinton River Cut-off BAS

Facility Owner:	MDNR
Address:	36110 Jefferson Avenue Harrison Township, MI 48045
Site ID:	A-50-006

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	9600	SF	\$ 70	\$ 672,000
Launch Piers	100%	3	EA	\$ 45,000	\$ 135,000
Total Boat Launch & Paddle Sport Access Cost					\$ 807,000

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	10000	CY	\$ 40	\$ 400,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	95%	5625	SF	\$ 10	\$ 53,438
Total Site-Features Cost					\$ 53,438

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building 1	100%	625	SF	\$ 400	\$ 250,000
Building 2	100%	36	SF	\$ 400	\$ 14,400
Total Buildings Cost					\$ 264,400

Total Cost \$ 1,524,838

Total Future Value Cost \$ 2,754,026

Coldwater Lake BAS

Facility Owner: MDNR
Address: 3 Miles North of Kinderhook/ Maple Knoll Beach Rd.
Site ID: A-12-002

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	200	10-20	Very Good	1	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	10	1	40	5	61	0

Dredge

% of Navigable Water	Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	<6'	17 years ago	Unknown	-	-	-	-	-
0%	6'-10'							
0%	>10'							
Dredging required for 2019 boating season:				0	CY			

Site Features

Off-Street Parking		Total		Concrete		Gravel/Unpaved		Access Drive	
Spaces	SF Asphalt	Asphalt Condition	SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material	
0	75000	Functional	0	-	0	-	900	Asphalt	
Landscaping		SF	Condition	Facility Responsible?					
		75000	Very Good	Yes					
Walkways		Total LF	Avg. Width	Material		Condition			
		120	5	Concrete		Very Good			

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Coldwater Lake BAS

Facility Owner: MDNR
Address: 3 Miles North of Kinderhook/ Maple Knoll Beach Rd.
Site ID: A-12-002

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Coldwater Lake BAS

Facility Owner:	MDNR
Address:	3 Miles North of Kinderhook/ Maple Knoll Beach Rd.
Site ID:	A-12-002

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	10%	200	LF	\$ 140	\$ 2,800
Total Structure Cost					\$ 2,800

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	75000	SF	\$ 10	\$ 750,000
Walkways	10%	600	SF	\$ 10	\$ 600
Total Site-Features Cost					\$ 750,600

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 859,400

Total Future Value Cost \$ 1,154,962

Coldwater Lake BAS

Facility Owner:	MDNR
Address:	3 Miles North of Kinderhook/ Maple Knoll Beach Rd.
Site ID:	A-12-002

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	10%	200	LF	\$ 350	\$ 7,000
Rock Revetment Maintenance Type B	90%	200	LF	\$ 140	\$ 25,200
Total Structure Cost					\$ 32,200

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	900	SF	\$ 10	\$ 9,000
Walkways	90%	600	SF	\$ 10	\$ 5,400
Total Site-Features Cost					\$ 14,400

Total Cost \$ 76,600

Total Future Value Cost \$ 138,348

Comins Flats BAS

Facility Owner: MDNR
Address: McKinley Rd, Mio, MI 48647
Site ID: A-68-008

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	-	-	-	-	-	30	30

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved	Condition	SF	Material
30	0	-	0	-	0	Functional	0	Gravel/Unpaved

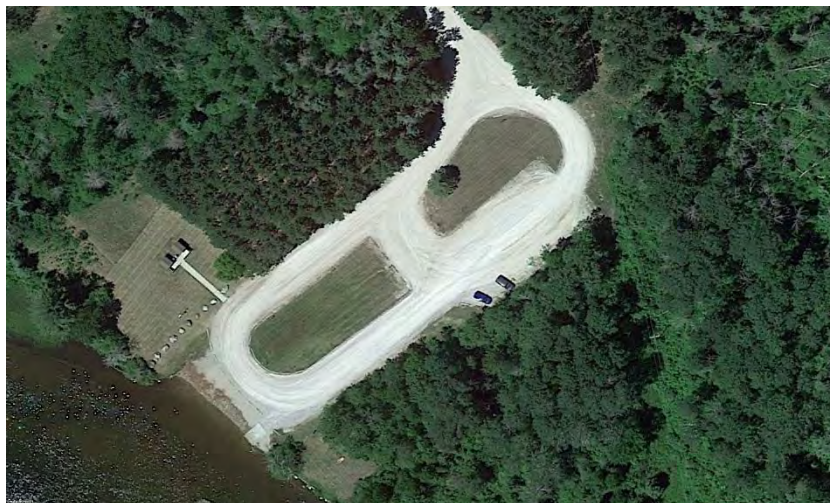
Landscaping	SF	Condition	Facility Responsible?
	7000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	60	6	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
2	Functional



Comins Flats BAS

Facility Owner: MDNR
Address: McKinley Rd, Mio, MI 48647
Site ID: A-68-008

There are no costs projected for this site within this time period

Comins Flats BAS

Facility Owner:	MDNR
Address:	McKinley Rd, Mio, MI 48647
Site ID:	A-68-008

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	10%	7000	SF	\$ 1	\$ 700
Total Site-Features Cost					\$ 700

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost					\$ 20,700
Total Future Value Cost					\$ 27,819

Comins Flats BAS

Facility Owner:	MDNR
Address:	McKinley Rd, Mio, MI 48647
Site ID:	A-68-008

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	90%	7000	SF	\$ 1	\$ 6,300
Walkways	100%	360	SF	\$ 10	\$ 3,600
Total Site-Features Cost					\$ 9,900
Total Cost					\$ 9,900
Total Future Value Cost					\$ 17,881

Copeyon Park BAS

Facility Owner: City of Ludington
Address: 400 S. Harrison St. Ludington Mi
Site ID: A-53-026

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	740	20-30	Functional	2	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	20	1	80	0	64	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
104	47900	Functional	0	-	0	-	1500	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	100000		Yes

Walkways	Total LF	Avg. Width	Material	Condition
	260	6	Concrete	-



Copeyon Park BAS

Facility Owner:	City of Ludington
Address:	400 S. Harrison St. Ludington Mi
Site ID:	A-53-026

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type A	100%	740	LF	\$ 50	\$ 37,000
Total Structure Cost					\$ 37,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 111,000
Total Cost					\$ 148,000

Copeyon Park BAS

Facility Owner:	City of Ludington
Address:	400 S. Harrison St. Ludington Mi
Site ID:	A-53-026

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	100%	740	LF	\$ 175	\$ 129,500
Total Structure Cost					\$ 129,500

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	1500	SF	\$ 10	\$ 15,000
Parking Lot - Asphalt	100%	47900	SF	\$ 10	\$ 479,000
Total Site-Features Cost					\$ 494,000

Total Cost \$ 623,500

Total Future Value Cost \$ 837,932

Copeyon Park BAS

Facility Owner:	City of Ludington
Address:	400 S. Harrison St. Ludington Mi
Site ID:	A-53-026

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	100%	740	LF	\$ 350	\$ 259,000
Total Structure Cost					\$ 259,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	100%	100000	SF	\$ 1	\$ 100,000
Walkways	100%	1560	SF	\$ 10	\$ 15,600
Total Site-Features Cost					\$ 115,600

Total Cost \$ 404,600

Total Future Value Cost \$ 730,753

Copper Harbor State Harbor

Facility Owner: MDNR
Address: 14447 Hwy. M-26, Copper Harbor Mi 49918
Site ID: 42-202

Docks

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
3021	Concrete	Steel Framed Crib	7	45'	100%	10-20
			1	55'		
			2	70' +		

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
315	Concrete	Steel Frame & Timber Piles	3	40'	50%	10-20
			2	45'	50%	40+

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	1680	40	Concrete	Timber Fendering
Fixed Crib Dock	1920	20	Concrete	-

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Concrete Wall	250	40+	Functional	7	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	10-20	Functional	100 % have vacuum breakers installed
WIFI	<5	Very Good	
Pumpout	10-20	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
5 Single 30 Amp	0% Very Good
1 Twin 30 Amp	100% Functional
3 30/ 50 Amp	0% Bad
2 Twin 50 Amp	

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	LF Lines over Land	LF Lines over Water	Overall Age	Overall Condition
Gas & Diesel	Fixed	80	12	2	100	150	10-20	Functional
	Tank Type	Tank Capacity	No. Tanks					
	Above Ground Single	2,800 Gallons	2					

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Cast-In-Place Concrete	Skid	10	1	40	5	19	21

Site Features

Off-Street Parking			Total			Gravel/Unpaved		Access Drive	
Spaces	SF Asphalt	Asphalt Condition	SF Concrete	Concrete Condition	SF Gravel/Unpaved	Condition	SF	Material	
0	29840	Functional	0	-	0	-	9900	Asphalt	

Landscaping	SF	Condition	Facility Responsible?
	40000	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	543	8	Concrete	Functional

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Boater Lounge, Restroom	1830	5	2	18	Functional	Renovate Boater's Lounge



Copper Harbor State Harbor

Facility Owner: MDNR
Address: 14447 Hwy. M-26, Copper Harbor Mi 49918
Site ID: 42-202

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Fixed Head Pier Redecking	100%	3021	SF	\$ 15	\$ 45,315
Broadside Fixed Crib	100%	1920	SF	\$ 150	\$ 288,000
Broadside Fixed Crib Redecking	100%	1920	SF	\$ 15	\$ 28,800
Total Dock Cost					\$ 362,115

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Concrete Wall	35%	250	LF	\$ 800	\$ 70,000
Concrete Wall Maintenance Type A	50%	250	LF	\$ 400	\$ 50,000
Concrete Wall Maintenance Type B	15%	250	LF	\$ 200	\$ 7,500
Total Structure Cost					\$ 127,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	15	SLIP	\$ 5,000	\$ 75,000
Total Utilities Cost					\$ 75,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 579,615

Copper Harbor State Harbor

Facility Owner: MDNR
Address: 14447 Hwy. M-26, Copper Harbor Mi 49918
Site ID: 42-202

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Broadside Fixed Crib Redecking	100%	1920	SF	\$ 15	\$ 28,800
Total Dock Cost					\$ 28,800

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Concrete Wall Maintenance Type A	50%	250	LF	\$ 1,050	\$ 131,250
Concrete Wall Maintenance Type B	15%	250	LF	\$ 700	\$ 26,250
Total Structure Cost					\$ 157,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Single 30 Amp Electric Pedestal	100%	5	EA	\$ 3,000	\$ 15,000
Twin 30 Amp Electric Pedestal	100%	1	EA	\$ 3,000	\$ 3,000
30/50 Amp Electric Pedestal	100%	3	EA	\$ 3,500	\$ 10,500
Twin 50 Amp Electric Pedestal	100%	2	EA	\$ 3,500	\$ 7,000
Potable Water	100%	15	SLIP	\$ 800	\$ 12,000
Fuel Dock	100%	960	SF	\$ 150	\$ 144,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	250	LF	\$ 100	\$ 25,000
Above Ground Single Product Tank	100%	2	EA	\$ 50,000	\$ 100,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 381,500

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 70	\$ 112,000
Total Boat Launch & Paddle Sport Access Cost					\$ 112,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	9900	SF	\$ 10	\$ 99,000
Parking Lot - Asphalt	100%	29840	SF	\$ 10	\$ 298,400
Landscaping	100%	40000	SF	\$ 1	\$ 40,000
Walkways	100%	4344	SF	\$ 10	\$ 43,440
Total Site-Features Cost					\$ 480,840

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 1,170,640
Total Future Value Cost \$ 1,534,537

Copper Harbor State Harbor

Facility Owner:	MDNR
Address:	14447 Hwy. M-26, Copper Harbor Mi 49918
Site ID:	42-202

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Fixed Head Pier	100%	3021	SF	\$ 150	\$ 453,150
Total Dock Cost					\$ 453,150

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Concrete Wall Maintenance Type A	50%	250	LF	\$ 1,400	\$ 175,000
Concrete Wall Maintenance Type B	15%	250	LF	\$ 1,050	\$ 39,375
Total Structure Cost					\$ 214,375

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	15	SLIP	\$ 3,500	\$ 52,500
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Fuel Dock	100%	960	SF	\$ 150	\$ 144,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	250	LF	\$ 100	\$ 25,000
Above Ground Single Product Tank	100%	2	EA	\$ 50,000	\$ 100,000
Total Utilities Cost					\$ 356,500

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building I	100%	1830	SF	\$ 400	\$ 732,000
Total Buildings Cost					\$ 732,000

Total Cost \$ 1,786,025

Total Future Value Cost \$ 3,225,760

Crystal Lake - North BAS (Montcalm)

Facility Owner: MDNR
Address: 426 N Shore Dr, Crystal, MI 48818
Site ID: A-59-017

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	5	2	30	5	46	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
46	40000	Functional	0	-	0	-	450	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	43500	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	10	10	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Very Good



Crystal Lake - North BAS (Montcalm)

Facility Owner: MDNR
 Address: 426 N Shore Dr, Crystal, MI 48818
 Site ID: A-59-017

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000

Crystal Lake - North BAS (Montcalm)

Facility Owner:	MDNR
Address:	426 N Shore Dr, Crystal, MI 48818
Site ID:	A-59-017

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	450	SF	\$ 10	\$ 4,500
Parking Lot - Asphalt	100%	40000	SF	\$ 10	\$ 400,000
Total Site-Features Cost					\$ 404,500

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 414,500
Total Future Value Cost					\$ 557,053

Crystal Lake - North BAS (Montcalm)

Facility Owner:	MDNR
Address:	426 N Shore Dr, Crystal, MI 48818
Site ID:	A-59-017

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Launch Piers	100%	2	EA	\$ 45,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 282,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	100%	43500	SF	\$ 1	\$ 43,500
Walkways	100%	100	SF	\$ 10	\$ 1,000
Total Site-Features Cost					\$ 44,500

Total Cost	\$ 326,500
-------------------	-------------------

Total Future Value Cost	\$ 589,695
--------------------------------	-------------------

Crystal Lake BAS (Benzie)

Facility Owner: MDNR
Address: 3730 Mill Rd. Grawn Mi. 49637
Site ID: A-10-006

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Floating Wave Attenuator	78	<10	Very Good	4	100	-	-	Yes

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
5	Precast	Skid	9	2	40	5	75	0
	Concrete Planks	Floating	9	1	78	6		

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0% <6'	9 years ago	535	-	-	-	-	-
100% 6'-10'							
0% >10'							

Dredging required for 2019 boating season: 0 CY

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
0	281664	Very Good	0	-	0	-	0	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	182709	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	1700	5	Concrete	Very Good

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Very Good



Crystal Lake BAS (Benzie)

Facility Owner: MDNR
 Address: 3730 Mill Rd. Grawn Mi. 49637
 Site ID: A-10-006

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000
Total Cost					\$ 60,000

Crystal Lake BAS (Benzie)

Facility Owner:	MDNR
Address:	3730 Mill Rd. Grawn Mi. 49637
Site ID:	A-10-006

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	10%	182709	SF	\$ 1	\$ 18,271
Total Site-Features Cost					\$ 18,271

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost					\$ 38,271
Total Future Value Cost					\$ 51,433

Crystal Lake BAS (Benzie)

Facility Owner:	MDNR
Address:	3730 Mill Rd. Grawn Mi. 49637
Site ID:	A-10-006

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Floating Wave Attenuator	100%	78	LF	\$ 1,500	\$ 117,000
Total Structure Cost					\$ 117,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	8000	SF	\$ 30	\$ 240,000
Launch Piers	100%	2	EA	\$ 45,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 330,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	281664	SF	\$ 10	\$ 2,816,640
Landscaping	90%	182709	SF	\$ 1	\$ 164,438
Walkways	100%	8500	SF	\$ 10	\$ 85,000
Total Site-Features Cost					\$ 3,066,078

Total Cost	\$ 3,513,078
-------------------	---------------------

Total Future Value Cost	\$ 6,345,010
--------------------------------	---------------------

De Tour Passage BAS

Facility Owner: MDNR
Address: M-134 DeTour, MI. 49725
Site ID: A-17-004

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	6	1	40	5	20	0

Dredge

% of Navigable Water Depth	% of	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
10%	<6'	10 years ago	Unknown	Yes	Every 12 years	-	10	90
90%	6'-10'							
0%	>10'							
Dredging required for 2019 boating season:				0	CY			

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition			SF	Material
0	0	-	0	-	30000	Functional	4800	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		3000	Functional	Yes				

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



De Tour Passage BAS

Facility Owner: MDNR
 Address: M-134 DeTour, MI. 49725
 Site ID: A-17-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

De Tour Passage BAS

Facility Owner: MDNR
Address: M-134 DeTour, MI. 49725
Site ID: A-17-004

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	4800	SF	\$ 5	\$ 24,000
Parking Lot - Gravel/Unpaved	100%	30000	SF	\$ 5	\$ 150,000
Total Site-Features Cost					\$ 174,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 184,000
Total Future Value Cost					\$ 247,281

De Tour Passage BAS

Facility Owner:	MDNR
Address:	M-134 DeTour, MI. 49725
Site ID:	A-17-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 141,000
Total Cost					\$ 141,000
Total Future Value Cost					\$ 254,662

De Tour State Harbor

Facility Owner: MDNR
Address: 600 North Ontario St. DeTour Village, MI. 49725
Site ID: 17-204

Docks

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
18789	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	24	40'	100%	<10
			22	45'		
			16	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Floating Dock	3600	10	-	Traditional Timber by Floatation Docking Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	230	<10-30	Very Good	6	100	0	0	NA
Rock Revetment Offshore	1300	30-40+	Functional	5	0	100	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Functional	100 % have vacuum breakers installed
WIFI	<5	Functional	
Dry Standpipe Fire System	<10	Very Good	
Ice Suppression System	<10	Very Good	9 Units Total
Air Distribution Lines	<10	Very Good	
Pumpout	<10	-	2 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
45 30/ 50 Amp	100% Very Good 0% Functional 0% Bad
Compliant with Electrical Shock Drowning Ground Fault Protection Standards?	Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	LF Lines over Land	LF Lines over Water	Overall Age	Overall Condition
Gas & Diesel	Floating	175	17	4	450	650	<10	Functional
Tank Type	Tank Capacity	No. Tanks						
Underground Single	25000	2						

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
10% <6'	7 years ago	Unknown	-	Every 10 years	0	90	10
80% 6'-10'							
10% >10'							

Site Features

Off-Street Parking						Total SF Gravel/Unpaved	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Condition	SF	Material
52	25000	Very Good	0	-	0	-	600	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		45000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		900	6	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets				
Amount	Age	Condition	Amount	Condition			
1	7	Very Good	0	-			
Building 1 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Restroom, Laundry	1500	7	5	7	Very Good	None	
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Fuel Service	350	1	0	25	Functional	Mechanical Upgrades, ADA update, General Interior Renovations	
Building 3 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Harbor Shop/Maintenance Storage	380	0	0	10	Very Good	Roof Replacement	
Building 4 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Office, Store	1600	1	0	50	Functional	Mechanical Upgrades, General Exterior Renovations	
Building 5 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Storage Shed	300	0	0	-	Functional	Roof Replacement	



5 Year Projected Cost Estimate

De Tour State Harbor

Facility Owner: MDNR
Address: 600 North Ontario St. DeTour Village, MI. 49725
Site ID: 17-204

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Ice Suppression Compressor System	20%	62	SLIP	\$ 1,800	\$ 22,320
				Total Utilities Cost	\$ 22,320
				Total Cost	\$ 22,320

De Tour State Harbor

Facility Owner:	MDNR
Address:	600 North Ontario St. DeTour Village, MI. 49725
Site ID:	17-204

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Broadside Floating Dock	100%	3600	SF	\$ 75	\$ 270,000
Total Dock Cost					\$ 270,000

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type B	100%	230	LF	\$ 70	\$ 16,100
Total Structure Cost					\$ 16,100

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Potable Water	50%	62	SLIP	\$ 800	\$ 24,800
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Total Utilities Cost					\$ 29,800

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 2	100%	350	SF	\$ 400	\$ 140,000
Building 4	100%	1600	SF	\$ 400	\$ 640,000
Total Buildings Cost					\$ 780,000

Total Cost \$ 1,095,900

Total Future Value Cost \$ 1,472,798

De Tour State Harbor

Facility Owner: MDNR
Address: 600 North Ontario St. DeTour Village, MI. 49725
Site ID: 17-204

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Floating Dock	100%	18789	SF	\$ 75	\$ 1,409,175
Total Dock Cost					\$ 1,409,175

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	230	LF	\$ 175	\$ 40,250
Total Structure Cost					\$ 40,250

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	62	SLIP	\$ 3,500	\$ 217,000
30/50 Amp Electric Pedestal	100%	45	EA	\$ 3,500	\$ 157,500
Potable Water	50%	62	SLIP	\$ 800	\$ 24,800
Dry Standpipe Fire Suppression System	100%	62	SLIP	\$ 800	\$ 49,600
Ice Suppression Compressor System	80%	62	SLIP	\$ 1,800	\$ 89,280
Fuel Dock	100%	2975	SF	\$ 100	\$ 297,500
Fuel Dispenser	100%	4	EA	\$ 15,000	\$ 60,000
Fuel Lines	100%	1100	LF	\$ 100	\$ 110,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Pumpout	100%	2	EA	\$ 35,000	\$ 70,000
Total Utilities Cost					\$ 1,275,680

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	600	SF	\$ 10	\$ 6,000
Parking Lot - Asphalt	100%	25000	SF	\$ 10	\$ 250,000
Landscaping	100%	45000	SF	\$ 1	\$ 45,000
Walkways	100%	5400	SF	\$ 10	\$ 54,000
Total Site-Features Cost					\$ 355,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building 3	100%	380	SF	\$ 400	\$ 152,000
Total Buildings Cost					\$ 152,000

Total Cost \$ 3,232,105
Total Future Value Cost \$ 5,837,541

Deer Lake BAS

Facility Owner: MDNR
Address: Deer Lake Road, Ishpeming Township, Ishpeming, MI
Site ID: 52-069

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	-	1	30	8	11	6

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved	Functional	SF	Material
5	0	-	0	-	4110	Functional	3500	Gravel/Unpaved

Landscaping	SF	Condition	Facility Responsible?
	7530	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	5	6	Gravel	Functional

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



Deer Lake BAS

Facility Owner:	MDNR
Address:	Deer Lake Road, Ishpeming Township, Ishpeming, MI
Site ID:	52-069

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 63,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Landscaping	10%	7530	SF	\$ 1	\$ 753
Walkways	10%	30	SF	\$ 5	\$ 15
Total Site-Features Cost					\$ 768
Total Cost					\$ 63,768

Deer Lake BAS

Facility Owner:	MDNR
Address:	Deer Lake Road, Ishpeming Township, Ishpeming, MI
Site ID:	52-069

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	3500	SF	\$ 5	\$ 17,500
Parking Lot - Gravel/Unpaved	100%	4110	SF	\$ 5	\$ 20,550
Landscaping	90%	7530	SF	\$ 1	\$ 6,777
Walkways	90%	30	SF	\$ 5	\$ 135
Total Site-Features Cost					\$ 44,962

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 54,962
-------------------	------------------

Total Future Value Cost	\$ 73,864
--------------------------------	------------------

Deer Lake BAS

Facility Owner: MDNR
Address: Deer Lake Road, Ishpeming Township, Ishpeming, MI
Site ID: 52-069

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000
Total Future Value Cost					\$ 54,183

Detroit Erma Henderson Park Marina

Facility Owner: City of Detroit
Address: 8800 East Jefferson
Site ID: -

Docks

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
7747.5	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	117	25'	100%	10-20
			56	40'		

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
3645	Traditional Timber	Floatation Docking	16	30'	100%	10-20
			24	40'		
			22	45'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Floating Dock	500	15	-	Traditional Timber by Floatation Docking Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Concrete Wall	0	-	-	12	0	0	0	NA



Detroit Erma Henderson Park Marina

Facility Owner:	City of Detroit
Address:	8800 East Jefferson
Site ID:	-

There are no costs projected for this site within this time period

Detroit Erma Henderson Park Marina

Facility Owner:	City of Detroit
Address:	8800 East Jefferson
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Floating Dock	100%	7748	SF	\$ 75	\$ 581,063
Floating Head Pier	100%	3645	SF	\$ 75	\$ 273,375
Broadside Floating Dock	0%	500	SF	\$ 75	\$ 37,500
Total Dock Cost					\$ 891,938
Total Cost					\$ 891,938
Total Future Value Cost					\$ 1,198,689

Detroit Erma Henderson Park Marina

Facility Owner: City of Detroit
Address: 8800 East Jefferson
Site ID: -

There are no costs projected for this site within this time period

Devils Lake BAS

Facility Owner: MDNR
Address: 9600 Devils Lake Highway Manitou Beach MI 49253
Site ID: A-46-003

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	30	2	30	5	65	5

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
0	YES	-	-	-	-	-	-	-	-

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
62	67000	Functional	0	-	0	-	0	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	11,000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	80	5	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Very Good



Devils Lake BAS

Facility Owner: MDNR
 Address: 9600 Devils Lake Highway Manitou Beach MI 49253
 Site ID: A-46-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 222,000
Total Cost					\$ 222,000

Devils Lake BAS

Facility Owner:	MDNR
Address:	9600 Devils Lake Highway Manitou Beach MI 49253
Site ID:	A-46-003

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	67000	SF	\$ 10	\$ 670,000
Total Site-Features Cost					\$ 670,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 680,000
Total Future Value Cost					\$ 913,863

Devils Lake BAS

Facility Owner:	MDNR
Address:	9600 Devils Lake Highway Manitou Beach MI 49253
Site ID:	A-46-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	100%	11,000	SF	\$ 1	\$ 11,000
Walkways	100%	400	SF	\$ 10	\$ 4,000
Total Site-Features Cost					\$ 15,000

Total Cost					\$ 75,000
Total Future Value Cost					\$ 135,458

Diamond Lake BAS

Facility Owner: MDNR
Address: 0
Site ID: A-14-006

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	110			-	-	-	-	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	20	1	30	5	58	0

Site Features

Off-Street Parking				Total Concrete	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Condition	Unpaved	Condition	SF	Material
10	10000	Functional	0	-	0	-	0	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	12000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	24	5	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Very Good



Diamond Lake BAS

Facility Owner: MDNR
 Address: 0
 Site ID: A-14-006

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 111,000
Total Cost					\$ 111,000

Diamond Lake BAS

Facility Owner:	MDNR
Address:	0
Site ID:	A-14-006

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	10000	SF	\$ 10	\$ 100,000
Total Site-Features Cost					\$ 100,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 110,000
Total Future Value Cost					\$ 147,831

Diamond Lake BAS

Facility Owner: MDNR
 Address:
 Site ID: A-14-006

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	100%	12000	SF	\$ 1	\$ 12,000
Walkways	100%	120	SF	\$ 10	\$ 1,200
Total Site-Features Cost					\$ 13,200

Total Cost					\$ 43,200
Total Future Value Cost					\$ 78,024

Dodge #4 State Park - Cass Lake BAS

Facility Owner: MDNR
Address: 4250 Parkway, Waterford, MI 48328
Site ID: A-63-020

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	4	2	30	5	84	10

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	YES	33	4	60	10	0	0	0	10

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
350	100	Functional	0	-	0	-	14000	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	1742400	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	1000	6	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Very Good

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	120	6	0	30	Very Good	None



Dodge #4 State Park - Cass Lake BAS

Facility Owner: MDNR
Address: 4250 Parkway, Waterford, MI 48328
Site ID: A-63-020

There are no costs projected for this site within this time period

Dodge #4 State Park - Cass Lake BAS

Facility Owner: MDNR
 Address: 4250 Parkway, Waterford, MI 48328
 Site ID: A-63-020

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	2	EA	\$ 45,000	\$ 90,000
Paddle Sport Launch Access	100%	600	SF	\$ 180	\$ 108,000
Total Boat Launch & Paddle Sport Access Cost					\$ 198,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Landscaping	15%	1742400	SF	\$ 1	\$ 261,360
Total Site-Features Cost					\$ 262,360

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Building I	100%	120	SF	\$ 400	\$ 48,000
Total Buildings Cost					\$ 58,000

Total Cost	\$ 518,360
Total Future Value Cost	\$ 696,632

Dodge #4 State Park - Cass Lake BAS

Facility Owner: MDNR
 Address: 4250 Parkway, Waterford, MI 48328
 Site ID: A-63-020

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Broadside Floating Dock	100%	600	SF	\$ 75	\$ 45,000
Total Dock Cost					\$ 45,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Total Boat Launch & Paddle Sport Access Cost					\$ 192,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	14000	SF	\$ 10	\$ 140,000
Landscaping	85%	1742400	SF	\$ 1	\$ 1,481,040
Walkways	100%	6000	SF	\$ 10	\$ 60,000
Total Site-Features Cost					\$ 1,681,040

Total Cost \$ 1,918,040

Total Future Value Cost \$ 3,464,194

Duck Lake BAS-Calhoun

Facility Owner: MDNR
Address: 3 Miles East of Partello (Calhoun County)
Site ID: A-13-005

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	80	10-20	Very Good	2	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Dry Standpipe Fire System	10-20	Very Good	

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
3	Precast Concrete Planks	Skid	10	2	40	5	28	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
28	50000	Functional	0	-	0	-	4000	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	43560	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	10	5	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Very Good



Duck Lake BAS-Calhoun

Facility Owner:	MDNR
Address:	3 Miles East of Partello (Calhoun County)
Site ID:	A-13-005

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000

Duck Lake BAS-Calhoun

Facility Owner: MDNR
 Address: 3 Miles East of Partello (Calhoun County)
 Site ID: A-13-005

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	10%	80	LF	\$ 140	\$ 1,120
Total Structure Cost					\$ 1,120

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	4800	SF	\$ 30	\$ 144,000
Total Boat Launch & Paddle Sport Access Cost					\$ 144,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	50000	SF	\$ 10	\$ 500,000
Landscaping	10%	43560	SF	\$ 1	\$ 4,356
Walkways	10%	50	SF	\$ 10	\$ 50
Total Site-Features Cost					\$ 504,406

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 659,526

Total Future Value Cost \$ 886,348

Duck Lake BAS-Calhoun

Facility Owner:	MDNR
Address:	3 Miles East of Partello (Calhoun County)
Site ID:	A-13-005

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	10%	80	LF	\$ 350	\$ 2,800
Rock Revetment Maintenance Type B	90%	80	LF	\$ 140	\$ 10,080
Total Structure Cost					\$ 12,880

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	4000	SF	\$ 10	\$ 40,000
Landscaping	90%	43560	SF	\$ 1	\$ 39,204
Walkways	90%	50	SF	\$ 10	\$ 450
Total Site-Features Cost					\$ 79,654

Total Cost \$ 152,534

Total Future Value Cost \$ 275,493

Duck Lake BAS-Gogebic

Facility Owner: MDNR
Address: 46.11'.55.77"N, 89.12'.56.77"W
Site ID: A-27-003

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	65	<10-20	Functional	3	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	10	1	30	5	0	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
25	0	-	0	-	22900	-	14500	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		9000	Functional	Yes				

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Duck Lake BAS-Gogebic

Facility Owner:	MDNR
Address:	46.11'.55.77"N, 89.12'.56.77"W
Site ID:	A-27-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Duck Lake BAS-Gogebic

Facility Owner:	MDNR
Address:	46.11'.55.77"N, 89.12'.56.77"W
Site ID:	A-27-003

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	100%	65	LF	\$ 70	\$ 4,550
Total Structure Cost					\$ 4,550

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Total Boat Launch & Paddle Sport Access Cost					\$ 48,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	14500	SF	\$ 5	\$ 72,500
Total Site-Features Cost					\$ 72,500

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 135,050
Total Future Value Cost	\$ 181,496

Duck Lake BAS-Gogebic

Facility Owner:	MDNR
Address:	46.11'.55.77"N, 89.12'.56.77"W
Site ID:	A-27-003

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	100%	65	LF	\$ 245	\$ 15,925
Total Structure Cost					\$ 15,925

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Total Cost					\$ 45,925
Total Future Value Cost					\$ 82,946

Eagle Harbor State Harbor

Facility Owner: MDNR
Address: Eagle Harbor State Harbor, Eagle Harbor Mi
Site ID: 42-201

Docks

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	2160	50	Concrete	Timber Fendering

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Steel Sheet Pile Wall	0	40+	Functional	5	100	0	0
Concrete Wall	120	40+	Replace	6	100	0	0
Rock Revetment Shoreline	120	-	Functional	4	100	0	0
Steel Sheet Pile Single	135	-	-	-	-	-	-

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Replace	100 % have vacuum breakers installed

Electric Shore Power

Utility Pedestals	% Condition
6 20 Amp	100% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	10	1	40	5	18	6

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0% <6'	15 years	600	Yes	Every 20 years	4700	15	85
25% 6'-10'	ago						
75% >10'							

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved	Functional	SF	Material
0	0	-	0	-	22000	Functional	24000	Gravel/Unpaved

Landscaping	SF	Condition	Facility Responsible?
	177000	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	175	4	Concrete	Functional

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
2	Functional

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Boater Lounge, Restroom	625	4	2	50	Functional	Mechanical Upgrades, ADA Update, General Interior and Exterior Renovations, General Utilities Renovation



Eagle Harbor State Harbor

Facility Owner:	MDNR
Address:	Eagle Harbor State Harbor, Eagle Harbor Mi
Site ID:	42-201

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Concrete Wall	50%	120	LF	\$ 800	\$ 48,000
Concrete Wall Maintenance Type A	50%	120	LF	\$ 400	\$ 24,000
Total Structure Cost					\$ 72,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
20 Amp Duplex Only Electric Pedestal	100%	6	EA	\$ 3,000	\$ 18,000
Total Utilities Cost					\$ 18,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 105,000

Eagle Harbor State Harbor

Facility Owner: MDNR
 Address: Eagle Harbor State Harbor, Eagle Harbor Mi
 Site ID: 42-201

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Concrete Wall Maintenance Type A	50%	120	LF	\$ 1,050	\$ 63,000
Total Structure Cost					\$ 63,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	24000	SF	\$ 5	\$ 120,000
Parking Lot - Gravel/Unpaved	100%	22000	SF	\$ 5	\$ 110,000
Landscaping	100%	177000	SF	\$ 1	\$ 177,000
Walkways	100%	700	SF	\$ 10	\$ 7,000
Total Site-Features Cost					\$ 414,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Building I	100%	625	SF	\$ 400	\$ 250,000
Total Buildings Cost					\$ 270,000

Total Cost \$ 843,000

Total Future Value Cost \$ 1,132,922

Eagle Harbor State Harbor

Facility Owner:	MDNR
Address:	Eagle Harbor State Harbor, Eagle Harbor Mi
Site ID:	42-201

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Concrete Wall Maintenance Type A	50%	120	LF	\$ 1,400	\$ 84,000
Total Structure Cost					\$ 84,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	4700	CY	\$ 40	\$ 188,000
Total Cost				\$ 302,000
Total Future Value Cost				\$ 545,446

East Arm BAS

Facility Owner: MDNR
Address: 3730 MillRd. Grawn Mi. 49637
Site ID: A-28-033

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	280	10-20	Very Good	2	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	5	1	40	5	42	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	6 years ago	1000	-	-	-	-
100%	6'-10'						
0%	>10'						
Dredging required for 2019 boating season:			0	CY			

Site Features

Off-Street Parking			Total SF Gravel/Unpaved			Access Drive		
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material
42	38000	Replace	0	-	0	-	480	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		30000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		10	5	Concrete		Functional		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Functional



5 Year Projected Cost Estimate

East Arm BAS

Facility Owner:	MDNR
Address:	3730 MillRd. Grawn Mi. 49637
Site ID:	A-28-033

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	480	SF	\$ 10	\$ 4,800
Parking Lot - Asphalt	100%	38000	SF	\$ 10	\$ 380,000
Total Site-Features Cost					\$ 384,800
Total Cost					\$ 399,800

East Arm BAS

Facility Owner:	MDNR
Address:	3730 MillRd. Grawn Mi. 49637
Site ID:	A-28-033

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	10%	30000	SF	\$ 1	\$ 3,000
Walkways	100%	50	SF	\$ 10	\$ 500
Total Site-Features Cost					\$ 3,500

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost					\$ 23,500
Total Future Value Cost					\$ 31,582

East Arm BAS

Facility Owner:	MDNR
Address:	3730 MillRd. Grawn Mi. 49637
Site ID:	A-28-033

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	280	LF	\$ 140	\$ 39,200
Total Structure Cost					\$ 39,200

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 141,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	90%	30000	SF	\$ 1	\$ 27,000
Total Site-Features Cost					\$ 27,000

Total Cost \$ 207,200

Total Future Value Cost \$ 374,226

East Bay Hubbard Lake BAS

Facility Owner: MDNR
Address: 54 West Tollson Road
Site ID: A-01-003

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	292	-	Very Good	2	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	30	2	40	5	67	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
75	46000	Functional	0	-	0	-	5180	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	8000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	12	6	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



East Bay Hubbard Lake BAS

Facility Owner:	MDNR
Address:	54 West Tollson Road
Site ID:	A-01-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 222,000
Total Cost					\$ 222,000

East Bay Hubbard Lake BAS

Facility Owner:	MDNR
Address:	54 West Tollson Road
Site ID:	A-01-003

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	5180	SF	\$ 10	\$ 51,800
Parking Lot - Asphalt	100%	46000	SF	\$ 10	\$ 460,000
Total Site-Features Cost					\$ 511,800

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 521,800
Total Future Value Cost					\$ 701,256

East Bay Hubbard Lake BAS

Facility Owner:	MDNR
Address:	54 West Tollson Road
Site ID:	A-01-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	72	SF	\$ 10	\$ 720
Total Site-Features Cost					\$ 720

Total Cost					\$ 60,720
Total Future Value Cost					\$ 109,667

East Jordan City Marina

Facility Owner: City of East Jordan
Address: 119 Spring Street East Jordan, MI 49727
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
1350	Timber	-	4	25'	100%	30-40

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
3340	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	28	30'	100%	30-40

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
11880	Timber	Timber Frame & Timber Piles	4	60'	100%	30-40

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
3435	Traditional Timber	Floatation Docking	18	45'	100%	30-40

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	1800	32	Timber	Timber and treated pine boards

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	120	-	-	0	0	0	0	NA
Rock Revetment Shoreline	365	-	Replace	4	0	0	100	NA
Caisson	320	30-40	Functional	10	0	0	100	No

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Very Good	100 % have vacuum breakers installed
WIFI	<5	Very Good	
Flow Inducers	-	Very Good	5 Units Total 4 Additional Units Needed
Pumpout	<10	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
0 Single 30 Amp	75% Very Good
6 Twin 30 Amp	25% Functional
20 Twin 50 Amp	0% Bad

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	LF Lines over Land	LF Lines over Water	Overall Age	Overall Condition
Gasoline	Fixed	50	8	2	170	130	30+	Very Good
Tank Type		Tank Capacity		No. Tanks				
Underground Single		10,000 Gallons		2				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	1	1	40	5	21	4

Dredge

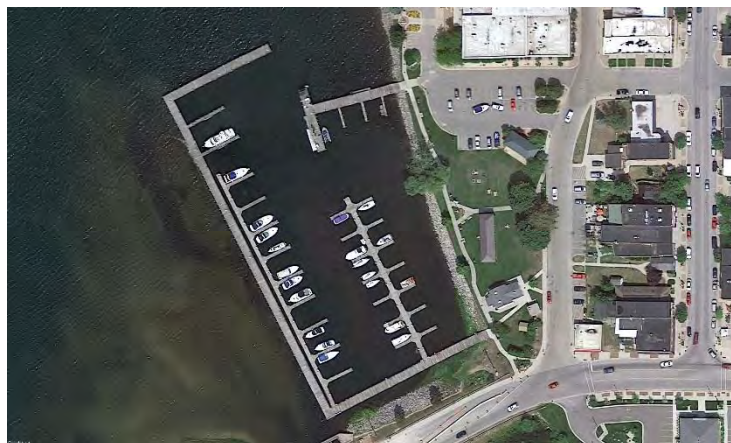
% of Navigable Water Depth	% of	Last Dredged	Avg CY removed
0%	<6'	5 years ago	5000
100%	6'-10'		
0%	>10'		

Site Features

Off-Street Parking		Total		Gravel/Unpaved		Access Drive	
Spaces	SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	SF	Material
33	14400	Functional	0	-	0	-	1000 Asphalt
On-Street Parking		Spaces	Condition	Facility Responsible?			
		10	Very Good	No			
Landscaping		SF	Condition	Facility Responsible?			
		33750	Very Good	No			
Walkways		Total LF	Avg. Width	Material		Condition	
		580	5	Concrete		Very Good	

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Restroom	1000	9	4	30	Functional	General Interior Renovations
Building 2 Type	Total SF	Toilets	Showers	Age	Condition	Improvements Needed
Fuel Service	100	0	0	32	Functional	Roof Replacement, General Exterior Renovations



5 Year Projected Cost Estimate

East Jordan City Marina

Facility Owner:	City of East Jordan
Address:	119 Spring Street East Jordan, MI 49727
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Floating Dock	100%	3340	SF	\$ 75	\$ 250,500
Fixed Head Pier	100%	11880	SF	\$ 60	\$ 712,800
Floating Head Pier	100%	3435	SF	\$ 75	\$ 257,625
Total Dock Cost					\$ 1,220,925

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	54	SLIP	\$ 5,000	\$ 270,000
Flow Inducers	100%	5	EA	\$ 1,000	\$ 5,000
Additional Flow Inducers	100%	4	EA	\$ 1,000	\$ 4,000
Total Utilities Cost					\$ 279,000
Total Cost					\$ 1,531,925

East Jordan City Marina

Facility Owner: City of East Jordan
Address: 119 Spring Street East Jordan, MI 49727
Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Single 30 Amp Electric Pedestal	25%	6	EA	\$ 3,000	\$ 4,500
Twin 30 Amp Electric Pedestal	25%	20	EA	\$ 3,000	\$ 15,000
Twin 50 Amp Electric Pedestal	25%	2	EA	\$ 3,500	\$ 1,750
Potable Water	50%	54	SLIP	\$ 800	\$ 21,600
Flow Inducers	100%	9	EA	\$ 1,000	\$ 9,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	300	LF	\$ 100	\$ 30,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 311,850

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	1000	SF	\$ 10	\$ 10,000
Parking Lot - Asphalt	100%	14400	SF	\$ 10	\$ 144,000
Landscaping	10%	33750	SF	\$ 1	\$ 3,375
Walkways	80%	2900	SF	\$ 10	\$ 23,200
Total Site-Features Cost					\$ 180,575

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 1	100%	1400	SF	\$ 400	\$ 560,000
Total Buildings Cost					\$ 560,000

Total Cost \$ 1,097,425
Total Future Value Cost \$ 1,474,847

East Jordan City Marina

Facility Owner: City of East Jordan
Address: 119 Spring Street East Jordan, MI 49727
Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	54	SLIP	\$ 3,500	\$ 189,000
Twin 30 Amp Electric Pedestal	75%	20	EA	\$ 3,000	\$ 45,000
Potable Water	50%	54	SLIP	\$ 800	\$ 21,600
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	300	LF	\$ 100	\$ 30,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 574,350

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Total Boat Launch & Paddle Sport Access Cost					\$ 224,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	90%	33750	SF	\$ 1	\$ 30,375
Walkways	20%	2900	SF	\$ 10	\$ 5,800
Total Site-Features Cost					\$ 36,175

Total Cost \$ 834,525

Total Future Value Cost \$ 1,507,245

East Lake Village Park BAS

Facility Owner: #N/A
Address: 230 Gillespie Road Eastlake, MI 49626
Site ID: A-51-026

Utilities

Type	Age	Condition	Additional Information
Potable Water	2	Very Good	100 % have vacuum breakers installed

Electric Shore Power

Utility Pedestals	% Condition	
10 Single 30 Amp	100% Very Good	
	0% Functional	
	0% Bad	
Compliant with Electrical Shock Drowning Ground Fault Protection Standards		Yes

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	0	1	0	0	8	8



East Lake Village Park BAS

Facility Owner: MDNR
Address: 230 Gillespie Road Eastlake, MI 49626
Site ID: A-51-026

There are no costs projected for this site within this time period

East Lake Village Park BAS

Facility Owner:	MDNR
Address:	230 Gillespie Road Eastlake, MI 49626
Site ID:	A-51-026

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000
Total Cost					\$ 45,000
Total Future Value Cost					\$ 60,476

East Lake Village Park BAS

Facility Owner:	MDNR
Address:	230 Gillespie Road Eastlake, MI 49626
Site ID:	A-51-026

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Single 30 Amp Electric Pedestal	100%	10	EA	\$ 3,000	\$ 30,000
Total Utilities Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Gravel/Unpaved	100%	49200	SF	\$ 5	\$ 246,000
Landscaping	100%	117800	SF	\$ 1	\$ 117,800
Total Site-Features Cost					\$ 363,800

Total Cost					\$ 393,800
Total Future Value Cost					\$ 711,247

East Tawas BAS

Facility Owner: MDNR
Address: 504 East Bay Street East Tawas MI 48730
Site ID: A-35-013

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	350	40+	Very Good	7	100	0	0	NA
Rock Revetment Offshore	200	40+	Very Good	7	100	0	0	Yes

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Cast-In-Place Concrete	Skid	10	2	40	5	74	4

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
75	86000	Very Good	0	-	0	-	0	-

Landscaping	SF	Condition	Facility Responsible?
	43560	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	250	4	Concrete	Functional



5 Year Projected Cost Estimate

East Tawas BAS

Facility Owner:	MDNR
Address:	504 East Bay Street East Tawas MI 48730
Site ID:	A-35-013

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type B	100%	350	LF	\$ 250	\$ 87,500
Rock Revetment Offshore Maintenance Type B	100%	200	LF	\$ 1,250	\$ 250,000
Total Structure Cost					\$ 337,500

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 367,500

East Tawas BAS

Facility Owner:	MDNR
Address:	504 East Bay Street East Tawas MI 48730
Site ID:	A-35-013

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type B	100%	350	LF	\$ 700	\$ 245,000
Rock Revetment Offshore Maintenance Type B	100%	200	LF	\$ 700	\$ 140,000
Total Structure Cost					\$ 385,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 70	\$ 448,000
Total Boat Launch & Paddle Sport Access Cost					\$ 448,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	100%	43560	SF	\$ 1	\$ 43,560
Walkways	100%	1000	SF	\$ 10	\$ 10,000
Total Site-Features Cost					\$ 53,560

Total Cost	\$ 886,560
Total Future Value Cost	\$ 1,191,463

East Tawas BAS

Facility Owner:	MDNR
Address:	504 East Bay Street East Tawas MI 48730
Site ID:	A-35-013

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	350	LF	\$ 1,050	\$ 367,500
Rock Revetment Offshore Maintenance Type B	100%	200	LF	\$ 1,050	\$ 210,000
Total Structure Cost					\$ 577,500

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	86000	SF	\$ 10	\$ 860,000
Total Site-Features Cost					\$ 860,000

Total Cost	\$ 1,497,500
-------------------	---------------------

Total Future Value Cost	\$ 2,704,652
--------------------------------	---------------------

East Tawas State Harbor

Facility Owner: MDNR
Address: 113 Newman street East Tawas Mi 48730
Site ID: 35-201

Docks

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
21535	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	14	30'	100%	<10
			56	35'	0%	10-20
			32	40'	0%	20-30
			2	45'	0%	30-40
			14	50'	0%	40+
			8	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Floating Dock	1200	1	-	Traditional Timber by Floatation Docking Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	200	<10	Very Good	8	100	0	0	NA
Caisson	2000	40+	Very Good	12	0	100	0	Yes
Floating Wave Attenuator	200	<10	Very Good	10	100	0	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	<10	Very Good	100 % have vacuum breakers installed
Dry Standpipe Fire System	<10	Very Good	
Flow Inducers	-	Very Good	47 Units Total 10 Additional Units Needed
Pumpout	<10	-	2 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
42 Twin 30 Amp	100% Very Good
9 30/ 50 Amp	0% Functional
12 Twin 50 Amp	0% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Harbor Wall	110	20	2	500	120	<10	Very Good
Tank Type		Tank Capacity	No. Tanks					
Underground Single Product		10000 Gallons	1					
Underground Single Product		15000 Gallons	1					

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged
0%	<6'	3 years ago	Unknown
50%	6'-10'		No
50%	>10'		
Dredging required for 2019 boating season:			0 CY

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive SF	Material
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved			
212	100	Functional	0	-	0	-	500	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		30000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		600	5	Concrete		Very Good		

Buildings

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Restroom, and Harbor Store	2800	18	8	15	Very Good	Roof Replacement and General Interior Renovations



East Tawas State Harbor

Facility Owner:	MDNR
Address:	113 Newman street East Tawas Mi 48730
Site ID:	35-201

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Additional Flow Inducers	100%	10	EA	\$ 1,000	\$ 10,000
Total Utilities Cost					\$ 10,000
Total Cost					\$ 10,000

East Tawas State Harbor

Facility Owner:	MDNR
Address:	113 Newman street East Tawas Mi 48730
Site ID:	35-201

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Flow Inducers	100%	57	EA	\$ 1,000	\$ 57,000
Total Utilities Cost					\$ 57,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	500	SF	\$ 10	\$ 5,000
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Landscaping	100%	30000	SF	\$ 1	\$ 30,000
Total Site-Features Cost					\$ 36,000

Total Cost \$ 93,000

Total Future Value Cost \$ 124,984

East Tawas State Harbor

Facility Owner: MDNR
Address: 113 Newman street East Tawas Mi 48730
Site ID: 35-201

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Floating Dock	100%	21535	SF	\$ 75	\$ 1,615,125
Broadside Floating Dock	100%	1200	SF	\$ 75	\$ 90,000
Total Dock Cost					\$ 1,705,125

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Floating Wave Attenuator	100%	200	LF	\$ 1,500	\$ 300,000
Total Structure Cost					\$ 300,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	126	SLIP	\$ 3,500	\$ 441,000
Twin 30 Amp Electric Pedestal	100%	42	EA	\$ 3,000	\$ 126,000
30/50 Amp Electric Pedestal	100%	9	EA	\$ 3,500	\$ 31,500
Twin 50 Amp Electric Pedestal	100%	12	EA	\$ 3,500	\$ 42,000
Potable Water	100%	126	SLIP	\$ 800	\$ 100,800
Dry Standpipe Fire Suppression System	100%	126	SLIP	\$ 800	\$ 100,800
Fuel Dock	100%	2200	SF	\$ 100	\$ 220,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	620	LF	\$ 100	\$ 62,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Pumpout	100%	2	EA	\$ 35,000	\$ 70,000
Total Utilities Cost					\$ 1,424,100

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	3000	SF	\$ 10	\$ 30,000
Total Site-Features Cost					\$ 30,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building I	100%	2800	SF	\$ 400	\$ 1,120,000
Total Buildings Cost					\$ 1,120,000

Total Cost \$ 4,579,225
Total Future Value Cost \$ 8,270,590

Ecorse Municipal BAS

Facility Owner: City of Ecorse
Address: 4633 W Jefferson Avenue, Ecorse, MI 48229
Site ID: A-82-004

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	110	-	Replace	0	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Cast-In-Place Concrete	Fixed	50	1	75	40	36	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
43	36000	Replace	0	-	0	-	3000	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		5000	Functional	Yes				



Ecorse Municipal BAS

Facility Owner:	City of Ecorse
Address:	4633 W Jefferson Avenue, Ecorse, MI 48229
Site ID:	A-82-004

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Shoreline	75%	110	LF	\$ 1,000	\$ 82,500
Total Structure Cost					\$ 82,500

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 70	\$ 112,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 127,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Parking Lot - Asphalt	100%	36000	SF	\$ 10	\$ 360,000
Total Site-Features Cost					\$ 360,000
Total Cost					\$ 569,500

Ecorse Municipal BAS

Facility Owner:	City of Ecorse
Address:	4633 W Jefferson Avenue, Ecorse, MI 48229
Site ID:	A-82-004

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	3000	SF	\$ 10	\$ 30,000
Landscaping	100%	5000	SF	\$ 1	\$ 5,000
Total Site-Features Cost					\$ 35,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 1	100%	300	SF	\$ 400	\$ 120,000
Total Buildings Cost					\$ 120,000

Total Cost					\$ 155,000
Total Future Value Cost					\$ 208,307

Ecorse Municipal BAS

Facility Owner: City of Ecorse
Address: 4633 W Jefferson Avenue, Ecorse, MI 48229
Site ID: A-82-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000
Total Future Value Cost					\$ 54,183

Elk Rapids Edward C. Grace Memorial Harbor

Facility Owner: Village of elk rapids
Address: 129 Cedar st, elk rapids Mi
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
24940	Timber	Steel Frame & Steel Piles	30	20'	10%	<10
			30	30'	0%	10-20
		100	35'	90%	20-30	
		40	45'	0%	30-40	
		50	60'	0%	40+	

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
2700	Timber	Fixed finger piers along 350 LF of Harbor Wall and 350 LF of Shoreline	30	30'	0%	<10
			10	40'	0%	10-20
			10	50'	100%	20-30
					0%	30-40
					0%	40+

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	0	20-30	Replace	6	100	0	0	NA
Concrete Wall	75	-	-	0	0	0	0	NA
Rock Revetment Offshore	25	40+	Very Good	10	100	0	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	10-20	Very Good	100 % have vacuum breakers installed
WIFI	<5	Functional	
Wet Fire Hydrant System	10-20	Very Good	
Flow Inducers	-	Functional	20 Units Total
Pumpout	<10	-	2 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
130 30/ 50 Amp	100% Very Good
	0% Functional
	0% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Harbor Wall	75	16	4	50	0	<10	Very Good
Tank Type		Tank Capacity		No. Tanks				
Underground Dual Product		4000 Gallons		1				
Underground Dual Product		8000 Gallons		1				

Boat Launch

Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Fixed	30	2	30	30	0	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged						
0%	<6'	3 years ago	4000	No					
25%	6'-10'								
75%	>10'								
Dredging required for 2019 boating season:				2500	CY				

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
150	100	Replace	0	-	0	-	128	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		40000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		5000	12	Unit Pavers		Very Good		

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
1	30	Functional	0	-				
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Boater Lounge, Restroom, and Fuel Services Building	500	11	9	20	Functional	Mechanical Updates, General Interior & Exterior Renovations		



Elk Rapids Edward C. Grace Memorial Harbor

Facility Owner: Village of elk rapids
 Address: 129 Cedar st, elk rapids Mi
 Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Offshore Maintenance Type B	100%	25	LF	\$ 1,250	\$ 31,250
Total Structure Cost					\$ 31,250

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Flow Inducers	100%	20	EA	\$ 1,000	\$ 20,000
Total Utilities Cost					\$ 20,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 70	\$ 448,000
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 478,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	128	SF	\$ 10	\$ 1,280
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Total Site-Features Cost					\$ 2,280
Total Cost					\$ 531,530

Elk Rapids Edward C. Grace Memorial Harbor

Facility Owner: Village of elk rapids
Address: 129 Cedar st, elk rapids Mi
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Fixed Dock	90%	24940	SF	\$ 75	\$ 1,683,450
Wall/Shoreline Head Pier Fixed Fingers	100%	2700	SF	\$ 70	\$ 189,000
Total Dock Cost					\$ 1,897,390

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Offshore Maintenance Type B	100%	25	LF	\$ 700	\$ 17,500
Total Structure Cost					\$ 17,500

Note: NR = Not Responsible

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Flow Inducers	100%	20	EA	\$ 1,000	\$ 20,000
Total Utilities Cost					\$ 25,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	0%	0	EA	\$ 30,000	\$ -
Total Boat Launch & Paddle Sport Access Cost					\$ -

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Building I	100%	500	SF	\$ 400	\$ 200,000
Total Buildings Cost					\$ 215,000

Total Cost \$ 2,154,890

Total Future Value Cost \$ 2,895,992

Elk Rapids Edward C. Grace Memorial Harbor

Facility Owner: Village of elk rapids
Address: 129 Cedar st, elk rapids Mi
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Offshore Maintenance Type B	100%	25	LF	\$ 1,050	\$ 26,250
Total Structure Cost					\$ 26,250

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	300	SLIP	\$ 3,500	\$ 1,050,000
30/50 Amp Electric Pedestal	100%	130	EA	\$ 3,500	\$ 455,000
Potable Water	100%	300	SLIP	\$ 800	\$ 240,000
Wet Fire Suppression System	100%	300	SLIP	\$ 1,000	\$ 300,000
Fuel Dock	100%	1200	SF	\$ 150	\$ 180,000
Fuel Dispenser	100%	4	EA	\$ 15,000	\$ 60,000
Fuel Lines	100%	50	LF	\$ 100	\$ 5,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Underground Dual Product Tank	100%	2	EA	\$ 120,000	\$ 240,000
Pumpout	100%	2	EA	\$ 35,000	\$ 70,000
Total Utilities Cost					\$ 2,800,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	100%	40000	SF	\$ 1	\$ 40,000
Walkways	100%	60000	SF	\$ 30	\$ 1,800,000
Total Site-Features Cost					\$ 1,840,000

Total Cost \$ 4,726,250

Total Future Value Cost \$ 8,536,133

Elmwood Township Marina - Greilickville

Facility Owner: Elmwood Township
Address: 13051 W Bayshore Drive Traverse City Mi 49684
Site ID: -

Docks

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
22245	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	77	30'	66%	10-20
			24	35'	34%	20-30
			67	40'		

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	550	30-40	-	15	100	0	0	NA
Rock Revetment Offshore	780	20-30	Very Good	12	100	0	0	Yes
Steel Sheet Pile Single	1070	20-30	Very Good	8	100	0	0	Yes
Caisson	85	20-30	Very Good	8	-	-	-	-

Utilities

Type	Age	Condition	Additional Information
Potable Water	10-20	Very Good	100 % have vacuum breakers installed
WIFI	<5	Very Good	
Dry Standpipe Fire System	10-20	Very Good	
Wet Fire Hydrant System	10-20	Very Good	
Ice Suppression System	10-20	Functional	12 Units Total
Air Distribution Lines	10-20	Very Good	
Flow Inducers	-	Very Good	12 Units Total
Pumpout	10-20	-	2 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
120 Single 30 Amp	100% Very Good
52 30/ 50 Amp	0% Functional
	0% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards Yes

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
6	Cast-In-Place	Fixed	30	1	95	5	132	132
	Concrete	Floating	10	2	95	5		

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA
YES	YES	10%

Boat Storage

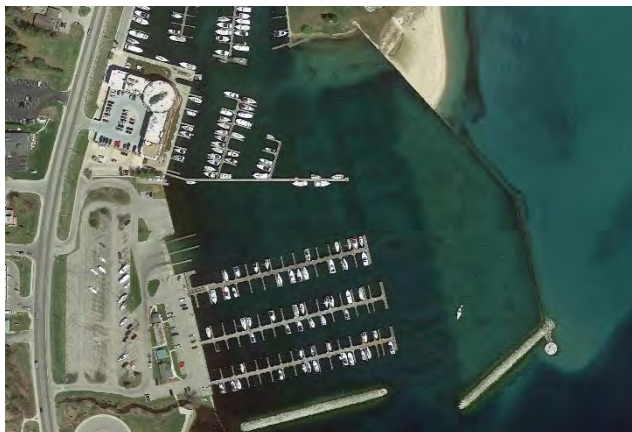
Hull Wash Down	Travel Lift	Hydraulic Trailer	Summer Storage SF	Indoor Heated SF	Winter Indoor SF	Winter Outdoor SF
No	No	No	0	0	0	50000

Site Features

Off-Street Parking		Asphalt Condition	Total		Concrete Condition	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt		SF Concrete	SF Gravel/Unpaved			SF	Material
132	100	Functional	0	-	0	-	7200	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		6000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		500	6	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets			
Amount	Age	Condition	Amount	Condition		
1	25	Very Good	0	-		
Building 1 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	450	0	0	4	Very Good	None
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom, Harbor Store	1300	10	0	48	Functional	Roof Replacement, Mechanical and ADA Upgrades, and General Interior renovation. It is being renovated this year.
Building 3 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom, Laundry	1200	9	8	31	Functional	Roof Replacement, Mechanical and ADA Upgrades, and General Interior renovation.



Elmwood Township Marina - Greilickville

Facility Owner: Elmwood Township
Address: 13051 W Bayshore Drive Traverse City Mi 49684
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Floating Dock	34%	22245	SF	\$ 75	\$ 567,248
Total Dock Cost					\$ 567,248

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	9600	SF	\$ 70	\$ 672,000
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Paddle Sport Launch Access	0%	0	SF	\$ -	\$ -
Total Boat Launch & Paddle Sport Access Cost					\$ 702,000
Total Cost					\$ 1,269,248

Elmwood Township Marina - Greilickville

Facility Owner: Elmwood Township
 Address: 13051 W Bayshore Drive Traverse City Mi 49684
 Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Floating Dock	66%	22245	SF	\$ 75	\$ 1,101,128
Total Dock Cost					\$ 1,101,128

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Offshore Maintenance Type B	100%	780	LF	\$ 140	\$ 109,200
Steel Sheet Pile Single Wall Breakwater	100%	1070	LF	\$ 1,600	\$ 1,712,000
Total Structure Cost					\$ 1,821,200

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Ice Suppression Compressor System	100%	168	SLIP	\$ 1,800	\$ 302,400
Flow Inducers	100%	12	EA	\$ 1,000	\$ 12,000
Pumpout	100%	2	EA	\$ 35,000	\$ 70,000
Total Utilities Cost					\$ 384,400

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	9600	SF	\$ 70	\$ 672,000
Total Boat Launch & Paddle Sport Access Cost					\$ 687,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	7200	SF	\$ 10	\$ 72,000
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Walkways	5%	3000	SF	\$ 10	\$ 1,500
Total Site-Features Cost					\$ 74,500

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Building 2	100%	1300	SF	\$ 400	\$ 520,000
Building 3	100%	1200	SF	\$ 400	\$ 480,000
Total Buildings Cost					\$ 1,015,000
Total Cost					\$ 5,083,228
Total Future Value Cost					\$ 6,831,433

Elmwood Township Marina - Greilickville

Facility Owner: Elmwood Township
Address: 13051 W Bayshore Drive Traverse City Mi 49684
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Offshore Maintenance Type B	100%	780	LF	\$ 350	\$ 273,000
Total Structure Cost					\$ 273,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	168	SLIP	\$ 3,500	\$ 588,000
Single 30 Amp Electric Pedestal	100%	120	EA	\$ 3,000	\$ 360,000
30/50 Amp Electric Pedestal	100%	52	EA	\$ 3,500	\$ 182,000
Potable Water	100%	168	SLIP	\$ 800	\$ 134,400
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Dry Standpipe Fire Suppression System	100%	168	SLIP	\$ 800	\$ 134,400
Wet Fire Suppression System	100%	168	SLIP	\$ 1,000	\$ 168,000
Total Utilities Cost					\$ 1,571,800

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	95%	3000	SF	\$ 10	\$ 28,500
Total Site-Features Cost					\$ 28,500

Total Cost \$ 1,873,300
Total Future Value Cost \$ 3,383,388

Escanaba Municipal Marina

Facility Owner: City of Escanaba
Address: 17 Beaumier Way Escanaba
Site ID: -

Docks

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
17789	Steel Framing	NA	12	25'	30%	<10
			36	30'	0%	10-20
			14	35'	0%	20-30
			20	40'	70%	30-40
			24	45'	0%	40+
			10	60'		

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
6300	Steel Framing	NA	24	35'	100%	30-40

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	2400	19	Concrete	Timber Fendering
Fixed Crib Dock	4000	50	Concrete	-

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Steel Sheet Pile Wall	1300	20-30	-	8	100	0	0
Rock Revetment Shoreline	1500	10-20	Functional	10	100	0	0

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Functional	100 % have vacuum breakers installed
WIFI	5+	Functional	
Dry Standpipe Fire System	<10	Very Good	
Flow Inducers	-	Functional	4 Units Total 0 Additional Units Needed
Pumpout	10-20	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
0 Single 30 Amp	75% Very Good
55 Twin 30 Amp	25% Functional
22 30/ 50 Amp	0% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? Yes

Fuel System

Fuel Type	Harbor Wall	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	I	80	14	2	50	50	30+	Functional
Tank Type		Tank Capacity	No. Tanks					
Underground Single Product		4,000 Gallons	2					

Boat Launch

Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete	Skid	20	1	25	8	20	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged
0%	<6'	5 years ago	No
50%	6'-10'		
50%	>10'		

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Total Spaces	Total SF Asphalt						SF	Material
60	16400	Functional	0	-	0	-	720	Asphalt
On-Street Parking		Spaces	Condition	Facility Responsible?				
		20	Functional	No				
Landscaping		SF	Condition	Facility Responsible?				
		100000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		1500	8	Concrete	Very Good			

Buildings

Picnic Shelters			Vault Toilets			Rented
Amount	Age	Condition	Amount	Condition		
0	0	-	0	-		
Building 1 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Boater Lounge, Restroom, Laundry, Harbor Store, and Fuel Service Building	10000	10	8	19	Functional	General Interior and Exterior Renovations
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Harbor Store	800	0	0	40	Functional	General Interior and Exterior Renovations



Escanaba Municipal Marina

Facility Owner:	City of Escanaba
Address:	17 Beaumier Way Escanaba
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Floating Dock	70%	17789	SF	\$ 55	\$ 684,877
Floating Head Pier	100%	6300	SF	\$ 55	\$ 346,500
Total Dock Cost					\$ 1,031,377

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Flow Inducers	75%	4	EA	\$ 1,000	\$ 3,000
Total Utilities Cost					\$ 3,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 239,000
Total Cost					\$ 1,273,377

Escanaba Municipal Marina

Facility Owner: City of Escanaba
Address: 17 Beaumier Way Escanaba
Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Twin 30 Amp Electric Pedestal	25%	55	EA	\$ 3,000	\$ 41,250
30/50 Amp Electric Pedestal	25%	22	EA	\$ 3,500	\$ 19,250
Potable Water	75%	140	SLIP	\$ 800	\$ 84,000
Flow Inducers	100%	4	EA	\$ 1,000	\$ 4,000
Fuel Dock	100%	1120	SF	\$ 150	\$ 168,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	100	LF	\$ 100	\$ 10,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 591,500

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	16400	SF	\$ 10	\$ 164,000
Walkways	50%	12000	SF	\$ 10	\$ 60,000
Total Site-Features Cost					\$ 224,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 2	100%	400	SF	\$ 400	\$ 160,000
Total Buildings Cost					\$ 160,000

Total Cost \$ 1,185,500

Total Future Value Cost \$ 1,593,213

Escanaba Municipal Marina

Facility Owner: City of Escanaba
Address: 17 Beaumier Way Escanaba
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Floating Dock	30%	17789	SF	\$ 55	\$ 293,519
Broadside Fixed Crib	100%	4000	SF	\$ 150	\$ 600,000
Total Dock Cost					\$ 893,519

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	140	SLIP	\$ 3,500	\$ 490,000
Twin 30 Amp Electric Pedestal	75%	55	EA	\$ 3,000	\$ 123,750
30/50 Amp Electric Pedestal	75%	22	EA	\$ 3,500	\$ 57,750
Potable Water	25%	140	SLIP	\$ 800	\$ 28,000
Dry Standpipe Fire Suppression System	100%	140	SLIP	\$ 800	\$ 112,000
Fuel Dock	100%	1120	SF	\$ 150	\$ 168,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	100	LF	\$ 100	\$ 10,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 1,224,500

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	720	SF	\$ 10	\$ 7,200
Landscaping	100%	100000	SF	\$ 1	\$ 100,000
Walkways	50%	12000	SF	\$ 10	\$ 60,000
Total Site-Features Cost					\$ 167,200

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building I	100%	3000	SF	\$ 400	\$ 1,200,000
Total Buildings Cost					\$ 1,200,000

Total Cost	\$ 4,040,219
Total Future Value Cost	\$ 7,297,084

Fair Haven BAS

Facility Owner: MDNR
Address: 8111 Dixie Highway Fair Haven, Mi 48023
Site ID: A-74-002

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	220	-	Very Good	3	100	0	0	NA
Rock Revetment Offshore	285	30-40	Very Good	4	100	0	0	Yes

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
3	Precast Concrete Planks	Skid	5	2	40	5	50	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged
100% <6'	5 years ago	40	No
0% 6'-10'			
0% >10'			
Dredging required for 2019 boating season:			0 CY

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
100	48000	Very Good	0	-	0	-	0	-
Landscaping		SF	Condition	Facility Responsible?				
		16520	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		90	5	Concrete	Very Good			

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
0	0	-	2	Very Good				
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Office	72	0	0	15	Very Good	ADA Upgrades and General Interior Renovations		



Fair Haven BAS

Facility Owner:	MDNR
Address:	8111 Dixie Highway Fair Haven, Mi 48023
Site ID:	A-74-002

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type B	100%	220	LF	\$ -	\$ -
Rock Revetment Offshore Maintenance Type B	100%	285	LF	\$ 500	\$ 142,500
Total Structure Cost					\$ 142,500

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Walkways	10%	450	SF	\$ 10	\$ 450
Total Site-Features Cost					\$ 450
Total Cost					\$ 172,950

Fair Haven BAS

Facility Owner:	MDNR
Address:	8111 Dixie Highway Fair Haven, Mi 48023
Site ID:	A-74-002

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Offshore Maintenance Type B	100%	285	LF	\$ 350	\$ 99,750
Total Structure Cost					\$ 99,750

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	10%	450	SF	\$ 10	\$ 450
Total Site-Features Cost					\$ 450

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost \$ 120,200

Total Future Value Cost \$ 161,539

Fair Haven BAS

Facility Owner:	MDNR
Address:	8111 Dixie Highway Fair Haven, Mi 48023
Site ID:	A-74-002

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Offshore Maintenance Type B	100%	285	LF	\$ 700	\$ 199,500
Total Structure Cost					\$ 199,500

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	4800	SF	\$ 30	\$ 144,000
Launch Piers	100%	2	EA	\$ 45,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 234,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	48000	SF	\$ 10	\$ 480,000
Walkways	80%	450	SF	\$ 10	\$ 3,600
Total Site-Features Cost					\$ 483,600

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building I	100%	72	SF	\$ 400	\$ 28,800
Total Buildings Cost					\$ 28,800

Total Cost	\$ 945,900
Total Future Value Cost	\$ 1,708,401

Fayette State Harbor

Facility Owner: MDNR
Address: 4785 II Road, Garden, MI 49835
Site ID: 21-201

Docks

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
4178	Traditional Timber	Floatation Docking	3	40'	100%	<10
			4	45'		
			8	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Floating Dock	280	3	-	Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Rock Revetment Shoreline	400	40+	Functional	3	100	0	0

Utilities

Type	Age	Condition	Additional Information			
Potable Water	<10	Very Good	100 % have vacuum breakers installed			
WIFI	<5	Very Good				
Dry Standpipe Fire System	<10	Very Good				
Flow Inducers	-	Very Good	15 Units Total	0	Additional Units Needed	

Electric Shore Power

Utility Pedestals	% Condition
9 30/ 50 Amp	100% Very Good
Compliant with Electrical Shock Drowning Ground Fault Protection Standards	
	Yes

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged
0% <6'	15 years	400	No
10% 6'-10'	ago		
90% >10'			
Dredging required for 2019 boating season:			0 CY

Site Features

Landscaping	SF	Condition	Facility Responsible?	
	6000	Very Good	Yes	
Walkways	Total LF	Avg. Width	Material	Condition
	380	8	Gravel	Very Good

Buildings

Vault Toilets	
Amount	Condition
2	Functional



5 Year Projected Cost Estimate

Fayette State Harbor

Facility Owner:	MDNR
Address:	4785 II Road, Garden, MI 49835
Site ID:	21-201

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type A	100%	400	LF	\$ 450	\$ 180,000
Total Structure Cost					\$ 180,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Flow Inducers	7%	15	EA	\$ 1,000	\$ 1,050
Total Utilities Cost					\$ 1,050
Total Cost					\$ 181,050

Fayette State Harbor

Facility Owner:	MDNR
Address:	4785 II Road, Garden, MI 49835
Site ID:	21-201

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	100%	400	LF	\$ 945	\$ 378,000
Total Structure Cost					\$ 378,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Flow Inducers	100%	15	EA	\$ 1,000	\$ 15,000
Total Utilities Cost					\$ 15,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	25%	6000	SF	\$ 1	\$ 1,500
Walkways	10%	3040	SF	\$ 5	\$ 1,520
Total Site-Features Cost					\$ 3,020

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost	\$ 416,020
Total Future Value Cost	\$ 559,096

Munising Bayshore Marina

Facility Owner: City of Munising
 Address: 355 Elm St. Munising, MI 498962
 Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Floating Dock	100%	3636	SF	\$ 75	\$ 272,700
Total Dock Cost					\$ 272,700

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	89	SLIP	\$ 3,500	\$ 311,500
30/50 Amp Electric Pedestal	75%	32	EA	\$ 3,500	\$ 84,000
Potable Water	100%	89	SLIP	\$ 800	\$ 71,200
Fuel Dock	100%	640	SF	\$ 70	\$ 44,800
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Fuel Lines	100%	100	LF	\$ 100	\$ 10,000
Underground Single Product Tank	100%	1	EA	\$ 100,000	\$ 100,000
Pumpout	100%	3	EA	\$ 35,000	\$ 105,000
Total Utilities Cost					\$ 741,500

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	3200	SF	\$ 10	\$ 32,000
Total Site-Features Cost					\$ 32,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Total Buildings Cost					\$ 15,000

Total Cost	\$ 1,151,200
Total Future Value Cost	\$ 2,079,195

Ferry Beach BAS

Facility Owner: City of Charlevoix
Address: 224 Ferry Ave, Charlevoix, MI 49720
Site ID: A-15-023

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	215	-	-	0	0	0	0	NA
Floating Wave Attenuator	0	-	-	20	100	0	0	Yes

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Cast-In-Place Concrete	Skid	30	4	56	4	95	2

Site Features

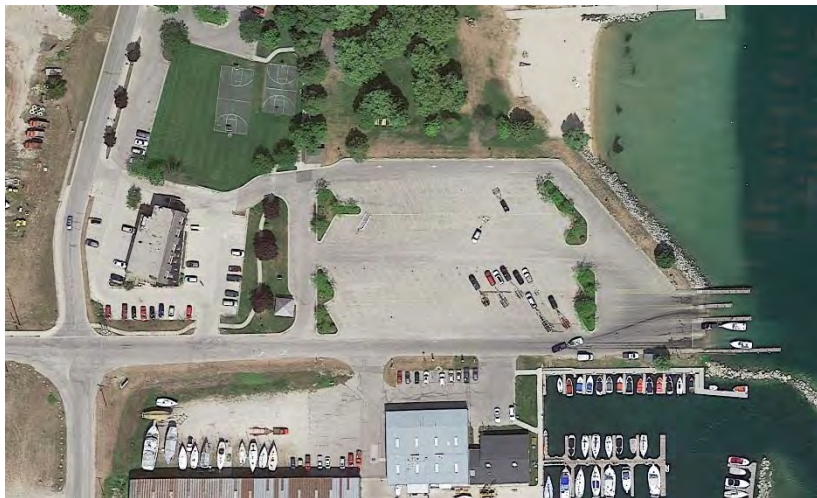
Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
96	90000	Replace	0	-	0	-	0	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	6000	-	No

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
2	Functional



Ferry Beach BAS

Facility Owner:	City of Charlevoix
Address:	224 Ferry Ave, Charlevoix, MI 49720
Site ID:	A-15-023

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	100%	136	LF	\$ 350	\$ 47,600
Total Structure Cost					\$ 47,600

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 70	\$ 448,000
Launch Piers	100%	4	EA	\$ 15,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 508,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Parking Lot - Asphalt	100%	90000	SF	\$ 10	\$ 900,000
Total Site-Features Cost					\$ 900,000
Total Cost					\$ 1,455,600

Ferry Beach BAS

Facility Owner:	City of Charlevoix
Address:	224 Ferry Ave, Charlevoix, MI 49720
Site ID:	A-15-023

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	100%	136	LF	\$ 700	\$ 95,200
Total Structure Cost					\$ 95,200

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	100%	6000	SF	\$ 1	\$ 6,000
Total Site-Features Cost					\$ 6,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Building I	100%	100	SF	\$ 400	\$ 40,000
Total Buildings Cost					\$ 60,000

Total Cost \$ 161,200

Total Future Value Cost \$ 216,639

Ferry Beach BAS

Facility Owner:	City of Charlevoix
Address:	224 Ferry Ave, Charlevoix, MI 49720
Site ID:	A-15-023

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	100%	136	LF	\$ 1,050	\$ 142,800
Total Structure Cost					\$ 142,800

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	4	EA	\$ 30,000	\$ 120,000
Total Boat Launch & Paddle Sport Access Cost					\$ 120,000

Total Cost					\$ 262,800
Total Future Value Cost					\$ 474,646

Fillion Road BAS

Facility Owner: MDNR
Address: -
Site ID: A-32-004

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	25	1	30	5	41	36

Site Features

Off-Street Parking			Total			Gravel/Unpaved		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Condition	SF	Material	
41	66000	Replace	0	-	0	-	3000	Asphalt	
Landscaping		SF	Condition	Facility Responsible?					
		36000	Functional	Yes					
Walkways		Total LF	Avg. Width	Material		Condition			
		25	6	Concrete		Very Good			

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



5 Year Projected Cost Estimate

Fillion Road BAS

Facility Owner: MDNR
 Address: -
 Site ID: A-32-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 239,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	3000	SF	\$ 10	\$ 30,000
Parking Lot - Asphalt	100%	66000	SF	\$ 10	\$ 660,000
Landscaping	40%	36000	SF	\$ 1	\$ 14,400
Total Site-Features Cost					\$ 704,400
Total Cost					\$ 943,400

Fillion Road BAS

Facility Owner:	MDNR
Address:	-
Site ID:	A-32-004

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	60%	36000	SF	\$ 1	\$ 21,600
Walkways	10%	150	SF	\$ 10	\$ 150
Total Site-Features Cost					\$ 21,750

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 31,750
Total Future Value Cost					\$ 42,669

Fillion Road BAS

Facility Owner: MDNR
 Address: -
 Site ID: A-32-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	90%	150	SF	\$ 10	\$ 1,350
Total Site-Features Cost					\$ 1,350

Total Cost					\$ 31,350
Total Future Value Cost					\$ 56,622

First Street BAS

Facility Owner: City of Manistee
Address: -
Site ID: A-51-027

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	1345	-	-	-	-	-	-	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	2	-	100 % have vacuum breakers installed
Wet Fire Hydrant System	1	-	

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
16	Cast-In-Place Concrete	Skid	30	8	38	4	250	0

Site Features

Off-Street Parking			Total Concrete	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	SF Concrete	Concrete Condition	SF Unpaved	SF	Material
0	350000	Replace	0	-	0	-	2250 Asphalt

Landscaping	SF	Condition	Facility Responsible?
	100000	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	700	5	Concrete	Very Good

Buildings

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Fish Cleaning Station and Restroom	800	2	0	6	Very Good	None



First Street BAS

Facility Owner: City of Manistee
 Address: 0
 Site ID: A-51-027

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	25600	SF	\$ 70	\$ 1,792,000
Launch Piers	100%	8	EA	\$ 15,000	\$ 120,000
Total Boat Launch & Paddle Sport Access Cost					\$ 1,912,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Parking Lot - Asphalt	100%	350000	SF	\$ 10	\$ 3,500,000
Total Site-Features Cost					\$ 3,500,000
Total Cost					\$ 5,412,000

First Street BAS

Facility Owner: City of Manistee
 Address: -
 Site ID: A-51-027

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	2250	SF	\$ 10	\$ 22,500
Landscaping	100%	100000	SF	\$ 1	\$ 100,000
Total Site-Features Cost					\$ 122,500
Total Cost					\$ 122,500
Total Future Value Cost					\$ 164,630

First Street BAS

Facility Owner: City of Manistee
 Address: -
 Site ID: A-51-027

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	8	EA	\$ 30,000	\$ 240,000
Total Boat Launch & Paddle Sport Access Cost					\$ 240,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	3500	SF	\$ 10	\$ 35,000
Total Site-Features Cost					\$ 35,000

Total Cost	\$ 275,000
Total Future Value Cost	\$ 496,681

Fletcher Pond BAS

Facility Owner: MDNR
Address: Jack's Landing Road, Alpena MI 49707
Site ID: A-04-001

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	3	1	40	5	48	0

Site Features

Off-Street Parking						Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition				SF	Material
0	0	-	0	-	30600	Very Good		30600	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?					
		14000	Very Good	Yes					

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Very Good



Fletcher Pond BAS

Facility Owner:

MDNR

Address:

Jack's Landing Road, Alpena MI 49707

Site ID:

A-04-001

There are no costs projected for this site within this time period

Fletcher Pond BAS

Facility Owner:	MDNR
Address:	Jack's Landing Road, Alpena MI 49707
Site ID:	A-04-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	30600	SF	\$ 5	\$ 153,000
Landscaping	10%	14000	SF	\$ 1	\$ 1,400
Total Site-Features Cost					\$ 154,400

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 209,400

Total Future Value Cost \$ 281,416

Fletcher Pond BAS

Facility Owner:	MDNR
Address:	Jack's Landing Road, Alpena MI 49707
Site ID:	A-04-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Gravel/Unpaved	100%	30600	SF	\$ 5	\$ 153,000
Landscaping	90%	14000	SF	\$ 1	\$ 12,600
Total Site-Features Cost					\$ 165,600

Total Cost \$ 261,600

Total Future Value Cost \$ 472,479

Ford Lake BAS

Facility Owner: Charter Township of Ypsilanti
Address: 9075 South River Drive
Site ID: A-81-004

Docks

Broadside

Type	Total LF	Age	Decking Type	Construction
Fixed Open Pile Dock	1200	40	Timber	Timber Frame & Timber Piles

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	40	2	25	4	50	139

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
250	50000	Functional	0	-	40000	Functional	48000	Asphalt

Landscaping	SF	Condition	Facility Responsible?
0	Very Good	Yes	

Walkways	Total LF	Avg. Width	Material	Condition
3806	3	dirt	Functional	

Buildings

Picnic Shelters		
Amount	Age	Condition
4	40	Functional

Vault Toilets	
Amount	Condition
0	-



5 Year Projected Cost Estimate

Ford Lake BAS

Facility Owner:	Charter Township of Ypsilanti
Address:	9075 South River Drive
Site ID:	A-81-004

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Broadside Fixed Open Pile Dock	100%	1200	SF	\$ 60	\$ 72,000
Total Dock Cost					\$ 72,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 222,000
Total Cost					\$ 294,000

Ford Lake BAS

Facility Owner:	Charter Township of Ypsilanti
Address:	9075 South River Drive
Site ID:	A-81-004

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	48000	SF	\$ 10	\$ 480,000
Parking Lot - Asphalt	100%	50000	SF	\$ 10	\$ 500,000
Parking Lot - Gravel/Unpaved	100%	40000	SF	\$ 5	\$ 200,000
Total Site-Features Cost					\$ 1,180,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	4	EA	\$ 15,000	\$ 60,000
Building 1	100%	2500	SF	\$ 400	\$ 1,000,000
Building 2	100%	1500	SF	\$ 400	\$ 600,000
Total Buildings Cost					\$ 1,660,000

Total Cost \$ 2,852,000

Total Future Value Cost \$ 3,832,850

Ford Lake BAS

Facility Owner: Charter Township of Ypsilanti
Address: 9075 South River Drive
Site ID: A-81-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000
Total Cost					\$ 60,000
Total Future Value Cost					\$ 108,367

Ford River Mouth BAS

Facility Owner: MDNR
Address: 45.676610 , -87.141055
Site ID: A-21-001

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	4	1	30	5	29	19

Dredge

% of Navigable Water Depth	% of	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
70%	<6'	7 years ago	67	Yes	Every 4 years	65	100	0
30%	6'-10'							
0%	>10'							
Dredging required for 2019 boating season:				0 CY				

Site Features

Off-Street Parking				Total SF Gravel/Unpaved			Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material
0	47000	Very Good	0	-	0	-	15000	-
Landscaping		SF	Condition	Facility Responsible?				
		23500	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		10	5	Gravel		Functional		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Ford River Mouth BAS

Facility Owner: MDNR
 Address: 45.676610 , -87.141055
 Site ID: A-21-001

Dredging

Item	Quantity	Unit	Unit Rate	5 Year Projection
Dredging	65	CY	\$ 40	\$ 2,600
Total Cost				\$ 2,600

Ford River Mouth BAS

Facility Owner: MDNR
 Address: 45.676610 , -87.141055
 Site ID: A-21-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Dredging

Item	Quantity	Unit	Unit Rate	10 Year Projection
Dredging	65	CY	\$ 40	\$ 2,600

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	90%	50	SF	\$ 5	\$ 225
Total Site-Features Cost					\$ 225

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 57,825

Total Future Value Cost \$ 77,712

Ford River Mouth BAS

Facility Owner: MDNR
 Address: 45.676610 , -87.141055
 Site ID: A-21-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	130	CY	\$ 40	\$ 5,200

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	47000	SF	\$ 10	\$ 470,000
Walkways	10%	50	SF	\$ 5	\$ 25
Total Site-Features Cost					\$ 470,025

Total Cost	\$ 571,225
Total Future Value Cost	\$ 1,031,696

Frankfort Municipal Marina

Facility Owner: City of Frankfort
Address: 606 Main Street, Frankfort, MI 49635
Site ID: -

Docks

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
10878	-	The head pier is on land and consists of the steel sheet wall cap and concrete sidewalk.	10 20 20	30' 40' 70' +	100%	30-40

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
3570	The head pier is on land	#N/A	20	45'	100%	30-40

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	1921	30-40	Functional	6	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Functional	100 % have vacuum breakers installed
WIFI	5+	Functional	
Wet Fire Hydrant System	30+	Very Good	
Pumpout	10-20	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
35 Twin 30 Amp	0% Very Good 0% Functional 100% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Fixed	80	12	2	0	15	10-20	Functional
Tank Type		Tank Capacity		No. Tanks				
Underground Dual Product		4000 Gallons		2				

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged
0% <6'	4 years ago	45000	No
20% 6'-10'			
80% >10'			
Dredging required for 2019 boating season:			0 CY

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
92	100	Functional	0	-	0	-	162	Asphalt
On-Street Parking		Spaces	Condition	Facility Responsible?				
		15	Very Good	No				
Landscaping		SF	Condition	Facility Responsible?				
		76760	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		1550	5	Concrete		Functional		

Buildings

Picnic Shelters			Vault Toilets				
Amount	Age	Condition	Amount	Condition			
1	40	Functional	0	-			
Building 1 Type		Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Restroom, and Store		2800	8	8	30	Very Good	General Interior Renovations
Building 2 Type		Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Fuel Service Building		150	0	0	40	Functional	General Interior and Exterior Renovations



Frankfort Municipal Marina

Facility Owner:	City of Frankfort
Address:	606 Main Street, Frankfort, MI 49635
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	50%	1921	LF	\$ 350	\$ 336,175
Total Structure Cost					\$ 336,175

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	70	SLIP	\$ 5,000	\$ 350,000
Twin 30 Amp Electric Pedestal	100%	35	EA	\$ 3,000	\$ 105,000
Total Utilities Cost					\$ 455,000
Total Cost					\$ 791,175

Frankfort Municipal Marina

Facility Owner: City of Frankfort
Address: 606 Main Street, Frankfort, MI 49635
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	50%	1921	LF	\$ 700	\$ 672,350
Total Structure Cost					\$ 672,350

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Potable Water	100%	70	SLIP	\$ 800	\$ 56,000
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Fuel Dock	100%	960	SF	\$ 150	\$ 144,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	15	LF	\$ 100	\$ 1,500
Underground Dual Product Tank	100%	2	EA	\$ 120,000	\$ 240,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 511,500

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	162	SF	\$ 10	\$ 1,620
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Walkways	80%	7750	SF	\$ 10	\$ 62,000
Total Site-Features Cost					\$ 64,620

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Building 1	100%	2800	SF	\$ 400	\$ 1,120,000
Building 2	100%	150	SF	\$ 400	\$ 60,000
Total Buildings Cost					\$ 1,195,000

Total Cost \$ 2,443,470

Total Future Value Cost \$ 3,283,819

Frankfort Municipal Marina

Facility Owner: City of Frankfort
Address: 606 Main Street, Frankfort, MI 49635
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	50%	1921	LF	\$ 1,050	\$ 1,008,525
Total Structure Cost					\$ 1,008,525

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	70	SLIP	\$ 3,500	\$ 245,000
Wet Fire Suppression System	100%	70	SLIP	\$ 1,000	\$ 70,000
Fuel Dock	100%	960	SF	\$ 150	\$ 144,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	15	LF	\$ 100	\$ 1,500
Underground Dual Product Tank	100%	2	EA	\$ 120,000	\$ 240,000
Total Utilities Cost					\$ 730,500

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	20%	7750	SF	\$ 10	\$ 15,500
Total Site-Features Cost					\$ 15,500
Total Cost					\$ 1,754,525
Total Future Value Cost					\$ 3,168,867

Gallup Park BAS

Facility Owner: City of Ann Arbor
Address: Gallup Park, 3000 Fuller Rd, Ann Arbor, MI 48105
Site ID: A-81-008

Docks

Broadside

Type	Total LF	Age	Decking Type	Construction
Fixed Open Pile Dock	120	20	Composite	Timber Frame & Timber Piles

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks						2	0

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	-	-	-	-	-	-	-	-	-

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
44	500	Functional	0	-	0	-	1200	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		1742400	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		19275	8	Asphalt		Functional		

Buildings

Picnic Shelters			Vault Toilets			Improvements Needed
Amount	Age	Condition	Amount	Condition		
2	10	Very Good	2	Very Good		
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	
Restroom, Store	900	4	0	35	Functional	ADA Update, General Exterior Renovations



Gallup Park BAS

Facility Owner:	City of Ann Arbor
Address:	Gallup Park, 3000 Fuller Rd, Ann Arbor, MI 48105
Site ID:	A-81-008

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Broadside Fixed Open Pile Redecking	100%	120	SF	\$ 14	\$ 1,680
Total Dock Cost					\$ 1,680

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Walkways	10%	154200	SF	\$ 7	\$ 107,940
Total Site-Features Cost					\$ 107,940
Total Cost					\$ 109,620

Gallup Park BAS

Facility Owner:	City of Ann Arbor
Address:	Gallup Park, 3000 Fuller Rd, Ann Arbor, MI 48105
Site ID:	A-81-008

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Broadside Fixed Open Pile Redecking	100%	120	SF	\$ 14	\$ 1,680
Total Dock Cost					\$ 1,680

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	500	SF	\$ 10	\$ 5,000
Landscaping	20%	1742400	SF	\$ 1	\$ 348,480
Walkways	60%	154200	SF	\$ 7	\$ 647,640
Total Site-Features Cost					\$ 1,001,120

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Building I	100%	900	SF	\$ 400	\$ 360,000
Total Buildings Cost					\$ 380,000

Total Cost \$ 1,382,800

Total Future Value Cost \$ 1,865,786

Gallup Park BAS

Facility Owner:	City of Ann Arbor
Address:	Gallup Park, 3000 Fuller Rd, Ann Arbor, MI 48105
Site ID:	A-81-008

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	1200	SF	\$ 10	\$ 12,000
Landscaping	80%	1742400	SF	\$ 1	\$ 1,393,920
Walkways	30%	154200	SF	\$ 7	\$ 323,820
Total Site-Features Cost					\$ 1,729,740

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Picnic Shelter	100%	2	EA	\$ 15,000	\$ 30,000
Total Buildings Cost					\$ 30,000

Total Cost	\$ 1,759,740
Total Future Value Cost	\$ 3,178,286

Garden Bay BAS

Facility Owner: MDNR
Address: Fayette Historic State Park, 4785 Il Road, Garden, MI 49835
Site ID: 21-007

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Rock Revetment Shoreline	300	10-20	Very Good	1	100	0	0

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	15	1	40	6	20	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
0	0	Functional	0	-	4400	Functional	11520	Concrete
Landscaping		SF	Condition	Facility Responsible?				
		7300	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		10	5	Asphalt		Very Good		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Garden Bay BAS

Facility Owner:	MDNR
Address:	Fayette Historic State Park, 4785 Il Road, Garden, MI 49835
Site ID:	21-007

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Garden Bay BAS

Facility Owner:	MDNR
Address:	Fayette Historic State Park, 4785 II Road, Garden, MI 49835
Site ID:	21-007

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Total Boat Launch & Paddle Sport Access Cost					\$ 48,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	11520	SF	\$ 5	\$ 57,600
Parking Lot - Gravel/Unpaved	100%	4400	SF	\$ 5	\$ 22,000
Landscaping	50%	7300	SF	\$ 1	\$ 3,650
Total Site-Features Cost					\$ 83,250

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 141,250

Total Future Value Cost \$ 189,828

Garden Bay BAS

Facility Owner:	MDNR
Address:	Fayette Historic State Park, 4785 II Road, Garden, MI 49835
Site ID:	21-007

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	300	LF	\$ 140	\$ 42,000
Total Structure Cost					\$ 42,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	50%	7300	SF	\$ 1	\$ 3,650
Walkways	100%	50	SF	\$ 7	\$ 350
Total Site-Features Cost					\$ 4,000

Total Cost \$ 76,000

Total Future Value Cost \$ 137,264

Grand Haven Municipal Marina

Facility Owner: City of Grand Haven
Address: 101 N. Harbor Dr Grand Haven, MI 49417
Site ID: -

Docks

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
2197.5	Composite	Timber Frame &	1	30'	100%	10-20
			6	40'		
			11	45'		
			10	70' +		

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
1095	Traditional Timber	-	7	25'	10%	<10
			15	30'	90%	10-20
			3	35'		

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
2205	Composite	600 LF of Wall	1	35'	100%	10-20
			6	40'		
			11	45'		
			10	70' +		

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	19200	0	Other	Steel Sheet Pile

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	1280		Functional	0	100	0	0	NA
Rock Revetment Shoreline	500	10-20'-	Functional	0	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	10-20	Very Good	100 % have vacuum breakers installed
WIFI	<5	Functional	
Ice Suppression System	10-20	Functional	6 Units Total
Air Disribution Lines	10-20	Functional	

Electric Shore Power

Utility Pedestals	% Condition
43 30/ 50 Amp	50% Very Good 50% Functional

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
11	Precast Concrete Planks	Skid	-	7	-	-	150	30

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed
100%	6'-10'	8 years ago

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
55	23800	Very Good	0	-	0	-	0	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		30000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		1600	6	Concrete		Very Good		



Grand Haven Municipal Marina

Facility Owner:	City of Grand Haven
Address:	101 N. Harbor Dr Grand Haven, MI 49417
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Redecking Finger Piers	100%	2205	SF	\$ 14	\$ 30,870
Total Dock Cost					\$ 61,635

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	81	SLIP	\$ 5,000	\$ 405,000
Total Utilities Cost					\$ 405,000
Total Cost					\$ 466,635

Grand Haven Municipal Marina

Facility Owner: City of Grand Haven
 Address: 101 N. Harbor Dr Grand Haven, MI 49417
 Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Floating Head Pier	90%	1095	SF	\$ 75	\$ 73,913
Total Dock Cost					\$ 73,913

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	100%	500	LF	\$ 140	\$ 70,000
Total Structure Cost					\$ 70,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
30/50 Amp Electric Pedestal	50%	43	EA	\$ 3,500	\$ 75,250
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Ice Suppression Compressor System	100%	81	SLIP	\$ 1,800	\$ 145,800
Total Utilities Cost					\$ 226,050

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	7	EA	\$ 45,000	\$ 315,000
Total Boat Launch & Paddle Sport Access Cost					\$ 315,000

Total Cost	\$ 684,963
Total Future Value Cost	\$ 920,532

Grand Haven Municipal Marina

Facility Owner: City of Grand Haven
Address: 101 N. Harbor Dr Grand Haven, MI 49417
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Fixed Head Pier	100%	2198	SF	\$ 60	\$ 131,850
Floating Head Pier	10%	1095	SF	\$ 75	\$ 8,213
Wall/Shoreline Head Pier Fixed Fingers	100%	2205	SF	\$ 67	\$ 147,735
Total Dock Cost					\$ 287,798

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	100%	500	LF	\$ 350	\$ 175,000
Total Structure Cost					\$ 175,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	81	SLIP	\$ 3,500	\$ 283,500
30/50 Amp Electric Pedestal	50%	43	EA	\$ 3,500	\$ 75,250
Potable Water	100%	81	SLIP	\$ 800	\$ 64,800
Total Utilities Cost					\$ 423,550

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	23800	SF	\$ 10	\$ 238,000
Landscaping	100%	30000	SF	\$ 1	\$ 30,000
Walkways	100%	9600	SF	\$ 10	\$ 96,000
Total Site-Features Cost					\$ 364,000

Total Cost	\$ 1,250,348
Total Future Value Cost	\$ 2,258,267

Grand Marais Marina - Burt Township

Facility Owner: Burt Township
Address: 21783 E Coast Guard Point Rd.
Site ID: -

Docks

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	1440	40	Composite	Steel Sheet Pile

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	240	30-40	N/A	20	100	0	0	NA



Grayhaven State Harbor

Facility Owner: MDNR
Address: 601 Port street, Detroit, Michigan
Site ID: 82-201

Docks

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
8790	Traditional Timber	Unknown	78	30'	100%	30-40

Broadside

Type	Total LF	Age	Decking Type	Construction
Floating Dock	544	40	-	Steel

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Rock Revetment Shoreline	-	N/A	Functional	10	100	0	0

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Very Good	100 % have vacuum breakers installed
WIFI	<5	Functional	

Electric Shore Power

Utility Pedestals	% Condition
40 Twin 30 Amp	100% Functional

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
-	-	-	40	30	3	20	26	8	0

Site Features

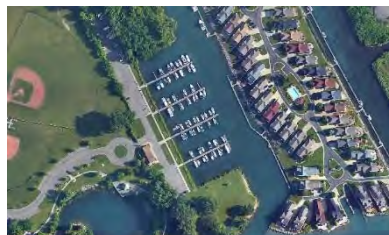
Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Total Spaces	SF Asphalt						SF	Material
120	0	Functional	0	-	0	-	360	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	15,000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	500	4	Concrete	Very Good

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Boater Lounge, Restroom, Laundry, Store, and Maintenance shop	1944	8	4	40	Functional	Roof Replacement



5 Year Projected Cost Estimate

Grayhaven State Harbor

Facility Owner: MDNR
 Address: 601 Port street, Detroit, Michigan
 Site ID: 82-201

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Floating Dock	100%	8790	SF	\$ 75	\$ 659,250
Broadside Floating Dock	100%	544	SF	\$ 55	\$ 29,920
Total Dock Cost					\$ 689,170

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	78	SLIP	\$ 5,000	\$ 390,000
Total Utilities Cost					\$ 390,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Paddle Sport Launch Access	100%	298	SF	\$ 120	\$ 35,760
Total Boat Launch & Paddle Sport Access Cost					\$ 35,760
Total Cost					\$ 1,114,930

Grayhaven State Harbor

Facility Owner:	MDNR
Address:	601 Port street, Detroit, Michigan
Site ID:	82-201

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Twin 30 Amp Electric Pedestal	100%	40	EA	\$ 3,000	\$ 120,000
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Total Utilities Cost					\$ 125,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	20%	2000	SF	\$ 10	\$ 4,000
Total Site-Features Cost					\$ 4,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building I	100%	1944	SF	\$ 400	\$ 777,600
Total Buildings Cost					\$ 777,600

Total Cost \$ 906,600

Total Future Value Cost \$ 1,218,395

Grayhaven State Harbor

Facility Owner:	MDNR
Address:	601 Port street, Detroit, Michigan
Site ID:	82-201

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	78	SLIP	\$ 3,500	\$ 273,000
Potable Water	100%	78	SLIP	\$ 800	\$ 62,400
Total Utilities Cost					\$ 335,400

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	360	SF	\$ 10	\$ 3,600
Walkways	80%	2000	SF	\$ 10	\$ 16,000
Total Site-Features Cost					\$ 19,600

Total Cost \$ 372,880

Total Future Value Cost \$ 673,463

Greenwood Reservoir BAS

Facility Owner: MDNR
Address: Wawonowin Road, Ely Township, Ishpeming, MI
Site ID: 52-061

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	3	1	30	6	15	15

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
15	0	-	0	-	6350	Functional	5040	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		3500	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		8	6	Gravel		Functional		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Greenwood Reservoir BAS

Facility Owner: MDNR
Address: Wawonowin Road, Ely Township, Ishpeming, MI
Site ID: 52-061

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Landscaping	15%	3500	SF	\$ 1	\$ 525
Total Site-Features Cost					\$ 525
Total Cost					\$ 525

Greenwood Reservoir BAS

Facility Owner:	MDNR
Address:	Wawonowin Road, Ely Township, Ishpeming, MI
Site ID:	52-061

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	5040	SF	\$ 5	\$ 25,200
Parking Lot - Gravel/Unpaved	100%	6350	SF	\$ 5	\$ 31,750
Landscaping	35%	3500	SF	\$ 1	\$ 1,225
Walkways	100%	48	SF	\$ 5	\$ 240
Total Site-Features Cost					\$ 58,415

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 113,415
Total Future Value Cost	\$ 152,420

Greenwood Reservoir BAS

Facility Owner: MDNR
 Address: Wawonowin Road, Ely Township, Ishpeming, MI
 Site ID: 52-061

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Total Boat Launch & Paddle Sport Access Cost					\$ 48,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	50%	3500	SF	\$ 1	\$ 1,750
Total Site-Features Cost					\$ 1,750

Total Cost \$ 49,750

Total Future Value Cost \$ 89,854

Grindstone City BAS

Facility Owner: MDNR
Address: 0
Site ID: A-32-009

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	10	1	45	8	47	4

Site Features

Off-Street Parking		Asphalt Condition	Total		Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	SF Asphalt		SF Concrete	SF Concrete				SF	Material
0	90000	Very Good	0	0	-	0	-	4500	-

Landscaping	SF	Condition	Facility Responsible?
	203184	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	1169	6	Gravel	Functional

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
3	Very Good



Grindstone City BAS

Facility Owner: MDNR
 Address: 0
 Site ID: A-32-009

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Grindstone City BAS

Facility Owner: MDNR
 Address: 0
 Site ID: A-32-009

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	50%	203184	SF	\$ 1	\$ 101,592
Walkways	50%	7014	SF	\$ 5	\$ 17,535
Total Site-Features Cost					\$ 119,127

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	3	EA	\$ 10,000	\$ 30,000
Total Buildings Cost					\$ 30,000

Total Cost \$ 245,127

Total Future Value Cost \$ 329,430

Grindstone City BAS

Facility Owner: MDNR
 Address: -
 Site ID: A-32-009

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	50%	203184	SF	\$ 1	\$ 101,592
Walkways	50%	7014	SF	\$ 5	\$ 17,535
Total Site-Features Cost					\$ 1,019,127
Total Cost					\$ 1,049,127
Total Future Value Cost					\$ 1,894,840

Half-moon Lake BAS

Facility Owner: MDNR
Address: NA
Site ID: A-81-002

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	5	1	24	5	35	0

Site Features

Landscaping	SF	Condition	Facility Responsible?
	1700	Good	Yes



Half-moon Lake BAS

Facility Owner: MDNR
 Address: NA
 Site ID: A-81-002

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Half-moon Lake BAS

Facility Owner:	MDNR
Address:	NA
Site ID:	A-81-002

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	20%	1700	SF	\$ 1	\$ 340
Total Site-Features Cost					\$ 340
Total Cost					\$ 340
Total Future Value Cost					\$ 457

Half-moon Lake BAS

Facility Owner:	MDNR
Address:	NA
Site ID:	A-81-002

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 93,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	7000	SF	\$ 10	\$ 70,000
Landscaping	80%	1700	SF	\$ 1	\$ 1,360
Total Site-Features Cost					\$ 71,360

Total Cost \$ 164,360

Total Future Value Cost \$ 296,852

Halfway Creek BAS

Facility Owner: MDNR
Address: Algonquin Street, Erie, MI, 48133
Site ID: A-58-006

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	400	-	-	0	0	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	20	1	40	5	45	0

Site Features

Off-Street Parking				Total Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Unpaved Condition	SF	Material
45	0	-	0	-	12615	Replace	15000	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		35806	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		32	6	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Halfway Creek BAS

Facility Owner:	MDNR
Address:	Algonquin Street, Erie, MI, 48133
Site ID:	A-58-006

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 63,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	15000	SF	\$ 5	\$ 75,000
Parking Lot - Gravel/Unpaved	100%	12615	SF	\$ 5	\$ 63,075
Total Site-Features Cost					\$ 138,075
Total Cost					\$ 201,075

Halfway Creek BAS

Facility Owner:	MDNR
Address:	Algonquin Street, Erie, MI, 48133
Site ID:	A-58-006

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	100%	35806	SF	\$ 1	\$ 35,806
Total Site-Features Cost					\$ 35,806

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 45,806
Total Future Value Cost					\$ 61,559

Halfway Creek BAS

Facility Owner: MDNR
 Address: Algonquin Street, Erie, MI, 48133
 Site ID: A-58-006

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	192	SF	\$ 10	\$ 1,920
Total Site-Features Cost					\$ 1,920

Total Cost					\$ 31,920
Total Future Value Cost					\$ 57,651

Hammond Bay State Harbor

Facility Owner: MDNR
Address: 24025 US 23 Millersburg Michigan 49759
Site ID: 71-201

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
5572.5	Timber	-	7	35'	100%	40+
			4	45'		
			2	60'		
			1	70' +		

Broadside

Type	Total LF	Age	Decking Type	Construction
Fixed Open Pile Dock	1200	50	Timber	Timber Frame & Steel Piles

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	180	40+	Very Good	5	100	0	0	NA
Rock Revetment Offshore	2000	40+	Replace	15	0	100	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Functional	100 % have vacuum breakers installed
Dry Standpipe Fire System	10-20	Functional	
Ice Suppression System	10-20	Functional	2 Units Total
Air Distribution Lines	10-20	Replace	
Pumpout	<10	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
4 Twin 30 Amp	100% Functional
7 30/ 50 Amp	
Compliant with Electrical Shock Drowning Ground Fault Protection Standards?	No

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	LF Lines over Land	LF Lines over Water	Overall Age	Overall Condition
Gas & Diesel	Fixed	35	10	2	210	175	10-20	Very Good
	Tank Type		Tank Capacity	No. Tanks				
	Underground Dual		16000	2				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	10	1	40	5	20	20

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	6'-10'	15 years ago	Unknown	-	-	0	0

Dredging required for 2019 boating season: 0 CY

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
25	10000	Very Good	0	-	0	-	6000	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		20000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		300	10	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
0	0	-	1	Functional				
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Office	1728	6	4	50	Very Good	-		



Hammond Bay State Harbor

Facility Owner:	MDNR
Address:	24025 US 23 Millersburg Michigan 49759
Site ID:	71-201

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Broadside Fixed Open Pile Dock	100%	1200	SF	\$ 70	\$ 84,000
Total Dock Cost					\$ 84,000

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type B	100%	180	LF	\$ 250	\$ 45,000
Total Structure Cost					\$ 45,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	14	SLIP	\$ 5,000	\$ 70,000
Total Utilities Cost					\$ 70,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 214,000

Hammond Bay State Harbor

Facility Owner: MDNR
Address: 24025 US 23 Millersburg Michigan 49759
Site ID: 71-201

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type B	100%	180	LF	\$ 700	\$ 126,000
Total Structure Cost					\$ 126,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Twin 30 Amp Electric Pedestal	100%	4	EA	\$ 3,000	\$ 12,000
30/50 Amp Electric Pedestal	100%	7	EA	\$ 3,500	\$ 24,500
Potable Water	100%	14	SLIP	\$ 800	\$ 11,200
Dry Standpipe Fire Suppression System	100%	14	SLIP	\$ 800	\$ 11,200
Ice Suppression Compressor System	100%	14	SLIP	\$ 1,800	\$ 25,200
Fuel Dock	100%	350	SF	\$ 150	\$ 52,500
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	385	LF	\$ 100	\$ 38,500
Underground Dual Product Tank	100%	2	EA	\$ 120,000	\$ 240,000
Total Utilities Cost					\$ 445,100

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Total Boat Launch & Paddle Sport Access Cost					\$ 224,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Building I	100%	1728	SF	\$ 400	\$ 691,200
Total Buildings Cost					\$ 701,200

Total Cost \$ 1,496,300

Total Future Value Cost \$ 2,010,902

Hammond Bay State Harbor

Facility Owner:	MDNR
Address:	24025 US 23 Millersburg Michigan 49759
Site ID:	71-201

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	180	LF	\$ 1,050	\$ 189,000
Total Structure Cost					\$ 189,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	14	SLIP	\$ 3,500	\$ 49,000
Fuel Dock	100%	350	SF	\$ 150	\$ 52,500
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	385	LF	\$ 100	\$ 38,500
Underground Dual Product Tank	100%	2	EA	\$ 120,000	\$ 240,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 445,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	6000	SF	\$ 10	\$ 60,000
Parking Lot - Asphalt	100%	10000	SF	\$ 10	\$ 100,000
Landscaping	100%	20000	SF	\$ 1	\$ 20,000
Walkways	100%	3000	SF	\$ 10	\$ 30,000
Total Site-Features Cost					\$ 210,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building 2	100%	120	SF	\$ 400	\$ 48,000
Total Buildings Cost					\$ 48,000

Total Cost \$ 922,000

Total Future Value Cost \$ 1,665,235

Harbor Beach Marina

Facility Owner: City of Harbor Beach
Address: 1 Ritchie Drive Harbor Beach, MI 48441
Site ID: -

Docks

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
11494	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	68	30'	100%	<10
			12	45'		
			12	60'		

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
4950	Monolithic Concrete	Floatation Docking	10	30'	100%	<10

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
450	Timber	210 LF along Shoreline of Floating Docking Systems Timber Constructed Floating Piers	10	30'	100%	<10

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	44100	30	Concrete	steel crib with a concrete cap

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Steel Sheet Pile Wall	50	20-30	-	0	100	0	0

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Very Good	100 % have vacuum breakers installed
WIFI	<5	Functional	
Dry Standpipe Fire System	<10	Functional	
Wet Fire Hydrant System	30+	Functional	
Pumpout	<10	-	2 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
0 20 Amp	100% Very Good
0 Single 30 Amp	0% Functional
20 Twin 30 Amp	0% Bad
6 30/ 50 Amp	
5 Twin 50 Amp	
0 100 Amp	

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	LF Lines over Land	LF Lines over Water	Overall Age	Overall Condition
Gas & Diesel	Fixed	130	12	4	200	900	<10	Very Good
Tank Type		Tank Capacity		No. Tanks				
Underground Single Product		6000 Gallons		1				
Underground Single Product		4000 Gallons		1				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
6	Cast-In-Place Concrete	Skid	30	3	60	4	60	22

Dredge

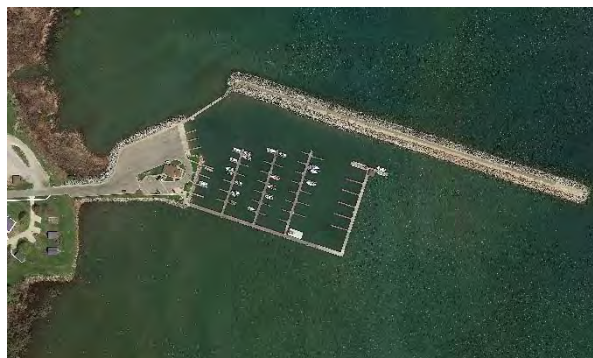
% of Navigable Water Depth	% of	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	2013 years ago	20000	Yes	Every 7 years	20000	100	0
70%	6'-10'							
30%	>10'							
Dredging required for 2019 boating season:				0	CY			

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved	Condition	SF	Material
82	0	Very Good	0	-	0	Functional	6000	Gravel/Unpaved
Walkways		Total LF	Avg. Width	Material	Condition			
		400	5	Concrete	Very Good			

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
0	0	-	0	-				
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Office, Restroom, and Fuel Service	800	11	6	30	Very Good	None		



5 Year Projected Cost Estimate

Harbor Beach Marina

Facility Owner: City of Harbor Beach
 Address: 1 Ritchie Drive Harbor Beach, MI 48441
 Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	112	SLIP	\$ 5,000	\$ 560,000
Total Utilities Cost					\$ 560,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	9600	SF	\$ 70	\$ 672,000
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 717,000

Total Cost \$ 1,277,000

5 Year Projected Cost Estimate

Harbor Beach Marina

Facility Owner: City of Harbor Beach
 Address: 1 Ritchie Drive Harbor Beach, MI 48441
 Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Fixed Dock	100%	6744	SF	\$ 150	\$ 1,011,600
Total Dock Cost					\$ 1,011,600

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Potable Water	30%	112	SLIP	\$ 800	\$ 26,880
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Wet Fire Suppression System	100%	112	SLIP	\$ 1,000	\$ 112,000
Total Utilities Cost					\$ 143,880

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 1	100%	800	SF	\$ 400	\$ 320,000
Total Buildings Cost					\$ 320,000

Total Cost \$ 1,475,480

Total Future Value Cost \$ 1,982,922

Harbor Beach Marina

Facility Owner: City of Harbor Beach
Address: 1 Ritchie Drive Harbor Beach, MI 48441
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Floating Dock	100%	11494	SF	\$ 75	\$ 862,050
Floating Head Pier	100%	4950	SF	\$ 65	\$ 321,750
Wall/Shoreline Head Pier Floating Fingers	100%	450	SF	\$ 75	\$ 33,750
Total Dock Cost					\$ 1,217,550

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	112	SLIP	\$ 3,500	\$ 392,000
Twin 30 Amp Electric Pedestal	100%	20	EA	\$ 3,000	\$ 60,000
30/50 Amp Electric Pedestal	100%	6	EA	\$ 3,500	\$ 21,000
Twin 50 Amp Electric Pedestal	100%	5	EA	\$ 3,500	\$ 17,500
Potable Water	70%	112	SLIP	\$ 800	\$ 62,720
Dry Standpipe Fire Suppression System	100%	112	SLIP	\$ 800	\$ 89,600
Fuel Dock	100%	1560	SF	\$ 150	\$ 234,000
Fuel Dispenser	100%	4	EA	\$ 15,000	\$ 60,000
Fuel Lines	100%	1100	LF	\$ 100	\$ 110,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Pumpout	100%	2	EA	\$ 35,000	\$ 70,000
Total Utilities Cost					\$ 1,316,820

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	3	EA	\$ 30,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	6000	SF	\$ 5	\$ 30,000
Walkways	100%	2000	SF	\$ 10	\$ 20,000
Total Site-Features Cost					\$ 50,000
Total Cost					\$ 2,674,370
Total Future Value Cost					\$ 4,830,210

Harbor Springs Municipal Marina

Facility Owner: City of Harbor Springs
Address: 250 East Bay St, Harbor Springs MI 49740
Site ID: -

Docks

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
660	Timber	Timber Frame &	5	30'	100%	20-30
			6	40'		
			1	50'		

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
1185	Timber floating docks	Floatation Docking	6	30'	100%	20-30
			2	35'		
			8	45'		
			3	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Fixed Open Pile Dock	6080	0	Composite	Steel Frame & Timber Piles

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	300	-	-	10	100	0	0	NA
Floating Wave Attenuator	300	20-30	Very Good	10	100	0	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Good	100 % have vacuum breakers installed
Flow Inducers	-	Very Good	40 Units Total 0 Additional Units Needed
Pumpout	<10	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
6 Twin 30 Amp	80% Very Good
38 30/ 50 Amp	20% Functional

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	15	1	50	5	33	20

Paddle Sport Launch

Beach/Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
-	-	-	-	-	-	1	8	4	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	>10'	5 years ago	Unknown	-	Every X years	0	0
Dredging required for 2019 boating season:				0	CY		

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
35	19000	Functional	0	-	0	-	660	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		41355	Very Good	No				
Walkways		Total LF	Avg. Width	Material	Condition			
		400	6	Concrete	Functional			



Harbor Springs Municipal Marina

Facility Owner:	City of Harbor Springs
Address:	250 East Bay St, Harbor Springs MI 49740
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Floating Wave Attenuator	100%	300	LF	\$ 1,500	\$ 450,000
Total Structure Cost					\$ 450,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	31	SLIP	\$ 5,000	\$ 155,000
Total Utilities Cost					\$ 155,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 620,000

Harbor Springs Municipal Marina

Facility Owner: City of Harbor Springs
Address: 250 East Bay St, Harbor Springs MI 49740
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Fixed Head Pier	100%	660	SF	\$ 60	\$ 39,600
Broadside Fixed Open Pile Redecking	100%	6080	SF	\$ 14	\$ 85,120
Total Dock Cost					\$ 124,720

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Twin 30 Amp Electric Pedestal	20%	6	EA	\$ 3,000	\$ 3,600
30/50 Amp Electric Pedestal	20%	38	EA	\$ 3,500	\$ 26,600
Potable Water	20%	31	SLIP	\$ 800	\$ 4,960
Flow Inducers	100%	40	EA	\$ 1,000	\$ 40,000
Total Utilities Cost					\$ 75,160

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Paddle Sport Launch Access	100%	160	SF	\$ 180	\$ 28,800
Total Boat Launch & Paddle Sport Access Cost					\$ 124,800

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	660	SF	\$ 10	\$ 6,600
Parking Lot - Asphalt	100%	19000	SF	\$ 10	\$ 190,000
Walkways	100%	2400	SF	\$ 10	\$ 24,000
Total Site-Features Cost					\$ 220,600

Total Cost \$ 545,280

Total Future Value Cost \$ 732,811

Harbor Springs Municipal Marina

Facility Owner: City of Harbor Springs
Address: 250 East Bay St, Harbor Springs MI 49740
Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	31	SLIP	\$ 3,500	\$ 108,500
Twin 30 Amp Electric Pedestal	80%	6	EA	\$ 3,000	\$ 14,400
30/50 Amp Electric Pedestal	80%	38	EA	\$ 3,500	\$ 106,400
Potable Water	80%	31	SLIP	\$ 800	\$ 19,840
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 284,140

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	100%	41355	SF	\$ 1	\$ 41,355
Total Site-Features Cost					\$ 41,355
Total Cost					\$ 355,495
Total Future Value Cost					\$ 642,064

Harley Ensign Memorial BAS

Facility Owner: MDNR
Address: 32995 South River Road Harrison Township, Mi 48045
Site ID: A-50-001

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	4890	20-30	Functional	3	90	10	0	NA
Rock Revetment Offshore	1385	20-30	Very Good	5	0	100	0	0

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
18	Precast Concrete Planks	Skid	9	9	40	5	328	51

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved	Condition	SF	Material
0	290000	Very Good	0	-	0	-	0	-

Landscaping	SF	Condition	Facility Responsible?
	93000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	280	5	Concrete	Good

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	0	-

Building 1 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	120			25	Very Good	-

Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	704	10		30	Functional	ADA Updates and General Interior Renovations



Harley Ensign Memorial BAS

Facility Owner:	MDNR
Address:	32995 South River Road Harrison Township, Mi 48045
Site ID:	A-50-001

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type A	50%	4890	LF	\$ 90	\$ 220,050
Rock Revetment Offshore Maintenance Type B	100%	1385	LF	NR	\$ -
Total Structure Cost					\$ 220,050

Note: NR = Not Responsible

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	9	EA	\$ 15,000	\$ 135,000
Total Boat Launch & Paddle Sport Access Cost					\$ 135,000
Total Cost					\$ 355,050

Harley Ensign Memorial BAS

Facility Owner:	MDNR
Address:	32995 South River Road Harrison Township, Mi 48045
Site ID:	A-50-001

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	45%	4890	LF	\$ 315	\$ 693,158
Rock Revetment Maintenance Type B	45%	4890	LF	\$ 126	\$ 277,263
Total Structure Cost					\$ 970,421

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	5%	93000	SF	\$ 1	\$ 4,650
Walkways	30%	1400	SF	\$ 10	\$ 4,200
Total Site-Features Cost					\$ 8,850

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 1	100%	120	SF	\$ 400	\$ 48,000
Building 2	100%	704	SF	\$ 400	\$ 281,600
Total Buildings Cost					\$ 329,600

Total Cost \$ 1,308,871

Total Future Value Cost \$ 1,759,013

Harley Ensign Memorial BAS

Facility Owner:	MDNR
Address:	32995 South River Road Harrison Township, Mi 48045
Site ID:	A-50-001

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	45%	4890	LF	\$ 630	\$ 1,386,315
Rock Revetment Maintenance Type B	45%	4890	LF	\$ 315	\$ 693,158
Total Structure Cost					\$ 2,079,473

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	28800	SF	\$ 30	\$ 864,000
Launch Piers	100%	9	EA	\$ 45,000	\$ 405,000
Total Boat Launch & Paddle Sport Access Cost					\$ 1,269,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	290000	SF	\$ 10	\$ 2,900,000
Landscaping	95%	93000	SF	\$ 1	\$ 88,350
Walkways	70%	1400	SF	\$ 10	\$ 9,800
Total Site-Features Cost					\$ 2,998,150

Total Cost \$ 6,346,623

Total Future Value Cost \$ 11,462,706

Harrisville BAS

Facility Owner: MDNR
Address: 326 Lake Street, Harrisville, MI 48740
Site ID: A-01-007

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	525	40+	Good	3	0	100	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
6	Precast Concrete Planks	Skid	30	3	40	6	130	25

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
25	90000	Functional	0	-	0	-	9280	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		25000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		230	7	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Functional

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Harbor Shop	676			35	Functional	Roof Replacement and General Interior Renovations



5 Year Projected Cost Estimate

Harrisville BAS

Facility Owner: MDNR
Address: 326 Lake Street, Harrisville, MI 48740
Site ID: A-01-007

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	9600	SF	\$ 30	\$ 288,000
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 333,000
Total Cost					\$ 333,000

Harrisville BAS

Facility Owner:	MDNR
Address:	326 Lake Street, Harrisville, MI 48740
Site ID:	A-01-007

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	90000	SF	\$ 10	\$ 900,000
Total Site-Features Cost					\$ 900,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Building I	100%	676	SF	\$ 400	\$ 270,400
Total Buildings Cost					\$ 290,400

Total Cost	\$ 1,190,400
Total Future Value Cost	\$ 1,599,798

Harrisville BAS

Facility Owner:	MDNR
Address:	326 Lake Street, Harrisville, MI 48740
Site ID:	A-01-007

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	3	EA	\$ 30,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	9280	SF	\$ 10	\$ 92,800
Landscaping	100%	25000	SF	\$ 1	\$ 25,000
Walkways	100%	1610	SF	\$ 10	\$ 16,100
Total Site-Features Cost					\$ 133,900

Total Cost	\$ 223,900
-------------------	-------------------

Total Future Value Cost	\$ 404,388
--------------------------------	-------------------

Harrisville Harbor

Facility Owner: City of Harrisville Mi
Address: 1 East Harbor Lane, Harrisville, Mi 48740
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
8120	Timber	Steel Frame & Steel Piles	7	30'	100%	<10
			29	35'		
			15	40'		
			15	45'		
			4	50'		
			3	60'		

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
8896	3	Floatation Docking Systems (FDS)	29	35'	100%	<10
			15	40'		
			9	45'		
			4	50'		
			3	60'		

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
540	Timber	Steel Frame & Steel	6	45'	100%	<10

Broadside

Type	Total LF	Age	Decking Type	Construction
Fixed Open Pile Dock	2650	10	Timber	Timber Frame & Steel Piles
Floating Dock	1176	10	-	Traditional Timber by Floatation Docking Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Offshore	2937	40+	Functional	3	0	100	0	No

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Very Good	90 % have vacuum breakers installed
WIFI	<5	Very Good	
Dry Standpipe Fire System	<10	Very Good	
Ice Suppression System	<10	Very Good	4 Units Total
Air Disribution Lines	<10	Very Good	
Flow Inducers	-	Repalce	12 Units Total 15 Additional Units Needed
Pumpout	<10	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
1 20 Amp	100% Very Good
2 Single 30 Amp	0% Functional
16 Twin 30 Amp	0% Bad
21 30/ 50 Amp	
7 Twin 50 Amp	
0 100 Amp	
Compliant with Electrical Shock Drowning Ground Fault Protection Standards?	Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over Land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Fixed	90	14	2	300	250	20-30	Functional
Tank Type		Tank Capacity		No. Tanks				
Underground Dual		20000		2				

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
5%	<6'	5 years ago	9950	-	Every 2 years	0	0
70%	6'-10'						
25%	>10'						
Dredging required for 2019 boating season:				0	CY		

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
38	100	Functional	0	-	0	-	7590	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		55200	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		550	11	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
1	10	Very Good	0	-

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Boater Lounge, Restroom, Laundry, Harbor Shop	4450	11	8	14	Functional	Shower Stalls



5 Year Projected Cost Estimate

Harrisville Harbor

Facility Owner:	City of Harrisville Mi
Address:	1 East Harbor Lane, Harrisville, Mi 48740
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Broadside Fixed Open Pile Redecking	100%	2650	SF	\$ 10	\$ 26,500
Total Dock Cost					\$ 26,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
PW System Vacuum Breakers	10%	139	SLIP	\$ 12	\$ 167
Flow Inducers	60%	12	EA	\$ 1,000	\$ 7,200
Additional Flow Inducers	100%	15	EA	\$ 1,000	\$ 15,000
Total Utilities Cost					\$ 22,367
Total Cost					\$ 48,867

Harrisville Harbor

Facility Owner:	City of Harrisville Mi
Address:	1 East Harbor Lane, Harrisville, Mi 48740
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Fixed Head Pier Redecking	100%	540	SF	\$ 10	\$ 5,400
Broadside Fixed Open Pile Redecking	100%	2650	SF	\$ 10	\$ 26,500
Broadside Floating Dock	100%	1176	SF	\$ 75	\$ 88,200
Total Dock Cost					\$ 201,300

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Flow Inducers	100%	27	EA	\$ 1,000	\$ 27,000
Fuel Dock	100%	1260	SF	\$ 150	\$ 189,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	550	LF	\$ 100	\$ 55,000
Underground Dual Product Tank	100%	2	EA	\$ 120,000	\$ 240,000
Total Utilities Cost					\$ 541,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	7590	SF	\$ 10	\$ 75,900
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Total Site-Features Cost					\$ 76,900

Total Cost	\$ 819,200
Total Future Value Cost	\$ 1,100,936

Harrisville Harbor

Facility Owner: City of Harrisville Mi
Address: 1 East Harbor Lane, Harrisville, Mi 48740
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Floating Dock	100%	8896	SF	\$ 65	\$ 578,240
Broadside Fixed Open Pile Dock	100%	2650	SF	\$ 70	\$ 185,500
Total Dock Cost					\$ 763,740

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	139	SLIP	\$ 3,500	\$ 486,500
20 Amp Duplex Only Electric Pedestal	100%	1	EA	\$ 3,000	\$ 3,000
Single 30 Amp Electric Pedestal	100%	2	EA	\$ 3,000	\$ 6,000
Twin 30 Amp Electric Pedestal	100%	16	EA	\$ 3,000	\$ 48,000
30/50 Amp Electric Pedestal	100%	21	EA	\$ 3,500	\$ 73,500
Twin 50 Amp Electric Pedestal	100%	7	EA	\$ 3,500	\$ 24,500
Potable Water	100%	139	SLIP	\$ 800	\$ 111,200
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Dry Standpipe Fire Suppression System	100%	139	SLIP	\$ 800	\$ 111,200
Ice Suppression Compressor System	100%	139	SLIP	\$ 1,800	\$ 250,200
Fuel Dock	100%	1260	SF	\$ 150	\$ 189,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	550	LF	\$ 100	\$ 55,000
Underground Dual Product Tank	100%	2	EA	\$ 120,000	\$ 240,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 1,668,100

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	100%	55200	SF	\$ 1	\$ 55,200
Walkways	100%	6050	SF	\$ 10	\$ 60,500
Total Site-Features Cost					\$ 115,700

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Building I	100%	4450	SF	\$ 400	\$ 1,780,000
Total Buildings Cost					\$ 1,795,000

Total Cost \$ 4,342,540

Total Future Value Cost \$ 7,843,110

Hellenburg Field BAS

Facility Owner: City of Monroe Michigan
Address: 1313 E. Front Street Monroe Michigan 48161
Site ID: A-58-011

Docks

Broadside

Type	Total LF	Age	Decking Type	Construction
Floating Dock	400	30	-	#N/A

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Cast-In-Place	Skid	30	2	40	5	87	11
	Concrete	Floating	30	2	20	5		

Site Features

Off-Street Parking			Total	Concrete	Total	Gravel/	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	SF Concrete	Condition	SF Gravel/Unpaved	Unpaved Condition	SF	Material
98	106000	Replace	0	-	0	-	14050	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		516900	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		256	10	Asphalt		Good		

Buildings

Picnic Shelters			Vault Toilets				
Amount	Age	Condition	Amount	Condition			
1	25	Functional	0	-			
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Restroom	400	2			Functional	Mechanical upgades (HVAC),ADA Upgrades, General Interior Renovations	



Hellenburg Field BAS

Facility Owner:	City of Monroe Michigan
Address:	1313 E. Front Street Monroe Michigan 48161
Site ID:	A-58-011

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 70	\$ 448,000
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 508,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	14050	SF	\$ 10	\$ 140,500
Parking Lot - Asphalt	100%	106000	SF	\$ 10	\$ 1,060,000
Total Site-Features Cost					\$ 1,200,500
Total Cost					\$ 1,708,500

Hellenburg Field BAS

Facility Owner:	City of Monroe Michigan
Address:	1313 E. Front Street Monroe Michigan 48161
Site ID:	A-58-011

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	10%	516900	SF	\$ 1	\$ 51,690
Walkways	15%	2560	SF	\$ 7	\$ 2,688
Total Site-Features Cost					\$ 54,378

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Total Buildings Cost					\$ 15,000

Total Cost					\$ 69,378
Total Future Value Cost					\$ 93,238

Hellenburg Field BAS

Facility Owner:	City of Monroe Michigan
Address:	1313 E. Front Street Monroe Michigan 48161
Site ID:	A-58-011

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	90%	516900	SF	\$ 1	\$ 465,210
Walkways	85%	2560	SF	\$ 7	\$ 15,232
Total Site-Features Cost					\$ 480,442
Total Cost					\$ 510,442
Total Future Value Cost					\$ 921,915

Henning Park BAS

Facility Owner: Newaygo County
Address: 500 Croton Drive , Newaygo MI 49337
Site ID: A-62-018

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Functional	100 % have vacuum breakers installed
WIFI	5+	Very Good	
Wet Fire Hydrant System	30+	Very Good	

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	-	-	-	-	40	40

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
80	120000	Functional	0	-	0	-	0	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		30	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		80	4	Concrete	Very Good			

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
1	800	Very Good	0	-				
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Office, Restroom		20	7		Functional	Roof Replacement, Mechanical Upgrades (HVAC), ADA Updates, General Interior Renovations, General Exterior Renovations		



Henning Park BAS

Facility Owner: Newaygo County
Address: 500 Croton Drive , Newaygo MI 49337
Site ID: A-62-018

There are no costs projected for this site within this time period

Henning Park BAS

Facility Owner:	Newaygo County
Address:	500 Croton Drive , Newaygo MI 49337
Site ID:	A-62-018

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	120000	SF	\$ 10	\$ 1,200,000
Total Site-Features Cost					\$ 1,200,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Total Buildings Cost					\$ 15,000

Total Cost \$ 1,215,000

Total Future Value Cost \$ 1,632,858

Henning Park BAS

Facility Owner: Newaygo County
 Address: 500 Croton Drive , Newaygo MI 49337
 Site ID: A-62-018

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Total Utilities Cost					\$ 5,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	100%	30	SF	\$ 1	\$ 30
Walkways	100%	320	SF	\$ 10	\$ 3,200
Total Site-Features Cost					\$ 3,230

Total Cost					\$ 8,230
Total Future Value Cost					\$ 14,864

Hessel Marina - Clark Township

Facility Owner: Clark Township
Address: 3023 w lake st. Hessel MI 49745
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
2424	Timber	Sheet Pile Crib	2	20'	10%	<10
			8	30'	90%	40+
			14	40'		
			4	50'		

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
2200	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	2	20'	10%	<10
			8	30'	90%	40+
			14	40'		
			4	50'		

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
780	Timber	375 LF of Fixed Timber Pile & Timber Frame	8	40'	100%	40+
			4	50'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	8000	60	Concrete	Timber Fendering

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	350	40+	Functional	10	100	0	0	NA
Rock Revetment Shoreline	300	40+	Functional	10	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	4	Replace	100 % have vacuum breakers installed
WIFI	<5	Replace	
Dry Standpipe Fire System	4	Functional	
Flow Inducers	-		2 Units Total 6 Additional Units Needed
Pumpout	1	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
12 30/ 50 Amp	10% Very Good 90% Bad
Compliant with Electrical Shock Drowning Ground Fault Protection Standards?	No

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	25	1	60	5	8	8

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	0	0	0	0	0	0	0	0	8

Site Features

Off-Street Parking		Asphalt Condition	Total		Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt		SF Concrete	SF				SF	Material
15	400	Functional	0	-	0	Functional	2500	Asphalt	
On-Street Parking		Spaces	Condition	Facility Responsible?					
		6	Functional	Yes					
Landscaping		SF	Condition	Facility Responsible?					
		4000	Functional	Yes					
Walkways		Total LF	Avg. Width	Material	Condition				
		1000	5	Concrete	Functional				

Buildings

Picnic Shelters			Vault Toilets			
Amount	Age	Condition	Amount	Condition		
1	40	Functional	0	-		
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Restroom & Laundry	1000	8	4	60	Replace	Roof Replacement, Mechanical Upgrades (HVAC), ADA Updates, General Interior Renovations, General Exterior Renovations



Hessel Marina - Clark Township

Facility Owner: Clark Township
Address: 3023 w lake st. Hessel MI 49745
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Fixed Dock	90%	2424	SF	\$ 200	\$ 436,320
Traditional Floating Dock	90%	2200	SF	\$ 75	\$ 148,500
Wall/Shoreline Head Pier Floating Fingers	100%	780	SF	\$ 75	\$ 58,500
Total Dock Cost					\$ 643,320

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	100%	350	LF	\$ 700	\$ 245,000
Rock Revetment Maintenance Type A	100%	300	LF	\$ 500	\$ 150,000
Total Structure Cost					\$ 395,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	68	SLIP	\$ 5,000	\$ 340,000
30/50 Amp Electric Pedestal	90%	12	EA	\$ 3,500	\$ 37,800
Potable Water	100%	68	SLIP	\$ 800	\$ 54,400
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Additional Flow Inducers	100%	6	EA	\$ 1,000	\$ 6,000
Total Utilities Cost					\$ 443,200

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 239,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building I	100%	1000	SF	\$ 400	\$ 400,000
Total Buildings Cost					\$ 400,000
Total Cost					\$ 2,120,520

Hessel Marina - Clark Township

Facility Owner: Clark Township
Address: 3023 w lake st. Hessel MI 49745
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	100%	350	LF	\$ 1,050	\$ 367,500
Rock Revetment Maintenance Type A	100%	300	LF	\$ 1,050	\$ 315,000
Total Structure Cost					\$ 682,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Dry Standpipe Fire Suppression System	100%	68	SLIP	\$ 800	\$ 54,400
Flow Inducers	100%	8	EA	\$ 1,000	\$ 8,000
Total Utilities Cost					\$ 62,400

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	2500	SF	\$ 10	\$ 25,000
Parking Lot - Asphalt	100%	400	SF	\$ 10	\$ 4,000
Landscaping	100%	4000	SF	\$ 1	\$ 4,000
Walkways	100%	5000	SF	\$ 10	\$ 50,000
Total Site-Features Cost					\$ 83,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Total Buildings Cost					\$ 15,000

Total Cost \$ 845,324

Total Future Value Cost \$ 1,136,045

Hessel Marina - Clark Township

Facility Owner:	Clark Township
Address:	3023 w lake st. Hessel MI 49745
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Floating Dock	10%	2200	SF	\$ 75	\$ 16,500
Total Dock Cost					\$ 16,500

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	100%	350	LF	\$ 1,400	\$ 490,000
Rock Revetment Maintenance Type A	100%	300	LF	\$ 1,400	\$ 420,000
Total Structure Cost					\$ 910,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	68	SLIP	\$ 3,500	\$ 238,000
30/50 Amp Electric Pedestal	10%	12	EA	\$ 3,500	\$ 4,200
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 277,200

Total Cost \$ 1,233,700

Total Future Value Cost \$ 2,228,199

High Rollway BAS

Facility Owner: MDNR
Address: 6812 Thornapple Ave, Newaygo, MI 49337
Site ID: A-62-013

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	-	-	-	-	75	0

Dredge

% of Navigable Water Depth	% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	3 years ago	4	-	-	0	0	0
0%	6'-10'							
0%	>10'							
Dredging required for 2019 boating season:				0	CY			

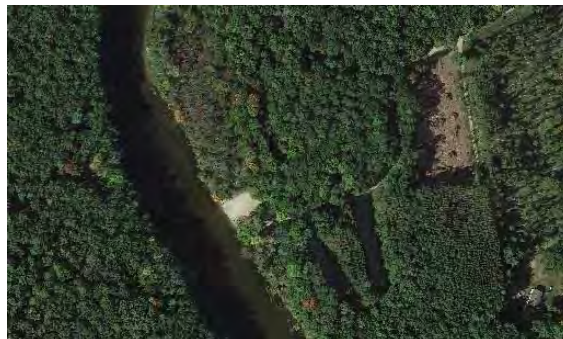
Site Features

Off-Street Parking				Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved	SF	Material
75	30000	Very Good	0	-	0	Replace	60000 Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?			
		0	Very Good	Yes			
Walkways		Total LF	Avg. Width	Material		Condition	
		15	5	Concrete		Very Good	

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Very Good

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	64	0	0	-	Functional	General Interior & Exterior Renovations



High Rollway BAS

Facility Owner: MDNR
Address: 6812 Thornapple Ave, Newaygo, MI 49337
Site ID: A-62-013

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	60000	SF	\$ 5	\$ 300,000
Total Site-Features Cost					\$ 300,000
Total Cost					\$ 300,000

High Rollway BAS

Facility Owner: MDNR
Address: 6812 Thornapple Ave, Newaygo, MI 49337
Site ID: A-62-013

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000
Total Cost					\$ 20,000
Total Future Value Cost					\$ 26,878

High Rollway BAS

Facility Owner: MDNR
Address: 6812 Thornapple Ave, Newaygo, MI 49337
Site ID: A-62-013

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	30000	SF	\$ 10	\$ 300,000
Walkways	100%	75	SF	\$ 10	\$ 750
Total Site-Features Cost					\$ 300,750
Total Cost					\$ 300,750
Total Future Value Cost					\$ 543,188

Hoffman Memorial BAS

Facility Owner: MDNR
Address: Lake Street, Monroe, MI (Bolles Harbor)
Site ID: A-58-001

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	593	40+	Functional	0	100	0	0	NA
Rock Revetment Offshore	468	30-40	Functional	0	0	100	0	0

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
15	0	Skid	0	8	37	7	0	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
64	43340	Replace	0	-	0	-	1600	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		48065	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		40	5	Concrete		Very Good		

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



Hoffman Memorial BAS

Facility Owner:	MDNR
Address:	Lake Street, Monroe, MI (Bolles Harbor)
Site ID:	A-58-001

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	10%	593	LF	\$ 700	\$ 41,510
Total Structure Cost					\$ 41,510

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	1600	SF	\$ 10	\$ 16,000
Parking Lot - Asphalt	100%	43340	SF	\$ 10	\$ 433,400
Total Site-Features Cost					\$ 449,400
Total Cost					\$ 490,910

Hoffman Memorial BAS

Facility Owner:	MDNR
Address:	Lake Street, Monroe, MI (Bolles Harbor)
Site ID:	A-58-001

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	10%	593	LF	\$ 1,050	\$ 62,265
Total Structure Cost					\$ 62,265

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	8	EA	\$ 45,000	\$ 360,000
Total Boat Launch & Paddle Sport Access Cost					\$ 360,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	100%	48065	SF	\$ 1	\$ 48,065
Total Site-Features Cost					\$ 48,065

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 480,330
Total Future Value Cost	\$ 645,523

Hoffman Memorial BAS

Facility Owner:	MDNR
Address:	Lake Street, Monroe, MI (Bolles Harbor)
Site ID:	A-58-001

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	10%	593	LF	\$ 1,400	\$ 83,020
Total Structure Cost					\$ 83,020

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	200	SF	\$ 10	\$ 2,000
Total Site-Features Cost					\$ 2,000

Total Cost					\$ 85,020
Total Future Value Cost					\$ 153,556

Holloway Reservoir BAS

Facility Owner: Genesee County Parks and Rec
Address: 7240 N Henderson Rd Davison MI 48423
Site ID: A-25-004

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
5	Cast-In-Place Concrete	Fixed	30	5	30	4	90	0

Site Features

Off-Street Parking				Total		Gravel/Unpaved		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Unpaved Condition	SF	Material	
90	200000	Functional	0	-	0	-	40000	Asphalt	
Landscaping		SF	Condition	Facility Responsible?					
		150000	Functional	Yes					
Walkways		Total LF	Avg. Width	Material		Condition			
		40	10	Asphalt		Functional			

Buildings

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	2400	9		20	Functional	General Interior Renovations



Holloway Reservoir BAS

Facility Owner: Genesee County Parks and Rec
Address: 7240 N Henderson Rd Davison MI 48423
Site ID: A-25-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	8000	SF	\$ 70	\$ 560,000
Launch Piers	100%	5	EA	\$ 15,000	\$ 75,000
Total Boat Launch & Paddle Sport Access Cost					\$ 635,000
Total Cost					\$ 635,000

Holloway Reservoir BAS

Facility Owner:	Genesee County Parks and Rec
Address:	7240 N Henderson Rd Davison MI 48423
Site ID:	A-25-004

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	40000	SF	\$ 10	\$ 400,000
Parking Lot - Asphalt	100%	200000	SF	\$ 10	\$ 2,000,000
Walkways	100%	400	SF	\$ 7	\$ 2,800
Total Site-Features Cost					\$ 2,402,800

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building I	100%	2400	SF	\$ 400	\$ 960,000
Total Buildings Cost					\$ 960,000

Total Cost \$ 3,362,800

Total Future Value Cost \$ 4,519,322

Holloway Reservoir BAS

Facility Owner: Genesee County Parks and Rec
 Address: 7240 N Henderson Rd Davison MI 48423
 Site ID: A-25-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	5	EA	\$ 30,000	\$ 150,000
Total Boat Launch & Paddle Sport Access Cost					\$ 150,000
Total Cost					\$ 150,000
Total Future Value Cost					\$ 270,917

Homestead Dam BAS

Facility Owner: MDNR
Address: 3730 Mill Rd. Grawn Mi. 49637
Site ID: A-10-102

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	200	10-20	Good	3	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Wood Timbers						50	0

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved		SF	Material
50	30000	-	0	-	15000	Functional	800	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		9000	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		250	8	Gravel		Functional		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Functional



Homestead Dam BAS

Facility Owner: MDNR
Address: 3730 Mill Rd. Grawn Mi. 49637
Site ID: A-10-102

There are no costs projected for this site within this time period

Homestead Dam BAS

Facility Owner:	MDNR
Address:	3730 Mill Rd. Grawn Mi. 49637
Site ID:	A-10-102

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	10%	200	LF	\$ 140	\$ 2,800
Total Structure Cost					\$ 2,800

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	800	SF	\$ 5	\$ 4,000
Parking Lot - Gravel/Unpaved	100%	15000	SF	\$ 5	\$ 75,000
Landscaping	30%	9000	SF	\$ 1	\$ 2,700
Walkways	30%	2000	SF	\$ 5	\$ 3,000
Total Site-Features Cost					\$ 84,700

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost	\$ 107,500
Total Future Value Cost	\$ 144,471

Homestead Dam BAS

Facility Owner:	MDNR
Address:	3730 Mill Rd. Grawn Mi. 49637
Site ID:	A-10-102

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	10%	200	LF	\$ 350	\$ 7,000
Rock Revetment Maintenance Type B	90%	200	LF	\$ 140	\$ 25,200
Total Structure Cost					\$ 32,200

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	70%	9000	SF	\$ 1	\$ 6,300
Walkways	70%	2000	SF	\$ 5	\$ 7,000
Total Site-Features Cost					\$ 13,300

Total Cost \$ 45,500

Total Future Value Cost \$ 82,178

Houghton City Marina

Facility Owner: City of Houghton
Address: 1100 Lakeshore Drive, Houghton, MI 49931
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
760	Timber	-	20	20'	100%	20-30

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	4000	50	Concrete	Concrete Wall

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Concrete Wall	0	10-20	Functional	20	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Cast-In-Place Concrete	Fixed	30	1	30	20	10	10

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
0	0	0	-	-	-	5	15	10	0

Site Features

Off-Street Parking			Total			Gravel/ Unpaved		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/ Unpaved	Gravel/ Unpaved Condition	SF	Material	
10	100	Functional	0	-	0	-	100	Asphalt	
Walkways		Total LF	Avg. Width	Material		Condition			
		20	20	Concrete		Functional			



5 Year Projected Cost Estimate

Houghton City Marina

Facility Owner: City of Houghton
Address: 1100 Lakeshore Drive, Houghton, MI 49931
Site ID: -

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 70	\$ 112,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 127,000
Total Cost					\$ 127,000

Houghton City Marina

Facility Owner:	City of Houghton
Address:	1100 Lakeshore Drive, Houghton, MI 49931
Site ID:	-

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	100	SF	\$ 10	\$ 1,000
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Walkways	100%	400	SF	\$ 10	\$ 4,000
Total Site-Features Cost					\$ 6,000
Total Cost					\$ 6,000
Total Future Value Cost					\$ 8,063

Houghton City Marina

Facility Owner: City of Houghton
Address: 1100 Lakeshore Drive, Houghton, MI 49931
Site ID: -

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Paddle Sport Launch Access	100%	150	SF	\$ 180	\$ 27,000
Total Boat Launch & Paddle Sport Access Cost					\$ 57,000
Total Cost					\$ 57,000
Total Future Value Cost					\$ 102,948

Houghton County Marina - Hancock

Facility Owner: Houghton County
Address: 20059 Gagnon Circle, Hancock, MI 49930
Site ID: -

Docks

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
3270	-	-	8	25'	0%	<10
			18	35'	0%	10-20
			10	45'	0%	20-30
			12	55'	0%	30-40
			4	60'	0%	40+

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Steel Sheet Pile Wall	150	40+	Functional	10	100	0	0
Rock Revetment Shoreline	1150	40+	Very Good	14	100	0	0

Utilities

Type	Age	Condition	Additional Information
WIFI	5+	Replace	
Pumpout	30+	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
26 30/ 50 Amp	100% Functional

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over Land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Fixed	80	6	2	20	0	30+	Functional

Tank Type	Tank Capacity	No. Tanks
Underground Single	12,000 Gallons	2

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	1	1	35	6	10	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	>10'	0 years ago	Unknown	-	-	0	0

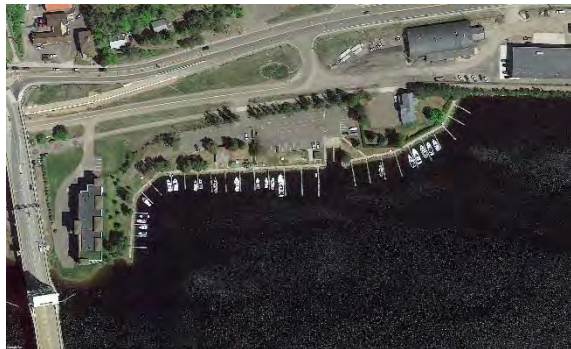
Dredging required for 2019 boating season: 10 CY

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/ Unpaved	Gravel/ Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
38	100	Functional	0	-	0	-	600	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		43560	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		1200	6	Concrete	Very Good			

Buildings

Building 1 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Boater Lounge, Restroom & Laundry	1000	4		50	Functional	Roof Replacement, Mechanical Upgrades (HVAC), General Interior & Exterior Renovations
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	150				Functional	Roof Replacement, Mechanical Upgrades (HVAC), General Interior Renovations



Houghton County Marina - Hancock

Facility Owner:	Houghton County
Address:	20059 Gagnon Circle, Hancock, MI 49930
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	100%	150	LF	\$ 700	\$ 105,000
Rock Revetment Maintenance Type B	100%	1150	LF	\$ 250	\$ 287,500
Total Structure Cost					\$ 392,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	52	SLIP	\$ 5,000	\$ 260,000
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 300,000
Total Cost					\$ 692,500

Houghton County Marina - Hancock

Facility Owner: Houghton County
Address: 20059 Gagnon Circle, Hancock, MI 49930
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	100%	150	LF	\$ 1,050	\$ 157,500
Rock Revetment Maintenance Type B	100%	1150	LF	\$ 700	\$ 805,000
Total Structure Cost					\$ 962,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
30/50 Amp Electric Pedestal	100%	26	EA	\$ 3,500	\$ 91,000
Fuel Dock	100%	480	SF	\$ 150	\$ 72,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	20	LF	\$ 100	\$ 2,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 395,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	600	SF	\$ 10	\$ 6,000
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Total Site-Features Cost					\$ 7,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building I	100%	1000	SF	\$ 400	\$ 400,000
Total Buildings Cost					\$ 400,000

Total Cost \$ 1,809,500
Total Future Value Cost \$ 2,431,817

Houghton County Marina - Hancock

Facility Owner: Houghton County
Address: 20059 Gagnon Circle, Hancock, MI 49930
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	100%	150	LF	\$ 1,400	\$ 210,000
Rock Revetment Maintenance Type B	100%	1150	LF	\$ 1,050	\$ 1,207,500
Total Structure Cost					\$ 1,417,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	52	SLIP	\$ 3,500	\$ 182,000
Fuel Dock	100%	480	SF	\$ 150	\$ 72,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	20	LF	\$ 100	\$ 2,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 486,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	7200	SF	\$ 10	\$ 72,000
Total Site-Features Cost					\$ 72,000

Total Cost \$ 2,071,500

Total Future Value Cost \$ 3,741,359

Houghton Lake South (fisherman's Paradise) BAS

Facility Owner: MDNR
Address: Townline Road North of M55 Houghton Lake, MI 48629
Site ID: A-72-001

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
6	Precast Concrete Planks	Skid	2	3	40	5	100	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
80	120000	Functional	0	-	0	-	6000	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
	15000	Very Good	Yes					

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Functional

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	80				Functional	General Interior & Exterior Renovations



Houghton Lake South (fisherman's Paradise) BAS

Facility Owner:

MDNR

Address:

Townline Road North of M55 Houghton Lake, MI 48629

Site ID:

A-72-001

There are no costs projected for this site within this time period

Houghton Lake South (fisherman's Paradise) BAS

Facility Owner:	MDNR
Address:	Townline Road North of M55 Houghton Lake, MI 48629
Site ID:	A-72-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	3	EA	\$ 45,000	\$ 135,000
Total Boat Launch & Paddle Sport Access Cost					\$ 135,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	6000	SF	\$ 10	\$ 60,000
Parking Lot - Asphalt	100%	120000	SF	\$ 10	\$ 1,200,000
Total Site-Features Cost					\$ 1,260,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost	\$ 1,415,000
-------------------	---------------------

Total Future Value Cost	\$ 1,901,642
--------------------------------	---------------------

Houghton Lake South (fisherman's Paradise) BAS

Facility Owner: MDNR
 Address: Townline Road North of M55 Houghton Lake, MI 48629
 Site ID: A-72-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	9600	SF	\$ 30	\$ 288,000
Total Boat Launch & Paddle Sport Access Cost					\$ 288,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	100%	15000	SF	\$ 1	\$ 15,000
Total Site-Features Cost					\$ 15,000

Total Cost					\$ 303,000
Total Future Value Cost					\$ 547,252

Houghton Lake West BAS

Facility Owner: MDNR
Address: North of M55 on Old 27 Houghton Lake, MI 48629
Site ID: A-72-003

Docks

Broadside

Type	Total LF	Age	Decking Type	Construction
Other	150	10	-	-

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
6	Precast Concrete Planks	Skid	5	3	40	5	90	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	<6'	0 years ago	Unknown	-	-	0	0

Dredging required for 2019 boating season: 100 CY

Site Features

Off-Street Parking				Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition		SF	Material
0	110000	Functional	0	-	0	-	7700 Asphalt

Landscaping	SF	Condition	Facility Responsible?
	59000		No

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Functional

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	80				Functional	Roof Replacement



Houghton Lake West BAS

Facility Owner: MDNR
Address: North of M55 on Old 27 Houghton Lake, MI 48629
Site ID: A-72-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000
Total Cost					\$ 45,000

Houghton Lake West BAS

Facility Owner: MDNR
 Address: North of M55 on Old 27 Houghton Lake, MI 48629
 Site ID: A-72-003

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000
Total Cost					\$ 1,197,000
Total Future Value Cost					\$ 1,608,668

Houghton Lake West BAS

Facility Owner:	MDNR
Address:	North of M55 on Old 27 Houghton Lake, MI 48629
Site ID:	A-72-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	9600	SF	\$ 30	\$ 288,000
Launch Piers	100%	3	EA	\$ 45,000	\$ 135,000
Total Boat Launch & Paddle Sport Access Cost					\$ 423,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	100%	59000	SF	\$ 1	\$ 59,000
Total Site-Features Cost					\$ 59,000

Total Cost \$ 482,000

Total Future Value Cost \$ 870,546

Howard Schultz Park BAS

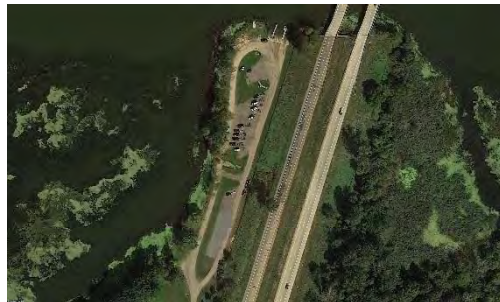
Facility Owner: City of Douglas
Address: 47 W Wiley Road
Site ID: A-03-021

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	3	2	40	5	30	30

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
45	80000	Very Good	0	-	0	-	25500	Gravel/Unpaved
On-Street Parking		Spaces	Condition	Facility Responsible?				
		0	Very Good	No				
Landscaping		SF	Condition	Facility Responsible?				
		20000	Replace	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		0	0	Gravel		N/A		



Howard Schultz Park BAS

Facility Owner: City of Douglas
 Address: 47 W Wiley Road
 Site ID: A-03-021

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Landscaping	89%	20000	SF	\$ 1	\$ 17,800
Total Site-Features Cost					\$ 17,800
Total Cost					\$ 17,800

Howard Schultz Park BAS

Facility Owner:	City of Douglas
Address:	47 W Wiley Road
Site ID:	A-03-021

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	2	EA	\$ 45,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	25500	SF	\$ 5	\$ 127,500
Total Site-Features Cost					\$ 129,700

Total Cost \$ 219,700

Total Future Value Cost \$ 295,258

Howard Schultz Park BAS

Facility Owner:	City of Douglas
Address:	47 W Wiley Road
Site ID:	A-03-021

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Total Boat Launch & Paddle Sport Access Cost					\$ 192,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	80000	SF	\$ 10	\$ 800,000
Total Site-Features Cost					\$ 800,000

Total Cost					\$ 992,000
Total Future Value Cost					\$ 1,791,662

I-94 Bridge BAS

Facility Owner: City of Port Huron
Address: 1775 Scott Ave. Port Huron Michigan 48060
Site ID: A-74-016

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Cast-In-Place Concrete	Skid	50	2	40	5	60	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
60	62400	Functional	0	-	0	-	0	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		100000	Very Good	Yes				

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



I-94 Bridge BAS

Facility Owner: City of Port Huron
Address: 1775 Scott Ave. Port Huron Michigan 48060
Site ID: A-74-016

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 70	\$ 448,000
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 478,000
Total Cost					\$ 478,000

I-94 Bridge BAS

Facility Owner:	City of Port Huron
Address:	1775 Scott Ave. Port Huron Michigan 48060
Site ID:	A-74-016

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	62400	SF	\$ 10	\$ 624,000
Total Site-Features Cost					\$ 624,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 634,000
Total Future Value Cost					\$ 852,043

I-94 Bridge BAS

Facility Owner: City of Port Huron
Address: 1775 Scott Ave. Port Huron Michigan 48060
Site ID: A-74-016

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000
Total Cost					\$ 60,000
Total Future Value Cost					\$ 108,367

Independence County Park BAS

Facility Owner: Charter Township of Bangor
Address: 1600 Martin Street Bay City, MI 48706
Site ID: A-09-001

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
150	Timber	Timber Frame & Timber Piles	5	20'	100%	<10

Broadside

Type	Total LF	Age	Decking Type	Construction
Fixed Crib Dock	900	6	Timber	-

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
10	Cast-In-Place Concrete	Fixed	6	5	30	4	200	200

Site Features

Off-Street Parking			Total				Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material
200	10000	Functional	0	-	0	-	100000	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	5000	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	0	0	0	Functional



Independence County Park BAS

Facility Owner: Charter Township of Bangor
Address: 1600 Martin Street Bay City, MI 48706
Site ID: A-09-001

There are no costs projected for this site within this time period

Independence County Park BAS

Facility Owner: Charter Township of Bangor
Address: 1600 Martin Street Bay City, MI 48706
Site ID: A-09-001

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	100000	SF	\$ 10	\$ 1,000,000
Parking Lot - Asphalt	100%	10000	SF	\$ 10	\$ 100,000
Landscaping	10%	5000	SF	\$ 1	\$ 500
Total Site-Features Cost					\$ 1,100,500
Total Cost					\$ 1,111,000
Total Future Value Cost					\$ 1,493,091

Independence County Park BAS

Facility Owner: Charter Township of Bangor
Address: 1600 Martin Street Bay City, MI 48706
Site ID: A-09-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	16000	SF	\$ 70	\$ 1,120,000
Launch Piers	100%	5	EA	\$ 45,000	\$ 225,000
Total Boat Launch & Paddle Sport Access Cost					\$ 1,345,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	90%	5000	SF	\$ 1	\$ 4,500
Total Site-Features Cost					\$ 4,500

Total Cost \$ 1,349,500
Total Future Value Cost \$ 2,437,347

Indian Lake State Park- South BAS

Facility Owner: MDNR
Address: 8970W County Road 442, Manistique, MI 49854
Site ID: A-77-025

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	25	1	30	5	12	0

Dredge

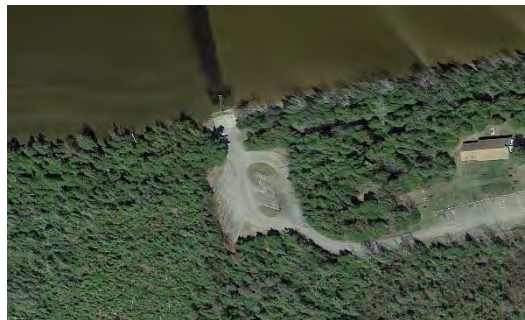
% of Navigable Water Depth	% of	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
10%	<6'	1 years ago	975	Yes	Every 5 years	950	0	0
85%	6'-10'							
5%	>10'							
Dredging required for 2019 boating season:				0	CY			

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
12	75000	Very Good	0	-	0	-	5600	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		2000	Function	Yes				

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Very Good



Indian Lake State Park- South BAS

Facility Owner:	MDNR
Address:	8970W County Road 442, Manistique, MI 49854
Site ID:	A-77-025

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 126,000

Dredging

Item	Quantity	Unit	Unit Rate	5 Year Projection
Dredging	950	CY	\$ 40	\$ 38,000
Total Cost				\$ 164,000

Indian Lake State Park- South BAS

Facility Owner: MDNR
 Address: 8970W County Road 442, Manistique, MI 49854
 Site ID: A-77-025

Dredging

Item	Quantity	Unit	Unit Rate	10 Year Projection
Dredging	950	CY	\$ 40	\$ 38,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost				\$	10,000
Total Cost				\$	48,500
Total Future Value Cost				\$	65,180

Indian Lake State Park- South BAS

Facility Owner:	MDNR
Address:	8970W County Road 442, Manistique, MI 49854
Site ID:	A-77-025

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	1900	CY	\$ 40	\$ 76,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	5600	SF	\$ 10	\$ 56,000
Parking Lot - Asphalt	100%	75000	SF	\$ 10	\$ 750,000
Landscaping	75%	2000	SF	\$ 1	\$ 1,500

Total Site-Features Cost \$ 807,500

Total Cost \$ 898,500

Total Future Value Cost \$ 1,622,791

Jewell Road BAS

Facility Owner: MDNR
Address: 3375 Boy Scout Road Indian River
Site ID: A-16-004

Utilities

Type	Age	Condition	Additional Information
Dry Standpipe Fire System	10-20	Replace	

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	2	1	40	5	34	5

Site Features

Off-Street Parking			Total	Gravel/Unpaved	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	SF Gravel/Unpaved	SF	Material
40	27000	Very Good	0	0	1200	Asphalt
Landscaping		SF	Condition	Facility Responsible?		
		750	Very Good	Yes		
Walkways		Total LF	Avg. Width	Material	Condition	
		90	5	Concrete	Very Good	

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Very Good



Jewell Road BAS

Facility Owner: MDNR
Address: 3375 Boy Scout Road Indian River
Site ID: A-16-004

There are no costs projected for this site within this time period

Jewell Road BAS

Facility Owner:	MDNR
Address:	3375 Boy Scout Road Indian River
Site ID:	A-16-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 55,000
Total Future Value Cost					\$ 73,915

Jewell Road BAS

Facility Owner:	MDNR
Address:	3375 Boy Scout Road Indian River
Site ID:	A-16-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	1200	SF	\$ 10	\$ 12,000
Parking Lot - Asphalt	100%	27000	SF	\$ 10	\$ 270,000
Walkways	100%	450	SF	\$ 10	\$ 4,500
Total Site-Features Cost					\$ 287,250

Total Cost					\$ 383,250
Total Future Value Cost					\$ 692,192

Johnson Park BAS

Facility Owner: Kent County Parks
Address: 3650 River Bend Drive, Grand Rapids MI 49534
Site ID: A-41-022

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	10	1	20	48	18	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
0	30000	Very Good	0	-	0	-	0	-
On-Street Parking		Spaces	Condition	Facility Responsible?				
		0		No				
Landscaping		SF	Condition	Facility Responsible?				
		20000	Functional	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		0	0	Gravel	N/A			



Johnson Park BAS

Facility Owner: Kent County Parks
Address: 3650 River Bend Drive, Grand Rapids MI 49534
Site ID: A-41-022

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Johnson Park BAS

Facility Owner: Kent County Parks
Address: 3650 River Bend Drive, Grand Rapids MI 49534
Site ID: A-41-022

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Total Boat Launch & Paddle Sport Access Cost					\$ 48,000
Total Cost					\$ 48,000
Total Future Value Cost					\$ 64,508

Johnson Park BAS

Facility Owner: Kent County Parks
 Address: 3650 River Bend Drive, Grand Rapids MI 49534
 Site ID: A-41-022

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	30000	SF	\$ 10	\$ 300,000
Total Site-Features Cost					\$ 300,000

Total Cost					\$ 330,000
Total Future Value Cost					\$ 596,017

Juno Lake BAS

Facility Owner: MDNR
Address: -
Site ID: A-14-012

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	20	1	30	5	11	3

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
0	13000	Functional	0	-	0	-	0	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
	2000	Very Good	Yes					
Walkways		Total LF	Avg. Width	Material	Condition			
	150	5	Concrete	Very Good				

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



5 Year Projected Cost Estimate

Juno Lake BAS

Facility Owner: MDNR
 Address: -
 Site ID: A-14-012

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 63,000
Total Cost					\$ 63,000

Juno Lake BAS

Facility Owner: MDNR
 Address: 0
 Site ID: A-14-012

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	13000	SF	\$ 10	\$ 130,000
Total Site-Features Cost					\$ 130,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 140,000
Total Future Value Cost					\$ 188,148

Juno Lake BAS

Facility Owner: MDNR
 Address: -
 Site ID: A-14-012

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	100%	2000	SF	\$ 1	\$ 2,000
Walkways	100%	750	SF	\$ 10	\$ 7,500
Total Site-Features Cost					\$ 9,500
Total Cost					\$ 39,500
Total Future Value Cost					\$ 71,341

Kenwood Park BAS

Facility Owner: City of Cadillac
Address: Kenwood Beach, Cadillac, Michigan
Site ID: A-83-013

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Cast-In-Place Concrete	Fixed	30	1	30	6	44	0

Site Features

Off-Street Parking				Total Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Condition	Access Drive
40	58000	Functional	0	-	0	-	8010 Asphalt
Landscaping		SF	Condition	Facility Responsible?			
		24000	Functional	No			
Walkways		Total LF	Avg. Width	Material	Condition		
		0	0	Concrete	Functional		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
1	4	Functional	0	-



5 Year Projected Cost Estimate

Kenwood Park BAS

Facility Owner:	City of Cadillac
Address:	Kenwood Beach, Cadillac, Michigan
Site ID:	A-83-013

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 70	\$ 112,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 127,000
Total Cost					\$ 127,000

Kenwood Park BAS

Facility Owner: City of Cadillac
Address: Kenwood Beach, Cadillac, Michigan
Site ID: A-83-013

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	8010	SF	\$ 10	\$ 80,100
Parking Lot - Asphalt	100%	58000	SF	\$ 10	\$ 580,000
Landscaping	100%	24000	SF	\$ 1	\$ 24,000
Total Site-Features Cost					\$ 684,100
Total Cost					\$ 684,100
Total Future Value Cost					\$ 919,373

Kenwood Park BAS

Facility Owner: City of Cadillac
 Address: Kenwood Beach, Cadillac, Michigan
 Site ID: A-83-013

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000
Total Future Value Cost					\$ 54,183

Kipling BAS

Facility Owner: MDNR
Address: 45.863357 , -87.018226
Site ID: A-21-017

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
3	Precast Concrete Planks	Skid	4	2	30	5	52	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged
40%	<6'	5 years ago	185
60%	6'-10'		-
Dredging required for 2019 boating season:			0 CY

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
0	47000	Very Good	0	-	0	-	0	-
On-Street Parking		Spaces	Condition	Facility Responsible?				
		0		No				
Landscaping		SF	Condition	Facility Responsible?				
		21000	Functional	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		40	5	Concrete	Very Good			

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Kipling BAS

Facility Owner: MDNR
Address: 45.863357 , -87.018226
Site ID: A-21-017

There are no costs projected for this site within this time period

Kipling BAS

Facility Owner:	MDNR
Address:	45.863357 , -87.018226
Site ID:	A-21-017

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	2	EA	\$ 45,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Landscaping	85%	21000	SF	\$ 1	\$ 17,850
Total Site-Features Cost					\$ 17,850

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 117,850
-------------------	-------------------

Total Future Value Cost	\$ 158,381
--------------------------------	-------------------

Kipling BAS

Facility Owner:	MDNR
Address:	45.863357 , -87.018226
Site ID:	A-21-017

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	4800	SF	\$ 30	\$ 144,000
Total Boat Launch & Paddle Sport Access Cost					\$ 144,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	47000	SF	\$ 10	\$ 470,000
Landscaping	15%	21000	SF	\$ 1	\$ 3,150
Walkways	100%	200	SF	\$ 10	\$ 2,000
Total Site-Features Cost					\$ 475,150

Total Cost \$ 619,150

Total Future Value Cost \$ 1,118,254

Klinger Lake BAS

Facility Owner: MDNR
Address: 0
Site ID: A-75-002

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	20	1	30	5	20	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
0	0	-	0	-	30000	Functional	30000	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		6000	Very Good	Yes				

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Klinger Lake BAS

Facility Owner: MDNR
 Address: -
 Site ID: A-75-002

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 111,000
Total Cost					\$ 111,000

Klinger Lake BAS

Facility Owner:	MDNR
Address:	0
Site ID:	A-75-002

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Gravel/Unpaved	100%	30000	SF	\$ 5	\$ 150,000
Total Site-Features Cost					\$ 300,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 310,000
Total Future Value Cost					\$ 416,614

Klinger Lake BAS

Facility Owner: MDNR
 Address: -
 Site ID: A-75-002

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000
Total Future Value Cost					\$ 54,183

L'Anse Municipal Marina

Facility Owner: Village of L'Anse
Address: Front Street, L'Anse
Site ID: -

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
940	Traditional Timber (DNR Standard)	Floation Docking Systems (FDS)	8	25'	100%	20-30

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
225	Concrete	375 LF of Fixed Timber Pile & Timber Frame	5	30'	100%	<10

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	2400	30	Concrete	Steel Sheet Pile

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	300	20-30	Functional	8	100	0	0	NA
Rock Revetment Shoreline	500	-	Functional	8	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	<10	Very Good	100 % have vacuum breakers installed
WIFI	<5	Very Good	

Electric Shore Power

Utility Pedestals	% Condition
8 Twin 30 Amp	100% Very Good
Compliant with Electrical Shock Drowning Ground Fault Protection Standards?	Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over Land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gasoline	Harbor Wall	50	8	1	10	0	30+	Replace
Tank Type		Tank Capacity		No. Tanks				
Above Ground Single		500 Gallons		1				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	30	1	30	4	20	10

Dredge

% of Navigable Water Depth		Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
10%	<6'	7 years ago	1600	Yes	Every 10 years	1500	100	0
80%	6'-10'							
10%	>10'							
Dredging required for 2019 boating season:				0	CY			

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
20	5000	Functional	0	-	0	-	0	Asphalt
On-Street Parking		Spaces	Condition	Facility Responsible?				
		20	Functional	Yes				
Landscaping		SF	Condition	Facility Responsible?				
		100000	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		1200	8	Concrete		Functional		

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
1	20	Functional	0	-				
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Office & Restroom	832	6	2	3	Very Good	Roof Replacement		



5 Year Projected Cost Estimate

L'Anse Municipal Marina

Facility Owner:	Village of L'Anse
Address:	Front Street, L'Anse
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Floating Dock	100%	940	SF	\$ 75	\$ 70,500
Total Dock Cost					\$ 70,500

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	25%	300	LF	\$ 140	\$ 10,500
Total Structure Cost					\$ 10,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Fuel Dock	100%	400	SF	\$ 70	\$ 28,000
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Fuel Lines	100%	10	LF	\$ 100	\$ 1,000
Above Ground Single Product Tank	100%	1	EA	\$ 50,000	\$ 50,000
Total Utilities Cost					\$ 94,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 239,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Walkways	20%	9600	SF	\$ 10	\$ 19,200
Total Site-Features Cost					\$ 19,200
Total Cost					\$ 433,200

L'Anse Municipal Marina

Facility Owner:	Village of L'Anse
Address:	Front Street, L'Anse
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	25%	300	LF	\$ 350	\$ 26,250
Total Structure Cost					\$ 26,250

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	5000	SF	\$ 10	\$ 50,000
Walkways	40%	9600	SF	\$ 10	\$ 38,400
Total Site-Features Cost					\$ 88,400

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Total Buildings Cost					\$ 15,000

Total Cost					\$ 129,650
Total Future Value Cost					\$ 174,239

L'Anse Municipal Marina

Facility Owner:	Village of L'Anse
Address:	Front Street, L'Anse
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	25%	300	LF	\$ 700	\$ 52,500
Total Structure Cost					\$ 52,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	13	SLIP	\$ 3,500	\$ 45,500
Twin 30 Amp Electric Pedestal	100%	8	EA	\$ 3,000	\$ 24,000
Potable Water	100%	13	SLIP	\$ 800	\$ 10,400
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Total Utilities Cost					\$ 84,900

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	1500	CY	\$ 40	\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	40%	9600	SF	\$ 10	\$ 38,400
Total Site-Features Cost					\$ 38,400

Total Cost					\$ 265,800
Total Future Value Cost					\$ 480,064

Lac La Belle State Harbor

Facility Owner: MDNR
Address: 0
Site ID: 42-203

Docks

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
2505	Timber	Rebar Reinforced	5	40'	100%	10-20
			6	45'		

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Steel Sheet Pile Wall	60	40+	Functional	5	100	0	0
Concrete Wall	32	10-20'-	Very Good	3	100	0	0

Utilities

Type	Age	Condition	Additional Information
Dry Standpipe Fire System	<10	Very Good	

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	8	1	40	5	27	9

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
20%	6'-10'	8 years ago	Unknown	Yes	Every 10 years	7500	0
80%	>10'						100
Dredging required for 2019 boating season:				0	CY		

Site Features

Off-Street Parking		Asphalt		Concrete		Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Condition	Total SF Concrete	Condition	Facility Responsible?			SF	Material
36	29900	Very Good	0	-	Yes	0	-	6030	Asphalt
Landscaping		SF	Condition	Facility Responsible?					
		27000	Functional	Yes					
Walkways		Total LF	Avg. Width	Material		Condition			
		110	5	Concrete		Vwey Good			

Buildings

Vault Toilets	
Amount	Condition
2	Functional



Lac La Belle State Harbor

Facility Owner:	MDNR
Address:	-
Site ID:	42-203

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Fixed Head Pier Redecking	100%	2505	SF	\$ 10	\$ 25,050
Total Dock Cost					\$ 25,050

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	100%	60	LF	\$ 700	\$ 42,000
Total Structure Cost					\$ 42,000
Total Cost					\$ 82,050

Lac La Belle State Harbor

Facility Owner:	MDNR	
Address:		0
Site ID:	42-203	

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	100%	60	LF	\$ 1,050	\$ 63,000
Total Structure Cost					\$ 63,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost					\$ 83,000
Total Future Value Cost					\$ 111,545

Lac La Belle State Harbor

Facility Owner: MDNR
 Address: -
 Site ID: 42-203

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	100%	60	LF	\$ 1,400	\$ 84,000
Concrete Wall Maintenance Type B	100%	32	LF	\$ 140	\$ 4,480
Total Structure Cost					\$ 88,480

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Dry Standpipe Fire Suppression System	100%	11	SLIP	\$ 800	\$ 8,800
Total Utilities Cost					\$ 8,800

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 141,000

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	7500	CY	\$ 40	\$ 300,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	6030	SF	\$ 10	\$ 60,300
Parking Lot - Asphalt	100%	29900	SF	\$ 10	\$ 299,000
Landscaping	100%	27000	SF	\$ 1	\$ 27,000
Walkways	100%	550	SF	\$ 10	\$ 5,500
Total Site-Features Cost					\$ 391,800

Total Cost \$ 930,080

Total Future Value Cost \$ 1,679,828

Lake Antoine County Park BAS

Facility Owner: Dickinson County
Address: P.O Box 609
Site ID: A-22-027

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Functional	100 % have vacuum breakers installed
WIFI	5+	Replace	
Pumpout	30+	-	1 Pumpout(s)

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Fixed	20	1	40	4	25	10

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
200	53000	Replace	0	-	0	Functional	55000	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		435600	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		600	6	Asphalt		Good		

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
2	30	Functional	3	Functional				
Building 1 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Restroom	400	6	-	60	Replace	Roof Replacement, Mechanical Upgrades, ADA Updates, General Interior & Exterior Renovations		
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Restroom	800	12	8	40	Functional	Roof Replacement, Mechanical Upgrades, ADA Updates, General Interior Renovations		
Building 3 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Restroom	700	6	4	35	Functional	Mechanical Upgrades, General Interior & Exterior Renovations		



Lake Antoine County Park BAS

Facility Owner:	Dickinson County
Address:	P.O Box 609
Site ID:	A-22-027

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 40,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Parking Lot - Asphalt	100%	53000	SF	\$ 10	\$ 530,000
Landscaping	10%	435600	SF	\$ 1	\$ 43,560
Total Site-Features Cost					\$ 573,560

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building 1	100%	400	SF	\$ 400	\$ 160,000
Total Buildings Cost					\$ 160,000
Total Cost					\$ 773,560

Lake Antoine County Park BAS

Facility Owner:	Dickinson County
Address:	P.O Box 609
Site ID:	A-22-027

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	55000	SF	\$ 10	\$ 550,000
Landscaping	40%	435600	SF	\$ 1	\$ 174,240
Walkways	10%	3600	SF	\$ 7	\$ 2,520
Total Site-Features Cost					\$ 726,760

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	2	EA	\$ 15,000	\$ 30,000
Vault Toilet	100%	3	EA	\$ 10,000	\$ 30,000
Building 2	100%	800	SF	\$ 400	\$ 320,000
Building 3	100%	700	SF	\$ 400	\$ 280,000
Total Buildings Cost					\$ 660,000

Total Cost \$ 1,416,760

Total Future Value Cost \$ 1,904,007

Lake Antoine County Park BAS

Facility Owner:	Dickinson County
Address:	P.O Box 609
Site ID:	A-22-027

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	50%	435600	SF	\$ 1	\$ 217,800
Walkways	90%	3600	SF	\$ 7	\$ 22,680
Total Site-Features Cost					\$ 240,480

Total Cost	\$ 270,480
Total Future Value Cost	\$ 488,517

Lake Fenton BAS

Facility Owner: MDNR
Address: 2244 Grove Park Rd., Fenton, MI 48430
Site ID: A-25-002

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	10	2	40	5	40	20

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	YES	0	0	0	0	0	0	0	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
60	52000	Very Good	4700	-	0	-	2250	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		60750	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		260	5	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Very Good



Lake Fenton BAS

Facility Owner:	MDNR
Address:	2244 Grove Park Rd., Fenton, MI 48430
Site ID:	A-25-002

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000

Lake Fenton BAS

Facility Owner:	MDNR
Address:	2244 Grove Park Rd., Fenton, MI 48430
Site ID:	A-25-002

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Total Boat Launch & Paddle Sport Access Cost					\$ 192,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 202,000

Total Future Value Cost \$ 271,471

Lake Fenton BAS

Facility Owner:	MDNR
Address:	2244 Grove Park Rd., Fenton, MI 48430
Site ID:	A-25-002

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	2250	SF	\$ 10	\$ 22,500
Parking Lot - Asphalt	100%	52000	SF	\$ 10	\$ 520,000
Landscaping	100%	60750	SF	\$ 1	\$ 60,750
Walkways	100%	1300	SF	\$ 10	\$ 13,000
Total Site-Features Cost					\$ 616,250

Total Cost \$ 676,250

Total Future Value Cost \$ 1,221,383

Lake Gogebic- East BAS

Facility Owner: MDNR
Address: Lake Gogebic State Park N9995 M64 Merisco Mi 449947
Site ID: A-27-014

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	10	1	40	6	0	0

Site Features

Off-Street Parking		Asphalt Condition	Total		Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	SF Asphalt		SF Concrete	Concrete Condition				SF	Material
23	0	-	0	-	10000	Functional	15400	Gravel/Unpaved	
Landscaping		SF	Condition	Facility Responsible?					
		25000	Functional	Yes					

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Very Good



Lake Gogebic- East BAS

Facility Owner:	MDNR
Address:	Lake Gogebic State Park N9995 M64 Merisco Mi 449947
Site ID:	A-27-014

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	15400	SF	\$ 5	\$ 77,000
Total Site-Features Cost					\$ 77,000
Total Cost					\$ 92,000

Lake Gogebic- East BAS

Facility Owner:	MDNR
Address:	Lake Gogebic State Park N9995 M64 Merisco Mi 449947
Site ID:	A-27-014

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Gravel/Unpaved	100%	10000	SF	\$ 5	\$ 50,000
Landscaping	75%	25000	SF	\$ 1	\$ 18,750
Total Site-Features Cost					\$ 68,750

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 174,750

Total Future Value Cost \$ 234,849

Lake Gogebic- East BAS

Facility Owner:	MDNR
Address:	Lake Gogebic State Park N9995 M64 Merisco Mi 449947
Site ID:	A-27-014

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	25%	25000	SF	\$ 1	\$ 6,250
Total Site-Features Cost					\$ 6,250

Total Cost					\$ 36,250
Total Future Value Cost					\$ 65,472

Lake Gogebic State Park BAS

Facility Owner: MDNR
Address: N9995 M64 Marenisco, Mi 49947
Site ID: A-27-013

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	10	1	30	6	0	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
130	52632	Functional	0	-	0	-	33600	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
	650,000	Functional	Yes					

Buildings

Picnic Shelters			Vault Toilets				
Amount	Age	Condition	Amount	Condition			
1	45	Functional	2	Functional			
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Restroom	950	6	-	-	Functional	ADA Upgrades, General Interior & Exterior Renovations	



Lake Gogebic State Park BAS

Facility Owner: MDNR
 Address: N9995 M64 Marenisco, Mi 49947
 Site ID: A-27-013

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Lake Gogebic State Park BAS

Facility Owner: MDNR
 Address: N9995 M64 Marenisco, Mi 49947
 Site ID: A-27-013

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	33600	SF	\$ 10	\$ 336,000
Parking Lot - Asphalt	100%	52632	SF	\$ 10	\$ 526,320
Total Site-Features Cost					\$ 862,320

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 35,000

Total Cost \$ 993,320

Total Future Value Cost \$ 1,334,939

Lake Gogebic State Park BAS

Facility Owner: MDNR
 Address: N9995 M64 Marenisco, Mi 49947
 Site ID: A-27-013

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000
Total Future Value Cost					\$ 54,183

Lake Lansing Park - North BAS

Facility Owner: Ingham County
Address: 6271 East Lake Drive
Site ID: A-33-002

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	250	10-20	Very Good	1	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	10	1	40	6	58	0

Boat Storage

Hull Wash Down	Travel Lift	Hydraulic Trailer	Summer Storage SF	Indoor Heated SF	Winter Indoor SF	Winter Outdoor SF
Yes	No	No	0	0	0	0

Site Features

Off-Street Parking		Asphalt Condition	Total		Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	SF Asphalt		SF Concrete	SF				SF	Material
58	35000	Functional	0	-	0	-	1500	Asphalt	
Landscaping		SF	Condition	Facility Responsible?					
		40000	Very Good	Yes					

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	640	6		40	Functional	



Lake Lansing Park - North BAS

Facility Owner:	Ingham County
Address:	6271 East Lake Drive
Site ID:	A-33-002

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Lake Lansing Park - North BAS

Facility Owner:	Ingham County
Address:	6271 East Lake Drive
Site ID:	A-33-002

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	1500	SF	\$ 10	\$ 15,000
Parking Lot - Asphalt	100%	35000	SF	\$ 10	\$ 350,000
Total Site-Features Cost					\$ 365,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building I	100%	640	SF	\$ 400	\$ 256,000
Total Buildings Cost					\$ 256,000

Total Cost \$ 717,000

Total Future Value Cost \$ 963,588

Lake Lansing Park - North BAS

Facility Owner:	Ingham County
Address:	6271 East Lake Drive
Site ID:	A-33-002

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	250	LF	\$ 140	\$ 35,000
Total Structure Cost					\$ 35,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	100%	40000	SF	\$ 1	\$ 40,000
Total Site-Features Cost					\$ 40,000

Total Cost					\$ 105,000
Total Future Value Cost					\$ 189,642

Lake Macatawa BAS

Facility Owner: MDNR
Address: 1812 Ottawa Beach Rd. Holland MI, 49424
Site ID: A-70-001

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
6	Precast Concrete Planks	Skid	10	3	40	5	210	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
210	139260	Functional	0	-	0	-	5000	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		37300	Good	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		185	6	Concrete	Very Good			

Buildings

Picnic Shelters			Vault Toilets			
Amount	Age	Condition	Amount	Condition		
0	0	-	1	Functional		
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	78	-	-	19	Functional	Roof Replacement, Mechanical Upgrades



Lake Macatawa BAS

Facility Owner:	MDNR
Address:	1812 Ottawa Beach Rd. Holland MI, 49424
Site ID:	A-70-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000
Total Cost					\$ 45,000

Lake Macatawa BAS

Facility Owner:	MDNR
Address:	1812 Ottawa Beach Rd. Holland MI, 49424
Site ID:	A-70-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	9600	SF	\$ 30	\$ 288,000
Total Boat Launch & Paddle Sport Access Cost					\$ 288,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	5000	SF	\$ 10	\$ 50,000
Parking Lot - Asphalt	100%	139260	SF	\$ 10	\$ 1,392,600
Total Site-Features Cost					\$ 1,450,060

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 1,748,060

Total Future Value Cost \$ 2,349,246

Lake Macatawa BAS

Facility Owner:	MDNR
Address:	1812 Ottawa Beach Rd. Holland MI, 49424
Site ID:	A-70-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	3	EA	\$ 30,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Landscaping	80%	37300	SF	\$ 1	\$ 29,840
Walkways	100%	1110	SF	\$ 10	\$ 11,100
Total Site-Features Cost					\$ 40,940

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building 1	100%	78	SF	\$ 400	\$ 31,200
Total Buildings Cost					\$ 31,200

Total Cost	\$ 162,140
Total Future Value Cost	\$ 292,843

Lake Michigamme BAS

Facility Owner: MDNR
Address: County Road IC/Brown Road, Michigamme, MI 49861
Site ID: A-52-011

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	20	1	30	6	20	20

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
20	0	-	0	-	4175	Functional	4800	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		8963	Functional	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		16	6	Concrete	Very Good			

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Lake Michigamme BAS

Facility Owner:	MDNR
Address:	County Road IC/Brown Road, Michigamme, MI 49861
Site ID:	A-52-011

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 63,000
Total Cost					\$ 63,000

Lake Michigamme BAS

Facility Owner:	MDNR
Address:	County Road IC/Brown Road, Michigamme, MI 49861
Site ID:	A-52-011

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	4800	SF	\$ 10	\$ 48,000
Parking Lot - Gravel/Unpaved	100%	4175	SF	\$ 5	\$ 20,875
Total Site-Features Cost					\$ 68,875

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 78,875

Total Future Value Cost \$ 106,001

Lake Michigamme BAS

Facility Owner: MDNR
 Address: County Road IC/Brown Road, Michigamme, MI 49861
 Site ID: A-52-011

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	96	SF	\$ 10	\$ 960
Total Site-Features Cost					\$ 960

Total Cost					\$ 30,960
Total Future Value Cost					\$ 55,917

Lake Skegemog BAS

Facility Owner: MDNR
Address: 1132 US 31 N Traverse City, MI 49686
Site ID: A-28-016

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	141	<10	Very Good	1	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	5	1	33	6	30	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
30	0	-	0	-	1082	Functional	12000	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		23289	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		39	5	Concrete		Functional		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Lake Skegemog BAS

Facility Owner: MDNR
 Address: 1132 US 31 N Traverse City, MI 49686
 Site ID: A-28-016

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Lake Skegemog BAS

Facility Owner:	MDNR
Address:	1132 US 31 N Traverse City, MI 49686
Site ID:	A-28-016

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	12000	SF	\$ 5	\$ 60,000
Parking Lot - Gravel/Unpaved	100%	1082	SF	\$ 5	\$ 5,410
Walkways	100%	195	SF	\$ 10	\$ 1,950
Total Site-Features Cost					\$ 67,360

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 77,360

Total Future Value Cost \$ 103,965

Lake Skegemog BAS

Facility Owner: MDNR
 Address: 1132 US 31 N Traverse City, MI 49686
 Site ID: A-28-016

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 141,000
Total Cost					\$ 141,000
Total Future Value Cost					\$ 254,662

Lake St Helen BAS

Facility Owner: MDNR
Address: 8910 Iroquois
Site ID: A-72-014

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	1400	20-30'-	Replace	1	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Dry Standpipe Fire System	10-20	Very Good	

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
3	Precast Concrete Planks	Skid	25	2	30	4	76	34

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
0	0	100	10	20	10	0	0	0	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
107	65000	Functional	0	-	0	-	500	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		87120	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		1100	7	Concrete and Limestone		Functional		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Functional



Lake St Helen BAS

Facility Owner:	MDNR
Address:	8910 Iroquois
Site ID:	A-72-014

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Shoreline	50%	1400	LF	\$ 1,000	\$ 700,000
Rock Revetment Maintenance Type A	50%	1400	LF	\$ 100	\$ 70,000
Total Structure Cost					\$ 770,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	4800	SF	\$ 30	\$ 144,000
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Paddle Sport Launch Access	100%	200	SF	\$ 75	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 189,000
Total Cost					\$ 959,000

Lake St Helen BAS

Facility Owner:	MDNR
Address:	8910 Iroquois
Site ID:	A-72-014

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	50%	1400	LF	\$ 350	\$ 245,000
Total Structure Cost					\$ 245,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	500	SF	\$ 10	\$ 5,000
Parking Lot - Asphalt	100%	65000	SF	\$ 10	\$ 650,000
Total Site-Features Cost					\$ 655,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost \$ 920,000

Total Future Value Cost \$ 1,236,403

Lake St Helen BAS

Facility Owner:	MDNR
Address:	8910 Iroquois
Site ID:	A-72-014

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	50%	1400	LF	\$ 700	\$ 490,000
Total Structure Cost					\$ 490,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Paddle Sport Launch Access	100%	200	SF	\$ 105	\$ 21,000
Total Boat Launch & Paddle Sport Access Cost					\$ 81,000

Total Cost					\$ 571,000
Total Future Value Cost					\$ 1,031,290

Leland Township Harbor

Facility Owner: Township of Leland, Leelanau Cc
Address: 107 N. Lake St., Leland, MI 49654
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
3157.5	Timber	-	26	30'	100%	<10
			25	35'		
			10	45'		

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
10774.5	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	25	25'	100%	<10
			20	35'		
			10	45'		

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
1110	Concrete	Unknown	1	30'	100%	<10
			4	35'		

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
285	Timber	Fixed Steel Pile & Timber Frame	1	30'	100%	<10
			4	40'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Fixed Open Pile Dock	0	0	Timber	Timber Frame & Timber Piles
Floating Dock	4368	10	-	Traditional Timber by Floatation Docking Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	180	30-40	-	5	95	5	0	NA
Rock Revetment Shoreline	135	<10	Very Good	6	100	0	0	NA
Rock Revetment Offshore	1575	40+	Very Good	20	0	100	0	Yes
Steel Sheet Pile Double	25	40+	Very Good	15	0	100	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	<10	Very Good	100 % have vacuum breakers installed
WIFI	<5	Very Good	
Dry Standpipe Fire System	<10	Very Good	
Wet Fire Hydrant System	<10	Very Good	
Flow Inducers	-	Very Good	50 Units Total
Pumpout	<10	-	0 Additional Units Needed 1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
13 Twin 30 Amp 18 30/ 50 Amp 9 Twin 50 Amp	100% Very Good
Compliant with Electrical Shock Drowning Ground Fault Protection Standards? Yes	

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over Land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	0	61	8	2	270	360	<10	Very Good
Tank Type		Tank Capacity		No. Tanks				
Underground Single		20,000 Gallons		1				
Underground Dual		10,000 Gallons		2				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	10	1	48	5	19	19

Dredge

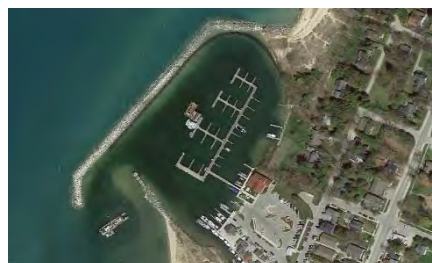
% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel	
100%	>10'	1 years ago	28000	Yes	Every 1 year	25000	5	95
Dredging required for 2019 boating season:				15000	CY			

Site Features

Off-Street Parking		Asphalt		Concrete		Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Condition	Total SF Concrete	Condition	SF Gravel/Unpaved	Condition	SF	Material	
22	33600	Very Good	0	-	0	-	6000	Asphalt	
Landscaping		SF	Condition	Facility Responsible?					
		20800	Very Good	Yes					
Walkways		Total LF	Avg. Width	Material		Condition			
		760	6	Concrete		Very Good			

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Office, Boater Lounge, Restroom, Laundry, and Maintenance shop	5100	8	8	10	Very Good	Roof Replacement	
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Restroom	500	8		10	Very Good	Roof Replacement	



Leland Township Harbor

Facility Owner:	Township of Leland, Leelanau County, MI
Address:	107 N. Lake St., Leland, MI 49654
Site ID:	-

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000

Dredging

Item	Quantity	Unit	Unit Rate	5 Year Projection
Dredging	750	CY	\$ 40	\$ 30,000
Total Cost				\$ 45,000

Leland Township Harbor

Facility Owner:	Township of Leland, Leelanau County, MI
Address:	107 N. Lake St., Leland, MI 49654
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Fixed Head Pier Redecking	100%	1110	SF	\$ 15	\$ 16,650
Redecking Finger Piers	100%	285	SF	\$ 10	\$ 2,850
Total Dock Cost					\$ 378,675

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Flow Inducers	100%	50	EA	\$ 1,000	\$ 50,000
Total Utilities Cost					\$ 50,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Total Boat Launch & Paddle Sport Access Cost					\$ 224,000

Dredging

Item	Quantity	Unit	Unit Rate	10 Year Projection
Dredging	6250	CY	\$ 40	\$ 250,000
Total Cost				\$ 902,675
Total Future Value Cost				\$ 1,213,120

Leland Township Harbor

Facility Owner: Township of Leland, Leelanau County, MI
Address: 107 N. Lake St., Leland, MI 49654
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Floating Dock	100%	10775	SF	\$ 75	\$ 808,088
Total Dock Cost					\$ 808,088

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	126	SLIP	\$ 3,500	\$ 441,000
Twin 30 Amp Electric Pedestal	100%	13	EA	\$ 3,000	\$ 39,000
30/50 Amp Electric Pedestal	100%	18	EA	\$ 3,500	\$ 63,000
Twin 50 Amp Electric Pedestal	100%	9	EA	\$ 3,500	\$ 31,500
Potable Water	100%	126	SLIP	\$ 800	\$ 100,800
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Dry Standpipe Fire Suppression System	100%	126	SLIP	\$ 800	\$ 100,800
Wet Fire Suppression System	100%	126	SLIP	\$ 1,000	\$ 126,000
Fuel Dock	100%	488	SF	\$ 100	\$ 48,800
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	630	LF	\$ 100	\$ 63,000
Underground Single Product Tank	100%	1	EA	\$ 100,000	\$ 100,000
Underground Dual Product Tank	100%	2	EA	\$ 120,000	\$ 240,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 1,423,900

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	12500	CY	\$ 40	\$ 500,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	6000	SF	\$ 10	\$ 60,000
Parking Lot - Asphalt	100%	33600	SF	\$ 10	\$ 336,000
Walkways	100%	4560	SF	\$ 10	\$ 45,600
Total Site-Features Cost					\$ 441,600

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building 1	100%	5100	SF	\$ 400	\$ 2,040,000
Building 2	100%	500	SF	\$ 400	\$ 200,000
Total Buildings Cost					\$ 2,240,000

Total Cost \$ 5,443,588

Total Future Value Cost \$ 9,831,725

Lexington State Harbor

Facility Owner: MDNR
Address: 7411 Huron Ave, Lexington, MI 48450
Site ID: 76-202

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
13672.5	Timber	Steel Frame & Steel	17	35'	20%	10-20
		Piles	32	45'	80%	30-40
			10	60'		

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
5140	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	40	35'	100%	10-20

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
2227.5	Concrete	Steel Frame & Steel	9	45'	100%	30-40

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
607.5	Timber	190 LF of Fixed Steel Pile & Steel Framing along a Harbor Wall	9	45'	100%	30-40

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	500	30-40	-	7	100	0	0	NA
Rock Revetment Offshore	0	30-40	Functional	0	0	100	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Very Good	50 % have vacuum breakers installed
Wet Fire Hydrant System	10-20	Functional	
Ice Suppression System	10-20	Replace	9 Units Total
Air Distribution Lines	10-20	Replace	
Flow Inducers	-		0 Units Total 4 Additional Units Needed
Pumpout	30+	-	2 Pumpout(s)

Electric Shore Power

5 Single 30 Amp 100% Functional
 26 Twin 30 Amp
 5 30/ 50 Amp
 23 Twin 50 Amp

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over Land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	0	60	12	4	140	540	10-20	Functional
Tank Type		Tank Capacity		No. Tanks				
Underground Single		5,300 Gallons		1				
Underground Single		13,500 Gallons		1				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
3	Cast-In-Place Concrete	Skid	0	3	40	5	76	0

Dredge

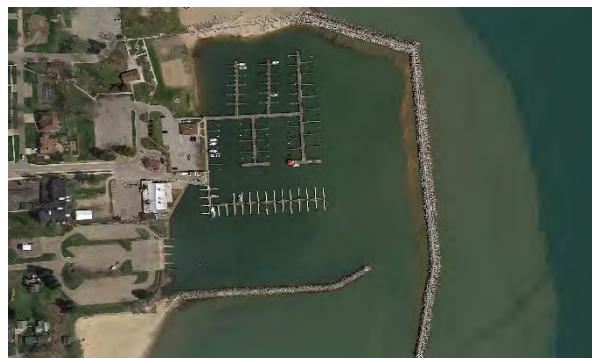
% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
20%	<6'	5 years ago	Unknown	Yes	Unknown	0	100
80%	6'-10'						
Dredging required for 2019 boating season:				0	CY		

Site Features

Off-Street Parking				Total Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Unpaved	Condition	SF	Material
38	17700	Functional	0	-	0	-	1800	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		20810	Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		550	8	Concrete		Very Good		

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	2100	17	8	34	Functional	Mechanical Upgrades, ADA Updates, General Interior & Exterior Renovations
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office & Fuel Service	216				Very Good	ADA Updates
Building 3 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office & Harbor Shop	700	1			Replace	Mechanical Upgrades, ADA Updates, General Interior & Exterior Renovations



Lexington State Harbor

Facility Owner:	MDNR
Address:	7411 Huron Ave, Lexington, MI 48450
Site ID:	76-202

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Fixed Dock	80%	13673	SF	\$ 75	\$ 820,350
Traditional Fixed Dock Redecking	20%	13673	SF	\$ 10	\$ 27,345
Fixed Head Pier	100%	2228	SF	\$ 75	\$ 167,063
Wall/Shoreline Head Pier Fixed Fingers	100%	608	SF	\$ 75	\$ 45,563
Total Dock Cost					\$ 1,060,320

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	117	SLIP	\$ 5,000	\$ 585,000
PW System Vacuum Breakers	50%	117	SLIP	\$ 12	\$ 702
Ice Suppression Compressor System	50%	117	SLIP	\$ 1,800	\$ 105,300
Additional Flow Inducers	100%	4	EA	\$ 1,000	\$ 4,000
Pumpout	100%	2	EA	\$ 35,000	\$ 70,000
Total Utilities Cost					\$ 765,002

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building 3	100%	700	SF	\$ 400	\$ 280,000
Total Buildings Cost					\$ 280,000
Total Cost					\$ 2,105,322

Lexington State Harbor

Facility Owner: MDNR
 Address: 7411 Huron Ave, Lexington, MI 48450
 Site ID: 76-202

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Floating Dock	100%	5140	SF	\$ 75	\$ 385,500
Total Dock Cost					\$ 385,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Single 30 Amp Electric Pedestal	100%	5	EA	\$ 3,000	\$ 15,000
Twin 30 Amp Electric Pedestal	100%	26	EA	\$ 3,000	\$ 78,000
30/50 Amp Electric Pedestal	100%	5	EA	\$ 3,500	\$ 17,500
Twin 50 Amp Electric Pedestal	100%	23	EA	\$ 3,500	\$ 80,500
Potable Water	100%	117	SLIP	\$ 800	\$ 93,600
Ice Suppression Compressor System	50%	117	SLIP	\$ 1,800	\$ 105,300
Flow Inducers	100%	4	EA	\$ 1,000	\$ 4,000
Fuel Dock	100%	720	SF	\$ 150	\$ 108,000
Fuel Dispenser	100%	4	EA	\$ 15,000	\$ 60,000
Fuel Lines	100%	680	LF	\$ 100	\$ 68,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 946,900

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	3	EA	\$ 45,000	\$ 135,000
Total Boat Launch & Paddle Sport Access Cost					\$ 135,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	1800	SF	\$ 10	\$ 18,000
Parking Lot - Asphalt	100%	17700	SF	\$ 10	\$ 177,000
Total Site-Features Cost					\$ 195,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building I	100%	2100	SF	\$ 400	\$ 840,000
Total Buildings Cost					\$ 840,000

Total Cost \$ 2,502,400
Total Future Value Cost \$ 3,363,016

Lexington State Harbor

Facility Owner:	MDNR
Address:	7411 Huron Ave, Lexington, MI 48450
Site ID:	76-202

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Fixed Dock	20%	13673	SF	\$ 75	\$ 205,088
Total Dock Cost					\$ 205,088

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	117	SLIP	\$ 3,500	\$ 409,500
Fuel Dock	100%	720	SF	\$ 150	\$ 108,000
Fuel Dispenser	100%	4	EA	\$ 15,000	\$ 60,000
Fuel Lines	100%	680	LF	\$ 100	\$ 68,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 845,500

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	4400	SF	\$ 10	\$ 44,000
Total Site-Features Cost					\$ 44,000

Total Cost \$ 1,094,588

Total Future Value Cost \$ 1,976,947

Lily Pond BAS

Facility Owner: Amry Corp of Engineers
Address: 0
Site ID: A-31-025

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	0	0	Concerete	Steel Sheet Pile
Other	1600	25	-	-

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	225	-	-	0	0	100	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	10	1	40	4	12	4

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved	Very Good	SF	Material
24	0	-	25000	-	9600	Very Good	20400	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		7500	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		340	4	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Lily Pond BAS

Facility Owner: Amry Corp of Engineers
 Address: -
 Site ID: A-31-025

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Lily Pond BAS

Facility Owner:	Amry Corp of Engineers
Address:	-
Site ID:	A-31-025

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 106,000

Total Future Value Cost \$ 142,455

Lily Pond BAS

Facility Owner: Amry Corp of Engineers
Address: 0
Site ID: A-31-025

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	20400	SF	\$ 5	\$ 102,000
Parking Lot - Gravel/Unpaved	100%	9600	SF	\$ 5	\$ 48,000
Walkways	100%	1360	SF	\$ 10	\$ 13,600
Total Site-Features Cost					\$ 163,600
Total Cost					\$ 193,600
Total Future Value Cost					\$ 349,663

Lime Island State Harbor

Facility Owner: MDNR
Address: C/O Brimley State Park 9200 W 6 Mile Rd Brimley MI 49715
Site ID: 17-205

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
363	Timber	Timber Framed Crib	2	25'	100%	30-40

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	400	60	Concrete	4ft Concrete Apron with Rock Fill Inside with Timber Fendering (Old Coal Dock)
Fixed Crib Dock	784	50	Timber	-

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Concrete Wall	800	40+	Functional	15	100	0	0	NA

Site Features

Landscaping	SF	Condition	Facility Responsible?	
	105400	Good	Yes	
Walkways	Total LF	Avg. Width	Material	Condition
	250	5	Gravel	Functional

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office & Maintenance shop	1000			50	Replace	ADA Updates, General Interior & Exterior Renovations



Lime Island State Harbor

Facility Owner:	MDNR
Address:	C/O Brimley State Park 9200 W 6 Mile Rd Brimley MI 49715
Site ID:	17-205

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Fixed Dock	100%	363	SF	\$ 125	\$ 45,375
Broadside Fixed Crib	100%	784	SF	\$ 150	\$ 117,600
Total Dock Cost					\$ 162,975

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Concrete Wall Maintenance Type A	100%	800	LF	\$ 400	\$ 320,000
Total Structure Cost					\$ 320,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building I	100%	1000	SF	\$ 400	\$ 400,000
Total Buildings Cost					\$ 400,000
Total Cost					\$ 882,975

Lime Island State Harbor

Facility Owner:	MDNR
Address:	C/O Brimley State Park 9200 W 6 Mile Rd Brimley MI 49715
Site ID:	I7-205

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Concrete Wall Maintenance Type A	100%	800	LF	\$ 1,050	\$ 840,000
Total Structure Cost					\$ 840,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	100%	1250	SF	\$ 5	\$ 6,250
Total Site-Features Cost					\$ 6,250

Total Cost \$ 846,250

Total Future Value Cost \$ 1,137,289

Lime Island State Harbor

Facility Owner: MDNR
Address: C/O Brimley State Park 9200 W 6 Mile Rd Brimley MI 49715
Site ID: I7-205

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Concrete Wall Maintenance Type A	100%	800	LF	\$ 1,400	\$ 1,120,000
Total Structure Cost					\$ 1,120,000
Total Cost					\$ 1,120,000
Total Future Value Cost					\$ 2,022,845

Little Lake Harbor BAS

Facility Owner: MDNR
Address: Little Lake BAS, C.R. 500, Newberry MI 49868
Site ID: A-48-031

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	15	2	40	5	6	6

Dredge

% of Navigable Water Depth	% of	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
25%	<6'	1 years ago	Unknown	Yes	Every 3 years	0	0	100
50%	6'-10'							
25%	>10'							
Dredging required for 2019 boating season:				0	CY			

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
10	0	-	0	-	13000	Functional	3750	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		100	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		25	5	Gravel		Functional		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Little Lake Harbor BAS

Facility Owner:	MDNR
Address:	Little Lake BAS, C.R. 500, Newberry MI 49868
Site ID:	A-48-031

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000

Little Lake Harbor BAS

Facility Owner:	MDNR
Address:	Little Lake BAS, C.R. 500, Newberry MI 49868
Site ID:	A-48-031

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	3750	SF	\$ 5	\$ 18,750
Parking Lot - Gravel/Unpaved	100%	13000	SF	\$ 5	\$ 65,000
Walkways	100%	125	SF	\$ 5	\$ 625
Total Site-Features Cost					\$ 84,375

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 190,375
-------------------	-------------------

Total Future Value Cost	\$ 255,848
--------------------------------	-------------------

Little Lake Harbor BAS

Facility Owner: MDNR
Address: Little Lake BAS, C.R. 500, Newberry MI 49868
Site ID: A-48-031

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000
Total Cost					\$ 60,000
Total Future Value Cost					\$ 108,367

Little Lake State Harbor

Facility Owner: MDNR
Address: LLSH, C.R. 500, Newberry MI 49868
Site ID: 48-201

Docks

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	0	0	Timber	Wood
Fixed Crib Dock	1200	50	Timber	-

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	100	40+	Functional	2	100	0	0	NA

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	<6'	1 years ago	Unknown	Yes	Every 3 years	0	100

Dredging required for 2019 boating season: 0 CY

Site Features

Off-Street Parking		Total			Gravel/Unpaved		Access Drive	
Spaces	SF Asphalt	Asphalt Condition	SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material
10	0	Functional	0	-	3500	Functional	3750	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		25	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		10	5	Gravel		Functional		

Buildings

Picnic Shelters			Vault Toilets			
Amount	Age	Condition	Amount	Condition		
0	0	-	1	Functional		
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Fuel Service	150			50	Replace	Demo



5 Year Projected Cost Estimate

Little Lake State Harbor

Facility Owner:	MDNR
Address:	LLSH, C.R. 500, Newberry MI 49868
Site ID:	48-201

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type A	100%	100	LF	\$ 500	\$ 50,000
Total Structure Cost					\$ 50,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building I	100%	150	SF	\$ 400	\$ 60,000
Total Buildings Cost					\$ 60,000
Total Cost					\$ 110,000

Little Lake State Harbor

Facility Owner:	MDNR
Address:	LLSH, C.R. 500, Newberry MI 49868
Site ID:	48-201

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	100%	100	LF	\$ 1,050	\$ 105,000
Total Structure Cost					\$ 105,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	3750	SF	\$ 5	\$ 18,750
Parking Lot - Gravel/Unpaved	100%	3500	SF	\$ 5	\$ 17,500
Walkways	100%	50	SF	\$ 5	\$ 250
Total Site-Features Cost					\$ 36,500

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 151,500

Total Future Value Cost \$ 203,603

Little Lake State Harbor

Facility Owner:	MDNR
Address:	LLSH, C.R. 500, Newberry MI 49868
Site ID:	48-201

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	100%	100	LF	\$ 1,400	\$ 140,000
Total Structure Cost					\$ 140,000
Total Cost					\$ 140,000
Total Future Value Cost					\$ 252,856

Long Lake BAS

Facility Owner: MDNR
Address: Kokosing Rd, Hale, MI 48739
Site ID: A-35-006

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	12	2	20	4	12	15

Site Features

Off-Street Parking			Total SF Gravel/Unpaved			Gravel/Unpaved Condition		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material	
25	25000	Very Good	0	-	0	Functional	1500	Gravel/Unpaved	
Landscaping		SF	Condition	Facility Responsible?					
		5000	Functional	Yes					
Walkways		Total LF	Avg. Width	Material		Condition			
		120	0	Gravel		Functional			

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Functional



Long Lake BAS

Facility Owner: MDNR
 Address: Kokosing Rd, Hale, MI 48739
 Site ID: A-35-006

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000

Long Lake BAS

Facility Owner:	MDNR
Address:	Kokosing Rd, Hale, MI 48739
Site ID:	A-35-006

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	1500	SF	\$ 5	\$ 7,500
Total Site-Features Cost					\$ 7,500

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost \$ 123,500

Total Future Value Cost \$ 165,974

Long Lake BAS

Facility Owner: MDNR
 Address: Kokosing Rd, Hale, MI 48739
 Site ID: A-35-006

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	25000	SF	\$ 10	\$ 250,000
Total Site-Features Cost					\$ 250,000

Total Cost					\$ 310,000
Total Future Value Cost					\$ 559,894

Loomis Street BAS

Facility Owner: City of Ludington
Address: 400 S. Harrison St. Ludington Mi
Site ID: A-53-025

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	500	-	-	0	0	0	0	NA
Rock Revetment Shoreline	1200	-	-	0	0	0	0	NA
Rock Revetment Offshore	570	-	-	0	0	0	0	0

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
0	0	Skid	0	4	45	5	0	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
215	0	-	0	-	0	-	2000	-



Loomis Street BAS

Facility Owner:	City of Ludington
Address:	400 S. Harrison St. Ludington Mi
Site ID:	A-53-025

There are no costs projected for this site within this time period

Loomis Street BAS

Facility Owner:	City of Ludington
Address:	400 S. Harrison St. Ludington Mi
Site ID:	A-53-025

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	4	EA	\$ 45,000	\$ 180,000
Total Boat Launch & Paddle Sport Access Cost					\$ 180,000
Total Cost					\$ 180,000
Total Future Value Cost					\$ 241,905

Loomis Street BAS

Facility Owner:	City of Ludington
Address:	400 S. Harrison St. Ludington Mi
Site ID:	A-53-025

There are no costs projected for this site within this time period

Ludington Harbor View Marina

Facility Owner: MDNR
Address: 400 S. Rath Avenue
Site ID: -

Docks

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
9150	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	58	30'	100%	10-20
			58	40'		
			28	45'		
			6	50'		



Ludington Harbor View Marina

Facility Owner: MDNR
Address: 400 S. Rath Avenue
Site ID: -

There are no costs projected for this site within this time period

Ludington Harbor View Marina

Facility Owner: MDNR
 Address: 400 S. Rath Avenue
 Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Floating Dock	100%	9150	SF	\$ 75	\$ 686,250
Total Dock Cost					\$ 686,250
Total Cost					\$ 686,250
Total Future Value Cost					\$ 922,263

Ludington Harbor View Marina

Facility Owner: MDNR
Address: 400 S. Rath Avenue
Site ID: -

There are no costs projected for this site within this time period

Ludington Municipal Marina

Facility Owner: City of Ludington
Address: 400 W Filer St Ludington, MI 49431
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
8737.5	Timber	-	49	45'	100%	30-40
			7	60'		

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
13797	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	90	30'	100%	30-40
			10	45'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	4800	9	Concrete	Steel Sheet Pile

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	900	<10	-	10	100	0	0	NA
Rock Revetment Shoreline	1700	20-30	Functional	6	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Functional	90 % have vacuum breakers installed
WIFI	<5	Functional	
Wet Fire Hydrant System	20-30	Functional	
Ice Suppression System	20-30	Replace	0 Units Total
Air Distribution Lines	20-30	Functional	
Pumpout	<10	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
14 Single 30 Amp	100% Functional
37 Twin 30 Amp	
5 30/ 50 Amp	
4 Twin 50 Amp	

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over Land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Fixed	115	10	5	40	300	20-30	Functional
	Tank Type	Tank Capacity	No. Tanks					
	Underground Single	10,000 Gallons	2					

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
120	100	Functional	0	-	0	-	150	Asphalt
On-Street Parking		Spaces	Condition	Facility Responsible?				
		20	Very Good	No				
Landscaping		SF	Condition	Facility Responsible?				
		87120	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		4000	5	Concrete		Functional		

Buildings

Picnic Shelters			Vault Toilets				
Amount	Age	Condition	Amount	Condition			
1	21	Functional	0	-			
Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Office, Boater Lounge, Restroom & Laundry	2000	17	9	22	Functional	Roof Replacement, Mechanical Upgrades, ADA Updates, General Interior & Exterior Renovations	



5 Year Projected Cost Estimate

Ludington Municipal Marina

Facility Owner:	City of Ludington
Address:	400 W Filer St Ludington, MI 49431
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Floating Dock	100%	13797	SF	\$ 75	\$ 1,034,775
Total Dock Cost					\$ 1,034,775

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type A	100%	1700	LF	\$ 100	\$ 170,000
Total Structure Cost					\$ 170,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
PW System Vacuum Breakers	10%	156	SLIP	\$ 12	\$ 187
Ice Suppression Compressor System	50%	156	SLIP	\$ 1,800	\$ 140,400
Total Utilities Cost					\$ 140,587

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building 2	100%	150	SF	\$ 400	\$ 60,000
Total Buildings Cost					\$ 60,000
Total Cost					\$ 1,405,362

Ludington Municipal Marina

Facility Owner: City of Ludington
Address: 400 W Filer St Ludington, MI 49431
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	100%	1700	LF	\$ 350	\$ 595,000
Total Structure Cost					\$ 595,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Single 30 Amp Electric Pedestal	100%	14	EA	\$ 3,000	\$ 42,000
Twin 30 Amp Electric Pedestal	100%	37	EA	\$ 3,000	\$ 111,000
30/50 Amp Electric Pedestal	100%	5	EA	\$ 3,500	\$ 17,500
Twin 50 Amp Electric Pedestal	100%	4	EA	\$ 3,500	\$ 14,000
Potable Water	100%	156	SLIP	\$ 800	\$ 124,800
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Wet Fire Suppression System	100%	156	SLIP	\$ 1,000	\$ 156,000
Ice Suppression Compressor System	50%	156	SLIP	\$ 1,800	\$ 140,400
Fuel Dock	100%	1150	SF	\$ 150	\$ 172,500
Fuel Dispenser	100%	5	EA	\$ 15,000	\$ 75,000
Fuel Lines	100%	340	LF	\$ 100	\$ 34,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 1,092,200

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Walkways	50%	20000	SF	\$ 10	\$ 100,000
Total Site-Features Cost					\$ 101,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Building I	100%	2000	SF	\$ 400	\$ 800,000
Total Buildings Cost					\$ 815,000

Total Cost \$ 2,603,200

Total Future Value Cost \$ 3,498,483

Ludington Municipal Marina

Facility Owner:	City of Ludington
Address:	400 W Filer St Ludington, MI 49431
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	100%	1700	LF	\$ 700	\$ 1,190,000
Total Structure Cost					\$ 1,190,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	156	SLIP	\$ 3,500	\$ 546,000
Fuel Dock	100%	1150	SF	\$ 150	\$ 172,500
Fuel Dispenser	100%	5	EA	\$ 15,000	\$ 75,000
Fuel Lines	100%	340	LF	\$ 100	\$ 34,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 1,062,500

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	150	SF	\$ 10	\$ 1,500
Walkways	50%	20000	SF	\$ 10	\$ 100,000
Total Site-Features Cost					\$ 101,500
Total Cost					\$ 2,354,000
Total Future Value Cost					\$ 4,251,586

Ludington State Park BAS

Facility Owner: MDNR
Address: 8800 W. M-116, Ludington, MI 49431
Site ID: A-53-018

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	10	1	32	5	43	2

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	YES	-	-	-	-	-	-	-	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
525	62000	Very Good	0	-	0	-	137280	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		10000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		450	5	Concrete		Good		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Ludington State Park BAS

Facility Owner: MDNR
 Address: 8800 W. M-116, Ludington, MI 49431
 Site ID: A-53-018

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Ludington State Park BAS

Facility Owner:	MDNR
Address:	8800 W. M-116, Ludington, MI 49431
Site ID:	A-53-018

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	137280	SF	\$ 10	\$ 1,372,800
Walkways	20%	2250	SF	\$ 10	\$ 4,500
Total Site-Features Cost					\$ 1,377,300

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 1,483,300

Total Future Value Cost \$ 1,993,431

Ludington State Park BAS

Facility Owner: MDNR
 Address: 8800 W. M-116, Ludington, MI 49431
 Site ID: A-53-018

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	62000	SF	\$ 10	\$ 620,000
Walkways	80%	2250	SF	\$ 10	\$ 18,000
Total Site-Features Cost					\$ 638,000

Total Cost \$ 668,000
Total Future Value Cost \$ 1,206,482

Mackinac Island State Harbor

Facility Owner: MDNR
Address: 7403 Main Street Mackinac Island MI 49757
Site ID: 49-204

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
14902.5	Both Standard timber and	Steel Frame & Steel Piles	5	25'	5%	<10
			17	30'	95%	30-40
			6	35'		
			20	40'		
			28	45'		

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
1800	Composite	375 LF of Fixed Timber Pile & Timber Frame	8	35'	5%	<10
			14	40'	95%	30-40
			8	45'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Fixed Open Pile Dock	450	10	Composite	Timber Frame & Steel Piles

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	720	<10	Very Good	0	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	10-20	Very Good	100 % have vacuum breakers installed
WIFI	<5	Functional	
Dry Standpipe Fire System	10-20	Very Good	
Ice Suppression System	<10	Good	12 Units Total
Air Distribution Lines	10-20	Good	
Flow Inducers	-		3 Units Total 0 Additional Units Needed
Pumpout	10-20	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
42 Twin 30 Amp	100% Very Good
20 30/ 50 Amp	
42 Twin 50 Amp	

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Site Features

Landscaping	SF	Condition	Facility Responsible?	
	26040	Very Good	Yes	
Walkways	Total LF	Avg. Width	Material	Condition
	930	8	Concrete	Very Good

Buildings

Building 1 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	350	-	-	30	Very Good	-
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Maintenance shop	1100	1	-	11	Very Good	-
Building 3 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	1400	12	4	40	Replace	General Interior & Exterior Renovations
Building 4 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Store	125	-	-	11	Very Good	-



Mackinac Island State Harbor

Facility Owner:	MDNR
Address:	7403 Main Street Mackinac Island MI 49757
Site ID:	49-204

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Fixed Dock	95%	14903	SF	\$ 75	\$ 1,061,803
Wall/Shoreline Head Pier Fixed Fingers	95%	1800	SF	\$ 75	\$ 128,250
Broadside Fixed Open Pile Redecking	100%	450	SF	\$ 14	\$ 6,300
Total Dock Cost					\$ 1,196,353

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	106	SLIP	\$ 5,000	\$ 530,000
Total Utilities Cost					\$ 530,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building 3	100%	1400	SF	\$ 400	\$ 560,000
Total Buildings Cost					\$ 560,000
Total Cost					\$ 2,286,353

Mackinac Island State Harbor

Facility Owner: MDNR
Address: 7403 Main Street Mackinac Island MI 49757
Site ID: 49-204

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Redecking Finger Piers	5%	1800	SF	\$ 14	\$ 1,260
Broadside Fixed Open Pile Redecking	100%	450	SF	\$ 14	\$ 6,300
Total Dock Cost					\$ 7,560

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Flow Inducers	100%	3	EA	\$ 1,000	\$ 3,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 43,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building I	100%	350	SF	\$ 400	\$ 140,000
Total Buildings Cost					\$ 140,000

Total Cost					\$ 190,560
Total Future Value Cost					\$ 256,097

Mackinac Island State Harbor

Facility Owner:	MDNR
Address:	7403 Main Street Mackinac Island MI 49757
Site ID:	49-204

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Broadside Fixed Open Pile Dock	0%	450	SF	\$ 70	\$ 31,500
Total Dock Cost					\$ 31,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	106	SLIP	\$ 3,500	\$ 371,000
Twin 30 Amp Electric Pedestal	100%	42	EA	\$ 3,000	\$ 126,000
30/50 Amp Electric Pedestal	100%	20	EA	\$ 3,500	\$ 70,000
Twin 50 Amp Electric Pedestal	100%	42	EA	\$ 3,500	\$ 147,000
Potable Water	100%	106	SLIP	\$ 800	\$ 84,800
Dry Standpipe Fire Suppression System	100%	106	SLIP	\$ 800	\$ 84,800
Ice Suppression Compressor System	100%	106	SLIP	\$ 1,800	\$ 190,800
Total Utilities Cost					\$ 1,074,400

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	7440	SF	\$ 10	\$ 74,400
Total Site-Features Cost					\$ 74,400

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building 2	100%	1100	SF	\$ 400	\$ 440,000
Building 4	100%	125	SF	\$ 400	\$ 50,000
Total Buildings Cost					\$ 490,000

Total Cost	\$ 1,670,300
Total Future Value Cost	\$ 3,016,748

Mackinaw City Municipal Marina

Facility Owner: Village of Mackinaw City
Address: 107 S Huron Ave Mackinaw City, MI 49701
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
14850	Timber	-	28	30'	20%	10-20
			45	40'	80%	30-40
			11	60'		

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
9930	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	28	30'	100%	10-20
			33	40'		
			11	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	0	0	Timber	Steel I beams along A Dock main pier
Fixed Open Pile Dock	6120	45	Timber	Timber Frame & Steel Piles

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	174	40+	Very Good	9	100	0	0	NA
Rock Revetment Offshore	280	40+	Very Good	14	0	0	0	Yes

Utilities

Type	Age	Condition	Additional Information		
WIFI	<5	Functional			
Ice Suppression System	<10	Functional	5 Units Total		
Air Distribution Lines	<10	Very Good			
Flow Inducers	-	Functional	2 Units Total	0	Additional Units Needed
Pumpout	<10	-	3 Pumpout(s)		

Electric Shore Power

Utility Pedestals	% Condition
27 Twin 30 Amp	100% Very Good
32 30/ 50 Amp	
Compliant with Electrical Shock Drowning Ground Fault Protection Standards?	Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over Land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gasoline	Fixed	475	12	1	55	475	10-20	Very Good
Tank Type		Tank Capacity	No. Tanks					
Underground Single		10,000 Gallons	1					

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Floating	20	1	50	4	43	28

Site Features

Off-Street Parking			Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	SF Concrete	Condition	SF Unpaved	Condition	SF	Material
27	0	Functional	175000	-	0	-	0	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		37850	Functional	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		450	6	Concrete	Very Good			

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Boater Lounge, Restroom & Laundry	1700	9	8	26	Functional	Roof Replacement, Mechanical Upgrades, General Interior & Exterior Renovations
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Fuel Service	64			30	Very Good	-



Mackinaw City Municipal Marina

Facility Owner:	Village of Mackinaw City
Address:	107 S Huron Ave Mackinaw City, MI 49701
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Fixed Dock Redecking	20%	14850	SF	\$ 10	\$ 29,700
Broadside Fixed Open Pile Dock	100%	6120	SF	\$ 70	\$ 428,400
Total Dock Cost					\$ 458,100

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type A	100%	174	LF	\$ 500	\$ 87,000
Total Structure Cost					\$ 87,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Total Boat Launch & Paddle Sport Access Cost					\$ 224,000
Total Cost					\$ 769,100

Mackinaw City Municipal Marina

Facility Owner: Village of Mackinaw City
Address: 107 S Huron Ave Mackinaw City, MI 49701
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Floating Dock	100%	9930	SF	\$ 75	\$ 744,750
Total Dock Cost					\$ 744,750

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	100%	174	LF	\$ 1,050	\$ 182,700
Total Structure Cost					\$ 182,700

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Flow Inducers	100%	2	EA	\$ 1,000	\$ 2,000
Fuel Dock	100%	5700	SF	\$ 150	\$ 855,000
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Fuel Lines	100%	530	LF	\$ 100	\$ 53,000
Underground Single Product Tank	100%	1	EA	\$ 100,000	\$ 100,000
Total Utilities Cost					\$ 1,030,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 1	100%	1700	SF	\$ 400	\$ 680,000
Building 2	100%	64	SF	\$ 400	\$ 25,600
Total Buildings Cost					\$ 705,600

Total Cost	\$ 2,663,050
Total Future Value Cost	\$ 3,578,917

Mackinaw City Municipal Marina

Facility Owner: Village of Mackinaw City
Address: 107 S Huron Ave Mackinaw City, MI 49701
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	100%	174	LF	\$ 1,400	\$ 243,600
Total Structure Cost					\$ 243,600

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	156	SLIP	\$ 3,500	\$ 546,000
Twin 30 Amp Electric Pedestal	100%	27	EA	\$ 3,000	\$ 81,000
30/50 Amp Electric Pedestal	100%	32	EA	\$ 3,500	\$ 112,000
Ice Suppression Compressor System	100%	156	SLIP	\$ 1,800	\$ 280,800
Fuel Dock	100%	5700	SF	\$ 150	\$ 855,000
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Fuel Lines	100%	530	LF	\$ 100	\$ 53,000
Underground Single Product Tank	100%	1	EA	\$ 100,000	\$ 100,000
Pumpout	100%	3	EA	\$ 35,000	\$ 105,000
Total Utilities Cost					\$ 2,147,800

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	2700	SF	\$ 10	\$ 27,000
Total Site-Features Cost					\$ 27,000
Total Cost					\$ 2,418,400
Total Future Value Cost					\$ 4,367,899

Manistique Muncipal Marina

Facility Owner: City of Manistique
Address: 300 South Cedar Drive Manistique, MI 49854
Site ID: -

Docks

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
3861	Traditional Timber	Floatation Docking Systems (FDS)	9	30'	100%	<10
			8	40'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	3100	6	Concerete	Steel Sheet Pile
Floating Dock	400	0	-	Traditional Timber by Floatation Docking Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	800	<10	Functional	11	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information		
Potable Water	<10	Very Good	100 % have vacuum breakers installed		
Dry Standpipe Fire System	<10	Very Good			
Wet Fire Hydrant System	<10	Very Good			
Flow Inducers	-	Very Good	15 Units Total	0	Additional Units Needed
Pumpout	<10	-	1 Pumpout(s)		

Electric Shore Power

Utility Pedestals	% Condition
25 30/ 50 Amp	100% Very Good
Compliant with Electrical Shock Drowning Ground Fault Protection Standards?	Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over Land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Floating	40	16	2	310	40	<10	Very Good
Tank Type		Tank Capacity	No. Tanks					
Above Ground Dual		2,000 Gallons	2					

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	6'-10'	45 years ago	Unknown	-	0	0	0

Dredging required for 2019 boating season: 5000 CY

Site Features

Off-Street Parking			Total	Gravel/	Access Drive			
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material
46	20000	Very Good	0	-	0	-	7700	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		120000	Good	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		1900	5	Concrete	Very Good			

Buildings

Building Type	Total SF	Amt		Age	Condition	Improvements Needed
		Toilets	Showers			
Office, Boater Lounge, Restroom & Laundry	2200	8	4	6	Very Good	-



Manistique Muncipal Marina

Facility Owner:

City of Manistique

Address:

300 South Cedar Drive Manistique, MI 49854

Site ID:

-

There are no costs projected for this site within this time period

Manistique Muncipal Marina

Facility Owner: City of Manistique
Address: 300 South Cedar Drive Manistique, MI 49854
Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Flow Inducers	100%	15	EA	\$ 1,000	\$ 15,000
Total Utilities Cost					\$ 15,000
Total Cost					\$ 15,000
Total Future Value Cost					\$ 20,159

Manistique Muncipal Marina

Facility Owner: City of Manistique
Address: 300 South Cedar Drive Manistique, MI 49854
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Floating Head Pier	100%	3861	SF	\$ 75	\$ 289,575
Broadside Floating Dock	100%	400	SF	\$ 75	\$ 30,000
Total Dock Cost					\$ 319,575

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	17	SLIP	\$ 3,500	\$ 59,500
30/50 Amp Electric Pedestal	100%	25	EA	\$ 3,500	\$ 87,500
Potable Water	100%	17	SLIP	\$ 800	\$ 13,600
Dry Standpipe Fire Suppression System	100%	17	SLIP	\$ 800	\$ 13,600
Wet Fire Suppression System	100%	17	SLIP	\$ 1,000	\$ 17,000
Fuel Dock	100%	640	SF	\$ 100	\$ 64,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	350	LF	\$ 100	\$ 35,000
Above Ground Dual Product Tank	100%	2	EA	\$ 60,000	\$ 120,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 475,200

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	7700	SF	\$ 10	\$ 77,000
Parking Lot - Asphalt	100%	20000	SF	\$ 10	\$ 200,000
Walkways	100%	9500	SF	\$ 10	\$ 95,000
Total Site-Features Cost					\$ 372,000
Total Cost					\$ 1,166,775
Total Future Value Cost					\$ 2,107,325

Maple Island BAS

Facility Owner: MDNR
Address: 11830 S. Warner Ave, Grant, MI 49327
Site ID: -

Site Features

Off-Street Parking			Concrete		Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved		SF	Material
51	20000	Functional	0	-	0	Functional	20000	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
	3 acres	Functional	Yes					

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Very Good



Maple Island BAS

Facility Owner:

MDNR

Address:

11830 S. Warner Ave, Grant, MI 49327

Site ID:

-

There are no costs projected for this site within this time period

Maple Island BAS

Facility Owner:	MDNR
Address:	11830 S. Warner Ave, Grant, MI 49327
Site ID:	-

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	20000	SF	\$ 10	\$ 200,000
Total Site-Features Cost					\$ 200,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 255,000

Total Future Value Cost \$ 342,699

Maple Island BAS

Facility Owner: MDNR
Address: 11830 S. Warner Ave, Grant, MI 49327
Site ID: -

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	20000	SF	\$ 5	\$ 100,000
Total Site-Features Cost					\$ 100,000
Total Cost					\$ 100,000
Total Future Value Cost					\$ 180,611

Marble Lake BAS

Facility Owner: MDNR
Address: 2 mi SW of Quincy on Wildwood Rd.
Site ID: A-12-003

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	225	10-20	Good	1	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	15	1	30	5	51	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
0	80000	Functional	0	-	0	-	900	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		30000	Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		70	5	Concrete		Good		



5 Year Projected Cost Estimate

Marble Lake BAS

Facility Owner: MDNR
 Address: 2 mi SW of Quincy on Wildwood Rd.
 Site ID: A-12-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Marble Lake BAS

Facility Owner:	MDNR
Address:	2 mi SW of Quincy on Wildwood Rd.
Site ID:	A-12-003

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	10%	225	LF	\$ 140	\$ 3,150
Total Structure Cost					\$ 3,150

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	900	SF	\$ 10	\$ 9,000
Parking Lot - Asphalt	100%	80000	SF	\$ 10	\$ 800,000
Walkways	10%	350	SF	\$ 10	\$ 350
Total Site-Features Cost					\$ 809,350

Total Cost \$ 908,500

Total Future Value Cost \$ 1,220,948

Marble Lake BAS

Facility Owner:	MDNR
Address:	2 mi SW of Quincy on Wildwood Rd.
Site ID:	A-12-003

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	10%	225	LF	\$ 350	\$ 7,875
Rock Revetment Maintenance Type B	90%	225	LF	\$ 140	\$ 28,350
Total Structure Cost					\$ 36,225

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	90%	350	SF	\$ 10	\$ 3,150
Total Site-Features Cost					\$ 3,150

Total Cost \$ 69,375

Total Future Value Cost \$ 125,299

Marina Island BAS

Facility Owner: City of St. Joseph
Address: 282 Anchor's Court, St. Joseph, MI 49085
Site ID: A-11-014

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
6	Cast-In-Place Concrete	Skid	40	3	51	5	142	0

Site Features

Off-Street Parking				Total Concrete	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Condition	Unpaved	Condition	SF	Material
0	75000	Functional	0	-	0	-	6000	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		20000	Functional	No				
Walkways		Total LF	Avg. Width	Material	Condition			
		600	5	Concrete	Functional			

Buildings

Picnic Shelters			Vault Toilets			
Amount	Age	Condition	Amount	Condition		
1	0	Very Good	0	-		
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	350	2		6	Very Good	General Interior & Exterior Renovations



5 Year Projected Cost Estimate

Marina Island BAS

Facility Owner:	City of St. Joseph
Address:	282 Anchor's Court, St. Joseph, MI 49085
Site ID:	A-11-014

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	9600	SF	\$ 70	\$ 672,000
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 717,000
Total Cost					\$ 717,000

Marina Island BAS

Facility Owner:	City of St. Joseph
Address:	282 Anchor's Court, St. Joseph, MI 49085
Site ID:	A-11-014

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	6000	SF	\$ 10	\$ 60,000
Parking Lot - Asphalt	100%	75000	SF	\$ 10	\$ 750,000
Walkways	50%	3000	SF	\$ 10	\$ 15,000
Total Site-Features Cost					\$ 825,000
Total Cost					\$ 825,000
Total Future Value Cost					\$ 1,108,731

Marina Island BAS

Facility Owner:	City of St. Joseph
Address:	282 Anchor's Court, St. Joseph, MI 49085
Site ID:	A-11-014

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	3	EA	\$ 30,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	50%	3000	SF	\$ 10	\$ 15,000
Total Site-Features Cost					\$ 15,000

Total Cost					\$ 105,000
Total Future Value Cost					\$ 189,642

Marine City BAS

Facility Owner: MDNR
Address: 1771 S Parker St, Marine City MI
Site ID: A-74-018

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	0	-	Very Good	3	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	14	2	40	5	58	24

Site Features

Landscaping	SF	Condition	Facility Responsible?
	3500	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	40	5	Concrete	Good

Buildings

Picnic Shelters			Vault Toilets		
Amount	Age	Condition	Amount	Condition	
0	0	-	1	Very Good	

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	48			30	Functional	General Interior Renovations



Marine City BAS

Facility Owner:	MDNR
Address:	1771 S Parker St, Marine City MI
Site ID:	A-74-018

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000

Marine City BAS

Facility Owner:	MDNR
Address:	1771 S Parker St, Marine City MI
Site ID:	A-74-018

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Total Boat Launch & Paddle Sport Access Cost					\$ 192,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	20%	200	SF	\$ 10	\$ 400
Total Site-Features Cost					\$ 400

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Building I	100%	150	SF	\$ 400	\$ 60,000
Total Buildings Cost					\$ 70,000

Total Cost \$ 262,400

Total Future Value Cost \$ 352,644

Marine City BAS

Facility Owner:	MDNR
Address:	1771 S Parker St, Marine City MI
Site ID:	A-74-018

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	80%	200	SF	\$ 10	\$ 1,600
Total Site-Features Cost					\$ 1,600

Total Cost					\$ 61,600
Total Future Value Cost					\$ 111,256

Marquette Cinder Pond Marina

Facility Owner: City of Marquette
Address: 260 South Lakeshore Boulevard Marquette MI 49855
Site ID: -

Docks

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
7057.5	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	17	25'	100%	20-30
			46	30'		
			1	40'		
			1	60'		

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
5945	Traditional Timber	Floatation Docking	21	25'	100%	20-30
			2	30'		
			12	40'		
			1	45'		

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
112.5	Timber	Timber Floating Structure	1	30'	100%	20-30
			1	45'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	2250	27	Concrete	Timber Fendering
Floating Dock	360	27	-	Traditional Timber by Floatation Docking Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	360	20-30'	Functional	10	100	0	0	NA
Concrete Wall	325	40+	Functional	10	0	0	0	NA
Rock Revetment Shoreline	615	20-30'	Very Good	10	100	0	0	NA
Rock Revetment Offshore	550	20-30'	Very Good	5	100	0	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Very Good	100 % have vacuum breakers installed
WIFI	<5	Functional	
Wet Fire Hydrant System	20-30	Very Good	
Flow Inducers	-	Functional	16 Units Total
Pumpout	<10	-	0 Additional Units Needed 1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
4 Single 30 Amp	100% Functional
46 Twin 30 Amp	

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over Land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Floating	200	8	2	235	200	20-30	Functional
Tank Type		Tank Capacity	No. Tanks					
Underground Single		8000	2					

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid Fixed	27	1	40	6	22	0
			27	1	100	8		

Boat Storage

Hull Wash Down	Travel Lift	Hydraulic Trailer	Summer Storage SF	Indoor Heated SF	Winter Indoor SF	Winter Outdoor SF
No	No	No	0	0	0	6500

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	6'-10'	27 years ago	Unknown	-	Every X years	0	0

Dredging required for 2019 boating season: 0 CY

Site Features

Off-Street Parking		Access Drive	
Total Spaces	Total SF Asphalt	Total SF Concrete	Total SF Gravel/Unpaved
212	100	0	0
Landscaping		Gravel/Unpaved Condition	
SF Condition		10575 SF	
50000 Very Good		Material Asphalt	
Walkways		Facility Responsible?	
Total LF		Yes	
300		Material Condition	
Avg. Width		Concrete Very Good	
6			

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Boater Lounge, Restroom, Laundry & Fuel Services	2000	7	4	5	Very Good	-
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Fuel Services	70			27	Functional	General Exterior Renovations



Marquette Cinder Pond Marina

Facility Owner:	City of Marquette
Address:	260 South Lakeshore Boulevard Marquette MI 49855
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Floating Dock	100%	7058	SF	\$ 75	\$ 529,313
Floating Head Pier	100%	5945	SF	\$ 75	\$ 445,875
Wall/Shoreline Head Pier Floating Fingers	100%	113	SF	\$ 75	\$ 8,438
Total Dock Cost					\$ 1,010,625

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	100%	360	LF	\$ 140	\$ 50,400
Total Structure Cost					\$ 50,400

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	103	SLIP	\$ 5,000	\$ 515,000
Flow Inducers	100%	16	EA	\$ 1,000	\$ 16,000
Total Utilities Cost					\$ 531,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 284,000
Total Cost					\$ 1,876,025

Marquette Cinder Pond Marina

Facility Owner:	City of Marquette
Address:	260 South Lakeshore Boulevard Marquette MI 49855
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	100%	360	LF	\$ 350	\$ 126,000
Rock Revetment Maintenance Type B	100%	615	LF	\$ 140	\$ 86,100
Rock Revetment Offshore Maintenance Type B	100%	550	LF	\$ 140	\$ 77,000
Total Structure Cost					\$ 289,100

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Single 30 Amp Electric Pedestal	100%	4	EA	\$ 3,000	\$ 12,000
Twin 30 Amp Electric Pedestal	100%	46	EA	\$ 3,000	\$ 138,000
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Flow Inducers	100%	16	EA	\$ 1,000	\$ 16,000
Fuel Dock	100%	1600	SF	\$ 100	\$ 160,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	435	LF	\$ 100	\$ 43,500
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 604,500

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Total Site-Features Cost					\$ 1,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 2	100%	70	SF	\$ 400	\$ 28,000
Total Buildings Cost					\$ 28,000

Total Cost	\$ 922,600
Total Future Value Cost	\$ 1,239,897

Marquette Cinder Pond Marina

Facility Owner:	City of Marquette
Address:	260 South Lakeshore Boulevard Marquette MI 49855
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	100%	360	LF	\$ 700	\$ 252,000
Rock Revetment Maintenance Type B	100%	615	LF	\$ 350	\$ 215,250
Rock Revetment Offshore Maintenance Type B	100%	550	LF	\$ 350	\$ 192,500
Total Structure Cost					\$ 659,750

Note: NR = Not Responsible

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	103	SLIP	\$ 3,500	\$ 360,500
Potable Water	100%	103	SLIP	\$ 800	\$ 82,400
Wet Fire Suppression System	100%	103	SLIP	\$ 1,000	\$ 103,000
Fuel Dock	100%	1600	SF	\$ 100	\$ 160,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	435	LF	\$ 100	\$ 43,500
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 1,014,400

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	10575	SF	\$ 10	\$ 105,750
Walkways	100%	1800	SF	\$ 10	\$ 18,000
Total Site-Features Cost					\$ 123,750
Total Cost					\$ 1,827,900
Total Future Value Cost					\$ 3,301,391

Metro Beach Metro Park West BAS

Facility Owner: Huron Clinton Metroparks
Address: 31300 Metro Parkway Harrison Township, MI 48045
Site ID: A-50-004

Utilities

Electric Shore Power

Utility Pedestals	% Condition
48 Single 30 Amp	55% Very Good
56 30/ 50 Amp	45% Functional
	0% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
8	Precast Concrete Planks	Skid	5	4	40	5	125	38

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed
0% <6'	20 years ago	Unknown
100% 6'-10'		
0% >10'		



Metro Beach Metro Park West BAS

Facility Owner: Huron Clinton Metroparks
Address: 31300 Metro Parkway Harrison Township, MI 48045
Site ID: A-50-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	4	EA	\$ 15,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000
Total Cost					\$ 60,000

Metro Beach Metro Park West BAS

Facility Owner: Huron Clinton Metroparks
Address: 31300 Metro Parkway Harrison Township, MI 48045
Site ID: A-50-004

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Single 30 Amp Electric Pedestal	45%	48	EA	\$ 3,000	\$ 64,800
30/50 Amp Electric Pedestal	45%	56	EA	\$ 3,500	\$ 88,200
Total Utilities Cost					\$ 153,000
Total Cost					\$ 153,000
Total Future Value Cost					\$ 205,619

Metro Beach Metro Park West BAS

Facility Owner: Huron Clinton Metroparks
Address: 31300 Metro Parkway Harrison Township, MI 48045
Site ID: A-50-004

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Single 30 Amp Electric Pedestal	55%	48	EA	\$ 3,000	\$ 79,200
30/50 Amp Electric Pedestal	55%	56	EA	\$ 3,500	\$ 107,800
Total Utilities Cost					\$ 187,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	12800	SF	\$ 30	\$ 384,000
Launch Piers	100%	4	EA	\$ 45,000	\$ 180,000
Total Boat Launch & Paddle Sport Access Cost					\$ 564,000

Total Cost \$ 751,000

Total Future Value Cost \$ 1,356,390

Metro Beach Metropark Marina - Lake St. Clair

Facility Owner: Huron Clinton Metroparks
Address: 31300 Metro parkway Harrison Township MI 48045
Site ID: -

Docks

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
55540	Concrete	Sheet Pile Crib	48	30'	50%	<10
			48	40'	50%	30-40

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
660	Traditional Timber	-	4	35'	100%	<10

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Single	3000	-	-	0	0	0	0	-

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Very Good	100 % have vacuum breakers installed
Wet Fire Hydrant System	20-30	Very Good	
Pumpout	10-20	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
48 Single 30 Amp	55% Very Good
55 30/ 50 Amp	45% Functional

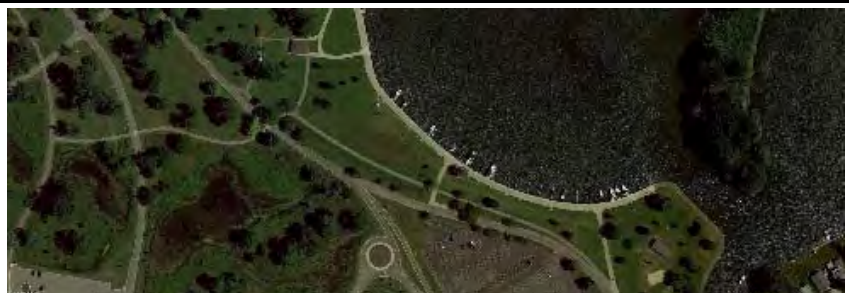
Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Site Features

Off-Street Parking				Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition		SF	Material
3063	1500000	Functional	0	-	0	-	74000 Asphalt
Landscaping		SF	Condition	Facility Responsible?			
		10000000	Very Good	Yes			
Walkways		Total LF	Avg. Width	Material		Condition	
		26400	10	Concrete		Functional	

Buildings

Picnic Shelters		
Amount	Age	Condition
13	15	Functional



5 Year Projected Cost Estimate

Metro Beach Metropark Marina - Lake St. Clair

Facility Owner: Huron Clinton Metroparks
 Address: 31300 Metro parkway Harrison Township MI 48045
 Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Fixed Head Pier	50%	55540	SF	\$ 200	\$ 5,554,000
Total Dock Cost					\$ 5,554,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	100	SLIP	\$ 5,000	\$ 500,000
Total Utilities Cost					\$ 500,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	74000	SF	\$ 10	\$ 740,000
Walkways	10%	264000	SF	\$ 10	\$ 264,000
Total Site-Features Cost					\$ 1,004,000
Total Cost					\$ 7,058,000

Metro Beach Metropark Marina - Lake St. Clair

Facility Owner: Huron Clinton Metroparks
Address: 31300 Metro parkway Harrison Township MI 48045
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Fixed Head Pier Redecking	50%	55540	SF	\$ 15	\$ 416,550
Total Dock Cost					\$ 416,550

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Single 30 Amp Electric Pedestal	45%	48	EA	\$ 3,000	\$ 64,800
30/50 Amp Electric Pedestal	45%	55	EA	\$ 3,500	\$ 86,625
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 186,425

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	1500000	SF	\$ 10	\$ 15,000,000
Walkways	40%	264000	SF	\$ 10	\$ 1,056,000
Total Site-Features Cost					\$ 16,056,000

Total Cost \$ 16,658,975

Total Future Value Cost \$ 22,388,269

Metro Beach Metropark Marina - Lake St. Clair

Facility Owner: Huron Clinton Metroparks
Address: 31300 Metro parkway Harrison Township MI 48045
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Floating Head Pier	100%	660	SF	\$ 75	\$ 49,500
Total Dock Cost					\$ 49,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	100	SLIP	\$ 3,500	\$ 350,000
Single 30 Amp Electric Pedestal	55%	48	EA	\$ 3,000	\$ 79,200
30/50 Amp Electric Pedestal	55%	55	EA	\$ 3,500	\$ 105,875
Potable Water	100%	100	SLIP	\$ 800	\$ 80,000
Wet Fire Suppression System	100%	100	SLIP	\$ 1,000	\$ 100,000
Total Utilities Cost					\$ 715,075

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	50%	264000	SF	\$ 10	\$ 1,320,000
Total Site-Features Cost					\$ 1,320,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Picnic Shelter	100%	13	EA	\$ 15,000	\$ 195,000
Total Buildings Cost					\$ 195,000

Total Cost \$ 2,279,575

Total Future Value Cost \$ 4,117,166

Mill Point Park BAS

Facility Owner: Village of Spring Lake
Address: 101 S. Buchanan Spring Lake MI 49456
Site ID: A-70-007

Docks

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
375	-	-	10	25'	100%	<10

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	10	1	30	6	12	20

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged
100%	<6'	7 years ago	Unknown

Dredging required for 2019 boating season: 0 CY

Site Features

Off-Street Parking			Total			Gravel/ Unpaved		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/ Unpaved	Condition	SF	Material	
20	80000	Replace	0	-	0	-	4000	Asphalt	
Landscaping		SF	Condition	Facility Responsible?					
		200000	Functional	Yes					
Walkways		Total LF	Avg. Width	Material		Condition			
		600	10	Asphalt		Very Good			

Buildings

Picnic Shelters		
Amount	Age	Condition
1	8	Functional

Vault Toilets	
Amount	Condition
0	-

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	400	4	-	8	Very Good	-



Mill Point Park BAS

Facility Owner: Village of Spring Lake
 Address: 101 S. Buchanan Spring Lake MI 49456
 Site ID: A-70-007

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Parking Lot - Asphalt	100%	80000	SF	\$ 10	\$ 800,000
Total Site-Features Cost					\$ 800,000
Total Cost					\$ 815,000

Mill Point Park BAS

Facility Owner:	Village of Spring Lake
Address:	101 S. Buchanan Spring Lake MI 49456
Site ID:	A-70-007

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	4000	SF	\$ 10	\$ 40,000
Total Site-Features Cost					\$ 40,000

Total Cost	\$ 136,000
-------------------	-------------------

Total Future Value Cost	\$ 182,773
--------------------------------	-------------------

Mill Point Park BAS

Facility Owner:	Village of Spring Lake
Address:	101 S. Buchanan Spring Lake MI 49456
Site ID:	A-70-007

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	6000	SF	\$ 7	\$ 42,000
Total Site-Features Cost					\$ 42,000

Total Cost					\$ 72,000
Total Future Value Cost					\$ 130,040

Milliken State Harbor

Facility Owner: MDNR
Address: 1900 atwater
Site ID: 82-203

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
3795	Timber	-	2	30'	100%	20-30
			47	50'		
			2	60'		



Milliken State Harbor

Facility Owner: MDNR
Address: 1900 atwater
Site ID: 82-203

There are no costs projected for this site within this time period

Milliken State Harbor

Facility Owner: MDNR
Address: 1900 atwater
Site ID: 82-203

There are no costs projected for this site within this time period

Milliken State Harbor

Facility Owner: MDNR
Address: 1900 atwater
Site ID: 82-203

There are no costs projected for this site within this time period

Misery River Mouth BAS

Facility Owner: MDNR
Address: -
Site ID: A-66-007

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks						14	0

Site Features

Off-Street Parking						Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition				SF	Material
14	0	-	0	-	12000	Functional		13488	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?					
		7500	Good	Yes					

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Misery River Mouth BAS

Facility Owner: MDNR
Address: 0
Site ID: A-66-007

There are no costs projected for this site within this time period

Misery River Mouth BAS

Facility Owner:	MDNR
Address:	-
Site ID:	A-66-007

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	13488	SF	\$ 5	\$ 67,440
Parking Lot - Gravel/Unpaved	100%	12000	SF	\$ 5	\$ 60,000
Total Site-Features Cost					\$ 127,440

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 137,440
-------------------	-------------------

Total Future Value Cost	\$ 184,708
--------------------------------	-------------------

Misery River Mouth BAS

Facility Owner: MDNR
Address: 0
Site ID: A-66-007

There are no costs projected for this site within this time period

Munising Bayshore Marina

Facility Owner: City of Munising
Address: 355 Elm St. Munising, MI 498962
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
1125	Timber	-	25	30'	100%	20-30

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
3636	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	12	40'	100%	<10
			12	50'		

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
3620	Timber	Steel Frame & Steel	20	30'	100%	20-30

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
900	-	-	20	30'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	18000	80	Concrete	Steel Sheet Pile
Fixed Open Pile Dock	2560	35	Timber	Steel Frame & Timber Piles

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Steel Sheet Pile Wall	1490	<10	-	12	100	0	0

Utilities

Type	Age	Condition	Additional Information
Potable Water	10-20	Very Good	100 % have vacuum breakers installed
WIFI	<5	Functional	
Pumpout	<10	-	3 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
32 30/ 50 Amp	75% Very Good 25% Functional
Compliant with Electrical Shock Drowning Ground Fault Protection Standards?	Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over Land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gasoline	Harbor Wall	80	8	1	100	0	10-20	Good
Tank Type		Tank Capacity		No. Tanks				
Underground Single		2500		1				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
5	Cast-In-Place Concrete	Skid	25	3	35	5	52	0

Site Features

Off-Street Parking				Total Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material
25	10000	Functional	0	-	0	-	12000	Asphalt
On-Street Parking		Spaces	Condition	Facility Responsible?				
		25	Functional	Yes				
Landscaping		SF	Condition	Facility Responsible?				
		20000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		400	8	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
1	10	Very Good	0	-				
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Restroom & Fuel services	2300	16	4	30	Functional	Roof Replacement, Mechanical Upgrades, ADA Updates & General Interior Renovations		



Munising Bayshore Marina

Facility Owner:	City of Munising
Address:	355 Elm St. Munising, MI 498962
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Broadside Fixed Open Pile Dock	100%	2560	SF	\$ 67	\$ 171,520
Total Dock Cost					\$ 171,520

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	8000	SF	\$ 70	\$ 560,000
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 605,000
Total Cost					\$ 776,520

Munising Bayshore Marina

Facility Owner: City of Munising
Address: 355 Elm St. Munising, MI 498962
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Fixed Head Pier	100%	3620	SF	\$ 75	\$ 271,500
Total Dock Cost					\$ 271,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
30/50 Amp Electric Pedestal	25%	32	EA	\$ 3,500	\$ 28,000
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Fuel Dock	100%	640	SF	\$ 70	\$ 44,800
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Fuel Lines	100%	100	LF	\$ 100	\$ 10,000
Underground Single Product Tank	100%	1	EA	\$ 100,000	\$ 100,000
Total Utilities Cost					\$ 202,800

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	12000	SF	\$ 10	\$ 120,000
Parking Lot - Asphalt	100%	10000	SF	\$ 10	\$ 100,000
Total Site-Features Cost					\$ 220,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building I	100%	2300	SF	\$ 400	\$ 920,000
Total Buildings Cost					\$ 920,000

Total Cost \$ 1,614,300

Total Future Value Cost \$ 2,169,484

Munising Bayshore Marina

Facility Owner:	City of Munising
Address:	355 Elm St. Munising, MI 498962
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Floating Dock	100%	3636	SF	\$ 75	\$ 272,700
Total Dock Cost					\$ 272,700

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	89	SLIP	\$ 3,500	\$ 311,500
30/50 Amp Electric Pedestal	75%	32	EA	\$ 3,500	\$ 84,000
Potable Water	100%	89	SLIP	\$ 800	\$ 71,200
Fuel Dock	100%	640	SF	\$ 70	\$ 44,800
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Fuel Lines	100%	100	LF	\$ 100	\$ 10,000
Underground Single Product Tank	100%	1	EA	\$ 100,000	\$ 100,000
Pumpout	100%	3	EA	\$ 35,000	\$ 105,000
Total Utilities Cost					\$ 741,500

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	3200	SF	\$ 10	\$ 32,000
Total Site-Features Cost					\$ 32,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Total Buildings Cost					\$ 15,000

Total Cost	\$ 1,151,200
Total Future Value Cost	\$ 2,079,195

Muskegon Hartshorn Marina

Facility Owner: City of Muskegon
Address: 920 W Western Ave, Muskegon, MI 49441
Site ID: -

Docks

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
6170	Traditional Timber (DNR Standard)	Great Lakes Docks & Materials, LLC	50	30'	100%	20-30

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
1840	Traditional Timber	Great Lakes Docks & Materials, LLC	16	30'	100%	20-30

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
3030	Composite	Fixed Timber Pile and Timber framed finger piers along 1,350 LF of Harbor Wall	54	30'	100%	10-20
			4	40'		
			4	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Floating Dock	544	30	-	Traditional Timber by Great Lakes Docks & Materials, LLC

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	1400	40+	Functional	9	100	0	0	NA
Steel Sheet Pile Single	290	10-20	Very Good	10	100	0	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Functional	90 % have vacuum breakers installed
Ice Suppression System	10-20	Replace	4 Units Total
Air Distribution Lines	10-20	Replace	
Pumpout	10-20	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
56 Twin 30 Amp	50% Functional
9 30/ 50 Amp	50% Bad
Compliant with Electrical Shock Drowning Ground Fault Protection Standards?	
No	

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
6	Cast-In-Place Concrete	Floating	10	2	45	6	35	7

Site Features

Off-Street Parking			Total			Gravel/Unpaved	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Condition	SF	Material
185	170000	-	0	-	0	-	4000	Concrete
Landscaping		SF	Condition	Facility Responsible?				
		10000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		1500	12	Concrete		Functional		

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
2	0	Functional	0	-				
Building 1 Type		Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Office and Harbor Shop (maintenance)		560	2	2	59	Functional	Roof Replacement, Mechanical Upgrades, ADA upgrades, Interior and Exterior Renovations	
Building 2 Type		Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Restroom		1200	10	6	40	Functional	Mechanical Upgrades	
Building 2 Type		Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Harbor Shop		200	0	0	0	Very Good	None	

Muskegon Hartshorn Marina

Facility Owner: City of Muskegon
Address: 920 W Western Ave, Muskegon, MI 49441
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Floating Dock	100%	6170	SF	\$ 75	\$ 462,750
Floating Head Pier	100%	1840	SF	\$ 75	\$ 138,000
Redecking Finger Piers	100%	3030	SF	\$ 14	\$ 42,420
Broadside Floating Dock	100%	544	SF	\$ 75	\$ 40,800
Total Dock Cost					\$ 683,970

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	100%	1400	LF	\$ 700	\$ 980,000
Total Structure Cost					\$ 980,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	128	SLIP	\$ 5,000	\$ 640,000
Twin 30 Amp Electric Pedestal	50%	56	EA	\$ 3,000	\$ 84,000
30/50 Amp Electric Pedestal	50%	9	EA	\$ 3,500	\$ 15,750
PW System Vacuum Breakers	10%	128	SLIP	\$ 12	\$ 154
Ice Suppression Compressor System	50%	128	SLIP	\$ 1,800	\$ 115,200
Total Utilities Cost					\$ 855,104
Total Cost					\$ 2,519,074

Muskegon Hartshorn Marina

Facility Owner: City of Muskegon
Address: 920 W Western Ave, Muskegon, MI 49441
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	100%	1400	LF	\$ 1,050	\$ 1,470,000
Total Structure Cost					\$ 1,470,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Twin 30 Amp Electric Pedestal	50%	56	EA	\$ 3,000	\$ 84,000
30/50 Amp Electric Pedestal	50%	9	EA	\$ 3,500	\$ 15,750
Potable Water	100%	128	SLIP	\$ 800	\$ 102,400
Ice Suppression Compressor System	50%	128	SLIP	\$ 1,800	\$ 115,200
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 352,350

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	9600	SF	\$ 70	\$ 672,000
Total Boat Launch & Paddle Sport Access Cost					\$ 672,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	4000	SF	\$ 7	\$ 28,000
Walkways	100%	18000	SF	\$ 10	\$ 180,000
Total Site-Features Cost					\$ 208,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 1	100%	560	SF	\$ 400	\$ 224,000
Building 2	100%	1200	SF	\$ 400	\$ 480,000
Total Buildings Cost					\$ 704,000

Total Cost \$ 3,406,350

Total Future Value Cost \$ 4,577,850

Muskegon Hartshorn Marina

Facility Owner:	City of Muskegon
Address:	920 W Western Ave, Muskegon, MI 49441
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Wall/Shoreline Head Pier Fixed Fingers	100%	3030	SF	\$ 60	\$ 181,800
Total Dock Cost					\$ 181,800

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	100%	1400	LF	\$ 1,400	\$ 1,960,000
Steel Sheet Pile Single Wall Breakwater	100%	290	LF	\$ 1,600	\$ 464,000
Total Structure Cost					\$ 2,424,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	128	SLIP	\$ 3,500	\$ 448,000
Total Utilities Cost					\$ 448,000

Total Cost \$ 3,053,800

Total Future Value Cost \$ 5,515,502

Muskegon State Park - Snug Harbor BAS

Facility Owner: MDNR
Address: 3560 Memorial Dr. Muskegon, MI 49445
Site ID: A-61-004

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
6	Precast Concrete Planks	Skid	20	3	40	5	70	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
125	4000	Functional	0	-	0	-	20000	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		250000	Good	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		400	5	Concrete	Very Good			

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
1	30	Very Good	1	Functional



Muskegon State Park - Snug Harbor BAS

Facility Owner: MDNR
 Address: 3560 Memorial Dr. Muskegon, MI 49445
 Site ID: A-61-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	9600	SF	\$ 30	\$ 288,000
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 333,000
Total Cost					\$ 333,000

Muskegon State Park - Snug Harbor BAS

Facility Owner:	MDNR
Address:	3560 Memorial Dr. Muskegon, MI 49445
Site ID:	A-61-004

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	20000	SF	\$ 10	\$ 200,000
Parking Lot - Asphalt	100%	4000	SF	\$ 10	\$ 40,000
Total Site-Features Cost					\$ 240,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 25,000

Total Cost	\$ 265,000
-------------------	-------------------

Total Future Value Cost	\$ 356,138
--------------------------------	-------------------

Muskegon State Park - Snug Harbor BAS

Facility Owner: MDNR
 Address: 3560 Memorial Dr. Muskegon, MI 49445
 Site ID: A-61-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	3	EA	\$ 30,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000

Site-Features

Walkways	100%	2000	SF	\$ 10	\$ 20,000
Total Site-Features Cost					\$ 20,000

Total Cost	\$ 110,000
Total Future Value Cost	\$ 198,672

Nahma BAS

Facility Owner: MDNR
Address: Fayette Historic State Park, 4785 Il Road, Garden, MI 49835
Site ID: A-21-005

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	850	-	-	0	0	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	10	1	40	5	36	10

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
36	100	Very Good	0	-	0	-	3536	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		33000	Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		280	5	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Functional



Nahma BAS

Facility Owner: MDNR
Address: Fayette Historic State Park, 4785 Il Road, Garden, MI 49835
Site ID: A-21-005

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Nahma BAS

Facility Owner:	MDNR
Address:	Fayette Historic State Park, 4785 Il Road, Garden, MI 49835
Site ID:	A-21-005

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Total Boat Launch & Paddle Sport Access Cost					\$ 224,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost	\$ 244,000
-------------------	-------------------

Total Future Value Cost	\$ 327,916
--------------------------------	-------------------

Nahma BAS

Facility Owner:	MDNR
Address:	Fayette Historic State Park, 4785 Il Road, Garden, MI 49835
Site ID:	A-21-005

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	3536	SF	\$ 10	\$ 35,360
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Walkways	100%	1400	SF	\$ 10	\$ 14,000
Total Site-Features Cost					\$ 50,360
Total Cost					\$ 80,360
Total Future Value Cost					\$ 145,139

Naubinway Garfield Township Marina

Facility Owner: Garfield Township
Address: N6760 M-117 P O Box 148 Engadine, Mi. 49827
Site ID: -

Docks

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
4365	Concrete	-	2	35'	100%	40+
			3	40'		

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
195	Timber	45 LF of Fixed Steel Framing and Piles	1	60'	100%	40+
			1	70' +		

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	204	-	-	0	0	0	0	NA
Concrete Wall	0	40+	Very Good	15	100	0	0	NA
Rock Revetment Shoreline	176	40+	Very Good	10	100	0	0	NA
Rock Revetment Offshore	0	40+	Very Good	20	100	0	0	Yes
Steel Sheet Pile Single	0	40+	Very Good	25	100	0	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Very Good	0 % have vacuum breakers installed
Ice Suppression System	10-20	Functional	1 Units Total
Air Distribution Lines	<10	Functional	
Pumpout	30+	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
7 30/ 50 Amp	100% Functional
Compliant with Electrical Shock Drowning Ground Fault Protection Standards?	No

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Cast-In-Place Concrete							

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/ Unpaved	Gravel/ Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
10	13578	Functional	0	-	0	-	240	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
	62312	Functional	Yes					
Walkways		Total LF	Avg. Width	Material	Condition			
	176	6	Concrete	Functional				

Buildings

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office & Restroom	418	4	2	51	Functional	General Interior & Exterior Renovations



Naubinway Garfield Township Marina

Facility Owner: Garfield Township
Address: N6760 M-117 P O Box 148 Engadine, Mi. 49827
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Wall/Shoreline Head Pier Fixed Fingers	100%	195	SF	\$ 75	\$ 14,625
Total Dock Cost					\$ 14,625

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type B	100%	176	LF	\$ 250	\$ 44,000
Total Structure Cost					\$ 44,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	7	SLIP	\$ 5,000	\$ 35,000
PW System Vacuum Breakers	100%	7	SLIP	\$ 12	\$ 84
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 70,084
Total Cost					\$ 128,709

Naubinway Garfield Township Marina

Facility Owner: Garfield Township
Address: N6760 M-117 P O Box 148 Engadine, Mi. 49827
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type B	100%	176	LF	\$ 700	\$ 123,200
Total Structure Cost					\$ 123,200

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
30/50 Amp Electric Pedestal	100%	7	EA	\$ 3,500	\$ 24,500
Ice Suppression Compressor System	100%	7	SLIP	\$ 1,800	\$ 12,600
Total Utilities Cost					\$ 37,100

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	240	SF	\$ 10	\$ 2,400
Parking Lot - Asphalt	100%	13578	SF	\$ 10	\$ 135,780
Walkways	100%	1056	SF	\$ 10	\$ 10,560
Total Site-Features Cost					\$ 148,740

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building I	100%	418	SF	\$ 400	\$ 167,200
Total Buildings Cost					\$ 167,200

Total Cost \$ 476,240

Total Future Value Cost \$ 640,027

Naubinway Garfield Township Marina

Facility Owner: Garfield Township
Address: N6760 M-117 P O Box 148 Engadine, Mi. 49827
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	176	LF	\$ 1,050	\$ 184,800
Total Structure Cost					\$ 184,800

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	7	SLIP	\$ 3,500	\$ 24,500
Potable Water	100%	7	SLIP	\$ 800	\$ 5,600
Total Utilities Cost					\$ 30,100

Total Cost					\$ 214,900
Total Future Value Cost					\$ 388,133

New Bridge BAS

Facility Owner: MDNR
Address: Sarrel St Newaygo, MI 49337
Site ID: A-62-004

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks						25	25

Site Features

Off-Street Parking						Total SF Gravel/Unpaved	Gravel/Unpaved Condition		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition			SF	Material		
25	0	-	0	-	0	Very Good	450	Gravel/Unpaved		
Landscaping		SF	Condition	Facility Responsible?						
		1700	Very Good	Yes						
Walkways		Total LF	Avg. Width	Material		Condition				
		0	0	Concrete		Functional				

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



New Bridge BAS

Facility Owner:	MDNR
Address:	Sarrel St Newaygo, MI 49337
Site ID:	A-62-004

There are no costs projected for this site within this time period

New Bridge BAS

Facility Owner: MDNR
Address: Sarrel St Newaygo, MI 49337
Site ID: A-62-004

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000
Total Cost					\$ 10,000
Total Future Value Cost					\$ 13,439

New Bridge BAS

Facility Owner: MDNR
Address: Sarrel St Newaygo, MI 49337
Site ID: A-62-004

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	450	SF	\$ 5	\$ 2,250
Total Site-Features Cost					\$ 2,250
Total Cost					\$ 2,250
Total Future Value Cost					\$ 4,064

New Buffalo Municipal Marina

Facility Owner: MDNR
 Address: 100 Water St.
 Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
12670	steel	Sheet Pile Crib	12	20'	100%	10-20
			12	25'		
			12	30'		
			13	35'		
			5	40'		
			5	45'		

Traditional Floating

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
12722.5	Concrete	-	12	20'	100%	10-20
			12	25'		
			12	30'		
			14	35'		
			5	40'		
			5	45'		

Head Pier Floating

Head Pier along Harbor Wall/Shoreline

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	0	-	Functional	6	0	100	0	NA
Rock Revetment Offshore	800	20-30	Functional	6	0	100	0	0
Steel Sheet Pile Single	0	20-30	Functional	6	0	100	0	0
Steel Sheet Pile Double	0	20-30	Functional	6	0	100	0	0

Utilities

Type	Age	Condition	Additional Information		
Potable Water	20-30	Replace	0 % have vacuum breakers installed		
WIFI	<5	Functional			
Wet Fire Hydrant System	20-30	Functional			
Flow Inducers	-	Good	16 Units Total	0	Additional Units Needed
Pumpout	20-30	-	1 Pumpout(s)		

Electric Shore Power

Utility Pedestals	% Condition
0 20 Amp	0% Very Good
20 Single 30 Amp	0% Functional
0 Twin 30 Amp	100% Bad
5 30/ 50 Amp	
0 Twin 50 Amp	
0 100 Amp	

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? No

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
8	Precast	Skid	20	4	25	3	100	0
	Concrete Planks	Fixed	20	2	25	4		

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
0	YES	0	0	0	0	0	0	0	15

Site Features

Off-Street Parking			Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition					SF	Material
10	750	Replace	0	-	0	-	7500	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
	2000	Functional	Yes					
Walkways		Total LF	Avg. Width	Material	Condition			
	250	4	Concrete	Functional				

Buildings

Picnic Shelters			Vault Toilets			Age	Condition	Improvements Needed
Amount	Age	Condition	Amount	Condition				
1	0	Very Good	0	-				
Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Office & Restroom	800	4	4	25	Functional	Roof Replacement, Mechanical Upgrades, ADA Updates, General Interior & Exterior Renovations		



New Buffalo Municipal Marina

Facility Owner: MDNR
 Address: 100 Water St.
 Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Fixed Head Pier Redecking	100%	12723	SF	\$ 15	\$ 190,838
Total Dock Cost					\$ 190,838

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	119	SLIP	\$ 5,000	\$ 595,000
Single 30 Amp Electric Pedestal	100%	20	EA	\$ 3,000	\$ 60,000
30/50 Amp Electric Pedestal	100%	5	EA	\$ 3,500	\$ 17,500
Potable Water	100%	119	SLIP	\$ 800	\$ 95,200
Flow Inducers	20%	16	EA	\$ 1,000	\$ 3,200
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 805,900

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	12800	SF	\$ 30	\$ 384,000
Launch Piers	100%	4	EA	\$ 30,000	\$ 120,000
Total Boat Launch & Paddle Sport Access Cost					\$ 504,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	7500	SF	\$ 10	\$ 75,000
Parking Lot - Asphalt	100%	750	SF	\$ 10	\$ 7,500
Total Site-Features Cost					\$ 82,500
Total Cost					\$ 1,583,238

New Buffalo Municipal Marina

Facility Owner: MDNR
 Address: 100 Water St.
 Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Wet Fire Suppression System	100%	119	SLIP	\$ 1,000	\$ 119,000
Flow Inducers	100%	16	EA	\$ 1,000	\$ 16,000
Total Utilities Cost					\$ 140,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	100%	1000	SF	\$ 10	\$ 10,000
Total Site-Features Cost					\$ 10,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building I	100%	800	SF	\$ 400	\$ 320,000
Total Buildings Cost					\$ 320,000

Total Cost	\$ 500,000
Total Future Value Cost	\$ 671,958

New Buffalo Municipal Marina

Facility Owner:	MDNR
Address:	100 Water St.
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Fixed Dock	100%	12670	SF	\$ 200	\$ 2,534,000
Total Dock Cost					\$ 2,534,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	119	SLIP	\$ 3,500	\$ 416,500
Total Utilities Cost					\$ 416,500

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	6	EA	\$ 15,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000

Total Cost	\$ 3,040,500
Total Future Value Cost	\$ 5,491,481

Newaygo State Park - Hardy Dam Pond BAS

Facility Owner: Consumers Energy and USFS
Address: 2793 Beech St Newaygo MI 49337
Site ID: A-62-020

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Cast-In-Place Concrete	Fixed	30	1	200	5	53	0

Dredge

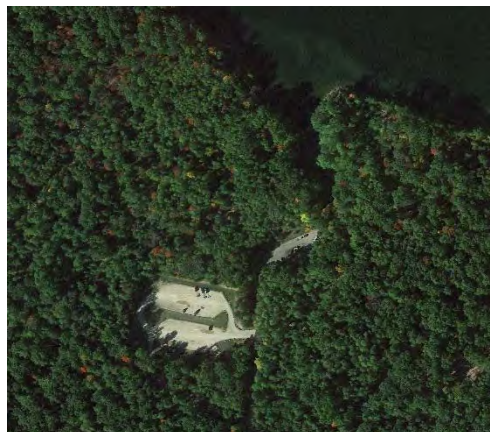
Navigable Water Depth	% of	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'		60	Yes	Every year	60	100	0
100%	6'-10'	1 years ago						
0%	>10'							
Dredging required for 2019 boating season:				0	CY			

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
53	41000	-	0	-	0	Very Good	34000	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		2200	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		10	5	Concrete	Very Good			

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Very Good



Newaygo State Park - Hardy Dam Pond BAS

Facility Owner:	Consumers Energy and USFS
Address:	2793 Beech St Newaygo MI 49337
Site ID:	A-62-020

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Broadside Fixed Open Pile Dock	100%	500	SF	\$ 60	\$ 30,000
Total Dock Cost					\$ 30,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 70	\$ 112,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 127,000
Total Cost					\$ 169,000

Newaygo State Park - Hardy Dam Pond BAS

Facility Owner:	Consumers Energy and USFS
Address:	2793 Beech St Newaygo MI 49337
Site ID:	A-62-020

Dredging

Item	Quantity	Unit	Unit Rate	10 Year Projection
Dredging	300	CY	\$ 40	\$ 12,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost				\$	10,000
Total Cost				\$	22,000
Total Future Value Cost				\$	29,566

Newaygo State Park - Hardy Dam Pond BAS

Facility Owner: Consumers Energy and USFS
 Address: 2793 Beech St Newaygo MI 49337
 Site ID: A-62-020

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	600	CY	\$ 40	\$ 24,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	34000	SF	\$ 5	\$ 170,000
Walkways	100%	50	SF	\$ 10	\$ 500
Total Site-Features Cost					\$ 170,500

Total Cost					\$ 224,500
Total Future Value Cost					\$ 405,472

North Channel BAS

Facility Owner: MDNR
Address: 2635 Point Tremble Rd Algonac MI 48001
Site ID: A-74-001

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	310	20-30	Replace	6	100	0	0	NA

Funding has been approved to replace the damaged shoreline wall. Construction to begin in the fall of 2019

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
8	Precast Concrete Planks	Skid	0	4	40	5	117	19

Site Features

Landscaping	SF	Condition	Facility Responsible?	
	70138	Very Good	Yes	
Walkways	Total LF	Avg. Width	Material	Condition
	156	5	Concrete	Very Good

Buildings

Picnic Shelters			Vault Toilets			
Amount	Age	Condition	Amount	Condition		
0	0	-	2	Functional		
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	100	0	0	24	Functional	-



5 Year Projected Cost Estimate

North Channel BAS

Facility Owner: MDNR
Address: 2635 Point Tremble Rd Algonac MI 48001
Site ID: A-74-001

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Steel Sheet Pile Wall Replacement	70%	310	LF	\$ 1,400	\$ 303,800
Sheet Pile Wall Maintenance Type A	30%	310	LF	\$ 140	\$ 13,020
				Total Structure Cost	\$ 316,820
				Total Cost	\$ 316,820

North Channel BAS

Facility Owner:	MDNR
Address:	2635 Point Tremble Rd Algonac MI 48001
Site ID:	A-74-001

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	30%	310	LF	\$ 350	\$ 32,550
Total Structure Cost					\$ 32,550

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	4	EA	\$ 45,000	\$ 180,000
Total Boat Launch & Paddle Sport Access Cost					\$ 180,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	10%	780	SF	\$ 10	\$ 780
Total Site-Features Cost					\$ 780

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Building I	100%	2500	SF	\$ 400	\$ 1,000,000
Total Buildings Cost					\$ 1,020,000

Total Cost \$ 1,233,330

Total Future Value Cost \$ 1,657,492

North Channel BAS

Facility Owner: MDNR
Address: 2635 Point Tremble Rd Algonac MI 48001
Site ID: A-74-001

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	30%	310	LF	\$ 700	\$ 65,100
Total Structure Cost					\$ 65,100

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	90%	780	SF	\$ 10	\$ 7,020
Total Site-Features Cost					\$ 7,020

Total Cost					\$ 72,120
Total Future Value Cost					\$ 130,257

North Higgins Lake State Park BAS

Facility Owner: MDNR
Address: 11747 N. Higgins Lake Drive Roscommon, MI 48653
Site ID: A-20-033

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
3	Precast Concrete Planks	Skid	5	2	40	5	30	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	<6'	2 years ago	200	Yes	Every Year	200	100
0%	6'-10'						0
0%	>10'						
Dredging required for 2019 boating season:				200	CY		

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
150	100	Functional	0	-	0	-	6000	Asphalt

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



North Higgins Lake State Park BAS

Facility Owner: MDNR
 Address: 11747 N. Higgins Lake Drive Roscommon, MI 48653
 Site ID: A-20-033

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Dredging

Item	Quantity	Unit	Unit Rate	5 Year Projection
Dredging	1000	CY	\$ 40	\$ 40,000
Total Cost				\$ 70,000

North Higgins Lake State Park BAS

Facility Owner:	MDNR
Address:	11747 N. Higgins Lake Drive Roscommon, MI 48653
Site ID:	A-20-033

Dredging

Item	Quantity	Unit	Unit Rate	10 Year Projection
Dredging	1000	CY	\$ 40	\$ 40,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	6000	SF	\$ 10	\$ 60,000
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Total Site-Features Cost				\$	61,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost				\$	10,000

Total Cost \$ 111,000

Total Future Value Cost \$ 149,175

North Higgins Lake State Park BAS

Facility Owner: MDNR
 Address: 11747 N. Higgins Lake Drive Roscommon, MI 48653
 Site ID: A-20-033

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	4800	SF	\$ 30	\$ 144,000
Total Boat Launch & Paddle Sport Access Cost					\$ 234,000

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	1000	CY	\$ 40	\$ 40,000
Total Cost				\$ 274,000
Total Future Value Cost				\$ 494,874

North Shore BAS

Facility Owner: City of Escanaba
Address: Power Plant Rd.
Site ID: A-21-034

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
8	Cast-In-Place Concrete	Skid	20	5	30	6	162	0

Site Features

Off-Street Parking			Total			Gravel/Unpaved		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Condition	SF	Material	
162	100	Very Good	0	-	0	-	13920	Asphalt	

Landscaping	SF	Condition	Facility Responsible?
	10000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	175	6	Concrete	Very Good

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Very Good

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Harbor Shop	648	0	0	18	Very Good	None



North Shore BAS

Facility Owner:	City of Escanaba
Address:	Power Plant Rd.
Site ID:	A-21-034

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	12800	SF	\$ 70	\$ 896,000
Launch Piers	100%	5	EA	\$ 15,000	\$ 75,000
Total Boat Launch & Paddle Sport Access Cost					\$ 971,000
Total Cost					\$ 971,000

North Shore BAS

Facility Owner:	City of Escanaba
Address:	Power Plant Rd.
Site ID:	A-21-034

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000
Total Cost					\$ 20,000
Total Future Value Cost					\$ 26,878

North Shore BAS

Facility Owner:	City of Escanaba
Address:	Power Plant Rd.
Site ID:	A-21-034

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	5	EA	\$ 30,000	\$ 150,000
Total Boat Launch & Paddle Sport Access Cost					\$ 150,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	13920	SF	\$ 10	\$ 139,200
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Walkways	100%	1050	SF	\$ 10	\$ 10,500
Total Site-Features Cost					\$ 150,700

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building I	100%	648	SF	\$ 400	\$ 259,200
Total Buildings Cost					\$ 259,200

Total Cost \$ 559,900

Total Future Value Cost \$ 1,011,242

Northport G. Martsen Dame Marina

Facility Owner: Village of Northport
Address: 105 Rose Street, Northport, Mi 49670
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
			81	35'		
			44	45'		
			6	60'		

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
			81	35'		
			44	45'		
			6	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	7200	25	Concrete	Timber Fendering
Floating Dock	2400	10	-	Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	800	20-30	Very Good	20	100	0	0	NA
Concrete Wall	0	10-20	Very Good	20	100	0	0	NA
Rock Revetment Shoreline	0	10-30	Functional	20	100	0	0	NA
Rock Revetment Offshore	0	20-30	Very Good	20	100	0	0	Yes
Steel Sheet Pile Single	0	20-30	Very Good	40	100	0	0	Yes
Steel Sheet Pile Double	0	20-30	Very Good	30	100	0	0	Yes
Caisson	0	20-30	Very Good	40	100	0	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Very Good	100 % have vacuum breakers installed
WIFI	<5	Very Good	
Dry Standpipe Fire System	10-20	Very Good	
Wet Fire Hydrant System	10-20	Very Good	
Ice Suppression System	<10	Very Good	4 Units Total
Air Distribution Lines	<10	Very Good	
Flow Inducers	-	Very Good	0 Units Total 0 Additional Units Needed
Pumpout	<10	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
131 30/ 50 Amp	50% Very Good 50% Functional

0% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards?

Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Fixed	100	12	4	-	-	<10	-
Tank Type		Tank Capacity		No. Tanks				
Above Ground Single Product		10000 Gallons		2				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	20	1	100	15	20	0

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	0	1	0	0	0	0	0	0	8

Site Features

Off-Street Parking			Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition					SF	Material
200	100	Functional	0	-	0	-	0	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		95	Very Good	Yes				

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
1	15	Very Good	0	-				
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Office, Boater Lounge, Restroom	-	20	6	12	Very Good	None		



Northport G. Martsen Dame Marina

Facility Owner:	Village of Northport
Address:	105 Rose Street, Northport, Mi 49670
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Fixed Dock Redecking	40%	23308	SF	\$ 10	\$ 93,230
Traditional Floating Dock	50%	22593	SF	\$ 55	\$ 621,294
Total Dock Cost					\$ 714,524

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 239,000
Total Cost					\$ 953,524

Northport G. Martsen Dame Marina

Facility Owner:	Village of Northport
Address:	105 Rose Street, Northport, Mi 49670
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Fixed Dock Redecking	10%	23308	SF	\$ 10	\$ 23,308
Traditional Floating Dock	40%	22593	SF	\$ 55	\$ 497,035
Total Dock Cost					\$ 700,343

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
30/50 Amp Electric Pedestal	50%	131	EA	\$ 3,500	\$ 229,250
Total Utilities Cost					\$ 229,250

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Total Site-Features Cost					\$ 1,000

Total Cost \$ 930,593

Total Future Value Cost \$ 1,250,639

Northport G. Martsen Dame Marina

Facility Owner: Village of Northport
 Address: 105 Rose Street, Northport, Mi 49670
 Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Floating Dock	10%	22593	SF	\$ 55	\$ 124,259
Total Dock Cost					\$ 124,259

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	262	SLIP	\$ 3,500	\$ 917,000
30/50 Amp Electric Pedestal	50%	131	EA	\$ 3,500	\$ 229,250
Potable Water	100%	262	SLIP	\$ 800	\$ 209,600
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Dry Standpipe Fire Suppression System	100%	262	SLIP	\$ 800	\$ 209,600
Wet Fire Suppression System	100%	262	SLIP	\$ 1,000	\$ 262,000
Ice Suppression Compressor System	100%	262	SLIP	\$ 1,800	\$ 471,600
Fuel Dock	100%	1200	SF	\$ 150	\$ 180,000
Fuel Dispenser	100%	4	EA	\$ 15,000	\$ 60,000
Above Ground Single Product Tank	100%	2	EA	\$ 50,000	\$ 100,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 2,679,050

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Total Buildings Cost					\$ 15,000

Total Cost	\$ 2,848,309
Total Future Value Cost	\$ 5,144,362

Oman's Creek BAS

Facility Owner: MDNR
Address: 46 36' 28.59"N, 90 19' 46 90"W
Site ID: A-27-015

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	3	1	30	6	0	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
80%	<6'	2800	Yes	Every Year	2800	100	0
20%	6'-10'						
0%	>10'						
Dredging required for 2019 boating season:				2800	CY		

Site Features

Off-Street Parking			Total			Gravel/Unpaved		Access Drive	
Spaces	SF Asphalt	Asphalt Condition	SF Concrete	Concrete Condition	SF Gravel/Unpaved	Condition	SF	Material	
22	8000	Functional	0	-	7500	Functional	1400	Asphalt	
Landscaping		SF	Condition	Facility Responsible?					
		6000	Replace	Yes					

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Replace



Oman's Creek BAS

Facility Owner: MDNR
 Address: 46 36' 28.59"N, 90 19' 46 90"W
 Site ID: A-27-015

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
				Total Buildings Cost	\$ 10,000
				Total Cost	\$ 10,000

Oman's Creek BAS

Facility Owner:	MDNR
Address:	46 36' 28.59"N, 90 19' 46 90"W
Site ID:	A-27-015

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	1400	SF	\$ 10	\$ 14,000
Parking Lot - Asphalt	100%	8000	SF	\$ 10	\$ 80,000
Parking Lot - Gravel/Unpaved	100%	7500	SF	\$ 5	\$ 37,500
Total Site-Features Cost					\$ 131,500
Total Cost					\$ 176,500
Total Future Value Cost					\$ 237,201

Oman's Creek BAS

Facility Owner:	MDNR
Address:	46 36' 28.59"N, 90 19' 46 90"W
Site ID:	A-27-015

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	100%	300	LF	\$ 140	\$ 42,000
Total Structure Cost					\$ 42,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Total Boat Launch & Paddle Sport Access Cost					\$ 48,000

Total Cost					\$ 90,000
Total Future Value Cost					\$ 162,550

Ontonagon Village Marina

Facility Owner: Village of Ontonagon
Address: 205 River Road, Ontonagon MI 49953
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
4080	Timber	Steel Frame & Steel Piles	4	25'	100%	40+
			32	35'		

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
4080	Timber	Steel Frame & Timber	4	25'	100%	40+
			32	35'		

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Rock Revetment Shoreline	2500	40+	Very Good	6	0	0	100

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Replace	0 % have vacuum breakers installed
Wet Fire Hydrant System	30+	Functional	
Pumpout	30+	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
20 Twin 30 Amp	0% Very Good 50% Functional 50% Bad

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gasoline	Fixed	50	20	1	50	150	10-20	Very Good
	Tank Type		Tank Capacity	No. Tanks				
	Above Ground Single Product		1500					

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
3	Precast Concrete Planks	Skid	25	3	20	4	42	0

Boat Storage

Hull Wash Down	Travel Lift	Hydraulic Trailer	Summer Storage SF	Indoor Heated SF	Winter Indoor SF	Winter Outdoor SF
No	Yes	No	40000	0	0	60000

Dredge

% of Navigable Water Depth		Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
50%	<6'	1 years ago	13000	Yes	Every 3 Years	10000	100	0
40%	6'-10'							
10%	>10'							
Dredging required for 2019 boating season:				5000	CY			

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
30	16000	Very Good	0	-	0	-	1560	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		200000	Functional	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		500	6	Asphalt	Functional			

Buildings

Picnic Shelters			Vault Toilets				
Amount	Age	Condition	Amount	Condition			
1	5	Very Good	2	Replace			
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Office	800	6	4	40	Replace	Roof Replacement, Mechanical Upgrade, ADA Update, General Interior Renovations	



Ontonagon Village Marina

Facility Owner: Village of Ontonagon
Address: 205 River Road, Ontonagon MI 49953
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Fixed Dock	100%	4080	SF	\$ 75	\$ 306,000
Fixed Head Pier	100%	4080	SF	\$ 67	\$ 273,360
Total Dock Cost					\$ 579,360

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	72	SLIP	\$ 5,000	\$ 360,000
Twin 30 Amp Electric Pedestal	50%	20	EA	\$ 3,000	\$ 30,000
Potable Water	70%	72	SLIP	\$ 800	\$ 40,320
PW System Vacuum Breakers	30%	72	SLIP	\$ 12	\$ 259
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 465,579

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	4800	SF	\$ 30	\$ 144,000
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 189,000

Dredging

Item	Quantity	Unit	Unit Rate	5 Year Projection
Dredging	4500	CY	\$ 40	\$ 180,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Building I	100%	800	SF	\$ 400	\$ 320,000
Total Buildings Cost					\$ 340,000
Total Cost					\$ 1,753,939

Ontonagon Village Marina

Facility Owner: Village of Ontonagon
Address: 205 River Road, Ontonagon MI 49953
Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Twin 30 Amp Electric Pedestal	50%	20	EA	\$ 3,000	\$ 30,000
Potable Water	30%	72	SLIP	\$ 800	\$ 17,280
Wet Fire Suppression System	100%	72	SLIP	\$ 1,000	\$ 72,000
Fuel Dock	100%	1000	SF	\$ 150	\$ 150,000
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Fuel Lines	100%	200	LF	\$ 100	\$ 20,000
Above Ground Single Product Tank	100%	1	EA	\$ 50,000	\$ 50,000
Total Utilities Cost					\$ 354,280

Boat Storage

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Travel Lift Haul-Out System	100%	1	LS	\$ 500,000	\$ 500,000
Total Boat Storage Cost					\$ 1,000,000

Dredging

Item	Quantity	Unit	Unit Rate	10 Year Projection
Dredging	15000	CY	\$ 40	\$ 600,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	100%	3000	SF	\$ 7	\$ 21,000
Total Site-Features Cost					\$ 21,000

Total Cost \$ 1,975,280

Total Future Value Cost \$ 1,310,695

Ontonagon Village Marina

Facility Owner: Village of Ontonagon
Address: 205 River Road, Ontonagon MI 49953
Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	72	SLIP	\$ 3,500	\$ 252,000
Fuel Dock	100%	1000	SF	\$ 150	\$ 150,000
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Fuel Lines	100%	200	LF	\$ 100	\$ 20,000
Above Ground Single Product Tank	100%	1	EA	\$ 50,000	\$ 50,000
Total Utilities Cost					\$ 487,000

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	30000	CY	\$ 40	\$ 1,200,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	1560	SF	\$ 10	\$ 15,600
Parking Lot - Asphalt	100%	16000	SF	\$ 10	\$ 160,000
Total Site-Features Cost					\$ 175,600

Total Cost \$ 1,952,600

Total Future Value Cost \$ 3,526,613

Orchard Lake BAS

Facility Owner: MDNR
Address: 4060 Orchard Lake Road, Orchard Lake, MI
Site ID: A-63-001

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	5	2	30	5	61	1

Site Features

Off-Street Parking		Asphalt Condition	Total		Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt		SF Concrete	SF Concrete				SF	Material
62	41845	Very Good	0	0	-	0	-	7061	Asphalt
Landscaping		SF	Condition	Facility Responsible?					
		8641	Very Good	Yes					
Walkways		Total LF	Avg. Width	Material		Condition			
		445	5	Concrete		Very Good			

Buildings

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	400	4	0	30	Functional	General Interior Renovations



Orchard Lake BAS

Facility Owner: MDNR
 Address: 4060 Orchard Lake Road, Orchard Lake, MI
 Site ID: A-63-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000

Orchard Lake BAS

Facility Owner: MDNR
Address: 4060 Orchard Lake Road, Orchard Lake, MI
Site ID: A-63-001

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building I	100%	400	SF	\$ 400	\$ 160,000
Total Buildings Cost					\$ 160,000
Total Cost					\$ 160,000
Total Future Value Cost					\$ 215,027

Orchard Lake BAS

Facility Owner:	MDNR
Address:	4060 Orchard Lake Road, Orchard Lake, MI
Site ID:	A-63-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Launch Piers	100%	2	EA	\$ 45,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 282,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	7061	SF	\$ 10	\$ 70,610
Parking Lot - Asphalt	100%	41845	SF	\$ 10	\$ 418,450
Walkways	100%	2225	SF	\$ 10	\$ 22,250
Total Site-Features Cost					\$ 511,310

Total Cost \$ 793,310

Total Future Value Cost \$ 1,432,806

Otsego Lake State Park BAS

Facility Owner: MDNR
Address: 7136 Old 27 South Gaylord, MI 49735
Site ID: A-69-022

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	5	2	30	5	0	40

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
108	55000	Very Good	0	-	0	-	52800	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		435600	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		60	4	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Very Good



Otsego Lake State Park BAS

Facility Owner: MDNR
 Address: 7136 Old 27 South Gaylord, MI 49735
 Site ID: A-69-022

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000

Otsego Lake State Park BAS

Facility Owner: MDNR
 Address: 7136 Old 27 South Gaylord, MI 49735
 Site ID: A-69-022

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000
Total Cost					\$ 10,000
Total Future Value Cost					\$ 13,439

Otsego Lake State Park BAS

Facility Owner: MDNR
 Address: 7136 Old 27 South Gaylord, MI 49735
 Site ID: A-69-022

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	2	EA	\$ 45,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 186,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	52800	SF	\$ 10	\$ 528,000
Parking Lot - Asphalt	100%	55000	SF	\$ 10	\$ 550,000
Walkways	100%	240	SF	\$ 10	\$ 2,400
Total Site-Features Cost					\$ 1,080,400

Total Cost \$ 1,266,400
Total Future Value Cost \$ 2,287,259

Paw Paw East BAS

Facility Owner: MDNR
Address: Paw Paw Lake
Site ID: A-11-002

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	2	1	45	6	24	24

Site Features

Landscaping	SF	Condition	Facility Responsible?
	833	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	50	5	Concrete	Functional

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Paw Paw East BAS

Facility Owner: MDNR
Address: Paw Paw Lake
Site ID: A-11-002

There are no costs projected for this site within this time period

Paw Paw East BAS

Facility Owner:	MDNR
Address:	Paw Paw Lake
Site ID:	A-11-002

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	100%	250	SF	\$ 10	\$ 2,500
Total Site-Features Cost					\$ 2,500

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 57,500
-------------------	------------------

Total Future Value Cost	\$ 77,275
--------------------------------	------------------

Paw Paw East BAS

Facility Owner:	MDNR
Address:	Paw Paw Lake
Site ID:	A-11-002

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Total Boat Launch & Paddle Sport Access Cost					\$ 48,000
Total Cost					\$ 48,000
Total Future Value Cost					\$ 86,693

Paw Paw West BAS

Facility Owner: MDNR
Address: Paw Paw Lake
Site ID: A-11-001

Site Features

Landscaping	SF	Condition	Facility Responsible?
	50	-	Yes

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



Paw Paw West BAS

Facility Owner: MDNR
Address: Paw Paw Lake
Site ID: A-11-001

There are no costs projected for this site within this time period

Paw Paw West BAS

Facility Owner:	MDNR
Address:	Paw Paw Lake
Site ID:	A-11-001

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000
Total Cost					\$ 10,000
Total Future Value Cost					\$ 13,439

Paw Paw West BAS

Facility Owner:	MDNR
Address:	Paw Paw Lake
Site ID:	A-11-001

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	15000	SF	\$ 10	\$ 150,000
Total Site-Features Cost					\$ 150,000
Total Cost					\$ 150,000
Total Future Value Cost					\$ 270,917

Pentwater Municipal Marina

Facility Owner: Village Of Pentwater
Address: 519 S Hancock Street, Pentwater, MI 49449
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
2010	Timber	Steel Frame & Steel Piles	28	25'	100%	20-30
			16	40'		

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
1650	Traditional Timber	Unknown	28	25'	100%	20-30

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
3935	Concrete		16	40'	100%	20-30

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	1250	30	Concrete	Steel Sheet Pile

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Steel Sheet Pile Wall	677	20-30	Functional	6	100	0	0
Rock Revetment Shoreline	40	-	-	0	0	0	0

Utilities

Type	Age	Condition	Additional Information
Potable Water	10-20	Replace	100 % have vacuum breakers installed
WIFI	<5	Functional	
Wet Fire Hydrant System	30+	Functional	
Flow Inducers	-	Replace	7 Units Total 0 Additional Units Needed
Pumpout	10-20	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
18 Twin 30 Amp	100% Bad

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
20%	<6'	Unknown	Yes	Every 5 years	0	50	50
80%	6'-10'	4 years ago					

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/ Unpaved	Gravel/ Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
22	100	Functional	0	-	0	-	216	Asphalt
On-Street Parking		Spaces	Condition	Facility Responsible?				
		12	Very Good	No				
Landscaping		SF	Condition	Facility Responsible?				
		35,000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		1090	5	Concrete		Good		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
1	20	Functional	0	-



Pentwater Municipal Marina

Facility Owner:	Village Of Pentwater
Address:	519 S Hancock Street, Pentwater, MI 49449
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Floating Dock	100%	1650	SF	\$ 75	\$ 123,750
Total Dock Cost					\$ 123,750

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	25%	677	LF	\$ 126	\$ 21,326
Total Structure Cost					\$ 21,326

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	88	SLIP	\$ 5,000	\$ 440,000
Twin 30 Amp Electric Pedestal	100%	18	EA	\$ 3,000	\$ 54,000
Potable Water	50%	88	SLIP	\$ 800	\$ 35,200
Flow Inducers	20%	7	EA	\$ 1,000	\$ 1,400
Total Utilities Cost					\$ 530,600

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Paddle Sport Launch Access	100%	200	SF	\$ 60	\$ 12,000
Total Boat Launch & Paddle Sport Access Cost					\$ 12,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Walkways	20%	5450	SF	\$ 10	\$ 10,900
Total Site-Features Cost					\$ 10,900
Total Cost					\$ 698,576

Pentwater Municipal Marina

Facility Owner: Village Of Pentwater
Address: 519 S Hancock Street, Pentwater, MI 49449
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Fixed Dock	100%	2010	SF	\$ 75	\$ 150,750
Total Dock Cost					\$ 150,750

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	25%	677	LF	\$ 315	\$ 53,314
Total Structure Cost					\$ 53,314

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Potable Water	50%	88	SLIP	\$ 800	\$ 35,200
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Wet Fire Suppression System	100%	88	SLIP	\$ 1,000	\$ 88,000
Flow Inducers	100%	7	EA	\$ 1,000	\$ 7,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 170,200

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	216	SF	\$ 10	\$ 2,160
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Walkways	20%	5450	SF	\$ 10	\$ 10,900
Total Site-Features Cost					\$ 14,060

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Total Buildings Cost					\$ 15,000

Total Cost \$ 403,324

Total Future Value Cost \$ 542,033

Pentwater Municipal Marina

Facility Owner:	Village Of Pentwater
Address:	519 S Hancock Street, Pentwater, MI 49449
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	25%	677	LF	\$ 644	\$ 108,997
Total Structure Cost					\$ 108,997

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	88	SLIP	\$ 3,500	\$ 308,000
Total Utilities Cost					\$ 308,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Paddle Sport Launch Access	100%	200	SF	\$ 120	\$ 24,000
Total Boat Launch & Paddle Sport Access Cost					\$ 24,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	60%	5450	SF	\$ 10	\$ 32,700
Total Site-Features Cost					\$ 32,700

Total Cost \$ 473,697

Total Future Value Cost \$ 855,549

Petoskey City Marina

Facility Owner: City of Petoskey
Address: 201 Bayfront Drive
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
44373.5	Timber	-	28	30'	30%	<10
			20	40'	15%	10-20
			79	45'	0%	20-30
			16	60'	0%	30-40
			1	70' +	55%	40+

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
21540	Timber	Steel Frame & Steel	26	30'	100%	30-40
			20	45'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Fixed Crib Dock	3600	10	Timber	-

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	600	20-30	Functional	8	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information		
Potable Water	20-30	Very Good	100 % have vacuum breakers installed		
WIFI	<5	Functional			
Wet Fire Hydrant System	10-20	Very Good			
Flow Inducers	-	Functional	40 Units Total	0	Additional Units Needed
Pumpout	<10	-	2 Pumpout(s)		

Electric Shore Power

Utility Pedestals	% Condition
72 30/ 50 Amp	100% Very Good
1 100 Amp	0% Functional
	0% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Fixed	100	16	2	60	550	20-30	Functional
Tank Type		Tank Capacity		No. Tanks				
Underground Single		13000		3				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	10	2	30	5	70	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	15 years	Unknown	-	-	-	-
100%	6'-10'	ago					
0%	>10'						
Dredging required for 2019 boating season:				0	CY		

Site Features

Off-Street Parking				Total SF Gravel/Unpaved			Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Condition	Unpaved	Gravel/Unpaved Condition	SF	Material
85	0	Functional	0	-	0	-	0	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		20000	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		600	10	Concrete		Functional		

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
1	20	Functional	0	-				
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Boater Lounge	-	14	7	15	Functional	General Exterior Improvements		



5 Year Projected Cost Estimate

Petoskey City Marina

Facility Owner: City of Petoskey
 Address: 201 Bayfront Drive
 Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Fixed Dock Redecking	15%	44374	SF	\$ 10	\$ 66,560
Fixed Head Pier	100%	21540	SF	\$ 75	\$ 1,615,500
Broadside Fixed Crib Redecking	100%	3600	SF	\$ 10	\$ 36,000
Total Dock Cost					\$ 1,718,060

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type A	100%	600	LF	\$ 100	\$ 60,000
Total Structure Cost					\$ 60,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Flow Inducers	100%	40	EA	\$ 1,000	\$ 40,000
Total Utilities Cost					\$ 40,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 1,848,060

Petoskey City Marina

Facility Owner:	City of Petoskey
Address:	201 Bayfront Drive
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Fixed Dock Redecking	30%	44374	SF	\$ 10	\$ 133,121
Broadside Fixed Crib Redecking	100%	3600	SF	\$ 10	\$ 36,000
Total Dock Cost					\$ 169,121

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	100%	600	LF	\$ 350	\$ 210,000
Total Structure Cost					\$ 210,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Potable Water	25%	190	SLIP	\$ 800	\$ 38,000
Flow Inducers	100%	40	EA	\$ 1,000	\$ 40,000
Fuel Dock	100%	1600	SF	\$ 150	\$ 240,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	610	LF	\$ 100	\$ 61,000
Underground Single Product Tank	100%	3	EA	\$ 100,000	\$ 300,000
Total Utilities Cost					\$ 714,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Total Boat Launch & Paddle Sport Access Cost					\$ 224,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	100%	6000	SF	\$ 10	\$ 60,000
Total Site-Features Cost					\$ 60,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Total Buildings Cost					\$ 15,000

Total Cost	\$ 1,392,121
Total Future Value Cost	\$ 1,870,894

Petoskey City Marina

Facility Owner:	City of Petoskey
Address:	201 Bayfront Drive
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	100%	600	LF	\$ 700	\$ 420,000
Total Structure Cost					\$ 420,000

Note: NR = Not Responsible

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	190	SLIP	\$ 3,500	\$ 665,000
30/50 Amp Electric Pedestal	100%	72	EA	\$ 3,500	\$ 252,000
100 Amp Electric Pedestal	100%	1	EA	\$ 5,000	\$ 5,000
Potable Water	75%	190	SLIP	\$ 800	\$ 114,000
Wet Fire Suppression System	100%	190	SLIP	\$ 1,000	\$ 190,000
Fuel Dock	100%	1600	SF	\$ 150	\$ 240,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	610	LF	\$ 100	\$ 61,000
Underground Single Product Tank	100%	3	EA	\$ 100,000	\$ 300,000
Pumpout	100%	2	EA	\$ 35,000	\$ 70,000
Total Utilities Cost					\$ 1,927,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Total Cost \$ 2,407,000

Total Future Value Cost \$ 4,347,310

Pigeon Lake BAS

Facility Owner: MDNR
Address: 7485 Lakeshore Dr. West Olive, MI
Site ID: A-70-011

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
6	Precast Concrete Planks	Skid	10	3	40	5	86	0

Site Features

Landscaping	SF	Condition	Facility Responsible?
	16849	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	40	5	Concrete	Functional

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Functional

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	24	0	0	15	Functional	-



Pigeon Lake BAS

Facility Owner:	MDNR
Address:	7485 Lakeshore Dr. West Olive, MI
Site ID:	A-70-011

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000
Total Cost					\$ 45,000

Pigeon Lake BAS

Facility Owner:	MDNR
Address:	7485 Lakeshore Dr. West Olive, MI
Site ID:	A-70-011

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	9600	SF	\$ 30	\$ 288,000
Total Boat Launch & Paddle Sport Access Cost					\$ 288,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	100%	200	SF	\$ 10	\$ 2,000
Total Site-Features Cost					\$ 2,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost \$ 310,000

Total Future Value Cost \$ 416,614

Pigeon Lake BAS

Facility Owner: MDNR
 Address: 7485 Lakeshore Dr. West Olive, MI
 Site ID: A-70-011

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	3	EA	\$ 30,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000
Total Cost					\$ 90,000
Total Future Value Cost					\$ 162,550

Pinconning BAS

Facility Owner: County of Bay County Mi.
Address: 3041 E Pinconning Rd, Pinconning Mi. 48650
Site ID: A-09-003

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	100	<10	Very Good	5	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	30	1	30	6	20	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Avg CY removed	% within Facility	% within Nav Channel
100% <6'	30 years ago	Unknown	-	-	-	-
0% 6'-10'						
0% >10'						

Site Features

Off-Street Parking				Total Concrete	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Condition	SF	Material
70	40000	Functional	0	-	0	-	3600	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	90000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	400	5	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
2	30	Functional

Vault Toilets	
Amount	Condition
4	Functional

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	1750	9	4	30	Very Good	Mechanical Upgrade



5 Year Projected Cost Estimate

Pinconning BAS

Facility Owner: County of Bay County Mi.
Address: 3041 E Pinconning Rd, Pinconning Mi. 48650
Site ID: A-09-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 239,000
Total Cost					\$ 239,000

Pinconning BAS

Facility Owner:	County of Bay County Mi.
Address:	3041 E Pinconning Rd, Pinconning Mi. 48650
Site ID:	A-09-003

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	3600	SF	\$ 10	\$ 36,000
Parking Lot - Asphalt	100%	40000	SF	\$ 10	\$ 400,000
Total Site-Features Cost					\$ 436,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	2	EA	\$ 15,000	\$ 30,000
Vault Toilet	100%	4	EA	\$ 10,000	\$ 40,000
Building I	100%	1750	SF	\$ 400	\$ 700,000
Total Buildings Cost					\$ 770,000

Total Cost	\$ 1,206,000
-------------------	---------------------

Total Future Value Cost	\$ 1,620,763
--------------------------------	---------------------

Pinconning BAS

Facility Owner: County of Bay County Mi.
 Address: 3041 E Pinconning Rd, Pinconning Mi. 48650
 Site ID: A-09-003

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Total Utilities Cost					\$ 5,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	2000	SF	\$ 10	\$ 20,000
Total Site-Features Cost					\$ 20,000

Total Cost					\$ 55,000
Total Future Value Cost					\$ 99,336

Pine Street BAS

Facility Owner: MDNR
Address: Pine Street, Newaygo, MI 49337
Site ID: A-62-015

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	-	-	-	-	77	77

Site Features

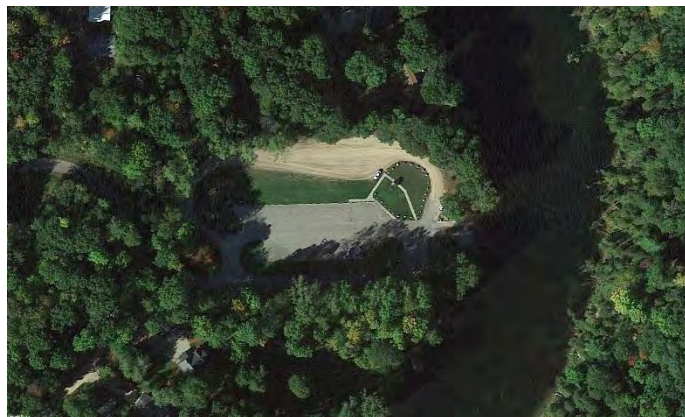
Off-Street Parking			Total	Concrete	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	SF Concrete	Condition	Unpaved	Condition	SF	Material
77	55000	Very Good	0	-	0	Very Good	450	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	3000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	40	5	Concrete	Very Good

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Very Good



Pine Street BAS

Facility Owner: MDNR
Address: Pine Street, Newaygo, MI 49337
Site ID: A-62-015

There are no costs projected for this site within this time period

Pine Street BAS

Facility Owner:	MDNR
Address:	Pine Street, Newaygo, MI 49337
Site ID:	A-62-015

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000
Total Cost					\$ 10,000
Total Future Value Cost					\$ 13,439

Pine Street BAS

Facility Owner: MDNR
Address: Pine Street, Newaygo, MI 49337
Site ID: A-62-015

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	450	SF	\$ 10	\$ 4,500
Parking Lot - Asphalt	100%	55000	SF	\$ 10	\$ 550,000
Walkways	100%	200	SF	\$ 10	\$ 2,000
Total Site-Features Cost					\$ 556,500
Total Cost					\$ 556,500
Total Future Value Cost					\$ 1,005,101

Pontiac Lake BAS

Facility Owner: MDNR
Address: 7800 Gale Rd Waterford, Mi 48327
Site ID: A-63-021

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	15	2	33	5	80	6

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Launch Platform						Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	-	-	-	-	-	-	-	-	-

Site Features

Off-Street Parking			Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition					SF	Material
83	0	-	53000	-	0	-	1500	-

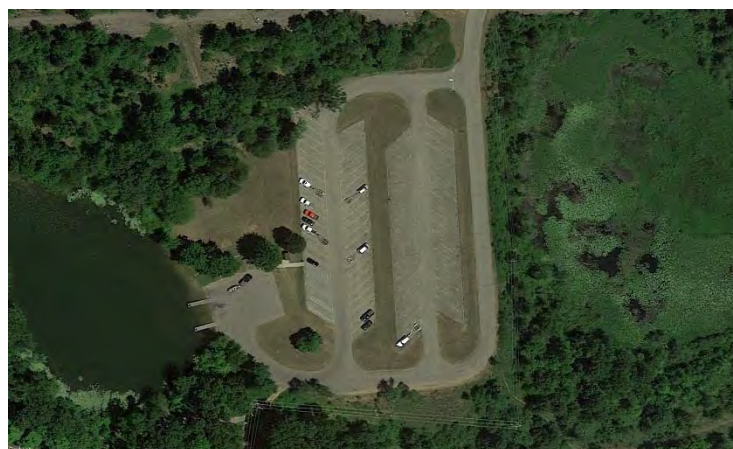
Landscaping	SF	Condition	Facility Responsible?
	1500	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	25	5	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



Pontiac Lake BAS

Facility Owner:	MDNR
Address:	7800 Gale Rd Waterford, Mi 48327
Site ID:	A-63-021

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000

Pontiac Lake BAS

Facility Owner:	MDNR
Address:	7800 Gale Rd Waterford, Mi 48327
Site ID:	A-63-021

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Total Boat Launch & Paddle Sport Access Cost					\$ 192,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	10%	125	SF	\$ 10	\$ 125
Total Site-Features Cost					\$ 125

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 202,125

Total Future Value Cost \$ 271,639

Pontiac Lake BAS

Facility Owner:	MDNR
Address:	7800 Gale Rd Waterford, Mi 48327
Site ID:	A-63-021

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	90%	125	SF	\$ 10	\$ 1,125
Total Site-Features Cost					\$ 1,125

Total Cost					\$ 61,125
Total Future Value Cost					\$ 110,399

Porcupine Mountains State Park - Union Bay BAS

Facility Owner: MDNR
Address: 33303 Headquarters Rd
Site ID: A-66-006

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	60	<10	Very Good	10	100	0	0	NA



Porcupine Mountains State Park - Union Bay BAS

Facility Owner: MDNR
Address: 33303 Headquarters Rd
Site ID: A-66-006

There are no costs projected for this site within this time period

Porcupine Mountains State Park - Union Bay BAS

Facility Owner: MDNR
Address: 33303 Headquarters Rd
Site ID: A-66-006

There are no costs projected for this site within this time period

Porcupine Mountains State Park - Union Bay BAS

Facility Owner: MDNR
Address: 33303 Headquarters Rd
Site ID: A-66-006

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	10%	60	LF	\$ 140	\$ 840
Total Structure Cost					\$ 840
Total Cost					\$ 840
Total Future Value Cost					\$ 1,517

Port Austin State Harbor

Facility Owner: MDNR
Address: 8787 Lake Street, Port Austin, MI 48467
Site ID: 32-203

Docks

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
73850	Traditional Timber (DNR Standard)	Great Lakes Docks & Materials, LLC	13	30'	100%	<10

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
13590	Traditional Timber	Floatation Docking	14	30'	100%	<10

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	10000	30	Concrete	Timber Fendering
Floating Dock	1500	5	-	Docks &

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Concrete Wall	0	40+	Good	0	0	100	0	NA
Rock Revetment Shoreline	1377	40+	Very Good	0	0	100	0	NA
Rock Revetment Offshore	0	40+	Very Good	5	0	100	0	No
Caisson	2432	40+	Very Good	5	0	100	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	<10	Very Good	100 % have vacuum breakers installed
WIFI	<5	Functional	
Dry Standpipe Fire System	<10	Very Good	
Ice Suppression System	<10	Very Good	6 Units Total
Air Distribution Lines	<10	Very Good	
Flow Inducers	-	Very Good	4 Units Total 8 Additional Units Needed
Pumpout	<10	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
15 Twin 30 Amp	100% Very Good
41 30/ 50 Amp	0% Functional
	0% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Fixed	107	20	1	500	0	<10	Very Good
	Tank Type		Tank Capacity	No. Tanks				
	Underground Single		10,000 Gallons	2				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	10	2	45	6	0	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	6 years ago	Unknown	Yes	Every 8 years	0	80
75%	6'-10'						
25%	>10'						

Site Features

Off-Street Parking			Total			Gravel/Unpaved		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Condition	SF	Material	
29	1314	Functional	0	-	0	-	20250	Asphalt	
Landscaping		SF	Condition	Facility Responsible?					
		70100	Good	Yes					
Walkways		Total LF	Avg. Width	Material		Condition			
		2428	6	Concrete		Very Good			

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	3131	10	6	20	Functional	Roof Replacement, Mechanical Upgrade, General Interior Renovations
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	1930	4	0	7	Functional	Replace Hot Water Connections
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Fuel Service	291	0	0	14	Functional	Mechanical Upgrades, ADA Update, General Interior Renovations



Port Austin State Harbor

Facility Owner: MDNR
Address: 8787 Lake Street, Port Austin, MI 48467
Site ID: 32-203

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Additional Flow Inducers	100%	8	EA	\$ 1,000	\$ 8,000
Total Utilities Cost					\$ 8,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 38,000

Port Austin State Harbor

Facility Owner: MDNR
Address: 8787 Lake Street, Port Austin, MI 48467
Site ID: 32-203

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Potable Water	100%	63	SLIP	\$ 800	\$ 5,040
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Flow Inducers	100%	12	EA	\$ 1,000	\$ 12,000
Total Utilities Cost					\$ 22,040

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Total Boat Launch & Paddle Sport Access Cost					\$ 192,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	20250	SF	\$ 10	\$ 202,500
Parking Lot - Asphalt	100%	1314	SF	\$ 10	\$ 13,140
Total Site-Features Cost					\$ 215,640

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building I	100%	3131	SF	\$ 400	\$ 1,252,400
Total Buildings Cost					\$ 1,252,400

Total Cost \$ 1,682,080

Total Future Value Cost \$ 2,260,575

Port Austin State Harbor

Facility Owner: MDNR
Address: 8787 Lake Street, Port Austin, MI 48467
Site ID: 32-203

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Floating Dock	100%	73850	SF	\$ 75	\$ 5,538,750
Floating Head Pier	100%	13590	SF	\$ 75	\$ 1,019,250
Broadside Floating Dock	100%	1500	SF	\$ 75	\$ 112,500
Total Dock Cost					\$ 6,670,500

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
------	------------	----------	------	-----------	-----------------------

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	63	SLIP	\$ 3,500	\$ 220,500
Twin 30 Amp Electric Pedestal	100%	15	EA	\$ 3,000	\$ 45,000
30/50 Amp Electric Pedestal	100%	41	EA	\$ 3,500	\$ 143,500
Potable Water	90%	63	SLIP	\$ 800	\$ 45,360
Dry Standpipe Fire Suppression System	100%	63	SLIP	\$ 800	\$ 50,400
Ice Suppression Compressor System	100%	63	SLIP	\$ 1,800	\$ 113,400
Fuel Dock	100%	2140	SF	\$ 150	\$ 321,000
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Fuel Lines	100%	500	LF	\$ 100	\$ 50,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 1,239,160

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	14568	SF	\$ 10	\$ 145,680
Total Site-Features Cost					\$ 145,680

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building 3	100%	291	SF	\$ 400	\$ 116,400
Total Buildings Cost					\$ 116,400

Total Cost \$ 8,231,740
Total Future Value Cost \$ 14,867,438

Port Huron Fort Street Marina

Facility Owner: City of Port Huron
Address: 525 River St. Port Huron Michigan
Site ID: -

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
2364	-	-	20	50'	100%	30-40

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
1500	Timber	-	20	50'	100%	30-40

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Steel Sheet Pile Wall	375	30-40	-	6	100	0	0

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Very Good	100 % have vacuum breakers installed
WIFI	<5	Replace	
Wet Fire Hydrant System	20-30	Very Good	

Electric Shore Power

Dock Box Integrated	% Condition
10 Twin 30 Amp	100% Very Good

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed
30% 6'-10'	5 years ago	Unknown
70% >10'		

Site Features

Off-Street Parking				Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF	Material	
20	100	Very Good	0	-	11250	Asphalt	
On-Street Parking		Spaces	Condition	Facility Responsible?			
		10	Very Good	No			
Landscaping		SF	Condition	Facility Responsible?			
		20000	Good	No			
Walkways		Total LF	Avg. Width	Material	Condition		
		400	12	Concrete	Very Good		

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers
Marina Outhouse	-	-	-



Port Huron Fort Street Marina

Facility Owner:	City of Port Huron
Address:	525 River St. Port Huron Michigan
Site ID:	-

Docks

Wall/Shoreline Head Pier Floating Fingers	100%	1500	SF	\$	55	\$	82,500
Total Dock Cost						\$	82,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection		
Electric Shore Power ESDP Compliance	100%	40	SLIP	\$ 5,000	\$	200,000	
WiFi	100%	-	LS	\$ 5,000	\$	5,000	
Total Utilities Cost						\$	205,000
Total Cost						\$	287,500

Port Huron Fort Street Marina

Facility Owner: City of Port Huron
Address: 525 River St. Port Huron Michigan
Site ID: -

There are no costs projected for this site within this time period

Port Huron Fort Street Marina

Facility Owner:	City of Port Huron
Address:	525 River St. Port Huron Michigan
Site ID:	-

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	40	SLIP	\$ 3,500	\$ 140,000
Twin 30 Amp Dock Box Integrated Power	100%	10	EA	\$ 2,500	\$ 25,000
Potable Water	100%	40	SLIP	\$ 800	\$ 32,000
Wet Fire Suppression System	100%	40	SLIP	\$ 1,000	\$ 40,000
Total Utilities Cost					\$ 237,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	11250	SF	\$ 10	\$ 112,500
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Walkways	100%	4800	SF	\$ 10	\$ 48,000
Total Site-Features Cost					\$ 161,500
Total Cost					\$ 398,500
Total Future Value Cost					\$ 719,735

Port Huron River Street Marina

Facility Owner: City of Port Huron
Address: 525 River St. Port Huron MI 48060
Site ID: -

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
5220	Timber	Timber Frame & Steel Piles	52	30'	100%	30-40
			33	40'		
			10	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	6000	40	Concrete	Timber Fendering

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Steel Sheet Pile Wall	2197	30-40	Functional	5	100	0	0

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Very Good	100 % have vacuum breakers installed
WIFI	<5	Replace	
Wet Fire Hydrant System	30+	Very Good	
Pumpout	<10	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition	Dock Box Integrated	% Condition
12 30/ 50 Amp	10% Very Good 90% Functional	42 Twin 30 Amp	100% Very Good 0% Functional

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Harbor Wall	75	0	2	150	0	10-20	Very Good

Tank Type	Tank Capacity	No. Tanks
Underground Single	16,000 Gallons	2

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed
30% 6'-10'	5 years ago	Unknown
70% >10'		

Site Features

Off-Street Parking		Total SF		Gravel/Unpaved		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Unpaved	Gravel/Unpaved Condition	SF Material
40	100	Functional	0	-	0	-	5000 Asphalt

Landscaping	SF	Condition	Facility Responsible?
	225000	100	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	3000	15	Concrete	Functional

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
1	3	Very Good	0	-

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Restroom, Fuel Service	500	8	4	40	Functional	Mechanical Upgrade, ADA Update, General Interior Renovations



Port Huron River Street Marina

Facility Owner:	City of Port Huron
Address:	525 River St. Port Huron MI 48060
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Wall/Shoreline Head Pier Fixed Fingers	100%	5220	SF	\$ 67	\$ 349,740
Total Dock Cost					\$ 349,740

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	20%	2197	LF	\$ 350	\$ 153,790
Total Structure Cost					\$ 153,790

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	95	SLIP	\$ 5,000	\$ 475,000
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Total Utilities Cost					\$ 480,000
Total Cost					\$ 983,530

Port Huron River Street Marina

Facility Owner:	City of Port Huron
Address:	525 River St. Port Huron MI 48060
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	20%	2197	LF	\$ 700	\$ 307,580
Total Structure Cost					\$ 307,580

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
30/50 Amp Electric Pedestal	90%	12	EA	\$ 3,500	\$ 37,800
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	150	LF	\$ 100	\$ 15,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 282,800

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	5000	SF	\$ 10	\$ 50,000
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Walkways	50%	45000	SF	\$ 10	\$ 225,000
Total Site-Features Cost					\$ 276,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building I	100%	500	SF	\$ 400	\$ 200,000
Total Buildings Cost					\$ 200,000

Total Cost \$ 1,066,380

Total Future Value Cost \$ 1,433,126

Port Huron River Street Marina

Facility Owner:	City of Port Huron
Address:	525 River St. Port Huron MI 48060
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	20%	2197	LF	\$ 1,050	\$ 461,370
Total Structure Cost					\$ 461,370

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	95	SLIP	\$ 3,500	\$ 332,500
Twin 30 Amp Dock Box Integrated Power	100%	42	EA	\$ 2,500	\$ 105,000
30/50 Amp Electric Pedestal	10%	12	EA	\$ 3,500	\$ 4,200
Potable Water	100%	95	SLIP	\$ 800	\$ 76,000
Wet Fire Suppression System	100%	95	SLIP	\$ 1,000	\$ 95,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	150	LF	\$ 100	\$ 15,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 892,700

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	50%	45000	SF	\$ 10	\$ 225,000
Total Site-Features Cost					\$ 225,000

Total Cost	\$ 1,579,070
Total Future Value Cost	\$ 2,851,976

Port Sanilac Harbor

Facility Owner: Village of Port Sanilac
Address: 7376 Main St. Port Sanilac, MI 48469
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
8280	Timber	Steel Frame & Timber Piles	10	25'	0%	<10
			4	30'	0%	10-20
			10	35'	0%	20-30
			34	40'	0%	30-40
			6	60'	100%	40+

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
900	Timber	Timber Frame & Timber Piles	10	25'	100%	40+
			10	35'		

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	0	40+	Functional	7	0	100	0	NA
Steel Sheet Pile Single	0	40+	Functional	0	0	100	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Replace	90 % have vacuum breakers installed
WIFI	<5	Replace	
Pumpout	10-20	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
17 Twin 30 Amp	100% Functional
16 30/ 50 Amp	

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Fixed	80	12	3	200ft	300ft	10-20	Very Good
Tank Type		Tank Capacity	No. Tanks					
Underground Single		12000	2					

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
3	Precast Concrete Planks	Skid	0	0	0	0	30	30

Dredge

	% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	6 years ago	Unknown	-	-	-	-	-
80%	6'-10'							
20%	>10'							

The opening of the harbor breakwater may require dredging due to sand movement near the north breakwater opening

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
40	0	-	100	-	0	-	1250	Concrete

Landscaping	SF	Condition	Facility Responsible?
	300	Very Good	Yes

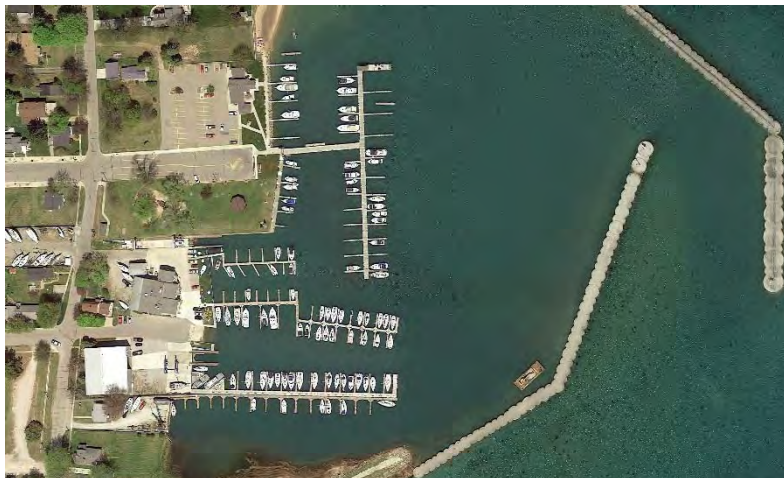
Walkways	Total LF	Avg. Width	Material	Condition
	300	8	Concrete	Good

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
1	10	Very Good	0	-

Building 1 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Boater Lounge, Restroom, Laundry	2600	9	5	15	Very Good	None

Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Fuel Service	100	0	0	20	Functional	Roof Replacement



5 Year Projected Cost Estimate

Port Sanilac Harbor

Facility Owner:	Village of Port Sanilac
Address:	7376 Main St. Port Sanilac, MI 48469
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Fixed Dock	100%	8280	SF	\$ 67	\$ 554,760
Wall/Shoreline Head Pier Fixed Fingers	100%	900	SF	\$ 70	\$ 63,000
Total Dock Cost					\$ 617,760

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	84	SLIP	\$ 5,000	\$ 420,000
Potable Water	100%	84	SLIP	\$ 800	\$ 67,200
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Total Utilities Cost					\$ 492,200
Total Cost					\$ 1,109,960

Port Sanilac Harbor

Facility Owner:	Village of Port Sanilac
Address:	7376 Main St. Port Sanilac, MI 48469
Site ID:	-

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Twin 30 Amp Electric Pedestal	100%	17	EA	\$ 3,000	\$ 51,000
30/50 Amp Electric Pedestal	100%	16	EA	\$ 3,500	\$ 56,000
Fuel Dock	100%	960	SF	\$ 150	\$ 144,000
Fuel Dispenser	100%	3	EA	\$ 15,000	\$ 45,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 531,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	30%	2400	SF	\$ 10	\$ 7,200
Total Site-Features Cost					\$ 7,200

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 2	100%	100	SF	\$ 400	\$ 40,000
Total Buildings Cost					\$ 40,000
Total Cost					\$ 578,200
Total Future Value Cost					\$ 63,433

Port Sanilac Harbor

Facility Owner:	Village of Port Sanilac
Address:	7376 Main St. Port Sanilac, MI 48469
Site ID:	-

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	84	SLIP	\$ 3,500	\$ 294,000
Fuel Dock	100%	960	SF	\$ 150	\$ 144,000
Fuel Dispenser	100%	3	EA	\$ 15,000	\$ 45,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 683,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	1250	SF	\$ 7	\$ 8,750
Walkways	70%	2400	SF	\$ 10	\$ 16,800
Total Site-Features Cost					\$ 25,550

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Building I	100%	2600	SF	\$ 400	\$ 1,040,000
Total Buildings Cost					\$ 1,055,000

Total Cost \$ 1,763,550

Total Future Value Cost \$ 1,951,593

Portage Lake BAS-Jackson

Facility Owner: MDNR
Address: 11500 Seymour Rd. Grass Lake, MI 49240
Site ID: A-38-003

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	50	<10-40	Very Good	3	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Functional	0 % have vacuum breakers installed

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	20	2	30	4	59	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
59	62000	Functional	0	-	0	-	20000	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	10000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	500	4	Asphalt	Replace

Buildings

There are nearby pavilions and modern restrooms but they are not considered a part of the BAS



Portage Lake BAS-Jackson

Facility Owner:	MDNR
Address:	11500 Seymour Rd. Grass Lake, MI 49240
Site ID:	A-38-003

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type A	15%	50	LF	\$ 40	\$ 300
Total Structure Cost					\$ 300

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 222,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Walkways	50%	2000	SF	\$ 7	\$ 7,000
Total Site-Features Cost					\$ 7,000
Total Cost					\$ 229,300

Portage Lake BAS-Jackson

Facility Owner:	MDNR
Address:	11500 Seymour Rd. Grass Lake, MI 49240
Site ID:	A-38-003

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	15%	50	LF	\$ 168	\$ 1,260
Rock Revetment Maintenance Type B	85%	50	LF	\$ 56	\$ 2,380
Total Structure Cost					\$ 3,640

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	20000	SF	\$ 10	\$ 200,000
Parking Lot - Asphalt	100%	62000	SF	\$ 10	\$ 620,000
Walkways	50%	2000	SF	\$ 7	\$ 7,000
Total Site-Features Cost					\$ 827,000

Total Cost \$ 830,640

Total Future Value Cost \$ 1,116,311

Portage Lake BAS-Jackson

Facility Owner:	MDNR
Address:	11500 Seymour Rd. Grass Lake, MI 49240
Site ID:	A-38-003

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	15%	50	LF	\$ 378	\$ 2,835
Rock Revetment Maintenance Type B	85%	50	LF	\$ 168	\$ 7,140
Total Structure Cost					\$ 9,975

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Total Cost					\$ 69,975
Total Future Value Cost					\$ 126,383

Portage Lake BAS-Manistee

Facility Owner: MDNR
Address: Lake Park Drive Onekama MI
Site ID: A-51-006

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	15	1	30	5	25	0

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved	Functional	SF	Material
10	0	-	0	-	11000	Functional	7000	Gravel/Unpaved

Landscaping	SF	Condition	Facility Responsible?
	2000	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	10	5	Gravel	Functional

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Very Good

Lighthouse on Site



Portage Lake BAS-Manistee

Facility Owner:	MDNR
Address:	Lake Park Drive Onkama MI
Site ID:	A-51-006

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Portage Lake BAS-Manistee

Facility Owner:	MDNR
Address:	Lake Park Drive Onekama MI
Site ID:	A-51-006

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Gravel/Unpaved	100%	11000	SF	\$ 5	\$ 55,000
Walkways	50%	50	SF	\$ 5	\$ 125
Total Site-Features Cost					\$ 55,125

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 161,125

Total Future Value Cost \$ 216,539

Portage Lake BAS-Manistee

Facility Owner:	MDNR
Address:	Lake Park Drive Onekama MI
Site ID:	A-51-006

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	7000	SF	\$ 5	\$ 35,000
Walkways	50%	50	SF	\$ 5	\$ 125
Total Site-Features Cost					\$ 35,125

Total Cost					\$ 65,125
Total Future Value Cost					\$ 117,623

Portage Lake BAS-St Joseph

Facility Owner: MDNR
Address: 0
Site ID: A-75-017

Boat Launch

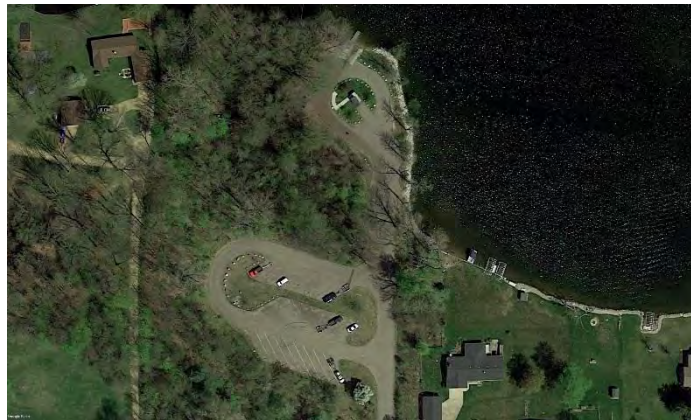
Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	20	1	30	5	19	1

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
0	17000	Very Good	0	-	0	-	0	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		-	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		70	5	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Portage Lake BAS-St Joseph

Facility Owner: MDNR
 Address: 0
 Site ID: A-75-017

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 111,000
Total Cost					\$ 111,000

Portage Lake BAS-St Joseph

Facility Owner: MDNR
 Address: 0
 Site ID: A-75-017

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000
Total Cost					\$ 10,000
Total Future Value Cost					\$ 13,439

Portage Lake BAS-St Joseph

Facility Owner: MDNR
 Address: -
 Site ID: A-75-017

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	17000	SF	\$ 10	\$ 170,000
Walkways	100%	350	SF	\$ 10	\$ 3,500
Total Site-Features Cost					\$ 173,500

Total Cost \$ 203,500

Total Future Value Cost \$ 367,544

Portage Lake BAS-Washtenaw

Facility Owner: MDNR
Address: NA
Site ID: A-81-020

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	7	1	32	5	21	0

Site Features

Landscaping	SF	Condition	Facility Responsible?
	9800	Very Good	Yes

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Portage Lake BAS-Washtenaw

Facility Owner: MDNR
 Address: NA
 Site ID: A-81-020

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Portage Lake BAS-Washtenaw

Facility Owner:	MDNR
Address:	NA
Site ID:	A-81-020

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000
Total Cost					\$ 10,000
Total Future Value Cost					\$ 13,439

Portage Lake BAS-Washtenaw

Facility Owner:	MDNR
Address:	NA
Site ID:	A-81-020

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 141,000
Total Cost					\$ 141,000
Total Future Value Cost					\$ 254,662

Prairieville Township Park BAS

Facility Owner: 50% DNR, 50% prairieville twp
Address: 15475 S. M 43 Hwy Hickory Corners, MI 49060
Site ID: A-08-031

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	30	2	30	4	70	20

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	-	-	-	-	-	-	-	-	-

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
90	100	Functional	0	-	0	-	320000	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	4000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	400	3	Concrete	Very Good

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Very Good

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	900	5	1	50	Very Good	None



Prairieville Township Park BAS

Facility Owner: 50% DNR, 50% prairieville twp
Address: 15475 S. M 43 Hwy Hickory Corners, MI 49060
Site ID: A-08-031

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 222,000
Total Cost					\$ 222,000

Prairieville Township Park BAS

Facility Owner:	50% DNR, 50% prairieville twp
Address:	15475 S. M 43 Hwy Hickory Corners, MI 49060
Site ID:	A-08-031

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Total Site-Features Cost					\$ 1,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Building I	100%	1000	SF	\$ 400	\$ 400,000
Total Buildings Cost					\$ 420,000

Total Cost					\$ 421,000
Total Future Value Cost					\$ 565,789

Prairieville Township Park BAS

Facility Owner: 50% DNR, 50% prairieville twp
 Address: 15475 S. M 43 Hwy Hickory Corners, MI 49060
 Site ID: A-08-031

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	320000	SF	\$ 10	\$ 3,200,000
Walkways	100%	1200	SF	\$ 10	\$ 12,000
Total Site-Features Cost					\$ 3,212,000

Total Cost \$ 3,272,000
Total Future Value Cost \$ 5,909,596

Presque Isle State Harbor

Facility Owner: MDNR
Address: 5462 East Grand Lake Road
Site ID: 71-203

Docks

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
18492.5	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	60	30'	100%	20-30
			18	40'		
			31	45'		
			9	60'		
			2	70' +		

Broadside

Type	Total LF	Age	Decking Type	Construction
Floating Dock	5400	30	-	Traditional Timber by Floatation Docking Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	180	20-30	-	11	100	0	0	NA
Concrete Wall	835	20-30	Very Good	0	0	0	0	NA
Rock Revetment Shoreline	835	20-30	Very Good	6	100	0	0	NA
Rock Revetment Offshore	1756	20-30	Very Good	10	100	0	0	Yes
Steel Sheet Pile Single	240			10	100	0	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Very Good	100 % have vacuum breakers installed
Ice Suppression System	20-30	-	14 Units Total
Air Distribution Lines	20-30	Functional	
Flow Inducers	-	Very Good	6 Units Total 0 Additional Units Needed
Pumpout	<10	-	2 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
60 30/ 50 Amp	100% Very Good
Compliant with Electrical Shock Drowning Ground Fault Protection Standards	
	Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Floating	425	10	4	100	425	<10	Replace
Tank Type		Tank Capacity	No. Tanks					
Underground Single		10000	1					

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	25	1	40	5	35	35

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed
0% <6'	30 years ago	Unknown
0% 6'-10'		
100% >10'		

Dredging required for 2019 boating season: 0 CY

Site Features

Off-Street Parking			Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive SF	Material
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition		
90	42700	Functional	0	-	0	Asphalt
Landscaping		SF	Condition	Facility Responsible?		
		78419	Very Good	Yes		
Walkways		Total LF	Avg. Width	Material	Condition	
		1470	10	Concrete	Very Good	

Buildings

Picnic Shelters			Vault Toilets			
Amount	Age	Condition	Amount	Condition		
0	0	-	2	Functional		
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Boater Lounge, Restroom, Laundry	2400	11	4	27	Functional	Roof Replacement, Mechanical Upgrade, ADA Update, General Interior and Exterior Renovations, Water Softener System
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Store	6000	4	0	40	Functional	Roof Replacement, Mechanical Upgrade, ADA Update, General Interior and Exterior Renovations

Building 3 Type

Concession building operated by Portage Restaurant



Presque Isle State Harbor

Facility Owner:	MDNR
Address:	5462 East Grand Lake Road
Site ID:	71-203

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Floating Dock	100%	18493	SF	\$ 75	\$ 1,386,938
Broadside Floating Dock	100%	5400	SF	\$ 75	\$ 405,000
Total Dock Cost					\$ 1,791,938

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Paddle Sport Launch Access	0%	0	SF	\$ -	\$ -
Total Boat Launch & Paddle Sport Access Cost					\$ 239,000

Total Cost \$ 2,030,938

Presque Isle State Harbor

Facility Owner: MDNR
Address: 5462 East Grand Lake Road
Site ID: 71-203

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type B	100%	835	LF	\$ 140	\$ 116,900
Rock Revetment Offshore Maintenance Type B	100%	1756	LF	\$ 140	\$ 245,840
Steel Sheet Pile Single Wall Breakwater	100%	240	LF	\$ 1,600	\$ 384,000
Total Structure Cost					\$ 746,740

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Ice Suppression Compressor System	100%	120	SLIP	\$ 1,800	\$ 216,000
Flow Inducers	100%	6	EA	\$ 1,000	\$ 6,000
Total Utilities Cost					\$ 222,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	42700	SF	\$ 10	\$ 427,000
Total Site-Features Cost					\$ 427,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Building 1	100%	2000	SF	\$ 400	\$ 800,000
Building 2	100%	300	SF	\$ 400	\$ 120,000
Building 3	100%	500	SF	\$ 400	\$ 200,000
Building 4	100%	500	SF	\$ 400	\$ 200,000
Total Buildings Cost					\$ 1,340,000

Total Cost \$ 2,735,740

Total Future Value Cost \$ 3,676,606

Presque Isle State Harbor

Facility Owner:	MDNR
Address:	5462 East Grand Lake Road
Site ID:	71-203

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	835	LF	\$ 350	\$ 292,250
Rock Revetment Offshore Maintenance Type B	100%	1756	LF	\$ 350	\$ 614,600
Total Structure Cost					\$ 906,850

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	120	SLIP	\$ 3,500	\$ 420,000
30/50 Amp Electric Pedestal	100%	60	EA	\$ 3,500	\$ 210,000
Potable Water	100%	120	SLIP	\$ 800	\$ 96,000
Wet Fire Suppression System	100%	120	SLIP	\$ 1,000	\$ 120,000
Fuel Dock	100%	4250	SF	\$ 100	\$ 425,000
Fuel Dispenser	100%	4	EA	\$ 15,000	\$ 60,000
Fuel Lines	100%	525	LF	\$ 100	\$ 52,500
Underground Dual Product Tank	100%	2	EA	\$ 120,000	\$ 240,000
Pumpout	100%	2	EA	\$ 35,000	\$ 70,000
Total Utilities Cost					\$ 1,693,500

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	600	SF	\$ 10	\$ 6,000
Walkways	100%	14700	SF	\$ 10	\$ 147,000
Total Site-Features Cost					\$ 153,000

Total Cost \$ 2,783,350

Total Future Value Cost \$ 5,027,040

Railroad Dock BAS

Facility Owner: MDNR
Address: 0
Site ID: A-55-008

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	45	20-30	-	6	100	0	0	NA
Rock Revetment Shoreline	75	10-20	Very Good	6	100	0	0	NA
Rock Revetment Offshore	0	<10-20	Very Good	6	100	0	0	Yes
Steel Sheet Pile Single	325	30-40	Functional	10	0	0	100	Yes
Steel Sheet Pile Double	1000	-	-	10	0	0	0	0

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	15	1	40	6	44	0

Site Features

Landscaping	SF	Condition	Facility Responsible?	
	32000	Good	Yes	
Walkways	Total LF	Avg. Width	Material	Condition
	1850	5	Asphalt	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



Railroad Dock BAS

Facility Owner: MDNR
 Address: 0
 Site ID: A-55-008

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Railroad Dock BAS

Facility Owner:	MDNR
Address:	-
Site ID:	A-55-008

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 106,000
-------------------	-------------------

Total Future Value Cost	\$ 142,455
--------------------------------	-------------------

Railroad Dock BAS

Facility Owner:	MDNR
Address:	0
Site ID:	A-55-008

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	75	LF	\$ 140	\$ 10,500
Total Structure Cost					\$ 10,500

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	9250	SF	\$ 7	\$ 64,750
Total Site-Features Cost					\$ 64,750

Total Cost	\$ 105,250
Total Future Value Cost	\$ 190,093

Rapid River Mouth BAS

Facility Owner: MDNR
Address: Fayette Historic State Park, 4785 Il Road, Garden, MI 49835
Site ID: A-21-021

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	282	10-20	Very Good	2	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	15	1	40	5	45	10

Site Features

Off-Street Parking				Total Concrete	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Condition	SF	Material
0	6000	Very Good	0	-	25000	Functional	26000	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	13800	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	325	5	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



Rapid River Mouth BAS

Facility Owner:	MDNR
Address:	Fayette Historic State Park, 4785 Il Road, Garden, MI 49835
Site ID:	A-21-021

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Rapid River Mouth BAS

Facility Owner:	MDNR
Address:	Fayette Historic State Park, 4785 Il Road, Garden, MI 49835
Site ID:	A-21-021

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Gravel/Unpaved	100%	25000	SF	\$ 5	\$ 125,000
Walkways	10%	1625	SF	\$ 10	\$ 1,625
Total Site-Features Cost					\$ 126,625

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 232,625

Total Future Value Cost \$ 312,629

Rapid River Mouth BAS

Facility Owner:	MDNR
Address:	Fayette Historic State Park, 4785 Il Road, Garden, MI 49835
Site ID:	A-21-021

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	282	LF	\$ 140	\$ 39,480
Total Structure Cost					\$ 39,480

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	26000	SF	\$ 10	\$ 260,000
Walkways	90%	1625	SF	\$ 10	\$ 14,625
Total Site-Features Cost					\$ 334,625

Total Cost					\$ 404,105
Total Future Value Cost					\$ 729,859

Reid/St. Jean BAS

Facility Owner: City of Detroit
Address: 150 St Jean, Detroit MI 48214
Site ID: A-82-001

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
6	Cast-In-Place Concrete	Skid	2	3	30	5	200	200

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
200	11000	Functional	0	-	0	-	0	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		0	-	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		0	0	Concrete		-		



Reid/St. Jean BAS

Facility Owner:	City of Detroit
Address:	150 St Jean, Detroit MI 48214
Site ID:	A-82-001

There are no costs projected for this site within this time period

Reid/St. Jean BAS

Facility Owner:	City of Detroit
Address:	150 St Jean, Detroit MI 48214
Site ID:	A-82-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	3	EA	\$ 45,000	\$ 135,000
Total Boat Launch & Paddle Sport Access Cost					\$ 135,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	11000	SF	\$ 10	\$ 110,000
Total Site-Features Cost					\$ 110,000

Total Cost	\$ 245,000
-------------------	-------------------

Total Future Value Cost	\$ 329,260
--------------------------------	-------------------

Reid/St. Jean BAS

Facility Owner:	City of Detroit
Address:	150 St Jean, Detroit MI 48214
Site ID:	A-82-001

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	9600	SF	\$ 70	\$ 672,000
Total Boat Launch & Paddle Sport Access Cost					\$ 672,000
Total Cost					\$ 672,000
Total Future Value Cost					\$ 1,213,707

River Oaks County Park BAS

Facility Owner: Kalamazoo County Parks
Address: 9202 East Michigan Avenue, Galesburg MI 49053
Site ID: A-39-013

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	5	1	30	5	15	0

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Launch Platform						Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	-	-	-	-	-	-	-	-	-

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0% <6'	5 years ago	Unknown	-	-	-	-	-
0% 6'-10'							
0% >10'							

Dredging required for 2019 boating season: 0 CY

Dredging conducted by Enbridge Energy as part of oil spill clean-up

Site Features

Off-Street Parking				Total			Access Drive	
Spaces	SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material
75	27400	Very Good	0	-	0	-	120472	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	15	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	74	10	Asphalt	Replace

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
4	10	Very Good	0	-

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	1500	5	0	10	Functional	General Interior Renovations



River Oaks County Park BAS

Facility Owner: Kalamazoo County Parks
Address: 9202 East Michigan Avenue, Galesburg MI 49053
Site ID: A-39-013

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Walkways	100%	740	SF	\$ 7	\$ 5,180
Total Site-Features Cost					\$ 5,180
Total Cost					\$ 20,180

River Oaks County Park BAS

Facility Owner: Kalamazoo County Parks
Address: 9202 East Michigan Avenue, Galesburg MI 49053
Site ID: A-39-013

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 2	100%	900	SF	\$ 400	\$ 360,000
Total Buildings Cost					\$ 360,000
Total Cost					\$ 360,000
Total Future Value Cost					\$ 483,810

River Oaks County Park BAS

Facility Owner:	Kalamazoo County Parks
Address:	9202 East Michigan Avenue, Galesburg MI 49053
Site ID:	A-39-013

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 141,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	120472	SF	\$ 10	\$ 1,204,720
Parking Lot - Asphalt	100%	27400	SF	\$ 10	\$ 274,000
Total Site-Features Cost					\$ 1,478,720

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Picnic Shelter	100%	4	EA	\$ 15,000	\$ 60,000
Building I	100%	1500	SF	\$ 400	\$ 600,000
Total Buildings Cost					\$ 660,000

Total Cost \$ 2,279,720

Total Future Value Cost \$ 4,117,428

Riverside Park BAS

Facility Owner: City of Detroit
Address: Grand Blvd. Detroit, MI 48209
Site ID: A-82-008

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Cast-In-Place Concrete	Floating	10	2	50	8	0	0



Riverside Park BAS

Facility Owner:	City of Detroit
Address:	Grand Blvd. Detroit, MI 48209
Site ID:	A-82-008

There are no costs projected for this site within this time period

Riverside Park BAS

Facility Owner:	City of Detroit
Address:	Grand Blvd. Detroit, MI 48209
Site ID:	A-82-008

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 70	\$ 448,000
Total Boat Launch & Paddle Sport Access Cost					\$ 448,000
Total Cost					\$ 448,000
Total Future Value Cost					\$ 602,075

Riverside Park BAS

Facility Owner: City of Detroit
Address: Grand Blvd. Detroit, MI 48209
Site ID: A-82-008

There are no costs projected for this site within this time period

Rogers City Marina

Facility Owner: City of Rogers City
Address: 270 N. Lake
Site ID: -

Docks

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
10925	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	30	30'	100%	20-30
			30	35'		
			24	40'		

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
4792.5	Timber	Steel Frame & Timber	1	25'	100%	20-30
			8	40'		
			10	45'		

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
1530	Timber	Timber Frame & Steel Piles	12	45'	100%	40+
			8	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	13000	50	Concrete	Timber Fendering

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	2100	40+	Functional	10	100	0	0	NA
Rock Revetment Offshore	2500	40+	Very Good	16	100	0	0	Yes

Rock revetment offshore breakwater at north end of marina has moved due to ice and worsens each year. Will need to be addressed in the near future.

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Very Good	100 % have vacuum breakers installed
WIFI	5+	Functional	
Dry Standpipe Fire System	20-30	Very Good	
Wet Fire Hydrant System	20-30	Very Good	
Ice Suppression System	20-30	Functional	8 Units Total
Air Distribution Lines	20-30	Functional	
Flow Inducers	-	Very Good	2 Units Total 8 Additional Units Needed
Pumpout	<10	-	2 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
64 Twin 30 Amp	0% Very Good
8 Twin 50 Amp	75% Functional
2 100 Amp	25% Bad

Fuel System Floating

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Fixed	150	24	2	70	300	20-30	Functional
Tank Type		Tank Capacity		No. Tanks				
Underground Single		15,000 Gallons		2				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
6	Cast-In-Place Concrete	Skid	40	3	60	5	0	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed
0% <6'	6 years ago	15000
0% 6'-10'		
100% >10'		

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved	Condition	SF	Material
200	150000	Functional	0	-	0	-	8000	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		25000	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		2200	6	Concrete		Very Good		

Buildings

Building 1 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Restroom, Laundry, Store	3000	10	10	23	Functional	Roof Replacement, General Interior and Exterior Renovations
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Boater Lounge	960	0	0	51	Replace	Tear down and replace with multi-purpose facility.



5 Year Projected Cost Estimate

Rogers City Marina

Facility Owner: City of Rogers City
Address: 270 N. Lake

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Floating Dock	100%	10925	SF	\$ 75	\$ 819,375
Wall/Shoreline Head Pier Fixed Fingers	100%	1530	SF	\$ 70	\$ 107,100
Total Dock Cost					\$ 926,475

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	10%	2100	LF	\$ 700	\$ 147,000
Rock Revetment Offshore Breakwater	20%	2500	LF	\$ 5,000	\$ 2,500,000
Rock Revetment Offshore Maintenance Type B	80%	2500	LF	\$ 1,250	\$ 2,500,000
Total Structure Cost					\$ 5,147,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	123	SLIP	\$ 5,000	\$ 615,000
Twin 30 Amp Electric Pedestal	25%	64	EA	\$ 3,000	\$ 48,000
Twin 50 Amp Electric Pedestal	25%	8	EA	\$ 3,500	\$ 7,000
100 Amp Electric Pedestal	25%	2	EA	\$ 5,000	\$ 2,500
Additional Flow Inducers	100%	8	EA	\$ 1,000	\$ 8,000
Total Utilities Cost					\$ 680,500

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	9600	SF	\$ 70	\$ 672,000
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 717,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Walkways	10%	13200	SF	\$ 10	\$ 13,200
Total Site-Features Cost					\$ 13,200

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building 2	100%	960	SF	\$ 400	\$ 384,000
Total Buildings Cost					\$ 384,000
Total Cost					\$ 7,868,175

Rogers City Marina

Facility Owner: City of Rogers City
Address: 270 N. Lake
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Fixed Head Pier	100%	4793	SF	\$ 67	\$ 321,098
Total Dock Cost					\$ 321,098

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	10%	2100	LF	\$ 1,050	\$ 220,500
Rock Revetment Offshore Maintenance Type B	80%	2500	LF	\$ 700	\$ 1,400,000
Total Structure Cost					\$ 1,620,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Twin 30 Amp Electric Pedestal	75%	64	EA	\$ 3,000	\$ 144,000
Twin 50 Amp Electric Pedestal	75%	8	EA	\$ 3,500	\$ 21,000
100 Amp Electric Pedestal	75%	2	EA	\$ 5,000	\$ 7,500
Ice Suppression Compressor System	100%	123	SLIP	\$ 1,800	\$ 221,400
Flow Inducers	100%	10	EA	\$ 1,000	\$ 10,000
Fuel Dock	100%	3600	SF	\$ 150	\$ 540,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	370	LF	\$ 100	\$ 37,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 1,215,900

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	8000	SF	\$ 10	\$ 80,000
Parking Lot - Asphalt	100%	150000	SF	\$ 10	\$ 1,500,000
Walkways	15%	13200	SF	\$ 10	\$ 19,800
Total Site-Features Cost					\$ 1,599,800

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 1	100%	3000	SF	\$ 400	\$ 1,200,000
Building 3	100%	400	SF	\$ 400	\$ 160,000
Total Buildings Cost					\$ 1,360,000

Total Cost \$ 6,117,298

Total Future Value Cost \$ 8,221,136

Rogers City Marina

Facility Owner:	City of Rogers City
Address:	270 N. Lake
Site ID:	-

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	10%	2100	LF	\$ 1,400	\$ 294,000
Rock Revetment Offshore Maintenance Type B	80%	2500	LF	\$ 1,050	\$ 2,100,000
Total Structure Cost					\$ 2,394,000

Note: NR = Not Responsible

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	123	SLIP	\$ 3,500	\$ 430,500
Potable Water	100%	123	SLIP	\$ 800	\$ 98,400
Dry Standpipe Fire Suppression System	100%	123	SLIP	\$ 800	\$ 98,400
Wet Fire Suppression System	100%	123	SLIP	\$ 1,000	\$ 123,000
Fuel Dock	100%	3600	SF	\$ 150	\$ 540,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	370	LF	\$ 100	\$ 37,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Pumpout	100%	2	EA	\$ 35,000	\$ 70,000
Total Utilities Cost					\$ 1,627,300

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	75%	13200	SF	\$ 10	\$ 99,000
Total Site-Features Cost					\$ 99,000
Total Cost					\$ 4,210,300
Total Future Value Cost					\$ 7,604,270

Saginaw River Mouth BAS

Facility Owner: MDNR
Address: Shady Shore Rd, Bangor Charter Township Bay City, MI 48706
Site ID: A-09-008

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
5	Precast Concrete Planks	Skid	6	3	30	5	100	0

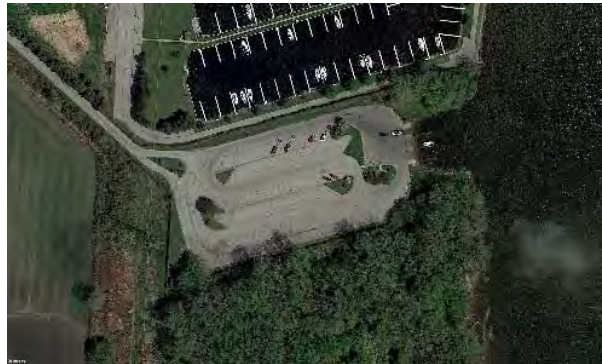
Site Features

Off-Street Parking			Total SF Gravel/Unpaved			Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	SF	Material
100	12000	Very Good	0	-	0	-	5400 Asphalt
Landscaping		SF	Condition	Facility Responsible?			
		12,500	Functioning	Yes			
Walkways		Total LF	Avg. Width	Material		Condition	
		75	5	Concrete		Very Good	

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Very Good

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Boater Lounge, Restroom, Laundry, Store, and Maintenance shop						Roof Replacement



Saginaw River Mouth BAS

Facility Owner: MDNR
Address: Shady Shore Rd, Bangor Charter Township Bay City, MI 48706
Site ID: A-09-008

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type A	10%	150	LF	\$ 100	\$ 1,500
Total Structure Cost					\$ 1,500
Total Cost					\$ 46,500

Saginaw River Mouth BAS

Facility Owner: MDNR
Address: Shady Shore Rd, Bangor Charter Township Bay City, MI 48706
Site ID: A-09-008

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	10%	150	LF	\$ 350	\$ 5,250
Rock Revetment Maintenance Type B	90%	150	LF	\$ 140	\$ 18,900
Total Structure Cost					\$ 24,150

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	20%	375	SF	\$ 10	\$ 750
Total Site-Features Cost					\$ 750

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost					\$ 44,900
Total Future Value Cost					\$ 60,342

Saginaw River Mouth BAS

Facility Owner:	MDNR
Address:	Shady Shore Rd, Bangor Charter Township Bay City, MI 48706
Site ID:	A-09-008

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	10%	150	LF	\$ 700	\$ 10,500
Rock Revetment Maintenance Type B	90%	150	LF	\$ 350	\$ 47,250
Total Structure Cost					\$ 57,750

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	8000	SF	\$ 30	\$ 240,000
Launch Piers	100%	3	EA	\$ 45,000	\$ 135,000
Total Boat Launch & Paddle Sport Access Cost					\$ 375,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	5400	SF	\$ 10	\$ 54,000
Parking Lot - Asphalt	100%	12000	SF	\$ 10	\$ 120,000
Walkways	80%	375	SF	\$ 10	\$ 3,000
Total Site-Features Cost					\$ 177,000
Total Cost					\$ 609,750
Total Future Value Cost					\$ 1,101,276

Sanford County Park BAS

Facility Owner: Midland County, Michigan
Address: 415 Irish St. Sanford, MI 48657
Site ID: A-56-003

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Fixed	40	1	38	5	80	80



Sanford County Park BAS

Facility Owner:	Midland County, Michigan
Address:	415 Irish St. Sanford, MI 48657
Site ID:	A-56-003

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Fixed Head Pier Redecking	100%	310	SF	\$ 10	\$ 3,100
Total Dock Cost					\$ 3,100

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 239,000
Total Cost					\$ 242,100

Sanford County Park BAS

Facility Owner: Midland County, Michigan
Address: 415 Irish St. Sanford, MI 48657
Site ID: A-56-003

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Floating Head Pier	100%	310	SF	\$ 75	\$ 23,250
Total Dock Cost					\$ 23,250
Total Cost					\$ 23,250
Total Future Value Cost					\$ 31,246

Sanford County Park BAS

Facility Owner: Midland County, Michigan
 Address: 415 Irish St. Sanford, MI 48657
 Site ID: A-56-003

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Fixed Head Pier	100%	310	SF	\$ 60	\$ 18,600
Total Dock Cost					\$ 18,600

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Paddle Sport Launch Access	100%	390	SF	\$ 180	\$ 70,200
Total Boat Launch & Paddle Sport Access Cost					\$ 100,200

Total Cost					\$ 118,800
Total Future Value Cost					\$ 214,566

Sault Ste. Marie Charles T. Harvey Marina

Facility Owner: City of Sault Sainte Marie
Address: Riverside Drive, Sault Sainte Marie, Michigan 49783
Site ID: -

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
3037.5	Timber	-	26	25'	100%	30-40
			5	35'		

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
1252.5	Timber	-	25	25'	100%	30-40
			6	35'		

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other
Steel Sheet Pile Wall	300	-	-	0	0	0	0

Utilities

Type	Age	Condition	Additional Information
Potable Water	3	Replace	0 % have vacuum breakers installed
Pumpout	3	-	1 Pumpout(s)

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	20	1	30	4	0	10

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	18 years ago	Unknown	-	-	-	-
50%	6'-10'						
50%	>10'						

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
1	30	Functional	0	Functional

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Boater Lounge, Restroom	-	-	-	30	Functional	Roof Replacement, ADA Update, General Interior Renovations



5 Year Projected Cost Estimate

Sault Ste. Marie Charles T. Harvey Marina

Facility Owner: City of Sault Sainte Marie
 Address: Riverside Drive, Sault Sainte Marie, Michigan 49783
 Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Wall/Shoreline Head Pier Fixed Fingers	100%	1253	SF	\$ 60	\$ 75,150
Total Dock Cost					\$ 75,150

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Potable Water	50%	62	SLIP	\$ 800	\$ 24,800
PW System Vacuum Breakers	50%	62	SLIP	\$ 12	\$ 372
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 60,172

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 111,000
Total Cost					\$ 246,322

Sault Ste. Marie Charles T. Harvey Marina

Facility Owner:	City of Sault Sainte Marie
Address:	Riverside Drive, Sault Sainte Marie, Michigan 49783
Site ID:	-

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Potable Water	50%	62	SLIP	\$ 800	\$ 24,800
Total Utilities Cost					\$ 24,800

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Paddle Sport Launch Access	100%	350	SF	\$ 180	\$ 63,000
Total Boat Launch & Paddle Sport Access Cost					\$ 63,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Total Buildings Cost					\$ 15,000

Total Cost \$ 102,800

Total Future Value Cost \$ 138,155

Sault Ste. Marie Charles T. Harvey Marina

Facility Owner: City of Sault Sainte Marie
Address: Riverside Drive, Sault Sainte Marie, Michigan 49783
Site ID: -

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000
Total Future Value Cost					\$ 54,183

Sault Ste. Marie George Kemp Marina

Facility Owner: City of Sault Sainte Marie
Address: 485 East Water Street, Sault Sainte Marie, Michigan 49783
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
7965	Treated timber		30	30'	10%	<10
			15	40'	90%	10-20

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
7965	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	30	30'	10%	<10
			15	40'	90%	10-20

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	0	10-20	Functional	10	0	0	100	NA
Rock Revetment Shoreline	0	10-20	Functional	7	0	0	100	NA
Steel Sheet Pile Single	0	10-20	Functional	10	0	0	100	Yes
Floating Wave Attenuator	300	10-20	-	15	0	0	100	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	10-20	Functional	0 % have vacuum breakers installed
WIFI	<5	Functional	
Flow Inducers	-	Functional	12 Units Total 0 Additional Units Needed
Pumpout	10-20	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
28 30/ 50 Amp	0% Very Good 100% Functional 0% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards Yes

Fuel System

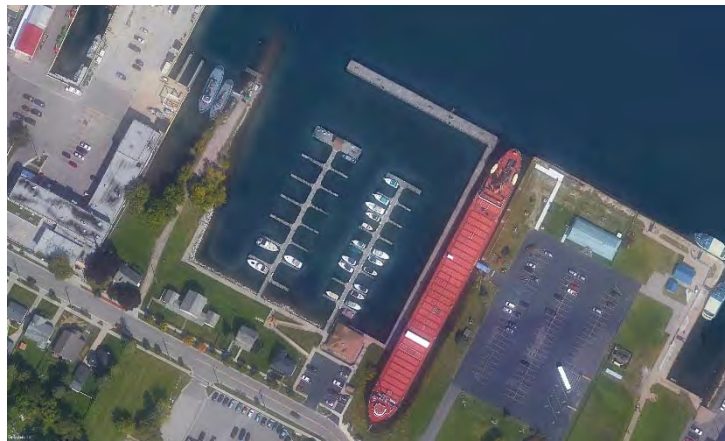
Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Floating	90	16	2	150	300	10-20	
	Tank Type		Tank Capacity	No. Tanks				
	Underground Single		24000	2				

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	20 years ago	Unknown	-	-	-	-
0%	6'-10'						
100%	>10'						
Dredging required for 2019 boating season:				0	CY		

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
15	0	Functional	0	-	0	-	150	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		0	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		0	10	Concrete		Functional		



Sault Ste. Marie George Kemp Marina

Facility Owner: City of Sault Sainte Marie
Address: 485 East Water Street, Sault Sainte Marie, Michigan 49783
Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
PW System Vacuum Breakers	100%	116	SLIP	\$ 12	\$ 1,392
Flow Inducers	75%	12	EA	\$ 1,000	\$ 9,000
				Total Utilities Cost	\$ 10,392
				Total Cost	\$ 10,392

Sault Ste. Marie George Kemp Marina

Facility Owner: City of Sault Sainte Marie
Address: 485 East Water Street, Sault Sainte Marie, Michigan 49783
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Floating Dock	90%	7965	SF	\$ 75	\$ 537,638
Total Dock Cost					\$ 537,638

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
30/50 Amp Electric Pedestal	100%	28	EA	\$ 3,500	\$ 98,000
Potable Water	100%	116	SLIP	\$ 800	\$ 92,800
Flow Inducers	100%	12	EA	\$ 1,000	\$ 12,000
Fuel Dock	100%	1440	SF	\$ 100	\$ 144,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	450	LF	\$ 100	\$ 45,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 661,800

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	150	SF	\$ 10	\$ 1,500
Total Site-Features Cost					\$ 1,500

Total Cost					\$ 1,200,938
Total Future Value Cost					\$ 1,613,960

Sault Ste. Marie George Kemp Marina

Facility Owner: City of Sault Sainte Marie
Address: 485 East Water Street, Sault Sainte Marie, Michigan 49783
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Floating Dock	10%	7965	SF	\$ 75	\$ 59,738
Total Dock Cost					\$ 59,738

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	116	SLIP	\$ 3,500	\$ 406,000
Fuel Dock	100%	1440	SF	\$ 100	\$ 144,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	450	LF	\$ 100	\$ 45,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 825,000
Total Cost					\$ 884,738
Total Future Value Cost					\$ 1,597,934

Sebewaing Harbor Marina

Facility Owner: MDNR
Address: 700 W Sebewaing Rd Sebewaing MI 48759
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
8323	Timber		26	25'	100%	20-30
			54	30'		

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
8788	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	24	25'	100%	20-30
			66	30'		

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
1785	0		14	25'	100%	20-30

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
4183	Traditional Timber	Floatation Docking	14	25'	100%	20-30

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
525	Timber	-	14	25'	100%	20-30

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	2177	-	-	0	0	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Replace	0 % have vacuum breakers installed
WIFI	<5	Very Good	
Pumpout	20-30	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition	Dock Box Integrated	% Condition
36 20 Amp	0% Very Good 100% Functional 0% Bad	66 Single 30 Amp	0% Very Good 0% Functional 0% Bad

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gasoline	Floating	30	4	1	75	75	20-30	
Tank Type		Tank Capacity		No. Tanks				
Above Ground Single		900		1				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	6	2	40	5	47	20

Dredge

% of Navigable Water Depth	% of	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
50%	<6'	23 years ago	Unknown	-	-	-	-	-
50%	6'-10'							
0%	>10'							
Dredging required for 2019 boating season:				0	CY			

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
109	75000	Functional	0	-	0	-	3000	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		150000	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		2177	6	Concrete		Replace		

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
0	0	-	0	-				
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Restroom Laundry	1664	10	4	24	Functional	Roof Replacement, ADA Update, General Interior Renovations		



Sebewaing Harbor Marina

Facility Owner: MDNR
Address: 700 W Sebewaing Rd Sebewaing MI 48759
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Floating Dock	100%	8788	SF	\$ 75	\$ 659,100
Wall/Shoreline Head Pier Floating Fingers	100%	525	SF	\$ 75	\$ 39,375
Total Dock Cost					\$ 1,012,200

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	212	SLIP	\$ 5,000	\$ 1,060,000
Potable Water	100%	212	SLIP	\$ 800	\$ 169,600
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 1,264,600

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Walkways	50%	13062	SF	\$ 10	\$ 65,310
Total Site-Features Cost					\$ 65,310
Total Cost					\$ 2,372,110

Sebewaing Harbor Marina

Facility Owner: MDNR
Address: 700 W Sebewaing Rd Sebewaing MI 48759
Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
20 Amp Duplex Only Electric Pedestal	100%	36	EA	\$ 3,000	\$ 108,000
Fuel Dock	100%	120	SF	\$ 100	\$ 12,000
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Fuel Lines	100%	150	LF	\$ 100	\$ 15,000
Above Ground Single Product Tank	100%	1	EA	\$ 50,000	\$ 50,000
Total Utilities Cost					\$ 200,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	3000	SF	\$ 10	\$ 30,000
Parking Lot - Asphalt	100%	75000	SF	\$ 10	\$ 750,000
Walkways	50%	13062	SF	\$ 10	\$ 65,310
Total Site-Features Cost					\$ 845,310

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 1	100%	1664	SF	\$ 400	\$ 665,600
Building 2	100%	1920	SF	\$ 400	\$ 768,000
Building 3	100%	1600	SF	\$ 400	\$ 640,000
Total Buildings Cost					\$ 2,073,600

Total Cost \$ 3,118,910

Total Future Value Cost \$ 4,191,554

Sebewaing Harbor Marina

Facility Owner: MDNR
Address: 700 W Sebewaing Rd Sebewaing MI 48759
Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	212	SLIP	\$ 3,500	\$ 742,000
Fuel Dock	100%	120	SF	\$ 100	\$ 12,000
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Fuel Lines	100%	150	LF	\$ 100	\$ 15,000
Above Ground Single Product Tank	100%	1	EA	\$ 50,000	\$ 50,000
Total Utilities Cost					\$ 839,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Launch Piers	100%	2	EA	\$ 45,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 282,000

Total Cost \$ 1,121,000

Total Future Value Cost \$ 2,024,651

Selfridge BAS

Facility Owner: MDNR
Address: 29028 William P. Rosso Highway Selfridge ANGB, Mi 48045
Site ID: A-50-003

Docks

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	1050	5	Concrete	Steel Sheet Pile

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	2000	<10-30	-	4	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Functional	100 % have vacuum breakers installed
Wet Fire Hydrant System	20-30	Very Good	

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
12	Cast-In-Place Concrete	Skid	9	6	40	5	250	25

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100% <6'	10 years ago	Unknown	-	-	-	-	-
0% 6'-10'							
0% >10'							

Dredging required for 2019 boating season: 0 CY

Site Features

Landscaping	SF	Condition	Facility Responsible?
	105000	Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	2735	5	Concrete	Very Good

Buildings

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	72	0	0	5	Very Good	None



5 Year Projected Cost Estimate

Selfridge BAS

Facility Owner: MDNR
Address: 29028 William P. Rosso Highway Selfridge ANGB, Mi 48045
Site ID: A-50-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	6	EA	\$ 15,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000
Total Cost					\$ 90,000

Selfridge BAS

Facility Owner:	MDNR
Address:	29028 William P. Rosso Highway Selfridge ANGB, Mi 48045
Site ID:	A-50-003

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	10%	13675	SF	\$ 10	\$ 13,675
Total Site-Features Cost					\$ 13,675

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 2	100%	1145	SF	\$ 400	\$ 458,000
Total Buildings Cost					\$ 458,000

Total Cost					\$ 471,675
Total Future Value Cost					\$ 633,892

Selfridge BAS

Facility Owner:	MDNR
Address:	29028 William P. Rosso Highway Selfridge ANGB, Mi 48045
Site ID:	A-50-003

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	19200	SF	\$ 70	\$ 1,344,000
Launch Piers	100%	6	EA	\$ 45,000	\$ 270,000
Total Boat Launch & Paddle Sport Access Cost					\$ 1,614,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	90%	13675	SF	\$ 10	\$ 123,075
Total Site-Features Cost					\$ 123,075

Total Cost					\$ 1,737,075
Total Future Value Cost					\$ 3,137,351

Sessions Lake BAS

Facility Owner: MDNR
Address: 2880 West David HWY Ionia MI 48846
Site ID: A-34-014

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
25	Precast Concrete Planks	Skid	1	1	30	5	25	25

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	YES	-	-	-	-	-	-	-	25

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
575	52800	Replace	0	-	0	Replace	52800	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	40800	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	20	4	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



Sessions Lake BAS

Facility Owner: MDNR
 Address: 2880 West David HWY Ionia MI 48846
 Site ID: A-34-014

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	52800	SF	\$ 10	\$ 528,000
Parking Lot - Asphalt	100%	52800	SF	\$ 10	\$ 528,000
Total Site-Features Cost					\$ 1,056,000
Total Cost					\$ 1,056,000

Sessions Lake BAS

Facility Owner:	MDNR
Address:	2880 West David HWY Ionia MI 48846
Site ID:	A-34-014

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	10%	80	SF	\$ 10	\$ 80
Total Site-Features Cost					\$ 80

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 55,080

Total Future Value Cost \$ 74,023

Sessions Lake BAS

Facility Owner:	MDNR
Address:	2880 West David HWY Ionia MI 48846
Site ID:	A-34-014

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	40000	SF	\$ 30	\$ 1,200,000
Total Boat Launch & Paddle Sport Access Cost					\$ 1,200,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	90%	80	SF	\$ 10	\$ 720
Total Site-Features Cost					\$ 720

Total Cost					\$ 1,200,720
Total Future Value Cost					\$ 2,168,634

Seul Choix Pointe BAS

Facility Owner: MDNR
Address: 3183 County Road 431 Gulliver MI 49840
Site ID: A-77-017

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	0	-	-	4	0	0	0	NA
Rock Revetment Offshore	100	30-40	Very Good	4	100	0	0	Yes

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	26	1	40	5	14	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
50% <6'	6 years ago	250	Yes	Every 5 years	100	100	0
50% 6'-10'							
0% >10'							
Dredging required for 2019 boating season:				0	CY		

Site Features

Off-Street Parking			Total SF Gravel/Unpaved			Gravel/Unpaved Condition		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Unpaved	Functional	SF	Material	
0	0	-	0	-	19000	Functional	1460	Gravel/Unpaved	

Landscaping	SF	Condition	Facility Responsible?
	5200	Very Good	Yes

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Functional



Seul Choix Pointe BAS

Facility Owner:	MDNR
Address:	3183 County Road 431 Gulliver MI 49840
Site ID:	A-77-017

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
------	--------------	----------	------	-----------	----------------------

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Offshore Maintenance Type A	25%	100	LF	\$ 1,250	\$ 31,250
Rock Revetment Offshore Maintenance Type B	75%	100	LF	\$ 500	\$ 37,500
Total Structure Cost					\$ 68,750

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 63,000
Total Cost					\$ 131,750

Seul Choix Pointe BAS

Facility Owner:	MDNR
Address:	3183 County Road 431 Gulliver MI 49840
Site ID:	A-77-017

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Offshore Maintenance Type A	25%	100	LF	\$ 700	\$ 17,500
Rock Revetment Offshore Maintenance Type B	75%	100	LF	\$ 350	\$ 26,250
Total Structure Cost					\$ 43,750

Dredging

Item	Quantity	Unit	Unit Rate	10 Year Projection
Dredging	100	CY	\$ 40	\$ 4,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Gravel/Unpaved	100%	19000	SF	\$ 5	\$ 95,000
Total Site-Features Cost					\$ 95,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost	\$ 162,750
-------------------	-------------------

Total Future Value Cost	\$ 218,722
--------------------------------	-------------------

Seul Choix Pointe BAS

Facility Owner:	MDNR
Address:	3183 County Road 431 Gulliver MI 49840
Site ID:	A-77-017

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Offshore Maintenance Type A	25%	100	LF	\$ 1,050	\$ 26,250
Rock Revetment Offshore Maintenance Type B	75%	100	LF	\$ 700	\$ 52,500
Total Structure Cost					\$ 78,750

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	200	CY	\$ 40	\$ 8,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	1460	SF	\$ 5	\$ 7,300
Total Site-Features Cost					\$ 7,300
Total Cost					\$ 124,050
Total Future Value Cost					\$ 224,048

Shamrock Park BAS

Facility Owner: Village of Berrien Springs
Address: 9385 US 31 Berrien Springs MI 49103
Site ID: A-11-006

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	-	-	-	-	-	35	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
30%	<6'	2016 years ago	Unknown	Yes	Every 2 years	100	100
60%	6'-10'						0
10%	>10'						
Dredging required for 2019 boating season:				100	CY		

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
20	100	Replace	0	-	0	-	39000	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	170000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	500	5	Asphalt	Very Good

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
1	25	Functional	0	-

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	100	8	4	40	Functional	Mechanical Upgrade, ADA Update, General Exterior Renovation



5 Year Projected Cost Estimate

Shamrock Park BAS

Facility Owner:	Village of Berrien Springs
Address:	9385 US 31 Berrien Springs MI 49103
Site ID:	A-11-006

Dredging

Item	Quantity	Unit	Unit Rate	5 Year Projection
Dredging	200	CY	\$ 40	\$ 8,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Total Site-Features Cost				\$	1,000
Total Cost				\$	9,000

Shamrock Park BAS

Facility Owner:	Village of Berrien Springs
Address:	9385 US 31 Berrien Springs MI 49103
Site ID:	A-11-006

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Total Utilities Cost					\$ 5,000

Dredging

Item	Quantity	Unit	Unit Rate	10 Year Projection
Dredging	200	CY	\$ 40	\$ 8,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	5%	2500	SF	\$ 7	\$ 875
Total Site-Features Cost					\$ 875

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Building 1	100%	100	SF	\$ 400	\$ 40,000
Building 3	100%	500	SF	\$ 400	\$ 200,000
Total Buildings Cost					\$ 255,000

Total Cost \$ 268,875

Total Future Value Cost \$ 361,346

Shamrock Park BAS

Facility Owner:	Village of Berrien Springs
Address:	9385 US 31 Berrien Springs MI 49103
Site ID:	A-11-006

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	500	CY	\$ 40	\$ 20,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	39000	SF	\$ 10	\$ 390,000
Walkways	95%	2500	SF	\$ 7	\$ 16,625
Total Site-Features Cost				\$	406,625

Total Cost \$ 426,625

Total Future Value Cost \$ 770,532

Silver Lake State Park BAS

Facility Owner: MDNR
Address: 9679 W. State Park Rd., Mears, MI 49436
Site ID: A-64-008

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	3	2	25	3	47	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	<6'	3 years ago	Unknown	Yes	Every 3 years	0	100
0%	6'-10'						0
0%	>10'						
Dredging required for 2019 boating season:				0	CY		

Site Features

Off-Street Parking			Total	Gravel/Unpaved	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	SF Concrete	SF Gravel/Unpaved	SF	Material
100	42000	Very Good	0	0	2400	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	0	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	500	6	Gravel	Very Good

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
3	3	Very Good	1	Very Good

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom	900	10	0	3	Very Good	Roof Replacement



Silver Lake State Park BAS

Facility Owner: MDNR
Address: 9679 W. State Park Rd., Mears, MI 49436
Site ID: A-64-008

There are no costs projected for this site within this time period

Silver Lake State Park BAS

Facility Owner:	MDNR
Address:	9679 W. State Park Rd., Mears, MI 49436
Site ID:	A-64-008

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	2	EA	\$ 45,000	\$ 90,000
Total Boat Launch & Paddle Sport Access Cost					\$ 90,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 100,000
Total Future Value Cost					\$ 134,392

Silver Lake State Park BAS

Facility Owner:	MDNR
Address:	9679 W. State Park Rd., Mears, MI 49436
Site ID:	A-64-008

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	2400	SF	\$ 10	\$ 24,000
Parking Lot - Asphalt	100%	42000	SF	\$ 10	\$ 420,000
Walkways	100%	3000	SF	\$ 5	\$ 15,000
Total Site-Features Cost					\$ 459,000

Total Cost \$ 555,000

Total Future Value Cost \$ 1,002,392

Singing Bridge BAS

Facility Owner: MDNR
Address: No address
Site ID: A-06-008

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	400	-	-	6	100	0	0	NA

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
100	100	Functional	0	-	0	-	7000	Asphalt

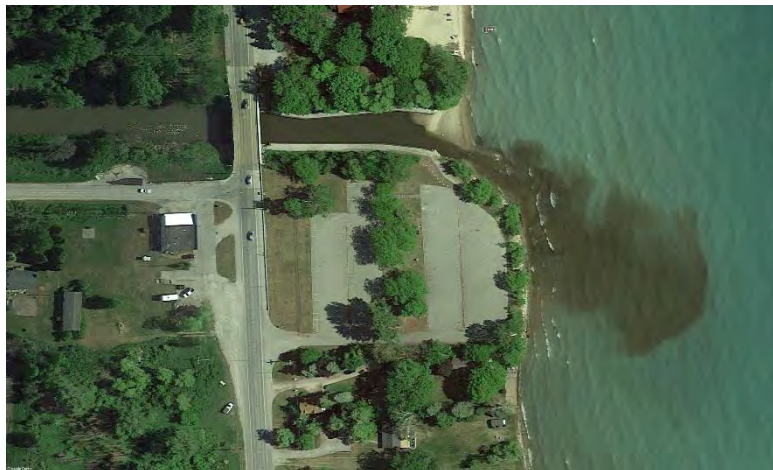
Landscaping	SF	Condition	Facility Responsible?
	43560	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	600	5	Concrete	Functional

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
3	Functional



Singing Bridge BAS

Facility Owner:	MDNR
Address:	No address
Site ID:	A-06-008

There are no costs projected for this site within this time period

Singing Bridge BAS

Facility Owner:	MDNR
Address:	No address
Site ID:	A-06-008

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	7000	SF	\$ 10	\$ 70,000
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Walkways	100%	3000	SF	\$ 10	\$ 30,000
Total Site-Features Cost					\$ 101,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	3	EA	\$ 10,000	\$ 30,000
Total Buildings Cost					\$ 30,000

Total Cost \$ 131,000

Total Future Value Cost \$ 176,053

Singing Bridge BAS

Facility Owner:	MDNR
Address:	No address
Site ID:	A-06-008

There are no costs projected for this site within this time period

Sleepy Hollow State Park BAS

Facility Owner: MDNR
Address: 7835 E. Price Rd
Site ID: A-19-005

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	6	10-20	-	1	100	0	0	NA
Rock Revetment Shoreline	75	10-20	Very Good	1	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	15	2	20	5	100	25

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	YES	-	-	-	-	-	-	-	-

Site Features

Off-Street Parking			Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition					SF	Material
72	10000	Functional	0	-	0	-	10000	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	25,000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	875	5	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
2	Very Good



Sleepy Hollow State Park BAS

Facility Owner: MDNR
 Address: 7835 E. Price Rd
 Site ID: A-19-005

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000

Sleepy Hollow State Park BAS

Facility Owner:	MDNR
Address:	7835 E. Price Rd
Site ID:	A-19-005

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Total Boat Launch & Paddle Sport Access Cost					\$ 192,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	10000	SF	\$ 10	\$ 100,000
Total Site-Features Cost					\$ 100,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost \$ 312,000

Total Future Value Cost \$ 419,302

Sleepy Hollow State Park BAS

Facility Owner:	MDNR
Address:	7835 E. Price Rd
Site ID:	A-19-005

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	75	LF	\$ 140	\$ 10,500
Total Structure Cost					\$ 10,500

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	10000	SF	\$ 10	\$ 100,000
Walkways	100%	4375	SF	\$ 10	\$ 43,750
Total Site-Features Cost					\$ 143,750

Total Cost					\$ 214,250
Total Future Value Cost					\$ 386,959

South Bay Hubbard Lake BAS

Facility Owner: MDNR
Address: 0
Site ID: A-01-009

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	1000	-	Very Good	3	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	30	1	40	5	41	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
0	30000	Very Good	0	-	0	-	49500	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	21000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	100	6	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



South Bay Hubbard Lake BAS

Facility Owner: MDNR
 Address: 0
 Site ID: A-01-009

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 111,000
Total Cost					\$ 111,000

South Bay Hubbard Lake BAS

Facility Owner: MDNR
 Address: -
 Site ID: A-01-009

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000
Total Cost					\$ 10,000
Total Future Value Cost					\$ 13,439

South Bay Hubbard Lake BAS

Facility Owner: MDNR
 Address: 0
 Site ID: A-01-009

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	49500	SF	\$ 10	\$ 495,000
Parking Lot - Asphalt	100%	30000	SF	\$ 10	\$ 300,000
Walkways	100%	600	SF	\$ 10	\$ 6,000
Total Site-Features Cost					\$ 801,000

Total Cost \$ 831,000
Total Future Value Cost \$ 1,500,878

South Haven Municipal Marina

Facility Owner: City of South Haven
Address: 148 Black River Road
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
26742.5	Timber		1	20'	0%	<10
			24	30'	0%	10-20
			18	35'	80%	20-30
			44	40'	15%	30-40
			11	45'	5%	40+
			41	50'		
			19	60'		

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
11239	Timber	Timber Frame &	40	50'	90%	20-30
			19	60'	10%	40+

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
4500	Timber	-	10	40'	100%	30-40
			40	50'		
			10	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Fixed Open Pile Dock	4960	40	Timber	Timber Frame & Timber Piles

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	2020	40+	Functional	14	0	100	0	NA
Rock Revetment Shoreline	517	-	Very Good	8	100	0	0	NA
Steel Sheet Pile Single	0	40+	Very Good	14	0	100	0	No
Steel Sheet Pile Double	2290	40+	Functional	15	0	100	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Functional	100 % have vacuum breakers installed
WIFI	<5	Functional	
Dry Standpipe Fire System	30+	Functional	
Wet Fire Hydrant System	20-30	Functional	
Pumpout	<10	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
3 Single 30 Amp	10% Very Good
35 Twin 30 Amp	50% Functional
45 30/ 50 Amp	40% Bad
23 Twin 50 Amp	

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
5% <6'	2013 years ago	23000	-	-	-	-	-
85% 6'-10'							
10% >10'							

Funding received for the removal of 45,000 cubic yards from their navigation channel

Site Features

On-Street Parking	Spaces	Condition	Facility Responsible?	
	212	Very Good	No	
Landscaping	SF	Condition	Facility Responsible?	
	600	Functional	Yes	
Walkways	Total LF	Avg. Width	Material	Condition
	1234	6	Concrete	Very Good

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
3	30	Functional	0	-

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Boater Lounge, Restroom, Laundry, Harbor Shop,	2000	13	10	6	Very Good	Roof Replacement



South Haven Municipal Marina

Facility Owner:	City of South Haven
Address:	148 Black River Road
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Fixed Head Pier	10%	11239	SF	\$ 60	\$ 67,434
Wall/Shoreline Head Pier Fixed Fingers	100%	4050	SF	\$ 60	\$ 243,000
Wall/Shoreline Head Pier Fixed Fingers	100%	450	SF	\$ 75	\$ 33,750
Broadside Fixed Open Pile Dock	100%	4960	SF	\$ 60	\$ 297,600
Total Dock Cost					\$ 641,784

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	277	SLIP	\$ 5,000	\$ 1,385,000
Single 30 Amp Electric Pedestal	40%	3	EA	\$ 3,000	\$ 3,600
Twin 30 Amp Electric Pedestal	40%	35	EA	\$ 3,000	\$ 42,000
30/50 Amp Electric Pedestal	40%	45	EA	\$ 3,500	\$ 63,000
Twin 50 Amp Electric Pedestal	40%	23	EA	\$ 3,500	\$ 32,200
Potable Water	35%	277	SLIP	\$ 800	\$ 77,560
Total Utilities Cost					\$ 1,603,360
Total Cost					\$ 2,245,144

South Haven Municipal Marina

Facility Owner: City of South Haven
Address: 148 Black River Road
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Fixed Head Pier	90%	11239	SF	\$ 60	\$ 606,906
Total Dock Cost					\$ 606,906

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Single 30 Amp Electric Pedestal	50%	3	EA	\$ 3,000	\$ 4,500
Twin 30 Amp Electric Pedestal	50%	35	EA	\$ 3,000	\$ 52,500
30/50 Amp Electric Pedestal	50%	45	EA	\$ 3,500	\$ 78,750
Twin 50 Amp Electric Pedestal	50%	23	EA	\$ 3,500	\$ 40,250
Potable Water	35%	277	SLIP	\$ 800	\$ 77,560
Dry Standpipe Fire Suppression System	100%	277	SLIP	\$ 800	\$ 221,600
Wet Fire Suppression System	100%	277	SLIP	\$ 1,000	\$ 277,000
Total Utilities Cost					\$ 757,160

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	25%	7404	SF	\$ 10	\$ 18,510
Total Site-Features Cost					\$ 18,510

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	3	EA	\$ 15,000	\$ 45,000
Building 1	100%	2000	SF	\$ 400	\$ 800,000
Building 2	100%	1200	SF	\$ 400	\$ 480,000
Building 3	100%	400	SF	\$ 400	\$ 160,000
Total Buildings Cost					\$ 1,485,000

Total Cost \$ 2,867,576

Total Future Value Cost \$ 3,853,782

South Haven Municipal Marina

Facility Owner:	City of South Haven
Address:	148 Black River Road
Site ID:	-

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	277	SLIP	\$ 3,500	\$ 969,500
Single 30 Amp Electric Pedestal	10%	3	EA	\$ 3,000	\$ 900
Twin 30 Amp Electric Pedestal	10%	35	EA	\$ 3,000	\$ 10,500
30/50 Amp Electric Pedestal	10%	45	EA	\$ 3,500	\$ 15,750
Twin 50 Amp Electric Pedestal	10%	23	EA	\$ 3,500	\$ 8,050
Potable Water	30%	277	SLIP	\$ 800	\$ 66,480
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 1,106,180

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	75%	7404	SF	\$ 10	\$ 55,530
Total Site-Features Cost					\$ 55,530

Total Cost					\$ 1,161,710
Total Future Value Cost					\$ 2,098,177

South Higgins Lake State Park BAS

Facility Owner: MDNR
Address: 106 State Park Dr. Roscommon, MI 48653
Site ID: A-72-012

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	50	-	-	0	0	0	0	NA
Rock Revetment Shoreline	50	<10	Very Good	1	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
9	Precast Concrete Planks	Skid	10	5	40	5	210	0

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Launch Platform						Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	YES	-	-	-	-	-	-	-	-

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100% <6'	2 years ago	Unknown	Yes	Every Year	1000	10	90
0% 6'-10'							
0% >10'							
Dredging required for 2019 boating season:				6000	CY		

Site Features

Landscaping	SF	Condition	Facility Responsible?	
	6000	Replace	Yes	
Walkways	Total LF	Avg. Width	Material	Condition
	500	6	Asphalt	Very Good

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
1	25	Functional	1	Very Good



South Higgins Lake State Park BAS

Facility Owner:	MDNR
Address:	106 State Park Dr. Roscommon, MI 48653
Site ID:	A-72-012

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	5	EA	\$ 15,000	\$ 75,000
Total Boat Launch & Paddle Sport Access Cost					\$ 75,000
Total Cost					\$ 75,000

South Higgins Lake State Park BAS

Facility Owner:	MDNR
Address:	106 State Park Dr. Roscommon, MI 48653
Site ID:	A-72-012

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	14400	SF	\$ 30	\$ 432,000
Total Boat Launch & Paddle Sport Access Cost					\$ 432,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 25,000

Total Cost					\$ 457,000
Total Future Value Cost					\$ 614,170

South Higgins Lake State Park BAS

Facility Owner: MDNR
 Address: 106 State Park Dr. Roscommon, MI 48653
 Site ID: A-72-012

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	5	EA	\$ 30,000	\$ 150,000
Total Boat Launch & Paddle Sport Access Cost					\$ 150,000

Dredging

Item	Quantity	Unit	Unit Rate	20 Year Projection
Dredging	10000	CY	\$ 40	\$ 400,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	3000	SF	\$ 7	\$ 21,000
Total Site-Features Cost					\$ 21,000

Total Cost \$ 571,000

Total Future Value Cost \$ 1,031,290

South Portage Entry BAS

Facility Owner: USACE
Address: 0
Site ID: A-31-030

Docks

Broadside

Type	Total LF	Age	Decking Type	Construction
Other	2430	0	-	-

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Concrete Wall	405	-	Replace	0	0	100	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	3	1	30	4	10	0

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material
0	0	-	0	-	8400	Functional	9240	Gravel/Unpaved

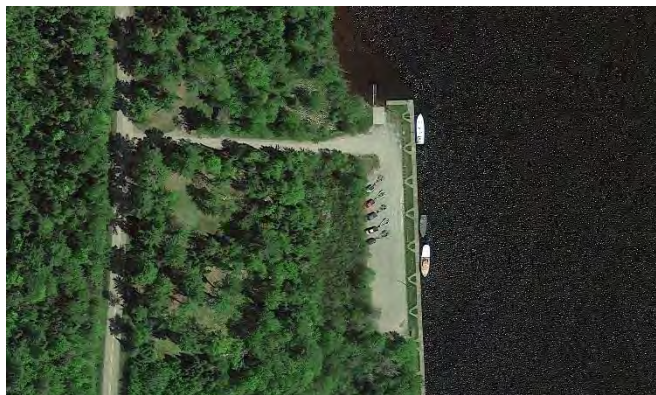
Landscaping	SF	Condition	Facility Responsible?
	6600	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	360	6	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



South Portage Entry BAS

Facility Owner: USACE
 Address: 0
 Site ID: A-31-030

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Walkways	5%	2160	SF	\$ 10	\$ 1,080
Total Site-Features Cost					\$ 1,080
Total Cost					\$ 1,080

South Portage Entry BAS

Facility Owner: USACE
 Address: -
 Site ID: A-31-030

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	9240	SF	\$ 5	\$ 46,200
Parking Lot - Gravel/Unpaved	100%	8400	SF	\$ 5	\$ 42,000
Walkways	10%	2160	SF	\$ 10	\$ 2,160
Total Site-Features Cost					\$ 90,360

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 145,360

Total Future Value Cost \$ 195,352

South Portage Entry BAS

Facility Owner: USACE
 Address: -
 Site ID: A-31-030

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Total Boat Launch & Paddle Sport Access Cost					\$ 48,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	85%	2160	SF	\$ 10	\$ 18,360
Total Site-Features Cost					\$ 18,360

Total Cost					\$ 66,360
Total Future Value Cost					\$ 119,854

Spider Lake BAS

Facility Owner: MDNR
Address: 1132 US 31 N. Traverse City, MI 49686
Site ID: A-28-004

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	5	1	32	6	11	0

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved	Functional	SF	Material
17	0	-	0	-	100	Functional	10710	Gravel/Unpaved

Landscaping	SF	Condition	Facility Responsible?
	5069	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	15	6	Concrete	Functional

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Very Good



Spider Lake BAS

Facility Owner: MDNR
Address: 1132 US 31 N. Traverse City, MI 49686
Site ID: A-28-004

There are no costs projected for this site within this time period

Spider Lake BAS

Facility Owner:	MDNR
Address:	1132 US 31 N. Traverse City, MI 49686
Site ID:	A-28-004

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	10710	SF	\$ 5	\$ 53,550
Parking Lot - Gravel/Unpaved	100%	100	SF	\$ 5	\$ 500
Walkways	100%	90	SF	\$ 10	\$ 900
Total Site-Features Cost					\$ 54,950

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 64,950

Total Future Value Cost \$ 87,287

Spider Lake BAS

Facility Owner: MDNR
 Address: 1132 US 31 N. Traverse City, MI 49686
 Site ID: A-28-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 141,000
Total Cost					\$ 141,000
Total Future Value Cost					\$ 254,662

Squaw Lake BAS

Facility Owner: MDNR
Address: 2179 W. Drahner Rd., Oxford, MI 48371
Site ID: A-63-013

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	25	1	30	5	55	0

Site Features

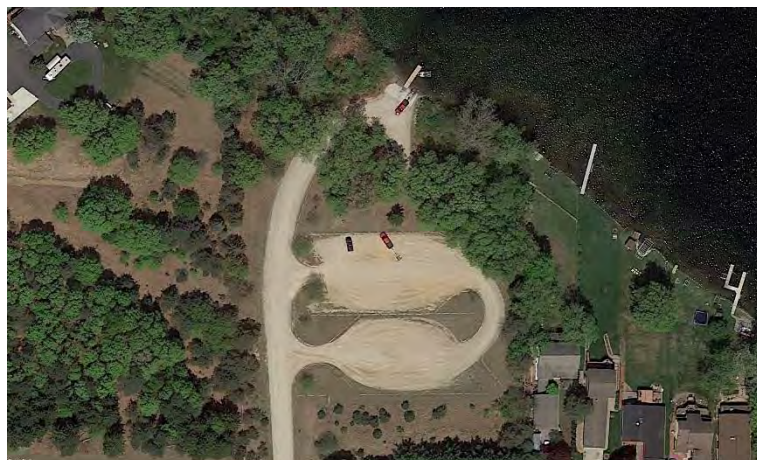
Off-Street Parking				Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved	SF	Material
55	0	-	0	-	28307	Functional	Gravel/Unpaved

Landscaping	SF	Condition	Facility Responsible?
	185940	Functional	Yes

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



Squaw Lake BAS

Facility Owner: MDNR
 Address: 2179 W. Drahner Rd., Oxford, MI 48371
 Site ID: A-63-013

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 111,000
Total Cost					\$ 111,000

Squaw Lake BAS

Facility Owner:	MDNR
Address:	2179 W. Drahner Rd., Oxford, MI 48371
Site ID:	A-63-013

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	62500	SF	\$ 5	\$ 312,500
Parking Lot - Gravel/Unpaved	100%	28307	SF	\$ 5	\$ 141,535
Total Site-Features Cost					\$ 454,035

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 464,035
Total Future Value Cost					\$ 623,624

Squaw Lake BAS

Facility Owner: MDNR
 Address: 2179 W. Drahner Rd., Oxford, MI 48371
 Site ID: A-63-013

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000
Total Future Value Cost					\$ 54,183

St Joseph Riverview Park BAS

Facility Owner: City of St. Joseph
Address: 2927 Niles Rd, St. Joseph MI 49085
Site ID: A-11-010

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	50	10-20	Very Good	1	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Gravel	-	-	-	-	-	15	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
10% <6'	0 years ago	Unknown	-	-	-	-	-
90% 6'-10'							
0% >10'							
Dredging required for 2019 boating season:				30	CY	Dredging would allow for larger boats to launch	

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
60	100	Functional	0	-	0	-	800	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		100	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		100	5	Asphalt		Functional		

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
2	20	Very Good	0	-				
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed		
Restroom	300	12	0	40	Functional	General Exterior and Interior Renovations		



St Joseph Riverview Park BAS

Facility Owner:

City of St. Joseph

Address:

2927 Niles Rd, St. Joseph MI 49085

Site ID:

A-11-010

There are no costs projected for this site within this time period

St Joseph Riverview Park BAS

Facility Owner:	City of St. Joseph
Address:	2927 Niles Rd, St. Joseph MI 49085
Site ID:	A-11-010

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	800	SF	\$ 10	\$ 8,000
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Walkways	100%	500	SF	\$ 7	\$ 3,500
Total Site-Features Cost					\$ 12,500

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	2	EA	\$ 15,000	\$ 30,000
Building I	100%	300	SF	\$ 400	\$ 120,000
Total Buildings Cost					\$ 150,000

Total Cost \$ 162,500

Total Future Value Cost \$ 218,386

St Joseph Riverview Park BAS

Facility Owner:	City of St. Joseph
Address:	2927 Niles Rd, St. Joseph MI 49085
Site ID:	A-11-010

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	50	LF	\$ 140	\$ 7,000
Total Structure Cost					\$ 7,000
Total Cost					\$ 7,000
Total Future Value Cost					\$ 12,643

St. Clair (Charles F. Moore) Boat Harbor

Facility Owner: City of St Clair
Address: 902 S Second St, St Clair MI 48079
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
2655	Composite	-	6	30'	100%	10-20
			5	70' +		

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
16125	Traditional Timber (DNR Standard)	-	32	35'	100%	10-20
			20	40'		
			14	45'		
			20	50'		

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
750	Timber	Timber Frame and Steel Piles	2	30'	0%	<10
			4	40'	100%	10-20
			4	45'	0%	20-30
			2	50'	0%	30-40

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	4000	30	Timber	Timber Fendering
Floating Dock	1600	10	-	

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	400	20-30	Functional	7	100	0	0	NA
Concrete Wall	0	-	-	7	0	0	0	NA
Rock Revetment Shoreline	1000	10-20	Functional	4	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	10-20	Very Good	70 % have vacuum breakers installed
WIFI	<5	Very Good	
Wet Fire Hydrant System	10-20	Very Good	
Pumpout	10-20	-	2 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
18 Twin 30 Amp	50% Very Good
32 30/ 50 Amp	40% Functional
12 Twin 50 Amp	10% Bad

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Floating	100	12	3	15	200	10-20	Very Good
Tank Type		Tank Capacity		No. Tanks				
Underground Dual		16000		2				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	14	1	30	10	78	0

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved	Condition	SF	Material
78	100	Very Good	0	-	0	-	7200	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		100000	Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		3000	6	Concrete		Very Good		

Buildings

Picnic Shelters			Vault Toilets					
Amount	Age	Condition	Amount	Condition				
4	12	Very Good	0	-				
Building 1 Type		Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Office, Restroom, Harbor Shop, Fuel Service		1040	10	8	45	Functional	Roof Replacement, Mechanical Upgrades	
Building 2 Type		Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Harbor Shop		600	0	0	20	Functional	Roof Replacement, Mechanical Upgrades	



5 Year Projected Cost Estimate

St. Clair (Charles F. Moore) Boat Harbor

Facility Owner:	City of St Clair
Address:	902 S Second St, St Clair MI 48079
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Fixed Dock Redecking	100%	2655	SF	\$ 14	\$ 37,170
Redecking Finger Piers	100%	750	SF	\$ 10	\$ 7,500
Total Dock Cost					\$ 44,670

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Wall Maintenance Type A	100%	400	LF	\$ 140	\$ 56,000
Total Structure Cost					\$ 56,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	109	SLIP	\$ 5,000	\$ 545,000
Twin 30 Amp Electric Pedestal	10%	18	EA	\$ 3,000	\$ 5,400
30/50 Amp Electric Pedestal	10%	32	EA	\$ 3,500	\$ 11,200
Twin 50 Amp Electric Pedestal	10%	12	EA	\$ 3,500	\$ 4,200
PW System Vacuum Breakers	30%	109	SLIP	\$ 12	\$ 392
Total Utilities Cost					\$ 566,192

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000

Total Cost \$ 681,862

St. Clair (Charles F. Moore) Boat Harbor

Facility Owner: City of St Clair
 Address: 902 S Second St, St Clair MI 48079
 Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Floating Dock	100%	16125	SF	\$ 75	\$ 1,209,375
Total Dock Cost					\$ 1,329,375

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Wall Maintenance Type A	100%	400	LF	\$ 350	\$ 140,000
Rock Revetment Maintenance Type A	100%	1000	LF	\$ 140	\$ 140,000
Total Structure Cost					\$ 280,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Twin 30 Amp Electric Pedestal	40%	18	EA	\$ 3,000	\$ 21,600
30/50 Amp Electric Pedestal	40%	32	EA	\$ 3,500	\$ 44,800
Twin 50 Amp Electric Pedestal	40%	12	EA	\$ 3,500	\$ 16,800
Potable Water	20%	109	SLIP	\$ 800	\$ 17,440
Fuel Dock	100%	1200	SF	\$ 100	\$ 120,000
Fuel Dispenser	100%	3	EA	\$ 15,000	\$ 45,000
Fuel Lines	100%	215	LF	\$ 100	\$ 21,500
Underground Dual Product Tank	100%	2	EA	\$ 120,000	\$ 240,000
Pumpout	100%	2	EA	\$ 35,000	\$ 70,000
Total Utilities Cost					\$ 597,140

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Total Boat Launch & Paddle Sport Access Cost					\$ 224,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	20%	18000	SF	\$ 10	\$ 36,000
Total Site-Features Cost					\$ 36,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 1	100%	1040	SF	\$ 400	\$ 416,000
Building 2	100%	600	SF	\$ 400	\$ 240,000
Total Buildings Cost					\$ 656,000

Total Cost \$ 3,122,515

Total Future Value Cost \$ 4,196,399

St. Clair (Charles F. Moore) Boat Harbor

Facility Owner: City of St Clair
Address: 902 S Second St, St Clair MI 48079
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Wall/Shoreline Head Pier Fixed Fingers	100%	750	SF	\$ 67	\$ 50,250
Total Dock Cost					\$ 50,250

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Sheet Pile Wall Maintenance Type A	100%	400	LF	\$ 700	\$ 280,000
Rock Revetment Maintenance Type A	100%	1000	LF	\$ 350	\$ 350,000
Total Structure Cost					\$ 630,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	109	SLIP	\$ 3,500	\$ 381,500
Twin 30 Amp Electric Pedestal	50%	18	EA	\$ 3,000	\$ 27,000
30/50 Amp Electric Pedestal	50%	32	EA	\$ 3,500	\$ 56,000
Twin 50 Amp Electric Pedestal	50%	12	EA	\$ 3,500	\$ 21,000
Potable Water	80%	109	SLIP	\$ 800	\$ 69,760
Wet Fire Suppression System	100%	109	SLIP	\$ 1,000	\$ 109,000
Fuel Dock	100%	1200	SF	\$ 100	\$ 120,000
Fuel Dispenser	100%	3	EA	\$ 15,000	\$ 45,000
Fuel Lines	100%	215	LF	\$ 100	\$ 21,500
Underground Dual Product Tank	100%	2	EA	\$ 120,000	\$ 240,000
Total Utilities Cost					\$ 1,095,760

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	7200	SF	\$ 10	\$ 72,000
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Walkways	80%	18000	SF	\$ 10	\$ 144,000
Total Site-Features Cost					\$ 217,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Picnic Shelter	100%	4	EA	\$ 15,000	\$ 60,000
Total Buildings Cost					\$ 60,000

Total Cost	\$ 2,165,810
Total Future Value Cost	\$ 3,911,694

St. Ignace Municipal Marina

Facility Owner: City of St. Ignace
Address: 13 S. State St, St. Ignace, MI 49781
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
8317.5	Timber	-	4	25'		
			35	30'		
			62	40'		
			29	45'		
			9	60'		
			1	70' +		

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
2130	Traditional Timber (DNR Standard)	Unknown	2	30'		
			16	40'		
			16	45'		

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
2212.5	Timber	-	4	25'		
			33	30'		
			11	35'		

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
727.5	Traditional Timber	-	4	25'	100%	10-20
			11	35'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	0	17	Timber	Same as main docks, Standard Timber

Utilities

Type	Age	Condition	Additional Information
Potable Water	10-20	Very Good	0 % have vacuum breakers installed
WIFI	<5	Functional	
Pumpout	10-20	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
100 30/ 50 Amp	100% Very Good

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Floating	0	0	4	0	0	10-20	Very Good
Tank Type		Tank Capacity		No. Tanks				
Underground Dual		2200		3				

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/ Unpaved	Gravel/ Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
50	0	-	0	-	0	-	0	Concrete

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Boater Lounge, Restroom, Laundry, Fuel Service	-	6	4	17	Very Good	None



St. Ignace Municipal Marina

Facility Owner: City of St. Ignace
Address: 13 S. State St, St. Ignace, MI 49781
Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	237	SLIP	\$ 5,000	\$ 1,185,000
PW System Vacuum Breakers	100%	237	SLIP	\$ 12	\$ 2,844
Total Utilities Cost				\$	1,187,844
Total Cost				\$	1,187,844

St. Ignace Municipal Marina

Facility Owner:	City of St. Ignace
Address:	13 S. State St, St. Ignace, MI 49781
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Floating Head Pier	100%	728	SF	\$ 75	\$ 54,563
Total Dock Cost					\$ 54,563

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Fuel Dispenser	100%	4	EA	\$ 15,000	\$ 60,000
Underground Dual Product Tank	100%	3	EA	\$ 120,000	\$ 360,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 460,000

Total Cost \$ 514,563

Total Future Value Cost \$ 691,529

St. Ignace Municipal Marina

Facility Owner: City of St. Ignace
Address: 13 S. State St, St. Ignace, MI 49781
Site ID: -

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	237	SLIP	\$ 3,500	\$ 829,500
30/50 Amp Electric Pedestal	100%	100	EA	\$ 3,500	\$ 350,000
Potable Water	100%	237	SLIP	\$ 800	\$ 189,600
Wet Fire Suppression System	100%	237	SLIP	\$ 1,000	\$ 237,000
Fuel Dispenser	100%	4	EA	\$ 15,000	\$ 60,000
Underground Dual Product Tank	100%	3	EA	\$ 120,000	\$ 360,000
Total Utilities Cost					\$ 2,026,100
Total Cost					\$ 2,026,100
Total Future Value Cost					\$ 3,659,362

St. Joseph West Basin Marina

Facility Owner: City of St. Joseph
Address: 273 Marina Drive, St. Joseph, MI 49085
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
3165	Composit & Standard	-	13	30'	40%	10-20
			14	35'	60%	20-30
			1	50'		

Traditional Floating

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
14205	-	-	6	25'	0%	<10
			19	30'	50%	10-20
			8	35'	50%	20-30
			30	40'	0%	30-40
			4	50'	0%	40+

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
4545	Composite & Standard	-	6	25'	0%	<10
	Lumber		20	30'	50%	10-20
			22	35'	50%	20-30
			30	40'	0%	30-40
			5	50'	0%	40+
			1	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Fixed Open Pile Dock	456	22	Timber	Timber Frame & Timber Piles

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	1640	40+	-	7	100	0	0	NA
Rock Revetment Shoreline	300	20-30	Very Good	8	100	0	0	NA

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Very Good	10 % have vacuum breakers installed
WIFI	<5	Functional	
Flow Inducers	-	Very Good	35 Units Total 0 Additional Units Needed
Pumpout	10-20	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition	Dock Box Integrated	% Condition
27 Single 30 Amp	0% Very Good	0 Single 30 Amp	50% Very Good
19 Twin 30 Amp	46% Functional	0 Twin 30 Amp	50% Functional
3 Twin 50 Amp	54% Bad	50 30/ 50 Amp	0% Bad
		0 Twin 50 Amp	

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Fixed	120	12	4	330	120	<10	Very Good
Tank Type		Tank Capacity		No. Tanks				
Above Ground Dual		6000		2				

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	Unknown	-	-	-	-	-
100%	6'-10'	6 years ago	-	-	-	-	-
0%	>10'						

Dredging only needed if the water level goes down.

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
140	100000	Functional	0	-	0	-	0	-

Landscaping	SF	Condition	Facility Responsible?
	100000	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	350	5	Concrete	Very Good

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
4	6	Very Good	0	-

Building 1 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Boater Lounge, Restroom, Store	1250	2	0	10	Very Good	General Interior Renovations

Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Harbor Store	1280	0	0	10	Very Good	Mechanical Upgrades, General Interior Renovations



St. Joseph West Basin Marina

Facility Owner:	City of St. Joseph
Address:	273 Marina Drive, St. Joseph, MI 49085
Site ID:	-

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	179	SLIP	\$ 5,000	\$ 895,000
Single 30 Amp Electric Pedestal	54%	27	EA	\$ 3,000	\$ 43,740
Twin 30 Amp Electric Pedestal	54%	19	EA	\$ 3,000	\$ 30,780
Twin 50 Amp Electric Pedestal	54%	3	EA	\$ 3,500	\$ 5,670
PW System Vacuum Breakers	90%	179	SLIP	\$ 12	\$ 1,933
Flow Inducers	25%	35	EA	\$ 1,000	\$ 8,750
Total Utilities Cost					\$ 985,873
Total Cost					\$ 985,873

St. Joseph West Basin Marina

Facility Owner: City of St. Joseph
Address: 273 Marina Drive, St. Joseph, MI 49085
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Wall/Shoreline Head Pier Fixed Fingers	50%	4545	SF	\$ 60	\$ 136,350
Total Dock Cost					\$ 163,710

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type B	100%	300	LF	\$ 140	\$ 42,000
Total Structure Cost					\$ 42,000

Note: NR = Not Responsible

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
30/50 Amp Dock Box Integrated Power	50%	50	EA	\$ 3,000	\$ 75,000
Single 30 Amp Electric Pedestal	46%	27	EA	\$ 3,000	\$ 37,260
Twin 30 Amp Electric Pedestal	46%	19	EA	\$ 3,000	\$ 26,220
Twin 50 Amp Electric Pedestal	46%	3	EA	\$ 3,500	\$ 4,830
Flow Inducers	100%	35	EA	\$ 1,000	\$ 35,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 218,310

Boat Storage

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Travel Lift Haul-Out System	100%	1	LS	\$ 500,000	\$ 500,000
Hydraulic Trailer Haul-Out System	100%	1	LS	\$ 100,000	\$ 600,000
Total Boat Storage Cost					\$ 1,100,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	100000	SF	\$ 10	\$ 1,000,000
Total Site-Features Cost					\$ 1,000,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 3	100%	1225	SF	\$ 400	\$ 490,000
Total Buildings Cost					\$ 490,000

Total Cost \$ 3,014,020

Total Future Value Cost \$ 2,572,284

St. Joseph West Basin Marina

Facility Owner: City of St. Joseph
 Address: 273 Marina Drive, St. Joseph, MI 49085

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Wall/Shoreline Head Pier Fixed Fingers	50%	4545	SF	\$ 60	\$ 136,350
Total Dock Cost					\$ 136,350

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	300	LF	\$ 350	\$ 105,000
Total Structure Cost					\$ 105,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	179	SLIP	\$ 3,500	\$ 626,500
30/50 Amp Dock Box Integrated Power	50%	50	EA	\$ 3,000	\$ 75,000
Potable Water	100%	179	SLIP	\$ 800	\$ 143,200
Fuel Dock	100%	1440	SF	\$ 150	\$ 216,000
Fuel Dispenser	100%	4	EA	\$ 15,000	\$ 60,000
Fuel Lines	100%	450	LF	\$ 100	\$ 45,000
Above Ground Dual Product Tank	100%	2	EA	\$ 60,000	\$ 120,000
Total Utilities Cost					\$ 1,285,700

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	1750	SF	\$ 10	\$ 17,500
Total Site-Features Cost					\$ 17,500

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building 1	100%	1250	SF	\$ 400	\$ 500,000
Building 2	100%	1280	SF	\$ 400	\$ 512,000
Building 4	100%	77	SF	\$ 400	\$ 30,800
Total Buildings Cost					\$ 1,042,800

Total Cost \$ 2,587,350

Total Future Value Cost \$ 4,673,042

Sterling State Park Bartnik BAS

Facility Owner: MDNR
Address: 2800 State Park Road, Monroe, MI 48162
Site ID: A-58-008

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	2644	40+	Functional	0	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
10	Precast Concrete Planks	Skid	25	5	40	5	303	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	14 years ago	Unknown	-	-	-	-
0%	6'-10'						
0%	>10'						

Channel would need a survey to determine dredging needs

Site Features

Off-Street Parking			Total				Access Drive	
Spaces	SF Asphalt	Asphalt Condition	SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material
303	151963	Replace	0	-	0	Replace	41880	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		80832	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		156	6	Concrete		Functional		

Buildings

Picnic Shelters			Vault Toilets			Improvements Needed		
Amount	Age	Condition	Amount	Condition				
0	0	-	1	Replace				
Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition			
Restroom	994	7	0	31	Functional	Roof Replacement, General Interior Renovations		



Sterling State Park Bartnik BAS

Facility Owner:	MDNR
Address:	2800 State Park Road, Monroe, MI 48162
Site ID:	A-58-008

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type A	100%	2644	LF	\$ 500	\$ 1,322,000
Total Structure Cost					\$ 1,322,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	16000	SF	\$ 30	\$ 480,000
Launch Piers	100%	5	EA	\$ 15,000	\$ 75,000
Total Boat Launch & Paddle Sport Access Cost					\$ 555,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	41880	SF	\$ 10	\$ 418,800
Parking Lot - Asphalt	100%	151963	SF	\$ 10	\$ 1,519,630
Walkways	25%	936	SF	\$ 10	\$ 2,340
Total Site-Features Cost					\$ 1,940,770

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000
Total Cost					\$ 3,827,770

Sterling State Park Bartnik BAS

Facility Owner: MDNR
 Address: 2800 State Park Road, Monroe, MI 48162
 Site ID: A-58-008

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	100%	2644	LF	\$ 1,050	\$ 2,776,200
Total Structure Cost					\$ 2,776,200

Note: NR = Not Responsible

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	50%	936	SF	\$ 10	\$ 4,680
Total Site-Features Cost					\$ 4,680

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building I	100%	994	SF	\$ 400	\$ 397,600
Total Buildings Cost					\$ 397,600

Total Cost					\$ 3,178,480
Total Future Value Cost					\$ 4,271,611

Sterling State Park Bartnik BAS

Facility Owner:	MDNR
Address:	2800 State Park Road, Monroe, MI 48162
Site ID:	A-58-008

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	100%	2644	LF	\$ 1,400	\$ 3,701,600
Total Structure Cost					\$ 3,701,600

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	5	EA	\$ 30,000	\$ 150,000
Total Boat Launch & Paddle Sport Access Cost					\$ 150,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	25%	936	SF	\$ 10	\$ 2,340
Total Site-Features Cost					\$ 2,340

Total Cost \$ 3,853,940

Total Future Value Cost \$ 6,960,644

Stonington Farmer's Dock BAS

Facility Owner: MDNR
Address: Fayette Historic State Park, 4785 Il Road, Garden, MI 49835
Site ID: A-21-003

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	1200	40+	Very Good	2	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	15	1	40	5	24	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
15% <6'	12 years ago	Unknown	-	-	-	-	-
35% 6'-10'							
50% >10'							

No dredging necessary with high water.

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
0	0	-	0	-	6400	Functional	2400	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		9000	Functional	Yes				
Walkways		Total LF	Avg. Width	Material	Condition			
		15	5	Concrete	Very Good			

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Stonington Farmer's Dock BAS

Facility Owner:	MDNR
Address:	Fayette Historic State Park, 4785 Il Road, Garden, MI 49835
Site ID:	A-21-003

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type B	100%	1200	LF	\$ 250	\$ 300,000
Total Structure Cost					\$ 300,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 315,000

Stonington Farmer's Dock BAS

Facility Owner:	MDNR
Address:	Fayette Historic State Park, 4785 Il Road, Garden, MI 49835
Site ID:	A-21-003

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type B	100%	1200	LF	\$ 700	\$ 840,000
Total Structure Cost					\$ 840,000

Note: NR = Not Responsible

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	2400	SF	\$ 5	\$ 12,000
Parking Lot - Gravel/Unpaved	100%	6400	SF	\$ 5	\$ 32,000
Total Site-Features Cost					\$ 44,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 990,000

Total Future Value Cost \$ 1,330,477

Stonington Farmer's Dock BAS

Facility Owner:	MDNR
Address:	Fayette Historic State Park, 4785 II Road, Garden, MI 49835
Site ID:	A-21-003

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type B	100%	1200	LF	\$ 1,050	\$ 1,260,000
Total Structure Cost					\$ 1,260,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	75	SF	\$ 10	\$ 750
Total Site-Features Cost					\$ 750

Total Cost	\$ 1,290,750
Total Future Value Cost	\$ 2,331,238

Stony Creek Metro Park BAS

Facility Owner: Huron Clinton Metroparks
Address: 4300 Main Park Dr, Shelby Twp. MI 48316
Site ID: A-50-005

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	400	40+	Repalce	3	0	0	0	NA
Rock Revetment Shoreline	-	10-20	Very Good	3	0	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
8	Precast Concrete Planks	Floating	2	5	40	3	10	0

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Foating Access Pier			Launch Platform		Parking Spaces	
			Age	Length	Width	Age	Length		Width
YES	YES	I	2	40	6	2	40	12	0

Boat Storage

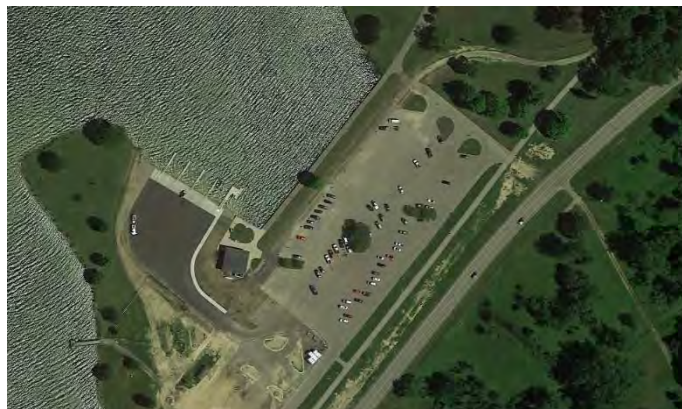
Hull Wash Down	Travel Lift	Hydraulic Trailer	Summer Storage SF	Indoor Heated SF	Winter Indoor SF	Winter Outdoor SF
No	No	No	65000	0	0	65000

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
250	132300	Replace	0	-	0	-	3000	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		35000	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		300	10	Concrete		Very Good		

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Boater Lounge, Restroom, Store	1600	6	0	45	Replace	Will be replaced in two years



Stony Creek Metro Park BAS

Facility Owner:	Huron Clinton Metroparks
Address:	4300 Main Park Dr, Shelby Twp. MI 48316
Site ID:	A-50-005

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	3000	SF	\$ 10	\$ 30,000
Parking Lot - Asphalt	100%	132300	SF	\$ 10	\$ 1,323,000
Total Site-Features Cost					\$ 1,353,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building I	100%	1600	SF	\$ 400	\$ 640,000
Total Buildings Cost					\$ 640,000
Total Cost					\$ 1,993,000

Stony Creek Metro Park BAS

Facility Owner:	Huron Clinton Metroparks
Address:	4300 Main Park Dr, Shelby Twp. MI 48316
Site ID:	A-50-005

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Paddle Sport Launch Access	100%	720	SF	\$ 180	\$ 129,600
Total Boat Launch & Paddle Sport Access Cost					\$ 129,600

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	10%	3000	SF	\$ 10	\$ 3,000
Total Site-Features Cost					\$ 3,000

Total Cost \$ 132,600

Total Future Value Cost \$ 178,203

Stony Creek Metro Park BAS

Facility Owner: Huron Clinton Metroparks
Address: 4300 Main Park Dr, Shelby Twp. MI 48316
Site ID: A-50-005

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	12800	SF	\$ 30	\$ 384,000
Total Boat Launch & Paddle Sport Access Cost					\$ 384,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	90%	3000	SF	\$ 10	\$ 27,000
Total Site-Features Cost					\$ 27,000

Total Cost					\$ 411,000
Total Future Value Cost					\$ 742,312

Straits State Harbor

Facility Owner: MDNR
Address: 409 South huron St. Mackinaw City Mi
Site ID: 16-202

Docks

Traditional Fixed

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
12420	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	38	30'	100%	<10
			50	40'		
			28	45'		
			11	60'		
			6	70' +		

Broadside

Type	Total LF	Age	Decking Type	Construction
Floating Dock	4200	12	-	Traditional Timber by Floatation Docking Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	0	40+	Functional	15	100	0	0	NA
Rock Revetment Shoreline	960	<10	Very Good	8	100	0	0	NA
Rock Revetment Offshore	940	<10	Very Good	12	100	0	0	Yes
Floating Wave Attenuator	40	<10	-	12	100	0	0	No

Utilities

Type	Age	Condition	Additional Information
Potable Water	10-20	Very Good	100 % have vacuum breakers installed
WIFI	<5	Replace	
Dry Standpipe Fire System	10-20	Very Good	
Wet Fire Hydrant System	10-20	Very Good	
Ice Suppression System	10-20	Functional	13 Units Total
Air Disribution Lines	10-20	Functional	
Pumpout	10-20	-	2 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
87 30/ 50 Amp	100% Very Good
3 100 Amp	

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	LF Lines over Land	LF Lines over Water	Overall Age	Overall Condition
Gas & Diesel	Floating	114	10	5	120	360	10-20	Very Good
Tank Type		Tank Capacity		No. Tanks				
Underground Single		28000		3				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Cast-In-Place Concrete	Skid	12	2	40	5	74	16

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	6'-10'	12 years ago	Unknown	-	-	0	0

Dredging required for 2019 boating season: 0 CY

Site Features

Landscaping	SF	Condition	Facility Responsible?	
	267,000	Functional	Yes	
Walkways	Total LF	Avg. Width	Material	Condition
	3653	5	Concrete	Very Good

Buildings

Picnic Shelters			Vault Toilets			
Amount	Age	Condition	Amount	Condition		
2	12	Very Good	0	-		
Building 1 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office	6400	15	6	12	Very Good	-
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Fuel Services	480	1	-	12	Functional	Mechanical Upgrades
Building 3 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Maintenance shop	600	-	-	80	Replace	ADA Upadtes, General Interior & exterior Renovations
Building 4 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Maintenance shop	864	-	-	80	Functional	Mechanical Upgrades, ADA Updates, General Interior & Exterior Renovations



5 Year Projected Cost Estimate

Straits State Harbor

Facility Owner:	MDNR
Address:	409 South huron St. Mackinaw City Mi
Site ID:	16-202

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Total Utilities Cost					\$ 5,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Building 3	100%	600	SF	\$ 400	\$ 240,000
Total Buildings Cost					\$ 240,000
Total Cost					\$ 275,000

Straits State Harbor

Facility Owner: MDNR
Address: 409 South huron St. Mackinaw City Mi
Site ID: 16-202

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Broadside Floating Dock	100%	4200	SF	\$ 75	\$ 315,000
Total Dock Cost					\$ 315,000

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type B	100%	960	LF	\$ -	\$ -
Rock Revetment Offshore Maintenance Type B	100%	940	LF	\$ -	\$ -
Total Structure Cost					\$ -

Note: NR = Not Responsible

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Ice Suppression Compressor System	100%	133	SLIP	\$ 1,800	\$ 239,400
Fuel Dock	100%	1140	SF	\$ 100	\$ 114,000
Fuel Dispenser	100%	5	EA	\$ 15,000	\$ 75,000
Fuel Lines	100%	480	LF	\$ 100	\$ 48,000
Underground Single Product Tank	100%	3	EA	\$ 100,000	\$ 300,000
Pumpout	100%	2	EA	\$ 35,000	\$ 70,000
Total Utilities Cost					\$ 846,400

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 70	\$ 448,000
Total Boat Launch & Paddle Sport Access Cost					\$ 448,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 4	100%	864	SF	\$ 400	\$ 345,600
Total Buildings Cost					\$ 345,600

Total Cost	\$ 1,955,000
Total Future Value Cost	\$ 2,627,357

Straits State Harbor

Facility Owner: MDNR
Address: 409 South huron St. Mackinaw City Mi
Site ID: 16-202

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Floating Dock	100%	12420	SF	\$ 75	\$ 931,500
Total Dock Cost					\$ 931,500

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Floating Wave Attenuator	100%	40	LF	\$ 1,500	\$ 60,000
Total Structure Cost					\$ 60,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	133	SLIP	\$ 3,500	\$ 465,500
30/50 Amp Electric Pedestal	100%	87	EA	\$ 3,500	\$ 304,500
100 Amp Electric Pedestal	100%	3	EA	\$ 5,000	\$ 15,000
Potable Water	100%	133	SLIP	\$ 800	\$ 106,400
Dry Standpipe Fire Suppression System	100%	133	SLIP	\$ 800	\$ 106,400
Wet Fire Suppression System	100%	133	SLIP	\$ 1,000	\$ 133,000
Fuel Dock	100%	1140	SF	\$ 100	\$ 114,000
Fuel Dispenser	100%	5	EA	\$ 15,000	\$ 75,000
Fuel Lines	100%	480	LF	\$ 100	\$ 48,000
Underground Single Product Tank	100%	3	EA	\$ 100,000	\$ 300,000
Total Utilities Cost					\$ 1,667,800

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	18265	SF	\$ 10	\$ 182,650
Total Site-Features Cost					\$ 182,650

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Picnic Shelter	100%	2	EA	\$ 15,000	\$ 30,000
Building 1	100%	6400	SF	\$ 400	\$ 2,560,000
Building 2	100%	480	SF	\$ 400	\$ 192,000
Total Buildings Cost					\$ 2,782,000

Total Cost \$ 5,683,950

Total Future Value Cost \$ 10,265,846

Stronach BAS

Facility Owner: MDNR
Address: 0
Site ID: A-51-023

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	5	1	30	5	35	0



Stronach BAS

Facility Owner: MDNR
 Address: 0
 Site ID: A-51-023

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Stronach BAS

Facility Owner: MDNR
Address: -
Site ID: A-51-023

There are no costs projected for this site within this time period

Stronach BAS

Facility Owner: MDNR
 Address: -
 Site ID: A-51-023

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 141,000
Total Cost					\$ 141,000
Total Future Value Cost					\$ 254,662

Tahquamenon Falls - River Mouth BAS

Facility Owner: MDNR
Address: 32130 W. South River Road
Site ID: A-17-011

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	100	-	Functional	6	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	10	1	40	5	8	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
0	0	-	0	-	0	-	3000	-

Landscaping	SF	Condition	Facility Responsible?
	2500	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	100	5	Concrete	Functional

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



Tahquamenon Falls - River Mouth BAS

Facility Owner: MDNR
 Address: 32130 W. South River Road
 Site ID: A-17-011

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Tahquamenon Falls - River Mouth BAS

Facility Owner:	MDNR
Address:	32130 W. South River Road
Site ID:	A-17-011

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Total Boat Launch & Paddle Sport Access Cost					\$ 48,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	100%	500	SF	\$ 10	\$ 5,000
Total Site-Features Cost					\$ 5,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 63,000

Total Future Value Cost \$ 84,667

Tahquamenon Falls - River Mouth BAS

Facility Owner: MDNR
 Address: 32130 W. South River Road
 Site ID: A-17-011

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000
Total Future Value Cost					\$ 54,183

The Forks BAS

Facility Owner: MDNR
Address: North Straits Hwy. Cheboygan Mich 49721
Site ID: A-16-009

Utilities

Type	Age	Condition	Additional Information
Dry Standpipe Fire System	<10	Very Good	

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/ Unpaved	Gravel/ Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
75	60000	Very Good	0	-	0	-	12000	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
	60000	Very Good	Yes					
Walkways		Total LF	Avg. Width	Material	Condition			
	900	5	Asphalt	Very Good				

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Very Good



The Forks BAS

Facility Owner: MDNR
Address: North Straits Hwy. Cheboygan Mich 49721
Site ID: A-16-009

There are no costs projected for this site within this time period

The Forks BAS

Facility Owner:	MDNR
Address:	North Straits Hwy. Cheboygan Mich 49721
Site ID:	A-16-009

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000
Total Cost					\$ 10,000
Total Future Value Cost					\$ 13,439

The Forks BAS

Facility Owner: MDNR
Address: North Straits Hwy. Cheboygan Mich 49721
Site ID: A-16-009

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	12000	SF	\$ 10	\$ 120,000
Parking Lot - Asphalt	100%	60000	SF	\$ 10	\$ 600,000
Walkways	100%	4500	SF	\$ 7	\$ 31,500
Total Site-Features Cost					\$ 751,500
Total Cost					\$ 751,500
Total Future Value Cost					\$ 1,357,293

Thousand Island Lake BAS

Facility Owner: MDNR
Address: 46 13' 28.16"N 89 23' 28.16"W
Site ID: A-27-004

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	7	1	30	6	0	0

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Launch Platform						Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	YES	-	-	-	-	-	-	-	-

Site Features

Off-Street Parking				Total			Gravel/ Unpaved		Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material		
14	0	-	0	-	14000	Functional	18700	Gravel/Unpaved		

Landscaping	SF	Condition	Facility Responsible?
	13000	Functional	Yes

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Thousand Island Lake BAS

Facility Owner: MDNR
 Address: 46 13' 28.16"N 89 23' 28.16"W
 Site ID: A-27-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Thousand Island Lake BAS

Facility Owner:	MDNR
Address:	46 13' 28.16"N 89 23' 28.16"W
Site ID:	A-27-004

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	18700	SF	\$ 5	\$ 93,500
Parking Lot - Gravel/Unpaved	100%	14000	SF	\$ 5	\$ 70,000
Total Site-Features Cost					\$ 163,500

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 173,500
-------------------	-------------------

Total Future Value Cost	\$ 233,169
--------------------------------	-------------------

Thousand Island Lake BAS

Facility Owner: MDNR
 Address: 46 13' 28.16"N 89 23' 28.16"W
 Site ID: A-27-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 141,000
Total Cost					\$ 141,000
Total Future Value Cost					\$ 254,662

Tippy Dam BAS

Facility Owner: Consumers Energy
Address: 1500 Dilling Road Brethern, MI 49619
Site ID: A-51-025

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	None	-	-	-	-	28	32

Site Features

Off-Street Parking				Total Concrete	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Condition	Unpaved	Condition	SF	Material
30	20000	Very Good	0	-	0	-	640	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	200	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	20	5	Asphalt	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
7	Functional



Tippy Dam BAS

Facility Owner: Consumers Energy
Address: 1500 Dilling Road Brethern, MI 49619
Site ID: A-51-025

There are no costs projected for this site within this time period

Tippy Dam BAS

Facility Owner: Consumers Energy
Address: 1500 Dilling Road Brethern, MI 49619
Site ID: A-51-025

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	7	EA	\$ 10,000	\$ 70,000
Building I	100%	1200	SF	\$ 400	\$ 480,000
Total Buildings Cost					\$ 550,000
Total Cost					\$ 550,000
Total Future Value Cost					\$ 739,154

Tippy Dam BAS

Facility Owner:	Consumers Energy
Address:	1500 Dilling Road Brethern, MI 49619
Site ID:	A-51-025

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	640	SF	\$ 10	\$ 6,400
Parking Lot - Asphalt	100%	20000	SF	\$ 10	\$ 200,000
Walkways	100%	100	SF	\$ 7	\$ 700
Total Site-Features Cost					\$ 207,100
Total Cost					\$ 207,100
Total Future Value Cost					\$ 374,046

Torch River BAS

Facility Owner: MDNR
Address: 8501 Aarwood Trail NW, Clearwater TWP Mi, 49676
Site ID: A-40-009

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	15	1	30	6	45	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
90%	<6'	13 Years	70	-	-	-	-
10%	6'-10'	Ago					
0%	>10'						
Dredging required for 2019 boating season:				0	CY		

Site Features

Off-Street Parking					Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Unpaved	Functional	SF	Material
0	0	-	0	-	100	Functional	8750	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?				
		0	Very Good	No				

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Very Good



Torch River BAS

Facility Owner: MDNR
Address: 8501 Aarwood Trail NW, Clearwater TWP Mi, 49676
Site ID: A-40-009

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Torch River BAS

Facility Owner:	MDNR
Address:	8501 Aarwood Trail NW, Clearwater TWP Mi, 49676
Site ID:	A-40-009

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	8750	SF	\$ 5	\$ 43,750
Parking Lot - Gravel/Unpaved	100%	100	SF	\$ 5	\$ 500
Total Site-Features Cost					\$ 44,250

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 150,250

Total Future Value Cost \$ 201,923

Torch River BAS

Facility Owner: MDNR
Address: 8501 Aarwood Trail NW, Clearwater TWP Mi, 49676
Site ID: A-40-009

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 30,000
Total Future Value Cost					\$ 54,183

Traverse City Duncan L. Clinch Marina

Facility Owner: City of Traverse City
Address: 111 East Grandview Parkway, Traverse City, MI. 49684
Site ID: -

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
18285.5	Traditional Timber (DNR Standard)	Floatation Docking Systems (FDS)	28	25'	0%	<10
			28	30'	100%	10-20
			27	35'	0%	20-30
			14	45'	0%	30-40
			9	50'	0%	40+
			13	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	3000	16	Concrete	Timber Fendering
Floating Dock	10750	16	-	Systems (FDS)

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	1325	10-20	-	10	100	0	0	NA
Rock Revetment Offshore	650	10-20	Very Good	14	100	0	0	Yes
Steel Sheet Pile Double	525	10-20	Functional	18	100	0	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	2	Very Good	100 % have vacuum breakers installed
WIFI	<5	Functional	
Dry Standpipe Fire System	2	Very Good	
Flow Inducers	-	Very Good	57 Units Total
Pumpout	2	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
53 Twin 30 Amp	100% Very Good
45 30/ 50 Amp	0% Functional
	0% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Floating	75	0	2	100	360	10-20	Very Good
Tank Type		Tank Capacity		No. Tanks				
Underground Dual		12000		1				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	16	1	40	5	16	48

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	0	0	0	0	0	5	30	11	0

Dredge

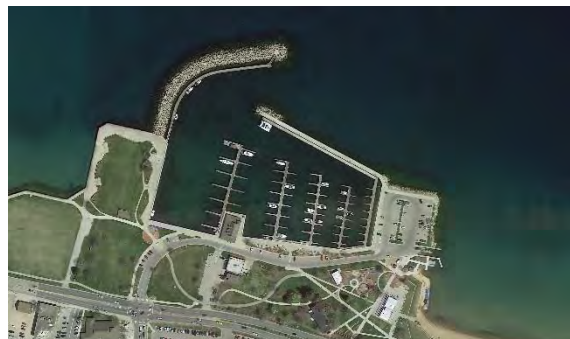
% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	15 years	Unknown	-	-	-	-
30%	6'-10'	ago					
70%	>10'						
Dredging required for 2019 boating season:				0	CY		

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
133	100000	Very Good	0	-	0	-	3800	Asphalt
On-Street Parking		Spaces	Condition	Facility Responsible?				
		0	Very Good	No				
Landscaping		SF	Condition	Facility Responsible?				
		11250	Very Good	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		1900	16	Concrete				

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
1	16	Very Good	0	-



Traverse City Duncan L. Clinch Marina

Facility Owner: City of Traverse City
Address: 111 East Grandview Parkway, Traverse City, MI. 49684
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Sheet Pile Double Wall Maintenance Type A	100%	525	LF	\$ 1,750	\$ 918,750
Total Structure Cost					\$ 918,750

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 933,750

Traverse City Duncan L. Clinch Marina

Facility Owner: City of Traverse City
Address: 111 East Grandview Parkway, Traverse City, MI. 49684
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Traditional Floating Dock	100%	18286	SF	\$ 75	\$ 1,371,413
Total Dock Cost					\$ 2,177,663

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Sheet Pile Double Wall Maintenance Type A	100%	525	LF	\$ 777	\$ 407,925
Total Structure Cost					\$ 407,925

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Flow Inducers	100%	57	EA	\$ 1,000	\$ 57,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	460	LF	\$ 100	\$ 46,000
Underground Dual Product Tank	100%	1	EA	\$ 120,000	\$ 120,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 293,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 70	\$ 224,000
Total Boat Launch & Paddle Sport Access Cost					\$ 224,000

Total Cost \$ 3,102,588

Total Future Value Cost \$ 4,169,618

Traverse City Duncan L. Clinch Marina

Facility Owner: City of Traverse City
Address: 111 East Grandview Parkway, Traverse City, MI. 49684
Site ID: -

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Offshore Maintenance Type B	100%	650	LF	\$ 140	\$ 91,000
Sheet Pile Double Wall Maintenance Type A	100%	525	LF	\$ 1,085	\$ 569,625
Total Structure Cost					\$ 660,625

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	119	SLIP	\$ 3,500	\$ 416,500
Twin 30 Amp Electric Pedestal	100%	53	EA	\$ 3,000	\$ 159,000
30/50 Amp Electric Pedestal	100%	45	EA	\$ 3,500	\$ 157,500
Potable Water	100%	119	SLIP	\$ 800	\$ 95,200
Dry Standpipe Fire Suppression System	100%	119	SLIP	\$ 800	\$ 95,200
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	460	LF	\$ 100	\$ 46,000
Underground Dual Product Tank	100%	1	EA	\$ 120,000	\$ 120,000
Total Utilities Cost					\$ 1,119,400

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	3800	SF	\$ 10	\$ 38,000
Parking Lot - Asphalt	100%	100000	SF	\$ 10	\$ 1,000,000
Walkways	100%	30400	SF	\$ 10	\$ 304,000
Total Site-Features Cost					\$ 1,342,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Total Buildings Cost					\$ 15,000

Total Cost	\$ 3,226,425
Total Future Value Cost	\$ 5,827,282

Trenton Elizabeth Park Marina

Facility Owner: Wayne County
Address: 202 Grosse Ile Parkway
Site ID: -

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
5960	Concrete	-	42	30'	0%	<10
			4	35'	100%	10-20
			6	40'	0%	20-30

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
2460	Traditional Timber	-	42	30'	0%	<10
			4	35'	100%	10-20
			6	40'	0%	20-30

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	250	10-20	-	6	100	0	0	NA
Steel Sheet Pile Single	0	10-20	Very Good	6	100	0	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	1	Very Good	100 % have vacuum breakers installed
WIFI	<5	Functional	
Ice Suppression System	1	Functional	8 Units Total
Air Distribution Lines	1	Functional	
Pumpout	2	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition
26 Twin 30 Amp	100% Very Good

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
8	Cast-In-Place Concrete	Floating	10	4	20	6	130	6

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/ Unpaved	Gravel/ Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
134	100	Functional	0	-	0	-	72	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		100000sq ft	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		1000	4	Concrete		Very Good		

Buildings

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Restroom, Laundry	2000	6	4	21	Functional	Mechanical Upgrade, ADA Update, General Interior and Exterior Renovations



Trenton Elizabeth Park Marina

Facility Owner: Wayne County
 Address: 202 Grosse Ile Parkway
 Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Fixed Head Pier Redecking	100%	5960	SF	\$ 15	\$ 89,400
Total Dock Cost					\$ 89,400

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	104	SLIP	\$ 5,000	\$ 520,000
Total Utilities Cost					\$ 520,000
Total Cost					\$ 609,400

Trenton Elizabeth Park Marina

Facility Owner: Wayne County
 Address: 202 Grosse Ile Parkway
 Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Floating Head Pier	100%	2460	SF	\$ 75	\$ 184,500
Total Dock Cost					\$ 184,500

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 40,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	12800	SF	\$ 70	\$ 896,000
Total Boat Launch & Paddle Sport Access Cost					\$ 896,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	100	SF	\$ 10	\$ 1,000
Total Site-Features Cost					\$ 1,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Building 1	100%	2000	SF	\$ 400	\$ 800,000
Building 2	100%	500	SF	\$ 400	\$ 200,000
Total Buildings Cost					\$ 1,000,000

Total Cost \$ 2,121,500

Total Future Value Cost \$ 2,851,119

Trenton Elizabeth Park Marina

Facility Owner:	Wayne County
Address:	202 Grosse Ile Parkway
Site ID:	-

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	104	SLIP	\$ 3,500	\$ 364,000
Twin 30 Amp Electric Pedestal	100%	26	EA	\$ 3,000	\$ 78,000
Potable Water	100%	104	SLIP	\$ 800	\$ 83,200
Ice Suppression Compressor System	100%	104	SLIP	\$ 1,800	\$ 187,200
Total Utilities Cost					\$ 712,400

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	72	SF	\$ 10	\$ 720
Walkways	100%	4000	SF	\$ 10	\$ 40,000
Total Site-Features Cost					\$ 40,720

Total Cost \$ 753,120

Total Future Value Cost \$ 1,360,218

Van Riper State Park BAS

Facility Owner: MDNR
Address: 298 County Road AKE, Champion, MI 49814
Site ID: A-52-055

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	5	1	25	6	18	18

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
18	13354	Very Good	0	-	0	-	60000	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	17110	Very Good	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	8	5	Concrete	Functional

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



Van Riper State Park BAS

Facility Owner:	MDNR
Address:	298 County Road AKE, Champion, MI 49814
Site ID:	A-52-055

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000
Total Cost					\$ 15,000

Van Riper State Park BAS

Facility Owner:	MDNR
Address:	298 County Road AKE, Champion, MI 49814
Site ID:	A-52-055

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Walkways	100%	40	SF	\$ 10	\$ 400
Total Site-Features Cost					\$ 400

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost					\$ 10,400
Total Future Value Cost					\$ 13,977

Van Riper State Park BAS

Facility Owner:	MDNR
Address:	298 County Road AKE, Champion, MI 49814
Site ID:	A-52-055

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 93,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	60000	SF	\$ 10	\$ 600,000
Parking Lot - Asphalt	100%	13354	SF	\$ 10	\$ 133,540
Total Site-Features Cost					\$ 733,540

Total Cost \$ 826,540

Total Future Value Cost \$ 1,492,823

Wamplers Lake BAS

Facility Owner: MDNR
Address: 1220 Wamplers lake Hwy. Onsted MI 49265
Site ID: A-46-004

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	30	2	30	5	84	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	<6'	1000	-	-	-	-	-
0%	6'-10'	1 years ago					
0%	>10'						
Dredging required for 2019 boating season:				0	CY		

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
0	77625	Replace	0	-	0	-	0	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		1000	Functional	Yes				

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	1	Functional



Wamplers Lake BAS

Facility Owner:	MDNR
Address:	1220 Wamplers lake Hwy. Onsted MI 49265
Site ID:	A-46-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 222,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Parking Lot - Asphalt	100%	77625	SF	\$ 10	\$ 776,250
Total Site-Features Cost					\$ 776,250
Total Cost					\$ 998,250

Wamplers Lake BAS

Facility Owner: MDNR
Address: 1220 Wamplers lake Hwy. Onsted MI 49265
Site ID: A-46-004

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000
Total Cost					\$ 10,000
Total Future Value Cost					\$ 13,439

Wamplers Lake BAS

Facility Owner: MDNR
 Address: 1220 Wamplers lake Hwy. Onsted MI 49265
 Site ID: A-46-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000
Total Cost					\$ 60,000
Total Future Value Cost					\$ 108,367

West Higgins Lake BAS

Facility Owner: MDNR
Address: 8606 West Higgins Lake Drive Roscommon, MI 48653
Site ID: A-72-005

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
6	Precast Concrete Planks	Skid	5	3	40	5	100	0

Dredge

% of Navigable Water Depth	% of	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
100%	<6'	2 years ago	200	Yes	Every Year	200	100	0
0%	6'-10'							
0%	>10'							
Dredging required for 2019 boating season:				200	CY			

Buildings

Picnic Shelters			Vault Toilets				
Amount	Age	Condition	Amount	Condition			
0	0	-	2	Functional			
Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed	
Office	80	0	0	10	Functional	Electrical to be installed in 2029	



West Higgins Lake BAS

Facility Owner: MDNR
 Address: 8606 West Higgins Lake Drive Roscommon, MI 48653
 Site ID: A-72-005

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	3	EA	\$ 15,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000
Total Cost					\$ 45,000

West Higgins Lake BAS

Facility Owner: MDNR
 Address: 8606 West Higgins Lake Drive Roscommon, MI 48653
 Site ID: A-72-005

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000
Total Cost					\$ 20,000
Total Future Value Cost					\$ 26,878

West Higgins Lake BAS

Facility Owner: MDNR
 Address: 8606 West Higgins Lake Drive Roscommon, MI 48653
 Site ID: A-72-005

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	9600	SF	\$ 30	\$ 288,000
Launch Piers	100%	3	EA	\$ 45,000	\$ 135,000
Total Boat Launch & Paddle Sport Access Cost					\$ 423,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building I	100%	80	SF	\$ 400	\$ 32,000
Total Buildings Cost					\$ 32,000

Total Cost					\$ 455,000
Total Future Value Cost					\$ 821,781

White Lake Municipal Marina - Whitehall

Facility Owner: City of Whitehall
Address: 100 Lake Street
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
7822.5	Concrete	Steel Frame & Steel Piles	20	30'	0%	<10
			17	45'	0%	10-20
				0%	20-30	
				100%	30-40	
				0%	40+	

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	2025	30	Concrete	Steel Sheet Pile

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	170	-	-	0	0	0	0	NA
Rock Revetment Shoreline	575	-	Functional	8	100	0	0	NA
Steel Sheet Pile Single	330	30-40	Replace	12	100	0	0	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	20-30	Functional	100 % have vacuum breakers installed
WIFI	<5	Replace	
Wet Fire Hydrant System	30+	Functional	
Pumpout	<10	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition	Dock Box Integrated	% Condition
4 Single 30 Amp	100% Very Good	0 Single 30 Amp	0% Very Good
23 30/ 50 Amp	0% Functional	0 Twin 30 Amp	0% Functional
	0% Bad	0 30/ 50 Amp	0% Bad
Compliant with Electrical Shock Drowning Ground Fault Protection Standards		Yes	

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	Lines over land (LF)	Lines over Water (LF)	Overall Age	Overall Condition
Gas & Diesel	Floating	25	8	2	30	0	<10	Functional
Tank Type		Tank Capacity		No. Tanks				
Underground Single		10000		2				

Dredge

	% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
0%	<6'	6 years ago	4600	-	-	-	-	-
90%	6'-10'							
10%	>10'							
Dredging required for 2019 boating season:				0	CY			

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
20	7000	Functional	0	-	0	-	5400	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		12400	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		630	5	Concrete		Good		

Buildings

Building Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Office, Boater Lounge, Restroom, Laundry, Store, Fuel Service	1600	8	4	15	Functional	Mechanical Upgrades, General Interior Renovations



White Lake Municipal Marina - Whitehall

Facility Owner:	City of Whitehall
Address:	100 Lake Street
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Fixed Dock	100%	7823	SF	\$ 75	\$ 586,688
Fixed Head Pier	100%	5693	SF	\$ 75	\$ 426,938
Total Dock Cost					\$ 1,013,625

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Steel Sheet Pile Single Wall Breakwater	50%	330	LF	\$ 1,600	\$ 264,000
Total Structure Cost					\$ 264,000

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Total Utilities Cost					\$ 5,000
Total Cost					\$ 1,282,625

White Lake Municipal Marina - Whitehall

Facility Owner:	City of Whitehall
Address:	100 Lake Street
Site ID:	-

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Potable Water	50%	50	SLIP	\$ 800	\$ 20,000
Wet Fire Suppression System	100%	50	SLIP	\$ 1,000	\$ 50,000
Total Utilities Cost					\$ 70,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	7000	SF	\$ 10	\$ 70,000
Walkways	25%	3150	SF	\$ 10	\$ 7,875
Total Site-Features Cost					\$ 77,875

Total Cost	\$ 147,875
-------------------	-------------------

Total Future Value Cost	\$ 198,732
--------------------------------	-------------------

White Lake Municipal Marina - Whitehall

Facility Owner:	City of Whitehall
Address:	100 Lake Street
Site ID:	-

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	50	SLIP	\$ 3,500	\$ 175,000
Single 30 Amp Electric Pedestal	100%	4	EA	\$ 3,000	\$ 12,000
30/50 Amp Electric Pedestal	100%	23	EA	\$ 3,500	\$ 80,500
Potable Water	50%	50	SLIP	\$ 800	\$ 20,000
Fuel Dock	100%	200	SF	\$ 100	\$ 20,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	30	LF	\$ 100	\$ 3,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 575,500

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	5400	SF	\$ 10	\$ 54,000
Walkways	75%	3150	SF	\$ 10	\$ 23,625
Total Site-Features Cost					\$ 77,625

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Building I	100%	1600	SF	\$ 400	\$ 640,000
Total Buildings Cost					\$ 640,000

Total Cost \$ 1,293,125

Total Future Value Cost \$ 2,335,528

Whitefish Point State Harbor

Facility Owner: MDNR
Address: Whitefish Twp
Site ID: 17-201

Docks

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
940	Timber	Steel Frame & Steel	6	40'	100%	10-20
			2	60'		

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Steel Sheet Pile Wall	85	30-40	-	2	100	0	0	NA
Rock Revetment Shoreline	200	-	Functional	2	100	0	0	NA
Steel Sheet Pile Single	520	30-40	Functional	8	50	50	0	Yes
Steel Sheet Pile Double	0	30-40	Very Good	7	100	0	0	Yes
Caisson	780	30-40	Very Good	8	0	100	0	Yes

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
1	Precast Concrete Planks	Skid	15	1	40	5	8	10

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged	Frequency	Avg CY removed	% within Facility	% within Nav Channel
25% <6'	9 years ago	Unknown	Yes	Every 5 years	0	30	70
50% 6'-10'							
25% >10'							

Dredging required for 2019 boating season: 1000 CY

Site Features

Off-Street Parking				Total SF	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	Unpaved	SF	Material
16	0	-	0	-	24500	7000	Gravel/Unpaved
Landscaping		SF	Condition	Facility Responsible?			
		2000	Functional	Yes			
Walkways		Total LF	Avg. Width	Material		Condition	
		200	5	Concrete		Replace	

Buildings

Vault Toilets	
Amount	Condition
1	Functional



Whitefish Point State Harbor

Facility Owner:	MDNR
Address:	Whitefish Twp
Site ID:	17-201

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Fixed Head Pier Redecking	100%	940	SF	\$ 10	\$ 9,400
Total Dock Cost					\$ 9,400

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Steel Sheet Pile Single Wall Breakwater	100%	520	LF	\$ 800	\$ 416,000
Total Structure Cost					\$ 416,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	1	EA	\$ 15,000	\$ 15,000
Total Boat Launch & Paddle Sport Access Cost					\$ 15,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Parking Lot - Gravel/Unpaved	100%	24500	SF	\$ 5	\$ 122,500
Walkways	100%	1000	SF	\$ 10	\$ 10,000
Total Site-Features Cost					\$ 132,500
Total Cost					\$ 572,900

Whitefish Point State Harbor

Facility Owner:	MDNR
Address:	Whitefish Twp
Site ID:	17-201

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	1600	SF	\$ 30	\$ 48,000
Total Boat Launch & Paddle Sport Access Cost					\$ 48,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	7000	SF	\$ 5	\$ 35,000
Total Site-Features Cost					\$ 35,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost \$ 93,000

Total Future Value Cost \$ 124,984

Whitefish Point State Harbor

Facility Owner:	MDNR
Address:	Whitefish Twp
Site ID:	17-201

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Fixed Head Pier	100%	940	SF	\$ 75	\$ 70,500
Total Dock Cost					\$ 70,500

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	1	EA	\$ 30,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Total Cost					\$ 100,500
Total Future Value Cost					\$ 181,514

Whitewater Township Park BAS

Facility Owner: Whitewater Township
Address: 9500 Park Road, Williamsburg, MI 49690
Site ID: A-28-028

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	0	1	60	5	45	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
16	33850	Very Good	0	-	9000	Replace	18000	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	75000	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	155	6	Asphalt	Functional

Buildings

Picnic Shelters		
Amount	Age	Condition
1	25	Replace

Vault Toilets	
Amount	Condition
2	Replace



Whitewater Township Park BAS

Facility Owner:	Whitewater Township
Address:	9500 Park Road, Williamsburg, MI 49690
Site ID:	A-28-028

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Parking Lot - Gravel/Unpaved	100%	9000	SF	\$ 5	\$ 45,000
Total Site-Features Cost					\$ 45,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Picnic Shelter	100%	1	EA	\$ 15,000	\$ 15,000
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 35,000
Total Cost					\$ 80,000

Whitewater Township Park BAS

Facility Owner: Whitewater Township
Address: 9500 Park Road, Williamsburg, MI 49690
Site ID: A-28-028

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	18000	SF	\$ 10	\$ 180,000
Walkways	100%	930	SF	\$ 7	\$ 6,510
Total Site-Features Cost					\$ 186,510
Total Cost					\$ 231,510
Total Future Value Cost					\$ 311,130

Whitewater Township Park BAS

Facility Owner: Whitewater Township
Address: 9500 Park Road, Williamsburg, MI 49690
Site ID: A-28-028

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Parking Lot - Asphalt	100%	33850	SF	\$ 10	\$ 338,500
Total Site-Features Cost					\$ 338,500
Total Cost					\$ 338,500
Total Future Value Cost					\$ 611,369

Whitmore Lake BAS

Facility Owner: MDNR
Address: 11380 Northshore Drive, Whitmore Lake 48189
Site ID: A-47-004

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	0	1	30	5	47	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
47	79200	Functional	0	-	0	-	14850	Asphalt

Landscaping	SF	Condition	Facility Responsible?
	6000	Functional	Yes

Walkways	Total LF	Avg. Width	Material	Condition
	335	6	Concrete	Very Good

Buildings

Picnic Shelters		
Amount	Age	Condition
0	0	-

Vault Toilets	
Amount	Condition
1	Functional



Whitmore Lake BAS

Facility Owner:

MDNR

Address:

11380 Northshore Drive, Whitmore Lake 48189

Site ID:

A-47-004

There are no costs projected for this site within this time period

Whitmore Lake BAS

Facility Owner:	MDNR
Address:	11380 Northshore Drive, Whitmore Lake 48189
Site ID:	A-47-004

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Asphalt	100%	79200	SF	\$ 10	\$ 792,000
Total Site-Features Cost					\$ 792,000

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 10,000

Total Cost	\$ 847,000
-------------------	-------------------

Total Future Value Cost	\$ 1,138,297
--------------------------------	---------------------

Whitmore Lake BAS

Facility Owner: MDNR
Address: 11380 Northshore Drive, Whitmore Lake 48189
Site ID: A-47-004

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Site Driveway/Approach	100%	14850	SF	\$ 10	\$ 148,500
Walkways	100%	2010	SF	\$ 10	\$ 20,100
Total Site-Features Cost					\$ 168,600
Total Cost					\$ 168,600
Total Future Value Cost					\$ 304,510

Wixom Lake - West BAS

Facility Owner: MDNR
Address: 8540 S Clare Ave, Clare MI
Site ID: A-26-008

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	200	20-30	Functional	3	100	0	0	NA

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	5	2	40	5	49	49

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
49	90	Replace	0	-	10	Functional	180	Asphalt
Landscaping		SF	Condition	Facility Responsible?				
		10000	Functional	Yes				
Walkways		Total LF	Avg. Width	Material		Condition		
		50	5	Concrete		Functional		

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
0	0	-	2	Functional



Wixom Lake - West BAS

Facility Owner:	MDNR
Address:	8540 S Clare Ave, Clare MI
Site ID:	A-26-008

Structures

Item	% of Total	Quantity	Unit	Unit Rate	5 Year Projection
Rock Revetment Maintenance Type A	100%	200	LF	\$ 100	\$ 20,000
Total Structure Cost					\$ 20,000

Note: NR = Not Responsible

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Site Driveway/Approach	100%	180	SF	\$ 10	\$ 1,800
Parking Lot - Asphalt	100%	90	SF	\$ 10	\$ 900
Total Site-Features Cost					\$ 2,700
Total Cost					\$ 52,700

Wixom Lake - West BAS

Facility Owner:	MDNR
Address:	8540 S Clare Ave, Clare MI
Site ID:	A-26-008

Structures

Item	% of Total	Quantity	Unit	Unit Rate	10 Year Projection
Rock Revetment Maintenance Type A	100%	200	LF	\$ 350	\$ 70,000
Total Structure Cost					\$ 70,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Parking Lot - Gravel/Unpaved	100%	10	SF	\$ 5	\$ 50
Walkways	100%	250	SF	\$ 10	\$ 2,500
Total Site-Features Cost					\$ 2,550

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Vault Toilet	100%	2	EA	\$ 10,000	\$ 20,000
Total Buildings Cost					\$ 20,000

Total Cost \$ 92,550

Total Future Value Cost \$ 124,379

Wixom Lake - West BAS

Facility Owner:	MDNR
Address:	8540 S Clare Ave, Clare MI
Site ID:	A-26-008

Structures

Item	% of Total	Quantity	Unit	Unit Rate	20 Year Projection
Rock Revetment Maintenance Type A	100%	200	LF	\$ 700	\$ 140,000
Total Structure Cost					\$ 140,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 186,000

Total Cost					\$ 326,000
Total Future Value Cost					\$ 588,792

Wyandotte Municipal BAS

Facility Owner: City of Wyandotte
Address: 705 Biddle Avenue, Wyandotte MI 48192
Site ID: A-82-005

Docks

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	0	0	-	Timber Fendering

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	0	1	0	0	0	0

Site Features

Off-Street Parking		Asphalt Condition	Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt						SF	Material
0	52000	Functional	0	-	0	-	0	Asphalt



Yankee Springs Recreation Area BAS

Facility Owner: MDNR
Address: 2104 S. Briggs Road Middleville Michigan 49333
Site ID: A-08-014

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
4	Precast Concrete Planks	Skid	5	4	30	5	100	0

Paddle Sport Launch

Beach/ Walk In	Boat Launch	ADA	Fixed or Floating Access Pier			Launch Platform			Parking Spaces
			Age	Length	Width	Age	Length	Width	
YES	-	-	-	-	-	-	-	-	-

Site Features

Off-Street Parking			Total SF Concrete	Concrete Condition	Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition					SF	Material
1100	74286	Functional	0	-	0	-	1500	Asphalt

Buildings

Picnic Shelters			Vault Toilets	
Amount	Age	Condition	Amount	Condition
2	25	Very Good	1	Very Good



Yankee Springs Recreation Area BAS

Facility Owner: MDNR
Address: 2104 S. Briggs Road Middleville Michigan 49333
Site ID: A-08-014

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	4	EA	\$ 15,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000
Total Cost					\$ 60,000

Yankee Springs Recreation Area BAS

Facility Owner:	MDNR
Address:	2104 S. Briggs Road Middleville Michigan 49333
Site ID:	A-08-014

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	1500	SF	\$ 10	\$ 15,000
Parking Lot - Asphalt	100%	74286	SF	\$ 10	\$ 742,860
Total Site-Features Cost					\$ 757,860

Buildings

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Picnic Shelter	100%	2	EA	\$ 15,000	\$ 30,000
Vault Toilet	100%	1	EA	\$ 10,000	\$ 10,000
Total Buildings Cost					\$ 40,000

Total Cost \$ 797,860

Total Future Value Cost \$ 1,072,257

Yankee Springs Recreation Area BAS

Facility Owner: MDNR
Address: 2104 S. Briggs Road Middleville Michigan 49333
Site ID: A-08-014

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Boat Launch Ramp	100%	6400	SF	\$ 30	\$ 192,000
Launch Piers	100%	4	EA	\$ 45,000	\$ 180,000
Total Boat Launch & Paddle Sport Access Cost					\$ 372,000
Total Cost					\$ 372,000
Total Future Value Cost					\$ 671,873

Marquette Presque Isle Marina

Facility Owner: City of Marquette
Address: 1 Peter White Drive, Marquette, MI 49855
Site ID: -

Docks

Traditional Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
6675	Concrete	Steel Framed Crib	12	25'	100%	40+
			8	35'		
			14	45'		
			4	60'		

Traditional Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
6330	Steel Framing	unknown	10	25'	100%	40+
			8	35'		
			10	45'		
			4	60'		

Broadside

Type	Total LF	Age	Decking Type	Construction
Harbor Wall	0	50	Concrete	Steel Sheet Pile
Fixed Crib Dock	8800	50	Concrete	-
Floating Dock	2000	50	-	Unknown

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	800	10-20	Functional	8	0	0	100	NA
Rock Revetment Offshore	800	10-20	Functional	12	0	0	100	Yes

Utilities

Type	Age	Condition	Additional Information
Potable Water	30+	Replace	100 % have vacuum breakers installed
Pumpout	<10	-	1 Pumpout(s)

Electric Shore Power

Utility Pedestals	% Condition	Dock Box Integrated	% Condition
20 Twin 30 Amp	100% Bad	0 30/ 50 Amp	0% Bad
Compliant with Electrical Shock Drowning Ground Fault Protection Standards?		No	

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	LF Lines over Land	LF Lines over Water	Overall Age	Overall Condition
Gas & Diesel	Fixed	60	4	1	100	100	30+	Functional
Tank Type		Tank Capacity		No. Tanks				
Underground		Ground Single Tank		850 & 2,000 Gals	2			

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Precast Concrete Planks	Skid	10	2	30	4	12	0

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed
0%	<6'	10 years ago
90%	6'-10'	
10%	>10'	

Site Features

Off-Street Parking				Total			Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Gravel/Unpaved	Gravel/Unpaved Condition	SF	Material
40	60000	Functional	0	-	0	-	60000	Asphalt

Marquette Presque Isle Marina

Facility Owner: City of Marquette
Address: 1 Peter White Drive, Marquette, MI 49855
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Traditional Fixed Dock	100%	6675	SF	\$ 150	\$ 1,001,250
Traditional Floating Dock	100%	6330	SF	\$ 55	\$ 348,150
Broadside Fixed Crib	100%	8800	SF	\$ 150	\$ 1,320,000
Broadside Floating Dock	100%	2000	SF	\$ 55	\$ 110,000
Total Dock Cost					\$ 2,779,400

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Electric Shore Power ESDP Compliance	100%	70	SLIP	\$ 5,000	\$ 350,000
Twin 30 Amp Electric Pedestal	100%	20	EA	\$ 3,000	\$ 60,000
Potable Water	100%	70	SLIP	\$ 800	\$ 56,000
Total Utilities Cost					\$ 466,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Launch Piers	100%	2	EA	\$ 15,000	\$ 30,000
Total Boat Launch & Paddle Sport Access Cost					\$ 30,000
Total Cost					\$ 3,275,400

Marquette Presque Isle Marina

Facility Owner:	City of Marquette
Address:	1 Peter White Drive, Marquette, MI 49855
Site ID:	-

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Fuel Dock	100%	240	SF	\$ 150	\$ 36,000
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Fuel Lines	100%	200	LF	\$ 100	\$ 20,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Total Utilities Cost					\$ 271,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Boat Launch Ramp	100%	3200	SF	\$ 30	\$ 96,000
Total Boat Launch & Paddle Sport Access Cost					\$ 96,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Site Driveway/Approach	100%	60000	SF	\$ 10	\$ 600,000
Parking Lot - Asphalt	100%	60000	SF	\$ 10	\$ 600,000
Total Site-Features Cost					\$ 1,200,000

Total Cost \$ 1,567,000

Total Future Value Cost \$ 2,105,917

Marquette Presque Isle Marina

Facility Owner: City of Marquette
Address: 1 Peter White Drive, Marquette, MI 49855
Site ID: -

Docks

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Traditional Fixed Dock Redecking	100%	6675	SF	\$ 15	\$ 100,125
Total Dock Cost					\$ 100,125

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Electric Shore Power ESDP Compliance	100%	70	SLIP	\$ 3,501	\$ 245,070
Fuel Dock	100%	240	SF	\$ 150	\$ 36,000
Fuel Dispenser	100%	1	EA	\$ 15,000	\$ 15,000
Fuel Lines	100%	200	LF	\$ 100	\$ 20,000
Underground Single Product Tank	100%	2	EA	\$ 100,000	\$ 200,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 551,070

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Launch Piers	100%	2	EA	\$ 30,000	\$ 60,000
Total Boat Launch & Paddle Sport Access Cost					\$ 60,000

Site-Features

Item	% Replace	Quantity	Unit	Unit Rate	20 Year Projection
Walkways	100%	2400	SF	\$ 10	\$ 24,000
Total Site-Features Cost					\$ 24,000

Total Cost	\$ 735,195
Total Future Value Cost	\$ 1,147,007

Suttons Bay Marina

Facility Owner: Village of Suttons Bay
Address: 420 Front Street
Site ID: -

Head Pier Fixed

Approx Total SF	Decking	Structure	Amt Slips	Slip Size	Age by %	Age Group
15865	Timber	-	12	25'	50%	<10
			148	30'	50%	10-20
			14	40'		

Head Pier Floating

Approx Total SF	Construction	Manufacturer	Amt Slips	Slip Size	Age by %	Age Group
17080	Traditional Timber	Floatation Docking Systems (FDS)	12	25'	50%	<10
			148	35'	50%	10-20
			14	45'		

Head Pier along Harbor Wall/Shoreline

SF Fingers	Decking Type	Construction	Amt Slips	Slip Size	Age by %	Age Group
9165	Timber	Timber Floating Docks	12	25'	100%	10-20
			148	35'		
			14	45'		

Structures

Type	Total LF	Age	Condition	Average Depth	% Owned by Facility	% Owned by USACE	% Owned by Other	Sufficiently Calm Wave Climate?
Rock Revetment Shoreline	1000	10-20	Functional	12	0	0	100	NA

Utilities

Type	Age	Condition	Additional Information		
Potable Water	<10	Very Good	100 % have vacuum breakers installed		
WIFI	<5	Functional			
Flow Inducers	-	Very Good	12 Units Total	12	Additional Units Needed
Pumpout	10-20	-	1 Pumpout(s)		

Electric Shore Power

Utility Pedestals	% Condition
65 Twin 30 Amp	95% Very Good
10 30/ 50 Amp	0% Functional
	5% Bad

Compliant with Electrical Shock Drowning Ground Fault Protection Standards? Yes

Fuel System

Fuel Type	Fuel Dock Type	Length	Width	Dispensers	LF Lines over Land	LF Lines over Water	Overall Age	Overall Condition
Gasoline	Fixed and Floating	75	20	2	20	30	20-30	Functional
	Tank Type		Tank Capacity	No. Tanks				
	Above Ground Single Tank		2,000 Gals	1				

Boat Launch

Launch Lanes	Paving Material	Pier Type	Age	Amount	Length	Width	Parking Trailer	Parking Vehicle
2	Cast-In-Place Concrete	Skid	0	1	12	4	6	6

Dredge

% of Navigable Water Depth	Last Dredged	Avg CY removed	Regularly Dredged
0%	<6'	5 years ago	15000
60%	6'-10'		-
40%	>10'		

Site Features

Off-Street Parking				Total SF Gravel/Unpaved	Gravel/Unpaved Condition	Access Drive	
Spaces	Total SF Asphalt	Asphalt Condition	Total SF Concrete	Concrete Condition	SF Unpaved	SF	Material
70	30000	Replace	0	-	0	-	1200 Asphalt
Landscaping		SF	Condition	Facility Responsible?			
	17000	Replace	No				
Walkways		Total LF	Avg. Width	Material		Condition	
	1000	6	concrete and gravel		Very Good		

Buildings

Building I Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Restroom and Fuel Service Building	800	5	4	50	Replace	Roof Replacement, Mechanical Upgrades, ADA Upgrades, General interior & exterior renovations.
Building 2 Type	Total SF	Amt Toilets	Amt Showers	Age	Condition	Improvements Needed
Fuel Service Building	200	0	0	0	Functional	None

Suttons Bay Marina

Facility Owner:	Village of Suttons Bay
Address:	420 Front Street
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Fixed Head Pier Redecking	50%	15865	SF	\$ 10	\$ 79,325
Total Dock Cost					\$ 79,325

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	5 Year Projection
Twin 30 Amp Electric Pedestal	5%	65	EA	\$ 3,000	\$ 9,750
30/50 Amp Electric Pedestal	5%	10	EA	\$ 3,500	\$ 1,750
Flow Inducers	20%	12	EA	\$ 1,000	\$ 2,400
Additional Flow Inducers	-	12	EA	\$ 1,000	\$ 12,000
Total Utilities Cost					\$ 25,900
Total Cost					\$ 737,225

Suttons Bay Marina

Facility Owner:	Village of Suttons Bay
Address:	420 Front Street
Site ID:	-

Docks

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Fixed Head Pier Redecking	50%	15865	SF	\$ 10	\$ 79,325
Floating Head Pier	50%	17080	SF	\$ 75	\$ 640,500
Wall/Shoreline Head Pier Floating Fingers	100%	9165	SF	\$ 75	\$ 687,375
Total Dock Cost					\$ 1,407,200

Utilities

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
WiFi	100%	-	LS	\$ 5,000	\$ 5,000
Flow Inducers	300%	24	EA	\$ 1,000	\$ 72,000
Fuel Dispenser	100%	2	EA	\$ 15,000	\$ 30,000
Fuel Lines	100%	50	LF	\$ 100	\$ 5,000
Above Ground Single Product Tank	100%	1	EA	\$ 50,000	\$ 50,000
Pumpout	100%	1	EA	\$ 35,000	\$ 35,000
Total Utilities Cost					\$ 197,000

Boat Launch & Paddle Sport Access

Item	% Replace	Quantity	Unit	Unit Rate	10 Year Projection
Launch Piers	100%	1	EA	\$ 45,000	\$ 45,000
Total Boat Launch & Paddle Sport Access Cost					\$ 45,000

Total Cost \$ 1,649,200

Total Future Value Cost \$ 2,216,387

APPENDIX D – Detailed Cost Projections per Facility Type



MICHIGAN STATE WATERWAYS PROGRAM
STATEWIDE FACILITIES ASSESSMENT - APPENDICES
Harbors, Boating Access Sites, and Lock & Dam Facilities

MDNR BAS 0-5 Year

Facility Name	Docks	Structures	Boat Launch	Dredging	Utilities	Haul-Out	Site-Features	Buildings	Total Cost
Klinger Lake BAS	\$ -	\$ -	\$ 111,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 111,000
Lac La Belle BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lake Fenton BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000
Lake Gogebic- East BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ 77,000	\$ -	\$ 92,000
Lake Gogebic State Park BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Lake Macatawa BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 45,000
Lake Margrethe SFCG BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lake Michigamme BAS	\$ -	\$ -	\$ 63,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 63,000
Lake Skegemog BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Lake St Helen BAS	\$ -	\$ 770,000	\$ 189,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 959,000
Lily Pond BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Litte Lake Harbor BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000
Long Lake BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000
Ludington State Park BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Maple Island BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Marble Lake BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Marine City BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000
Misery River Mouth BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Muskegon State Park - Snug Harbor BAS	\$ -	\$ -	\$ 333,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 333,000
Nahma BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
New Bridge BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Newaygo State Park - Hardy Dam Pond BAS	\$ 30,000	\$ -	\$ 127,000	\$ 12,000	\$ -	\$ -	\$ -	\$ -	\$ 169,000
North Channel BAS	\$ -	\$ 316,820	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 316,820
North Higgins Lake State Park BAS	\$ -	\$ -	\$ 30,000	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 70,000
Oman's Creek BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 10,000
Orchard Lake BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000
Otsego Lake State Park BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000
Paw Paw East BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Paw Paw West BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pigeon Lake BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 45,000
Pine Street BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pontiac Lake BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000
Porcupine Mountains State Park - Union Bay BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Port Austin BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Portage Lake BAS-Jackson	\$ -	\$ 300	\$ 222,000	\$ -	\$ -	\$ -	\$ 7,000	\$ -	\$ 229,300
Portage Lake BAS-Manistee	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Portage Lake BAS-St Joseph	\$ -	\$ -	\$ 111,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 111,000
Portage Lake BAS-Washtenaw	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Presque Isle BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Railroad Dock BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Rapid River Mouth BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Saginaw River Mouth BAS	\$ -	\$ 1,500	\$ 45,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 46,500
Selfridge BAS	\$ -	\$ -	\$ 90,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 90,000
Sessions Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,056,000	\$ -	\$ 1,056,000
Seul Choix Pointe BAS	\$ -	\$ 68,750	\$ 63,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 131,750
Silver Lake State Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Singing Bridge BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sleepy Hollow State Park BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000
South Bay Hubbard Lake BAS	\$ -	\$ -	\$ 111,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 111,000
South Higgins Lake State Park BAS	\$ -	\$ -	\$ 75,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 75,000
South Portage Entry BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,080	\$ -	\$ 1,080
Spider Lake BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Squaw Lake BAS	\$ -	\$ -	\$ 111,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 111,000
Sterling State Park Bartnik BAS	\$ -	\$ 1,322,000	\$ 555,000	\$ -	\$ -	\$ -	\$ 1,940,770	\$ 10,000	\$ 3,827,770
Stonington Farmer's Dock BAS	\$ -	\$ 300,000	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 315,000
Straits State Harbor BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stronach BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Tahquamenon Falls - River Mouth BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
The Forks BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Thousand Island Lake BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000

MDNR BAS 0-5 Year

Facility Name	Docks	Structures	Boat Launch	Dredging	Utilities	Haul-Out	Site-Features	Buildings	Total Cost
Tippy Dam BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Torch River BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Van Riper State Park BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000
Wamplers Lake BAS	\$ -	\$ -	\$ 222,000	\$ -	\$ -	\$ -	\$ 776,250	\$ -	\$ 998,250
West Higgins Lake BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 45,000
Whitmore Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wixom Lake - West BAS	\$ -	\$ 20,000	\$ 30,000	\$ -	\$ -	\$ -	\$ 2,700	\$ -	\$ 52,700
Yankee Springs Recreation Area BAS	\$ -	\$ -	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 60,000
Total Sites	1	16	87	6	0	0	22	3	97
Total Cost	\$ 30,000	\$ 4,553,443	\$ 6,696,000	\$ 95,000	\$ -	\$ -	\$ 9,731,605	\$ 77,600	\$ 21,183,647

MDNR BAS 5-10 Year

Facility Name	Docks	Structures	Boat Launch	Dredging	Utilities	Haul- Out	Site-Features	Buildings	Total Cost	Future Value Cost
Allegan Dam East BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ -	\$ 20,000	\$ 65,000	\$ 87,354.56
Aloha State Park BAS	\$ -	\$ 576,800	\$ 96,000	\$ 400	\$ -	\$ -	\$ -	\$ 10,000	\$ 683,200	\$ 918,163.67
Au Gres River Mouth BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 253,500	\$ 30,000	\$ 283,500	\$ 381,000.29
Au Sable River Mouth BAS	\$ -	\$ -	\$ 480,000	\$ -	\$ -	\$ -	\$ 60,000	\$ 20,000	\$ 560,000	\$ 752,593.17
Austin Lake BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ 630,000	\$ 22,800	\$ 697,800	\$ 937,784.85
Barton Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 410,000	\$ 10,000	\$ 420,000	\$ 564,444.88
Base Line Lake BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 55,000	\$ 73,915.40
Bay Port BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 10,000	\$ 13,439.16
Belleville Lake East BAS	\$ -	\$ -	\$ 192,000	\$ -	\$ -	\$ -	\$ -	\$ 20,000	\$ 212,000	\$ 284,910.27
Belleville Lake West BAS	\$ -	\$ -	\$ 112,000	\$ -	\$ -	\$ -	\$ 25,500	\$ 20,000	\$ 157,500	\$ 211,666.83
Benton Harbor BAS	\$ -	\$ 69,556	\$ 135,000	\$ -	\$ -	\$ -	\$ 48,060	\$ 26,800	\$ 279,416	\$ 375,512.38
Bergland Dock BAS	\$ -	\$ -	\$ 90,000	\$ -	\$ -	\$ -	\$ 6,500	\$ 10,000	\$ 106,500	\$ 143,127.09
Big Star Lake BAS	\$ -	\$ 14,000	\$ 96,000	\$ -	\$ -	\$ -	\$ 2,810,000	\$ 10,000	\$ 2,930,000	\$ 3,937,674.99
Bolles Harbor BAS	\$ -	\$ 367,500	\$ -	\$ -	\$ -	\$ -	\$ 156,683	\$ 20,000	\$ 544,183	\$ 731,336.58
Bowers Harbor BAS	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ 1,900	\$ 20,000	\$ 117,900	\$ 158,447.74
Brevort Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 130,765	\$ 10,000	\$ 140,765	\$ 189,176.39
Brimley State Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 180,000	\$ -	\$ 180,000	\$ 241,904.95
Burt Lake State Park BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ 11,800	\$ 10,000	\$ 66,800	\$ 89,773.61
Caribou Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,000	\$ 10,000	\$ 11,000	\$ 14,783.08
Cedar Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 190,000	\$ 10,000	\$ 200,000	\$ 268,783.28
Cedar River Mouth BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Center Lake BAS	\$ -	\$ 4,830	\$ 96,000	\$ -	\$ -	\$ -	\$ 5,000	\$ 10,000	\$ 115,830	\$ 155,665.83
Cheboygan Dam BAS	\$ -	\$ -	\$ 224,000	\$ -	\$ -	\$ -	\$ -	\$ 30,000	\$ 254,000	\$ 341,354.76
Chippewa Lake BAS	\$ -	\$ -	\$ -	\$ 2,000	\$ -	\$ -	\$ 3,200	\$ 20,000	\$ 25,200	\$ 33,866.69
Clinton River Cut-off BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,813	\$ -	\$ 2,813	\$ 3,779.76
Coldwater Lake BAS	\$ -	\$ 2,800	\$ 96,000	\$ -	\$ -	\$ -	\$ 750,600	\$ 10,000	\$ 859,400	\$ 1,154,961.74
Comins Flats BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 700	\$ 20,000	\$ 20,700	\$ 27,819.07
Copper Harbor BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Crystal Lake - North BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 404,500	\$ 10,000	\$ 414,500	\$ 557,053.34
Crystal Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,271	\$ 20,000	\$ 38,271	\$ 51,432.89
De Tour Passage BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 174,000	\$ 10,000	\$ 184,000	\$ 247,280.61
Deer Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 44,962	\$ 10,000	\$ 54,962	\$ 73,864.33
Devils Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 670,000	\$ 10,000	\$ 680,000	\$ 913,863.14
Diamond Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 100,000	\$ 10,000	\$ 110,000	\$ 147,830.80
Dodge #4 State Park - Cass Lake BAS	\$ -	\$ -	\$ 198,000	\$ -	\$ -	\$ -	\$ 262,360	\$ 58,000	\$ 518,360	\$ 696,632.49
Duck Lake BAS-Calhoun	\$ -	\$ 1,120	\$ 144,000	\$ -	\$ -	\$ -	\$ 504,406	\$ 10,000	\$ 659,526	\$ 886,347.79
Duck Lake BAS-Gogebic	\$ -	\$ 4,550	\$ 48,000	\$ -	\$ -	\$ -	\$ 72,500	\$ 10,000	\$ 135,050	\$ 181,495.91
Eagle Harbor BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
East Arm BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,500	\$ 20,000	\$ 23,500	\$ 31,582.03
East Bay Hubbard Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 511,800	\$ 10,000	\$ 521,800	\$ 701,255.57
East Lake Village Park BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 45,000	\$ 60,476.24
East Tawas BAS	\$ -	\$ 385,000	\$ 448,000	\$ -	\$ -	\$ -	\$ 53,560	\$ -	\$ 886,560	\$ 1,191,462.51
Fair Haven BAS	\$ -	\$ 99,750	\$ -	\$ -	\$ -	\$ -	\$ 450	\$ 20,000	\$ 120,200	\$ 161,538.75
Fillion Road BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 21,750	\$ 10,000	\$ 31,750	\$ 42,669.35
Fletcher Pond BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ 154,400	\$ 10,000	\$ 209,400	\$ 281,416.09
Ford River Mouth BAS	\$ -	\$ -	\$ 45,000	\$ 2,600	\$ -	\$ -	\$ 225	\$ 10,000	\$ 57,825	\$ 77,711.96
Garden Bay BAS	\$ -	\$ -	\$ 48,000	\$ -	\$ -	\$ -	\$ 83,250	\$ 10,000	\$ 141,250	\$ 189,828.19
Greenwood Reservoir BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ 58,415	\$ 10,000	\$ 113,415	\$ 152,420.28
Grindstone City BAS	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ 119,127	\$ 30,000	\$ 245,127	\$ 329,430.19
Half-moon Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 340	\$ -	\$ 340	\$ 456.93
Halfway Creek BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 35,806	\$ 10,000	\$ 45,806	\$ 61,559.43
Harley Ensign Memorial BAS	\$ -	\$ 970,421	\$ -	\$ -	\$ -	\$ -	\$ 8,850	\$ 329,600	\$ 1,308,871	\$ 1,759,012.50
Harrisville BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 900,000	\$ 290,400	\$ 1,190,400	\$ 1,599,798.06
High Rollway BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,000	\$ 20,000	\$ 26,878.33
Hoffman Memorial BAS	\$ -	\$ 62,265	\$ 360,000	\$ -	\$ -	\$ -	\$ 48,065	\$ 10,000	\$ 480,330	\$ 645,523.35
Homestead Dam BAS	\$ -	\$ 2,800	\$ -	\$ -	\$ -	\$ -	\$ 84,700	\$ 20,000	\$ 107,500	\$ 144,471.01
Houghton Lake South BAS	\$ -	\$ -	\$ 135,000	\$ -	\$ -	\$ -	\$ 1,260,000	\$ 20,000	\$ 1,415,000	\$ 1,901,641.68
Houghton Lake West BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,177,000	\$ 20,000	\$ 1,197,000	\$ 1,608,667.91
Indian Lake State Park- South BAS	\$ -	\$ -	\$ -	\$ 38,000	\$ -	\$ -	\$ 500	\$ 10,000	\$ 48,500	\$ 65,179.94
Jewell Road BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 55,000	\$ 73,915.40
Juno Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 130,000	\$ 10,000	\$ 140,000	\$ 188,148.29
Kipling BAS	\$ -	\$ -	\$ 90,000	\$ -	\$ -	\$ -	\$ 17,850	\$ 10,000	\$ 117,850	\$ 158,380.55
Klinger Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 300,000	\$ 10,000	\$ 310,000	\$ 416,614.08
Lac La Belle BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lake Fenton BAS	\$ -	\$ -	\$ 192,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 202,000	\$ 271,471.11
Lake Gogebic- East BAS	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ 68,750	\$ 10,000	\$ 174,750	\$ 234,849.39
Lake Gogebic State Park BAS	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ 862,320	\$ 35,000	\$ 993,320	\$ 1,334,939.02
Lake Macatawa BAS	\$ -	\$ -	\$ 288,000	\$ -	\$ -	\$ -	\$ 1,450,060	\$ 10,000	\$ 1,748,060	\$ 2,349,246.47
Lake Margrethe SFCG BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lake Michigamme BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 68,875	\$ 10,000	\$ 78,875	\$ 106,001.40

MDNR BAS 5-10 Year

Facility Name	Docks	Structures	Boat Launch	Dredging	Utilities	Haul- Out	Site-Features	Buildings	Total Cost	Future Value Cost
Lake Skegemog BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 67,360	\$ 10,000	\$ 77,360	\$ 103,965.37
Lake St Helen BAS	\$ -	\$ 245,000	\$ -	\$ -	\$ -	\$ -	\$ 655,000	\$ 20,000	\$ 920,000	\$ 1,236,403.07
Lily Pond BAS	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 106,000	\$ 142,455.14
Little Lake Harbor BAS	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ 84,375	\$ 10,000	\$ 190,375	\$ 255,848.08
Long Lake BAS	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ 7,500	\$ 20,000	\$ 123,500	\$ 165,973.67
Ludington State Park BAS	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ 1,377,300	\$ 10,000	\$ 1,483,300	\$ 1,993,431.17
Maple Island BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ 200,000	\$ 10,000	\$ 255,000	\$ 342,698.68
Marble Lake BAS	\$ -	\$ 3,150	\$ 96,000	\$ -	\$ -	\$ -	\$ 809,350	\$ -	\$ 908,500	\$ 1,220,948.03
Marine City BAS	\$ -	\$ -	\$ 192,000	\$ -	\$ -	\$ -	\$ 400	\$ 70,000	\$ 262,400	\$ 352,643.66
Misery River Mouth BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 127,440	\$ 10,000	\$ 137,440	\$ 184,707.87
Muskegon State Park - Snug Harbor BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 240,000	\$ 25,000	\$ 265,000	\$ 356,137.84
Nahma BAS	\$ -	\$ -	\$ 224,000	\$ -	\$ -	\$ -	\$ -	\$ 20,000	\$ 244,000	\$ 327,915.60
New Bridge BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 10,000	\$ 13,439.16
Newaygo State Park - Hardy Dam Pond BAS	\$ -	\$ -	\$ -	\$ 12,000	\$ -	\$ -	\$ -	\$ 10,000	\$ 22,000	\$ 29,566.16
North Channel BAS	\$ -	\$ 32,550	\$ 180,000	\$ -	\$ -	\$ -	\$ 780	\$ 1,020,000	\$ 1,233,330	\$ 1,657,492.39
North Higgins Lake State Park BAS	\$ -	\$ -	\$ -	\$ 40,000	\$ -	\$ -	\$ 61,000	\$ 10,000	\$ 111,000	\$ 149,174.72
Oman's Creek BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ 131,500	\$ -	\$ 176,500	\$ 237,201.24
Orchard Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 160,000	\$ 160,000	\$ 215,026.62
Otsego Lake State Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 10,000	\$ 13,439.16
Paw Paw East BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ 2,500	\$ 10,000	\$ 57,500	\$ 77,275.19
Paw Paw West BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 10,000	\$ 13,439.16
Pigeon Lake BAS	\$ -	\$ -	\$ 288,000	\$ -	\$ -	\$ -	\$ 2,000	\$ 20,000	\$ 310,000	\$ 416,614.08
Pine Street BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 10,000	\$ 13,439.16
Pontiac Lake BAS	\$ -	\$ -	\$ 192,000	\$ -	\$ -	\$ -	\$ 125	\$ 10,000	\$ 202,125	\$ 271,639.10
Porcupine Mountains State Park - Union Bay BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Port Austin BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Portage Lake BAS-Jackson	\$ -	\$ 3,640	\$ -	\$ -	\$ -	\$ -	\$ 827,000	\$ -	\$ 830,640	\$ 1,116,310.70
Portage Lake BAS-Manistee	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ 55,125	\$ 10,000	\$ 161,125	\$ 216,538.53
Portage Lake BAS-St Joseph	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 10,000	\$ 13,439.16
Portage Lake BAS-Washtenaw	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 10,000	\$ 13,439.16
Presque Isle BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Railroad Dock BAS	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 106,000	\$ 142,455.14
Rapid River Mouth BAS	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ 126,625	\$ 10,000	\$ 232,625	\$ 312,628.55
Saginaw River Mouth BAS	\$ -	\$ 24,150	\$ -	\$ -	\$ -	\$ -	\$ 750	\$ 20,000	\$ 44,900	\$ 60,341.85
Selfridge BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 13,675	\$ 458,000	\$ 471,675	\$ 633,891.76
Sessions Lake BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ 80	\$ 10,000	\$ 55,080	\$ 74,022.91
Seul Choix Pointe BAS	\$ -	\$ 43,750	\$ -	\$ 4,000	\$ -	\$ -	\$ 95,000	\$ 20,000	\$ 162,750	\$ 218,722.39
Silver Lake State Park BAS	\$ -	\$ -	\$ 90,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 100,000	\$ 134,391.64
Singing Bridge BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 101,000	\$ 30,000	\$ 131,000	\$ 176,053.05
Sleepy Hollow State Park BAS	\$ -	\$ -	\$ 192,000	\$ -	\$ -	\$ -	\$ 100,000	\$ 20,000	\$ 312,000	\$ 419,301.91
South Bay Hubbard Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 10,000	\$ 13,439.16
South Higgins Lake State Park BAS	\$ -	\$ -	\$ 432,000	\$ -	\$ -	\$ -	\$ -	\$ 25,000	\$ 457,000	\$ 614,169.79
South Portage Entry BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ 90,360	\$ 10,000	\$ 145,360	\$ 195,351.68
Spider Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 54,950	\$ 10,000	\$ 64,950	\$ 87,287.37
Squaw Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 454,035	\$ 10,000	\$ 464,035	\$ 623,624.24
Sterling State Park Bartnik BAS	\$ -	\$ 2,776,200	\$ -	\$ -	\$ -	\$ -	\$ 4,680	\$ 397,600	\$ 3,178,480	\$ 4,271,611.33
Stonington Farmer's Dock BAS	\$ -	\$ 840,000	\$ 96,000	\$ -	\$ -	\$ -	\$ 44,000	\$ 10,000	\$ 990,000	\$ 1,330,477.22
Straits State Harbor BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stronach BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tahquamenon Falls - River Mouth BAS	\$ -	\$ -	\$ 48,000	\$ -	\$ -	\$ -	\$ 5,000	\$ 10,000	\$ 63,000	\$ 84,666.73
The Forks BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 10,000	\$ 13,439.16
Thousand Island Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 163,500	\$ 10,000	\$ 173,500	\$ 233,169.49
Tippy Dam BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 550,000	\$ 550,000	\$ 739,154.01
Torch River BAS	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ 44,250	\$ 10,000	\$ 150,250	\$ 201,923.44
Van Riper State Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 400	\$ 10,000	\$ 10,400	\$ 13,976.73
Wamplers Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 10,000	\$ 13,439.16
West Higgins Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,000	\$ 20,000	\$ 26,878.33
Whitmore Lake BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ 792,000	\$ 10,000	\$ 847,000	\$ 1,138,297.17
Wixom Lake - West BAS	\$ -	\$ 70,000	\$ -	\$ -	\$ -	\$ -	\$ 2,550	\$ 20,000	\$ 92,550	\$ 124,379.46
Yankee Springs Recreation Area BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 757,860	\$ 40,000	\$ 797,860	\$ 1,072,257.12
Total Sites	0	22	57	7	0	0	92	111	119	119
Total Cost	\$ -	\$ 6,599,832	\$ 7,380,000	\$ 99,000	\$ -	\$ -	\$ 22,848,083	\$ 4,778,200	\$ 41,705,114	\$ 56,048,186

MDNR BAS 10-20 Year

Facility Name	Docks	Structures	Boat Launch	Dredging	Utilities	Haul- Out	Site-Features	Buildings	Total Cost	Future Value Cost
Allegan Dam East BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Aloha State Park BAS	\$ -	\$ 865,200	\$ 30,000	\$ 1,200	\$ -	\$ -	\$ 250	\$ -	\$ 896,650	\$ 1,619,449.64
Au Gres River Mouth BAS	\$ -	\$ -	\$ 564,000	\$ -	\$ -	\$ -	\$ 650,000	\$ -	\$ 1,214,000	\$ 2,192,619.04
Au Sable River Mouth BAS	\$ -	\$ -	\$ 150,000	\$ -	\$ -	\$ -	\$ 1,700,000	\$ -	\$ 1,850,000	\$ 3,341,305.78
Austin Lake BAS	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ 142,500	\$ -	\$ 238,500	\$ 430,757.53
Barton Lake BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 205,000	\$ -	\$ 235,000	\$ 424,436.14
Base Line Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 201,870	\$ -	\$ 201,870	\$ 364,599.67
Bay Port BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 1,000	\$ -	\$ 31,000	\$ 55,989.45
Belleville Lake East BAS	\$ -	\$ -	\$ 60,000	\$ -	\$ -	\$ -	\$ 1,852,800	\$ -	\$ 1,912,800	\$ 3,454,729.57
Belleville Lake West BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 520,000	\$ -	\$ 550,000	\$ 993,361.18
Benton Harbor BAS	\$ -	\$ 168,269	\$ 144,000	\$ -	\$ -	\$ -	\$ 112	\$ -	\$ 312,381	\$ 564,194.47
Bergland Dock BAS	\$ -	\$ -	\$ 112,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 112,000	\$ 202,284.46
Big Star Lake BAS	\$ -	\$ 35,000	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 65,000	\$ 117,397.23
Bolles Harbor BAS	\$ -	\$ 735,000	\$ 240,000	\$ -	\$ -	\$ -	\$ 42,623	\$ -	\$ 1,017,623	\$ 1,837,940.87
Bowers Harbor BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ 17,100	\$ -	\$ 32,100	\$ 57,976.17
Brevort Lake BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 535	\$ -	\$ 30,535	\$ 55,149.61
Brimley State Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Burt Lake State Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Caribou Lake BAS	\$ -	\$ -	\$ 93,000	\$ -	\$ -	\$ -	\$ 79,000	\$ -	\$ 172,000	\$ 310,651.13
Cedar Lake BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 209,250	\$ -	\$ 239,250	\$ 432,112.11
Cedar River Mouth BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Center Lake BAS	\$ -	\$ 11,550	\$ 30,000	\$ -	\$ -	\$ -	\$ 585,000	\$ -	\$ 626,550	\$ 1,131,618.99
Cheboygan Dam BAS	\$ -	\$ 49,000	\$ 30,000	\$ -	\$ -	\$ -	\$ 43,250	\$ -	\$ 122,250	\$ 220,797.10
Chippewa Lake BAS	\$ -	\$ -	\$ 186,000	\$ 4,000	\$ -	\$ -	\$ -	\$ -	\$ 190,000	\$ 343,161.13
Clinton River Cut-off BAS	\$ -	\$ -	\$ 807,000	\$ 400,000	\$ -	\$ -	\$ 53,438	\$ 264,400	\$ 1,524,838	\$ 2,754,026.14
Coldwater Lake BAS	\$ -	\$ 32,200	\$ 30,000	\$ -	\$ -	\$ -	\$ 14,400	\$ -	\$ 76,600	\$ 138,348.12
Comins Flats BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,900	\$ -	\$ 9,900	\$ 17,880.50
Copper Harbor BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Crystal Lake - North BAS	\$ -	\$ -	\$ 282,000	\$ -	\$ -	\$ -	\$ 44,500	\$ -	\$ 326,500	\$ 589,695.32
Crystal Lake BAS	\$ -	\$ 117,000	\$ 330,000	\$ -	\$ -	\$ -	\$ 3,066,078	\$ -	\$ 3,513,078	\$ 6,345,009.82
De Tour Passage BAS	\$ -	\$ -	\$ 141,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 141,000	\$ 254,661.68
Deer Lake BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000	\$ 54,183.34
Devils Lake BAS	\$ -	\$ -	\$ 60,000	\$ -	\$ -	\$ -	\$ 15,000	\$ -	\$ 75,000	\$ 135,458.34
Diamond Lake BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 13,200	\$ -	\$ 43,200	\$ 78,024.01
Dodge #4 State Park - Cass Lake BAS	\$ 45,000	\$ -	\$ 192,000	\$ -	\$ -	\$ -	\$ 1,681,040	\$ -	\$ 1,918,040	\$ 3,464,193.59
Duck Lake BAS-Calhoun	\$ -	\$ 12,880	\$ 60,000	\$ -	\$ -	\$ -	\$ 79,654	\$ -	\$ 152,534	\$ 275,493.37
Duck Lake BAS-Gogebic	\$ -	\$ 15,925	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 45,925	\$ 82,945.66
Eagle Harbor BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
East Arm BAS	\$ -	\$ 39,200	\$ 141,000	\$ -	\$ -	\$ -	\$ 27,000	\$ -	\$ 207,200	\$ 374,226.25
East Bay Hubbard Lake BAS	\$ -	\$ -	\$ 60,000	\$ -	\$ -	\$ -	\$ 720	\$ -	\$ 60,720	\$ 109,667.07
East Lake Village Park BAS	\$ -	\$ -	\$ -	\$ -	\$ 30,000	\$ -	\$ 363,800	\$ -	\$ 393,800	\$ 711,246.60
East Tawas BAS	\$ -	\$ 577,500	\$ 60,000	\$ -	\$ -	\$ -	\$ 860,000	\$ -	\$ 1,497,500	\$ 2,704,651.57
Fair Haven BAS	\$ -	\$ 199,500	\$ 234,000	\$ -	\$ -	\$ -	\$ 483,600	\$ 28,800	\$ 945,900	\$ 1,708,400.62
Fillion Road BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 1,350	\$ -	\$ 31,350	\$ 56,621.59
Fletcher Pond BAS	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ 165,600	\$ -	\$ 261,600	\$ 472,478.70
Ford River Mouth BAS	\$ -	\$ -	\$ 96,000	\$ 5,200	\$ -	\$ -	\$ 470,025	\$ -	\$ 571,225	\$ 1,031,695.89
Garden Bay BAS	\$ -	\$ 42,000	\$ 30,000	\$ -	\$ -	\$ -	\$ 4,000	\$ -	\$ 76,000	\$ 137,264.45
Greenwood Reservoir BAS	\$ -	\$ -	\$ 48,000	\$ -	\$ -	\$ -	\$ 1,750	\$ -	\$ 49,750	\$ 89,854.03
Grindstone City BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 1,019,127	\$ -	\$ 1,049,127	\$ 1,894,840.06
Half-moon Lake BAS	\$ -	\$ -	\$ 93,000	\$ -	\$ -	\$ -	\$ 71,360	\$ -	\$ 164,360	\$ 296,852.44
Halfway Creek BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 1,920	\$ -	\$ 31,920	\$ 57,651.07
Harley Ensign Memorial BAS	\$ -	\$ 2,079,473	\$ 1,269,000	\$ -	\$ -	\$ -	\$ 2,998,150	\$ -	\$ 6,346,623	\$ 11,462,706.20
Harrisville BAS	\$ -	\$ -	\$ 90,000	\$ -	\$ -	\$ -	\$ 133,900	\$ -	\$ 223,900	\$ 404,388.31
High Rollway BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 300,750	\$ -	\$ 300,750	\$ 543,187.95
Hoffman Memorial BAS	\$ -	\$ 83,020	\$ -	\$ -	\$ -	\$ -	\$ 2,000	\$ -	\$ 85,020	\$ 153,555.58
Homestead Dam South	\$ -	\$ 32,200	\$ -	\$ -	\$ -	\$ -	\$ 13,300	\$ -	\$ 45,500	\$ 82,178.06
Houghton Lake South BAS	\$ -	\$ -	\$ 288,000	\$ -	\$ -	\$ -	\$ 15,000	\$ -	\$ 303,000	\$ 547,251.70
Houghton Lake West BAS	\$ -	\$ -	\$ 423,000	\$ -	\$ -	\$ -	\$ 59,000	\$ -	\$ 482,000	\$ 870,545.62
Indian Lake State Park- South BAS	\$ -	\$ -	\$ 15,000	\$ 76,000	\$ -	\$ -	\$ 807,500	\$ -	\$ 898,500	\$ 1,622,790.94
Jewell Road BAS	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ 287,250	\$ -	\$ 383,250	\$ 692,192.13
Juno Lake BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 9,500	\$ -	\$ 39,500	\$ 71,341.39
Kipling BAS	\$ -	\$ -	\$ 144,000	\$ -	\$ -	\$ -	\$ 475,150	\$ -	\$ 619,150	\$ 1,118,253.77
Klinger Lake BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000	\$ 54,183.34
Lac La Belle BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lake Fenton BAS	\$ -	\$ -	\$ 60,000	\$ -	\$ -	\$ -	\$ 616,250	\$ -	\$ 676,250	\$ 1,221,382.72
Lake Gogebic- East BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 6,250	\$ -	\$ 36,250	\$ 65,471.53
Lake Gogebic State Park BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000	\$ 54,183.34
Lake Macatawa BAS	\$ -	\$ -	\$ 90,000	\$ -	\$ -	\$ -	\$ 40,940	\$ 31,200	\$ 162,140	\$ 292,842.88
Lake Margrethe SFCG BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lake Michigamme BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 960	\$ -	\$ 30,960	\$ 55,917.20
Lake Skegemog BAS	\$ -	\$ -	\$ 141,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 141,000	\$ 254,661.68

MDNR BAS 10-20 Year

Facility Name	Docks	Structures	Boat Launch	Dredging	Utilities	Haul- Out	Site-Features	Buildings	Total Cost	Future Value Cost
Allegan Dam East BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lake St Helen BAS	\$ -	\$ 490,000	\$ 81,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 571,000	\$ 1,031,289.51
Lily Pond BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 163,600	\$ -	\$ 193,600	\$ 349,663.14
Little Lake Harbor BAS	\$ -	\$ -	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 60,000	\$ 108,366.67
Long Lake BAS	\$ -	\$ -	\$ 60,000	\$ -	\$ -	\$ -	\$ 250,000	\$ -	\$ 310,000	\$ 559,894.48
Ludington State Park BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 638,000	\$ -	\$ 668,000	\$ 1,206,482.30
Maple Island BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ 180,611.12
Marble Lake BAS	\$ -	\$ 36,225	\$ 30,000	\$ -	\$ -	\$ -	\$ 3,150	\$ -	\$ 69,375	\$ 125,298.97
Marine City BAS	\$ -	\$ -	\$ 60,000	\$ -	\$ -	\$ -	\$ 1,600	\$ -	\$ 61,600	\$ 111,256.45
Misery River Mouth BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Muskegon State Park - Snug Harbor BAS	\$ -	\$ -	\$ 90,000	\$ -	\$ -	\$ -	\$ 20,000	\$ -	\$ 110,000	\$ 198,672.24
Nahma BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 50,360	\$ -	\$ 80,360	\$ 145,139.10
New Bridge BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,250	\$ -	\$ 2,250	\$ 4,063.75
Newaygo State Park - Hardy Dam Pond BAS	\$ -	\$ -	\$ 30,000	\$ 24,000	\$ -	\$ -	\$ 170,500	\$ -	\$ 224,500	\$ 405,471.97
North Channel BAS	\$ -	\$ 65,100	\$ -	\$ -	\$ -	\$ -	\$ 7,020	\$ -	\$ 72,120	\$ 130,256.74
North Higgins Lake State Park BAS	\$ -	\$ -	\$ 234,000	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ 274,000	\$ 494,874.48
Oman's Creek BAS	\$ -	\$ 42,000	\$ 48,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 90,000	\$ 162,550.01
Orchard Lake BAS	\$ -	\$ -	\$ 282,000	\$ -	\$ -	\$ -	\$ 511,310	\$ -	\$ 793,310	\$ 1,432,806.10
Otsego Lake State Park BAS	\$ -	\$ -	\$ 186,000	\$ -	\$ -	\$ -	\$ 1,080,400	\$ -	\$ 1,266,400	\$ 2,287,259.27
Paw Paw East BAS	\$ -	\$ -	\$ 48,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 48,000	\$ 86,693.34
Paw Paw West BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ 150,000	\$ 270,916.69
Pigeon Lake BAS	\$ -	\$ -	\$ 90,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 90,000	\$ 162,550.01
Pine Street BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 556,500	\$ -	\$ 556,500	\$ 1,005,100.90
Pontiac Lake BAS	\$ -	\$ -	\$ 60,000	\$ -	\$ -	\$ -	\$ 1,125	\$ -	\$ 61,125	\$ 110,398.55
Porcupine Mountains State Park - Union Bay BAS	\$ -	\$ 840	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 840	\$ 1,517.13
Port Austin BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Portage Lake BAS-Jackson	\$ -	\$ 9,975	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 69,975	\$ 126,382.63
Portage Lake BAS-Manistee	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 35,125	\$ -	\$ 65,125	\$ 117,622.99
Portage Lake BAS-St Joseph	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 173,500	\$ -	\$ 203,500	\$ 367,543.64
Portage Lake BAS-Washtenaw	\$ -	\$ -	\$ 141,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 141,000	\$ 254,661.68
Presque Isle BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Railroad Dock BAS	\$ -	\$ 10,500	\$ 30,000	\$ -	\$ -	\$ -	\$ 64,750	\$ -	\$ 105,250	\$ 190,093.21
Rapid River Mouth BAS	\$ -	\$ 39,480	\$ 30,000	\$ -	\$ -	\$ -	\$ 334,625	\$ -	\$ 404,105	\$ 729,858.58
Saginaw River Mouth BAS	\$ -	\$ 57,750	\$ 375,000	\$ -	\$ -	\$ -	\$ 177,000	\$ -	\$ 609,750	\$ 1,101,276.33
Selfridge BAS	\$ -	\$ -	\$ 1,614,000	\$ -	\$ -	\$ -	\$ 123,075	\$ -	\$ 1,737,075	\$ 3,137,350.67
Sessions Lake BAS	\$ -	\$ -	\$ 1,200,000	\$ -	\$ -	\$ -	\$ 720	\$ -	\$ 1,200,720	\$ 2,168,633.88
Seul Choix Pointe BAS	\$ -	\$ 78,750	\$ 30,000	\$ 8,000	\$ -	\$ -	\$ 7,300	\$ -	\$ 124,050	\$ 224,048.10
Silver Lake State Park BAS	\$ -	\$ -	\$ 96,000	\$ -	\$ -	\$ -	\$ 459,000	\$ -	\$ 555,000	\$ 1,002,391.74
Singing Bridge BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sleepy Hollow State Park BAS	\$ -	\$ 10,500	\$ 60,000	\$ -	\$ -	\$ -	\$ 143,750	\$ -	\$ 214,250	\$ 386,959.33
South Bay Hubbard Lake BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ 801,000	\$ -	\$ 831,000	\$ 1,500,878.44
South Higgins Lake State Park BAS	\$ -	\$ -	\$ 150,000	\$ 400,000	\$ -	\$ -	\$ 21,000	\$ -	\$ 571,000	\$ 1,031,289.51
South Portage Entry BAS	\$ -	\$ -	\$ 48,000	\$ -	\$ -	\$ -	\$ 18,360	\$ -	\$ 66,360	\$ 119,853.54
Spider Lake BAS	\$ -	\$ -	\$ 141,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 141,000	\$ 254,661.68
Squaw Lake BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000	\$ 54,183.34
Sterling State Park Bartnik BAS	\$ -	\$ 3,701,600	\$ 150,000	\$ -	\$ -	\$ -	\$ 2,340	\$ -	\$ 3,853,940	\$ 6,960,644.33
Stonington Farmer's Dock BAS	\$ -	\$ 1,260,000	\$ 30,000	\$ -	\$ -	\$ -	\$ 750	\$ -	\$ 1,290,750	\$ 2,331,238.08
Straits State Harbor BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stronach BAS	\$ -	\$ -	\$ 141,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 141,000	\$ 254,661.68
Tahquamenon Falls - River Mouth BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000	\$ 54,183.34
The Forks BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 751,500	\$ -	\$ 751,500	\$ 1,357,292.59
Thousand Island Lake BAS	\$ -	\$ -	\$ 141,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 141,000	\$ 254,661.68
Tippy Dam BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 207,100	\$ -	\$ 207,100	\$ 374,045.64
Torch River BAS	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000	\$ 54,183.34
Van Riper State Park BAS	\$ -	\$ -	\$ 93,000	\$ -	\$ -	\$ -	\$ 733,540	\$ -	\$ 826,540	\$ 1,492,823.18
Wamplers Lake BAS	\$ -	\$ -	\$ 60,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 60,000	\$ 108,366.67
West Higgins Lake BAS	\$ -	\$ -	\$ 423,000	\$ -	\$ -	\$ -	\$ -	\$ 32,000	\$ 455,000	\$ 821,780.61
Whitmore Lake BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 168,600	\$ -	\$ 168,600	\$ 304,510.35
Wixom Lake - West BAS	\$ -	\$ 140,000	\$ 186,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 326,000	\$ 588,792.26
Yankee Springs Recreation Area BAS	\$ -	\$ -	\$ 372,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 372,000	\$ 671,873.38
Total Sites	1	31	102	9	1	0	89	4	117	117
Total Cost	\$ 45,000	\$ 11,037,636	\$ 14,836,000	\$ 958,400	\$ 30,000	\$ -	\$ 28,392,502	\$ 356,400	\$ 55,655,938	\$ 100,520,815

GIA BAS 0-5 Year

Facility Name	Docks	Structures	Boat Launch	Dredging	Utilities	Haul-Out	Site-Features	Buildings	Total Cost
River Oaks County Park BAS	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ 5,180	\$ -	\$ 20,180
Riverside Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rogers City BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rust Avenue BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sandy Beach BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sanford County Park BAS	\$ 3,100	\$ -	\$ 239,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 242,100
Shamrock Park BAS	\$ -	\$ -	\$ -	\$ 8,000	\$ -	\$ -	\$ 1,000	\$ -	\$ 9,000
St Joseph Riverview Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
St. Clair Municipal BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stafford County Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stony Creek Metro Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,353,000	\$ 640,000	\$ 1,993,000
Veterans Memorial Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Whitewater Township Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 45,000	\$ 35,000	\$ 80,000
Wyandotte Municipal BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Sites	5	5	29	1	2	0	13	4	36
Total Cost	\$ 468,580	\$ 480,350	\$ 9,767,000	\$ 8,000	\$ 45,000	\$ -	\$ 10,323,980	\$ 875,000	\$ 21,967,910

GIA BAS 5-10 Year

Facility Name	Docks	Structures	Boat Launch	Dredging	Utilities	Haul- Out	Site-Features	Buildings	Total Cost	Future Value Cost
Rust Avenue BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sandy Beach BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sanford County Park BAS	\$ 23,250	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23,250	\$ 31,246.06
Shamrock Park BAS	\$ -	\$ -	\$ -	\$ 8,000	\$ 5,000	\$ -	\$ 875	\$ 255,000	\$ 268,875	\$ 361,345.52
St Joseph Riverview Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,500	\$ 150,000	\$ 162,500	\$ 218,386.41
St. Clair Municipal BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stafford County Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stony Creek Metro Park BAS	\$ -	\$ -	\$ 129,600	\$ -	\$ -	\$ -	\$ 3,000	\$ -	\$ 132,600	\$ 178,203.31
Veterans Memorial Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Whitewater Township Park BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ 186,510	\$ -	\$ 231,510	\$ 311,130.08
Wyandotte Municipal BAS	\$ -	\$ -	\$ 45,000	\$ -	\$ -	\$ -	\$ 520,000	\$ -	\$ 565,000	\$ 759,312.75
Total Sites	3	4	17	1	4	0	28	22	42	42
Total Cost	\$ 40,950	\$ 640,325	\$ 2,012,400	\$ 8,000	\$ 175,000	\$ -	\$ 13,464,393	\$ 7,516,000	\$ 23,857,068	\$ 32,061,904

GIA BAS 10-20 Year

Facility Name	Docks	Structures	Boat Launch	Dredging	Utilities	Haul- Out	Site-Features	Buildings	Total Cost	Future Value Cost
12th St. Municipal BAS	\$ -	\$ -	\$ 90,000	\$ -	\$ -	\$ -	\$ 15,000	\$ -	\$ 105,000	\$ 189,641.68
Sandy Beach BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sanford County Park BAS	\$ 18,600	\$ -	\$ 100,200	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 118,800	\$ 214,566.01
Shamrock Park BAS	\$ -	\$ -	\$ -	\$ 20,000	\$ -	\$ -	\$ 406,625	\$ -	\$ 426,625	\$ 770,532.21
St Joseph Riverview Park BAS	\$ -	\$ 7,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,000	\$ 12,642.78
St. Clair Municipal BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stafford County Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Stony Creek Metro Park BAS	\$ -	\$ -	\$ 384,000	\$ -	\$ -	\$ -	\$ 27,000	\$ -	\$ 411,000	\$ 742,311.72
Veterans Memorial Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Whitewater Township Park BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 338,500	\$ -	\$ 338,500	\$ 611,368.65
Wyandotte Municipal BAS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Sites	1	7	35	1	3	0	29	5	41	41
Total Cost	\$ 18,600	\$ 1,150,800	\$ 6,011,200	\$ 20,000	\$ 197,000	\$ -	\$ 15,810,037	\$ 1,204,200	\$ 24,411,837	\$ 44,090,493

MDNR Harbor 0-5 Year

Facility Name	Docks	Structures	Boat Launch	Dredging	Utilities	Haul-Out Total Cost	Site-Features	Buildings	Total Cost
Au Gres State Harbor (refuge)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cedar River State Harbor	\$ 57,463	\$ -	\$ 30,000	\$ -	\$ 625,000	\$ -	\$ -	\$ -	\$ 712,463
Copper Harbor State Harbor	\$ 362,115	\$ 127,500	\$ 15,000	\$ -	\$ 75,000	\$ -	\$ -	\$ -	\$ 579,615
De Tour State Harbor	\$ -	\$ -	\$ -	\$ -	\$ 22,320	\$ -	\$ -	\$ -	\$ 22,320
Eagle Harbor State Harbor	\$ -	\$ 72,000	\$ 15,000	\$ -	\$ 18,000	\$ -	\$ -	\$ -	\$ 105,000
East Tawas State Harbor	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ -	\$ -	\$ -	\$ 10,000
Fayette State Harbor	\$ -	\$ 180,000	\$ -	\$ -	\$ 1,050	\$ -	\$ -	\$ -	\$ 181,050
Grayhaven State Harbor	\$ 689,170	\$ -	\$ 35,760	\$ -	\$ 390,000	\$ -	\$ -	\$ -	\$ 1,114,930
Hammond Bay State Harbor	\$ 84,000	\$ 45,000	\$ 15,000	\$ -	\$ 70,000	\$ -	\$ -	\$ -	\$ 214,000
Lac La Belle State Harbor	\$ 25,050	\$ 42,000	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 82,050
Lexington State Harbor	\$ 1,060,320	\$ -	\$ -	\$ -	\$ 765,002	\$ -	\$ -	\$ 280,000	\$ 2,105,322
Lime Island State Harbor	\$ 162,975	\$ 320,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 400,000	\$ 882,975
Little Lake State Harbor	\$ -	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 60,000	\$ 110,000
Mackinac Island State Harbor	\$ 1,196,353	\$ -	\$ -	\$ -	\$ 530,000	\$ -	\$ -	\$ 560,000	\$ 2,286,353
Milliken State Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Port Austin State Harbor	\$ -	\$ -	\$ 30,000	\$ -	\$ 8,000	\$ -	\$ -	\$ -	\$ 38,000
Presque Isle State Harbor	\$ 1,791,938	\$ -	\$ 239,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,030,938
Straits State Harbor	\$ -	\$ -	\$ 30,000	\$ -	\$ 5,000	\$ -	\$ -	\$ 240,000	\$ 275,000
Whitefish Point State Harbor	\$ 9,400	\$ 416,000	\$ 15,000	\$ -	\$ -	\$ -	\$ 132,500	\$ -	\$ 572,900
Total Sites	10	8	10	0	12	0	1	5	17
Total Cost	\$ 5,438,783	\$ 1,252,500	\$ 439,760	\$ -	\$ 2,519,372	\$ -	\$ 132,500	\$ 1,540,000	\$ 11,322,915

MDNR Harbor 5-10 Year

Facility Name	Docks	Structures	Boat Launch	Dredging	Utilities	Haul- Out	Site-Features	Buildings	Total Cost	Future Value Cost
Au Gres State Harbor (refuge)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cedar River State Harbor	\$ 453,431	\$ -	\$ 192,000	\$ -	\$ 666,850	\$ -	\$ -	\$ 10,000	\$ 1,322,281	\$ 1,777,035.43
Copper Harbor State Harbor	\$ -	\$ 157,500	\$ 112,000	\$ -	\$ 381,500	\$ -	\$ 480,840	\$ 10,000	\$ 1,141,840	\$ 1,534,537.48
De Tour State Harbor	\$ 270,000	\$ 16,100	\$ -	\$ -	\$ 29,800	\$ -	\$ -	\$ 780,000	\$ 1,095,900	\$ 1,472,797.96
Eagle Harbor State Harbor	\$ -	\$ 63,000	\$ 96,000	\$ -	\$ -	\$ -	\$ 414,000	\$ 270,000	\$ 843,000	\$ 1,132,921.51
East Tawas State Harbor	\$ -	\$ -	\$ -	\$ -	\$ 57,000	\$ -	\$ 36,000	\$ -	\$ 93,000	\$ 124,984.22
Fayette State Harbor	\$ -	\$ 378,000	\$ -	\$ -	\$ 15,000	\$ -	\$ 3,020	\$ 20,000	\$ 416,020	\$ 559,096.09
Grayhaven State Harbor	\$ -	\$ -	\$ -	\$ -	\$ 125,000	\$ -	\$ 4,000	\$ 777,600	\$ 906,600	\$ 1,218,394.59
Hammond Bay State Harbor	\$ -	\$ 126,000	\$ 224,000	\$ -	\$ 445,100	\$ -	\$ -	\$ 701,200	\$ 1,496,300	\$ 2,010,902.08
Lac La Belle State Harbor	\$ -	\$ 63,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,000	\$ 83,000	\$ 111,545.06
Lexington State Harbor	\$ 385,500	\$ -	\$ 135,000	\$ -	\$ 946,900	\$ -	\$ 195,000	\$ 840,000	\$ 2,502,400	\$ 3,363,016.35
Lime Island State Harbor	\$ -	\$ 840,000	\$ -	\$ -	\$ -	\$ -	\$ 6,250	\$ -	\$ 846,250	\$ 1,137,289.24
Little Lake State Harbor	\$ -	\$ 105,000	\$ -	\$ -	\$ -	\$ -	\$ 36,500	\$ 10,000	\$ 151,500	\$ 203,603.33
Mackinac Island State Harbor	\$ 7,560	\$ -	\$ -	\$ -	\$ 43,000	\$ -	\$ -	\$ 140,000	\$ 190,560	\$ 256,096.71
Milliken State Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Port Austin State Harbor	\$ -	\$ -	\$ 192,000	\$ -	\$ 22,040	\$ -	\$ 215,640	\$ 1,252,400	\$ 1,682,080	\$ 2,260,574.86
Presque Isle State Harbor	\$ -	\$ 746,740	\$ -	\$ -	\$ 222,000	\$ -	\$ 427,000	\$ 1,340,000	\$ 2,735,740	\$ 3,676,605.80
Straits State Harbor	\$ 315,000	\$ -	\$ 448,000	\$ -	\$ 846,400	\$ -	\$ -	\$ 345,600	\$ 1,955,000	\$ 2,627,356.52
Whitefish Point State Harbor	\$ -	\$ -	\$ 48,000	\$ -	\$ -	\$ -	\$ 35,000	\$ 10,000	\$ 93,000	\$ 124,984.22
Total Sites	5	9	8	0	12	0	11	15	17	17
Total Cost	\$ 1,431,491	\$ 2,495,340	\$ 1,447,000	\$ -	\$ 3,800,590	\$ -	\$ 1,853,250	\$ 6,526,800	\$ 17,554,471	\$ 23,591,741

MDNR Harbor 10-20 Year

Facility Name	Docks	Structures	Boat Launch	Dredging	Utilities	Haul- Out	Site-Features	Buildings	Total Cost	Future Value Cost
Au Gres State Harbor (refuge)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cedar River State Harbor	\$ 395,097	\$ 332,500	\$ 60,000	\$ -	\$ 1,184,850	\$ -	\$ 385,225	\$ 1,261,600	\$ 3,619,272	\$ 6,536,807.37
Copper Harbor State Harbor	\$ 453,150	\$ 214,375	\$ 30,000	\$ -	\$ 356,500	\$ -	\$ -	\$ 732,000	\$ 1,786,025	\$ 3,225,759.82
De Tour State Harbor	\$ 1,409,175	\$ 40,250	\$ -	\$ -	\$ 1,275,680	\$ -	\$ 355,000	\$ 152,000	\$ 3,232,105	\$ 5,837,541.15
Eagle Harbor State Harbor	\$ -	\$ 84,000	\$ 30,000	\$ 188,000	\$ -	\$ -	\$ -	\$ -	\$ 302,000	\$ 545,445.59
East Tawas State Harbor	\$ 1,705,125	\$ 300,000	\$ -	\$ -	\$ 1,424,100	\$ -	\$ 30,000	\$ 1,120,000	\$ 4,579,225	\$ 8,270,589.72
Fayette State Harbor	\$ 334,350	\$ 509,600	\$ -	\$ -	\$ 113,000	\$ -	\$ 18,180	\$ -	\$ 975,130	\$ 1,761,193.25
Grayhaven State Harbor	\$ -	\$ -	\$ 17,880	\$ -	\$ 335,400	\$ -	\$ 19,600	\$ -	\$ 372,880	\$ 673,462.76
Hammond Bay State Harbor	\$ -	\$ 189,000	\$ 30,000	\$ -	\$ 445,000	\$ -	\$ 210,000	\$ 48,000	\$ 922,000	\$ 1,665,234.56
Lac La Belle State Harbor	\$ -	\$ 88,480	\$ 141,000	\$ 300,000	\$ 8,800	\$ -	\$ 391,800	\$ -	\$ 930,080	\$ 1,679,827.94
Lexington State Harbor	\$ 205,088	\$ -	\$ -	\$ -	\$ 845,500	\$ -	\$ 44,000	\$ -	\$ 1,094,588	\$ 1,976,946.78
Lime Island State Harbor	\$ -	\$ 1,120,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,120,000	\$ 2,022,844.58
Little Lake State Harbor	\$ -	\$ 140,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 140,000	\$ 252,855.57
Mackinac Island State Harbor	\$ 31,500	\$ -	\$ -	\$ -	\$ 1,074,400	\$ -	\$ 74,400	\$ 490,000	\$ 1,670,300	\$ 3,016,747.60
Milliken State Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Port Austin State Harbor	\$ 6,670,500	\$ -	\$ 60,000	\$ -	\$ 1,239,160	\$ -	\$ 145,680	\$ 116,400	\$ 8,231,740	\$ 14,867,438.09
Presque Isle State Harbor	\$ -	\$ 906,850	\$ 30,000	\$ -	\$ 1,693,500	\$ -	\$ 153,000	\$ -	\$ 2,783,350	\$ 5,027,039.71
Straits State Harbor	\$ 931,500	\$ 60,000	\$ 60,000	\$ -	\$ 1,667,800	\$ -	\$ 182,650	\$ 2,782,000	\$ 5,683,950	\$ 10,265,845.95
Whitefish Point State Harbor	\$ 70,500	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 100,500	\$ 181,514.18
Total Sites	10	12	10	2	13	0	12	8	17	17
Total Cost	\$ 12,205,984	\$ 3,985,055	\$ 488,880	\$ 488,000	\$ 11,663,690	\$ -	\$ 2,009,535	\$ 6,702,000	\$ 37,543,144	\$ 67,807,095

GIA Harbor 0-5 Year

Facility Name	Docks	Structures	Boat Launch	Dredging	Utilities	Haul-Out	Site-Features	Buildings	Total Cost
Alpena Municipal Marina	\$ 1,012,410	\$ -	\$ 60,000	\$ -	\$ 65,125	\$ -	\$ -	\$ 1,320,000	\$ 2,457,535
Arcadia Veterans Memorial Marina	\$ 142,200	\$ -	\$ 45,000	\$ -	\$ 306,000	\$ -	\$ -	\$ 240,000	\$ 733,200
Baraga Municipal Marina	\$ -	\$ 360,000	\$ 30,000	\$ -	\$ -	\$ -	\$ 86,800	\$ 160,000	\$ 636,800
Bay City Liberty Harbor Marina	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Beaver Island Municipal Marina	\$ 4,250	\$ 2,000	\$ -	\$ -	\$ 236,500	\$ -	\$ -	\$ -	\$ 242,750
Big Bay Harbor - Marquette County	\$ -	\$ -	\$ 142,000	\$ 60,000	\$ 56,000	\$ -	\$ 9,860	\$ 200,000	\$ 467,860
Bois Blanc Island Marina	\$ -	\$ -	\$ 15,000	\$ -	\$ 13,000	\$ -	\$ -	\$ -	\$ 28,000
Boyer City F. Grant Moore Municipal Marina	\$ 307,556	\$ 728,100	\$ 127,000	\$ -	\$ 250,650	\$ -	\$ 27,000	\$ -	\$ 1,440,306
Caseville Municipal Harbor	\$ 527,850	\$ 1,375,000	\$ 111,000	\$ -	\$ 537,850	\$ -	\$ 7,200	\$ -	\$ 2,558,900
Cedarville Marina - Clark Township	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Charlevoix City Marina	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cheboygan County Marina	\$ 1,134,263	\$ 528,000	\$ 222,000	\$ -	\$ 1,143,500	\$ -	\$ -	\$ -	\$ 3,027,763
Cheboygan Municipal Marina	\$ -	\$ 588,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 588,000
Detroit Erma Henderson Park Marina	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
East Jordan City Marina	\$ 1,220,925	\$ -	\$ -	\$ -	\$ 279,000	\$ -	\$ -	\$ 32,000	\$ 1,531,925
Elk Rapids Edward C. Grace Memorial Harbor	\$ -	\$ 31,250	\$ 478,000	\$ -	\$ 20,000	\$ -	\$ 2,280	\$ -	\$ 531,530
Elmwood Township Marina - Greilickville	\$ 567,248	\$ -	\$ 702,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,269,248
Escanaba Municipal Marina	\$ 1,031,377	\$ -	\$ 239,000	\$ -	\$ 3,000	\$ -	\$ -	\$ -	\$ 1,273,377
Frankfort Municipal Marina	\$ -	\$ 336,175	\$ -	\$ -	\$ 455,000	\$ -	\$ -	\$ -	\$ 791,175
Gladstone Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Haven Municipal Marina	\$ 61,635	\$ -	\$ -	\$ -	\$ 405,000	\$ -	\$ -	\$ -	\$ 466,635
Grand Marais Marina - Burt Township	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Traverse Bay Marina - Schoolcraft Township	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Harbor Beach Marina	\$ -	\$ -	\$ 717,000	\$ -	\$ 560,000	\$ -	\$ -	\$ -	\$ 1,277,000
Harbor Springs Municipal Marina	\$ -	\$ 450,000	\$ 15,000	\$ -	\$ 155,000	\$ -	\$ -	\$ -	\$ 620,000
Harrisville Harbor	\$ 26,500	\$ -	\$ -	\$ -	\$ 22,367	\$ -	\$ -	\$ -	\$ 48,867
Hessel Marina - Clark Township	\$ 643,320	\$ 395,000	\$ 239,000	\$ -	\$ 443,200	\$ -	\$ -	\$ 400,000	\$ 2,120,520
Houghton City Marina	\$ -	\$ -	\$ 127,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 127,000
Houghton County Marina - Hancock	\$ -	\$ 392,500	\$ -	\$ -	\$ 300,000	\$ -	\$ -	\$ -	\$ 692,500
L'Anse Municipal Marina	\$ 70,500	\$ 10,500	\$ 239,000	\$ -	\$ 94,000	\$ -	\$ 19,200	\$ -	\$ 433,200
Lake Erie Metropark Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Leland Township Harbor	\$ -	\$ -	\$ 15,000	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ 45,000
Ludington Harbor View Marina	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Ludington Municipal Marina	\$ 1,034,775	\$ 170,000	\$ -	\$ -	\$ 140,587	\$ -	\$ -	\$ 60,000	\$ 1,405,362
Mackinaw City Municipal Marina	\$ 458,100	\$ 87,000	\$ 224,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 769,100
Manistee Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Manistique Municipal Marina	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Marquette Cinder Pond Marina	\$ 1,010,625	\$ 50,400	\$ 284,000	\$ -	\$ 531,000	\$ -	\$ -	\$ -	\$ 1,876,025
Marquette Presque Isle Marina	\$ 2,779,400	\$ -	\$ 30,000	\$ -	\$ 466,000	\$ -	\$ -	\$ -	\$ 3,275,400
Menominee Marina	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Metro Beach Metropark Marina	\$ 5,554,000	\$ -	\$ -	\$ -	\$ 500,000	\$ -	\$ 1,004,000	\$ -	\$ 7,058,000
Munising Bayshore Marina	\$ 171,520	\$ -	\$ 605,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 776,520
Muskegon Hartshorn Marina	\$ 683,970	\$ 980,000	\$ -	\$ -	\$ 855,104	\$ -	\$ -	\$ -	\$ 2,519,074
Naubinway Garfield Township Marina	\$ 14,625	\$ 44,000	\$ -	\$ -	\$ 70,084	\$ -	\$ -	\$ -	\$ 128,709
New Buffalo Municipal Marina	\$ 190,838	\$ -	\$ 504,000	\$ -	\$ 805,900	\$ -	\$ 82,500	\$ -	\$ 1,583,238
Northport G. Martsen Dame Marina	\$ 714,524	\$ -	\$ 239,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 953,524
Ontonagon Village Marina	\$ 579,360	\$ -	\$ 189,000	\$ 180,000	\$ 465,579	\$ -	\$ -	\$ 340,000	\$ 1,753,939
Pentwater Municipal Marina	\$ 123,750	\$ 21,326	\$ 12,000	\$ -	\$ 530,600	\$ -	\$ 10,900	\$ -	\$ 698,576
Petoskey City Marina	\$ 1,718,060	\$ 60,000	\$ 30,000	\$ -	\$ 40,000	\$ -	\$ -	\$ -	\$ 1,848,060
Port Huron Fort Street Marina	\$ 82,500	\$ -	\$ -	\$ -	\$ 205,000	\$ -	\$ -	\$ -	\$ 287,500
Port Huron River Street Marina	\$ 349,740	\$ 153,790	\$ -	\$ -	\$ 480,000	\$ -	\$ -	\$ -	\$ 983,530
Port Sanilac Harbor	\$ 617,760	\$ -	\$ -	\$ -	\$ 492,200	\$ -	\$ -	\$ -	\$ 1,109,960
Rogers City Marina	\$ 926,475	\$ 5,147,000	\$ 717,000	\$ -	\$ 680,500	\$ -	\$ 13,200	\$ 384,000	\$ 7,868,175
Sault Ste. Marie Charles T. Harvey Marina	\$ 75,150	\$ -	\$ 111,000	\$ -	\$ 60,172	\$ -	\$ -	\$ -	\$ 246,322
Sault Ste. Marie George Kemp Marina	\$ -	\$ -	\$ -	\$ -	\$ 10,392	\$ -	\$ -	\$ -	\$ 10,392
Sebewaing Harbor Marina	\$ 1,012,200	\$ -	\$ 30,000	\$ -	\$ 1,264,600	\$ -	\$ 65,310	\$ -	\$ 2,372,110
South Haven Municipal Marina	\$ 641,784	\$ -	\$ -	\$ -	\$ 1,603,360	\$ -	\$ -	\$ -	\$ 2,245,144
St. Clair (Charles F. Moore) Boat Harbor	\$ 44,670	\$ 56,000	\$ 15,000	\$ -	\$ 566,192	\$ -	\$ -	\$ -	\$ 681,862
St. Ignace Municipal Marina	\$ -	\$ -	\$ -	\$ -	\$ 1,187,844	\$ -	\$ -	\$ -	\$ 1,187,844
St. Joseph West Basin Marina	\$ -	\$ -	\$ -	\$ -	\$ 985,873	\$ -	\$ -	\$ -	\$ 985,873
Suttons Bay Marina	\$ 79,325	\$ -	\$ -	\$ -	\$ 25,900	\$ -	\$ 312,000	\$ 320,000	\$ 737,225
Traverse City Duncan L. Clinch Marina	\$ -	\$ 918,750	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 933,750
Trenton Elizabeth Park Marina	\$ 89,400	\$ -	\$ -	\$ -	\$ 520,000	\$ -	\$ -	\$ -	\$ 609,400
White Lake Municipal Marina - Whitehall	\$ 1,013,625	\$ 264,000	\$ -	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ 1,282,625
Marquette Presque Isle Marina	\$ 2,779,400	\$ -	\$ 30,000	\$ -	\$ 466,000	\$ -	\$ -	\$ -	\$ 3,275,400
Suttons Bay Marina	\$ 79,325	\$ -	\$ -	\$ -	\$ 25,900	\$ -	\$ 312,000	\$ 320,000	\$ 737,225
Lake Erie Metropark Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Sites	38	24	31	3	44	0	13	10	53
Total Cost	\$ 29,574,933	\$ 13,148,791	\$ 6,558,000	\$ 270,000	\$ 18,328,979	\$ -	\$ 1,952,250	\$ 3,776,000	\$ 73,608,953

GIA Harbor 5-10 Year

Facility Name	Docks	Structures	Boat Launch	Dredging	Utilities	Haul- Out	Site-Features	Buildings	Total Cost	Future Value Cost
Alpena Municipal Marina	\$ 188,640	\$ 227,500	\$ -	\$ -	\$ 1,029,990	\$ 1,000,000	\$ 301,000	\$ 916,000	\$ 2,791,130	\$ 3,751,045
Arcadia Veterans Memorial Marina	\$ -	\$ -	\$ 224,000	\$ -	\$ 573,500	\$ -	\$ 31,000	\$ 1,000,000	\$ 1,828,500	\$ 2,457,351
Baraga Municipal Marina	\$ 82,913	\$ -	\$ -	\$ -	\$ 180,000	\$ -	\$ 18,000	\$ 25,000	\$ 305,913	\$ 411,121
Bay City Liberty Harbor Marina	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Beaver Island Municipal Marina	\$ 325,050	\$ 32,200	\$ -	\$ -	\$ 117,500	\$ -	\$ 57,800	\$ 1,047,000	\$ 1,579,550	\$ 2,122,783
Big Bay Harbor - Marquette County	\$ -	\$ -	\$ -	\$ 600,000	\$ 86,000	\$ -	\$ 22,540	\$ -	\$ 708,540	\$ 952,219
Bois Blanc Island Marina	\$ 41,610	\$ -	\$ 112,000	\$ -	\$ 78,200	\$ -	\$ 19,640	\$ 84,000	\$ 335,450	\$ 450,817
Boyne City F. Grant Moore Municipal Marina	\$ -	\$ 440,335	\$ -	\$ -	\$ 100,400	\$ -	\$ 45,000	\$ 627,000	\$ 1,212,735	\$ 1,629,814
Caseville Municipal Harbor	\$ -	\$ 735,000	\$ -	\$ -	\$ 287,650	\$ -	\$ 20,440	\$ 1,049,600	\$ 2,092,690	\$ 2,812,400
Cedarville Marina - Clark Township	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Charlevoix City Marina	\$ 875,813	\$ 2,100	\$ -	\$ -	\$ 226,800	\$ -	\$ -	\$ -	\$ 1,104,713	\$ 1,484,641
Cheboygan County Marina	\$ -	\$ 504,000	\$ -	\$ -	\$ 82,200	\$ -	\$ -	\$ 1,450,800	\$ 2,037,000	\$ 2,737,558
Cheboygan Municipal Marina	\$ -	\$ 378,000	\$ -	\$ -	\$ 36,000	\$ -	\$ 8,514	\$ 64,000	\$ 486,514	\$ 653,834
Detroit Erma Henderson Park Marina	\$ 891,938	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 891,938	\$ 1,198,689
East Jordan City Marina	\$ -	\$ -	\$ 45,000	\$ -	\$ 311,850	\$ -	\$ 180,575	\$ 560,000	\$ 1,097,425	\$ 1,474,847
Elk Rapids Edward C. Grace Memorial Harbor	\$ 1,897,390	\$ 17,500	\$ -	\$ -	\$ 25,000	\$ -	\$ -	\$ 215,000	\$ 2,154,890	\$ 2,895,992
Elmwood Township Marina - Grellickville	\$ 1,101,128	\$ 1,821,200	\$ 687,000	\$ -	\$ 384,400	\$ -	\$ 74,500	\$ 1,015,000	\$ 5,083,228	\$ 6,831,433
Escanaba Municipal Marina	\$ -	\$ 210,000	\$ -	\$ -	\$ 591,500	\$ -	\$ 224,000	\$ 160,000	\$ 1,185,500	\$ 1,593,213
Frankfort Municipal Marina	\$ -	\$ 672,350	\$ -	\$ -	\$ 511,500	\$ -	\$ 64,620	\$ 1,195,000	\$ 2,443,470	\$ 3,283,819
Gladstone Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Haven Municipal Marina	\$ 73,913	\$ 70,000	\$ 315,000	\$ -	\$ 226,050	\$ -	\$ -	\$ -	\$ 684,963	\$ 920,532
Grand Marais Marina - Burt Township	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Traverse Bay Marina - Schoolcraft Township	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Harbor Beach Marina	\$ 1,011,600	\$ -	\$ -	\$ -	\$ 143,880	\$ -	\$ -	\$ 320,000	\$ 1,475,480	\$ 1,982,922
Harbor Springs Municipal Marina	\$ 124,720	\$ -	\$ 124,800	\$ -	\$ 75,160	\$ -	\$ 220,600	\$ -	\$ 545,280	\$ 732,811
Harrisville Harbor	\$ 201,300	\$ -	\$ -	\$ -	\$ 541,000	\$ -	\$ 76,900	\$ -	\$ 819,200	\$ 1,100,936
Hessel Marina - Clark Township	\$ 2,424	\$ 682,500	\$ -	\$ -	\$ 62,400	\$ -	\$ 83,000	\$ 15,000	\$ 845,324	\$ 1,136,045
Houghton City Marina	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,000	\$ -	\$ 6,000	\$ 8,063
Houghton County Marina - Hancock	\$ -	\$ 962,500	\$ 45,000	\$ -	\$ 395,000	\$ -	\$ 7,000	\$ 400,000	\$ 1,809,500	\$ 2,431,817
L'Anse Municipal Marina	\$ -	\$ 26,250	\$ -	\$ -	\$ -	\$ -	\$ 88,400	\$ 15,000	\$ 129,650	\$ 174,239
Lake Erie Metropark Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Leland Township Harbor	\$ 378,675	\$ -	\$ 224,000	\$ 250,000	\$ 50,000	\$ -	\$ -	\$ -	\$ 902,675	\$ 1,213,120
Ludington Harbor View Marina	\$ 686,250	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 686,250	\$ 922,263
Ludington Municipal Marina	\$ -	\$ 595,000	\$ -	\$ -	\$ 1,092,200	\$ -	\$ 101,000	\$ 815,000	\$ 2,603,200	\$ 3,498,483
Mackinaw City Municipal Marina	\$ 744,750	\$ 182,700	\$ -	\$ -	\$ 1,030,000	\$ -	\$ -	\$ 705,600	\$ 2,663,050	\$ 3,578,917
Manistee Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Manistique Municipal Marina	\$ -	\$ -	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ 15,000	\$ 20,159
Marquette Cinder Pond Marina	\$ -	\$ 289,100	\$ -	\$ -	\$ 604,500	\$ -	\$ 1,000	\$ 28,000	\$ 922,600	\$ 1,239,897
Marquette Presque Isle Marina	\$ -	\$ -	\$ 96,000	\$ -	\$ 271,000	\$ -	\$ 1,200,000	\$ -	\$ 1,567,000	\$ -
Menominee Marina	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Metro Beach Metropark Marina	\$ 416,550	\$ -	\$ -	\$ -	\$ 186,425	\$ -	\$ 16,056,000	\$ -	\$ 16,658,975	\$ 22,388,269
Munising Bayshore Marina	\$ 271,500	\$ -	\$ -	\$ -	\$ 202,800	\$ -	\$ 220,000	\$ 920,000	\$ 1,614,300	\$ 2,169,484
Muskegon Hartshorn Marina	\$ -	\$ 1,470,000	\$ 672,000	\$ -	\$ 352,350	\$ -	\$ 208,000	\$ 704,000	\$ 3,406,350	\$ 4,577,850
Naubinway Garfield Township Marina	\$ -	\$ 123,200	\$ -	\$ -	\$ 37,100	\$ -	\$ 148,740	\$ 167,200	\$ 476,240	\$ 640,027
New Buffalo Municipal Marina	\$ -	\$ -	\$ 30,000	\$ -	\$ 140,000	\$ -	\$ 10,000	\$ 320,000	\$ 500,000	\$ 671,958
Northport G. Martsen Dame Marina	\$ 700,343	\$ -	\$ -	\$ -	\$ 229,250	\$ -	\$ 1,000	\$ -	\$ 930,593	\$ 1,250,639
Ontonagon Village Marina	\$ -	\$ -	\$ -	\$ 600,000	\$ 354,280	\$ 1,000,000	\$ 21,000	\$ -	\$ 975,280	\$ 1,310,695
Pentwater Municipal Marina	\$ 150,750	\$ 53,314	\$ -	\$ -	\$ 170,200	\$ -	\$ 14,060	\$ 15,000	\$ 403,324	\$ 542,033
Petoskey City Marina	\$ 169,121	\$ 210,000	\$ 224,000	\$ -	\$ 714,000	\$ -	\$ 60,000	\$ 15,000	\$ 1,392,121	\$ 1,870,894
Port Huron Fort Street Marina	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Port Huron River Street Marina	\$ -	\$ 307,580	\$ -	\$ -	\$ 282,800	\$ -	\$ 276,000	\$ 200,000	\$ 1,066,380	\$ 1,433,126
Port Sanilac Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,200	\$ 40,000	\$ 47,200	\$ 63,433
Rogers City Marina	\$ 321,098	\$ 1,620,500	\$ -	\$ -	\$ 1,215,900	\$ -	\$ 1,599,800	\$ 1,360,000	\$ 6,117,298	\$ 8,221,136
Sault Ste. Marie Charles T. Harvey Marina	\$ -	\$ -	\$ 63,000	\$ -	\$ 24,800	\$ -	\$ -	\$ 15,000	\$ 102,800	\$ 138,155
Sault Ste. Marie George Kemp Marina	\$ 537,638	\$ -	\$ -	\$ -	\$ 661,800	\$ -	\$ 1,500	\$ -	\$ 1,200,938	\$ 1,613,960
Sebewaing Harbor Marina	\$ -	\$ -	\$ -	\$ -	\$ 200,000	\$ -	\$ 845,310	\$ 2,073,600	\$ 3,118,910	\$ 4,191,554
South Haven Municipal Marina	\$ 606,906	\$ -	\$ -	\$ -	\$ 757,160	\$ -	\$ 18,510	\$ 1,485,000	\$ 2,867,576	\$ 3,853,782
St. Clair (Charles F. Moore) Boat Harbor	\$ 1,329,375	\$ 280,000	\$ 224,000	\$ -	\$ 597,140	\$ -	\$ 36,000	\$ 656,000	\$ 3,122,515	\$ 4,196,399
St. Ignace Municipal Marina	\$ 54,563	\$ -	\$ -	\$ -	\$ 460,000	\$ -	\$ -	\$ -	\$ 514,563	\$ 691,529
St. Joseph West Basin Marina	\$ 163,710	\$ 42,000	\$ -	\$ -	\$ 218,310	\$ 1,100,000	\$ 1,000,000	\$ 490,000	\$ 1,914,021	\$ 2,572,284
Suttons Bay Marina	\$ 1,407,200	\$ -	\$ 45,000	\$ -	\$ 197,000	\$ -	\$ -	\$ -	\$ 1,649,200	\$ -
Traverse City Duncan L. Clinch Marina	\$ 2,177,663	\$ 407,925	\$ 224,000	\$ -	\$ 293,000	\$ -	\$ -	\$ -	\$ 3,102,588	\$ 4,169,618
Trenton Elizabeth Park Marina	\$ 184,500	\$ -	\$ 896,000	\$ -	\$ 40,000	\$ -	\$ 1,000	\$ 1,000,000	\$ 2,121,500	\$ 2,851,119
White Lake Municipal Marina - Whitehall	\$ -	\$ -	\$ -	\$ -	\$ 70,000	\$ -	\$ 77,875	\$ -	\$ 147,875	\$ 198,732
Marquette Presque Isle Marina	\$ -	\$ -	\$ 96,000	\$ -	\$ 271,000	\$ -	\$ 1,200,000	\$ -	\$ 1,567,000	\$ 2,105,917
Suttons Bay Marina	\$ 1,407,200	\$ -	\$ 45,000	\$ -	\$ 197,000	\$ -	\$ -	\$ -	\$ 1,649,200	\$ 2,216,387
Lake Erie Metropark Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Sites	30	26	19	3	51	2	41	35	56	57
Total Cost	\$ 18,526,226	\$ 12,362,754	\$ 4,391,800	\$ 1,450,000	\$ 17,000,995	\$ 3,100,000	\$ 24,653,524	\$ 21,167,800	\$ 99,681,099	\$ 125,889,713

GIA Harbor 10-20 Year

Facility Name	Docks	Structures	Boat Launch	Dredging	Utilities	Haul-Out	Site-Features	Buildings	Total Cost	Future Value Cost
Alpena Municipal Marina	\$ -	\$ 568,750	\$ 1,076,000	\$ -	\$ 1,210,685	\$ -	\$ 43,000	\$ -	\$ 2,898,435	\$ 5,234,896
Arcadia Veterans Memorial Marina	\$ -	\$ -	\$ 72,000	\$ -	\$ 585,000	\$ -	\$ -	\$ -	\$ 657,000	\$ 1,186,615
Baraga Municipal Marina	\$ -	\$ -	\$ 234,000	\$ -	\$ 175,500	\$ -	\$ -	\$ -	\$ 409,500	\$ 739,603
Bay City Liberty Harbor Marina	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Beaver Island Municipal Marina	\$ -	\$ 77,000	\$ -	\$ -	\$ 87,500	\$ -	\$ 6,800	\$ -	\$ 171,300	\$ 309,387
Big Bay Harbor - Marquette County	\$ -	\$ -	\$ 60,000	\$ 1,200,000	\$ 86,000	\$ -	\$ 189,900	\$ -	\$ 1,535,900	\$ 2,774,006
Bois Blanc Island Marina	\$ 62,415	\$ -	\$ 30,000	\$ -	\$ 54,000	\$ -	\$ 376,610	\$ 80,000	\$ 603,025	\$ 1,089,130
Boyne City F. Grant Moore Municipal Marina	\$ 160,969	\$ 733,030	\$ 30,000	\$ -	\$ 161,000	\$ -	\$ 26,000	\$ -	\$ 1,110,999	\$ 2,006,587
Caseville Municipal Harbor	\$ -	\$ 1,085,000	\$ 30,000	\$ -	\$ 439,750	\$ -	\$ -	\$ -	\$ 1,554,750	\$ 2,808,051
Cedarville Marina - Clark Township	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Charlevoix City Marina	\$ -	\$ 24,150	\$ -	\$ -	\$ 1,006,800	\$ -	\$ 436,000	\$ 1,000,000	\$ 2,466,950	\$ 4,455,586
Cheboygan County Marina	\$ -	\$ 756,000	\$ 60,000	\$ -	\$ 430,000	\$ -	\$ 145,000	\$ -	\$ 1,391,000	\$ 2,512,301
Cheboygan Municipal Marina	\$ -	\$ 504,000	\$ -	\$ -	\$ -	\$ -	\$ 27,021	\$ -	\$ 531,021	\$ 959,083
Detroit Erma Henderson Park Marina	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
East Jordan City Marina	\$ -	\$ -	\$ 224,000	\$ -	\$ 574,350	\$ -	\$ 36,175	\$ -	\$ 834,525	\$ 1,507,245
Elk Rapids Edward C. Grace Memorial Harbor	\$ -	\$ 26,250	\$ 60,000	\$ -	\$ 2,800,000	\$ -	\$ 1,840,000	\$ -	\$ 4,726,250	\$ 8,536,133
Elmwood Township Marina - Greilickville	\$ -	\$ 273,000	\$ -	\$ -	\$ 1,571,800	\$ -	\$ 28,500	\$ -	\$ 1,873,300	\$ 3,383,388
Escanaba Municipal Marina	\$ 893,519	\$ 525,000	\$ 30,000	\$ -	\$ 1,224,500	\$ -	\$ 167,200	\$ 1,200,000	\$ 4,040,219	\$ 7,297,084
Frankfort Municipal Marina	\$ -	\$ 1,008,525	\$ -	\$ -	\$ 730,500	\$ -	\$ 15,500	\$ -	\$ 1,754,525	\$ 3,168,867
Gladstone Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Haven Municipal Marina	\$ 287,798	\$ 175,000	\$ -	\$ -	\$ 423,550	\$ -	\$ 364,000	\$ -	\$ 1,250,348	\$ 2,258,267
Grand Marais Marina - Burt Township	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Traverse Bay Marina - Schoolcraft Township	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Harbor Beach Marina	\$ 1,217,550	\$ -	\$ 90,000	\$ -	\$ 1,316,820	\$ -	\$ 50,000	\$ -	\$ 2,674,370	\$ 4,830,210
Harbor Springs Municipal Marina	\$ -	\$ -	\$ 30,000	\$ -	\$ 284,140	\$ -	\$ 41,355	\$ -	\$ 355,495	\$ 642,064
Harrisville Harbor	\$ 763,740	\$ -	\$ -	\$ -	\$ 1,668,100	\$ -	\$ 115,700	\$ 1,795,000	\$ 4,342,540	\$ 7,843,110
Hessel Marina - Clark Township	\$ 16,500	\$ 910,000	\$ 30,000	\$ -	\$ 277,200	\$ -	\$ -	\$ -	\$ 1,233,700	\$ 2,228,199
Houghton City Marina	\$ -	\$ -	\$ 57,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 57,000	\$ 102,948
Houghton County Marina - Hancock	\$ -	\$ 1,417,500	\$ 96,000	\$ -	\$ 486,000	\$ -	\$ 72,000	\$ -	\$ 2,071,500	\$ 3,741,359
L'Anse Municipal Marina	\$ -	\$ 52,500	\$ 30,000	\$ 60,000	\$ 84,900	\$ -	\$ 38,400	\$ -	\$ 265,800	\$ 480,064
Lake Erie Metropark Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Leland Township Harbor	\$ 808,088	\$ -	\$ 30,000	\$ 500,000	\$ 1,423,900	\$ -	\$ 441,600	\$ 2,240,000	\$ 5,443,588	\$ 9,831,725
Ludington Harbor View Marina	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Ludington Municipal Marina	\$ -	\$ 1,190,000	\$ -	\$ -	\$ 1,062,500	\$ -	\$ 101,500	\$ -	\$ 2,354,000	\$ 4,251,586
Mackinaw City Municipal Marina	\$ -	\$ 243,600	\$ -	\$ -	\$ 2,147,800	\$ -	\$ 27,000	\$ -	\$ 2,418,400	\$ 4,367,899
Manistee Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Manistique Municipal Marina	\$ 319,575	\$ -	\$ -	\$ -	\$ 475,200	\$ -	\$ 372,000	\$ -	\$ 1,166,775	\$ 2,107,325
Marquette Cinder Pond Marina	\$ -	\$ 659,750	\$ 30,000	\$ -	\$ 1,014,400	\$ -	\$ 123,750	\$ -	\$ 1,827,900	\$ 3,301,391
Marquette Presque Isle Marina	\$ -	\$ -	\$ 60,000	\$ -	\$ 551,070	\$ -	\$ 24,000	\$ -	\$ 635,070	\$ -
Menominee Marina	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Metro Beach Metropark Marina	\$ 49,500	\$ -	\$ -	\$ -	\$ 715,075	\$ -	\$ 1,320,000	\$ 195,000	\$ 2,279,575	\$ 4,117,166
Munising Bayshore Marina	\$ 272,700	\$ -	\$ 90,000	\$ -	\$ 741,500	\$ -	\$ 32,000	\$ 15,000	\$ 1,151,200	\$ 2,079,195
Muskegon Hartshorn Marina	\$ 181,800	\$ 2,424,000	\$ -	\$ -	\$ 448,000	\$ -	\$ -	\$ -	\$ 3,053,800	\$ 5,515,502
Naubinway Garfield Township Marina	\$ -	\$ 184,800	\$ -	\$ -	\$ 30,100	\$ -	\$ -	\$ -	\$ 214,900	\$ 388,133
New Buffalo Municipal Marina	\$ 2,534,000	\$ -	\$ 90,000	\$ -	\$ 416,500	\$ -	\$ -	\$ -	\$ 3,040,500	\$ 5,491,481
Northport G. Martsen Dame Marina	\$ 124,259	\$ -	\$ 30,000	\$ -	\$ 2,679,050	\$ -	\$ -	\$ 15,000	\$ 2,848,309	\$ 5,144,362
Ontonagon Village Marina	\$ -	\$ -	\$ 90,000	\$ 1,200,000	\$ 487,000	\$ -	\$ 175,600	\$ -	\$ 1,952,600	\$ 3,526,613
Pentwater Municipal Marina	\$ -	\$ 108,997	\$ 24,000	\$ -	\$ 308,000	\$ -	\$ 32,700	\$ -	\$ 473,697	\$ 855,549
Petoskey City Marina	\$ -	\$ 420,000	\$ 60,000	\$ -	\$ 1,927,000	\$ -	\$ -	\$ -	\$ 2,407,000	\$ 4,347,310
Port Huron Fort Street Marina	\$ -	\$ -	\$ -	\$ -	\$ 237,000	\$ -	\$ 161,500	\$ -	\$ 398,500	\$ 719,735
Port Huron River Street Marina	\$ -	\$ 461,370	\$ -	\$ -	\$ 892,700	\$ -	\$ 225,000	\$ -	\$ 1,579,070	\$ 2,851,976
Port Sanilac Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 25,550	\$ 1,055,000	\$ 1,080,550	\$ 1,951,593
Rogers City Marina	\$ -	\$ 2,394,000	\$ 90,000	\$ -	\$ 1,627,300	\$ -	\$ 99,000	\$ -	\$ 4,210,300	\$ 7,604,270
Sault Ste. Marie Charles T. Harvey Marina	\$ -	\$ -	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,000	\$ 54,183
Sault Ste. Marie George Kemp Marina	\$ 59,738	\$ -	\$ -	\$ -	\$ 825,000	\$ -	\$ -	\$ -	\$ 884,738	\$ 1,597,934
Sebewaing Harbor Marina	\$ -	\$ -	\$ 282,000	\$ -	\$ 839,000	\$ -	\$ -	\$ -	\$ 1,121,000	\$ 2,024,651
South Haven Municipal Marina	\$ -	\$ -	\$ -	\$ -	\$ 1,106,180	\$ -	\$ 55,530	\$ -	\$ 1,161,710	\$ 2,098,177
St. Clair (Charles F. Moore) Boat Harbor	\$ 50,250	\$ 630,000	\$ 112,800	\$ -	\$ 1,095,760	\$ -	\$ 217,000	\$ 60,000	\$ 2,165,810	\$ 3,911,694
St. Ignace Municipal Marina	\$ -	\$ -	\$ -	\$ -	\$ 2,026,100	\$ -	\$ -	\$ -	\$ 2,026,100	\$ 3,659,362
St. Joseph West Basin Marina	\$ 136,350	\$ 105,000	\$ -	\$ -	\$ 1,285,700	\$ -	\$ 17,500	\$ 1,042,800	\$ 2,587,350	\$ 4,673,042
Suttons Bay Marina	\$ 640,500	\$ -	\$ -	\$ -	\$ 2,597,144	\$ -	\$ -	\$ -	\$ 3,237,644	\$ -
Traverse City Duncan L. Clinch Marina	\$ -	\$ 660,625	\$ 89,400	\$ -	\$ 1,119,400	\$ -	\$ 1,342,000	\$ 15,000	\$ 3,226,425	\$ 5,827,282
Trenton Elizabeth Park Marina	\$ -	\$ -	\$ -	\$ -	\$ 712,400	\$ -	\$ 40,720	\$ -	\$ 753,120	\$ 1,360,218
White Lake Municipal Marina - Whitehall	\$ -	\$ -	\$ -	\$ -	\$ 575,500	\$ -	\$ 77,625	\$ 640,000	\$ 1,293,125	\$ 2,335,528
Marquette Presque Isle Marina	\$ -	\$ -	\$ 60,000	\$ -	\$ 551,070	\$ -	\$ 24,000	\$ -	\$ 635,070	\$ 1,147,007
Suttons Bay Marina	\$ 640,500	\$ -	\$ -	\$ -	\$ 2,597,144	\$ -	\$ -	\$ -	\$ 3,237,644	\$ 5,847,545
Lake Erie Metropark Harbor	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Sites	19	26	31	4	51	0	39	13	55	56
Total Cost	\$ 9,219,749	\$ 17,617,847	\$ 3,407,200	\$ 2,960,000	\$ 48,192,588	\$ -	\$ 8,954,736	\$ 9,352,800	\$ 99,704,920	\$ 173,292,314

APPENDIX E – Total Cost Summaries per Facility Type



MICHIGAN STATE WATERWAYS PROGRAM
STATEWIDE FACILITIES ASSESSMENT - APPENDICES
Harbors, Boating Access Sites, and Lock & Dam Facilities

MDNR BAS Summary

Facility Name	0-5 Year	5-10 Year	10-20 Year	Cummulative Cost
Allegan Dam East BAS	\$ -	\$ 87,355	\$ -	\$ 87,355
Aloha State Park BAS	\$ 919,400	\$ 918,164	\$ 1,619,450	\$ 3,457,013
Au Gres River Mouth BAS	\$ 64,000	\$ 381,000	\$ 2,192,619	\$ 2,637,619
Au Sable River Mouth BAS	\$ 75,000	\$ 752,593	\$ 3,341,306	\$ 4,168,899
Austin Lake BAS	\$ -	\$ 937,785	\$ 430,758	\$ 1,368,542
Barton Lake BAS	\$ 111,000	\$ 564,445	\$ 424,436	\$ 1,099,881
Base Line Lake BAS	\$ -	\$ 73,915	\$ 364,600	\$ 438,515
Bay Port BAS	\$ 112,000	\$ 13,439	\$ 55,989	\$ 181,429
Belleville Lake East BAS	\$ 30,000	\$ 284,910	\$ 3,454,730	\$ 3,769,640
Belleville Lake West BAS	\$ 75,100	\$ 211,667	\$ 993,361	\$ 1,280,128
Benton Harbor BAS	\$ 96,613	\$ 375,512	\$ 564,194	\$ 1,036,320
Bergland Dock BAS	\$ -	\$ 143,127	\$ 202,284	\$ 345,412
Big Star Lake BAS	\$ 15,000	\$ 3,937,675	\$ 117,397	\$ 4,070,072
Bolles Harbor BAS	\$ 2,940,687	\$ 731,337	\$ 1,837,941	\$ 5,509,964
Bowers Harbor BAS	\$ 565,800	\$ 158,448	\$ 57,976	\$ 782,224
Brevort Lake BAS	\$ 111,000	\$ 189,176	\$ 55,150	\$ 355,326
Brimley State Park BAS	\$ -	\$ 241,905	\$ -	\$ 241,905
Burt Lake State Park BAS	\$ 1,260,000	\$ 89,774	\$ -	\$ 1,349,774
Caribou Lake BAS	\$ 15,000	\$ 14,783	\$ 310,651	\$ 340,434
Chippewa Lake BAS	\$ 32,000	\$ 33,867	\$ 343,161	\$ 409,028
Clinton River Cut-off BAS	\$ 45,000	\$ 3,780	\$ 2,754,026	\$ 2,802,806
Coldwater Lake BAS	\$ 15,000	\$ 1,154,962	\$ 138,348	\$ 1,308,310
Comins Flats BAS	\$ -	\$ 27,819	\$ 17,881	\$ 45,700
Copper Harbor BAS	\$ -	\$ -	\$ -	\$ -
Crystal Lake - North BAS	\$ 30,000	\$ 557,053	\$ 589,695	\$ 1,176,749
Crystal Lake BAS	\$ 60,000	\$ 51,433	\$ 6,345,010	\$ 6,456,443
De Tour Passage BAS	\$ 15,000	\$ 247,281	\$ 254,662	\$ 516,942
Deer Lake BAS	\$ 63,768	\$ 73,864	\$ 54,183	\$ 191,816
Devils Lake BAS	\$ 222,000	\$ 913,863	\$ 135,458	\$ 1,271,321
Diamond Lake BAS	\$ 111,000	\$ 147,831	\$ 78,024	\$ 336,855
Dodge #4 State Park - Cass Lake BAS	\$ -	\$ 696,632	\$ 3,464,194	\$ 4,160,826
Duck Lake BAS-Calhoun	\$ 30,000	\$ 886,348	\$ 275,493	\$ 1,191,841
Duck Lake BAS-Gogebic	\$ 15,000	\$ 181,496	\$ 82,946	\$ 279,442
Eagle Harbor BAS	\$ -	\$ -	\$ -	\$ -
East Arm BAS	\$ 399,800	\$ 31,582	\$ 374,226	\$ 805,608
East Bay Hubbard Lake BAS	\$ 222,000	\$ 701,256	\$ 109,667	\$ 1,032,923
East Lake Village Park BAS	\$ -	\$ 60,476	\$ 711,247	\$ 771,723
East Tawas BAS	\$ 367,500	\$ 1,191,463	\$ 2,704,652	\$ 4,263,614
Fair Haven BAS	\$ 172,950	\$ 161,539	\$ 1,708,401	\$ 2,042,889
Fillion Road BAS	\$ 943,400	\$ 42,669	\$ 56,622	\$ 1,042,691
Fletcher Pond BAS	\$ -	\$ 281,416	\$ 472,479	\$ 753,895
Ford River Mouth BAS	\$ 2,600	\$ 77,712	\$ 1,031,696	\$ 1,112,008
Garden Bay BAS	\$ 15,000	\$ 189,828	\$ 137,264	\$ 342,093
Greenwood Reservoir BAS	\$ 525	\$ 152,420	\$ 89,854	\$ 242,799
Grindstone City BAS	\$ 15,000	\$ 329,430	\$ 1,894,840	\$ 2,239,270
Half-moon Lake BAS	\$ 15,000	\$ 457	\$ 296,852	\$ 312,309
Halfway Creek BAS	\$ 201,075	\$ 61,559	\$ 57,651	\$ 320,286
Harley Ensign Memorial BAS	\$ 355,050	\$ 1,759,013	\$ 11,462,706	\$ 13,576,769
Harrisville BAS	\$ 333,000	\$ 1,599,798	\$ 404,388	\$ 2,337,186
High Rollway BAS	\$ 300,000	\$ 26,878	\$ 543,188	\$ 870,066
Hoffman Memorial BAS	\$ 490,910	\$ 645,523	\$ 153,556	\$ 1,289,989
Homestead Dam BAS	\$ -	\$ 144,471	\$ 82,178	\$ 226,649
Houghton Lake South BAS	\$ -	\$ 1,901,642	\$ 547,252	\$ 2,448,893
Houghton Lake West BAS	\$ 45,000	\$ 1,608,668	\$ 870,546	\$ 2,524,214

MDNR BAS Summary

Facility Name	0-5 Year	5-10 Year	10-20 Year	Cummulative Cost
Indian Lake State Park- South BAS	\$ 164,000	\$ 65,180	\$ 1,622,791	\$ 1,851,971
Jewell Road BAS	\$ -	\$ 73,915	\$ 692,192	\$ 766,108
Juno Lake BAS	\$ 63,000	\$ 188,148	\$ 71,341	\$ 322,490
Kipling BAS	\$ -	\$ 158,381	\$ 1,118,254	\$ 1,276,634
Klinger Lake BAS	\$ 111,000	\$ 416,614	\$ 54,183	\$ 581,797
Lac La Belle BAS	\$ -	\$ -	\$ -	\$ -
Lake Fenton BAS	\$ 30,000	\$ 271,471	\$ 1,221,383	\$ 1,522,854
Lake Gogebic- East BAS	\$ 92,000	\$ 234,849	\$ 65,472	\$ 392,321
Lake Gogebic State Park BAS	\$ 15,000	\$ 1,334,939	\$ 54,183	\$ 1,404,122
Lake Macatawa BAS	\$ 45,000	\$ 2,349,246	\$ 292,843	\$ 2,687,089
Lake Margrethe SFCG BAS	\$ -	\$ -	\$ -	\$ -
Lake Michigamme BAS	\$ 63,000	\$ 106,001	\$ 55,917	\$ 224,919
Lake Skegemog BAS	\$ 15,000	\$ 103,965	\$ 254,662	\$ 373,627
Lake St Helen BAS	\$ 959,000	\$ 1,236,403	\$ 1,031,290	\$ 3,226,693
Lily Pond BAS	\$ 15,000	\$ 142,455	\$ 349,663	\$ 507,118
Litte Lake Harbor BAS	\$ 30,000	\$ 255,848	\$ 108,367	\$ 394,215
Long Lake BAS	\$ 30,000	\$ 165,974	\$ 559,894	\$ 755,868
Ludington State Park BAS	\$ 15,000	\$ 1,993,431	\$ 1,206,482	\$ 3,214,913
Maple Island BAS	\$ -	\$ 342,699	\$ 180,611	\$ 523,310
Marble Lake BAS	\$ 15,000	\$ 1,220,948	\$ 125,299	\$ 1,361,247
Marine City BAS	\$ 30,000	\$ 352,644	\$ 111,256	\$ 493,900
Misery River Mouth BAS	\$ -	\$ 184,708	\$ -	\$ 184,708
Muskegon State Park - Snug Harbor BAS	\$ 333,000	\$ 356,138	\$ 198,672	\$ 887,810
Nahma BAS	\$ 15,000	\$ 327,916	\$ 145,139	\$ 488,055
New Bridge BAS	\$ -	\$ 13,439	\$ 4,064	\$ 17,503
Newaygo State Park - Hardy Dam Pond BAS	\$ 169,000	\$ 29,566	\$ 405,472	\$ 604,038
North Channel BAS	\$ 316,820	\$ 1,657,492	\$ 130,257	\$ 2,104,569
North Higgins Lake State Park BAS	\$ 70,000	\$ 149,175	\$ 494,874	\$ 714,049
Oman's Creek BAS	\$ 10,000	\$ 237,201	\$ 162,550	\$ 409,751
Orchard Lake BAS	\$ 30,000	\$ 215,027	\$ 1,432,806	\$ 1,677,833
Otsego Lake State Park BAS	\$ 30,000	\$ 13,439	\$ 2,287,259	\$ 2,330,698
Paw Paw East BAS	\$ -	\$ 77,275	\$ 86,693	\$ 163,969
Paw Paw West BAS	\$ -	\$ 13,439	\$ 270,917	\$ 284,356
Pigeon Lake BAS	\$ 45,000	\$ 416,614	\$ 162,550	\$ 624,164
Pine Street BAS	\$ -	\$ 13,439	\$ 1,005,101	\$ 1,018,540
Pontiac Lake BAS	\$ 30,000	\$ 271,639	\$ 110,399	\$ 412,038
Porcupine Mountains State Park - Union Bay BAS	\$ -	\$ -	\$ 1,517	\$ 1,517
Port Austin BAS	\$ -	\$ -	\$ -	\$ -
Portage Lake BAS-Jackson	\$ 229,300	\$ 1,116,311	\$ 126,383	\$ 1,471,993
Portage Lake BAS-Manistee	\$ 15,000	\$ 216,539	\$ 117,623	\$ 349,162
Portage Lake BAS-St Joseph	\$ 111,000	\$ 13,439	\$ 367,544	\$ 491,983
Portage Lake BAS-Washtenaw	\$ 15,000	\$ 13,439	\$ 254,662	\$ 283,101
Presque Isle BAS	\$ -	\$ -	\$ -	\$ -
Railroad Dock BAS	\$ 15,000	\$ 142,455	\$ 190,093	\$ 347,548
Rapid River Mouth BAS	\$ 15,000	\$ 312,629	\$ 729,859	\$ 1,057,487
Saginaw River Mouth BAS	\$ 46,500	\$ 60,342	\$ 1,101,276	\$ 1,208,118
Selfridge BAS	\$ 90,000	\$ 633,892	\$ 3,137,351	\$ 3,861,242
Sessions Lake BAS	\$ 1,056,000	\$ 74,023	\$ 2,168,634	\$ 3,298,657
Seul Choix Pointe BAS	\$ 131,750	\$ 218,722	\$ 224,048	\$ 574,520
Silver Lake State Park BAS	\$ -	\$ 134,392	\$ 1,002,392	\$ 1,136,783
Singing Bridge BAS	\$ -	\$ 176,053	\$ -	\$ 176,053
Sleepy Hollow State Park BAS	\$ 30,000	\$ 419,302	\$ 386,959	\$ 836,261
South Bay Hubbard Lake BAS	\$ 111,000	\$ 13,439	\$ 1,500,878	\$ 1,625,318

MDNR BAS Summary

Facility Name	0-5 Year	5-10 Year	10-20 Year	Cummulative Cost
South Higgins Lake State Park BAS	\$ 75,000	\$ 614,170	\$ 1,031,290	\$ 1,720,459
South Portage Entry BAS	\$ 1,080	\$ 195,352	\$ 119,854	\$ 316,285
Spider Lake BAS	\$ 15,000	\$ 87,287	\$ 254,662	\$ 356,949
Squaw Lake BAS	\$ 111,000	\$ 623,624	\$ 54,183	\$ 788,808
Sterling State Park Bartnik BAS	\$ 3,827,770	\$ 4,271,611	\$ 6,960,644	\$ 15,060,026
Stonington Farmer's Dock BAS	\$ 315,000	\$ 1,330,477	\$ 2,331,238	\$ 3,976,715
Straits State Harbor BAS	\$ -	\$ -	\$ -	\$ -
Stronach BAS	\$ 15,000	\$ -	\$ 254,662	\$ 269,662
Tahquamenon Falls - River Mouth BAS	\$ 15,000	\$ 84,667	\$ 54,183	\$ 153,850
The Forks BAS	\$ -	\$ 13,439	\$ 1,357,293	\$ 1,370,732
Thousand Island Lake BAS	\$ 15,000	\$ 233,169	\$ 254,662	\$ 502,831
Tippy Dam BAS	\$ -	\$ 739,154	\$ 374,046	\$ 1,113,200
Torch River BAS	\$ 15,000	\$ 201,923	\$ 54,183	\$ 271,107
Van Riper State Park BAS	\$ 15,000	\$ 13,977	\$ 1,492,823	\$ 1,521,800
Wamplers Lake BAS	\$ 998,250	\$ 13,439	\$ 108,367	\$ 1,120,056
West Higgins Lake BAS	\$ 45,000	\$ 26,878	\$ 821,781	\$ 893,659
Whitmore Lake BAS	\$ -	\$ 1,138,297	\$ 304,510	\$ 1,442,808
Wixom Lake - West BAS	\$ 52,700	\$ 124,379	\$ 588,792	\$ 765,872
Yankee Springs Recreation Area BAS	\$ 60,000	\$ 1,072,257	\$ 671,873	\$ 1,804,131

1. *Italics* signifies statistical outlier

GIA BAS Summary

Facility Name	0-5 Year	5-10 Year	10-20 Year	Cummulative Cost
I2th St. Municipal BAS	\$ 605,000	\$ 671,958	\$ 189,642	\$ 1,466,600
Alpena Municipal Marina BAS	\$ 15,000	\$ 13,439	\$ 1,089,085	\$ 1,117,524
Arvon Township Park BAS	\$ -	\$ 161,001	\$ 726,418	\$ 887,419
Benton Township River Park BAS	\$ -	\$ -	\$ -	\$ -
Black River Park BAS	\$ 1,599,500	\$ 1,087,632	\$ 519,257	\$ 3,206,389
Bluegill BAS	\$ 381,000	\$ 1,609,743	\$ 596,017	\$ 2,586,760
Boardman River BAS	\$ 316,800	\$ 113,158	\$ 673,679	\$ 1,103,637
Boyne City Municipal BAS	\$ 239,000	\$ 322,540	\$ 998,418	\$ 1,559,958
Brandenburg Memorial Park BAS	\$ 781,750	\$ 476,250	\$ 4,519,793	\$ 5,777,794
Bridgeton Township Park BAS	\$ -	\$ 628,415	\$ 372,059	\$ 1,000,474
Brower Park Marina BAS	\$ 35,000	\$ 301,037	\$ 665,552	\$ 1,001,589
Brown's Addition BAS	\$ 285,000	\$ -	\$ 884,995	\$ 1,169,995
Carronde Park BAS	\$ 30,000	\$ 258,032	\$ 3,106,511	\$ 3,394,543
Center Road BAS	\$ -	\$ -	\$ -	\$ -
Cheboygan County BAS	\$ 553,000	\$ -	\$ 1,643,561	\$ 2,196,561
Clinch Memorial BAS	\$ -	\$ -	\$ -	\$ -
Copeyon Park BAS	\$ 148,000	\$ 837,932	\$ 730,753	\$ 1,716,684
Dr. H. Belanger Park BAS	\$ -	\$ -	\$ -	\$ -
Ecorse Municipal BAS	\$ 569,500	\$ 208,307	\$ 54,183	\$ 831,990
Finn Road Park BAS	\$ -	\$ -	\$ -	\$ -
First Street BAS	\$ 5,412,000	\$ 164,630	\$ 496,681	\$ 6,073,310
Ford Lake BAS	\$ 294,000	\$ 3,832,850	\$ 108,367	\$ 4,235,216
Frankfort Municipal BAS	\$ -	\$ -	\$ -	\$ -
Gallup Park BAS	\$ 109,620	\$ 1,865,786	\$ 3,178,286	\$ 5,153,692
Giddings Street Ramp BAS	\$ -	\$ -	\$ -	\$ -
Gladstone BAS	\$ -	\$ -	\$ -	\$ -
Grand Haven Municipal BAS	\$ -	\$ -	\$ -	\$ -
Grand Trunk BAS	\$ -	\$ -	\$ -	\$ -
Harbor Beach BAS	\$ -	\$ -	\$ -	\$ -
Harbor Springs BAS	\$ -	\$ -	\$ -	\$ -
Hartshorn Municipal Marina BAS	\$ -	\$ -	\$ -	\$ -
Hellenburg Field BAS	\$ 1,708,500	\$ 93,238	\$ 921,915	\$ 2,723,653
Henning Park BAS	\$ -	\$ 1,632,858	\$ 14,864	\$ 1,647,723
Holloway Reservoir BAS	\$ 635,000	\$ 4,519,322	\$ 270,917	\$ 5,425,239
Howard Dunton Park BAS	\$ -	\$ -	\$ -	\$ -
Howard Schultz Park BAS	\$ 17,800	\$ 295,258	\$ 1,791,662	\$ 2,104,721
I-94 Bridge BAS	\$ 478,000	\$ 852,043	\$ 108,367	\$ 1,438,410
Imerman Park BAS	\$ -	\$ -	\$ -	\$ -
Independence County Park BAS	\$ -	\$ 1,493,091	\$ 2,437,347	\$ 3,930,438
Ionia Fairground BAS	\$ -	\$ -	\$ -	\$ -
Johnson Park BAS	\$ 15,000	\$ 64,508	\$ 596,017	\$ 675,525
Kenwood Park BAS	\$ 127,000	\$ 919,373	\$ 54,183	\$ 1,100,557
Kollen Park BAS	\$ -	\$ -	\$ -	\$ -
Lake Antoine County Park BAS	\$ 773,560	\$ 1,904,007	\$ 488,517	\$ 3,166,084
Lake Lansing Park - North BAS	\$ 15,000	\$ 963,588	\$ 189,642	\$ 1,168,230
L'anse Village Dock BAS	\$ -	\$ -	\$ -	\$ -
Loomis Street BAS	\$ -	\$ 241,905	\$ -	\$ 241,905
Mackinaw City Municipal Marina BAS	\$ -	\$ -	\$ -	\$ -
Marina Island BAS	\$ 717,000	\$ 1,108,731	\$ 189,642	\$ 2,015,373
Marquette City BAS	\$ -	\$ -	\$ -	\$ -

GIA BAS Summary

Facility Name	0-5 Year	5-10 Year	10-20 Year	Cummulative Cost
Metro Beach Metro Park West BAS	\$ 60,000	\$ 205,619	\$ 1,356,390	\$ 1,622,009
Mill Point Park BAS	\$ 815,000	\$ 182,773	\$ 130,040	\$ 1,127,813
Missaukee County Park BAS	\$ -	\$ -	\$ -	\$ -
Montague - Roesler Park BAS	\$ -	\$ -	\$ -	\$ -
New Buffalo BAS	\$ -	\$ -	\$ -	\$ -
North Shore BAS	\$ 971,000	\$ 26,878	\$ 1,011,242	\$ 2,009,120
Northport Marina BAS	\$ -	\$ -	\$ -	\$ -
Ontonagon Municipal BAS	\$ -	\$ -	\$ -	\$ -
Paris County Park BAS	\$ -	\$ -	\$ -	\$ -
Pinconning BAS	\$ 239,000	\$ 1,620,763	\$ 99,336	\$ 1,959,099
Prairieville Township Park BAS	\$ 222,000	\$ 565,789	\$ 5,909,596	\$ 6,697,385
Quincy-Marble Lake BAS	\$ -	\$ -	\$ -	\$ -
Reid/St. Jean BAS	\$ -	\$ 329,260	\$ 1,213,707	\$ 1,542,966
River Oaks County Park BAS	\$ 20,180	\$ 483,810	\$ 4,117,428	\$ 4,621,418
Riverside Park BAS	\$ -	\$ 602,075	\$ -	\$ 602,075
Rogers City BAS	\$ -	\$ -	\$ -	\$ -
Rust Avenue BAS	\$ -	\$ -	\$ -	\$ -
Sandy Beach BAS	\$ -	\$ -	\$ -	\$ -
Sanford County Park BAS	\$ 242,100	\$ 31,246	\$ 214,566	\$ 487,912
Shamrock Park BAS	\$ 9,000	\$ 361,346	\$ 770,532	\$ 1,140,878
St Joseph Riverview Park BAS	\$ -	\$ 218,386	\$ 12,643	\$ 231,029
St. Clair Municipal BAS	\$ -	\$ -	\$ -	\$ -
Stafford County Park BAS	\$ -	\$ -	\$ -	\$ -
Stony Creek Metro Park BAS	\$ <i>1,993,000</i>	\$ 178,203	\$ 742,312	\$ 2,913,515
Veterans Memorial Park BAS	\$ -	\$ -	\$ -	\$ -
Whitewater Township Park BAS	\$ 80,000	\$ 311,130	\$ 611,369	\$ 1,002,499
Wyandotte Municipal BAS	\$ -	\$ 759,313	\$ -	\$ 759,313

Notes: 1. *Italics* signifies statistical outlier

MDNR Harbor Summary

Facility Name	0-5 Year	5-10 Year	10-20 Year	Cummulative Cost
Au Gres State Harbor (refuge)	\$ -	\$ -	\$ -	\$ -
Cedar River State Harbor	\$ 712,463	\$ 1,777,035	\$ 6,536,807	\$ 9,026,305
Copper Harbor State Harbor	\$ 579,615	\$ 1,534,537	\$ 3,225,760	\$ 5,339,912
De Tour State Harbor	\$ 22,320	\$ 1,472,798	\$ 5,837,541	\$ 7,332,659
Eagle Harbor State Harbor	\$ 105,000	\$ 1,132,922	\$ 545,446	\$ 1,783,367
East Tawas State Harbor	\$ 10,000	\$ 124,984	\$ 8,270,590	\$ 8,405,574
Fayette State Harbor	\$ 181,050	\$ 559,096	\$ 1,761,193	\$ 2,501,339
Grayhaven State Harbor	\$ 1,114,930	\$ 1,218,395	\$ 673,463	\$ 3,006,787
Hammond Bay State Harbor	\$ 214,000	\$ 2,010,902	\$ 1,665,235	\$ 3,890,137
Lac La Belle State Harbor	\$ 82,050	\$ 111,545	\$ 1,679,828	\$ 1,873,423
Lexington State Harbor	\$ 2,105,322	\$ 3,363,016	\$ 1,976,947	\$ 7,445,285
Lime Island State Harbor	\$ 882,975	\$ 1,137,289	\$ 2,022,845	\$ 4,043,109
Little Lake State Harbor	\$ 110,000	\$ 203,603	\$ 252,856	\$ 566,459
Mackinac Island State Harbor	\$ 2,286,353	\$ 256,097	\$ 3,016,748	\$ 5,559,197
Milliken State Harbor	\$ -	\$ -	\$ -	\$ -
Port Austin State Harbor	\$ 38,000	\$ 2,260,575	\$ <i>14,867,438</i>	\$ 17,166,013
Presque Isle State Harbor	\$ 2,030,938	\$ 3,676,606	\$ 5,027,040	\$ 10,734,583
Straits State Harbor	\$ 275,000	\$ 2,627,357	\$ <i>10,265,846</i>	\$ 13,168,202
Whitefish Point State Harbor	\$ 572,900	\$ 124,984	\$ 181,514	\$ 879,398

Notes: I. *Italics* signifies statistical outlier

GIA Harbor Summary

Facility Name	0-5 Year	5-10 Year	10-20 Year	Cummulative Cost
Alpena Municipal Marina	\$ 2,457,535	\$ 3,751,045	\$ 5,234,896	\$ 11,443,476
Arcadia Veterans Memorial Marina	\$ 733,200	\$ 2,457,351	\$ 1,186,615	\$ 4,377,166
Baraga Municipal Marina	\$ 636,800	\$ 411,121	\$ 739,603	\$ 1,787,523
Bay City Liberty Harbor Marina	\$ -	\$ -	\$ -	\$ -
Beaver Island Municipal Marina	\$ 242,750	\$ 2,122,783	\$ 309,387	\$ 2,674,920
Big Bay Harbor - Marquette County	\$ 467,860	\$ 952,219	\$ 2,774,006	\$ 4,194,085
Bois Blanc Island Marina	\$ 28,000	\$ 450,817	\$ 1,089,130	\$ 1,567,947
Boyne City F. Grant Moore Municipal Marina	\$ 1,440,306	\$ 1,629,814	\$ 2,006,587	\$ 5,076,708
Caseville Municipal Harbor	\$ 2,558,900	\$ 2,812,400	\$ 2,808,051	\$ 8,179,352
Cedarville Marina - Clark Township	\$ -	\$ -	\$ -	\$ -
Charlevoix City Marina	\$ -	\$ 1,484,641	\$ 4,455,586	\$ 5,940,227
Cheboygan County Marina	\$ 3,027,763	\$ 2,737,558	\$ 2,512,301	\$ 8,277,621
Cheboygan Municipal Marina	\$ 588,000	\$ 653,834	\$ 959,083	\$ 2,200,917
Detroit Erma Henderson Park Marina	\$ -	\$ 1,198,689	\$ -	\$ 1,198,689
East Jordan City Marina	\$ 1,531,925	\$ 1,474,847	\$ 1,507,245	\$ 4,514,017
Elk Rapids Edward C. Grace Memorial Harbor	\$ 531,530	\$ 2,895,992	\$ 8,536,133	\$ 11,963,655
Elmwood Township Marina - Greilickville	\$ 1,269,248	\$ 6,831,433	\$ 3,383,388	\$ 11,484,068
Escanaba Municipal Marina	\$ 1,273,377	\$ 1,593,213	\$ 7,297,084	\$ 10,163,673
Frankfort Municipal Marina	\$ 791,175	\$ 3,283,819	\$ 3,168,867	\$ 7,243,862
Harbor Beach Marina	\$ 1,277,000	\$ 1,982,922	\$ 4,830,210	\$ 8,090,131
Harbor Springs Municipal Marina	\$ 620,000	\$ 732,811	\$ 642,064	\$ 1,994,874
Harrisville Harbor	\$ 48,867	\$ 1,100,936	\$ 7,843,110	\$ 8,992,913
Hessel Marina - Clark Township	\$ 2,120,520	\$ 1,136,045	\$ 2,228,199	\$ 5,484,764
Houghton City Marina	\$ 127,000	\$ 8,063	\$ 102,948	\$ 238,012
Houghton County Marina - Hancock	\$ 692,500	\$ 2,431,817	\$ 3,741,359	\$ 6,865,676
L'Anse Municipal Marina	\$ 433,200	\$ 174,239	\$ 480,064	\$ 1,087,503
Lake Erie Metropark Harbor	\$ -	\$ -	\$ -	\$ -
Leland Township Harbor	\$ 45,000	\$ 1,213,120	\$ 9,831,725	\$ 11,089,844
Ludington Harbor View Marina	\$ -	\$ 922,263	\$ -	\$ 922,263
Ludington Municipal Marina	\$ 1,405,362	\$ 3,498,483	\$ 4,251,586	\$ 9,155,431
Mackinaw City Municipal Marina	\$ 769,100	\$ 3,578,917	\$ 4,367,899	\$ 8,715,916
Manistee Harbor	\$ -	\$ -	\$ -	\$ -
Manistique Muncpal Marina	\$ -	\$ 20,159	\$ 2,107,325	\$ 2,127,484
Marquette Cinder Pond Marina	\$ 1,876,025	\$ 1,239,897	\$ 3,301,391	\$ 6,417,313
Marquette Presque Isle Marina	\$ 3,275,400	\$ -	\$ -	\$ 3,275,400
Menominee Marina	\$ -	\$ -	\$ -	\$ -
Metro Beach Metropark Marina	\$ 7,058,000	\$ 22,388,269	\$ 4,117,166	\$ 33,563,435
Munising Bayshore Marina	\$ 776,520	\$ 2,169,484	\$ 2,079,195	\$ 5,025,199
Muskegon Hartshorn Marina	\$ 2,519,074	\$ 4,577,850	\$ 5,515,502	\$ 12,612,426
Naubinway Garfield Township Marina	\$ 128,709	\$ 640,027	\$ 388,133	\$ 1,156,869
New Buffalo Municipal Marina	\$ 1,583,238	\$ 671,958	\$ 5,491,481	\$ 7,746,677
Northport G. Martsen Dame Marina	\$ 953,524	\$ 1,250,639	\$ 5,144,362	\$ 7,348,525
Ontonagon Village Marina	\$ 1,753,939	\$ 1,310,695	\$ 3,526,613	\$ 6,591,247
Pentwater Municipal Marina	\$ 698,576	\$ 542,033	\$ 855,549	\$ 2,096,158
Petoskey City Marina	\$ 1,848,060	\$ 1,870,894	\$ 4,347,310	\$ 8,066,264
Port Huron Fort Street Marina	\$ 287,500	\$ -	\$ 719,735	\$ 1,007,235
Port Huron River Street Marina	\$ 983,530	\$ 1,433,126	\$ 2,851,976	\$ 5,268,632

GIA Harbor Summary

Facility Name	0-5 Year	5-10 Year	10-20 Year	Cummulative Cost
Port Sanilac Harbor	\$ 1,109,960	\$ 63,433	\$ 1,951,593	\$ 3,124,986
Rogers City Marina	\$ 7,868,175	\$ 8,221,136	\$ 7,604,270	\$ 23,693,581
Sault Ste. Marie Charles T. Harvey Marina	\$ 246,322	\$ 138,155	\$ 54,183	\$ 438,660
Sault Ste. Marie George Kemp Marina	\$ 10,392	\$ 1,613,960	\$ 1,597,934	\$ 3,222,286
Sebewaing Harbor Marina	\$ 2,372,110	\$ 4,191,554	\$ 2,024,651	\$ 8,588,315
South Haven Municipal Marina	\$ 2,245,144	\$ 3,853,782	\$ 2,098,177	\$ 8,197,104
St. Clair (Charles F. Moore) Boat Harbor	\$ 681,862	\$ 4,196,399	\$ 3,911,694	\$ 8,789,955
St. Ignace Municipal Marina	\$ 1,187,844	\$ 691,529	\$ 3,659,362	\$ 5,538,735
St. Joseph West Basin Marina	\$ 985,873	\$ 2,572,284	\$ 4,673,042	\$ 8,231,199
Suttons Bay Marina	\$ 737,225	\$ -	\$ -	\$ 737,225
Traverse City Duncan L. Clinch Marina	\$ 933,750	\$ 4,169,618	\$ 5,827,282	\$ 10,930,651
Trenton Elizabeth Park Marina	\$ 609,400	\$ 2,851,119	\$ 1,360,218	\$ 4,820,737
White Lake Municipal Marina - Whitehall	\$ 1,282,625	\$ 198,732	\$ 2,335,528	\$ 3,816,884
Marquette Presque Isle Marina	\$ 3,275,400	\$ 2,105,917	\$ 1,147,007	\$ 6,528,324
Suttons Bay Marina	\$ 737,225	\$ 2,216,387	\$ 5,847,545	\$ 8,801,157
Lake Erie Metropark Harbor	\$ -	\$ -	\$ -	\$ -

Notes: 1. *Italics* signifies statistical outlier

APPENDIX F – USACE Structures Cost Estimate



MICHIGAN STATE WATERWAYS PROGRAM
STATEWIDE FACILITIES ASSESSMENT - APPENDICES
Harbors, Boating Access Sites, and Lock & Dam Facilities

USACE Structures						
Facility Name	Structure Type	LF	Cost 5 Year	Cost 10 Year	Cost 20 Year	Total
Au Gres River Mouth BAS	Rock Revetment Shoreline	8800	\$ 4,400,000	\$ 9,240,000	\$ 12,320,000	\$ 25,960,000
Au Sable River Mouth BAS	Steel Sheet Pile Wall	2400	\$ 1,680,000	\$ 2,520,000	\$ 3,360,000	\$ 7,560,000
Big Bay Harbor - Marquette County	Steel Sheet Pile Wall	400	\$ 280,000	\$ 420,000	\$ 560,000	\$ 1,260,000
Big Bay Harbor - Marquette County	Rock Revetment Offshore Breakwater	250	\$ 312,500	\$ 175,000	\$ 262,500	\$ 750,000
Big Bay Harbor - Marquette County	Steel Sheet Pile Single	680	\$ 1,088,000	\$ -	\$ -	\$ 1,088,000
Big Bay Harbor - Marquette County	Caisson	270	\$ 540,000	\$ 283,500	\$ 378,000	\$ 1,201,500
Cedar River State Harbor	Rock Revetment Offshore Breakwater	1435	\$ -	\$ -	\$ 200,900	\$ 200,900
De Tour State Harbor	Rock Revetment Offshore Breakwater	1300	\$ 1,397,500	\$ 773,500	\$ 1,228,500	\$ 3,399,500
East Tawas State Harbor	Caisson	2000	\$ 4,000,000	\$ 2,100,000	\$ 2,800,000	\$ 8,900,000
Hammond Bay State Harbor	Rock Revetment Offshore Breakwater	2000	\$ 10,000,000	\$ -	\$ -	\$ 10,000,000
Harley Ensign Memorial BAS	Rock Revetment Shoreline	4890	\$ 24,450	\$ 11,981	\$ 25,673	\$ 62,103
Harley Ensign Memorial BAS	Rock Revetment Offshore Breakwater	1385	\$ -	\$ 193,900	\$ 484,750	\$ 678,650
Harrisville BAS	Rock Revetment Shoreline	525	\$ 144,375	\$ 385,875	\$ 569,625	\$ 1,099,875
Harrisville Harbor	Rock Revetment Offshore Breakwater	2937	\$ 7,342,500	\$ 2,569,875	\$ 3,495,030	\$ 13,407,405
Hoffman Memorial BAS	Rock Revetment Offshore Breakwater	468	\$ 585,000	\$ 327,600	\$ 491,400	\$ 1,404,000
Leland Township Harbor	Rock Revetment Offshore Breakwater	1575	\$ 1,968,750	\$ 1,102,500	\$ 1,653,750	\$ 4,725,000
Leland Township Harbor	Steel Sheet Pile Double	25	\$ 31,250.00	\$ 17,500	\$ 26,250	\$ 75,000
New Buffalo Municipal Marina	Rock Revetment Offshore Breakwater	800	\$ 400,000	\$ 280,000	\$ 560,000	\$ 1,240,000
Port Austin State Harbor	Rock Revetment Shoreline	1377	\$ 344,250	\$ 963,900	\$ 1,445,850	\$ 2,754,000
Port Austin State Harbor	Caisson	2432	\$ 2,918,400	\$ 1,872,640	\$ 2,723,840	\$ 7,514,880
South Haven Municipal Marina	Steel Sheet Pile Wall	2020	\$ 1,272,600	\$ 1,060,500	\$ 1,414,000	\$ 3,747,100
South Haven Municipal Marina	Steel Sheet Pile Double	2290	\$ 5,438,750.00	\$ 2,123,975	\$ 2,885,400	\$ 10,448,125
South Portage Entry BAS	Concrete Wall	405	\$ 324,000	\$ -	\$ -	\$ 324,000
Whitefish Point State Harbor	Steel Sheet Pile Single	520	\$ 416,000	\$ -	\$ -	\$ 416,000
Whitefish Point State Harbor	Caisson	780	\$ 780,000	\$ 546,000	\$ 819,000	\$ 2,145,000

Notes: 1. 5-10 and 10-20 Year Costs do not include escalation factor and are based on today's costs

2. Costs do not include Mobilization, General Conditions, Design, Permitting, or Contingency costs

APPENDIX G – Unit Rates



MICHIGAN STATE WATERWAYS PROGRAM
STATEWIDE FACILITIES ASSESSMENT - APPENDICES
Harbors, Boating Access Sites, and Lock & Dam Facilities

Item	Price	Unit	Notes
Docks			
<i>Decking</i>			
Timber	\$ 10	SF	Assumes Southern Yellow Pine or Treated Timber. MDNR/GIA recent pricing.
Composite	\$ 14	SF	MDNR/GIA recent pricing. Adjusted for material cost.
Concrete	\$ 15	SF	Concrete sidewalk. Adjusted with with RS Means for pumped placement. MDNR/GIA recent pricing.
<i>Framing</i>			
Timber frame & Timber Piles	\$ 60	SF	MDNR/GIA recent pricing. Adjusted for material types.
Timber frame & Steel Piles	\$ 70	SF	MDNR/GIA recent pricing. Adjusted for material types.
Steel frame & Steel Piles	\$ 75	SF	MDNR/GIA recent pricing. Adjusted for material types.
Steel Frame & Timber Piles	\$ 67	SF	MDNR/GIA recent pricing. Adjusted for material types.
Timber Crib	\$ 125	SF	Assumes 10' water depth. Estimate.
Steel Crib	\$ 150	SF	Assumes 10' water depth. Estimate.
Steel Sheet Pile Crib	\$ 200	SF	Assumes 10' water depth. Municipal recent pricing.
<i>Construction Floating Docks</i>			
Timber	\$ 75	SF	MDNR/GIA recent pricing.
Steel	\$ 55	SF	Municipal recent pricing.
Aluminum	\$ 65	SF	Municipal recent pricing.
Monolithic Concrete	\$ 100	SF	Municipal recent pricing.
<i>Harbor Walls</i>			
Steel Sheet Pile Crib	\$ 2,200	LF	Assumes 14' height and 30' sheets. MDNR/GIA recent pricing.
SSP w/ Timber Fendering	\$ 1,800	LF	Assumes 14' height and 30' sheets. MDNR/GIA recent pricing.
Concrete Panel Wall	\$ 800	LF	Assumes 14' height and 30' walls. Estimate.
CPW w/ Timber Fendering	\$ 1,800	LF	Assumes 14' height and 30' walls. Estimate.
<i>Decking along Harbor Wall</i>			
Concrete	\$ 15	SF	MDNR/GIA recent pricing. Adjusted with RS Means for Pumped Placement.
Asphalt	\$ 8	SF	Municipal recent pricing. Adjusted for difficult placement.
Shoreline & Breakwater Structures			
Steel Sheet Pile Wall	\$ 1,400	LF	Assumes 14' height and 30' sheets. MDNR/GIA recent pricing.
Concrete Panel Wall	\$ 800	LF	Assumes 14' height and 30' walls. Estimate.
Rock Revetment Shoreline	\$ 1,000	LF	Assumes 12' total heights. MDNR/GIA recent pricing.
Rock Revetment Offshore	\$ 5,000	LF	Assumes 15' total height. Municipal recent pricing.
Steel Sheet Pile Single	\$ 1,600	LF	Assumes 35' sheets. MDNR/GIA recent pricing.
Steel Sheet Pile Double	\$ 5,000	LF	Assumes 35' sheets and 6' wide. MDNR/GIA recent pricing.
Caisson	\$ 4,000	LF	Assumes 16' width, concrete and steel construction, and 30' sheets. Estimate.
Floating Wave Attenuator	\$ 1,500	LF	Assumes 10' width. Municipal recent pricing.
Boat Launch			
<i>Ramp Material + Piers</i>			
CIP Concrete Paving	\$ 70	SF	Includes Dewatering. Estimate.
Planks	\$ 30	SF	Includes Demo. MDNR/GIA recent pricing.
Gravel	\$ 8	SF	Estimate.
Skid Pier	\$ 15,000	EA	MDNR/GIA recent pricing.
Fixed Pier	\$ 15,000	EA	Assumes 5' by 30'. Estimate.
Floating Pier	\$ 15,000	EA	Assumes 5' by 30'. Estimate.
Paddle Sport			
Platform	\$ 45	SF	Assumes EZ Dock construction.
Dredging			
Dredge	\$ 40	CY	MDNR emergency dredge pricing escalated from 2013 cost.
Utilities			
<i>ESP</i>			
ESDGFPs Upgrade	\$ 5,000	/SLIP	Assumes rewiring. MDNR/GIA recent pricing.
20 amp duplex	\$ 3,000	EA	Installed pedestal cost.
Single 30 amp	\$ 3,000	EA	Installed pedestal cost.
Twin 30 amp	\$ 3,000	EA	Installed pedestal cost.
30/50 amp	\$ 3,500	EA	Installed pedestal cost.
Twin 50 amp	\$ 3,500	EA	Installed pedestal cost.
100 amp	\$ 5,000	EA	Installed pedestal cost.
Dock Box single 30	\$ 2,000	EA	Installed pedestal cost.
Dock Box Twin 30	\$ 2,500	EA	Installed pedestal cost.
Dock Box 30/50	\$ 3,000	EA	Installed pedestal cost.

Item	Price	Unit	Notes
Dock Box Twin 50	\$ 3,500	EA	Installed pedestal cost.
Pot Water system	\$ 800	/SLIP	Installed pedestal cost.
Hose Bibs & vacuum breaker	\$ 12	/SLIP	Installed pedestal cost.
Wifi	\$ 5,000	EA	Wifi in buildings only. (Not Wifi on docks)
Dry Fire Standpipe	\$ 800	/SLIP	MDNR/GIA recent pricing.
Wet Fire Hydrant	\$ 1,000	/SLIP	Estimate.
Compressors	\$ 1,800	/SLIP	MDNR/GIA recent pricing.
Flow Inducer	\$ 1,000	EA	MDNR/GIA recent pricing.
Fuel System			
Fuel Dock - Fixed	\$ 150	SF	MDNR/GIA recent pricing.
Fuel Dock - Floating	\$ 100	SF	MDNR/GIA recent pricing.
Fuel Dock - Harbor wall	\$ 70	SF	Estimate.
Dispensers	\$ 15,000	EA	MDNR/GIA recent pricing.
Fuel Lines	\$ 100	LF	MDNR/GIA recent pricing.
Above ground single	\$ 50,000	EA	Assumes tank cost only. Estimate.
Above ground dual	\$ 60,000	EA	Assumes tank cost only. Estimate.
Below Ground Single	\$ 100,000	EA	Assumes tank cost only. Estimate.
Below Ground Double	\$ 120,000	EA	Assumes tank cost only. Estimate.
Pump Out	\$ 35,000	EA	MDNR/GIA recent pricing.
Collection System Hull Wash Down	\$ 100,000	EA	Only one facility has it and we did not ask about the age or condition - not used in cost estimate. For reference only.
Haul Out Services			
Lift Well	\$ 500,000	EA	Assumes pile supported and includes travel lift. Estimate.
Hydraulic trailer	\$ 100,000	EA	Product quote. Estimate.
Boat Storage	\$ 50	SF	Building price. Not used in cost estimate. For reference only.
PWC Racks	-	-	-
Forklift	\$ 75,000	EA	Not used in cost estimate. For reference only.
Parking			
Asphalt	\$ 10	SF	Municipal recent pricing.
Concrete	\$ 7	SF	Municipal recent pricing.
Gravel /Unpaved	\$ 5	SF	Municipal recent pricing.
Landscape Maintenance	\$ 1	SF	Municipal recent pricing.
Ped Walkways			
Concrete	\$ 10	SF	Municipal recent pricing.
Asphalt	\$ 7	SF	Municipal recent pricing.
Unit Paver	\$ 30	SF	Municipal recent pricing.
Gravel	\$ 5	SF	Municipal recent pricing.
Building	\$ 400	SF	Municipal recent pricing.
Picnic Shelter	\$ 15,000	EA	Municipal recent pricing.
Vault Toilet	\$ 10,000	EA	Municipal recent pricing.

APPENDIX H – Sample Calculations



MICHIGAN STATE WATERWAYS PROGRAM
STATEWIDE FACILITIES ASSESSMENT - APPENDICES
Harbors, Boating Access Sites, and Lock & Dam Facilities

Calculations Sheet

I. GENERAL

Age dependent replacement:

$$(\% \text{ Age group indicating replacement from the appropriate matrix}) * \text{Total Units} * \text{Unit Cost} = \text{Replacement Cost}$$

Condition dependent replacement:

0-5 Year

$$\% \text{ Replacement} * \text{Total Units} * \text{Unit Cost} = \text{Cost Replacement}$$

5-10 Year

$$\% \text{ Functional} * \text{Total Units} * \text{Unit Cost} = \text{Cost Replacement}$$

10-20 Year

$$\% \text{ Very Good} * \text{Total Units} * \text{Unit Cost} = \text{Cost Replacement}$$

2. DOCKS

$\text{Slip Amount} / 2 * 3 \text{ feet (assumed finger pier width)} * \text{Slip Size} = \text{SF Finger Piers}$

$\text{Length} * \text{Width Main Piers} = \text{SF Main Pier}$

$\text{SF Fingers} + \text{Main Pier} = \text{Total SF}$

$\text{Percentage of Age Group needing replacement} * \text{Total SF} * \text{Unit Cost of Materials} = \text{Replacement Cost}$

3. SHORELINE AND BREAKWATER STRUCTURES

For 50+ Year Life Span Structures:

$$\text{Total LF} * \text{Adjusted Unit Price} = \text{Replacement/Maintenance Cost}$$

For 0-5 Year:

Replacement

$$\% \text{ Owned By Facility} * \% \text{ Replacement} * \text{Unit Cost} = \text{Adjusted Unit Price}$$

Type A

$$\% \text{ Owned By Facility} * \% \text{ Functional Condition} * (\% \text{ 20-30 years} * 10\% + \% \text{ 30-40 years} * 25\% + \% \text{ 40+ years} * 50\%) * \text{Unit Cost} = \text{Adjusted Unit Price}$$

Type B

$$\% \text{ Owned By Facility} * \% \text{ Very Good Condition} * (\% \text{ 30-40 years} * 10\% + \% \text{ 40+ years} * 25\%) * \text{Unit Cost} = \text{Adjusted Unit Price}$$

For 5-10 Year:

Type A

$$\% \text{ Owned By Facility} * \% \text{ Functional Condition} * (\% \text{ 10-20 years} * 10\% + \% \text{ 20-30 years} * 25\% + \% \text{ 30-40 years} * 50\% + \% \text{ 40+ years} * 75\%) * \text{Unit Cost} = \text{Adjusted Unit Price}$$

Type B

$$\% \text{ Owned By Facility} * \% \text{ Very Good Condition} * (\% \text{ 20-30 years} * 10\% + \% \text{ 30-40 years} * 25\% + \% \text{ 40+ years} * 50\%) * \text{Unit Cost} = \text{Adjusted Unit Price}$$

For 10-20 Year:

Type A

% Owned By Facility * % Functional Condition * (% <10 years * 10% + % 10-20 years * 25% + % 20-30 years * 50% + % 30-40 years * 75% + 40+ years * 100%) * Unit Cost = Adjusted Unit Price

Type B

% Owned By Facility * % Very Good Condition * (% 10- 20 years* 10% + % 20-30 years * 25% + % 30-40 years * 50% + % 40+ years * 75%) * Unit Cost = Adjusted Unit Price

For 20-30 Year Life Span Structures:

Single Sheet Pile Offshore Breakwater & Floating Wave Attenuator

0-5 Year

% Owned by Facility * % Replace * Total LF * Unit Cost = Replacement Cost

IF % Replace = 0, % 20-30 Year * Total LF * Unit Cost = Replacement Cost

5-10 Year

% Owned by Facility * % 10-20 Year * Total LF * Unit Cost = Replacement Cost

10-20 Year

% Owned by Facility * % <10 Year * Total LF * Unit Cost = Replacement Cost

4. BOAT LAUNCH

Total SF = Amount Launch Lanes * 20' assumed width / Lane * 80' assumed length

5. FUTURE VALUE

FV= Cost Today * (1+Rate) ^ n

5-10 year

FV= Cost Today * (1.03) ^ 10

10-20 year

FV= Cost Today * (1.03) ^ 20

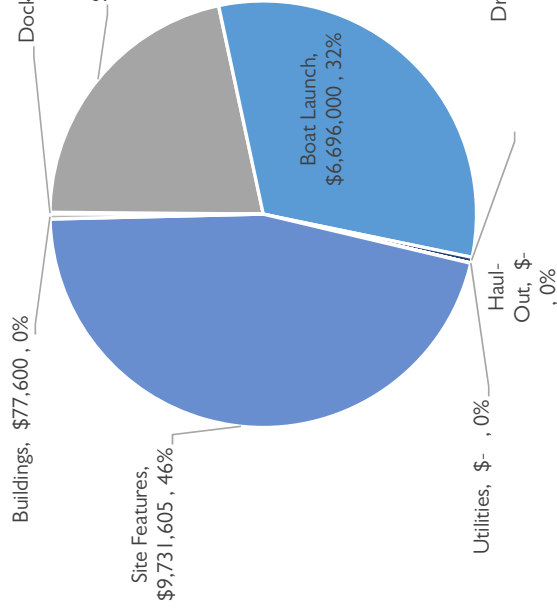
APPENDIX I – Supplemental Charts and Tables



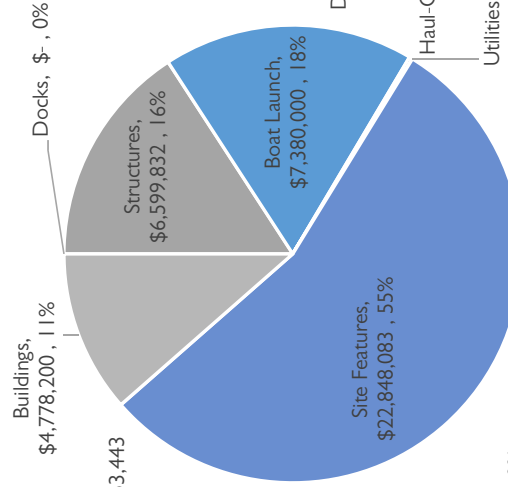
MICHIGAN STATE WATERWAYS PROGRAM
STATEWIDE FACILITIES ASSESSMENT - APPENDICES
Harbors, Boating Access Sites, and Lock & Dam Facilities

MDNR BAS Cost Categories

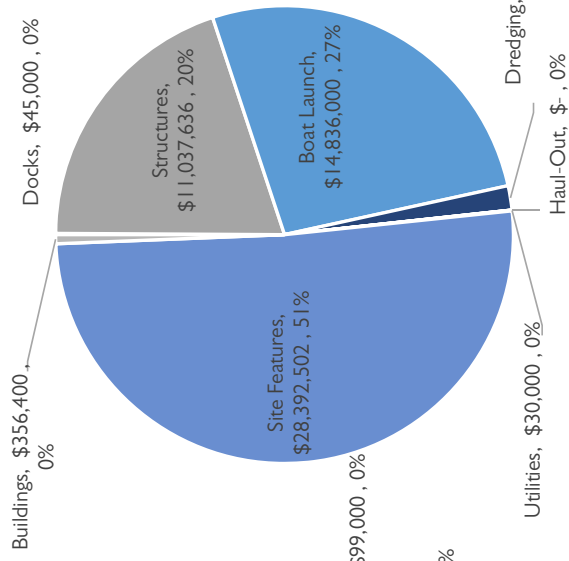
5 Years



10 Years

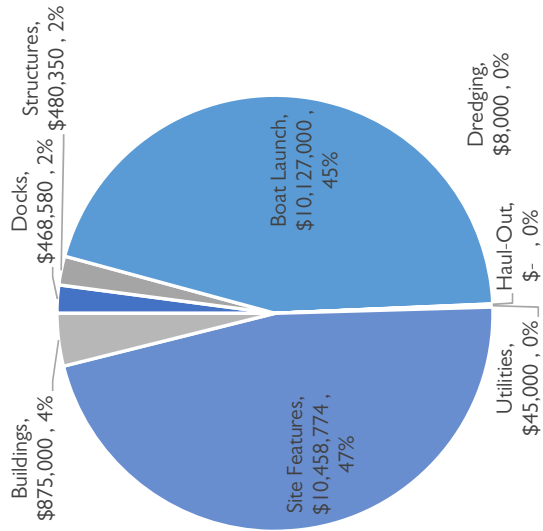


20 Years

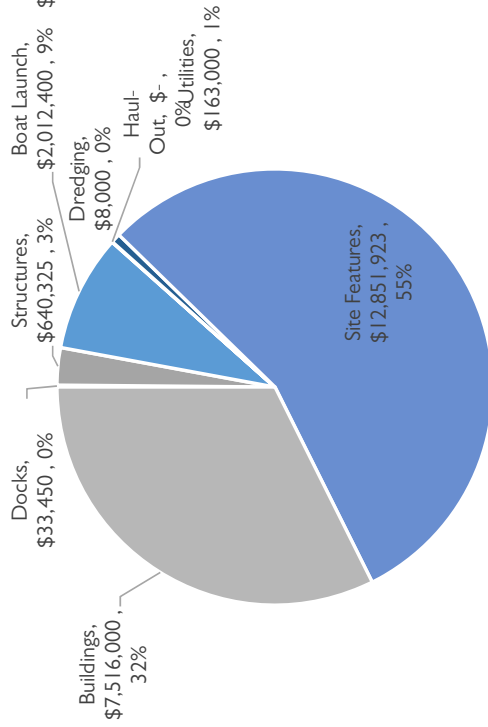


GIA BAS Cost Categories

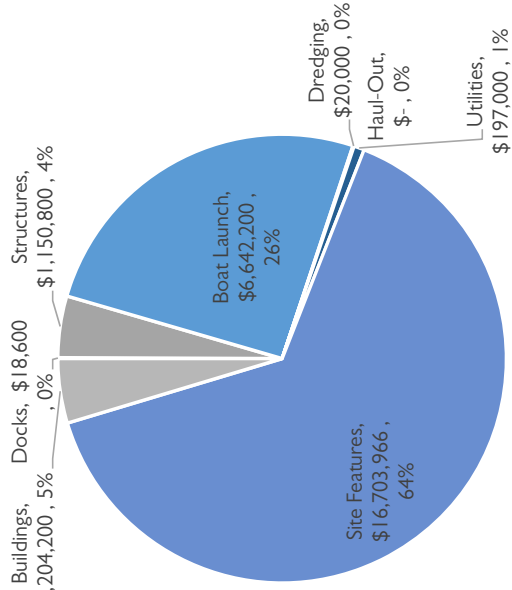
5 Years



10 Years

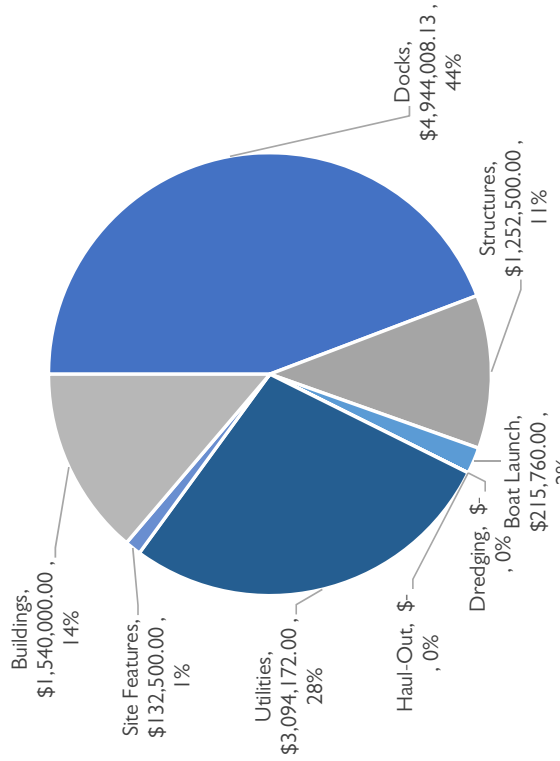


20 Years

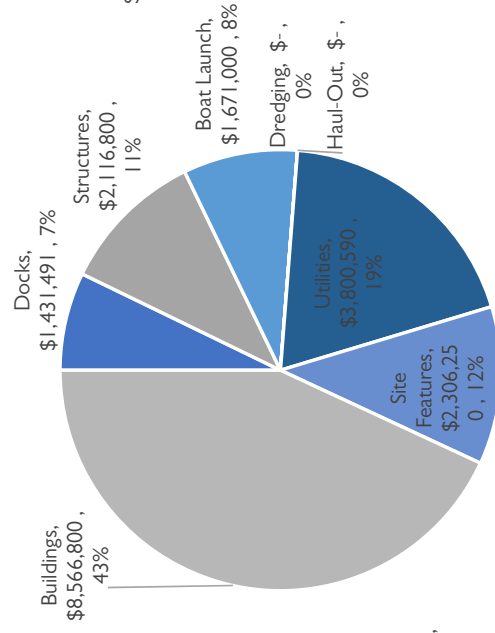


MDNR Harbor Cost Categories

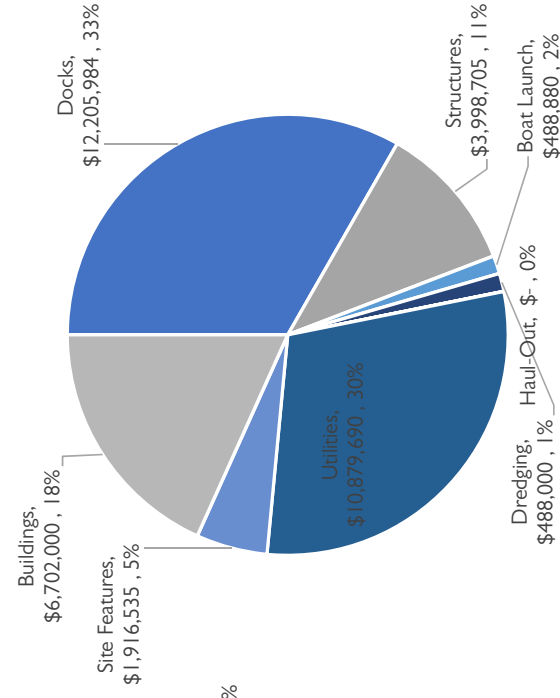
5 Years



10 Years

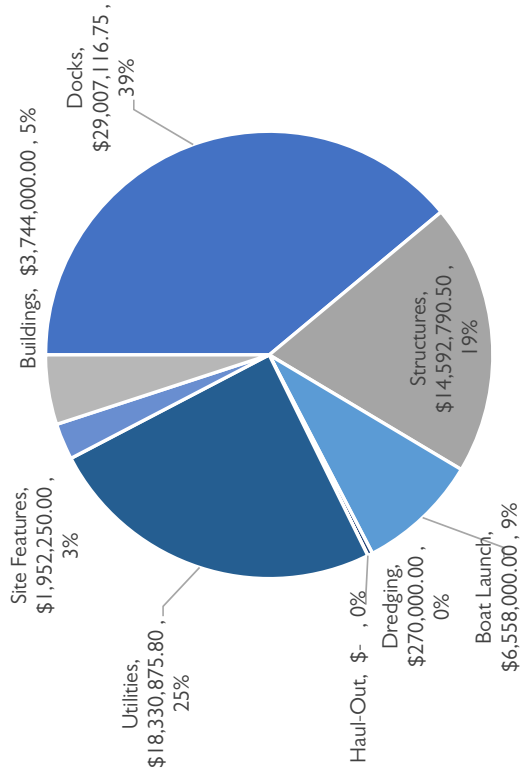


20 Years

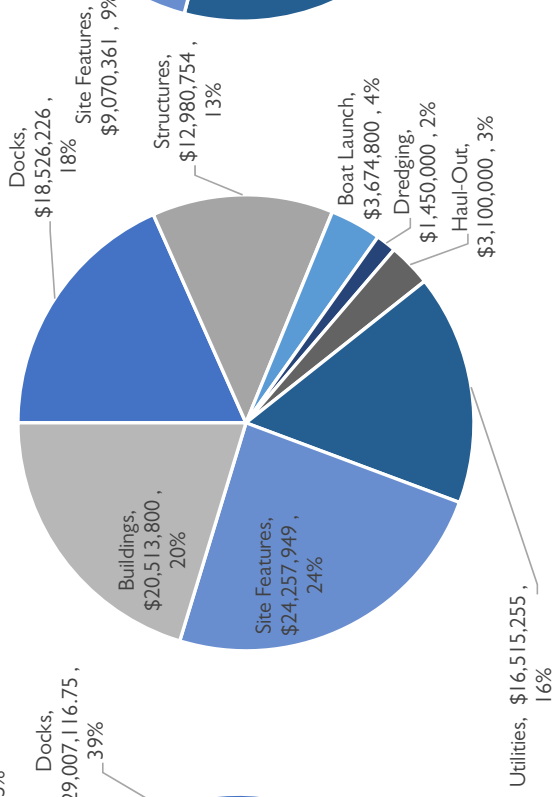


GIA Harbor Cost Categories

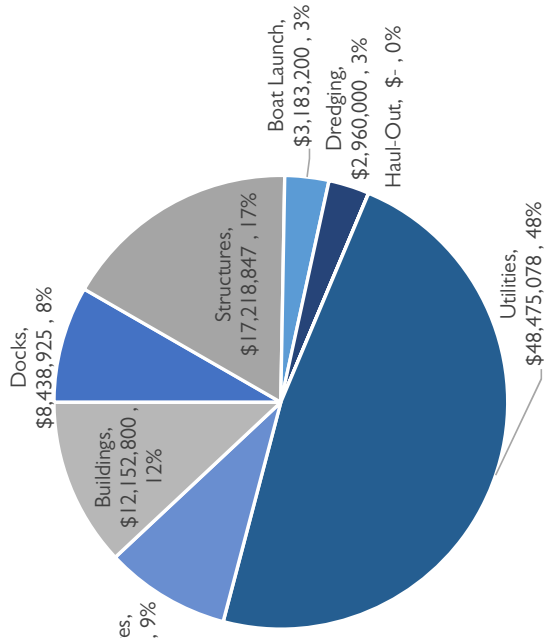
5 Years



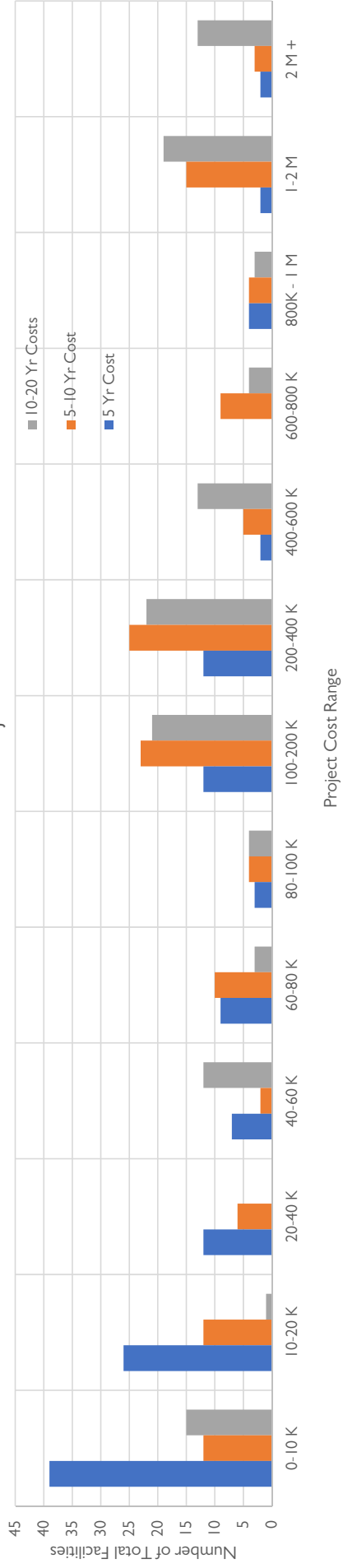
10 Years



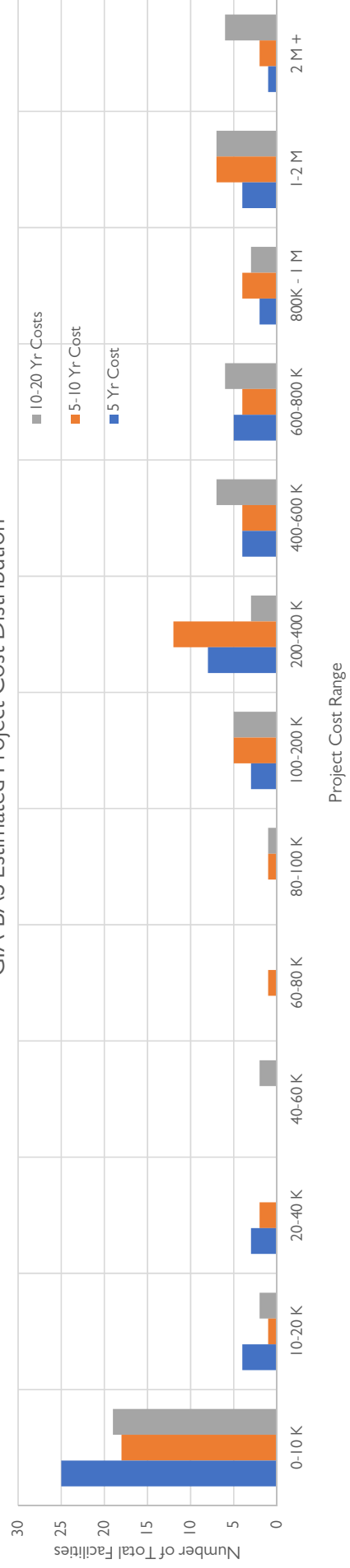
20 Years



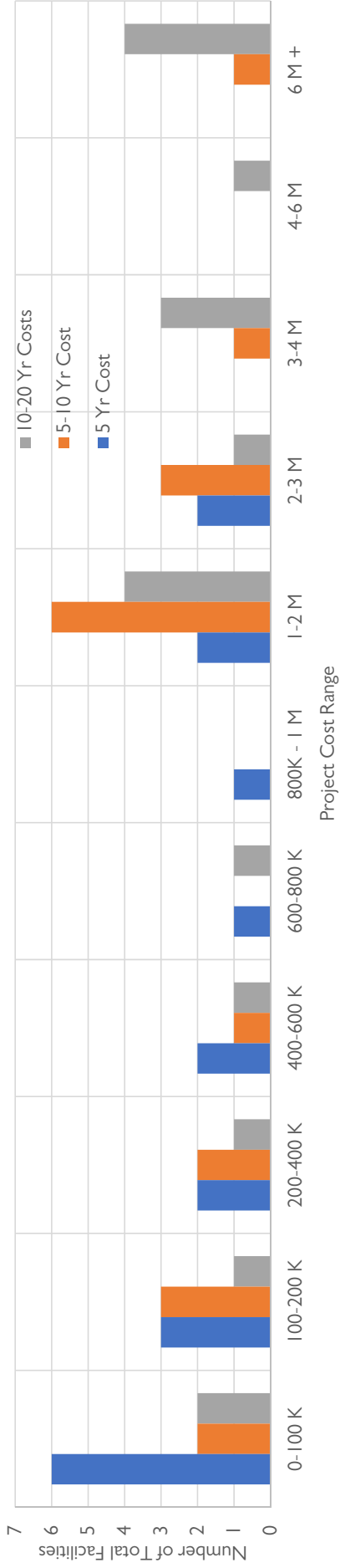
MDNR-BAS Estimated Project Cost Distribution



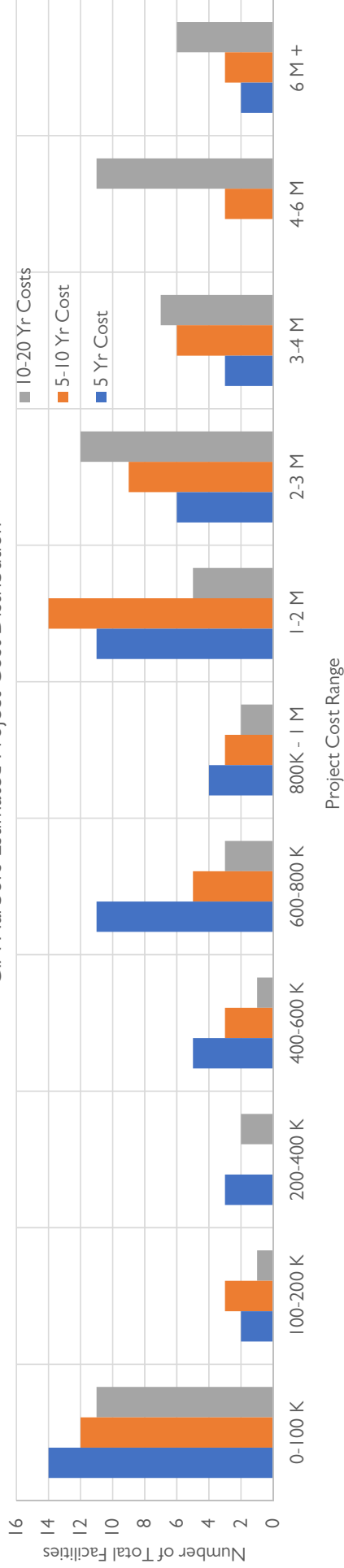
GIA-BAS Estimated Project Cost Distribution



MDNR Harbors Estimated Project Cost Distribution



GIA Harbors Estimated Project Cost Distribution



Structure Type	USACE Owned						Total Cost
	No. of Facilities	Total LF	0-5 Year Cost	5-10 Year Cost	10-20 Year Cost	Total Cost	
Steel Sheet Pile Wall	3	4,820	\$ 3,232,600	\$ 4,000,500	\$ 5,334,000	\$ 12,567,100	
Concrete Wall	1	405	\$ 324,000	\$ -	\$ -	\$ 324,000	
Rock Revetment Shoreline	4	15,592	\$ 4,913,075	\$ 10,601,756	\$ 14,361,148	\$ 29,875,978	
Rock Revetment Offshore Breakwater	9	10,150	\$ 22,006,250	\$ 5,472,375	\$ 8,376,830	\$ 35,805,455	
Steel Sheet Pile Single	2	1,200	\$ 5,470,000	\$ -	\$ -	\$ 5,470,000	
Steel Sheet Pile Double	2	2,315	\$ 5,470,000	\$ 2,141,475	\$ 2,911,650	\$ 10,523,125	
Caisson	4	5,482	\$ 8,238,400	\$ 4,802,140	\$ 6,720,840	\$ 19,761,380	
Floating Wave Attenuator	0	-	\$ -	\$ -	\$ -	\$ -	
					Total	\$ 114,327,038	

Structure Type	Other Local Gov't Owned						Total Cost
	No. of Facilities	Total LF	0-5 Year Cost	5-10 Year Cost	10-20 Year Cost	Total Cost	
Steel Sheet Pile Wall	1	750	\$ 288,750	\$ 354,375	\$ 472,500	\$ 1,115,625	
Concrete Wall	0	-	\$ -	\$ -	\$ -	\$ -	
Rock Revetment Shoreline	2	2,865	\$ 1,115,000	\$ 1,925,000	\$ 2,800,000	\$ 5,840,000	
Rock Revetment Offshore Breakwater	0	-	\$ -	\$ -	\$ -	\$ -	
Steel Sheet Pile Single	1	325	\$ 520,000	\$ -	\$ -	\$ 520,000	
Steel Sheet Pile Double	0	-	\$ -	\$ -	\$ -	\$ -	
Caisson	1	320	\$ 1,280,000	\$ 1,280,000	\$ 1,280,000	\$ 3,840,000	
Floating Wave Attenuator	1	300	\$ -	\$ 450,000	\$ -	\$ 450,000	
				Total		\$ 11,765,625	

Structure Type	Other Owned						Total Cost
	No. of Facilities	Total LF	0-5 Year Cost	5-10 Year Cost	10-20 Year Cost	Total Cost	
Steel Sheet Pile Wall	1	400	\$ 560,000	\$ -	\$ -	\$ 560,000	
Concrete Wall	2	576	\$ 130,803	\$ 343,077	\$ 459,217	\$ 933,097	
Rock Revetment Shoreline	2	1,250	\$ -	\$ 24,920	\$ 151,900	\$ 176,820	
Rock Revetment Offshore Breakwater	1	280	\$ 350,000	\$ 196,000	\$ 294,000	\$ 840,000	
Steel Sheet Pile Single	0	-	\$ -	\$ -	\$ -	\$ -	
Steel Sheet Pile Double	0	-	\$ -	\$ -	\$ -	\$ -	
Caisson	0	-	\$ -	\$ -	\$ -	\$ -	
Floating Wave Attenuator	0	-	\$ -	\$ -	\$ -	\$ -	
				Total		\$ 2,509,917	

Element	Life Span
Fixed Docks	30-40
Floating Docks	20-30
Steel Sheet Pile Wall	50+
Concrete Panel Wall	50+
Rock Revetment Shoreline	50+
Rock Revetment Offshore Breakwater	50+
Steel Sheet Pile Single Wall Offshore Breakwater	20-30
Steel Sheet Pile Double Wall Offshore Breakwater	50+
Caisson Offshore Breakwater	50+
Floating Wave Attenuator	20-30
Boat Launch - CIP Concrete	X
Boat Launch - Concrete Planks	X
Boat Launch - Gravel	X
Skid Pier	10-20
Kayak Launch	10-20
Travel Lift Haul-Out System	20-30
Hydraulic Trailer Haul-Out System	20-30
Electrical Shore Power Pedestals	X
Potable Water System	X
Wi-Fi System	X
Dry Standpipe Fire Suppression System	X
Wet Fire Hydrant System	X
Ice Suppression System - Compressor Driven	X
Flow Inducers	X
Fuel System	20-30
Sanitary Pump-out System	10-20
Parking & Approach (Asphalt, Gravel, Concrete)	X
Landscaping	X
Walkways	X
Picnic Shelter	20-30
Vault Toilet	10-20
Buildings	20-30

Notes:

1. X = Based on Today's Condition not Age
2. Elements in need of replacement trump the age in the cost estimate calculations

30-40 Year Life Span				
Cost Estimate Projection	Age Group			
	<10	10-20	20-30	30-40
0-5 Year				40+
5-10 Year			Replace	
10-20 Year		Replace		

20-30 Year Life Span				
Cost Estimate Projection	Age Group			
	<10	10-20	20-30	30-40
0-5 Year			Replace	40+
5-10 Year		Replace		
10-20 Year	Replace			

10-20 Year Life Span				
Cost Estimate Projection	Age Group			
	<10	10-20	20-30	30-40
0-5 Year		Replace		40+
5-10 Year	Replace			
10-20 Year				

50 Year Life Span- Type A1				
Cost Estimate Projection	Age Group			
	<10	10-20	20-30	30-40
0-5 Year			10%	40+
5-10 Year		10%	25%	50%
10-20 Year	10%	25%	50%	75%
				100%

50 Year Life Span- Type B2				
Cost Estimate Projection	Age Group			
	<10	10-20	20-30	30-40
0-5 Year				40+
5-10 Year			10%	25%
10-20 Year		10%	25%	50%
				75%
				100%

Notes:

1. Type A- Functional Condition Today
2. Type B- Very Good Condition Today

Conditional Assessment			
Cost Estimate Projection	Today's Condition		
	Replace	Functional	Very Good
0-5 Year	Replace		
5-10 Year	Replace		
10-20 Year		Replace	
			Replace

Average Overall Project Cost per Slip or Lane for BAS or Harbor facilities only (excludes combined facilities)

Facility Type	0-5 Year	5-10 Year	10-20 Year	Cummulative Projected
GIA BAS (Avg Cost/Lane)	\$ 80,410	\$ 80,175	\$ 70,352	\$ 230,937
MDNR BAS (Avg Cost/Lane)	\$ 33,217	\$ 66,739	\$ 69,229	\$ 169,185
BAS Overall (Avg Cost/Lane)	\$ 50,917	\$ 109,970	\$ 119,240	\$ 280,126
GIA Harbors (Avg Cost/Slip)	\$ 8,352	\$ 9,274	\$ 22,797	\$ 40,422
MDNR Harbors (Avg Cost/Slip)	\$ 9,675	\$ 11,914	\$ 15,234	\$ 36,822
Harbors Overall (Avg Cost/Slip)	\$ 12,176	\$ 19,961	\$ 18,960	\$ 51,098

Average Isolated Cost per Slip or Lane

Facility Type	0-5 Year	5-10 Year	10-20 Year	Cummulative Projected
GIA BAS (Avg Cost/Lane)	\$ 74,739	\$ 58,618	\$ 37,897	\$ 171,254
MDNR BAS (Avg Cost/Lane)	\$ 25,108	\$ 50,258	\$ 38,312	\$ 113,678
BAS Overall (Avg Cost/Lane)	\$ 44,000	\$ 53,073	\$ 38,157	\$ 135,231
GIA Harbors (Avg Cost/Slip)	\$ 10,230	\$ 5,863	\$ 9,950	\$ 26,042
MDNR Harbors (Avg Cost/Slip)	\$ 7,884	\$ 8,073	\$ 27,778	\$ 43,736
Harbors Overall (Avg Cost/Slip)	\$ 9,700	\$ 6,271	\$ 13,850	\$ 29,821

Note:

The isolated costs only account for BAS infrastructure i.e. launch ramp and piers and Dock infrastructure i.e. docks and marina utilities. An inflation factor was not applied. This data excludes outlier data.

Total Projected Costs per Facility Type

Facility Type	No. of Facilities	0-5 Year Total Cost	5-10 Year Total Cost	10-20 Year Total Cost	10-20 Year Total Cost	Cummulative Projected Cost (0-20 Years)
GIA BAS	62	\$ 14,735,540	\$ 20,381,934	\$ 33,268,744	\$ 98,981,907	
MDNR BAS	130	\$ 17,000,827	\$ 50,104,917	\$ 82,097,465	\$ 177,840,004	
BAS Total	192	\$ 31,736,367	\$ 70,486,851	\$ 115,366,209	\$ 276,821,911	
GIA Harbors	56	\$ 55,877,477	\$ 95,963,292	\$ 152,557,858	\$ 376,333,334	
MDNR Harbors	19	\$ 8,978,978	\$ 15,027,204	\$ 37,646,771	\$ 102,721,751	
Harbors Total	75	\$ 64,856,454	\$ 110,990,496	\$ 190,204,629	\$ 479,055,085	
Total	267	\$ 96,592,822	\$ 181,477,348	\$ 305,570,838	\$ 755,876,997	

USACE Dredge Costs							
Facility Name	0-5 Year		5-10 Year		10-20 Year		Total
	Quantity (CY)	COST	Quantity (CY)	COST	Quantity (CY)	COST	
Big Bay Harbor - Marquette County	13,500	\$ 540,000	13,500	\$ 540,000	27,000	\$ 1,080,000	\$ 1,134,000
Clinton River Cut-off BAS	80	\$ 3,200	500	\$ 20,000	1,000	\$ 40,000	\$ 24,780
Eagle Harbor State Harbor	-	\$ -	3,995	\$ 159,800	3,995	\$ 159,800	\$ 167,790
Lac La Belle State Harbor	-	\$ -	7,500	\$ 300,000	7,500	\$ 300,000	\$ 315,000
Leland Township Harbor	14,250	\$ 570,000	118,750	\$ 4,750,000	237,500	\$ 9,500,000	\$ 5,690,500
South Higgins Lake State Park BAS	5,400	\$ 216,000	4,500	\$ 180,000	9,000	\$ 360,000	\$ 414,900
Whitefish Point State Harbor	700	\$ 28,000	-	\$ -	-	\$ -	\$ 28,700

APPENDIX J - Lock & Dam Assessments



MICHIGAN STATE WATERWAYS PROGRAM
STATEWIDE FACILITIES ASSESSMENT - APPENDICES
Harbors, Boating Access Sites, and Lock & Dam Facilities

Crooked River Lock – Alanson, MI



Site Summary

This facility is located in Alanson, MI along Michigan’s Inland Waterway. This structure was originally built by the USACE in efforts to regulate water levels within Crooked Lake. Critical mechanical and electrical repairs were last completed in 2010. Operations of the lock were later transferred to the MDNR under a lease agreement. In 2012, Emmet County became responsible for operational management of the lock operations, but the facility is still owned by MDNR. The County’s Parks and Recreation Department currently handles the management of the lock. This lock has a concrete approach, seawalls, concrete walls, and infrastructure related to the lock including railing, gates, the operation building, and operating machinery.

In discussion with County staff, the following items are deemed immediate needs (within the next 5 years) of the facility:

1. Potable water well is non-functional, this water source provides drinking water to staff and a hose connection to facilitate cleaning of the lock gates annually.
2. The building at the lock needs to be repainted.
3. There are no permanent bathrooms available to staff, staff currently uses an outdated portable toilet.
4. One of the arms on the southern lock gate is cracked and needs to be welded.
5. There are no means for users to stop at the lock if needed, nor any amenities.

Projected Cost Estimate

Preliminary 0-5 Year Cost Estimate			
Item	Description	Cost	Notes
1	Water Well Repairs	\$1,400	Assumes existing well can be repaired with jetting and new pump
2	Repaint Building	\$500	Assumes building dimensions are 16x12x8
3	New Portable Toilet	\$1,500	Assumes 1 new portable toilet for staff is warranted
4	Gate Arm Repair	\$1,000	Assumes landside access to repair area
5	Boater Accomodations	\$35,000	Assumes a skid pier, vault toilet, and small picnic shelter at road end is warranted
Total		\$39,400	

Cheboygan Lock and Dam – Cheboygan, MI



Site Summary

This facility is integral to Michigan’s Inland Waterway in Cheboygan, MI. It is owned and operated by MDNR. The lock is approximately 20’ wide and infrastructure elements include concrete walkways, seawalls, concrete walls, and infrastructure related to the lock including railing, gates, the operation building, and operating machinery. There are no restrooms or parking areas on site. Dredge quantities could not be quantified, but it should be noted that MDNR is responsible to maintain navigation depths. All of the infrastructure is functioning, but requires general improvements due to aging infrastructure, safety, and to better accommodate recreational boaters.

Projected Cost Estimate

A Phase 100 Study was completed in 2014 by Bergmann Associates for this site. An update to that study is currently being performed but is yet to be published. The 2014 Phase 100 study included future renovation recommendations of the facility. These recommendations were noted as near future renovations (within two years) the time the report was issued in 2014. The recommendations are listed below along with the estimated pricing, as reported in the study.

Table 1.5. Lock Renovation Work Item Costs		
Item	Description	Bare Cost
L1	Concrete Rehabilitation & Resurfacing	\$ 825,000
L2	Gate Leaf Removal & Setting	\$ 100,000
L3	Miter Gates Clean & Paint	\$ 80,000
L4	Miter Gate Seals	\$ 91,000
L5	Miter Gate Walkways & Railing Upgrades	\$ 22,500
L6	Bypass Valves Rehabilitation	\$ 75,000
L7	Operating Machinery	\$ -
L8	Cofferdam Systems, U/S & D/S	\$ 94,000
L9	Lower Approach Wall Reconstruction (west side only)	\$ 200,000
L10	Lock Wall Safety Improvements	\$ 70,000
L11	Sill Timber Replacement	\$ 67,500
L12	Pintles and Bushings Replacement	\$ 40,000
L13	Gate Anchorages Improvements	\$ 30,000
L14	Fill Scour Hole Downstream of Lock	\$ 45,000
L15	Bridge Retrofit	\$ 70,000
Bare Cost Subtotal =		\$ 1,810,000
Mobilization (8%) =		\$ 145,000
Winter Covering/Tenting and Heating of Lock =		\$ 60,000
Preliminary Design Level Estimating Contingency (25%) =		\$ 453,000
Assumed Engineering Design Fee (20%) =		\$ 362,000
Construction Contingency (10%) =		\$ 181,000
Extended Total =		\$ 3,011,000
Budgetary Project Cost Total (Rounded) =		\$ 3,000,000

By assuming an average inflation rate of 1.62% from 2014-2019, budgetary project cost of \$3,000,000 in 2014 would equate to approximately \$3,250,000 in 2019.

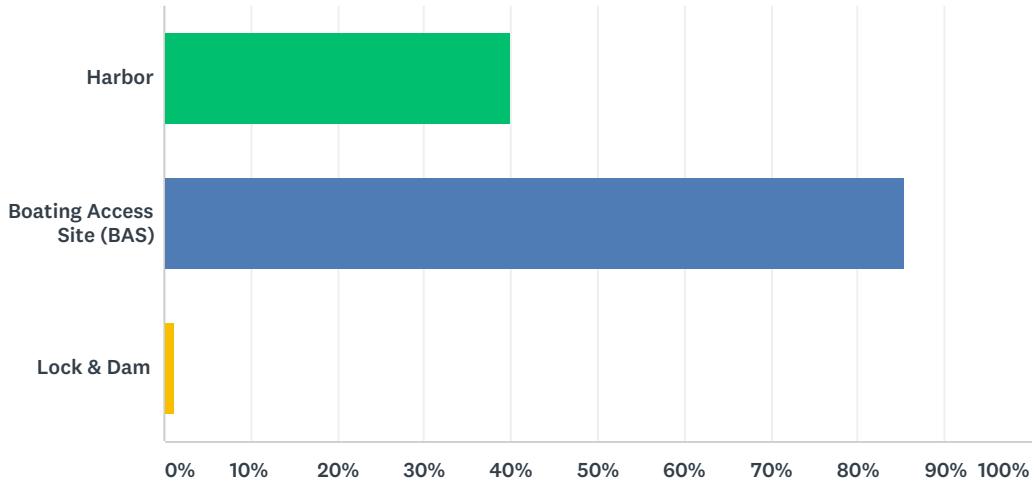
APPENDIX K – MDNR Operator Trends Survey



MICHIGAN STATE WATERWAYS PROGRAM
STATEWIDE FACILITIES ASSESSMENT - APPENDICES
Harbors, Boating Access Sites, and Lock & Dam Facilities

Q1 Does your facility include (check all that apply). Please answer all questions regarding Harbor, BAS or Lock & Dam facilities on following pages.

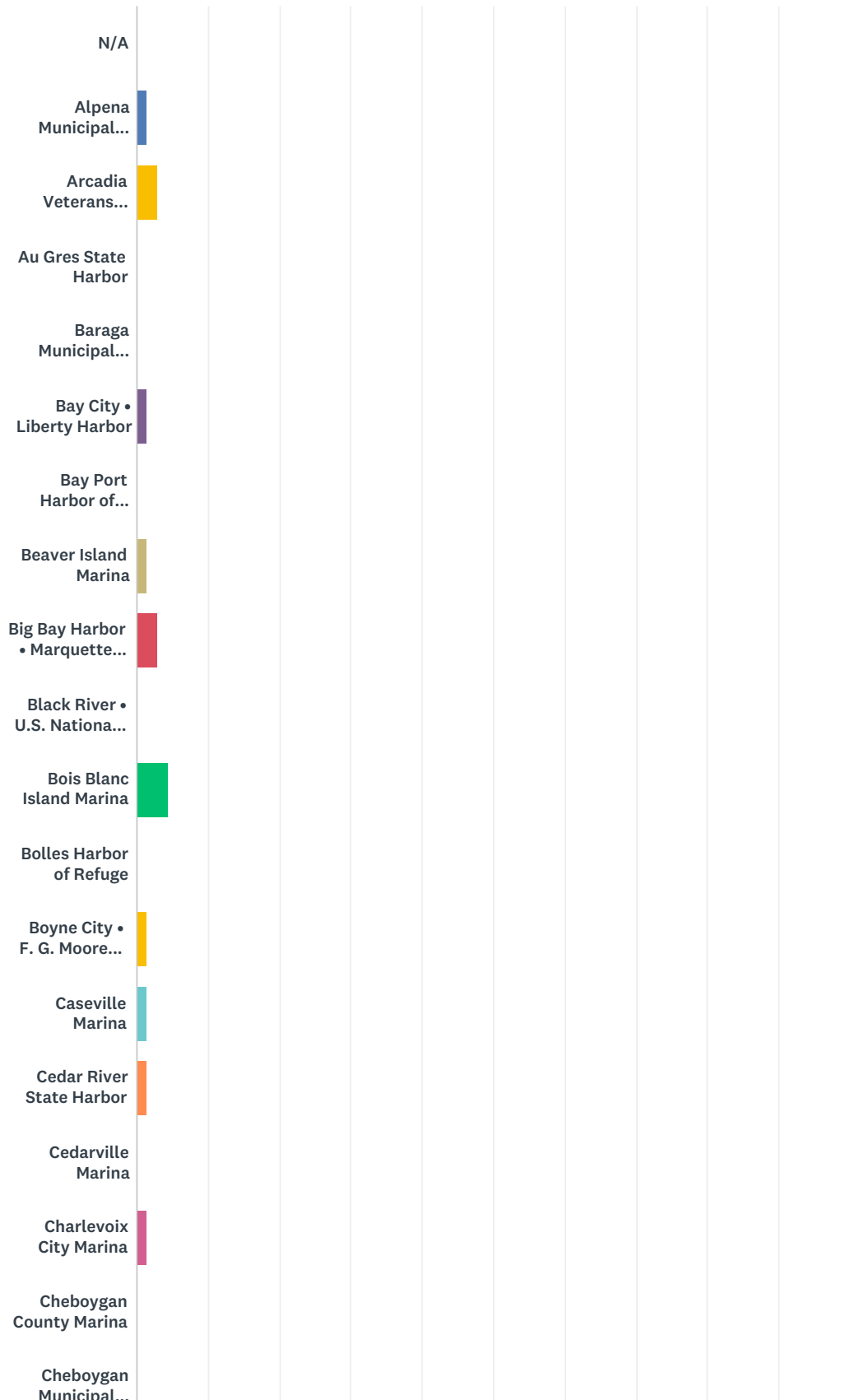
Answered: 225 Skipped: 0



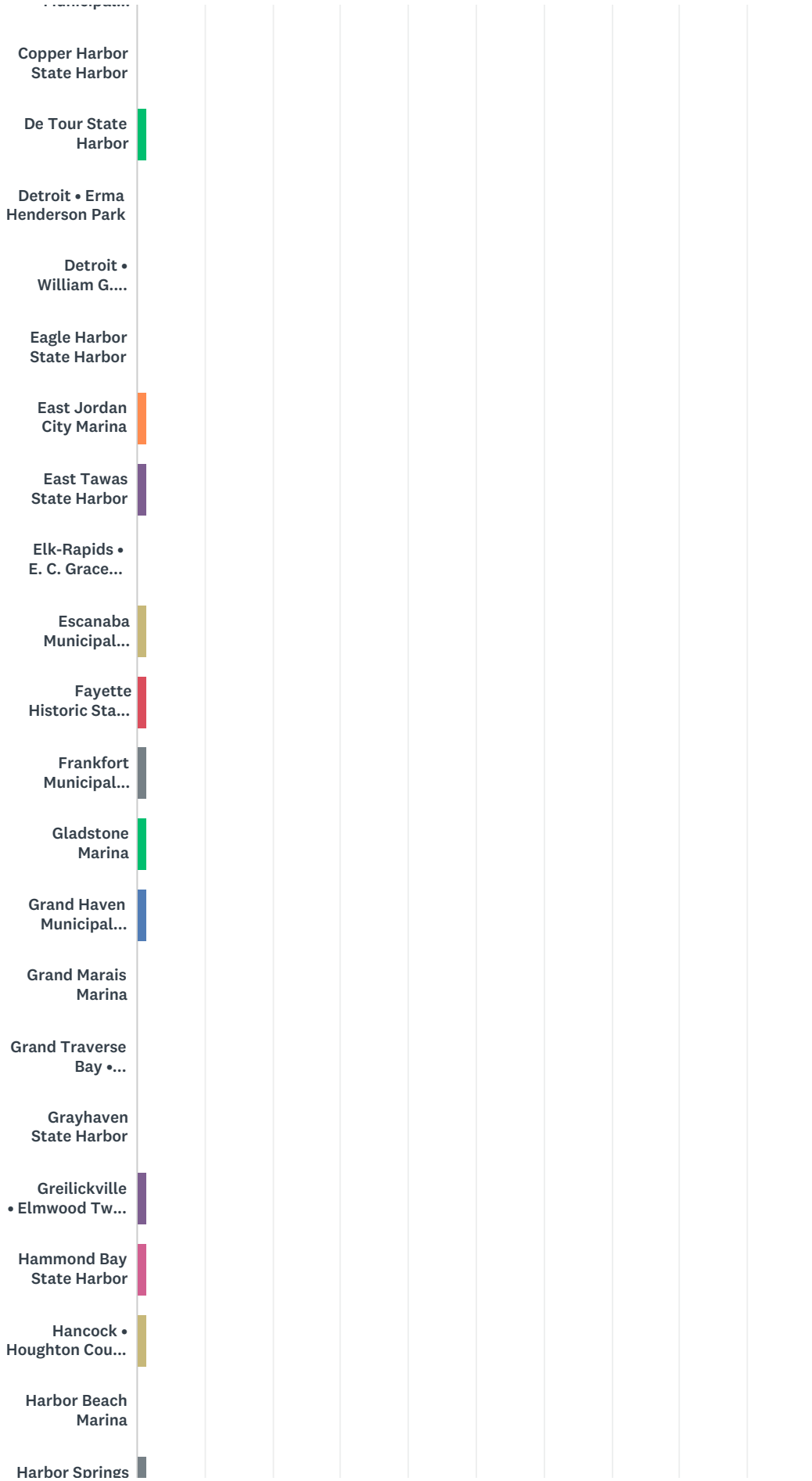
ANSWER CHOICES	RESPONSES	
Harbor	40.00%	90
Boating Access Site (BAS)	85.33%	192
Lock & Dam	1.33%	3
Total Respondents: 225		

Q2 Please choose which harbor you operate:

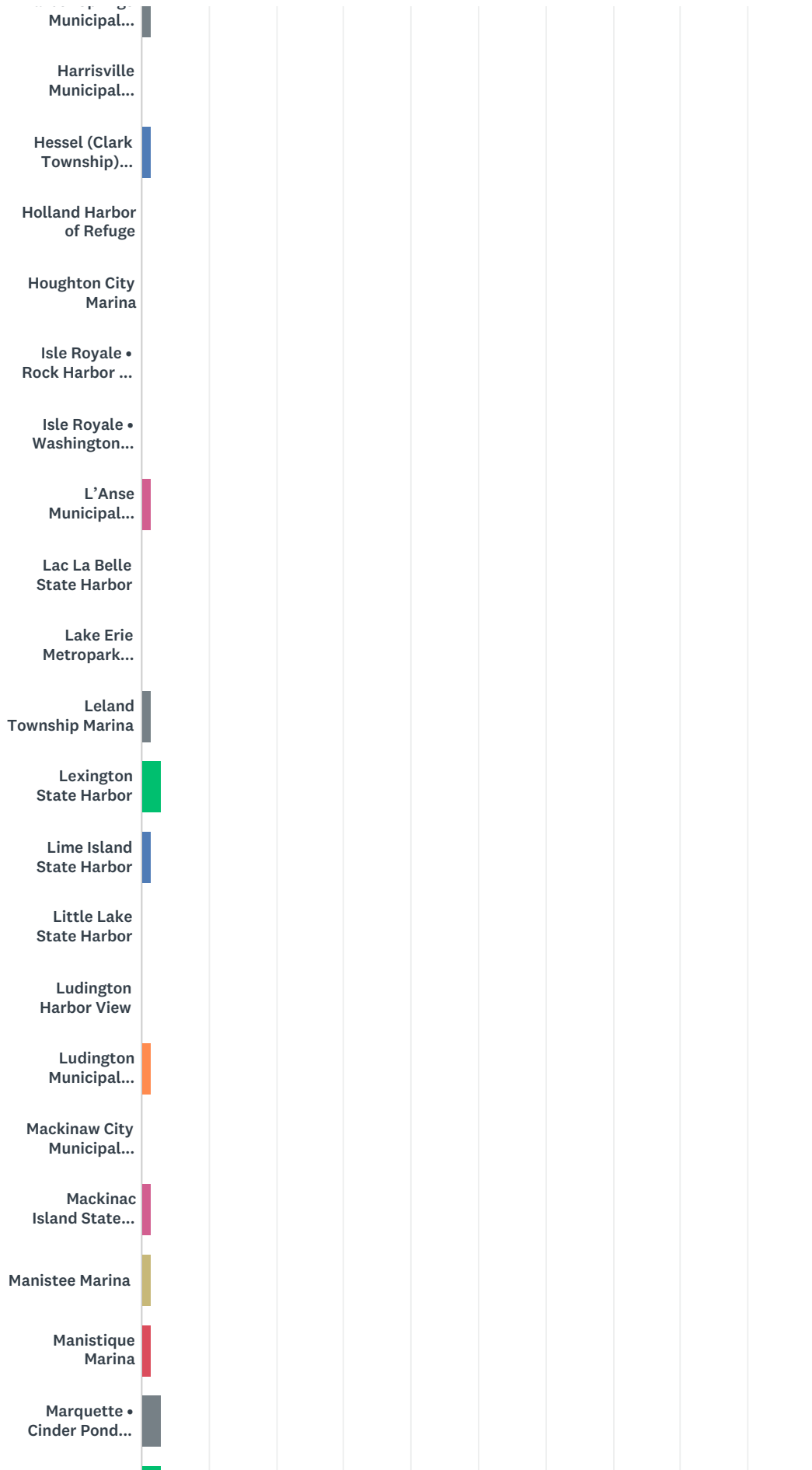
Answered: 67 Skipped: 158



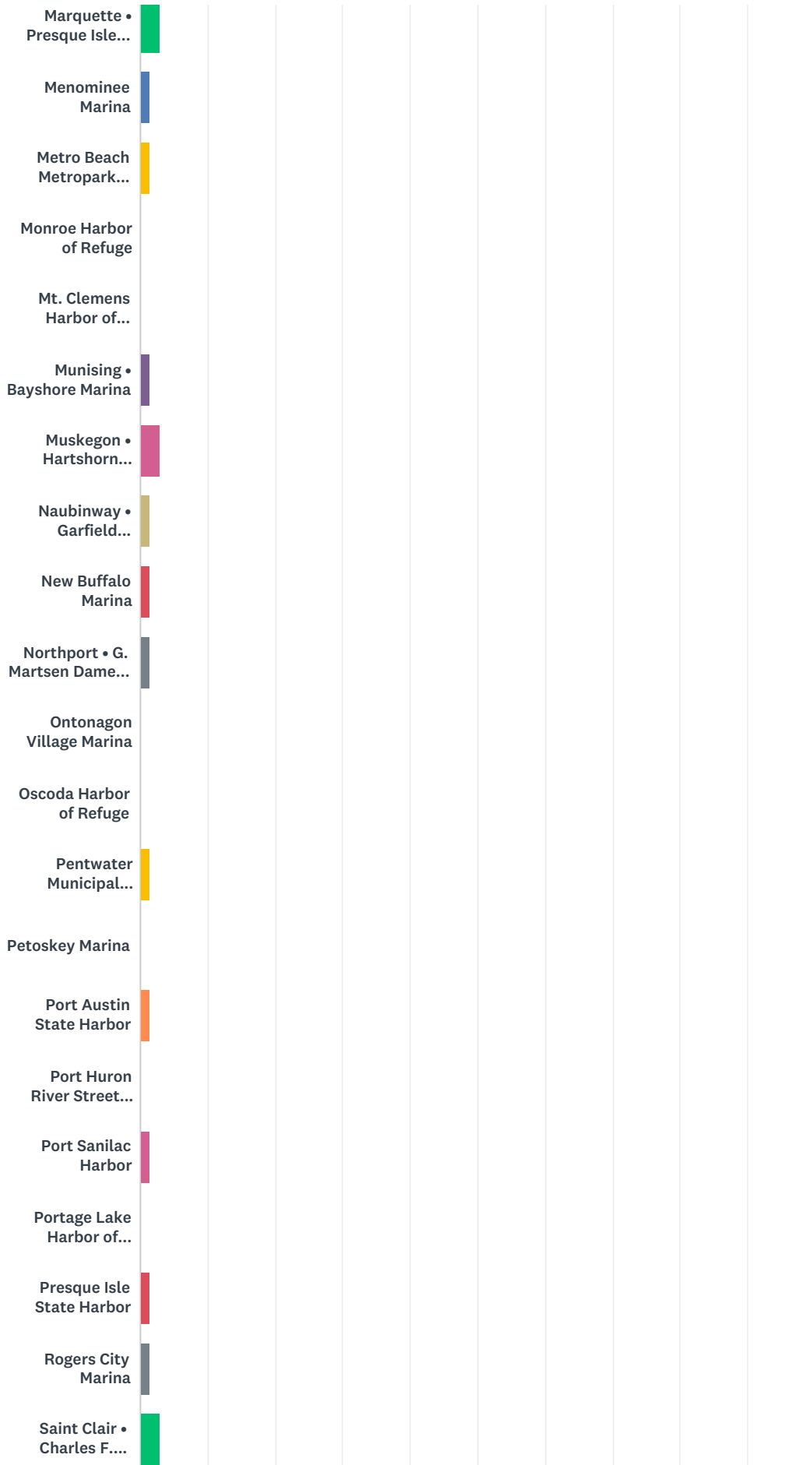
MSWC Facilities Survey



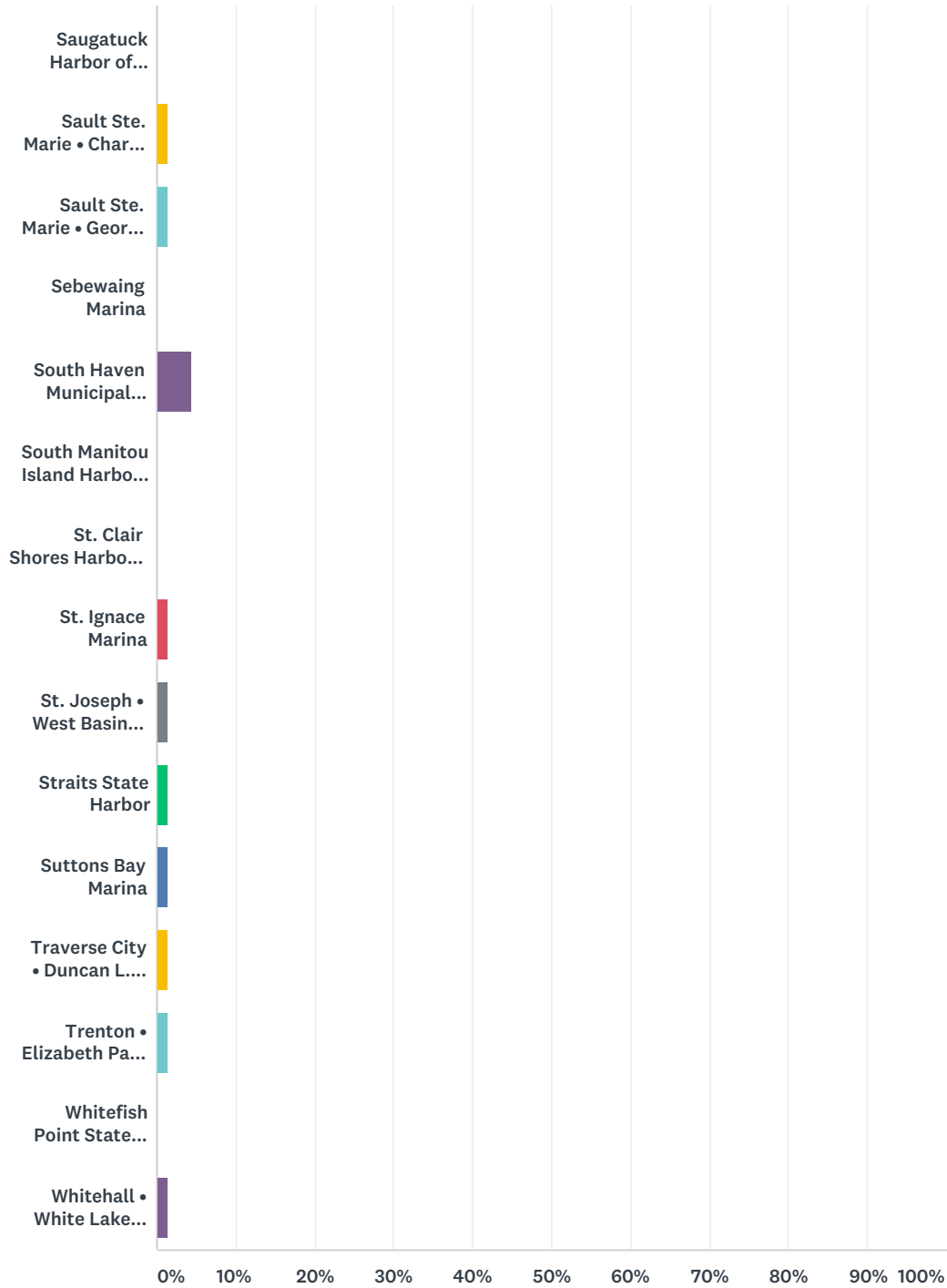
MSWC Facilities Survey



MSWC Facilities Survey



MSWC Facilities Survey



ANSWER CHOICES	RESPONSES
N/A	0.00% 0
Alpena Municipal Harbor	1.49% 1
Arcadia Veterans Memorial Marina	2.99% 2
Au Gres State Harbor	0.00% 0
Baraga Municipal Marina	0.00% 0
Bay City • Liberty Harbor	1.49% 1
Bay Port Harbor of Refuge	0.00% 0

MSWC Facilities Survey

Beaver Island Marina	1.49%	1
Big Bay Harbor • Marquette County	2.99%	2
Black River • U.S. National Forest	0.00%	0
Bois Blanc Island Marina	4.48%	3
Bolles Harbor of Refuge	0.00%	0
Boyne City • F. G. Moore Municipal Marina	1.49%	1
Caseville Marina	1.49%	1
Cedar River State Harbor	1.49%	1
Cedarville Marina	0.00%	0
Charlevoix City Marina	1.49%	1
Cheboygan County Marina	0.00%	0
Cheboygan Municipal Marina	0.00%	0
Copper Harbor State Harbor	0.00%	0
De Tour State Harbor	1.49%	1
Detroit • Erma Henderson Park	0.00%	0
Detroit • William G. Milliken State Park and Harbor	0.00%	0
Eagle Harbor State Harbor	0.00%	0
East Jordan City Marina	1.49%	1
East Tawas State Harbor	1.49%	1
Elk-Rapids • E. C. Grace Memorial Harbor	0.00%	0
Escanaba Municipal Marina	1.49%	1
Fayette Historic State Park • Snail Shell Harbor	1.49%	1
Frankfort Municipal Marina	1.49%	1
Gladstone Marina	1.49%	1
Grand Haven Municipal Marina	1.49%	1
Grand Marais Marina	0.00%	0
Grand Traverse Bay • Schoolcraft Twp. Marina	0.00%	0
Grayhaven State Harbor	0.00%	0
Greilickville • Elmwood Twp. Marina	1.49%	1
Hammond Bay State Harbor	1.49%	1
Hancock • Houghton County Marina	1.49%	1
Harbor Beach Marina	0.00%	0
Harbor Springs Municipal Marina	1.49%	1
Harrisville Municipal Marina	0.00%	0

MSWC Facilities Survey

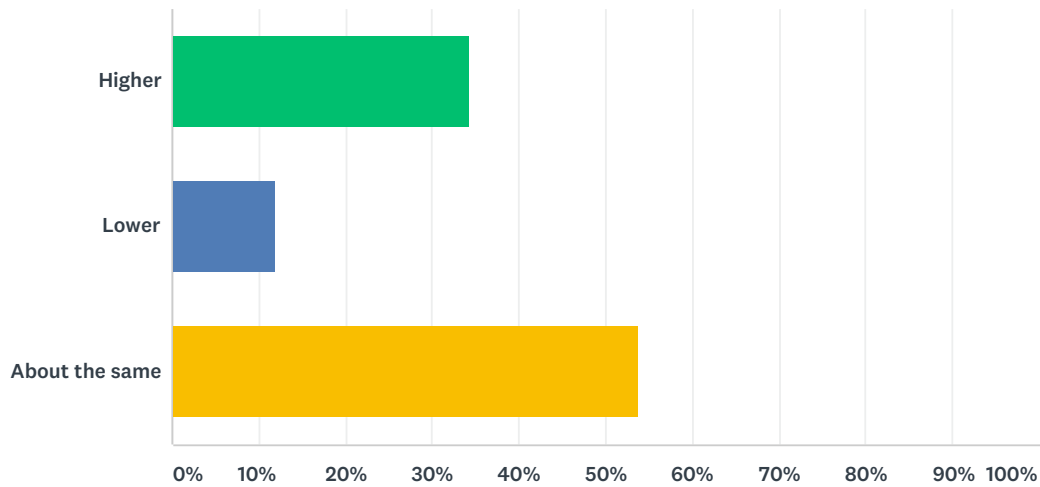
Hessel (Clark Township) Marina	1.49%	1
Holland Harbor of Refuge	0.00%	0
Houghton City Marina	0.00%	0
Isle Royale • Rock Harbor • Harbor of Refuge	0.00%	0
Isle Royale • Washington Harbor • Harbor of Refuge	0.00%	0
L'Anse Municipal Marina	1.49%	1
Lac La Belle State Harbor	0.00%	0
Lake Erie Metropark Harbor of Refuge	0.00%	0
Leland Township Marina	1.49%	1
Lexington State Harbor	2.99%	2
Lime Island State Harbor	1.49%	1
Little Lake State Harbor	0.00%	0
Ludington Harbor View	0.00%	0
Ludington Municipal Marina	1.49%	1
Mackinaw City Municipal Marina	0.00%	0
Mackinac Island State Harbor	1.49%	1
Manistee Marina	1.49%	1
Manistique Marina	1.49%	1
Marquette • Cinder Pond Marina	2.99%	2
Marquette • Presque Isle Marina	2.99%	2
Menominee Marina	1.49%	1
Metro Beach Metropark Marina	1.49%	1
Monroe Harbor of Refuge	0.00%	0
Mt. Clemens Harbor of Refuge	0.00%	0
Munising • Bayshore Marina	1.49%	1
Muskegon • Hartshorn Marina	2.99%	2
Naubinway • Garfield Township Marina	1.49%	1
New Buffalo Marina	1.49%	1
Northport • G. Martsen Dame Marina	1.49%	1
Ontonagon Village Marina	0.00%	0
Oscoda Harbor of Refuge	0.00%	0
Pentwater Municipal Marina	1.49%	1
Petoskey Marina	0.00%	0
Port Austin State Harbor	1.49%	1
Port Huron River Street Marina	0.00%	0

MSWC Facilities Survey

Port Sanilac Harbor	1.49%	1
Portage Lake Harbor of Refuge	0.00%	0
Presque Isle State Harbor	1.49%	1
Rogers City Marina	1.49%	1
Saint Clair • Charles F. Moore Harbor	2.99%	2
Saugatuck Harbor of Refuge	0.00%	0
Sault Ste. Marie • Charles T. Harvey Marina	1.49%	1
Sault Ste. Marie • George Kemp Marina	1.49%	1
Sebewaing Marina	0.00%	0
South Haven Municipal Marina	4.48%	3
South Manitou Island Harbor of Refuge	0.00%	0
St. Clair Shores Harbor of Refuge	0.00%	0
St. Ignace Marina	1.49%	1
St. Joseph • West Basin Marina	1.49%	1
Straits State Harbor	1.49%	1
Suttons Bay Marina	1.49%	1
Traverse City • Duncan L. Clinch Marina	1.49%	1
Trenton • Elizabeth Park Marina	1.49%	1
Whitefish Point State Harbor	0.00%	0
Whitehall • White Lake Municipal Marina	1.49%	1
TOTAL		67

Q3 Is your harbor seasonal occupancy higher, lower, or about the same as last year?

Answered: 67 Skipped: 158



ANSWER CHOICES	RESPONSES	
Higher	34.33%	23
Lower	11.94%	8
About the same	53.73%	36
TOTAL		67

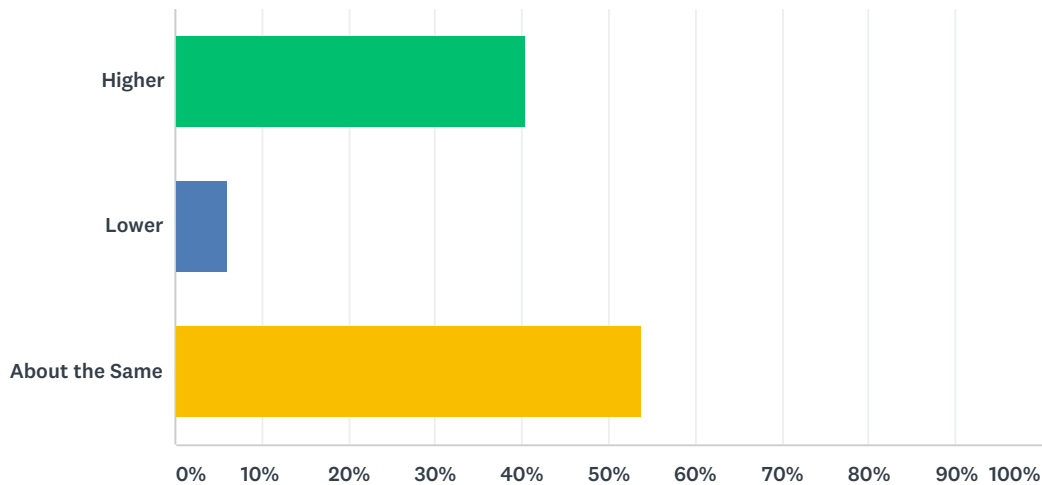
#	PLEASE ADD ANY ADDITIONAL COMMENTS ABOUT SEASONAL OCCUPANCY TREND OVER THE LAST YEAR:	DATE
1	We are allotted only two seasonal slips per our GIA agreement. Our facility name is Beaver Island Municipal Dock, not Beaver Island Marina as listed in the previous pull down menu.	9/30/2019 12:17 PM
2	Addition of <45' seasonal slips increased occupancy	9/30/2019 12:06 PM
3	Charter Captains remained the same and we added one additional seasonal business for 2019.	9/30/2019 10:12 AM
4	Dock replacement plan caused some boaters to relocate to private dockage.	9/30/2019 10:11 AM
5	Our seasonal is at 100 percent occupancy with a long waiting list	9/30/2019 8:38 AM
6	Late start to the season due to weather.	9/30/2019 7:10 AM
7	Usually one. This year three.	9/30/2019 6:28 AM
8	We are under construction	9/30/2019 6:05 AM
9	Our occupancy has been lower due to decommissioned docks and anticipation of construction of a new floating pier system that was grant funded with a match through the MDNR Waterways program.	9/30/2019 5:57 AM
10	Added <45' seasonal slips	9/30/2019 5:50 AM
11	its about the same	9/30/2019 5:19 AM
12	The only launch site not under water	9/27/2019 7:12 AM
13	The Restaurant was closed all summer and the fuel tanks were replaced. The fuel was shut down June 17-August 7th, 2019. The privately owned store was also closed in the spring and opened by new owner.	9/27/2019 7:04 AM

MSWC Facilities Survey

14	We trended down as a result of the seiche damage from last year. We are now back in full service. Next year will be the best look into trues seasonal occupancy.	9/27/2019 6:53 AM
15	Does not apply	9/27/2019 4:33 AM
16	We are trending towards larger boats. Inventory of 45-60ft slips are now the premium	9/27/2019 4:33 AM
17	We are limited to how many slips we can use seasonally per GIA agreement. All of our seasonal slips have always been maxed out with an extensive wait list	9/23/2019 12:30 PM
18	High water levels on lake Michigan flooded some of our docks	9/23/2019 6:37 AM
19	More small boats using non powered docks.	9/23/2019 5:20 AM
20	We have a waiting list for seasonal slips that is currently 65 people long.	9/21/2019 11:21 AM
21	May and June were down about 30% because of weather. July/August were up.	9/18/2019 6:07 AM
22	Longer waiting list for seasonal slips	9/18/2019 5:38 AM
23	N/A	9/17/2019 2:40 PM
24	We have a waiting list with 50+ applicants for a boat slip for next year. Most requested dock size is 30-50 feet.	9/17/2019 1:10 PM
25	WE are at capacity for seasonal occupancy. We do have a waiting list	9/17/2019 11:18 AM
26	We sell no seasonal slips, only transient	9/17/2019 10:47 AM
27	Leland Harbor is 100% transient.	9/17/2019 9:52 AM

Q4 Is there a discernable trend in your seasonal occupancy (higher, lower, or consistent) over the last five years?

Answered: 67 Skipped: 158



ANSWER CHOICES	RESPONSES	
Higher	40.30%	27
Lower	5.97%	4
About the Same	53.73%	36
TOTAL		67

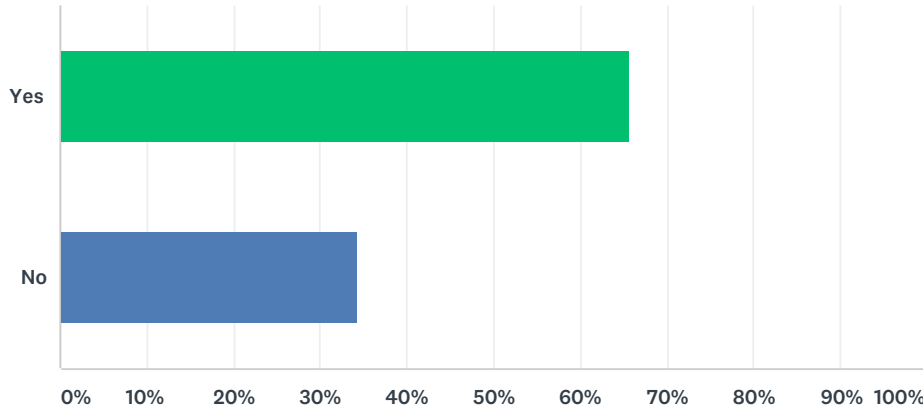
#	PLEASE ADD ANY ADDITIONAL COMMENTS ABOUT SEASONAL OCCUPANCY TREND OVER LAST FIVE YEARS:	DATE
1	Consistently full	10/2/2019 5:59 AM
2	See comment above.	9/30/2019 12:17 PM
3	<45' this year	9/30/2019 12:06 PM
4	two seasons ago we were able to increase our seasonal slip capacity however we have been and will continue to be at 100 percent occupancy	9/30/2019 8:38 AM
5	A few new boater's to the harbor. Most were return clients who have been here nearly five years.	9/30/2019 7:10 AM
6	New construction of harbormaster's house and dredging have helped to increase traffic. They like our new facility with its amenities.	9/30/2019 6:05 AM
7	>45 roughly similar; >60' less; <45' demand high	9/30/2019 5:50 AM
8	this is our first year having seasonal slips	9/27/2019 10:55 AM
9	Word of mouth. Diving and fishing businesses.	9/27/2019 7:04 AM
10	not including this past season	9/27/2019 6:53 AM
11	We've been pretty much full every year. Maybe 1 or 2 short at most.	9/27/2019 4:33 AM
12	Seasonal slips full and wait list has been fairly consistent over the last 5 years with 50 or more people paying to keep their place on the list.	9/23/2019 12:30 PM
13	OUr seasonals return year in and year out and there is rarely a turnover	9/20/2019 10:38 AM
14	As more boaters discover us, use increases.	9/18/2019 4:57 PM

MSWC Facilities Survey

15	As older seasonal boaters pass away some are replaced by new people moving into the area with larger boats so we are remaining fairly consistent in occupancy.	9/18/2019 4:44 AM
16	The last two seasons ('14 & '15) of a rustic dock averaged 295 boat nights. 2016 we were closed virtually all season. The first two years ('17 & '18) of a modern dock averaged 509. In 2019 we had 502 boat nights.	9/17/2019 2:40 PM
17	As the water has come back and we have improved amenities, we have seen increasing popularity with our seasonal slips.	9/17/2019 1:10 PM
18	Our marina is a destination for many boaters. They comment that they would rather drive a little further and keep their boat in St Clair.	9/17/2019 11:18 AM
19	N/A	9/17/2019 9:52 AM

Q5 Do you have a waiting list to lease a slip in your facility?

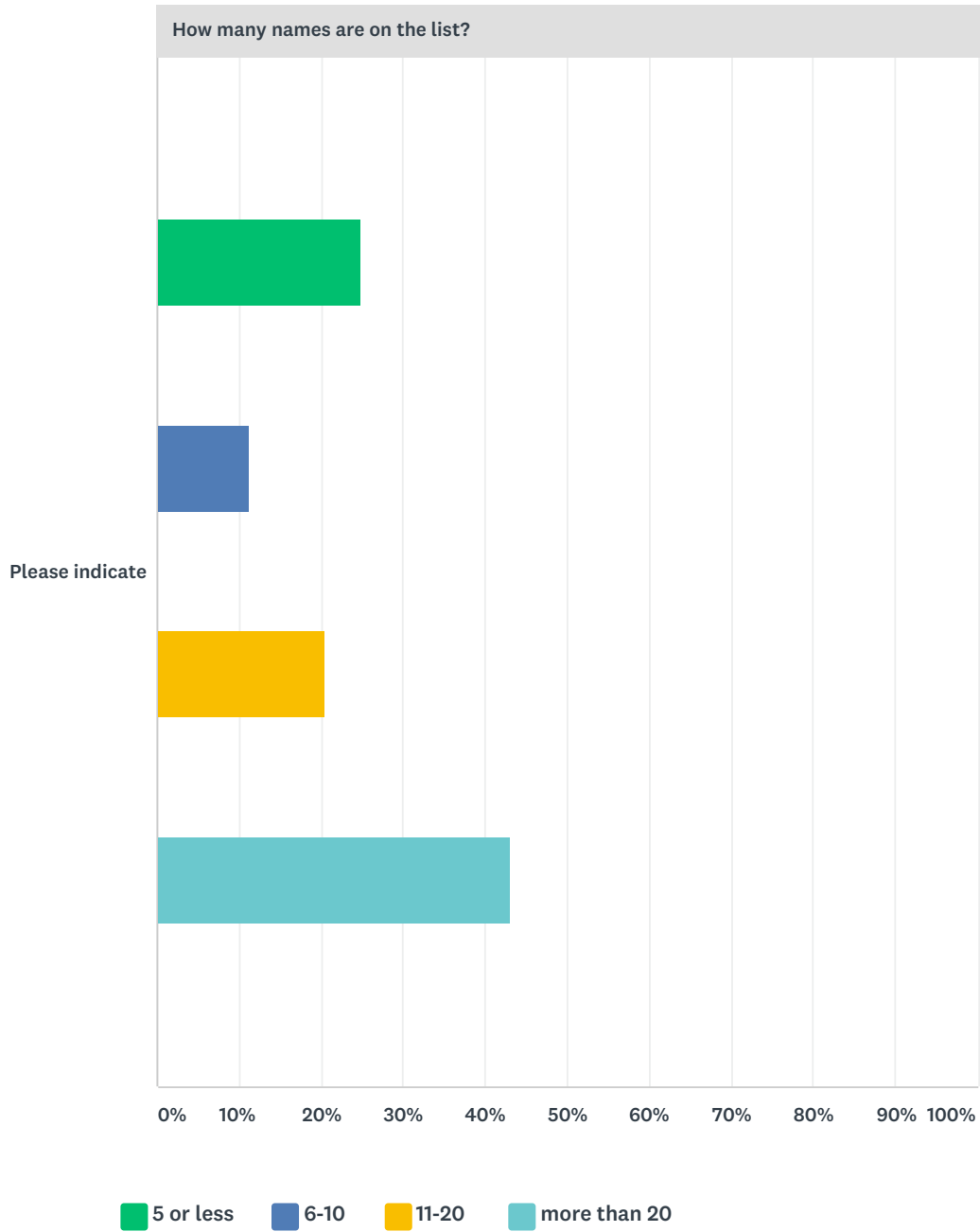
Answered: 67 Skipped: 158



ANSWER CHOICES	RESPONSES	
Yes	65.67%	44
No	34.33%	23
TOTAL		67

Q6 If there is a waiting list for your facility:

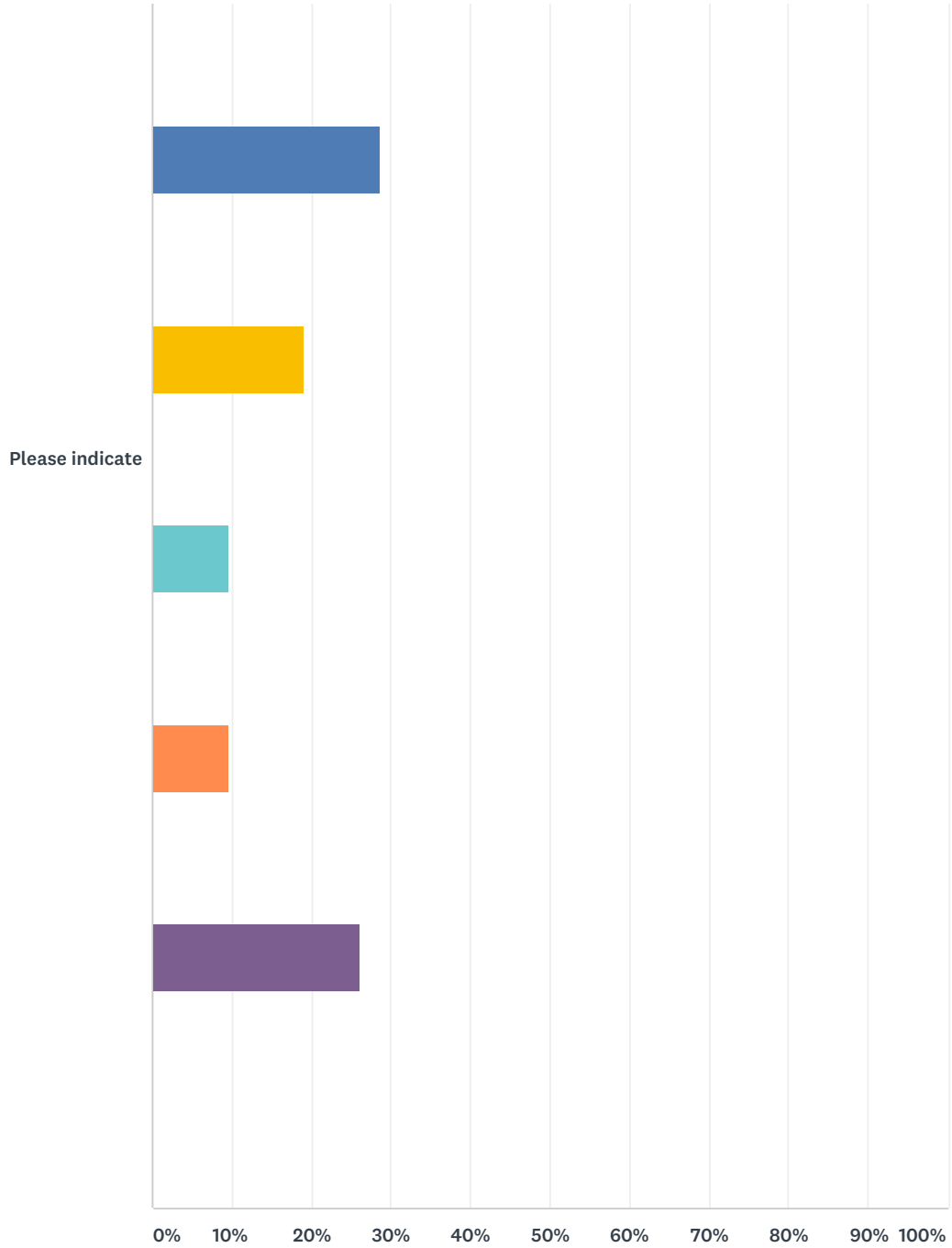
Answered: 44 Skipped: 181



How long is the usual wait?



MSWC Facilities Survey

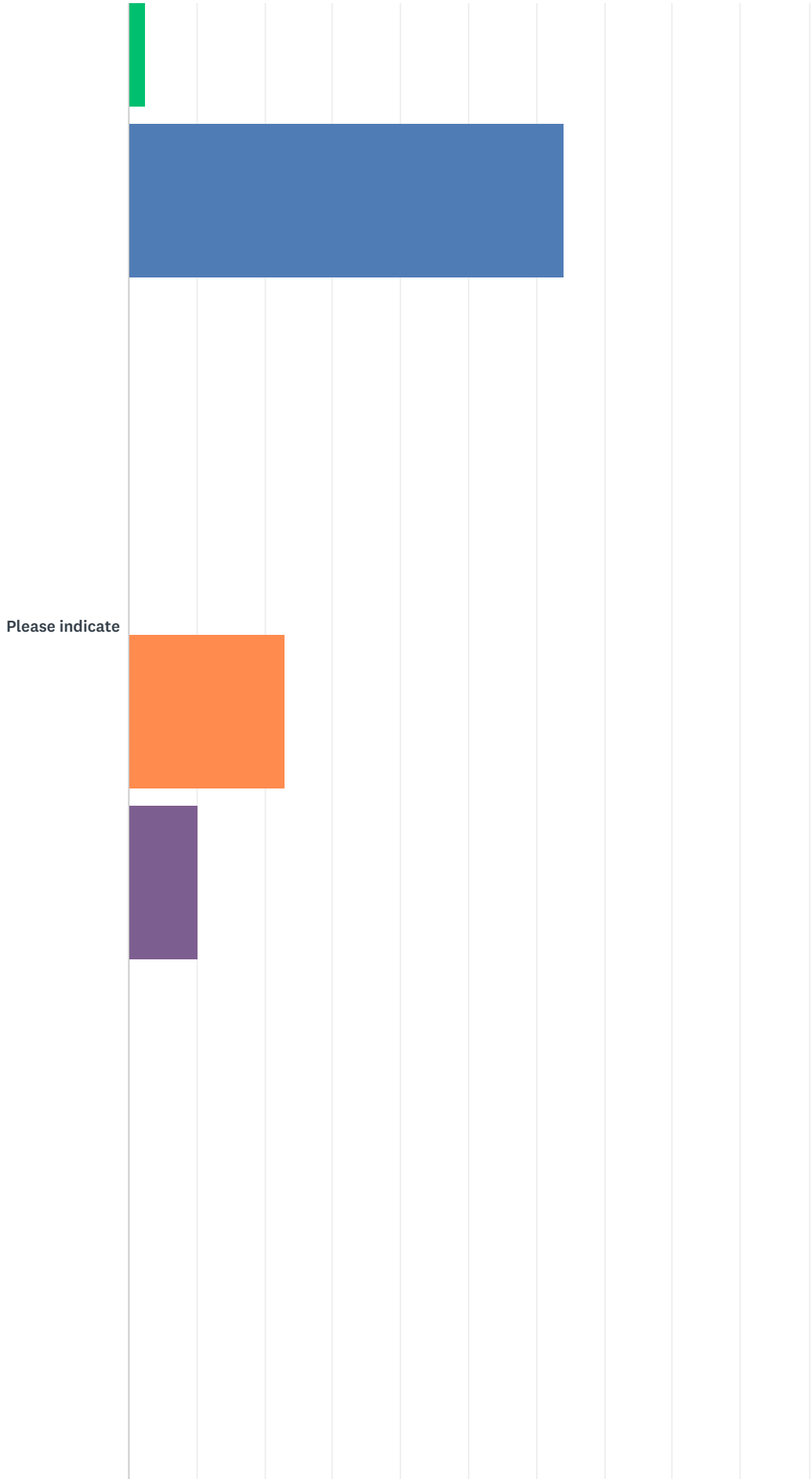


- less than 1 season
- 1 season
- 2 seasons
- 3 seasons
- 4 seasons
- 5 or more seasons

What type of slips are most in demand?

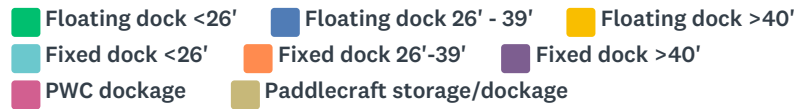


MSWC Facilities Survey



MSWC Facilities Survey

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



How many names are on the list?					
	5 OR LESS	6-10	11-20	MORE THAN 20	TOTAL
Please indicate	25.00%	11.36%	20.45%	43.18%	
	11	5	9	19	44

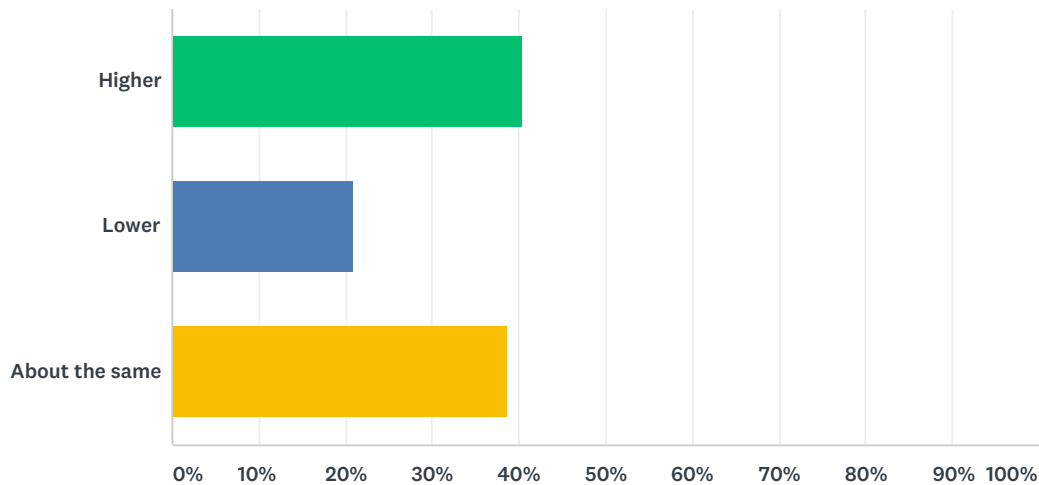
How long is the usual wait?							
	LESS THAN 1 SEASON	1 SEASON	2 SEASONS	3 SEASONS	4 SEASONS	5 OR MORE SEASONS	TOTAL
Please indicate	7.14%	28.57%	19.05%	9.52%	9.52%	26.19%	
	3	12	8	4	4	11	42

What type of slips are most in demand?									
	FLOATING DOCK <26'	FLOATING DOCK 26' - 39'	FLOATING DOCK >40'	FIXED DOCK <26'	FIXED DOCK 26'-39'	FIXED DOCK >40'	PWC DOCKAGE	PADDLECRAFT STORAGE/DOCKAGE	TOTAL
Please indicate	2.56%	64.10%	0.00%	0.00%	23.08%	10.26%	0.00%	0.00%	
	1	25	0	0	9	4	0	0	39

#	PLEASE ADD ANY SPECIFICS TO THE ABOVE ANSWERS WHERE POSSIBLE	DATE
1	Waiting list only for slips <45'	9/30/2019 12:06 PM
2	We do not do seasonal slips for individuals, just commercial charter businesses.	9/30/2019 10:12 AM
3	The demand does not reflect the actual fixed vs. floating question. We get more request for floating however we can use them for seasonal so we only have a fixed waiting list. If we could use the floating for seasonal, it would be astronomically higher than our fixed.	9/30/2019 8:38 AM
4	I would like to add four to eight wells with a floating dock to accommodate boater's who are transient and the list of people who want seasonal docking.	9/30/2019 7:10 AM
5	Waiting list only includes slips <45' in length	9/30/2019 5:50 AM
6	the usual wait is undetermined since we have not had seasonals for a full year yet.	9/27/2019 10:55 AM
7	161 on waitlist and moving into 5 year wait	9/27/2019 7:12 AM
8	No.	9/27/2019 7:04 AM
9	Does not apply	9/27/2019 4:33 AM
10	Because of the length of the waiting list at one time we have not taken any names and exhausted the list. Turnover for the island is very rare as most slip holders retain their slip until they are deceased or no longer capable of boating.	9/20/2019 10:38 AM
11	38 to 40 feet	9/18/2019 6:07 AM
12	the most sought after slips are 30 feet and under	9/18/2019 4:57 AM
13	N/A	9/17/2019 2:40 PM
14	Fixed docks 30'-50' are the highest demand.	9/17/2019 1:10 PM
15	We do not have enough slips that will accommodate boats over 32'.	9/17/2019 11:18 AM
16	N/A	9/17/2019 9:52 AM

Q7 Is your transient/guest occupancy higher, lower, or about the same as last year?

Answered: 67 Skipped: 158



ANSWER CHOICES	RESPONSES	
Higher	40.30%	27
Lower	20.90%	14
About the same	38.81%	26
TOTAL		67

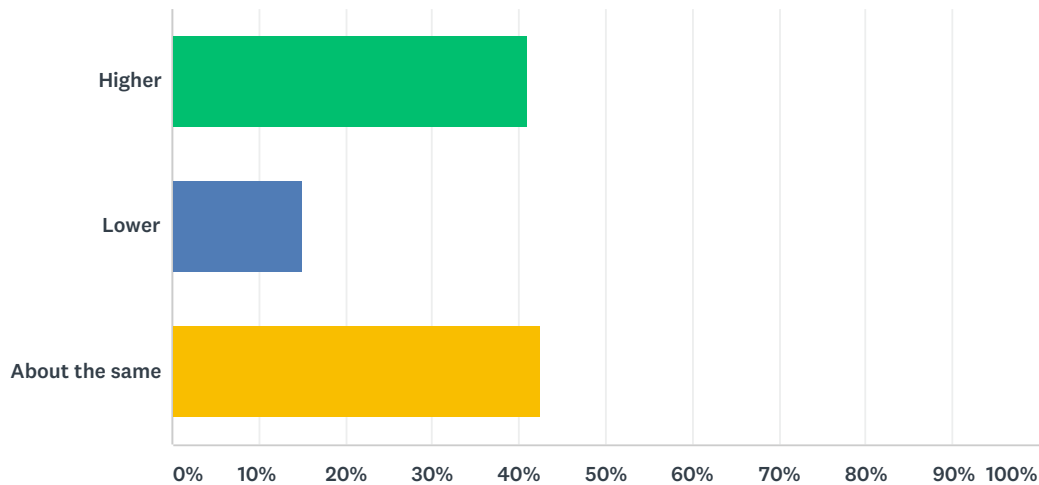
#	PLEASE ADD ANY ADDITIONAL COMMENTS ABOUT TRANSIENT/GUEST OCCUPANCY TREND OVER LAST YEAR:	DATE
1	Boat clubs were brought in and stayed with us; Great Lakes Cruising Club, Duncan Bay Rendezvous, Bay Harbor Rendezvous- Cruise to Car Show	10/2/2019 5:59 AM
2	This year we saw more boats, staying a few days vs. last year when we had fewer boats staying more days. We have also seen larger boats each year and are always in need of larger slips, >35'.	9/30/2019 12:17 PM
3	More boaters mid-week in the summer and more loopers in the off season	9/30/2019 10:12 AM
4	Group of boaters came this year.	9/30/2019 6:28 AM
5	We are under construction	9/30/2019 6:05 AM
6	Caused from no Restaurant and no fuel.	9/27/2019 7:04 AM
7	Again, seiche damaged over 2/3 of the docks, causing availability issues	9/27/2019 6:53 AM
8	High water levels this year, and our facility needs upgrading badly	9/27/2019 4:33 AM
9	Less boats but more revenue. Hence larger boats traveling. Less fishing boats	9/27/2019 4:33 AM
10	June was slower due to weather	9/23/2019 12:30 PM
11	Lime Island Harbor offers overnight dockage with no amenities	9/23/2019 11:15 AM
12	High water levels had some docks under water	9/23/2019 6:37 AM
13	It was a slow start to the spring so there weren't many people traveling.	9/21/2019 11:21 AM
14	More Loopers due to next years lock closures.	9/18/2019 6:07 AM
15	Slightly higher , seasons are weather dependent	9/18/2019 5:38 AM

MSWC Facilities Survey

16	As we are 10 miles off the main lake it is always challenging to attract the boaters to make the run in. Presque Isle not having fuel for a time caused more boaters to come to us.	9/18/2019 4:44 AM
17	boat nights: 2018 - 453 2019 - 502	9/17/2019 2:40 PM
18	Upgrades to the new electric codes have caused a lot of bad reviews for the transient slips. Many boaters don't understand the new regulations and why their boat doesn't work in a fully compliant marina. Thusly, their reviews on the facility are negative.	9/17/2019 1:10 PM
19	Even with the cold/rainy May and early June we increased our transient business. Partially due to the fact some marina's docks were under water. Boaters comment that they like St Clair because of the condition of the facility, pleasant staff and activities in the city of St Clair.	9/17/2019 11:18 AM
20	Neighboring Presque Isle Harbor had fuel tank issues and did not sell fuel for most the season; also, the restaurant at that facility was closed all season. For those reasons, we picked up plenty of folks who might otherwise have gone to Presque Isle	9/17/2019 11:00 AM
21	We had to shut power off to one of our two marinas, due to high water levels infiltrating our power supply. This significantly reduced our number of patrons.	9/17/2019 10:47 AM

Q8 Is there a discernable trend in your transient/guest occupancy (higher, lower, or consistent) over the last five years?

Answered: 66 Skipped: 159

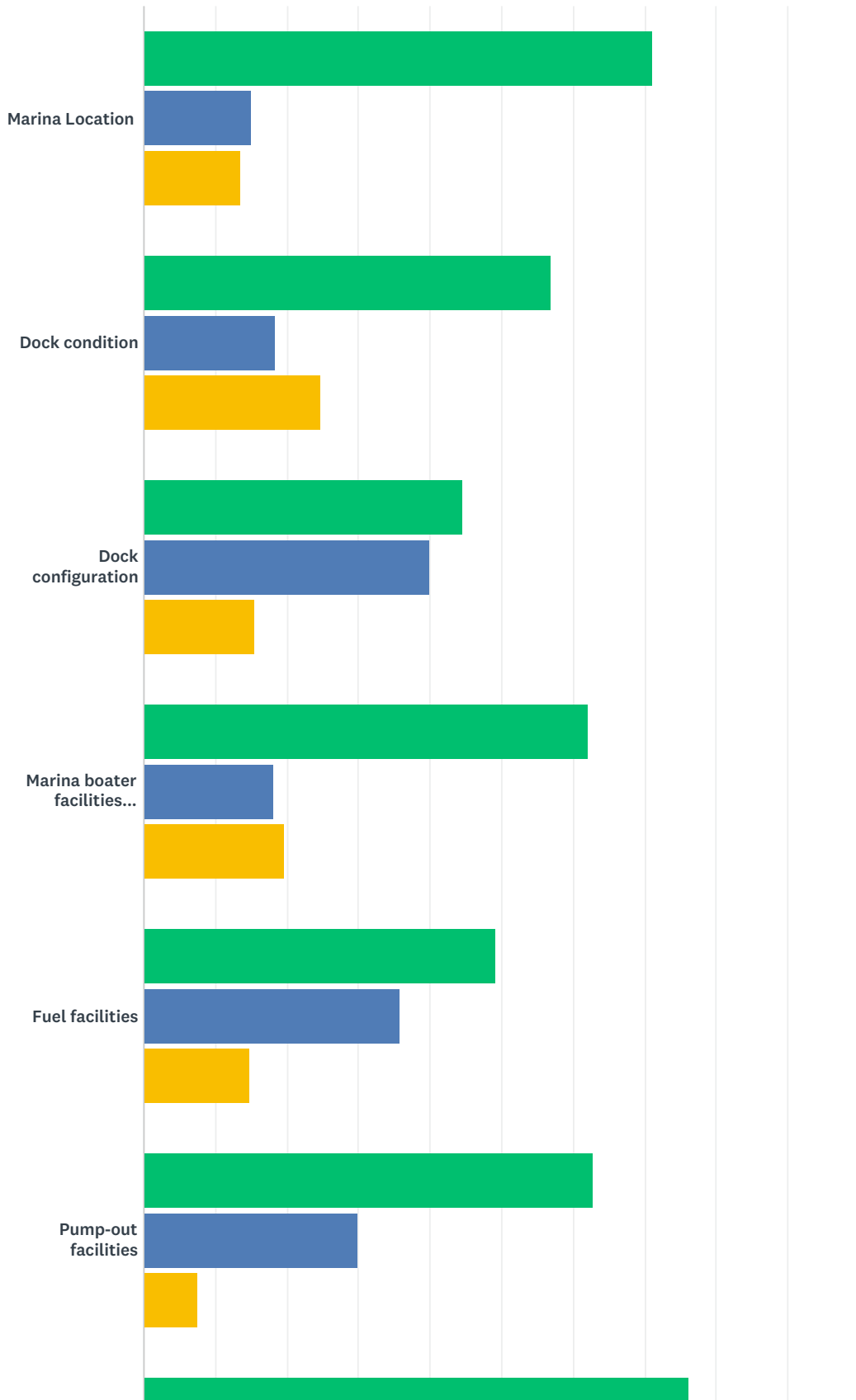


ANSWER CHOICES	RESPONSES	
Higher	40.91%	27
Lower	15.15%	10
About the same	42.42%	28
TOTAL		66

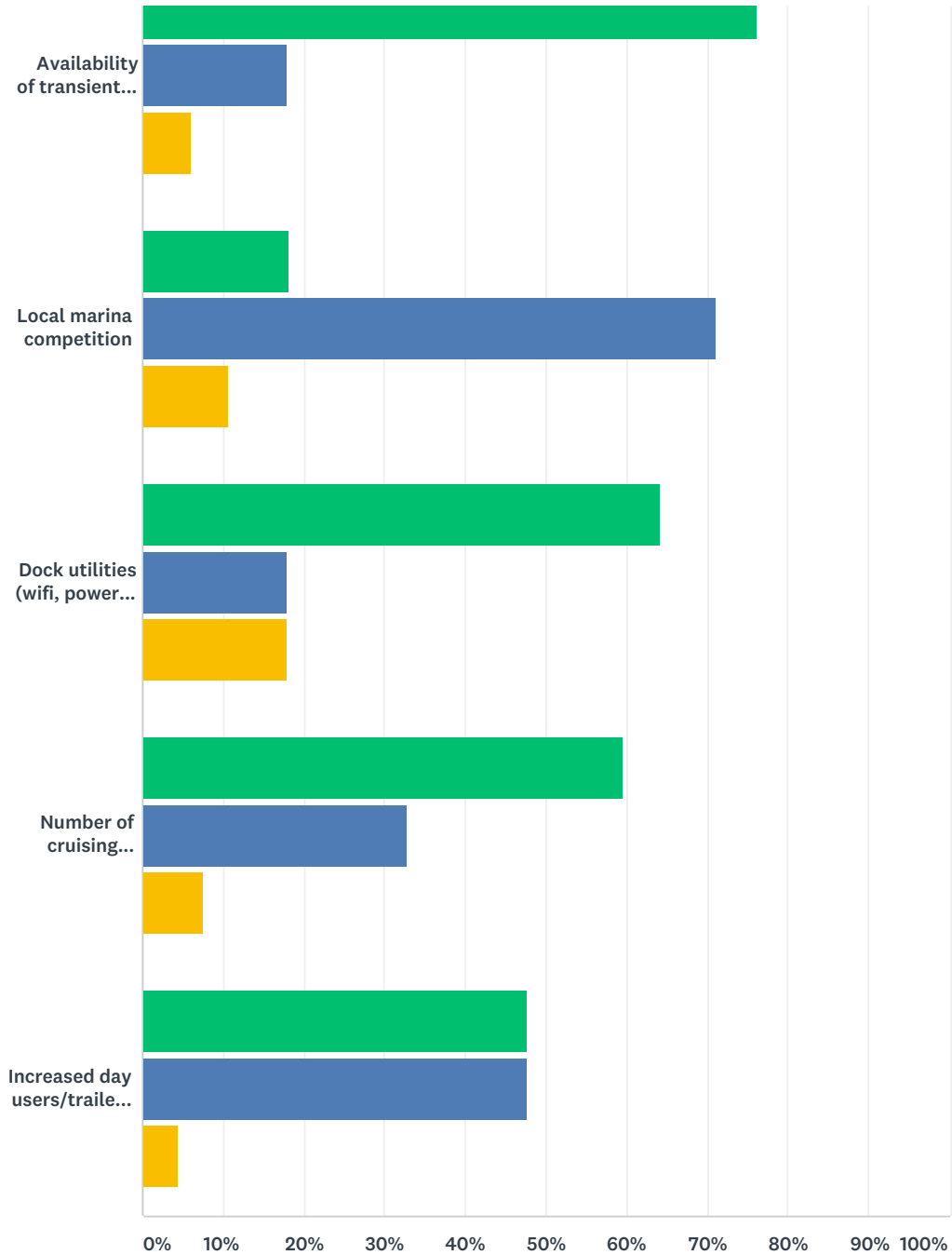
#	PLEASE ADD ANY ADDITIONAL COMMENTS ABOUT TRANSIENT/GUEST OCCUPANCY TREND OVER LAST FIVE YEARS:	DATE
1	It seems like we have had a higher occupancy the past couple of years than in previous years due to the change of hands and upkeep of the harbor.	10/2/2019 5:59 AM
2	They like our new facility and the dredged harbor allows more boats to come in.	9/30/2019 6:05 AM
3	harbor host program improved our on site staffing which improved our boater service and care	9/28/2019 12:15 PM
4	We have new harbor hosts that provide service to boaters and this encourages more and longer stays.	9/28/2019 9:19 AM
5	about the same to higher. Because we only have 44 slips and 22 of the them are seasonal, it is difficult to go much higher. We are usually maxed out in July & August	9/23/2019 12:30 PM
6	it has slightly went up over the last 5 years	9/18/2019 4:57 AM
7	The last two seasons ('14 & '15) of a rustic dock averaged 295 boat nights. 2016 we were closed virtually all season. The first two years ('17 & '18) of a modern dock averaged 509. In 2019 we had 502 boat nights.	9/17/2019 2:40 PM
8	I believe they are lower due to a number of factors: cold, wet spring; electric upgrades that don't allow boats that leak amperage to use power pedestals, and high water issues.	9/17/2019 1:10 PM
9	see above	9/17/2019 11:18 AM
10	We got a boost this year from Presque Isle's woes; five years ago we got a boost from a fairly large power boat Rendezvous that we hosted; other than that occupancy is stagnant.	9/17/2019 11:00 AM

Q9 What factors are most affecting your transient/guest occupancy?

Answered: 67 Skipped: 158



MSWC Facilities Survey



■ Positively affects my facility
 ■ Does Not affect my facility
■ Negatively affects my facility

	POSITIVELY AFFECTS MY FACILITY	DOES NOT AFFECT MY FACILITY	NEGATIVELY AFFECTS MY FACILITY	TOTAL	WEIGHTED AVERAGE
Marina Location	71.21% 47	15.15% 10	13.64% 9	66	1.29
Dock condition	56.92% 37	18.46% 12	24.62% 16	65	1.43
Dock configuration	44.62% 29	40.00% 26	15.38% 10	65	1.55

MSWC Facilities Survey

Marina boater facilities (restrooms, showers, laundry, lounge)	62.12% 41	18.18% 12	19.70% 13	66	1.38
Fuel facilities	49.25% 33	35.82% 24	14.93% 10	67	1.51
Pump-out facilities	62.69% 42	29.85% 20	7.46% 5	67	1.37
Availability of transient slips	76.12% 51	17.91% 12	5.97% 4	67	1.24
Local marina competition	18.18% 12	71.21% 47	10.61% 7	66	1.82
Dock utilities (wifi, power, water)	64.18% 43	17.91% 12	17.91% 12	67	1.36
Number of cruising boats/boaters	59.70% 40	32.84% 22	7.46% 5	67	1.40
Increased day users/trailer boats	47.76% 32	47.76% 32	4.48% 3	67	1.52

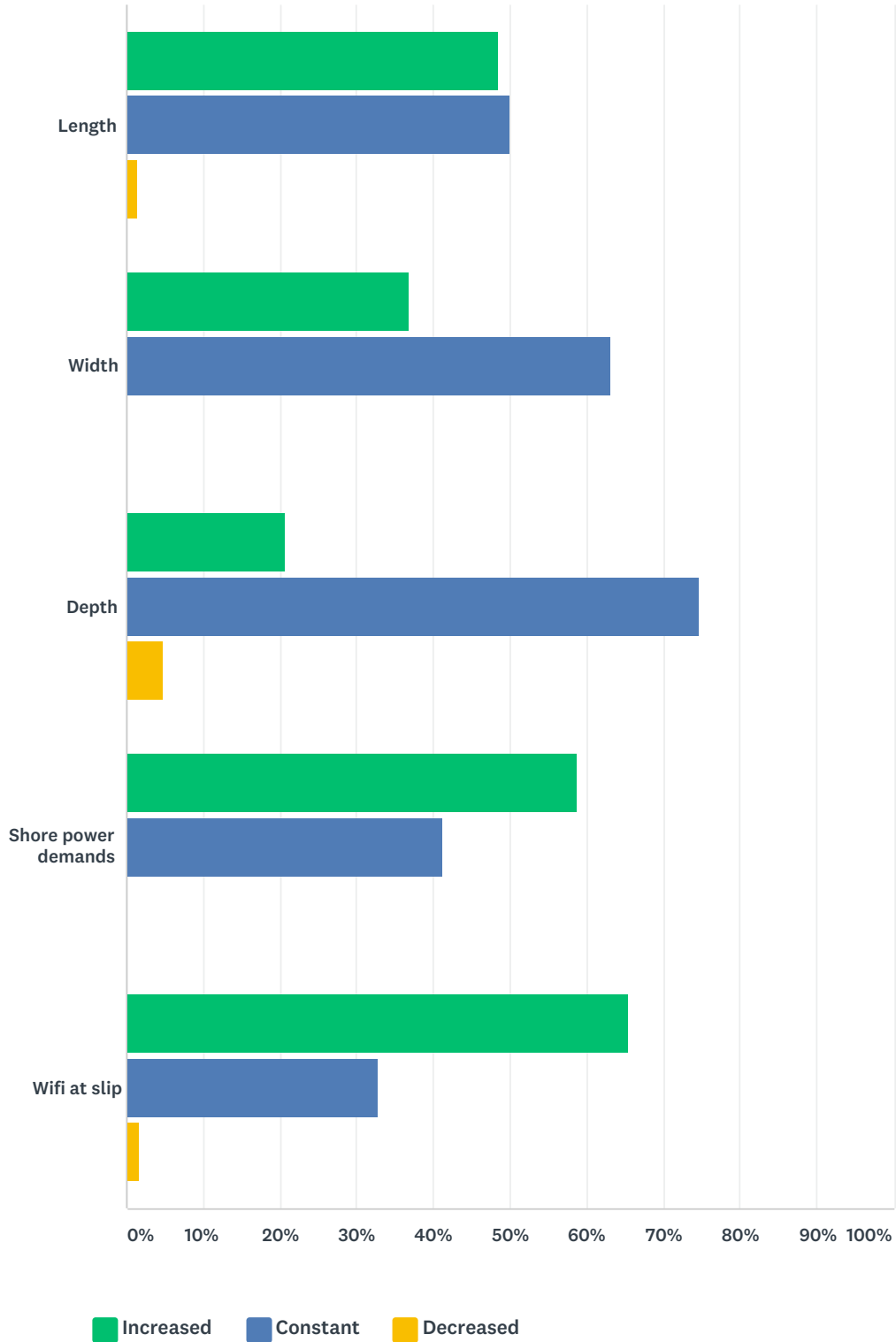
#	PLEASE ADD COMMENTS OR CLARIFICATION TO THE ANSWERS ABOVE:	DATE
1	The way the marina is laid out tends to make operations difficult when we try to fit in larger vessels. It seems we have a large amount of 38' slips that are unnecessary. Overall dockage works out great and we never run out of space. Trailer boaters utilize the boat launch site just down the road, which encourages those who do not want to travel by water to this side of the bridge.	10/2/2019 5:59 AM
2	Need for wifi important to boaters; updates to fuel/electrical systems needed	9/30/2019 12:06 PM
3	50 year old fixed docks were removed over the past two weeks. A new 38 ft slip floating dock system is in the process of being installed. Completion in about 30 days.	9/30/2019 10:11 AM
4	Charles T. Harvey Marina is all seasonal	9/30/2019 9:06 AM
5	No fuel available on site. Fuel brought in from near by station.	9/30/2019 6:28 AM
6	Improvements to facility have helped facility traffic and word of mouth between boaters helps also.	9/30/2019 6:05 AM
7	More broadside dockage would be very helpful. Fuel system, docks, restrooms old. No wifi, but demand for it is high.	9/30/2019 5:50 AM
8	dock utilities-the harbor water and power is top of the line however we are seeing very negative responses to our lack of wi-fi	9/27/2019 10:55 AM
9	Restaurant, WIFI and fuel are the three big issues at Presque Isle. Fuel is fixed. Restaurant is in progress. WIFI needs some support. WIFI is the number one complaint.	9/27/2019 7:04 AM
10	Our launch is also maxed out during the summer months, there is not enough parking spaces and only two launch lanes. However, due to space limitations, there isn't room to expand the parking.	9/23/2019 12:30 PM
11	Lime Island Harbor normally has around 30-50 overnight dockage per season. There are no harbor amenities. Most docking activity is from boaters who rent one of the cabins or camping platforms or dock for the day to visit.	9/23/2019 11:15 AM
12	High water levels taking a toll on boat launches.	9/20/2019 9:57 AM
13	Dock still needs WIFI which keeps some boaters unhappy	9/18/2019 4:57 AM
14	Boating owner trends to small boats and changes in fishing species have led a decline of people using the marina for overnights as it relates to sport fishing. With the high water levels this year, all my supply water lines on the older section of the marina are under water and therefore I have had to post it as non-potable for all this season.	9/18/2019 4:44 AM
15	The dock utilities is the one we struggle with the most. We have upgraded the wifi; a positive. We have good water pressure; a positive. We've upgraded the electric to be compliant with NEC regulations; a negative. There needs to be more education on ESD and electricity on boats.	9/17/2019 1:10 PM

MSWC Facilities Survey

16	We do not get the traffic of marinas on the west side of the State but do pick up those sailing to and from the North Channel; we are a bit more convenient than Alpena's marina but are hurt by the proximity of Presque Isle.	9/17/2019 11:00 AM
17	Our shore marina is in poor condition and gets used less than our south marina	9/17/2019 10:47 AM

Q10 What changes do you see in the boats in your facility?

Answered: 67 Skipped: 158



	INCREASED	CONSTANT	DECREASED	TOTAL	WEIGHTED AVERAGE
Length	48.48% 32	50.00% 33	1.52% 1	66	1.53

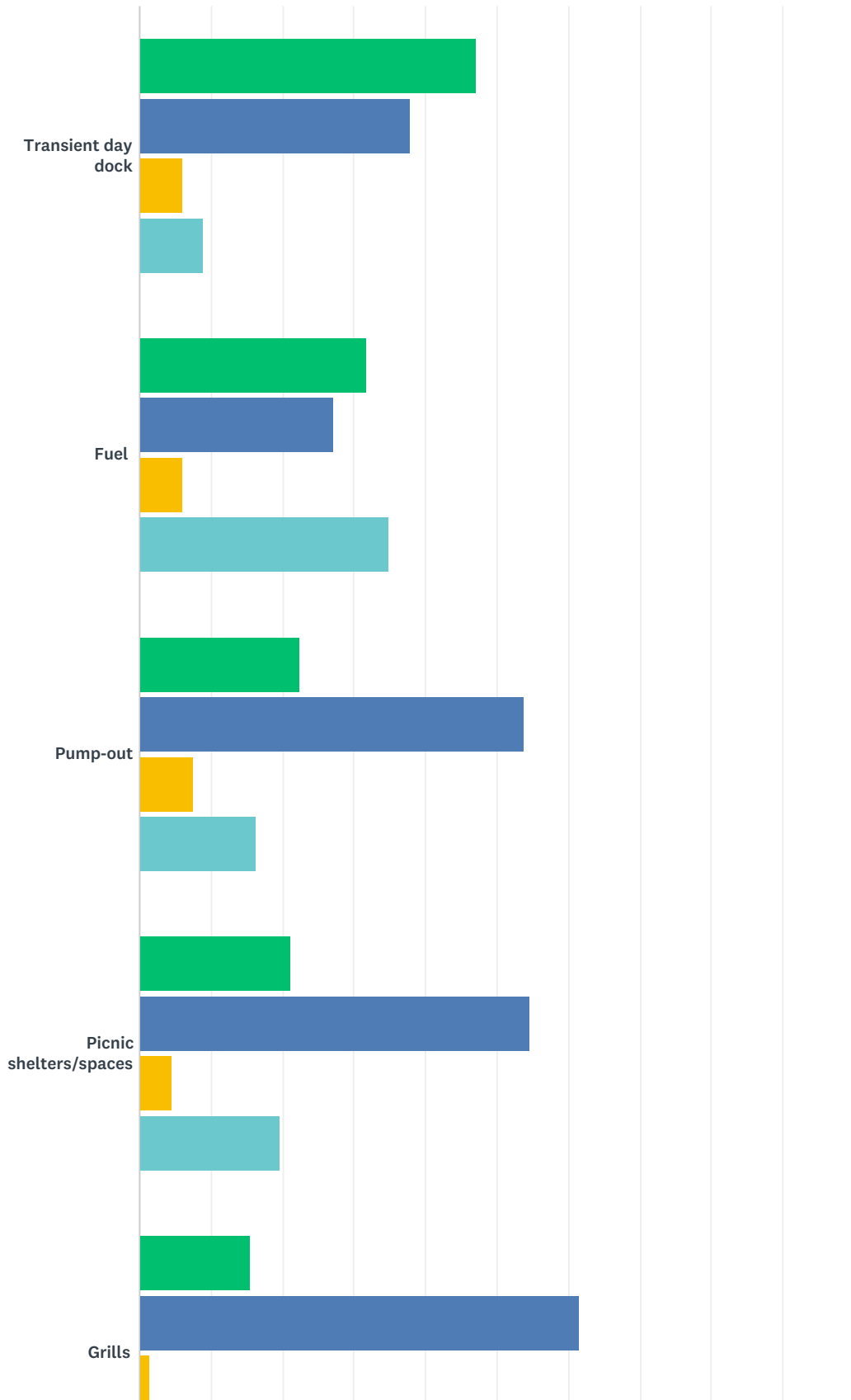
MSWC Facilities Survey

Width	36.92% 24	63.08% 41	0.00% 0	65	1.63
Depth	20.63% 13	74.60% 47	4.76% 3	63	1.84
Shore power demands	58.73% 37	41.27% 26	0.00% 0	63	1.41
Wifi at slip	65.52% 38	32.76% 19	1.72% 1	58	1.36

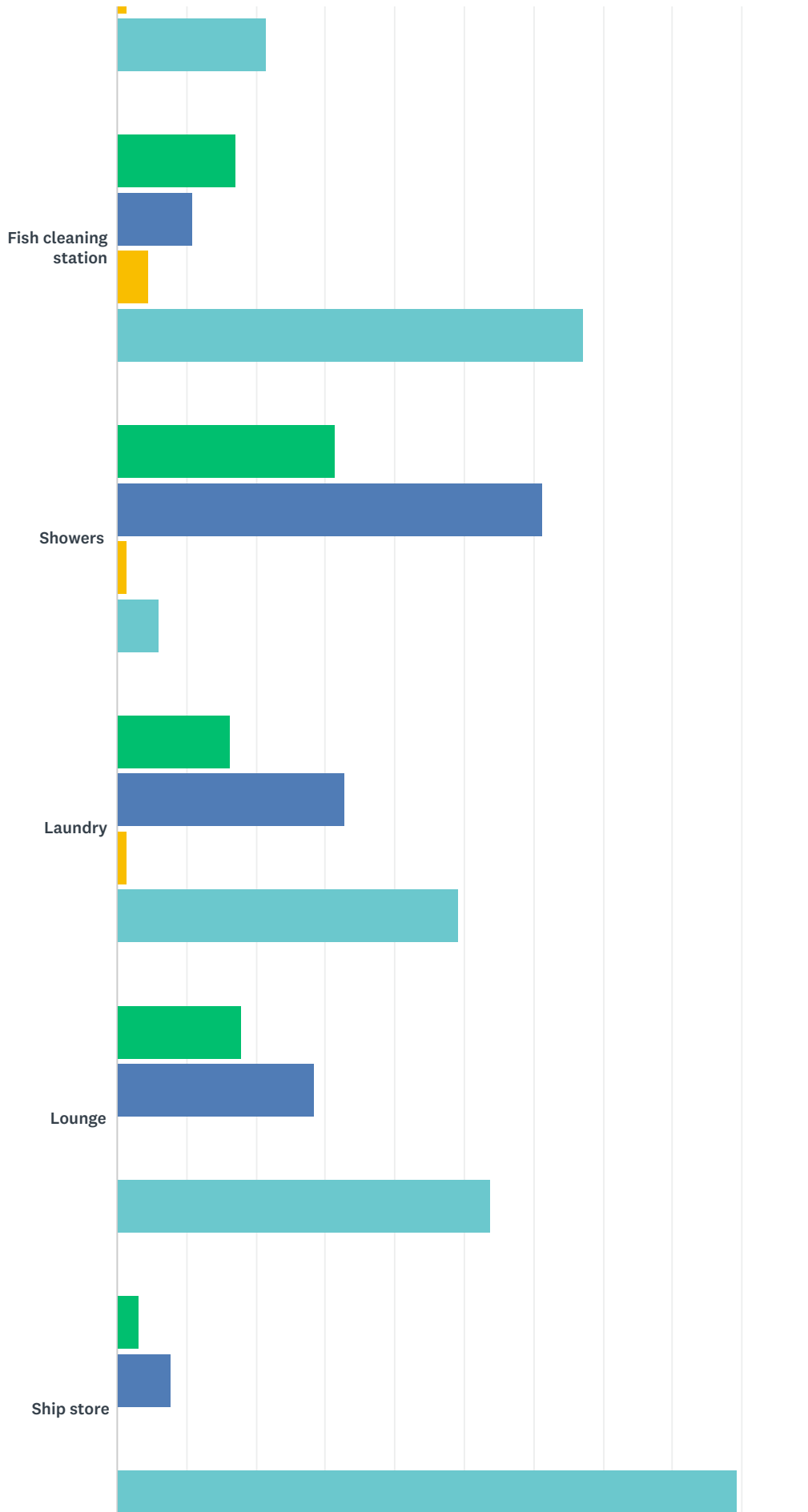
#	PLEASE ADD ANY OTHER CHANGES AND DETAIL TO THE ANSWERS ABOVE:	DATE
1	wi-fi not available at this marina	9/30/2019 10:11 AM
2	Depth isn't an issue with the high water levels this year. However, last year we dredged. The wifi is the single biggest topic when boaters come into the harbor and with seasonals.	9/30/2019 7:10 AM
3	this question is unclear, but we have seen an increase in negative feedback due to our lack of wifi at the docks.	9/27/2019 10:55 AM
4	Because we are considered an inland lake with channel access to Lake Michigan, we see all types and sizes of boats from the 16' fishing boat, sail boats, watersports boats, high performance boats to yachts.	9/23/2019 12:30 PM
5	We just received a grant to upgrade our power to 50 amps, this will improve larger boat demands for the 2020 season	9/23/2019 6:37 AM
6	This season we installed new wifi and security cameras. We have had no complaints about wifi connection. Previously we had satellite tv which was expensive and in need of an upgrade.	9/17/2019 11:18 AM
7	We currently do not have Wifi at slips	9/17/2019 10:47 AM

Q11 What changes do you see in the way boaters are using your facility?

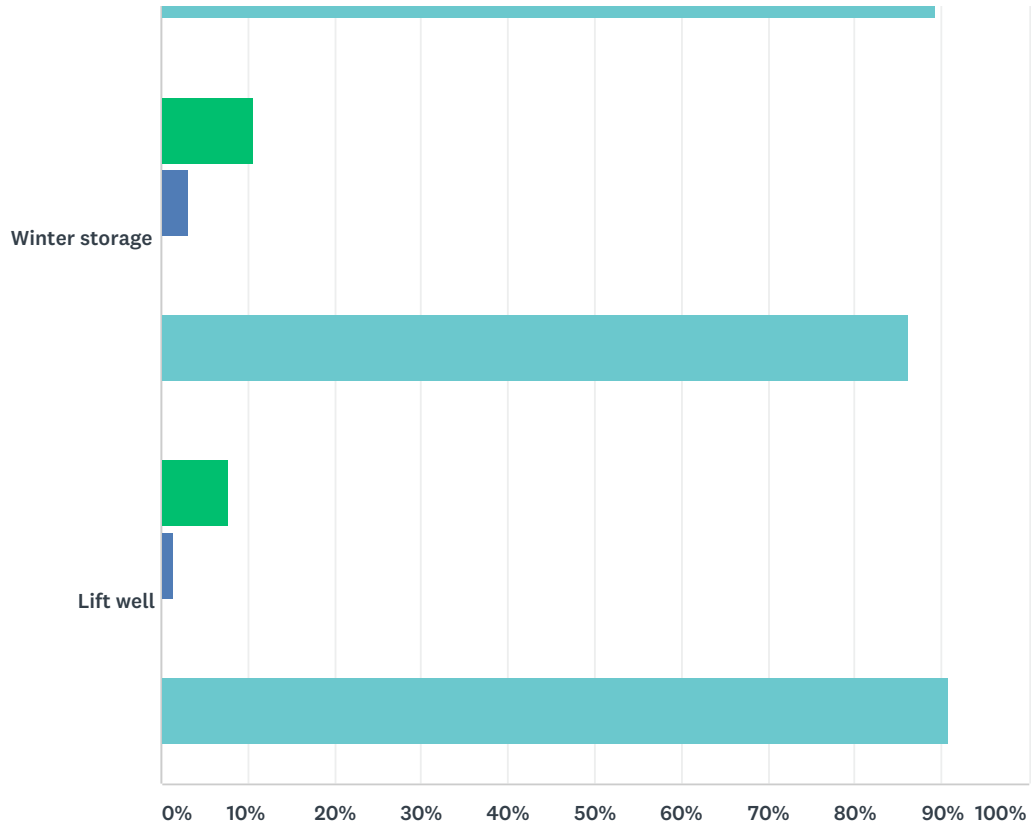
Answered: 67 Skipped: 158



MSWC Facilities Survey



MSWC Facilities Survey



■ Increased
 ■ Constant
 ■ Decreased
 ■ N/A

	INCREASED	CONSTANT	DECREASED	N/A	TOTAL	WEIGHTED AVERAGE
Transient day dock	46.97% 31	37.88% 25	6.06% 4	9.09% 6	66	2.41
Fuel	31.82% 21	27.27% 18	6.06% 4	34.85% 23	66	2.05
Pump-out	22.39% 15	53.73% 36	7.46% 5	16.42% 11	67	2.52
Picnic shelters/spaces	21.21% 14	54.55% 36	4.55% 3	19.70% 13	66	2.44
Grills	15.38% 10	61.54% 40	1.54% 1	21.54% 14	65	2.43
Fish cleaning station	17.19% 11	10.94% 7	4.69% 3	67.19% 43	64	1.53
Showers	31.34% 21	61.19% 41	1.49% 1	5.97% 4	67	2.58
Laundry	16.42% 11	32.84% 22	1.49% 1	49.25% 33	67	1.87
Lounge	17.91% 12	28.36% 19	0.00% 0	53.73% 36	67	1.75
Ship store	3.08% 2	7.69% 5	0.00% 0	89.23% 58	65	1.18
Winter storage	10.77% 7	3.08% 2	0.00% 0	86.15% 56	65	1.17

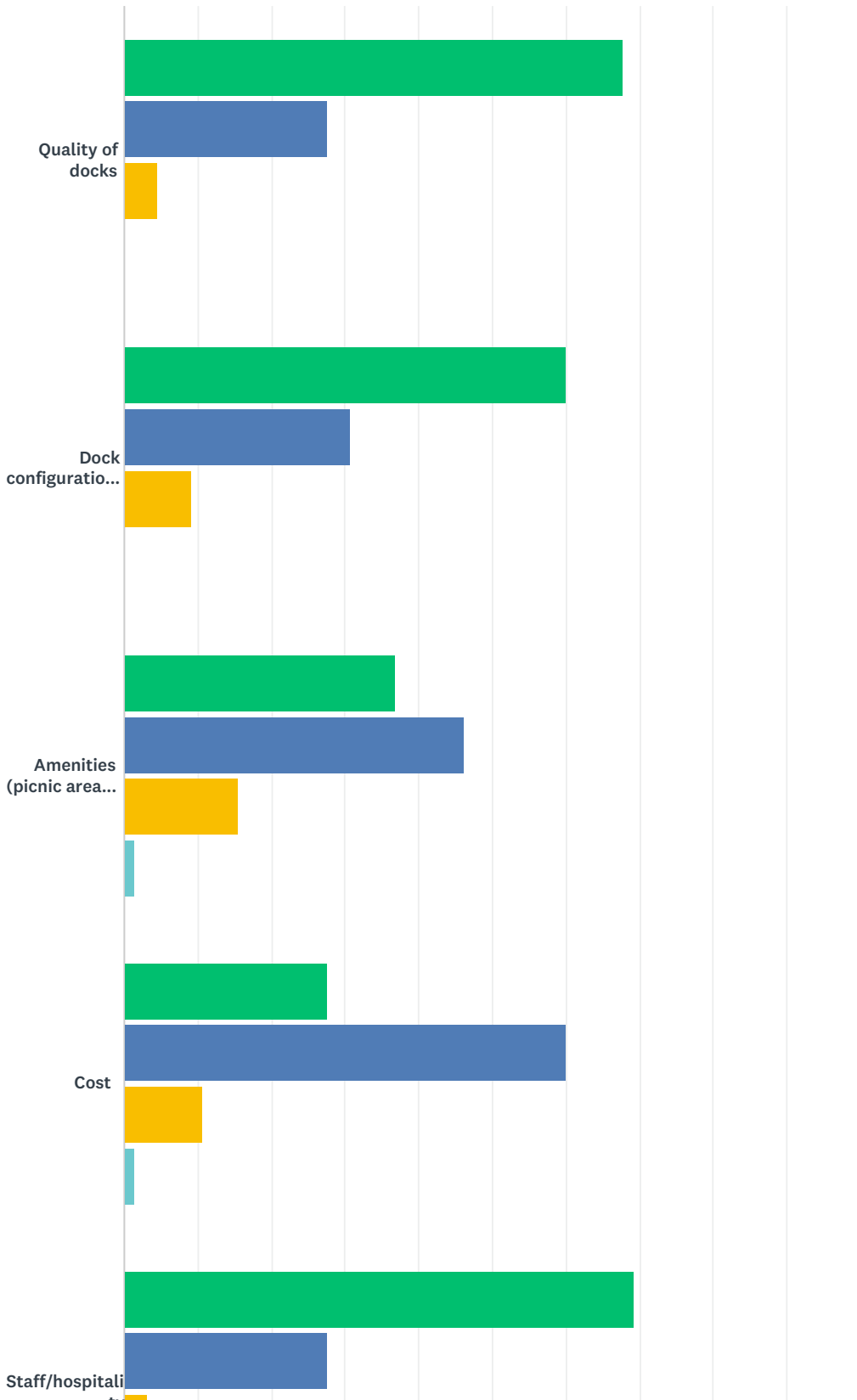
MSWC Facilities Survey

Lift well	7.69%	1.54%	0.00%	90.77%		
	5	1	0	59	65	1.11

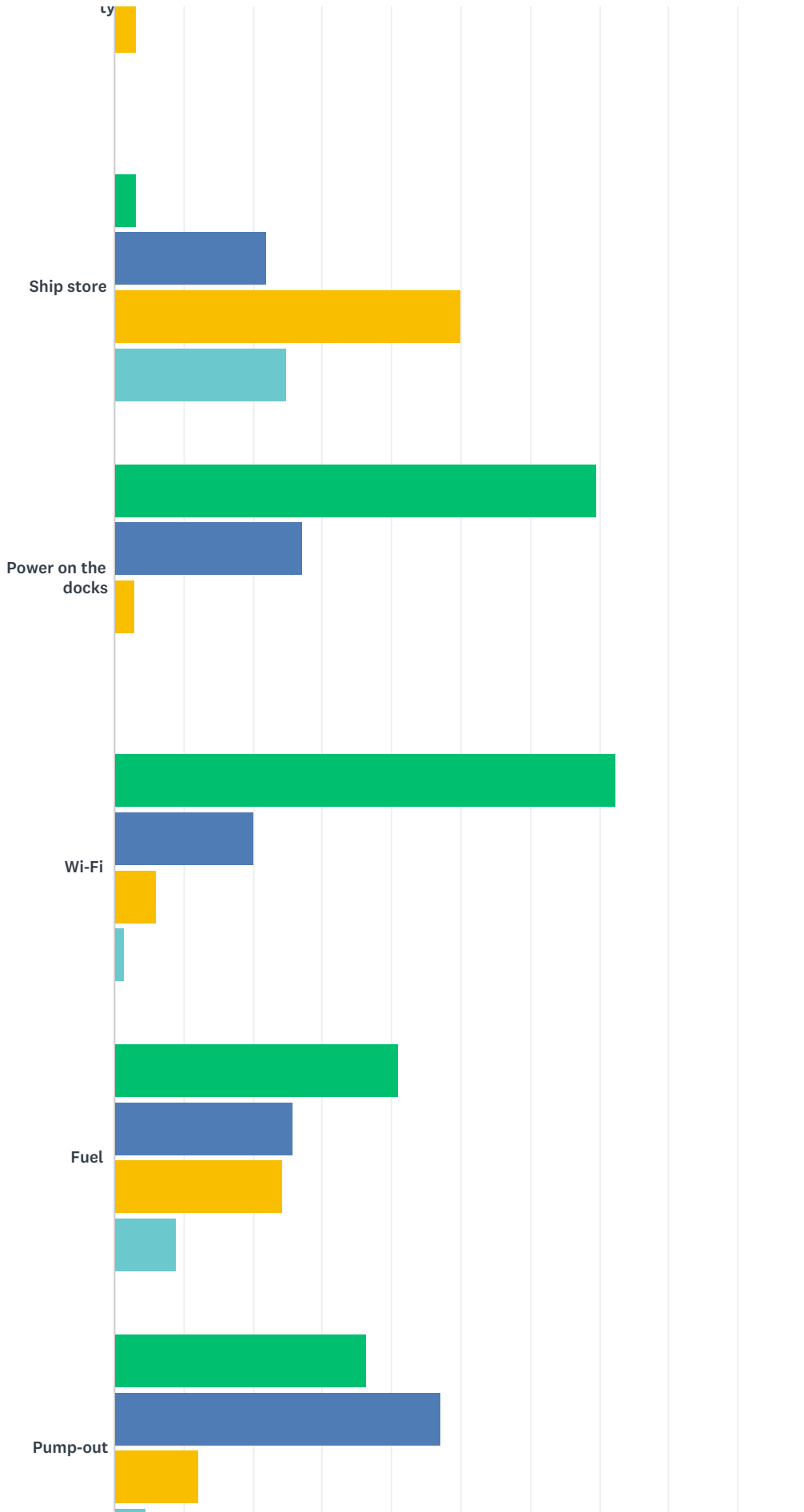
#	PLEASE ADD ANY OTHER CHANGES AND DETAILS TO THE ANSWERS ABOVE:	DATE
1	Fuel discontinued at this marina as of 2019 season. Fuel available at Cinder Pond Marina.	9/30/2019 10:11 AM
2	We don't charge for boater's coming to have lunch in town. Seeing more boater's from Lexington and Harbor Bch coming for lunch. Have had a few larger sail boats shelter during foul weather. Not charged for refuge.	9/30/2019 7:10 AM
3	City of Marquette does not operate the travel lift services.	9/30/2019 5:32 AM
4	Many boaters are wishing to use the facilities amenities rather than just being on the boat. The more you can offer (wifi, boater lounge, picnic areas, gardens, boater bikes) it increases their satisfaction with the facility.	9/17/2019 1:10 PM
5	We have a new hydraulic lift trailer that has allowed us to service additional boaters and add to our (outdoor) winter storage	9/17/2019 11:00 AM

Q12 Please indicate how important these potential changes are to your facility to benefit your boaters?

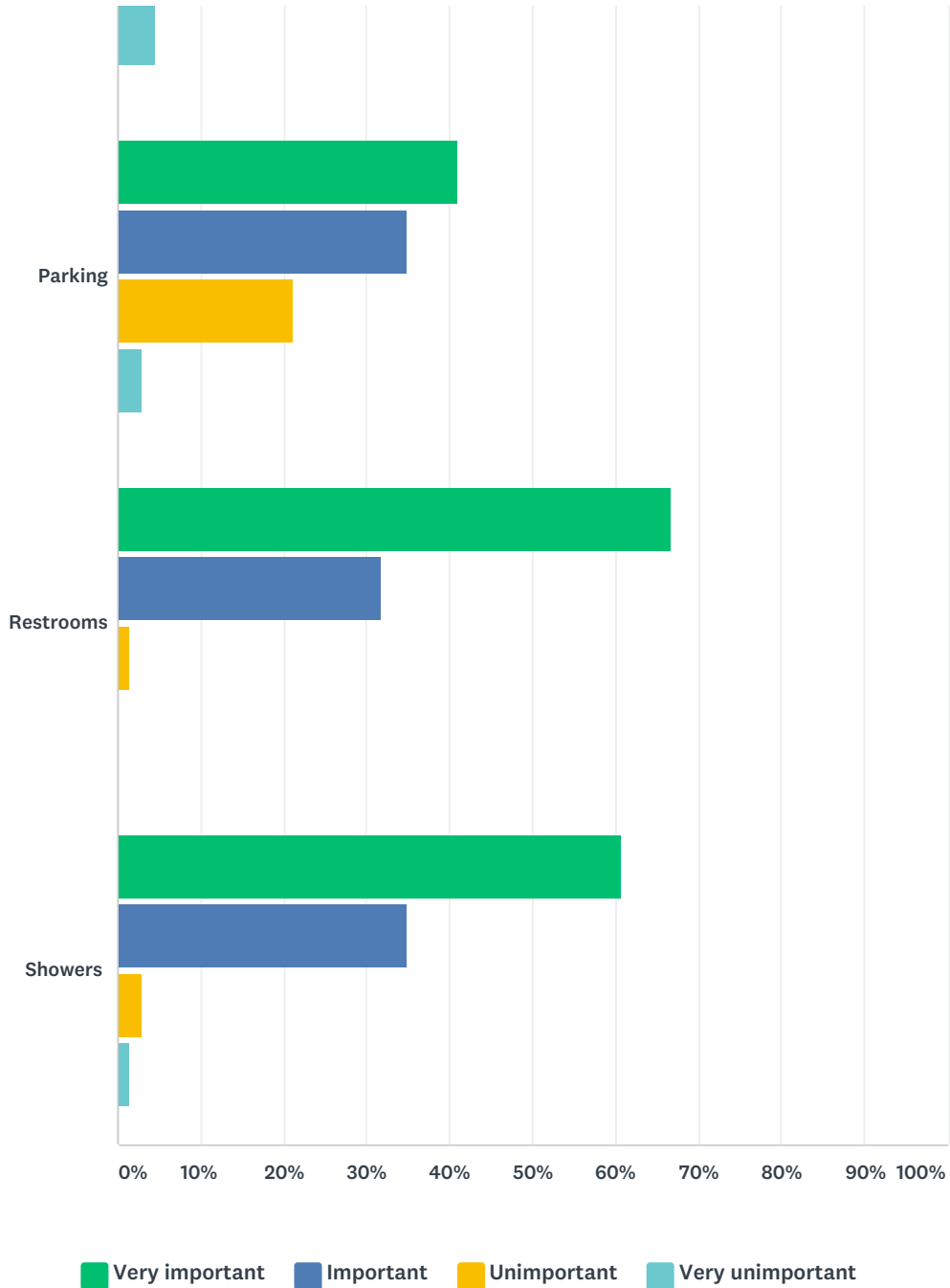
Answered: 66 Skipped: 159



MSWC Facilities Survey



MSWC Facilities Survey



	VERY IMPORTANT	IMPORTANT	UNIMPORTANT	VERY UNIMPORTANT	TOTAL	WEIGHTED AVERAGE
Quality of docks	67.69% 44	27.69% 18	4.62% 3	0.00% 0	65	1.37
Dock configuration/sizes	60.00% 39	30.77% 20	9.23% 6	0.00% 0	65	1.49
Amenities (picnic areas, play areas, etc)	36.92% 24	46.15% 30	15.38% 10	1.54% 1	65	1.82
Cost	27.69% 18	60.00% 39	10.77% 7	1.54% 1	65	1.86
Staff/hospitality	69.23% 45	27.69% 18	3.08% 2	0.00% 0	65	1.34

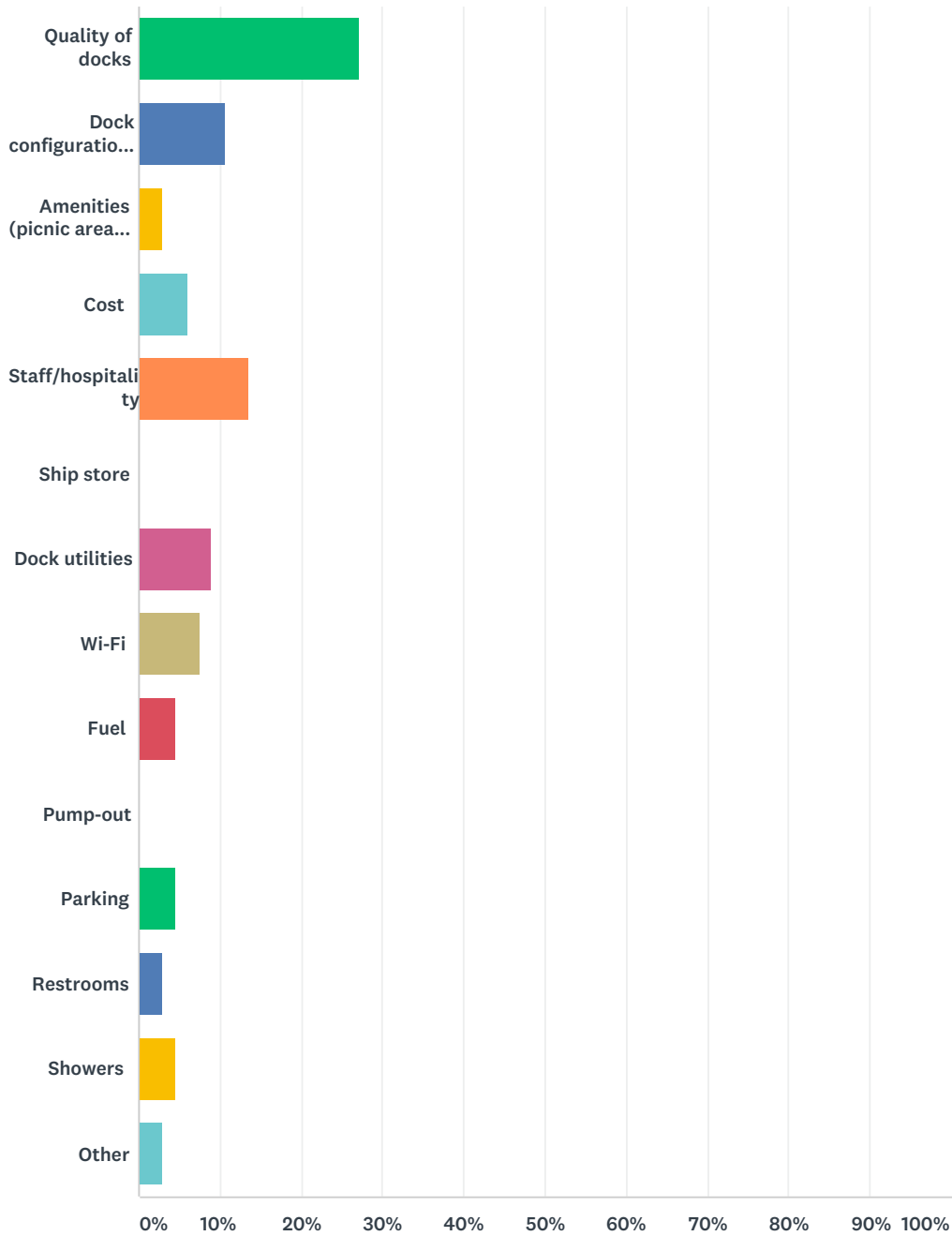
MSWC Facilities Survey

Ship store	3.13% 2	21.88% 14	50.00% 32	25.00% 16	64	2.97
Power on the docks	69.70% 46	27.27% 18	3.03% 2	0.00% 0	66	1.33
Wi-Fi	72.31% 47	20.00% 13	6.15% 4	1.54% 1	65	1.37
Fuel	40.91% 27	25.76% 17	24.24% 16	9.09% 6	66	2.02
Pump-out	36.36% 24	46.97% 31	12.12% 8	4.55% 3	66	1.85
Parking	40.91% 27	34.85% 23	21.21% 14	3.03% 2	66	1.86
Restrooms	66.67% 44	31.82% 21	1.52% 1	0.00% 0	66	1.35
Showers	60.61% 40	34.85% 23	3.03% 2	1.52% 1	66	1.45

#	OTHER (PLEASE SPECIFY)	DATE
1	The everyday needs of boaters are essential to the day to day operation. The world is at a constant change with technology and availability of resources, which grows a population of impatient and demanding individuals. I want our facility to grow and prosper with the times as it is feasible.	10/2/2019 5:59 AM
2	We do not have a ship store or fuel.	9/30/2019 12:17 PM
3	i don't have any changes	9/30/2019 5:36 AM
4	It is difficult to do business on the island and costs are higher than other locations. We held a bid meeting to replace our toilet shower building and recieved no contractor bids to complete the project.	9/20/2019 10:38 AM
5	flush toilets and showers are about a 10 minute walk away in campground	9/17/2019 2:40 PM
6	Boater appreciate and will return to a marina that is well run, clean, modern restrooms and showers and offer fuel, pump out facilities and dependable WiFi connection. Fishermen like our facility because of our updated fish cleaning station, ample blacktop parking and clear directions on launch and retrieval of there craft.	9/17/2019 11:18 AM
7	We believe we need a better hospitality area to add more energy to our facility.	9/17/2019 11:00 AM

Q13 Please choose which of the changes listed below is the most important and indicate why:

Answered: 66 Skipped: 159



ANSWER CHOICES	RESPONSES	
Quality of docks	27.27%	18
Dock configuration/sizes	10.61%	7
Amenities (picnic areas, play areas, etc)	3.03%	2
Cost	6.06%	4

MSWC Facilities Survey

Staff/hospitality	13.64%	9
Ship store	0.00%	0
Dock utilities	9.09%	6
Wi-Fi	7.58%	5
Fuel	4.55%	3
Pump-out	0.00%	0
Parking	4.55%	3
Restrooms	3.03%	2
Showers	4.55%	3
Other	3.03%	2
TOTAL		66

#	WHY IS THIS THE MOST IMPORTANT CHANGE TO MAKE?	DATE
1	We have plenty of parking for the boaters, however, the events that go on at the marina hinder the ability for the boaters to conveniently park at our facility. I have been working with the city to maybe find a new location for some if not all of these events that have a negative impact on my day to day marina operations. I was happy to see the DNR needing to approve events that happen here from now on. This is probably the biggest issue we deal with leaving a risk of losing seasonal and transient customers.	10/2/2019 5:59 AM
2	Age of our docks	9/30/2019 1:00 PM
3	This is the most important change we have already made. Improved hospitality has filled our docks once again. Our boaters also appreciate the quality of our docks.	9/30/2019 12:17 PM
4	Fuel system in need of upgrades for environmental safety and consistent functionality	9/30/2019 12:06 PM
5	We have a consistent request from larger boats for our floating docks beyond the Charter businesses. Our current configuration does not allow us to put anything larger than a 26ft. boat in those docks, which reduces our revenue and decreases the options for local boaters with boats that exceed that size.	9/30/2019 10:12 AM
6	The existing docks were in poor condition due to age.	9/30/2019 10:11 AM
7	High demand for limited docks over 30 ft	9/30/2019 9:54 AM
8	Most boaters want it.	9/30/2019 9:16 AM
9	Facility is old and is need of upgrade	9/30/2019 9:06 AM
10	An eclectic mix of people with differing financial situations means I have clients who are casual boaters who can't afford extras and clients who have three or four boats and they are non-plussed by the cost.	9/30/2019 7:10 AM
11	There are not enough parking spaces for the number of marina slips. Parking is shared with the general public	9/30/2019 6:33 AM
12	Existing docks are failing and have exceeded their expected service life. We are unable to fully fill the marina due to some slips being unusable based on dock condition. With more expected after the next winter cycle.	9/30/2019 6:20 AM
13	having more staff on during boating hours. This year we did not have enough staff working.	9/30/2019 6:20 AM
14	Replacing original fixed piers with with floating docks.	9/30/2019 5:57 AM
15	All items checked in #12 are important, however the aging fuel system makes upgrades necessary for environmental safety and consistent functionality.	9/30/2019 5:50 AM
16	We have a few old docks that need to be replaced for safety and aesthetic reasons	9/30/2019 5:36 AM

MSWC Facilities Survey

17	We have found that a successful season with happy boaters is directly related to quality, knowledgeable staff. Just by having the right people working at our facilities has dramatically changed the perception of our facilities.	9/30/2019 5:32 AM
18	it will give both the seasonal and transient something else to do in walking distance	9/30/2019 5:19 AM
19	providing quality customer service and support increases user satisfaction	9/28/2019 12:15 PM
20	we are located a mile from town, hosts provide contact info. and transportation and area information	9/28/2019 9:19 AM
21	Two of our piers are over 30 years old and are in need of replacement. Our fuel tanks are over 30 years old and even though they are in good shape we may be required to replace them.	9/28/2019 7:52 AM
22	Everyone needs wifi and signal is weak	9/27/2019 11:31 AM
23	the other items on the list that apply to this facility we are getting great feedback on, the biggest thing we could do to improve our standing with customers is to find a way to offer them wifi at the docks	9/27/2019 10:55 AM
24	Exist is old and needs replacement	9/27/2019 10:51 AM
25	We are undergoing new shore power pedestals to accommodate 30 amp and 50 amp services.	9/27/2019 10:13 AM
26	Boats are wider than in the past	9/27/2019 8:10 AM
27	need to upgrade our docks	9/27/2019 7:58 AM
28	The demand for larger slips continues to increase so we would do well to consider extending our docks or building future docks to accommodate larger boats.	9/27/2019 7:12 AM
29	People want to stay connected and be able to operate their businesses while at the harbor.	9/27/2019 7:04 AM
30	could make them handicap friendly	9/27/2019 5:22 AM
31	Our utilities are out of date. Most of the newer boats are requiring higher AMP's than what we currently have.	9/27/2019 4:33 AM
32	Safety and reoccurring cost of old docks does not allow enough capital to make other improvements	9/27/2019 4:33 AM
33	our marina is, in the near future, hoping to improve our boaters' experience by building a new harbormaster building to better serve both our transient boater as well as our seasonal boater. Our current building is over 30 years old.	9/25/2019 1:08 PM
34	Our docks are approx. 45 - 50 years old	9/23/2019 12:30 PM
35	The current docks, not counting the broadsides on the cement finger pier, are resting on old wood cribbing which is quickly failing due to age and now high water. We are in the planning/design phase with a consultant to replace the existing docking.	9/23/2019 11:15 AM
36	Narrow for newer boats	9/23/2019 10:27 AM
37	DeTour State Harbor's occupancy rate stays constant from year to year. We sell a lot of fuel, but there is not much in the DeTour Village area to draw new boaters or to get them to stay overnight. The Harbor was upgraded in 2013/14 and is a great facility, but things to do once boaters come are not in the area. We sell a lot of fuel to boaters passing through to Drummond, up the St. Mary's River or into the North Channel	9/23/2019 10:19 AM
38	we need to upgrade more floating to combat the rise of water levels	9/23/2019 6:37 AM
39	Outdated power pedestals, docks without power.	9/23/2019 5:20 AM
40	There are a few areas around the Marina where there are more slips than parking spots. Overall in the marina there are almost 2 parking spots for all the seasonal slips.	9/21/2019 11:21 AM
41	Our dock amenities have been upgraded in 2008 however our toilet shower facility is a building that was converted and was not originally built as a toilet shower building. It has ran its course and is a desperate need for replacement and upgrades. We have a design and blueprints but were unable to get a single bid at the first bid meeting.	9/20/2019 10:38 AM
42	the better the shape the safer patrons feel.	9/20/2019 9:57 AM
43	As boater standards change the demand for more power is becoming a larger demand	9/19/2019 8:10 AM

MSWC Facilities Survey

44	We have few amenities, so high quality dockage is very important	9/18/2019 4:57 PM
45	WE have improved all other areas in the past two years and now are going to upgrade docks	9/18/2019 11:11 AM
46	Floating docks; because of changes in water levels	9/18/2019 5:38 AM
47	Our users seem to be driven by cost and availability of a slip.	9/18/2019 4:57 AM
48	Boaters are using their boats more and more as cottages, less boating means less fuel sales, and demand the latest technology to stay in touch with their business, family, and friends.	9/18/2019 4:51 AM
49	ours are old and getting harder to keep clean. We are trying to upgrade the appearance for the boaters. This is the biggest area of complaints.	9/18/2019 4:44 AM
50	To be compliant with the new electric regulations, we have made substantial upgrades to our power system. Safety, especially with high water over the docks, should be paramount.	9/17/2019 1:10 PM
51	We have addressed the other areas listed in the question the past two years. The quality of docks is our next project. The docks at St Clair Boat Harbor are about 12 years old and many of the boards are in need of replacement. We intended to start completely replacing each dock one at a time this year. The high water issue has delayed this project until we see how the ice affects the docks this winter.	9/17/2019 11:18 AM
52	Our hospitality area is lacking and often time boaters are unable to find what they are looking for downtown, particularly in the evening	9/17/2019 11:00 AM
53	Our shore marina docks are becoming unsafe, which causes much lower use	9/17/2019 10:47 AM
54	Happy guests=Happy staff	9/17/2019 9:52 AM
55	Too much Duck Feces, many complaints.	9/17/2019 9:37 AM
56	Our floating docks and restroom facilities were constructed in 1987 and are ready for replacement. The City of East Jordan has invested in several dredging projects, power, fuel, pumpout and dock maintenance over the past decade. However, a new marina and upgraded restroom facilities is a necessity.	9/17/2019 8:50 AM

Q14 What is the biggest challenge you face in your facility on a regular basis?

Answered: 66 Skipped: 159

#	RESPONSES	DATE
1	The biggest challenge I face in my facility on a regular basis is the local events that go on in my parking lot and on the main deck. I would like to see these events moved to a different location as the city of St. Ignace has plenty of beautiful city property to host events. I can not stress enough how negatively it impacts my daily operations and the marina does not benefit financially from this. It is wear and tear on the facilities from non-boaters.	10/2/2019 5:59 AM
2	Grant funding for dock improvement	9/30/2019 1:00 PM
3	Birds	9/30/2019 12:17 PM
4	Day dockage conflicting with reserved slips; need dedicated areas for say docakge	9/30/2019 12:06 PM
5	Not enough larger docks for the demand and bathroom facilities that meet the demand of the boating population. Many boaters also comment that we have no boater lounge for them to use.	9/30/2019 10:12 AM
6	The marina is 3.5 miles from downtown Marquette and Cinder Pond Marina. Not busy enough for full time staff. Responding on an on-call basis presents some challenges.	9/30/2019 10:11 AM
7	Controlling nuisance waterfowl (geese and ducks) and daily clean-up.	9/30/2019 9:54 AM
8	All good	9/30/2019 9:16 AM
9	Keep marina updated and current with maintenance	9/30/2019 9:15 AM
10	Dockage needs upgrading	9/30/2019 9:06 AM
11	Aging facilities and and increasing demands on operations and maintenance budgets.	9/30/2019 8:38 AM
12	I seem to have more small fires than one big challenge. Everything I am hearing and seeing are doable and quickly resolved.	9/30/2019 7:10 AM
13	Water levels and parking.	9/30/2019 6:33 AM
14	High cost of maintenance with little income.	9/30/2019 6:28 AM
15	The age and condition of the floating docks.	9/30/2019 6:20 AM
16	high water levels	9/30/2019 6:20 AM
17	Dredging the Manistique River. Boats are afraid to come in. It is imperative that we keep the river accessible, otherwise we have a new facility that no one can get to.	9/30/2019 6:05 AM
18	Dock conditions have been deteriorating and many have been decommissioned.	9/30/2019 5:57 AM
19	Power issues; fuel pump issues	9/30/2019 5:50 AM
20	We are "not on the way".	9/30/2019 5:36 AM
21	Managing the daily waterfowl mess has been a challenge lately.	9/30/2019 5:32 AM
22	trying to make enough money to cover expense and try to upgrade the older facility at the same time.	9/30/2019 5:19 AM
23	not enough fuel pumps or staff	9/30/2019 5:18 AM
24	staffing	9/28/2019 12:15 PM
25	need to increase number of seasonal/transient docks	9/28/2019 9:19 AM
26	Nothing at this time	9/28/2019 7:52 AM
27	Wifi	9/27/2019 11:31 AM
28	lack of dock wifi complaints about being slip specific	9/27/2019 10:55 AM

MSWC Facilities Survey

29	maintenance	9/27/2019 10:51 AM
30	Shore Power needs and high water surges.	9/27/2019 10:13 AM
31	Dock width and power	9/27/2019 8:10 AM
32	In 2019 it has been the High water. Trying to accommodate all the transient boaters	9/27/2019 7:58 AM
33	Parking and staffing seasonal employees	9/27/2019 7:12 AM
34	Why we do not have WIFI.	9/27/2019 7:04 AM
35	seasonal usage	9/27/2019 6:53 AM
36	not enough docks at times	9/27/2019 5:22 AM
37	Dock utilities, out of date restrooms & showers	9/27/2019 4:33 AM
38	Staffing, finding great customer service workers now is tough.	9/27/2019 4:33 AM
39	An outdated building.	9/25/2019 1:08 PM
40	Not having enough docks to rent, both seasonally and transient	9/23/2019 12:30 PM
41	Keeping the current wood crib docks safe for boater/visitors to the Island	9/23/2019 11:15 AM
42	Dock configuration	9/23/2019 10:27 AM
43	Hiring summer staff and attracting boaters	9/23/2019 10:19 AM
44	water levels, lack of floating docks	9/23/2019 6:37 AM
45	Enough power	9/23/2019 5:20 AM
46	1234	9/23/2019 4:37 AM
47	Boats using our facility without registering.	9/22/2019 10:55 AM
48	Camis's reservation website. The new program was rushed into production with many flaws.	9/21/2019 11:21 AM
49	Staffing issues. Finding qualified staff willing to commute to the island.	9/20/2019 10:38 AM
50	The high water level has been tough	9/20/2019 9:57 AM
51	Water levels, currently the height excess	9/19/2019 8:10 AM
52	Parking	9/18/2019 4:57 PM
53	Accommodating all the requests for dockage during the summer months	9/18/2019 11:11 AM
54	Slips for larger boats....50 plus	9/18/2019 6:07 AM
55	Outdated bath house	9/18/2019 5:38 AM
56	managing the seasonal boaters	9/18/2019 4:57 AM
57	This summer - high water levels	9/18/2019 4:51 AM
58	Currently it is the high water levels off the lake.	9/18/2019 4:44 AM
59	GFCI Tripping	9/17/2019 2:40 PM
60	Electric issues & Staffing	9/17/2019 1:10 PM
61	Be able to accommodate larger boats on busy weekends.	9/17/2019 11:18 AM
62	There is a lack of boaters traveling through our area and many are competing to bring fewer boaters in. Our marina has a great reputation but transient boaters are not always pleased with the shopping and dining offerings in our downtown.	9/17/2019 11:00 AM
63	Weather and water levels	9/17/2019 10:47 AM
64	Honoring reservations.	9/17/2019 9:52 AM
65	Duck feces and weak Wifi signal, GFI.	9/17/2019 9:37 AM
66	Funding and competition with nearby communities.	9/17/2019 8:50 AM

Q15 What would be the most important change to your facility to benefit your staff/operations?

Answered: 62 Skipped: 163

#	RESPONSES	DATE
1	The most important change to my facility to benefit the staff and operations is more user-friendly equipment and updated technology to work with.	10/2/2019 5:59 AM
2	Reconfiguring travel routes.	9/30/2019 1:00 PM
3	We need more 60' docks.	9/30/2019 12:17 PM
4	Staff offices at harbor so they don't need to walk from BAS office	9/30/2019 12:06 PM
5	A more user friendly reservation system. Even with the upgrades done by CAMIS this year, the system is challenging and the "bugs" don't always get worked out in a timely manner. We had an increase in boaters wanting to register through the marina office because they could not figure out the reservation system.	9/30/2019 10:12 AM
6	Higher wage to be more competitive in the seasonal job market.	9/30/2019 10:11 AM
7	Increased pay to better compete in the seasonal job market.	9/30/2019 9:54 AM
8	new mowers/equipment	9/30/2019 9:16 AM
9	Upgraded shower and restrooms	9/30/2019 9:06 AM
10	The ability to control nuisance winged animals. Our marina has issues with waterfowl creating cleanliness issues within our docks and facility. Duck, seagull, and goose droppings are a health and safety risk however we have limited means to limit our risk.	9/30/2019 8:38 AM
11	It's an aging dock. Likely the biggest change is remodel, at some point. Aging infrastructure.	9/30/2019 7:10 AM
12	Larger gas dock	9/30/2019 6:33 AM
13	Replacement of floating docks would allow staff more time to see to other needs of the facility that are currently underserved due to the needs of the floating docks.	9/30/2019 6:20 AM
14	change to the layout of the office and lounge area	9/30/2019 6:20 AM
15	Dredging to maintain our accessibility. This is the question our staff gets asked the most.	9/30/2019 6:05 AM
16	Replacement of the piers and utilities.	9/30/2019 5:57 AM
17	Upgraded utilities; more versatile dock configuration (broadside)	9/30/2019 5:50 AM
18	Replace our old docks, upgrade our fueling system and harbor building.	9/30/2019 5:36 AM
19	We have a new harbor services facility in thanks to the MDNR Waterways, and it is much easier to maintain. We have also been fortunate in finding great staff despite the lack of available workers.	9/30/2019 5:32 AM
20	new or upgraded bath/shower facilities	9/30/2019 5:19 AM
21	addition of a fuel pump and more staff	9/30/2019 5:18 AM
22	improve infrastructure	9/28/2019 12:15 PM
23	keep host position filled	9/28/2019 9:19 AM
24	Nothing at this time	9/28/2019 7:52 AM
25	Wifi	9/27/2019 11:31 AM
26	good working wifi and ending slip specific at our facility	9/27/2019 10:55 AM
27	Fuel Station and a part time harbormaster	9/27/2019 10:51 AM
28	Upgrade of shore power and remedial activity to minimize high water/ground water issues.	9/27/2019 10:13 AM
29	Dock configuration	9/27/2019 8:10 AM

MSWC Facilities Survey

30	N/A	9/27/2019 7:58 AM
31	We are currently renovating the entire land based operations	9/27/2019 7:12 AM
32	WIFI	9/27/2019 7:04 AM
33	maybe one more gas hose	9/27/2019 5:22 AM
34	new showers and restrooms, dock utilities, floating docks	9/27/2019 4:33 AM
35	WiFi/CATV seem to be the biggest complaints by boaters.	9/27/2019 4:33 AM
36	A new harbormaster building.	9/25/2019 1:08 PM
37	improved docking and breakwall / wave attenuation for protection of the boats and additional slips to accommodate more boaters	9/23/2019 12:30 PM
38	New harbor docks	9/23/2019 11:15 AM
39	Higher wage for summer staff and the availability of more reliable wifi for boaters	9/23/2019 10:19 AM
40	upgraded floating docks	9/23/2019 6:37 AM
41	Power update.	9/23/2019 5:20 AM
42	1234	9/23/2019 4:37 AM
43	A harbor building with restrooms, showers, and a harbor office.	9/22/2019 10:55 AM
44	Credit Card reader that works properly on the fuel dock.	9/21/2019 11:21 AM
45	A new toilet shower facility that would be more user friendly and not take up so much staff time to keep fixed and operational.	9/20/2019 10:38 AM
46	training	9/20/2019 9:57 AM
47	At this time we are comfortable with our staff operations	9/19/2019 8:10 AM
48	Parking enforcement,	9/18/2019 4:57 PM
49	Better communication with boaters entering our harbor	9/18/2019 11:11 AM
50	Better handheld radios and ship to shore radio. Also cleaning device for cleaning restrooms.	9/18/2019 6:07 AM
51	New bath house	9/18/2019 5:38 AM
52	Currently in the process of adding on a new addition to dock building to help with staff storage and boaters lounge, as well as new offices.	9/18/2019 4:57 AM
53	Floating docks	9/18/2019 4:51 AM
54	New marina office and ship store.	9/18/2019 4:44 AM
55	Boaters repair their faulty electrical systems	9/17/2019 2:40 PM
56	Critical upgrades to infrastructure - electric upgrades, high water erosion issues, etc	9/17/2019 1:10 PM
57	More efficient way to monitor our boat launch and fish cleaning station. Launch and cleaning facility is not visible from office area.	9/17/2019 11:18 AM
58	Overhauling the office and hospitality area to better meet today's needs versus the needs of the 1980s.	9/17/2019 11:00 AM
59	Wifi, consistent internet for Camis	9/17/2019 10:47 AM
60	Controlling the vast numbers of boaters that want to visit Leland.	9/17/2019 9:52 AM
61	None	9/17/2019 9:37 AM
62	Upgraded facilities. Office and workspace improvements.	9/17/2019 8:50 AM

Q16 What trends do you see evolving in your facility that we need to plan for in the future?

Answered: 60 Skipped: 165

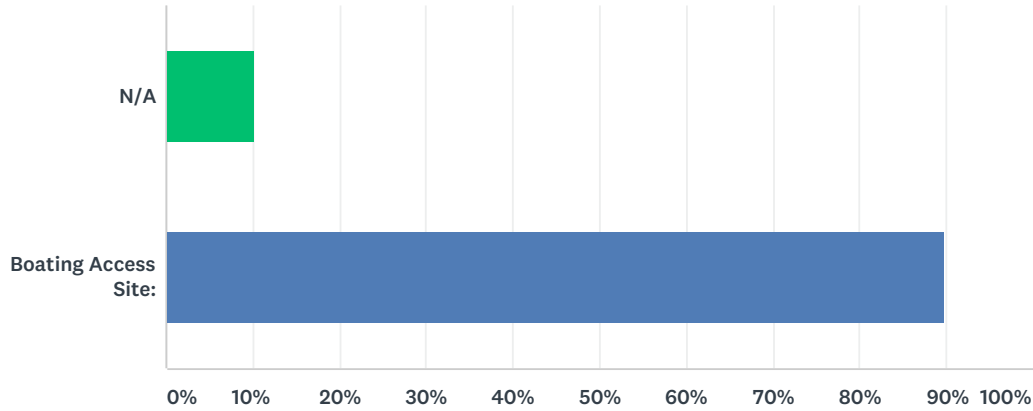
#	RESPONSES	DATE
1	From working with this facility as the Harbormaster and dockhand, and at the Mackinaw City Municipal Marina as a dockhand, I have seen a constant trend of issues with the DNR system and users having a hard time with it. I see more and more 40'+ vessels than the smaller vessels. Our facility is more than capable of accommodating 38' and below. It often gets tight with the larger vessels in the peak of the season. Boaters seem to expect more amenities as the years progress, and I would like to brainstorm on productive options to satisfy this demand.	10/2/2019 5:59 AM
2	Bigger boats and day use boats on the increase. The mid size boats are showing up less.	9/30/2019 1:00 PM
3	We have seen bigger boats each year.	9/30/2019 12:17 PM
4	Need for greater power supplies and technology/wifi	9/30/2019 12:06 PM
5	Longer floating docks Wifi access throughout the entire marina New office/with attached bathroom & shower facilities	9/30/2019 10:12 AM
6	None.	9/30/2019 10:11 AM
7	Increased transient traffic of 40 ft and greater vessel sizes	9/30/2019 9:54 AM
8	Retirements	9/30/2019 9:16 AM
9	Upgrade/update marina infrastructure	9/30/2019 9:06 AM
10	One thing we have noticed is an increase in boaters with dogs. Pet friendly facilities have become a priority for many of our users.	9/30/2019 8:38 AM
11	Will likely need to go further with the five year plan and address the docks, finger docks, and amenities supplied to boaters.	9/30/2019 7:10 AM
12	Aging docks and electrical systems	9/30/2019 6:33 AM
13	Larger vessels and demand for increased amenities.	9/30/2019 6:20 AM
14	having more broadside dockage at the facility.	9/30/2019 6:20 AM
15	Maintenance dredging otherwise the improvements will be wasted.	9/30/2019 6:05 AM
16	Increased costs for replacing docks and dredging as well as regulations around construction in the Great Lakes may delay projects.	9/30/2019 5:57 AM
17	Bigger boats drawing more power; the desire for technology (wifi)	9/30/2019 5:50 AM
18	high water levels	9/30/2019 5:36 AM
19	If the economy and fuel prices remain stable, then we should continue to be at capacity and recognize higher revenues in transient and concession sales. We will need to ensure that routine maintenance and support services operate efficiently to provide the highest levels of service to meet the demand.	9/30/2019 5:32 AM
20	we need to do some remodeling and improvements to the bathhouse and docks	9/30/2019 5:19 AM
21	a director's order to make our parking lot for trailers only	9/30/2019 5:18 AM
22	township is improving their park and recreation facilities and our harbor/marina adjoins their property which will increase our visitors	9/28/2019 12:15 PM
23	increase seasonal and transient docking, parking and infrastructure	9/28/2019 9:19 AM
24	I believe attracting a new generation of boater is needed at least at our marina.	9/28/2019 7:52 AM
25	wifi	9/27/2019 11:31 AM

MSWC Facilities Survey

26	increased interest in our seasonal program, we may need to evaluate allowing more seasonal boaters in	9/27/2019 10:55 AM
27	need to expand and provide/improve protection from river sediments adjacent to facility	9/27/2019 10:51 AM
28	Winter preservation of slips.	9/27/2019 10:13 AM
29	More power and wider slips	9/27/2019 8:10 AM
30	N/a	9/27/2019 7:12 AM
31	WIFI	9/27/2019 7:04 AM
32	none at this time	9/27/2019 5:22 AM
33	floating docks, boaters lounge and laundry facility	9/27/2019 4:33 AM
34	Water levels. If they raise next year we will have serious operational issues	9/27/2019 4:33 AM
35	A need for a more efficient and boater friendly harbormaster building.	9/25/2019 1:08 PM
36	An eventual increase in visitation due to new upgraded docking structures in the future	9/23/2019 11:15 AM
37	Width and power	9/23/2019 10:27 AM
38	Our current boaters seem happy with our facility	9/23/2019 10:19 AM
39	dock replacement	9/23/2019 6:37 AM
40	Increasing demand for fast WiFi	9/23/2019 5:20 AM
41	123	9/23/2019 4:37 AM
42	More flotation docks, harbor building (above), more secure breakwater.	9/22/2019 10:55 AM
43	possible dock raising due to current high water levels.	9/21/2019 11:21 AM
44	Some of the newer 55-60 foot boats are now being made wider than 20 feet. We have a couple slips we can squeak boats that wide into but with fixed piers if that trend continues as those boats hit the great lakes it will be difficult to dock them.	9/20/2019 10:38 AM
45	na	9/20/2019 9:57 AM
46	Updating aging facilities including restrooms	9/19/2019 8:10 AM
47	Desperately need an East breakwall..!!!!	9/18/2019 4:57 PM
48	Good dependable WiFi and security	9/18/2019 11:11 AM
49	Larger boats. Economy is getting better and boats are getting bigger.	9/18/2019 6:07 AM
50	rising water levels	9/18/2019 5:38 AM
51	more seasonal boaters instead of transient users due to cost of boating.	9/18/2019 4:57 AM
52	More on-site amenities to meet the needs of the "cottage" boater	9/18/2019 4:51 AM
53	Dock maintenance, power upgrades and building improvements.	9/18/2019 4:44 AM
54	Electric issues - ESD	9/17/2019 1:10 PM
55	Our upgrade in WiFi and security system helped us get ahead of the curve with seasonal & transient boaters. We also have a courtesy van that transports customers within the city 7a-9p weekdays, 7a-11p weekends. One issue is the number of boaters with 8' swim platforms and dinghys.	9/17/2019 11:18 AM
56	Our facility is aging and will need a large overhaul within 10 years -- docks, pilings, etc. Also, we need to improve the amenities we offer, particularly our hospitality area.	9/17/2019 11:00 AM
57	Larger boats	9/17/2019 10:47 AM
58	Larger boats require larger slips. We currently have 10-45' slips....Many of our guests have boats exceeding 50'.	9/17/2019 9:52 AM
59	Better Wifi, less duck feces	9/17/2019 9:37 AM
60	Mid size/recreational boats are more common than larger boats. However, there is still a need to large vessel dockage	9/17/2019 8:50 AM

Q17 Please indicate which Boating Access Site you operate:

Answered: 177 Skipped: 48



ANSWER CHOICES	RESPONSES	
N/A	10.17%	18
Boating Access Site:	89.83%	159
TOTAL		177

#	BOATING ACCESS SITE:	DATE
1	Finn Road Park Boat launch	10/1/2019 5:52 AM
2	A03-012 Baseline Lake	10/1/2019 3:23 AM
3	A03-013 Allegan Dam East	10/1/2019 3:20 AM
4	Morrow Lake - River Oaks County Park	9/30/2019 1:15 PM
5	Lexington	9/30/2019 12:09 PM
6	Ausabe River Mounth BAS	9/30/2019 11:56 AM
7	Grand Haven Boat Launch	9/30/2019 10:16 AM
8	Presque Isle Marina	9/30/2019 10:15 AM
9	Bartnik	9/30/2019 10:03 AM
10	Cinder Pond Marina	9/30/2019 10:00 AM
11	Charles T. Harvey	9/30/2019 9:09 AM
12	Lake Lansing Boat Launch	9/30/2019 9:04 AM
13	Saginaw River Mouth	9/30/2019 8:49 AM
14	Browns Addition Boat Launch	9/30/2019 8:43 AM
15	Fayette Historic State Park	9/30/2019 7:32 AM
16	Garden Bay	9/30/2019 7:30 AM
17	Fishdam	9/30/2019 7:26 AM
18	Nahma	9/30/2019 7:25 AM
19	Farmer's Dock	9/30/2019 7:22 AM
20	Rapid River	9/30/2019 6:58 AM

MSWC Facilities Survey

21	Duncan L. Clinch	9/30/2019 6:48 AM
22	Grand Trunk, Hartshorn, Cottage Grove, and Fisherman's Landing	9/30/2019 6:47 AM
23	Naubinway Marina Garfield Township Mackinac Co.	9/30/2019 6:38 AM
24	Thousand Island Lake	9/30/2019 6:36 AM
25	Oman's Creek	9/30/2019 6:35 AM
26	Duck Lake	9/30/2019 6:33 AM
27	Lake Gogebic East Shore	9/30/2019 6:32 AM
28	Bergland Dock	9/30/2019 6:30 AM
29	10 B.A.S. sites Cheboygan County	9/30/2019 6:30 AM
30	Lake Gogebic State park	9/30/2019 6:27 AM
31	Cedar river Harbor	9/30/2019 6:25 AM
32	Black River Park Marina & Boat Launch	9/30/2019 6:18 AM
33	Manistique Westside Boat Launch	9/30/2019 6:10 AM
34	Presque Isle Marina	9/30/2019 6:03 AM
35	Shamrock Park Berrien Springs MI	9/30/2019 6:01 AM
36	Lake St. Helen	9/30/2019 5:46 AM
37	Cinder Pond Marina	9/30/2019 5:44 AM
38	Paw Paw East	9/30/2019 5:43 AM
39	Gladstone	9/30/2019 5:40 AM
40	Lexington	9/30/2019 5:21 AM
41	Grindstone Access site, Eagle Bay	9/30/2019 5:20 AM
42	Kipling BAS	9/30/2019 5:15 AM
43	Ford River Mouth BAS	9/30/2019 5:12 AM
44	Comins Flats	9/30/2019 5:12 AM
45	Wixom Lake Glawin Co.	9/30/2019 5:07 AM
46	A75-017 Portage Lake	9/30/2019 3:02 AM
47	A75-002 Klinger Lake	9/30/2019 2:58 AM
48	A14-012 Juno Lake	9/30/2019 2:52 AM
49	A14-006 Diamond Lake	9/30/2019 2:47 AM
50	A80-005 Cedar Lake	9/30/2019 2:37 AM
51	big bay harbor	9/28/2019 12:21 PM
52	Alverno damm	9/28/2019 9:51 AM
53	big bay harbor	9/28/2019 9:34 AM
54	North Shore and Arenson Island in Escanaba	9/28/2019 8:00 AM
55	Hoffman Memorial Access Site (no boat launch at this location)	9/28/2019 2:54 AM
56	DNR	9/27/2019 11:33 AM
57	LAnse Municipal Marina	9/27/2019 11:09 AM
58	Halfway Creek	9/27/2019 11:05 AM
59	Straits Stat Harbor	9/27/2019 10:58 AM
60	Bolles Harbor	9/27/2019 10:55 AM
61	Frankfort	9/27/2019 10:17 AM

MSWC Facilities Survey

62	Halfmoon Lake	9/27/2019 9:18 AM
63	Portage Lake, Washtenaw County	9/27/2019 9:09 AM
64	Presque Isle and Alpena Counties	9/27/2019 7:30 AM
65	Elmwood Township Marina	9/27/2019 7:15 AM
66	Tippy Dam - Manistee River - Manistee County	9/27/2019 5:47 AM
67	Stronach - Manistee County	9/27/2019 5:42 AM
68	Portage lake - Manistee County	9/27/2019 5:37 AM
69	Portage Lake BAS	9/27/2019 5:34 AM
70	Marble Lake BAS	9/27/2019 5:23 AM
71	Duck Lake BAS	9/27/2019 5:15 AM
72	Coldwater Lake BAS	9/27/2019 5:11 AM
73	Spider Lake BAS	9/27/2019 5:09 AM
74	Center Lake BAS	9/27/2019 5:06 AM
75	Skegemog Lake	9/27/2019 5:05 AM
76	Yankee Springs Recreation Area	9/27/2019 4:47 AM
77	Pontiac Lake	9/27/2019 4:45 AM
78	City of New Buffalo Boat Ramp	9/27/2019 4:36 AM
79	Stony Creek Metropark Boat Launch	9/27/2019 4:23 AM
80	Ionia Recreation Area/BAS	9/27/2019 4:18 AM
81	Harrisville BAS	9/26/2019 8:03 AM
82	South Bay Hubbard Lake	9/26/2019 7:58 AM
83	Belleville Lake BAS West A82-009	9/26/2019 7:56 AM
84	East Bay Hubbard Lake	9/26/2019 7:53 AM
85	Belleville Lake East A 82-003	9/26/2019 7:46 AM
86	A launch ramp facility with two launch lanes.	9/25/2019 1:18 PM
87	Pine Street	9/25/2019 11:41 AM
88	Newaygo State Park	9/25/2019 11:38 AM
89	New Bridge	9/25/2019 11:33 AM
90	High Rollway	9/25/2019 11:30 AM
91	Crystal Lake - North	9/25/2019 11:03 AM
92	Gallup Park	9/25/2019 8:20 AM
93	A 39-001 Barton Lake	9/25/2019 8:01 AM
94	Otsego Lake State Park BAS	9/24/2019 12:31 PM
95	Saginaw River Mouth	9/24/2019 9:49 AM
96	Boyne City Municipal	9/23/2019 12:43 PM
97	Brimley State Park BAS	9/23/2019 11:00 AM
98	DeTour Passage BAS	9/23/2019 10:54 AM
99	Caribou Lake BAS	9/23/2019 10:50 AM
100	Van Riper State Park	9/23/2019 10:08 AM
101	Lake Michigamme BAS	9/23/2019 10:01 AM
102	Deer Lake BAS	9/23/2019 9:56 AM

MSWC Facilities Survey

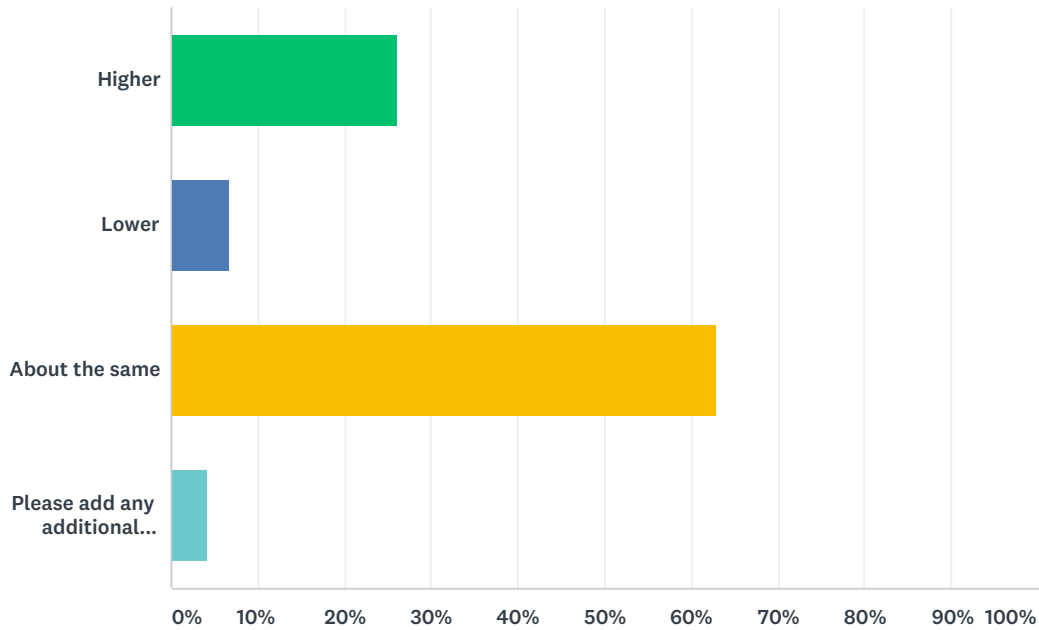
103	Greenwood Reservoir BAS	9/23/2019 9:50 AM
104	Pentwater boat launch	9/23/2019 6:40 AM
105	Aloha State Park	9/23/2019 5:31 AM
106	Hessel and cedarville launches	9/23/2019 5:26 AM
107	Lake Antoine Park	9/23/2019 4:53 AM
108	grand trunk	9/23/2019 4:39 AM
109	Bois Blanc Island Marina	9/22/2019 11:01 AM
110	City of St. Joseph Boat Launch	9/21/2019 11:33 AM
111	Brevort Lake	9/20/2019 10:23 AM
112	Elizabeth Park Marina	9/20/2019 9:59 AM
113	Ford Lake	9/20/2019 9:31 AM
114	Ludington State Park BAS	9/19/2019 12:27 PM
115	Snug Harbor in Muskegon State Park	9/19/2019 11:05 AM
116	Brandenburg Park	9/19/2019 10:35 AM
117	Squaw Lake B.A.S.	9/19/2019 10:20 AM
118	Whitewater Township Park	9/19/2019 8:34 AM
119	Launch area with parking	9/19/2019 8:19 AM
120	South Houghton Lake BAS	9/19/2019 7:35 AM
121	West Houghton Lake BAS	9/19/2019 7:31 AM
122	West Higgins Lake BAS	9/19/2019 7:26 AM
123	North Higgins Lake State Park	9/19/2019 7:20 AM
124	Bridgeton Township Park BAS and Maple Island Park BAS	9/19/2019 3:58 AM
125	St Clair Boat Harbor	9/18/2019 11:16 AM
126	Cass Lake	9/18/2019 11:11 AM
127	Fillion Road BAS	9/18/2019 9:29 AM
128	East Houghton Lake BAS	9/18/2019 7:12 AM
129	Carronde Park	9/18/2019 6:44 AM
130	Marine City BAS	9/18/2019 6:37 AM
131	Shamrock Park Berrien Springs MI	9/18/2019 6:24 AM
132	North Channel BAS	9/18/2019 6:19 AM
133	charlevoix city police run this area.	9/18/2019 6:12 AM
134	Lake Margrethe	9/18/2019 6:01 AM
135	South Portage Entry BAS	9/18/2019 5:41 AM
136	Bayport BAS	9/18/2019 5:33 AM
137	Austin Lake (Kalamazoo County) 39-14	9/18/2019 5:23 AM
138	benton harbor	9/18/2019 5:16 AM
139	Whitmore Lake	9/18/2019 5:11 AM
140	2 boat docks	9/18/2019 5:04 AM
141	East Tawas BAS	9/18/2019 5:01 AM
142	Independence Boat Launch	9/18/2019 4:58 AM
143	Thunder Bay River downtown Alpena	9/18/2019 4:49 AM

MSWC Facilities Survey

144	Torch River	9/18/2019 4:29 AM
145	Harley Ensign, Clinton River Cut Off, Selfridge & Fair Haven	9/18/2019 3:29 AM
146	Rapid River, Nahma, Farmer's Dock, Fishdam, Garden Bay & Fayette	9/17/2019 2:49 PM
147	Lake Fenton BAS	9/17/2019 12:57 PM
148	Halfmoon Lake	9/17/2019 11:39 AM
149	Six launch ramps at Rogers City Marina	9/17/2019 11:04 AM
150	Lake St. Clair Metropark	9/17/2019 10:57 AM
151	Sanford Lake Park	9/17/2019 10:39 AM
152	Union Bay & Big Iron River	9/17/2019 10:39 AM
153	Fletcher's Pond	9/17/2019 10:28 AM
154	North Higgins Lake State Park, West Higgins Lake BAS, West Houghton Lake BAS, and South Houghton Lake BAS	9/17/2019 10:16 AM
155	Leland Twp. Harbor	9/17/2019 9:58 AM
156	DNR	9/17/2019 9:44 AM
157	Silver Lake State Park, Oceana County	9/17/2019 9:19 AM
158	AuSable River Canoe Camp, Bear Lake, Big Blue Lake, Big Twin Lake, Bright Lake, Burton's Landing, Connors Flats, Cranberry Lake, Cub Lake, Glory Lake, Hole in the Fence, Hole in the Wall, Indian Lake, Jones Lake, Keystone Landing, KP Lake, Lake Margrethe, Logger's Landing, M-72 Access, Manistee River Bridge, McMasters Bridge, Sheep Pasture, Shupac Lake, Starvation Lake, Stephan Bridge, White Pine Canoe Camp, Yellow Trees Landing	9/17/2019 8:53 AM
159	East Jordan Municipal Launch Site	9/17/2019 8:52 AM

Q18 Is your facility usage (higher, lower, or consistent) over the last year?

Answered: 165 Skipped: 60

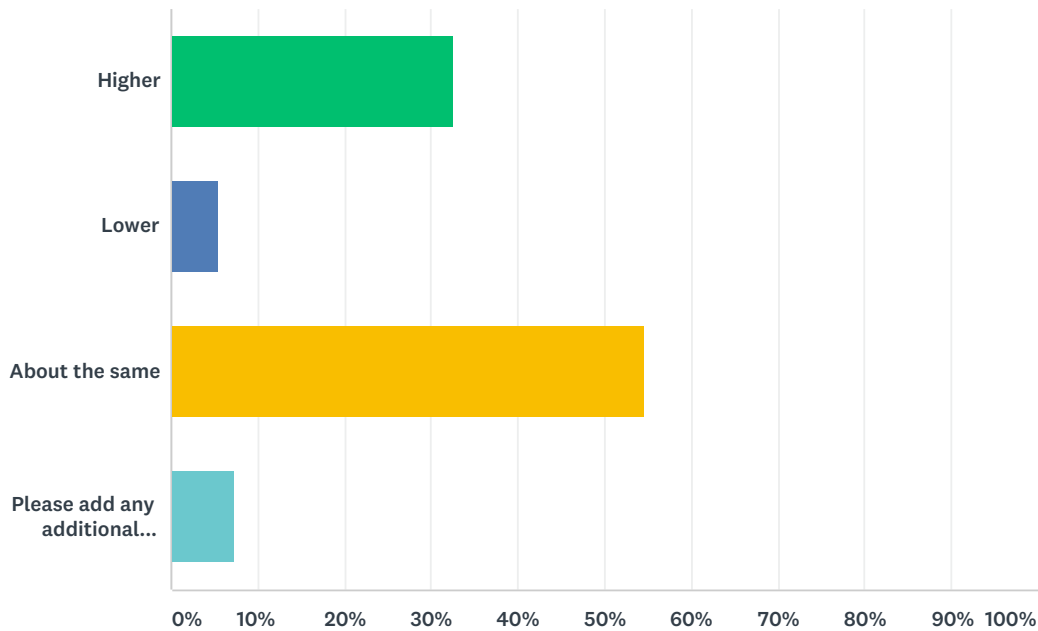


ANSWER CHOICES	RESPONSES	
Higher	26.06%	43
Lower	6.67%	11
About the same	63.03%	104
Please add any additional comments about transient/guest occupancy trend over the last year:	4.24%	7
TOTAL		165

#	PLEASE ADD ANY ADDITIONAL COMMENTS ABOUT TRANSIENT/GUEST OCCUPANCY TREND OVER THE LAST YEAR:	DATE
1	Lake Michigan Water Level has caused some minor flooding of site on occasion. I suspect visitation may be lower because of this	9/27/2019 5:37 AM
2	Transient numbers down. Especially in July. We are though seeing larger boats which subsidize the lower numbers of small boats	9/27/2019 4:37 AM
3	PFAS contamination - DO Not Eat Fish Advisory	9/26/2019 7:56 AM
4	PFAS concern about Do Not Eat Fish Advisory in place	9/26/2019 7:46 AM
5	Unsure. The area is not staffed nor monitored. Water levels have been very high this year	9/18/2019 5:04 AM
6	High water levels left half of the docks unusable.	9/18/2019 4:58 AM
7	unknown, I've only been here since December.	9/17/2019 8:53 AM

Q19 Is there a discernible trend in your facility usage (higher, lower, or consistent) over the last five years?

Answered: 165 Skipped: 60



ANSWER CHOICES	RESPONSES	
Higher	32.73%	54
Lower	5.45%	9
About the same	54.55%	90
Please add any additional comments about transient/guest occupancy trend over last five years:	7.27%	12
TOTAL		165

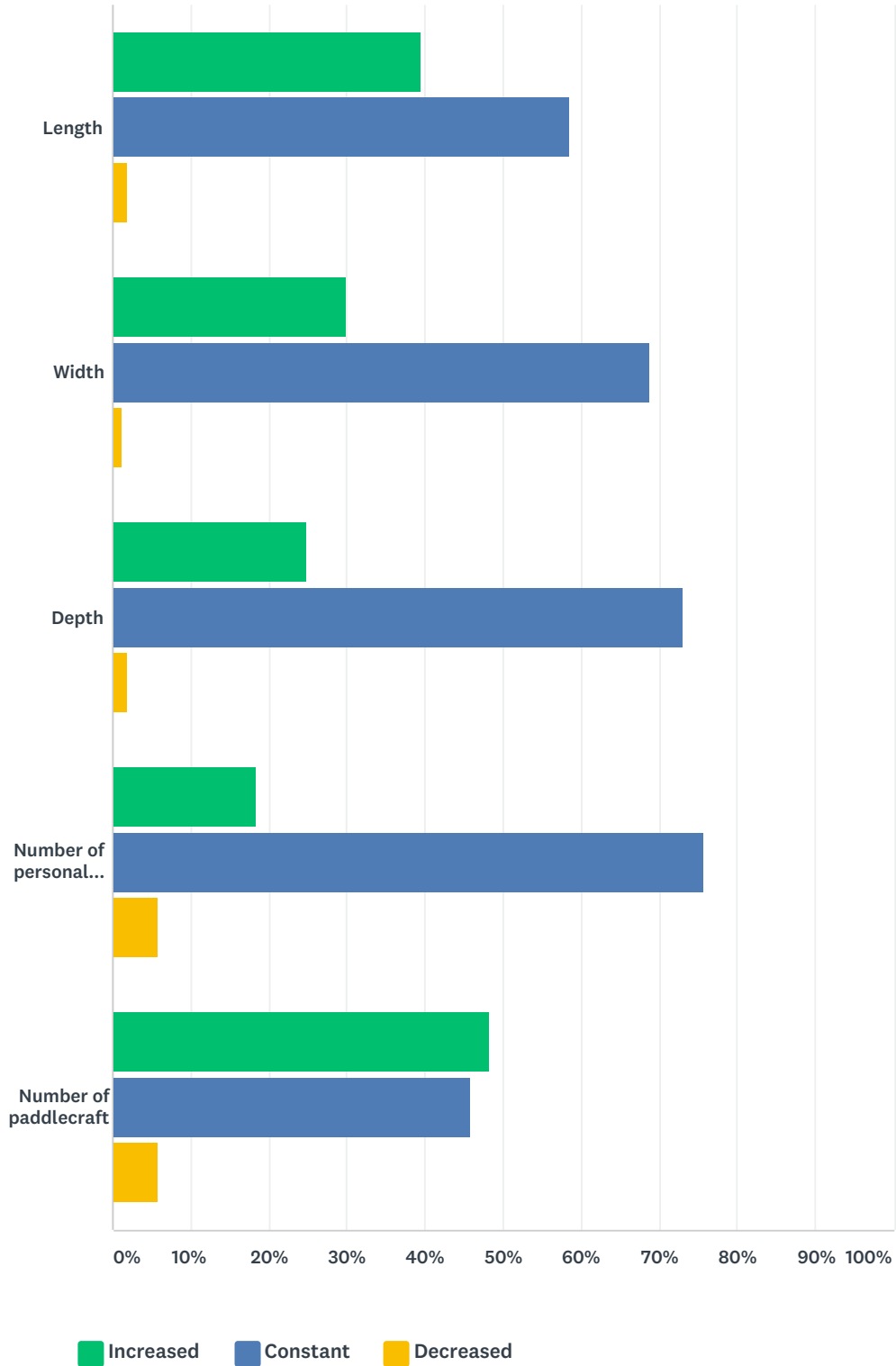
#	PLEASE ADD ANY ADDITIONAL COMMENTS ABOUT TRANSIENT/GUEST OCCUPANCY TREND OVER LAST FIVE YEARS:	DATE
1	I'm new. From the records it looks like it is fairly consistent and fluctuation is due to reduction of boaters and weather.	9/30/2019 7:14 AM
2	Fishing down	9/27/2019 8:15 AM
3	More pontoons on the inland lakes. They want the skid pier longer.	9/27/2019 7:30 AM
4	Renovation of East BAS in 2016 forced use at WEst	9/26/2019 7:56 AM
5	Renovation to site in 2016. Belleville Lake usage has increased in popularity.	9/26/2019 7:46 AM
6	Very limited due to parking spaces and 2 launch lanes. The place is packed most of the summer with long launch and retrieval lanes.	9/23/2019 12:43 PM
7	Lower Due to the state of our landing	9/23/2019 4:53 AM
8	With higher water levels comes higher usage. Water levels have been increasing more drastically the last couple of years and as a result the BAS has had a drastic increase in usage	9/18/2019 9:29 AM
9	usage increases with water levels	9/18/2019 5:33 AM
10	Unsure	9/18/2019 5:04 AM

MSWC Facilities Survey

11	Our Day Use Area and BAS was completely rebuilt and has increased in use. We now have boat trailer parking spaces which previously were not available. These spaces are completely filled many days each summer and we turn traffic away according to PRD policy. I also have some problems with trailer spaces getting used by non-boating traffic although the vehicles display a valid Passport. Many are at Silver Lake for ORV use and taking boating spaces can hinder visitors who cannot access the launch for boating purposes. A LUOD could help tremendously to keep non-boating activity vehicles from entering the BAS parking areas.	9/17/2019 9:19 AM
12	unknown	9/17/2019 8:53 AM

Q20 What changes do you see in the boats in your facility?

Answered: 162 Skipped: 63



	INCREASED	CONSTANT	DECREASED	TOTAL	WEIGHTED AVERAGE
Length	39.62% 63	58.49% 93	1.89% 3	159	1.62

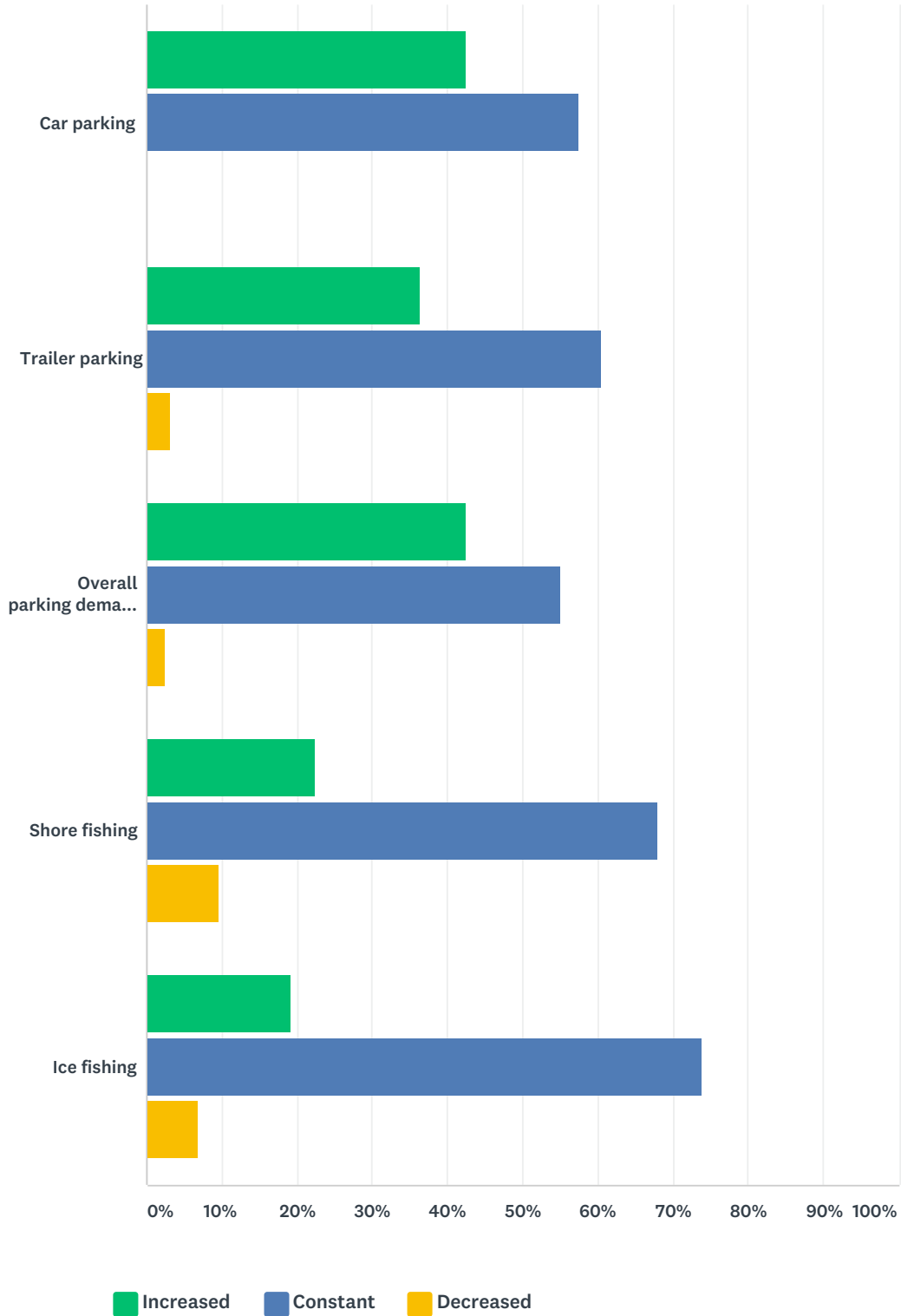
MSWC Facilities Survey

Width	29.94% 47	68.79% 108	1.27% 2	157	1.71
Depth	25.00% 38	73.03% 111	1.97% 3	152	1.77
Number of personal watercraft (jet ski)	18.42% 28	75.66% 115	5.92% 9	152	1.88
Number of paddlecraft	48.39% 75	45.81% 71	5.81% 9	155	1.57

#	PLEASE ADD ANY OTHER CHANGES AND DETAIL TO THE ANSWERS ABOVE:	DATE
1	Water levels were extremely high this year which made it difficult for launching at our site.	9/30/2019 10:16 AM
2	The record high lake levels has led to the increase of larger boats launching for daily use.	9/30/2019 10:03 AM
3	We do not staff this facility, so the usage is based on very little first hand knowledge	9/30/2019 6:58 AM
4	We are seeing more single vehicle parking (no trailer but with Rec. Passport). This causes issues with parking on Holidays	9/30/2019 6:30 AM
5	This is a shore fishing access site only. No launch at this location.	9/28/2019 2:54 AM
6	Pontoons and more jet skis.	9/27/2019 7:30 AM
7	More Bass boats	9/27/2019 5:05 AM
8	Kayaks specifically have been overwhelming increasingly exponentially	9/27/2019 4:45 AM
9	Most traffic remains the same, with a notable increase in paddle sports	9/27/2019 4:18 AM
10	Paddlecraft usage is low due to this launch putting people out onto Lake Huron	9/26/2019 8:03 AM
11	More kayakers	9/26/2019 7:56 AM
12	We don't allow paddle craft to use this launch site due to the demand of trailered boats and limited parking. We have other launch areas more appropriate.	9/23/2019 12:43 PM
13	We are seeing more vehicles without trailers using the double length parking spaces, causing conflict between users.	9/19/2019 12:27 PM
14	Tri-toon pontoon boats and paddlecraft utilizing the launch as Houghton Lake has a blue water watertrail that people use.	9/19/2019 7:35 AM
15	Houghton Lake created a blue water (paddlecraft) trail around the lake bringing increase use.	9/19/2019 7:31 AM
16	Tri-toon pontoon boats seem to be popular and we are seeing increased use.	9/19/2019 7:26 AM
17	Tri-toon pontoon boats are becoming very popular.	9/19/2019 7:20 AM
18	we have a very large number of kayaks who end up taking boat trailer parking .	9/18/2019 11:11 AM
19	Not supervised. Unsure who uses it	9/18/2019 5:04 AM
20	Tri-toon Pontoon boats are becoming very popular.	9/17/2019 10:16 AM

Q21 What changes do you see in the use of your landside facilities?

Answered: 163 Skipped: 62



	INCREASED	CONSTANT	DECREASED	TOTAL	WEIGHTED AVERAGE
Car parking	42.41% 67	57.59% 91	0.00% 0	158	1.58

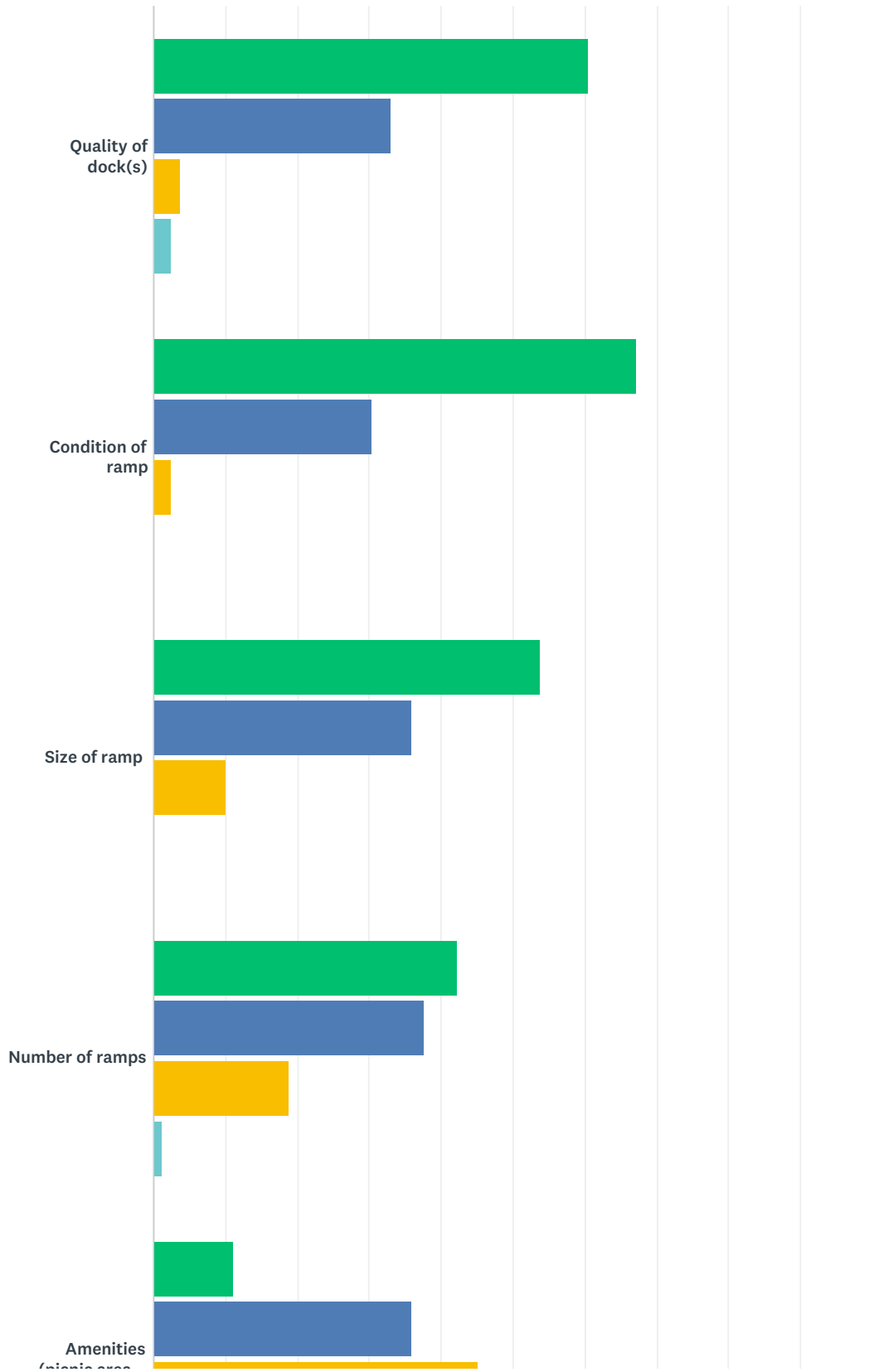
MSWC Facilities Survey

Trailer parking	36.48% 58	60.38% 96	3.14% 5	159	1.67
Overall parking demand or conflicts	42.41% 67	55.06% 87	2.53% 4	158	1.60
Shore fishing	22.45% 33	68.03% 100	9.52% 14	147	1.87
Ice fishing	19.31% 28	73.79% 107	6.90% 10	145	1.88

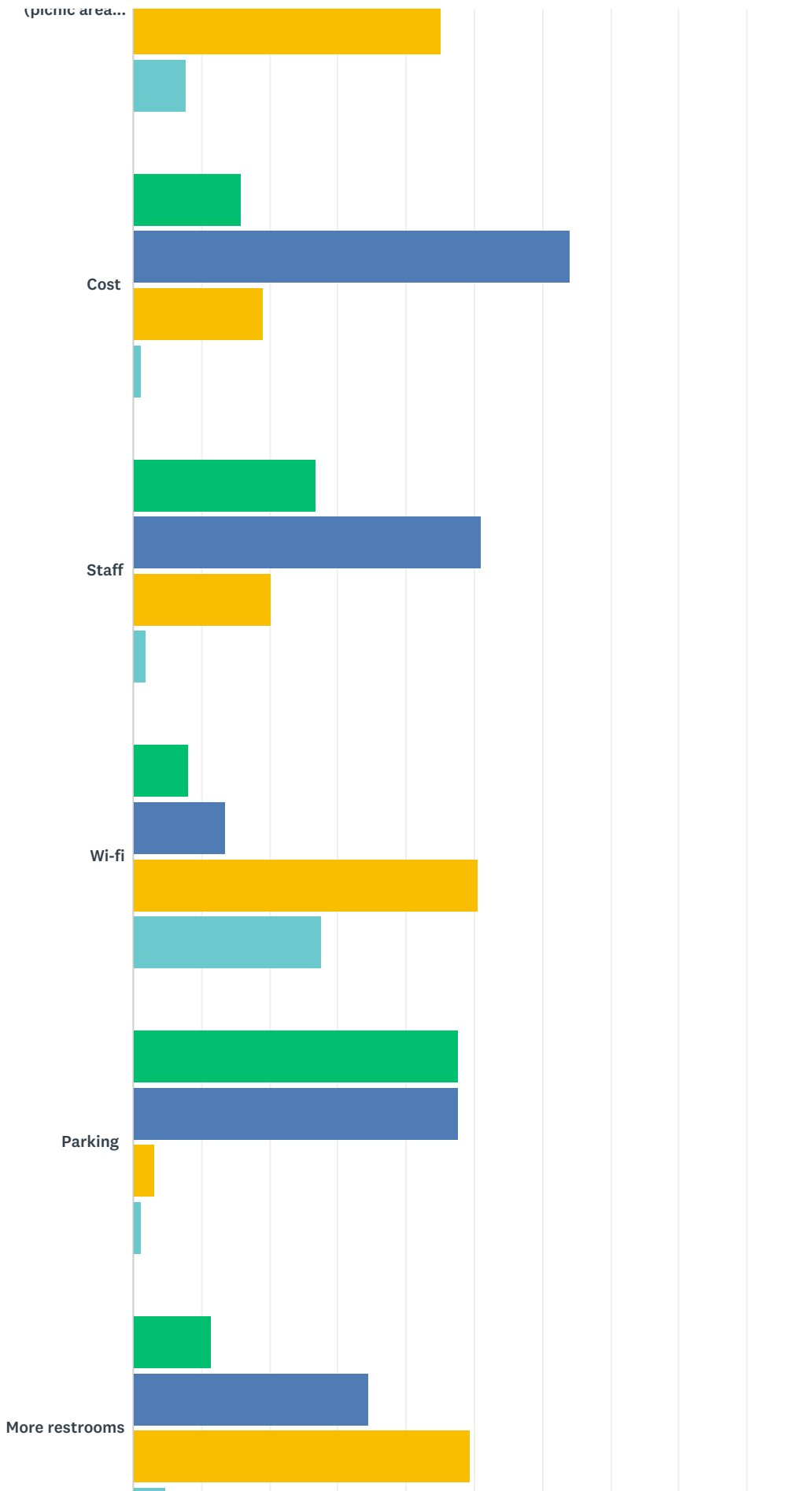
#	PLEASE ADD ANY OTHER CHANGES AND DETAIL TO THE ANSWERS ABOVE:	DATE
1	In recent years there has been a increase in vehicle parking at the BAS for other recreational opportunities such as waterfowl hunting and easily accessible fishing spots.	9/30/2019 10:03 AM
2	Our undersized facility coupled with a drastic increase in visitor ship has resulted in extreme parking issues.	9/30/2019 8:43 AM
3	2 week period in spring has intense use, otherwise no troubles - if perch are in bay!	9/30/2019 7:30 AM
4	I haven't been here long enough to answer the ice fishing question.	9/30/2019 7:14 AM
5	Forks B.A.S. as well as Mullett Village B.A.S. have increased vehicle (no trailer) parking. This is due to a hang out area on Mullett lake called Music on Mullett every Saturday during the summer.	9/30/2019 6:30 AM
6	Fishing can create conflicts at boat ramps when people occupy the ramps to fish	9/30/2019 5:21 AM
7	Lake water heights are much greater than years past and therefore this access site has been flooded on and off much of 2019.	9/28/2019 2:54 AM
8	There are some conflicts with parking due to the increase in special events	9/27/2019 5:34 AM
9	Skegemog is due for an upgrade. County puts oil on the road to keep down dust	9/27/2019 5:05 AM
10	There is always a draw for shore fishing at the site due to the parking available and the fact that the launch is located within the Harrisville Harbor, which is maintained by the city of Harrisville	9/26/2019 8:03 AM
11	There are more fishing tournaments being held out of this site likely due to the draw from the Major League Fishing events that have been held there in the past, which is televised to a national audience. We have also had more requests for this site to be plowed in the winter for ice fishing	9/26/2019 7:53 AM
12	Do Not Eat Fish Advisory in place	9/26/2019 7:46 AM
13	We do not allow single car parking or trailer storage onsite. There is too much launch activity to fish from shore and there are better places along the lakeshore for ice fishing and access. Our winter activity generally consists of ice boats	9/23/2019 12:43 PM
14	little to no shore fishing or ice fishing at this location	9/23/2019 10:54 AM
15	newer trucks and trailer lengths are longer than current parking slips.	9/20/2019 9:31 AM
16	We are not tracking fishing	9/19/2019 8:19 AM
17	The layout and design of this south is confusing. Additional parking lot in a current grass field and better layout/design would be ideal for this site.	9/19/2019 7:35 AM
18	We blacktopped a former gravel parking lot and designed traffic flow better for this large BAS in June 2019.	9/19/2019 7:26 AM
19	We added 13 vehicle and trailer parking spots in late June 2019.	9/19/2019 7:20 AM
20	Kayaks take up boat trailer parking, boats are longer so there is a need for long stall parking,	9/18/2019 11:11 AM
21	Unsure, area not monitored	9/18/2019 5:04 AM
22	We just updated the parking facility at West Higgins Lake BAS which will take care of a lot of our parking conflicts at that launch. We also updated 13 boat trailer parking spots at North Higgins Lake State Park which decreased our number of vehicles in our overflow lot.	9/17/2019 10:16 AM

Q22 Please indicate how important these potential changes are to your facility to benefit your boaters?

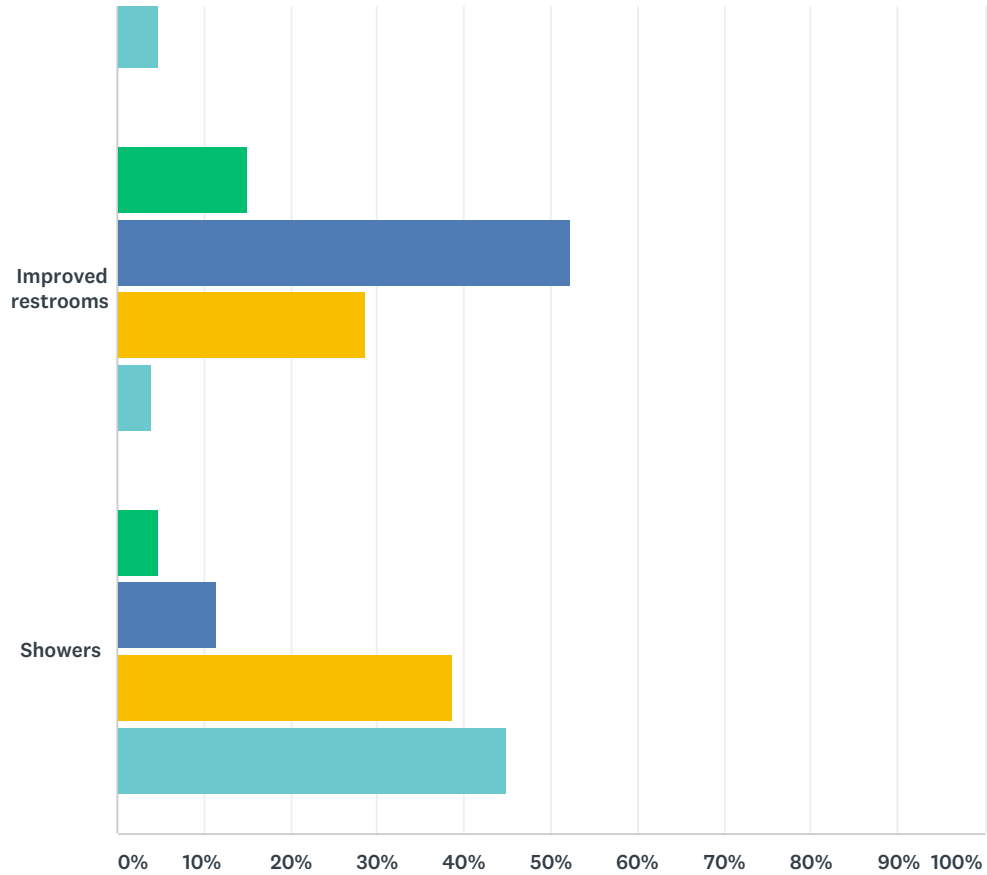
Answered: 162 Skipped: 63



MSWC Facilities Survey



MSWC Facilities Survey



■ Very Important
 ■ Important
 ■ Unimportant
 ■ Very Unimportant

	VERY IMPORTANT	IMPORTANT	UNIMPORTANT	VERY UNIMPORTANT	TOTAL	WEIGHTED AVERAGE
Quality of dock(s)	60.51% 95	33.12% 52	3.82% 6	2.55% 4	157	1.48
Condition of ramp	67.09% 106	30.38% 48	2.53% 4	0.00% 0	158	1.35
Size of ramp	53.80% 85	36.08% 57	10.13% 16	0.00% 0	158	1.56
Number of ramps	42.21% 65	37.66% 58	18.83% 29	1.30% 2	154	1.79
Amenities (picnic areas, play areas, etc)	11.11% 17	35.95% 55	45.10% 69	7.84% 12	153	2.50
Cost	15.82% 25	63.92% 101	18.99% 30	1.27% 2	158	2.06
Staff	26.80% 41	50.98% 78	20.26% 31	1.96% 3	153	1.97
Wi-fi	8.11% 12	13.51% 20	50.68% 75	27.70% 41	148	2.98
Parking	47.80% 76	47.80% 76	3.14% 5	1.26% 2	159	1.58
More restrooms	11.49% 17	34.46% 51	49.32% 73	4.73% 7	148	2.47

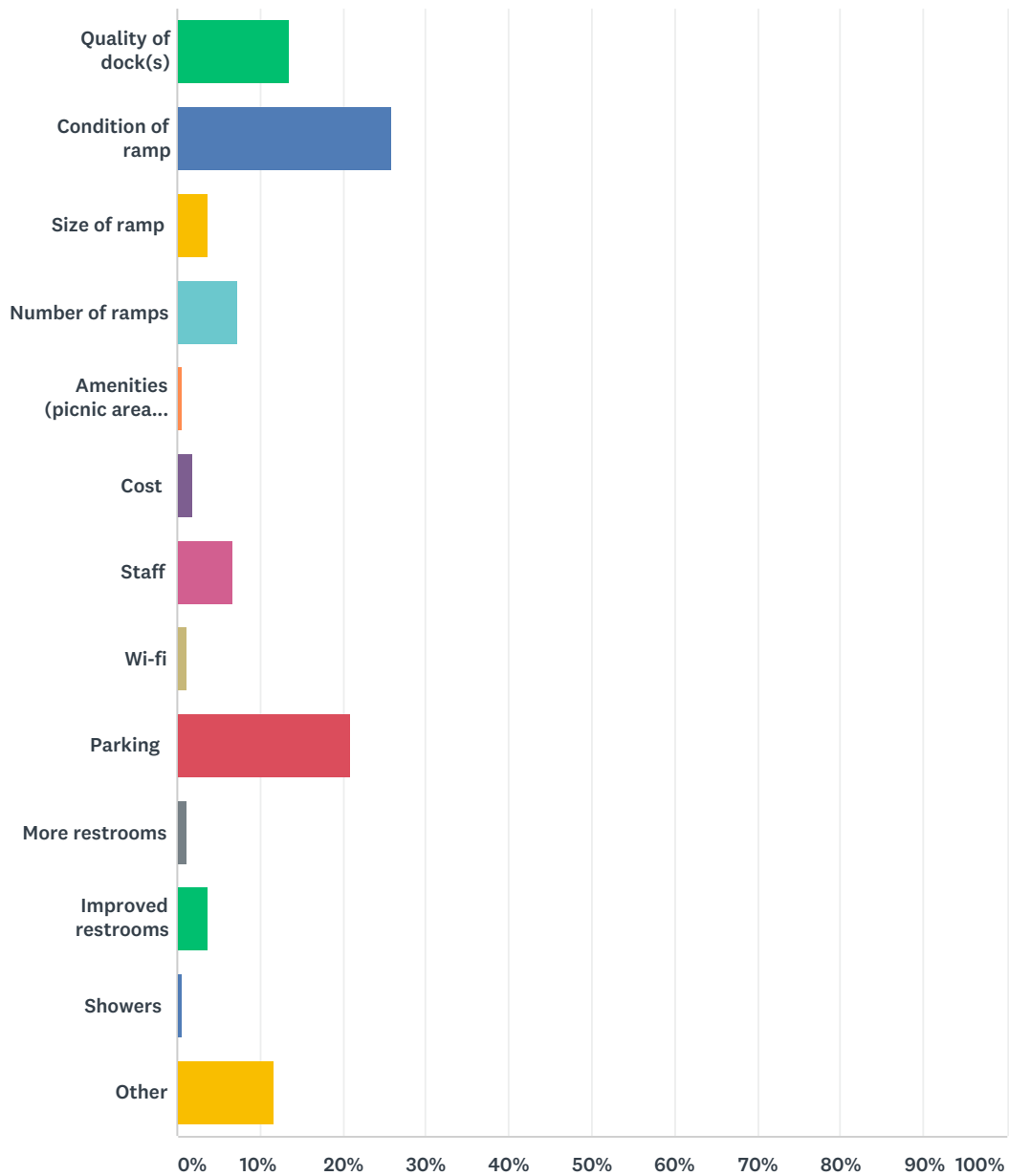
MSWC Facilities Survey

Improved restrooms	15.03%	52.29%	28.76%	3.92%		
	23	80	44	6	153	2.22
Showers	4.76%	11.56%	38.78%	44.90%		
	7	17	57	66	147	3.24

#	OTHER (PLEASE SPECIFY)	DATE
1	boat wash station	10/1/2019 3:23 AM
2	Boat wash station, designated paddle sport launch area	10/1/2019 3:20 AM
3	The site currently has a fish cleaning station, this is very important and has high demand year round when in operation. The fish cleaning station is a piece of equipment that requires regular maintenance. Additionally upgrading the size to accommodate larger crowds would be something to consider. Another very important change would be resurfacing the asphalt roadway and parking lot. The site is over 15 years old, which is concerned the top end of the life span for asphalt.	9/30/2019 10:03 AM
4	Staffing for general maintenance to all 10 facilities is very important. This is a challenge due to competing businesses which pay higher wage. Wage increase to \$12 is recommended.	9/30/2019 6:30 AM
5	Boat wash station, docking area while parking and retrieving vehicle	9/30/2019 3:02 AM
6	Boat wash station	9/30/2019 2:58 AM
7	Boat wash station, paddle sport launch area	9/30/2019 2:52 AM
8	Boat wash station, area to dock boat while parking or retrieving vehicle	9/30/2019 2:47 AM
9	Boat wash station	9/30/2019 2:37 AM
10	improved septic system needed with increased use	9/28/2019 9:34 AM
11	Road and parking lot conditions need improvement. This aspect is very important.	9/27/2019 10:55 AM
12	Lake Michigan water levels sometimes flood some of the parking area or increases water table to the point of some very wet parking spaces	9/27/2019 5:37 AM
13	Would like a nightlight put on the pit toilet.	9/27/2019 5:05 AM
14	Being this launch is located at the state park, most of out campers stay here for the water access. We do not have modern restrooms or showers. Showers for the campers would be a big draw.	9/25/2019 11:38 AM
15	Boat wash station, extra docking area	9/25/2019 8:01 AM
16	Better tie down areas, possibly mooring areas for boats to tie up to shoreline to get situated to go out, this helps eliminate backing up of the ramps when people just want to sit there and get situated.	9/18/2019 11:11 AM
17	We have submitted a grant for purchase and installation of fishing platforms (3) and an ADA kayak launch. In addition construction will begin in a couple of weeks on a new outdoor pavilion.	9/18/2019 6:44 AM
18	Boat wash station	9/18/2019 5:16 AM

Q23 Please choose which of the above change is the most important and indicate why:

Answered: 162 Skipped: 63



ANSWER CHOICES	RESPONSES	
Quality of dock(s)	13.58%	22
Condition of ramp	25.93%	42
Size of ramp	3.70%	6
Number of ramps	7.41%	12
Amenities (picnic areas, play areas, etc)	0.62%	1

MSWC Facilities Survey

Cost	1.85%	3
Staff	6.79%	11
Wi-fi	1.23%	2
Parking	20.99%	34
More restrooms	1.23%	2
Improved restrooms	3.70%	6
Showers	0.62%	1
Other	11.73%	19
TOTAL		162

#	PLEASE EXPLAIN WHY THIS WOULD BE THE MOST IMPORTANT CHANGE:	DATE
1	Boat wash to help stop spread of invasives	10/1/2019 3:23 AM
2	Boat wash to help stop spread of invasives. Paddle sport use has steadily been increasing over the last few years on this stretch of the Kalamazoo River.	10/1/2019 3:20 AM
3	Adding access for paddling would increase use.	9/30/2019 1:15 PM
4	Age of docks	9/30/2019 1:03 PM
5	Need better arrangement of parking lot/traffic flow; also longer boat ramps/skid piers	9/30/2019 12:09 PM
6	Everyone likes a nice ramp to launch from, being clean and usable is the most important for a boating access site.	9/30/2019 11:56 AM
7	We do not currently have staff that manages the daily operations at the boat launch	9/30/2019 10:16 AM
8	Ramp configuration only allows for two boat use at one time. Four would be optimal.	9/30/2019 10:15 AM
9	The most important change is the resurfacing of the asphalt roadway and parking area. The site is a very popular and high traffic access point to Lake Eire, without quality asphalt the user experience is immediately negatively impacted.	9/30/2019 10:03 AM
10	Limited ramp parking which also competes with adjacent public park parking and special event parking.	9/30/2019 10:00 AM
11	Quality seasonal staff is getting harder to find and retain.	9/30/2019 9:04 AM
12	With the higher water levels and the fishing people want to be able to launch more boats. It's really a tie between number of ramps and parking.	9/30/2019 8:49 AM
13	Maintain status quo	9/30/2019 7:32 AM
14	Problem is, that parking is only an issue in the 2 week period that the perch are in bay	9/30/2019 7:30 AM
15	At very least maintain at current level	9/30/2019 7:22 AM
16	Aging dock with needed updating.	9/30/2019 7:14 AM
17	Currently ramp is shifting creating a bump in the asphalt, resulting in a poor approach to the water	9/30/2019 6:58 AM
18	Ramp will only accommoted up to 27foot boats	9/30/2019 6:48 AM
19	Changing water levels have created havoc at our existing facilities. Rending one of our launches unusable and requiring increased damage and maintenance to keep the remaining facilities operational.	9/30/2019 6:47 AM
20	Walkway along launch ramp is underwater due to the high water and there is no way to raise the walkway.	9/30/2019 6:38 AM
21	Staff clean the sites. They inspect the sites. They improve the sites. They build docks/ install ramps etc. for the sites.	9/30/2019 6:30 AM
22	Ramp is in poor condition	9/30/2019 6:27 AM

MSWC Facilities Survey

23	no changes needed	9/30/2019 6:25 AM
24	With every increasing visitors to the site, bathrooms are the most requested amenity.	9/30/2019 6:18 AM
25	Our boat launch at Presque Isle Marina was replaced recently in thanks to the MDNR Waterways program. The complaints we receive are based on the varying lake levels that occasionally submerge the docks, lack of accessibility by less mobile users, and patrons who disobey the parking rules.	9/30/2019 6:03 AM
26	Good conditions help with a better launch experience.	9/30/2019 6:01 AM
27	The need for staging docks in the boat launch canal would be a very important asset to this boat launch	9/30/2019 5:46 AM
28	Our staff are responsible for maintaining all aspects of our launch facilities. Trash removal, parking enforcement, and dock maintenance are high priorities to ensure efficient operations.	9/30/2019 5:44 AM
29	Safety concerns	9/30/2019 5:40 AM
30	Improvements in parking lot condition, design, and flow are needed. Lot is deteriorating and geometry/layout creates conflicts. Tie-down area is needed closer to ramps.	9/30/2019 5:21 AM
31	constant complaints that their are not enough ramp slots	9/30/2019 5:15 AM
32	increase in vehicle parking due to increase in shoreline usage	9/30/2019 5:12 AM
33	Extended parking spaces to accommodate the longer trailers we are seeing today	9/30/2019 5:07 AM
34	To help slow the spread of invasives, long walk to parking lot from launch area	9/30/2019 3:02 AM
35	Klinger Lake is going through the design process for parking lot reconfiguration and paving. A boat wash station would be a welcomed addition to this site to curtail invasive species. The lake association hosts a couple of boat wash events with MSU every year at the BAS.	9/30/2019 2:58 AM
36	The BAS at Juno Lake has limited parking area for the size and popularity of this lake and there is limited room for any additional amenities.	9/30/2019 2:52 AM
37	Diamond lake is probably the busiest lake in SW Michigan during the summer months. This lake sees an extreme number of boaters during the weekends. A boat wash station would help curtail the spread of invasive species. An area to dock boats for vehicle retrieval would and a larger ramp area would help with the amount of traffic this lake sees.	9/30/2019 2:47 AM
38	sand issues clogging ramp	9/28/2019 9:34 AM
39	Our boat launches are very nice at this time.	9/28/2019 8:00 AM
40	Boaters need and want wifi	9/27/2019 11:33 AM
41	Roadway and parking lot conditions- the access road to this site is abhorrent and the parking lot needs frequent maintenance to maintain acceptable conditions. The access road to the site is a private road and maintenance responsibility is routinely contested. The whole site and roadways are stone.	9/27/2019 11:05 AM
42	figuring out a way to allow overnight parking for those looking to boat at other state facilities close by and long term trailer storage	9/27/2019 10:58 AM
43	Roadways/parking lots- quality of pavement is important. Poor pavement conditions in the past have resulted in equipment damage claims against the state.	9/27/2019 10:55 AM
44	Increase interest in paddle sport and no vehicle parking availability.	9/27/2019 9:18 AM
45	Due to the limited parking at this only State operated launch on this chain of lakes and the increase in paddlesport interest (single car parking).	9/27/2019 9:09 AM
46	Width and power	9/27/2019 8:15 AM
47	Is this for inland lakes? I already completed this once. Longer ramps and ski piers would be the best.	9/27/2019 7:30 AM
48	Keeping and hiring good seasonal staff	9/27/2019 7:15 AM
49	Increased fishing pressure	9/27/2019 5:47 AM
50	Old pit toilet	9/27/2019 5:34 AM
51	Keep up on the pavement	9/27/2019 5:23 AM

MSWC Facilities Survey

52	There are resurfacing, crack filling and striping needs	9/27/2019 5:06 AM
53	A lot of times people have to park on the road edge because there is no room in the lot	9/27/2019 5:05 AM
54	With increased usage over the years the size and number of boats has increased making maneuvering in and out of congested areas difficult.	9/27/2019 4:47 AM
55	Increased car-top use means more parking spots used by cars without trailers.	9/27/2019 4:45 AM
56	We are in the process of replacing our restrooms at the facility	9/27/2019 4:23 AM
57	More in the budget, upkeep has a growing cost for all maintenance issues.	9/27/2019 4:18 AM
58	If the ramp is failing the boaters will not be happy with the amenities offered	9/26/2019 8:03 AM
59	Currently there is only room for two smaller boats to launch or be retrieved. I could see a demand for more launch lanes	9/26/2019 7:58 AM
60	Only one ramp currently Skid piers need replacement	9/26/2019 7:56 AM
61	I think there is a draw for larger boats in Hubbard Lake and our ramps don't always facilitate that.	9/26/2019 7:53 AM
62	Skid piers all need replacement as they are beyond life expectancy	9/26/2019 7:46 AM
63	Parking is a delicate balance for us. On the same property the City offers seasonal storage for kayaks and paddleboards and a ramp and kayak launch that sees users parking in a limited number of spots. The City does offer ramp users parking at an overflow lot about a 5 minute walk from the property.	9/25/2019 1:18 PM
64	We have a lot of shore fishermen at this facility. Picnic area would be a nice feature.	9/25/2019 11:41 AM
65	A lot of our boaters stay at the campgrounds, but we do not have a shower facility	9/25/2019 11:38 AM
66	Ramp is on replacement list currently	9/25/2019 11:33 AM
67	Currently this facility is slated for an additional ramp to be put in. This ramp would be used for kayak and tube launching in an effort to separate these users from the boat users.	9/25/2019 11:30 AM
68	Extra ramp can move boat traffic faster. We always have a lineup at this site.	9/25/2019 11:03 AM
69	Gallup Park parking lots are full to capacity on summer weekends.	9/25/2019 8:20 AM
70	Overall the Barton Lake BAS meets the needs of our boaters when it comes to the ramp and parking. A change for this site to benefit the lake would be adding a boat washing station as we need to be more proactive in providing this type of amenity to help stop the spread of invasive species. Another change that would benefit the site would be adding an extra docking area for boaters to tie their boats of to while they are making the long walk from the ramp to their vehicle in the parking lot. This will help keep the ramp area clear for others to launch and retrieve	9/25/2019 8:01 AM
71	Boat Wash and fish cleaning station are our 2 most requested things. More parking would also be ideal, but we are maxed out on space here. Adding a boat wash on a heavily used inland lake would be an excellent fit for this location.	9/24/2019 12:31 PM
72	Brimley State Park BAS has not had a skid pier for many years. Due to numerous N/NW wind events the launch gets choked out with sand. The last couple years with a higher water level, I am seeing increased use....but still mainly just smaller length fishing boats and PWC's.	9/23/2019 11:00 AM
73	This site is mainly used by locals to launch their watercraft 2x/per year....in and then out for the winter.	9/23/2019 10:50 AM
74	Ramp being in good condition is the most important to visitors here as it is in the park.	9/23/2019 10:08 AM
75	Site sees fairly heavy use and each season there is a request for an additional ramp at this location.	9/23/2019 10:01 AM
76	Site sees fairly heavy usage and is in desperate need of more parking with the increase in the numbers of boaters it sees.	9/23/2019 9:56 AM
77	Our unit will have a designated ranger to maintain our boating program. Additional staff to assist with boating projects and repairs would allow for the improvements and overall maintenance of many of the facilities.	9/23/2019 9:50 AM
78	high water levels have affected the seawall caused erosion on ramp	9/23/2019 6:40 AM
79	Skid pier should be in quality condition for expediting launch of boat.	9/23/2019 5:31 AM

MSWC Facilities Survey

80	We are working on projects to install an Entry Arm Gate to help enforce the pay to use facility (Ramp & Fish Cleaning). We have a big issue right now of people not paying to use the facilities.	9/21/2019 11:33 AM
81	The parking area is a gravel lot with no designation this causes trailers and cars to park in a non-uniform fashion and causes conflicts. A organized paved site would be more beneficial.	9/20/2019 10:23 AM
82	age of docks, increase dock length, ADA	9/20/2019 9:31 AM
83	Conflict occurs between paddlers, who don't have trailers but who park in double length parking spaces near the boat launch, and boaters with trailers who can't find other places to park.	9/19/2019 12:27 PM
84	Customers want a quality surface to launch and recover from	9/19/2019 11:05 AM
85	A docking area so that boaters can gain easy access to the park amenities to stay and play awhile.	9/19/2019 10:35 AM
86	Keep the capability of launching two boats at once.	9/19/2019 10:20 AM
87	Less wait time for users	9/19/2019 8:34 AM
88	We used to have staff at this access site on weekends and holidays to direct traffic, sell recreation passports, and keep the facilities clean.	9/19/2019 7:35 AM
89	We used to staff this BAS on weekend and holidays but have not been able to find someone to work at the location for numerous years now.	9/19/2019 7:31 AM
90	In the past prior to the parking lot project in 2019, vehicles would park on the county and state highway making the local land owners upset. This seems to have been taken care of with the parking lot project that was just completed.	9/19/2019 7:26 AM
91	We allow boats to launch and utilize overflow parking lots which are approximately 1/3 -1/2 mile away from the boat ramp. Parking is key to the quick launching and leaving process at North Higgins Lake.	9/19/2019 7:20 AM
92	maintaining the access drive is a constant maintenance issue. Eventually would like it paved	9/19/2019 3:58 AM
93	We are in the process of improving our ramp	9/18/2019 11:16 AM
94	Each facility will probably be different with their needs, but Dodge 4 could use possibly one more ramp to help with moving the flow of traffic coming in / going out.	9/18/2019 11:11 AM
95	Ramp condition most directly effects boating usage	9/18/2019 9:29 AM
96	If the ramp is in poor condition, boaters will be less inclined to launch at this facility, resulting in complaints and revenue loss when they utilize nearby private facilities.	9/18/2019 7:12 AM
97	We must have adequate funding to move forward with any change.	9/18/2019 6:44 AM
98	The current condition of the ramps is poor. A joint EGLE/USACE permit has been submitted to replace the ramp. Hopefully this will take place in 2020.	9/18/2019 6:37 AM
99	A good ramp is a successful launch. Poor quality is a bad launch of your boat.	9/18/2019 6:24 AM
100	This Access Site fills to capacity several times throughout the summer season. Additional staff hours are needed to direct traffic as well as monitor launching/Retrieving and available parking spaces.	9/18/2019 6:19 AM
101	Lack of parking for current amount of usage	9/18/2019 6:01 AM
102	floating docks to work with changing water levels	9/18/2019 5:42 AM
103	Getting the Army Corps of Engineers to agree to a new lease, or turn the site back over to them	9/18/2019 5:41 AM
104	This is a boating access site in a city with no other parks or public harbors. Day traffic can sometimes take up parking that would otherwise be used by boaters and vise versa.	9/18/2019 5:33 AM
105	Site is filling up more and more often with people driving separately from the boat owner to go boating. Fishing tournaments are becoming more and more popular.	9/18/2019 5:23 AM
106	Improve parking lot with new pavement or seal with new stripping	9/18/2019 5:16 AM
107	Without staff on weekends to direct boat traffic the site becomes unruly.	9/18/2019 5:11 AM
108	This is not a destination for picnics, etc. The quality of the dock would be most important to those using it.	9/18/2019 5:04 AM
109	allows more boats to launch at once.	9/18/2019 5:01 AM

MSWC Facilities Survey

110	High water levels have created the need for new docks. 2nd most important would be the creation of a covered structure with picnic tables.	9/18/2019 4:58 AM
111	The ramp is in/next too a public parking lot near the downtown so it is over crowded during the day and sometimes hard for boaters to find parking for their vehicle and trailer.	9/18/2019 4:49 AM
112	Quite a few people are still parking out on the road on the busy weekends	9/18/2019 4:29 AM
113	Facilities are heavily utilized and there are not enough parking spaces to accommodate boaters on a typical weekend.	9/18/2019 3:29 AM
114	This boat launch is very busy and sees a large quantity of vehicles and boats on the weekends throughout the summer. Having multiple lanes is needed to keep the traffic moving with the large amount of turnover.	9/17/2019 12:57 PM
115	If there is not enough parking to accommodate the majority of our visitors, then for those people, none of the other changes are important. We need to plan and develop parking areas for the paddle sports with the increase interest in these activities. Most of our facilities were designed years ago for trailer parking with very little car parking in mind.	9/17/2019 11:39 AM
116	We need a quality fishery to fill our parking lot up again and better make use of our docks and increase our launch revenue	9/17/2019 11:04 AM
117	Metroparks charge significantly higher fees to launch a boat then state run ramps. Currently we charge \$70 for a boat/car annual pass, compared to \$11 at DNR facility	9/17/2019 10:57 AM
118	Our current ramp is quite old	9/17/2019 10:39 AM
119	Usability, if it is silted in with sand and not dredged it is difficult to launch.	9/17/2019 10:39 AM
120	Boaters can damage their boat, trailer or vehicle if ramp is not in good shape. Will not use a ramp if in poor condition. Condition of the ramp is very important.	9/17/2019 10:28 AM
121	Being able to accommodate people in a central parking lot area rather than utilizing overflow lots a 1/3 mile away helps with the ingress and egress of boat traffic.	9/17/2019 10:16 AM
122	There never has been sufficient parking at Leland.	9/17/2019 9:58 AM
123	Everyone uses Wifi and would like to get constant access	9/17/2019 9:44 AM
124	Although the condition of the actual concrete slabs on the launch are in good shape since they are only about 3 years old, the depth of the launch and maintenance of the dredged channel to deeper water is a challenge to maintain on Silver Lake.	9/17/2019 9:19 AM
125	lack of parking seems to be an issue at many of our BAS's	9/17/2019 8:53 AM

Q24 What is the biggest challenge you face in your facility on a regular basis?

Answered: 139 Skipped: 86

#	RESPONSES	DATE
1	Funding for operations	9/30/2019 1:15 PM
2	dock maintenance	9/30/2019 1:03 PM
3	Traffic control; need tie-down area at bottom of hill closer to ramps	9/30/2019 12:09 PM
4	Maintenance	9/30/2019 11:56 AM
5	water levels	9/30/2019 10:16 AM
6	Limited trailer parking.	9/30/2019 10:15 AM
7	This sites biggest challenge is keeping the aging asphalt in tack.	9/30/2019 10:03 AM
8	Parking and special event pressure on available parking.	9/30/2019 10:00 AM
9	Launch area is old and in need of upgrade/update	9/30/2019 9:09 AM
10	Staffing	9/30/2019 9:04 AM
11	Parking. The site should be expanded.	9/30/2019 8:49 AM
12	Our demand has shifted to a larger number of users with boats and trailers that overwhelm our small number of ramps and our relatively small size of docks and launch.	9/30/2019 8:43 AM
13	I don't have a biggest challenge that occurs on a regular basis.	9/30/2019 7:14 AM
14	Parking	9/30/2019 6:48 AM
15	Maintenance of equipment and failure of docks due to water levels.	9/30/2019 6:47 AM
16	High cost of maintenance.	9/30/2019 6:38 AM
17	Keeping everyone satisfied while being short staffed. Keeping up with maintenance while being short staffed.	9/30/2019 6:30 AM
18	multiple launches	9/30/2019 6:27 AM
19	getting individuals to pay or pay the correct amount	9/30/2019 6:25 AM
20	High Water levels	9/30/2019 6:18 AM
21	Water rising	9/30/2019 6:10 AM
22	Parking and the varying lake levels.	9/30/2019 6:03 AM
23	Speeding through facility	9/30/2019 6:01 AM
24	I'm busy high traffic weekends the congestion of watercraft in The Canal at the launch docks	9/30/2019 5:46 AM
25	The daily waterfowl mess on the launch docks from the late evening to early morning. The early morning fisherman use the docks before our staff are onsite.	9/30/2019 5:44 AM
26	distance from work location	9/30/2019 5:43 AM
27	This year water levels	9/30/2019 5:40 AM
28	Traffic control during peak periods; pier/lot maintenance; sewage flooding in office/shop building	9/30/2019 5:21 AM
29	community vision of the site	9/30/2019 5:20 AM
30	wintertime plowing	9/30/2019 5:15 AM
31	Trash	9/30/2019 5:12 AM
32	Number of vehicles Number of intoxicated people exiting river	9/30/2019 5:12 AM

MSWC Facilities Survey

33	filling our site, - turning away users once we are full.	9/30/2019 5:07 AM
34	parking	9/30/2019 2:52 AM
35	Launching and retrieving boats in a timely fashion	9/30/2019 2:47 AM
36	parking	9/28/2019 12:21 PM
37	none	9/28/2019 9:51 AM
38	parking	9/28/2019 9:34 AM
39	High water	9/28/2019 8:00 AM
40	wifi	9/27/2019 11:33 AM
41	funding for improvments	9/27/2019 11:09 AM
42	Road and parking lot conditions.	9/27/2019 11:05 AM
43	people trying to park their trailers for extended periods of time	9/27/2019 10:58 AM
44	Funding for large scale projects such as pavement improvements.	9/27/2019 10:55 AM
45	Currently, the greatest challenge is high water.	9/27/2019 10:17 AM
46	parking availability	9/27/2019 9:18 AM
47	Managing traffic with limited parking availability	9/27/2019 9:09 AM
48	Right size slips and power	9/27/2019 8:15 AM
49	Not enough launch lanes and skid pier is too short.	9/27/2019 7:30 AM
50	Staffing	9/27/2019 7:15 AM
51	Law enforcement	9/27/2019 5:47 AM
52	The floating fishing Pier during freeze thaw cycle	9/27/2019 5:42 AM
53	High Lake Mi water levels	9/27/2019 5:37 AM
54	road asphalt	9/27/2019 5:34 AM
55	some times boats are to big or wide	9/27/2019 5:24 AM
56	asphalt repairs	9/27/2019 5:23 AM
57	Very high weekend usage. We have a bad asphalt section at the ramp that needs replaced.	9/27/2019 5:15 AM
58	Parking lot repairs	9/27/2019 5:11 AM
59	Parking is over flowing	9/27/2019 5:09 AM
60	Cost of maintaining asphalt surfacing	9/27/2019 5:06 AM
61	Getting to the sites regularly to check on them and clean the pit toilet. Also grading of the sites and condition of the ramps	9/27/2019 5:05 AM
62	Condition of ramps, blow outs from users power loading along with sand on ramps that we do not have adequate equipment to remove.	9/27/2019 4:47 AM
63	Cars without trailers taking up trailer spots.	9/27/2019 4:45 AM
64	Restrooms, and parking	9/27/2019 4:36 AM
65	Parking	9/27/2019 4:23 AM
66	I have 3. Money, equipment upgrades, and staff.	9/27/2019 4:18 AM
67	Staffing levels (STW's)	9/26/2019 8:03 AM
68	Limited available seasonal staffing (STW's)	9/26/2019 7:58 AM
69	Site line from booth to ramp - too far away and too many trees	9/26/2019 7:56 AM
70	The amount of staffing available to maintain it.	9/26/2019 7:53 AM
71	Inexperienced boaters	9/26/2019 7:46 AM

MSWC Facilities Survey

72	PARKING	9/25/2019 1:18 PM
73	N/A	9/25/2019 11:41 AM
74	Very unsafe dock. Not enough dock space for the number of boats. Not enough turn radius for large boat trailers. This facility is in the planning phase for improvements which should fix these issues.	9/25/2019 11:38 AM
75	Flooding in February and early spring	9/25/2019 11:33 AM
76	Crowd control during the summer months when the liveries are running tubes	9/25/2019 11:30 AM
77	Distance from shop and size of site. Takes a lot of staff hours to maintain this site on a weekly basis.	9/25/2019 11:03 AM
78	Staffing the canoe liveries (115 staff and 550 boats). Having enough parking is another challenge.	9/25/2019 8:20 AM
79	Busy facility during the summer season and not enough parking or staffing	9/24/2019 12:31 PM
80	limited launch lanes and parking	9/23/2019 12:43 PM
81	Condition of ramp	9/23/2019 10:08 AM
82	Number of ramps	9/23/2019 10:01 AM
83	No enough parking to accommodate users	9/23/2019 9:56 AM
84	Staffing	9/23/2019 9:50 AM
85	high water levels past two years	9/23/2019 6:40 AM
86	Trailer parking from campers mixing with boater parking	9/23/2019 5:31 AM
87	Having enough power	9/23/2019 5:26 AM
88	Condition of ramp and dock	9/23/2019 4:53 AM
89	21321	9/23/2019 4:39 AM
90	Jame up of boats coming in and out of the water and the ability to park all of the vehicles w/trailers.	9/22/2019 11:01 AM
91	1. People not paying to use the facilities. 2. The geese, we have to clean the docks 3 times a day.	9/21/2019 11:33 AM
92	Grading of the parking area and ramp deficiencies.	9/20/2019 10:23 AM
93	rising Water levels	9/20/2019 9:59 AM
94	more handicap parking	9/20/2019 9:31 AM
95	Traffic control and parking issues.	9/19/2019 12:27 PM
96	Parking conflicts between those with trailers and those without.	9/19/2019 11:05 AM
97	Water levels	9/19/2019 10:35 AM
98	Just keeping an eye on it for vandalism. It is the farthest facility away from our H.Q.	9/19/2019 10:20 AM
99	Wait time, parking	9/19/2019 8:34 AM
100	Water levels	9/19/2019 8:19 AM
101	Getting the visitors to have the Recreation Passport on their vehicle.	9/19/2019 7:35 AM
102	Getting visitors to self register for the Recreation Passport.	9/19/2019 7:31 AM
103	The layout of the site. There are two parking lots, one near the ramp and another across the road. Getting people to get between the parking lot across the road and back to the boat ramp in a timely manner to not hold up traffic.	9/19/2019 7:26 AM
104	Getting staff to boat launch prior to it filling to direct traffic throughout the day.	9/19/2019 7:20 AM
105	maintenance of the drive (ie...washouts due to it being gravel)	9/19/2019 3:58 AM
106	Too many boats attempting to launch at same time	9/18/2019 11:16 AM

MSWC Facilities Survey

107	The biggest challenge would be indicating the launch is full, where we are located and how you enter the facility causes issues, blocking residents access to their homes , emergency access to the facility and letting people know we are full before they hit the side streets and congest the neighborhood. We really need a digital sign on Cass / Elizabeth to help notify the public the launch is full. this is the number one complaint from the public!!	9/18/2019 11:11 AM
108	trash and messy toilet	9/18/2019 9:29 AM
109	The ramp is blocked off for wintertime access. This is due to past problems with heaving from large vehicles driving on it. Customers were not happy with the change and we are working on creating a separate winter access point to allow users access to the lake for ice fishing and recreation.	9/18/2019 7:12 AM
110	Adequate pavilion space for use by the public. We currently have 1 pavilion and there are sometimes issues with those who have reserved and those who just take over the space.	9/18/2019 6:44 AM
111	Finding much needed staff ours to maintain the overall condition of the Access Site. This includes mowing, trimming cleaning the vault toilet as well as maintaining the launch and shoreline.	9/18/2019 6:37 AM
112	Dredging gravel every other year.	9/18/2019 6:24 AM
113	Currently the biggest challenge is the deteriorating Seawall due to the high water levels. However, this issue will be resolved in 2020 when a new seawall will be installed.	9/18/2019 6:19 AM
114	Parking	9/18/2019 6:01 AM
115	outdated bath house	9/18/2019 5:42 AM
116	Failing infrastructure	9/18/2019 5:41 AM
117	Damage and congestion caused by day users with parking and/or rule breaking.	9/18/2019 5:33 AM
118	Use as a day-use facility by non-boaters. Swimming, sunbathing, picnicking.	9/18/2019 5:23 AM
119	water level	9/18/2019 5:16 AM
120	Parking in previous years, 2019 attendance was down.	9/18/2019 5:11 AM
121	Vandalism	9/18/2019 5:04 AM
122	maintenance upkeep	9/18/2019 5:01 AM
123	High water levels. Struggle in finding an employee to work there.	9/18/2019 4:58 AM
124	People not wanting to pay the launch fee and parking	9/18/2019 4:49 AM
125	Not enough parking	9/18/2019 4:29 AM
126	Traffic control and parking spaces that were not designed to accommodate the larger vehicles we have utilizing the access sites now.	9/18/2019 3:29 AM
127	The enforcement of the rules when there is a long line of boaters waiting to get into the launch.	9/17/2019 12:57 PM
128	available parking, high demand and turning away visitors.	9/17/2019 11:39 AM
129	Fishery inconsistent	9/17/2019 11:04 AM
130	Use	9/17/2019 10:57 AM
131	Power loading	9/17/2019 10:39 AM
132	The wooden groin at Union Bay needs regular maintenance and the ramp at the Big Iron needs dredged often.	9/17/2019 10:39 AM
133	Staffing for cleaning and maintenance of the facility as site is 30 miles away.	9/17/2019 10:28 AM
134	When a parking lot fills and people start to utilize overflow parking lots.	9/17/2019 10:16 AM
135	Accommodating all that arrive to launch thier boat.	9/17/2019 9:58 AM
136	Wifi and duck poop	9/17/2019 9:44 AM
137	Full boat trailer parking spaces and the requirement to close the launch by policy.	9/17/2019 9:19 AM
138	lack of staffing	9/17/2019 8:53 AM
139	Restrooms	9/17/2019 8:52 AM

Q25 What would be the most important change to your facility to benefit your staff/operations?

Answered: 131 Skipped: 94

#	RESPONSES	DATE
1	Adding ADA Accessible Paddling Facilities	9/30/2019 1:15 PM
2	travel routes	9/30/2019 1:03 PM
3	Car parking; tie-down area; additional staff	9/30/2019 12:09 PM
4	having more staff	9/30/2019 11:56 AM
5	Assign a seasonal worker to the boat launch	9/30/2019 10:16 AM
6	Increased wage to better compete in the seasonal; job market.	9/30/2019 10:15 AM
7	The most important change would to resurface the asphalt roadway. Staff time is consumed with repairs, and fighting vegetation growth is cracks. Increasing the tie down and prep lane areas would be very beneficial at this time too.	9/30/2019 10:03 AM
8	Increased wage to better compete in the seasonal; job market.	9/30/2019 10:00 AM
9	Upgrade/update facility	9/30/2019 9:09 AM
10	Funding to increase wages	9/30/2019 9:04 AM
11	A new fee booth.	9/30/2019 8:49 AM
12	An automated pay station would reduce our demand on staff. We work on the honor system and do not staff the boat launch on a regular basis.	9/30/2019 8:43 AM
13	I don't have an answer at this point.	9/30/2019 7:14 AM
14	Parking	9/30/2019 6:48 AM
15	Looking for reduced maintenance options for docks, and on site electronic collection of launch fees. Additional ramps at existing facilities to increase capacity especially when some ramps are out of service.	9/30/2019 6:47 AM
16	Higher wages generates quality work staff.	9/30/2019 6:30 AM
17	Reconstructed launch	9/30/2019 6:27 AM
18	having more staff	9/30/2019 6:25 AM
19	improving access drives, launch approaches, adding sidewalks for better walkability	9/30/2019 6:18 AM
20	Better enforcement and public education about the parking lot.	9/30/2019 6:03 AM
21	None come to mind at the moment.	9/30/2019 6:01 AM
22	Staging Docs and the launch canal	9/30/2019 5:46 AM
23	An automated meter for boat launch users that accepts credit cards.	9/30/2019 5:44 AM
24	ramp	9/30/2019 5:43 AM
25	Facility improvements	9/30/2019 5:40 AM
26	Repair office sewer; redesign lot; additional staff	9/30/2019 5:21 AM
27	nothing	9/30/2019 5:15 AM
28	Paving	9/30/2019 5:12 AM
29	Additional parking	9/30/2019 5:12 AM
30	increased parking with deeper spots and new asphalt.	9/30/2019 5:07 AM
31	staffing	9/28/2019 12:21 PM

MSWC Facilities Survey

32	none	9/28/2019 9:51 AM
33	increased parking	9/28/2019 9:34 AM
34	Nothing	9/28/2019 8:00 AM
35	wifi	9/27/2019 11:33 AM
36	being able to staff a harbormaster	9/27/2019 11:09 AM
37	Parking lot and roadway improvements.	9/27/2019 11:05 AM
38	a plan for long term overnight trailer parking	9/27/2019 10:58 AM
39	Improved pavement.	9/27/2019 10:55 AM
40	Repave parking areas.	9/27/2019 10:17 AM
41	increased parking	9/27/2019 9:18 AM
42	Increase parking, particularly single vehicle parking to accommodate paddle sport interest.	9/27/2019 9:09 AM
43	Docks and power	9/27/2019 8:15 AM
44	More parking, ramps and skid piers.	9/27/2019 7:30 AM
45	Higher wages	9/27/2019 7:15 AM
46	Another Park Officer. We only have one at a very busy facility	9/27/2019 5:47 AM
47	Storm water management	9/27/2019 5:42 AM
48	ADA Kayak Launch	9/27/2019 5:37 AM
49	road/parking repairs	9/27/2019 5:34 AM
50	one more gas hose update the restrooms	9/27/2019 5:24 AM
51	asphalt repairs	9/27/2019 5:23 AM
52	Preventative maintenance funds/plan for the asphalt	9/27/2019 5:15 AM
53	Preventative maintenance funds for asphalt repairs	9/27/2019 5:11 AM
54	more parking	9/27/2019 5:09 AM
55	Staying on top of asphalt. We don't have a good preventative maintenance program currently.	9/27/2019 5:06 AM
56	more staff to help take care of the sites	9/27/2019 5:05 AM
57	Bigger wider ramps along with areas for boaters to tie to when putting in and retrieving their boats so they are not tying up docks/ramps.	9/27/2019 4:47 AM
58	More car spots	9/27/2019 4:45 AM
59	restrooms	9/27/2019 4:36 AM
60	N/A	9/27/2019 4:23 AM
61	More in the budget. Operations cost more than they did years ago.	9/27/2019 4:18 AM
62	Having more staffing available (STW's)	9/26/2019 8:03 AM
63	Having more seasonal staff available (STW's)	9/26/2019 7:58 AM
64	Electricity	9/26/2019 7:56 AM
65	Having more dedicated seasonal staff (STW's)	9/26/2019 7:53 AM
66	Signage that would help enforce direction provided by staff - speed limit, no walk zone, loading and unloading.	9/26/2019 7:46 AM
67	Improved/added parking.	9/25/2019 1:18 PM
68	N/A	9/25/2019 11:41 AM
69	Fixes to the issues mentioned in question 9.	9/25/2019 11:38 AM
70	Move bathroom to different location.	9/25/2019 11:33 AM

MSWC Facilities Survey

71	Paved parking and an additional ramp. Both are in the planning phase currently	9/25/2019 11:30 AM
72	The Gallup Park BAS dock is at a different location than the Gallup Park Canoe Liveries. The canoe liveries have extensive docks and facilities to accommodate the rental operation. The Gallup Park BAS is not staffed but with the increase use of personal kayaks the dock should be lower to allow for entering/exiting kayaks and canoes.	9/25/2019 8:20 AM
73	additional staffing to be able to station someone at the launch during the busy times. We try to do this now, but oftentimes are short staffed and employees are needed at a higher priority location.	9/24/2019 12:31 PM
74	more lanes so they could be dedicated specifically for launch vs. retrieval	9/23/2019 12:43 PM
75	Condition of ramp	9/23/2019 10:08 AM
76	Number of ramps	9/23/2019 10:01 AM
77	Additional parking	9/23/2019 9:56 AM
78	Upgrading to the restroom	9/23/2019 9:50 AM
79	upgrade to dock and ramp	9/23/2019 6:40 AM
80	facility in good condition.	9/23/2019 5:31 AM
81	Electrical upgrade.	9/23/2019 5:26 AM
82	New Ramp and Dock	9/23/2019 4:53 AM
83	231	9/23/2019 4:39 AM
84	More approved vehicle w/trailer parking. Harbor building with restrooms, showers, and a harbor office.	9/22/2019 11:01 AM
85	Install an Entry Arm Pay Gate system	9/21/2019 11:33 AM
86	A new improved launch with a structured paved parking area and potentially a fishing pier.	9/20/2019 10:23 AM
87	training	9/20/2019 9:59 AM
88	more fishing access from pier (new layout)	9/20/2019 9:31 AM
89	Additional trailer parking.	9/19/2019 12:27 PM
90	Improved parking site/road surfaces	9/19/2019 11:05 AM
91	Restored shoreline	9/19/2019 10:35 AM
92	Having parking lot and road paved for no grading or dust control costs.	9/19/2019 10:20 AM
93	Additional ramps, additional parking	9/19/2019 8:34 AM
94	We do not staff the access site	9/19/2019 8:19 AM
95	Creating a self registration station and insert a fee pipe for people to be able to purchase a recreation passport on site.	9/19/2019 7:35 AM
96	Having staff on site to sell recreation passports, direct traffic, and keep the facilities clean.	9/19/2019 7:31 AM
97	I can't think of one right now. I am excited to see how the future holds after the most recent project.	9/19/2019 7:26 AM
98	More vehicle and boat trailer parking spots. (on top of the 13 additional we had made in 2019)	9/19/2019 7:20 AM
99	electricity connections	9/19/2019 3:58 AM
100	Cameras to cover our launch area. Launch is not visible from our office	9/18/2019 11:16 AM
101	Digital sign on Cass / Elizabeth help keep backups to a minimum! Notify people the Launch is full. you drive approximately 2 miles of side street to enter the facility.	9/18/2019 11:11 AM
102	rip rap to protect against rising waters	9/18/2019 9:29 AM
103	No changes are currently needed	9/18/2019 7:12 AM
104	Additional pavilion	9/18/2019 6:44 AM
105	If it were not open year around. However it is and we deal with it perfectly fine.	9/18/2019 6:24 AM
106	Additional staff hours on weekends would greatly improve our ability to control traffic and help maximize efficiency and safety for BAS users,	9/18/2019 6:19 AM

MSWC Facilities Survey

107	more funding	9/18/2019 6:01 AM
108	new bath house	9/18/2019 5:42 AM
109	ACOE to make major repairs to eroding dock wall	9/18/2019 5:41 AM
110	Riprap to protect against the rising waters	9/18/2019 5:33 AM
111	Sell it to Kalamazoo County so they can develop it as a county park.	9/18/2019 5:23 AM
112	new pavement and stripes	9/18/2019 5:16 AM
113	Additional parking.	9/18/2019 5:11 AM
114	Docks are aging and will eventually need to be replaced.	9/18/2019 5:04 AM
115	just being able to hire good staff	9/18/2019 5:01 AM
116	Finding an employee to the area. Only one applicant for the part time position, who quit the day before he was to start.	9/18/2019 4:58 AM
117	Nothing at this ramp. No staff presence there at all.	9/18/2019 4:49 AM
118	We are an hour and a half away, during the busy season. Perhaps there's a unit that's closer that could provide more enforcement and day to day maintenance, and we could still provide the major maintenance...	9/18/2019 4:29 AM
119	More parking spaces at the two access sites that have room for expansion. The other two have no room for expansion.	9/18/2019 3:29 AM
120	An official lane for boaters to wait in and a control gate across the entrance of the boat launch.	9/17/2019 12:57 PM
121	Increased parking	9/17/2019 11:39 AM
122	N/A	9/17/2019 11:04 AM
123	Lower fee	9/17/2019 10:57 AM
124	Rebuilding our boat ramp	9/17/2019 10:39 AM
125	More staffing	9/17/2019 10:28 AM
126	More parking at all BAS.	9/17/2019 10:16 AM
127	Keeping passenger vehicles out of launch ramp parking spaces.	9/17/2019 9:58 AM
128	None	9/17/2019 9:44 AM
129	A LUOD to prohibit non-boating vehicles from parking in the BAS areas.	9/17/2019 9:19 AM
130	more funding for more staffing and maintenance needs at BAS's	9/17/2019 8:53 AM
131	We are constructing a new facility	9/17/2019 8:52 AM

Q26 What trends do you see evolving in your facility that we need to plan for in the future?

Answered: 123 Skipped: 102

#	RESPONSES	DATE
1	Increased kayaking	9/30/2019 1:15 PM
2	updating docks	9/30/2019 1:03 PM
3	Longer boats; paddleboards/small craft	9/30/2019 12:09 PM
4	honestly less boaters is a trend that we need to be worried about	9/30/2019 11:56 AM
5	Since our launch site is the closest to the big lake and access to the Grand River, I anticipate a continued increase in use at our facility.	9/30/2019 10:16 AM
6	None	9/30/2019 10:15 AM
7	People are using BAS for many other recreational opportunities in addition to boating. This site see heavy waterfowl hunting and paddle sports.	9/30/2019 10:03 AM
8	Higher ramp usage due to increased sport fishing.	9/30/2019 10:00 AM
9	Upgrade/update facility	9/30/2019 9:09 AM
10	A wash in and wash out station for boats. Currently we have 1 and are planning to add another.	9/30/2019 9:04 AM
11	There has been more talk recently about a fish cleaning station.	9/30/2019 8:49 AM
12	Our region has seen a marked increase in recreational fishing. We do not offer a fish cleaning station which demand for is extremely high. This leads to a station issue as we have fish remains dumped in trash and local dumpsters.	9/30/2019 8:43 AM
13	Power and fresh water updates, wifi increased, and a need for more wells.	9/30/2019 7:14 AM
14	Water levels	9/30/2019 6:48 AM
15	Increased ramps and parking.	9/30/2019 6:47 AM
16	Less applicants applying for work, because of the pay scale we offer	9/30/2019 6:30 AM
17	more fishing tournaments	9/30/2019 6:25 AM
18	more diverse users; waterfronts are now part of walking, biking paths and more visitors are using the site beyond just launching boats.	9/30/2019 6:18 AM
19	As the marina reopens after construction, we are expecting the launch to get more use. We will need to plan for higher volume of boaters and parking issues.	9/30/2019 6:03 AM
20	Access for paddle people	9/30/2019 6:01 AM
21	Traffic in the launch area due to more fishing tournaments on our Lake	9/30/2019 5:46 AM
22	We will need to plan for additional parking enforcement during large events to ensure that parking spaces will be available for boat launch users.	9/30/2019 5:44 AM
23	ramp	9/30/2019 5:43 AM
24	Water Levels	9/30/2019 5:40 AM
25	Larger boats (longer ramps/piers); more paddleboards/etc,	9/30/2019 5:21 AM
26	nothing	9/30/2019 5:15 AM
27	increase in shoreline usage	9/30/2019 5:12 AM
28	Longer trailer / parking space extensions	9/30/2019 5:07 AM
29	paddle sports	9/30/2019 3:02 AM

MSWC Facilities Survey

30	paddle sports	9/30/2019 2:52 AM
31	township park & rec. improvements will increase visitation to our facility	9/28/2019 12:21 PM
32	none	9/28/2019 9:51 AM
33	local township is increasing/improving their lake side park and recreation offerings which will encourage more use of the adjacent county marina and harbor	9/28/2019 9:34 AM
34	Nothing	9/28/2019 8:00 AM
35	Increasing water levels and site flooding. Also, the pavement is in poor condition (pothole throughout) and does not drain well. Therefore holds water in various areas.	9/28/2019 2:54 AM
36	wifi	9/27/2019 11:33 AM
37	kayak launch facilities	9/27/2019 11:09 AM
38	Failing roadway and parking lot conditions.	9/27/2019 11:05 AM
39	more and more boater traffic means we need a plan for long-term overnight parking	9/27/2019 10:58 AM
40	Failing roadway and parking lot conditions.	9/27/2019 10:55 AM
41	Enhanced personal watercraft launch area.	9/27/2019 10:17 AM
42	continued increase in paddle sport	9/27/2019 9:18 AM
43	Continued interest in paddle sport participation.	9/27/2019 9:09 AM
44	Size	9/27/2019 8:15 AM
45	Pontoons and bass boats.	9/27/2019 7:30 AM
46	It's all about the fish and there is a bunch of them	9/27/2019 5:47 AM
47	It's all about how the fish are biting	9/27/2019 5:42 AM
48	non-motorized use	9/27/2019 5:34 AM
49	none at this time	9/27/2019 5:24 AM
50	non-motorized use	9/27/2019 5:23 AM
51	Very high usage!	9/27/2019 5:15 AM
52	non-motorized use and aquatic invasive concerns	9/27/2019 5:11 AM
53	more paddlesports	9/27/2019 5:09 AM
54	Increased non-motorized use and concerns from reparation's regarding aquatic invasives.	9/27/2019 5:06 AM
55	more kayaking and stand up paddle boards	9/27/2019 5:05 AM
56	More boaters and bigger boats with increased demand for additional ramps and parking due to increase of personal watercrafts.	9/27/2019 4:47 AM
57	A kayak launch	9/27/2019 4:45 AM
58	better parking, improved restrooms	9/27/2019 4:36 AM
59	Increase usage of paddle craft. SUP's Need for on site storage.	9/27/2019 4:23 AM
60	Additional single car parking for paddle sports users.	9/27/2019 4:18 AM
61	Could see more paddlecraft, but likely only kayakers due to the draw of the Blueways Trails	9/26/2019 8:03 AM
62	Ice fishing usage	9/26/2019 7:58 AM
63	No	9/26/2019 7:56 AM
64	Large scale fishing tournaments due to the local CVB drawing in the national level outdoor channel programs that showcase this lake	9/26/2019 7:53 AM
65	Increased personal watercraft use, inexperienced boaters, increased request for jump box services, requests for boater assistance	9/26/2019 7:46 AM
66	N/A	9/25/2019 11:41 AM

MSWC Facilities Survey

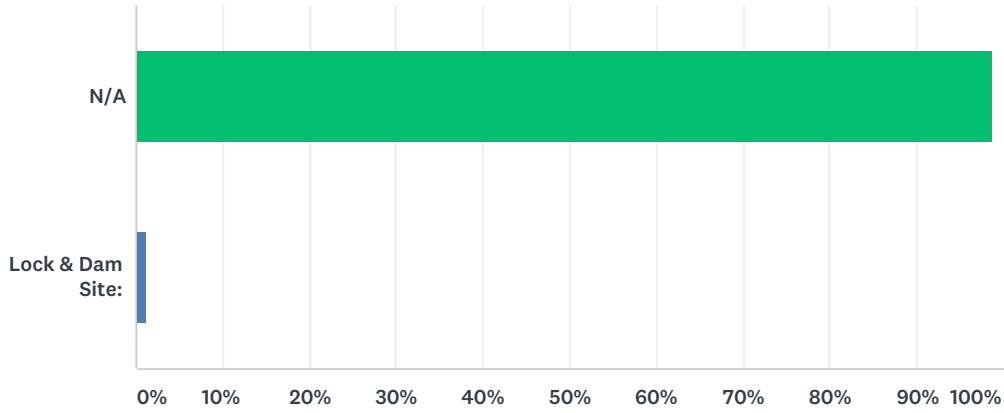
67	Increased Kayaking	9/25/2019 11:38 AM
68	More single car parking.	9/25/2019 11:33 AM
69	Increased boat traffic on weekends once second ramp is placed	9/25/2019 11:30 AM
70	Personal kayaks and canoes. Docks should accommodate small non motorized watercraft.	9/25/2019 8:20 AM
71	We are seeing an increase in paddle sports here. Ideally we could install a small launch area that is designated for them in the future.	9/24/2019 12:31 PM
72	automated payment option	9/23/2019 12:43 PM
73	Home/property owners on the lake are increasingly more worried about invasive species---milfoil mostly	9/23/2019 10:50 AM
74	Higher use, potential for additional shore fishing locations	9/23/2019 10:08 AM
75	Larger boats at all locations	9/23/2019 10:01 AM
76	Continued heavy use is creating a need for additional parking.	9/23/2019 9:56 AM
77	Larger watercraft using the facility	9/23/2019 9:50 AM
78	Larger boats, possibly more boat camping	9/23/2019 5:31 AM
79	More boats needing power	9/23/2019 5:26 AM
80	With a new Ramp we may need to look into resurfacing our parking lot	9/23/2019 4:53 AM
81	1231	9/23/2019 4:39 AM
82	More vacationers are bringing their boats w/trailers and using our ramps. We need more ramps with parking in different locations on the island.	9/22/2019 11:01 AM
83	N/A	9/21/2019 11:33 AM
84	More boaters and folks fishing from the pier.	9/20/2019 10:23 AM
85	na	9/20/2019 9:59 AM
86	full launch re-design to accommodate better ADA, improved/increase pier fishing access, increase ramp length for larger boats, and longer trailer parking spaces	9/20/2019 9:31 AM
87	The increase in paddlers will require additional parking near the boat launch or installation of paddle sport launch site near other parking options.	9/19/2019 12:27 PM
88	None	9/19/2019 11:05 AM
89	Soft shoreline, natural habitat educational center, increased use due to population growth	9/19/2019 10:35 AM
90	More kayaks and stand up boards.	9/19/2019 10:20 AM
91	no future plans	9/19/2019 8:19 AM
92	Local land owners/property owners wanting a boat cleaning station for the incoming and outgoing boat traffic.	9/19/2019 7:35 AM
93	Local land owners/property owners, wanting boat cleaning stations for incoming and outgoing boats.	9/19/2019 7:31 AM
94	Local land owners/property owners wanting boat cleaning stations installed for the incoming and outgoing boat traffic.	9/19/2019 7:26 AM
95	Pressure from the property owners and special interest groups for boat cleaning stations for incoming and outgoing boats.	9/19/2019 7:20 AM
96	increased river usage, continued maintenance funds to keep the docks and launch in working condition	9/19/2019 3:58 AM
97	Fish Cleaning stations at all launch sites	9/18/2019 11:16 AM
98	Size of the water craft / trailers, and the increase want to use the ramps, even when we are full people want to be able to drop and go. the use of kayaks that take up boat parking.	9/18/2019 11:11 AM
99	Paddle sports are on the rise and we have received requests for an ADA accessible dock/launch.	9/18/2019 7:12 AM

MSWC Facilities Survey

100	As stated above, we are planning for 3 fishing platforms and an ADA kayak launch. These amenities will bring an increase in number of visitors to the park. More visitors creates a greater need for more pavilion space and updated restrooms.	9/18/2019 6:44 AM
101	Less salmon fishing because the state is stocking less.	9/18/2019 6:24 AM
102	The rising popularity of kayaks has created a demand for more launch areas.	9/18/2019 6:19 AM
103	rising water levels	9/18/2019 5:42 AM
104	Day use traffic including dog walking, fishing off of fishing dock, picnicking	9/18/2019 5:33 AM
105	Increased day-use and increased paddle sport use.	9/18/2019 5:23 AM
106	size of parking lot	9/18/2019 5:16 AM
107	More paddlesports	9/18/2019 5:11 AM
108	Docks replaced.	9/18/2019 5:04 AM
109	maintenance upkeep of the boating ramp	9/18/2019 5:01 AM
110	A larger amount of kayak traffic.	9/18/2019 4:58 AM
111	More users means more parking requirements	9/18/2019 4:49 AM
112	More parking needs because of commercial use agreements and the rise of paddle sports, cars without trailers take up a lot of the parking.	9/18/2019 4:29 AM
113	Non resident usage increases every year putting more demand on for more parking spaces.	9/18/2019 3:29 AM
114	Unknown.	9/17/2019 12:57 PM
115	Accommodation for Non motorized boating, especially in areas that connect to a water trail	9/17/2019 11:39 AM
116	We will need to overhaul our entire facility in the next 10 years including our launch ramps and day docks.	9/17/2019 11:04 AM
117	N/A	9/17/2019 10:39 AM
118	More people are fishing on the groin and it is aged.	9/17/2019 10:39 AM
119	WiFi, Modern restrooms	9/17/2019 10:28 AM
120	Neighbors would like to see boat cleaning stations at the sites for the boats coming in and leaving the lakes.	9/17/2019 10:16 AM
121	We need more launch ramp parking spaces.	9/17/2019 9:58 AM
122	Improving wifi, less feces	9/17/2019 9:44 AM
123	No comment	9/17/2019 9:19 AM

Q27 Please indicate which Lock & Dam you operate:

Answered: 167 Skipped: 58

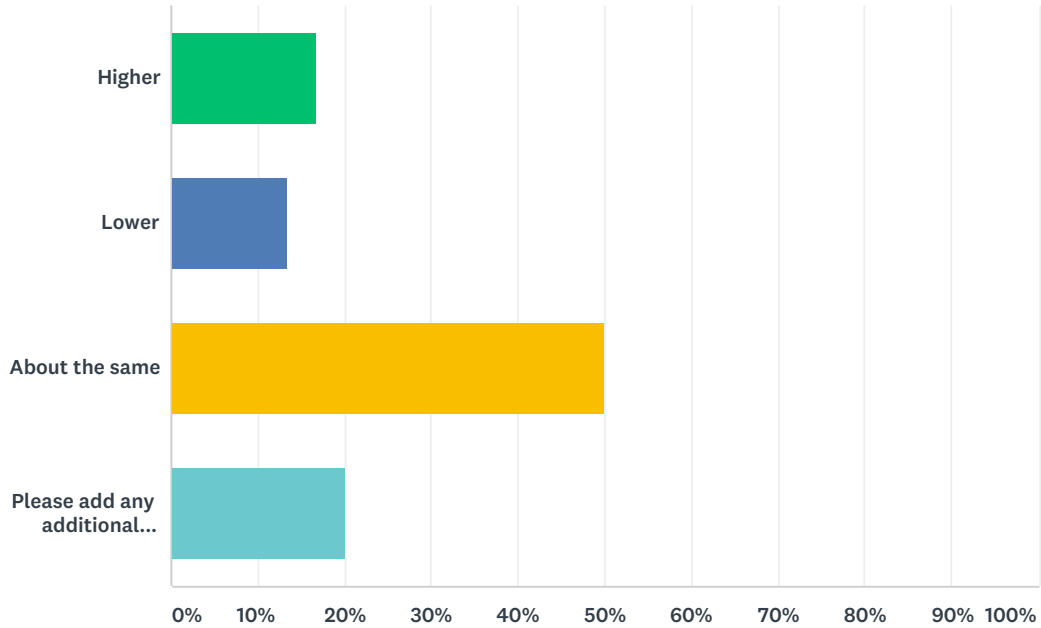


ANSWER CHOICES	RESPONSES	
N/A	98.80%	165
Lock & Dam Site:	1.20%	2
TOTAL		167

#	LOCK & DAM SITE:	DATE
1	Cheboygan Lock & Dam	9/30/2019 6:15 AM
2	Alverno Damm	9/28/2019 9:52 AM

Q28 Is your facility usage (higher, lower, or consistent) over the last year?

Answered: 30 Skipped: 195

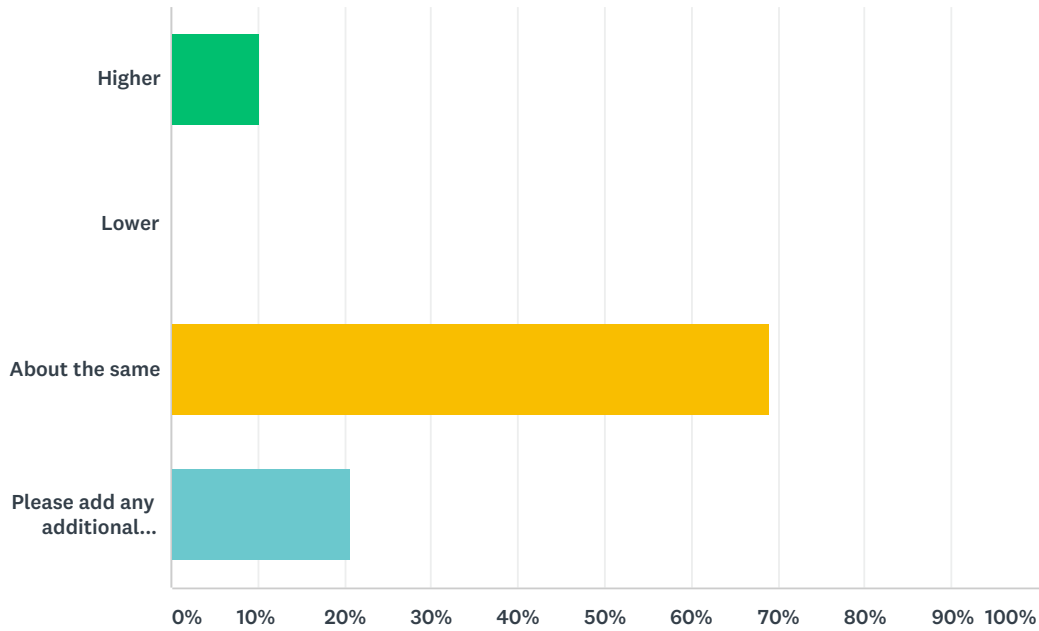


ANSWER CHOICES	RESPONSES	
Higher	16.67%	5
Lower	13.33%	4
About the same	50.00%	15
Please add any additional comments about transient/guest occupancy trend over the last year:	20.00%	6
TOTAL		30

#	PLEASE ADD ANY ADDITIONAL COMMENTS ABOUT TRANSIENT/GUEST OCCUPANCY TREND OVER THE LAST YEAR:	DATE
1	N/A	9/30/2019 12:09 PM
2	none	9/30/2019 5:28 AM
3	N/A	9/30/2019 5:21 AM
4	N/A	9/27/2019 10:18 AM
5	Na	9/27/2019 8:17 AM
6	Unsure	9/18/2019 5:05 AM

Q29 Is there a discernible trend in your facility usage (higher, lower, or consistent) over the last five years?

Answered: 29 Skipped: 196

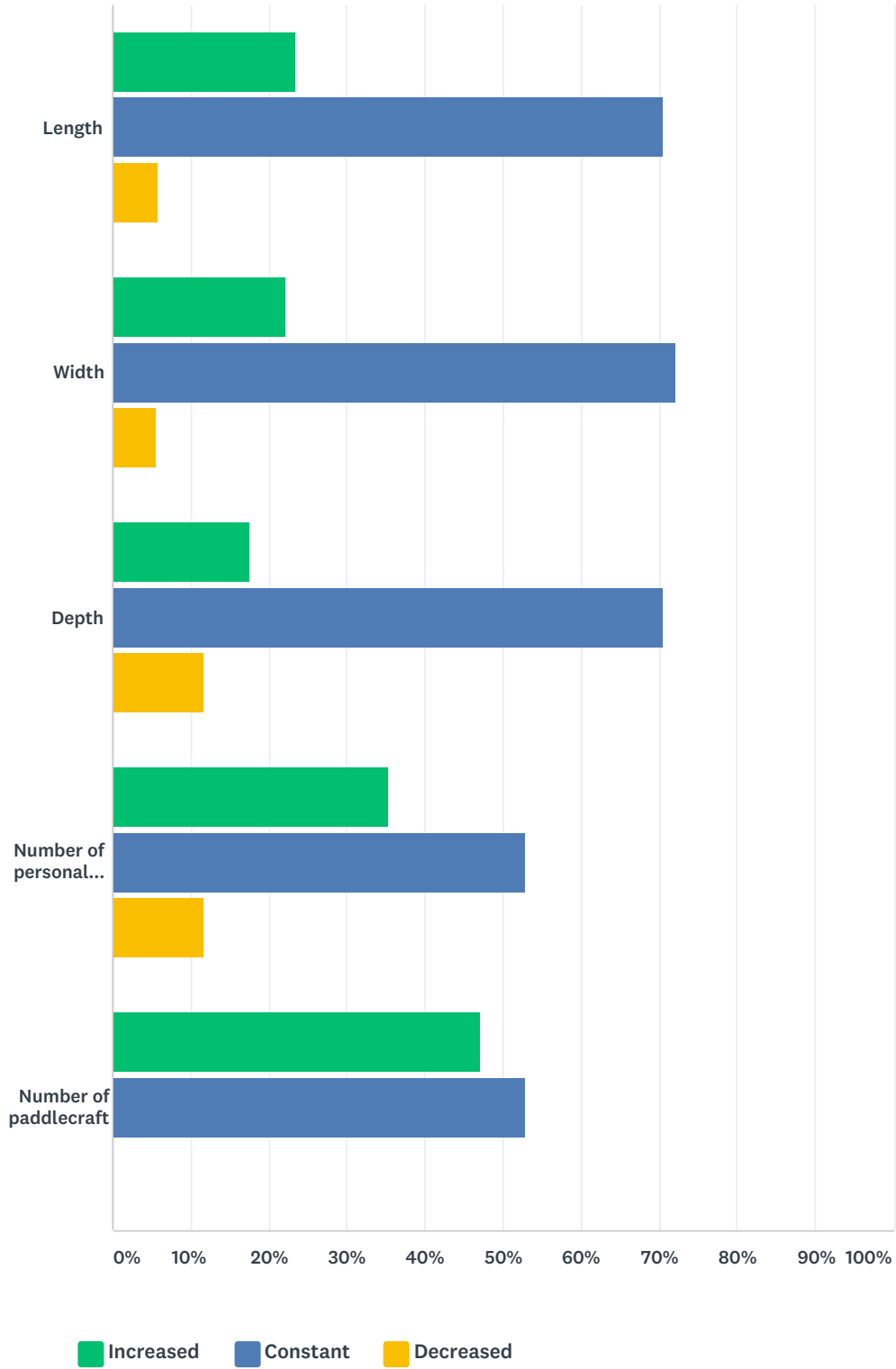


ANSWER CHOICES	RESPONSES	
Higher	10.34%	3
Lower	0.00%	0
About the same	68.97%	20
Please add any additional comments about transient/guest occupancy trend over last five years:	20.69%	6
TOTAL		29

#	PLEASE ADD ANY ADDITIONAL COMMENTS ABOUT TRANSIENT/GUEST OCCUPANCY TREND OVER LAST FIVE YEARS:	DATE
1	N/A	9/30/2019 12:09 PM
2	none	9/30/2019 5:28 AM
3	N/A	9/30/2019 5:21 AM
4	N/A	9/27/2019 10:18 AM
5	Na	9/27/2019 8:17 AM
6	Unsure	9/18/2019 5:05 AM

Q30 What changes do you see in the boats in your facility?

Answered: 18 Skipped: 207



	INCREASED	CONSTANT	DECREASED	TOTAL	WEIGHTED AVERAGE
Length	23.53%	70.59%	5.88%	17	1.82
	4	12	1		

MSWC Facilities Survey

Width	22.22% 4	72.22% 13	5.56% 1	18	1.83
Depth	17.65% 3	70.59% 12	11.76% 2	17	1.94
Number of personal watercraft (jet ski)	35.29% 6	52.94% 9	11.76% 2	17	1.76
Number of paddlecraft	47.06% 8	52.94% 9	0.00% 0	17	1.53

#	PLEASE ADD ANY OTHER CHANGES AND DETAIL TO THE ANSWERS ABOVE:	DATE
1	N/A	9/30/2019 12:09 PM
2	none	9/30/2019 5:28 AM
3	N/A	9/30/2019 5:21 AM
4	This is a fishing access site with no boat launch.	9/28/2019 3:15 AM
5	N/A	9/27/2019 10:18 AM
6	We see more paddle sports than we used to.	9/27/2019 4:20 AM
7	Unsure	9/18/2019 5:05 AM

Q31 What is the biggest challenge you face in your facility on a regular basis?

Answered: 22 Skipped: 203

#	RESPONSES	DATE
1	dock maintenance	9/30/2019 1:04 PM
2	N/A	9/30/2019 12:09 PM
3	Access when the water table is high, we had a significant amount of flooding this year that impacted our business	9/30/2019 10:18 AM
4	payment of fees	9/30/2019 6:29 AM
5	Break downs. The facility is very old	9/30/2019 6:15 AM
6	Watercraft traffic in the launch area canal	9/30/2019 5:47 AM
7	use	9/30/2019 5:46 AM
8	none	9/30/2019 5:28 AM
9	N/A	9/30/2019 5:21 AM
10	none	9/28/2019 9:52 AM
11	Poor pavement conditions.	9/28/2019 3:15 AM
12	wifi	9/27/2019 11:34 AM
13	N/A	9/27/2019 10:18 AM
14	Size	9/27/2019 8:17 AM
15	not enough slips at times	9/27/2019 5:26 AM
16	restrooms	9/27/2019 4:37 AM
17	Funding and equipment.	9/27/2019 4:20 AM
18	Repeat	9/23/2019 5:28 AM
19	Water levels	9/19/2019 10:37 AM
20	Keeping ramps clean during flooding season.	9/18/2019 5:05 AM
21	Wifi and duck poop	9/17/2019 9:46 AM
22	N/A	9/17/2019 8:53 AM

Q32 What would be the most important change to your facility to benefit your staff/operations?

Answered: 22 Skipped: 203

#	RESPONSES	DATE
1	new docks	9/30/2019 1:04 PM
2	N/A	9/30/2019 12:09 PM
3	n/a	9/30/2019 10:18 AM
4	more staffing	9/30/2019 6:29 AM
5	Bathroom / Running water. Camis credit charging	9/30/2019 6:15 AM
6	Staging docks in the launch canal	9/30/2019 5:47 AM
7	ramp	9/30/2019 5:46 AM
8	none	9/30/2019 5:28 AM
9	N/A	9/30/2019 5:21 AM
10	none	9/28/2019 9:52 AM
11	Flood control to prevent lake water from entering site which brings in lake muck resulting in extensive cleanup efforts.	9/28/2019 3:15 AM
12	wifi	9/27/2019 11:34 AM
13	N/A	9/27/2019 10:18 AM
14	Docks	9/27/2019 8:17 AM
15	one more gas hose and update bathrooms	9/27/2019 5:26 AM
16	restrooms	9/27/2019 4:37 AM
17	Add more to the budget.	9/27/2019 4:20 AM
18	Repeat	9/23/2019 5:28 AM
19	Shoreline restoration	9/19/2019 10:37 AM
20	Unsure	9/18/2019 5:05 AM
21	None	9/17/2019 9:46 AM
22	N/A	9/17/2019 8:53 AM

Q33 What trends do you see evolving in your facility that we need to plan for in the future?

Answered: 21 Skipped: 204

#	RESPONSES	DATE
1	new docks	9/30/2019 1:04 PM
2	N/A	9/30/2019 12:09 PM
3	none	9/30/2019 6:29 AM
4	Invasive species that could get into inland waterway	9/30/2019 6:15 AM
5	Staging dachshund lunch canal	9/30/2019 5:47 AM
6	kayaks	9/30/2019 5:46 AM
7	none	9/30/2019 5:28 AM
8	N/A	9/30/2019 5:21 AM
9	none	9/28/2019 9:52 AM
10	Deteriorating pavement and site flooding resulting from high water levels.	9/28/2019 3:15 AM
11	wifi	9/27/2019 11:34 AM
12	N/A	9/27/2019 10:18 AM
13	Size and power	9/27/2019 8:17 AM
14	none at this time	9/27/2019 5:26 AM
15	restrooms, wifi	9/27/2019 4:37 AM
16	Add more single car parking.	9/27/2019 4:20 AM
17	Repeat	9/23/2019 5:28 AM
18	Shoreline restoration, Natural Habitat educational center resulting in increased use.	9/19/2019 10:37 AM
19	Docks replaced	9/18/2019 5:05 AM
20	wifi	9/17/2019 9:46 AM
21	N/A	9/17/2019 8:53 AM

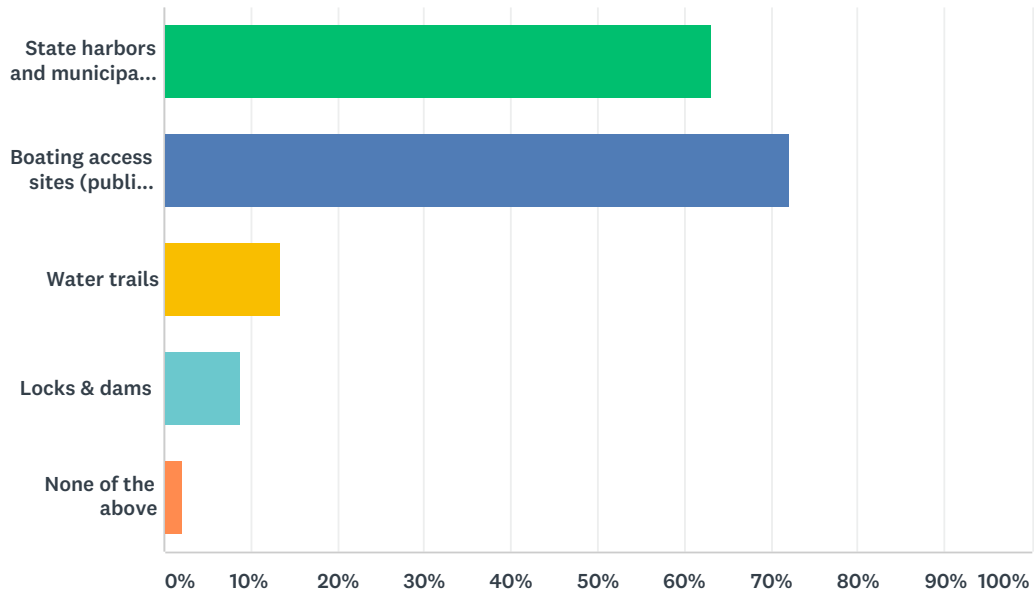
APPENDIX L – MDNR Boater Trends Survey



MICHIGAN STATE WATERWAYS PROGRAM
STATEWIDE FACILITIES ASSESSMENT - APPENDICES
Harbors, Boating Access Sites, and Lock & Dam Facilities

Q1 Please indicate the facility type(s) you use:

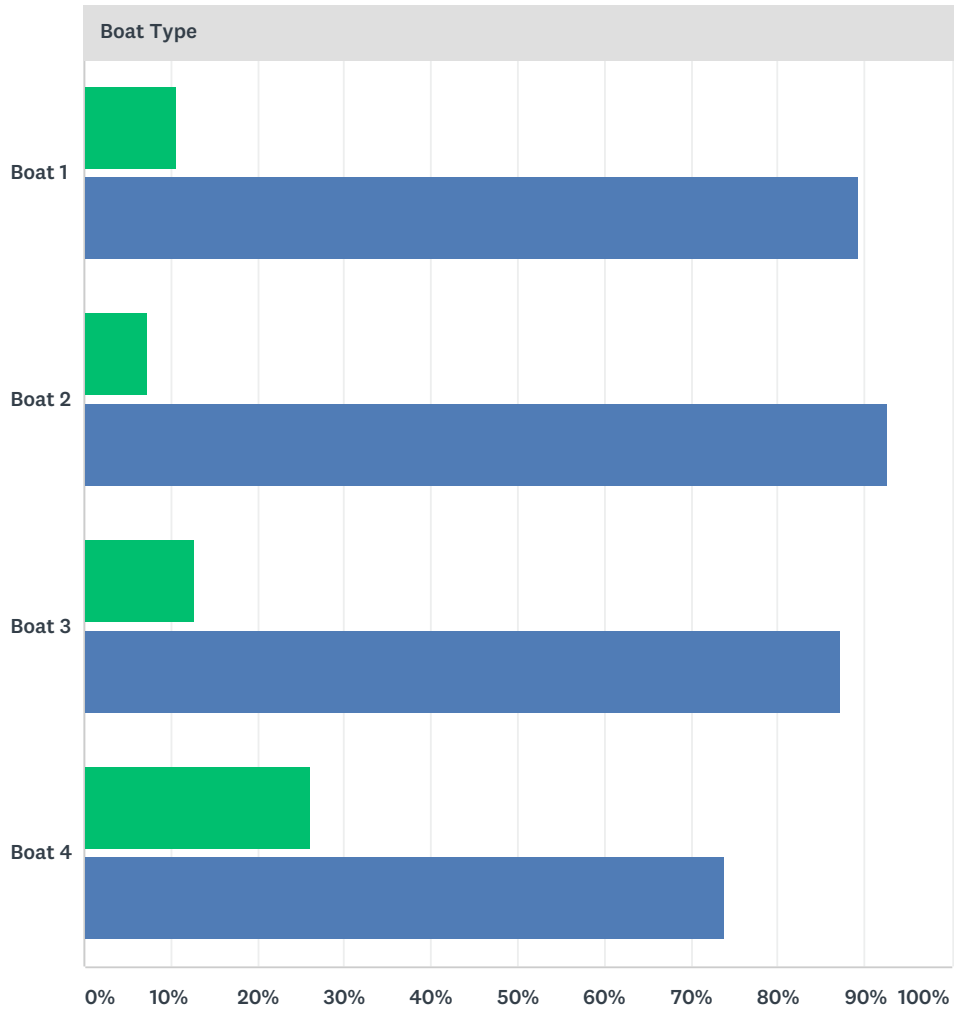
Answered: 3,714 Skipped: 29



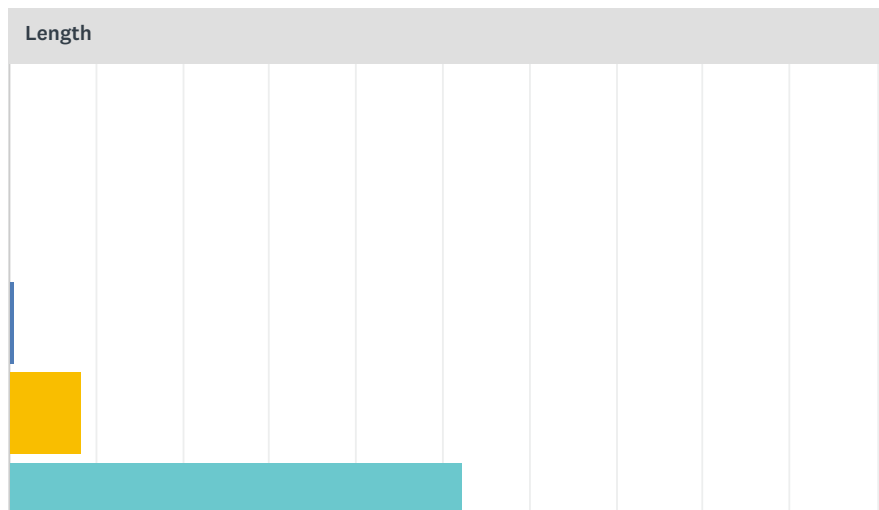
ANSWER CHOICES	RESPONSES	
State harbors and municipal marinas	63.14%	2,345
Boating access sites (public boat launches)	72.19%	2,681
Water trails	13.33%	495
Locks & dams	8.89%	330
None of the above	2.02%	75
Total Respondents: 3,714		

Q2 What type(s) of boat(s) do you own? Please indicate length, draft, beam and storage location for each. Skip question if you do not own.

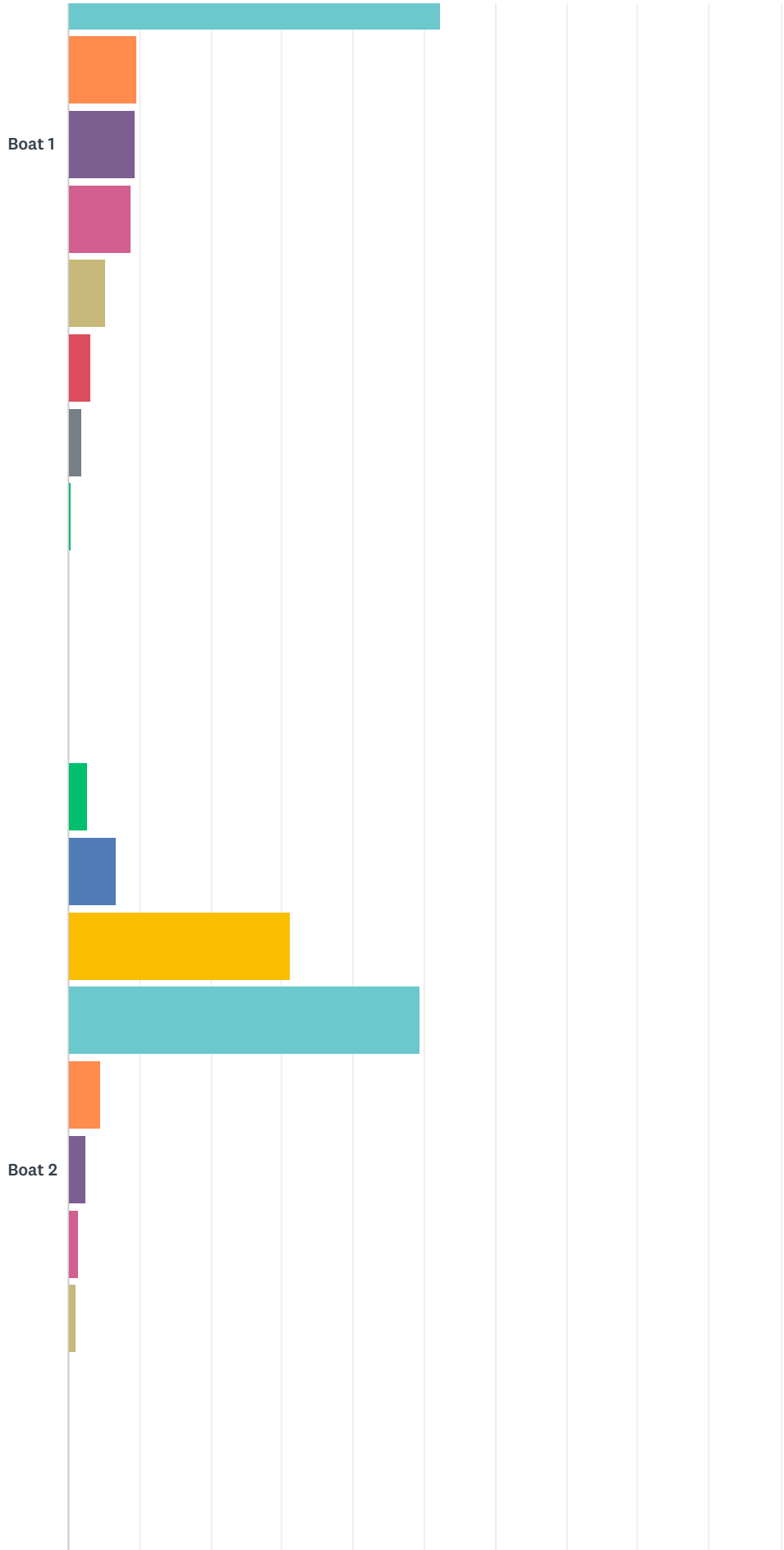
Answered: 3,430 Skipped: 313



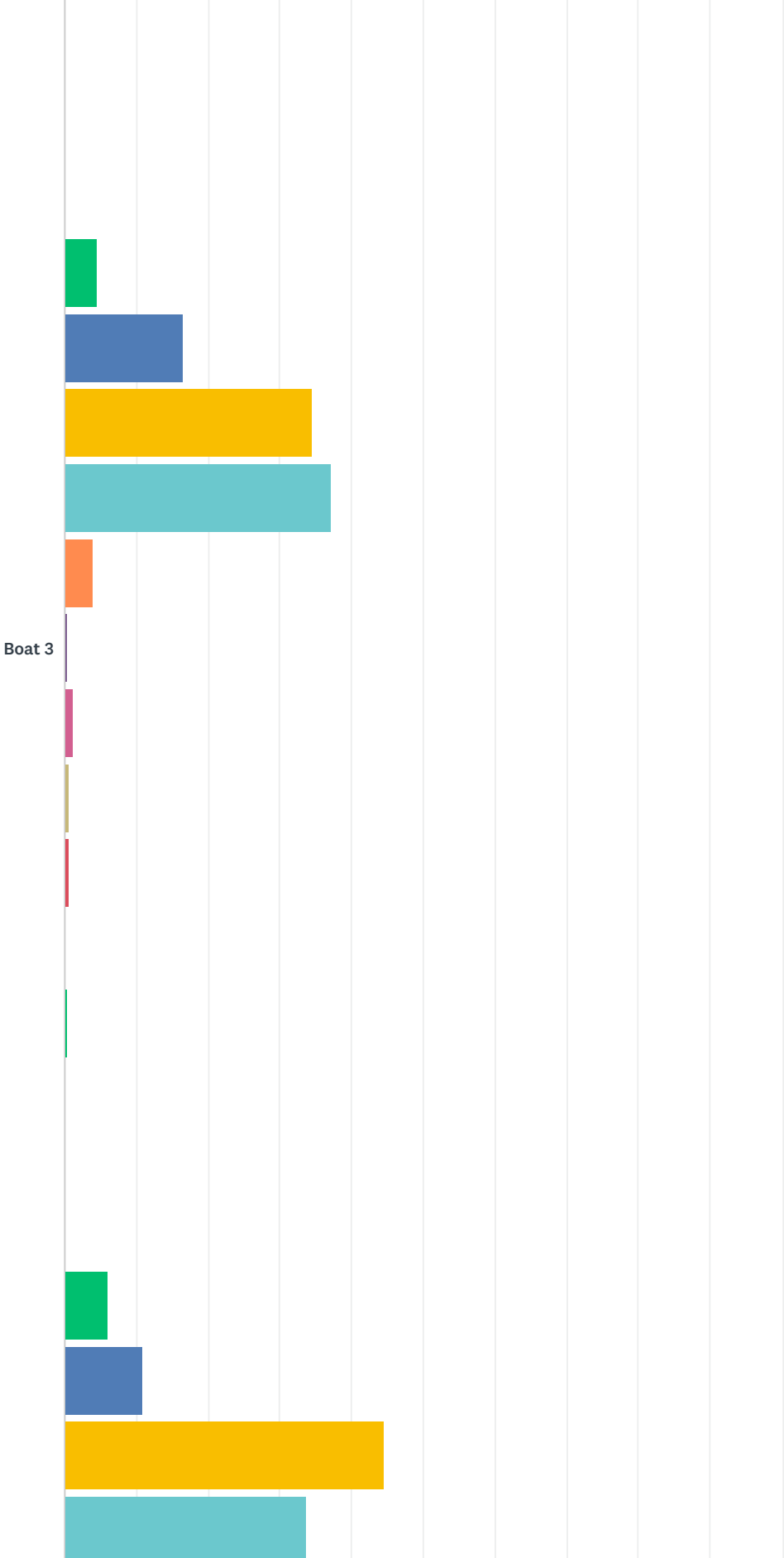
Sailboat Powerboat



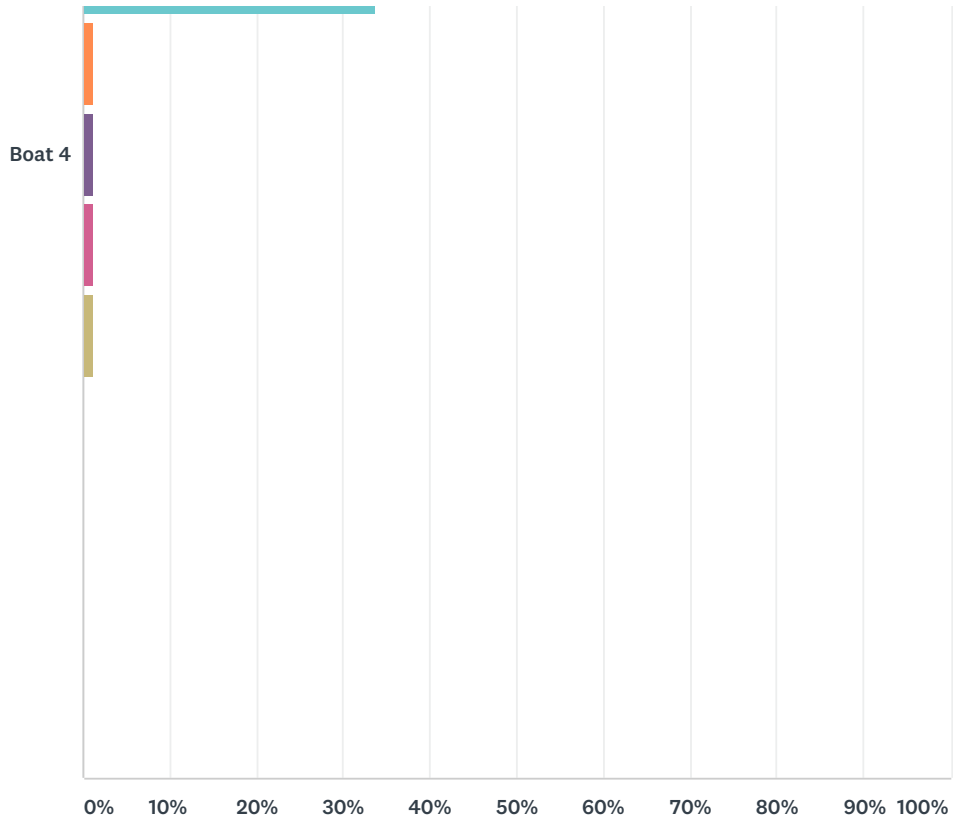
MSWC Boater Trends Survey



MSWC Boater Trends Survey

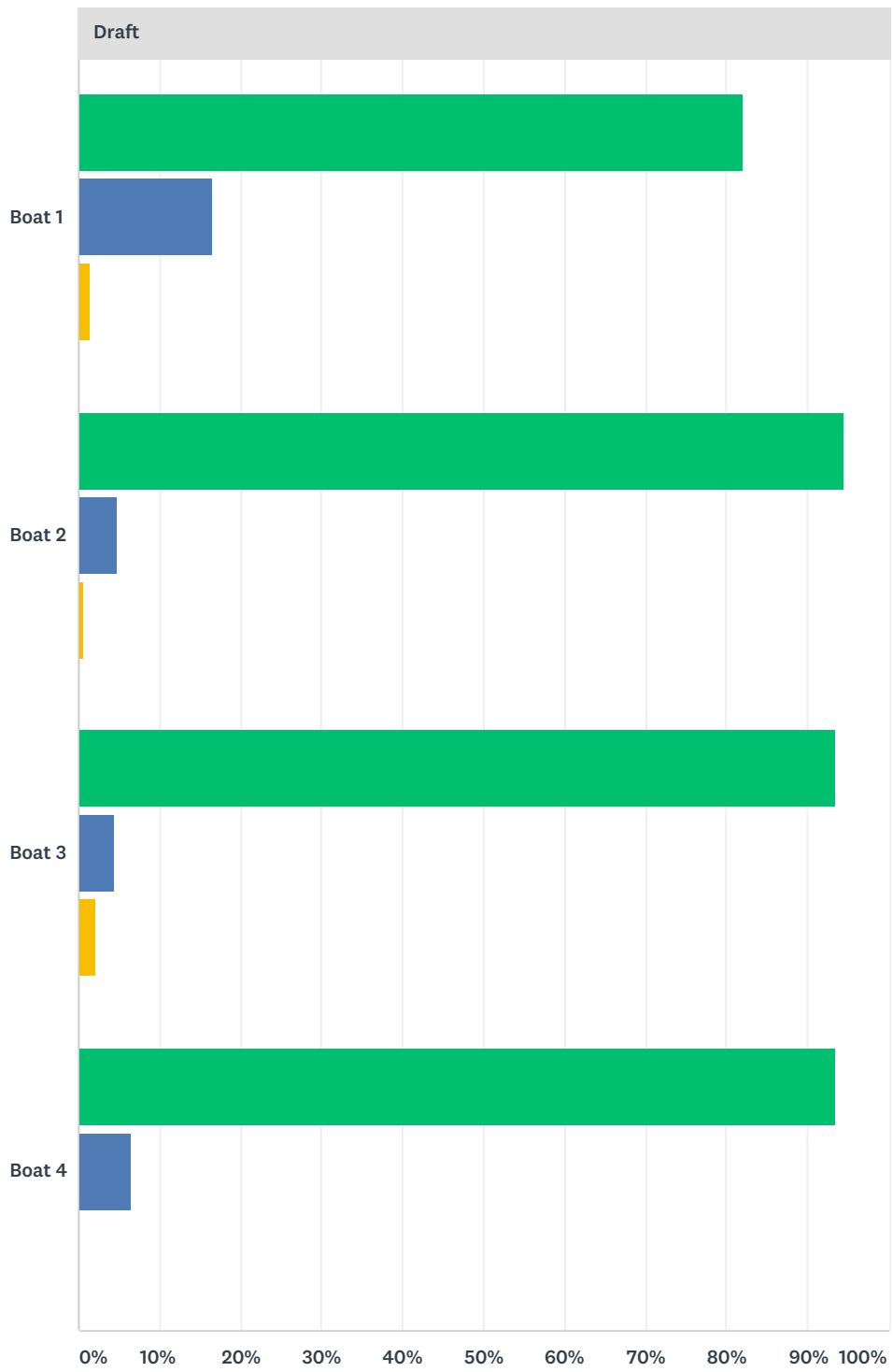


MSWC Boater Trends Survey

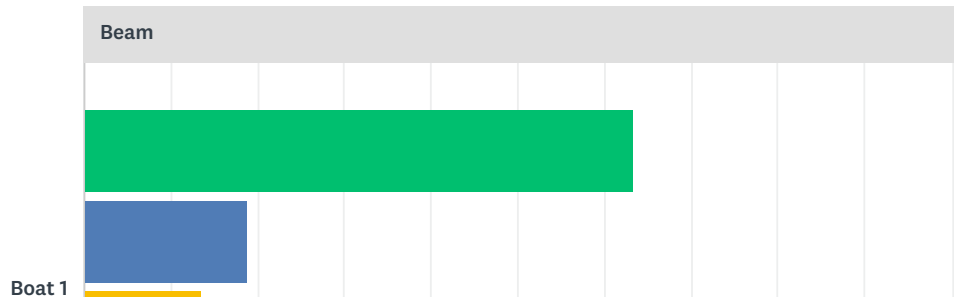


- < 8'
- 8' - 10'
- 11' - 15'
- 16' - 25'
- 26' - 29'
- 30' - 34'
- 35' - 39'
- 40' - 44'
- 45' - 49'
- 50' - 60'
- > 60'

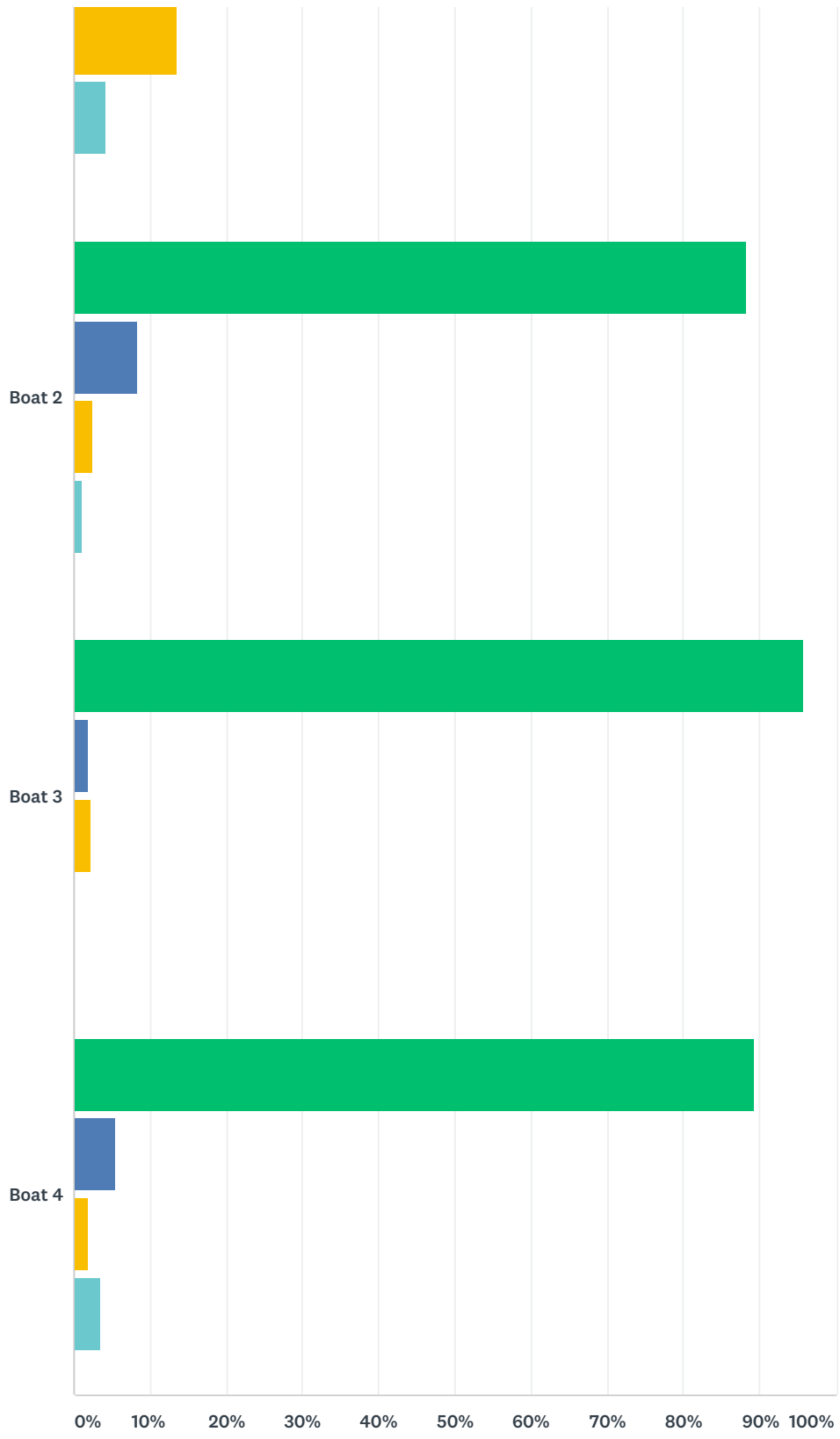
MSWC Boater Trends Survey



■ < 5' ■ 5'-8' ■ > 8'



MSWC Boater Trends Survey

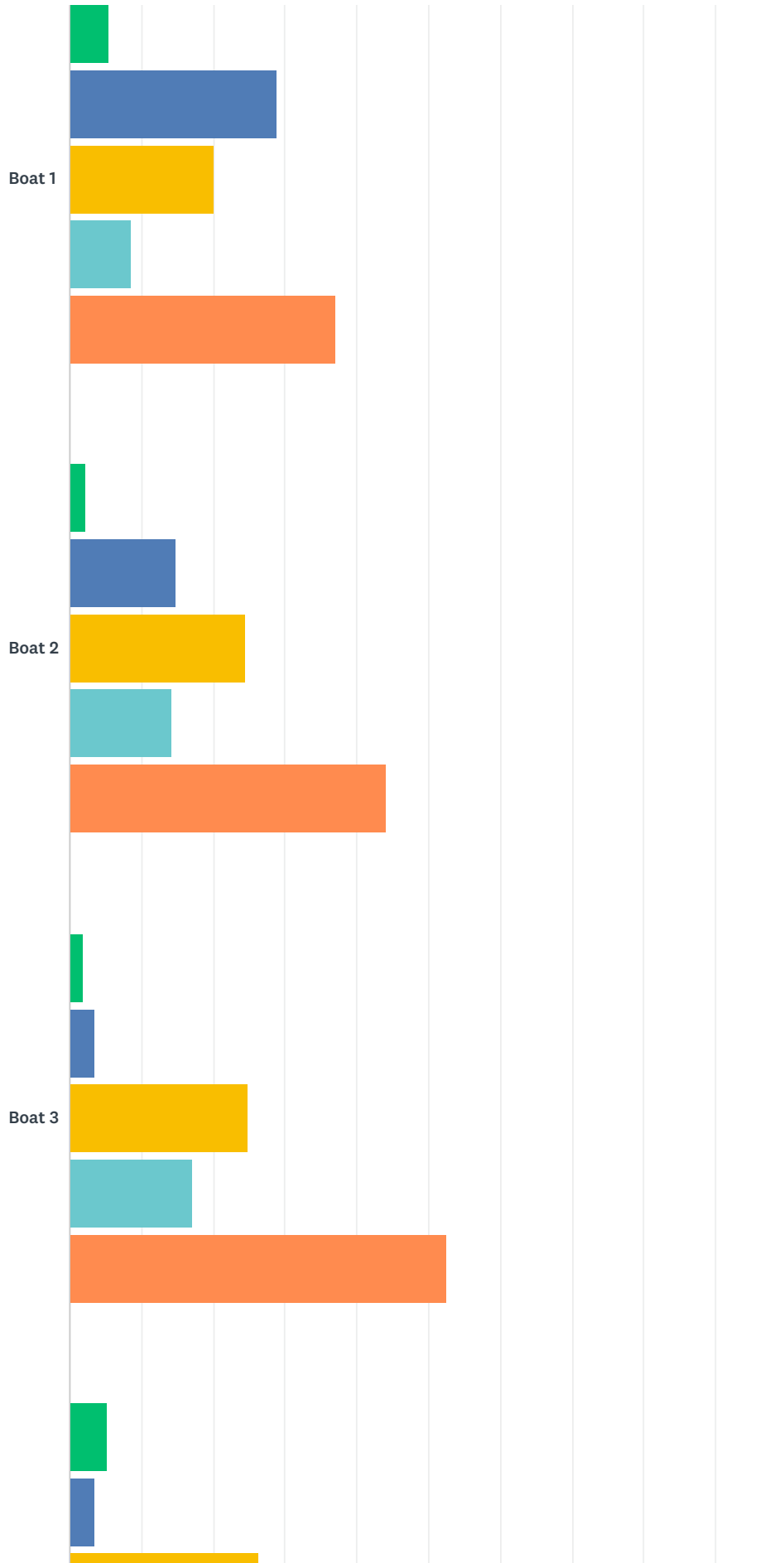


■ < 10' ■ 10'-12' ■ 13'-15' ■ >15'

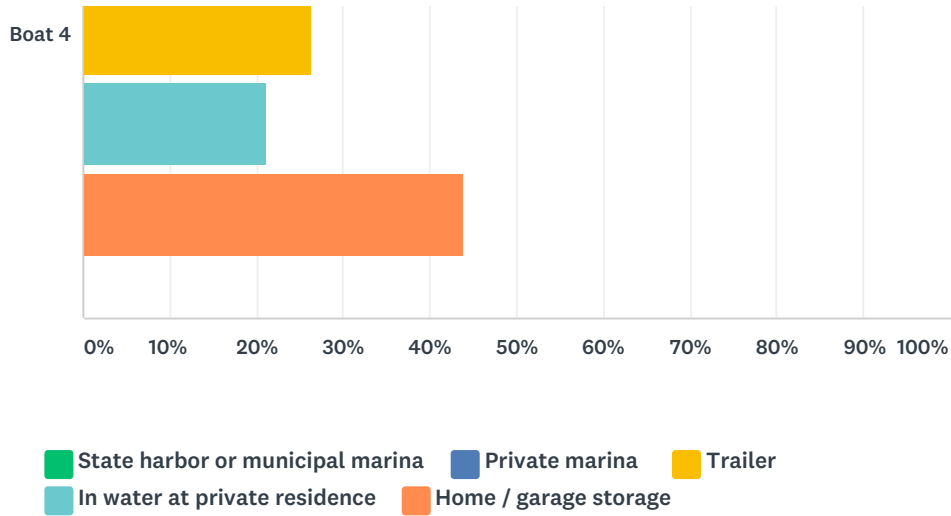
Storage



MSWC Boater Trends Survey



MSWC Boater Trends Survey



■ State harbor or municipal marina
 ■ Private marina
 ■ Trailer
■ In water at private residence
 ■ Home / garage storage

Boat Type			
	SAILBOAT	POWERBOAT	TOTAL
Boat 1	10.62% 360	89.38% 3,031	3,391
Boat 2	7.26% 85	92.74% 1,086	1,171
Boat 3	12.82% 40	87.18% 272	312
Boat 4	26.19% 22	73.81% 62	84

Length												
	< 8'	8' - 10'	11' - 15'	16' - 25'	26' - 29'	30' - 34'	35' - 39'	40' - 44'	45'-49'	50'-60'	>60'	TOTAL
Boat 1	0.24% 8	0.56% 19	8.34% 284	52.35% 1,782	9.61% 327	9.46% 322	8.87% 302	5.32% 181	3.06% 104	1.79% 61	0.41% 14	3,404
Boat 2	2.66% 31	6.62% 77	31.19% 363	49.31% 574	4.55% 53	2.49% 29	1.55% 18	1.12% 13	0.17% 2	0.26% 3	0.09% 1	1,164
Boat 3	4.55% 14	16.56% 51	34.42% 106	37.34% 115	3.90% 12	0.32% 1	1.30% 4	0.65% 2	0.65% 2	0.00% 0	0.32% 1	308
Boat 4	6.02% 5	10.84% 9	44.58% 37	33.73% 28	1.20% 1	1.20% 1	1.20% 1	1.20% 1	0.00% 0	0.00% 0	0.00% 0	83

Draft				
	< 5'	5'-8'	>8'	TOTAL
Boat 1	82.05% 2,158	16.58% 436	1.37% 36	2,630
Boat 2	94.59% 839	4.74% 42	0.68% 6	887
Boat 3	93.56% 218	4.29% 10	2.15% 5	233
Boat 4	93.44% 57	6.56% 4	0.00% 0	61

Beam					
	< 10'	10'-12'	13'-15'	>15'	TOTAL
Boat 1	63.40% 1,547	18.81% 459	13.61% 332	4.18% 102	2,440

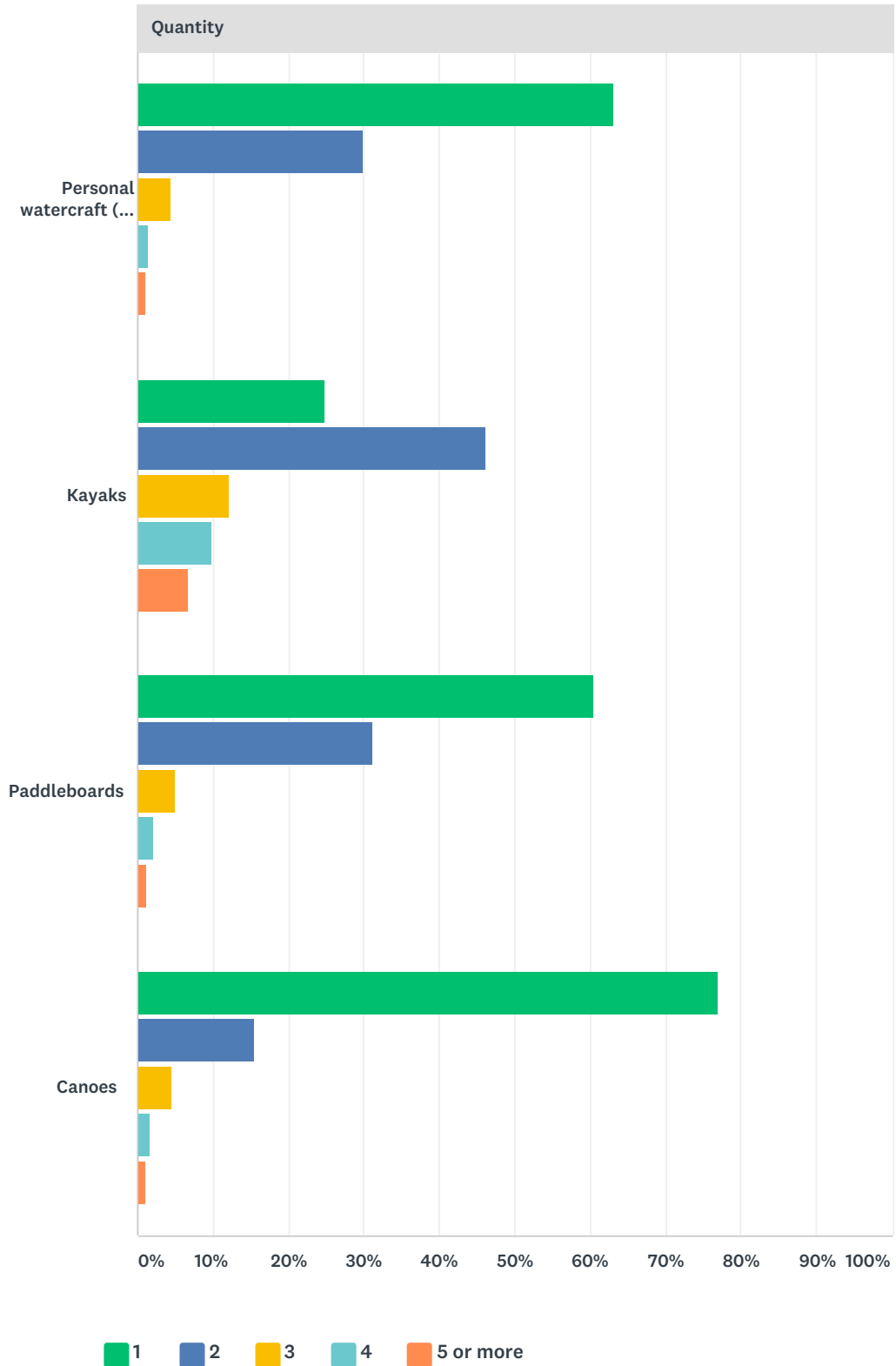
MSWC Boater Trends Survey

Boat 2	88.23% 727	8.37% 69	2.43% 20	0.97% 8	824
Boat 3	95.81% 206	1.86% 4	2.33% 5	0.00% 0	215
Boat 4	89.29% 50	5.36% 3	1.79% 1	3.57% 2	56

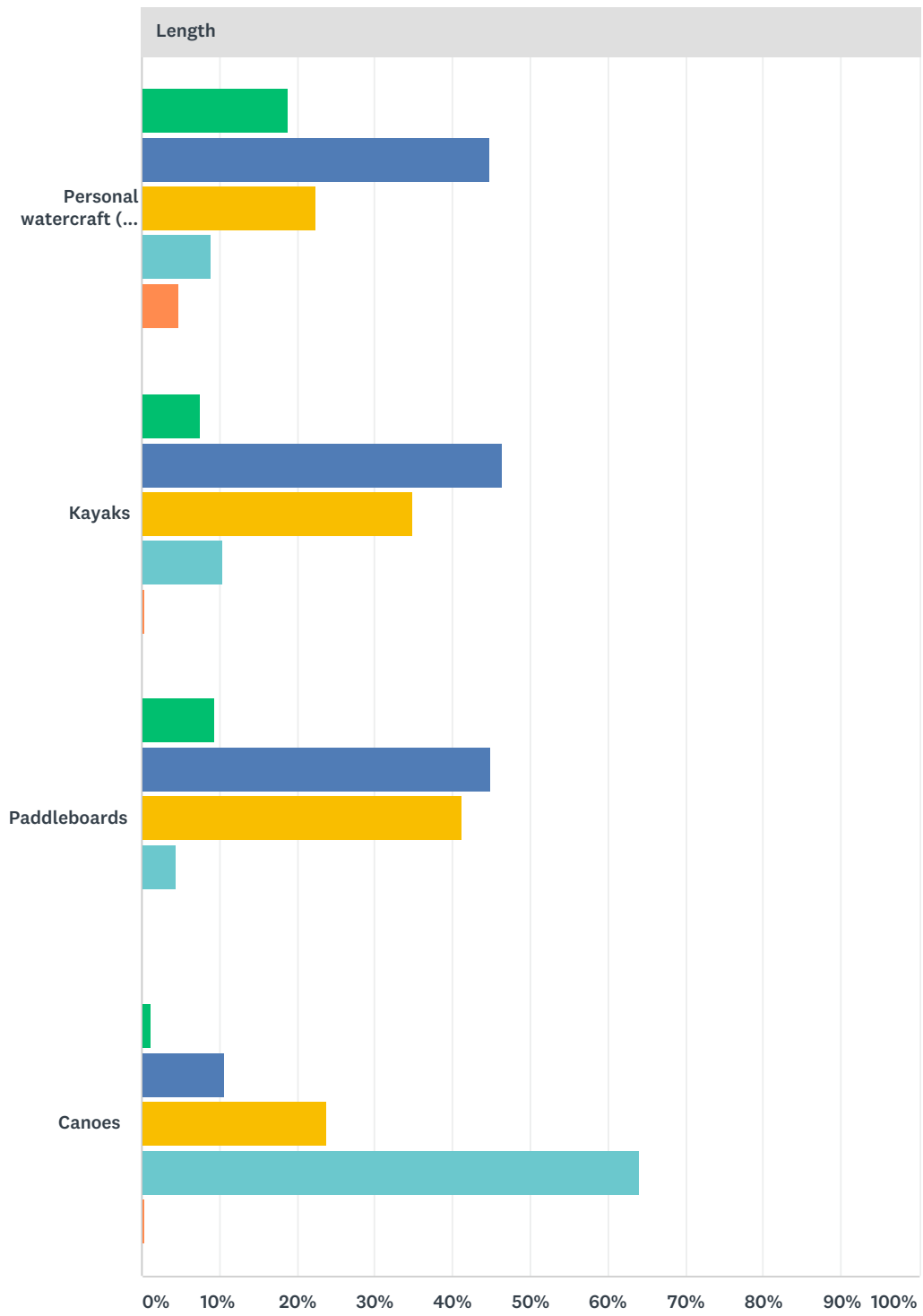
Storage							
	STATE HARBOR OR MUNICIPAL MARINA	PRIVATE MARINA	TRAILER	IN WATER AT PRIVATE RESIDENCE	HOME / GARAGE STORAGE	TOTAL	
Boat 1	5.43% 134	28.78% 710	20.19% 498	8.63% 213	36.97% 912	2,467	
Boat 2	2.24% 19	14.88% 126	24.44% 207	14.29% 121	44.16% 374	847	
Boat 3	1.81% 4	3.62% 8	24.89% 55	17.19% 38	52.49% 116	221	
Boat 4	5.26% 3	3.51% 2	26.32% 15	21.05% 12	43.86% 25	57	

Q3 Please provide information of any personal watercraft or paddlecraft you own. Please skip question if you do not own any.

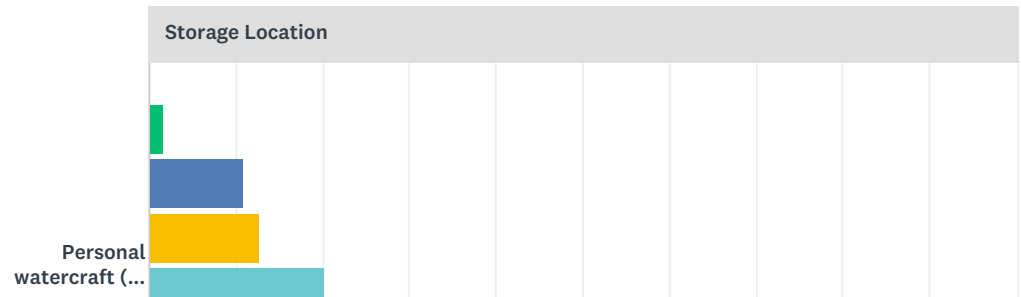
Answered: 1,915 Skipped: 1,828



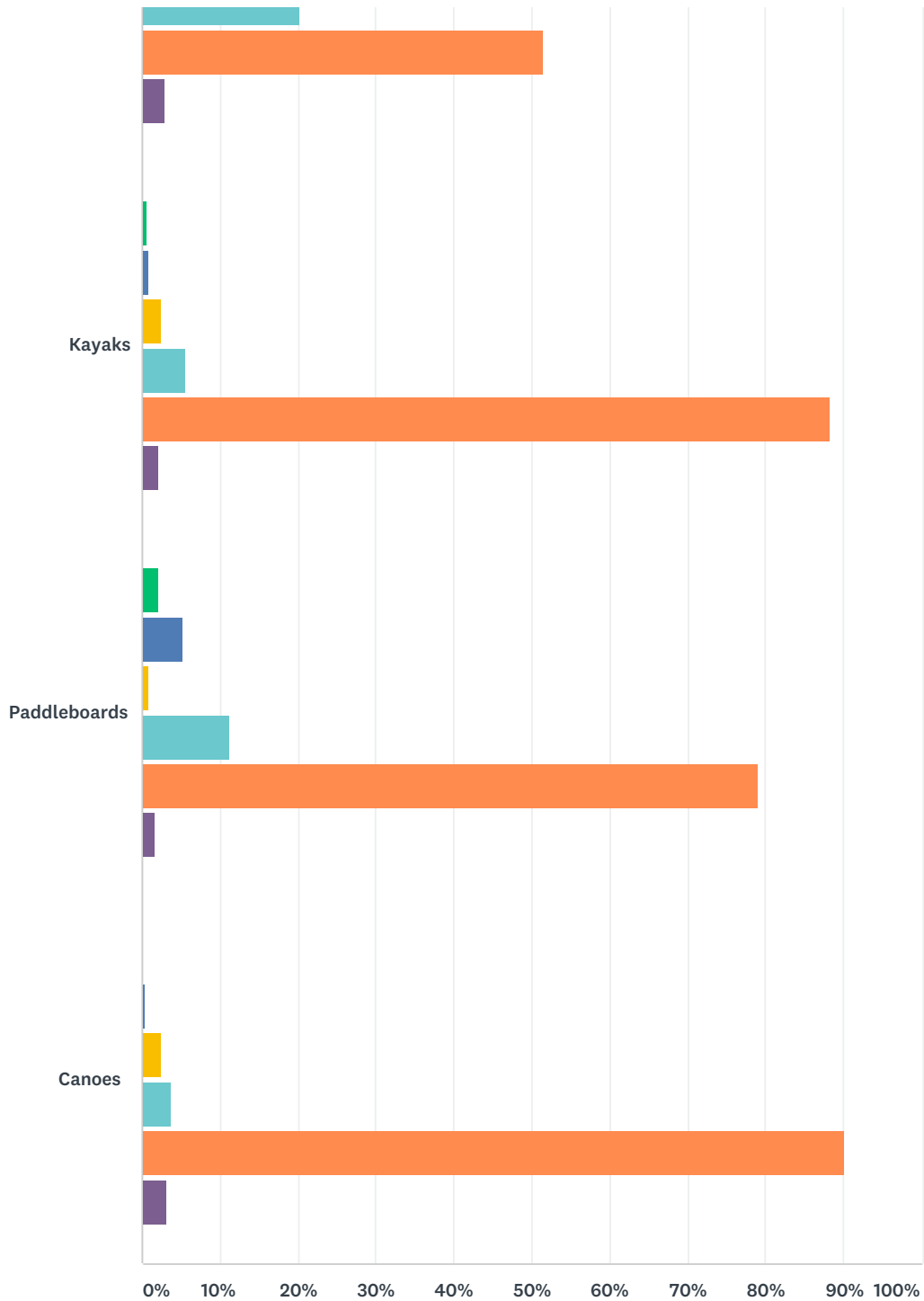
MSWC Boater Trends Survey



■ Less than 8'
 ■ 8'-10'
 ■ 11'-13'
 ■ 14'-20'
 ■ More than 20'



MSWC Boater Trends Survey



■ State harbors and municipal marinas
 ■ Private marina
 ■ Trailer
■ In water at private residence
 ■ Home / garage storage
 ■ Multiple locations

Quantity	1	2	3	4	5 OR MORE	TOTAL
Personal watercraft (PWC - such as jet skis)	63.17% 259	30.00% 123	4.39% 18	1.46% 6	0.98% 4	410
Kayaks	25.00% 330	46.29% 611	12.12% 160	9.92% 131	6.67% 88	1,320

MSWC Boater Trends Survey

Paddleboards	60.47%	31.27%	5.01%	2.06%	1.18%	339
	205	106	17	7	4	
Canoes	76.94%	15.56%	4.67%	1.70%	1.13%	707
	544	110	33	12	8	

Length						
	LESS THAN 8'	8'-10'	11'-13'	14'-20'	MORE THAN 20'	TOTAL
Personal watercraft (PWC - such as jet skis)	18.92%	44.86%	22.43%	8.92%	4.86%	370
	70	166	83	33	18	
Kayaks	7.61%	46.51%	34.95%	10.46%	0.46%	1,090
	83	507	381	114	5	
Paddleboards	9.42%	44.93%	41.30%	4.35%	0.00%	276
	26	124	114	12	0	
Canoes	1.19%	10.58%	23.89%	63.99%	0.34%	586
	7	62	140	375	2	

Storage Location							
	STATE HARBORS AND MUNICIPAL MARINAS	PRIVATE MARINA	TRAILER	IN WATER AT PRIVATE RESIDENCE	HOME / GARAGE STORAGE	MULTIPLE LOCATIONS	TOTAL
Personal watercraft (PWC - such as jet skis)	1.73%	10.98%	12.72%	20.23%	51.45%	2.89%	346
	6	38	44	70	178	10	
Kayaks	0.61%	0.91%	2.42%	5.75%	88.19%	2.12%	991
	6	9	24	57	874	21	
Paddleboards	2.02%	5.24%	0.81%	11.29%	79.03%	1.61%	248
	5	13	2	28	196	4	
Canoes	0.00%	0.38%	2.46%	3.78%	90.17%	3.21%	529
	0	2	13	20	477	17	

#	OTHER (PLEASE SPECIFY)	DATE
1	Row boat 12 foot stored at the house	10/8/2019 4:49 AM
2	Dinghy	10/7/2019 11:11 PM
3	rowboat	10/7/2019 3:51 PM
4	2 inflatable rowboats (multiple person)	10/7/2019 1:12 PM
5	Sailboats (2)	10/7/2019 12:07 PM
6	None above	10/7/2019 9:12 AM
7	Paddle boat	10/7/2019 8:21 AM
8	Dinghy	10/6/2019 11:13 PM
9	Inflatable	10/6/2019 8:16 PM
10	Paddle boat	10/5/2019 10:27 PM
11	row boat	10/5/2019 6:20 PM
12	1) Paddle Boat & 1) Row Boat	10/5/2019 5:40 PM
13	Runabout	10/5/2019 5:15 PM
14	2 dinghy	10/5/2019 3:58 PM
15	Dinghy	10/5/2019 2:34 PM
16	Dinghy	10/5/2019 11:24 AM
17	8	10/5/2019 11:17 AM

MSWC Boater Trends Survey

18	Dinghy, 11.3 ft., inflatable with steering console, 30 hp motor	10/5/2019 11:13 AM
19	23'-9" Pontoon x 8'-6" beam	10/5/2019 10:17 AM
20	Dinghy	10/5/2019 9:57 AM
21	dinghy	10/5/2019 9:55 AM
22	RIB Dinghy	10/5/2019 9:51 AM
23	Paddleboat	10/5/2019 8:28 AM
24	inflatable	10/4/2019 8:39 PM
25	rowboat	10/4/2019 6:48 PM
26	Fishing boat	10/4/2019 6:23 PM
27	3 ice boats	10/4/2019 6:16 PM
28	Home built wooden flat bottom boat (downsized version of a great lakes freighter), Length 18 feet, Width 49 inches, Draft aprox: 6 inches, stored in garage and should be completed by late 2020.	10/4/2019 5:08 PM
29	Jon boat less than 10 feet	10/4/2019 5:00 PM
30	Dinghy	10/4/2019 4:02 PM
31	inflatable dinghy	10/4/2019 3:35 PM
32	paddleboat	10/4/2019 3:22 PM
33	Dinghy	10/4/2019 2:51 PM
34	Home made	10/4/2019 2:26 PM
35	Drift boat	10/4/2019 2:20 PM
36	poontoon	10/4/2019 2:17 PM
37	dinghy	10/4/2019 1:45 PM
38	Dinghy	10/4/2019 1:43 PM
39	Inflatable dinghy	10/4/2019 1:03 PM
40	Inflatable Pontoon Fishing Boat	10/4/2019 11:59 AM
41	Paddle boat	10/4/2019 11:52 AM
42	dighny	10/4/2019 11:46 AM
43	Row boat 12ft small motor	10/4/2019 11:35 AM
44	dinghy rib	10/4/2019 11:34 AM
45	Dinghy	10/4/2019 11:23 AM
46	dinghy	10/4/2019 11:17 AM
47	Dinghy	10/4/2019 11:03 AM
48	paddle boat	10/4/2019 10:38 AM
49	2 boats, one flat bottom one deep v	10/4/2019 10:31 AM
50	Paddle Pontoon 12' in water at private residence	10/4/2019 10:31 AM
51	Paddle boat	10/4/2019 10:30 AM
52	Row Boat	10/4/2019 10:28 AM
53	Dinghy	10/4/2019 10:27 AM
54	12 ft fishing inflatable	10/4/2019 10:26 AM
55	8' bass boat	10/4/2019 10:21 AM
56	2, 14 foot rox boats.	10/4/2019 10:21 AM
57	11 Foot dinghy (rib)	10/4/2019 10:21 AM

MSWC Boater Trends Survey

58	8+ rowing shell	10/4/2019 10:21 AM
59	Pontoon	10/4/2019 10:12 AM
60	peddleboat	10/3/2019 7:17 PM
61	Paddle boat	10/3/2019 2:44 PM
62	Paddleboat	10/3/2019 2:28 PM
63	Sneak boat, 16 ft, home storage	10/3/2019 5:38 AM
64	Inflatable dinghy	10/2/2019 10:24 PM
65	4 person Paddle boat	10/2/2019 2:14 PM
66	Paddle Boat	10/2/2019 11:35 AM
67	jon boat 12 ft	10/2/2019 10:11 AM
68	John boat (fishing boat/dinghy)	10/2/2019 10:09 AM
69	Inflatable	10/2/2019 7:50 AM
70	Stump Jumper made in Wilsonville tenn	10/2/2019 7:42 AM
71	Inflatable	10/2/2019 12:13 AM
72	Paddle boat	10/1/2019 11:03 PM
73	Pontoon Boat (applies to Q. 2)	10/1/2019 7:08 PM
74	inflatables dingys	10/1/2019 11:13 AM
75	center console, 21ft, home	10/1/2019 8:07 AM
76	Paddleboat - 5 person	10/1/2019 8:06 AM
77	11 foot flatbottom	9/30/2019 10:30 PM
78	Paddle boat	9/30/2019 8:36 PM
79	Row boat/sailing dinghy	9/30/2019 5:12 PM
80	paddleboat	9/30/2019 4:56 PM
81	Paddle boat <6' stored at home	9/30/2019 4:06 PM
82	paddleboat	9/30/2019 4:04 PM
83	Inflatable	9/30/2019 3:32 PM
84	rowboat, paddleboat	9/30/2019 3:02 PM
85	Windsurfing boards and sails (6), stored at home	9/30/2019 2:52 PM
86	Paddle Boat	9/30/2019 1:03 PM
87	Paddle Boats (x2)	9/30/2019 9:00 AM
88	Power boat	9/30/2019 8:05 AM
89	paddleboat	9/30/2019 12:51 AM
90	Rowing shell	9/29/2019 10:43 AM
91	Inflatable	9/29/2019 8:51 AM
92	Row boat	9/29/2019 7:34 AM
93	Boat (2) is pontoon	9/28/2019 11:14 PM
94	O	9/28/2019 3:46 PM
95	electric deck boat - 13 feet long - stored at our home	9/28/2019 2:29 PM
96	Inflatable Dingy	9/28/2019 12:57 PM
97	fishing float tube	9/28/2019 12:41 PM
98	O	9/28/2019 12:34 PM

MSWC Boater Trends Survey

99	2 special dick hunting boats	9/28/2019 11:49 AM
100	Dinghy for sailboat	9/28/2019 10:30 AM
101	Dinghy boat with 6hp outboard	9/28/2019 9:00 AM
102	11' Inflatable	9/27/2019 8:57 PM
103	paddle boat and a kayak	9/27/2019 8:52 PM
104	Dingy	9/27/2019 5:27 PM
105	Drift boat	9/27/2019 5:20 PM
106	Row boat 12' trolling motor	9/27/2019 3:36 PM
107	rowboat	9/27/2019 3:29 PM
108	Paddle boat	9/27/2019 3:02 PM
109	Paddle boat	9/27/2019 2:27 PM
110	row boat, at home	9/27/2019 1:14 PM
111	Paddle boat	9/27/2019 12:59 PM
112	Inflatable kayak	9/27/2019 12:50 PM
113	Paddle boat	9/27/2019 12:32 PM
114	raft	9/27/2019 10:40 AM
115	Zodiac	9/27/2019 10:16 AM
116	Inflatable pontoon	9/27/2019 9:42 AM
117	Inflatable dinghy	9/27/2019 9:40 AM
118	Inflatable Dinghy	9/27/2019 9:21 AM
119	Pontoon	9/27/2019 8:53 AM
120	8.5 to 16 ft kayaks	9/27/2019 8:22 AM
121	21' center console, inflatable dinghy	9/27/2019 8:08 AM
122	Inflatable and folding boats	9/27/2019 8:06 AM
123	Personal inflatable pontoon boat	9/27/2019 7:41 AM
124	Dingy	9/27/2019 6:16 AM
125	Inflatable with motor	9/26/2019 10:36 PM
126	None	9/26/2019 9:56 PM
127	personal pontoon	9/26/2019 9:36 PM
128	16' lund	9/26/2019 9:16 PM
129	Inflatable	9/26/2019 9:09 PM
130	Sail boards	9/26/2019 9:08 PM
131	RIB	9/26/2019 9:01 PM
132	Dinghy	9/26/2019 8:54 PM
133	River boat	9/26/2019 8:50 PM
134	12 foot butterfly one design sailboat	9/26/2019 8:47 PM
135	Zodiac	9/26/2019 8:39 PM
136	Inflateable	9/26/2019 8:35 PM
137	Paddleboat	9/26/2019 8:34 PM
138	only one 16' kayak and one 10' kayak both stored at home	9/26/2019 8:34 PM
139	Inflatable	9/26/2019 8:28 PM

MSWC Boater Trends Survey

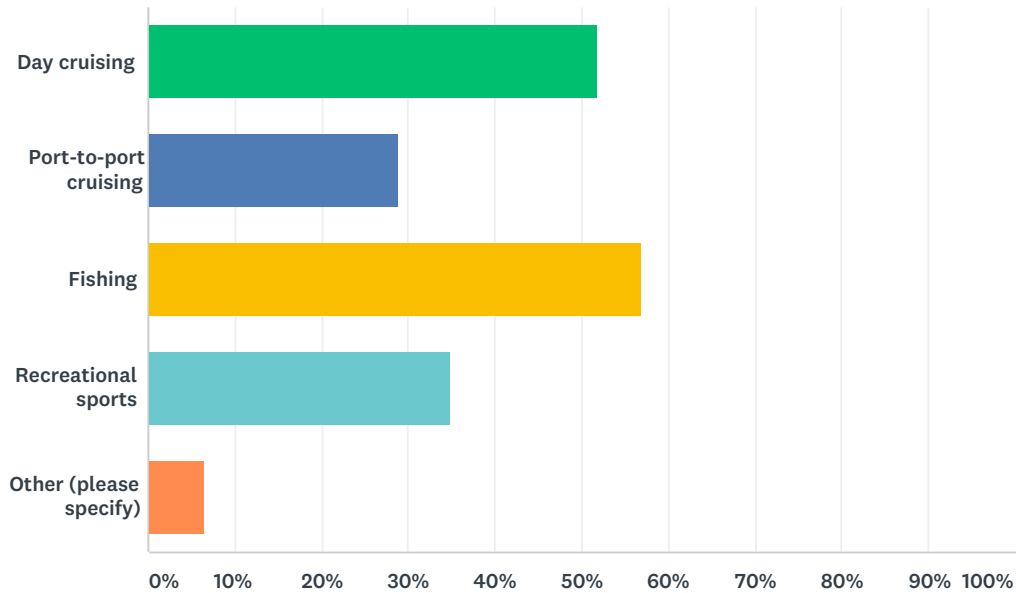
140	Inflatable RIB	9/26/2019 8:14 PM
141	10" Flat bottom boat	9/26/2019 8:00 PM
142	Paddle boat	9/26/2019 7:59 PM
143	Fishing boat	9/26/2019 7:52 PM
144	Bass boat 18' in water at private residence	9/26/2019 7:37 PM
145	Peddle boat	9/26/2019 7:33 PM
146	Dinghy	9/26/2019 7:18 PM
147	Dinghy	9/26/2019 7:12 PM
148	Pontoon	9/26/2019 7:06 PM
149	Dinghies, row, sail, small motor	9/26/2019 7:02 PM
150	Paddle boat	9/26/2019 7:00 PM
151	Fly fishing raft	9/26/2019 6:44 PM
152	Inflatable dinghy with outboard	9/26/2019 6:31 PM
153	Dinghy	9/26/2019 6:10 PM
154	row boat 12 foot	9/26/2019 6:08 PM
155	Dinghy	9/26/2019 5:58 PM
156	None of above	9/26/2019 5:53 PM
157	Fishing boat	9/26/2019 5:33 PM
158	Dinghy with outboard motor	9/26/2019 5:25 PM
159	Dinghy	9/26/2019 5:24 PM
160	None	9/26/2019 5:24 PM
161	Dinghy	9/26/2019 5:20 PM
162	Pontoon	9/26/2019 5:18 PM
163	Fishing Boat = 16ft	9/26/2019 5:03 PM
164	Inflatable fishing boat	9/26/2019 4:55 PM
165	Other kayak is smaller one person	9/26/2019 4:40 PM
166	Paddle boating	9/26/2019 4:37 PM
167	Paddleboat	9/26/2019 4:23 PM
168	Inflatable	9/26/2019 4:19 PM
169	dinghies	9/26/2019 4:18 PM
170	Paddle boat, bicycle style	9/26/2019 4:17 PM
171	dinghy	9/26/2019 4:15 PM
172	Inflatable pontoon	9/26/2019 4:06 PM
173	Inflatable	9/26/2019 4:05 PM
174	15 ft sailboat on trailer	9/26/2019 4:00 PM
175	Inflatable boat and motor	9/26/2019 3:59 PM
176	8	9/26/2019 3:58 PM
177	Row boat	9/26/2019 3:56 PM
178	paddle boat	9/26/2019 3:54 PM
179	2 inflatable tenders	9/26/2019 3:53 PM
180	Sailboat	9/26/2019 3:50 PM

MSWC Boater Trends Survey

181	dinghy	9/26/2019 3:47 PM
182	inflatable dinghy 10' with outboard	9/26/2019 3:45 PM
183	inner tube	9/26/2019 3:40 PM
184	none	9/26/2019 3:37 PM
185	Inflatable dinghy	9/26/2019 3:37 PM
186	Row boat	9/26/2019 3:35 PM
187	Dinghy	9/26/2019 3:34 PM
188	Rigid Bottom Inflatable Dinghy	9/26/2019 3:30 PM
189	Pontoon	9/26/2019 3:29 PM
190	catamaran	9/26/2019 3:29 PM
191	12 foot flat bottom and 20ft pontoon	9/26/2019 3:28 PM
192	dingy	9/26/2019 3:25 PM
193	Row boat	9/26/2019 3:24 PM
194	10' Inflatable RIB tender for Powerboat	9/26/2019 2:36 PM
195	Zodiac Dingy	9/26/2019 12:04 PM
196	Row boats	9/26/2019 11:15 AM
197	Fishing boat	9/26/2019 10:56 AM

Q4 What are your primary reasons for boating?

Answered: 3,712 Skipped: 31



ANSWER CHOICES	RESPONSES
Day cruising	51.91% 1,927
Port-to-port cruising	28.77% 1,068
Fishing	56.87% 2,111
Recreational sports	34.83% 1,293
Other (please specify)	6.49% 241
Total Respondents: 3,712	

#	OTHER (PLEASE SPECIFY)	DATE
1	Look for Aquatic Invasive Species (AIS)	10/9/2019 10:28 AM
2	touring	10/8/2019 12:27 PM
3	weekend cruising	10/8/2019 8:14 AM
4	Hunting	10/7/2019 10:05 PM
5	Waterfowl hunting	10/7/2019 3:43 PM
6	racing	10/7/2019 2:44 PM
7	Relaxation	10/7/2019 11:11 AM
8	Hunting	10/7/2019 10:21 AM
9	Commute	10/7/2019 8:41 AM
10	Cruising	10/7/2019 1:07 AM
11	Enjoying natural surroundings	10/6/2019 11:54 PM
12	Travel	10/6/2019 11:13 PM
13	Anchor in bays	10/6/2019 10:31 AM

MSWC Boater Trends Survey

14	Day and overnight paddle trips	10/6/2019 9:11 AM
15	Wilderness canoe trips	10/6/2019 8:05 AM
16	Home Hammond Marina.	10/6/2019 7:56 AM
17	Sightseeing	10/6/2019 6:38 AM
18	Touring/camping	10/6/2019 5:12 AM
19	I do not boat and I stay at the campgrounds, but do not use any marine stuff.	10/5/2019 10:11 PM
20	Relaxing and enjoying new locations	10/5/2019 9:38 PM
21	Hunting	10/5/2019 8:16 PM
22	Relaxation!	10/5/2019 1:29 PM
23	Looping live aboard	10/5/2019 11:24 AM
24	Destination cruising	10/5/2019 10:31 AM
25	Hunting	10/5/2019 8:39 AM
26	Taking Pictures	10/5/2019 8:16 AM
27	Sailboat racing	10/4/2019 10:38 PM
28	Disabled/Exercise	10/4/2019 6:48 PM
29	3 months in North Channel, Canada	10/4/2019 6:36 PM
30	Racing	10/4/2019 6:16 PM
31	To cruise from Burt Lake into Lake Huron, under the bridge and across to the U.P...	10/4/2019 5:08 PM
32	relaxing and site seeing	10/4/2019 4:15 PM
33	Member of USCG Aux. Also member of GLS Boat Club	10/4/2019 2:20 PM
34	Summer dockage slips	10/4/2019 1:46 PM
35	Do the Great Loop	10/4/2019 1:43 PM
36	We live on our boat in the summer.	10/4/2019 1:43 PM
37	"summer home" that can move (sail) whenever	10/4/2019 1:21 PM
38	Scuba Diving	10/4/2019 12:28 PM
39	Fun	10/4/2019 12:23 PM
40	Camping	10/4/2019 12:22 PM
41	Duck Hunting	10/4/2019 12:21 PM
42	Camping	10/4/2019 11:59 AM
43	hunting	10/4/2019 11:32 AM
44	waterfowl hunting	10/4/2019 11:10 AM
45	Duck hunting	10/4/2019 11:09 AM
46	Teach	10/4/2019 10:49 AM
47	Local cruising, overnight anchorage's	10/4/2019 10:44 AM
48	Overnight	10/4/2019 10:41 AM
49	Nature/outdoor/birding experience	10/4/2019 10:33 AM
50	Whitewater	10/4/2019 10:33 AM
51	Hunting	10/4/2019 10:32 AM
52	Vacations and travel	10/4/2019 10:31 AM
53	Just heading for a day on the sand bar	10/4/2019 10:29 AM
54	Visit places	10/4/2019 10:29 AM

MSWC Boater Trends Survey

55	cruising and staying at anchorages	10/4/2019 10:27 AM
56	hunting	10/4/2019 10:27 AM
57	Anchoring out for 1 to 3 days at a time between marina stays.	10/4/2019 10:21 AM
58	Racing	10/4/2019 10:19 AM
59	Live aboard during the summer months and travel to other marina's	10/4/2019 10:18 AM
60	Boat club rendezvous	10/3/2019 7:32 AM
61	Boat club rendezvous	10/3/2019 7:29 AM
62	Hunting	10/3/2019 5:38 AM
63	Hunting	10/3/2019 1:13 AM
64	Remote Wilderness Cruising	10/2/2019 10:24 PM
65	Scuba diving	10/2/2019 10:22 PM
66	Antique boat shows	10/2/2019 7:50 PM
67	hunting	10/2/2019 4:16 PM
68	Leisure on private lake	10/2/2019 11:46 AM
69	Pleasure	10/2/2019 11:20 AM
70	Relaxing on Michigan's rivers	10/2/2019 11:01 AM
71	Hang in marina	10/2/2019 10:14 AM
72	Travel on Much rivers	10/2/2019 7:42 AM
73	Duck/goose hunting	10/2/2019 7:19 AM
74	Duck hunting	10/1/2019 7:32 PM
75	Duck hunting	10/1/2019 6:46 PM
76	Fun with friends	10/1/2019 2:00 PM
77	Paddle camping down a river	10/1/2019 11:56 AM
78	Live aboard	10/1/2019 7:36 AM
79	hunting	10/1/2019 7:25 AM
80	Scuba diving charters	10/1/2019 7:14 AM
81	hunting, trapping	9/30/2019 9:25 PM
82	Enjoying the water	9/30/2019 8:22 PM
83	Waterfowl hunting	9/30/2019 6:46 PM
84	Being on the water w/ family	9/30/2019 6:12 PM
85	exploring, exercise, photography	9/30/2019 5:47 PM
86	Boat camping -- in the marina or anchored in a bay	9/30/2019 4:52 PM
87	boom deployment	9/30/2019 4:35 PM
88	Charter fishing boat	9/30/2019 4:00 PM
89	Birding	9/30/2019 3:53 PM
90	Sun bathing and socializing	9/30/2019 3:52 PM
91	waterfowl hunting	9/30/2019 3:49 PM
92	B	9/30/2019 3:32 PM
93	we have a cottage and we are on the water alot	9/30/2019 3:29 PM
94	"Bamping" or Boat Camping	9/30/2019 3:08 PM
95	Government work	9/30/2019 3:07 PM

MSWC Boater Trends Survey

96	waterski, tube, pleasure ride	9/30/2019 3:02 PM
97	Exercise and fishing	9/30/2019 2:57 PM
98	Duck hunting	9/30/2019 2:47 PM
99	Aquatic plant surveys and water quality sampling	9/30/2019 2:47 PM
100	smuggling	9/30/2019 2:46 PM
101	Paddling and camping	9/30/2019 10:12 AM
102	Hunting	9/29/2019 8:51 PM
103	Stay on our boat most weekends	9/29/2019 8:14 PM
104	Day and weekend stays	9/29/2019 5:55 PM
105	exercise	9/29/2019 2:22 PM
106	Whitewater kayaking	9/29/2019 7:24 AM
107	Paddle in camping from kayaks	9/29/2019 6:43 AM
108	racing, exercise	9/28/2019 10:06 PM
109	diving	9/28/2019 9:08 PM
110	Enjoying nature	9/28/2019 8:41 PM
111	relaxation and exploration	9/28/2019 2:29 PM
112	Hunting	9/28/2019 11:49 AM
113	sailboat racing	9/28/2019 8:29 AM
114	Hunting	9/28/2019 8:11 AM
115	hunting	9/28/2019 12:07 AM
116	Racing	9/27/2019 8:57 PM
117	Relaxing, kayaking	9/27/2019 8:38 PM
118	Canoe/kayak expedition	9/27/2019 6:49 PM
119	Enjoying being on the water	9/27/2019 5:19 PM
120	Camping	9/27/2019 4:52 PM
121	Fitness	9/27/2019 3:27 PM
122	Racing	9/27/2019 3:08 PM
123	Waterfowling	9/27/2019 1:06 PM
124	Waterfowling	9/27/2019 1:02 PM
125	Waterfowling	9/27/2019 12:53 PM
126	Multi day fishing and camping trips.	9/27/2019 12:19 PM
127	Work	9/27/2019 12:00 PM
128	Upper Great Lakes cruising	9/27/2019 11:43 AM
129	Live aboard traveler	9/27/2019 11:32 AM
130	Water trails	9/27/2019 11:30 AM
131	Scuba diving shipwrecks with the Southwest M.I. Underwater Preserves council members	9/27/2019 11:28 AM
132	hunting	9/27/2019 11:14 AM
133	Kayak tours and uexpeditions	9/27/2019 11:10 AM
134	Fitness	9/27/2019 11:05 AM
135	Kayak camping	9/27/2019 11:05 AM
136	swimming	9/27/2019 10:40 AM

MSWC Boater Trends Survey

137	Camping and exploring	9/27/2019 10:29 AM
138	singlehanded racing	9/27/2019 10:16 AM
139	Photography	9/27/2019 10:13 AM
140	Racing	9/27/2019 9:23 AM
141	Liveaboard cruising	9/27/2019 9:21 AM
142	river and water trail paddling	9/27/2019 9:15 AM
143	duck hunting yee yee	9/27/2019 9:05 AM
144	Research, Outreach, Education	9/27/2019 9:04 AM
145	Racing	9/27/2019 8:50 AM
146	Overnight stay at location	9/27/2019 8:33 AM
147	Kayak camping trips	9/27/2019 8:22 AM
148	boat camping with family	9/27/2019 8:19 AM
149	Long term cruising	9/27/2019 8:07 AM
150	hunting	9/27/2019 8:06 AM
151	Travel	9/27/2019 8:02 AM
152	weekend or longer marina and sailing activities, occasional 1-4 week trips	9/27/2019 8:01 AM
153	transportation	9/27/2019 7:48 AM
154	Tripping	9/27/2019 7:10 AM
155	Duck Hunting	9/27/2019 6:43 AM
156	Duck Hunting	9/27/2019 5:31 AM
157	trips	9/27/2019 2:58 AM
158	Cruise entire Great Lakes June through September	9/27/2019 2:05 AM
159	Love Boating and being on the water	9/27/2019 12:11 AM
160	Love Boating and being on the water	9/27/2019 12:10 AM
161	sightseeing, island access	9/26/2019 11:02 PM
162	racing	9/26/2019 10:37 PM
163	Ability to enjoy the Great Lakes. Love being on the water.	9/26/2019 10:12 PM
164	School	9/26/2019 10:04 PM
165	Use as a weekend cottage	9/26/2019 9:40 PM
166	Home on the water.	9/26/2019 9:40 PM
167	Scenic rides	9/26/2019 9:23 PM
168	Cruising anchor to anchor	9/26/2019 9:08 PM
169	Relaxing with my wife	9/26/2019 9:04 PM
170	Kayaking/getaway	9/26/2019 8:59 PM
171	sand bar anchoring	9/26/2019 8:48 PM
172	Tubing with the visiting relatives. Cruising.	9/26/2019 8:34 PM
173	Waterfowl hunt	9/26/2019 8:32 PM
174	hunting	9/26/2019 8:32 PM
175	Mojitos and beautiful women	9/26/2019 8:26 PM
176	entertaining,	9/26/2019 8:26 PM
177	Enjoying the water	9/26/2019 8:17 PM

MSWC Boater Trends Survey

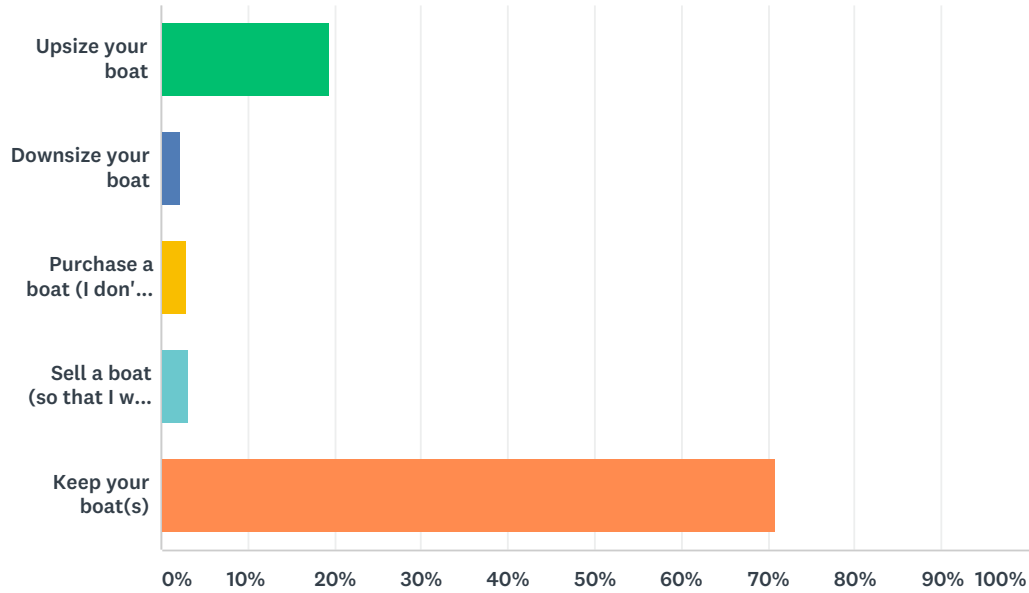
178	Racing	9/26/2019 7:44 PM
179	business (BoatUS)	9/26/2019 7:08 PM
180	Relaxing	9/26/2019 7:06 PM
181	Anchoring in beautiful and usually wilderness bays	9/26/2019 7:02 PM
182	Relaxing and teaching grandkids	9/26/2019 7:00 PM
183	Sailboat racing	9/26/2019 6:31 PM
184	Stress relief	9/26/2019 6:13 PM
185	SCUBA	9/26/2019 6:10 PM
186	Paddling rivers using public launch access	9/26/2019 6:02 PM
187	Hunting	9/26/2019 6:01 PM
188	Law enforcement	9/26/2019 5:56 PM
189	Racing	9/26/2019 5:50 PM
190	Sanity on the water	9/26/2019 5:34 PM
191	Hunting.	9/26/2019 5:31 PM
192	Hunting	9/26/2019 5:28 PM
193	Harbor exploration	9/26/2019 5:23 PM
194	Hunting	9/26/2019 5:16 PM
195	Waterfowl hunting	9/26/2019 5:01 PM
196	Long distance cruising	9/26/2019 4:50 PM
197	fun runs	9/26/2019 4:46 PM
198	multiple day camping trips, hunting islands	9/26/2019 4:45 PM
199	fun runs	9/26/2019 4:42 PM
200	Visiting friends and family	9/26/2019 4:38 PM
201	Parks on the Air	9/26/2019 4:37 PM
202	Whitewater	9/26/2019 4:37 PM
203	Enjoying the outdoors & scenery	9/26/2019 4:23 PM
204	waterfowl hunting	9/26/2019 4:21 PM
205	Job	9/26/2019 4:19 PM
206	Sailing, scuba,	9/26/2019 4:17 PM
207	hunting waterfowl	9/26/2019 4:13 PM
208	Hunting, ducks	9/26/2019 4:06 PM
209	explore, enjoy sights and State of MI	9/26/2019 4:04 PM
210	Boat Club Outing	9/26/2019 4:02 PM
211	Racing	9/26/2019 4:00 PM
212	Hunting	9/26/2019 3:52 PM
213	Summer home	9/26/2019 3:49 PM
214	Over night in State Harbor	9/26/2019 3:46 PM
215	Wilderness cruising/anchoring	9/26/2019 3:42 PM
216	Scuba Diving	9/26/2019 3:41 PM
217	passive outdoor rec / scenic outdoor rec	9/26/2019 3:40 PM
218	Weekend relaxing	9/26/2019 3:38 PM

MSWC Boater Trends Survey

219	Scuba diving	9/26/2019 3:38 PM
220	Poker Runs & Fun Runs	9/26/2019 3:37 PM
221	sitting and watching boats	9/26/2019 3:37 PM
222	Duck Hunting	9/26/2019 3:37 PM
223	Weekend Stays	9/26/2019 3:36 PM
224	Quiet time	9/26/2019 3:35 PM
225	Poker runs	9/26/2019 3:34 PM
226	Hunting water fowel	9/26/2019 3:31 PM
227	Cruising anchorage to anchorage	9/26/2019 3:30 PM
228	Exploring Michigan Lakes and Chains of Lakes	9/26/2019 3:28 PM
229	Racing	9/26/2019 3:28 PM
230	Swimming platform off my pontoon boat	9/26/2019 3:27 PM
231	tubing	9/26/2019 3:26 PM
232	Work	9/26/2019 3:25 PM
233	racing	9/26/2019 3:25 PM
234	relaxation and persoanl enjoyment	9/26/2019 3:24 PM
235	Duck hunting	9/26/2019 3:23 PM
236	Wilderness Cruising	9/26/2019 2:36 PM
237	exploring	9/26/2019 2:33 PM
238	Invasive species surveying.	9/26/2019 12:29 PM
239	river cleanups	9/26/2019 11:08 AM
240	Lighthouse Photography	9/26/2019 11:01 AM
241	Overnight stay in marina	9/26/2019 11:00 AM

Q5 In the next 5 years, do you plan to:

Answered: 3,659 Skipped: 84



ANSWER CHOICES	RESPONSES	
Upsize your boat	19.40%	710
Downsize your boat	2.27%	83
Purchase a boat (I don't have one currently)	2.84%	104
Sell a boat (so that I will not own a boat)	3.20%	117
Keep your boat(s)	70.92%	2,595
TOTAL		3,659

#	OTHER (PLEASE SPECIFY)	DATE
1	Continue to bareboat charter	10/11/2019 11:00 AM
2	Maybe buy another one.	10/8/2019 12:27 PM
3	Buy a pontoon 10 to 12 foot	10/8/2019 4:49 AM
4	just bought it this year	10/7/2019 9:31 PM
5	sell 2 and get bigger boat	10/6/2019 9:06 PM
6	Just bought this one brand new 2 years ago	10/6/2019 7:00 PM
7	Selling current power boats to buy new one	10/6/2019 8:33 AM
8	Selling current power boats to buy new one	10/6/2019 8:28 AM
9	None	10/5/2019 10:11 PM
10	Sell one boat	10/5/2019 8:50 PM
11	Keep row boat, possibly/want to buy larger boat	10/5/2019 6:20 PM
12	possibly sell the canoe	10/5/2019 3:58 PM
13	And keep the one i have	10/5/2019 2:12 PM

MSWC Boater Trends Survey

14	Buy a vintage speed boat	10/5/2019 5:57 AM
15	keep 2 boats	10/5/2019 3:15 AM
16	Keep the one at home and upsize the one at the marina.	10/4/2019 7:39 PM
17	Sell one 36ft sailboat	10/4/2019 6:16 PM
18	easier to get on and off the lakes	10/4/2019 5:56 PM
19	If it turns out to be water worthy I'll keep the boat, if it don't float too well... it will end up in the front yard for planting flowers.	10/4/2019 5:08 PM
20	0	10/4/2019 2:11 PM
21	Increase number of kayaks	10/4/2019 1:09 PM
22	I don't have a boat and I don't plan to purchase one	10/4/2019 11:58 AM
23	Probably sell a couple so we only have 1.	10/4/2019 11:50 AM
24	sell some boats	10/4/2019 11:46 AM
25	34209	10/4/2019 11:23 AM
26	Maybe sell and purchase newer or different model sailboat	10/4/2019 11:06 AM
27	Stay the same	10/4/2019 11:02 AM
28	Keep current boat and also purchase a pontoon.	10/4/2019 10:59 AM
29	Teaching grandchildren about nature preservation and appreciation	10/4/2019 10:49 AM
30	Sell boat	10/4/2019 10:46 AM
31	Trade in existing on a new boat of same size but upgraded equipment and slightly larger motor	10/4/2019 10:44 AM
32	Plan on chartering and doing deliveries for friends	10/4/2019 10:30 AM
33	Currently considering both a trailerable sailboat or keeping or upsizing.	10/4/2019 10:24 AM
34	not sure	10/4/2019 10:20 AM
35	not sure	10/4/2019 10:19 AM
36	Buy mor kayaks	10/4/2019 10:19 AM
37	I do not own a boat and don't plan on purchasing one.	10/4/2019 10:18 AM
38	and Buy a pontoon	10/3/2019 5:44 PM
39	Just sold ours, debating to get another	10/3/2019 9:21 AM
40	Keep what I have and perhaps acquire another.	10/3/2019 5:38 AM
41	buy another larger boat	10/2/2019 4:16 PM
42	We will be purchasing another boat and or 2 personal watercraft within the next 12 months	10/1/2019 12:42 PM
43	Sell 14' and canoe	10/1/2019 11:58 AM
44	Buy a second smaller boat and/or canoe	10/1/2019 8:35 AM
45	Sell 1 of our 2 boats	9/30/2019 4:52 PM
46	none	9/30/2019 4:43 PM
47	purchase more windsurfing boards and sails	9/30/2019 2:52 PM
48	Purchase smaller fishing boat	9/30/2019 2:46 PM
49	Also might buy a single sculling rowing boat.	9/30/2019 10:51 AM
50	Purchase new boat	9/30/2019 10:20 AM
51	Get a different type of kayak	9/30/2019 10:12 AM
52	sell some	9/29/2019 10:43 AM
53	Buy another kayak	9/29/2019 7:24 AM

MSWC Boater Trends Survey

54	plan to purchase a new kayak in next 8 months - maybe 2 more	9/28/2019 2:29 PM
55	consolidate	9/28/2019 12:07 AM
56	Sell one boat	9/27/2019 9:56 PM
57	Build more	9/27/2019 6:49 PM
58	I plan on restoring and selling two of my boats	9/27/2019 3:47 PM
59	I plan on selling two of my boats after I restore them.	9/27/2019 2:54 PM
60	Move from sailboat to power boat	9/27/2019 11:43 AM
61	Add and maintain fleet	9/27/2019 11:10 AM
62	Buy moire	9/27/2019 11:05 AM
63	Sell biggest powerboat, seek smaller one for fishing	9/27/2019 10:13 AM
64	sell one boat and keep one boat	9/27/2019 10:05 AM
65	Purchase additional kayaks as my kids grow older.	9/27/2019 9:15 AM
66	Sell a boat to purchase a boat	9/27/2019 8:52 AM
67	TBD	9/27/2019 8:48 AM
68	Buy a sailboat to keep in Florida Keys for winter months	9/27/2019 8:01 AM
69	and Keep Kayaks	9/27/2019 7:54 AM
70	Trade for a raft	9/27/2019 7:12 AM
71	waiting for seasonal slip	9/27/2019 7:00 AM
72	Going to buy canoe/kayak.	9/27/2019 4:06 AM
73	We just downsided this year from a 75 foot.	9/26/2019 10:12 PM
74	Sell 2 keep 1	9/26/2019 10:04 PM
75	Sell a power boat and still own boats	9/26/2019 9:08 PM
76	Build a boat	9/26/2019 8:59 PM
77	keep my boats and possibly buy another one	9/26/2019 8:34 PM
78	Purchase a new boat & sell one	9/26/2019 8:32 PM
79	sell current boat and upgrade	9/26/2019 8:26 PM
80	Always the possibility of either or both upsizing and downsizing.	9/26/2019 8:26 PM
81	continue to rent when needed; may join club for rentals	9/26/2019 8:26 PM
82	buy another one	9/26/2019 8:07 PM
83	Maybe buy one	9/26/2019 6:16 PM
84	I likely will sell my 12' rowboat and ultralight weight canoe and purchase a Radison Canoe with a squared stern for a small electric motor for back wter fishing in MICHIGAN.	9/26/2019 6:10 PM
85	Buy another, smaller boat.	9/26/2019 6:04 PM
86	Probably buy a canoe and/or kayak(s).	9/26/2019 5:31 PM
87	None of the above	9/26/2019 5:29 PM
88	Sell 23' Jet Boat, Purchase Center Console or something similar	9/26/2019 5:07 PM
89	Just upsized this year	9/26/2019 4:50 PM
90	Sell some and keep some	9/26/2019 4:33 PM
91	Add to my fleet	9/26/2019 4:17 PM
92	May sell one	9/26/2019 4:04 PM
93	Buy another kayak	9/26/2019 3:55 PM

MSWC Boater Trends Survey

94	would like a small sail boat, sunfish or similar	9/26/2019 3:48 PM
95	Purchase another powerboat	9/26/2019 3:46 PM
96	I do not own motor boats, only muscle-power	9/26/2019 3:40 PM
97	Sell two buy one	9/26/2019 3:38 PM
98	Upgrade to a newer boat, same size	9/26/2019 3:38 PM
99	Sell big power boat and buy a aluminum 14 ft deep v for a 10 hp outboard	9/26/2019 3:32 PM
100	Purchase another kayak and possible a fishing boat	9/26/2019 3:29 PM
101	Keep my kayaks & paddleboard	9/26/2019 3:29 PM
102	Purchase cruiser boat 55 foot plus	9/26/2019 3:26 PM
103	Sell a smaller one and up size the 37 to a trawler	9/26/2019 3:24 PM
104	Keep chartering	9/26/2019 3:23 PM
105	Buy a newer one but may be same size	9/26/2019 2:19 PM
106	Stay with the same equipment	9/26/2019 12:54 PM
107	Possibly keep or upsize.	9/26/2019 11:32 AM
108	purchase additional kayaks	9/26/2019 11:08 AM
109	Sell the smaller one	9/26/2019 11:01 AM

Q6 Please indicate the zip code of your primary residence:

Answered: 3,662 Skipped: 81

#	RESPONSES	DATE
1	49307	10/16/2019 10:44 PM
2	49344	10/15/2019 1:19 PM
3	48071	10/14/2019 2:33 PM
4	48843	10/14/2019 5:38 AM
5	48706	10/13/2019 7:06 PM
6	49601	10/12/2019 2:15 PM
7	49601	10/12/2019 2:09 PM
8	48111	10/11/2019 11:27 PM
9	49010	10/11/2019 11:45 AM
10	49008	10/11/2019 11:00 AM
11	48629	10/10/2019 10:04 PM
12	46554	10/10/2019 2:59 PM
13	46554	10/10/2019 2:45 PM
14	48656	10/10/2019 2:16 PM
15	49453	10/10/2019 1:45 PM
16	49507	10/10/2019 12:04 PM
17	48350	10/10/2019 7:17 AM
18	49829	10/10/2019 1:10 AM
19	49442	10/9/2019 10:16 PM
20	48842	10/9/2019 8:46 PM
21	48043-2507	10/9/2019 8:14 PM
22	48088	10/9/2019 11:03 AM
23	48178	10/9/2019 10:34 AM
24	49112	10/9/2019 10:28 AM
25	48138	10/9/2019 10:08 AM
26	48367	10/9/2019 8:39 AM
27	48071	10/9/2019 8:27 AM
28	46590	10/9/2019 6:26 AM
29	49307	10/8/2019 11:15 PM
30	29928	10/8/2019 6:40 PM
31	48350	10/8/2019 4:44 PM
32	48081	10/8/2019 4:15 PM
33	49009	10/8/2019 2:22 PM
34	49057	10/8/2019 1:01 PM
35	48189	10/8/2019 12:53 PM

MSWC Boater Trends Survey

36	49686	10/8/2019 12:27 PM
37	48634	10/8/2019 12:02 PM
38	49316	10/8/2019 10:53 AM
39	17329 Lane Ave Spring Lake Mich	10/8/2019 10:51 AM
40	48414	10/8/2019 8:14 AM
41	48442	10/8/2019 8:09 AM
42	49676	10/8/2019 7:49 AM
43	48910	10/8/2019 7:47 AM
44	49508	10/8/2019 7:39 AM
45	48114	10/8/2019 6:50 AM
46	49022	10/8/2019 6:20 AM
47	48817	10/8/2019 4:49 AM
48	45013	10/7/2019 11:32 PM
49	48357	10/7/2019 11:25 PM
50	48433	10/7/2019 11:11 PM
51	33919	10/7/2019 10:24 PM
52	49341	10/7/2019 10:05 PM
53	48238	10/7/2019 10:02 PM
54	48085	10/7/2019 9:34 PM
55	48047	10/7/2019 9:31 PM
56	49010	10/7/2019 8:58 PM
57	49327	10/7/2019 8:25 PM
58	49424	10/7/2019 8:15 PM
59	48051	10/7/2019 8:14 PM
60	48640	10/7/2019 7:50 PM
61	49270	10/7/2019 7:47 PM
62	49418	10/7/2019 7:42 PM
63	48618	10/7/2019 7:32 PM
64	48047	10/7/2019 7:11 PM
65	49420	10/7/2019 5:36 PM
66	48350	10/7/2019 4:58 PM
67	48350	10/7/2019 4:55 PM
68	46555	10/7/2019 4:43 PM
69	49720	10/7/2019 4:23 PM
70	48089	10/7/2019 4:09 PM
71	48823	10/7/2019 3:56 PM
72	49341	10/7/2019 3:51 PM
73	48082	10/7/2019 3:43 PM
74	48122	10/7/2019 3:42 PM
75	48047	10/7/2019 3:16 PM
76	48461	10/7/2019 2:59 PM

MSWC Boater Trends Survey

77	48430	10/7/2019 2:54 PM
78	48854	10/7/2019 2:47 PM
79	48312-3030	10/7/2019 2:44 PM
80	48433	10/7/2019 2:26 PM
81	48138	10/7/2019 1:27 PM
82	48001	10/7/2019 1:17 PM
83	48118	10/7/2019 1:12 PM
84	48047	10/7/2019 1:08 PM
85	48066	10/7/2019 1:07 PM
86	49775	10/7/2019 12:55 PM
87	49315	10/7/2019 12:40 PM
88	48178-7021	10/7/2019 12:07 PM
89	48098	10/7/2019 11:38 AM
90	49026	10/7/2019 11:11 AM
91	47553	10/7/2019 11:01 AM
92	48879	10/7/2019 10:47 AM
93	49858	10/7/2019 10:44 AM
94	49087	10/7/2019 10:27 AM
95	48917	10/7/2019 10:21 AM
96	48855	10/7/2019 10:05 AM
97	49749	10/7/2019 9:46 AM
98	48111	10/7/2019 9:41 AM
99	48111	10/7/2019 9:37 AM
100	487606	10/7/2019 9:37 AM
101	48134	10/7/2019 9:33 AM
102	49402	10/7/2019 9:26 AM
103	48307	10/7/2019 9:13 AM
104	49120	10/7/2019 9:12 AM
105	48038	10/7/2019 9:05 AM
106	46037	10/7/2019 8:56 AM
107	49799	10/7/2019 8:53 AM
108	49676	10/7/2019 8:41 AM
109	48451	10/7/2019 8:33 AM
110	49849	10/7/2019 8:33 AM
111	48044	10/7/2019 8:28 AM
112	48082-1082	10/7/2019 8:23 AM
113	49130	10/7/2019 8:21 AM
114	48813	10/7/2019 8:20 AM
115	48081	10/7/2019 8:10 AM
116	49720	10/7/2019 8:10 AM
117	49328	10/7/2019 8:06 AM

MSWC Boater Trends Survey

118	48864	10/7/2019 7:57 AM
119	49336	10/7/2019 7:55 AM
120	48183	10/7/2019 7:51 AM
121	48005	10/7/2019 7:34 AM
122	49707	10/7/2019 7:33 AM
123	48225	10/7/2019 7:32 AM
124	48150	10/7/2019 7:23 AM
125	48045	10/7/2019 7:20 AM
126	48430	10/7/2019 7:18 AM
127	49868	10/7/2019 7:12 AM
128	49945	10/7/2019 7:09 AM
129	48390	10/7/2019 7:07 AM
130	48850	10/7/2019 7:03 AM
131	48612	10/7/2019 7:02 AM
132	49759	10/7/2019 6:50 AM
133	48097	10/7/2019 6:28 AM
134	49033	10/7/2019 6:06 AM
135	49428	10/7/2019 4:26 AM
136	48843	10/7/2019 1:07 AM
137	48888	10/7/2019 12:30 AM
138	48854	10/6/2019 11:54 PM
139	49721	10/6/2019 11:48 PM
140	48045-1867	10/6/2019 11:13 PM
141	49426	10/6/2019 10:57 PM
142	49017	10/6/2019 10:36 PM
143	48045	10/6/2019 9:15 PM
144	48858	10/6/2019 9:06 PM
145	49068	10/6/2019 8:53 PM
146	55604	10/6/2019 8:35 PM
147	48186	10/6/2019 8:22 PM
148	48462	10/6/2019 8:16 PM
149	48203	10/6/2019 7:00 PM
150	4805	10/6/2019 6:14 PM
151	48152	10/6/2019 5:41 PM
152	49417	10/6/2019 5:30 PM
153	48108	10/6/2019 4:16 PM
154	49727	10/6/2019 3:31 PM
155	48040	10/6/2019 3:29 PM
156	48067	10/6/2019 3:29 PM
157	49756	10/6/2019 3:17 PM
158	48169	10/6/2019 3:00 PM

MSWC Boater Trends Survey

159	48169	10/6/2019 2:58 PM
160	49631	10/6/2019 2:46 PM
161	49265	10/6/2019 2:32 PM
162	49638	10/6/2019 2:00 PM
163	N8N 4Y5	10/6/2019 1:04 PM
164	N8N 4Y5	10/6/2019 1:03 PM
165	49307	10/6/2019 12:56 PM
166	48653	10/6/2019 12:45 PM
167	48138	10/6/2019 12:38 PM
168	49504	10/6/2019 12:26 PM
169	48808	10/6/2019 12:23 PM
170	34145	10/6/2019 12:16 PM
171	49073	10/6/2019 12:06 PM
172	49733	10/6/2019 11:32 AM
173	48023	10/6/2019 11:30 AM
174	48186	10/6/2019 11:29 AM
175	48023	10/6/2019 11:17 AM
176	49801	10/6/2019 11:09 AM
177	48653	10/6/2019 10:58 AM
178	49504	10/6/2019 10:47 AM
179	43537	10/6/2019 10:41 AM
180	NOBIAO	10/6/2019 10:31 AM
181	49417	10/6/2019 10:31 AM
182	49306	10/6/2019 10:27 AM
183	48239	10/6/2019 10:18 AM
184	N7S 4V9	10/6/2019 10:18 AM
185	49420	10/6/2019 10:15 AM
186	34145	10/6/2019 10:01 AM
187	49101	10/6/2019 10:01 AM
188	N0r1a0	10/6/2019 9:56 AM
189	49735	10/6/2019 9:31 AM
190	49829	10/6/2019 9:22 AM
191	49441	10/6/2019 9:22 AM
192	49829	10/6/2019 9:20 AM
193	48840	10/6/2019 9:18 AM
194	48840	10/6/2019 9:11 AM
195	49738	10/6/2019 9:09 AM
196	48103	10/6/2019 9:06 AM
197	48039	10/6/2019 8:54 AM
198	49720	10/6/2019 8:53 AM
199	48823	10/6/2019 8:50 AM

MSWC Boater Trends Survey

200	49034	10/6/2019 8:49 AM
201	48060	10/6/2019 8:49 AM
202	49424	10/6/2019 8:48 AM
203	48842	10/6/2019 8:48 AM
204	49707	10/6/2019 8:47 AM
205	48051	10/6/2019 8:43 AM
206	49651	10/6/2019 8:42 AM
207	48801	10/6/2019 8:33 AM
208	48854	10/6/2019 8:31 AM
209	49601 ⁹	10/6/2019 8:29 AM
210	49437	10/6/2019 8:29 AM
211	48801	10/6/2019 8:28 AM
212	48135	10/6/2019 8:15 AM
213	48519	10/6/2019 8:08 AM
214	49067	10/6/2019 8:07 AM
215	49546	10/6/2019 8:05 AM
216	49024	10/6/2019 8:02 AM
217	48130	10/6/2019 8:00 AM
218	49345	10/6/2019 7:58 AM
219	60430	10/6/2019 7:56 AM
220	48732	10/6/2019 7:49 AM
221	49093	10/6/2019 7:43 AM
222	148054	10/6/2019 7:41 AM
223	49010	10/6/2019 7:39 AM
224	47978	10/6/2019 7:37 AM
225	49660	10/6/2019 7:31 AM
226	48169	10/6/2019 7:31 AM
227	48314	10/6/2019 7:10 AM
228	48009	10/6/2019 7:05 AM
229	48815	10/6/2019 7:02 AM
230	48002	10/6/2019 6:51 AM
231	48703	10/6/2019 6:38 AM
232	49022	10/6/2019 6:32 AM
233	45056	10/6/2019 6:30 AM
234	49684	10/6/2019 6:08 AM
235	48317	10/6/2019 5:29 AM
236	_48178	10/6/2019 5:16 AM
237	48823 2436	10/6/2019 5:12 AM
238	49650	10/6/2019 2:40 AM
239	48309	10/5/2019 11:33 PM
240	47620	10/5/2019 10:37 PM

MSWC Boater Trends Survey

241	48023	10/5/2019 10:27 PM
242	60030	10/5/2019 10:27 PM
243	48725	10/5/2019 10:20 PM
244	49684	10/5/2019 10:14 PM
245	48045	10/5/2019 10:11 PM
246	48177	10/5/2019 10:11 PM
247	49423	10/5/2019 9:54 PM
248	49099	10/5/2019 9:51 PM
249	49099	10/5/2019 9:41 PM
250	49935	10/5/2019 9:38 PM
251	49417	10/5/2019 9:36 PM
252	48047	10/5/2019 9:14 PM
253	48047	10/5/2019 9:12 PM
254	48734	10/5/2019 8:50 PM
255	48840	10/5/2019 8:47 PM
256	49424	10/5/2019 8:40 PM
257	44102	10/5/2019 8:37 PM
258	48854	10/5/2019 8:33 PM
259	48768	10/5/2019 8:16 PM
260	43440	10/5/2019 8:14 PM
261	48624	10/5/2019 7:32 PM
262	49721	10/5/2019 7:16 PM
263	49684	10/5/2019 6:57 PM
264	49423	10/5/2019 6:55 PM
265	48051	10/5/2019 6:48 PM
266	49676	10/5/2019 6:32 PM
267	49233	10/5/2019 6:20 PM
268	49735	10/5/2019 5:59 PM
269	48884	10/5/2019 5:48 PM
270	49234	10/5/2019 5:40 PM
271	33948	10/5/2019 5:15 PM
272	48236	10/5/2019 4:52 PM
273	48306	10/5/2019 4:35 PM
274	48306	10/5/2019 4:35 PM
275	54311	10/5/2019 4:15 PM
276	49777	10/5/2019 3:58 PM
277	49660	10/5/2019 3:46 PM
278	48348	10/5/2019 3:44 PM
279	49461	10/5/2019 3:20 PM
280	49331	10/5/2019 3:18 PM
281	49014	10/5/2019 3:00 PM

MSWC Boater Trends Survey

282	49010	10/5/2019 2:56 PM
283	49652	10/5/2019 2:49 PM
284	46373	10/5/2019 2:34 PM
285	49103	10/5/2019 2:12 PM
286	48423	10/5/2019 2:05 PM
287	53040	10/5/2019 2:04 PM
288	45331	10/5/2019 1:56 PM
289	49022	10/5/2019 1:54 PM
290	49783	10/5/2019 1:29 PM
291	49820 48653	10/5/2019 1:27 PM
292	49125	10/5/2019 1:19 PM
293	N0H2C1	10/5/2019 1:19 PM
294	48306	10/5/2019 1:14 PM
295	48221	10/5/2019 1:03 PM
296	48393	10/5/2019 12:53 PM
297	80002	10/5/2019 12:46 PM
298	48221	10/5/2019 12:23 PM
299	49337	10/5/2019 12:07 PM
300	49038	10/5/2019 12:02 PM
301	46260	10/5/2019 11:54 AM
302	48732	10/5/2019 11:41 AM
303	49931	10/5/2019 11:40 AM
304	48315	10/5/2019 11:23 AM
305	48042	10/5/2019 11:17 AM
306	48324	10/5/2019 11:15 AM
307	49740	10/5/2019 11:13 AM
308	48170	10/5/2019 11:12 AM
309	49644	10/5/2019 11:04 AM
310	48170	10/5/2019 11:00 AM
311	49712	10/5/2019 10:49 AM
312	49310	10/5/2019 10:46 AM
313	49660	10/5/2019 10:40 AM
314	48420	10/5/2019 10:33 AM
315	43452	10/5/2019 10:33 AM
316	85338	10/5/2019 10:32 AM
317	48192	10/5/2019 10:31 AM
318	49931	10/5/2019 10:27 AM
319	46517	10/5/2019 10:21 AM
320	48336	10/5/2019 10:18 AM
321	49112-9566	10/5/2019 10:17 AM
322	49464	10/5/2019 10:17 AM

MSWC Boater Trends Survey

323	54143	10/5/2019 10:14 AM
324	49004	10/5/2019 10:06 AM
325	49103	10/5/2019 10:01 AM
326	49065	10/5/2019 10:00 AM
327	48433	10/5/2019 9:59 AM
328	48895	10/5/2019 9:57 AM
329	48230	10/5/2019 9:55 AM
330	49508	10/5/2019 9:55 AM
331	49417	10/5/2019 9:51 AM
332	33952	10/5/2019 9:50 AM
333	49093	10/5/2019 9:44 AM
334	49707	10/5/2019 9:37 AM
335	48047	10/5/2019 9:33 AM
336	48093	10/5/2019 9:32 AM
337	49682	10/5/2019 9:26 AM
338	49841	10/5/2019 9:25 AM
339	49456	10/5/2019 9:23 AM
340	48088	10/5/2019 9:16 AM
341	49404	10/5/2019 9:11 AM
342	48624	10/5/2019 9:09 AM
343	9038	10/5/2019 9:02 AM
344	48842	10/5/2019 8:48 AM
345	48154	10/5/2019 8:42 AM
346	43021	10/5/2019 8:39 AM
347	49120	10/5/2019 8:39 AM
348	48873	10/5/2019 8:28 AM
349	48063	10/5/2019 8:27 AM
350	48080	10/5/2019 8:16 AM
351	49333	10/5/2019 8:09 AM
352	49546	10/5/2019 8:08 AM
353	48458	10/5/2019 8:01 AM
354	48653	10/5/2019 8:00 AM
355	49201	10/5/2019 7:54 AM
356	60441	10/5/2019 7:51 AM
357	49525	10/5/2019 7:50 AM
358	48381	10/5/2019 7:40 AM
359	54115	10/5/2019 7:37 AM
360	48304	10/5/2019 7:35 AM
361	49461	10/5/2019 7:33 AM
362	48650	10/5/2019 7:23 AM
363	48162	10/5/2019 7:21 AM

MSWC Boater Trends Survey

364	49221	10/5/2019 7:18 AM
365	49316	10/5/2019 7:04 AM
366	49651	10/5/2019 7:01 AM
367	43452	10/5/2019 7:00 AM
368	48843	10/5/2019 6:58 AM
369	48041	10/5/2019 6:39 AM
370	48886	10/5/2019 6:38 AM
371	49855	10/5/2019 6:32 AM
372	49660	10/5/2019 6:24 AM
373	48818j	10/5/2019 6:14 AM
374	60014	10/5/2019 6:00 AM
375	48073	10/5/2019 5:57 AM
376	48706	10/5/2019 5:51 AM
377	48045-1824	10/5/2019 5:33 AM
378	48801	10/5/2019 5:33 AM
379	49854	10/5/2019 5:32 AM
380	48612	10/5/2019 5:24 AM
381	48439	10/5/2019 5:02 AM
382	48152	10/5/2019 4:43 AM
383	49017	10/5/2019 4:34 AM
384	49460	10/5/2019 4:32 AM
385	48060	10/5/2019 3:30 AM
386	48601	10/5/2019 3:15 AM
387	48118	10/5/2019 2:52 AM
388	48021	10/5/2019 2:38 AM
389	60126	10/5/2019 12:19 AM
390	48881	10/5/2019 12:18 AM
391	80526	10/5/2019 12:17 AM
392	48476	10/4/2019 11:57 PM
393	49024	10/4/2019 11:08 PM
394	49087	10/4/2019 11:01 PM
395	48350	10/4/2019 10:47 PM
396	48111	10/4/2019 10:42 PM
397	48081	10/4/2019 10:39 PM
398	48360	10/4/2019 10:38 PM
399	54937	10/4/2019 10:35 PM
400	48026	10/4/2019 10:31 PM
401	48851	10/4/2019 10:31 PM
402	48179	10/4/2019 10:30 PM
403	49913	10/4/2019 10:23 PM
404	48095	10/4/2019 10:21 PM

MSWC Boater Trends Survey

405	48611	10/4/2019 10:16 PM
406	49057	10/4/2019 10:07 PM
407	48661	10/4/2019 9:46 PM
408	46628	10/4/2019 9:40 PM
409	48757	10/4/2019 9:35 PM
410	48134	10/4/2019 9:33 PM
411	60401	10/4/2019 9:30 PM
412	49042	10/4/2019 9:28 PM
413	48843	10/4/2019 9:17 PM
414	48906	10/4/2019 9:16 PM
415	46526	10/4/2019 9:09 PM
416	48624	10/4/2019 9:07 PM
417	48763	10/4/2019 9:05 PM
418	49448	10/4/2019 9:04 PM
419	49341	10/4/2019 8:54 PM
420	48629	10/4/2019 8:53 PM
421	N7S 2Y3	10/4/2019 8:47 PM
422	48703	10/4/2019 8:41 PM
423	48085	10/4/2019 8:40 PM
424	44867	10/4/2019 8:39 PM
425	49660	10/4/2019 8:24 PM
426	43452	10/4/2019 8:22 PM
427	49660	10/4/2019 8:17 PM
428	48843	10/4/2019 8:14 PM
429	49085	10/4/2019 8:06 PM
430	48624	10/4/2019 8:05 PM
431	49090	10/4/2019 8:05 PM
432	48036	10/4/2019 7:59 PM
433	53403	10/4/2019 7:57 PM
434	60561	10/4/2019 7:48 PM
435	48655	10/4/2019 7:44 PM
436	49712	10/4/2019 7:39 PM
437	48045	10/4/2019 7:38 PM
438	43617	10/4/2019 7:36 PM
439	48624	10/4/2019 7:27 PM
440	49765	10/4/2019 7:25 PM
441	48146	10/4/2019 7:21 PM
442	48733	10/4/2019 7:21 PM
443	60045	10/4/2019 7:19 PM
444	48116	10/4/2019 7:17 PM
445	49712	10/4/2019 7:17 PM

MSWC Boater Trends Survey

446	49068	10/4/2019 7:12 PM
447	48750	10/4/2019 7:10 PM
448	N0P 1A0	10/4/2019 7:09 PM
449	49749	10/4/2019 7:08 PM
450	48081	10/4/2019 6:57 PM
451	48176	10/4/2019 6:55 PM
452	43452	10/4/2019 6:49 PM
453	48658	10/4/2019 6:48 PM
454	48656	10/4/2019 6:48 PM
455	48363	10/4/2019 6:48 PM
456	49326	10/4/2019 6:46 PM
457	48446	10/4/2019 6:42 PM
458	48073	10/4/2019 6:36 PM
459	48603	10/4/2019 6:31 PM
460	48755	10/4/2019 6:31 PM
461	48130	10/4/2019 6:26 PM
462	33950	10/4/2019 6:24 PM
463	48419	10/4/2019 6:23 PM
464	48030	10/4/2019 6:22 PM
465	48911	10/4/2019 6:17 PM
466	48182	10/4/2019 6:16 PM
467	49712	10/4/2019 6:16 PM
468	48060	10/4/2019 6:13 PM
469	48137	10/4/2019 6:11 PM
470	48036	10/4/2019 6:11 PM
471	48035	10/4/2019 6:11 PM
472	45246	10/4/2019 6:01 PM
473	48160	10/4/2019 5:57 PM
474	48307	10/4/2019 5:56 PM
475	49120	10/4/2019 5:56 PM
476	48039	10/4/2019 5:55 PM
477	48162	10/4/2019 5:54 PM
478	49631	10/4/2019 5:54 PM
479	53532	10/4/2019 5:52 PM
480	48629	10/4/2019 5:52 PM
481	49546	10/4/2019 5:49 PM
482	48757	10/4/2019 5:49 PM
483	17737	10/4/2019 5:48 PM
484	44691	10/4/2019 5:43 PM
485	48081	10/4/2019 5:41 PM
486	49868	10/4/2019 5:35 PM

MSWC Boater Trends Survey

487	48023	10/4/2019 5:34 PM
488	49686	10/4/2019 5:30 PM
489	48604-2453	10/4/2019 5:24 PM
490	48827	10/4/2019 5:23 PM
491	48737	10/4/2019 5:22 PM
492	49125	10/4/2019 5:18 PM
493	48044	10/4/2019 5:17 PM
494	49686	10/4/2019 5:17 PM
495	49112	10/4/2019 5:08 PM
496	48185	10/4/2019 5:07 PM
497	49321	10/4/2019 5:00 PM
498	60491	10/4/2019 4:58 PM
499	49445	10/4/2019 4:54 PM
500	48093	10/4/2019 4:54 PM
501	27705	10/4/2019 4:52 PM
502	48060	10/4/2019 4:50 PM
503	49442	10/4/2019 4:47 PM
504	49442	10/4/2019 4:41 PM
505	49424	10/4/2019 4:38 PM
506	N0P1A0	10/4/2019 4:34 PM
507	48130	10/4/2019 4:30 PM
508	48101	10/4/2019 4:27 PM
509	48133	10/4/2019 4:24 PM
510	48314	10/4/2019 4:24 PM
511	33907	10/4/2019 4:24 PM
512	48047	10/4/2019 4:20 PM
513	48045	10/4/2019 4:18 PM
514	49854	10/4/2019 4:18 PM
515	48166	10/4/2019 4:15 PM
516	49668	10/4/2019 4:12 PM
517	49719	10/4/2019 4:11 PM
518	48328	10/4/2019 4:10 PM
519	48045	10/4/2019 4:03 PM
520	48001	10/4/2019 4:02 PM
521	48817-9406	10/4/2019 3:58 PM
522	49085	10/4/2019 3:54 PM
523	49418	10/4/2019 3:51 PM
524	48001	10/4/2019 3:50 PM
525	49036	10/4/2019 3:48 PM
526	48116	10/4/2019 3:46 PM
527	48602	10/4/2019 3:43 PM

MSWC Boater Trends Survey

528	48118	10/4/2019 3:39 PM
529	48060	10/4/2019 3:38 PM
530	48236	10/4/2019 3:35 PM
531	49046	10/4/2019 3:29 PM
532	48054	10/4/2019 3:29 PM
533	48048	10/4/2019 3:27 PM
534	48047	10/4/2019 3:26 PM
535	49328	10/4/2019 3:26 PM
536	48073	10/4/2019 3:25 PM
537	48307	10/4/2019 3:25 PM
538	48611	10/4/2019 3:23 PM
539	49449-9560	10/4/2019 3:22 PM
540	49406	10/4/2019 3:20 PM
541	49460	10/4/2019 3:20 PM
542	49107	10/4/2019 3:20 PM
543	48383	10/4/2019 3:19 PM
544	49726	10/4/2019 3:15 PM
545	N7S 0A2	10/4/2019 3:06 PM
546	48080	10/4/2019 3:06 PM
547	48236	10/4/2019 3:05 PM
548	49721	10/4/2019 3:03 PM
549	48864	10/4/2019 3:02 PM
550	49855	10/4/2019 3:00 PM
551	48301	10/4/2019 3:00 PM
552	48331	10/4/2019 2:56 PM
553	49071	10/4/2019 2:56 PM
554	49720-2111	10/4/2019 2:51 PM
555	54115	10/4/2019 2:51 PM
556	54814	10/4/2019 2:48 PM
557	48173	10/4/2019 2:47 PM
558	48309	10/4/2019 2:46 PM
559	49329	10/4/2019 2:41 PM
560	49729	10/4/2019 2:39 PM
561	48872	10/4/2019 2:35 PM
562	66013	10/4/2019 2:35 PM
563	48891	10/4/2019 2:34 PM
564	48103	10/4/2019 2:34 PM
565	49323	10/4/2019 2:33 PM
566	49519	10/4/2019 2:30 PM
567	48215	10/4/2019 2:29 PM
568	48073	10/4/2019 2:28 PM

MSWC Boater Trends Survey

569	48047	10/4/2019 2:27 PM
570	43147	10/4/2019 2:27 PM
571	48624	10/4/2019 2:24 PM
572	49456	10/4/2019 2:21 PM
573	48734	10/4/2019 2:20 PM
574	48146	10/4/2019 2:20 PM
575	48101	10/4/2019 2:18 PM
576	48060	10/4/2019 2:17 PM
577	49343	10/4/2019 2:17 PM
578	48047	10/4/2019 2:16 PM
579	48169	10/4/2019 2:11 PM
580	48890	10/4/2019 2:08 PM
581	48328	10/4/2019 2:02 PM
582	48836	10/4/2019 2:00 PM
583	49546	10/4/2019 1:54 PM
584	48063	10/4/2019 1:49 PM
585	49345	10/4/2019 1:47 PM
586	48067	10/4/2019 1:47 PM
587	49725	10/4/2019 1:46 PM
588	49453	10/4/2019 1:45 PM
589	48656	10/4/2019 1:45 PM
590	49423	10/4/2019 1:44 PM
591	10598	10/4/2019 1:43 PM
592	47401	10/4/2019 1:43 PM
593	48603	10/4/2019 1:42 PM
594	48623	10/4/2019 1:40 PM
595	48650	10/4/2019 1:39 PM
596	48045	10/4/2019 1:37 PM
597	48820	10/4/2019 1:34 PM
598	49321	10/4/2019 1:34 PM
599	48178	10/4/2019 1:33 PM
600	48116	10/4/2019 1:31 PM
601	48054	10/4/2019 1:29 PM
602	48060	10/4/2019 1:27 PM
603	48049	10/4/2019 1:26 PM
604	48137	10/4/2019 1:26 PM
605	49720	10/4/2019 1:26 PM
606	49058	10/4/2019 1:23 PM
607	60660	10/4/2019 1:21 PM
608	49743	10/4/2019 1:20 PM
609	60611	10/4/2019 1:18 PM

MSWC Boater Trends Survey

610	48650	10/4/2019 1:18 PM
611	48418	10/4/2019 1:16 PM
612	48382	10/4/2019 1:16 PM
613	49316	10/4/2019 1:16 PM
614	49696	10/4/2019 1:15 PM
615	49727	10/4/2019 1:15 PM
616	48346	10/4/2019 1:14 PM
617	N0P 2B0	10/4/2019 1:14 PM
618	48050	10/4/2019 1:13 PM
619	48331	10/4/2019 1:10 PM
620	48001	10/4/2019 1:09 PM
621	49733	10/4/2019 1:09 PM
622	49525	10/4/2019 1:08 PM
623	48346	10/4/2019 1:08 PM
624	48134	10/4/2019 1:06 PM
625	46614	10/4/2019 1:05 PM
626	48737	10/4/2019 1:04 PM
627	48161	10/4/2019 1:04 PM
628	48336	10/4/2019 1:04 PM
629	48168	10/4/2019 1:03 PM
630	49727	10/4/2019 1:03 PM
631	48169	10/4/2019 1:00 PM
632	48412	10/4/2019 12:58 PM
633	49660	10/4/2019 12:57 PM
634	49853	10/4/2019 12:57 PM
635	48756	10/4/2019 12:57 PM
636	48174	10/4/2019 12:56 PM
637	48855	10/4/2019 12:55 PM
638	49829	10/4/2019 12:54 PM
639	48768	10/4/2019 12:53 PM
640	49686	10/4/2019 12:52 PM
641	48612	10/4/2019 12:51 PM
642	48823	10/4/2019 12:50 PM
643	48154	10/4/2019 12:48 PM
644	48356	10/4/2019 12:48 PM
645	49321	10/4/2019 12:46 PM
646	48044	10/4/2019 12:45 PM
647	48154	10/4/2019 12:45 PM
648	49426	10/4/2019 12:44 PM
649	49441	10/4/2019 12:42 PM
650	48168	10/4/2019 12:40 PM

MSWC Boater Trends Survey

651	48072	10/4/2019 12:39 PM
652	60614	10/4/2019 12:39 PM
653	49424	10/4/2019 12:38 PM
654	48439	10/4/2019 12:38 PM
655	48348	10/4/2019 12:37 PM
656	53092	10/4/2019 12:36 PM
657	44333	10/4/2019 12:36 PM
658	44281	10/4/2019 12:35 PM
659	80524	10/4/2019 12:34 PM
660	48317	10/4/2019 12:34 PM
661	49130	10/4/2019 12:33 PM
662	49855	10/4/2019 12:33 PM
663	48854	10/4/2019 12:33 PM
664	48842	10/4/2019 12:31 PM
665	48093	10/4/2019 12:31 PM
666	N8S 3G9	10/4/2019 12:31 PM
667	48703	10/4/2019 12:31 PM
668	46365	10/4/2019 12:30 PM
669	49079	10/4/2019 12:30 PM
670	48446	10/4/2019 12:30 PM
671	49423	10/4/2019 12:28 PM
672	49456	10/4/2019 12:28 PM
673	48366	10/4/2019 12:27 PM
674	49720	10/4/2019 12:25 PM
675	48026	10/4/2019 12:25 PM
676	49762	10/4/2019 12:23 PM
677	49525	10/4/2019 12:22 PM
678	48360	10/4/2019 12:22 PM
679	49319	10/4/2019 12:22 PM
680	49503	10/4/2019 12:22 PM
681	49686	10/4/2019 12:21 PM
682	48176	10/4/2019 12:21 PM
683	48065	10/4/2019 12:21 PM
684	49221	10/4/2019 12:20 PM
685	49323	10/4/2019 12:20 PM
686	48433	10/4/2019 12:19 PM
687	48189	10/4/2019 12:17 PM
688	48603	10/4/2019 12:15 PM
689	48348	10/4/2019 12:15 PM
690	60047	10/4/2019 12:15 PM
691	48051	10/4/2019 12:14 PM

MSWC Boater Trends Survey

692	49720	10/4/2019 12:14 PM
693	49426	10/4/2019 12:14 PM
694	49441	10/4/2019 12:12 PM
695	48043	10/4/2019 12:11 PM
696	49234	10/4/2019 12:11 PM
697	49306	10/4/2019 12:11 PM
698	49036	10/4/2019 12:11 PM
699	48450	10/4/2019 12:09 PM
700	48458	10/4/2019 12:09 PM
701	48310	10/4/2019 12:08 PM
702	48045	10/4/2019 12:08 PM
703	54665	10/4/2019 12:06 PM
704	48640	10/4/2019 12:05 PM
705	49316	10/4/2019 12:04 PM
706	48634	10/4/2019 12:03 PM
707	49690	10/4/2019 12:03 PM
708	49060	10/4/2019 12:01 PM
709	48813	10/4/2019 12:00 PM
710	49855	10/4/2019 12:00 PM
711	49879	10/4/2019 11:59 AM
712	49722	10/4/2019 11:59 AM
713	49712	10/4/2019 11:59 AM
714	48017	10/4/2019 11:58 AM
715	48185	10/4/2019 11:58 AM
716	48236	10/4/2019 11:57 AM
717	49341	10/4/2019 11:56 AM
718	44851	10/4/2019 11:56 AM
719	49006	10/4/2019 11:55 AM
720	48879	10/4/2019 11:54 AM
721	49953	10/4/2019 11:52 AM
722	48039	10/4/2019 11:52 AM
723	49423	10/4/2019 11:52 AM
724	48455	10/4/2019 11:52 AM
725	48642	10/4/2019 11:51 AM
726	48313	10/4/2019 11:51 AM
727	49878	10/4/2019 11:50 AM
728	49093	10/4/2019 11:50 AM
729	48025	10/4/2019 11:50 AM
730	48348	10/4/2019 11:50 AM
731	49306	10/4/2019 11:50 AM
732	49339	10/4/2019 11:50 AM

MSWC Boater Trends Survey

733	49316	10/4/2019 11:49 AM
734	46350	10/4/2019 11:49 AM
735	48610	10/4/2019 11:49 AM
736	48867	10/4/2019 11:49 AM
737	48066	10/4/2019 11:49 AM
738	49402	10/4/2019 11:48 AM
739	49319	10/4/2019 11:48 AM
740	48044	10/4/2019 11:48 AM
741	48193	10/4/2019 11:47 AM
742	48060	10/4/2019 11:47 AM
743	48634	10/4/2019 11:46 AM
744	48649	10/4/2019 11:46 AM
745	49284	10/4/2019 11:46 AM
746	54159	10/4/2019 11:46 AM
747	48044	10/4/2019 11:46 AM
748	48906	10/4/2019 11:45 AM
749	44022	10/4/2019 11:45 AM
750	54208	10/4/2019 11:44 AM
751	48111	10/4/2019 11:44 AM
752	48064	10/4/2019 11:40 AM
753	48212	10/4/2019 11:40 AM
754	49738	10/4/2019 11:39 AM
755	48843	10/4/2019 11:39 AM
756	48240	10/4/2019 11:39 AM
757	68127	10/4/2019 11:38 AM
758	48227	10/4/2019 11:38 AM
759	48227	10/4/2019 11:37 AM
760	48756	10/4/2019 11:37 AM
761	49509	10/4/2019 11:36 AM
762	48323	10/4/2019 11:36 AM
763	48631	10/4/2019 11:36 AM
764	43611-1216	10/4/2019 11:36 AM
765	48820	10/4/2019 11:35 AM
766	49461	10/4/2019 11:35 AM
767	48653	10/4/2019 11:35 AM
768	27896	10/4/2019 11:34 AM
769	49684	10/4/2019 11:34 AM
770	48065	10/4/2019 11:34 AM
771	49684	10/4/2019 11:33 AM
772	48137	10/4/2019 11:32 AM
773	49344	10/4/2019 11:32 AM

MSWC Boater Trends Survey

774	48813	10/4/2019 11:32 AM
775	48624	10/4/2019 11:31 AM
776	49770	10/4/2019 11:30 AM
777	49	10/4/2019 11:30 AM
778	48706	10/4/2019 11:29 AM
779	48111	10/4/2019 11:29 AM
780	48060	10/4/2019 11:29 AM
781	48302	10/4/2019 11:29 AM
782	49738	10/4/2019 11:28 AM
783	49735	10/4/2019 11:27 AM
784	48188	10/4/2019 11:27 AM
785	48047	10/4/2019 11:26 AM
786	Canada	10/4/2019 11:26 AM
787	49601	10/4/2019 11:26 AM
788	49008	10/4/2019 11:26 AM
789	48730	10/4/2019 11:25 AM
790	49733	10/4/2019 11:24 AM
791	48383	10/4/2019 11:24 AM
792	48473	10/4/2019 11:23 AM
793	48154	10/4/2019 11:22 AM
794	49548Kent	10/4/2019 11:21 AM
795	48706	10/4/2019 11:20 AM
796	48167	10/4/2019 11:19 AM
797	49417	10/4/2019 11:18 AM
798	49546	10/4/2019 11:17 AM
799	49051	10/4/2019 11:17 AM
800	60192	10/4/2019 11:16 AM
801	60450	10/4/2019 11:16 AM
802	46350	10/4/2019 11:15 AM
803	49968	10/4/2019 11:15 AM
804	60450	10/4/2019 11:15 AM
805	48023	10/4/2019 11:13 AM
806	48104	10/4/2019 11:13 AM
807	48855	10/4/2019 11:13 AM
808	48442	10/4/2019 11:13 AM
809	49756	10/4/2019 11:12 AM
810	48895	10/4/2019 11:12 AM
811	48094	10/4/2019 11:11 AM
812	49426	10/4/2019 11:11 AM
813	49451	10/4/2019 11:10 AM
814	48045	10/4/2019 11:10 AM

MSWC Boater Trends Survey

815	49012	10/4/2019 11:09 AM
816	48076	10/4/2019 11:09 AM
817	48708	10/4/2019 11:08 AM
818	49727	10/4/2019 11:08 AM
819	48167	10/4/2019 11:07 AM
820	49660	10/4/2019 11:06 AM
821	48848	10/4/2019 11:06 AM
822	48328	10/4/2019 11:05 AM
823	48706	10/4/2019 11:05 AM
824	49424	10/4/2019 11:05 AM
825	49022	10/4/2019 11:04 AM
826	48625	10/4/2019 11:04 AM
827	48045	10/4/2019 11:04 AM
828	48152	10/4/2019 11:03 AM
829	49203	10/4/2019 11:03 AM
830	48141	10/4/2019 11:03 AM
831	48316	10/4/2019 11:03 AM
832	49740	10/4/2019 11:03 AM
833	48383	10/4/2019 11:03 AM
834	47421	10/4/2019 11:03 AM
835	49525	10/4/2019 11:02 AM
836	48001	10/4/2019 11:02 AM
837	48101	10/4/2019 11:02 AM
838	48239	10/4/2019 11:02 AM
839	48173	10/4/2019 11:02 AM
840	48045	10/4/2019 11:02 AM
841	48166	10/4/2019 11:01 AM
842	43452	10/4/2019 11:01 AM
843	01880	10/4/2019 11:01 AM
844	48066	10/4/2019 11:00 AM
845	48075	10/4/2019 11:00 AM
846	48843	10/4/2019 11:00 AM
847	49024	10/4/2019 11:00 AM
848	49305	10/4/2019 11:00 AM
849	48383	10/4/2019 11:00 AM
850	Canada	10/4/2019 11:00 AM
851	48857	10/4/2019 10:59 AM
852	49456	10/4/2019 10:58 AM
853	49685	10/4/2019 10:58 AM
854	49855	10/4/2019 10:58 AM
855	49120	10/4/2019 10:58 AM

MSWC Boater Trends Survey

856	49712	10/4/2019 10:58 AM
857	N0M1T0	10/4/2019 10:58 AM
858	48191	10/4/2019 10:58 AM
859	49424	10/4/2019 10:58 AM
860	49683	10/4/2019 10:58 AM
861	48049	10/4/2019 10:57 AM
862	49036	10/4/2019 10:56 AM
863	49431	10/4/2019 10:55 AM
864	49315	10/4/2019 10:55 AM
865	48187	10/4/2019 10:55 AM
866	49423	10/4/2019 10:55 AM
867	49036	10/4/2019 10:55 AM
868	48329	10/4/2019 10:54 AM
869	48315	10/4/2019 10:54 AM
870	48047	10/4/2019 10:53 AM
871	48629	10/4/2019 10:53 AM
872	60517	10/4/2019 10:52 AM
873	48442	10/4/2019 10:51 AM
874	48178	10/4/2019 10:51 AM
875	48324	10/4/2019 10:51 AM
876	48436	10/4/2019 10:51 AM
877	49684	10/4/2019 10:51 AM
878	49660	10/4/2019 10:50 AM
879	49426	10/4/2019 10:50 AM
880	48854	10/4/2019 10:50 AM
881	48173	10/4/2019 10:50 AM
882	48185	10/4/2019 10:49 AM
883	49716	10/4/2019 10:49 AM
884	48623	10/4/2019 10:49 AM
885	49660	10/4/2019 10:49 AM
886	48073	10/4/2019 10:49 AM
887	48152	10/4/2019 10:49 AM
888	48197	10/4/2019 10:49 AM
889	48236	10/4/2019 10:48 AM
890	48127	10/4/2019 10:47 AM
891	49806-9504	10/4/2019 10:47 AM
892	48763	10/4/2019 10:47 AM
893	48214	10/4/2019 10:47 AM
894	49224	10/4/2019 10:47 AM
895	60565	10/4/2019 10:47 AM
896	48854	10/4/2019 10:47 AM

MSWC Boater Trends Survey

897	54412	10/4/2019 10:46 AM
898	48911	10/4/2019 10:45 AM
899	49612	10/4/2019 10:45 AM
900	49341	10/4/2019 10:45 AM
901	48118	10/4/2019 10:45 AM
902	48359	10/4/2019 10:45 AM
903	48081	10/4/2019 10:45 AM
904	43452	10/4/2019 10:45 AM
905	48350	10/4/2019 10:44 AM
906	49686	10/4/2019 10:44 AM
907	48236	10/4/2019 10:44 AM
908	60442	10/4/2019 10:44 AM
909	48864-3076	10/4/2019 10:44 AM
910	49418	10/4/2019 10:43 AM
911	48433	10/4/2019 10:42 AM
912	48183	10/4/2019 10:42 AM
913	48236	10/4/2019 10:42 AM
914	46530	10/4/2019 10:42 AM
915	49328	10/4/2019 10:42 AM
916	48183	10/4/2019 10:42 AM
917	49451	10/4/2019 10:42 AM
918	48192	10/4/2019 10:42 AM
919	48876	10/4/2019 10:41 AM
920	48382	10/4/2019 10:41 AM
921	48060	10/4/2019 10:41 AM
922	33139	10/4/2019 10:41 AM
923	48178	10/4/2019 10:41 AM
924	48838	10/4/2019 10:41 AM
925	48174	10/4/2019 10:41 AM
926	48350	10/4/2019 10:40 AM
927	46614	10/4/2019 10:40 AM
928	49720	10/4/2019 10:40 AM
929	48036	10/4/2019 10:40 AM
930	49055	10/4/2019 10:40 AM
931	49067	10/4/2019 10:39 AM
932	48439	10/4/2019 10:39 AM
933	49526	10/4/2019 10:39 AM
934	49085	10/4/2019 10:39 AM
935	48101	10/4/2019 10:39 AM
936	48880	10/4/2019 10:39 AM
937	66610	10/4/2019 10:39 AM

MSWC Boater Trends Survey

938	48306	10/4/2019 10:38 AM
939	49615	10/4/2019 10:38 AM
940	48390	10/4/2019 10:38 AM
941	48088	10/4/2019 10:38 AM
942	60123	10/4/2019 10:37 AM
943	48323	10/4/2019 10:37 AM
944	46614	10/4/2019 10:37 AM
945	48025	10/4/2019 10:37 AM
946	49253	10/4/2019 10:37 AM
947	48183	10/4/2019 10:37 AM
948	48187	10/4/2019 10:37 AM
949	48045	10/4/2019 10:37 AM
950	48180	10/4/2019 10:36 AM
951	49686	10/4/2019 10:36 AM
952	49644	10/4/2019 10:36 AM
953	48840	10/4/2019 10:36 AM
954	54915	10/4/2019 10:35 AM
955	48038	10/4/2019 10:35 AM
956	48509	10/4/2019 10:35 AM
957	49436	10/4/2019 10:35 AM
958	60565	10/4/2019 10:35 AM
959	48315	10/4/2019 10:35 AM
960	48467	10/4/2019 10:35 AM
961	48045	10/4/2019 10:34 AM
962	49073	10/4/2019 10:34 AM
963	60657	10/4/2019 10:34 AM
964	48612	10/4/2019 10:34 AM
965	48380-2511	10/4/2019 10:34 AM
966	49659	10/4/2019 10:33 AM
967	49087	10/4/2019 10:33 AM
968	49735	10/4/2019 10:33 AM
969	49453	10/4/2019 10:33 AM
970	49417	10/4/2019 10:33 AM
971	48327-4338	10/4/2019 10:33 AM
972	49435	10/4/2019 10:33 AM
973	54235	10/4/2019 10:32 AM
974	48430	10/4/2019 10:32 AM
975	48076	10/4/2019 10:32 AM
976	48182	10/4/2019 10:32 AM
977	48091	10/4/2019 10:32 AM
978	49684	10/4/2019 10:32 AM

MSWC Boater Trends Survey

979	49525	10/4/2019 10:32 AM
980	49505	10/4/2019 10:32 AM
981	48911	10/4/2019 10:32 AM
982	48823	10/4/2019 10:32 AM
983	48706	10/4/2019 10:32 AM
984	54304	10/4/2019 10:32 AM
985	54211	10/4/2019 10:32 AM
986	60185	10/4/2019 10:32 AM
987	49686	10/4/2019 10:32 AM
988	48422	10/4/2019 10:32 AM
989	48316	10/4/2019 10:31 AM
990	49548	10/4/2019 10:31 AM
991	49684	10/4/2019 10:31 AM
992	49230	10/4/2019 10:31 AM
993	49337	10/4/2019 10:31 AM
994	49325	10/4/2019 10:31 AM
995	48878	10/4/2019 10:30 AM
996	49684	10/4/2019 10:30 AM
997	48067	10/4/2019 10:30 AM
998	49675	10/4/2019 10:30 AM
999	49009	10/4/2019 10:30 AM
1000	48808	10/4/2019 10:29 AM
1001	48637	10/4/2019 10:29 AM
1002	48044	10/4/2019 10:29 AM
1003	48433	10/4/2019 10:29 AM
1004	49738	10/4/2019 10:29 AM
1005	48429	10/4/2019 10:29 AM
1006	48849	10/4/2019 10:29 AM
1007	N8Y 3L7,	10/4/2019 10:29 AM
1008	49456	10/4/2019 10:28 AM
1009	49341	10/4/2019 10:28 AM
1010	48021	10/4/2019 10:28 AM
1011	48170	10/4/2019 10:28 AM
1012	49424	10/4/2019 10:28 AM
1013	49418	10/4/2019 10:28 AM
1014	48079	10/4/2019 10:28 AM
1015	65757	10/4/2019 10:28 AM
1016	44060	10/4/2019 10:28 AM
1017	49501	10/4/2019 10:28 AM
1018	48036	10/4/2019 10:28 AM
1019	48130	10/4/2019 10:28 AM

MSWC Boater Trends Survey

1020	49009	10/4/2019 10:28 AM
1021	48178	10/4/2019 10:28 AM
1022	49323	10/4/2019 10:28 AM
1023	46360	10/4/2019 10:27 AM
1024	n5x 0e8	10/4/2019 10:27 AM
1025	48621	10/4/2019 10:27 AM
1026	46360	10/4/2019 10:27 AM
1027	48843	10/4/2019 10:27 AM
1028	48750	10/4/2019 10:27 AM
1029	49302	10/4/2019 10:26 AM
1030	48213	10/4/2019 10:26 AM
1031	60640	10/4/2019 10:26 AM
1032	41076	10/4/2019 10:26 AM
1033	43452	10/4/2019 10:25 AM
1034	46375	10/4/2019 10:25 AM
1035	48624	10/4/2019 10:25 AM
1036	48054	10/4/2019 10:25 AM
1037	60304	10/4/2019 10:25 AM
1038	49076	10/4/2019 10:25 AM
1039	49024	10/4/2019 10:25 AM
1040	48044	10/4/2019 10:25 AM
1041	48188	10/4/2019 10:25 AM
1042	49245	10/4/2019 10:25 AM
1043	49730	10/4/2019 10:24 AM
1044	49046	10/4/2019 10:24 AM
1045	48084	10/4/2019 10:24 AM
1046	48005	10/4/2019 10:24 AM
1047	49721	10/4/2019 10:23 AM
1048	48656	10/4/2019 10:23 AM
1049	48438	10/4/2019 10:23 AM
1050	48167	10/4/2019 10:23 AM
1051	48180	10/4/2019 10:23 AM
1052	48895	10/4/2019 10:23 AM
1053	48763	10/4/2019 10:23 AM
1054	48169	10/4/2019 10:22 AM
1055	60410	10/4/2019 10:22 AM
1056	48615	10/4/2019 10:22 AM
1057	48750	10/4/2019 10:22 AM
1058	49301	10/4/2019 10:21 AM
1059	49506	10/4/2019 10:21 AM
1060	P0R1J0	10/4/2019 10:21 AM

MSWC Boater Trends Survey

1061	43452	10/4/2019 10:21 AM
1062	49451	10/4/2019 10:21 AM
1063	40475	10/4/2019 10:21 AM
1064	48895	10/4/2019 10:21 AM
1065	49735	10/4/2019 10:21 AM
1066	48755	10/4/2019 10:21 AM
1067	49093	10/4/2019 10:21 AM
1068	48138	10/4/2019 10:21 AM
1069	48138	10/4/2019 10:21 AM
1070	53206	10/4/2019 10:20 AM
1071	48604	10/4/2019 10:20 AM
1072	49309	10/4/2019 10:20 AM
1073	48081	10/4/2019 10:20 AM
1074	48328	10/4/2019 10:20 AM
1075	60045	10/4/2019 10:20 AM
1076	49401	10/4/2019 10:20 AM
1077	48236	10/4/2019 10:20 AM
1078	48094	10/4/2019 10:20 AM
1079	49684	10/4/2019 10:20 AM
1080	48207	10/4/2019 10:19 AM
1081	48328	10/4/2019 10:19 AM
1082	34240	10/4/2019 10:19 AM
1083	49426	10/4/2019 10:19 AM
1084	49613	10/4/2019 10:19 AM
1085	49431	10/4/2019 10:19 AM
1086	49441	10/4/2019 10:19 AM
1087	49770	10/4/2019 10:19 AM
1088	49878	10/4/2019 10:19 AM
1089	49073	10/4/2019 10:19 AM
1090	48236	10/4/2019 10:19 AM
1091	48214	10/4/2019 10:18 AM
1092	48183	10/4/2019 10:18 AM
1093	48230	10/4/2019 10:18 AM
1094	49783	10/4/2019 10:18 AM
1095	48430	10/4/2019 10:18 AM
1096	48622	10/4/2019 10:18 AM
1097	49546	10/4/2019 10:18 AM
1098	48326	10/4/2019 10:18 AM
1099	48348	10/4/2019 10:17 AM
1100	48017	10/4/2019 10:17 AM
1101	49727	10/4/2019 10:17 AM

MSWC Boater Trends Survey

1102	46307	10/4/2019 10:17 AM
1103	49685	10/4/2019 10:16 AM
1104	49855	10/4/2019 10:12 AM
1105	48808	10/4/2019 9:53 AM
1106	48167	10/4/2019 8:35 AM
1107	49235	10/3/2019 9:49 PM
1108	48809	10/3/2019 9:34 PM
1109	48060	10/3/2019 9:02 PM
1110	48192	10/3/2019 8:52 PM
1111	48047	10/3/2019 8:24 PM
1112	48193	10/3/2019 8:21 PM
1113	48001	10/3/2019 7:42 PM
1114	48843	10/3/2019 7:17 PM
1115	48051-2658	10/3/2019 7:10 PM
1116	49686	10/3/2019 6:20 PM
1117	48386	10/3/2019 5:44 PM
1118	53213	10/3/2019 5:30 PM
1119	49010	10/3/2019 5:06 PM
1120	49445	10/3/2019 4:58 PM
1121	48854	10/3/2019 4:35 PM
1122	48101	10/3/2019 4:07 PM
1123	48101	10/3/2019 4:02 PM
1124	49685	10/3/2019 3:53 PM
1125	49916	10/3/2019 2:44 PM
1126	49770	10/3/2019 2:28 PM
1127	48081	10/3/2019 2:17 PM
1128	48306	10/3/2019 12:57 PM
1129	48309	10/3/2019 12:13 PM
1130	49685	10/3/2019 11:59 AM
1131	48060	10/3/2019 10:55 AM
1132	48624	10/3/2019 10:52 AM
1133	48064	10/3/2019 10:04 AM
1134	48625	10/3/2019 10:04 AM
1135	48036	10/3/2019 9:21 AM
1136	48469	10/3/2019 9:19 AM
1137	49009	10/3/2019 9:16 AM
1138	48306	10/3/2019 8:58 AM
1139	49783	10/3/2019 8:53 AM
1140	48818	10/3/2019 8:50 AM
1141	48625	10/3/2019 8:43 AM
1142	48074	10/3/2019 8:38 AM

MSWC Boater Trends Survey

1143	49686	10/3/2019 8:24 AM
1144	48047	10/3/2019 8:18 AM
1145	48167	10/3/2019 8:12 AM
1146	49707	10/3/2019 8:07 AM
1147	48081	10/3/2019 7:32 AM
1148	48081	10/3/2019 7:29 AM
1149	49783	10/3/2019 5:38 AM
1150	49920	10/3/2019 4:33 AM
1151	49735	10/3/2019 3:33 AM
1152	49931	10/3/2019 1:13 AM
1153	49885	10/2/2019 10:37 PM
1154	48230	10/2/2019 10:24 PM
1155	48458	10/2/2019 10:22 PM
1156	48041	10/2/2019 9:56 PM
1157	48189	10/2/2019 9:54 PM
1158	48744	10/2/2019 9:43 PM
1159	48047	10/2/2019 9:41 PM
1160	48623	10/2/2019 9:31 PM
1161	48138	10/2/2019 8:53 PM
1162	48033	10/2/2019 8:18 PM
1163	48393	10/2/2019 8:05 PM
1164	48653	10/2/2019 8:03 PM
1165	48393	10/2/2019 7:59 PM
1166	48079	10/2/2019 7:50 PM
1167	49766	10/2/2019 7:41 PM
1168	48848	10/2/2019 7:10 PM
1169	48612	10/2/2019 6:15 PM
1170	48225	10/2/2019 6:00 PM
1171	46573	10/2/2019 5:42 PM
1172	49646	10/2/2019 5:20 PM
1173	49777	10/2/2019 5:11 PM
1174	49684	10/2/2019 4:40 PM
1175	49649	10/2/2019 4:16 PM
1176	48104	10/2/2019 4:06 PM
1177	47909	10/2/2019 4:05 PM
1178	48001	10/2/2019 3:23 PM
1179	48183	10/2/2019 3:18 PM
1180	48036	10/2/2019 3:15 PM
1181	48864	10/2/2019 3:04 PM
1182	49534	10/2/2019 2:53 PM
1183	49127	10/2/2019 2:35 PM

MSWC Boater Trends Survey

1184	48170	10/2/2019 2:21 PM
1185	48302	10/2/2019 2:14 PM
1186	48047	10/2/2019 2:01 PM
1187	48045	10/2/2019 1:54 PM
1188	N5a 4n9	10/2/2019 1:15 PM
1189	48393	10/2/2019 12:47 PM
1190	48173	10/2/2019 12:36 PM
1191	48045	10/2/2019 12:23 PM
1192	48015	10/2/2019 12:15 PM
1193	48632	10/2/2019 12:05 PM
1194	49047	10/2/2019 12:00 PM
1195	49727	10/2/2019 11:46 AM
1196	48360	10/2/2019 11:46 AM
1197	48353	10/2/2019 11:35 AM
1198	48316	10/2/2019 11:20 AM
1199	48430	10/2/2019 11:10 AM
1200	48327	10/2/2019 11:03 AM
1201	48820	10/2/2019 11:03 AM
1202	48917	10/2/2019 11:01 AM
1203	48054	10/2/2019 11:00 AM
1204	48323	10/2/2019 10:31 AM
1205	48650	10/2/2019 10:20 AM
1206	48310	10/2/2019 10:17 AM
1207	48221	10/2/2019 10:14 AM
1208	48154	10/2/2019 10:11 AM
1209	48065	10/2/2019 10:10 AM
1210	49930	10/2/2019 10:09 AM
1211	49686	10/2/2019 10:05 AM
1212	49461	10/2/2019 10:00 AM
1213	49685	10/2/2019 9:57 AM
1214	48080	10/2/2019 9:49 AM
1215	48346	10/2/2019 9:47 AM
1216	48026-2601	10/2/2019 9:46 AM
1217	48363	10/2/2019 9:37 AM
1218	48301	10/2/2019 9:36 AM
1219	48001	10/2/2019 9:33 AM
1220	48080.	10/2/2019 9:33 AM
1221	48080	10/2/2019 9:23 AM
1222	48039	10/2/2019 9:14 AM
1223	48362	10/2/2019 9:02 AM
1224	48025	10/2/2019 8:58 AM

MSWC Boater Trends Survey

1225	48044	10/2/2019 8:55 AM
1226	48001	10/2/2019 8:55 AM
1227	48335	10/2/2019 8:44 AM
1228	48346	10/2/2019 8:35 AM
1229	48310	10/2/2019 8:32 AM
1230	48360	10/2/2019 8:30 AM
1231	48045	10/2/2019 8:22 AM
1232	48430	10/2/2019 8:22 AM
1233	48362	10/2/2019 8:17 AM
1234	28037	10/2/2019 8:15 AM
1235	48326	10/2/2019 8:02 AM
1236	48169	10/2/2019 8:00 AM
1237	48135	10/2/2019 7:57 AM
1238	48471	10/2/2019 7:55 AM
1239	48045	10/2/2019 7:50 AM
1240	48356	10/2/2019 7:49 AM
1241	49690	10/2/2019 7:48 AM
1242	48843	10/2/2019 7:44 AM
1243	48047	10/2/2019 7:42 AM
1244	48154	10/2/2019 7:42 AM
1245	48214	10/2/2019 7:39 AM
1246	48238	10/2/2019 7:37 AM
1247	48450	10/2/2019 7:37 AM
1248	48051	10/2/2019 7:34 AM
1249	48360	10/2/2019 7:33 AM
1250	48154	10/2/2019 7:33 AM
1251	48116	10/2/2019 7:31 AM
1252	48028	10/2/2019 7:28 AM
1253	48047	10/2/2019 7:28 AM
1254	48383	10/2/2019 7:27 AM
1255	48642	10/2/2019 7:27 AM
1256	48038	10/2/2019 7:27 AM
1257	48035	10/2/2019 7:21 AM
1258	48613	10/2/2019 7:19 AM
1259	48035	10/2/2019 7:15 AM
1260	48047	10/2/2019 7:14 AM
1261	48026	10/2/2019 7:13 AM
1262	48316	10/2/2019 7:10 AM
1263	48049	10/2/2019 6:36 AM
1264	49284	10/2/2019 3:49 AM
1265	48091	10/2/2019 12:13 AM

MSWC Boater Trends Survey

1266	48047	10/1/2019 11:53 PM
1267	49616	10/1/2019 11:04 PM
1268	49858	10/1/2019 11:03 PM
1269	48060	10/1/2019 10:59 PM
1270	49441	10/1/2019 10:17 PM
1271	48028	10/1/2019 8:24 PM
1272	48335	10/1/2019 8:13 PM
1273	48380	10/1/2019 7:43 PM
1274	48739	10/1/2019 7:37 PM
1275	48768	10/1/2019 7:32 PM
1276	49445	10/1/2019 7:30 PM
1277	48045	10/1/2019 7:18 PM
1278	49696	10/1/2019 7:13 PM
1279	48624	10/1/2019 7:12 PM
1280	49417	10/1/2019 7:09 PM
1281	48633	10/1/2019 7:08 PM
1282	43623	10/1/2019 7:00 PM
1283	48768	10/1/2019 6:46 PM
1284	48044	10/1/2019 6:34 PM
1285	48746	10/1/2019 6:33 PM
1286	48740	10/1/2019 5:42 PM
1287	49783	10/1/2019 5:11 PM
1288	48906	10/1/2019 4:34 PM
1289	48165	10/1/2019 4:09 PM
1290	48858	10/1/2019 3:29 PM
1291	48125	10/1/2019 3:27 PM
1292	49946	10/1/2019 3:15 PM
1293	49457	10/1/2019 3:10 PM
1294	48836	10/1/2019 2:00 PM
1295	49046	10/1/2019 1:53 PM
1296	54154	10/1/2019 1:47 PM
1297	49546	10/1/2019 1:40 PM
1298	48642	10/1/2019 1:19 PM
1299	48611	10/1/2019 1:16 PM
1300	49706	10/1/2019 1:11 PM
1301	48393	10/1/2019 12:58 PM
1302	48840	10/1/2019 12:49 PM
1303	48386	10/1/2019 12:42 PM
1304	49770	10/1/2019 12:29 PM
1305	49341	10/1/2019 12:23 PM
1306	49709	10/1/2019 12:15 PM

MSWC Boater Trends Survey

1307	48111	10/1/2019 12:13 PM
1308	49619	10/1/2019 12:05 PM
1309	48134	10/1/2019 11:58 AM
1310	48105	10/1/2019 11:56 AM
1311	49341	10/1/2019 11:56 AM
1312	49849	10/1/2019 11:23 AM
1313	60910	10/1/2019 11:17 AM
1314	49431	10/1/2019 11:16 AM
1315	49080	10/1/2019 11:13 AM
1316	49082	10/1/2019 11:04 AM
1317	48346	10/1/2019 10:48 AM
1318	49441	10/1/2019 10:39 AM
1319	48842	10/1/2019 10:35 AM
1320	49686	10/1/2019 10:33 AM
1321	48374	10/1/2019 10:31 AM
1322	48170	10/1/2019 10:07 AM
1323	49814	10/1/2019 9:48 AM
1324	48116	10/1/2019 9:45 AM
1325	55235	10/1/2019 9:32 AM
1326	48473	10/1/2019 9:18 AM
1327	48823	10/1/2019 9:17 AM
1328	49424	10/1/2019 9:13 AM
1329	48047	10/1/2019 9:11 AM
1330	48316	10/1/2019 9:09 AM
1331	49686	10/1/2019 9:07 AM
1332	48626	10/1/2019 9:02 AM
1333	48642	10/1/2019 8:40 AM
1334	49868	10/1/2019 8:37 AM
1335	48317	10/1/2019 8:36 AM
1336	49643	10/1/2019 8:35 AM
1337	48236	10/1/2019 8:27 AM
1338	54956	10/1/2019 8:24 AM
1339	49246	10/1/2019 8:18 AM
1340	48842	10/1/2019 8:11 AM
1341	48001	10/1/2019 8:07 AM
1342	48169	10/1/2019 8:06 AM
1343	49654	10/1/2019 8:05 AM
1344	48082	10/1/2019 7:58 AM
1345	48072	10/1/2019 7:55 AM
1346	46347	10/1/2019 7:54 AM
1347	49456	10/1/2019 7:48 AM

MSWC Boater Trends Survey

1348	48439	10/1/2019 7:46 AM
1349	49315	10/1/2019 7:40 AM
1350	49617	10/1/2019 7:40 AM
1351	49623	10/1/2019 7:36 AM
1352	49441	10/1/2019 7:36 AM
1353	48367	10/1/2019 7:26 AM
1354	48820	10/1/2019 7:25 AM
1355	49866	10/1/2019 7:20 AM
1356	49009	10/1/2019 7:14 AM
1357	55802	10/1/2019 7:08 AM
1358	49449	10/1/2019 7:06 AM
1359	49058	10/1/2019 7:05 AM
1360	48371	10/1/2019 7:04 AM
1361	49327	10/1/2019 7:00 AM
1362	49221	10/1/2019 6:51 AM
1363	48063	10/1/2019 6:29 AM
1364	48656	10/1/2019 6:20 AM
1365	49629	10/1/2019 6:08 AM
1366	48703	10/1/2019 6:04 AM
1367	48021	10/1/2019 5:59 AM
1368	49453	10/1/2019 5:51 AM
1369	48809	10/1/2019 5:51 AM
1370	48809	10/1/2019 5:50 AM
1371	48837	10/1/2019 5:18 AM
1372	49783	10/1/2019 3:21 AM
1373	49306	10/1/2019 2:39 AM
1374	49855	10/1/2019 2:13 AM
1375	49749	10/1/2019 2:10 AM
1376	49621	9/30/2019 11:53 PM
1377	48837	9/30/2019 11:29 PM
1378	49015	9/30/2019 11:12 PM
1379	32095	9/30/2019 10:54 PM
1380	49036	9/30/2019 10:30 PM
1381	48386	9/30/2019 10:16 PM
1382	30062	9/30/2019 10:15 PM
1383	48906	9/30/2019 10:01 PM
1384	48042	9/30/2019 9:52 PM
1385	48362	9/30/2019 9:49 PM
1386	49922	9/30/2019 9:25 PM
1387	49346	9/30/2019 8:51 PM
1388	48706	9/30/2019 8:43 PM

MSWC Boater Trends Survey

1389	48461	9/30/2019 8:39 PM
1390	49326	9/30/2019 8:36 PM
1391	48328	9/30/2019 8:22 PM
1392	49073	9/30/2019 8:22 PM
1393	48045	9/30/2019 8:11 PM
1394	49202	9/30/2019 8:10 PM
1395	49445	9/30/2019 8:00 PM
1396	49449	9/30/2019 7:53 PM
1397	48625	9/30/2019 7:49 PM
1398	49445	9/30/2019 7:45 PM
1399	48178	9/30/2019 7:44 PM
1400	48640	9/30/2019 7:42 PM
1401	49424	9/30/2019 7:37 PM
1402	48657	9/30/2019 7:23 PM
1403	48854	9/30/2019 7:16 PM
1404	49525	9/30/2019 7:16 PM
1405	48848	9/30/2019 7:12 PM
1406	49670	9/30/2019 7:11 PM
1407	48314	9/30/2019 7:03 PM
1408	49622	9/30/2019 7:03 PM
1409	48114	9/30/2019 6:51 PM
1410	48703	9/30/2019 6:46 PM
1411	48642	9/30/2019 6:34 PM
1412	48044	9/30/2019 6:25 PM
1413	49853	9/30/2019 6:22 PM
1414	48623	9/30/2019 6:15 PM
1415	49950	9/30/2019 6:14 PM
1416	48152	9/30/2019 6:12 PM
1417	49756	9/30/2019 5:59 PM
1418	49420	9/30/2019 5:53 PM
1419	48040	9/30/2019 5:52 PM
1420	48532	9/30/2019 5:52 PM
1421	48830	9/30/2019 5:49 PM
1422	49504	9/30/2019 5:48 PM
1423	49777	9/30/2019 5:47 PM
1424	63056	9/30/2019 5:47 PM
1425	49675	9/30/2019 5:42 PM
1426	48638	9/30/2019 5:40 PM
1427	48574	9/30/2019 5:35 PM
1428	49464	9/30/2019 5:34 PM
1429	48025	9/30/2019 5:28 PM

MSWC Boater Trends Survey

1430	49779	9/30/2019 5:28 PM
1431	43551	9/30/2019 5:24 PM
1432	49735	9/30/2019 5:21 PM
1433	49643	9/30/2019 5:17 PM
1434	49720	9/30/2019 5:12 PM
1435	49615	9/30/2019 5:10 PM
1436	48329	9/30/2019 5:08 PM
1437	49418	9/30/2019 5:04 PM
1438	49852	9/30/2019 5:01 PM
1439	48414	9/30/2019 4:59 PM
1440	60005	9/30/2019 4:56 PM
1441	48114	9/30/2019 4:55 PM
1442	48309	9/30/2019 4:52 PM
1443	48819	9/30/2019 4:51 PM
1444	49341	9/30/2019 4:47 PM
1445	49725	9/30/2019 4:43 PM
1446	48734	9/30/2019 4:43 PM
1447	48230	9/30/2019 4:43 PM
1448	49417	9/30/2019 4:41 PM
1449	49725	9/30/2019 4:40 PM
1450	48209	9/30/2019 4:35 PM
1451	48837	9/30/2019 4:35 PM
1452	49696	9/30/2019 4:34 PM
1453	48104	9/30/2019 4:29 PM
1454	48848	9/30/2019 4:28 PM
1455	48166	9/30/2019 4:28 PM
1456	48072	9/30/2019 4:27 PM
1457	49112	9/30/2019 4:26 PM
1458	48722	9/30/2019 4:25 PM
1459	49950	9/30/2019 4:23 PM
1460	48023	9/30/2019 4:20 PM
1461	48060	9/30/2019 4:14 PM
1462	49424	9/30/2019 4:13 PM
1463	48837	9/30/2019 4:09 PM
1464	49403	9/30/2019 4:08 PM
1465	48438	9/30/2019 4:06 PM
1466	43551	9/30/2019 4:04 PM
1467	48820	9/30/2019 4:04 PM
1468	49735	9/30/2019 4:01 PM
1469	49315	9/30/2019 4:00 PM
1470	49870-1145	9/30/2019 4:00 PM

MSWC Boater Trends Survey

1471	49345	9/30/2019 3:59 PM
1472	49870-1145	9/30/2019 3:58 PM
1473	45005	9/30/2019 3:58 PM
1474	48043	9/30/2019 3:56 PM
1475	48917	9/30/2019 3:55 PM
1476	49720	9/30/2019 3:53 PM
1477	49456	9/30/2019 3:53 PM
1478	48357	9/30/2019 3:52 PM
1479	49305	9/30/2019 3:51 PM
1480	48473	9/30/2019 3:49 PM
1481	49333	9/30/2019 3:48 PM
1482	48655	9/30/2019 3:44 PM
1483	49046	9/30/2019 3:43 PM
1484	48433	9/30/2019 3:43 PM
1485	48843	9/30/2019 3:40 PM
1486	49953	9/30/2019 3:38 PM
1487	49415	9/30/2019 3:38 PM
1488	48890	9/30/2019 3:38 PM
1489	54540	9/30/2019 3:35 PM
1490	49837	9/30/2019 3:34 PM
1491	49316	9/30/2019 3:32 PM
1492	48214	9/30/2019 3:32 PM
1493	49341	9/30/2019 3:31 PM
1494	49651	9/30/2019 3:30 PM
1495	48884	9/30/2019 3:30 PM
1496	49783	9/30/2019 3:30 PM
1497	48917	9/30/2019 3:29 PM
1498	49770	9/30/2019 3:29 PM
1499	49332	9/30/2019 3:28 PM
1500	49442	9/30/2019 3:27 PM
1501	49417	9/30/2019 3:26 PM
1502	49022	9/30/2019 3:26 PM
1503	48105	9/30/2019 3:25 PM
1504	58701	9/30/2019 3:24 PM
1505	48178	9/30/2019 3:22 PM
1506	48442	9/30/2019 3:21 PM
1507	48116	9/30/2019 3:20 PM
1508	49503	9/30/2019 3:20 PM
1509	48168	9/30/2019 3:19 PM
1510	49659	9/30/2019 3:18 PM
1511	48854	9/30/2019 3:17 PM

MSWC Boater Trends Survey

1512	49727	9/30/2019 3:16 PM
1513	48152	9/30/2019 3:16 PM
1514	48624	9/30/2019 3:14 PM
1515	48631	9/30/2019 3:13 PM
1516	48306	9/30/2019 3:12 PM
1517	48451	9/30/2019 3:12 PM
1518	49765	9/30/2019 3:10 PM
1519	49009	9/30/2019 3:10 PM
1520	48875	9/30/2019 3:10 PM
1521	48471	9/30/2019 3:09 PM
1522	49725	9/30/2019 3:09 PM
1523	49601	9/30/2019 3:09 PM
1524	48134	9/30/2019 3:08 PM
1525	48637	9/30/2019 3:08 PM
1526	48638	9/30/2019 3:07 PM
1527	48909	9/30/2019 3:07 PM
1528	48134	9/30/2019 3:06 PM
1529	48138	9/30/2019 3:06 PM
1530	49307	9/30/2019 3:05 PM
1531	48079	9/30/2019 3:05 PM
1532	48624	9/30/2019 3:03 PM
1533	48193	9/30/2019 3:03 PM
1534	48629	9/30/2019 3:02 PM
1535	49202	9/30/2019 3:02 PM
1536	49285	9/30/2019 3:01 PM
1537	48836	9/30/2019 2:59 PM
1538	49862	9/30/2019 2:59 PM
1539	49055	9/30/2019 2:58 PM
1540	49854	9/30/2019 2:58 PM
1541	48801	9/30/2019 2:58 PM
1542	48230	9/30/2019 2:58 PM
1543	49971	9/30/2019 2:57 PM
1544	48441	9/30/2019 2:57 PM
1545	54022	9/30/2019 2:55 PM
1546	48603	9/30/2019 2:54 PM
1547	49660	9/30/2019 2:54 PM
1548	48158	9/30/2019 2:52 PM
1549	48659	9/30/2019 2:52 PM
1550	48864	9/30/2019 2:52 PM
1551	39341	9/30/2019 2:51 PM
1552	48040	9/30/2019 2:51 PM

MSWC Boater Trends Survey

1553	48836	9/30/2019 2:50 PM
1554	49456	9/30/2019 2:49 PM
1555	48446	9/30/2019 2:49 PM
1556	49456	9/30/2019 2:48 PM
1557	48125	9/30/2019 2:48 PM
1558	49643	9/30/2019 2:47 PM
1559	49931	9/30/2019 2:47 PM
1560	49462	9/30/2019 2:47 PM
1561	49525	9/30/2019 2:47 PM
1562	48729	9/30/2019 2:47 PM
1563	48130	9/30/2019 2:47 PM
1564	48071	9/30/2019 2:47 PM
1565	49431	9/30/2019 2:46 PM
1566	48811	9/30/2019 2:45 PM
1567	48381	9/30/2019 2:27 PM
1568	48625	9/30/2019 2:21 PM
1569	48315	9/30/2019 2:12 PM
1570	48152	9/30/2019 1:39 PM
1571	48169	9/30/2019 1:03 PM
1572	48195	9/30/2019 12:46 PM
1573	49445	9/30/2019 12:21 PM
1574	48169	9/30/2019 12:15 PM
1575	48095	9/30/2019 11:51 AM
1576	48188	9/30/2019 11:48 AM
1577	48060	9/30/2019 11:48 AM
1578	49730	9/30/2019 11:34 AM
1579	48421	9/30/2019 11:28 AM
1580	48161	9/30/2019 11:19 AM
1581	48079	9/30/2019 11:12 AM
1582	48080	9/30/2019 11:08 AM
1583	40370	9/30/2019 11:06 AM
1584	48809	9/30/2019 11:04 AM
1585	49660	9/30/2019 10:57 AM
1586	49503	9/30/2019 10:51 AM
1587	48081	9/30/2019 10:37 AM
1588	49779	9/30/2019 10:35 AM
1589	48895	9/30/2019 10:20 AM
1590	48220	9/30/2019 10:15 AM
1591	48836	9/30/2019 10:12 AM
1592	49720	9/30/2019 10:12 AM
1593	49684	9/30/2019 10:03 AM

MSWC Boater Trends Survey

1594	48316	9/30/2019 9:56 AM
1595	48084	9/30/2019 9:52 AM
1596	60647	9/30/2019 9:48 AM
1597	49098	9/30/2019 9:38 AM
1598	48467	9/30/2019 9:36 AM
1599	49464	9/30/2019 9:33 AM
1600	49931	9/30/2019 9:27 AM
1601	49853	9/30/2019 9:16 AM
1602	48651	9/30/2019 9:13 AM
1603	48651	9/30/2019 9:06 AM
1604	48866	9/30/2019 9:00 AM
1605	48623	9/30/2019 8:50 AM
1606	48101	9/30/2019 8:47 AM
1607	48631	9/30/2019 8:43 AM
1608	48230	9/30/2019 8:28 AM
1609	49862	9/30/2019 8:05 AM
1610	49508	9/30/2019 8:05 AM
1611	48890	9/30/2019 7:41 AM
1612	60126	9/30/2019 7:41 AM
1613	49696	9/30/2019 7:35 AM
1614	49026	9/30/2019 7:28 AM
1615	49026	9/30/2019 7:25 AM
1616	48060	9/30/2019 7:09 AM
1617	48328	9/30/2019 6:58 AM
1618	49013	9/30/2019 6:00 AM
1619	49424	9/30/2019 4:56 AM
1620	49329	9/30/2019 1:19 AM
1621	48818	9/30/2019 12:51 AM
1622	48879	9/29/2019 10:49 PM
1623	33952	9/29/2019 10:18 PM
1624	48038	9/29/2019 10:10 PM
1625	48640	9/29/2019 9:59 PM
1626	35958	9/29/2019 9:57 PM
1627	49686	9/29/2019 9:55 PM
1628	48165	9/29/2019 9:23 PM
1629	48096	9/29/2019 9:07 PM
1630	48628	9/29/2019 9:03 PM
1631	49601	9/29/2019 8:51 PM
1632	49418	9/29/2019 8:43 PM
1633	47906	9/29/2019 8:14 PM
1634	48054	9/29/2019 8:12 PM

MSWC Boater Trends Survey

1635	48103	9/29/2019 7:29 PM
1636	48348	9/29/2019 7:01 PM
1637	48001	9/29/2019 5:55 PM
1638	49461	9/29/2019 5:35 PM
1639	54911	9/29/2019 5:31 PM
1640	48124	9/29/2019 5:28 PM
1641	48446	9/29/2019 5:22 PM
1642	48178	9/29/2019 5:03 PM
1643	49512	9/29/2019 5:02 PM
1644	49976	9/29/2019 4:33 PM
1645	48631	9/29/2019 4:01 PM
1646	48801	9/29/2019 3:53 PM
1647	48801	9/29/2019 3:52 PM
1648	48442	9/29/2019 3:50 PM
1649	48811	9/29/2019 3:40 PM
1650	48326	9/29/2019 2:41 PM
1651	48039	9/29/2019 2:34 PM
1652	49855	9/29/2019 2:30 PM
1653	49437	9/29/2019 2:22 PM
1654	48428	9/29/2019 1:58 PM
1655	49601	9/29/2019 1:51 PM
1656	49456	9/29/2019 1:36 PM
1657	49456	9/29/2019 1:29 PM
1658	45241	9/29/2019 1:21 PM
1659	49456	9/29/2019 1:21 PM
1660	48838	9/29/2019 1:16 PM
1661	49028	9/29/2019 1:05 PM
1662	49719	9/29/2019 1:04 PM
1663	60175	9/29/2019 12:53 PM
1664	49224	9/29/2019 12:45 PM
1665	48383	9/29/2019 12:38 PM
1666	48703	9/29/2019 12:25 PM
1667	49068	9/29/2019 12:16 PM
1668	49068	9/29/2019 12:11 PM
1669	48763	9/29/2019 11:55 AM
1670	49456	9/29/2019 11:40 AM
1671	49329	9/29/2019 11:36 AM
1672	49315	9/29/2019 11:29 AM
1673	49677	9/29/2019 11:21 AM
1674	48433	9/29/2019 11:05 AM
1675	48081-2345	9/29/2019 11:03 AM

MSWC Boater Trends Survey

1676	48433	9/29/2019 11:00 AM
1677	48723	9/29/2019 10:54 AM
1678	49201	9/29/2019 10:43 AM
1679	46307	9/29/2019 10:13 AM
1680	49090	9/29/2019 10:07 AM
1681	49445	9/29/2019 10:06 AM
1682	49637	9/29/2019 9:29 AM
1683	49648-9226	9/29/2019 8:57 AM
1684	49080	9/29/2019 8:51 AM
1685	48829	9/29/2019 8:19 AM
1686	48309	9/29/2019 8:05 AM
1687	49046	9/29/2019 8:04 AM
1688	48154	9/29/2019 7:34 AM
1689	48867	9/29/2019 7:33 AM
1690	49046	9/29/2019 7:31 AM
1691	48895	9/29/2019 7:27 AM
1692	48169	9/29/2019 7:24 AM
1693	46360	9/29/2019 7:07 AM
1694	48085	9/29/2019 6:43 AM
1695	49305	9/29/2019 6:14 AM
1696	48880	9/29/2019 6:13 AM
1697	48150	9/29/2019 2:24 AM
1698	49712	9/29/2019 12:05 AM
1699	49246	9/28/2019 11:33 PM
1700	48442	9/28/2019 11:14 PM
1701	49423	9/28/2019 10:58 PM
1702	48025	9/28/2019 10:49 PM
1703	48414	9/28/2019 10:47 PM
1704	48414	9/28/2019 10:40 PM
1705	48823	9/28/2019 10:06 PM
1706	49424	9/28/2019 10:04 PM
1707	54115	9/28/2019 9:36 PM
1708	49684	9/28/2019 9:33 PM
1709	48706	9/28/2019 9:08 PM
1710	48165	9/28/2019 9:05 PM
1711	49686	9/28/2019 9:04 PM
1712	48165	9/28/2019 8:46 PM
1713	48356	9/28/2019 8:41 PM
1714	49001	9/28/2019 7:53 PM
1715	49657	9/28/2019 7:46 PM
1716	48458	9/28/2019 7:34 PM

MSWC Boater Trends Survey

1717	48763	9/28/2019 7:21 PM
1718	49424	9/28/2019 6:57 PM
1719	48045	9/28/2019 6:46 PM
1720	49648	9/28/2019 6:37 PM
1721	49331	9/28/2019 6:21 PM
1722	48640	9/28/2019 6:02 PM
1723	48836	9/28/2019 5:02 PM
1724	49424	9/28/2019 4:22 PM
1725	49080	9/28/2019 4:01 PM
1726	48191-9758	9/28/2019 3:49 PM
1727	49719	9/28/2019 3:46 PM
1728	49629	9/28/2019 3:42 PM
1729	32128	9/28/2019 3:35 PM
1730	49601	9/28/2019 3:31 PM
1731	48158	9/28/2019 3:16 PM
1732	46567	9/28/2019 3:14 PM
1733	48117	9/28/2019 2:29 PM
1734	49251	9/28/2019 2:29 PM
1735	49948	9/28/2019 2:15 PM
1736	49456	9/28/2019 1:37 PM
1737	49456	9/28/2019 1:37 PM
1738	60613	9/28/2019 1:33 PM
1739	49456	9/28/2019 1:30 PM
1740	48473	9/28/2019 1:24 PM
1741	44122	9/28/2019 1:21 PM
1742	48473	9/28/2019 1:18 PM
1743	60154	9/28/2019 12:58 PM
1744	49428	9/28/2019 12:57 PM
1745	48703	9/28/2019 12:56 PM
1746	48739	9/28/2019 12:41 PM
1747	49855	9/28/2019 12:37 PM
1748	49719	9/28/2019 12:34 PM
1749	49036	9/28/2019 12:31 PM
1750	48739	9/28/2019 12:28 PM
1751	49648	9/28/2019 12:28 PM
1752	49525	9/28/2019 12:22 PM
1753	48858	9/28/2019 12:18 PM
1754	49424	9/28/2019 12:11 PM
1755	48732	9/28/2019 12:00 PM
1756	48043	9/28/2019 11:49 AM
1757	48047	9/28/2019 11:46 AM

MSWC Boater Trends Survey

1758	48838	9/28/2019 11:17 AM
1759	46635	9/28/2019 11:13 AM
1760	46565	9/28/2019 11:05 AM
1761	49423	9/28/2019 11:03 AM
1762	60526	9/28/2019 10:57 AM
1763	l9z2v1	9/28/2019 10:54 AM
1764	48827	9/28/2019 10:43 AM
1765	48421-9626	9/28/2019 10:37 AM
1766	48060	9/28/2019 10:35 AM
1767	48423	9/28/2019 10:33 AM
1768	60045	9/28/2019 10:30 AM
1769	48138	9/28/2019 10:26 AM
1770	48371	9/28/2019 10:22 AM
1771	48169	9/28/2019 10:21 AM
1772	54151	9/28/2019 9:55 AM
1773	48329	9/28/2019 9:39 AM
1774	48755	9/28/2019 9:25 AM
1775	49858	9/28/2019 9:15 AM
1776	48842	9/28/2019 9:08 AM
1777	48732	9/28/2019 9:03 AM
1778	49419	9/28/2019 9:00 AM
1779	49601	9/28/2019 8:58 AM
1780	49642	9/28/2019 8:46 AM
1781	48871	9/28/2019 8:41 AM
1782	48436	9/28/2019 8:33 AM
1783	75013	9/28/2019 8:29 AM
1784	48323	9/28/2019 8:29 AM
1785	48135	9/28/2019 8:26 AM
1786	49684	9/28/2019 8:11 AM
1787	49329	9/28/2019 8:02 AM
1788	49441	9/28/2019 7:52 AM
1789	48002	9/28/2019 7:46 AM
1790	49525	9/28/2019 7:35 AM
1791	48623	9/28/2019 7:28 AM
1792	48350	9/28/2019 7:27 AM
1793	48640	9/28/2019 7:27 AM
1794	49958	9/28/2019 6:12 AM
1795	49525	9/28/2019 6:08 AM
1796	49646	9/28/2019 4:24 AM
1797	48450	9/28/2019 4:19 AM
1798	N8A2J9	9/28/2019 3:04 AM

MSWC Boater Trends Survey

1799	48386	9/28/2019 1:49 AM
1800	49431	9/28/2019 1:20 AM
1801	48642	9/28/2019 12:32 AM
1802	48001	9/28/2019 12:07 AM
1803	48348	9/28/2019 12:01 AM
1804	49738	9/27/2019 11:50 PM
1805	48044	9/27/2019 11:28 PM
1806	49428	9/27/2019 11:22 PM
1807	48836	9/27/2019 11:19 PM
1808	48135	9/27/2019 11:14 PM
1809	49675	9/27/2019 11:06 PM
1810	48843	9/27/2019 11:02 PM
1811	44121	9/27/2019 10:39 PM
1812	49707	9/27/2019 10:33 PM
1813	49457	9/27/2019 10:26 PM
1814	54143	9/27/2019 10:04 PM
1815	49854	9/27/2019 9:56 PM
1816	28461	9/27/2019 9:51 PM
1817	49709	9/27/2019 9:51 PM
1818	48623	9/27/2019 9:47 PM
1819	49720	9/27/2019 9:41 PM
1820	48882	9/27/2019 9:35 PM
1821	48750	9/27/2019 9:32 PM
1822	48604	9/27/2019 9:28 PM
1823	48045	9/27/2019 9:19 PM
1824	49712	9/27/2019 9:14 PM
1825	49635	9/27/2019 9:09 PM
1826	49777	9/27/2019 9:08 PM
1827	46701	9/27/2019 9:07 PM
1828	48074	9/27/2019 9:07 PM
1829	48640	9/27/2019 9:02 PM
1830	60638	9/27/2019 8:57 PM
1831	;8230	9/27/2019 8:57 PM
1832	48073	9/27/2019 8:52 PM
1833	48079	9/27/2019 8:38 PM
1834	46322	9/27/2019 8:30 PM
1835	48430	9/27/2019 8:27 PM
1836	48640	9/27/2019 8:18 PM
1837	48893	9/27/2019 8:14 PM
1838	48135	9/27/2019 7:58 PM
1839	48879	9/27/2019 7:56 PM

MSWC Boater Trends Survey

1840	49635	9/27/2019 7:47 PM
1841	48819	9/27/2019 7:42 PM
1842	49341	9/27/2019 7:38 PM
1843	48071	9/27/2019 7:33 PM
1844	48767	9/27/2019 7:28 PM
1845	48047	9/27/2019 7:23 PM
1846	49265	9/27/2019 7:13 PM
1847	49286	9/27/2019 7:04 PM
1848	49738,	9/27/2019 7:01 PM
1849	48466	9/27/2019 6:58 PM
1850	49735	9/27/2019 6:58 PM
1851	48801	9/27/2019 6:57 PM
1852	49402	9/27/2019 6:49 PM
1853	46311	9/27/2019 6:48 PM
1854	49236	9/27/2019 6:45 PM
1855	48626	9/27/2019 6:44 PM
1856	48044	9/27/2019 6:44 PM
1857	48446	9/27/2019 6:38 PM
1858	49712	9/27/2019 6:34 PM
1859	48236	9/27/2019 6:31 PM
1860	54155	9/27/2019 6:26 PM
1861	44280	9/27/2019 6:23 PM
1862	48154	9/27/2019 6:19 PM
1863	48624	9/27/2019 6:18 PM
1864	49098	9/27/2019 6:13 PM
1865	48854	9/27/2019 6:12 PM
1866	49331	9/27/2019 6:11 PM
1867	49456	9/27/2019 6:07 PM
1868	53122	9/27/2019 6:04 PM
1869	48390	9/27/2019 6:01 PM
1870	54235	9/27/2019 6:00 PM
1871	48390	9/27/2019 6:00 PM
1872	48103	9/27/2019 5:59 PM
1873	48103	9/27/2019 5:59 PM
1874	48726	9/27/2019 5:38 PM
1875	48167	9/27/2019 5:31 PM
1876	48820	9/27/2019 5:30 PM
1877	48185	9/27/2019 5:29 PM
1878	48612	9/27/2019 5:27 PM
1879	48757	9/27/2019 5:25 PM
1880	48374	9/27/2019 5:23 PM

MSWC Boater Trends Survey

1881	48915	9/27/2019 5:20 PM
1882	49720	9/27/2019 5:19 PM
1883	48837	9/27/2019 5:15 PM
1884	49424	9/27/2019 4:57 PM
1885	48846	9/27/2019 4:52 PM
1886	49735	9/27/2019 4:46 PM
1887	48135	9/27/2019 4:38 PM
1888	49546	9/27/2019 4:33 PM
1889	48047	9/27/2019 4:33 PM
1890	48307	9/27/2019 4:06 PM
1891	49046	9/27/2019 3:47 PM
1892	48073	9/27/2019 3:46 PM
1893	48467	9/27/2019 3:39 PM
1894	48028	9/27/2019 3:36 PM
1895	49507	9/27/2019 3:35 PM
1896	48382	9/27/2019 3:32 PM
1897	48864	9/27/2019 3:31 PM
1898	48837	9/27/2019 3:29 PM
1899	49740	9/27/2019 3:27 PM
1900	49720	9/27/2019 3:19 PM
1901	48230	9/27/2019 3:08 PM
1902	48757	9/27/2019 3:06 PM
1903	48125	9/27/2019 3:03 PM
1904	48624	9/27/2019 3:02 PM
1905	48108	9/27/2019 2:54 PM
1906	49046	9/27/2019 2:54 PM
1907	49747	9/27/2019 2:50 PM
1908	49008	9/27/2019 2:50 PM
1909	49709	9/27/2019 2:32 PM
1910	48442	9/27/2019 2:30 PM
1911	N8S1C8	9/27/2019 2:28 PM
1912	600:1	9/27/2019 2:27 PM
1913	49916	9/27/2019 2:27 PM
1914	49201	9/27/2019 2:23 PM
1915	49816	9/27/2019 2:22 PM
1916	41018	9/27/2019 2:20 PM
1917	48842	9/27/2019 2:19 PM
1918	60449	9/27/2019 2:17 PM
1919	38316	9/27/2019 2:14 PM
1920	49099	9/27/2019 2:12 PM
1921	49929	9/27/2019 2:08 PM

MSWC Boater Trends Survey

1922	48462	9/27/2019 2:06 PM
1923	53186	9/27/2019 2:05 PM
1924	49085	9/27/2019 1:56 PM
1925	48042	9/27/2019 1:48 PM
1926	48730	9/27/2019 1:48 PM
1927	48442	9/27/2019 1:48 PM
1928	48001	9/27/2019 1:42 PM
1929	49814	9/27/2019 1:36 PM
1930	49026	9/27/2019 1:32 PM
1931	49506	9/27/2019 1:31 PM
1932	48629	9/27/2019 1:30 PM
1933	49001	9/27/2019 1:27 PM
1934	48047	9/27/2019 1:23 PM
1935	48111	9/27/2019 1:14 PM
1936	49913	9/27/2019 1:12 PM
1937	49426	9/27/2019 1:07 PM
1938	48073	9/27/2019 1:06 PM
1939	49601	9/27/2019 1:06 PM
1940	49930	9/27/2019 1:05 PM
1941	48073	9/27/2019 1:02 PM
1942	49203 49612	9/27/2019 12:59 PM
1943	48854	9/27/2019 12:57 PM
1944	53151	9/27/2019 12:55 PM
1945	48073	9/27/2019 12:53 PM
1946	48306	9/27/2019 12:51 PM
1947	48393	9/27/2019 12:50 PM
1948	48186	9/27/2019 12:46 PM
1949	48228	9/27/2019 12:43 PM
1950	48116	9/27/2019 12:43 PM
1951	48055	9/27/2019 12:41 PM
1952	49885	9/27/2019 12:38 PM
1953	43611	9/27/2019 12:34 PM
1954	49050	9/27/2019 12:32 PM
1955	49090	9/27/2019 12:32 PM
1956	49730	9/27/2019 12:28 PM
1957	48836	9/27/2019 12:26 PM
1958	48146	9/27/2019 12:20 PM
1959	48893	9/27/2019 12:19 PM
1960	48439	9/27/2019 12:17 PM
1961	49735	9/27/2019 12:16 PM
1962	48706	9/27/2019 12:16 PM

MSWC Boater Trends Survey

1963	49503	9/27/2019 12:12 PM
1964	48723	9/27/2019 12:10 PM
1965	48178	9/27/2019 12:09 PM
1966	48045	9/27/2019 12:03 PM
1967	49777	9/27/2019 12:03 PM
1968	49735	9/27/2019 12:01 PM
1969	49423	9/27/2019 12:00 PM
1970	49668	9/27/2019 11:59 AM
1971	60031	9/27/2019 11:59 AM
1972	48025	9/27/2019 11:58 AM
1973	45331	9/27/2019 11:56 AM
1974	48744	9/27/2019 11:55 AM
1975	49424	9/27/2019 11:46 AM
1976	48435	9/27/2019 11:45 AM
1977	49417	9/27/2019 11:44 AM
1978	49083	9/27/2019 11:44 AM
1979	49301	9/27/2019 11:44 AM
1980	60515	9/27/2019 11:43 AM
1981	49770	9/27/2019 11:43 AM
1982	46371	9/27/2019 11:43 AM
1983	49862	9/27/2019 11:42 AM
1984	48067	9/27/2019 11:36 AM
1985	48875	9/27/2019 11:35 AM
1986	48197	9/27/2019 11:33 AM
1987	99901	9/27/2019 11:32 AM
1988	49221	9/27/2019 11:32 AM
1989	48047	9/27/2019 11:32 AM
1990	49021	9/27/2019 11:31 AM
1991	49640	9/27/2019 11:30 AM
1992	48632	9/27/2019 11:30 AM
1993	48089	9/27/2019 11:29 AM
1994	48837	9/27/2019 11:28 AM
1995	48230	9/27/2019 11:27 AM
1996	48423	9/27/2019 11:26 AM
1997	48820	9/27/2019 11:25 AM
1998	48134	9/27/2019 11:19 AM
1999	48346	9/27/2019 11:19 AM
2000	49816	9/27/2019 11:17 AM
2001	49858	9/27/2019 11:17 AM
2002	49765	9/27/2019 11:14 AM
2003	49456	9/27/2019 11:14 AM

MSWC Boater Trends Survey

2004	48843	9/27/2019 11:13 AM
2005	48161	9/27/2019 11:11 AM
2006	49632	9/27/2019 11:10 AM
2007	48708	9/27/2019 11:10 AM
2008	49759	9/27/2019 11:10 AM
2009	49866	9/27/2019 11:07 AM
2010	49525	9/27/2019 11:06 AM
2011	49616	9/27/2019 11:05 AM
2012	55105	9/27/2019 11:05 AM
2013	60045	9/27/2019 11:04 AM
2014	49264	9/27/2019 11:03 AM
2015	49431	9/27/2019 11:00 AM
2016	48843	9/27/2019 10:59 AM
2017	48170	9/27/2019 10:58 AM
2018	60456	9/27/2019 10:56 AM
2019	48336	9/27/2019 10:54 AM
2020	49512	9/27/2019 10:53 AM
2021	48169	9/27/2019 10:53 AM
2022	49426	9/27/2019 10:52 AM
2023	49091	9/27/2019 10:51 AM
2024	48047	9/27/2019 10:45 AM
2025	48236	9/27/2019 10:45 AM
2026	48001	9/27/2019 10:43 AM
2027	48186	9/27/2019 10:42 AM
2028	48001	9/27/2019 10:40 AM
2029	48653	9/27/2019 10:40 AM
2030	48473	9/27/2019 10:38 AM
2031	48162	9/27/2019 10:33 AM
2032	48864	9/27/2019 10:33 AM
2033	48623	9/27/2019 10:32 AM
2034	49408	9/27/2019 10:31 AM
2035	49277	9/27/2019 10:31 AM
2036	48750	9/27/2019 10:31 AM
2037	49525	9/27/2019 10:31 AM
2038	49740	9/27/2019 10:30 AM
2039	49806	9/27/2019 10:29 AM
2040	48103	9/27/2019 10:26 AM
2041	48170	9/27/2019 10:25 AM
2042	60643	9/27/2019 10:24 AM
2043	48604	9/27/2019 10:23 AM
2044	48315	9/27/2019 10:22 AM

MSWC Boater Trends Survey

2045	48346	9/27/2019 10:22 AM
2046	49071	9/27/2019 10:22 AM
2047	49307	9/27/2019 10:18 AM
2048	49431	9/27/2019 10:17 AM
2049	60527	9/27/2019 10:16 AM
2050	48749	9/27/2019 10:16 AM
2051	49779	9/27/2019 10:16 AM
2052	48174	9/27/2019 10:15 AM
2053	48162	9/27/2019 10:14 AM
2054	49431	9/27/2019 10:13 AM
2055	60657	9/27/2019 10:13 AM
2056	48725	9/27/2019 10:09 AM
2057	49332	9/27/2019 10:09 AM
2058	48843	9/27/2019 10:08 AM
2059	48306	9/27/2019 10:07 AM
2060	49770	9/27/2019 10:05 AM
2061	49014	9/27/2019 10:00 AM
2062	48412	9/27/2019 9:56 AM
2063	26241	9/27/2019 9:55 AM
2064	49080	9/27/2019 9:53 AM
2065	49323	9/27/2019 9:52 AM
2066	49457	9/27/2019 9:51 AM
2067	48045	9/27/2019 9:48 AM
2068	49050	9/27/2019 9:48 AM
2069	48439	9/27/2019 9:48 AM
2070	48091	9/27/2019 9:47 AM
2071	48230	9/27/2019 9:46 AM
2072	48230	9/27/2019 9:45 AM
2073	48307	9/27/2019 9:44 AM
2074	48604	9/27/2019 9:44 AM
2075	49015	9/27/2019 9:43 AM
2076	49685	9/27/2019 9:42 AM
2077	48160	9/27/2019 9:42 AM
2078	54235	9/27/2019 9:40 AM
2079	49776	9/27/2019 9:39 AM
2080	48730	9/27/2019 9:38 AM
2081	49341	9/27/2019 9:37 AM
2082	48173	9/27/2019 9:35 AM
2083	45414	9/27/2019 9:34 AM
2084	43551	9/27/2019 9:32 AM
2085	49620	9/27/2019 9:31 AM

MSWC Boater Trends Survey

2086	49431	9/27/2019 9:29 AM
2087	49437	9/27/2019 9:28 AM
2088	48843	9/27/2019 9:25 AM
2089	49866	9/27/2019 9:24 AM
2090	60091	9/27/2019 9:23 AM
2091	49323	9/27/2019 9:23 AM
2092	49770	9/27/2019 9:21 AM
2093	49601	9/27/2019 9:21 AM
2094	49417	9/27/2019 9:21 AM
2095	49721	9/27/2019 9:20 AM
2096	48708	9/27/2019 9:19 AM
2097	49461	9/27/2019 9:18 AM
2098	49684	9/27/2019 9:17 AM
2099	48307	9/27/2019 9:17 AM
2100	60137	9/27/2019 9:15 AM
2101	49770	9/27/2019 9:15 AM
2102	49615	9/27/2019 9:15 AM
2103	53235	9/27/2019 9:14 AM
2104	49431	9/27/2019 9:14 AM
2105	49721	9/27/2019 9:12 AM
2106	49344	9/27/2019 9:10 AM
2107	48854	9/27/2019 9:08 AM
2108	48150	9/27/2019 9:07 AM
2109	48463	9/27/2019 9:05 AM
2110	49931	9/27/2019 9:04 AM
2111	49406	9/27/2019 9:03 AM
2112	P6A3V4	9/27/2019 9:03 AM
2113	48746	9/27/2019 9:02 AM
2114	49684	9/27/2019 9:02 AM
2115	32043	9/27/2019 9:01 AM
2116	49015	9/27/2019 8:59 AM
2117	49464	9/27/2019 8:59 AM
2118	49643	9/27/2019 8:59 AM
2119	49945	9/27/2019 8:58 AM
2120	49259	9/27/2019 8:57 AM
2121	49961	9/27/2019 8:53 AM
2122	48622	9/27/2019 8:53 AM
2123	48154	9/27/2019 8:52 AM
2124	48461	9/27/2019 8:52 AM
2125	49770	9/27/2019 8:52 AM
2126	49048	9/27/2019 8:50 AM

MSWC Boater Trends Survey

2127	49770	9/27/2019 8:50 AM
2128	49341	9/27/2019 8:50 AM
2129	49424	9/27/2019 8:49 AM
2130	48629	9/27/2019 8:49 AM
2131	48082	9/27/2019 8:48 AM
2132	49684	9/27/2019 8:46 AM
2133	48313	9/27/2019 8:43 AM
2134	54121	9/27/2019 8:43 AM
2135	49442	9/27/2019 8:40 AM
2136	48750	9/27/2019 8:39 AM
2137	49508	9/27/2019 8:39 AM
2138	49417	9/27/2019 8:38 AM
2139	48910	9/27/2019 8:38 AM
2140	48357	9/27/2019 8:38 AM
2141	48038	9/27/2019 8:37 AM
2142	49321	9/27/2019 8:37 AM
2143	48066	9/27/2019 8:36 AM
2144	49864	9/27/2019 8:34 AM
2145	48065	9/27/2019 8:33 AM
2146	49117	9/27/2019 8:31 AM
2147	49512	9/27/2019 8:31 AM
2148	49417	9/27/2019 8:31 AM
2149	48430	9/27/2019 8:30 AM
2150	49615	9/27/2019 8:28 AM
2151	49534	9/27/2019 8:27 AM
2152	48442	9/27/2019 8:26 AM
2153	48473	9/27/2019 8:25 AM
2154	48316	9/27/2019 8:24 AM
2155	48823	9/27/2019 8:22 AM
2156	48174	9/27/2019 8:21 AM
2157	49735	9/27/2019 8:19 AM
2158	48170	9/27/2019 8:18 AM
2159	48220	9/27/2019 8:17 AM
2160	48101	9/27/2019 8:16 AM
2161	49079	9/27/2019 8:14 AM
2162	48625	9/27/2019 8:14 AM
2163	49504	9/27/2019 8:13 AM
2164	49706	9/27/2019 8:12 AM
2165	48509	9/27/2019 8:10 AM
2166	48073	9/27/2019 8:08 AM
2167	49783	9/27/2019 8:07 AM

MSWC Boater Trends Survey

2168	49726	9/27/2019 8:06 AM
2169	49319	9/27/2019 8:06 AM
2170	48734	9/27/2019 8:05 AM
2171	48875	9/27/2019 8:04 AM
2172	48313	9/27/2019 8:04 AM
2173	49814	9/27/2019 8:04 AM
2174	49009	9/27/2019 8:03 AM
2175	48073	9/27/2019 8:03 AM
2176	Nom1t0	9/27/2019 8:02 AM
2177	48080	9/27/2019 8:02 AM
2178	48661	9/27/2019 8:01 AM
2179	48612	9/27/2019 7:58 AM
2180	49615	9/27/2019 7:57 AM
2181	48877	9/27/2019 7:55 AM
2182	48198	9/27/2019 7:54 AM
2183	48843	9/27/2019 7:54 AM
2184	49783	9/27/2019 7:53 AM
2185	49128	9/27/2019 7:53 AM
2186	48035	9/27/2019 7:53 AM
2187	48455	9/27/2019 7:53 AM
2188	48049	9/27/2019 7:51 AM
2189	48306	9/27/2019 7:50 AM
2190	48602	9/27/2019 7:50 AM
2191	43512	9/27/2019 7:49 AM
2192	46534	9/27/2019 7:48 AM
2193	49434	9/27/2019 7:48 AM
2194	49441	9/27/2019 7:47 AM
2195	49228	9/27/2019 7:46 AM
2196	48767	9/27/2019 7:46 AM
2197	48750	9/27/2019 7:45 AM
2198	48138	9/27/2019 7:45 AM
2199	48195	9/27/2019 7:44 AM
2200	49080	9/27/2019 7:43 AM
2201	48063	9/27/2019 7:41 AM
2202	48059	9/27/2019 7:41 AM
2203	48001	9/27/2019 7:39 AM
2204	53551	9/27/2019 7:39 AM
2205	48650	9/27/2019 7:38 AM
2206	48168	9/27/2019 7:38 AM
2207	48047	9/27/2019 7:38 AM
2208	49441	9/27/2019 7:35 AM

MSWC Boater Trends Survey

2209	48079	9/27/2019 7:33 AM
2210	49837	9/27/2019 7:28 AM
2211	48827	9/27/2019 7:28 AM
2212	48444	9/27/2019 7:27 AM
2213	49690	9/27/2019 7:27 AM
2214	48842	9/27/2019 7:25 AM
2215	48117	9/27/2019 7:24 AM
2216	49423	9/27/2019 7:24 AM
2217	48348	9/27/2019 7:22 AM
2218	48911	9/27/2019 7:22 AM
2219	48888	9/27/2019 7:20 AM
2220	48640	9/27/2019 7:20 AM
2221	48473	9/27/2019 7:20 AM
2222	49348	9/27/2019 7:13 AM
2223	49201	9/27/2019 7:12 AM
2224	48451	9/27/2019 7:12 AM
2225	49341	9/27/2019 7:11 AM
2226	49090	9/27/2019 7:10 AM
2227	49022	9/27/2019 7:10 AM
2228	48134	9/27/2019 7:10 AM
2229	48362	9/27/2019 7:08 AM
2230	48661	9/27/2019 7:07 AM
2231	48309	9/27/2019 7:06 AM
2232	54229	9/27/2019 7:05 AM
2233	49264	9/27/2019 7:04 AM
2234	49404	9/27/2019 7:04 AM
2235	48761	9/27/2019 7:01 AM
2236	48625	9/27/2019 7:00 AM
2237	54915	9/27/2019 7:00 AM
2238	48145	9/27/2019 6:55 AM
2239	48047	9/27/2019 6:54 AM
2240	48837	9/27/2019 6:54 AM
2241	48168	9/27/2019 6:53 AM
2242	49720	9/27/2019 6:51 AM
2243	48138	9/27/2019 6:50 AM
2244	49958	9/27/2019 6:50 AM
2245	49756	9/27/2019 6:48 AM
2246	49047	9/27/2019 6:47 AM
2247	48813	9/27/2019 6:44 AM
2248	48025	9/27/2019 6:43 AM
2249	48047	9/27/2019 6:42 AM

MSWC Boater Trends Survey

2250	49660	9/27/2019 6:41 AM
2251	48463	9/27/2019 6:40 AM
2252	49064	9/27/2019 6:40 AM
2253	N7S4H9	9/27/2019 6:37 AM
2254	49684	9/27/2019 6:37 AM
2255	49644	9/27/2019 6:35 AM
2256	48154	9/27/2019 6:31 AM
2257	48079	9/27/2019 6:26 AM
2258	48879	9/27/2019 6:25 AM
2259	48045	9/27/2019 6:24 AM
2260	49201	9/27/2019 6:24 AM
2261	48356	9/27/2019 6:23 AM
2262	48028	9/27/2019 6:21 AM
2263	48001	9/27/2019 6:20 AM
2264	49202	9/27/2019 6:20 AM
2265	48154	9/27/2019 6:18 AM
2266	48390	9/27/2019 6:16 AM
2267	48054	9/27/2019 6:16 AM
2268	493232	9/27/2019 6:14 AM
2269	49014	9/27/2019 6:07 AM
2270	48858	9/27/2019 6:06 AM
2271	48054	9/27/2019 6:06 AM
2272	47630	9/27/2019 6:00 AM
2273	48138	9/27/2019 5:59 AM
2274	49419	9/27/2019 5:58 AM
2275	48420	9/27/2019 5:53 AM
2276	48420	9/27/2019 5:50 AM
2277	49055	9/27/2019 5:50 AM
2278	48604	9/27/2019 5:48 AM
2279	49719	9/27/2019 5:45 AM
2280	48187	9/27/2019 5:42 AM
2281	48371	9/27/2019 5:32 AM
2282	49093	9/27/2019 5:31 AM
2283	48306	9/27/2019 5:31 AM
2284	48138	9/27/2019 5:30 AM
2285	48312	9/27/2019 5:28 AM
2286	48865	9/27/2019 5:24 AM
2287	48030	9/27/2019 5:20 AM
2288	49403	9/27/2019 5:19 AM
2289	49614	9/27/2019 5:14 AM
2290	48467	9/27/2019 5:11 AM

MSWC Boater Trends Survey

2291	48310	9/27/2019 5:05 AM
2292	46112	9/27/2019 4:56 AM
2293	48187	9/27/2019 4:53 AM
2294	48872	9/27/2019 4:49 AM
2295	49545	9/27/2019 4:47 AM
2296	48045	9/27/2019 4:45 AM
2297	48872	9/27/2019 4:38 AM
2298	49047	9/27/2019 4:37 AM
2299	48160	9/27/2019 4:36 AM
2300	49417	9/27/2019 4:28 AM
2301	48455	9/27/2019 4:10 AM
2302	49849	9/27/2019 4:07 AM
2303	49224	9/27/2019 4:06 AM
2304	48438	9/27/2019 3:46 AM
2305	60622	9/27/2019 3:43 AM
2306	48060	9/27/2019 3:43 AM
2307	48642	9/27/2019 3:39 AM
2308	49512	9/27/2019 3:18 AM
2309	49309	9/27/2019 3:10 AM
2310	45322	9/27/2019 3:02 AM
2311	48044	9/27/2019 2:58 AM
2312	48371	9/27/2019 2:53 AM
2313	48128	9/27/2019 2:50 AM
2314	49635	9/27/2019 2:28 AM
2315	48021	9/27/2019 2:19 AM
2316	49095	9/27/2019 2:14 AM
2317	34275	9/27/2019 2:07 AM
2318	48138	9/27/2019 2:05 AM
2319	49010	9/27/2019 1:50 AM
2320	49783	9/27/2019 12:46 AM
2321	48737	9/27/2019 12:35 AM
2322	46404	9/27/2019 12:35 AM
2323	48737	9/27/2019 12:25 AM
2324	60091	9/27/2019 12:12 AM
2325	48042	9/27/2019 12:11 AM
2326	48042	9/27/2019 12:10 AM
2327	49201	9/27/2019 12:08 AM
2328	48173	9/27/2019 12:04 AM
2329	48216	9/27/2019 12:02 AM
2330	49316	9/26/2019 11:53 PM
2331	48840	9/26/2019 11:47 PM

MSWC Boater Trends Survey

2332	49858	9/26/2019 11:40 PM
2333	48038	9/26/2019 11:38 PM
2334	49721	9/26/2019 11:33 PM
2335	48067	9/26/2019 11:32 PM
2336	43518	9/26/2019 11:27 PM
2337	49770	9/26/2019 11:25 PM
2338	48602	9/26/2019 11:24 PM
2339	48708	9/26/2019 11:21 PM
2340	49417	9/26/2019 11:20 PM
2341	49319	9/26/2019 11:16 PM
2342	60640	9/26/2019 11:14 PM
2343	43033	9/26/2019 11:13 PM
2344	49827	9/26/2019 11:12 PM
2345	48855	9/26/2019 11:08 PM
2346	60646	9/26/2019 11:06 PM
2347	48817	9/26/2019 11:02 PM
2348	49341	9/26/2019 10:58 PM
2349	49460	9/26/2019 10:58 PM
2350	33037/winter and 48080/summer	9/26/2019 10:57 PM
2351	48225	9/26/2019 10:53 PM
2352	49346	9/26/2019 10:51 PM
2353	49009	9/26/2019 10:50 PM
2354	48801	9/26/2019 10:49 PM
2355	49684	9/26/2019 10:47 PM
2356	49601	9/26/2019 10:47 PM
2357	48329	9/26/2019 10:45 PM
2358	48651	9/26/2019 10:44 PM
2359	48357	9/26/2019 10:44 PM
2360	49080	9/26/2019 10:43 PM
2361	54303	9/26/2019 10:42 PM
2362	49829	9/26/2019 10:38 PM
2363	46368	9/26/2019 10:37 PM
2364	49686	9/26/2019 10:36 PM
2365	49651	9/26/2019 10:35 PM
2366	48439	9/26/2019 10:35 PM
2367	48446	9/26/2019 10:34 PM
2368	49749	9/26/2019 10:34 PM
2369	48313	9/26/2019 10:33 PM
2370	48733	9/26/2019 10:32 PM
2371	48629	9/26/2019 10:31 PM
2372	48429	9/26/2019 10:30 PM

MSWC Boater Trends Survey

2373	46303	9/26/2019 10:28 PM
2374	48327	9/26/2019 10:26 PM
2375	49010	9/26/2019 10:22 PM
2376	75501	9/26/2019 10:20 PM
2377	49442	9/26/2019 10:17 PM
2378	48822	9/26/2019 10:16 PM
2379	48001	9/26/2019 10:15 PM
2380	48094	9/26/2019 10:15 PM
2381	48141	9/26/2019 10:14 PM
2382	48625	9/26/2019 10:14 PM
2383	48642	9/26/2019 10:12 PM
2384	49685	9/26/2019 10:12 PM
2385	43056	9/26/2019 10:11 PM
2386	48141	9/26/2019 10:11 PM
2387	49067	9/26/2019 10:06 PM
2388	49779	9/26/2019 10:06 PM
2389	48855	9/26/2019 10:05 PM
2390	46609	9/26/2019 10:04 PM
2391	49418	9/26/2019 10:04 PM
2392	49426	9/26/2019 10:04 PM
2393	49727	9/26/2019 10:04 PM
2394	49721	9/26/2019 10:04 PM
2395	45331	9/26/2019 10:03 PM
2396	54246	9/26/2019 10:03 PM
2397	40316	9/26/2019 10:01 PM
2398	49644	9/26/2019 10:01 PM
2399	49330	9/26/2019 10:00 PM
2400	48356	9/26/2019 9:59 PM
2401	48414	9/26/2019 9:56 PM
2402	48842	9/26/2019 9:53 PM
2403	48832	9/26/2019 9:52 PM
2404	48748	9/26/2019 9:52 PM
2405	48843	9/26/2019 9:49 PM
2406	48191	9/26/2019 9:49 PM
2407	48085	9/26/2019 9:49 PM
2408	48616	9/26/2019 9:48 PM
2409	49456	9/26/2019 9:48 PM
2410	49765	9/26/2019 9:46 PM
2411	43614	9/26/2019 9:46 PM
2412	49120	9/26/2019 9:45 PM
2413	49505	9/26/2019 9:44 PM

MSWC Boater Trends Survey

2414	60611	9/26/2019 9:43 PM
2415	48864	9/26/2019 9:42 PM
2416	48375	9/26/2019 9:42 PM
2417	48001	9/26/2019 9:41 PM
2418	49448	9/26/2019 9:40 PM
2419	48843	9/26/2019 9:40 PM
2420	49747	9/26/2019 9:39 PM
2421	48166	9/26/2019 9:36 PM
2422	48307	9/26/2019 9:34 PM
2423	48894	9/26/2019 9:34 PM
2424	48390	9/26/2019 9:33 PM
2425	49301	9/26/2019 9:33 PM
2426	48316	9/26/2019 9:33 PM
2427	49089	9/26/2019 9:31 PM
2428	49441	9/26/2019 9:31 PM
2429	43614	9/26/2019 9:30 PM
2430	48309	9/26/2019 9:29 PM
2431	48462	9/26/2019 9:29 PM
2432	49525	9/26/2019 9:29 PM
2433	48150	9/26/2019 9:27 PM
2434	48236	9/26/2019 9:27 PM
2435	48170	9/26/2019 9:26 PM
2436	48749	9/26/2019 9:26 PM
2437	48167	9/26/2019 9:25 PM
2438	48430	9/26/2019 9:23 PM
2439	48429	9/26/2019 9:23 PM
2440	49441	9/26/2019 9:21 PM
2441	48225	9/26/2019 9:20 PM
2442	49707	9/26/2019 9:18 PM
2443	48189	9/26/2019 9:17 PM
2444	48060	9/26/2019 9:16 PM
2445	48640	9/26/2019 9:16 PM
2446	49725	9/26/2019 9:16 PM
2447	48309	9/26/2019 9:14 PM
2448	48603	9/26/2019 9:14 PM
2449	49686	9/26/2019 9:13 PM
2450	N9k1c2	9/26/2019 9:12 PM
2451	15317	9/26/2019 9:12 PM
2452	49127	9/26/2019 9:11 PM
2453	49417	9/26/2019 9:11 PM
2454	49017	9/26/2019 9:11 PM

MSWC Boater Trends Survey

2455	49505	9/26/2019 9:10 PM
2456	49445	9/26/2019 9:10 PM
2457	48188	9/26/2019 9:10 PM
2458	49417	9/26/2019 9:09 PM
2459	49727	9/26/2019 9:09 PM
2460	48640	9/26/2019 9:08 PM
2461	48306	9/26/2019 9:08 PM
2462	46350	9/26/2019 9:07 PM
2463	49341	9/26/2019 9:07 PM
2464	48770	9/26/2019 9:07 PM
2465	49643	9/26/2019 9:07 PM
2466	49117	9/26/2019 9:06 PM
2467	48328	9/26/2019 9:05 PM
2468	49117	9/26/2019 9:05 PM
2469	48180	9/26/2019 9:05 PM
2470	48093	9/26/2019 9:04 PM
2471	92122-4023	9/26/2019 9:04 PM
2472	49835	9/26/2019 9:03 PM
2473	49740	9/26/2019 9:03 PM
2474	49022	9/26/2019 9:02 PM
2475	60540	9/26/2019 9:02 PM
2476	49770	9/26/2019 9:01 PM
2477	48085	9/26/2019 9:01 PM
2478	48331	9/26/2019 9:01 PM
2479	49417	9/26/2019 9:00 PM
2480	48623	9/26/2019 8:59 PM
2481	32953	9/26/2019 8:58 PM
2482	49331	9/26/2019 8:58 PM
2483	43614	9/26/2019 8:56 PM
2484	48033	9/26/2019 8:56 PM
2485	48192	9/26/2019 8:54 PM
2486	48306	9/26/2019 8:54 PM
2487	48002	9/26/2019 8:51 PM
2488	49829	9/26/2019 8:51 PM
2489	48858	9/26/2019 8:50 PM
2490	48047	9/26/2019 8:49 PM
2491	48613	9/26/2019 8:49 PM
2492	49234	9/26/2019 8:48 PM
2493	48348	9/26/2019 8:48 PM
2494	48103	9/26/2019 8:47 PM
2495	49686	9/26/2019 8:47 PM

MSWC Boater Trends Survey

2496	46804	9/26/2019 8:47 PM
2497	49712	9/26/2019 8:45 PM
2498	48734	9/26/2019 8:44 PM
2499	49637	9/26/2019 8:43 PM
2500	44820	9/26/2019 8:43 PM
2501	48001	9/26/2019 8:43 PM
2502	48066	9/26/2019 8:42 PM
2503	48001	9/26/2019 8:40 PM
2504	49721	9/26/2019 8:40 PM
2505	49401	9/26/2019 8:40 PM
2506	N7V3H8	9/26/2019 8:39 PM
2507	48001	9/26/2019 8:38 PM
2508	54313	9/26/2019 8:37 PM
2509	48049	9/26/2019 8:36 PM
2510	48375	9/26/2019 8:35 PM
2511	48307	9/26/2019 8:34 PM
2512	49969	9/26/2019 8:34 PM
2513	48602	9/26/2019 8:34 PM
2514	48444	9/26/2019 8:33 PM
2515	49808	9/26/2019 8:32 PM
2516	48111	9/26/2019 8:32 PM
2517	49058	9/26/2019 8:32 PM
2518	48867	9/26/2019 8:31 PM
2519	49417	9/26/2019 8:31 PM
2520	48381	9/26/2019 8:31 PM
2521	48045	9/26/2019 8:30 PM
2522	49601	9/26/2019 8:29 PM
2523	49684	9/26/2019 8:29 PM
2524	49254	9/26/2019 8:28 PM
2525	29685	9/26/2019 8:28 PM
2526	49427	9/26/2019 8:27 PM
2527	49686	9/26/2019 8:26 PM
2528	48043	9/26/2019 8:26 PM
2529	49464	9/26/2019 8:26 PM
2530	48188	9/26/2019 8:26 PM
2531	49037	9/26/2019 8:26 PM
2532	48236	9/26/2019 8:26 PM
2533	49770	9/26/2019 8:26 PM
2534	48080	9/26/2019 8:25 PM
2535	49840	9/26/2019 8:24 PM
2536	49719	9/26/2019 8:24 PM

MSWC Boater Trends Survey

2537	49503	9/26/2019 8:23 PM
2538	48417	9/26/2019 8:21 PM
2539	48230	9/26/2019 8:20 PM
2540	48759	9/26/2019 8:18 PM
2541	48629	9/26/2019 8:17 PM
2542	48083	9/26/2019 8:16 PM
2543	48881	9/26/2019 8:16 PM
2544	48091	9/26/2019 8:15 PM
2545	48038	9/26/2019 8:14 PM
2546	49715	9/26/2019 8:14 PM
2547	48042	9/26/2019 8:13 PM
2548	49931	9/26/2019 8:12 PM
2549	46321	9/26/2019 8:11 PM
2550	48165	9/26/2019 8:11 PM
2551	48165	9/26/2019 8:11 PM
2552	48009	9/26/2019 8:10 PM
2553	48306	9/26/2019 8:09 PM
2554	49010	9/26/2019 8:09 PM
2555	49230	9/26/2019 8:09 PM
2556	l0g1t0	9/26/2019 8:08 PM
2557	49201	9/26/2019 8:07 PM
2558	49659	9/26/2019 8:04 PM
2559	49221	9/26/2019 8:04 PM
2560	48708	9/26/2019 8:04 PM
2561	49735	9/26/2019 8:03 PM
2562	48414	9/26/2019 8:03 PM
2563	49221	9/26/2019 8:01 PM
2564	49855	9/26/2019 8:01 PM
2565	48872	9/26/2019 8:00 PM
2566	48228	9/26/2019 8:00 PM
2567	48185	9/26/2019 7:59 PM
2568	49344	9/26/2019 7:59 PM
2569	48468	9/26/2019 7:58 PM
2570	49749	9/26/2019 7:57 PM
2571	48137	9/26/2019 7:56 PM
2572	48045	9/26/2019 7:55 PM
2573	46385	9/26/2019 7:55 PM
2574	37221	9/26/2019 7:55 PM
2575	49435	9/26/2019 7:53 PM
2576	49445	9/26/2019 7:53 PM
2577	49457	9/26/2019 7:53 PM

MSWC Boater Trends Survey

2578	49233	9/26/2019 7:52 PM
2579	48703	9/26/2019 7:52 PM
2580	49307	9/26/2019 7:52 PM
2581	49622	9/26/2019 7:51 PM
2582	4947	9/26/2019 7:50 PM
2583	48469	9/26/2019 7:49 PM
2584	48226	9/26/2019 7:49 PM
2585	49221	9/26/2019 7:49 PM
2586	49426	9/26/2019 7:48 PM
2587	28461	9/26/2019 7:48 PM
2588	48001	9/26/2019 7:47 PM
2589	48837	9/26/2019 7:46 PM
2590	46321	9/26/2019 7:44 PM
2591	49770	9/26/2019 7:44 PM
2592	49245	9/26/2019 7:44 PM
2593	48169	9/26/2019 7:44 PM
2594	49460	9/26/2019 7:43 PM
2595	48180	9/26/2019 7:43 PM
2596	48081	9/26/2019 7:42 PM
2597	48858	9/26/2019 7:42 PM
2598	48467	9/26/2019 7:41 PM
2599	48170	9/26/2019 7:41 PM
2600	48192	9/26/2019 7:39 PM
2601	48730	9/26/2019 7:37 PM
2602	49304	9/26/2019 7:37 PM
2603	49047	9/26/2019 7:37 PM
2604	49505	9/26/2019 7:36 PM
2605	49686	9/26/2019 7:36 PM
2606	49408	9/26/2019 7:35 PM
2607	49653	9/26/2019 7:35 PM
2608	49445	9/26/2019 7:34 PM
2609	49730	9/26/2019 7:34 PM
2610	49855	9/26/2019 7:33 PM
2611	48065	9/26/2019 7:33 PM
2612	48150	9/26/2019 7:33 PM
2613	48854	9/26/2019 7:33 PM
2614	48336	9/26/2019 7:32 PM
2615	48415	9/26/2019 7:32 PM
2616	49654	9/26/2019 7:31 PM
2617	49862	9/26/2019 7:31 PM
2618	49085	9/26/2019 7:30 PM

MSWC Boater Trends Survey

2619	44045	9/26/2019 7:30 PM
2620	48843	9/26/2019 7:30 PM
2621	48197	9/26/2019 7:30 PM
2622	49614	9/26/2019 7:30 PM
2623	49696	9/26/2019 7:28 PM
2624	48390	9/26/2019 7:27 PM
2625	48089	9/26/2019 7:25 PM
2626	48723	9/26/2019 7:23 PM
2627	48185	9/26/2019 7:23 PM
2628	48632	9/26/2019 7:22 PM
2629	43537	9/26/2019 7:22 PM
2630	48657	9/26/2019 7:20 PM
2631	48111	9/26/2019 7:19 PM
2632	48329	9/26/2019 7:18 PM
2633	48634	9/26/2019 7:16 PM
2634	49331	9/26/2019 7:16 PM
2635	49033	9/26/2019 7:14 PM
2636	49651	9/26/2019 7:14 PM
2637	49093	9/26/2019 7:14 PM
2638	49905	9/26/2019 7:14 PM
2639	45056	9/26/2019 7:12 PM
2640	49684	9/26/2019 7:12 PM
2641	48045	9/26/2019 7:12 PM
2642	49441	9/26/2019 7:12 PM
2643	49107	9/26/2019 7:11 PM
2644	48708	9/26/2019 7:10 PM
2645	49905	9/26/2019 7:08 PM
2646	40031	9/26/2019 7:08 PM
2647	48080	9/26/2019 7:08 PM
2648	33914	9/26/2019 7:06 PM
2649	49091	9/26/2019 7:06 PM
2650	60601	9/26/2019 7:05 PM
2651	48732	9/26/2019 7:04 PM
2652	48709	9/26/2019 7:04 PM
2653	48733	9/26/2019 7:03 PM
2654	49829	9/26/2019 7:02 PM
2655	48118	9/26/2019 7:02 PM
2656	44256	9/26/2019 7:02 PM
2657	48093	9/26/2019 7:01 PM
2658	49203	9/26/2019 7:01 PM
2659	48703	9/26/2019 7:00 PM

MSWC Boater Trends Survey

2660	49203	9/26/2019 7:00 PM
2661	49686	9/26/2019 7:00 PM
2662	48073	9/26/2019 7:00 PM
2663	48657	9/26/2019 6:59 PM
2664	49736	9/26/2019 6:59 PM
2665	49301	9/26/2019 6:59 PM
2666	48455	9/26/2019 6:58 PM
2667	49229	9/26/2019 6:58 PM
2668	48023	9/26/2019 6:58 PM
2669	48371	9/26/2019 6:56 PM
2670	49101	9/26/2019 6:56 PM
2671	48872	9/26/2019 6:56 PM
2672	48840	9/26/2019 6:55 PM
2673	49736	9/26/2019 6:54 PM
2674	48507	9/26/2019 6:52 PM
2675	48312	9/26/2019 6:51 PM
2676	49753	9/26/2019 6:50 PM
2677	49684	9/26/2019 6:49 PM
2678	49638	9/26/2019 6:47 PM
2679	48183	9/26/2019 6:47 PM
2680	48629	9/26/2019 6:46 PM
2681	48193	9/26/2019 6:46 PM
2682	48047	9/26/2019 6:46 PM
2683	46371	9/26/2019 6:46 PM
2684	48083	9/26/2019 6:45 PM
2685	48858	9/26/2019 6:44 PM
2686	48653	9/26/2019 6:44 PM
2687	48154	9/26/2019 6:42 PM
2688	49684	9/26/2019 6:41 PM
2689	49534	9/26/2019 6:41 PM
2690	48184	9/26/2019 6:41 PM
2691	48654	9/26/2019 6:41 PM
2692	48414	9/26/2019 6:39 PM
2693	48603	9/26/2019 6:39 PM
2694	48654	9/26/2019 6:38 PM
2695	49807	9/26/2019 6:38 PM
2696	48236	9/26/2019 6:36 PM
2697	49931	9/26/2019 6:36 PM
2698	49087	9/26/2019 6:35 PM
2699	48609	9/26/2019 6:34 PM
2700	48162	9/26/2019 6:34 PM

MSWC Boater Trends Survey

2701	46360	9/26/2019 6:34 PM
2702	54234	9/26/2019 6:33 PM
2703	44139	9/26/2019 6:32 PM
2704	49721	9/26/2019 6:32 PM
2705	49037	9/26/2019 6:31 PM
2706	48230	9/26/2019 6:31 PM
2707	48180	9/26/2019 6:31 PM
2708	49008	9/26/2019 6:30 PM
2709	48169	9/26/2019 6:30 PM
2710	49112	9/26/2019 6:29 PM
2711	49408	9/26/2019 6:29 PM
2712	49426	9/26/2019 6:28 PM
2713	48801	9/26/2019 6:27 PM
2714	58161	9/26/2019 6:27 PM
2715	49712	9/26/2019 6:27 PM
2716	49286	9/26/2019 6:27 PM
2717	48074	9/26/2019 6:26 PM
2718	49815	9/26/2019 6:26 PM
2719	58161	9/26/2019 6:26 PM
2720	48082	9/26/2019 6:26 PM
2721	49404	9/26/2019 6:25 PM
2722	48326	9/26/2019 6:25 PM
2723	49712	9/26/2019 6:25 PM
2724	54952	9/26/2019 6:24 PM
2725	48414	9/26/2019 6:24 PM
2726	48442	9/26/2019 6:24 PM
2727	48843	9/26/2019 6:24 PM
2728	54234	9/26/2019 6:23 PM
2729	49783	9/26/2019 6:23 PM
2730	48095	9/26/2019 6:23 PM
2731	49646	9/26/2019 6:23 PM
2732	48045	9/26/2019 6:22 PM
2733	49441	9/26/2019 6:22 PM
2734	48044	9/26/2019 6:22 PM
2735	43402	9/26/2019 6:21 PM
2736	49735	9/26/2019 6:21 PM
2737	48304	9/26/2019 6:20 PM
2738	49631	9/26/2019 6:20 PM
2739	55418	9/26/2019 6:20 PM
2740	49765	9/26/2019 6:19 PM
2741	49504	9/26/2019 6:17 PM

MSWC Boater Trends Survey

2742	49508	9/26/2019 6:17 PM
2743	49424	9/26/2019 6:17 PM
2744	49525	9/26/2019 6:16 PM
2745	48138	9/26/2019 6:16 PM
2746	48062	9/26/2019 6:16 PM
2747	49686	9/26/2019 6:16 PM
2748	48820	9/26/2019 6:16 PM
2749	49001	9/26/2019 6:16 PM
2750	48035	9/26/2019 6:15 PM
2751	49745	9/26/2019 6:13 PM
2752	48044	9/26/2019 6:13 PM
2753	48747	9/26/2019 6:13 PM
2754	48169	9/26/2019 6:13 PM
2755	63367	9/26/2019 6:12 PM
2756	49021	9/26/2019 6:12 PM
2757	48035	9/26/2019 6:11 PM
2758	29407	9/26/2019 6:10 PM
2759	48640	9/26/2019 6:10 PM
2760	48801	9/26/2019 6:10 PM
2761	49021	9/26/2019 6:10 PM
2762	45056	9/26/2019 6:10 PM
2763	48428	9/26/2019 6:10 PM
2764	49270	9/26/2019 6:10 PM
2765	48624	9/26/2019 6:09 PM
2766	49884	9/26/2019 6:08 PM
2767	48657	9/26/2019 6:07 PM
2768	49534	9/26/2019 6:07 PM
2769	49426	9/26/2019 6:07 PM
2770	48047	9/26/2019 6:07 PM
2771	49285	9/26/2019 6:05 PM
2772	49676	9/26/2019 6:05 PM
2773	49090	9/26/2019 6:05 PM
2774	48088	9/26/2019 6:05 PM
2775	33706	9/26/2019 6:04 PM
2776	48045	9/26/2019 6:04 PM
2777	49316	9/26/2019 6:02 PM
2778	48326	9/26/2019 6:02 PM
2779	48377	9/26/2019 6:02 PM
2780	48160	9/26/2019 6:02 PM
2781	48433	9/26/2019 6:01 PM
2782	82801	9/26/2019 6:01 PM

MSWC Boater Trends Survey

2783	48509	9/26/2019 6:01 PM
2784	48066	9/26/2019 6:00 PM
2785	49740	9/26/2019 6:00 PM
2786	48080	9/26/2019 6:00 PM
2787	48006	9/26/2019 6:00 PM
2788	48649	9/26/2019 5:59 PM
2789	49676	9/26/2019 5:58 PM
2790	49719	9/26/2019 5:58 PM
2791	49336	9/26/2019 5:56 PM
2792	49091	9/26/2019 5:56 PM
2793	49712	9/26/2019 5:56 PM
2794	48006	9/26/2019 5:56 PM
2795	49431	9/26/2019 5:56 PM
2796	48044	9/26/2019 5:55 PM
2797	49930	9/26/2019 5:55 PM
2798	49927	9/26/2019 5:55 PM
2799	49601	9/26/2019 5:54 PM
2800	49612	9/26/2019 5:54 PM
2801	60559	9/26/2019 5:54 PM
2802	49401	9/26/2019 5:54 PM
2803	49770	9/26/2019 5:53 PM
2804	49686	9/26/2019 5:53 PM
2805	49684	9/26/2019 5:52 PM
2806	49091	9/26/2019 5:52 PM
2807	49417	9/26/2019 5:52 PM
2808	49428	9/26/2019 5:51 PM
2809	48230	9/26/2019 5:50 PM
2810	49456	9/26/2019 5:50 PM
2811	49853	9/26/2019 5:49 PM
2812	48187	9/26/2019 5:49 PM
2813	48837	9/26/2019 5:49 PM
2814	48703	9/26/2019 5:49 PM
2815	46530	9/26/2019 5:47 PM
2816	49749	9/26/2019 5:46 PM
2817	48430	9/26/2019 5:46 PM
2818	48307	9/26/2019 5:46 PM
2819	49690	9/26/2019 5:44 PM
2820	49694	9/26/2019 5:44 PM
2821	49676	9/26/2019 5:43 PM
2822	48439	9/26/2019 5:43 PM
2823	49341	9/26/2019 5:42 PM

MSWC Boater Trends Survey

2824	48911	9/26/2019 5:41 PM
2825	48042	9/26/2019 5:41 PM
2826	48383	9/26/2019 5:40 PM
2827	48315	9/26/2019 5:39 PM
2828	48307	9/26/2019 5:38 PM
2829	61111	9/26/2019 5:38 PM
2830	48393	9/26/2019 5:35 PM
2831	48134	9/26/2019 5:35 PM
2832	48842	9/26/2019 5:35 PM
2833	48042	9/26/2019 5:35 PM
2834	58350	9/26/2019 5:34 PM
2835	48428	9/26/2019 5:34 PM
2836	48176	9/26/2019 5:34 PM
2837	29501	9/26/2019 5:34 PM
2838	48114	9/26/2019 5:33 PM
2839	49911	9/26/2019 5:33 PM
2840	48439	9/26/2019 5:33 PM
2841	49686	9/26/2019 5:32 PM
2842	49507	9/26/2019 5:31 PM
2843	48183	9/26/2019 5:31 PM
2844	48315	9/26/2019 5:31 PM
2845	49546	9/26/2019 5:30 PM
2846	49684	9/26/2019 5:30 PM
2847	48640	9/26/2019 5:30 PM
2848	48875	9/26/2019 5:29 PM
2849	48872	9/26/2019 5:29 PM
2850	48069	9/26/2019 5:28 PM
2851	48080	9/26/2019 5:28 PM
2852	60614	9/26/2019 5:27 PM
2853	48631	9/26/2019 5:27 PM
2854	48313	9/26/2019 5:26 PM
2855	49234	9/26/2019 5:26 PM
2856	48187	9/26/2019 5:26 PM
2857	49008	9/26/2019 5:25 PM
2858	49719	9/26/2019 5:25 PM
2859	P6a 6 b	9/26/2019 5:24 PM
2860	49464	9/26/2019 5:24 PM
2861	49458	9/26/2019 5:24 PM
2862	49329	9/26/2019 5:24 PM
2863	49720	9/26/2019 5:23 PM
2864	45451	9/26/2019 5:23 PM

MSWC Boater Trends Survey

2865	48166	9/26/2019 5:23 PM
2866	49504	9/26/2019 5:23 PM
2867	48532	9/26/2019 5:22 PM
2868	61537	9/26/2019 5:22 PM
2869	48154	9/26/2019 5:22 PM
2870	48390	9/26/2019 5:21 PM
2871	48813	9/26/2019 5:21 PM
2872	48021	9/26/2019 5:20 PM
2873	48130	9/26/2019 5:20 PM
2874	49829	9/26/2019 5:20 PM
2875	48371	9/26/2019 5:20 PM
2876	48317	9/26/2019 5:20 PM
2877	48883	9/26/2019 5:19 PM
2878	48651	9/26/2019 5:18 PM
2879	48183	9/26/2019 5:18 PM
2880	48111	9/26/2019 5:18 PM
2881	48350	9/26/2019 5:17 PM
2882	N8R1M6	9/26/2019 5:17 PM
2883	49321	9/26/2019 5:16 PM
2884	49660	9/26/2019 5:16 PM
2885	48176	9/26/2019 5:16 PM
2886	49419	9/26/2019 5:16 PM
2887	48066	9/26/2019 5:14 PM
2888	48744	9/26/2019 5:14 PM
2889	48170	9/26/2019 5:13 PM
2890	49519	9/26/2019 5:13 PM
2891	49783	9/26/2019 5:13 PM
2892	48154	9/26/2019 5:12 PM
2893	49415	9/26/2019 5:12 PM
2894	46628	9/26/2019 5:11 PM
2895	46321	9/26/2019 5:11 PM
2896	49735	9/26/2019 5:11 PM
2897	49085	9/26/2019 5:10 PM
2898	49689	9/26/2019 5:10 PM
2899	54210	9/26/2019 5:09 PM
2900	49009	9/26/2019 5:09 PM
2901	48625	9/26/2019 5:09 PM
2902	48001	9/26/2019 5:08 PM
2903	48302	9/26/2019 5:08 PM
2904	49519	9/26/2019 5:08 PM
2905	48094	9/26/2019 5:07 PM

MSWC Boater Trends Survey

2906	49620 bi	9/26/2019 5:07 PM
2907	49009	9/26/2019 5:06 PM
2908	49424	9/26/2019 5:06 PM
2909	48065	9/26/2019 5:05 PM
2910	44870	9/26/2019 5:05 PM
2911	49749	9/26/2019 5:05 PM
2912	48323	9/26/2019 5:04 PM
2913	48895	9/26/2019 5:04 PM
2914	55731	9/26/2019 5:04 PM
2915	48909	9/26/2019 5:03 PM
2916	49455	9/26/2019 5:02 PM
2917	48855	9/26/2019 5:02 PM
2918	48896	9/26/2019 5:01 PM
2919	49633	9/26/2019 5:01 PM
2920	49643	9/26/2019 5:01 PM
2921	49930	9/26/2019 5:01 PM
2922	49302	9/26/2019 5:01 PM
2923	48377	9/26/2019 5:01 PM
2924	49684	9/26/2019 5:00 PM
2925	48214	9/26/2019 5:00 PM
2926	49309	9/26/2019 4:59 PM
2927	33955	9/26/2019 4:58 PM
2928	48150	9/26/2019 4:57 PM
2929	48184	9/26/2019 4:56 PM
2930	60190	9/26/2019 4:56 PM
2931	49045	9/26/2019 4:55 PM
2932	48197	9/26/2019 4:55 PM
2933	44333	9/26/2019 4:55 PM
2934	49783	9/26/2019 4:54 PM
2935	48047	9/26/2019 4:53 PM
2936	49740	9/26/2019 4:53 PM
2937	48005	9/26/2019 4:53 PM
2938	49428	9/26/2019 4:52 PM
2939	48101	9/26/2019 4:52 PM
2940	49417	9/26/2019 4:52 PM
2941	49022	9/26/2019 4:52 PM
2942	49646	9/26/2019 4:51 PM
2943	48192	9/26/2019 4:50 PM
2944	48842	9/26/2019 4:50 PM
2945	48040	9/26/2019 4:50 PM
2946	49316	9/26/2019 4:50 PM

MSWC Boater Trends Survey

2947	60640	9/26/2019 4:49 PM
2948	49424	9/26/2019 4:49 PM
2949	49431	9/26/2019 4:49 PM
2950	48732	9/26/2019 4:49 PM
2951	48162	9/26/2019 4:49 PM
2952	49341	9/26/2019 4:48 PM
2953	48114	9/26/2019 4:48 PM
2954	48125	9/26/2019 4:48 PM
2955	48134	9/26/2019 4:48 PM
2956	48469	9/26/2019 4:48 PM
2957	49055	9/26/2019 4:47 PM
2958	49718	9/26/2019 4:46 PM
2959	46250	9/26/2019 4:46 PM
2960	49302	9/26/2019 4:46 PM
2961	48602	9/26/2019 4:46 PM
2962	49442	9/26/2019 4:46 PM
2963	48045	9/26/2019 4:46 PM
2964	43452	9/26/2019 4:45 PM
2965	49348	9/26/2019 4:45 PM
2966	49424	9/26/2019 4:45 PM
2967	48730	9/26/2019 4:45 PM
2968	48038	9/26/2019 4:44 PM
2969	48021	9/26/2019 4:44 PM
2970	49646	9/26/2019 4:44 PM
2971	49689	9/26/2019 4:44 PM
2972	49525	9/26/2019 4:44 PM
2973	48875	9/26/2019 4:42 PM
2974	48439	9/26/2019 4:42 PM
2975	48625	9/26/2019 4:42 PM
2976	49646	9/26/2019 4:42 PM
2977	46250	9/26/2019 4:42 PM
2978	48849	9/26/2019 4:42 PM
2979	49046	9/26/2019 4:41 PM
2980	48105	9/26/2019 4:41 PM
2981	48382	9/26/2019 4:41 PM
2982	49315	9/26/2019 4:41 PM
2983	48911	9/26/2019 4:40 PM
2984	48818	9/26/2019 4:40 PM
2985	53074	9/26/2019 4:40 PM
2986	49017	9/26/2019 4:40 PM
2987	49660	9/26/2019 4:40 PM

MSWC Boater Trends Survey

2988	48045	9/26/2019 4:40 PM
2989	48460	9/26/2019 4:39 PM
2990	48045	9/26/2019 4:39 PM
2991	48152	9/26/2019 4:39 PM
2992	48426	9/26/2019 4:39 PM
2993	48393	9/26/2019 4:39 PM
2994	49534	9/26/2019 4:39 PM
2995	48307	9/26/2019 4:39 PM
2996	48173	9/26/2019 4:39 PM
2997	49221	9/26/2019 4:38 PM
2998	49779	9/26/2019 4:38 PM
2999	48101	9/26/2019 4:38 PM
3000	48504	9/26/2019 4:38 PM
3001	49058	9/26/2019 4:38 PM
3002	49456	9/26/2019 4:38 PM
3003	49664	9/26/2019 4:38 PM
3004	48722	9/26/2019 4:38 PM
3005	48236	9/26/2019 4:37 PM
3006	48390	9/26/2019 4:37 PM
3007	48103	9/26/2019 4:37 PM
3008	48045	9/26/2019 4:37 PM
3009	48382	9/26/2019 4:37 PM
3010	48428	9/26/2019 4:37 PM
3011	48060	9/26/2019 4:36 PM
3012	49791	9/26/2019 4:36 PM
3013	48744	9/26/2019 4:36 PM
3014	49546	9/26/2019 4:36 PM
3015	48872	9/26/2019 4:36 PM
3016	48150	9/26/2019 4:35 PM
3017	60565	9/26/2019 4:35 PM
3018	48176	9/26/2019 4:34 PM
3019	49945	9/26/2019 4:34 PM
3020	48209	9/26/2019 4:34 PM
3021	48720	9/26/2019 4:34 PM
3022	48314	9/26/2019 4:34 PM
3023	48060	9/26/2019 4:34 PM
3024	49437	9/26/2019 4:34 PM
3025	49272	9/26/2019 4:33 PM
3026	48657	9/26/2019 4:33 PM
3027	48072	9/26/2019 4:33 PM
3028	48116	9/26/2019 4:33 PM

MSWC Boater Trends Survey

3029	48072	9/26/2019 4:33 PM
3030	48186	9/26/2019 4:33 PM
3031	49265	9/26/2019 4:33 PM
3032	48750	9/26/2019 4:33 PM
3033	48236	9/26/2019 4:33 PM
3034	48708	9/26/2019 4:33 PM
3035	33756	9/26/2019 4:32 PM
3036	48026	9/26/2019 4:32 PM
3037	49006	9/26/2019 4:32 PM
3038	02769	9/26/2019 4:31 PM
3039	49426	9/26/2019 4:31 PM
3040	49509	9/26/2019 4:31 PM
3041	48001	9/26/2019 4:31 PM
3042	49343	9/26/2019 4:30 PM
3043	48328	9/26/2019 4:30 PM
3044	49721	9/26/2019 4:29 PM
3045	60613	9/26/2019 4:29 PM
3046	49091	9/26/2019 4:29 PM
3047	49441	9/26/2019 4:29 PM
3048	48183	9/26/2019 4:28 PM
3049	49508	9/26/2019 4:28 PM
3050	49829	9/26/2019 4:28 PM
3051	37075	9/26/2019 4:26 PM
3052	49548	9/26/2019 4:25 PM
3053	49456	9/26/2019 4:25 PM
3054	49913	9/26/2019 4:25 PM
3055	49685	9/26/2019 4:25 PM
3056	48383	9/26/2019 4:23 PM
3057	49097	9/26/2019 4:23 PM
3058	48446	9/26/2019 4:23 PM
3059	60047	9/26/2019 4:22 PM
3060	49436	9/26/2019 4:22 PM
3061	48854	9/26/2019 4:22 PM
3062	48310	9/26/2019 4:21 PM
3063	49026	9/26/2019 4:21 PM
3064	48130	9/26/2019 4:21 PM
3065	43560	9/26/2019 4:20 PM
3066	49712	9/26/2019 4:20 PM
3067	49085	9/26/2019 4:20 PM
3068	45249	9/26/2019 4:19 PM
3069	48854	9/26/2019 4:19 PM

MSWC Boater Trends Survey

3070	48047	9/26/2019 4:19 PM
3071	48043	9/26/2019 4:19 PM
3072	49247	9/26/2019 4:19 PM
3073	49229	9/26/2019 4:19 PM
3074	48192	9/26/2019 4:19 PM
3075	48094	9/26/2019 4:19 PM
3076	48059	9/26/2019 4:19 PM
3077	48315	9/26/2019 4:18 PM
3078	49038	9/26/2019 4:18 PM
3079	48732	9/26/2019 4:18 PM
3080	48706	9/26/2019 4:18 PM
3081	48629	9/26/2019 4:18 PM
3082	48360	9/26/2019 4:17 PM
3083	48045	9/26/2019 4:17 PM
3084	49783	9/26/2019 4:17 PM
3085	48726	9/26/2019 4:17 PM
3086	49677	9/26/2019 4:17 PM
3087	48383	9/26/2019 4:17 PM
3088	49720	9/26/2019 4:16 PM
3089	46619	9/26/2019 4:16 PM
3090	48180	9/26/2019 4:16 PM
3091	48154	9/26/2019 4:16 PM
3092	60014	9/26/2019 4:15 PM
3093	49712	9/26/2019 4:15 PM
3094	48082	9/26/2019 4:15 PM
3095	48003	9/26/2019 4:14 PM
3096	48624	9/26/2019 4:14 PM
3097	49770	9/26/2019 4:14 PM
3098	49120	9/26/2019 4:13 PM
3099	48747	9/26/2019 4:13 PM
3100	48625	9/26/2019 4:13 PM
3101	48236	9/26/2019 4:12 PM
3102	49461	9/26/2019 4:12 PM
3103	48001	9/26/2019 4:12 PM
3104	48327	9/26/2019 4:12 PM
3105	48080	9/26/2019 4:12 PM
3106	48188	9/26/2019 4:12 PM
3107	48049	9/26/2019 4:11 PM
3108	E48446	9/26/2019 4:11 PM
3109	49408	9/26/2019 4:11 PM
3110	48439	9/26/2019 4:11 PM

MSWC Boater Trends Survey

3111	48809	9/26/2019 4:11 PM
3112	48314	9/26/2019 4:10 PM
3113	48082	9/26/2019 4:10 PM
3114	49451	9/26/2019 4:09 PM
3115	49444	9/26/2019 4:08 PM
3116	49525	9/26/2019 4:08 PM
3117	48192	9/26/2019 4:08 PM
3118	48334	9/26/2019 4:07 PM
3119	49014	9/26/2019 4:07 PM
3120	49321	9/26/2019 4:07 PM
3121	48446	9/26/2019 4:07 PM
3122	48703	9/26/2019 4:06 PM
3123	48306	9/26/2019 4:06 PM
3124	48845	9/26/2019 4:06 PM
3125	48848	9/26/2019 4:06 PM
3126	49024	9/26/2019 4:06 PM
3127	49009	9/26/2019 4:06 PM
3128	48045	9/26/2019 4:05 PM
3129	49090	9/26/2019 4:05 PM
3130	48114	9/26/2019 4:05 PM
3131	48042	9/26/2019 4:05 PM
3132	48346	9/26/2019 4:05 PM
3133	48044	9/26/2019 4:04 PM
3134	48346	9/26/2019 4:04 PM
3135	48895	9/26/2019 4:04 PM
3136	48116	9/26/2019 4:04 PM
3137	48611	9/26/2019 4:04 PM
3138	49464	9/26/2019 4:04 PM
3139	49408	9/26/2019 4:04 PM
3140	75013	9/26/2019 4:04 PM
3141	60559	9/26/2019 4:03 PM
3142	49686	9/26/2019 4:03 PM
3143	48030	9/26/2019 4:03 PM
3144	48170	9/26/2019 4:03 PM
3145	48084	9/26/2019 4:03 PM
3146	48640	9/26/2019 4:03 PM
3147	48329	9/26/2019 4:03 PM
3148	49423	9/26/2019 4:03 PM
3149	48750	9/26/2019 4:03 PM
3150	48817	9/26/2019 4:03 PM
3151	48657	9/26/2019 4:03 PM

MSWC Boater Trends Survey

3152	48065	9/26/2019 4:02 PM
3153	48001	9/26/2019 4:02 PM
3154	48383	9/26/2019 4:02 PM
3155	48045	9/26/2019 4:02 PM
3156	48662	9/26/2019 4:01 PM
3157	49835	9/26/2019 4:01 PM
3158	49441	9/26/2019 4:01 PM
3159	48038	9/26/2019 4:01 PM
3160	48237	9/26/2019 4:01 PM
3161	80206	9/26/2019 4:01 PM
3162	48073	9/26/2019 4:01 PM
3163	49506	9/26/2019 4:00 PM
3164	48624	9/26/2019 4:00 PM
3165	49341	9/26/2019 4:00 PM
3166	48842	9/26/2019 4:00 PM
3167	49630	9/26/2019 3:59 PM
3168	49546	9/26/2019 3:59 PM
3169	48335	9/26/2019 3:59 PM
3170	49735	9/26/2019 3:59 PM
3171	48051	9/26/2019 3:59 PM
3172	48183	9/26/2019 3:58 PM
3173	49729	9/26/2019 3:58 PM
3174	49721	9/26/2019 3:58 PM
3175	48837	9/26/2019 3:58 PM
3176	49302	9/26/2019 3:58 PM
3177	49727	9/26/2019 3:58 PM
3178	49461	9/26/2019 3:57 PM
3179	43452	9/26/2019 3:57 PM
3180	49033	9/26/2019 3:57 PM
3181	49770	9/26/2019 3:57 PM
3182	48169	9/26/2019 3:57 PM
3183	49935	9/26/2019 3:57 PM
3184	48346	9/26/2019 3:57 PM
3185	77095	9/26/2019 3:56 PM
3186	49685	9/26/2019 3:56 PM
3187	49093	9/26/2019 3:56 PM
3188	48640	9/26/2019 3:56 PM
3189	48193	9/26/2019 3:56 PM
3190	48187	9/26/2019 3:56 PM
3191	49464	9/26/2019 3:56 PM
3192	48706	9/26/2019 3:56 PM

MSWC Boater Trends Survey

3193	49415	9/26/2019 3:55 PM
3194	48096	9/26/2019 3:55 PM
3195	49201	9/26/2019 3:55 PM
3196	48047	9/26/2019 3:55 PM
3197	48160	9/26/2019 3:55 PM
3198	48817	9/26/2019 3:55 PM
3199	49720	9/26/2019 3:54 PM
3200	48306	9/26/2019 3:54 PM
3201	49855	9/26/2019 3:54 PM
3202	48848	9/26/2019 3:54 PM
3203	54901	9/26/2019 3:53 PM
3204	48026	9/26/2019 3:53 PM
3205	49453	9/26/2019 3:53 PM
3206	49525	9/26/2019 3:53 PM
3207	49779	9/26/2019 3:53 PM
3208	48178	9/26/2019 3:52 PM
3209	60077	9/26/2019 3:52 PM
3210	48152	9/26/2019 3:52 PM
3211	53024	9/26/2019 3:52 PM
3212	49417	9/26/2019 3:52 PM
3213	48350	9/26/2019 3:52 PM
3214	48017	9/26/2019 3:51 PM
3215	53142	9/26/2019 3:51 PM
3216	48001	9/26/2019 3:51 PM
3217	49007	9/26/2019 3:51 PM
3218	48166	9/26/2019 3:51 PM
3219	48114	9/26/2019 3:51 PM
3220	49418	9/26/2019 3:51 PM
3221	48451	9/26/2019 3:51 PM
3222	48306	9/26/2019 3:51 PM
3223	49770	9/26/2019 3:51 PM
3224	48706	9/26/2019 3:50 PM
3225	48066	9/26/2019 3:50 PM
3226	48808	9/26/2019 3:50 PM
3227	48236	9/26/2019 3:50 PM
3228	48473	9/26/2019 3:50 PM
3229	53705	9/26/2019 3:50 PM
3230	49684	9/26/2019 3:50 PM
3231	48854	9/26/2019 3:49 PM
3232	48116	9/26/2019 3:49 PM
3233	49770	9/26/2019 3:49 PM

MSWC Boater Trends Survey

3234	49686	9/26/2019 3:49 PM
3235	48162	9/26/2019 3:49 PM
3236	46077	9/26/2019 3:49 PM
3237	60464	9/26/2019 3:49 PM
3238	48167	9/26/2019 3:49 PM
3239	48070	9/26/2019 3:49 PM
3240	49241	9/26/2019 3:48 PM
3241	48617	9/26/2019 3:48 PM
3242	48317	9/26/2019 3:48 PM
3243	48008	9/26/2019 3:48 PM
3244	48439	9/26/2019 3:48 PM
3245	49866	9/26/2019 3:48 PM
3246	49712	9/26/2019 3:48 PM
3247	49424	9/26/2019 3:48 PM
3248	48005	9/26/2019 3:48 PM
3249	49012-9648	9/26/2019 3:47 PM
3250	48315	9/26/2019 3:47 PM
3251	48236	9/26/2019 3:47 PM
3252	48843	9/26/2019 3:47 PM
3253	48706	9/26/2019 3:47 PM
3254	48188	9/26/2019 3:47 PM
3255	44035	9/26/2019 3:47 PM
3256	48823	9/26/2019 3:47 PM
3257	48346	9/26/2019 3:46 PM
3258	48038	9/26/2019 3:46 PM
3259	48072	9/26/2019 3:46 PM
3260	48439	9/26/2019 3:46 PM
3261	48230	9/26/2019 3:46 PM
3262	49423	9/26/2019 3:46 PM
3263	49696	9/26/2019 3:46 PM
3264	60640	9/26/2019 3:45 PM
3265	48044	9/26/2019 3:45 PM
3266	27518	9/26/2019 3:45 PM
3267	49331	9/26/2019 3:45 PM
3268	49721	9/26/2019 3:45 PM
3269	48047	9/26/2019 3:45 PM
3270	49015	9/26/2019 3:45 PM
3271	48640	9/26/2019 3:45 PM
3272	54216	9/26/2019 3:45 PM
3273	49424	9/26/2019 3:44 PM
3274	48096	9/26/2019 3:44 PM

MSWC Boater Trends Survey

3275	48079	9/26/2019 3:44 PM
3276	48071	9/26/2019 3:44 PM
3277	48146	9/26/2019 3:44 PM
3278	49644	9/26/2019 3:43 PM
3279	49031	9/26/2019 3:43 PM
3280	48021	9/26/2019 3:43 PM
3281	48390	9/26/2019 3:43 PM
3282	48045	9/26/2019 3:43 PM
3283	49759	9/26/2019 3:43 PM
3284	48169	9/26/2019 3:43 PM
3285	48640	9/26/2019 3:43 PM
3286	49503	9/26/2019 3:43 PM
3287	48706	9/26/2019 3:43 PM
3288	48439	9/26/2019 3:43 PM
3289	48626	9/26/2019 3:42 PM
3290	49548	9/26/2019 3:42 PM
3291	48313	9/26/2019 3:42 PM
3292	48230	9/26/2019 3:42 PM
3293	33064	9/26/2019 3:42 PM
3294	48879	9/26/2019 3:41 PM
3295	60189	9/26/2019 3:41 PM
3296	49445	9/26/2019 3:41 PM
3297	49946	9/26/2019 3:41 PM
3298	48138	9/26/2019 3:41 PM
3299	48322	9/26/2019 3:41 PM
3300	49010	9/26/2019 3:41 PM
3301	34240	9/26/2019 3:41 PM
3302	48412	9/26/2019 3:41 PM
3303	60618	9/26/2019 3:40 PM
3304	4896	9/26/2019 3:40 PM
3305	49321	9/26/2019 3:40 PM
3306	49240	9/26/2019 3:40 PM
3307	49801	9/26/2019 3:40 PM
3308	48744	9/26/2019 3:40 PM
3309	48473	9/26/2019 3:40 PM
3310	43612	9/26/2019 3:40 PM
3311	2142	9/26/2019 3:40 PM
3312	48412	9/26/2019 3:40 PM
3313	48170	9/26/2019 3:40 PM
3314	48820	9/26/2019 3:39 PM
3315	49735	9/26/2019 3:39 PM

MSWC Boater Trends Survey

3316	48656	9/26/2019 3:39 PM
3317	N8P 1H8	9/26/2019 3:39 PM
3318	34202	9/26/2019 3:39 PM
3319	49441	9/26/2019 3:39 PM
3320	54235	9/26/2019 3:39 PM
3321	46322	9/26/2019 3:39 PM
3322	49449	9/26/2019 3:39 PM
3323	48152	9/26/2019 3:39 PM
3324	48150	9/26/2019 3:39 PM
3325	48706-1905	9/26/2019 3:39 PM
3326	49519	9/26/2019 3:39 PM
3327	48809	9/26/2019 3:39 PM
3328	48820	9/26/2019 3:39 PM
3329	54202	9/26/2019 3:38 PM
3330	49038	9/26/2019 3:38 PM
3331	48130	9/26/2019 3:38 PM
3332	48035	9/26/2019 3:38 PM
3333	49464	9/26/2019 3:38 PM
3334	48367	9/26/2019 3:38 PM
3335	49419	9/26/2019 3:38 PM
3336	48154	9/26/2019 3:38 PM
3337	48059	9/26/2019 3:37 PM
3338	48371	9/26/2019 3:37 PM
3339	48042	9/26/2019 3:37 PM
3340	48335	9/26/2019 3:37 PM
3341	49286	9/26/2019 3:37 PM
3342	49445	9/26/2019 3:37 PM
3343	49712	9/26/2019 3:37 PM
3344	48044	9/26/2019 3:37 PM
3345	48044	9/26/2019 3:37 PM
3346	49412	9/26/2019 3:37 PM
3347	48875	9/26/2019 3:36 PM
3348	49685	9/26/2019 3:36 PM
3349	49720	9/26/2019 3:36 PM
3350	48183	9/26/2019 3:36 PM
3351	49017	9/26/2019 3:36 PM
3352	49112	9/26/2019 3:36 PM
3353	49464	9/26/2019 3:36 PM
3354	48430	9/26/2019 3:36 PM
3355	48750	9/26/2019 3:36 PM
3356	48152	9/26/2019 3:36 PM

MSWC Boater Trends Survey

3357	49799	9/26/2019 3:36 PM
3358	49456	9/26/2019 3:36 PM
3359	60614	9/26/2019 3:36 PM
3360	48101	9/26/2019 3:36 PM
3361	31558	9/26/2019 3:35 PM
3362	49733	9/26/2019 3:35 PM
3363	54311	9/26/2019 3:35 PM
3364	48170	9/26/2019 3:35 PM
3365	48864	9/26/2019 3:35 PM
3366	48192	9/26/2019 3:35 PM
3367	49720	9/26/2019 3:35 PM
3368	49071	9/26/2019 3:35 PM
3369	49301	9/26/2019 3:35 PM
3370	49320	9/26/2019 3:35 PM
3371	49684	9/26/2019 3:34 PM
3372	48025	9/26/2019 3:34 PM
3373	48076	9/26/2019 3:34 PM
3374	48043	9/26/2019 3:34 PM
3375	60805	9/26/2019 3:34 PM
3376	48642	9/26/2019 3:34 PM
3377	49015	9/26/2019 3:34 PM
3378	49740	9/26/2019 3:34 PM
3379	49770	9/26/2019 3:34 PM
3380	49337	9/26/2019 3:34 PM
3381	49406	9/26/2019 3:34 PM
3382	41051	9/26/2019 3:34 PM
3383	46321	9/26/2019 3:34 PM
3384	54311	9/26/2019 3:34 PM
3385	48390	9/26/2019 3:34 PM
3386	49306	9/26/2019 3:33 PM
3387	49621	9/26/2019 3:33 PM
3388	48080	9/26/2019 3:33 PM
3389	48188	9/26/2019 3:33 PM
3390	49749	9/26/2019 3:33 PM
3391	28625	9/26/2019 3:33 PM
3392	48628	9/26/2019 3:33 PM
3393	48117	9/26/2019 3:33 PM
3394	48628	9/26/2019 3:33 PM
3395	49437	9/26/2019 3:32 PM
3396	48032	9/26/2019 3:32 PM
3397	48045	9/26/2019 3:32 PM

MSWC Boater Trends Survey

3398	48334	9/26/2019 3:32 PM
3399	48128	9/26/2019 3:32 PM
3400	49765	9/26/2019 3:32 PM
3401	48038	9/26/2019 3:32 PM
3402	48152	9/26/2019 3:32 PM
3403	46350	9/26/2019 3:32 PM
3404	48503	9/26/2019 3:32 PM
3405	48023	9/26/2019 3:32 PM
3406	53150	9/26/2019 3:32 PM
3407	48359	9/26/2019 3:32 PM
3408	48066	9/26/2019 3:32 PM
3409	49441	9/26/2019 3:32 PM
3410	48306	9/26/2019 3:31 PM
3411	49735	9/26/2019 3:31 PM
3412	49009	9/26/2019 3:31 PM
3413	48326	9/26/2019 3:31 PM
3414	49095	9/26/2019 3:31 PM
3415	48820	9/26/2019 3:31 PM
3416	49445	9/26/2019 3:31 PM
3417	49307	9/26/2019 3:31 PM
3418	49028	9/26/2019 3:31 PM
3419	48114	9/26/2019 3:31 PM
3420	48393	9/26/2019 3:31 PM
3421	49712	9/26/2019 3:31 PM
3422	48154	9/26/2019 3:31 PM
3423	48226	9/26/2019 3:31 PM
3424	49010	9/26/2019 3:31 PM
3425	49759	9/26/2019 3:30 PM
3426	49321	9/26/2019 3:30 PM
3427	48455	9/26/2019 3:30 PM
3428	49045	9/26/2019 3:30 PM
3429	35216	9/26/2019 3:30 PM
3430	53405	9/26/2019 3:30 PM
3431	60491	9/26/2019 3:30 PM
3432	49203	9/26/2019 3:30 PM
3433	48382	9/26/2019 3:30 PM
3434	48190	9/26/2019 3:30 PM
3435	48081	9/26/2019 3:30 PM
3436	53149	9/26/2019 3:30 PM
3437	48116	9/26/2019 3:29 PM
3438	48228	9/26/2019 3:29 PM

MSWC Boater Trends Survey

3439	48433	9/26/2019 3:29 PM
3440	48911	9/26/2019 3:29 PM
3441	48334	9/26/2019 3:29 PM
3442	60803	9/26/2019 3:29 PM
3443	49715	9/26/2019 3:29 PM
3444	48128	9/26/2019 3:29 PM
3445	49929	9/26/2019 3:29 PM
3446	54301	9/26/2019 3:29 PM
3447	48823	9/26/2019 3:29 PM
3448	48823	9/26/2019 3:29 PM
3449	49508	9/26/2019 3:29 PM
3450	48642	9/26/2019 3:29 PM
3451	49022	9/26/2019 3:28 PM
3452	48236	9/26/2019 3:28 PM
3453	49419	9/26/2019 3:28 PM
3454	54311	9/26/2019 3:28 PM
3455	48038	9/26/2019 3:28 PM
3456	48176	9/26/2019 3:28 PM
3457	48114	9/26/2019 3:28 PM
3458	46342	9/26/2019 3:28 PM
3459	49341	9/26/2019 3:28 PM
3460	48732	9/26/2019 3:28 PM
3461	49725	9/26/2019 3:28 PM
3462	48872	9/26/2019 3:28 PM
3463	60045	9/26/2019 3:28 PM
3464	48820	9/26/2019 3:28 PM
3465	48079	9/26/2019 3:28 PM
3466	49417	9/26/2019 3:28 PM
3467	49685	9/26/2019 3:28 PM
3468	48079	9/26/2019 3:28 PM
3469	49601	9/26/2019 3:28 PM
3470	48602	9/26/2019 3:28 PM
3471	53092	9/26/2019 3:27 PM
3472	46514	9/26/2019 3:27 PM
3473	48083	9/26/2019 3:27 PM
3474	48306	9/26/2019 3:27 PM
3475	49649	9/26/2019 3:27 PM
3476	48092	9/26/2019 3:27 PM
3477	48759	9/26/2019 3:27 PM
3478	48917	9/26/2019 3:27 PM
3479	48083	9/26/2019 3:27 PM

MSWC Boater Trends Survey

3480	48152	9/26/2019 3:27 PM
3481	48760	9/26/2019 3:27 PM
3482	48473	9/26/2019 3:27 PM
3483	48888	9/26/2019 3:26 PM
3484	49855	9/26/2019 3:26 PM
3485	49428	9/26/2019 3:26 PM
3486	48659	9/26/2019 3:26 PM
3487	48047	9/26/2019 3:26 PM
3488	60608	9/26/2019 3:26 PM
3489	49456	9/26/2019 3:26 PM
3490	54115	9/26/2019 3:26 PM
3491	49958	9/26/2019 3:26 PM
3492	49009	9/26/2019 3:26 PM
3493	49836	9/26/2019 3:26 PM
3494	49098	9/26/2019 3:26 PM
3495	46250	9/26/2019 3:26 PM
3496	48103	9/26/2019 3:26 PM
3497	48442	9/26/2019 3:26 PM
3498	49464	9/26/2019 3:26 PM
3499	49089	9/26/2019 3:26 PM
3500	48623	9/26/2019 3:26 PM
3501	49058	9/26/2019 3:25 PM
3502	48708	9/26/2019 3:25 PM
3503	48047	9/26/2019 3:25 PM
3504	48820	9/26/2019 3:25 PM
3505	53511	9/26/2019 3:25 PM
3506	48072	9/26/2019 3:25 PM
3507	49331	9/26/2019 3:25 PM
3508	48732	9/26/2019 3:25 PM
3509	48837	9/26/2019 3:25 PM
3510	48045	9/26/2019 3:25 PM
3511	49690	9/26/2019 3:25 PM
3512	49445	9/26/2019 3:25 PM
3513	49690	9/26/2019 3:25 PM
3514	49221	9/26/2019 3:25 PM
3515	48819	9/26/2019 3:25 PM
3516	16803	9/26/2019 3:25 PM
3517	49315	9/26/2019 3:24 PM
3518	43517	9/26/2019 3:24 PM
3519	48101	9/26/2019 3:24 PM
3520	49426	9/26/2019 3:24 PM

MSWC Boater Trends Survey

3521	48362	9/26/2019 3:24 PM
3522	48236	9/26/2019 3:24 PM
3523	49428	9/26/2019 3:24 PM
3524	49458	9/26/2019 3:24 PM
3525	48375	9/26/2019 3:24 PM
3526	48169	9/26/2019 3:24 PM
3527	48023	9/26/2019 3:24 PM
3528	48066	9/26/2019 3:24 PM
3529	49301	9/26/2019 3:24 PM
3530	49801	9/26/2019 3:24 PM
3531	48864	9/26/2019 3:24 PM
3532	49460	9/26/2019 3:24 PM
3533	48430	9/26/2019 3:24 PM
3534	48706	9/26/2019 3:24 PM
3535	49868	9/26/2019 3:23 PM
3536	49120	9/26/2019 3:23 PM
3537	49424	9/26/2019 3:23 PM
3538	48603	9/26/2019 3:23 PM
3539	48192	9/26/2019 3:23 PM
3540	49749	9/26/2019 3:23 PM
3541	48603	9/26/2019 3:23 PM
3542	49534	9/26/2019 3:23 PM
3543	48080	9/26/2019 3:23 PM
3544	49097	9/26/2019 3:23 PM
3545	53072	9/26/2019 3:23 PM
3546	49684	9/26/2019 3:23 PM
3547	49331	9/26/2019 3:23 PM
3548	80228	9/26/2019 3:23 PM
3549	48025	9/26/2019 3:23 PM
3550	49426	9/26/2019 3:23 PM
3551	48360	9/26/2019 3:23 PM
3552	49058	9/26/2019 3:23 PM
3553	49506	9/26/2019 3:23 PM
3554	N0R1V0	9/26/2019 3:23 PM
3555	48371	9/26/2019 3:23 PM
3556	60647	9/26/2019 3:23 PM
3557	48088	9/26/2019 3:23 PM
3558	48125	9/26/2019 3:22 PM
3559	49506	9/26/2019 3:22 PM
3560	60647	9/26/2019 3:22 PM
3561	48450	9/26/2019 3:22 PM

MSWC Boater Trends Survey

3562	47906	9/26/2019 3:22 PM
3563	49953	9/26/2019 3:22 PM
3564	48168	9/26/2019 3:22 PM
3565	49735	9/26/2019 3:22 PM
3566	48847	9/26/2019 3:22 PM
3567	46304	9/26/2019 3:21 PM
3568	48316	9/26/2019 3:21 PM
3569	48348	9/26/2019 3:21 PM
3570	48067	9/26/2019 3:21 PM
3571	49689	9/26/2019 3:20 PM
3572	49756	9/26/2019 3:12 PM
3573	48038	9/26/2019 3:04 PM
3574	48065	9/26/2019 2:59 PM
3575	48861	9/26/2019 2:52 PM
3576	54301	9/26/2019 2:48 PM
3577	60515	9/26/2019 2:40 PM
3578	55112	9/26/2019 2:36 PM
3579	84120	9/26/2019 2:33 PM
3580	48111	9/26/2019 2:30 PM
3581	49241	9/26/2019 2:19 PM
3582	48430	9/26/2019 2:19 PM
3583	48840	9/26/2019 2:16 PM
3584	4845	9/26/2019 2:13 PM
3585	49623	9/26/2019 2:13 PM
3586	48656	9/26/2019 1:55 PM
3587	48045	9/26/2019 1:54 PM
3588	49454	9/26/2019 1:34 PM
3589	48763	9/26/2019 1:33 PM
3590	49727	9/26/2019 1:14 PM
3591	49201	9/26/2019 12:54 PM
3592	48093	9/26/2019 12:53 PM
3593	48067	9/26/2019 12:44 PM
3594	48374	9/26/2019 12:37 PM
3595	49404	9/26/2019 12:31 PM
3596	48631	9/26/2019 12:31 PM
3597	40272	9/26/2019 12:29 PM
3598	48433	9/26/2019 12:29 PM
3599	48051-2011	9/26/2019 12:26 PM
3600	48140	9/26/2019 12:24 PM
3601	48603	9/26/2019 12:24 PM
3602	49849	9/26/2019 12:20 PM

MSWC Boater Trends Survey

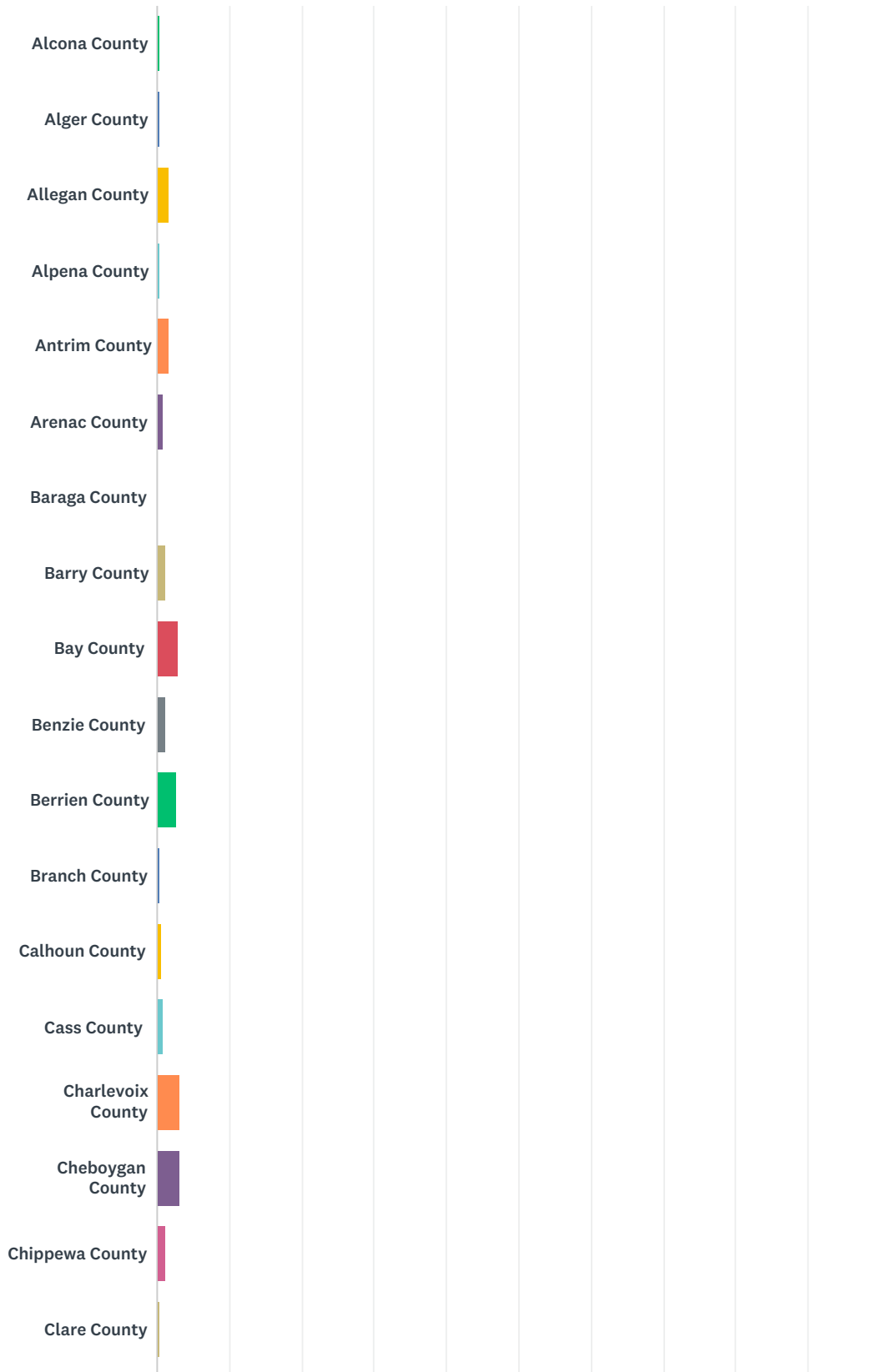
3603	48310	9/26/2019 12:20 PM
3604	49306	9/26/2019 12:18 PM
3605	45309	9/26/2019 12:18 PM
3606	49428	9/26/2019 12:12 PM
3607	48164	9/26/2019 12:11 PM
3608	48416	9/26/2019 12:09 PM
3609	48917	9/26/2019 12:06 PM
3610	48872	9/26/2019 12:06 PM
3611	48081	9/26/2019 12:04 PM
3612	49426	9/26/2019 12:02 PM
3613	48653	9/26/2019 11:59 AM
3614	60098	9/26/2019 11:59 AM
3615	48879	9/26/2019 11:55 AM
3616	48187	9/26/2019 11:51 AM
3617	48220	9/26/2019 11:50 AM
3618	48187	9/26/2019 11:49 AM
3619	48038	9/26/2019 11:45 AM
3620	48198	9/26/2019 11:42 AM
3621	48897	9/26/2019 11:34 AM
3622	48103	9/26/2019 11:32 AM
3623	49418	9/26/2019 11:32 AM
3624	48455	9/26/2019 11:27 AM
3625	48660	9/26/2019 11:25 AM
3626	P6B5X1	9/26/2019 11:23 AM
3627	49770	9/26/2019 11:23 AM
3628	48446	9/26/2019 11:20 AM
3629	48877	9/26/2019 11:16 AM
3630	48073	9/26/2019 11:15 AM
3631	48001	9/26/2019 11:15 AM
3632	48509	9/26/2019 11:14 AM
3633	4i910	9/26/2019 11:14 AM
3634	48047	9/26/2019 11:14 AM
3635	49686	9/26/2019 11:13 AM
3636	48125	9/26/2019 11:12 AM
3637	48730	9/26/2019 11:08 AM
3638	49333	9/26/2019 11:08 AM
3639	48067	9/26/2019 11:08 AM
3640	48036	9/26/2019 11:04 AM
3641	48001	9/26/2019 11:02 AM
3642	48356	9/26/2019 11:02 AM
3643	46845	9/26/2019 11:01 AM

MSWC Boater Trends Survey

3644	49423	9/26/2019 11:01 AM
3645	49464	9/26/2019 11:00 AM
3646	48658	9/26/2019 11:00 AM
3647	49548	9/26/2019 11:00 AM
3648	49866	9/26/2019 10:59 AM
3649	48038	9/26/2019 10:58 AM
3650	49746	9/26/2019 10:56 AM
3651	49426	9/26/2019 10:56 AM
3652	49759	9/26/2019 10:56 AM
3653	49781	9/26/2019 10:56 AM
3654	49120	9/26/2019 10:55 AM
3655	48879	9/26/2019 10:54 AM
3656	48049	9/26/2019 10:54 AM
3657	49423	9/26/2019 10:53 AM
3658	48079	9/26/2019 10:53 AM
3659	49999	9/25/2019 4:24 PM
3660	49058	9/24/2019 10:30 AM
3661	48840	9/18/2019 1:39 PM
3662	49085	9/13/2019 10:04 AM

Q7 Please choose the county of your primary boating area using map below for reference:

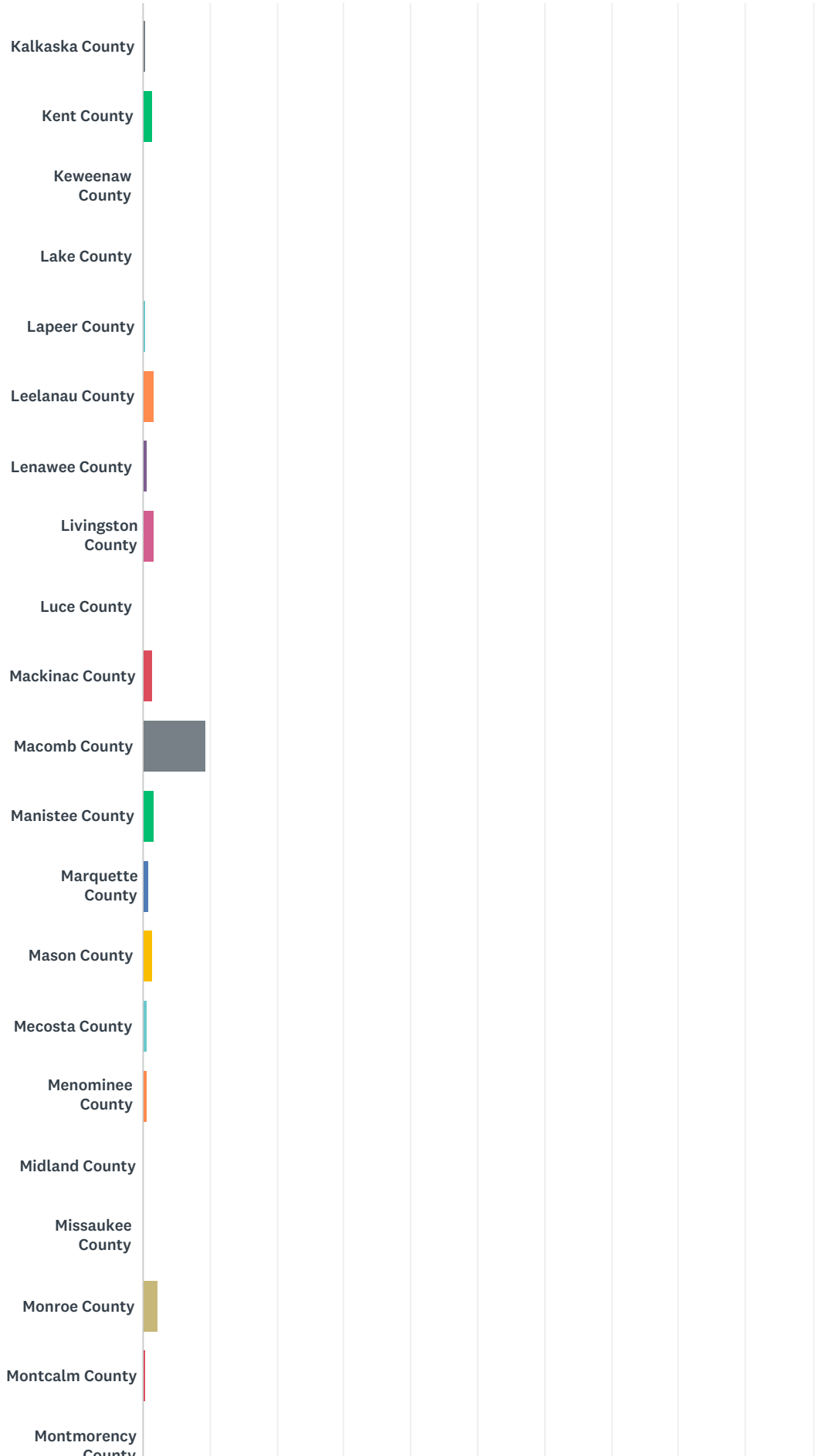
Answered: 3,581 Skipped: 162



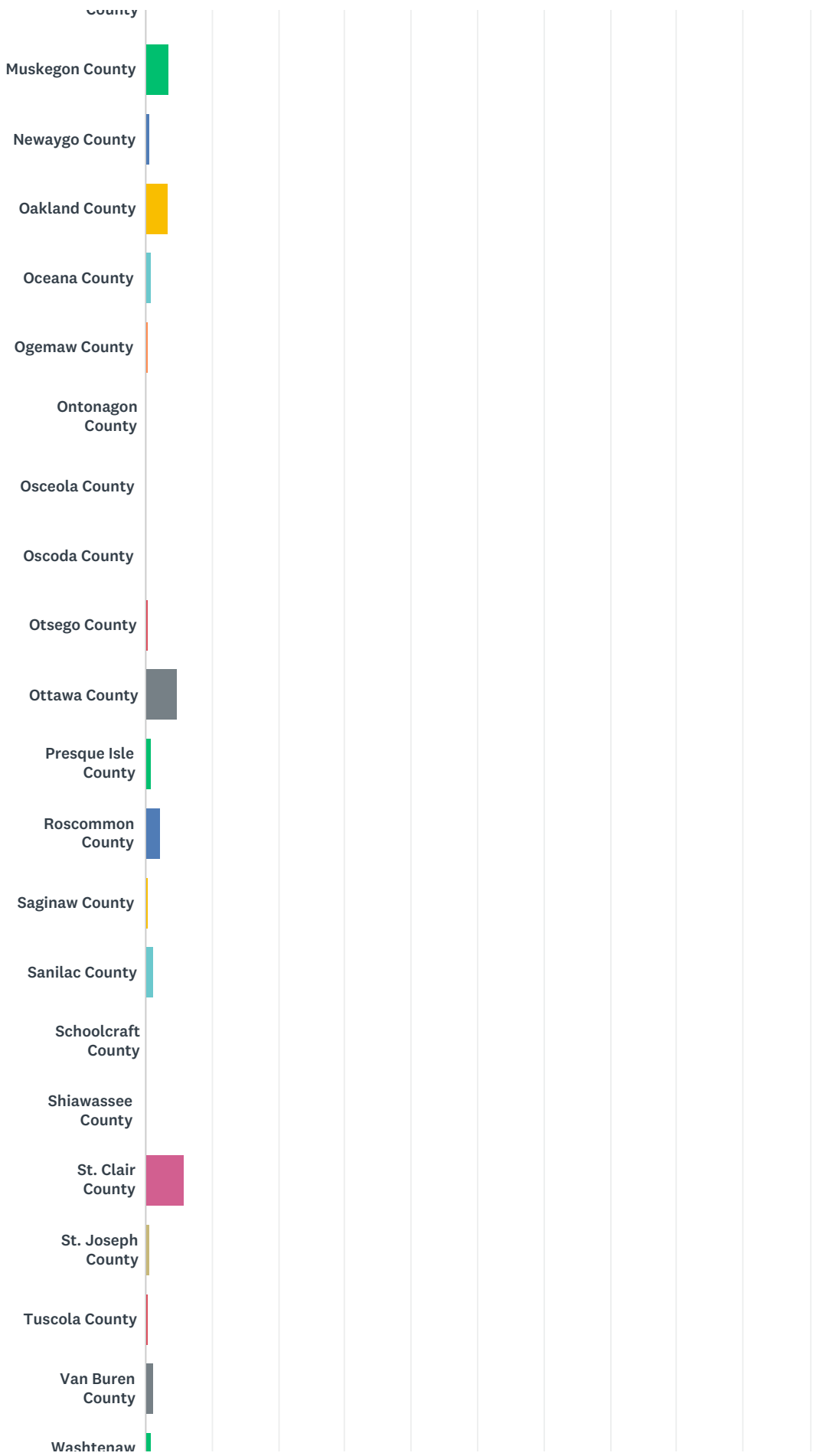
MSWC Boater Trends Survey



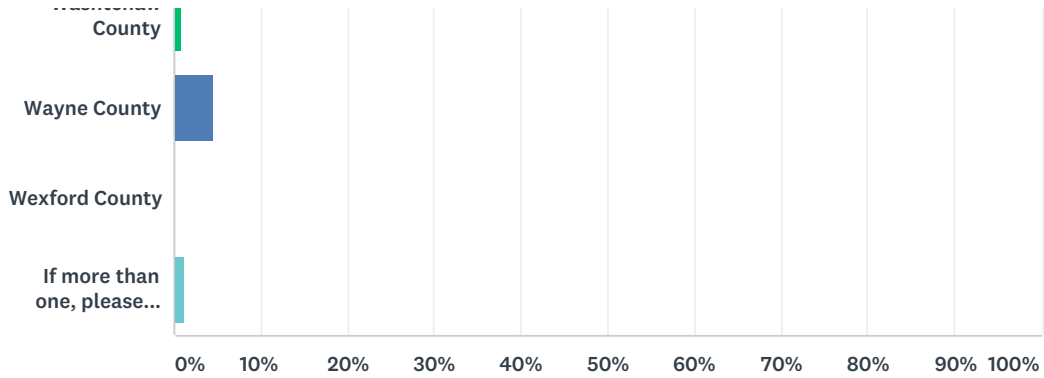
MSWC Boater Trends Survey



MSWC Boater Trends Survey



MSWC Boater Trends Survey



ANSWER CHOICES	RESPONSES	
Alcona County	0.36%	13
Alger County	0.50%	18
Allegan County	1.59%	57
Alpena County	0.47%	17
Antrim County	1.62%	58
Arenac County	0.84%	30
Baraga County	0.22%	8
Barry County	1.17%	42
Bay County	3.02%	108
Benzie County	1.28%	46
Berrien County	2.65%	95
Branch County	0.45%	16
Calhoun County	0.61%	22
Cass County	0.75%	27
Charlevoix County	3.18%	114
Cheboygan County	3.21%	115
Chippewa County	1.23%	44
Clare County	0.36%	13
Clinton County	0.22%	8
Crawford County	0.39%	14
Delta County	0.95%	34
Dickinson County	0.17%	6
Eaton County	0.34%	12
Emmet County	1.03%	37
Genesee County	0.81%	29

MSWC Boater Trends Survey

Gladwin County	0.87%	31
Gogebic County	0.31%	11
Grand Traverse County	2.90%	104
Gratiot County	0.06%	2
Hillsdale County	0.03%	1
Houghton County	0.81%	29
Huron County	1.51%	54
Ingham County	0.70%	25
Ionia County	0.47%	17
Iosco County	2.04%	73
Iron County	0.22%	8
Isabella County	0.11%	4
Jackson County	0.84%	30
Kalamazoo County	0.64%	23
Kalkaska County	0.36%	13
Kent County	1.56%	56
Keweenaw County	0.17%	6
Lake County	0.28%	10
Lapeer County	0.47%	17
Leelanau County	1.65%	59
Lenawee County	0.64%	23
Livingston County	1.73%	62
Luce County	0.22%	8
Mackinac County	1.45%	52
Macomb County	9.47%	339
Manistee County	1.62%	58
Marquette County	0.81%	29
Mason County	1.48%	53
Mecosta County	0.53%	19
Menominee County	0.56%	20
Midland County	0.25%	9
Missaukee County	0.25%	9
Monroe County	2.29%	82
Montcalm County	0.42%	15

MSWC Boater Trends Survey

Montmorency County	0.28%	10
Muskegon County	3.63%	130
Newaygo County	0.53%	19
Oakland County	3.32%	119
Oceana County	0.87%	31
Ogemaw County	0.36%	13
Ontonagon County	0.17%	6
Osceola County	0.06%	2
Oscoda County	0.20%	7
Otsego County	0.39%	14
Ottawa County	4.78%	171
Presque Isle County	0.75%	27
Roscommon County	2.32%	83
Saginaw County	0.42%	15
Sanilac County	1.26%	45
Schoolcraft County	0.11%	4
Shiawassee County	0.20%	7
St. Clair County	5.84%	209
St. Joseph County	0.59%	21
Tuscola County	0.45%	16
Van Buren County	1.26%	45
Washtenaw County	0.75%	27
Wayne County	4.69%	168
Wexford County	0.28%	10
If more than one, please indicate:	1.34%	48
TOTAL		3,581

#	IF MORE THAN ONE, PLEASE INDICATE:	DATE
1	Schoolcraft, Cheboygan, Presque Isle, Benzie, Manistee, Mason, Wexford, Missaukee, Osceola, Clare, Arenac, Bay, Roscommon	10/12/2019 2:15 PM
2	Cheboygan, Wexford, Bay, Arenac, Manistee, Benzie, Clare, Missaukee, Mason, SchoolcraftMason	10/12/2019 2:09 PM
3	INGHAM, EATON, BARRY, IONIA, CALHOUN, CLINTON, BAY, MIDLAND, GLADWIN, MUSKEGON, OTTAWA, BARRY, GRATIOT, MECOSTA, ROSCOMMON, +++++	10/9/2019 8:46 PM
4	Presque Isle, Cheboygan, Mackinac, Chippewa	10/5/2019 1:19 PM
5	Elkhart In	10/5/2019 10:21 AM
6	Macomb and St Clair counties	10/5/2019 5:33 AM
7	Washtenaw, Livingston, Jackson, Mackinac	10/5/2019 2:52 AM

MSWC Boater Trends Survey

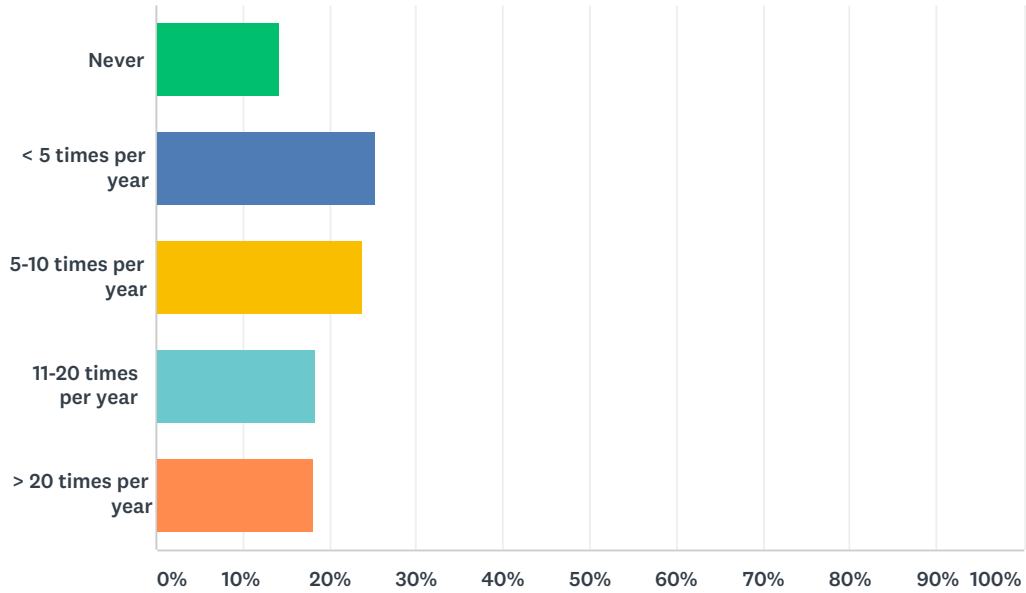
8	To many to list.	10/4/2019 7:17 PM
9	Great lakes	10/4/2019 6:24 PM
10	Drummond	10/4/2019 6:01 PM
11	Lake huron,lake Michigan, including UP ports	10/4/2019 12:31 PM
12	We sail all over Lake Michigan on Wisc and Mich ports	10/4/2019 11:03 AM
13	Berrian,van buren,ottawa,Mason,manistee,benze,leelanau,charlevoix,mackinac,cheboygan,chippewa,alger, marquette,keweenaw, hoghton, baraga,menominee, delta,	10/4/2019 10:37 AM
14	Schoolcraft,Alger,Crawford,Oscoda,Alcona,Montmorency,Clare,Oakland,Lapeer,Sanilac	10/4/2019 10:32 AM
15	Lake Michigan, Lake Huron, Lake Superior and Canadian waters	10/4/2019 10:30 AM
16	Ottawa to emmet along the west coast of michigan	10/4/2019 10:26 AM
17	all of the UP	10/4/2019 10:21 AM
18	all	10/3/2019 9:39 AM
19	Maccomb,Wayne, st clair	10/2/2019 8:58 AM
20	Benzie, Manistee, Mason, Oceana, Muskegon, Ottawa, Allegan, Van Buren, Berrien, Lelenau, Grand Traverse, Charlevoix	10/2/2019 8:15 AM
21	Van buren, Muskegon, Mason, Ottawa, Huron, Sanilac, Berren	10/1/2019 7:14 AM
22	any county where work requires	9/30/2019 3:07 PM
23	wayne, macomb	9/30/2019 2:58 PM
24	Wayne, Washtenaw, Macomb, Antrim	9/30/2019 2:48 PM
25	cook county	9/30/2019 9:48 AM
26	Statewide	9/29/2019 8:51 PM
27	Washtenaw, Wayne, Huron, Alger, Chippewa, Leelanau are just a few	9/29/2019 5:03 PM
28	Through boater	9/27/2019 9:01 AM
29	I fish the hole state	9/27/2019 8:52 AM
30	Wayne, Macomb, St. Clair, Emmet, Charlevoix	9/26/2019 8:26 PM
31	Benton Harbor, Ludington, Manistee, Frankfort	9/26/2019 8:10 PM
32	most of them along coast of michigan	9/26/2019 8:08 PM
33	All of Michigan coastline	9/26/2019 5:38 PM
34	cruisd the UP and Michigan side of Lake Michigan	9/26/2019 5:04 PM
35	between muskegon and down to benton harbor	9/26/2019 4:46 PM
36	between muskegon and down to benton harbor	9/26/2019 4:42 PM
37	Washtenaw, Oakland, Grand Traverse, Antrium, Kent, Genesee, Lapeer, Shiawassee, St. Clair, Macomb, Wayne, Livingston, Marquette, Baraga, Chippewa, Mackinaw, Houghton, Delta, Gogebic, Roscommon, Oscoda, Manistee, Wexford, Eaton,	9/26/2019 4:37 PM
38	Norther Great Lakes	9/26/2019 3:58 PM
39	All coastal cointies	9/26/2019 3:56 PM
40	Chaelevoix, Leelanau, Benzie, Manistee, Mason	9/26/2019 3:45 PM
41	Wayne Macomb	9/26/2019 3:36 PM
42	Oconto, WI	9/26/2019 3:35 PM
43	Van buren, berrien	9/26/2019 3:30 PM
44	Oconto, WI	9/26/2019 3:28 PM
45	Houghton, Keweenaw, Benzie, Leelanau, Grand Travesse, Antrim, Delta, Manistee	9/26/2019 3:28 PM

MSWC Boater Trends Survey

46	All over the state	9/26/2019 3:25 PM
47	northern lake michigan and lake huron	9/26/2019 1:14 PM
48	Cheybogan, Chippewa, Mackinac, St. Joseph Island - Canada	9/26/2019 11:23 AM

Q8 How often do you use boating access sites (public boat launches)?

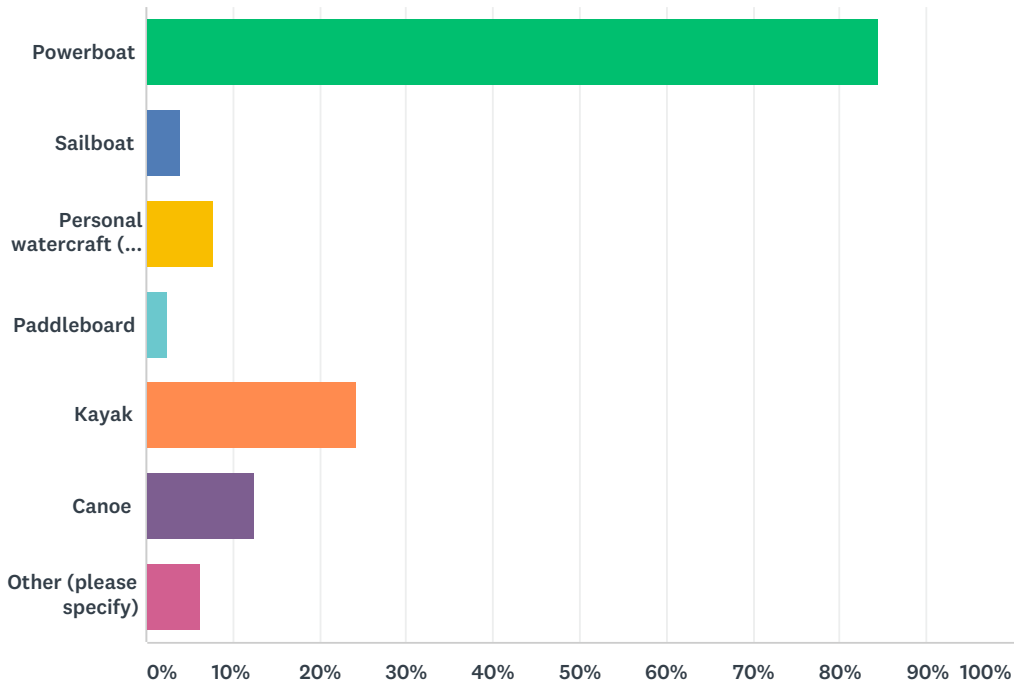
Answered: 3,346 Skipped: 397



ANSWER CHOICES	RESPONSES	
Never	14.17%	474
< 5 times per year	25.28%	846
5-10 times per year	23.85%	798
11-20 times per year	18.50%	619
> 20 times per year	18.20%	609
TOTAL		3,346

Q9 What type of boat(s) do you launch at boating access sites (check all that apply)

Answered: 2,921 Skipped: 822



ANSWER CHOICES	RESPONSES	
Powerboat	84.46%	2,467
Sailboat	3.97%	116
Personal watercraft (jet ski)	7.84%	229
Paddleboard	2.53%	74
Kayak	24.27%	709
Canoe	12.53%	366
Other (please specify)	6.33%	185
Total Respondents: 2,921		

#	OTHER (PLEASE SPECIFY)	DATE
1	pontoon	10/11/2019 11:47 AM
2	Pontoon	10/10/2019 2:20 PM
3	Rowboat	10/8/2019 1:03 PM
4	Row boat	10/8/2019 4:54 AM
5	Pontoon	10/7/2019 7:56 PM
6	Pontoon	10/7/2019 7:34 PM
7	rowboat	10/7/2019 3:55 PM
8	rowboats	10/7/2019 1:22 PM

MSWC Boater Trends Survey

9	fishing boat	10/7/2019 1:20 PM
10	Dinghy	10/6/2019 11:16 PM
11	Inflatable	10/6/2019 8:20 PM
12	Pontoon	10/6/2019 3:01 PM
13	pontoon	10/6/2019 2:06 PM
14	Na	10/6/2019 11:32 AM
15	RIB	10/6/2019 8:52 AM
16	tender	10/5/2019 10:22 PM
17	N/a	10/5/2019 9:40 PM
18	Pontoon	10/5/2019 7:35 PM
19	36' launched at Shepler's in Mac City	10/5/2019 1:33 PM
20	Dinghy	10/5/2019 11:16 AM
21	boat is stored over winter on cradle, launched by the marina	10/5/2019 10:21 AM
22	dinghy	10/5/2019 9:58 AM
23	dinghy for power boat	10/5/2019 7:41 AM
24	None	10/5/2019 12:22 AM
25	Dingy	10/4/2019 10:46 PM
26	*	10/4/2019 8:25 PM
27	4x4	10/4/2019 7:24 PM
28	row boat	10/4/2019 7:15 PM
29	Fishing boat	10/4/2019 6:25 PM
30	None	10/4/2019 5:51 PM
31	Row boat	10/4/2019 5:26 PM
32	Have no working boat as of yet...	10/4/2019 5:16 PM
33	Jon boat	10/4/2019 5:04 PM
34	Inflatable	10/4/2019 4:52 PM
35	Pontoon	10/4/2019 4:23 PM
36	None	10/4/2019 4:05 PM
37	Row	10/4/2019 3:39 PM
38	Hqme made drift type	10/4/2019 2:33 PM
39	Powerboat as a crew member at Great lake steel boat club	10/4/2019 2:32 PM
40	Drift boat	10/4/2019 2:25 PM
41	12 foot meyer row boat	10/4/2019 2:13 PM
42	inflatable	10/4/2019 1:50 PM
43	Dinghy	10/4/2019 1:07 PM
44	None	10/4/2019 12:56 PM
45	Powerboat throughout the season, sailboat twice, in/out	10/4/2019 12:56 PM
46	Pontoon	10/4/2019 12:37 PM
47	pontoon	10/4/2019 12:29 PM
48	Layout boat for duck hunting.	10/4/2019 12:27 PM
49	dighny	10/4/2019 11:55 AM

MSWC Boater Trends Survey

50	River boat	10/4/2019 11:27 AM
51	N.A.	10/4/2019 11:10 AM
52	Na	10/4/2019 11:07 AM
53	pontoon boat	10/4/2019 11:02 AM
54	Small fishing	10/4/2019 10:52 AM
55	aluminum fishing boat	10/4/2019 10:45 AM
56	DINGHY	10/4/2019 10:44 AM
57	12 ft inflatable	10/4/2019 10:39 AM
58	Fishing boat	10/4/2019 10:37 AM
59	Zodiac	10/4/2019 10:36 AM
60	drift boat	10/4/2019 10:31 AM
61	Pontoon	10/4/2019 10:27 AM
62	row boat	10/4/2019 10:22 AM
63	Pontoon	10/4/2019 10:19 AM
64	Pontoon boat	10/3/2019 5:09 PM
65	Inflatable rib as tender	10/3/2019 1:00 PM
66	Pontoon	10/3/2019 8:59 AM
67	I do not use boat launch facilities; long distance cruising with transient boater stops at marinas	10/2/2019 10:29 PM
68	none	10/2/2019 8:54 PM
69	none	10/2/2019 2:36 PM
70	None	10/2/2019 10:12 AM
71	Aluminum boat and power boats	10/2/2019 7:31 AM
72	Fish off landing	10/2/2019 3:51 AM
73	Inflatable	10/2/2019 12:23 AM
74	Bass boat	10/1/2019 7:39 PM
75	Pontoon	10/1/2019 7:21 PM
76	Pontoon	10/1/2019 7:10 PM
77	Tenders	10/1/2019 5:13 PM
78	inflatable	10/1/2019 11:19 AM
79	Dingy	10/1/2019 7:43 AM
80	Pontoon	9/30/2019 11:14 PM
81	I used to launch 23 ft Searay but now Racket launch at Anchor bay Marine going on 17 yrs, love it	9/30/2019 10:06 PM
82	Pontoon	9/30/2019 5:52 PM
83	dingy	9/30/2019 3:58 PM
84	Drift Boat	9/30/2019 3:36 PM
85	non powered waterfowl hunting boat	9/30/2019 2:59 PM
86	windsurfers	9/30/2019 2:58 PM
87	N/A Boat is launched and hauled at marina with lift	9/30/2019 11:09 AM
88	Dinghy	9/30/2019 10:58 AM
89	Paddle Boats	9/30/2019 9:04 AM
90	Dingy	9/29/2019 8:15 PM

MSWC Boater Trends Survey

91	dinghy	9/29/2019 11:36 AM
92	Dinghy	9/29/2019 11:09 AM
93	Dinghy	9/29/2019 11:03 AM
94	rowing shell	9/29/2019 10:49 AM
95	pontoon	9/28/2019 11:17 PM
96	Dinghy	9/28/2019 10:51 PM
97	Dingy	9/28/2019 9:07 PM
98	Dingy	9/28/2019 8:57 PM
99	Pontoon	9/28/2019 2:34 PM
100	port-a-bote	9/28/2019 11:09 AM
101	Paddle boat	9/28/2019 8:50 AM
102	john boat	9/28/2019 4:28 AM
103	paddle boat	9/27/2019 8:55 PM
104	Bass Boat	9/27/2019 8:31 PM
105	Pontoon	9/27/2019 7:02 PM
106	Drift boat	9/27/2019 5:24 PM
107	Inflatable dinghy with motor	9/27/2019 5:00 PM
108	Fishing boat	9/27/2019 4:29 PM
109	Bass boat	9/27/2019 11:46 AM
110	inflatable	9/27/2019 11:16 AM
111	jet boat	9/27/2019 10:49 AM
112	None	9/27/2019 8:55 AM
113	pontoon	9/27/2019 8:50 AM
114	never use	9/27/2019 8:21 AM
115	Launch from shore	9/27/2019 7:51 AM
116	PONTOON	9/27/2019 7:08 AM
117	Row boat	9/27/2019 6:27 AM
118	Dingy	9/27/2019 6:26 AM
119	Power boat	9/27/2019 12:20 AM
120	NA	9/26/2019 10:19 PM
121	personel pontoon	9/26/2019 9:40 PM
122	dinghy	9/26/2019 9:33 PM
123	RIB ¹	9/26/2019 9:02 PM
124	River boat & Starcraft 19ft fishing boat	9/26/2019 8:58 PM
125	paddle boat	9/26/2019 8:46 PM
126	Duck Hunting Boat	9/26/2019 8:37 PM
127	Dinghy	9/26/2019 8:33 PM
128	usually rental boats are already on water	9/26/2019 8:31 PM
129	Inflatable	9/26/2019 8:30 PM
130	16 ft jet boat	9/26/2019 8:18 PM
131	atv	9/26/2019 8:16 PM

MSWC Boater Trends Survey

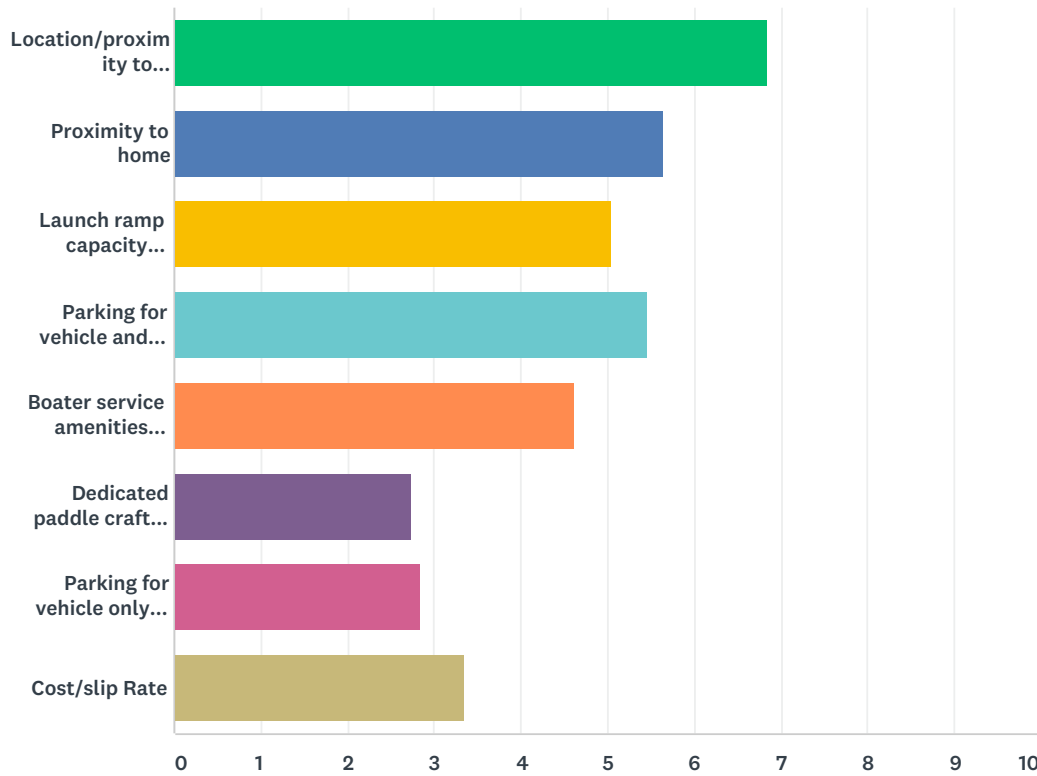
132	Fishing boat	9/26/2019 8:06 PM
133	kayak with trolling motor	9/26/2019 8:02 PM
134	Row boat	9/26/2019 8:01 PM
135	Pontoon. 25'	9/26/2019 7:50 PM
136	Bass boat	9/26/2019 7:40 PM
137	inflatable	9/26/2019 7:37 PM
138	Pontoon	9/26/2019 7:08 PM
139	Dinghy	9/26/2019 7:05 PM
140	Raft	9/26/2019 6:48 PM
141	None	9/26/2019 6:34 PM
142	Driftboat	9/26/2019 6:30 PM
143	ROWBOAT	9/26/2019 6:19 PM
144	row boat 12 foot	9/26/2019 6:14 PM
145	none	9/26/2019 6:13 PM
146	Rowboat	9/26/2019 6:03 PM
147	Rowboat	9/26/2019 6:00 PM
148	Shore access via dinghy	9/26/2019 5:53 PM
149	Paddleboat	9/26/2019 5:40 PM
150	Row boat	9/26/2019 5:23 PM
151	Dinghy	9/26/2019 5:21 PM
152	Pontoon	9/26/2019 5:20 PM
153	dinghy	9/26/2019 5:19 PM
154	Inflatable	9/26/2019 5:19 PM
155	Fishing Boat	9/26/2019 5:09 PM
156	n/a	9/26/2019 5:07 PM
157	Pontoon	9/26/2019 5:04 PM
158	Inflatable fishing boat	9/26/2019 5:01 PM
159	Dinghy	9/26/2019 4:57 PM
160	Side of the road because because you don't build Kayak access points properly.	9/26/2019 4:42 PM
161	Nothing	9/26/2019 4:35 PM
162	Fishing boat	9/26/2019 4:34 PM
163	Fishing boat	9/26/2019 4:29 PM
164	Dinghy	9/26/2019 4:19 PM
165	I would launch my 36' cruiser at a state launch site if I had a trailer big enough	9/26/2019 4:13 PM
166	Inflatable boat and motor	9/26/2019 4:04 PM
167	Pontoon	9/26/2019 3:56 PM
168	Fishing boat	9/26/2019 3:50 PM
169	Pontoon	9/26/2019 3:42 PM
170	none	9/26/2019 3:40 PM
171	Dinghy	9/26/2019 3:38 PM
172	Alumin Hull Fishing Boat, 115 HP Outboard Motor	9/26/2019 3:36 PM

MSWC Boater Trends Survey

173	I launch from dry dock storage	9/26/2019 3:34 PM
174	ATV for ice fishing	9/26/2019 3:34 PM
175	Inflatable dinghy	9/26/2019 3:33 PM
176	bass boat	9/26/2019 3:32 PM
177	Do not launch	9/26/2019 3:30 PM
178	Row boat	9/26/2019 3:28 PM
179	row boat	9/26/2019 3:26 PM
180	Fishing boat	9/26/2019 3:26 PM
181	dinghy	9/26/2019 3:24 PM
182	Paddle boat	9/26/2019 12:25 PM
183	Zodiac 8ft	9/26/2019 12:07 PM
184	Pontoon	9/26/2019 12:03 PM
185	Pontoon	9/26/2019 12:02 PM

Q10 Please rank the following criteria in order of importance in your preference for boating access sites. To place lines in order of importance, you can assign a number ranking or drag the lines in order of ranking:

Answered: 3,044 Skipped: 699



	1	2	3	4	5	6	7	8	TOTAL	SCORE
Location/proximity to preferred boating area	54.27% 1,544	18.80% 535	9.17% 261	6.40% 182	4.15% 118	2.88% 82	1.93% 55	2.39% 68	2,845	6.84
Proximity to home	19.39% 539	28.17% 783	13.02% 362	11.01% 306	10.76% 299	7.05% 196	5.11% 142	5.50% 153	2,780	5.65
Launch ramp capacity (number of launch lanes)	6.89% 187	14.89% 404	26.21% 711	17.77% 482	13.16% 357	9.36% 254	5.97% 162	5.75% 156	2,713	5.04
Parking for vehicle and trailer (number, ease of parking)	9.82% 272	19.20% 532	23.35% 647	26.49% 734	7.80% 216	5.92% 164	4.08% 113	3.36% 93	2,771	5.46
Boater service amenities (restrooms, etc)	4.29% 117	10.19% 278	13.19% 360	18.47% 504	33.57% 916	13.23% 361	4.40% 120	2.67% 73	2,729	4.63
Dedicated paddle craft facilities (launch and slips)	4.20% 109	2.89% 75	3.00% 78	3.47% 90	7.40% 192	28.43% 738	19.22% 499	31.39% 815	2,596	2.74
Parking for vehicle only (no trailer) (number, ease of parking)	1.79% 47	3.62% 95	4.42% 116	6.06% 159	9.03% 237	16.30% 428	43.92% 1,153	14.86% 390	2,625	2.84
Cost/slip Rate	5.65% 155	5.91% 162	9.26% 254	9.00% 247	12.29% 337	14.15% 388	11.85% 325	31.90% 875	2,743	3.34

MSWC Boater Trends Survey

Q11 What is the single most important improvement that could be made to state-managed or municipal boating access sites to make them more desirable to you?

Answered: 2,222 Skipped: 1,521

#	RESPONSES	DATE
1	Enforcing the P on the plates of the vehicles	10/16/2019 10:47 PM
2	Length of docks, too many are too short to safely load and unload boats due to low water depths. Examples, Mitchell State Park, Berry Lake Wexford Co. Onaway State Park, Indian Lake State Park,	10/12/2019 2:23 PM
3	Length of docks, this is critical. Too many docks do not extend far enough to allow for safe loading and unloading.	10/12/2019 2:08 PM
4	an excellent launch with docks/ramps	10/11/2019 11:47 AM
5	floating docks to adjust to water levels	10/11/2019 11:02 AM
6	Tie up piers after launching	10/10/2019 2:59 PM
7	Tie up piers after launching	10/10/2019 2:49 PM
8	Enforce penalties for power loading which destroy the launch	10/10/2019 1:32 AM
9	more picnic areas	10/9/2019 11:05 AM
10	Fish cleaning stations	10/9/2019 10:38 AM
11	Disinfection/Decontamination Equipment	10/9/2019 10:30 AM
12	Decrease wait time	10/9/2019 8:31 AM
13	Enforcement of the parking restrictions	10/8/2019 11:52 PM
14	Ease of access loading / unloading, deep enough well, handicapped	10/8/2019 6:44 PM
15	more accesable in high water	10/8/2019 2:26 PM
16	Better policing	10/8/2019 1:03 PM
17	better enforcement of slow wake zones	10/8/2019 12:55 PM
18	It would be nice to have more public access to lakes.	10/8/2019 12:30 PM
19	clear the debris	10/8/2019 10:56 AM
20	more slips	10/8/2019 8:18 AM
21	Developing proper in/out/line educate	10/8/2019 8:15 AM
22	fix the pot holes	10/8/2019 7:51 AM
23	Better bathrooms/outhouses or clean them more frequently	10/8/2019 7:51 AM
24	Hull cleaning facility at at least large access ramps.	10/8/2019 7:42 AM
25	Sweep up debris	10/8/2019 6:24 AM
26	Better facilities i.e bathrooms with running water.	10/8/2019 4:54 AM
27	Enforcement of rules.	10/7/2019 11:33 PM
28	A boat ramp on Bell Isle	10/7/2019 9:37 PM
29	all boat launches need expanding on LSC - over crowded!	10/7/2019 9:34 PM
30	good maintnance for ease of lauching	10/7/2019 8:20 PM
31	Dedicated launch/retrieve lanes	10/7/2019 8:14 PM

MSWC Boater Trends Survey

32	Make the dock longer on inland lakes	10/7/2019 7:56 PM
33	larger access sites with more boat trailer availability	10/7/2019 7:17 PM
34	Protecting water quality	10/7/2019 5:39 PM
35	Boat launch is deep enough to launch a 28 foot boat.	10/7/2019 4:49 PM
36	Add More sites	10/7/2019 4:14 PM
37	pavement or approach to ramp quality	10/7/2019 3:55 PM
38	Latrines	10/7/2019 3:49 PM
39	More access points for kayaks	10/7/2019 3:48 PM
40	picnic tables	10/7/2019 3:02 PM
41	Longer launch docks	10/7/2019 2:58 PM
42	lengthen the docks	10/7/2019 2:50 PM
43	NA	10/7/2019 2:46 PM
44	Cleanliness	10/7/2019 1:30 PM
45	remove sharp broken woody plant stems from launch points to prevent damage	10/7/2019 1:22 PM
46	Parking	10/7/2019 1:12 PM
47	cleaning station	10/7/2019 12:44 PM
48	Keeping the launches open	10/7/2019 12:10 PM
49	Clean up	10/7/2019 11:16 AM
50	covered slips	10/7/2019 11:04 AM
51	keep ramps free from debris	10/7/2019 10:50 AM
52	Security	10/7/2019 10:23 AM
53	more parking for truck and trailer	10/7/2019 9:49 AM
54	Better online reservation system for marina slips.	10/7/2019 9:36 AM
55	Seaweed control	10/7/2019 9:15 AM
56	Complete renovation to Clinton river spillway site	10/7/2019 9:10 AM
57	A dock or longer dock	10/7/2019 8:58 AM
58	Early/late season dock installation	10/7/2019 8:43 AM
59	Improve access for kayaks/canoes.	10/7/2019 8:37 AM
60	more ramps so wait times are not as long	10/7/2019 8:35 AM
61	Removal of debris/seaweed from launches	10/7/2019 8:14 AM
62	More parking	10/7/2019 8:12 AM
63	more parking	10/7/2019 8:08 AM
64	access road improvements/repairs	10/7/2019 8:03 AM
65	Reduce Seasonal cost	10/7/2019 7:37 AM
66	Cell phone service	10/7/2019 7:35 AM
67	Wash down facilities to comply with new boating laws	10/7/2019 7:28 AM
68	teaching people how to prep their boat before getting to ramp to make launch sites more efficient	10/7/2019 7:26 AM
69	Year around use.	10/7/2019 7:26 AM
70	Weed Control in August	10/7/2019 7:22 AM
71	Longer docks	10/7/2019 7:12 AM

MSWC Boater Trends Survey

72	bring back garbage cans at all sites. The state has removed garbage cans at many sites because they don't want to pay someone to empty them. That's never acceptable, unbelievable that the state would gladly have residents pay to launch boats but refuse to spend money to provide basic service at state sites paid for with resident access fees.	10/7/2019 7:10 AM
73	cost	10/7/2019 7:09 AM
74	Additional parking	10/7/2019 7:05 AM
75	Better docks	10/7/2019 6:56 AM
76	Keep them cleaner	10/7/2019 6:31 AM
77	Parking	10/7/2019 4:28 AM
78	Docks	10/7/2019 12:34 AM
79	Restrooms	10/7/2019 12:02 AM
80	Better docks /parking	10/6/2019 11:55 PM
81	Longer docks	10/6/2019 9:18 PM
82	they are all great, bathrooms clean,	10/6/2019 9:10 PM
83	None. Very nice ramps and boat cleaning station. CLWA does a great job. M115 south shore Crystal Lake	10/6/2019 8:56 PM
84	Number of ramps	10/6/2019 8:20 PM
85	Clean updated bathrooms/showers	10/6/2019 7:01 PM
86	More boat ramps	10/6/2019 5:44 PM
87	Lighting of ramp and parking lot	10/6/2019 5:34 PM
88	Add fish cleaning facilities	10/6/2019 3:56 PM
89	Docks	10/6/2019 3:36 PM
90	expanded parking	10/6/2019 3:33 PM
91	Restroom	10/6/2019 3:21 PM
92	Na	10/6/2019 2:49 PM
93	Better on-site management to ensure boaters are in compliance with boating laws that address invasive species	10/6/2019 2:37 PM
94	not sure.	10/6/2019 2:06 PM
95	Wifi	10/6/2019 1:05 PM
96	Convenient truck and trailerparking (Unlike City of Muskegon!)	10/6/2019 1:00 PM
97	Make sure they are level and maintained	10/6/2019 12:48 PM
98	Handicap access	10/6/2019 12:25 PM
99	More parking	10/6/2019 12:08 PM
100	better launch docks	10/6/2019 11:39 AM
101	Better parking for truck and trailer	10/6/2019 11:32 AM
102	Better parking for truck and trailer	10/6/2019 11:20 AM
103	Dredge the ramp	10/6/2019 11:00 AM
104	Ability to hand launch from a natural surface (not concrete)	10/6/2019 10:52 AM
105	Trying to book a slip in the marina through the website was not good the marina themselves were fantastic so another words the government portion was very bad	10/6/2019 10:34 AM
106	Docks at every ramp, especially helpful to seniors	10/6/2019 10:32 AM
107	Longer docks for water level fluctuation	10/6/2019 10:22 AM
108	Keep nontrailer vehicles in separate area	10/6/2019 10:21 AM

MSWC Boater Trends Survey

109	Well maintained ramps and docks.	10/6/2019 10:10 AM
110	Restrooms	10/6/2019 9:58 AM
111	Longer docks, taller posts	10/6/2019 9:34 AM
112	additional launch locations	10/6/2019 9:26 AM
113	PAVE THE FORD RIVER LAUNCHING AREA!!!!!!	10/6/2019 9:24 AM
114	Require all boaters know how to launch at ramps	10/6/2019 9:16 AM
115	Specific area to launch paddle craft	10/6/2019 9:14 AM
116	More parking	10/6/2019 9:08 AM
117	putting in docks right	10/6/2019 8:57 AM
118	As I'm am sixty-nine years old, a launch as pictured on Lake Mitchell would be fantastic at each site.	10/6/2019 8:56 AM
119	keep them clean and maintained	10/6/2019 8:53 AM
120	longer launch docks	10/6/2019 8:52 AM
121	More launch slips	10/6/2019 8:51 AM
122	Proper Restrooms for folks at the municipal marina in Alpena.	10/6/2019 8:51 AM
123	Better information of launch and retrieve directions	10/6/2019 8:48 AM
124	Take responsibility for aquatic invasive species present in our lakes transported in by boats	10/6/2019 8:48 AM
125	Longer docks	10/6/2019 8:32 AM
126	Better Ramps	10/6/2019 8:32 AM
127	Clean n Safe Locations	10/6/2019 8:20 AM
128	More dedicated launch sites for paddle craft, more water trails	10/6/2019 8:10 AM
129	Concrete loading ramps	10/6/2019 8:07 AM
130	Lower cost to enter site	10/6/2019 8:02 AM
131	Better roads and access for the Handicapped	10/6/2019 7:49 AM
132	Upgrade-maintain ramps	10/6/2019 7:47 AM
133	Make the platforms longer or more adaptable to water levels	10/6/2019 7:46 AM
134	Good safe concrete ramps in good condition .	10/6/2019 7:43 AM
135	Trash bins and recycling	10/6/2019 7:34 AM
136	ramp structure in water is level and not slippery	10/6/2019 7:34 AM
137	Separate paddle craft area from power boat area	10/6/2019 7:08 AM
138	Clean restrooms	10/6/2019 7:07 AM
139	Painted lines on the ramp and parking lot to direct traffic at site	10/6/2019 6:53 AM
140	Bathroom facilities	10/6/2019 6:43 AM
141	The Benton Harbor Launch is not maintained at all. There are broken dock posts along seawall, very dangerous. Also river trash, logs etc are piled in ramp area and not cleaned up. Bathrooms are rarely open. Outhouse is rarely pumped out and smells from 100 feet away. Worst launch anywhere in Michigan!	10/6/2019 6:35 AM
142	lighting	10/6/2019 6:10 AM
143	More access sites, period.	10/6/2019 5:32 AM
144	BATHroom	10/6/2019 5:19 AM
145	Appropriate launching for paddlecraft	10/6/2019 5:14 AM
146	Wash down facilities, NOT LIKE CALIFORNIA's	10/6/2019 2:44 AM

MSWC Boater Trends Survey

147	Manage putting boats in and out of the water	10/5/2019 10:29 PM
148	Boat washes	10/5/2019 10:29 PM
149	docks at the ramps a little longer	10/5/2019 10:15 PM
150	Boat cleaning to remove invasive species. Then having a dock at the launch	10/5/2019 9:59 PM
151	no wavemakers on inland lakes, I was almost swamped on thompson lake	10/5/2019 9:54 PM
152	No wave makers on inland lakes. I was almost swamped.	10/5/2019 9:46 PM
153	clean facility	10/5/2019 9:39 PM
154	easy payment method	10/5/2019 8:58 PM
155	More sites	10/5/2019 8:50 PM
156	Good docks	10/5/2019 8:44 PM
157	Z	10/5/2019 8:39 PM
158	Replace fixed docks with more floating docks	10/5/2019 8:20 PM
159	Better restrooms	10/5/2019 8:19 PM
160	Parking for the Wildwood Road Ramp in Gladwin County	10/5/2019 7:35 PM
161	More launch lanes	10/5/2019 7:19 PM
162	Adequate Parking	10/5/2019 6:37 PM
163	Trash can by ramp	10/5/2019 6:03 PM
164	nothing at this time	10/5/2019 5:43 PM
165	nothing	10/5/2019 4:37 PM
166	wi-fi	10/5/2019 4:00 PM
167	Fish cleaning facilites	10/5/2019 3:50 PM
168	More parking	10/5/2019 3:01 PM
169	Parking	10/5/2019 2:56 PM
170	Restrooms	10/5/2019 2:19 PM
171	Get rid of your reservation system. We are not motorhomes. We are weather dependent & can't forsee the future.	10/5/2019 2:07 PM
172	Keep them cleaner	10/5/2019 1:56 PM
173	Mac City Marina is great! Crew is exceptional!	10/5/2019 1:33 PM
174	Lower or no access cost for Paddle craft	10/5/2019 1:26 PM
175	weed free deep water access	10/5/2019 1:24 PM
176	Better maintained	10/5/2019 12:49 PM
177	parking	10/5/2019 12:11 PM
178	Availability of slips	10/5/2019 12:01 PM
179	Location and deep water access	10/5/2019 11:46 AM
180	Length of docks at launch ramps, and quality of launch surfaces and access roads.	10/5/2019 11:26 AM
181	Happy the way they are.	10/5/2019 11:17 AM
182	nothing	10/5/2019 11:16 AM
183	dock conditions- padding, cleats	10/5/2019 11:16 AM
184	lower cost	10/5/2019 10:51 AM
185	easy access and parking	10/5/2019 10:48 AM
186	Less fees	10/5/2019 10:45 AM

MSWC Boater Trends Survey

187	Restrooms	10/5/2019 10:26 AM
188	Restrooms	10/5/2019 10:22 AM
189	more/improved municiple marinas	10/5/2019 10:21 AM
190	Launch dock improvement	10/5/2019 10:04 AM
191	Johnson launch on the grand needs a wider launch and have the dock in the water not on shore ..	10/5/2019 9:58 AM
192	Boat wash, decontamination facilities	10/5/2019 9:49 AM
193	Paved approach to water	10/5/2019 9:40 AM
194	Docks	10/5/2019 9:28 AM
195	More parking.	10/5/2019 9:26 AM
196	Dedicated in and out at peek times. When you want to set out and the majority are coming in. Sunset cruise. At least one open departure.	10/5/2019 9:21 AM
197	?	10/5/2019 9:16 AM
198	Parking availability	10/5/2019 9:14 AM
199	Nothing	10/5/2019 8:46 AM
200	Nothing	10/5/2019 8:42 AM
201	Enforce Rec Passes for funding	10/5/2019 8:31 AM
202	There should be at all the lower METRO BOAT slips someone CHECKING boats and HUGE SIGNS THAT READ LIFE JACKETS FOR BOTH ALL INCLUDING PETS...LIGHTS ON BOATS...HAVE THE FIRST THREE WEEKS OF OPENING BOATING TO HAVE SAFETY CHECKS...GET STUDENTS TO DO THIS WITH APPROPRIATE TRAINING AND HAVE AN OFFICIAL WATCHING THEM..GIVE KIDS JOBS	10/5/2019 8:24 AM
203	More parking	10/5/2019 8:13 AM
204	Cedar River Marina, harbor entrance must have more lighting, boey markings should have some sort of marking for night vision most helpful	10/5/2019 7:40 AM
205	Clean restrooms	10/5/2019 7:36 AM
206	keep goose poop off docks	10/5/2019 7:21 AM
207	Security of property	10/5/2019 7:04 AM
208	Bathrooms/ fish cleaning.	10/5/2019 7:04 AM
209	Cost	10/5/2019 7:04 AM
210	Ramp improvements	10/5/2019 6:42 AM
211	docks	10/5/2019 6:42 AM
212	Clean bathrooms.	10/5/2019 6:40 AM
213	more/improved parking	10/5/2019 6:27 AM
214	better restrooms	10/5/2019 6:03 AM
215	Launch Ramp Capacity	10/5/2019 5:42 AM
216	Maintenance of the seaweed that gathers at the edge and makes it difficult for tires to grip on the pavement	10/5/2019 5:39 AM
217	Docks at smaller lakes. (many have no dock)	10/5/2019 5:37 AM
218	I think the launches are usually good. High water this year made it tough on most though.	10/5/2019 5:07 AM
219	More parking at some lakes, the small lakes	10/5/2019 4:41 AM
220	Fish cleaning stations	10/5/2019 4:35 AM
221	docks at proper level	10/5/2019 3:37 AM
222	one boating fee to be paid when the vehical plate is bought	10/5/2019 3:21 AM

MSWC Boater Trends Survey

223	Larger parking spots DNR parking lots aren't big enough for all the big trucks people drive nowadays	10/5/2019 2:56 AM
224	Kayak and dinghy storage racks clean bathrooms	10/5/2019 2:42 AM
225	parking lot maintenance, space line painting. pot holes, snow plowing	10/5/2019 12:25 AM
226	Make holiday slip available to everyone regardless of boat size	10/5/2019 12:22 AM
227	Require dock preferably 30' long, were seniors unable without	10/4/2019 11:04 PM
228	People need to move out of the ramp area once their boat is on the trailer.	10/4/2019 10:46 PM
229	None that I can think of	10/4/2019 10:46 PM
230	better truck and trailer parking	10/4/2019 10:42 PM
231	Fix the bad socks and keep the sea weed out of the ramps	10/4/2019 10:41 PM
232	I WISH THE BATHROOMS WERE KEPT CLEANER! THEY USUALLY SMELL REALLY BAD!!	10/4/2019 10:35 PM
233	More slips	10/4/2019 10:26 PM
234	Breakwalls to protect ramps and docks long Enoch for larger boats.	10/4/2019 10:22 PM
235	better parking	10/4/2019 10:09 PM
236	Lower fishing license cost for out of state senior	10/4/2019 9:52 PM
237	none just maintain what there is now	10/4/2019 9:40 PM
238	NA	10/4/2019 9:35 PM
239	one charge for launch and retrailering	10/4/2019 9:31 PM
240	Tent camping	10/4/2019 9:30 PM
241	fish cleaning stations	10/4/2019 9:20 PM
242	Increasing the depth of the public launch (my sailboat drafts 4 feet). Very few launches are deep enough to float the boat off the trailer. New Buffalo is one of the few.	10/4/2019 9:13 PM
243	More area on certain launches	10/4/2019 9:11 PM
244	Post signs about ediqite who's turn for in or out	10/4/2019 9:11 PM
245	Wifi	10/4/2019 9:07 PM
246	dock fingers with vertical posts to grab or tie onto when launching or retrieving the boat.t	10/4/2019 9:02 PM
247	more dockage	10/4/2019 8:42 PM
248	Make body of water restrictions better known. Restrictions are printed way too small.	10/4/2019 8:18 PM
249	cleaner restrooms	10/4/2019 8:09 PM
250	Maintenance	10/4/2019 8:01 PM
251	Exotic species eradication equipment. I.e power washer	10/4/2019 7:51 PM
252	Launch ramp capacity	10/4/2019 7:44 PM
253	Lower cost	10/4/2019 7:44 PM
254	There good as ar	10/4/2019 7:39 PM
255	Better launch Maintenance.	10/4/2019 7:33 PM
256	Make your web site work when attempting to rent slips, now you can't see accurate info and still need to call to make arrangements.	10/4/2019 7:30 PM
257	Add restrooms	10/4/2019 7:25 PM
258	Better rest rooms	10/4/2019 7:25 PM
259	web site access	10/4/2019 7:22 PM
260	Launch ramp quality	10/4/2019 7:20 PM
261	better signage	10/4/2019 7:15 PM

MSWC Boater Trends Survey

262	More of a DNR presence	10/4/2019 7:13 PM
263	Take hand rail ropes off the shorter docks in Manistee.	10/4/2019 6:56 PM
264	accessibility	10/4/2019 6:51 PM
265	bathrooms	10/4/2019 6:51 PM
266	Include access with the state park sticker	10/4/2019 6:51 PM
267	Parking	10/4/2019 6:45 PM
268	Better launches	10/4/2019 6:25 PM
269	Working restrooms and Fishing dock	10/4/2019 6:25 PM
270	Floating docks	10/4/2019 6:20 PM
271	number of parking spots	10/4/2019 6:17 PM
272	clean, friendly workers,	10/4/2019 6:16 PM
273	kayak launches	10/4/2019 6:13 PM
274	More launching lanes	10/4/2019 6:00 PM
275	make state pay for weed control when you have a public boat launch	10/4/2019 6:00 PM
276	none	10/4/2019 5:58 PM
277	Provide power washing to clean trailer and hull after use	10/4/2019 5:57 PM
278	Clean areas	10/4/2019 5:54 PM
279	doing good	10/4/2019 5:53 PM
280	Dredge them deeper access to the lake	10/4/2019 5:53 PM
281	Not applicable	10/4/2019 5:51 PM
282	Cleaner rest rooms	10/4/2019 5:38 PM
283	Educate users on proper launch etiquette	10/4/2019 5:32 PM
284	Longer docks. We have a 22' 1947 Chris Craft	10/4/2019 5:30 PM
285	Well maintained parking lots , ramps and restrooms with lighting	10/4/2019 5:29 PM
286	I don't know	10/4/2019 5:22 PM
287	Restrooms	10/4/2019 5:19 PM
288	Haven't had any issues yet...	10/4/2019 5:16 PM
289	Longer docks, due to high water . Hard to launch larger boats	10/4/2019 5:15 PM
290	Large number of them - to spread people out	10/4/2019 5:04 PM
291	slips	10/4/2019 5:01 PM
292	cleanliness	10/4/2019 4:52 PM
293	Improve greenspace for shore angling adjacent to launch ramp parking lots	10/4/2019 4:49 PM
294	Improve greenspace for shore angling adjacent to launch ramp parking lots	10/4/2019 4:46 PM
295	Cars without trailers to not park in places made for cars with trailers	10/4/2019 4:25 PM
296	Add fire pits	10/4/2019 4:24 PM
297	well maintained, good docks and enough parking w/trailers	10/4/2019 4:23 PM
298	Buy or create more state owned marina's	10/4/2019 4:19 PM
299	Improving the ramps into the water.	10/4/2019 4:15 PM
300	I like the harbors as they are	10/4/2019 4:13 PM
301	power loading of boats	10/4/2019 4:09 PM

MSWC Boater Trends Survey

302	Keep launch and docks clean, along with some sort of plan to deal with changing water levels as this year was a disaster when it came to trying to launch.	10/4/2019 4:08 PM
303	Had docks	10/4/2019 4:05 PM
304	Generally speaking- parking with trailer and ramp capacity (more ramps)	10/4/2019 3:58 PM
305	Keep the launch ramps free of debris	10/4/2019 3:53 PM
306	wash/rinse stations	10/4/2019 3:51 PM
307	Rep ave the parking lots	10/4/2019 3:48 PM
308	more parking	10/4/2019 3:44 PM
309	secure parking areas	10/4/2019 3:37 PM
310	More impactful rules and regulations/laws signage.	10/4/2019 3:33 PM
311	Break walls to reduce rough water louching and recovery.	10/4/2019 3:32 PM
312	More parking spaces	10/4/2019 3:28 PM
313	Availability	10/4/2019 3:28 PM
314	Clean toilets	10/4/2019 3:28 PM
315	Breakwater to protect ramp	10/4/2019 3:26 PM
316	Fish cleaning stations	10/4/2019 3:26 PM
317	More consistent maintenance	10/4/2019 3:23 PM
318	Cleanliness	10/4/2019 3:22 PM
319	cleaner washrooms	10/4/2019 3:09 PM
320	Bathroom close to the launch area	10/4/2019 3:05 PM
321	Upgrade restrooms. Keep them clean	10/4/2019 3:04 PM
322	Easier online access	10/4/2019 2:58 PM
323	More knowledgable and reliable help	10/4/2019 2:57 PM
324	Make recycling easier	10/4/2019 2:49 PM
325	Parking	10/4/2019 2:43 PM
326	Non-slip docks	10/4/2019 2:39 PM
327	It would have been nice to have a service shop or food and water. Even if its just grab and go stuff.	10/4/2019 2:38 PM
328	Keeping the whole area clean, outside and inside building	10/4/2019 2:32 PM
329	better bathrooms	10/4/2019 2:31 PM
330	Better bathrooms. Pretty bad now.	10/4/2019 2:31 PM
331	Improved bathroom facilities	10/4/2019 2:30 PM
332	wifi/extended period docking	10/4/2019 2:30 PM
333	FLOATING DOCKS TO ACCOMODATE WATER FLUCTUATIONS.	10/4/2019 2:24 PM
334	Boat launch rules and a time limit waiting at dock	10/4/2019 2:22 PM
335	more out houses	10/4/2019 2:19 PM
336	Good ramps are awesome.	10/4/2019 2:15 PM
337	Can't name one	10/4/2019 2:05 PM
338	Parking and restroom	10/4/2019 2:04 PM
339	Ramp condition	10/4/2019 1:59 PM
340	more slips to be available	10/4/2019 1:55 PM
341	Better parking	10/4/2019 1:52 PM

MSWC Boater Trends Survey

342	Stop minimum length for dock reservation.	10/4/2019 1:52 PM
343	clean out logs and other trash so that launch is fully useable	10/4/2019 1:50 PM
344	Cleaning of bath houses and grounds daily	10/4/2019 1:48 PM
345	Allow for more summer slips in DeTour Marina	10/4/2019 1:47 PM
346	cost	10/4/2019 1:47 PM
347	Keep them clean and neat	10/4/2019 1:46 PM
348	Michigan state marinas are overall excellent. I do appreciate clean restrooms.	10/4/2019 1:45 PM
349	Consistency. Between marinas	10/4/2019 1:44 PM
350	People being at the facility during hours posted	10/4/2019 1:44 PM
351	Help at the launch site	10/4/2019 1:33 PM
352	All harbors we used were great and well maintained and staffed	10/4/2019 1:32 PM
353	Draft/Depth of approach to docking services	10/4/2019 1:30 PM
354	Availability	10/4/2019 1:29 PM
355	more launching lanes	10/4/2019 1:28 PM
356	Park ranger onsite to manage ramps	10/4/2019 1:26 PM
357	Longer docks	10/4/2019 1:25 PM
358	Michigan marine facilities are superb. Can't think of an "improvement"	10/4/2019 1:23 PM
359	BLACKTOP PAVEMENT	10/4/2019 1:21 PM
360	Education	10/4/2019 1:18 PM
361	Restrooms and trash	10/4/2019 1:18 PM
362	not sure	10/4/2019 1:17 PM
363	New bathrooms	10/4/2019 1:15 PM
364	more available slips	10/4/2019 1:10 PM
365	Parking access	10/4/2019 1:09 PM
366	Keep the geese off of the docks or have someone clean them once in a while	10/4/2019 1:09 PM
367	Better access	10/4/2019 1:07 PM
368	Better docks	10/4/2019 1:07 PM
369	less motorized lakes	10/4/2019 1:06 PM
370	shower/bathroom facilities and laundry	10/4/2019 1:04 PM
371	better parking	10/4/2019 1:03 PM
372	Restrooms where there are none	10/4/2019 1:02 PM
373	Launches that can launch more than 1 boat at a time	10/4/2019 1:01 PM
374	Keep launch areas clean.	10/4/2019 1:01 PM
375	More room to maneuver	10/4/2019 12:58 PM
376	Have longer docks so you could launch easier	10/4/2019 12:54 PM
377	?	10/4/2019 12:52 PM
378	?? Not sure @ this time, some times. More tie down area, when it's busy	10/4/2019 12:52 PM
379	Clean bathroom with water	10/4/2019 12:50 PM
380	facilities (restroom, hose)	10/4/2019 12:49 PM
381	facilities (bathroom, wash-down hose)	10/4/2019 12:47 PM
382	Launch pads being in better condition	10/4/2019 12:42 PM

MSWC Boater Trends Survey

383	Wifi	10/4/2019 12:41 PM
384	Restrooms	10/4/2019 12:39 PM
385	More privacy at Grand Haven transient slips	10/4/2019 12:39 PM
386	Restrooms	10/4/2019 12:37 PM
387	More and clean restroom	10/4/2019 12:36 PM
388	More of them on more lakes and waterways	10/4/2019 12:36 PM
389	Grating for better tire traction	10/4/2019 12:35 PM
390	More docks to tie to. Dangerous with kids!	10/4/2019 12:35 PM
391	handicap accessibility	10/4/2019 12:33 PM
392	More parking spaces	10/4/2019 12:31 PM
393	nicer restrooms	10/4/2019 12:30 PM
394	Ramp cleanup- sometimes very weedy	10/4/2019 12:28 PM
395	Raise ramp dock	10/4/2019 12:27 PM
396	Make the parking lots higher so they don't flood - Lake St. Clair	10/4/2019 12:27 PM
397	less people	10/4/2019 12:26 PM
398	Add fish cleaning stations	10/4/2019 12:23 PM
399	Kayak and small craft launches, also restrooms	10/4/2019 12:21 PM
400	reduce amount of Aquatic Invasive species	10/4/2019 12:20 PM
401	Having easily accessible boat ramps at all sites	10/4/2019 12:19 PM
402	Clean them up	10/4/2019 12:18 PM
403	Onsite water washdown	10/4/2019 12:18 PM
404	Modify for high water conditions	10/4/2019 12:18 PM
405	Upgrade to modern bathrooms and showers - Boater will pay whatever; but make them nice and CLEAN!!	10/4/2019 12:17 PM
406	They need bathrooms	10/4/2019 12:16 PM
407	Teaching people how to efficiently launch, and trailer there boat!	10/4/2019 12:16 PM
408	keep them maintained	10/4/2019 12:15 PM
409	More parking	10/4/2019 12:15 PM
410	Clean site	10/4/2019 12:14 PM
411	Fish cleaning stations	10/4/2019 12:14 PM
412	Keep clean	10/4/2019 12:13 PM
413	Trash containers and regular pick up at all sites.	10/4/2019 12:09 PM
414	Parking upgrades / better docks (non flooded docks with north wind)	10/4/2019 12:07 PM
415	nice bathrooms, fish cleaning station	10/4/2019 12:06 PM
416	Wider ramps and sturdier docks	10/4/2019 12:05 PM
417	I think they are great	10/4/2019 12:04 PM
418	More launches	10/4/2019 12:02 PM
419	More consistent ramps. Some places have different slopes, material, etc.	10/4/2019 12:02 PM
420	Deeper	10/4/2019 12:01 PM
421	Stop vehicles without boat trailers from taking up parking spots for boaters!	10/4/2019 12:00 PM
422	Safer docks	10/4/2019 12:00 PM

MSWC Boater Trends Survey

423	Continued maintenance	10/4/2019 11:58 AM
424	Safe docks in good repair!	10/4/2019 11:57 AM
425	Hot shower facilities	10/4/2019 11:57 AM
426	Eliminate gathereing of geese and their droppings	10/4/2019 11:56 AM
427	No alcohol	10/4/2019 11:56 AM
428	Fish cleaning facilities	10/4/2019 11:55 AM
429	Keep our water clean. Do not allow poluting industry. No mines!	10/4/2019 11:55 AM
430	Make them all handicap accessible to everyone with disabilities of any kind	10/4/2019 11:54 AM
431	Site to eat lunch off water	10/4/2019 11:53 AM
432	docks above the water level	10/4/2019 11:52 AM
433	Awareness of launch locations on a lake	10/4/2019 11:52 AM
434	Fish cleaning stations	10/4/2019 11:52 AM
435	Restroom updates	10/4/2019 11:52 AM
436	More docks	10/4/2019 11:52 AM
437	Additional parking	10/4/2019 11:52 AM
438	Easier parking, more spaces	10/4/2019 11:52 AM
439	Parking	10/4/2019 11:51 AM
440	More ramps	10/4/2019 11:51 AM
441	nothing except have them close to docks	10/4/2019 11:51 AM
442	easy launch	10/4/2019 11:51 AM
443	pump out	10/4/2019 11:49 AM
444	Mandatory boat washes	10/4/2019 11:47 AM
445	Cleaner rest rooms, fish cleaning stations or service,vehicle security	10/4/2019 11:46 AM
446	Updated showers and bathrooms	10/4/2019 11:44 AM
447	The larger water bodies would benefit from more than 1 ramp.	10/4/2019 11:44 AM
448	Other People who have no idea what they are doing, Young kids, and young adults launching crafts that have no reason or training to do so.	10/4/2019 11:43 AM
449	More accurate availability	10/4/2019 11:40 AM
450	Staff them and keep them clean	10/4/2019 11:40 AM
451	extend the ramp for lower water tables in some lakes	10/4/2019 11:40 AM
452	updated bathrooms that have privacy and doors for showers (not curtains)	10/4/2019 11:38 AM
453	Fix the launch site at the Linwood Rd,Linwood ,Mi	10/4/2019 11:38 AM
454	Continue great job of maintaining facilties and minimizing cost to use. Thanks.	10/4/2019 11:37 AM
455	ease of use	10/4/2019 11:37 AM
456	amenities	10/4/2019 11:36 AM
457	More state ramp locations to access Northern Lake Michigan the major Lake Michigan	10/4/2019 11:36 AM
458	more annual slips	10/4/2019 11:35 AM
459	fuel and pump out costs and availability	10/4/2019 11:34 AM
460	Better policing	10/4/2019 11:31 AM
461	Lake 27 improving the launch site /improve parking & Launch	10/4/2019 11:31 AM
462	Keeping the sites clean and maintained is	10/4/2019 11:31 AM

MSWC Boater Trends Survey

463	longer boat docks , setup for only 16 foot boats now	10/4/2019 11:30 AM
464	Parking area for Boat trailer with car	10/4/2019 11:30 AM
465	Boat wash	10/4/2019 11:30 AM
466	easier reservations	10/4/2019 11:29 AM
467	None	10/4/2019 11:27 AM
468	Toilet	10/4/2019 11:27 AM
469	Nothing	10/4/2019 11:27 AM
470	MORE ACCESS TO SMALLER LAKES	10/4/2019 11:26 AM
471	Ferry No-Wake Regulations at Mackinaic Island Harbor	10/4/2019 11:23 AM
472	Security Detroit safe boat 9 mile launch lake st CLAIRE awful	10/4/2019 11:22 AM
473	have decent bathroom facilities	10/4/2019 11:22 AM
474	Lighting	10/4/2019 11:22 AM
475	lower the cost	10/4/2019 11:20 AM
476	Clean restroom,fish cleaning station	10/4/2019 11:19 AM
477	More transient slips	10/4/2019 11:19 AM
478	Lower the water level	10/4/2019 11:17 AM
479	Better socks, longer.	10/4/2019 11:17 AM
480	Designated Parking for non-trailer vehicles	10/4/2019 11:17 AM
481	more parking	10/4/2019 11:15 AM
482	Deep water launch	10/4/2019 11:15 AM
483	larger parking lots/fish cleaning ststions	10/4/2019 11:15 AM
484	Facilities	10/4/2019 11:15 AM
485	Open them earlier and keep them open later	10/4/2019 11:15 AM
486	Slip barriers, piers between adjacent slips.	10/4/2019 11:15 AM
487	Price and availability	10/4/2019 11:14 AM
488	Lighting of parking area	10/4/2019 11:14 AM
489	Better ramps	10/4/2019 11:14 AM
490	I feel that most sites are perfectly adequate	10/4/2019 11:13 AM
491	Up keep	10/4/2019 11:12 AM
492	LOCATION	10/4/2019 11:11 AM
493	Camping and Boat launch on Detroit river Like Belle Isle	10/4/2019 11:09 AM
494	Paving	10/4/2019 11:07 AM
495	Parking with trailer	10/4/2019 11:07 AM
496	Update showers at Mackinac Island harbor Marina please? For the cost of dockage there should be better facilities than the "	10/4/2019 11:07 AM
497	Nothing	10/4/2019 11:06 AM
498	When water is high pull up docks quickly so they are not under water	10/4/2019 11:06 AM
499	More space	10/4/2019 11:05 AM
500	Maintain docks and ramps	10/4/2019 11:05 AM
501	Improve ramps to accommodate power trailering	10/4/2019 11:05 AM

MSWC Boater Trends Survey

502	More lanes easier turning radiusillumination for evening safety, and evening/foul weather locating from the waterway	10/4/2019 11:05 AM
503	Make the ramp docks longer	10/4/2019 11:04 AM
504	Cleaner	10/4/2019 11:04 AM
505	upgrade docks	10/4/2019 11:03 AM
506	Improved Dockage	10/4/2019 11:02 AM
507	Ramps on Belle Isle	10/4/2019 11:02 AM
508	Get rid of them ROCKS you keep putting in the beaches around boating access sites	10/4/2019 11:02 AM
509	Simplify dnr online registration for municipal marinas	10/4/2019 11:02 AM
510	Good docks	10/4/2019 11:01 AM
511	maintainence and cleanliness.	10/4/2019 11:01 AM
512	docks	10/4/2019 11:01 AM
513	Have good docks thay don't scratch your boat	10/4/2019 11:00 AM
514	keep them clean	10/4/2019 11:00 AM
515	Improve and maintain docks	10/4/2019 11:00 AM
516	Helpful and friendly law enforcement.	10/4/2019 11:00 AM
517	More ramps	10/4/2019 10:58 AM
518	Clean up of goose waste, ect.	10/4/2019 10:57 AM
519	ease of use with increased water depth of Lake Michigan	10/4/2019 10:56 AM
520	Make the launch ramp docks longer to control longer boats!!!	10/4/2019 10:56 AM
521	We need more	10/4/2019 10:55 AM
522	Restroom facilities	10/4/2019 10:54 AM
523	More docks at Lakes & Rivers without them	10/4/2019 10:53 AM
524	more	10/4/2019 10:52 AM
525	Keep maintained	10/4/2019 10:52 AM
526	Large transient slips	10/4/2019 10:52 AM
527	Widen the launch sites on the most used lakes in each county so there are two lanes for boats to be put in or taken out.	10/4/2019 10:52 AM
528	clean restroom facilities	10/4/2019 10:51 AM
529	washing facility to hose down the boat to prevent invasives spread	10/4/2019 10:51 AM
530	put docks in earlier	10/4/2019 10:50 AM
531	Fix Harbor Beach. Dredge and docks. Fix Preque Isle.	10/4/2019 10:50 AM
532	Better restroom facilities	10/4/2019 10:49 AM
533	Remove Charlevoixs ability to remove weeks from slips being reserved on the state website, to make it fair for all	10/4/2019 10:49 AM
534	Separate boat trailer parking and car only parking. Some cars take up limited trailer parking spaces. Example is Big Pine Island Lake near Belding.	10/4/2019 10:49 AM
535	Public pump out facilities	10/4/2019 10:49 AM
536	No steel or concrete used on docks where boat ties up	10/4/2019 10:49 AM
537	Upkeep docks	10/4/2019 10:48 AM
538	Clean docks (of goose poo). Maintain docks and ramp.	10/4/2019 10:48 AM
539	New docks floating	10/4/2019 10:47 AM

MSWC Boater Trends Survey

540	longer docks	10/4/2019 10:47 AM
541	More access to cut down waiting time (access management)	10/4/2019 10:47 AM
542	Public fishing piers	10/4/2019 10:46 AM
543	bathroom facilities open a little later in the fall	10/4/2019 10:46 AM
544	Can't think of anything.	10/4/2019 10:46 AM
545	Assuring plenty of spots to park on busy weekend and holidays.	10/4/2019 10:45 AM
546	In slip pump out	10/4/2019 10:45 AM
547	ramps	10/4/2019 10:45 AM
548	Longer docks	10/4/2019 10:44 AM
549	Better construction	10/4/2019 10:44 AM
550	depth of water approaching the launch	10/4/2019 10:44 AM
551	I LIKE THEM THE WAY THEY ARE NOW	10/4/2019 10:44 AM
552	Cleaning parking lot and Chanel's	10/4/2019 10:44 AM
553	Have docks/mooring points at all ramps.	10/4/2019 10:44 AM
554	build a better road so facility doesn't have to close in the spring.(one mile, lenawee county)	10/4/2019 10:44 AM
555	Fish cleaning stations	10/4/2019 10:43 AM
556	Parking, boat docks not under water	10/4/2019 10:43 AM
557	Deeper water at launch sites, harbor island is very shallow	10/4/2019 10:42 AM
558	Number of slips	10/4/2019 10:42 AM
559	clean debris from area meant for parking	10/4/2019 10:42 AM
560	Improve bathroom facilities and appearance.	10/4/2019 10:41 AM
561	Fish cleaning stations	10/4/2019 10:41 AM
562	Ramp safety and quality	10/4/2019 10:41 AM
563	Better communication about open slips when traveling port to port and better wifi in home port.	10/4/2019 10:41 AM
564	bathroom cleanliness	10/4/2019 10:40 AM
565	better ramp faciilites	10/4/2019 10:40 AM
566	water depth	10/4/2019 10:39 AM
567	Better locations for on shore anglers	10/4/2019 10:39 AM
568	Close the ones that provide limited access.	10/4/2019 10:38 AM
569	All should be reservable with cancel fee	10/4/2019 10:38 AM
570	More launch pads	10/4/2019 10:38 AM
571	Mandatory removal of bilge and removal of invasive species with oversight	10/4/2019 10:38 AM
572	Clear instructions	10/4/2019 10:38 AM
573	Better restrooms better Dock up keep	10/4/2019 10:38 AM
574	More fish cleaning stations	10/4/2019 10:38 AM
575	Bigger better docks handicape	10/4/2019 10:37 AM
576	Long season for docks in	10/4/2019 10:37 AM
577	Community room at marina	10/4/2019 10:37 AM
578	Quality of docks	10/4/2019 10:37 AM
579	Make sure the ramp is in good shape and the docks are long enough to dock a boat	10/4/2019 10:36 AM
580	Updated bigger bath houses, secure to boaters only, washing machine and dryer on premises	10/4/2019 10:36 AM

MSWC Boater Trends Survey

581	Condition of ramp	10/4/2019 10:36 AM
582	Fish cleaning station	10/4/2019 10:36 AM
583	more docks at facilities, put in docks earlier and take out later.	10/4/2019 10:35 AM
584	Better maintenance	10/4/2019 10:35 AM
585	more access	10/4/2019 10:35 AM
586	floating docks	10/4/2019 10:34 AM
587	more remote small craft access for kayaks and canoes	10/4/2019 10:34 AM
588	CLEAN restrooms	10/4/2019 10:34 AM
589	Parking	10/4/2019 10:33 AM
590	Restrooms	10/4/2019 10:33 AM
591	Longer docks for larger trailerable boats	10/4/2019 10:33 AM
592	X	10/4/2019 10:33 AM
593	Parking	10/4/2019 10:33 AM
594	Add launch locations with access to Lk Michigan	10/4/2019 10:33 AM
595	Docks for launch and retrieve rest rooms and adequate vehicle and trailer parking	10/4/2019 10:33 AM
596	Make sure marinas monitor channel 16	10/4/2019 10:32 AM
597	Cheaper slips	10/4/2019 10:32 AM
598	keeping the docks in later in the boating season	10/4/2019 10:31 AM
599	parking	10/4/2019 10:31 AM
600	Keep the water level up at the Cleveland Cliffs Basin = Forrest Lake.	10/4/2019 10:31 AM
601	size	10/4/2019 10:30 AM
602	More capacity for holidays	10/4/2019 10:30 AM
603	Having a bathroom/out house	10/4/2019 10:30 AM
604	Cleanliness of docks, bird feces everywhere.	10/4/2019 10:30 AM
605	more launches	10/4/2019 10:29 AM
606	Open earlier and later in year	10/4/2019 10:29 AM
607	They are all great.	10/4/2019 10:28 AM
608	Easier to obtain permits	10/4/2019 10:28 AM
609	Upgrading from single launch lane to double.	10/4/2019 10:28 AM
610	Clean dock areas of geese poop regularly	10/4/2019 10:28 AM
611	Handicap accessible	10/4/2019 10:27 AM
612	Cleaner restrooms and showers	10/4/2019 10:27 AM
613	none	10/4/2019 10:27 AM
614	Concrete ramps	10/4/2019 10:26 AM
615	cost	10/4/2019 10:26 AM
616	Easy access	10/4/2019 10:26 AM
617	Fish cleaning station	10/4/2019 10:26 AM
618	garbage or recycle bins.	10/4/2019 10:26 AM
619	remove sand and gravel from ramps	10/4/2019 10:25 AM
620	higher docks	10/4/2019 10:25 AM
621	Portage Lake needs more parking or another launch	10/4/2019 10:25 AM

MSWC Boater Trends Survey

622	dock or walk way on more remote sites	10/4/2019 10:25 AM
623	To many to mention in Oscoda.	10/4/2019 10:24 AM
624	breakwall	10/4/2019 10:24 AM
625	Make more of them	10/4/2019 10:24 AM
626	cleaning	10/4/2019 10:24 AM
627	Slips in the area are sold out before they are even available to reserve on DNR website.	10/4/2019 10:24 AM
628	Improvements to state owned areas that aren't typical launch facilities - for example roads dead ending into lakes/rivers.	10/4/2019 10:24 AM
629	Better parking	10/4/2019 10:24 AM
630	Not sure	10/4/2019 10:23 AM
631	Concrete ramps	10/4/2019 10:23 AM
632	Length of docks at launch sites	10/4/2019 10:23 AM
633	none	10/4/2019 10:23 AM
634	lower fees	10/4/2019 10:23 AM
635	n/a	10/4/2019 10:23 AM
636	security for vehicles	10/4/2019 10:23 AM
637	Launch docks with good bumpers and cleats	10/4/2019 10:23 AM
638	None	10/4/2019 10:22 AM
639	Good ramp and dock	10/4/2019 10:22 AM
640	Address issues caused by high water and re-open (Manuka Lake)	10/4/2019 10:22 AM
641	dredging when required	10/4/2019 10:21 AM
642	NA	10/4/2019 10:21 AM
643	Control the spiders	10/4/2019 10:21 AM
644	they should all have restrooms and parking, be ADA accessible	10/4/2019 10:21 AM
645	Several that I use are paved but in very very poor condition (Lake Orion for example).	10/4/2019 10:20 AM
646	More access	10/4/2019 10:19 AM
647	I'm happy	10/4/2019 10:19 AM
648	Availability of slips	10/4/2019 10:19 AM
649	Parking space for vehicle and trailer	10/4/2019 8:38 AM
650	?	10/3/2019 10:13 PM
651	Loading dock longer to make easier to tie up and load boat.	10/3/2019 9:53 PM
652	Docks	10/3/2019 9:46 PM
653	At the Lexington Harbor, the seaweed is out of control. Also when the marina is empty on a week night sometimes they want to charge patrons who are just coming into Lexington for two hours to eat dinner and then go back to Port Huron. Kind of ridiculous.	10/3/2019 9:05 PM
654	Bathrooms that r modern	10/3/2019 8:26 PM
655	Tie up dock maintenance	10/3/2019 7:44 PM
656	Ammenities	10/3/2019 7:13 PM
657	decrease the number of boats permitted on Pontiac lake through the launch in a day.	10/3/2019 5:46 PM
658	Good ramp quality: proper slope, cement base	10/3/2019 5:34 PM
659	Parking	10/3/2019 5:09 PM
660	Free, Good docks, Well paved	10/3/2019 4:41 PM

MSWC Boater Trends Survey

661	Make sure the dock is always on the starboard side of the boat so the boat driver can control the relationship of the the boat to the dock..	10/3/2019 4:31 PM
662	Reinstate vehicle with trailer parking	10/3/2019 3:57 PM
663	Breakwall and dredging Misery Bay launch site	10/3/2019 2:48 PM
664	Easy launch, turnaround area	10/3/2019 2:31 PM
665	I have to pay double fees to launch in the spring and pull out in the fall. Should be one fee.	10/3/2019 2:22 PM
666	Trying of personnel and enforcement of waterways laws and regulations	10/3/2019 1:00 PM
667	Larger are to stage boat during entry or exit	10/3/2019 12:16 PM
668	more parking	10/3/2019 12:02 PM
669	I use mostly state launches - alot of lakes only have private launches.	10/3/2019 10:59 AM
670	Adding fish cleaning facilities	10/3/2019 10:08 AM
671	clean the restroom more often	10/3/2019 10:06 AM
672	Adequate parking for vehicles with trailers	10/3/2019 9:20 AM
673	in water boat mooring	10/3/2019 9:04 AM
674	Need to charge for use of boating access, the size for this lake and size of speed boats needs addressing. Big boats are distroying the lake	10/3/2019 8:59 AM
675	Michigan does a great job. Security is sometimes a concern.	10/3/2019 8:55 AM
676	Wider boat launches	10/3/2019 8:47 AM
677	Launch only ramps, and retrieve only ramps	10/3/2019 8:41 AM
678	Improve dock length (30' or more), height above water (2-3') & positioning at ramps	10/3/2019 8:29 AM
679	Maintenance/upkeep	10/3/2019 8:21 AM
680	Pave the roads leading to them.	10/3/2019 8:15 AM
681	more access to inland lakes	10/3/2019 8:11 AM
682	Maintain what we have.	10/3/2019 5:40 AM
683	Law enforcement	10/2/2019 10:40 PM
684	High bandwidth internet connection via WiFi	10/2/2019 10:29 PM
685	Cement sites	10/2/2019 10:25 PM
686	Too much marijuana consumption is going on these days in plain site.	10/2/2019 9:56 PM
687	Staff to move people along	10/2/2019 9:43 PM
688	Good ramps and asphalt parking	10/2/2019 9:36 PM
689	Monitor & remove invasive species (starrywort, milefoil? Zebra muscles) entering water on trailers & boats	10/2/2019 8:10 PM
690	Maintenance. Keep goose poop off docks	10/2/2019 7:55 PM
691	Cement ramps with grooves.	10/2/2019 7:44 PM
692	Better launch ramps and docks at the more remote boat launch sites.	10/2/2019 6:22 PM
693	sites are good skip rec.pass	10/2/2019 5:46 PM
694	Lower cost	10/2/2019 5:13 PM
695	better docks	10/2/2019 4:44 PM
696	More transient slips, Most of the time I can't get a weekend slip	10/2/2019 4:32 PM
697	The people footing the majority of the bill for the site should be able to use the site. These are not road side parks and also currently people that do not pay are using the launch. The d.n.r. has almost no enforcement on these sites and on top of that there is no place to pay for a pass.	10/2/2019 4:27 PM

MSWC Boater Trends Survey

698	raise them to be above the water line, Geez	10/2/2019 4:09 PM
699	better restrooms	10/2/2019 4:07 PM
700	Nothing	10/2/2019 3:19 PM
701	Plant more fish	10/2/2019 3:10 PM
702	adequate dockage, good ramp surface	10/2/2019 2:57 PM
703	Seperate paddle craft launch and slips	10/2/2019 2:25 PM
704	Single fee to cover all ramps in the state	10/2/2019 2:16 PM
705	More access sites, specifically on the south side of Lake St. Clair. The 9 mile/Crocker road launch is nearly unserviceable most of the year. Need another ramp south of mile and more launches on the Detroit river.	10/2/2019 2:04 PM
706	Change the docks as needed for the higher water	10/2/2019 1:57 PM
707	keep launch docks clean and user frendly	10/2/2019 12:52 PM
708	Clean launch sites , weeds , slime	10/2/2019 12:27 PM
709	Rules,boats sit by,dock,for half hour or more.	10/2/2019 12:11 PM
710	Maintenance like- fill potholes, clean restrooms	10/2/2019 12:00 PM
711	MORE OF THEM	10/2/2019 11:49 AM
712	The one I use , none needed	10/2/2019 11:28 AM
713	Most in my area are poorly managed and allow drunk, disorderly, rude people with unregistered boats onto the lakes claiming that is not their job because that is a water enforcement issue. Boating safety and legal access should be access site's top priority.	10/2/2019 11:14 AM
714	Depth at launch ramps.. with Bunk Pontoon Trailers they sit up so high .. hard to launch at most sights	10/2/2019 11:06 AM
715	The new pull-on/pull-off canoe launches are GREAT. Other non-improved river launch sites should have crushed stone river banks to facilitate safe launches. Muddy, slippery river banks are difficult.	10/2/2019 11:06 AM
716	More ramps	10/2/2019 11:05 AM
717	Ramps and docks	10/2/2019 10:23 AM
718	Control Algae on ramp	10/2/2019 10:19 AM
719	Docks that dont scratch craft	10/2/2019 10:16 AM
720	Nicer docks with cleats for tying up	10/2/2019 10:14 AM
721	non slip ramps	10/2/2019 10:04 AM
722	More launch sites or launch lanes	10/2/2019 10:01 AM
723	Access needed on Belle Isle	10/2/2019 9:49 AM
724	Update restrooms	10/2/2019 9:47 AM
725	by far the quality/ease of access at the launch site itself...too many in state of disrepair, or single dock for launch/retrieve that leads to long lines and difficulty launching alone. for example, lake Orion and lake lakeville dnr access points.	10/2/2019 9:44 AM
726	Rest rooms	10/2/2019 9:39 AM
727	Make the docks longer to accommodate larger boats to launch	10/2/2019 9:39 AM
728	If we could have a cement launch/parking area so we could install hose/water to clean your boat upon exit of the lake. We have gravel. Cedar Lake in Oscoda, MI	10/2/2019 9:28 AM
729	Keep them clean and safe	10/2/2019 9:00 AM
730	Restrooms	10/2/2019 8:57 AM
731	In good condition, safe	10/2/2019 8:47 AM
732	LONGER RAMPS!!!! There's not a single long Ramp (Dock) on St. Clair.	10/2/2019 8:42 AM

MSWC Boater Trends Survey

733	Cost	10/2/2019 8:33 AM
734	At Lake Orion launch fix the ramp, it has potholes and the dock is too short .	10/2/2019 8:33 AM
735	Increased parking for vehicles w trailers and additional parking for non trailer vehicles.. Also, patrolling launches for lake residents that are simply parking vehicles w trailers at the access sites on the weekends to block other boaters from having available parking.	10/2/2019 8:32 AM
736	Weed removale	10/2/2019 8:24 AM
737	The State public access site on lake orion is worse than an off road dirt bike track.	10/2/2019 8:20 AM
738	ADA kayak launches	10/2/2019 8:00 AM
739	I have non	10/2/2019 7:47 AM
740	Designate in and out ramps	10/2/2019 7:46 AM
741	able to adjust to water levels	10/2/2019 7:42 AM
742	Access	10/2/2019 7:39 AM
743	Wifi better restrooms	10/2/2019 7:38 AM
744	crowded ramps need better DNR supervision to direct traffic	10/2/2019 7:33 AM
745	Longer docks at the boat ramps	10/2/2019 7:31 AM
746	Kayak and canoe launches	10/2/2019 7:30 AM
747	Provide docks at all.sites	10/2/2019 7:27 AM
748	Clean ramps	10/2/2019 7:24 AM
749	Power wash on site	10/2/2019 7:19 AM
750	Concrete launches on Clinton River for kayaks / canoes.	10/2/2019 7:17 AM
751	Have someone around. 1. Keeps the peace. safety for everyone. 3 helps in keeping the rules followed.	10/2/2019 12:23 AM
752	Competent people	10/1/2019 11:54 PM
753	Improve design to address variable water levels.	10/1/2019 11:13 PM
754	More parking	10/1/2019 10:20 PM
755	Better maintenance of ramps	10/1/2019 8:27 PM
756	Docking before or after launch	10/1/2019 8:20 PM
757	no charge	10/1/2019 7:46 PM
758	Trash cans.. Water to wash boats off.	10/1/2019 7:39 PM
759	Get rid of the recreational passport !!!!!	10/1/2019 7:19 PM
760	There arent enough slips on the west side of the state	10/1/2019 7:16 PM
761	Dnr access site availability- part of rec passport program	10/1/2019 7:15 PM
762	Docks	10/1/2019 7:07 PM
763	System works good I like the license plate tab thing	10/1/2019 6:40 PM
764	Better maintenance and upkeep of docks	10/1/2019 4:37 PM
765	more parking, keep clean	10/1/2019 4:14 PM
766	Piers at remote sites	10/1/2019 3:17 PM
767	More parking, deeper more improved launches on large inland lakes	10/1/2019 2:03 PM
768	Update and clean the restrooms. More fish cleaning stations with garbage disposals	10/1/2019 1:43 PM
769	Improved boat slip reservation system - delete pick a slip option	10/1/2019 1:22 PM
770	not sure	10/1/2019 1:22 PM
771	Restrict the length of pontoon trailers allowed. They clutter the access sites and block lanes.	10/1/2019 1:21 PM

MSWC Boater Trends Survey

772	more parking, easier access	10/1/2019 1:00 PM
773	Provide docks with sufficient length, ties, posts and sufficient depth on ramps.	10/1/2019 12:53 PM
774	Longer ramps and docks to facilitate larger boats being trailered	10/1/2019 12:46 PM
775	for what i use it for no improvements necessary	10/1/2019 12:27 PM
776	eliminating goose poop / nice restrooms	10/1/2019 12:22 PM
777	Clean bathrooms	10/1/2019 12:16 PM
778	more launch lanes	10/1/2019 12:09 PM
779	Condition of site: ramps, docks, pavement, parking	10/1/2019 12:03 PM
780	Upgrade / add canoe camps along rivers	10/1/2019 12:00 PM
781	better parking	10/1/2019 11:24 AM
782	security cameras	10/1/2019 11:19 AM
783	ramp maintenance	10/1/2019 10:40 AM
784	No suggestions	10/1/2019 10:37 AM
785	more ramps	10/1/2019 10:35 AM
786	More Launch Ramps	10/1/2019 10:11 AM
787	Lower cost (free)	10/1/2019 9:53 AM
788	Better restroom facilities	10/1/2019 9:50 AM
789	Limited access	10/1/2019 9:20 AM
790	a wash down area for boat and trailer	10/1/2019 9:17 AM
791	Dock conditions.	10/1/2019 9:09 AM
792	Educating the public how to launch a trailered boat - lot of disorganized, thoughtless people it would be nice if boaters had an IQ above the ambient temperature	10/1/2019 9:08 AM
793	More trailer parking	10/1/2019 8:48 AM
794	Ease of traffic flow	10/1/2019 8:46 AM
795	The boat ramps throughout the Upper Peninsula do not have docks. Taking an a senior citizen or special needs individual is extremely difficult. In rough weather conditions not having a dock makes loading and unloading very hazardous.	10/1/2019 8:39 AM
796	Install water hose to wash off boat prior to leaving ramp.	10/1/2019 8:16 AM
797	in and out faster	10/1/2019 8:15 AM
798	Our site is completely under water	10/1/2019 8:11 AM
799	Over night parking	10/1/2019 8:00 AM
800	An efficient and clean launching area	10/1/2019 7:59 AM
801	Launch condition	10/1/2019 7:57 AM
802	quality docs that extend far enough out to make them usefull	10/1/2019 7:53 AM
803	Maintain the depth at the end of the ramp and beyond.	10/1/2019 7:52 AM
804	Adequate draft capacity to minimize prop damage	10/1/2019 7:44 AM
805	Have bait close to ramp	10/1/2019 7:43 AM
806	Parking for long trailers	10/1/2019 7:42 AM
807	some need better lighting for the launches	10/1/2019 7:40 AM
808	You leave the docks in in the fall. It is ridiculous and embarassing for you how early you pull some of them.	10/1/2019 7:33 AM
809	Parking	10/1/2019 7:30 AM

MSWC Boater Trends Survey

810	Allow those that don't have boats to fish at marinas, on fingers, and slips that are not occupied.	10/1/2019 7:25 AM
811	dock's offen I take older friends and a dock is important.	10/1/2019 7:17 AM
812	I am 80, posts to stabilize me on entry/exit to Boat. Most of your dock have them. TKS	10/1/2019 7:15 AM
813	more ramps	10/1/2019 7:06 AM
814	smoother ramp areas in water	10/1/2019 6:55 AM
815	more ramps	10/1/2019 6:32 AM
816	clean the bathrooms!!!! Thaey are all DISGUSTING!	10/1/2019 6:06 AM
817	Seasonal passes to expedite launch process.	10/1/2019 5:55 AM
818	More docks	10/1/2019 5:53 AM
819	Keep launch channel clear (Newaygo State Park)	10/1/2019 5:21 AM
820	I think you do a great job. Maybe disposal for fishing line.	10/1/2019 3:27 AM
821	Put a dock by each ramp.	10/1/2019 2:42 AM
822	Ramp channel depths are adequately dredged	10/1/2019 2:18 AM
823	more paddle craft sites	10/1/2019 2:15 AM
824	deeper launch sites	10/1/2019 12:00 AM
825	enough parking	9/30/2019 11:35 PM
826	Bathrooms	9/30/2019 11:14 PM
827	easier reservation system	9/30/2019 10:55 PM
828	Make sure all have gates that lock so no after hours use mainly after hours drinking and damaging launch	9/30/2019 10:20 PM
829	good dock facilities	9/30/2019 10:20 PM
830	Not to let no car go in just to drive around and look at the water unless they PAY or have a yr sticker on Plate	9/30/2019 10:06 PM
831	Make sure docks are long enough to tie boat off and back trailer under boat.	9/30/2019 9:53 PM
832	improve docks	9/30/2019 9:29 PM
833	Launch lane access size	9/30/2019 8:53 PM
834	Kayak accessible	9/30/2019 8:46 PM
835	More Fish cleaning stations	9/30/2019 8:41 PM
836	paved launches where gravel launches currently are.	9/30/2019 8:25 PM
837	Better bathroom facilities or cleaner facilities	9/30/2019 8:13 PM
838	Na	9/30/2019 7:55 PM
839	Deep enough to launch a boat and a dock to launch	9/30/2019 7:52 PM
840	Maintain parking lot better	9/30/2019 7:50 PM
841	Quality docks	9/30/2019 7:48 PM
842	Restroom facility	9/30/2019 7:40 PM
843	supervised during weekends	9/30/2019 7:26 PM
844	More paddle craft facilities	9/30/2019 7:23 PM
845	Improve usability of restrooms for the ladies	9/30/2019 7:16 PM
846	None	9/30/2019 7:07 PM
847	More of them	9/30/2019 6:54 PM
848	Have them ready early in the year and have as many docks as possible for launching	9/30/2019 6:49 PM

MSWC Boater Trends Survey

849	Ramp on Belle Isle	9/30/2019 6:28 PM
850	Lower cost	9/30/2019 6:19 PM
851	It is a good ramp with adequate parking	9/30/2019 6:16 PM
852	Force cleaning of boats/trailers	9/30/2019 6:15 PM
853	Just keep them in good repair and clean	9/30/2019 6:02 PM
854	fish cleaning	9/30/2019 5:58 PM
855	Boat wash stations for AIS control.	9/30/2019 5:57 PM
856	Better ramps lower cost	9/30/2019 5:52 PM
857	More launch and retrieve areas, Presque Isle	9/30/2019 5:50 PM
858	More lanes at busy sites, Cleaner restrooms, parking	9/30/2019 5:48 PM
859	Good maintenance	9/30/2019 5:43 PM
860	Bigger parking lots. Multiple launch pads	9/30/2019 5:39 PM
861	Parking	9/30/2019 5:37 PM
862	Condition of docks and facilities and proximity to shore facilities	9/30/2019 5:33 PM
863	Boat cleaning	9/30/2019 5:28 PM
864	More transient slips	9/30/2019 5:20 PM
865	Non slip surfaces at the water's edge	9/30/2019 5:16 PM
866	Provide a board with lake map/info at launch site. This is particularly helpful in smaller UP lakes.	9/30/2019 5:13 PM
867	More parking	9/30/2019 5:07 PM
868	parking	9/30/2019 4:59 PM
869	increase lanes or accessibility. then parking, then quality	9/30/2019 4:51 PM
870	ADA accessible	9/30/2019 4:48 PM
871	clean	9/30/2019 4:45 PM
872	I would like more DNR access sites near the Macomb County shoreline.	9/30/2019 4:42 PM
873	Parking for towing vehicle	9/30/2019 4:36 PM
874	Safe access/ease getting in and out of the kayak	9/30/2019 4:31 PM
875	Charge a daily fee	9/30/2019 4:31 PM
876	Post the rules and enforce them for Lac La Belle Marina. People are staying there all summer without paying. No room left for transient boaters	9/30/2019 4:30 PM
877	More Fish Cleaning Stations	9/30/2019 4:29 PM
878	Cleaning Station	9/30/2019 4:27 PM
879	longer docks	9/30/2019 4:23 PM
880	Grand River Boat Launch Access	9/30/2019 4:13 PM
881	not as busy =)	9/30/2019 4:12 PM
882	Restrooms- out house at each site	9/30/2019 4:12 PM
883	charge a fee for boaters who do not live on our lake and pay taxes and fees for lake maintenance. Our lake is one of the busiest in our county in the summer, but many boaters do not live in the county.	9/30/2019 4:09 PM
884	Safe and clean boat launch. Not underwater!	9/30/2019 4:06 PM
885	More access sites	9/30/2019 4:05 PM
886	Clean restrooms	9/30/2019 4:03 PM
887	Lighting	9/30/2019 4:01 PM

MSWC Boater Trends Survey

888	Keeping ramps dredged for adequate depth.	9/30/2019 3:58 PM
889	more slips	9/30/2019 3:58 PM
890	A good public listing with maps of the access sites.	9/30/2019 3:55 PM
891	ADA accessible kayak and canoe launch ramps	9/30/2019 3:55 PM
892	Parking spots available	9/30/2019 3:54 PM
893	capacity/size at the more popular ones	9/30/2019 3:51 PM
894	cheeper	9/30/2019 3:46 PM
895	Large ramp areas and good parking	9/30/2019 3:42 PM
896	Improve/increase parking	9/30/2019 3:42 PM
897	Eliminate Geese and their feces	9/30/2019 3:41 PM
898	Boat launch. Easy entry and exit	9/30/2019 3:41 PM
899	improving boat ramps and docks	9/30/2019 3:39 PM
900	Dock/ramp area, place to shore fish south out getting run over at ramp	9/30/2019 3:36 PM
901	Better rest rooms	9/30/2019 3:36 PM
902	Parking	9/30/2019 3:34 PM
903	manage the ramps for improvements and safety	9/30/2019 3:34 PM
904	Parking	9/30/2019 3:32 PM
905	Good ramp and docks	9/30/2019 3:31 PM
906	Schedule for open and closing of ramps/dockside, when they are put in and taken out	9/30/2019 3:30 PM
907	Parking with trailer	9/30/2019 3:29 PM
908	Wash down for places like Port Sheldon/Pigeon lake that have duckweed	9/30/2019 3:28 PM
909	Parking and launch/load ramp designations	9/30/2019 3:28 PM
910	Ramp Quality	9/30/2019 3:26 PM
911	fishing platforms	9/30/2019 3:24 PM
912	Bathrooms	9/30/2019 3:24 PM
913	Quality of ramp	9/30/2019 3:22 PM
914	They need to have more information about potential boating trips (like water trails have)	9/30/2019 3:21 PM
915	depending on the location, sea wall or weir protecting the launch from wind and current.	9/30/2019 3:21 PM
916	Clean restrooms	9/30/2019 3:21 PM
917	Better DNR facility at Thornapple Lake	9/30/2019 3:20 PM
918	Easy way to pay - credit card payment	9/30/2019 3:19 PM
919	More ramps	9/30/2019 3:17 PM
920	Upkeep on docks	9/30/2019 3:16 PM
921	launch ramps	9/30/2019 3:15 PM
922	Accessibility	9/30/2019 3:15 PM
923	more sites	9/30/2019 3:15 PM
924	Overnight parking	9/30/2019 3:15 PM
925	parking	9/30/2019 3:12 PM
926	Fish cleaning stations	9/30/2019 3:11 PM
927	more organized staging areas	9/30/2019 3:11 PM
928	ramp maintenance	9/30/2019 3:10 PM

MSWC Boater Trends Survey

929	install concrete launch pads at unimproved sites	9/30/2019 3:10 PM
930	Number of launches	9/30/2019 3:09 PM
931	Quit charging launch fee. I paid a reg.fee that should be enough	9/30/2019 3:09 PM
932	Launch area	9/30/2019 3:07 PM
933	24h access year round	9/30/2019 3:05 PM
934	cement entry ways into water that are not slippery	9/30/2019 3:04 PM
935	more parking	9/30/2019 3:00 PM
936	Location and enough for all	9/30/2019 3:00 PM
937	a BAS on belle isle	9/30/2019 2:59 PM
938	remove the frag-mites completely	9/30/2019 2:59 PM
939	preserve natural shoreline vegetation, no rip rap	9/30/2019 2:58 PM
940	Depth at launch	9/30/2019 2:57 PM
941	well designed fishing cleaning stations	9/30/2019 2:57 PM
942	Markings	9/30/2019 2:55 PM
943	Non Slipery	9/30/2019 2:54 PM
944	Parking	9/30/2019 2:54 PM
945	Separate non-motorized boat launch area	9/30/2019 2:52 PM
946	More slips.	9/30/2019 2:52 PM
947	Improve online resources to find launches	9/30/2019 2:51 PM
948	Getting the docks in early	9/30/2019 2:51 PM
949	more available transient space	9/30/2019 2:50 PM
950	Bathrooms	9/30/2019 2:50 PM
951	docks and natural shoreline	9/30/2019 2:49 PM
952	More lightpoles around launch sites and parking lots	9/30/2019 2:29 PM
953	Length of dock and depth of water for ease of our 30 ft, 2 ft draft	9/30/2019 2:18 PM
954	no ideas at this time.	9/30/2019 2:15 PM
955	good ramps	9/30/2019 12:49 PM
956	nothing	9/30/2019 12:26 PM
957	free	9/30/2019 12:20 PM
958	skid piers	9/30/2019 11:53 AM
959	Concrete and dock upkeep	9/30/2019 11:50 AM
960	clean bathrooms	9/30/2019 11:49 AM
961	parking spaces	9/30/2019 11:32 AM
962	cost	9/30/2019 11:14 AM
963	I am totally pleased with the marinas and their service	9/30/2019 11:09 AM
964	Water levels to high this year to launch at several sites.	9/30/2019 11:06 AM
965	None	9/30/2019 10:58 AM
966	Information kiosks with maps	9/30/2019 10:54 AM
967	Have a boat wash to spray your boat after.	9/30/2019 10:39 AM
968	Clean rest rooms!	9/30/2019 10:25 AM
969	An area with NO CEMENT to launch and beach. Preferably sand and grass.	9/30/2019 10:22 AM

MSWC Boater Trends Survey

970	additional rental opportunities	9/30/2019 10:17 AM
971	Signage and ease of access to the water	9/30/2019 10:14 AM
972	More dedicated accessible launches for kayaks and other paddle craft	9/30/2019 10:06 AM
973	launch capacity	9/30/2019 10:02 AM
974	Leave launch docs in water longer in the year.	9/30/2019 9:41 AM
975	fish cleaning station	9/30/2019 9:38 AM
976	Remove rocks, Break water from prevailing winds	9/30/2019 9:20 AM
977	I have no issues with any of them so far	9/30/2019 9:17 AM
978	More launch capacity - shorter wait times.	9/30/2019 9:04 AM
979	Paved parking, wait times to launch, restrooms, trash recepticles	9/30/2019 8:46 AM
980	Better signage for boat and trailer only parking	9/30/2019 8:16 AM
981	more of em	9/30/2019 8:10 AM
982	Number of parking spaces	9/30/2019 7:45 AM
983	good dock fenders	9/30/2019 7:45 AM
984	Keep cars from parking in spots for vehicles with trailers. Enforcing recreation passport on vehicles.	9/30/2019 7:40 AM
985	Deeper water at the ramp	9/30/2019 7:31 AM
986	Paved parking and launches	9/30/2019 7:28 AM
987	clear ramps	9/30/2019 6:05 AM
988	Restroom	9/30/2019 4:57 AM
989	Clean restrooms	9/30/2019 1:21 AM
990	clear channel to deeper water	9/30/2019 12:54 AM
991	if you have a seasonal pass at one marina, having a discounted transient fee at other marinas.	9/29/2019 10:23 PM
992	Reduce the cost of the slips for small boats	9/29/2019 10:03 PM
993	boat prep and parking	9/29/2019 10:01 PM
994	Add more launch lanes at high traffic access sites	9/29/2019 9:27 PM
995	Bathrooms, Pavilions benches even a rock to sit on sometimes it's nice to just sit by the water and enjoy outside	9/29/2019 9:13 PM
996	Adequate parking for boaters, too many places being used as local parks which they are not intended for	9/29/2019 8:54 PM
997	Leave docks in place until solid ice forms.	9/29/2019 8:47 PM
998	More ramps and better pacement and maintenance of the sites	9/29/2019 8:16 PM
999	additional parking	9/29/2019 7:32 PM
1000	Clean restrooms and shower facilities	9/29/2019 5:59 PM
1001	Stronger WiFi system	9/29/2019 5:38 PM
1002	The best sites have personnel on site to keep things moving. It is especially helpful to have areas where you can beach your boat while you retrieve your trailer so as not to tie up docks and ramps.	9/29/2019 5:38 PM
1003	New bathrooms and showers	9/29/2019 5:25 PM
1004	unloading area close to water so we are not in power boaters way	9/29/2019 5:05 PM
1005	More parking at popular sites	9/29/2019 4:38 PM
1006	Improved launch facility and parking for trailer	9/29/2019 3:54 PM
1007	Depth of channels in and out to lake from launch	9/29/2019 3:45 PM

MSWC Boater Trends Survey

1008	Notification of Pending Access Sites.	9/29/2019 2:47 PM
1009	all great	9/29/2019 2:45 PM
1010	Maintain launch ramps and docks	9/29/2019 2:35 PM
1011	MORE Public FREE access	9/29/2019 2:26 PM
1012	over night parking with camper/boat	9/29/2019 2:02 PM
1013	Hard surface launch sites	9/29/2019 1:39 PM
1014	Boat cleaning facilities	9/29/2019 1:30 PM
1015	No problem	9/29/2019 1:24 PM
1016	dock	9/29/2019 1:19 PM
1017	Ease of getting into the water	9/29/2019 1:09 PM
1018	maintenance of sites, accessibility	9/29/2019 1:08 PM
1019	Keep the launch ramps clear of weeds	9/29/2019 11:59 AM
1020	facilities	9/29/2019 11:38 AM
1021	launch maintenance and access (depth) on smaller fishing lakes	9/29/2019 11:32 AM
1022	Wifi, Wifi, Wifi.	9/29/2019 11:09 AM
1023	Clean restrooms	9/29/2019 11:06 AM
1024	Wifi, Wifi, Wifi.	9/29/2019 11:03 AM
1025	docks, more ramp angle	9/29/2019 10:49 AM
1026	Fix the 4x4 wood posts at the dock	9/29/2019 10:15 AM
1027	Replace parking lot	9/29/2019 10:08 AM
1028	Good ramp	9/29/2019 8:53 AM
1029	na	9/29/2019 8:22 AM
1030	We don't have any suggestions.	9/29/2019 8:09 AM
1031	No fee website reservations	9/29/2019 8:09 AM
1032	Better launch ramps	9/29/2019 7:38 AM
1033	Easier online access to reserve slips	9/29/2019 7:36 AM
1034	Convert lowhead dams into whitewater kayak play areas	9/29/2019 7:30 AM
1035	Dedicated kayak and canoe launch facilities	9/29/2019 6:47 AM
1036	my local launch ramps need improvement because of washouts	9/29/2019 6:16 AM
1037	Increase number of ramps	9/29/2019 12:09 AM
1038	Ramp is Concrete	9/28/2019 11:17 PM
1039	More launch lanes/capacity	9/28/2019 11:04 PM
1040	CLEAN THE BATHROOMS THEY ARE A DISGRACE	9/28/2019 10:49 PM
1041	Maintenance	9/28/2019 9:39 PM
1042	Deep safe boat launches	9/28/2019 9:36 PM
1043	management control idiots	9/28/2019 9:15 PM
1044	WiFi	9/28/2019 8:57 PM
1045	Better ramps	9/28/2019 7:56 PM
1046	More Launch sites/parking access	9/28/2019 7:54 PM
1047	ok as is	9/28/2019 7:38 PM
1048	gas dock	9/28/2019 7:23 PM

MSWC Boater Trends Survey

1049	Public launch on Belle Isle	9/28/2019 3:53 PM
1050	Charge kayakers!! They are parking in lots they don't pay for!!!	9/28/2019 3:33 PM
1051	Larger gfi breakers. My 38 carver won't function with breakers set for house branch loads	9/28/2019 2:34 PM
1052	add kayak launch stations (close second is clear dead ash trees)	9/28/2019 2:32 PM
1053	Extended concrete	9/28/2019 1:39 PM
1054	Extended concrete	9/28/2019 1:34 PM
1055	Docks that allow easier launch (length, solid, rope up cleats, proper depth) Clean smelling restrooms (not outhouses)	9/28/2019 1:27 PM
1056	include kayak access	9/28/2019 1:23 PM
1057	Upgrade docks and bathroom facilities	9/28/2019 1:00 PM
1058	ease of access and parking	9/28/2019 12:41 PM
1059	Kayak/canoe launch area separate from concrete ramp	9/28/2019 12:39 PM
1060	Launch ramp depth and grade. Some ramps are too shallow.	9/28/2019 12:32 PM
1061	Longer dockd	9/28/2019 12:13 PM
1062	Good lighting	9/28/2019 11:58 AM
1063	Fish cleaning stations	9/28/2019 11:20 AM
1064	Parking lots need to be larger, more spots.	9/28/2019 11:17 AM
1065	free access to ALL lakes	9/28/2019 11:09 AM
1066	Dock maintenance	9/28/2019 11:09 AM
1067	access to tv service	9/28/2019 10:55 AM
1068	Upgrade boat launches that have flooded due to rising Great Lakes levels. Ocqueoc Rivermouth has been closed all year due to flooding.	9/28/2019 10:50 AM
1069	Someone of authority to manage the ramp on busy times, someone to maintain order!	9/28/2019 10:44 AM
1070	Add second ramp for boaters	9/28/2019 10:40 AM
1071	Restroom facilities	9/28/2019 10:29 AM
1072	Dedicated paddle sports access away from powerboats.	9/28/2019 10:24 AM
1073	Some marinas have overly sensitive GFCI protection	9/28/2019 10:07 AM
1074	Fishing information on water where sites are located	9/28/2019 9:24 AM
1075	Dock for ease of launch and pulling boat out of water	9/28/2019 9:18 AM
1076	Have DNR officers that are polite, friendly, helpful instead of on a power trip to find something wrong.	9/28/2019 9:08 AM
1077	Keep access open long as possible	9/28/2019 9:06 AM
1078	Keep them maintained	9/28/2019 8:44 AM
1079	Mackinac Island Marina needs major upgrade East wind = Bugout	9/28/2019 8:17 AM
1080	More launch slips, more area for vehicles during the launching process, easy to follow launches for idiots who do not know or have common sense on the proper etiquette	9/28/2019 8:06 AM
1081	Not sure	9/28/2019 7:55 AM
1082	Painted lines on the ramp and parking lot to direct traffic at site	9/28/2019 7:50 AM
1083	condition	9/28/2019 7:48 AM
1084	Restroom	9/28/2019 7:39 AM
1085	Fish cleaning station.	9/28/2019 7:38 AM

MSWC Boater Trends Survey

1086	Dedicate launch slips as launch or retrieve, or have someone direct boat traffic at launch sites during busy times.	9/28/2019 7:33 AM
1087	longer docks	9/28/2019 7:32 AM
1088	Have DNR staff regularly check that portable docks are submerged deep enough to launch. This dry summer there were several weeks that Otter Lake was inaccessible to a 19' boat due to shallow dick conditions.	9/28/2019 6:20 AM
1089	lessen the weed and duck weed bloom near launch sites	9/28/2019 6:13 AM
1090	no opinion	9/28/2019 4:28 AM
1091	Attendant to direct launch and parking as some need larger parking spaces than others.	9/28/2019 4:24 AM
1092	If staffed, having employees direct people in launch/haulout procedures...not allowing people to sit at docks loading and unloading coolers, etc....	9/28/2019 1:55 AM
1093	More information posted specifically about that lake.	9/28/2019 12:39 AM
1094	Lake Orion boat launch in Oakland county needs to badly be repaved. It could use another dock because on busy days it's very crowded	9/28/2019 12:03 AM
1095	Restrooms.	9/27/2019 11:29 PM
1096	Less DNR	9/27/2019 11:21 PM
1097	Overnight parking	9/27/2019 11:19 PM
1098	ease of launching	9/27/2019 11:17 PM
1099	More launch facilities for non-motorized watercraft and launch facilities for non-motorized watercraft that ADA-accessible	9/27/2019 11:06 PM
1100	Better management of docks being put into the water in the spring and maintenance of docks above the water line	9/27/2019 10:41 PM
1101	Improved mapping of access sites and signage leading to launches	9/27/2019 10:32 PM
1102	Make the mainstays river site free again with rec pass	9/27/2019 9:59 PM
1103	assistance	9/27/2019 9:59 PM
1104	Showers without 30-second timers	9/27/2019 9:37 PM
1105	Adjustments for higher water levels considered with adjustable dock.	9/27/2019 9:16 PM
1106	better lighting for night boating	9/27/2019 9:11 PM
1107	More kayak launches	9/27/2019 9:10 PM
1108	access	9/27/2019 9:05 PM
1109	Facilities	9/27/2019 9:00 PM
1110	having a dock far enough out to fish from	9/27/2019 8:55 PM
1111	Good dock accessibility	9/27/2019 8:42 PM
1112	Not many without problems, most have to short of slope boat disappears from your mirrors, approach has a turn and bad slope makes them a total pain. Cheboygan municipal launch bad design, Higgins north boat disappears when launching. Pine River launch Standish what a mess needs to be doubled in size. A visit to Alaska's boat launches would train your designers do they ever launch a boat that should be a requirement. Lancer lake state launch Gladwin, Mi. Unbelievable all of the launches in Gladwin county are very poorly designed. Sanford lake county park has a launch that is fair Slope is still not totally correct.	9/27/2019 8:32 PM
1113	Better patrolled	9/27/2019 8:31 PM
1114	Paddlecraft only access	9/27/2019 8:18 PM
1115	Launch ramp capacity	9/27/2019 8:01 PM
1116	Overnight parking	9/27/2019 8:00 PM
1117	Restroom	9/27/2019 7:54 PM

MSWC Boater Trends Survey

1118	Floating docks	9/27/2019 7:42 PM
1119	Deep enough to launch. Good docks	9/27/2019 7:40 PM
1120	Better Parking and Power loading	9/27/2019 7:30 PM
1121	deeper	9/27/2019 7:26 PM
1122	Hayes state park make channel deeper and wider	9/27/2019 7:23 PM
1123	Stop all the power loading.	9/27/2019 7:06 PM
1124	Hose area for cleaning	9/27/2019 7:02 PM
1125	dock for launching	9/27/2019 6:52 PM
1126	restrooms	9/27/2019 6:51 PM
1127	Longer docks, cleaner bathrooms	9/27/2019 6:47 PM
1128	Allow private groups to help maintain launch sites. Helps the budget .	9/27/2019 6:47 PM
1129	Add more.	9/27/2019 6:23 PM
1130	Cleaning Stations for kayaks and canoes	9/27/2019 6:22 PM
1131	trees frequently block access with my sailboats	9/27/2019 6:17 PM
1132	More slips	9/27/2019 6:08 PM
1133	Depth of water	9/27/2019 6:03 PM
1134	Improve marinas	9/27/2019 5:33 PM
1135	Make sure ramps can handle heavy boats	9/27/2019 5:32 PM
1136	floating docks	9/27/2019 5:31 PM
1137	Parking with trailer/ capacity	9/27/2019 5:30 PM
1138	Non cement area for kayaks/paddle board	9/27/2019 5:23 PM
1139	Maintain dock conditions, length. Keep landings smooth and clear	9/27/2019 5:18 PM
1140	Ability to adjust to water depth	9/27/2019 5:00 PM
1141	Parking area that shows a map with float times to the next launch point.	9/27/2019 4:55 PM
1142	decrease transient slips and increase yearly rentals	9/27/2019 4:17 PM
1143	Gravel/sand sloped human entry/exit	9/27/2019 4:09 PM
1144	Make it easier to find launch on a map	9/27/2019 3:56 PM
1145	The number of launch lanes	9/27/2019 3:49 PM
1146	Most are not set up well for both power boat and paddle craft. Most are better for one or the other.	9/27/2019 3:45 PM
1147	More of them.	9/27/2019 3:42 PM
1148	Increase parking for vehicle and trailer	9/27/2019 3:35 PM
1149	handicap accessible	9/27/2019 3:32 PM
1150	Never use state BAS sites as most are concrete; powerboats stink and drink.	9/27/2019 3:27 PM
1151	length of dock with cleats and ramp slope to accomodate putting boat in	9/27/2019 3:24 PM
1152	Cleanliness. area beautification and security	9/27/2019 3:10 PM
1153	fish cleaning stations	9/27/2019 3:05 PM
1154	FILL POTHOLEs where wheels go at launch pads!	9/27/2019 2:58 PM
1155	More lanes	9/27/2019 2:53 PM
1156	We've been very pleased with the municipal marinas.	9/27/2019 2:53 PM
1157	Maintenance and repair or ramp facilities	9/27/2019 2:33 PM
1158	Not sure; don't use them	9/27/2019 2:31 PM

MSWC Boater Trends Survey

1159	Vehicle and trailer room.	9/27/2019 2:29 PM
1160	All paved and no gravel boat ramps	9/27/2019 2:23 PM
1161	Clean bathrooms.	9/27/2019 2:23 PM
1162	not to steep of landing in the water hard on front of pontoon	9/27/2019 2:20 PM
1163	Upgrade docks	9/27/2019 2:17 PM
1164	Restrooms	9/27/2019 2:15 PM
1165	seperate kayak launch areas	9/27/2019 2:08 PM
1166	More trash cans	9/27/2019 1:49 PM
1167	ramp maintenance	9/27/2019 1:46 PM
1168	Paved launch ramps	9/27/2019 1:35 PM
1169	more kayak launches	9/27/2019 1:29 PM
1170	have morings available near launch sites	9/27/2019 1:26 PM
1171	I am happy with how they are	9/27/2019 1:17 PM
1172	parking for longer truck and trailer	9/27/2019 1:13 PM
1173	Sites in more remote locations	9/27/2019 1:12 PM
1174	More launch sites in Wayne and oakland co.	9/27/2019 1:11 PM
1175	allow for reserving specific slip number at Mackinac Island Marina	9/27/2019 1:09 PM
1176	Docks need to be longer so as to provide better asscess to deeper water for launching bunked pontoon boats.	9/27/2019 1:09 PM
1177	Where 2 boats can launch at the same time	9/27/2019 1:04 PM
1178	Boat and vehicle traffic flow and parking in and out of launch	9/27/2019 1:00 PM
1179	More launch sites in Wayne and Macomb co.	9/27/2019 1:00 PM
1180	More availability	9/27/2019 12:57 PM
1181	Bathrooms	9/27/2019 12:56 PM
1182	Clean up lakes	9/27/2019 12:56 PM
1183	Don't need improvements	9/27/2019 12:53 PM
1184	easy way to enter/exit boat	9/27/2019 12:46 PM
1185	Longer docks at launch ramps	9/27/2019 12:45 PM
1186	Better launch	9/27/2019 12:43 PM
1187	Access roads often are in bad condition	9/27/2019 12:40 PM
1188	Ease of excess to ramp, sliminess of ramp	9/27/2019 12:32 PM
1189	make two lanes at the one lane ramps	9/27/2019 12:30 PM
1190	Beter parking and outhouse's	9/27/2019 12:25 PM
1191	Your docks are often to short and almost every one is to steep and it is difficult to control the back of the boat while loading.	9/27/2019 12:25 PM
1192	Open to over night use and parking by boaters only.	9/27/2019 12:24 PM
1193	more locations	9/27/2019 12:14 PM
1194	more ramps	9/27/2019 12:11 PM
1195	More kayak launches	9/27/2019 12:02 PM
1196	Depth of ramp at docks maintained in fall	9/27/2019 12:00 PM
1197	boats and trailers no cars without trailers.	9/27/2019 11:56 AM

MSWC Boater Trends Survey

1198	Easier to make a reservation - avoid online when traveling	9/27/2019 11:49 AM
1199	clean site, more parking	9/27/2019 11:48 AM
1200	Nice restrooms	9/27/2019 11:48 AM
1201	ramps on lakes near me	9/27/2019 11:47 AM
1202	Better paddle craft access away from motor boat areas	9/27/2019 11:46 AM
1203	Reservation App w/insight into availability at the harbor e.g. 6/10 slips open for 35' boat with 5'8" draft	9/27/2019 11:46 AM
1204	power loading	9/27/2019 11:46 AM
1205	That the parking spots are made bigger to accommodate more modern vehicles and boat trailers.	9/27/2019 11:46 AM
1206	Sign showing the entrance from the lake to the launch ramp.	9/27/2019 11:44 AM
1207	Clean the docks earlier in the morning (goose droppings)	9/27/2019 11:42 AM
1208	Improve docks! Each dock should be able to have two boats on it.	9/27/2019 11:39 AM
1209	None that I can think of right now	9/27/2019 11:39 AM
1210	enforcement of power loading rules	9/27/2019 11:38 AM
1211	8 Point Lake Access-Trash Can Available	9/27/2019 11:35 AM
1212	Paddle specific launce and landing areas	9/27/2019 11:34 AM
1213	N/A	9/27/2019 11:31 AM
1214	protect my boat from damage from docks with no cushion/bumpers.	9/27/2019 11:31 AM
1215	Have canoe launches so I don't launch a canoe on concrete	9/27/2019 11:28 AM
1216	Parking	9/27/2019 11:28 AM
1217	floating docks that rise and fall as water levels change	9/27/2019 11:24 AM
1218	Single vehicle parking (no trailer).	9/27/2019 11:24 AM
1219	Maintenance	9/27/2019 11:18 AM
1220	train the people properly that work there	9/27/2019 11:16 AM
1221	Take care of them better	9/27/2019 11:14 AM
1222	Clean water	9/27/2019 11:12 AM
1223	parking availability	9/27/2019 11:12 AM
1224	Fuel	9/27/2019 11:10 AM
1225	Dedicated paddlecraft access sites.	9/27/2019 11:08 AM
1226	Allow overnight parking	9/27/2019 11:05 AM
1227	Ramp and Lot condition	9/27/2019 11:01 AM
1228	launching dock	9/27/2019 10:59 AM
1229	More funding for upkeep	9/27/2019 10:57 AM
1230	Keep them open as long as safe launching conditions allow	9/27/2019 10:56 AM
1231	Plow snow	9/27/2019 10:56 AM
1232	Clean restrooms	9/27/2019 10:55 AM
1233	prevention of the spread of aquatic invasive species	9/27/2019 10:43 AM
1234	fish cleaning area	9/27/2019 10:39 AM
1235	RESTROOMS women and children despise fly infested dirty smelly restrooms !!!	9/27/2019 10:38 AM
1236	A sign stating whats in season and whats out, along wiht size and limits on certain fish. And what i species are in that lake.	9/27/2019 10:36 AM

MSWC Boater Trends Survey

1237	None	9/27/2019 10:35 AM
1238	A soft (non concrete) place to launch/land	9/27/2019 10:33 AM
1239	Ramp condition	9/27/2019 10:32 AM
1240	running water bathrooms and fish cleaning stations	9/27/2019 10:30 AM
1241	Having a Dock. Not just a concrete pad.	9/27/2019 10:29 AM
1242	larger parking lots and better docks/depth of launch	9/27/2019 10:28 AM
1243	More handicap accessible	9/27/2019 10:27 AM
1244	Have kayak launch ramps at more rivers and lakes.	9/27/2019 10:27 AM
1245	trailer parking	9/27/2019 10:21 AM
1246	More launch areas appropriate for kayaks and canoes	9/27/2019 10:18 AM
1247	Hellenburg Field in Monroe is terribel - dangerous, theft from cars when out fishing.	9/27/2019 10:17 AM
1248	Floating docks	9/27/2019 10:16 AM
1249	More trash receptacles	9/27/2019 10:11 AM
1250	parking for vehicle and three axle trailer	9/27/2019 10:08 AM
1251	Docks at ramps example bear lake otsego county	9/27/2019 10:04 AM
1252	Keep them maintained	9/27/2019 10:03 AM
1253	have more than 1 ramp available	9/27/2019 9:58 AM
1254	More river access points	9/27/2019 9:55 AM
1255	More and/or larger capacity sites are needed in high population areas of the state (e.g. Southeast Michigan).	9/27/2019 9:53 AM
1256	Ramps and parking	9/27/2019 9:51 AM
1257	Making launch ramps more friendly to the 35-40' boats	9/27/2019 9:51 AM
1258	User friendly	9/27/2019 9:50 AM
1259	Teach launch etiquette	9/27/2019 9:50 AM
1260	Easy path to ramp	9/27/2019 9:46 AM
1261	flush toilets	9/27/2019 9:45 AM
1262	Clean safe docks	9/27/2019 9:42 AM
1263	Overnight parking	9/27/2019 9:42 AM
1264	Lower Cost	9/27/2019 9:42 AM
1265	Security or surveillance cameras	9/27/2019 9:40 AM
1266	Fish Cleaning stations	9/27/2019 9:38 AM
1267	Garbage cans or dumpsters	9/27/2019 9:37 AM
1268	Parking and ramp improvements	9/27/2019 9:35 AM
1269	Ability to book with marina on day of arrival!!!!	9/27/2019 9:30 AM
1270	having a dock in.	9/27/2019 9:29 AM
1271	Channel dredging	9/27/2019 9:27 AM
1272	Wider or more lanes at launches.	9/27/2019 9:26 AM
1273	Increase the number of sites. Seek out more "road ends"	9/27/2019 9:24 AM
1274	Longer dock. Most are too short or half out of the water making them about worthless.	9/27/2019 9:24 AM
1275	Require user to pass a backing with trailer class.	9/27/2019 9:24 AM
1276	dredging to make launch easier	9/27/2019 9:23 AM

MSWC Boater Trends Survey

1277	Reservations	9/27/2019 9:22 AM
1278	longer hours and longer seasons at gas dock	9/27/2019 9:21 AM
1279	CLEAN	9/27/2019 9:20 AM
1280	Adequate depth for launching. I launch with a minivan and cannot back way out to get the boat deep enough to load.	9/27/2019 9:20 AM
1281	Update info	9/27/2019 9:19 AM
1282	rest room facilities	9/27/2019 9:17 AM
1283	Cleaner docks	9/27/2019 9:17 AM
1284	Accessible kayak launch ramps are awesome!	9/27/2019 9:17 AM
1285	Updated fish in the waters.	9/27/2019 9:15 AM
1286	parking for longer trailers	9/27/2019 9:12 AM
1287	can't think of a single thing, they are great everywhere	9/27/2019 9:07 AM
1288	More ramps at quinnacasee site and parking	9/27/2019 9:07 AM
1289	Parking	9/27/2019 9:05 AM
1290	fish cleaning facilities,no public facilities in Oscoda area	9/27/2019 9:04 AM
1291	Change the walkway design. The posts that stick out on the sides of the walkways are very difficult for powerboats. They need a smooth continuous surface on the outside for the boat to bump against. p	9/27/2019 9:01 AM
1292	parking	9/27/2019 9:00 AM
1293	Well maintained ramps and docks.	9/27/2019 9:00 AM
1294	Easy in easy out	9/27/2019 8:56 AM
1295	Acess to upper Detroit River	9/27/2019 8:56 AM
1296	maintain ramp quality for trailering & launching boats.	9/27/2019 8:56 AM
1297	Clean, Oder free restrooms	9/27/2019 8:55 AM
1298	I think your doing a fine job so far	9/27/2019 8:55 AM
1299	Condition of ramp	9/27/2019 8:54 AM
1300	Add wash down hose	9/27/2019 8:53 AM
1301	A resveration system that works on line. Never seems to work for me	9/27/2019 8:52 AM
1302	dredging	9/27/2019 8:50 AM
1303	Handicap accessable docks	9/27/2019 8:46 AM
1304	parking	9/27/2019 8:46 AM
1305	Ease of access	9/27/2019 8:43 AM
1306	A hose for cleaning off the underside.	9/27/2019 8:42 AM
1307	Improve parking access	9/27/2019 8:40 AM
1308	Bathroom	9/27/2019 8:40 AM
1309	Depth	9/27/2019 8:40 AM
1310	More paddle craft facilities and other facilities to enjoy such as fishing piers or walking trails that have fishing areas.	9/27/2019 8:39 AM
1311	Overall maintenance on what we have.	9/27/2019 8:38 AM
1312	Most ramps too short for longer boats, add at least 1 longer ramp/dock	9/27/2019 8:35 AM
1313	Lower costs	9/27/2019 8:34 AM
1314	More overnight parking options close to the launch sites.	9/27/2019 8:34 AM

MSWC Boater Trends Survey

1315	Bathroom facilities/frequent cleaning of the pit toilets	9/27/2019 8:34 AM
1316	At times the ramps of gravel get pretty good ruts	9/27/2019 8:30 AM
1317	Provide rack to allow temporary security of kayak while shuttling car	9/27/2019 8:27 AM
1318	More up keep on boat ramps	9/27/2019 8:24 AM
1319	A gentle slope for launch. Many very steep. Dangerous for vehicle, and to walk. Mistakes are multiplied the steeper the launch angle. Algae growing on steep angle is dangerous.	9/27/2019 8:23 AM
1320	rest room updates	9/27/2019 8:21 AM
1321	Toll Booth openmor e hours.	9/27/2019 8:21 AM
1322	having docks at launch sites	9/27/2019 8:20 AM
1323	Most ramps are too steep, this makes retrieving boats over 20 feet harder to get on the trap!	9/27/2019 8:18 AM
1324	Make belisle the putinbay of Michigan	9/27/2019 8:13 AM
1325	Make the reservation system work	9/27/2019 8:10 AM
1326	Parking at busy ramps	9/27/2019 8:10 AM
1327	Limit number of bass tournaments and number of boats in each they over load access sites	9/27/2019 8:10 AM
1328	Maintain Convenient car parking	9/27/2019 8:09 AM
1329	Better docks	9/27/2019 8:06 AM
1330	How about lake st clair access site(s) near mile roads	9/27/2019 8:06 AM
1331	All boat launches should have at least two launch lanes. Having only one causes lots of backups and confusion.	9/27/2019 8:04 AM
1332	Boaters lounge	9/27/2019 8:04 AM
1333	fish cleaning station	9/27/2019 7:59 AM
1334	better tie-offs for loading and unloading boats when a person is on a solo trip.	9/27/2019 7:59 AM
1335	Have designated spots to get boat read to launch and return to tie down for the road.	9/27/2019 7:58 AM
1336	Updated working shower facilities	9/27/2019 7:57 AM
1337	running water	9/27/2019 7:56 AM
1338	Parking for truck and trailer. Dedicated vehicle w/o trailer spaces	9/27/2019 7:55 AM
1339	More basic simple accesses without pavement, or other facilities .	9/27/2019 7:55 AM
1340	On fast flowing rivers, a dock at the ramp would be very helpful. This would make the ramp safer and faster to use. The ramp in Berrien Springs on the St. Joseph River does not have a dock and it is difficult to get a boat on the trailer in the strong current. An inexperienced boater is likely to give up or not come back to this site or possibly harm their boat or themselves in the process.	9/27/2019 7:54 AM
1341	keeping the ramps in good shape	9/27/2019 7:51 AM
1342	More handicap kayak launches at boating access sites.	9/27/2019 7:51 AM
1343	Leave docks in later	9/27/2019 7:50 AM
1344	teach idiots boat launch/ramp etiquette	9/27/2019 7:47 AM
1345	Actual bathrooms instead of stinky outhouses.	9/27/2019 7:46 AM
1346	Not sure, always been pleased	9/27/2019 7:41 AM
1347	Spray for Spiders Constantly.	9/27/2019 7:40 AM
1348	Deport launch area	9/27/2019 7:40 AM
1349	cost	9/27/2019 7:40 AM
1350	Convenience and appearance of the bathrooms	9/27/2019 7:39 AM
1351	Bottom boat cleaning service	9/27/2019 7:37 AM

MSWC Boater Trends Survey

1352	Improve river launches.	9/27/2019 7:31 AM
1353	Mark harbor with bouys	9/27/2019 7:31 AM
1354	Make ramp angles more steep	9/27/2019 7:31 AM
1355	Keep the state out of the marinas	9/27/2019 7:29 AM
1356	trash recepticles	9/27/2019 7:28 AM
1357	upkeep/maintenance	9/27/2019 7:28 AM
1358	in and out slips. It's a zoo @ 2 pm	9/27/2019 7:27 AM
1359	maintenance	9/27/2019 7:25 AM
1360	Deeper Launch	9/27/2019 7:22 AM
1361	Open the one's in state parks at 6a rather than 8a	9/27/2019 7:16 AM
1362	making boat ramps better	9/27/2019 7:15 AM
1363	Parking	9/27/2019 7:13 AM
1364	larger capacity	9/27/2019 7:12 AM
1365	easier access to a passport	9/27/2019 7:12 AM
1366	Clean!	9/27/2019 7:11 AM
1367	Width-some are narrow that we use.	9/27/2019 7:11 AM
1368	Making reservations, the DNR website is terrible.	9/27/2019 7:04 AM
1369	enforce no power loading	9/27/2019 7:03 AM
1370	Dedicated staging areas for both in and out.	9/27/2019 6:59 AM
1371	More paddler friendly access sites (eg. Ez-dock)	9/27/2019 6:58 AM
1372	Ease of backing to launch boat without other parked trailers in the way	9/27/2019 6:56 AM
1373	Improved launch space and bocks	9/27/2019 6:54 AM
1374	Location	9/27/2019 6:53 AM
1375	Bathroom Upgrades	9/27/2019 6:50 AM
1376	none	9/27/2019 6:49 AM
1377	Hire more field staff to maintain the sites better	9/27/2019 6:46 AM
1378	They have all I need	9/27/2019 6:45 AM
1379	cleanliness	9/27/2019 6:44 AM
1380	GOOD INTERNET	9/27/2019 6:43 AM
1381	get rid of the pre assigned slip reservation system and give control to the harbor master. It was absolutely horribly chaotic and not efficient	9/27/2019 6:41 AM
1382	clean restrooms	9/27/2019 6:40 AM
1383	Better docks and more parking	9/27/2019 6:29 AM
1384	Bathrooms	9/27/2019 6:29 AM
1385	Maintenance	9/27/2019 6:27 AM
1386	fish cleaning stations	9/27/2019 6:22 AM
1387	Charge kayakers and paddle boarders by providing a license	9/27/2019 6:21 AM
1388	Dockage	9/27/2019 6:13 AM
1389	Cleanliness	9/27/2019 6:09 AM
1390	Make sure platforms are longer or out far enough for launching!	9/27/2019 6:09 AM
1391	Cleaning dock surfaces	9/27/2019 6:01 AM

MSWC Boater Trends Survey

1392	cost	9/27/2019 5:54 AM
1393	Parking	9/27/2019 5:54 AM
1394	cost	9/27/2019 5:52 AM
1395	docks	9/27/2019 5:52 AM
1396	Just more sites	9/27/2019 5:50 AM
1397	fish claenning area or at least controlled waste for carcasses	9/27/2019 5:46 AM
1398	Signs directions	9/27/2019 5:35 AM
1399	Removing seaweed and trash from water	9/27/2019 5:35 AM
1400	Availability! Many times not enough transient slips.	9/27/2019 5:32 AM
1401	Maintenance	9/27/2019 5:26 AM
1402	open earlier in the spring	9/27/2019 5:19 AM
1403	Improve docks	9/27/2019 5:15 AM
1404	Location. We need a launch half way between Augres and tawascity	9/27/2019 5:13 AM
1405	Need more of them with more space for parking.	9/27/2019 5:02 AM
1406	Clean restrooms	9/27/2019 4:59 AM
1407	Toilet/ pit are fine	9/27/2019 4:51 AM
1408	Add toilets/ pit are fine	9/27/2019 4:46 AM
1409	more lights at night	9/27/2019 4:39 AM
1410	More of them	9/27/2019 4:14 AM
1411	Angle	9/27/2019 4:13 AM
1412	Put a trashcan out side of the restrooms so maybe people will stop tossing their garbage in the toilet.	9/27/2019 4:11 AM
1413	Accessible Rivers, cleared pathways. Public access sites to rivers with accessible launch sites	9/27/2019 3:51 AM
1414	Address the cleanness of the ramps	9/27/2019 3:22 AM
1415	Docks	9/27/2019 3:16 AM
1416	Kayak launches	9/27/2019 2:53 AM
1417	if gated open more hours	9/27/2019 2:26 AM
1418	to make sure that the docks are not submerged under water	9/27/2019 1:53 AM
1419	Improve more boat launches for power boats	9/27/2019 12:38 AM
1420	Clean restroom	9/27/2019 12:36 AM
1421	Improve more boat launches for power boats	9/27/2019 12:31 AM
1422	Repairs to docks, rubber bumpers along docks, cleaning the toilets more frequently, and some form of light so it can be seen at night coming back from the lake (ie. solar dock light)	9/27/2019 12:20 AM
1423	Open all night	9/27/2019 12:20 AM
1424	boat wash down	9/27/2019 12:09 AM
1425	Open 24 hours with lightning.	9/26/2019 11:45 PM
1426	Restroom facility	9/26/2019 11:40 PM
1427	State owned Launch on the Detroit River, like Belle Isle	9/26/2019 11:36 PM
1428	WATER RAMPS	9/26/2019 11:33 PM
1429	Layout	9/26/2019 11:27 PM
1430	Web page giving conditions at the various municipal/state marinas	9/26/2019 11:23 PM

MSWC Boater Trends Survey

1431	Don't know happy with what i have in my area	9/26/2019 11:15 PM
1432	Bicycle rental or loaner.	9/26/2019 11:12 PM
1433	easier access.	9/26/2019 11:10 PM
1434	adequate parking for vehicle with trailer	9/26/2019 11:06 PM
1435	Deep enough water to easily launch boat	9/26/2019 11:01 PM
1436	having someone keep order at the launch	9/26/2019 11:00 PM
1437	Keep them up to date with maintenance of existing facilities.	9/26/2019 10:56 PM
1438	ligts at night	9/26/2019 10:55 PM
1439	Fish cleaning station	9/26/2019 10:50 PM
1440	Launch ramp is uneven and not level side to side	9/26/2019 10:50 PM
1441	More room for parking more vehicles...	9/26/2019 10:50 PM
1442	Docks need to be built to withstand Seiche.	9/26/2019 10:50 PM
1443	Build more	9/26/2019 10:45 PM
1444	better docks	9/26/2019 10:42 PM
1445	Parking	9/26/2019 10:41 PM
1446	AIS boat washes	9/26/2019 10:38 PM
1447	good docks	9/26/2019 10:37 PM
1448	Longer docks	9/26/2019 10:37 PM
1449	Have personnel to help at the launch ramp	9/26/2019 10:37 PM
1450	Michigan is one of the most boater freindly states i have fished.	9/26/2019 10:37 PM
1451	Ease of launch	9/26/2019 10:37 PM
1452	Nice docks	9/26/2019 10:35 PM
1453	Bathrooms at launch sites	9/26/2019 10:30 PM
1454	Nothing needed	9/26/2019 10:26 PM
1455	Reservations	9/26/2019 10:24 PM
1456	Veterans should be free at municipal sites	9/26/2019 10:23 PM
1457	Amenities/care of the slips. Walking distance to busy town	9/26/2019 10:21 PM
1458	Good launch platform, space, docks	9/26/2019 10:18 PM
1459	restroom facilities	9/26/2019 10:16 PM
1460	Improved docks.	9/26/2019 10:15 PM
1461	restroom facilities	9/26/2019 10:13 PM
1462	Simple: paint trailer backing lines on the pavement to guide the trailer when backing.	9/26/2019 10:12 PM
1463	better docks	9/26/2019 10:11 PM
1464	Ramps	9/26/2019 10:07 PM
1465	nothing	9/26/2019 10:06 PM
1466	Better parking	9/26/2019 10:06 PM
1467	Decent bathroom facilities	9/26/2019 10:05 PM
1468	Install ADA compliant handicap kayak launches	9/26/2019 10:04 PM
1469	lower cost	9/26/2019 10:03 PM
1470	Closer to Tawas state park	9/26/2019 9:59 PM
1471	deep enough in launch to get the boat of trailer	9/26/2019 9:55 PM

MSWC Boater Trends Survey

1472	Bathrooms	9/26/2019 9:55 PM
1473	Longer parking spaces	9/26/2019 9:52 PM
1474	Docks with extra space	9/26/2019 9:52 PM
1475	More parking for county residents	9/26/2019 9:50 PM
1476	Easy boat trailer parking	9/26/2019 9:48 PM
1477	a few have limited parking spots for trailers	9/26/2019 9:48 PM
1478	Easy kayak / canoe launch	9/26/2019 9:46 PM
1479	I think they are fine.	9/26/2019 9:43 PM
1480	Make sure transient slips are used for transient boaters.	9/26/2019 9:41 PM
1481	ramps are in dire need of maintenance / improvement	9/26/2019 9:40 PM
1482	Minimum 2 ramps with improved concrete.	9/26/2019 9:40 PM
1483	Better launch ramps	9/26/2019 9:38 PM
1484	Allow overnight parking for truck and trailer.	9/26/2019 9:37 PM
1485	More of them	9/26/2019 9:34 PM
1486	Allow cancellations/ rescheduling due to bad lake conditions	9/26/2019 9:34 PM
1487	Better reservation procedures	9/26/2019 9:33 PM
1488	Better docks	9/26/2019 9:33 PM
1489	Clean bathrooms	9/26/2019 9:30 PM
1490	Up keep	9/26/2019 9:30 PM
1491	I would personally like to see all ramps marked for launching and for pulling boats out	9/26/2019 9:29 PM
1492	Floating docks at marinas	9/26/2019 9:28 PM
1493	Parking space size for truck and trailer	9/26/2019 9:27 PM
1494	bumpers on slips	9/26/2019 9:25 PM
1495	N/A	9/26/2019 9:21 PM
1496	Let lake owners living on the lake have free launch	9/26/2019 9:21 PM
1497	Improve toilet facilities	9/26/2019 9:21 PM
1498	4 to 6 foot longer docks at smaller inland sites suitable for 17 and 18 foot boats.	9/26/2019 9:20 PM
1499	Update the ramp itself every few years	9/26/2019 9:19 PM
1500	make docks longer and keep weeds and geese away	9/26/2019 9:17 PM
1501	More parking	9/26/2019 9:17 PM
1502	Some spots need concrete fixed	9/26/2019 9:15 PM
1503	Parking	9/26/2019 9:15 PM
1504	docks out of the water	9/26/2019 9:15 PM
1505	Less cost for docking.	9/26/2019 9:15 PM
1506	Dependable wifi	9/26/2019 9:14 PM
1507	clean bathroom	9/26/2019 9:14 PM
1508	Floating dock	9/26/2019 9:12 PM
1509	place to wash off boats and fish cleaning station	9/26/2019 9:12 PM
1510	Open around the clock	9/26/2019 9:12 PM
1511	Floating & longer docks at launch	9/26/2019 9:11 PM
1512	more launches and room to park	9/26/2019 9:10 PM

MSWC Boater Trends Survey

1513	Good question. Can't think of an answer.	9/26/2019 9:10 PM
1514	Good ramps for launching	9/26/2019 9:10 PM
1515	Keep people from swimming in the accessence sites	9/26/2019 9:08 PM
1516	up keep of road to it	9/26/2019 9:06 PM
1517	parking	9/26/2019 9:05 PM
1518	added breakwalls for more protection	9/26/2019 9:04 PM
1519	I think they are great. Glen Lake needs more parking really bad!	9/26/2019 9:01 PM
1520	Bathroom updates	9/26/2019 9:00 PM
1521	Nothing	9/26/2019 8:58 PM
1522	Na	9/26/2019 8:58 PM
1523	Ramps fish cleaning	9/26/2019 8:58 PM
1524	Management of ramps. Launching and retrieving is sometimes difficult when people don't respect the rules. Launching in the retrieve ramps etc.	9/26/2019 8:56 PM
1525	Docks kept up with padding and secure wood	9/26/2019 8:55 PM
1526	Lengthen the docks so access to boarding is easier.	9/26/2019 8:53 PM
1527	More launch sites	9/26/2019 8:51 PM
1528	LONGER DOCKS	9/26/2019 8:51 PM
1529	Ability to launch larger boats	9/26/2019 8:51 PM
1530	more parking spaces	9/26/2019 8:50 PM
1531	Having the docks in good repair .	9/26/2019 8:49 PM
1532	Bathroom shower facilities	9/26/2019 8:47 PM
1533	clean	9/26/2019 8:46 PM
1534	Parking for vehicles with boat trailers closer to the boat ramp so the boat driver doesn't have to walk a half mile while other boaters wait to launch, mean while cars with no trailers have the close prime parking spots, they need to make a cars only parking site and vehicles with trailer sites	9/26/2019 8:46 PM
1535	License plate passes to all State launches	9/26/2019 8:44 PM
1536	Add more on lakes that do not have them.	9/26/2019 8:44 PM
1537	None	9/26/2019 8:42 PM
1538	Reduced nightly rates \$30 too much for small boat with no electrical wanted	9/26/2019 8:39 PM
1539	More parking	9/26/2019 8:39 PM
1540	A place to tie down kayaks without causing a backup	9/26/2019 8:37 PM
1541	Ramp maintenance	9/26/2019 8:37 PM
1542	Access by low water current areas on the Grand (Like Bayou's)	9/26/2019 8:37 PM
1543	Post signs and enforce no parking near ramps.	9/26/2019 8:35 PM
1544	Fish cleaning station - Petoskey needs one!!! Oh ya, forgot - never catch fish in a Petoskey anymore!!!!	9/26/2019 8:34 PM
1545	VERY visible launch instructions. Some lanes are for launching, others are for retrieving. Make sure people know this which speeds up the process for everyone.	9/26/2019 8:33 PM
1546	Parking, seems everyone thinks these launches are for other uses	9/26/2019 8:33 PM
1547	?	9/26/2019 8:31 PM
1548	keep slips and launch sites affordable	9/26/2019 8:31 PM
1549	Control goose droppings	9/26/2019 8:30 PM

MSWC Boater Trends Survey

1550	Bathrooms open all year and somewhat attended to	9/26/2019 8:30 PM
1551	non power boat launch; fishing docks for folks without a boat	9/26/2019 8:29 PM
1552	Cleanliness	9/26/2019 8:29 PM
1553	Better evening lighting on the water and on the ramp.	9/26/2019 8:29 PM
1554	reasonable parking	9/26/2019 8:28 PM
1555	None	9/26/2019 8:22 PM
1556	Personnel at the sites. People done pay and show 0 respect for the property, other people and wildlife.	9/26/2019 8:21 PM
1557	Add more parking for truck and trailer	9/26/2019 8:20 PM
1558	Lower Cost	9/26/2019 8:19 PM
1559	Wash out water spigot	9/26/2019 8:18 PM
1560	update laundry facilities in So. Haven	9/26/2019 8:18 PM
1561	Wifi	9/26/2019 8:15 PM
1562	dock space	9/26/2019 8:15 PM
1563	Longer docks with proper tiedowns	9/26/2019 8:13 PM
1564	Parking at Frankfort Municipal Marina	9/26/2019 8:13 PM
1565	ease of access	9/26/2019 8:12 PM
1566	Ease of use. We	9/26/2019 8:10 PM
1567	Better ramps	9/26/2019 8:06 PM
1568	Eliminate those stupid ramp docks with posts. They break equipment.Use bumpers.	9/26/2019 8:06 PM
1569	Instruct people launching boats to ready boats not at the boat launch	9/26/2019 8:04 PM
1570	Ensure launch is in good shape and floating docks so they rise and fall with water level	9/26/2019 8:03 PM
1571	Deeper water, hard surfaced launch ramps	9/26/2019 8:03 PM
1572	Trash picked up	9/26/2019 8:02 PM
1573	Lights	9/26/2019 8:01 PM
1574	Many of them need to be dredged and smoothed out. Some need it because of power loading (prop washing out the ramp under the water), but others need it because it hasn't been done in years and the water levels have changed a lot.	9/26/2019 8:00 PM
1575	Clean bath facilities	9/26/2019 7:59 PM
1576	Update shower houses	9/26/2019 7:58 PM
1577	Non slip kayak launch pads	9/26/2019 7:56 PM
1578	More docks or lanes	9/26/2019 7:55 PM
1579	Better WiFi	9/26/2019 7:54 PM
1580	boat ramps in deeper	9/26/2019 7:54 PM
1581	extended ramp docks add 10feet to them	9/26/2019 7:54 PM
1582	Fewer PWC	9/26/2019 7:53 PM
1583	Safe and clean	9/26/2019 7:53 PM
1584	Control proper launch depth	9/26/2019 7:53 PM
1585	due to recent regs. a boat / trailer wash off.	9/26/2019 7:52 PM
1586	Michigan new canoe launch have the worst dock for canoe. It would be better with no dock	9/26/2019 7:48 PM
1587	More parking spaces for vehicle and trailer.	9/26/2019 7:47 PM
1588	New docks	9/26/2019 7:45 PM

MSWC Boater Trends Survey

1589	Maintained kayak launches	9/26/2019 7:42 PM
1590	dredging	9/26/2019 7:42 PM
1591	Non-slip kayak launch pads.	9/26/2019 7:42 PM
1592	Parking	9/26/2019 7:40 PM
1593	More spaces	9/26/2019 7:40 PM
1594	Enforcement of "No Power Loading Allowed".	9/26/2019 7:39 PM
1595	Consistent upkeep/maintenance and added amenities	9/26/2019 7:39 PM
1596	Upgrade the facilities	9/26/2019 7:38 PM
1597	Clean showers	9/26/2019 7:38 PM
1598	cleaner bathrooms at East Jordan City Marina	9/26/2019 7:37 PM
1599	Nothing	9/26/2019 7:37 PM
1600	Add more docks to Munising boat launch , and add parking , and a fish cleaning station.	9/26/2019 7:37 PM
1601	Smooth transition from Lake bottom to paved ramp and adequate depth.	9/26/2019 7:37 PM
1602	Clean restroom	9/26/2019 7:36 PM
1603	unlock gate at Bridgeport kayak ramp, clean up Bay City State park beach	9/26/2019 7:35 PM
1604	Raise the slip walkways at least one foot	9/26/2019 7:33 PM
1605	Depth of launch and length of docks	9/26/2019 7:33 PM
1606	Parking Mgmt	9/26/2019 7:31 PM
1607	Fish cleaning stations	9/26/2019 7:28 PM
1608	better depth at the launch ramp. Most are too shallow. dock after launching	9/26/2019 7:28 PM
1609	The ones I use are fine	9/26/2019 7:26 PM
1610	More launch sites and convenient parking	9/26/2019 7:25 PM
1611	Nothing	9/26/2019 7:23 PM
1612	Nothing	9/26/2019 7:22 PM
1613	Keep lanch area deep 4ft	9/26/2019 7:19 PM
1614	Already perfect	9/26/2019 7:18 PM
1615	Keep the bicyclists and other non boaters from using up the parking	9/26/2019 7:18 PM
1616	LIGHTING - both parking lot and dock areas	9/26/2019 7:18 PM
1617	Up grade ramps due to water height	9/26/2019 7:17 PM
1618	Nothing really, they are fine. I just prefer using the "free" ones...	9/26/2019 7:17 PM
1619	Improve the conditions of the launches and docks	9/26/2019 7:15 PM
1620	Enforce no power loading	9/26/2019 7:15 PM
1621	Docks	9/26/2019 7:14 PM
1622	Nothing really, they are fine. I just prefer using the "free" ones...	9/26/2019 7:13 PM
1623	proper maintenance	9/26/2019 7:10 PM
1624	good access and depth	9/26/2019 7:09 PM
1625	Paving	9/26/2019 7:08 PM
1626	Cleanliness	9/26/2019 7:08 PM
1627	Paved parking	9/26/2019 7:07 PM
1628	Really have no complaints	9/26/2019 7:07 PM
1629	Trailer parking	9/26/2019 7:06 PM

MSWC Boater Trends Survey

1630	Escanaba marina access site good for residents and visitors	9/26/2019 7:05 PM
1631	Parking	9/26/2019 7:05 PM
1632	Floating Docks	9/26/2019 7:03 PM
1633	Same day reservatons	9/26/2019 7:03 PM
1634	none	9/26/2019 7:03 PM
1635	Ensure vehicles without trailers do not block boaters needs	9/26/2019 7:03 PM
1636	More signs to tell where the launch sites are.	9/26/2019 7:03 PM
1637	Waste/trash receptacles	9/26/2019 7:01 PM
1638	Fishing cleaning station	9/26/2019 7:01 PM
1639	Trash receptacles made available	9/26/2019 6:58 PM
1640	MORE DNR LAKE MI, CROWD CONTROL FOR ON/OFF WATER, JET SKI HAVE OWN ON/OFF, BOAT RAMP CLOSER TO CHERITY ISLAND	9/26/2019 6:57 PM
1641	longer parking spots	9/26/2019 6:56 PM
1642	More slips	9/26/2019 6:55 PM
1643	Floating docks for use in high and low water	9/26/2019 6:54 PM
1644	2 docks	9/26/2019 6:54 PM
1645	fish cleaning stations and bathroom facilities	9/26/2019 6:53 PM
1646	efficient ramps and docks	9/26/2019 6:53 PM
1647	restrooms of any kind (portable toilets are fine)	9/26/2019 6:53 PM
1648	Longer docks so that we do not have to enter/exit the boat from the bow and so we do not have to push the boat back because you can't get the trailer under the boat.	9/26/2019 6:53 PM
1649	Ranger or ramp manager directing all of the new boaters on the busy days.	9/26/2019 6:49 PM
1650	Installing piers at ALL public access sites.	9/26/2019 6:48 PM
1651	Additional ramps on the detroit River	9/26/2019 6:48 PM
1652	Open 24 hours. I hate that some parks do not open until 8am.	9/26/2019 6:48 PM
1653	Have mandatory 140 degree boat washes	9/26/2019 6:47 PM
1654	Bathroom	9/26/2019 6:46 PM
1655	Places to fish from shore.	9/26/2019 6:44 PM
1656	Nothing their fine	9/26/2019 6:44 PM
1657	boat washing stations	9/26/2019 6:40 PM
1658	Parking	9/26/2019 6:38 PM
1659	dock	9/26/2019 6:37 PM
1660	Multiple launch lanes	9/26/2019 6:37 PM
1661	Floating docks	9/26/2019 6:36 PM
1662	I do not trailer my 23000 pound boat!	9/26/2019 6:34 PM
1663	Increase quantity of protected sites on the Great Lakes	9/26/2019 6:34 PM
1664	Gas grills	9/26/2019 6:33 PM
1665	Pier next to launch	9/26/2019 6:32 PM
1666	Capacity	9/26/2019 6:31 PM
1667	Keep docks in good shape	9/26/2019 6:31 PM
1668	wash down area	9/26/2019 6:30 PM

MSWC Boater Trends Survey

1669	Easy to put in boat	9/26/2019 6:30 PM
1670	Clean restroom with running water	9/26/2019 6:30 PM
1671	Secure kept up docks	9/26/2019 6:29 PM
1672	Lighting	9/26/2019 6:28 PM
1673	make them more environmentally sound, stop cutting the vegetation at the water line. The ramps alone can cause enough erosion. Let natural vegetation grow up along the shore and everywhere else at the site that is feasible	9/26/2019 6:28 PM
1674	pick up drop off docks for non fisherman	9/26/2019 6:26 PM
1675	Maintain the ramps better (large gaps, settled)	9/26/2019 6:26 PM
1676	parking - kayaks, paddle take up a lot of spots & time	9/26/2019 6:26 PM
1677	Parking	9/26/2019 6:26 PM
1678	Increase capacity	9/26/2019 6:24 PM
1679	Nicer bathrooms	9/26/2019 6:24 PM
1680	Staff being more rigorous about enforcing adherence to proper launch/load procedures and ramp etiquette. One jerk (or jerk family) behaving badly can ruin EVERYONE'S day.	9/26/2019 6:24 PM
1681	Hours of operation	9/26/2019 6:22 PM
1682	docks	9/26/2019 6:20 PM
1683	I can't think of anything you could do to improve sites.	9/26/2019 6:20 PM
1684	people pick up there trash so we do not have to	9/26/2019 6:19 PM
1685	Don't hassle the Michigan Boater Resident Voter Citizens. The State workers seem to think they have a badge and gun and lord the "rules: over you. Do not bite the hand that feeeds you.	9/26/2019 6:19 PM
1686	Less costly	9/26/2019 6:18 PM
1687	More available sites	9/26/2019 6:17 PM
1688	More kayak launches	9/26/2019 6:17 PM
1689	More docks and parking	9/26/2019 6:16 PM
1690	clean	9/26/2019 6:14 PM
1691	add docks and hard ramps	9/26/2019 6:13 PM
1692	Larger Slips or docks	9/26/2019 6:11 PM
1693	More public access in addition to the existing locations.	9/26/2019 6:11 PM
1694	Provide free shopper dockage	9/26/2019 6:10 PM
1695	Location , and an area that's not too busy.	9/26/2019 6:10 PM
1696	parking	9/26/2019 6:09 PM
1697	Cleanliness (debris, logs, trash) on ramp.	9/26/2019 6:09 PM
1698	Cleaner bathroom facilities	9/26/2019 6:09 PM
1699	have them opened 24 hours a day	9/26/2019 6:08 PM
1700	docks	9/26/2019 6:07 PM
1701	Nothing	9/26/2019 6:07 PM
1702	Lights!!!! Bumper rails, base cement maintenance	9/26/2019 6:05 PM
1703	N/A	9/26/2019 6:04 PM
1704	Enforcement of laws already in place	9/26/2019 6:03 PM
1705	WIFI	9/26/2019 6:02 PM
1706	None	9/26/2019 6:02 PM

MSWC Boater Trends Survey

1707	parking availablilty	9/26/2019 6:01 PM
1708	Electricity and water	9/26/2019 6:00 PM
1709	maintenance daily	9/26/2019 6:00 PM
1710	improved head buildings	9/26/2019 5:59 PM
1711	lights	9/26/2019 5:57 PM
1712	Eliminate crowding	9/26/2019 5:57 PM
1713	Maintence	9/26/2019 5:55 PM
1714	safety	9/26/2019 5:55 PM
1715	Easier refund policy, boating is weather dependent	9/26/2019 5:53 PM
1716	Withstand high water levels	9/26/2019 5:53 PM
1717	plant more fish in Manistique KINGS	9/26/2019 5:53 PM
1718	More parking	9/26/2019 5:51 PM
1719	Reduce wait times	9/26/2019 5:51 PM
1720	Launch areas on smaller lakes be made larger. Some of them are nearly impossible for most fishermen to navigate.	9/26/2019 5:51 PM
1721	Bathroom	9/26/2019 5:48 PM
1722	Better restrooms	9/26/2019 5:48 PM
1723	Incorporate paddle sports	9/26/2019 5:46 PM
1724	Less Government	9/26/2019 5:45 PM
1725	Over night parking	9/26/2019 5:44 PM
1726	Lower the cost of doing laundry in Mackinac City. \$7.00 a load is ridiculous!	9/26/2019 5:44 PM
1727	Easy access to fishing areas	9/26/2019 5:43 PM
1728	parking enforcement	9/26/2019 5:42 PM
1729	Parking	9/26/2019 5:42 PM
1730	Enforce parking areas. If the sign says trailer parking only, then ticket or tow vehicles that dont have a trailer. Also, dump sand to fill ruts, maintain the launch sites.	9/26/2019 5:42 PM
1731	Just maintain them as they are.	9/26/2019 5:42 PM
1732	Fix Black River Harbor so charter boats might resume business -	9/26/2019 5:40 PM
1733	Ease of launching, driving with trailer	9/26/2019 5:38 PM
1734	Deadicated in and out lanes for ramp use	9/26/2019 5:38 PM
1735	More parking at some of the sites and instructions about loading/unloading etiquette.	9/26/2019 5:37 PM
1736	Boater service amenities. Bait shop, rest rooms, fish cleaning stations.	9/26/2019 5:36 PM
1737	Remove tree's that hang over roadway. They snag sailboat masts	9/26/2019 5:35 PM
1738	More parking	9/26/2019 5:35 PM
1739	More lanes	9/26/2019 5:34 PM
1740	addtional truck/trailer parking	9/26/2019 5:34 PM
1741	Facilities	9/26/2019 5:33 PM
1742	Posting of local fish report	9/26/2019 5:32 PM
1743	Safer	9/26/2019 5:32 PM
1744	Restroom and shower facility upkeep	9/26/2019 5:31 PM
1745	Fish cleaning stations	9/26/2019 5:28 PM

MSWC Boater Trends Survey

1746	Better docks	9/26/2019 5:27 PM
1747	Rest rooms	9/26/2019 5:26 PM
1748	Refuse collecting, law enforcement at ramps	9/26/2019 5:26 PM
1749	Longer parking spaces	9/26/2019 5:26 PM
1750	N.A.	9/26/2019 5:25 PM
1751	Dock maintenance	9/26/2019 5:23 PM
1752	Clean facilities, restaurants nearby or at the marina	9/26/2019 5:23 PM
1753	put more access sites on the Detroit River	9/26/2019 5:22 PM
1754	A docking area once in the water	9/26/2019 5:22 PM
1755	Fish cleaning stations!	9/26/2019 5:21 PM
1756	Restroom and parking	9/26/2019 5:20 PM
1757	Safety	9/26/2019 5:20 PM
1758	amenities, internet, power	9/26/2019 5:19 PM
1759	Maintain water depth9'+, floating docks, and proximity of restroom and showers to docks	9/26/2019 5:19 PM
1760	Clean and upgraded bathrooms/showers.	9/26/2019 5:18 PM
1761	More garbage cans to stop people from littering in lake. Most launches I use are well maintained.	9/26/2019 5:18 PM
1762	WiFi for Weather Checks and Family communication	9/26/2019 5:17 PM
1763	Trash barrels.	9/26/2019 5:17 PM
1764	cost for slip	9/26/2019 5:16 PM
1765	Increase number of launch lanes and enforce trailer parking only at ramps with limited parking.	9/26/2019 5:15 PM
1766	Fish cleaning station. People do not dispose of fish carcasses properly	9/26/2019 5:15 PM
1767	Parking	9/26/2019 5:15 PM
1768	Tie off posts while moving trailer	9/26/2019 5:14 PM
1769	I'm happy with facilities I use.	9/26/2019 5:13 PM
1770	Adequate parking for truck and trailer so that anyone who wants to get on the water, can.	9/26/2019 5:12 PM
1771	None	9/26/2019 5:10 PM
1772	access thru a phone app	9/26/2019 5:10 PM
1773	Ease of launching safely	9/26/2019 5:10 PM
1774	More docks at launches	9/26/2019 5:10 PM
1775	access year round	9/26/2019 5:09 PM
1776	More room to maneuver boat and trailer, and THE BIGGEST improvement would be to NOT ALLOW cars or trucks with no trailers or racks to park in BAS on the weekends or busy holidays. It is a lot harder for a truck/trailer to park on the street next to a ditch than a car	9/26/2019 5:09 PM
1777	web site access	9/26/2019 5:09 PM
1778	Post launch controls and courtesy	9/26/2019 5:08 PM
1779	Construct more sites.	9/26/2019 5:07 PM
1780	Your reservation system is not good. Often don't know if will make a destination until the day of arrival and the reservation system doesn't allow this.	9/26/2019 5:07 PM
1781	Ease of use, lighting and parking.	9/26/2019 5:05 PM
1782	Parking	9/26/2019 5:05 PM
1783	Ramp Construction	9/26/2019 5:04 PM
1784	Closer to downtown area	9/26/2019 5:04 PM

MSWC Boater Trends Survey

1785	wash stations	9/26/2019 5:03 PM
1786	Bathroom for before/after boating	9/26/2019 5:03 PM
1787	Modern amenities	9/26/2019 5:01 PM
1788	Pretty good now...just maintenance and maybe increasing more non motorized access points.	9/26/2019 5:01 PM
1789	allow people who are not leaving there vehicle and trailer in the parking to still launch even though the parking lot is full.	9/26/2019 5:00 PM
1790	Discard current reservation system, get one that works	9/26/2019 4:58 PM
1791	fish cleaning stations	9/26/2019 4:58 PM
1792	Someone directing traffic	9/26/2019 4:58 PM
1793	More ramps	9/26/2019 4:57 PM
1794	More transient slips available/marinas like clinch park, TC are not following rules regarding total number of overnights allowed. Many boats are being allowed to stay in transient slips all summer.	9/26/2019 4:57 PM
1795	Clean	9/26/2019 4:56 PM
1796	On shore fishing docks.	9/26/2019 4:53 PM
1797	Carp Lake 49718 paradise Lake. Put in new dock and slabs but dock has always been too shallow to launch and take out easily.	9/26/2019 4:53 PM
1798	Adequate ramp depth and break waters on large lakes	9/26/2019 4:53 PM
1799	Transportation to and from points of interest.	9/26/2019 4:52 PM
1800	Docks	9/26/2019 4:52 PM
1801	Water level fixes so the ramps are not under water all year.	9/26/2019 4:52 PM
1802	FLOATING DOCKS (Caps intended)	9/26/2019 4:51 PM
1803	Longer launch docks	9/26/2019 4:51 PM
1804	cleaning stations	9/26/2019 4:51 PM
1805	Better Law Enforcement for Safety	9/26/2019 4:50 PM
1806	Better ramps	9/26/2019 4:49 PM
1807	being able to beach boats without huge rocks off the shoreline	9/26/2019 4:48 PM
1808	Condition of accessible dock to launch kayaks	9/26/2019 4:48 PM
1809	Make sure Launch docks are long enough for larger boats with higher post. I have watched people struggle and fall into water while launching because the docks are so short a 23 ft boat needs to be floated off past the dock. Very Dangerous. The short post gouge the sides of boats instead of hitting the rub rails.	9/26/2019 4:48 PM
1810	None	9/26/2019 4:47 PM
1811	Upgrade too sand launches	9/26/2019 4:46 PM
1812	Lexington is a complete disaster!! Seams no one wants to fix it.	9/26/2019 4:46 PM
1813	Capacity to wash off invasive weeds	9/26/2019 4:46 PM
1814	Safe docks and clean facilities	9/26/2019 4:45 PM
1815	lighting at night	9/26/2019 4:44 PM
1816	Better rest room facilities	9/26/2019 4:44 PM
1817	Size of parking area	9/26/2019 4:44 PM
1818	Good launch ramp	9/26/2019 4:44 PM
1819	i dislike the on line reservation system	9/26/2019 4:43 PM
1820	docks	9/26/2019 4:43 PM
1821	More ramps	9/26/2019 4:43 PM

MSWC Boater Trends Survey

1822	Keep the goose crap off the boat ramps and docks	9/26/2019 4:43 PM
1823	Good docks	9/26/2019 4:43 PM
1824	floating docks	9/26/2019 4:42 PM
1825	parking	9/26/2019 4:42 PM
1826	spray for mosquitos	9/26/2019 4:42 PM
1827	wifi	9/26/2019 4:41 PM
1828	More parking	9/26/2019 4:41 PM
1829	Everything!!! Electric, water, bathrooms, showers. We pay the MOST for our slip rental as compared to any Municipal Marina on Lake Michigan yet we have the oldest, most outdated and least amenities.	9/26/2019 4:41 PM
1830	keep the goose shit off the dock	9/26/2019 4:41 PM
1831	Access to fuel and pump out	9/26/2019 4:41 PM
1832	Clean restroom	9/26/2019 4:40 PM
1833	Docks	9/26/2019 4:40 PM
1834	Improve/dredge launch at Cedar Lake, Iosco County. Also install a launching dock at Avery Lake, Montmorency County.	9/26/2019 4:40 PM
1835	Add more on inland lakes. Get MRBIS system working.	9/26/2019 4:40 PM
1836	Reduce the Rates @ Mackinaw Island Harbor	9/26/2019 4:39 PM
1837	add more facilities	9/26/2019 4:39 PM
1838	Some launches are in need of repaving	9/26/2019 4:39 PM
1839	easy to get in/out with trailer/tow vehicle	9/26/2019 4:38 PM
1840	Trash cans	9/26/2019 4:38 PM
1841	more help	9/26/2019 4:38 PM
1842	Keep them plowed of snow for winter fishing!	9/26/2019 4:38 PM
1843	The parks division and waterways commission coming to understanding that in reality these are multi-use sites. They are used for fishing and for winter access regardless of the fact that you prefer to view and manage them as single use. You need to get in touch with reality.	9/26/2019 4:38 PM
1844	Shoreline clearance around the ramp to allow for sailboat maneuverability and ample space for mast-stepping and de-stepping.	9/26/2019 4:37 PM
1845	Some are not really made for 24 foot boats. The docks are too short.	9/26/2019 4:37 PM
1846	Additional sites on Detroit River	9/26/2019 4:36 PM
1847	Cleaner shower facilities	9/26/2019 4:36 PM
1848	Instal cleats on docks	9/26/2019 4:36 PM
1849	Allow boats with more than 15' beam to request slip electronically	9/26/2019 4:36 PM
1850	Nothing comes to mind	9/26/2019 4:35 PM
1851	No wake times	9/26/2019 4:34 PM
1852	Restrooms and Parking	9/26/2019 4:33 PM
1853	Someone directing traffic	9/26/2019 4:33 PM
1854	Enforcement of Slow No Wake Laws	9/26/2019 4:32 PM
1855	Docks to help with launching	9/26/2019 4:31 PM
1856	Better enforcement of daily fish limits at public boat launches	9/26/2019 4:30 PM
1857	Bathrooms/outhouses	9/26/2019 4:29 PM
1858	1 to 4 extra slips for canoe and kayak fishing and enjoyment!!! Also drop the tax for these!!!!w	9/26/2019 4:29 PM

MSWC Boater Trends Survey

1859	Longer docks	9/26/2019 4:27 PM
1860	Larger parking areas	9/26/2019 4:27 PM
1861	Double wide launch ramps. trimaran sailboat is 15' beam.	9/26/2019 4:26 PM
1862	Sturdy docks	9/26/2019 4:26 PM
1863	water for cleaning hull on pull out	9/26/2019 4:25 PM
1864	Maintain the sites	9/26/2019 4:25 PM
1865	Better shore fishing areas that don't interfere with boats	9/26/2019 4:25 PM
1866	handicap accessible	9/26/2019 4:25 PM
1867	Update docks due to high waters	9/26/2019 4:25 PM
1868	more Ramp & parking Capacity	9/26/2019 4:25 PM
1869	Less trash-more light	9/26/2019 4:24 PM
1870	Depth	9/26/2019 4:23 PM
1871	Lot repair and organize parking	9/26/2019 4:22 PM
1872	Have people manning the Booth's again	9/26/2019 4:22 PM
1873	Restrooms	9/26/2019 4:21 PM
1874	A way to rent slips when other people don't show up	9/26/2019 4:21 PM
1875	A central listing of all sites with complete description of amenities	9/26/2019 4:21 PM
1876	cleaner restroom- hole in the ground smells bad. put screens on bldg at Sand Lake in Lenewee County.	9/26/2019 4:21 PM
1877	New bathrooms	9/26/2019 4:20 PM
1878	Ramp depth	9/26/2019 4:20 PM
1879	Ability to have short term slip use for temporary stays (meals, shopping)	9/26/2019 4:19 PM
1880	The number and quality of the launches. Higgins Lake South State Park is a great example. 8 launches. The line isn't bad, even on the most busy weekends. Hundreds of parking spots for truck/trailer.	9/26/2019 4:19 PM
1881	Improve web based reservation system	9/26/2019 4:18 PM
1882	Location proximity to home	9/26/2019 4:18 PM
1883	Parking	9/26/2019 4:17 PM
1884	More launches on some lakes. ex.. Torch lake Antrim Co	9/26/2019 4:16 PM
1885	restroom cleaned better.	9/26/2019 4:16 PM
1886	Improve the launch	9/26/2019 4:16 PM
1887	Access	9/26/2019 4:16 PM
1888	walk out dock at ramp	9/26/2019 4:15 PM
1889	Maintain docks	9/26/2019 4:15 PM
1890	That they be well maintained	9/26/2019 4:14 PM
1891	More dock space	9/26/2019 4:14 PM
1892	More of them on lakes they are not on.	9/26/2019 4:14 PM
1893	I'm pretty pleased with the ones I use	9/26/2019 4:13 PM
1894	Overall appearance	9/26/2019 4:13 PM
1895	Keeping cost for launching down	9/26/2019 4:13 PM
1896	Improve WEB reservation site	9/26/2019 4:13 PM
1897	well maintained	9/26/2019 4:12 PM

MSWC Boater Trends Survey

1898	LAUNCH CAPACITY	9/26/2019 4:12 PM
1899	More	9/26/2019 4:10 PM
1900	Better management of depth (in normal water level seasons) and weed clearance	9/26/2019 4:10 PM
1901	local information and issues to consider on a billboard at each launch site	9/26/2019 4:10 PM
1902	Reduce congestion	9/26/2019 4:09 PM
1903	Start over with Lexington. It is awful. I had a seasonal slip.	9/26/2019 4:09 PM
1904	Fish cleaning facilities	9/26/2019 4:09 PM
1905	Extend the breakwall at the Mack Island harbor Worst harbor in the state	9/26/2019 4:09 PM
1906	Better quality Boat Launch	9/26/2019 4:08 PM
1907	Pave road and parking lot. Too many ignored lots.	9/26/2019 4:08 PM
1908	More sites on busy lakes	9/26/2019 4:08 PM
1909	Floating docks	9/26/2019 4:07 PM
1910	Longer docks - Many are too short for 30+ foot boats	9/26/2019 4:07 PM
1911	closness to my home and paved ramps	9/26/2019 4:07 PM
1912	Better docks	9/26/2019 4:06 PM
1913	High Pressure Washdown area	9/26/2019 4:06 PM
1914	Consistency in launch depth	9/26/2019 4:06 PM
1915	Make accessible to all boaters all the time instead of letting fishing clubs have first choice.	9/26/2019 4:06 PM
1916	nothing	9/26/2019 4:06 PM
1917	Clean water	9/26/2019 4:06 PM
1918	improve landing docks	9/26/2019 4:06 PM
1919	Parking	9/26/2019 4:05 PM
1920	Access to long term parking, 1-3 months	9/26/2019 4:05 PM
1921	Bathrooms. Landscaping	9/26/2019 4:05 PM
1922	Clean and safe	9/26/2019 4:05 PM
1923	maintain them, our road that accesses the launch is almost unpassable with a trailer, potholes in excess of 6" deep	9/26/2019 4:05 PM
1924	Better launching ramps. Some ramps are too short, and to properly launch we need some space	9/26/2019 4:05 PM
1925	Help with launching and vehicle/trailer parking when boating alone	9/26/2019 4:05 PM
1926	More truck/car trailer parking	9/26/2019 4:04 PM
1927	More parking a busy launches	9/26/2019 4:03 PM
1928	Clean water areas by launch from growth	9/26/2019 4:02 PM
1929	At least one dock at every launch, better docks, earlier start date.	9/26/2019 4:02 PM
1930	I don't use them	9/26/2019 4:02 PM
1931	Power wash facilities available to	9/26/2019 4:02 PM
1932	Increase loading/unloading area	9/26/2019 4:02 PM
1933	More launch lanes	9/26/2019 4:01 PM
1934	More spots for cleaning and tie down	9/26/2019 4:01 PM
1935	Improved toilet room	9/26/2019 4:01 PM
1936	An app telling me real time (and trends for similar days) there is room to park my truck and trailer after launching (i.e. like rest areas tell truckers how many spots are open)	9/26/2019 4:01 PM

MSWC Boater Trends Survey

1937	Better bathrooms	9/26/2019 4:00 PM
1938	Add more	9/26/2019 4:00 PM
1939	some are improver, but without a dock. some have no trash containers available.	9/26/2019 4:00 PM
1940	Keep restrooms clean	9/26/2019 4:00 PM
1941	Paved launches	9/26/2019 4:00 PM
1942	Fresh water spigots available for washing/cleaning as per invasive species regs.	9/26/2019 3:59 PM
1943	Ramp angle	9/26/2019 3:59 PM
1944	Better kayak/paddleboard launches	9/26/2019 3:59 PM
1945	Keeping ramp safe from slippery algae	9/26/2019 3:58 PM
1946	Provide washe down facilities to remove weeds from boats and trailers	9/26/2019 3:58 PM
1947	Parking	9/26/2019 3:58 PM
1948	clean & up to date	9/26/2019 3:57 PM
1949	NEWER DOCKS(FLOATING) ARE BEST	9/26/2019 3:57 PM
1950	CONTROL OF INVASIVE SPECIES/ENFORCEMENT	9/26/2019 3:57 PM
1951	Keep access open	9/26/2019 3:57 PM
1952	More parking	9/26/2019 3:56 PM
1953	parking for trailer and ease of launching's	9/26/2019 3:56 PM
1954	Keep harbors on lake Superior and gasoline availability at state harbors.	9/26/2019 3:56 PM
1955	can't think of anything	9/26/2019 3:56 PM
1956	More	9/26/2019 3:55 PM
1957	Adequate launch dock	9/26/2019 3:55 PM
1958	Launch and retrieve only docks	9/26/2019 3:55 PM
1959	Wash stations for cleaning off invasive species	9/26/2019 3:55 PM
1960	EASE OF ENTERING AND EXITING	9/26/2019 3:55 PM
1961	More parking	9/26/2019 3:55 PM
1962	Access to Walloon lake	9/26/2019 3:54 PM
1963	dedicated launch and recovery lanes	9/26/2019 3:54 PM
1964	Increase Parking spots at Boat launch at mouth of saginaw river a must. River a must	9/26/2019 3:54 PM
1965	Ramp upgrades	9/26/2019 3:54 PM
1966	upscale marina with pool, store, etc.	9/26/2019 3:53 PM
1967	Update electrical service at slips	9/26/2019 3:53 PM
1968	Parking at Duncan Keith is HORRIBLE	9/26/2019 3:53 PM
1969	For each to have a some type of dock.	9/26/2019 3:53 PM
1970	maintain docks well -- install non-slip surface, repair moorings if damaged, etc.	9/26/2019 3:52 PM
1971	More parking	9/26/2019 3:52 PM
1972	seasonal pass	9/26/2019 3:52 PM
1973	None	9/26/2019 3:51 PM
1974	access to bike trails	9/26/2019 3:51 PM
1975	Law enforcement being seen	9/26/2019 3:51 PM
1976	Make the vehicle/trailer parking spots larger	9/26/2019 3:51 PM
1977	room	9/26/2019 3:51 PM

MSWC Boater Trends Survey

1978	Plastic or rubber bumpers on docks	9/26/2019 3:50 PM
1979	Wifi at Lake st clair metro park	9/26/2019 3:50 PM
1980	Angle of approach, length of launch pad in water with great length of docks	9/26/2019 3:50 PM
1981	More in and out ramps	9/26/2019 3:50 PM
1982	Larger Docks	9/26/2019 3:49 PM
1983	Boater facilities	9/26/2019 3:49 PM
1984	Improving the efficiency of the launch will improve the speed in which all boaters can enter and exist the launch.	9/26/2019 3:49 PM
1985	Eliminate aquatic weeds at the ramp so I don't have to clean them off boat and trailer	9/26/2019 3:49 PM
1986	to be free	9/26/2019 3:48 PM
1987	Improve the fishing of the port.	9/26/2019 3:48 PM
1988	convert the fixed docks to floating	9/26/2019 3:48 PM
1989	People power loaded	9/26/2019 3:48 PM
1990	depth & number of docks	9/26/2019 3:48 PM
1991	more launching sites	9/26/2019 3:47 PM
1992	Stop fishing boats from power loading at ramps, destroying ramps	9/26/2019 3:47 PM
1993	More parking	9/26/2019 3:47 PM
1994	24hr access	9/26/2019 3:47 PM
1995	Reduced rate for return seasonal slip renter.	9/26/2019 3:47 PM
1996	docks long enough to put trailer in water in front of boat while taking boat out	9/26/2019 3:47 PM
1997	Improved launching site design.	9/26/2019 3:47 PM
1998	Parking	9/26/2019 3:46 PM
1999	Fish Cleaning Stations Like On West Side Of Michigan	9/26/2019 3:46 PM
2000	Clean Water / Ramp	9/26/2019 3:46 PM
2001	Boater Service Amenities	9/26/2019 3:46 PM
2002	Make them safe and friendly for a mix of boats and paddlecraft	9/26/2019 3:46 PM
2003	I can't think of anything right now ☐	9/26/2019 3:46 PM
2004	Fix the damn potholes in the pere marquette access site near ludington. Its ridiculous	9/26/2019 3:45 PM
2005	Keep price the same. Go higher and I will anchor out.	9/26/2019 3:45 PM
2006	Eliminate geese from launch area.	9/26/2019 3:45 PM
2007	boat wash facility	9/26/2019 3:44 PM
2008	wash stations	9/26/2019 3:44 PM
2009	Wide launch area to make backing the trailer in easier	9/26/2019 3:44 PM
2010	Parking	9/26/2019 3:44 PM
2011	More/better parking areas	9/26/2019 3:43 PM
2012	Improved channel markers	9/26/2019 3:43 PM
2013	Clean bathrooms and facilities	9/26/2019 3:43 PM
2014	Address the user-conflicts between motor- and paddle-craft... capitol improvements!	9/26/2019 3:43 PM
2015	SECURITY	9/26/2019 3:43 PM
2016	Wi-Fi	9/26/2019 3:43 PM
2017	Quality of launch site and amenities	9/26/2019 3:43 PM

MSWC Boater Trends Survey

2018	nothing at the moment	9/26/2019 3:42 PM
2019	More Launch Ramps	9/26/2019 3:42 PM
2020	better entrance markings	9/26/2019 3:42 PM
2021	Improve toilet maintenance (pit toilets are usually nasty)	9/26/2019 3:42 PM
2022	Dock/ramp upkeep	9/26/2019 3:42 PM
2023	make sure people follow the rules, know how to actually launch a boat	9/26/2019 3:41 PM
2024	parking	9/26/2019 3:41 PM
2025	updating dockage	9/26/2019 3:41 PM
2026	Maintaince of launches, roads and ramps	9/26/2019 3:41 PM
2027	Other people. But that's not your fault	9/26/2019 3:41 PM
2028	Short term docking	9/26/2019 3:41 PM
2029	Longer docks. It's hard to launch a big boat on a short dock.	9/26/2019 3:41 PM
2030	Stay open longer in the state parks	9/26/2019 3:41 PM
2031	Launch rack dock lengths are not long enough. Some launch ramp docks are not safe enough to tie boat to since they are so short in length.	9/26/2019 3:41 PM
2032	STRONG WIFI Signal	9/26/2019 3:40 PM
2033	concrete ramps	9/26/2019 3:40 PM
2034	Increased space for maneuvering a long trailer/boat	9/26/2019 3:40 PM
2035	picnic area	9/26/2019 3:40 PM
2036	Doing a good job now	9/26/2019 3:40 PM
2037	Nothing. Current facilities work just fine for me.	9/26/2019 3:40 PM
2038	restroom facilities	9/26/2019 3:40 PM
2039	Ease of access	9/26/2019 3:40 PM
2040	debris free ramps, longer docks, accessible shoreline to wait for open ramp.	9/26/2019 3:40 PM
2041	Noise levels	9/26/2019 3:39 PM
2042	nicer restrooms and showers	9/26/2019 3:39 PM
2043	Rental Opportunities	9/26/2019 3:39 PM
2044	Adding a dock and a decent concrete ramp.	9/26/2019 3:39 PM
2045	Provide wash stations to prevent weed infiltration into lakes	9/26/2019 3:39 PM
2046	Longer docks	9/26/2019 3:39 PM
2047	Large map of the lake posted for reference	9/26/2019 3:39 PM
2048	Parking & access (restrooms help, but not as important as access)	9/26/2019 3:39 PM
2049	Not being underwater-Grand haven among others!!!	9/26/2019 3:39 PM
2050	CLEAN rest rooms!	9/26/2019 3:38 PM
2051	Maintenance	9/26/2019 3:38 PM
2052	More seasonal slips, less transient	9/26/2019 3:38 PM
2053	better maintenavce	9/26/2019 3:38 PM
2054	Quality, some are getting run down and not maintained	9/26/2019 3:38 PM
2055	More of them.	9/26/2019 3:38 PM
2056	Post notices signs about Swimmer's Itch; I will never boat again in MI until state addresses to improve my family experience	9/26/2019 3:38 PM

MSWC Boater Trends Survey

2057	None	9/26/2019 3:38 PM
2058	Add fish cleaning stations	9/26/2019 3:38 PM
2059	If you are going to close them for upgrading, please do it quickly!	9/26/2019 3:37 PM
2060	The DNR should contribute funds to weed control on any lakes where DNR boat launches are present.	9/26/2019 3:37 PM
2061	More of them	9/26/2019 3:37 PM
2062	allow swimming on edges of launch sites.	9/26/2019 3:37 PM
2063	Longer docks at Quanicassee, More lighting to at night, DNR should actually man their post in Bay City, no one is ever at the booth, we pay our fair share and others should have to as well to keep up the docks and launches. Keep logs and debris out of the launch areas. Salmon fish in Manistee and lighting is horrible at the launch site. If I'm paying for the DNR launches by buying a tab, at least use the money to upgrade.	9/26/2019 3:37 PM
2064	Fine as is... no suggestions	9/26/2019 3:36 PM
2065	Access and maintenance	9/26/2019 3:36 PM
2066	A deep Access to eliminate mud getting into coolant system	9/26/2019 3:36 PM
2067	Power washing facility	9/26/2019 3:36 PM
2068	maintain the finger docks - just yesterday I tripped and fell due to uneven dock boards and gaps	9/26/2019 3:36 PM
2069	Clean up bathrooms	9/26/2019 3:35 PM
2070	size of slip	9/26/2019 3:35 PM
2071	Depth of ramps at rural lakes	9/26/2019 3:35 PM
2072	More launches	9/26/2019 3:35 PM
2073	Nice sturdy access docks.	9/26/2019 3:35 PM
2074	better ramps	9/26/2019 3:35 PM
2075	maintain docks at appropriate height in relation to water level	9/26/2019 3:35 PM
2076	Have the St Joe river access be open year round. It's frustrating that the access is just randomly closed when your drive 40 mins in snow to fish and the access is gated.	9/26/2019 3:35 PM
2077	nice docks, enough trailer/vehicle parking spots	9/26/2019 3:35 PM
2078	longer docks	9/26/2019 3:35 PM
2079	Don't allow it to be used at private Marina. Hard to get a slip at Milliken	9/26/2019 3:34 PM
2080	Maintain the launches	9/26/2019 3:34 PM
2081	Depth of ramp	9/26/2019 3:34 PM
2082	enforce no power loading rules	9/26/2019 3:34 PM
2083	Make them all wifi and cable ready. U just spent 5 million dollars in towers and no internet or cable was designed into the plan what a waste	9/26/2019 3:34 PM
2084	Room to launch more boats at one site	9/26/2019 3:34 PM
2085	Parking for truck and boat trailer combinations.	9/26/2019 3:34 PM
2086	Better parking	9/26/2019 3:34 PM
2087	Longer available hours before closing times	9/26/2019 3:34 PM
2088	Dock at ramp - Gilead Lake, Branch county	9/26/2019 3:33 PM
2089	Clean them up	9/26/2019 3:33 PM
2090	Improved docks and cost	9/26/2019 3:33 PM
2091	Easy to use online harbor reservations.	9/26/2019 3:33 PM
2092	make sure only trucks with trailers that are permitted aloud and clean rest rooms	9/26/2019 3:33 PM

MSWC Boater Trends Survey

2093	more launch ramps	9/26/2019 3:33 PM
2094	more kayak launches	9/26/2019 3:32 PM
2095	More public access sites	9/26/2019 3:32 PM
2096	Maintenance - clear debries	9/26/2019 3:32 PM
2097	closer to S Lk St Clair -Detroit	9/26/2019 3:32 PM
2098	more of them	9/26/2019 3:32 PM
2099	Promoting nonmotorized access and trails	9/26/2019 3:32 PM
2100	Better kayak launch area next to concrete boat launch	9/26/2019 3:32 PM
2101	No state launch sites on Detroit River?????!!!!!!!	9/26/2019 3:31 PM
2102	fees charged	9/26/2019 3:31 PM
2103	Ensure ease of loading unloading logistics. most are good currently	9/26/2019 3:31 PM
2104	I don't like the state run reservation situation	9/26/2019 3:31 PM
2105	kayak, canoe, paddle board: beach launch	9/26/2019 3:31 PM
2106	Staff each with a dock manager to assist boaters in launching and retrieving to expedite the process.	9/26/2019 3:31 PM
2107	Lighting or Flag to find it from lake	9/26/2019 3:30 PM
2108	Better management	9/26/2019 3:30 PM
2109	More access site availability and parking along lakes	9/26/2019 3:30 PM
2110	Online realtime monitoring of how full they are (Dodge and Orchard often fill on the weekend and it sucks to drive 30 minutes to discover it's full	9/26/2019 3:30 PM
2111	Over flow parking, marked and within walking distance	9/26/2019 3:30 PM
2112	All have clean restrooms	9/26/2019 3:30 PM
2113	Benton Harbor needs posts replaced on outer wall, I have a stepped haul and the docks are too short to float off trailer yet for a couple years now I risk damage to my boat due to broken or missing posts. The upkeep is poor at best for this facility.	9/26/2019 3:30 PM
2114	Increase capacity	9/26/2019 3:30 PM
2115	Nothing	9/26/2019 3:29 PM
2116	more launch sites	9/26/2019 3:29 PM
2117	rack storage or increase in seasonal slip rentals	9/26/2019 3:29 PM
2118	Clear Ramps	9/26/2019 3:29 PM
2119	Clean bathrooms	9/26/2019 3:29 PM
2120	Installation of Docks earlier in the year.	9/26/2019 3:29 PM
2121	no recreational passport needed to use them	9/26/2019 3:29 PM
2122	Launch sites are good. Focus on aquatic invasive species control and obnoxious boaters	9/26/2019 3:29 PM
2123	ADA non-motorized launches so we have a Michigan system	9/26/2019 3:29 PM
2124	more parking	9/26/2019 3:28 PM
2125	cleanliness and staff	9/26/2019 3:28 PM
2126	When you reserve a slip; know the exact number and an easy map on website to know port or starboard tie	9/26/2019 3:28 PM
2127	Parking	9/26/2019 3:28 PM
2128	in/out direction	9/26/2019 3:28 PM
2129	Boat Wash Stations, Kayak Launches	9/26/2019 3:28 PM

MSWC Boater Trends Survey

2130	Monitor parking for non trailer vehicles with out parking pass	9/26/2019 3:28 PM
2131	Parking	9/26/2019 3:28 PM
2132	Docks at the launch sites	9/26/2019 3:28 PM
2133	more parking on holidays and weekends	9/26/2019 3:28 PM
2134	Car without trailer parking.	9/26/2019 3:28 PM
2135	Plenty of car/trailer parking and two boat launch lanes	9/26/2019 3:28 PM
2136	lighting for after dark	9/26/2019 3:27 PM
2137	Parking for vehicle only.	9/26/2019 3:27 PM
2138	kindness in new buffalo	9/26/2019 3:27 PM
2139	Larger parking Area	9/26/2019 3:27 PM
2140	Improve the worst sites, gravel launch to paved	9/26/2019 3:27 PM
2141	Efficiency of loading and unloading of boat	9/26/2019 3:27 PM
2142	snow plow ramps areas in winter	9/26/2019 3:27 PM
2143	flow in and out	9/26/2019 3:27 PM
2144	allow overnight parking	9/26/2019 3:27 PM
2145	Have a dock	9/26/2019 3:27 PM
2146	Small grocery items, beer/wine	9/26/2019 3:27 PM
2147	More ramps with skid piers	9/26/2019 3:26 PM
2148	launch capacity	9/26/2019 3:26 PM
2149	parking	9/26/2019 3:26 PM
2150	Available parking for vehicle and trailer	9/26/2019 3:26 PM
2151	I honestly think you guys do an awesome job	9/26/2019 3:26 PM
2152	Additional Transient slips	9/26/2019 3:26 PM
2153	More parking	9/26/2019 3:26 PM
2154	charge out of state a parking permit to use access site	9/26/2019 3:25 PM
2155	Pier	9/26/2019 3:25 PM
2156	Be more accommodating to last minute arrivals and stays. Often call and marinas say they are full but show up and can find a spot. Weather and conditions are unpredictable to flexibility is a priority, even if it's sharing slips.	9/26/2019 3:25 PM
2157	keeping them maintained	9/26/2019 3:24 PM
2158	n/a	9/26/2019 3:24 PM
2159	Someone directing traffic and monitoring for stickers.	9/26/2019 3:24 PM
2160	trailer & tow vehicle parking	9/26/2019 3:24 PM
2161	Nice staff	9/26/2019 3:24 PM
2162	outfit them all with cleaning stations to prevent spread of invasives	9/26/2019 3:23 PM
2163	Parking for trailers/Bathrooms. I know, thats 2:)	9/26/2019 3:23 PM
2164	Accessibility	9/26/2019 3:23 PM
2165	More/larger parking	9/26/2019 3:13 PM
2166	launch prep lane	9/26/2019 3:08 PM
2167	Air condition bathroom facalities at boat marinas	9/26/2019 3:03 PM
2168	More parking on more popular lakes.	9/26/2019 3:01 PM

MSWC Boater Trends Survey

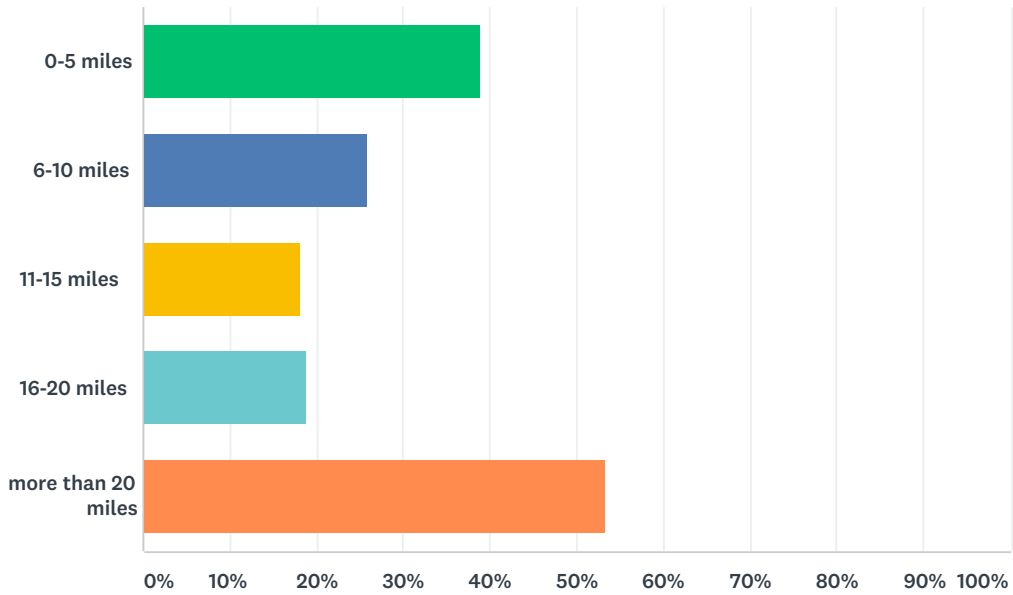
2169	Control Costs	9/26/2019 2:50 PM
2170	LIMIT NUMBER OF POWERED CRAFT	9/26/2019 2:37 PM
2171	Bathroom facilities, attendants at launch sites	9/26/2019 2:36 PM
2172	docks	9/26/2019 2:28 PM
2173	Restroom facilities at all.	9/26/2019 2:22 PM
2174	Better condition of the ramp/dock	9/26/2019 2:19 PM
2175	build more docks at area lakes for easier launching	9/26/2019 2:16 PM
2176	Parking	9/26/2019 1:38 PM
2177	boat wash for invasives	9/26/2019 1:16 PM
2178	Get rid of the Canadian geese they crap all over the docks	9/26/2019 12:57 PM
2179	Parking	9/26/2019 12:56 PM
2180	Make sure that area of ramp is clear and deep enough for boats larger than 16 foot	9/26/2019 12:49 PM
2181	Longer docks to accommodate larger boats	9/26/2019 12:41 PM
2182	Launch quality.	9/26/2019 12:35 PM
2183	Cost....days or operation	9/26/2019 12:32 PM
2184	Keep them maintained. Plow in the winter, docks maintained in the summer, good concrete ramps all the time.	9/26/2019 12:31 PM
2185	Boat washing stations	9/26/2019 12:30 PM
2186	Keep them clean , good people working there	9/26/2019 12:28 PM
2187	Maintain ramps and docks	9/26/2019 12:25 PM
2188	Adjust the docks for the water level changes	9/26/2019 12:23 PM
2189	a sitting bench by the water would be nice	9/26/2019 12:23 PM
2190	clean restrooms and shower facilities like the ones at Lake st clair Marina at metro beach	9/26/2019 12:21 PM
2191	Rd improvements accessing some of the smaller launches	9/26/2019 12:18 PM
2192	Tell people not to park in trailer spots when they dont have a trailer. I've had to find different launches because theres nowhere to park my trailer because cars are parked in boating spots.	9/26/2019 12:16 PM
2193	As many docks / lanes as possible to minimize loading / unloading wait.	9/26/2019 12:14 PM
2194	Walk-in to water access and easy tie-up while loading fishing gear	9/26/2019 12:07 PM
2195	Clean up goose manure	9/26/2019 12:03 PM
2196	Sign of rules for the ramp, enforcement at busy ramps. Lots of boaters get angry when I follow state law of the boat determining the trailer order. Angry drunk boaters are not reasonable people.	9/26/2019 12:03 PM
2197	Let boats park in the lakes overnight without getting tickets	9/26/2019 12:02 PM
2198	Wirh high water floating docks make use easier	9/26/2019 12:01 PM
2199	N/A	9/26/2019 11:52 AM
2200	Better upkeep of restrooms	9/26/2019 11:48 AM
2201	Person directing traffic in and out of the water	9/26/2019 11:45 AM
2202	Flood Control	9/26/2019 11:35 AM
2203	Staff	9/26/2019 11:25 AM
2204	Docks available earlier and later in year	9/26/2019 11:21 AM
2205	Parking	9/26/2019 11:17 AM
2206	they should all have accessible clean restrooms for boaters	9/26/2019 11:17 AM
2207	more trailer parking	9/26/2019 11:17 AM

MSWC Boater Trends Survey

2208	cost	9/26/2019 11:16 AM
2209	New Buffalo is getting very crowded coming into town to launch a boat; wish there was a back access (besides residential streets). Feels like the crowds/traffic grows each year. Between the train, restaurants (Stray Dog) and beach goer's; it is difficult at times to get thru with a larger boat. There's got a be a better way to clear that bottle neck area. This year, I see another business opened down by the Beach; which means younger kids running around, it's getting crazy congested. We had gone to Michigan City a few times this year and was impressed it was easier to drive in/out without the fear of someone crossing or running in the road. We were also impressed as they seem they have done updates to their boat launches.	9/26/2019 11:15 AM
2210	Reserve specific boat slip number online	9/26/2019 11:11 AM
2211	more access sites for non motorized (paddle) boats	9/26/2019 11:10 AM
2212	paving access	9/26/2019 11:09 AM
2213	Ramp condition and parking	9/26/2019 11:07 AM
2214	Staff availability/hours during weekends	9/26/2019 11:05 AM
2215	more options	9/26/2019 11:04 AM
2216	Better lighting	9/26/2019 11:02 AM
2217	Improved unimproved boat access sites	9/26/2019 11:02 AM
2218	teach people how to lauch or load their boats	9/26/2019 11:01 AM
2219	Better Docks	9/26/2019 11:00 AM
2220	Improved launches at state parks	9/26/2019 10:59 AM
2221	Keeping goose poop off the docs	9/26/2019 10:57 AM
2222	free	9/24/2019 2:02 PM

Q12 How far do you drive to get to a boating access site? (If you travel to multiple boating access sites, please select all that apply)

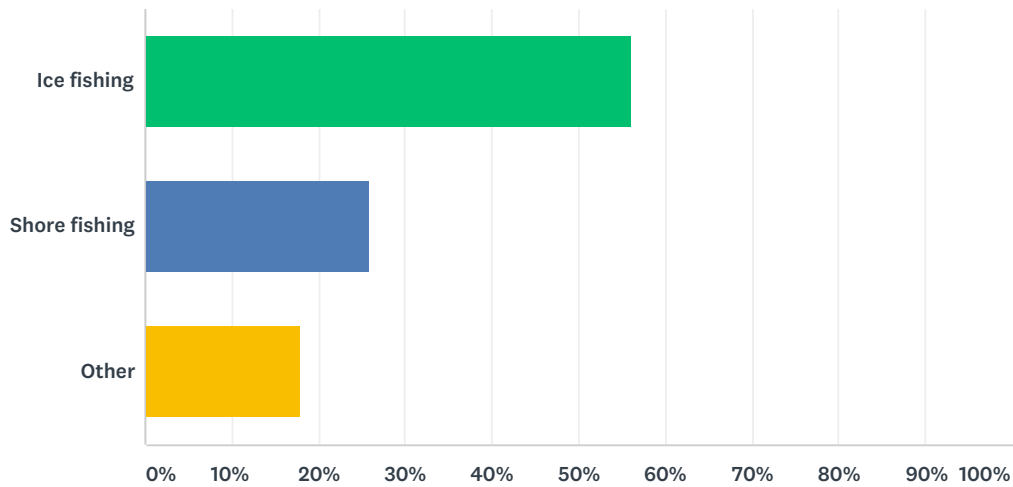
Answered: 3,008 Skipped: 735



ANSWER CHOICES	RESPONSES	
0-5 miles	38.96%	1,172
6-10 miles	25.93%	780
11-15 miles	18.22%	548
16-20 miles	18.82%	566
more than 20 miles	53.42%	1,607
Total Respondents: 3,008		

Q13 Do you use boating access site(s) for ice fishing or other non-boating purposes? (Select all that apply)

Answered: 1,783 Skipped: 1,960



ANSWER CHOICES	RESPONSES
Ice fishing	56.03% 999
Shore fishing	26.02% 464
Other	17.95% 320
Total Respondents: 1,783	

#	PLEASE INDICATE WHICH BOATING ACCESS SITE(S) YOU USE FOR THESE PURPOSES BY FACILITY NAME OR ZIP CODE:	DATE
1	49307	10/16/2019 10:47 PM
2	Yankee Springs state park	10/10/2019 2:59 PM
3	Yankee Springs state park	10/10/2019 2:49 PM
4	48656	10/10/2019 2:20 PM
5	49829, 49837, 49855	10/10/2019 1:32 AM
6	AT THE ABOVE LAKE LISTED	10/9/2019 8:52 PM
7	Union Lake, Clinton River cut-off, Selfridge, Crooked Lake (Livingston), Whitmore Lake	10/9/2019 10:38 AM
8	49307	10/8/2019 11:52 PM
9	Mullett Lake	10/8/2019 6:44 PM
10	benton harbor-south haven-detroit river	10/8/2019 2:26 PM
11	Rush Lake in Van Buren County	10/8/2019 1:03 PM
12	49659	10/8/2019 7:51 AM
13	48116	10/8/2019 6:55 AM
14	Benton Harbor, Coloma, Watervliet	10/8/2019 6:24 AM
15	Sleepy Hollow	10/8/2019 4:54 AM
16	Alderman Lake, Highland	10/7/2019 11:33 PM

MSWC Boater Trends Survey

17	Metro Beach and orchard lake	10/7/2019 9:37 PM
18	algonac DNR - use to be no one there, but now its loaded all the time. They neex a boat ramp on Belle Isle.	10/7/2019 9:34 PM
19	49327	10/7/2019 8:26 PM
20	croton and hardy dams	10/7/2019 8:20 PM
21	Site on Houghton Lake off County Road 100	10/7/2019 7:56 PM
22	48350	10/7/2019 5:01 PM
23	49420	10/7/2019 4:49 PM
24	Selfridge, Harley Ensign, CRCO (Ballard St), Wyandotte.	10/7/2019 3:49 PM
25	Monroe Grosse Ile Frankfort Holland st.joe Ludington benzonia	10/7/2019 3:48 PM
26	walking Pierce Lake (Wastenaw County Park) 48118, hiking, nature center classes Eddy Nature Center	10/7/2019 1:22 PM
27	48001	10/7/2019 1:20 PM
28	Selfridge	10/7/2019 1:17 PM
29	Harley ensign, Clinton river cut-off, metro beach, fairhaven	10/7/2019 1:12 PM
30	Cedarville	10/7/2019 12:10 PM
31	48879	10/7/2019 10:48 AM
32	48917	10/7/2019 10:23 AM
33	49749	10/7/2019 9:49 AM
34	49721	10/7/2019 9:39 AM
35	Selfridge	10/7/2019 9:15 AM
36	Selfrige	10/7/2019 9:10 AM
37	Thumb Lake (lake Louise)	10/7/2019 8:58 AM
38	Greenwood Reservoir, Lake Michigamme	10/7/2019 8:37 AM
39	48451	10/7/2019 8:35 AM
40	Jefferson & Crocker, Selfrige, Algonac	10/7/2019 8:14 AM
41	Crocker,harley ensign,newbaltimore, belleville lake, wolverine lake, fletchers pond long lake alpena, lake leelanau, tippy dam pond, lake margrethe,otsego lake, black lake,hubbard lake,duck lake,HUDSON lake,austin lake, gun lake,morrison lake woodland lake...and all of the upper peninsula sites	10/7/2019 7:28 AM
42	49868	10/7/2019 7:26 AM
43	Lexington	10/7/2019 7:22 AM
44	Lk. Mecosta	10/7/2019 7:09 AM
45	49779	10/7/2019 6:56 AM
46	Little bay de noc	10/7/2019 12:34 AM
47	Usually where roads cross streams or rivers	10/7/2019 12:02 AM
48	48045 Clinton River - Harley Ensign	10/6/2019 9:18 PM
49	martiny lakes	10/6/2019 9:10 PM
50	Dutchman Bay	10/6/2019 3:36 PM
51	bishop lake, brighton	10/6/2019 3:33 PM
52	49756	10/6/2019 3:21 PM
53	Private	10/6/2019 2:49 PM

MSWC Boater Trends Survey

54	green lake, tippy dam	10/6/2019 2:06 PM
55	48653	10/6/2019 12:48 PM
56	48001	10/6/2019 11:32 AM
57	48001	10/6/2019 11:20 AM
58	49801, 49802	10/6/2019 11:19 AM
59	48653	10/6/2019 11:00 AM
60	Selfridge boat ramp	10/6/2019 10:22 AM
61	Berrien Springs Dam, Benton Harbor and St. Joseph, MI	10/6/2019 10:10 AM
62	DNR West Shore Launch 48653	10/6/2019 9:26 AM
63	Hartshorn	10/6/2019 9:14 AM
64	marine city	10/6/2019 8:57 AM
65	Leach Lake, Hastings	10/6/2019 8:53 AM
66	South Lake, Bruin Lake , North Lake, Half Moon Lake	10/6/2019 8:51 AM
67	48519	10/6/2019 8:14 AM
68	49067	10/6/2019 8:11 AM
69	49002	10/6/2019 8:07 AM
70	Slip at Hammond Marina, Ind.	10/6/2019 8:01 AM
71	Allegan Dam,Baseline lake,Tippy Dam,Muskrat,Miner lake,Pine Lake,Maple Lake,Kalamazoo River ,Muskegon River,South haven launch,Saugatuck Launch,Holland Launch,Grand Haven Launc,St Joe Launch	10/6/2019 7:49 AM
72	49461	10/6/2019 7:47 AM
73	Fair haven	10/6/2019 7:46 AM
74	48169	10/6/2019 7:34 AM
75	Sebawaing	10/6/2019 7:13 AM
76	AuGres river	10/6/2019 6:43 AM
77	Leland	10/6/2019 6:33 AM
78	Lake Ann, Benzie co, home port	10/6/2019 2:44 AM
79	48023	10/5/2019 10:29 PM
80	bolles harbor, boyne city, east tawas, mackinac city, frankfort	10/5/2019 10:15 PM
81	49417	10/5/2019 9:39 PM
82	48047	10/5/2019 9:15 PM
83	Oscoda, AuGres, Frankfort, Manistee	10/5/2019 8:58 PM
84	Patterson rd	10/5/2019 8:19 PM
85	48051	10/5/2019 6:55 PM
86	Torch River Bridge	10/5/2019 6:37 PM
87	The Forks in Cheboygan Co. & Leland	10/5/2019 5:43 PM
88	48001	10/5/2019 4:37 PM
89	Menominee Marina	10/5/2019 4:23 PM
90	state marina at presque isle michigan	10/5/2019 4:00 PM
91	48348	10/5/2019 3:50 PM
92	49331	10/5/2019 3:36 PM

MSWC Boater Trends Survey

93	Duck lake, gun lake, eagle lake, big bass lake,	10/5/2019 3:01 PM
94	Jaspe dairy	10/5/2019 2:19 PM
95	New Buffalo, Saint Joseph and Benton Harbor	10/5/2019 1:26 PM
96	Lexington State Harbor 48450	10/5/2019 1:24 PM
97	Orchard Lake	10/5/2019 12:54 PM
98	none	10/5/2019 12:11 PM
99	Stanton Twp Launch, Big Traverse Launch, Eagle Harbor launch, Copper Harbor Launch, lily Pond Launch city of houghton, S entry give Dock launch	10/5/2019 11:46 AM
100	Lakeville Lake, Lower Pettibone Lake, Lake Orion, Stringy Chain, Lake Saint Clair Metro Park, Harley Ensign, Selfridge Launch Site, Lake Leelanau, Suttons Bay.	10/5/2019 11:26 AM
101	none	10/5/2019 11:16 AM
102	Harper Lake, Bass Lake, 49644 Lake County	10/5/2019 11:08 AM
103	Arcadia Marina	10/5/2019 11:02 AM
104	49660	10/5/2019 10:45 AM
105	Benton Harbor	10/5/2019 10:04 AM
106	Pinckney	10/5/2019 9:58 AM
107	Johnson Park	10/5/2019 9:58 AM
108	Various Ausable and Manistee River access points	10/5/2019 9:49 AM
109	49707	10/5/2019 9:40 AM
110	49841	10/5/2019 9:28 AM
111	Multiple launches, 49682	10/5/2019 9:26 AM
112	GLADWIN, WIXOM LAKE, HOUGHTON LAKE, AUGRE	10/5/2019 9:16 AM
113	49038	10/5/2019 9:05 AM
114	Dimond lake	10/5/2019 8:42 AM
115	CHIPPEWA LAKE	10/5/2019 8:31 AM
116	49546	10/5/2019 8:13 AM
117	White Lake Public	10/5/2019 7:54 AM
118	48162	10/5/2019 7:24 AM
119	Pinckney. Brighton	10/5/2019 7:04 AM
120	Port Sheldon, Grand Haven, Muskegon, Manistee, Platt River	10/5/2019 7:04 AM
121	48886	10/5/2019 6:42 AM
122	Kipling boat launch on Little Bay De Noc and Garden boat launch on Big Bay de Noc for fishing; Marquette and Munising boat launches for sight seeing; Chocolay township boat launch for fishng.	10/5/2019 6:40 AM
123	Rainbow lake (Montcalm Co)	10/5/2019 5:37 AM
124	48706	10/5/2019 5:07 AM
125	48629	10/5/2019 4:41 AM
126	49460, 49079	10/5/2019 4:35 AM
127	riverside launch	10/5/2019 3:37 AM
128	Blossom heath park SCS	10/5/2019 2:42 AM
129	None	10/5/2019 12:22 AM
130	LLittlePawPaw,Portage,Cory,Cedar,Pine,Gun,Austin,Gull,Manistee,Sugarloaf	10/4/2019 11:04 PM
131	Boyne City and Torch Lake	10/4/2019 10:42 PM

MSWC Boater Trends Survey

132	Hall road by sailfage air base Harrison twp.	10/4/2019 10:41 PM
133	MORRISON LAKE SARANAC, MI 48881	10/4/2019 10:35 PM
134	49930	10/4/2019 10:25 PM
135	St Joe river,Klinger Lake,Diamond lake, Juno lake,	10/4/2019 9:52 PM
136	48661	10/4/2019 9:51 PM
137	South Higgins Lake State Park boat basin	10/4/2019 9:40 PM
138	Muskegon municipal launch; Charlevoix municipal launch and Straits State Park Launch	10/4/2019 9:02 PM
139	Harbor of Refuge, Au Gres mi 48703	10/4/2019 8:46 PM
140	49759	10/4/2019 8:18 PM
141	49022 & 49085	10/4/2019 8:09 PM
142	48045	10/4/2019 8:05 PM
143	48045	10/4/2019 7:40 PM
144	Traverse Bay, Black Lake, Burt Lake, Kipling, Klieber pond, Cheboygan River, Manistee River, Saginaw Bay, Escanaba, Raber,	10/4/2019 7:33 PM
145	48737	10/4/2019 7:25 PM
146	48733	10/4/2019 7:25 PM
147	49068	10/4/2019 7:15 PM
148	48750	10/4/2019 7:13 PM
149	49749	10/4/2019 7:13 PM
150	lakeville lake, harley ensine(lake st. clair)	10/4/2019 6:51 PM
151	Spring lake, Wabasis Lake, Muskegon, Southaven, Ludington, grand river	10/4/2019 6:51 PM
152	belle isle, Michigan	10/4/2019 6:25 PM
153	Houghton Lake, Wixom Lake, Grand River	10/4/2019 6:21 PM
154	Sand lake for iceboating!	10/4/2019 6:20 PM
155	Riverside launch ramp Port Huron MI 48060	10/4/2019 6:17 PM
156	Pinckney's	10/4/2019 6:16 PM
157	48001/ 48039	10/4/2019 6:00 PM
158	Bowles Harbor, Monroe , MI	10/4/2019 5:58 PM
159	48629	10/4/2019 5:53 PM
160	48023	10/4/2019 5:38 PM
161	Port Huron ramp upriver of the Marina, Elmwood Township, Hessell, Cedarville, Indian River, narrows at Lake Leelenau	10/4/2019 5:30 PM
162	49112	10/4/2019 5:16 PM
163	Woodland lake, Kent lake, Tipsico lake	10/4/2019 5:15 PM
164	Alganic	10/4/2019 5:15 PM
165	49444	10/4/2019 5:04 PM
166	New Buffalo	10/4/2019 4:55 PM
167	Hartshorn Municipal Marina and Fishermans Landing 49440	10/4/2019 4:49 PM
168	48130	10/4/2019 4:32 PM
169	Luna pier- Boles Harbor- Sterling- Sand Lake	10/4/2019 4:30 PM
170	Brandenberg park New Baltimore, Big Bear lake	10/4/2019 4:25 PM

MSWC Boater Trends Survey

171	Norther Exposure Camp Ground Mesick, Michigan 49668	10/4/2019 4:23 PM
172	48166	10/4/2019 4:19 PM
173	48328	10/4/2019 4:15 PM
174	48045	10/4/2019 4:09 PM
175	None	10/4/2019 4:05 PM
176	48001	10/4/2019 3:52 PM
177	Sterling state park, North lake Access Washtenaw county, Wilderness State Park	10/4/2019 3:44 PM
178	48047	10/4/2019 3:32 PM
179	49406	10/4/2019 3:28 PM
180	Pentwater Lake - removal of boat hoist	10/4/2019 3:26 PM
181	Skaneecoo park	10/4/2019 3:05 PM
182	48080	10/4/2019 2:58 PM
183	48173	10/4/2019 2:49 PM
184	Patterson Road Launch, Linwood Beach Marina, Hoyles, Ludington City Marina, Manistee City Marina	10/4/2019 2:39 PM
185	Duck Lake , Narrow Lake , Metro Lake Erie	10/4/2019 2:33 PM
186	48146 Lake Erie Metro park, Boat ramp and the Marina area. two location in the same metro park	10/4/2019 2:32 PM
187	Milliken	10/4/2019 2:31 PM
188	ELIZABETH PARK LAUNCH LOCATED IN TRENTON	10/4/2019 2:24 PM
189	48060	10/4/2019 2:22 PM
190	Many lakes rivers and streams	10/4/2019 2:04 PM
191	Achor bay	10/4/2019 1:52 PM
192	Saginaw River, Patterson rd site, Bay City, Mi.	10/4/2019 1:46 PM
193	New Buffalo	10/4/2019 1:44 PM
194	South Higgins Lake State Park	10/4/2019 1:33 PM
195	48079	10/4/2019 1:32 PM
196	48060	10/4/2019 1:29 PM
197	49720	10/4/2019 1:28 PM
198	49743 49707	10/4/2019 1:25 PM
199	49696	10/4/2019 1:18 PM
200	Dutchman's Bay	10/4/2019 1:18 PM
201	48001 48023	10/4/2019 1:11 PM
202	Lexington	10/4/2019 1:11 PM
203	48134	10/4/2019 1:10 PM
204	48737	10/4/2019 1:09 PM
205	48161	10/4/2019 1:07 PM
206	Long point	10/4/2019 1:02 PM
207	Beach Hazeerate Peninsula Township	10/4/2019 12:56 PM
208	48629	10/4/2019 12:52 PM
209	Watching freighters	10/4/2019 12:52 PM
210	48044	10/4/2019 12:50 PM

MSWC Boater Trends Survey

211	scuba	10/4/2019 12:49 PM
212	scuba	10/4/2019 12:47 PM
213	Lake st clair	10/4/2019 12:46 PM
214	Boers Harbor Boat Launch	10/4/2019 12:40 PM
215	Big Lake	10/4/2019 12:39 PM
216	Kipling launch	10/4/2019 12:38 PM
217	49130	10/4/2019 12:37 PM
218	Baseline lake(Allegan co.)	10/4/2019 12:36 PM
219	Murray lake, wabasis lake, etc.	10/4/2019 12:36 PM
220	48703	10/4/2019 12:35 PM
221	South River Road Harrison Twp	10/4/2019 12:28 PM
222	49762	10/4/2019 12:27 PM
223	48045, 48023, 48001, 48028	10/4/2019 12:27 PM
224	49319	10/4/2019 12:26 PM
225	Flushing, Linden, Fenton	10/4/2019 12:21 PM
226	palms road launch fairhaven mi	10/4/2019 12:18 PM
227	Harbor club north	10/4/2019 12:16 PM
228	49417	10/4/2019 12:15 PM
229	49234	10/4/2019 12:15 PM
230	48450	10/4/2019 12:14 PM
231	49036	10/4/2019 12:13 PM
232	48045, Halfmoon Lake	10/4/2019 12:11 PM
233	Saginaw River mouth,	10/4/2019 12:07 PM
234	Boyne City launch: 525 N Lake St.	10/4/2019 12:06 PM
235	49060	10/4/2019 12:05 PM
236	Crystal lake	10/4/2019 12:02 PM
237	49722	10/4/2019 12:02 PM
238	South Manistique State Forest Campground	10/4/2019 12:01 PM
239	Wabasis park	10/4/2019 12:00 PM
240	48820 49721	10/4/2019 11:58 AM
241	Klinger lake, st. Joe river 49032, st. Joseph mi, 49093, Muskegon- Muskegon lake, white lake, Pentwater	10/4/2019 11:57 AM
242	48455	10/4/2019 11:56 AM
243	algonac/marine city	10/4/2019 11:55 AM
244	Newaygo State Park, Little Whitefish Lake, Mitchell State Park,	10/4/2019 11:54 AM
245	Rapid River	10/4/2019 11:53 AM
246	Wixom lake	10/4/2019 11:52 AM
247	49284	10/4/2019 11:52 AM
248	Houghton lake, sleepy hollow, lake lansing	10/4/2019 11:52 AM
249	Many across Lake St. Clair	10/4/2019 11:52 AM
250	Belleville lake	10/4/2019 11:51 AM

MSWC Boater Trends Survey

251	cheboygan river	10/4/2019 11:51 AM
252	49319	10/4/2019 11:50 AM
253	Belanger Park, RR, MI., French Road boat launch, Det., Metro Beach Park, Wyandote launch ramps., Elizabeth Park.	10/4/2019 11:46 AM
254	Hayes state park , bolles harbor	10/4/2019 11:40 AM
255	49344	10/4/2019 11:37 AM
256	48001	10/4/2019 11:36 AM
257	Elmwood Township Marina	10/4/2019 11:35 AM
258	Duck, Morrison lakes	10/4/2019 11:34 AM
259	48060	10/4/2019 11:31 AM
260	49735	10/4/2019 11:31 AM
261	49023	10/4/2019 11:31 AM
262	48047	10/4/2019 11:29 AM
263	48730	10/4/2019 11:27 AM
264	49412	10/4/2019 11:27 AM
265	38383	10/4/2019 11:25 AM
266	48001	10/4/2019 11:22 AM
267	West Basin StJoseph, MI	10/4/2019 11:20 AM
268	49968	10/4/2019 11:17 AM
269	Harley Ensign	10/4/2019 11:17 AM
270	48843	10/4/2019 11:15 AM
271	do not use.	10/4/2019 11:15 AM
272	Muskegon State Park	10/4/2019 11:13 AM
273	49727	10/4/2019 11:11 AM
274	48706	10/4/2019 11:11 AM
275	Sterling	10/4/2019 11:09 AM
276	49660	10/4/2019 11:07 AM
277	Union Lake, south River Rd in Macomb county	10/4/2019 11:07 AM
278	48625	10/4/2019 11:06 AM
279	Benton harbor	10/4/2019 11:05 AM
280	Lake Erie Metro Park	10/4/2019 11:05 AM
281	Harbor island	10/4/2019 11:05 AM
282	49685	10/4/2019 11:05 AM
283	48045	10/4/2019 11:04 AM
284	Don't know either	10/4/2019 11:03 AM
285	Buchanan, New buffalo	10/4/2019 11:03 AM
286	49036	10/4/2019 11:02 AM
287	49712	10/4/2019 11:01 AM
288	49683	10/4/2019 11:01 AM
289	48060	10/4/2019 11:01 AM
290	49036	10/4/2019 11:01 AM

MSWC Boater Trends Survey

291	None	10/4/2019 11:00 AM
292	49431, Benton Harbor	10/4/2019 11:00 AM
293	49316	10/4/2019 10:59 AM
294	49423	10/4/2019 10:58 AM
295	48047	10/4/2019 10:55 AM
296	48629	10/4/2019 10:55 AM
297	Linwood, bay city state park, eagle bay marin	10/4/2019 10:54 AM
298	Stewart Lake, Nottaw Lake & Lee Lake	10/4/2019 10:53 AM
299	hunting	10/4/2019 10:52 AM
300	Gravel lake, Cedar lake both in Van Buren county	10/4/2019 10:52 AM
301	48045	10/4/2019 10:51 AM
302	mostly north of M55	10/4/2019 10:51 AM
303	48197	10/4/2019 10:50 AM
304	49806	10/4/2019 10:50 AM
305	48763	10/4/2019 10:50 AM
306	48127	10/4/2019 10:49 AM
307	Big Lake, White Lake, Lk Saint Clair Metro Park Marina, Mackinac Island Marina	10/4/2019 10:49 AM
308	48911	10/4/2019 10:48 AM
309	Small launches around Ingham county	10/4/2019 10:48 AM
310	48045	10/4/2019 10:47 AM
311	Berrein Springs dam, St. Joe River.	10/4/2019 10:47 AM
312	49055	10/4/2019 10:46 AM
313	Selfridge Access Site & Fairhaven Access Site	10/4/2019 10:46 AM
314	Narrow lake. Jordan lake. Morrison lake	10/4/2019 10:44 AM
315	Seven Lake State Park	10/4/2019 10:44 AM
316	grassy lake, deep lake, devils lake, one mile, sand lake, allen chain, iron lake any little puddle I can find in Lenawee and Jackson Counties	10/4/2019 10:44 AM
317	48183	10/4/2019 10:44 AM
318	Morrison lake	10/4/2019 10:43 AM
319	Harbor Island launch Grand Haven	10/4/2019 10:42 AM
320	New Buffalo public boat launch	10/4/2019 10:42 AM
321	Harrisville Harbor, East Bay Hubbard Lame	10/4/2019 10:41 AM
322	Clam Lake	10/4/2019 10:41 AM
323	48323	10/4/2019 10:40 AM
324	48180	10/4/2019 10:39 AM
325	49735	10/4/2019 10:39 AM
326	Delray, Pointe Mouille, st clair metro....48213	10/4/2019 10:39 AM
327	49644	10/4/2019 10:38 AM
328	Patterson rd	10/4/2019 10:38 AM
329	Dodge part number four	10/4/2019 10:38 AM
330	49337,snug harbor, Custer river launch	10/4/2019 10:38 AM

MSWC Boater Trends Survey

331	49073	10/4/2019 10:37 AM
332	48182	10/4/2019 10:37 AM
333	caseville	10/4/2019 10:36 AM
334	Menominee River , Cedar River , Ford River , St Joseph river , carp river , chocollet river , lake Ellen , gogebic lake, escanaba , kippling little Bay denoc , fox Park lake Michigan	10/4/2019 10:36 AM
335	48730	10/4/2019 10:35 AM
336	49417	10/4/2019 10:34 AM
337	Hamlin Lake	10/4/2019 10:34 AM
338	Belle Isle	10/4/2019 10:33 AM
339	49675	10/4/2019 10:33 AM
340	49660	10/4/2019 10:33 AM
341	South River Road, Mt. Clemens, Port Austin	10/4/2019 10:32 AM
342	49749	10/4/2019 10:31 AM
343	Just Fishing	10/4/2019 10:31 AM
344	Bay County	10/4/2019 10:29 AM
345	Elizabeth Park, Sterling State Park, LEMP	10/4/2019 10:29 AM
346	48054	10/4/2019 10:27 AM
347	Big Fish Lake	10/4/2019 10:27 AM
348	Sterling SP, Elizabeth Park	10/4/2019 10:27 AM
349	48656	10/4/2019 10:27 AM
350	Quanicasee, sebawaing, Caseville	10/4/2019 10:26 AM
351	48730	10/4/2019 10:26 AM
352	Burt Lake, Mullett Lake	10/4/2019 10:25 AM
353	Oscoda, Alpena, Augres, Bay City, Frankfort	10/4/2019 10:24 AM
354	48045	10/4/2019 10:24 AM
355	frankfort mi	10/4/2019 10:24 AM
356	49783,49725	10/4/2019 10:24 AM
357	49735 Manuka Lake	10/4/2019 10:22 AM
358	Saginaw Bay-Patterson Rd. Lake Fenton, Lake Ponemah	10/4/2019 10:22 AM
359	49613	10/4/2019 10:21 AM
360	within Barry County ususally, 49073	10/4/2019 10:21 AM
361	48183	10/4/2019 10:21 AM
362	New Buffalo	10/4/2019 10:19 AM
363	Big Bay	10/4/2019 10:19 AM
364	49721	10/4/2019 8:38 AM
365	49235	10/3/2019 9:53 PM
366	48192	10/3/2019 8:54 PM
367	48047	10/3/2019 8:26 PM
368	Algonac	10/3/2019 7:44 PM
369	48386 - Pontiac Lake State park	10/3/2019 5:46 PM
370	Too many to name from Monroe to Saint Joe to Houghton in the UP to Alpena/.	10/3/2019 4:31 PM

MSWC Boater Trends Survey

371	49685	10/3/2019 3:57 PM
372	St Clair Shores facilities	10/3/2019 2:22 PM
373	Skegemog Lake (Grand Traverse) Center Road (Grand Traverse)	10/3/2019 12:02 PM
374	48625	10/3/2019 10:06 AM
375	48045, 48047	10/3/2019 9:23 AM
376	48469	10/3/2019 9:20 AM
377	48818	10/3/2019 8:59 AM
378	East Arm Grand Traverse Bay (Peninsula Twp), Old Mission Park (Peninsula Twp), West ARM Grand Traverse Bay (Peninsula Twp)	10/3/2019 8:29 AM
379	Metro beach, Selfridge, Frankfurt	10/3/2019 8:21 AM
380	Grand Lk and Long Lake in Presque Isle co	10/3/2019 8:11 AM
381	48081	10/3/2019 7:32 AM
382	49783	10/3/2019 5:40 AM
383	Whitmore Lake	10/2/2019 9:56 PM
384	48047	10/2/2019 9:43 PM
385	Higgins Lake DNR West launch	10/2/2019 8:10 PM
386	Hubbard Lake, Fletchers Foodwaters and Lake Avalon	10/2/2019 7:44 PM
387	48848	10/2/2019 7:14 PM
388	Higgins lake south, Wixom Lake, Houghton Lake West, Multiple small access sites on West side of Saginaw Bay.	10/2/2019 6:22 PM
389	49777	10/2/2019 5:13 PM
390	49649,48624,and others	10/2/2019 4:27 PM
391	new buffalo	10/2/2019 4:09 PM
392	Lake Lansing, Higgins Lake, Houghton Lake	10/2/2019 3:10 PM
393	Ludington State Park, Bishop Lake, Pinckney Rec Area.	10/2/2019 2:25 PM
394	Selfridge	10/2/2019 2:04 PM
395	Several up to a hundred miles away.	10/2/2019 12:11 PM
396	AuGres River	10/2/2019 10:23 AM
397	Selfridge	10/2/2019 10:19 AM
398	48624	10/2/2019 10:14 AM
399	49461	10/2/2019 10:04 AM
400	Crescent Shores/Long Lake	10/2/2019 10:01 AM
401	stoney creek, prince lake, macready lake, Pontiac lake	10/2/2019 9:44 AM
402	Macomb public boat launches	10/2/2019 9:39 AM
403	48001	10/2/2019 9:39 AM
404	Cedar Lake 48750 Oscoda County	10/2/2019 9:28 AM
405	Algonac Boat Ramp 2635 Pointe Tremble Rd Algonac 48001 across from Kroger	10/2/2019 8:42 AM
406	48360	10/2/2019 8:33 AM
407	Lake Fenton, Lobdell Lake, Lake Ponemah, Woodland Lake, Portage Lake chain Pinckney, Torch Lake, Lake Lelanau	10/2/2019 8:32 AM
408	48362	10/2/2019 8:20 AM
409	48169	10/2/2019 8:03 AM

MSWC Boater Trends Survey

410	Port sanilac	10/2/2019 7:58 AM
411	48651	10/2/2019 7:46 AM
412	48214	10/2/2019 7:42 AM
413	48201	10/2/2019 7:39 AM
414	48028	10/2/2019 7:31 AM
415	48629	10/2/2019 7:31 AM
416	48038	10/2/2019 7:30 AM
417	49831, sites in SW Marquette Co, Newberry sites, St Mary's River, Saginaw Bay, Grand Traverse Bays sites	10/2/2019 7:27 AM
418	48035	10/2/2019 7:24 AM
419	Manistee and del Ray	10/2/2019 7:20 AM
420	48629	10/2/2019 7:19 AM
421	St Clair Shores and Metro Beach	10/2/2019 7:17 AM
422	48049	10/2/2019 6:39 AM
423	49709	10/2/2019 3:51 AM
424	L. Huron, L. Saint Clair, L. Michigan, Detroit River, Saint Clair River, L. Superior, L. Erie	10/2/2019 12:23 AM
425	I ice fish on multiple lakes in Menominee, Alger, Dickinson, and Delta Counties in the Upper Peninsula of Michigan, and I don't know zip codes.	10/1/2019 11:13 PM
426	Crystal Lake 49616	10/1/2019 11:06 PM
427	lexington	10/1/2019 11:01 PM
428	Snug Harbor	10/1/2019 10:20 PM
429	48028	10/1/2019 8:27 PM
430	48739	10/1/2019 7:39 PM
431	Harley , crco, Selfridge	10/1/2019 7:21 PM
432	48624 , 48737 , 49689 , and the great lakes shore	10/1/2019 7:19 PM
433	Spring lake, Muskegon lake, pm lake, Hamlin lk, lake macatawa, Petty's bayou	10/1/2019 7:15 PM
434	Port sanilac, Kirk Rd. Quanicassee, Bay City mouth of Saginaw river.	10/1/2019 7:07 PM
435	Bolles Harbor. Lake Erie Metropark	10/1/2019 7:04 PM
436	49946	10/1/2019 3:17 PM
437	49046	10/1/2019 1:59 PM
438	Wixom Lake Boat Launch, Patterson Road Saginaw River Launch	10/1/2019 1:21 PM
439	meadows	10/1/2019 12:27 PM
440	Port Austin, Port Sanilac Port Lexington Presque	10/1/2019 12:22 PM
441	49709	10/1/2019 12:17 PM
442	48111	10/1/2019 12:16 PM
443	bear creek lauch manistee county	10/1/2019 12:09 PM
444	Sterling State Park, Interlochen State Park, Pinckney Rec Area, Waterloo Rec Area, Muskegon State Park	10/1/2019 12:03 PM
445	49920	10/1/2019 11:22 AM
446	tippy dam; sixth street dam	10/1/2019 11:19 AM
447	48346	10/1/2019 10:54 AM
448	48624	10/1/2019 10:37 AM

MSWC Boater Trends Survey

449	Van Riper State Park, Lake Michigan access site, Wolf Lake, Brocky Lake, Keweenaw Bay	10/1/2019 9:53 AM
450	Boles Harbor	10/1/2019 9:50 AM
451	Selfridge and Harley Ensign	10/1/2019 9:17 AM
452	Fairhaven launch	10/1/2019 9:12 AM
453	Grand Lake, Presque Ilse; AuGres, East Tawas;	10/1/2019 9:08 AM
454	Green Lake (GT Co); Higgins Lake; Long Lake (GT Co); Platte Lake; Bass Lake (SW GT Co)	10/1/2019 8:48 AM
455	Burt Lake	10/1/2019 8:46 AM
456	Selfridge Air Force area	10/1/2019 8:44 AM
457	49868	10/1/2019 8:40 AM
458	Haggerman, Iron, Ottawa, Brule, Smoky, Perch, Ice, Sunset, Swan, Cable,Emily, Stanley, Golden, Teepee,Winslow, paint river multiple sections	10/1/2019 8:39 AM
459	Portage Lake, Whitmore Lake	10/1/2019 8:16 AM
460	Crocker Road	10/1/2019 8:00 AM
461	49920	10/1/2019 7:57 AM
462	lloyds bayou	10/1/2019 7:53 AM
463	Several	10/1/2019 7:52 AM
464	49442	10/1/2019 7:43 AM
465	49623	10/1/2019 7:40 AM
466	Saginaw Bay, many	10/1/2019 7:33 AM
467	Port Huron	10/1/2019 7:30 AM
468	49058, 49918, 49901, 49001, 48140,	10/1/2019 7:17 AM
469	Topinabee public ramp	10/1/2019 7:10 AM
470	49221	10/1/2019 6:55 AM
471	48062	10/1/2019 6:32 AM
472	Red Dock, Schultz Park	10/1/2019 5:55 AM
473	Sessions lake	10/1/2019 5:53 AM
474	49749, Mackinaw Straits Harbor, Petoskey Harbor,	10/1/2019 2:18 AM
475	49621, leeland, Tippy Dam, Frankfort, Traverse City , Houghton Lake	10/1/2019 12:00 AM
476	Muskegon Lake	9/30/2019 11:35 PM
477	Soith havem	9/30/2019 11:14 PM
478	Nome	9/30/2019 10:20 PM
479	48042 to drive in at times and walk around and talk to people, and not just this site either	9/30/2019 10:06 PM
480	49346	9/30/2019 8:53 PM
481	48706	9/30/2019 8:46 PM
482	Saginaw bay	9/30/2019 8:41 PM
483	Munising	9/30/2019 8:25 PM
484	Crooked Lake (Washtenaw County)	9/30/2019 8:13 PM
485	49449	9/30/2019 7:55 PM
486	Houghton lake, Bay City, au gre, Curtis, Cadillac	9/30/2019 7:55 PM
487	49445	9/30/2019 7:52 PM
488	Bay city Ludington State Park houghton lake	9/30/2019 7:50 PM

MSWC Boater Trends Survey

489	Ludington	9/30/2019 7:48 PM
490	49670, 49682, 49621, 49643, 49862, 49855	9/30/2019 7:23 PM
491	49622	9/30/2019 7:07 PM
492	South River Road	9/30/2019 7:06 PM
493	Pinckney	9/30/2019 6:54 PM
494	48703 , Ludington Municipal Marina, Nayanqing Point State Game Area, Fish Point State Game Area	9/30/2019 6:49 PM
495	48044	9/30/2019 6:28 PM
496	loomis launch ludington	9/30/2019 5:58 PM
497	Cedar Lake losco County	9/30/2019 5:57 PM
498	Allegan county park	9/30/2019 5:52 PM
499	49601	9/30/2019 5:50 PM
500	49777 Presque Isle	9/30/2019 5:50 PM
501	Houghton Lake	9/30/2019 5:48 PM
502	49675	9/30/2019 5:43 PM
503	Swan lake	9/30/2019 5:39 PM
504	49685	9/30/2019 5:20 PM
505	49868	9/30/2019 5:13 PM
506	48632, 48451,48629,49756,48661,48414	9/30/2019 4:59 PM
507	48114	9/30/2019 4:57 PM
508	all public access sites on Lake bellaire	9/30/2019 4:51 PM
509	48734	9/30/2019 4:45 PM
510	48081	9/30/2019 4:42 PM
511	Numerous	9/30/2019 4:31 PM
512	Copper Harbor, Menominee, Escanaba	9/30/2019 4:30 PM
513	48023	9/30/2019 4:23 PM
514	River Fishing Pere Marquette River Shed and Grand River Shed	9/30/2019 4:13 PM
515	Otsego lake emeral lake Crawford lake big lake	9/30/2019 4:12 PM
516	49736	9/30/2019 4:05 PM
517	Patterson rd, Bay city. Snug harbor, Muskegon, Higgins lake,	9/30/2019 4:03 PM
518	Harley Ensign at mouth of Clinton River.	9/30/2019 3:58 PM
519	49720	9/30/2019 3:58 PM
520	49046	9/30/2019 3:46 PM
521	Kipling Launch	9/30/2019 3:42 PM
522	Ontonagon	9/30/2019 3:41 PM
523	48949	9/30/2019 3:41 PM
524	miser bay and duck, but usually can't get in because it is NEVER PLOWED.	9/30/2019 3:39 PM
525	49333	9/30/2019 3:36 PM
526	High Bridge	9/30/2019 3:36 PM
527	Sutton's bay, Duncan Clinch traverse City	9/30/2019 3:34 PM
528	halfmoon chain in pinckney	9/30/2019 3:34 PM

MSWC Boater Trends Survey

529	49712	9/30/2019 3:32 PM
530	49783	9/30/2019 3:31 PM
531	Swede Rd (Delta), Sugar Island (Chippewa), Sterling (Lake Erie), Lake Hudson(Lenawee)	9/30/2019 3:28 PM
532	48178	9/30/2019 3:24 PM
533	49646, 49659	9/30/2019 3:22 PM
534	Riverside Park, Grand Rapids	9/30/2019 3:21 PM
535	Monroe launches. Detroit river launches and Onaway state park and black river launch	9/30/2019 3:21 PM
536	Bay city	9/30/2019 3:21 PM
537	49720	9/30/2019 3:19 PM
538	Algonac and selfridge	9/30/2019 3:17 PM
539	48624	9/30/2019 3:16 PM
540	Too many to list genesee and Oakland counties	9/30/2019 3:15 PM
541	49765	9/30/2019 3:15 PM
542	PRIVATE MARINA IN TRAVERSE CITY MI	9/30/2019 3:12 PM
543	Port Sanilac	9/30/2019 3:11 PM
544	48739	9/30/2019 3:10 PM
545	48079	9/30/2019 3:07 PM
546	Lake Ovid, Jordan Lake, Elizabeth Park, Harley Ensign	9/30/2019 3:07 PM
547	traverse city	9/30/2019 3:05 PM
548	Rapid River, Kipling	9/30/2019 3:05 PM
549	Lake Lansing North ramp	9/30/2019 2:58 PM
550	54540	9/30/2019 2:57 PM
551	Cedarville mi	9/30/2019 2:55 PM
552	Linwood, USS Edson,	9/30/2019 2:54 PM
553	Qunicassee, Sunset, Thomas	9/30/2019 2:51 PM
554	Manistee, Frankfort ,and Standish	9/30/2019 2:29 PM
555	48315	9/30/2019 2:15 PM
556	48843	9/30/2019 1:06 PM
557	Muskegan State Park	9/30/2019 12:26 PM
558	49735, 49712, 49770, 49749	9/30/2019 11:53 AM
559	Tawas Bay	9/30/2019 10:39 AM
560	Brighton Michigan area	9/30/2019 10:25 AM
561	All	9/30/2019 10:22 AM
562	48467	9/30/2019 9:38 AM
563	49820	9/30/2019 9:20 AM
564	Tippy dam	9/30/2019 9:17 AM
565	48651, 48866	9/30/2019 9:04 AM
566	Torch Lake - Torch River - Aarwood Trail Launch	9/30/2019 8:46 AM
567	Garden, indian lake, Au Train lake, Munising bay, Little bay De Noc, Ackerman lake, Forest Lake basin	9/30/2019 8:10 AM
568	Morrison Lake, Thornapple Lake, Lake Mecosta	9/30/2019 7:45 AM

MSWC Boater Trends Survey

569	49696	9/30/2019 7:40 AM
570	Jep	9/30/2019 7:31 AM
571	Lake St. Clair	9/30/2019 7:28 AM
572	49047, 49013	9/30/2019 6:05 AM
573	Duck Lake	9/30/2019 12:54 AM
574	Duncan Clinch marina Traverse City	9/29/2019 10:03 PM
575	49829	9/29/2019 10:00 PM
576	48629	9/29/2019 9:27 PM
577	Eagle Bay, Port Austin Michigan	9/29/2019 9:13 PM
578	Too many to list	9/29/2019 8:54 PM
579	Marine City	9/29/2019 8:16 PM
580	Cedar River Marina, Escanaba Marina, Fayette Marina	9/29/2019 5:38 PM
581	Duck Lake	9/29/2019 4:38 PM
582	48886	9/29/2019 3:55 PM
583	49456	9/29/2019 1:39 PM
584	49719	9/29/2019 1:08 PM
585	48703, Strates Harbor Mackinaw City	9/29/2019 12:31 PM
586	49667, 49601, Huron County (Bay Port, Caseville, Gieger Road access)	9/29/2019 11:32 AM
587	East Tawas State Dock,Bay City Ramps	9/29/2019 11:09 AM
588	Snug harbor. 49445	9/29/2019 10:08 AM
589	Green Lake South	9/29/2019 9:31 AM
590	Newburgh lake , Proud Lake, Lake Tipsico ,Union Lake, Proud lake, Crescent Lake...to name a few	9/29/2019 8:01 AM
591	49305	9/29/2019 6:16 AM
592	pine hill lake	9/28/2019 11:38 PM
593	48442	9/28/2019 11:17 PM
594	Lobdell	9/28/2019 10:49 PM
595	bluegill boat ramp	9/28/2019 7:38 PM
596	Grand Traverse East Bay	9/28/2019 6:24 PM
597	Mackinac city	9/28/2019 4:07 PM
598	Bolles Harbor	9/28/2019 3:53 PM
599	All	9/28/2019 3:20 PM
600	48117	9/28/2019 2:34 PM
601	49456	9/28/2019 1:39 PM
602	49456	9/28/2019 1:34 PM
603	Lake Fenton 48430. Lake Missaukee (Missaukee)	9/28/2019 1:27 PM
604	all public access sites along the Rifle River and in Ionia, all boat launches along the Grand River	9/28/2019 12:41 PM
605	49648	9/28/2019 12:32 PM
606	48732	9/28/2019 12:03 PM
607	Dnr launch sites in St. Clair county	9/28/2019 11:58 AM
608	Holland State Park	9/28/2019 11:09 AM

MSWC Boater Trends Survey

609	49759	9/28/2019 10:50 AM
610	48183	9/28/2019 10:29 AM
611	Oakland County sites	9/28/2019 9:24 AM
612	Manistee	9/28/2019 9:06 AM
613	Bear lake torch lake Manistee lake	9/28/2019 8:44 AM
614	49343	9/28/2019 8:06 AM
615	Grand trunk. 49441	9/28/2019 7:55 AM
616	48036	9/28/2019 7:48 AM
617	Lake Bellaire	9/28/2019 7:39 AM
618	48707	9/28/2019 7:33 AM
619	Chassell Boat dock, Otter Lake launch	9/28/2019 6:20 AM
620	48450	9/28/2019 4:24 AM
621	Wixom Lake public access. Higgins Lake State Park and the launch near Sam-o-set Marina. West or South launch on Houghton Lake (state owned). Saginaw River mouth. Quanicassee public access. Linwood Rd and campground.	9/28/2019 12:39 AM
622	lk st clair area	9/28/2019 12:26 AM
623	48348	9/28/2019 12:03 AM
624	Ann arbor	9/27/2019 11:19 PM
625	Manistee Frankfort Benzie	9/27/2019 11:17 PM
626	Devil river, grand lake, long lake, Hubbard lake, fletcher floodwaters and other local lakes	9/27/2019 10:41 PM
627	49457	9/27/2019 10:32 PM
628	48750	9/27/2019 9:39 PM
629	Bay city river mouth	9/27/2019 9:37 PM
630	48045	9/27/2019 9:21 PM
631	48060	9/27/2019 9:10 PM
632	48382	9/27/2019 8:55 PM
633	48079	9/27/2019 8:42 PM
634	Pinckney	9/27/2019 7:54 PM
635	Patterson Rd Bay city	9/27/2019 7:30 PM
636	Allen lake	9/27/2019 6:51 PM
637	48044	9/27/2019 6:47 PM
638	48467	9/27/2019 6:47 PM
639	49712	9/27/2019 6:36 PM
640	48236	9/27/2019 6:36 PM
641	Higgins Lake/Houghton Lake	9/27/2019 6:23 PM
642	49098	9/27/2019 6:17 PM
643	Green Lake	9/27/2019 6:15 PM
644	Lake magarethe,Higgins lake,Houghton lake	9/27/2019 5:41 PM
645	Port Austin, MI 48467	9/27/2019 4:17 PM
646	49046	9/27/2019 3:56 PM
647	48073	9/27/2019 3:49 PM

MSWC Boater Trends Survey

648	Reeds Lake (East GR), Jordan Lake (Lake Odessa), Green Lake (Kent County), Houghton Lake, Lake Cadillac	9/27/2019 3:45 PM
649	Alpena, Marine City, Harsens Island, Petoskey, Fair Haven	9/27/2019 3:42 PM
650	iron ton, walloon lake access, elsworth. all other DNR sites north of TC are NOT adequate for use	9/27/2019 3:24 PM
651	Charlevoix (ferry beach) launch and border creek beach and state harbor marina...pt. Austin	9/27/2019 3:10 PM
652	48624	9/27/2019 3:06 PM
653	Monroe Michigan	9/27/2019 3:05 PM
654	49747	9/27/2019 2:53 PM
655	49709 &	9/27/2019 2:34 PM
656	NA - I don't ice or shore fish.	9/27/2019 2:33 PM
657	Portage Lake	9/27/2019 2:29 PM
658	Forrest Lake... Autrain lake	9/27/2019 2:26 PM
659	49641	9/27/2019 2:23 PM
660	Duck Lake, Narrow Lake, Gordon Lake, Ackley Lake	9/27/2019 2:23 PM
661	49920	9/27/2019 2:20 PM
662	East jordan	9/27/2019 2:09 PM
663	48442	9/27/2019 1:49 PM
664	48001	9/27/2019 1:46 PM
665	49026	9/27/2019 1:35 PM
666	Ice skating	9/27/2019 1:26 PM
667	49930	9/27/2019 1:12 PM
668	49437	9/27/2019 1:09 PM
669	49203	9/27/2019 1:04 PM
670	Portage Lake Onekema	9/27/2019 1:00 PM
671	St.jean, river rouge	9/27/2019 1:00 PM
672	Erie metro, south river road, Algonac, Leland, north port, cheboygon	9/27/2019 12:56 PM
673	Elizabeth park, winawanta	9/27/2019 12:56 PM
674	Wolverine lake	9/27/2019 12:53 PM
675	48116	9/27/2019 12:46 PM
676	Cedarville	9/27/2019 12:43 PM
677	Marquette upper harbor	9/27/2019 12:40 PM
678	Halfway Creek, sterling sp, Huron river, Bruin lake	9/27/2019 12:40 PM
679	Tawas, Bay City, most northern sites on West side of state	9/27/2019 12:25 PM
680	I use multiple sites through out the state.	9/27/2019 12:24 PM
681	Palms road	9/27/2019 12:14 PM
682	49777	9/27/2019 12:11 PM
683	49668	9/27/2019 12:02 PM
684	49423	9/27/2019 12:01 PM
685	Detour	9/27/2019 11:59 AM
686	gull lake	9/27/2019 11:48 AM
687	Boating	9/27/2019 11:47 AM

MSWC Boater Trends Survey

688	49417	9/27/2019 11:46 AM
689	48843	9/27/2019 11:46 AM
690	48629	9/27/2019 11:44 AM
691	48632-8 Point Lake Public Access	9/27/2019 11:35 AM
692	Platte lake	9/27/2019 11:34 AM
693	Boat landing 5 on Caldren Falls in Crivitz, WI	9/27/2019 11:31 AM
694	48162	9/27/2019 11:14 AM
695	Walking tours	9/27/2019 11:12 AM
696	duck lake,calhoun co., lake erie metropark, Hamlin lake, South lake, washtenaw co.	9/27/2019 11:12 AM
697	Ludington Municipal Marina	9/27/2019 11:10 AM
698	Cisco Lake	9/27/2019 10:59 AM
699	Dodge #4 State Park, Orchard Lake BAS, Crescent Lake BAS	9/27/2019 10:57 AM
700	Portage lake Washtenaw,	9/27/2019 10:56 AM
701	49091	9/27/2019 10:56 AM
702	48001	9/27/2019 10:44 AM
703	Au Gres	9/27/2019 10:40 AM
704	Tower Marine and Douglas MI.	9/27/2019 10:39 AM
705	48602	9/27/2019 10:36 AM
706	49503	9/27/2019 10:32 AM
707	Algonac, selfrige launch clinton river launch	9/27/2019 10:30 AM
708	Saginaw Bay, Linwood	9/27/2019 10:29 AM
709	Quanacasse	9/27/2019 10:27 AM
710	49431	9/27/2019 10:20 AM
711	49431 as well as many sites throughout Michigan. I stop when traveling at all kinds of state access sites for shore fishing and photography.	9/27/2019 10:18 AM
712	Sterling State Park and Hellenberg	9/27/2019 10:17 AM
713	49770	9/27/2019 10:08 AM
714	48446	9/27/2019 10:04 AM
715	49014	9/27/2019 10:03 AM
716	morison lake in ionia county and sessions lake in ionia county	9/27/2019 9:58 AM
717	Kalamazoo River	9/27/2019 9:55 AM
718	49050	9/27/2019 9:50 AM
719	49341	9/27/2019 9:46 AM
720	54235	9/27/2019 9:42 AM
721	49776	9/27/2019 9:42 AM
722	48173	9/27/2019 9:40 AM
723	49660	9/27/2019 9:38 AM
724	M 37, Bowers Harbor, Yuba, M 22, Clinch Park, Perins Landing	9/27/2019 9:37 AM
725	Teal Lake, East Bass Lake, Big Shag Lake, Little Lake, Engman Lake, Schweitzer Flowage, etc.	9/27/2019 9:35 AM
726	48843	9/27/2019 9:29 AM
727	Thumb Lake	9/27/2019 9:24 AM

MSWC Boater Trends Survey

728	Benzie	9/27/2019 9:24 AM
729	48706, 49777	9/27/2019 9:24 AM
730	49684	9/27/2019 9:21 AM
731	MONTAGUE LAUNCH RAMP	9/27/2019 9:20 AM
732	The Easport launch on Torch lake has an unofficial swim beach that is separate from the launch. It's honestly the best spot to swim on the entirety of that lake. Please do what you can to continue this access.	9/27/2019 9:20 AM
733	49721. 49749	9/27/2019 9:17 AM
734	49837	9/27/2019 9:15 AM
735	Quinnasacee	9/27/2019 9:07 AM
736	Portage Lake, Vinyard lake, Wamplers lake	9/27/2019 9:04 AM
737	Various locations.	9/27/2019 9:01 AM
738	Sagnaw Bay	9/27/2019 8:56 AM
739	Not available	9/27/2019 8:56 AM
740	48060, 48028, 48045, 48047, 48703	9/27/2019 8:56 AM
741	Non of the above	9/27/2019 8:55 AM
742	Maple Bay	9/27/2019 8:54 AM
743	49770	9/27/2019 8:53 AM
744	Elk Rapids , Elmwood township,	9/27/2019 8:52 AM
745	west ramp, Higgins Lake	9/27/2019 8:51 AM
746	49442	9/27/2019 8:43 AM
747	Cedar lake	9/27/2019 8:41 AM
748	Clam Lake	9/27/2019 8:40 AM
749	Clam, Charlevoix, mullet, Bellaire, intermediate,	9/27/2019 8:38 AM
750	White Lake, Muskegon Lake	9/27/2019 8:34 AM
751	Higgins, Wabasis, Houghton lake, Muskegon Lake. White lake	9/27/2019 8:23 AM
752	Marine City	9/27/2019 8:21 AM
753	North Higgins Lake	9/27/2019 8:21 AM
754	De Tour Village , Cedarville, Heasel,Sault Sainte Marie, and Saint Ignace	9/27/2019 8:18 AM
755	Lake Fenton	9/27/2019 8:15 AM
756	Lexington harbor	9/27/2019 8:10 AM
757	Jordan lake and ionia state park	9/27/2019 8:10 AM
758	Cornwell Flooding	9/27/2019 8:08 AM
759	Clam Lake	9/27/2019 8:04 AM
760	bay city rivermouth	9/27/2019 7:59 AM
761	48843, 48116, 48150, 48080,48167,	9/27/2019 7:59 AM
762	49117	9/27/2019 7:58 AM
763	Beacon cove marina	9/27/2019 7:56 AM
764	Saginaw River mouth; Dundas Rd. Tobacco River.	9/27/2019 7:55 AM
765	River access sites in all Counties of MI.	9/27/2019 7:51 AM
766	Sand lake. Devils lake	9/27/2019 7:50 AM

MSWC Boater Trends Survey

767	quanicassee, sumac island, mud creek, saginaw river mouth, bay port	9/27/2019 7:48 AM
768	49659	9/27/2019 7:40 AM
769	48047	9/27/2019 7:40 AM
770	None	9/27/2019 7:39 AM
771	49837	9/27/2019 7:31 AM
772	Grindstone City	9/27/2019 7:31 AM
773	Tippy Dam and Pine Street launch	9/27/2019 7:28 AM
774	49201	9/27/2019 7:15 AM
775	lake Orion	9/27/2019 7:12 AM
776	Vanetan Lake, Londo, Long, Saw Mill Point, Indian Lake (Glennie)	9/27/2019 7:11 AM
777	too many to list.	9/27/2019 6:58 AM
778	All Cass Co. lakes for ice fishing and they are never plowed and very hard to access in the winter	9/27/2019 6:56 AM
779	Chassell MI Rampon Portage Ramp	9/27/2019 6:54 AM
780	All Lake St. Clair Launches	9/27/2019 6:50 AM
781	49660	9/27/2019 6:49 AM
782	49727	9/27/2019 6:46 AM
783	Lake of the woods	9/27/2019 6:46 AM
784	Selfridge	9/27/2019 6:45 AM
785	49201	9/27/2019 6:44 AM
786	ST CLAIR	9/27/2019 6:43 AM
787	Portage lake north launch by Onekema, Tippy Pond West side, Hamlin Lake...	9/27/2019 6:40 AM
788	48079	9/27/2019 6:30 AM
789	Cass lake	9/27/2019 6:27 AM
790	St.Clair,Marine City,Algonac,Harsen Island,Fair Haven,Traverse City,Suttons Bay Frankfort,Manistee,Lealand	9/27/2019 6:26 AM
791	49202	9/27/2019 6:22 AM
792	Sterling State Park, Elizabeth Park	9/27/2019 6:22 AM
793	Yankee Springs	9/27/2019 6:21 AM
794	West Huoghton lk	9/27/2019 6:13 AM
795	Marine city	9/27/2019 6:09 AM
796	marysville	9/27/2019 5:54 AM
797	Bay County	9/27/2019 5:54 AM
798	49719	9/27/2019 5:50 AM
799	Harrison twp	9/27/2019 5:35 AM
800	49403	9/27/2019 5:23 AM
801	Grindrtone city	9/27/2019 5:15 AM
802	East tawascity state launch Augres state launch	9/27/2019 5:13 AM
803	Lake Bellaire, intermediated lake, portage lake other lakes	9/27/2019 5:02 AM
804	Burt lake state park, young state park, ludington state park,	9/27/2019 4:55 AM
805	lake st clair metropark	9/27/2019 4:50 AM
806	49849	9/27/2019 4:13 AM

MSWC Boater Trends Survey

807	Grand Haven	9/27/2019 3:22 AM
808	Nichols lake, hardy dam, Lake Michigan, hamlin lake, mannistee lake, Portage lake,	9/27/2019 3:16 AM
809	49635	9/27/2019 2:33 AM
810	48021	9/27/2019 2:26 AM
811	49095	9/27/2019 2:19 AM
812	49010	9/27/2019 1:53 AM
813	49783	9/27/2019 12:50 AM
814	48737	9/27/2019 12:38 AM
815	Baseline Lake	9/27/2019 12:36 AM
816	48737	9/27/2019 12:31 AM
817	The back ramp of Michigan center lake and portage lake mainly	9/27/2019 12:20 AM
818	48216 Delray	9/27/2019 12:20 AM
819	48173-9453	9/27/2019 12:09 AM
820	49868	9/26/2019 11:55 PM
821	Dnr facilities	9/26/2019 11:45 PM
822	49721	9/26/2019 11:40 PM
823	Crocker road	9/26/2019 11:36 PM
824	48602	9/26/2019 11:33 PM
825	48708	9/26/2019 11:25 PM
826	49719	9/26/2019 11:06 PM
827	Elk Rapids	9/26/2019 10:56 PM
828	haymarsh state game area, chippewa lake, youngs lake, muskegon river by freeway, browers park	9/26/2019 10:55 PM
829	49601	9/26/2019 10:50 PM
830	Too many to list. We go all over the state.	9/26/2019 10:50 PM
831	Kensington Metro Park, Holly Recreation Area, 7 Lakes State Park, Addison Oaks County Park, Sleepy Hollow State Park,	9/26/2019 10:49 PM
832	pine river, saginaw river, quanicassee river	9/26/2019 10:42 PM
833	Bowers harbor	9/26/2019 10:38 PM
834	48446	9/26/2019 10:37 PM
835	Port Austin	9/26/2019 10:37 PM
836	Most of my ice fishing is done on Houghton Lake. I use the access at the north end or the one on the south west end.	9/26/2019 10:37 PM
837	Tuscola county	9/26/2019 10:35 PM
838	Houghton Lake, west boat launch (off old 27)	9/26/2019 10:26 PM
839	48001	9/26/2019 10:18 PM
840	Alpena harbour	9/26/2019 10:15 PM
841	tippy dam	9/26/2019 10:11 PM
842	49437	9/26/2019 10:07 PM
843	49727	9/26/2019 10:06 PM
844	Mullett lake village	9/26/2019 10:06 PM
845	49449	9/26/2019 10:05 PM

MSWC Boater Trends Survey

846	Tawas	9/26/2019 9:59 PM
847	East Tawas	9/26/2019 9:55 PM
848	Holland	9/26/2019 9:52 PM
849	Black Lake and Tomahawk floodings	9/26/2019 9:52 PM
850	49456	9/26/2019 9:50 PM
851	selfridge	9/26/2019 9:44 PM
852	48636	9/26/2019 9:40 PM
853	49079	9/26/2019 9:33 PM
854	Keans , mariners park	9/26/2019 9:30 PM
855	To numerous... I fish all over this great state!	9/26/2019 9:29 PM
856	48430 lake Fenton	9/26/2019 9:27 PM
857	48189	9/26/2019 9:21 PM
858	Pine River, AuGres River, East Tawas, Londo Lake, Lake ST. Helen, and others	9/26/2019 9:20 PM
859	Long Lake	9/26/2019 9:17 PM
860	Crystal Lake	9/26/2019 9:15 PM
861	49445	9/26/2019 9:15 PM
862	49090	9/26/2019 9:14 PM
863	Clinton river	9/26/2019 9:13 PM
864	49727	9/26/2019 9:12 PM
865	new buffalo boat launch 49117	9/26/2019 9:12 PM
866	Erie metro	9/26/2019 9:12 PM
867	49341	9/26/2019 9:10 PM
868	49740	9/26/2019 9:10 PM
869	Harley Ensign Memorial	9/26/2019 9:08 PM
870	No	9/26/2019 9:05 PM
871	Ogemaw county	9/26/2019 8:58 PM
872	Newaygo highrollway. Ludington	9/26/2019 8:58 PM
873	Selfridge	9/26/2019 8:56 PM
874	49829 Kipling	9/26/2019 8:55 PM
875	Pine River Saginaw Bay	9/26/2019 8:53 PM
876	DON'T	9/26/2019 8:51 PM
877	Big Fish Lake	9/26/2019 8:44 PM
878	48001	9/26/2019 8:42 PM
879	Dnr East Tawas	9/26/2019 8:39 PM
880	Snowshoeing	9/26/2019 8:39 PM
881	All over the staye	9/26/2019 8:33 PM
882	DeTour	9/26/2019 8:33 PM
883	49684	9/26/2019 8:31 PM
884	Harley ensign, ballard	9/26/2019 8:30 PM
885	49254	9/26/2019 8:29 PM
886	49840	9/26/2019 8:27 PM

MSWC Boater Trends Survey

887	48651	9/26/2019 8:21 PM
888	Bay port	9/26/2019 8:20 PM
889	49783	9/26/2019 8:18 PM
890	49931	9/26/2019 8:15 PM
891	Bolles harbor	9/26/2019 8:13 PM
892	Selfridge	9/26/2019 8:12 PM
893	Lobdell lake	9/26/2019 8:04 PM
894	48468	9/26/2019 8:02 PM
895	Half moon	9/26/2019 8:02 PM
896	49233	9/26/2019 8:01 PM
897	Ludington	9/26/2019 7:59 PM
898	Several	9/26/2019 7:55 PM
899	49622	9/26/2019 7:53 PM
900	Lac St. Clair municipal harbor, Stearling state park.	9/26/2019 7:52 PM
901	homer, lake, kalamazoo river	9/26/2019 7:48 PM
902	Houghton lake, higgins lake	9/26/2019 7:48 PM
903	49749	9/26/2019 7:47 PM
904	48183	9/26/2019 7:46 PM
905	Wyandotte 48292	9/26/2019 7:43 PM
906	Big Star Lake, Baldwin, MI	9/26/2019 7:39 PM
907	49408	9/26/2019 7:39 PM
908	State dock in East Tawas	9/26/2019 7:38 PM
909	East Jordan City Marina	9/26/2019 7:37 PM
910	Munising, Grand Maria's , Sault St. Marie	9/26/2019 7:37 PM
911	Saginaw River, Cass River, Buell Lake	9/26/2019 7:35 PM
912	Pier 33 in St Joseph	9/26/2019 7:33 PM
913	Wamplers lake	9/26/2019 7:33 PM
914	Sumac island	9/26/2019 7:29 PM
915	Selfridge	9/26/2019 7:28 PM
916	Quanicassee	9/26/2019 7:26 PM
917	Drummond Island Scott's Bay	9/26/2019 7:18 PM
918	Statewide	9/26/2019 7:18 PM
919	multiple lakes in Leelanau and Grand Traverse counties	9/26/2019 7:18 PM
920	"The long dock" in Portage Entry.	9/26/2019 7:17 PM
921	49441	9/26/2019 7:15 PM
922	Port Sheldon	9/26/2019 7:15 PM
923	49107	9/26/2019 7:14 PM
924	Omena lake where I live	9/26/2019 7:08 PM
925	48706	9/26/2019 7:07 PM
926	Vandercook and surrounding area	9/26/2019 7:07 PM
927	48634	9/26/2019 7:06 PM

MSWC Boater Trends Survey

928	48093	9/26/2019 7:03 PM
929	Eight point lake	9/26/2019 7:03 PM
930	Raber Bay Boat Launch	9/26/2019 7:01 PM
931	Ira twp	9/26/2019 7:01 PM
932	48840-9501	9/26/2019 7:00 PM
933	Raber Bay Boat Launch	9/26/2019 6:58 PM
934	PATTERSON, LINWOOD, LUDINGTON, TAWAS, OSCODA, AUGRAY, SLEEPY HOLLOW, MONROE	9/26/2019 6:57 PM
935	hubbard lake , long lake	9/26/2019 6:53 PM
936	manistee lake and onekema	9/26/2019 6:53 PM
937	48629	9/26/2019 6:53 PM
938	South Higgins Lake, North Higgins Lake	9/26/2019 6:49 PM
939	48653	9/26/2019 6:47 PM
940	49417	9/26/2019 6:46 PM
941	All over state of MI	9/26/2019 6:44 PM
942	48236, 49612	9/26/2019 6:42 PM
943	Patterson quanicassee Pinconning Ludington skegemog augres Gambils	9/26/2019 6:38 PM
944	49721	9/26/2019 6:37 PM
945	sterling	9/26/2019 6:36 PM
946	New Buffalo Mi launch ramp	9/26/2019 6:36 PM
947	Juno	9/26/2019 6:32 PM
948	48082-2513	9/26/2019 6:30 PM
949	48161	9/26/2019 6:29 PM
950	Jordan river	9/26/2019 6:29 PM
951	49646	9/26/2019 6:28 PM
952	ROSCOMMON	9/26/2019 6:26 PM
953	Elmwood Township Marina 49684	9/26/2019 6:24 PM
954	Lake of the woods public access, Fort Custer, Black river public access	9/26/2019 6:22 PM
955	bert lake	9/26/2019 6:20 PM
956	Lakeville, Lake Orion, Squaw Lake	9/26/2019 6:20 PM
957	48820& 49839	9/26/2019 6:19 PM
958	Lexington, Port Sanalic, Harbor Beach, Mackinaw, Harvey Earle and other Lake St Claires,Huron, Michigan and UP and the rest as need be	9/26/2019 6:19 PM
959	48706	9/26/2019 6:16 PM
960	48313	9/26/2019 6:14 PM
961	never	9/26/2019 6:13 PM
962	Second Lk. Houghton Lk. Honey falls inpoundment	9/26/2019 6:13 PM
963	Grand Haven Municipal	9/26/2019 6:11 PM
964	Selfridge 48047	9/26/2019 6:11 PM
965	Don't know the name	9/26/2019 6:10 PM
966	49676	9/26/2019 6:09 PM

MSWC Boater Trends Survey

967	49449	9/26/2019 6:05 PM
968	Platte River, Homestead Dan	9/26/2019 6:03 PM
969	48p01	9/26/2019 6:02 PM
970	49719	9/26/2019 6:01 PM
971	Newaygo county	9/26/2019 6:00 PM
972	49612	9/26/2019 5:57 PM
973	Luce county--- Big Manistique LAKE===== Mackinac county South Manistique lake	9/26/2019 5:53 PM
974	Burt lake state park 49749	9/26/2019 5:50 PM
975	49684	9/26/2019 5:45 PM
976	Saxon Harbor, Black River Harbor	9/26/2019 5:40 PM
977	49721	9/26/2019 5:38 PM
978	South Higgins Lake State Park	9/26/2019 5:37 PM
979	Old mission peninsula	9/26/2019 5:35 PM
980	Rockport boating access site, and port sanilac marina	9/26/2019 5:35 PM
981	Billed harbor. Sterling st pk. Houghton II	9/26/2019 5:31 PM
982	North channel DNR Boat launch	9/26/2019 5:28 PM
983	49431	9/26/2019 5:27 PM
984	Harley ensign	9/26/2019 5:26 PM
985	48390	9/26/2019 5:26 PM
986	Don't use	9/26/2019 5:25 PM
987	Camp lake, Sparta Mi.	9/26/2019 5:23 PM
988	Lexington	9/26/2019 5:23 PM
989	48111	9/26/2019 5:20 PM
990	49419	9/26/2019 5:18 PM
991	49417 49339	9/26/2019 5:18 PM
992	To many to list	9/26/2019 5:18 PM
993	Walk, jogging, photography	9/26/2019 5:17 PM
994	Sister lakes.	9/26/2019 5:17 PM
995	Ludington, wabasis lake, Saginaw bay, Lake Erie	9/26/2019 5:15 PM
996	Tippy dam	9/26/2019 5:14 PM
997	South River Road, Harrison Twp, MI	9/26/2019 5:10 PM
998	South Haven municipal	9/26/2019 5:10 PM
999	Saginaw Rive access	9/26/2019 5:10 PM
1000	Depends	9/26/2019 5:09 PM
1001	49643	9/26/2019 5:05 PM
1002	49686	9/26/2019 5:04 PM
1003	Dollar Bay, Gratiot Lake, Copper Harbor	9/26/2019 5:04 PM
1004	49309	9/26/2019 5:04 PM
1005	49630	9/26/2019 5:03 PM
1006	49436	9/26/2019 5:00 PM
1007	49417	9/26/2019 4:58 PM

MSWC Boater Trends Survey

1008	48045	9/26/2019 4:58 PM
1009	49740	9/26/2019 4:56 PM
1010	49449	9/26/2019 4:56 PM
1011	49690	9/26/2019 4:53 PM
1012	49718	9/26/2019 4:53 PM
1013	Barry county lakes (ice fishing), great lakes public marinas (both pier fishing and sightseeing)	9/26/2019 4:53 PM
1014	48060	9/26/2019 4:52 PM
1015	muskegon, grand haven municipal, south haven, st. joesph, new buffalo municipal	9/26/2019 4:52 PM
1016	To many to name.	9/26/2019 4:52 PM
1017	48183	9/26/2019 4:52 PM
1018	Cheboygan County boat Launch	9/26/2019 4:51 PM
1019	Lake Erie Metropark	9/26/2019 4:50 PM
1020	49055	9/26/2019 4:50 PM
1021	48125	9/26/2019 4:49 PM
1022	Sleepy Hollow, Lake Ovid	9/26/2019 4:48 PM
1023	Port Sanilac 48469	9/26/2019 4:48 PM
1024	49047	9/26/2019 4:47 PM
1025	49646	9/26/2019 4:46 PM
1026	48818	9/26/2019 4:46 PM
1027	49689	9/26/2019 4:45 PM
1028	48625	9/26/2019 4:45 PM
1029	48085	9/26/2019 4:45 PM
1030	Saginaw River	9/26/2019 4:45 PM
1031	Jordan, Morrison, Long, Woodard, Murray	9/26/2019 4:44 PM
1032	Prarieville park. St.Joe. Gun lake	9/26/2019 4:44 PM
1033	Patterson Rd Bay City	9/26/2019 4:44 PM
1034	49315	9/26/2019 4:43 PM
1035	48047	9/26/2019 4:43 PM
1036	Erie Metro	9/26/2019 4:43 PM
1037	Caseville	9/26/2019 4:42 PM
1038	48390	9/26/2019 4:42 PM
1039	Straits State Marina	9/26/2019 4:41 PM
1040	49456 49417	9/26/2019 4:41 PM
1041	Glen lake	9/26/2019 4:41 PM
1042	grindstone	9/26/2019 4:41 PM
1043	49058	9/26/2019 4:40 PM
1044	Ludington	9/26/2019 4:40 PM
1045	Au Gres, Cedar Lake49750, Avery Lake Montmorency County.	9/26/2019 4:40 PM
1046	Quanicassee	9/26/2019 4:40 PM
1047	Lake Orion, Stringy Lakes, Maceday, Lake 16	9/26/2019 4:39 PM
1048	48103	9/26/2019 4:38 PM

MSWC Boater Trends Survey

1049	Boles harber	9/26/2019 4:38 PM
1050	48116	9/26/2019 4:38 PM
1051	49265, 49230	9/26/2019 4:38 PM
1052	Selfridge, Fair Haven, Harley Ensign, Clinton River Cut off, North Channel BAS in Algonac.	9/26/2019 4:38 PM
1053	48045 and selfridge	9/26/2019 4:36 PM
1054	48239	9/26/2019 4:35 PM
1055	Macatawa, Miner Lake, Baker Lake	9/26/2019 4:34 PM
1056	48328	9/26/2019 4:33 PM
1057	49585	9/26/2019 4:28 PM
1058	Lac la belle	9/26/2019 4:27 PM
1059	Big lake , center lake	9/26/2019 4:27 PM
1060	Maple Bay, 49749	9/26/2019 4:25 PM
1061	D&R ramp Mouth of Saginaw River -Quanicassee River D&R ramp	9/26/2019 4:25 PM
1062	49056	9/26/2019 4:24 PM
1063	M59 and Jefferson	9/26/2019 4:22 PM
1064	South DNR ACCESS SITE 48629	9/26/2019 4:22 PM
1065	Selfridge	9/26/2019 4:21 PM
1066	49749	9/26/2019 4:21 PM
1067	Lexington State Harbor	9/26/2019 4:20 PM
1068	Selfridge	9/26/2019 4:20 PM
1069	Saginaw River Mouth, Higgins Lake North and South (South is always better due to number of launches), Elmwood Marina, Au Gres, several more....	9/26/2019 4:19 PM
1070	49720	9/26/2019 4:18 PM
1071	49120	9/26/2019 4:16 PM
1072	Hutchins lake	9/26/2019 4:16 PM
1073	O	9/26/2019 4:16 PM
1074	Port Austin	9/26/2019 4:14 PM
1075	I fish over 30 different places a year. Kalamazoo county, van Buren county, traverse county, charlavioux, st joe county,allegan county to name some.	9/26/2019 4:14 PM
1076	muskegon lake	9/26/2019 4:13 PM
1077	49444	9/26/2019 4:13 PM
1078	48703	9/26/2019 4:12 PM
1079	LAKE ST CLAIR WIXOM LAKE MIDLAND HOUGHT LAKE RUSH LAKE OAKLAND LAKE MACADEY LAKE	9/26/2019 4:12 PM
1080	49525	9/26/2019 4:10 PM
1081	49014	9/26/2019 4:10 PM
1082	South Haven, Sagutuck/douglas, Holland, St. Joe River	9/26/2019 4:10 PM
1083	48624	9/26/2019 4:09 PM
1084	Ludington, Manistee, Bolles Harbor	9/26/2019 4:09 PM
1085	Rapid river access, Gladstone marina & Escanaba marina	9/26/2019 4:09 PM
1086	49431	9/26/2019 4:07 PM
1087	Selfridge, Harley ensign	9/26/2019 4:07 PM

MSWC Boater Trends Survey

1088	wayne county area	9/26/2019 4:07 PM
1089	48346	9/26/2019 4:06 PM
1090	Dogs	9/26/2019 4:06 PM
1091	48329	9/26/2019 4:06 PM
1092	my sail boat is to big	9/26/2019 4:06 PM
1093	49441	9/26/2019 4:06 PM
1094	49423	9/26/2019 4:05 PM
1095	48383	9/26/2019 4:04 PM
1096	48045	9/26/2019 4:04 PM
1097	Little Glen lake	9/26/2019 4:04 PM
1098	48051	9/26/2019 4:04 PM
1099	Quanicassee, Saginaw river,lake st clair,	9/26/2019 4:03 PM
1100	48629	9/26/2019 4:02 PM
1101	Bolles Hatbor	9/26/2019 4:02 PM
1102	49735-9055	9/26/2019 4:02 PM
1103	49727	9/26/2019 4:01 PM
1104	ck Lake	9/26/2019 4:01 PM
1105	48169	9/26/2019 4:00 PM
1106	49935	9/26/2019 4:00 PM
1107	49093	9/26/2019 4:00 PM
1108	49770	9/26/2019 3:59 PM
1109	Sterling State Park, Round Lake (Hanover), Vandercook Lake	9/26/2019 3:59 PM
1110	49424 49423 49419 49417 49453 49408	9/26/2019 3:58 PM
1111	Long lake Oakland county. Devils lake lenawee county. Duck lake Alger county	9/26/2019 3:57 PM
1112	Ramp below the Alcona dam site ... but some one put canoe and kayak only.. just don't like that cause I have a "car top" light weight boat that I would like to put in the river... like I use to be able to do ...	9/26/2019 3:57 PM
1113	Muskegon River, Chippewa Lake, Lake Cadillac, Saginaw Bay, Marine City	9/26/2019 3:57 PM
1114	49756	9/26/2019 3:56 PM
1115	49720	9/26/2019 3:56 PM
1116	48060	9/26/2019 3:55 PM
1117	Harley	9/26/2019 3:55 PM
1118	Lake ponemah,	9/26/2019 3:55 PM
1119	48001	9/26/2019 3:55 PM
1120	East tawas	9/26/2019 3:54 PM
1121	49740 49721	9/26/2019 3:54 PM
1122	49083	9/26/2019 3:53 PM
1123	Lobdell lake	9/26/2019 3:53 PM
1124	Elmwood in Traverse city since the State launch site is HORRIBLE at Duncan Keith	9/26/2019 3:53 PM
1125	Otsego Lake State Park, Burt Lake SP, Young SP, Lake Margarethe, Thumb Lake, Houghton Lake DNR launch	9/26/2019 3:53 PM
1126	Clinton River, Selfridge	9/26/2019 3:52 PM

MSWC Boater Trends Survey

1127	48706	9/26/2019 3:52 PM
1128	Don't know	9/26/2019 3:51 PM
1129	Bay port	9/26/2019 3:50 PM
1130	launch our boat in the spring at clear lake	9/26/2019 3:50 PM
1131	48192	9/26/2019 3:50 PM
1132	Sleepy Hollow State Park (Clinton County), Houghton Lake, Higgins Lake, Thornapple Lake (Barry County)	9/26/2019 3:49 PM
1133	Delray, S.River Rd, Decker's Landing	9/26/2019 3:47 PM
1134	I don't recall the name of the boat launches. The one by the port city princess/old papermill, and the one by Dockers	9/26/2019 3:47 PM
1135	Walking	9/26/2019 3:46 PM
1136	DNR Clinton River Cutoff	9/26/2019 3:46 PM
1137	48045	9/26/2019 3:46 PM
1138	Cedarville, Hessel, Bay City Lake, Carp River Mouth, Copper Harbor, Eagle Harbor	9/26/2019 3:46 PM
1139	49740, 49770	9/26/2019 3:46 PM
1140	Lexington, Port Sanilac. Metro beach.	9/26/2019 3:46 PM
1141	Lake Charlevoix	9/26/2019 3:45 PM
1142	Clinton river DNR site.	9/26/2019 3:45 PM
1143	49679	9/26/2019 3:44 PM
1144	St Jean	9/26/2019 3:44 PM
1145	St joe county	9/26/2019 3:44 PM
1146	Lake Macatawa	9/26/2019 3:43 PM
1147	BOLLES HARBOR	9/26/2019 3:43 PM
1148	49715, 49783, 49725, 49726, 49719, 49781	9/26/2019 3:43 PM
1149	49424	9/26/2019 3:42 PM
1150	48656	9/26/2019 3:42 PM
1151	48706-1905	9/26/2019 3:41 PM
1152	Bolles harbor, Harbor Island, St. Clair Metropark	9/26/2019 3:41 PM
1153	Lobdell Lake - 48430	9/26/2019 3:40 PM
1154	48750	9/26/2019 3:40 PM
1155	Bills lake	9/26/2019 3:40 PM
1156	launch kayaks	9/26/2019 3:40 PM
1157	49685	9/26/2019 3:39 PM
1158	Holland	9/26/2019 3:39 PM
1159	Belleville lake, Port Austin State harbor	9/26/2019 3:38 PM
1160	48043	9/26/2019 3:38 PM
1161	St Ignace	9/26/2019 3:38 PM
1162	Wixom Lake	9/26/2019 3:38 PM
1163	Lake Charlevoix Public Access Site @ Ironton; Charlevoix City Launch; East Jordan City Launch	9/26/2019 3:37 PM
1164	Selfridge	9/26/2019 3:37 PM
1165	Muskegon, Ludington, Cheboygan, mackinac City, Mackinac Island	9/26/2019 3:37 PM

MSWC Boater Trends Survey

1166	hess lake, newago S.P.,gun lake S.P.	9/26/2019 3:37 PM
1167	DNR launch at the mouth of the Saginaw River, Quanicassee DNR launch, Ludington DNR, we vacation with our boat and like to select places on the water, so we use a variety of places throughout the year. I love the DNR launch at the Saginaw River Mouth, but I wish someone would man the booth. I pay my fair share and others should as well. MI always wants more money, but when they have ways of getting it and only SOME of us pay while others get a free ride. Most launches are very nice but some could use branch and limb removal at the launch areas.	9/26/2019 3:37 PM
1168	49749	9/26/2019 3:36 PM
1169	48117	9/26/2019 3:36 PM
1170	Algonac 48001	9/26/2019 3:36 PM
1171	Up	9/26/2019 3:35 PM
1172	Clear lake, tomahawk lake	9/26/2019 3:35 PM
1173	48629	9/26/2019 3:35 PM
1174	48066	9/26/2019 3:35 PM
1175	49045	9/26/2019 3:35 PM
1176	Aloha on mullett lake	9/26/2019 3:35 PM
1177	48023	9/26/2019 3:34 PM
1178	49735	9/26/2019 3:34 PM
1179	Sears Park	9/26/2019 3:34 PM
1180	48750	9/26/2019 3:34 PM
1181	Statewide.	9/26/2019 3:34 PM
1182	Lake Orion	9/26/2019 3:34 PM
1183	Union Lake, Wolverine Lake, Long Lake and other lakes that suit the weather.	9/26/2019 3:34 PM
1184	49028 gilead lake access	9/26/2019 3:33 PM
1185	49010	9/26/2019 3:33 PM
1186	Ballenger Park River Rouge	9/26/2019 3:33 PM
1187	fruitport municipal (the best ever) city of grand haven 49417 but flooded this year	9/26/2019 3:33 PM
1188	bay city , bay port & mud creek	9/26/2019 3:33 PM
1189	48226	9/26/2019 3:32 PM
1190	Lake Interstate, Lake Leelanau Narrows, Leland, West Grand Traverse Bay	9/26/2019 3:32 PM
1191	48038	9/26/2019 3:32 PM
1192	49304	9/26/2019 3:32 PM
1193	Many different ones	9/26/2019 3:32 PM
1194	48079	9/26/2019 3:31 PM
1195	West Higgins Lake	9/26/2019 3:30 PM
1196	DeTour Village	9/26/2019 3:30 PM
1197	Most are within the thumb	9/26/2019 3:30 PM
1198	???	9/26/2019 3:30 PM
1199	Benton Harbor & South Haven primarily	9/26/2019 3:30 PM
1200	marquette au train munising	9/26/2019 3:29 PM
1201	48703	9/26/2019 3:29 PM
1202	Selfridge boat launch	9/26/2019 3:29 PM

MSWC Boater Trends Survey

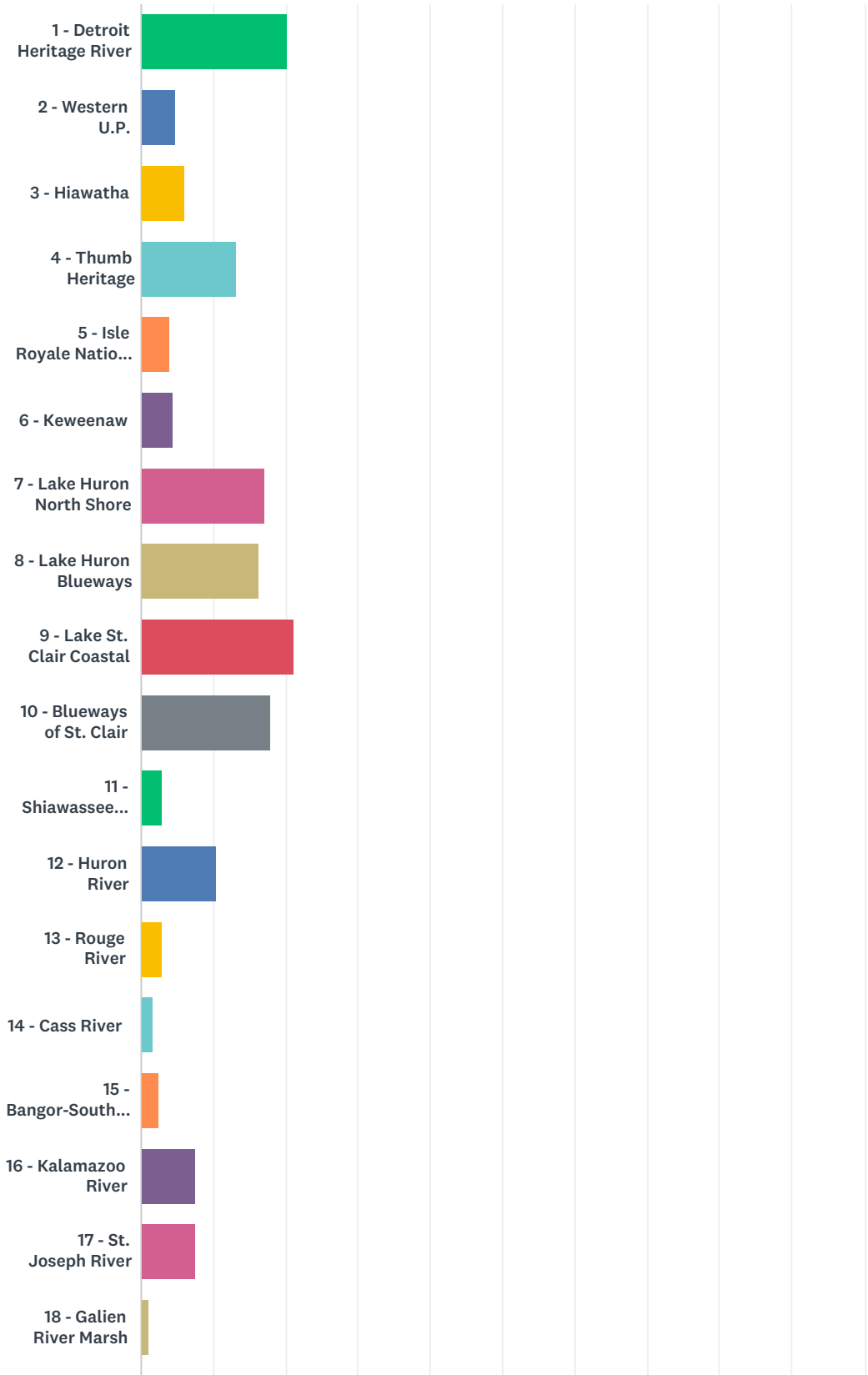
1203	cooks bay miliquokins lake	9/26/2019 3:29 PM
1204	TOo many to list but primarily Carter Lake, Barry County	9/26/2019 3:29 PM
1205	Fairhaven, Algonac DNR boat launch, Milliken State Park, Delray boat launch, Wyandotte boat launch, Lake Erie Metropark, Sterling State Park other but not on a regular basis	9/26/2019 3:29 PM
1206	Harbor Island Grand Haven	9/26/2019 3:28 PM
1207	Bass River	9/26/2019 3:28 PM
1208	49445	9/26/2019 3:28 PM
1209	Pickney Recreation area, Joslin Lake - New Launch is great. Needs a dock desperately	9/26/2019 3:28 PM
1210	Appleton lake	9/26/2019 3:28 PM
1211	Morrison Lake, Wabasis Lake, Murray Lake, Saginaw Bay, Portage Lake, Campau Lake, Gun Lake, East Bay - Traverse City	9/26/2019 3:28 PM
1212	49460	9/26/2019 3:27 PM
1213	49097	9/26/2019 3:27 PM
1214	48023	9/26/2019 3:26 PM
1215	bay city, sebewaing	9/26/2019 3:26 PM
1216	Elmwood Marina	9/26/2019 3:26 PM
1217	48505	9/26/2019 3:25 PM
1218	48450	9/26/2019 3:24 PM
1219	49953	9/26/2019 3:24 PM
1220	rosco rd	9/26/2019 3:08 PM
1221	Rawsonville Rd. Pyblic access.	9/26/2019 2:35 PM
1222	49241	9/26/2019 2:28 PM
1223	N/A	9/26/2019 2:22 PM
1224	49623	9/26/2019 2:16 PM
1225	49656	9/26/2019 1:57 PM
1226	48045	9/26/2019 1:56 PM
1227	49454 & 49431	9/26/2019 1:38 PM
1228	Lake St, Clare don't know zip or name	9/26/2019 12:49 PM
1229	Bay City, Ludington, Manistee, AuGres, Harbor Beach, Port Sanilac, frankfort	9/26/2019 12:31 PM
1230	Sand Lake	9/26/2019 12:28 PM
1231	48421	9/26/2019 12:25 PM
1232	wabasis, big pine, hardy	9/26/2019 12:23 PM
1233	Burt lake, fair haven LSC, Linwood rd	9/26/2019 12:18 PM
1234	LSC Metropark	9/26/2019 12:07 PM
1235	St. Ignace boat launch, Lake Charlevoix launches,	9/26/2019 12:03 PM
1236	48187	9/26/2019 12:03 PM
1237	Harley ensign	9/26/2019 11:48 AM
1238	boiles Harbor	9/26/2019 11:45 AM
1239	Grand haven, croton and hardy dam	9/26/2019 11:31 AM
1240	48461	9/26/2019 11:22 AM
1241	Linwood blacklake crystal lake rock lake bass lake town line horseshoe lake	9/26/2019 11:21 AM

MSWC Boater Trends Survey

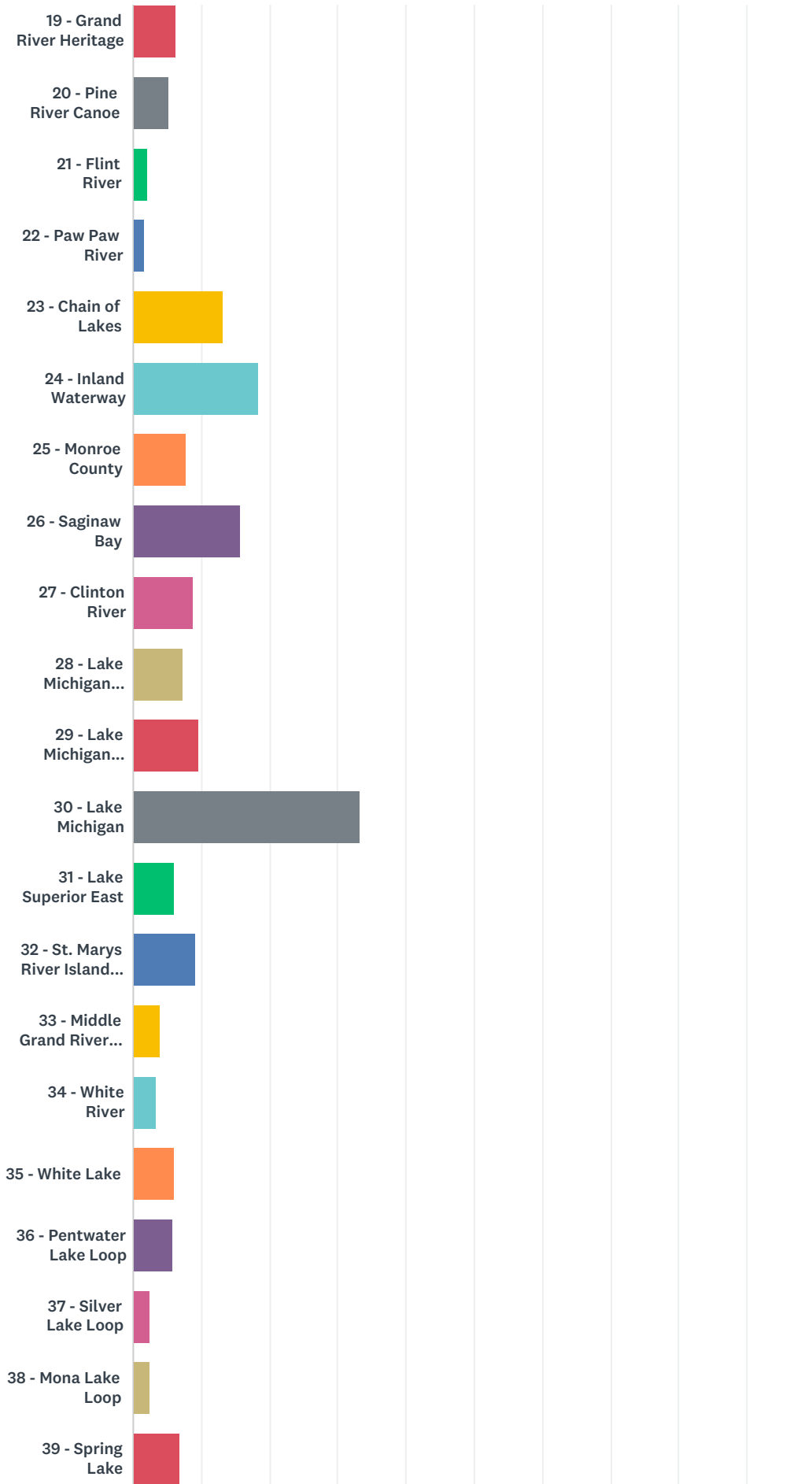
1242	South Higgins Lake state park	9/26/2019 11:18 AM
1243	48001	9/26/2019 11:17 AM
1244	48509 nearby facilities have walking trails which I also use	9/26/2019 11:17 AM
1245	48001	9/26/2019 11:17 AM
1246	sage lake	9/26/2019 11:16 AM
1247	Recreation	9/26/2019 11:11 AM
1248	48658	9/26/2019 11:09 AM
1249	48023	9/26/2019 11:07 AM
1250	48038	9/26/2019 11:01 AM
1251	13th Street 48060	9/26/2019 10:57 AM
1252	Duncan lake public access, leach lake public access, middle lake public access, gun lake public access, long lake public access, Hall lake public access, other long lake public access	9/25/2019 4:26 PM

Q14 Using the map as reference, please indicate the water trail(s) you have used:

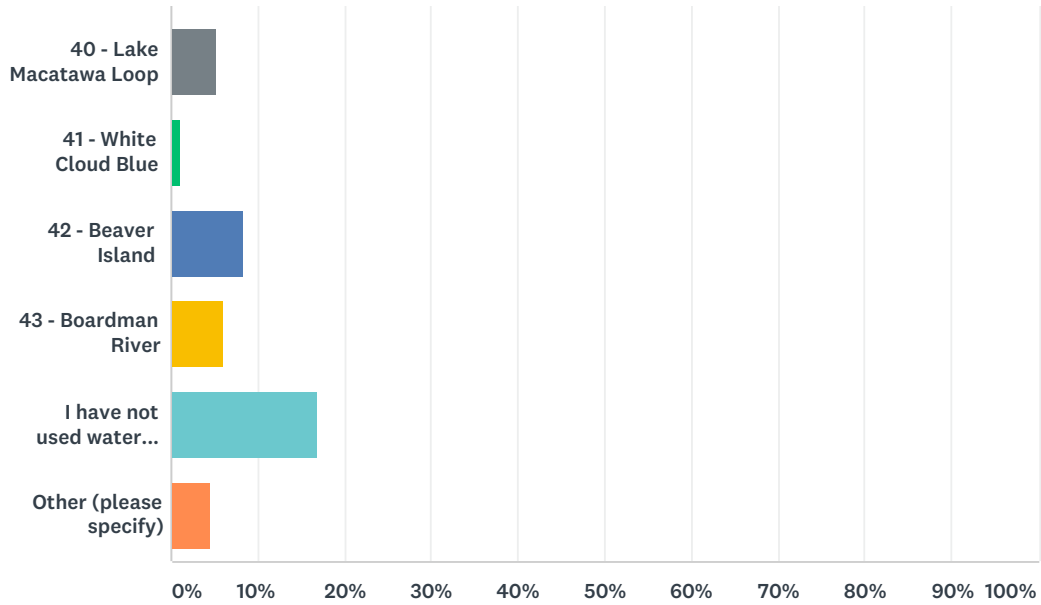
Answered: 2,799 Skipped: 944



MSWC Boater Trends Survey



MSWC Boater Trends Survey



ANSWER CHOICES	RESPONSES	
1 - Detroit Heritage River	20.36%	570
2 - Western U.P.	4.89%	137
3 - Hiawatha	6.07%	170
4 - Thumb Heritage	13.11%	367
5 - Isle Royale National Park	4.04%	113
6 - Keweenaw	4.39%	123
7 - Lake Huron North Shore	17.11%	479
8 - Lake Huron Blueways	16.36%	458
9 - Lake St. Clair Coastal	21.22%	594
10 - Blueways of St. Clair	18.01%	504
11 - Shiawassee Heritage River	2.97%	83
12 - Huron River	10.40%	291
13 - Rouge River	2.86%	80
14 - Cass River	1.68%	47
15 - Bangor-South Haven Heritage	2.61%	73
16 - Kalamazoo River	7.50%	210
17 - St. Joseph River	7.47%	209
18 - Galien River Marsh	1.04%	29
19 - Grand River Heritage	6.32%	177
20 - Pine River Canoe	5.25%	147
21 - Flint River	2.18%	61
22 - Paw Paw River	1.68%	47

MSWC Boater Trends Survey

23 - Chain of Lakes	13.15%	368
24 - Inland Waterway	18.51%	518
25 - Monroe County	7.65%	214
26 - Saginaw Bay	15.79%	442
27 - Clinton River	8.86%	248
28 - Lake Michigan (Mason-Lake)	7.25%	203
29 - Lake Michigan (WMEAC)	9.72%	272
30 - Lake Michigan	33.30%	932
31 - Lake Superior East	6.00%	168
32 - St. Marys River Island Explorer	9.29%	260
33 - Middle Grand River Heritage	3.97%	111
34 - White River	3.39%	95
35 - White Lake	6.00%	168
36 - Pentwater Lake Loop	5.79%	162
37 - Silver Lake Loop	2.54%	71
38 - Mona Lake Loop	2.54%	71
39 - Spring Lake	6.93%	194
40 - Lake Macatawa Loop	5.25%	147
41 - White Cloud Blue	0.96%	27
42 - Beaver Island	8.40%	235
43 - Boardman River	6.04%	169
I have not used water trails.	16.90%	473
Other (please specify)	4.68%	131
Total Respondents: 2,799		

#	OTHER (PLEASE SPECIFY)	DATE
1	Lake ovid	10/8/2019 4:56 AM
2	PM River	10/7/2019 9:29 AM
3	Several lower and upper mi rivers	10/7/2019 12:07 AM
4	Pictured Rocks	10/6/2019 11:22 AM
5	Ausable (Grayling to Tawas, Manistee (CR 612 to Yellow Trees, Pine to Manistee, Pere Marquette, Betsie	10/6/2019 9:04 AM
6	Little Bay De Noc	10/6/2019 8:35 AM
7	Pictured Rocks, Grand Island	10/6/2019 8:16 AM
8	Detroit river	10/5/2019 3:53 PM
9	Ludington State Park/Hamlin Lake , Sturgeon River, Muskegon River	10/5/2019 1:33 PM
10	Au Sable River / Manistee River	10/5/2019 1:21 PM
11	Au Sable / Manistee	10/5/2019 12:58 PM

MSWC Boater Trends Survey

12	rogue river in Kent county	10/5/2019 12:15 PM
13	Didn't know they existed	10/5/2019 11:47 AM
14	Multiplr day river trips, need more dispersed campsites.	10/5/2019 9:34 AM
15	Chaboygan river	10/5/2019 8:05 AM
16	big manistie and the pere marquette	10/5/2019 6:46 AM
17	Manistee	10/5/2019 2:59 AM
18	North Channel	10/4/2019 8:27 PM
19	North Channel	10/4/2019 7:49 PM
20	None	10/4/2019 7:37 PM
21	Ausable River	10/4/2019 7:29 PM
22	Inland Waterway	10/4/2019 5:30 PM
23	This map is not completely accurate. We kayak the Muskegon River and Muskegon Lake Loop of the Lake Michigan Water Trail in Muskegon County	10/4/2019 4:52 PM
24	new to me, but we'll try them !	10/4/2019 3:58 PM
25	Saugatuck	10/4/2019 3:33 PM
26	Ok	10/4/2019 1:29 PM
27	Manistee River, AuSable River	10/4/2019 1:18 PM
28	Oakland Co.White Lk., Lobbdel, Mullet,, Higgins	10/4/2019 12:58 PM
29	Thread Creek	10/4/2019 12:43 PM
30	Yes	10/4/2019 12:29 PM
31	manistee river	10/4/2019 12:25 PM
32	Ausable River	10/4/2019 11:54 AM
33	Traverse Bay	10/4/2019 11:44 AM
34	Detroit River	10/4/2019 11:41 AM
35	Muskegon	10/4/2019 11:30 AM
36	Kawkawlin River	10/4/2019 11:27 AM
37	Frankfort	10/4/2019 11:06 AM
38	Have rules put into place to keep kayaks close to shore, I see way to many close calls out there as there numbers are growing, you have fast boats ripping past at un safe distance	10/4/2019 10:52 AM
39	Muskegon and chippewas	10/4/2019 10:51 AM
40	Au sable	10/4/2019 10:44 AM
41	Menominee River , Ford River	10/4/2019 10:40 AM
42	St Clair River; Black River	10/4/2019 10:38 AM
43	Thornapple river	10/4/2019 10:38 AM
44	AuTrain River U.P. Not a designated water trail	10/4/2019 10:35 AM
45	rifle river	10/4/2019 10:31 AM
46	None	10/4/2019 10:30 AM
47	Homer Lake	10/4/2019 10:29 AM
48	Sturgeon River	10/3/2019 2:32 PM
49	T ib	10/3/2019 11:02 AM

MSWC Boater Trends Survey

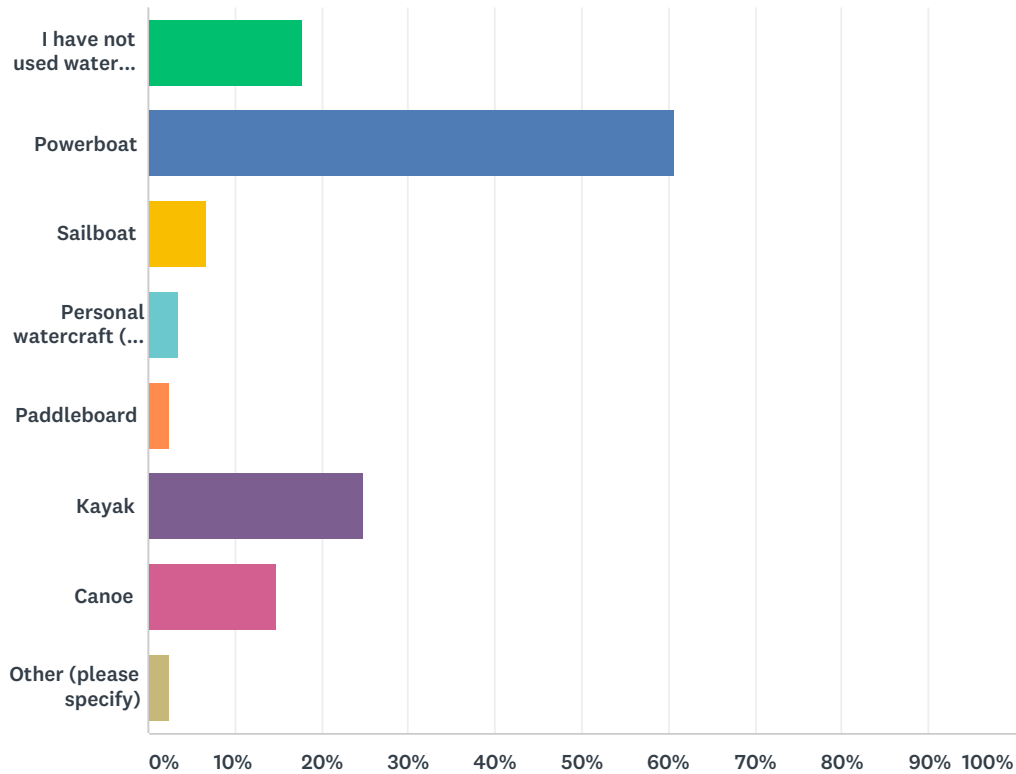
50	Muskegon River	10/3/2019 10:07 AM
51	Platte river from lake to lake michigan	10/3/2019 9:06 AM
52	Lake Erie	10/2/2019 10:02 PM
53	North Channel	10/2/2019 8:57 PM
54	Pretty Ls quiet area, Luce Co and Big Island Lake area in School craft Co	10/2/2019 7:29 AM
55	I like fishing from everywhere	10/2/2019 12:33 AM
56	Platte River, Ontonagon River	10/1/2019 12:05 PM
57	I use inland rivers that provide state forest land to camp	10/1/2019 12:03 PM
58	Paint River	10/1/2019 8:40 AM
59	Platte River	10/1/2019 7:45 AM
60	Black River	9/30/2019 11:15 PM
61	Other inland lakes	9/30/2019 10:22 PM
62	Jordan River	9/30/2019 7:09 PM
63	Shiawassee Flats Saginaw, Michigamme Baraga, MAnistee river, Ausable River,	9/30/2019 3:58 PM
64	Tipsico	9/30/2019 3:56 PM
65	Jordan River	9/30/2019 3:52 PM
66	Rifle River, Ausable River, Muskegon River	9/30/2019 3:33 PM
67	Ludington State Park water trail on Hamlin Lake	9/30/2019 3:15 PM
68	Manistee River	9/30/2019 11:34 AM
69	Ausable River	9/30/2019 7:33 AM
70	Grand Traverse West bay	9/29/2019 10:05 PM
71	Ausable River	9/29/2019 2:56 PM
72	Bear river, Petoskey and Sturgeon river near Wolverine	9/29/2019 7:34 AM
73	Chippewa River	9/29/2019 6:18 AM
74	What is a "water trail"?	9/28/2019 10:47 AM
75	none	9/28/2019 4:29 AM
76	Muskegon River, Rifle River	9/27/2019 9:12 PM
77	Pinckney -- Bruin, Watson, Halfmoon lakes	9/27/2019 6:06 PM
78	Lake Charlevoix	9/27/2019 3:13 PM
79	Black River	9/27/2019 1:31 PM
80	Indian river	9/27/2019 12:58 PM
81	Cheboygan River	9/27/2019 12:31 PM
82	Muskegon Lake Water Trail	9/27/2019 11:53 AM
83	Menominee	9/27/2019 11:33 AM
84	Pier Marquette River, Platte River, Chrystal River, Portage Creek and others	9/27/2019 10:37 AM
85	Taquamenen River	9/27/2019 10:33 AM
86	Au Sable River	9/27/2019 8:23 AM
87	You	9/27/2019 8:09 AM
88	Rifle River Ausable River Upper Manistee River	9/27/2019 8:00 AM
89	Water trail designation is a waste of staff time.	9/27/2019 6:49 AM
90	Manistee River	9/26/2019 10:40 PM

MSWC Boater Trends Survey

91	Muskegon lake	9/26/2019 10:27 PM
92	None	9/26/2019 10:25 PM
93	n/a	9/26/2019 10:14 PM
94	ausable	9/26/2019 9:41 PM
95	Whitmore lake, Coldwater chain of lakes	9/26/2019 9:24 PM
96	North Channel	9/26/2019 9:15 PM
97	Charlevoix gun lake cross village. Crystal lake. Glen lake. Murray lake. Campau Lake. Pratt.	9/26/2019 9:05 PM
98	Chicago lake	9/26/2019 8:56 PM
99	Grand Haven	9/26/2019 8:35 PM
100	Inland waterway	9/26/2019 8:12 PM
101	Ludington State Park Canoe Pathway	9/26/2019 7:57 PM
102	none	9/26/2019 7:46 PM
103	Ludington State Park	9/26/2019 7:45 PM
104	None, didn't know these existed!	9/26/2019 6:51 PM
105	Jordan River, Manistee River, AuSable River	9/26/2019 6:51 PM
106	Muskegon Channel	9/26/2019 6:28 PM
107	None	9/26/2019 6:08 PM
108	None	9/26/2019 5:56 PM
109	St. Clair River for walleye	9/26/2019 5:34 PM
110	Ohio	9/26/2019 5:19 PM
111	Hamlin Lake	9/26/2019 4:48 PM
112	None	9/26/2019 4:33 PM
113	Muskegon Lake	9/26/2019 4:27 PM
114	van etten	9/26/2019 4:07 PM
115	none. kyack the brule river	9/26/2019 4:01 PM
116	Saginaw river	9/26/2019 3:56 PM
117	Pere marquette lake/river	9/26/2019 3:47 PM
118	Betsie	9/26/2019 3:46 PM
119	Kayak on Rifle River and many lakes in MI	9/26/2019 3:43 PM
120	Pere Marquette	9/26/2019 3:42 PM
121	Magician Lake	9/26/2019 3:40 PM
122	muskegon river	9/26/2019 3:39 PM
123	This definition of water trails is vague. There are plenty of marked routes on navigable waterways that are not listed above. I prefer to find my own places to paddle.	9/26/2019 3:33 PM
124	Lake St. Clair Water Trail	9/26/2019 3:33 PM
125	North Channel	9/26/2019 3:27 PM
126	Ontonagaon river	9/26/2019 3:26 PM
127	NONE	9/26/2019 2:51 PM
128	None	9/26/2019 12:57 PM
129	N/A	9/26/2019 11:55 AM
130	Rifle River, Arenac County	9/26/2019 11:11 AM

Q15 If you have used water trails, what type of boat were you using?

Answered: 2,594 Skipped: 1,149



ANSWER CHOICES	RESPONSES
I have not used water trails	17.69% 459
Powerboat	60.60% 1,572
Sailboat	6.59% 171
Personal watercraft (jet ski)	3.47% 90
Paddleboard	2.51% 65
Kayak	24.94% 647
Canoe	14.76% 383
Other (please specify)	2.43% 63
Total Respondents: 2,594	

#	OTHER (PLEASE SPECIFY)	DATE
1	tube	10/9/2019 8:37 AM
2	rowboat	10/7/2019 1:26 PM
3	rib	10/6/2019 8:53 AM
4	Drift boat	10/6/2019 8:09 AM
5	river float	10/6/2019 7:41 AM
6	J	10/5/2019 2:58 PM

MSWC Boater Trends Survey

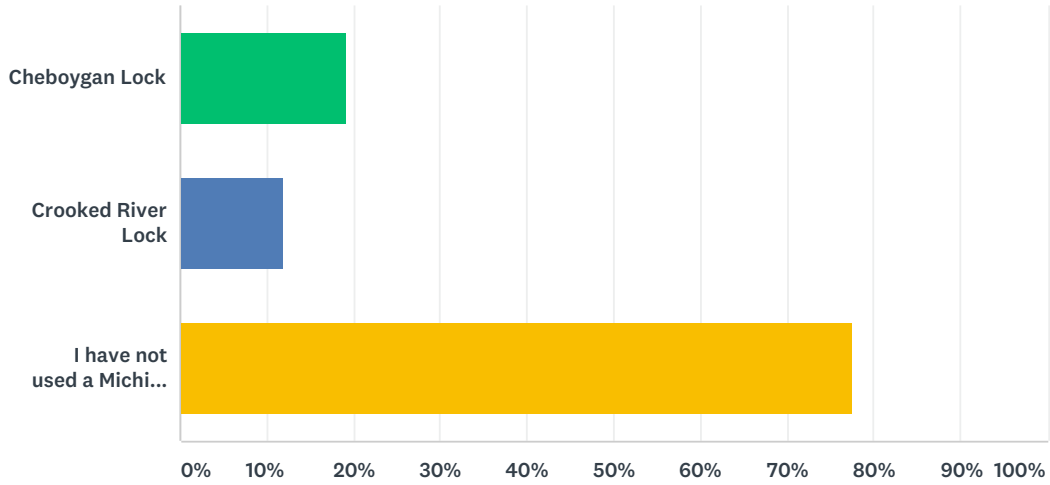
7	didnt know they existed	10/5/2019 11:47 AM
8	dinghy	10/5/2019 11:20 AM
9	jon boat	10/5/2019 9:07 AM
10	Inner tube	10/4/2019 10:51 PM
11	Paddle boat	10/4/2019 6:03 PM
12	Pontoon	10/4/2019 4:26 PM
13	Layout boat	10/4/2019 12:29 PM
14	drift boat	10/4/2019 12:25 PM
15	Dinghy	10/4/2019 12:00 PM
16	River boat	10/4/2019 11:30 AM
17	wading	10/4/2019 10:53 AM
18	None	10/4/2019 10:39 AM
19	Dinghy	10/4/2019 10:38 AM
20	dinghy	10/4/2019 10:29 AM
21	Tube	10/3/2019 2:32 PM
22	Pontoon and small fishing boat	10/3/2019 9:06 AM
23	Pontoon	10/2/2019 9:47 PM
24	Dinghy	10/2/2019 8:32 PM
25	Inflatable	10/2/2019 12:33 AM
26	Pontoon	10/1/2019 7:22 PM
27	Dingy	10/1/2019 10:35 AM
28	Pontoon	9/30/2019 11:15 PM
29	windsurfer	9/30/2019 3:03 PM
30	Row Boat	9/30/2019 2:55 PM
31	L	9/29/2019 12:20 PM
32	pontoon	9/28/2019 11:21 PM
33	tubes and personal fishing tube	9/28/2019 12:41 PM
34	?	9/28/2019 10:47 AM
35	na	9/28/2019 4:29 AM
36	Bass Boat	9/27/2019 8:34 PM
37	Manastee	9/27/2019 1:01 PM
38	Tube	9/27/2019 9:16 AM
39	Shore Fishing	9/27/2019 8:41 AM
40	Personal Pontoon Boat	9/27/2019 8:00 AM
41	Tube	9/27/2019 7:05 AM
42	Dingy	9/27/2019 6:33 AM
43	Docks, Piers	9/26/2019 10:51 PM
44	Personal pontoon	9/26/2019 10:35 PM
45	Pontoon	9/26/2019 9:24 PM
46	Dinghy	9/26/2019 9:14 PM
47	Rowboat	9/26/2019 9:14 PM

MSWC Boater Trends Survey

48	jet boat	9/26/2019 8:18 PM
49	bank fish	9/26/2019 6:55 PM
50	Fly fishing raft	9/26/2019 6:50 PM
51	12 foot row boat	9/26/2019 6:17 PM
52	Rowboat	9/26/2019 6:04 PM
53	Dinghy	9/26/2019 5:54 PM
54	Fishing boat	9/26/2019 5:11 PM
55	Float tube	9/26/2019 4:31 PM
56	Inflatable w outboard	9/26/2019 4:08 PM
57	Fishing boat	9/26/2019 3:52 PM
58	walking	9/26/2019 3:42 PM
59	AuSable River, once about 20 years ago.	9/26/2019 2:25 PM
60	Paddle boat	9/26/2019 12:29 PM
61	Zodiac	9/26/2019 12:08 PM
62	Inflatable Rowboat	9/26/2019 12:05 PM
63	innertubes	9/26/2019 11:11 AM

Q16 Which Michigan lock and dam facilities have you used?

Answered: 2,836 Skipped: 907



ANSWER CHOICES	RESPONSES	
Cheboygan Lock	19.22%	545
Crooked River Lock	11.95%	339
I have not used a Michigan lock and dam facility	77.54%	2,199
Total Respondents: 2,836		

MSWC Boater Trends Survey

Q17 What is the most important improvement that could be made to the lock and dam facilities:

Answered: 415 Skipped: 3,328

#	RESPONSES	DATE
1	N/A	10/9/2019 8:55 PM
2	Waiting dock	10/8/2019 6:49 PM
3	?	10/8/2019 11:00 AM
4	better boat ac.& up grade lock.	10/8/2019 8:21 AM
5	N/a	10/8/2019 4:56 AM
6	more access!	10/7/2019 9:35 PM
7	?	10/7/2019 7:19 PM
8	width and length	10/7/2019 1:35 PM
9	Rebuild to ensure continuation of use	10/7/2019 10:50 AM
10	better marking of the rocks on the up river side of the lock.	10/7/2019 8:10 AM
11	stop screwing citizens and provide basic services for those using facilities	10/7/2019 7:11 AM
12	Don't know	10/7/2019 12:07 AM
13	it is a good setup, they do good job	10/6/2019 9:12 PM
14	Na	10/6/2019 2:50 PM
15	No problems with these!	10/6/2019 1:03 PM
16	N/A	10/6/2019 12:50 PM
17	Na	10/6/2019 11:32 AM
18	NA	10/6/2019 11:22 AM
19	Haven't used them.	10/6/2019 10:14 AM
20	Works for me now	10/6/2019 9:18 AM
21	More info posted viewable from boat	10/6/2019 9:17 AM
22	Better Ramps & Docks	10/6/2019 8:35 AM
23	Just a general clean up.	10/6/2019 7:49 AM
24	None they are great	10/6/2019 6:37 AM
25	.	10/5/2019 10:30 PM
26	I have no clue	10/5/2019 9:55 PM
27	Don't know	10/5/2019 9:47 PM
28	Better lines to hold	10/5/2019 8:48 PM
29	Na.	10/5/2019 6:57 PM
30	Posted schedule of loch hours/day & posted weather/water conditions - so you can see them from the water (ie., post at the Cheboygan loch what the conditions of Straights of Mackinac are & forecast to be)	10/5/2019 5:57 PM
31	keep them repaired, which they may already be.	10/5/2019 4:06 PM
32	A place stage your boat while waiting for a lock.	10/5/2019 2:58 PM

MSWC Boater Trends Survey

33	Na	10/5/2019 1:57 PM
34	Sault Ste Marie is a lock system that we have used. Also all the locks in the Trent Severn Waterways. Welland Canal	10/5/2019 1:43 PM
35	Timing	10/5/2019 12:04 PM
36	Na	10/5/2019 11:47 AM
37	nothing	10/5/2019 11:20 AM
38	None	10/5/2019 9:41 AM
39	NA	10/5/2019 9:34 AM
40	NA	10/5/2019 8:48 AM
41	Na	10/5/2019 8:44 AM
42	Bigger or removal completely	10/5/2019 8:35 AM
43	Let the EXPERTS DO THERE JOB BOIES THAT HAVE THAT GLOW IN THE DARK PAINT AROUND THE LOCK S AN DAM SO BOATERS AT NIGHT IN THE WATER CAN SEE THESE AREAS NIT TO GO NEAR THEM OR BETTER FLASHING LIGHTS	10/5/2019 8:28 AM
44	Cedar River Harbor entrance more night vision to enhance the stone break waters on either side and buoy markers.	10/5/2019 7:43 AM
45	n/a	10/5/2019 6:46 AM
46	N/A	10/5/2019 6:06 AM
47	Storage bathroom facilities and maybe a food truck	10/5/2019 2:45 AM
48	Lines to hold your boat	10/4/2019 10:46 PM
49	Not sure	10/4/2019 9:04 PM
50	Extended hours in the evening.	10/4/2019 7:47 PM
51	Maintenance and docking	10/4/2019 7:37 PM
52	What I have used is generally in good shape so I can not suggest any improvements.	10/4/2019 7:36 PM
53	Restrooms	10/4/2019 7:29 PM
54	Don't know	10/4/2019 7:25 PM
55	N/A	10/4/2019 6:03 PM
56	remove all dams	10/4/2019 6:03 PM
57	better handicap access	10/4/2019 5:54 PM
58	S	10/4/2019 5:39 PM
59	Having to ring a bell at the Crooked River lock is not always easy. There has to be a better way. We had problems getting the operator of the Alanson swing bridge to open it. The operator was asleep once and a pedestrian had to wake him up!	10/4/2019 5:30 PM
60	Nothing we have had great experiences	10/4/2019 3:57 PM
61	longer season hours	10/4/2019 3:31 PM
62	Good as is.	10/4/2019 3:07 PM
63	x	10/4/2019 2:46 PM
64	Bumpers	10/4/2019 2:14 PM
65	N/a	10/4/2019 2:06 PM
66	NA	10/4/2019 1:55 PM
67	None	10/4/2019 1:53 PM
68	Would like improved mooring at Cheboygan locks, e.i., install a mooring rope on upper lock entrance (similar to mooring rope at lower lock entrance). It is sometimes difficult with wind, water current, etc to tie boat to cleats on the walkway.	10/4/2019 1:41 PM

MSWC Boater Trends Survey

69	They're good the way they are	10/4/2019 1:28 PM
70	N/A	10/4/2019 12:58 PM
71	??	10/4/2019 12:58 PM
72	Don't know	10/4/2019 12:39 PM
73	None	10/4/2019 12:37 PM
74	Not applicable	10/4/2019 12:29 PM
75	n/a	10/4/2019 12:27 PM
76	None	10/4/2019 12:16 PM
77	Na	10/4/2019 12:14 PM
78	not sure it was about 8 years ago!	10/4/2019 12:10 PM
79	I think the crooked river lock is in good working order.	10/4/2019 12:07 PM
80	N/A	10/4/2019 12:06 PM
81	Maintenance. I understand the Cheboygan lock is in need of improvement before it fails	10/4/2019 12:01 PM
82	Not sure	10/4/2019 11:55 AM
83	Sitting Area	10/4/2019 11:54 AM
84	none	10/4/2019 11:54 AM
85	Don't know because I have never used one	10/4/2019 11:53 AM
86	IDK I didn't have concerns with this facility.	10/4/2019 11:51 AM
87	NA	10/4/2019 11:48 AM
88	N/A	10/4/2019 11:42 AM
89	keep the carp and other creatures that don't belong out	10/4/2019 11:39 AM
90	Nothing	10/4/2019 11:30 AM
91	Worked great for us	10/4/2019 11:24 AM
92	Make the connection from Cheboygan to Lake Michigan.	10/4/2019 11:22 AM
93	Up date them for bigger ships.	10/4/2019 11:18 AM
94	The lock is in need of repair, it's condition is so poor we are concerned about our safety.	10/4/2019 11:17 AM
95	Size and height clearance	10/4/2019 11:17 AM
96	There are many unused dams still in place throughout the state. They should be removed to allow natural water flow	10/4/2019 11:16 AM
97	DO NOT KNOW HAVE NOT USED ONE	10/4/2019 11:12 AM
98	n/a	10/4/2019 11:11 AM
99	Kayak wheels to move kayaks past the dams	10/4/2019 11:11 AM
100	Dockage Cleats	10/4/2019 11:03 AM
101	Keep them operating	10/4/2019 11:01 AM
102	n/a	10/4/2019 10:55 AM
103	porta potty nearby	10/4/2019 10:54 AM
104	unknown	10/4/2019 10:53 AM
105	Alcohol use allowed	10/4/2019 10:51 AM
106	Better dockage	10/4/2019 10:49 AM
107	No opinion. Have not used such facilities.	10/4/2019 10:49 AM
108	current control	10/4/2019 10:48 AM

MSWC Boater Trends Survey

109	none	10/4/2019 10:48 AM
110	Not applicable	10/4/2019 10:47 AM
111	None	10/4/2019 10:44 AM
112	Modernize	10/4/2019 10:41 AM
113	NA	10/4/2019 10:41 AM
114	Larger	10/4/2019 10:39 AM
115	N/A	10/4/2019 10:39 AM
116	more facilities	10/4/2019 10:39 AM
117	Upgrade them all add security cameras	10/4/2019 10:38 AM
118	we had a 30 minute wait time to get up river. Too long	10/4/2019 10:37 AM
119	Cheboygan Lock is great	10/4/2019 10:37 AM
120	Forrest Lake/Cleveland Cliffs Basin. Water gets too low to launch at times. Another ramp close to the dam on the west side would help when low water is evident.	10/4/2019 10:36 AM
121	No response	10/4/2019 10:34 AM
122	N/A	10/4/2019 10:32 AM
123	navigable current	10/4/2019 10:32 AM
124	expanded hours.	10/4/2019 10:31 AM
125	none	10/4/2019 10:31 AM
126	Not Applicable	10/4/2019 10:30 AM
127	These facilities seem to be in good order	10/4/2019 10:28 AM
128	Handicap accessible	10/4/2019 10:28 AM
129	none	10/4/2019 10:28 AM
130	lower fee	10/4/2019 10:26 AM
131	There could be more of them	10/4/2019 10:25 AM
132	Can't think of anything	10/4/2019 10:24 AM
133	Access	10/4/2019 10:21 AM
134	Modern bathroom	10/3/2019 8:27 PM
135	Lower fees	10/3/2019 4:44 PM
136	No thoughts because I haven't used them.	10/3/2019 4:33 PM
137	keep maintained	10/3/2019 8:45 AM
138	Ensuring hours of operation are as accommodating as possible during summer hours	10/3/2019 8:32 AM
139	Keep lock we'll walls clean.	10/3/2019 8:17 AM
140	Law enforcement	10/2/2019 10:41 PM
141	None	10/2/2019 9:40 PM
142	Lower rates and longer hours at Cheboygan	10/2/2019 7:47 PM
143	enforcement,	10/2/2019 4:30 PM
144	NA	10/2/2019 2:28 PM
145	None	10/2/2019 12:13 PM
146	I LIKE THEM	10/2/2019 11:51 AM
147	Unkown.	10/2/2019 11:16 AM
148	Credit card for payment	10/2/2019 11:11 AM

MSWC Boater Trends Survey

149	Just keep them in good repair	10/2/2019 10:27 AM
150	N/A	10/2/2019 7:51 AM
151	first time use it was somewhat confusing, i was not sure what to expect so made it a little intimidating. not sure how to fix that other than encourage other to just DO IT	10/2/2019 7:36 AM
152	Do not use	10/2/2019 7:29 AM
153	Clinton river spillway dam can be removed	10/2/2019 12:33 AM
154	Fine as is!	10/1/2019 12:56 PM
155	nothing	10/1/2019 12:28 PM
156	N/A	10/1/2019 9:10 AM
157	More tie off space for busier times	10/1/2019 8:50 AM
158	Maintenance	10/1/2019 8:50 AM
159	Keep them open	10/1/2019 8:19 AM
160	lighting at tippy dam launch	10/1/2019 7:41 AM
161	none	10/1/2019 7:12 AM
162	Boat ramp on belill	10/1/2019 6:04 AM
163	n/a	10/1/2019 12:03 AM
164	East portage	9/30/2019 8:48 PM
165	Not sure. It's been awhile.	9/30/2019 8:28 PM
166	I don't have any suggestions; they are both fine as is.	9/30/2019 8:15 PM
167	None	9/30/2019 7:52 PM
168	Connect Crooked River to Lake Michigan so the Inland Waterway goes from Huron to Michigan.	9/30/2019 6:05 PM
169	None	9/30/2019 5:53 PM
170	na	9/30/2019 5:00 PM
171	Remove them all	9/30/2019 4:15 PM
172	Convenient tie-up when waiting	9/30/2019 4:10 PM
173	N/A	9/30/2019 4:00 PM
174	None	9/30/2019 3:55 PM
175	N/A	9/30/2019 3:41 PM
176	Restroom	9/30/2019 3:39 PM
177	Not sure	9/30/2019 3:36 PM
178	fishing locations	9/30/2019 3:25 PM
179	N/A	9/30/2019 3:13 PM
180	Extend hours of operation or at least GUARANTEE hours of operation	9/30/2019 3:10 PM
181	faster fill rates	9/30/2019 3:02 PM
182	No ideas at this time.	9/30/2019 2:21 PM
183	none	9/30/2019 12:22 PM
184	N/A	9/30/2019 11:11 AM
185	Keep up Preventative Maintenance	9/30/2019 11:09 AM
186	N/A	9/30/2019 10:56 AM
187	Not sure	9/30/2019 10:03 AM
188	Nothing---they're doing a great job!	9/30/2019 8:48 AM

MSWC Boater Trends Survey

189	access for both ice and boat fishing	9/30/2019 8:12 AM
190	Better access	9/30/2019 7:33 AM
191	More affordable	9/29/2019 9:29 PM
192	Dredging the river so I don't ding my prop	9/29/2019 9:06 PM
193	None at this time	9/29/2019 8:53 PM
194	remove dams wherever possible	9/29/2019 7:37 PM
195	They are satisfactory to my use	9/29/2019 6:02 PM
196	n/a	9/29/2019 2:56 PM
197	Hours	9/29/2019 1:27 PM
198	don't know	9/29/2019 1:10 PM
199	Remove the dams to restore natural rivers.....make into whitewater parks.....improves ecology and local economies.	9/29/2019 7:34 AM
200	Cost	9/29/2019 12:11 AM
201	CLEAN RESTROOMS	9/28/2019 10:56 PM
202	Better tie up locations while waiting your turn.	9/28/2019 8:00 PM
203	do not use	9/28/2019 3:44 PM
204	Would love a lock for Torch/Elk chain of lakes to Lake Michigan!	9/28/2019 12:36 PM
205	Na	9/28/2019 12:02 PM
206	do not know	9/28/2019 11:11 AM
207	No suggestions.	9/28/2019 10:52 AM
208	no experience with those	9/28/2019 9:25 AM
209	Keep them properly maintained	9/28/2019 8:46 AM
210	They seem fine, extended hours possibly	9/28/2019 8:18 AM
211	Not sure	9/28/2019 7:59 AM
212	Less DNR	9/27/2019 11:22 PM
213	Portage	9/27/2019 11:21 PM
214	Something to tie up to while waiting for the Crooked River Lock to open. It's hard to stay in the river. We ended up holding onto branches from the trees.	9/27/2019 10:07 PM
215	More convient docks at Cheboygan lock	9/27/2019 9:46 PM
216	Mooring	9/27/2019 9:01 PM
217	Easier Portage rollers would be great at all dams fix the Portage for rawsonville rd. Between Ford lake and belleville lake that one sucks badly	9/27/2019 8:03 PM
218	Its been years since I used them so I cannot answer this question.	9/27/2019 7:29 PM
219	Stay open a little later in summer months	9/27/2019 6:50 PM
220	I use Soo Locks.	9/27/2019 6:26 PM
221	Moore help going through the locks	9/27/2019 5:33 PM
222	Increase their umber	9/27/2019 4:09 PM
223	More frequent lock activity	9/27/2019 3:39 PM
224	Better instructions	9/27/2019 3:00 PM
225	Did not use, but maintenance and repair are important	9/27/2019 2:36 PM
226	Upkeep	9/27/2019 2:24 PM
227	NA	9/27/2019 2:21 PM

MSWC Boater Trends Survey

228	Don't know.	9/27/2019 2:18 PM
229	N/A	9/27/2019 1:49 PM
230	i have not use them.	9/27/2019 1:30 PM
231	Keep clean	9/27/2019 1:01 PM
232	They are adequate but tie-offs are greasy	9/27/2019 12:28 PM
233	N/A	9/27/2019 11:49 AM
234	??	9/27/2019 11:33 AM
235	None that I am aware of.	9/27/2019 11:29 AM
236	they are fine the way they are currently	9/27/2019 11:20 AM
237	Remove dams, use science to stop invasive species	9/27/2019 11:13 AM
238	N/A	9/27/2019 11:01 AM
239	upgrade to include boat inspection to prevent the spread of aquatic invasive species	9/27/2019 10:47 AM
240	?	9/27/2019 10:44 AM
241	I use them so infrequently I don't have any suggestions.	9/27/2019 10:38 AM
242	Operating hours	9/27/2019 10:34 AM
243	Better protection from the concrete walls within the lock and entering and exiting	9/27/2019 10:13 AM
244	crooked river lock needs better personal - more friendly - just the old lady is always a pain and trys to get too many boats in the lock at one time and has done thousands worth of damage to my boat	9/27/2019 10:10 AM
245	N/a	9/27/2019 10:04 AM
246	Tie up.	9/27/2019 9:54 AM
247	Hours of operation	9/27/2019 9:43 AM
248	none	9/27/2019 9:23 AM
249	none	9/27/2019 9:05 AM
250	n/a	9/27/2019 8:59 AM
251	Easy in easy out more fish cleaning stations	9/27/2019 8:58 AM
252	None all seem to we'll maned and have good hours of operation	9/27/2019 8:56 AM
253	N/A	9/27/2019 8:44 AM
254	Not sure....	9/27/2019 8:41 AM
255	Non sure	9/27/2019 8:36 AM
256	none	9/27/2019 8:23 AM
257	No comment	9/27/2019 8:20 AM
258	A bigger red/green light at the Cheboygan lock. More signage to indicate where the light is. Maybe two wait/enter lights.	9/27/2019 8:19 AM
259	lower cost at cheboygan	9/27/2019 8:13 AM
260	Longer access hours	9/27/2019 8:13 AM
261	The concrete walls damage the sides if the boats. It would be great to have some type of bumper protection	9/27/2019 8:09 AM
262	Somehow educating boater on how to handle their boat in a lock and lock and dam etiquette.	9/27/2019 8:00 AM
263	none	9/27/2019 7:59 AM
264	The lock and dam facilities that I use are outside of Michigan	9/27/2019 7:59 AM
265	NA	9/27/2019 7:42 AM
266	Speed	9/27/2019 7:41 AM

MSWC Boater Trends Survey

267	n/a	9/27/2019 7:15 AM
268	none	9/27/2019 6:49 AM
269	Provide dedicated maintenance funding for these important control structures	9/27/2019 6:49 AM
270	Adequate signage	9/27/2019 6:29 AM
271	none	9/27/2019 6:02 AM
272	Na	9/27/2019 5:55 AM
273	Nice	9/27/2019 5:52 AM
274	24 hour operation	9/27/2019 5:47 AM
275	Something to help protect boats from the sides of the locks	9/27/2019 5:04 AM
276	None	9/27/2019 5:03 AM
277	N/a	9/27/2019 12:25 AM
278	Imperative to establish marine radio communication with boaters	9/26/2019 11:45 PM
279	Maintenance	9/26/2019 11:01 PM
280	Longer hours of operation	9/26/2019 10:39 PM
281	I don't have a suggestion.	9/26/2019 10:38 PM
282	N/A	9/26/2019 10:30 PM
283	Muskegon river at hardy dam is toooooo steep and somewhat dangerous	9/26/2019 10:27 PM
284	na	9/26/2019 10:07 PM
285	I think they are fine.	9/26/2019 9:43 PM
286	Had no problems	9/26/2019 9:30 PM
287	lower cost	9/26/2019 9:30 PM
288	deeper concrete	9/26/2019 9:28 PM
289	Dont know	9/26/2019 9:24 PM
290	I enjoyed both of them, but it was 16 years ago.	9/26/2019 9:23 PM
291	Better maintained.	9/26/2019 9:18 PM
292	No complaints	9/26/2019 9:16 PM
293	Just keep them modern and operating	9/26/2019 9:15 PM
294	NA	9/26/2019 9:15 PM
295	Nothing I can think of	9/26/2019 9:14 PM
296	None I'm aware of. Seem fine.	9/26/2019 9:05 PM
297	Bigger Signs explaining the procedure and the location of the button to get service.	9/26/2019 9:04 PM
298	Fix the Flat Rock before it fails	9/26/2019 9:01 PM
299	More cemented lunches for a bigger boat under 24 at least	9/26/2019 9:00 PM
300	Na	9/26/2019 8:56 PM
301	Don't know	9/26/2019 8:44 PM
302	?	9/26/2019 8:33 PM
303	They're good !	9/26/2019 8:31 PM
304	We use Reedsburg Dam but it is Currently under construction. Way past its estimated time frame.	9/26/2019 8:25 PM
305	None	9/26/2019 8:22 PM
306	Both were fine	9/26/2019 8:09 PM
307	No opinion	9/26/2019 8:06 PM

MSWC Boater Trends Survey

308	It's been a while, and I don't remember it that well. Sorry...	9/26/2019 8:06 PM
309	better instructions and online information about how to do it	9/26/2019 7:45 PM
310	Upgrade facilities, additional power hookups and make them walkable	9/26/2019 7:40 PM
311	N/A - have not been there (would like to though!)	9/26/2019 7:40 PM
312	NA	9/26/2019 7:38 PM
313	Fishing seems bad at the "old" Frankenmuth dam, now that it has changed.	9/26/2019 7:37 PM
314	Facilities were in good operating condition, in my opinion, not in need of improvement	9/26/2019 7:36 PM
315	Na	9/26/2019 7:27 PM
316	Not sure. Cheyboygan was pretty slimey, but it a lock?	9/26/2019 7:20 PM
317	N/A	9/26/2019 7:18 PM
318	Cleaning station	9/26/2019 7:08 PM
319	Bollards	9/26/2019 7:05 PM
320	update locks	9/26/2019 6:39 PM
321	Cheyboygan Lock grab wires could occasionally be cleaned of algae making holding on from your boat easier.	9/26/2019 6:38 PM
322	Ease of entry	9/26/2019 6:30 PM
323	Don't know. Make faster maybe	9/26/2019 6:28 PM
324	General Annual Maintenance	9/26/2019 6:27 PM
325	Na	9/26/2019 6:19 PM
326	Up grades	9/26/2019 6:17 PM
327	N/A	9/26/2019 6:14 PM
328	Tear down all dams, open the rivers and waterways to there natural state.	9/26/2019 6:12 PM
329	Free!!!!	9/26/2019 6:09 PM
330	?	9/26/2019 6:08 PM
331	N/a	9/26/2019 6:08 PM
332	More conservation officers	9/26/2019 6:04 PM
333	No improvement needed.	9/26/2019 5:36 PM
334	Bathroom	9/26/2019 5:27 PM
335	Frequent staff	9/26/2019 5:22 PM
336	Removal	9/26/2019 5:19 PM
337	Better access to fish closer to dam.	9/26/2019 5:16 PM
338	Increase hours for late season boating.	9/26/2019 5:15 PM
339	Consistently working lock	9/26/2019 5:05 PM
340	Have not used them so I can't say.	9/26/2019 4:55 PM
341	Maintenance so that they are in good working order especially during boating season.	9/26/2019 4:51 PM
342	Expand hours of use...but current is not too bad	9/26/2019 4:51 PM
343	None	9/26/2019 4:46 PM
344	Larger Green and red access lighting	9/26/2019 4:46 PM
345	Remove the dams	9/26/2019 4:45 PM
346	None	9/26/2019 4:42 PM
347	A better to notify lockmaster of your approach.	9/26/2019 4:37 PM

MSWC Boater Trends Survey

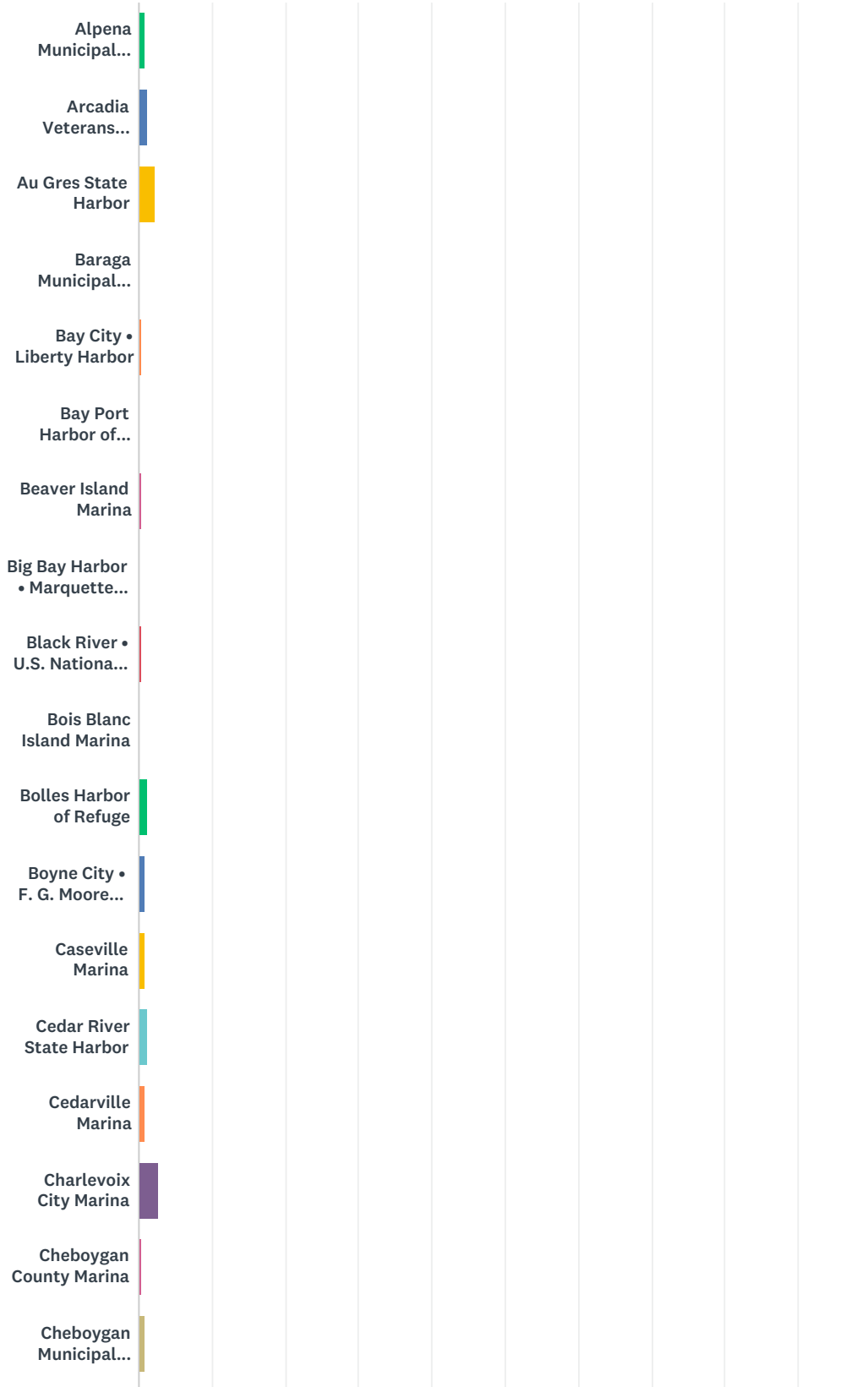
348	Enforce Slow No Wake Laws on the entire Cheboygan River and Inland Waterway as applicable	9/26/2019 4:34 PM
349	No idea	9/26/2019 4:27 PM
350	Really have no complaints... love the inland waterway!!	9/26/2019 4:24 PM
351	Nothing perfect	9/26/2019 4:23 PM
352	Maintenance	9/26/2019 4:23 PM
353	?	9/26/2019 4:18 PM
354	At Saulte Ste. Marie locks, should have better small craft assistance. I have used both the Canadian and U.S. locks.	9/26/2019 4:18 PM
355	O	9/26/2019 4:16 PM
356	N/A	9/26/2019 4:15 PM
357	Frequent/annual traveler pass (sticker)	9/26/2019 4:10 PM
358	Published data on bridge heights	9/26/2019 4:07 PM
359	N/a	9/26/2019 4:07 PM
360	Love to see one between the north end of Torch Lake and Lake Michigan	9/26/2019 4:04 PM
361	None	9/26/2019 4:02 PM
362	N/a	9/26/2019 4:02 PM
363	N/A	9/26/2019 4:02 PM
364	Keep restrooms clean	9/26/2019 4:02 PM
365	Don't know	9/26/2019 4:00 PM
366	NO ISSUES	9/26/2019 3:59 PM
367	Sign showing the price each way	9/26/2019 3:58 PM
368	none	9/26/2019 3:56 PM
369	None	9/26/2019 3:52 PM
370	Law enforcement	9/26/2019 3:52 PM
371	Everything was satisfactory at time of passage	9/26/2019 3:50 PM
372	Longer and better posted hours	9/26/2019 3:49 PM
373	Ease	9/26/2019 3:47 PM
374	Remove them	9/26/2019 3:46 PM
375	no idea	9/26/2019 3:44 PM
376	Not sure	9/26/2019 3:43 PM
377	Maintenance	9/26/2019 3:42 PM
378	notification of wait time both ways	9/26/2019 3:42 PM
379	?	9/26/2019 3:42 PM
380	The water dropping into boat at Crooked River upon exit. At least have a sign up to notify boaters to wait before exiting. One would think the staff would notify of this condition. They find it funny.	9/26/2019 3:41 PM
381	None	9/26/2019 3:40 PM
382	Buchanan DNR launcs needs to be cleaned out and made deeper current depth is 1.5 feet for about 50 feet to ST Jseph River and lots of silt and mud	9/26/2019 3:40 PM
383	Longer hours	9/26/2019 3:40 PM
384	Don't know	9/26/2019 3:39 PM
385	no opinion	9/26/2019 3:38 PM
386	N/A	9/26/2019 3:37 PM

MSWC Boater Trends Survey

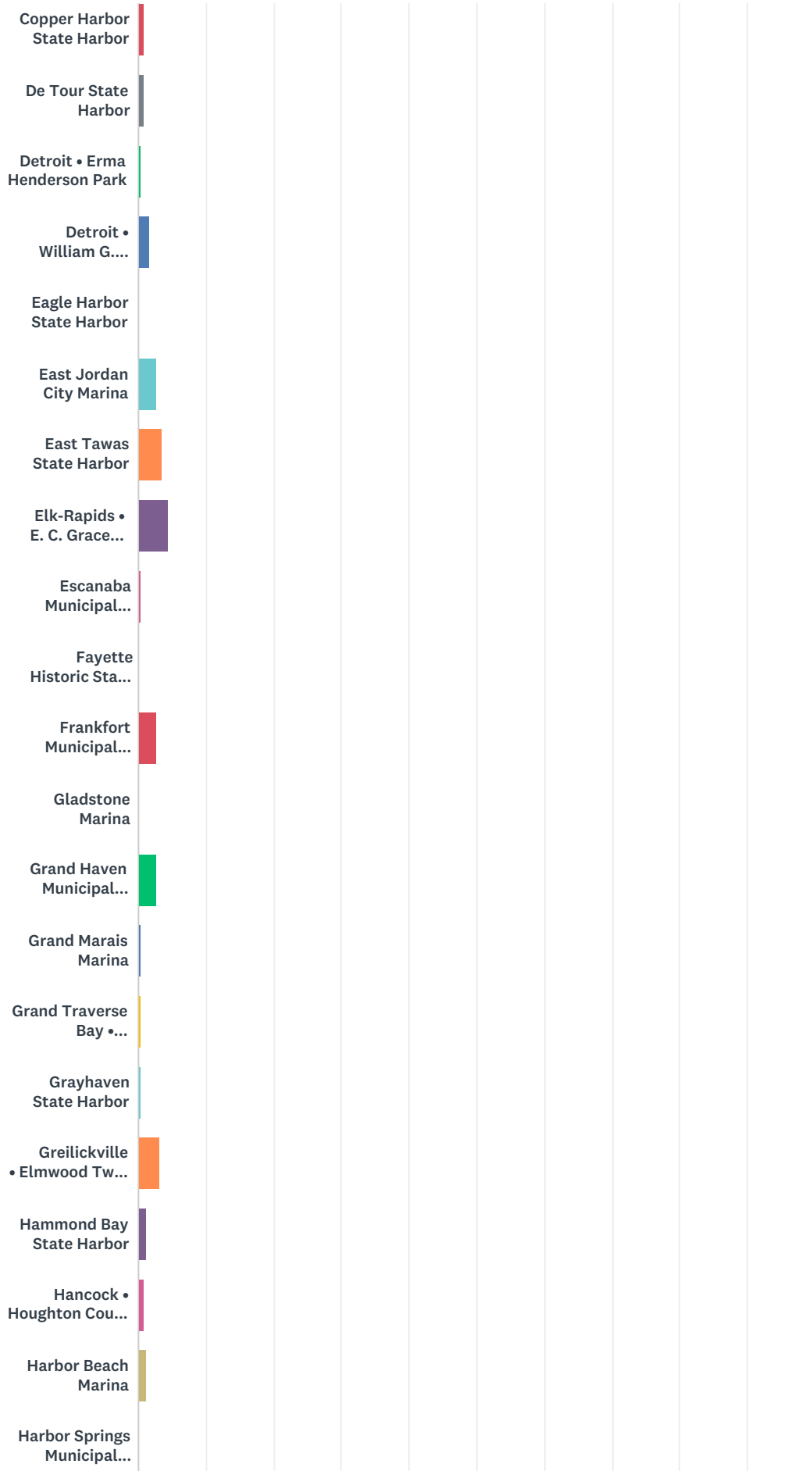
387	Ok	9/26/2019 3:36 PM
388	I don't know, YET! I hope to use the locks next season.	9/26/2019 3:35 PM
389	Have a discount for round trip payment	9/26/2019 3:33 PM
390	safe fish passage	9/26/2019 3:33 PM
391	N/A	9/26/2019 3:32 PM
392	grab lines or sliding cleats	9/26/2019 3:31 PM
393	Advertise and post lock usage rules and etiquette	9/26/2019 3:30 PM
394	don't know	9/26/2019 3:29 PM
395	waiting/tie-off areas marked, made larger.	9/26/2019 3:29 PM
396	Don't use them.	9/26/2019 3:29 PM
397	lower cost	9/26/2019 3:29 PM
398	I'm sorry not sure	9/26/2019 3:28 PM
399	Fishing Platform	9/26/2019 3:28 PM
400	Pay by Venmo	9/26/2019 3:28 PM
401	.	9/26/2019 3:27 PM
402	More open hours	9/26/2019 3:26 PM
403	n/a	9/26/2019 3:10 PM
404	Better places for boats to wait in line for locks that they can temp secure boats and not fight the current waiting	9/26/2019 2:40 PM
405	Don't know. It's been more than 5 years.	9/26/2019 2:25 PM
406	none	9/26/2019 1:18 PM
407	Safety	9/26/2019 12:29 PM
408	Shore fishing access (especially for seniors)	9/26/2019 12:08 PM
409	Seem good to me!	9/26/2019 12:05 PM
410	Better operation, I had the door shutting on me as I was trying to get in because the operator didn't see me. I have to rush in to avoid being crushed.	9/26/2019 12:05 PM
411	Bumpers on sides of lock	9/26/2019 11:37 AM
412	None	9/26/2019 11:24 AM
413	Easy portage for paddle boats like kayaks.	9/26/2019 11:19 AM
414	dam removal	9/26/2019 11:11 AM
415	free	9/24/2019 2:04 PM

Q18 If you store a boat at a state harbor or municipal marina, please select your storage location from the dropdown.

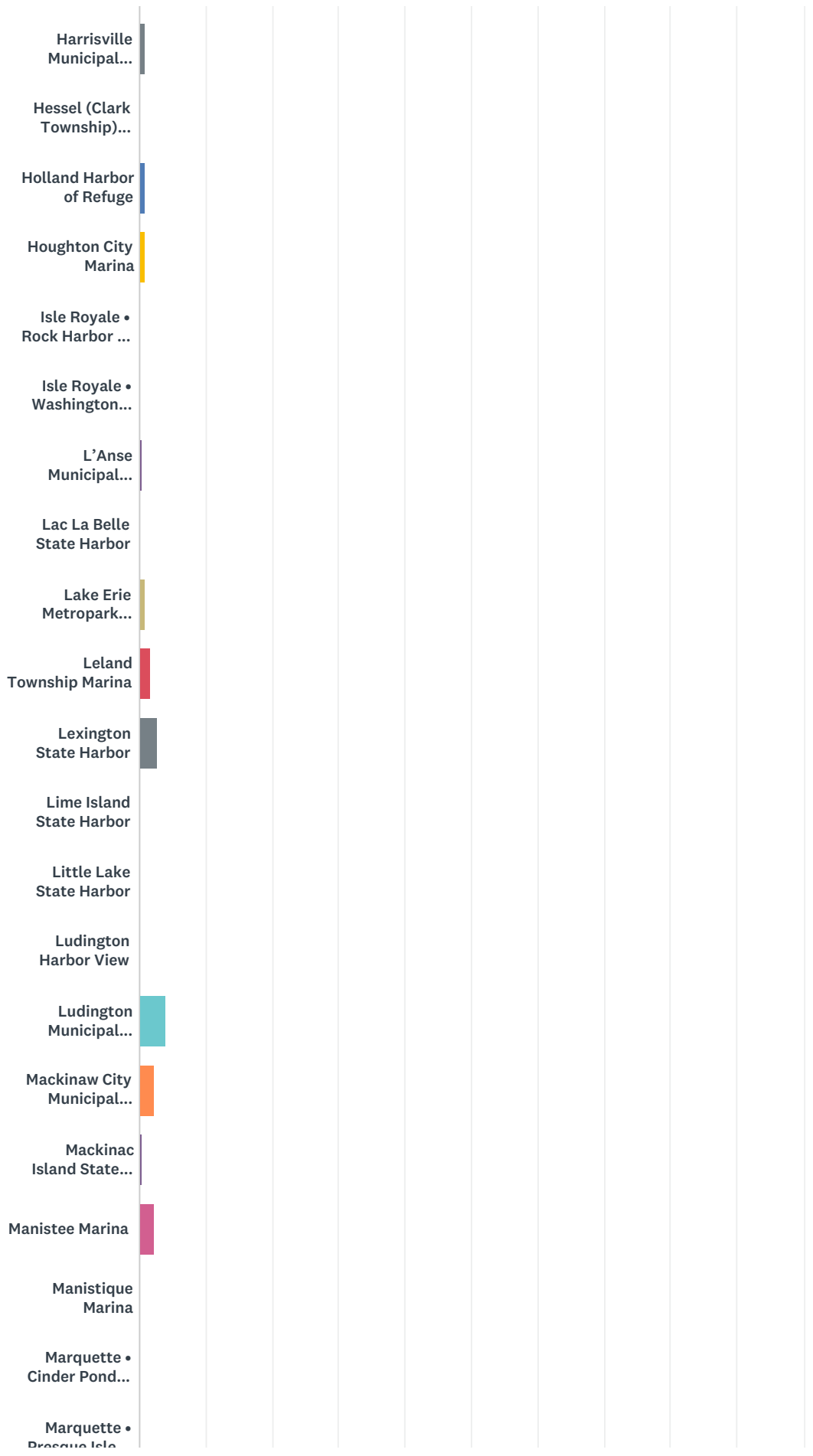
Answered: 227 Skipped: 3,516



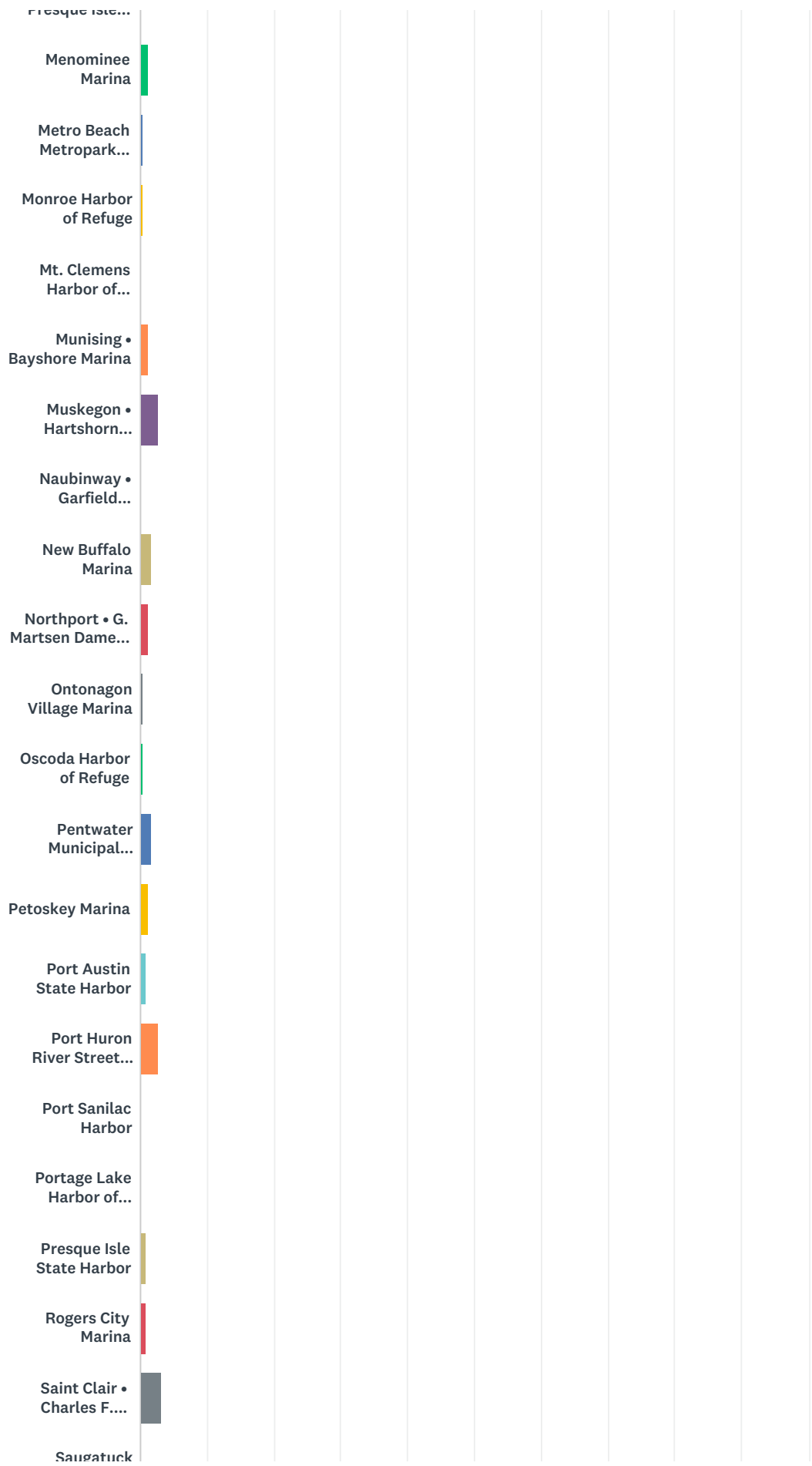
MSWC Boater Trends Survey



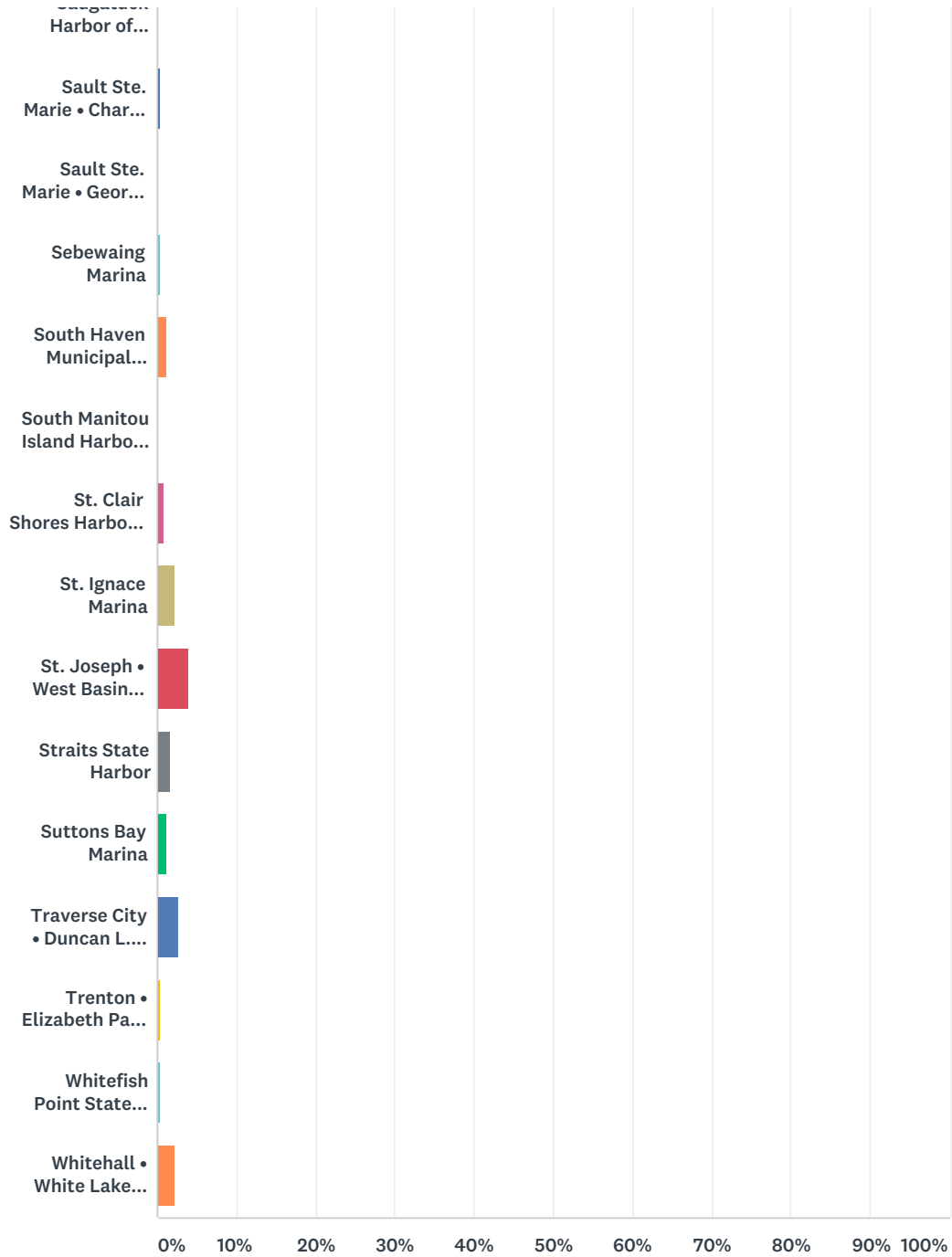
MSWC Boater Trends Survey



MSWC Boater Trends Survey



MSWC Boater Trends Survey



ANSWER CHOICES	RESPONSES	
Alpena Municipal Harbor	0.88%	2
Arcadia Veterans Memorial Marina	1.32%	3
Au Gres State Harbor	2.20%	5
Baraga Municipal Marina	0.00%	0
Bay City • Liberty Harbor	0.44%	1
Bay Port Harbor of Refuge	0.00%	0
Beaver Island Marina	0.44%	1

MSWC Boater Trends Survey

Big Bay Harbor • Marquette County	0.00%	0
Black River • U.S. National Forest	0.44%	1
Bois Blanc Island Marina	0.00%	0
Bolles Harbor of Refuge	1.32%	3
Boyne City • F. G. Moore Municipal Marina	0.88%	2
Caseville Marina	0.88%	2
Cedar River State Harbor	1.32%	3
Cedarville Marina	0.88%	2
Charlevoix City Marina	2.64%	6
Cheboygan County Marina	0.44%	1
Cheboygan Municipal Marina	0.88%	2
Copper Harbor State Harbor	0.88%	2
De Tour State Harbor	0.88%	2
Detroit • Erma Henderson Park	0.44%	1
Detroit • William G. Milliken State Park and Harbor	1.76%	4
Eagle Harbor State Harbor	0.00%	0
East Jordan City Marina	2.64%	6
East Tawas State Harbor	3.52%	8
Elk-Rapids • E. C. Grace Memorial Harbor	4.41%	10
Escanaba Municipal Marina	0.44%	1
Fayette Historic State Park • Snail Shell Harbor	0.00%	0
Frankfort Municipal Marina	2.64%	6
Gladstone Marina	0.00%	0
Grand Haven Municipal Marina	2.64%	6
Grand Marais Marina	0.44%	1
Grand Traverse Bay • Schoolcraft Twp. Marina	0.44%	1
Grayhaven State Harbor	0.44%	1
Greilickville • Elmwood Twp. Marina	3.08%	7
Hammond Bay State Harbor	1.32%	3
Hancock • Houghton County Marina	0.88%	2
Harbor Beach Marina	1.32%	3
Harbor Springs Municipal Marina	0.00%	0
Harrisville Municipal Marina	0.88%	2
Hessel (Clark Township) Marina	0.00%	0
Holland Harbor of Refuge	0.88%	2

MSWC Boater Trends Survey

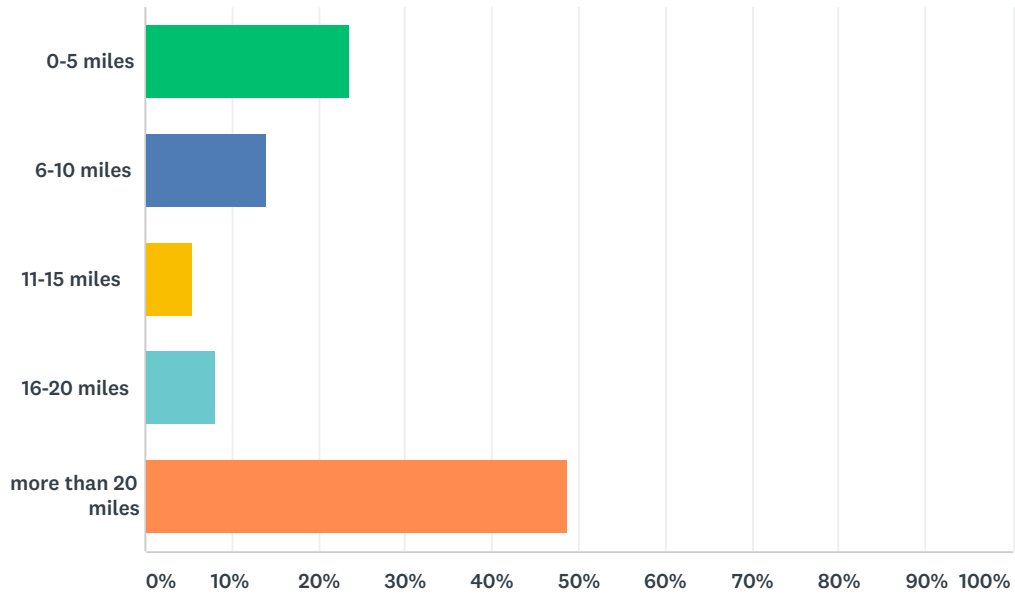
Houghton City Marina	0.88%	2
Isle Royale • Rock Harbor • Harbor of Refuge	0.00%	0
Isle Royale • Washington Harbor • Harbor of Refuge	0.00%	0
L'Anse Municipal Marina	0.44%	1
Lac La Belle State Harbor	0.00%	0
Lake Erie Metropark Harbor of Refuge	0.88%	2
Leland Township Marina	1.76%	4
Lexington State Harbor	2.64%	6
Lime Island State Harbor	0.00%	0
Little Lake State Harbor	0.00%	0
Ludington Harbor View	0.00%	0
Ludington Municipal Marina	3.96%	9
Mackinaw City Municipal Marina	2.20%	5
Mackinac Island State Harbor	0.44%	1
Manistee Marina	2.20%	5
Manistique Marina	0.00%	0
Marquette • Cinder Pond Marina	0.00%	0
Marquette • Presque Isle Marina	0.00%	0
Menominee Marina	1.32%	3
Metro Beach Metropark Marina	0.44%	1
Monroe Harbor of Refuge	0.44%	1
Mt. Clemens Harbor of Refuge	0.00%	0
Munising • Bayshore Marina	1.32%	3
Muskegon • Hartshorn Marina	2.64%	6
Naubinway • Garfield Township Marina	0.00%	0
New Buffalo Marina	1.76%	4
Northport • G. Martsen Dame Marina	1.32%	3
Ontonagon Village Marina	0.44%	1
Oscoda Harbor of Refuge	0.44%	1
Pentwater Municipal Marina	1.76%	4
Petoskey Marina	1.32%	3
Port Austin State Harbor	0.88%	2
Port Huron River Street Marina	2.64%	6
Port Sanilac Harbor	0.00%	0

MSWC Boater Trends Survey

Portage Lake Harbor of Refuge	0.00%	0
Presque Isle State Harbor	0.88%	2
Rogers City Marina	0.88%	2
Saint Clair • Charles F. Moore Harbor	3.08%	7
Saugatuck Harbor of Refuge	0.00%	0
Sault Ste. Marie • Charles T. Harvey Marina	0.44%	1
Sault Ste. Marie • George Kemp Marina	0.00%	0
Sebewaing Marina	0.44%	1
South Haven Municipal Marina	1.32%	3
South Manitou Island Harbor of Refuge	0.00%	0
St. Clair Shores Harbor of Refuge	0.88%	2
St. Ignace Marina	2.20%	5
St. Joseph • West Basin Marina	3.96%	9
Straits State Harbor	1.76%	4
Suttons Bay Marina	1.32%	3
Traverse City • Duncan L. Clinch Marina	2.64%	6
Trenton • Elizabeth Park Marina	0.44%	1
Whitefish Point State Harbor	0.44%	1
Whitehall • White Lake Municipal Marina	2.20%	5
TOTAL		227

Q19 If you store a boat at a state harbor or municipal marina, how far away do you live?

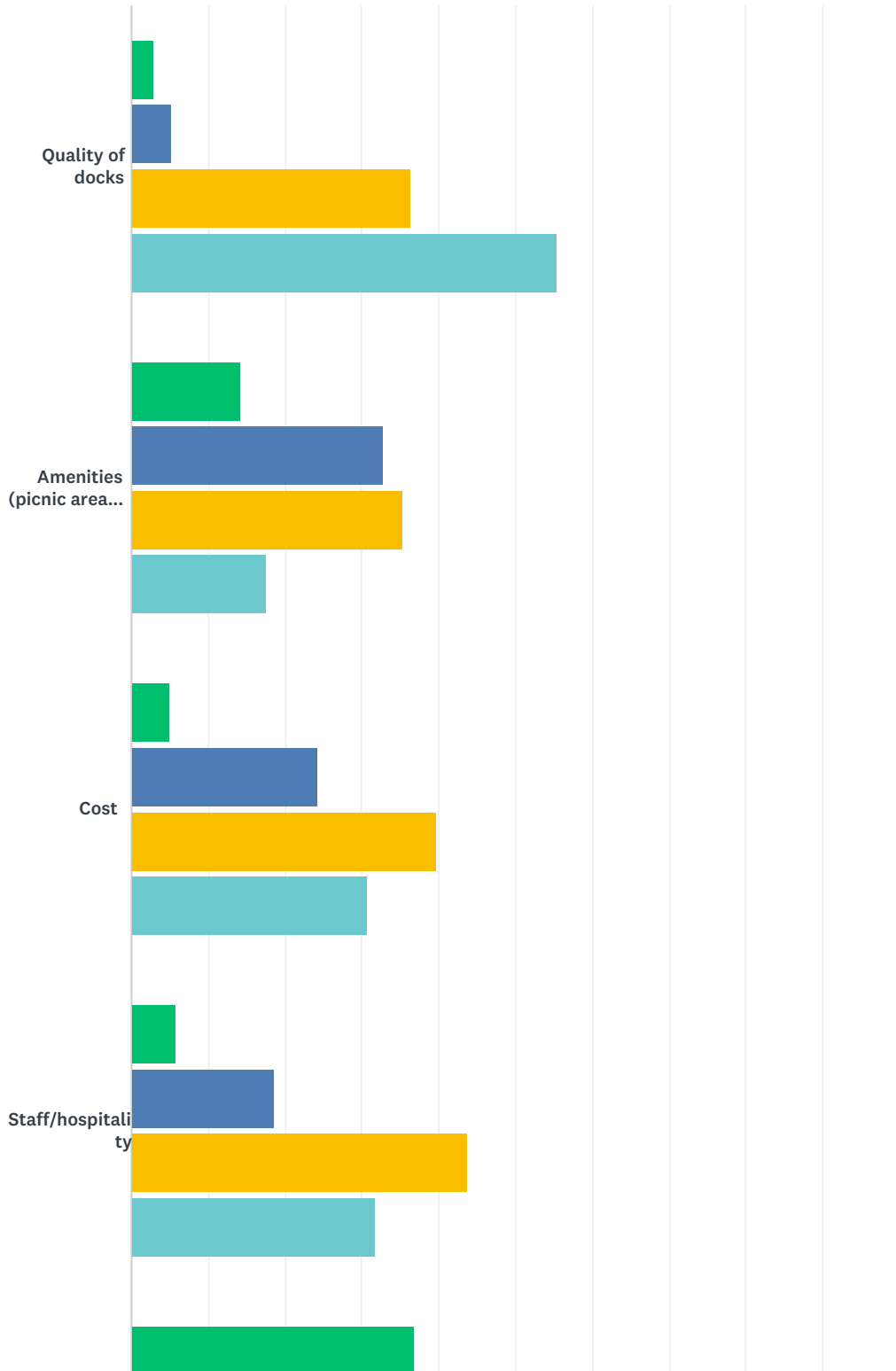
Answered: 334 Skipped: 3,409



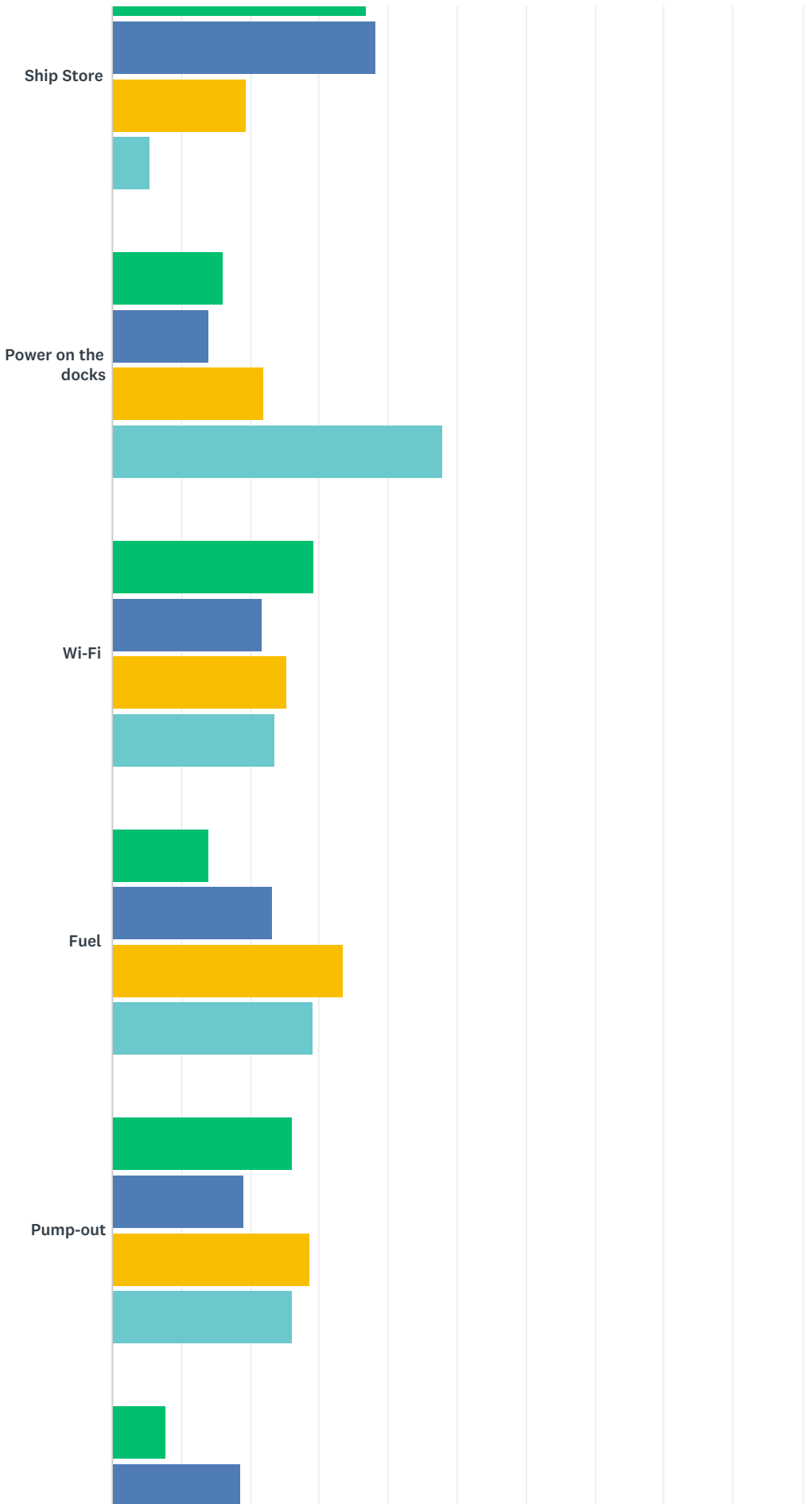
ANSWER CHOICES	RESPONSES	
0-5 miles	23.65%	79
6-10 miles	14.07%	47
11-15 miles	5.39%	18
16-20 miles	8.08%	27
more than 20 miles	48.80%	163
TOTAL		334

Q20 Please rate the importance of the following marina features in choosing a home state harbor or municipal marina (your “home” marina is where you lease your seasonal slip). You do not need to be a current seasonal slip holder to answer:

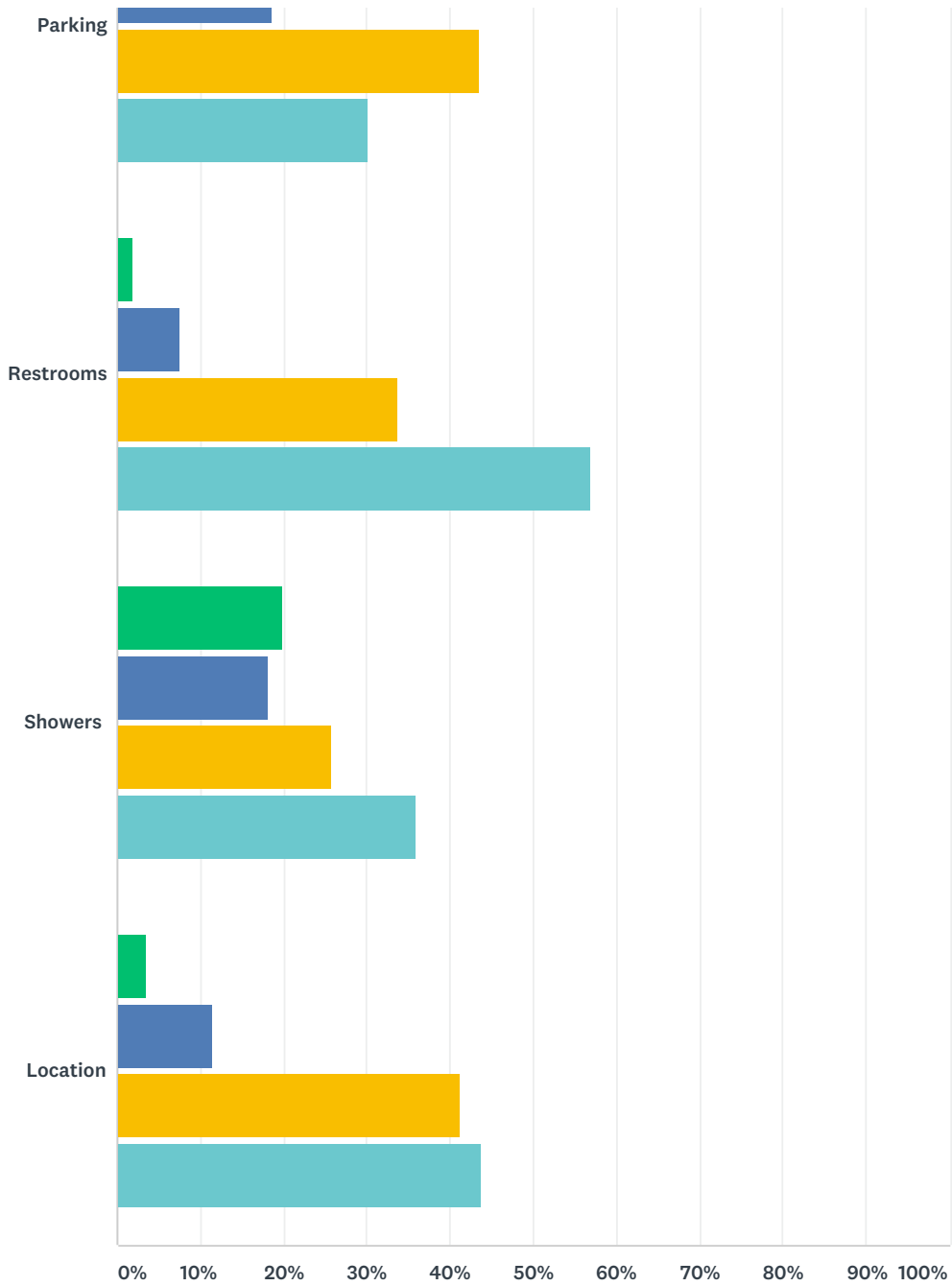
Answered: 1,797 Skipped: 1,946



MSWC Boater Trends Survey



MSWC Boater Trends Survey



■ Not Important
 ■ Somewhat Important
 ■ Important
 ■ Very Important

	NOT IMPORTANT	SOMEWHAT IMPORTANT	IMPORTANT	VERY IMPORTANT	TOTAL	WEIGHTED AVERAGE
Quality of docks	2.90% 50	5.28% 91	36.41% 628	55.42% 956	1,725	3.44
Amenities (picnic areas, play areas, etc)	14.12% 238	32.82% 553	35.43% 597	17.63% 297	1,685	2.57
Cost	5.09% 89	24.29% 425	39.77% 696	30.86% 540	1,750	2.96
Staff/hospitality	5.84% 100	18.70% 320	43.66% 747	31.79% 544	1,711	3.01

MSWC Boater Trends Survey

Ship Store	36.79% 617	38.28% 642	19.56% 328	5.37% 90	1,677	1.94
Power on the docks	16.06% 277	13.91% 240	22.03% 380	48.00% 828	1,725	3.02
Wi-Fi	29.25% 499	21.81% 372	25.26% 431	23.68% 404	1,706	2.43
Fuel	14.12% 244	23.32% 403	33.51% 579	29.05% 502	1,728	2.77
Pump-out	26.16% 445	19.05% 324	28.57% 486	26.22% 446	1,701	2.55
Parking	7.73% 133	18.66% 321	43.55% 749	30.06% 517	1,720	2.96
Restrooms	1.81% 32	7.60% 134	33.67% 594	56.92% 1,004	1,764	3.46
Showers	19.93% 343	18.19% 313	25.80% 444	36.08% 621	1,721	2.78
Location	3.46% 59	11.54% 197	41.24% 704	43.76% 747	1,707	3.25

#	OTHER (PLEASE SPECIFY)	DATE
1	N/A	10/9/2019 8:58 PM
2	Dockside water	10/7/2019 1:42 PM
3	Lack of availability, 23' sailboat, 10 year waiting lists	10/7/2019 9:02 AM
4	put trash cans at all sites and pay someone to empty them	10/7/2019 7:18 AM
5	Activities(Functions,concerts) at marina	10/6/2019 10:32 AM
6	I do not use marinas	10/6/2019 5:17 AM
7	Power washing to remove invasive species	10/5/2019 10:08 PM
8	no wave makers on inland lakes	10/5/2019 9:59 PM
9	Proximity to food/groceries or access to a bicycle/vehicle	10/5/2019 8:51 PM
10	Dog walks, courtesy vehicle, distance to towns if walking.	10/5/2019 10:59 AM
11	i'm in a private marina and there are no state or municiple marinas available in the Holland area	10/5/2019 10:31 AM
12	M/A	10/5/2019 6:09 AM
13	I keep my boat at home on Lake Winnebago, Wisconsin	10/4/2019 10:50 PM
14	Security very important	10/4/2019 7:55 PM
15	CABLE TV	10/4/2019 7:16 PM
16	Security	10/4/2019 6:57 PM
17	Docks should not be underwater	10/4/2019 4:59 PM
18	Shore Fishing and Scenic Views	10/4/2019 4:59 PM
19	Security	10/4/2019 1:33 PM
20	diesel fuel	10/4/2019 1:20 PM
21	Laundry facilities	10/4/2019 12:54 PM
22	Free of polutants.	10/4/2019 12:18 PM
23	Availability	10/4/2019 12:10 PM
24	Security of both car, boat and trailer.	10/4/2019 11:57 AM

MSWC Boater Trends Survey

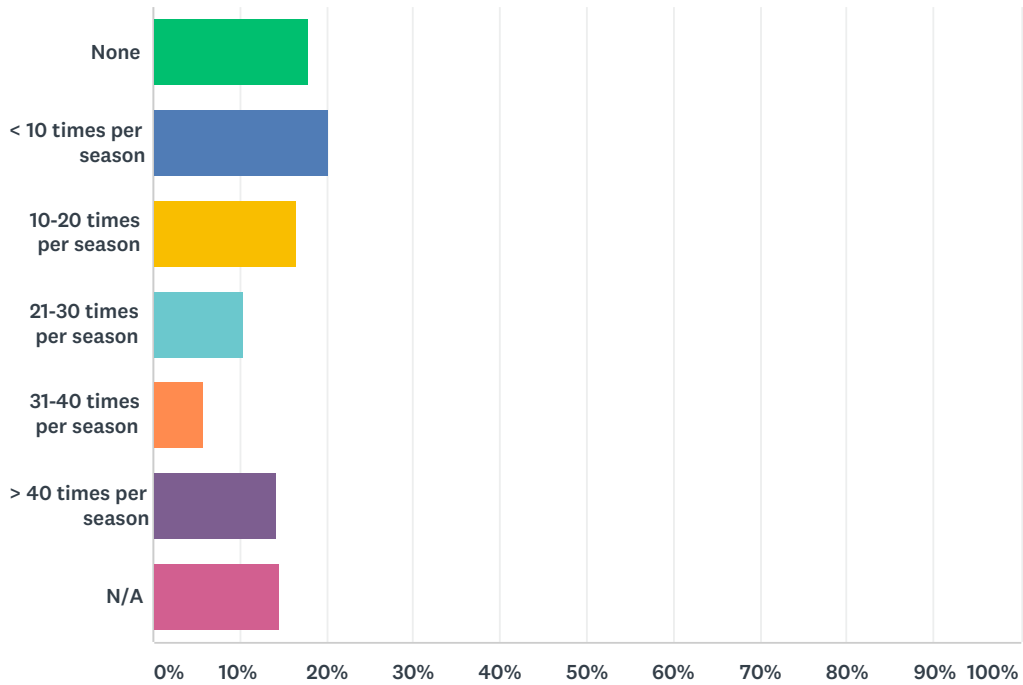
25	Availability of grocery shopping	10/4/2019 11:50 AM
26	don't have to be new - just clean	10/4/2019 11:46 AM
27	security if/when leaving the boat	10/4/2019 11:38 AM
28	Laundry facilities important	10/4/2019 10:43 AM
29	Should be mandatory removal of invasive species, emptying bilge water with staff oversight	10/4/2019 10:41 AM
30	The restrooms and showers at East Jordan are terrible.	10/4/2019 10:37 AM
31	prefer floating docks!	10/4/2019 10:31 AM
32	Cleanliness	10/3/2019 7:16 PM
33	I trailer my boat.	10/3/2019 4:35 PM
34	Need to limit amount and charge for use	10/3/2019 9:19 AM
35	Water	10/3/2019 4:42 AM
36	fishing cleaning stations	10/3/2019 3:37 AM
37	WiFi and Internet Connectivity	10/2/2019 10:42 PM
38	Clean	10/2/2019 10:35 AM
39	Clear markings	10/2/2019 8:58 AM
40	Training of dock hands in how to assist captains with docking is critically important and completely lacking at many MI state / municipal harbors.	10/2/2019 8:58 AM
41	I don't use them	10/2/2019 7:53 AM
42	Fresh water supply to wash off boat after use.	10/1/2019 8:20 AM
43	Proximity to shops, restaurants and good access to great sailing	9/30/2019 5:23 PM
44	na	9/30/2019 5:01 PM
45	Don't let boats stay there all summer at no cost, no dock space left to use. I	9/30/2019 4:45 PM
46	Laundry, fish cleaning, dish washing sinks, 24 hour weather info including weather radar, proximity to town, grocery and restaurants	9/30/2019 3:16 PM
47	N/A	9/30/2019 7:49 AM
48	dingy parking at boat	9/29/2019 2:11 PM
49	Wifi,Wifi, Wifi.	9/29/2019 11:17 AM
50	At least dual 30 amp electrical hookup	9/28/2019 9:10 AM
51	Condition of the dock so/maintenance	9/28/2019 8:57 AM
52	fish	9/28/2019 12:55 AM
53	Ice available at facility, wheeled cart	9/27/2019 1:23 PM
54	Easy docks for Kayaks	9/27/2019 11:47 AM
55	properly trained staff	9/27/2019 11:24 AM
56	municipal marinas are the entry and exit point of the aquatic invasive species proliferation and at each location there must be boat inspection before launch	9/27/2019 10:58 AM
57	Shoulder season costs for slip	9/27/2019 9:32 AM
58	amenities like fire pit and outdoor/off boat seating very important to our family	9/27/2019 8:31 AM
59	Lake Surge, pool, clean	9/27/2019 8:18 AM
60	Up grades and cleanliness of the municipal. Close to town	9/26/2019 11:00 PM
61	cleanliness	9/26/2019 9:52 PM
62	DeTour's Harbor Master Richard is rude and unprofessional	9/26/2019 9:27 PM
63	Clean restrooms/showers	9/26/2019 9:22 PM

MSWC Boater Trends Survey

64	fish cleaning station	9/26/2019 9:22 PM
65	longer ramp docks	9/26/2019 9:14 PM
66	Breakwall protection from rough seas	9/26/2019 9:13 PM
67	Bring back transient day time visitor docking to Mackinaw Island	9/26/2019 9:08 PM
68	Protection from wakes	9/26/2019 8:57 PM
69	CLEAN showers / restrooms !	9/26/2019 8:49 PM
70	Dog park. No geese	9/26/2019 8:35 PM
71	Breakwall if needed for wave actions	9/26/2019 8:33 PM
72	Clubhouse. Laundry.	9/26/2019 8:03 PM
73	launch ramp	9/26/2019 7:59 PM
74	Want bigger ships in marina - cruise ships	9/26/2019 7:45 PM
75	Quality of launch	9/26/2019 7:43 PM
76	Floating docks	9/26/2019 7:25 PM
77	Security	9/26/2019 6:43 PM
78	Cleanliness!!!!!!	9/26/2019 6:08 PM
79	Availability of slips is very important	9/26/2019 5:22 PM
80	Ability to get a slip	9/26/2019 4:40 PM
81	number of launches	9/26/2019 4:34 PM
82	Staff never notified me that power was shutting off on 9/22/19	9/26/2019 4:16 PM
83	Fish cleaning station	9/26/2019 4:14 PM
84	Parking /Duncan Keith is Horrible	9/26/2019 4:12 PM
85	Laundry is important too	9/26/2019 4:05 PM
86	Availability and ability to find safe harbor	9/26/2019 4:04 PM
87	Cleanliness	9/26/2019 4:01 PM
88	STRONG WIFI SIGNAL!!!!!!!!!!	9/26/2019 3:57 PM
89	security from theft, vandalism	9/26/2019 3:53 PM
90	Proximity to Chicago	9/26/2019 3:49 PM
91	Posting About Swimmer's Itch or other boating hazards that ruin a trip	9/26/2019 3:45 PM
92	Security	9/26/2019 3:28 PM
93	N/A	9/26/2019 2:28 PM
94	reservations available on short term notice (less than 3 days) preferably directly with the marina	9/26/2019 1:27 PM
95	I have a private dock on the lake	9/26/2019 12:24 PM

Q21 How many days per season do you use your boat from your home state harbor or municipal marina?

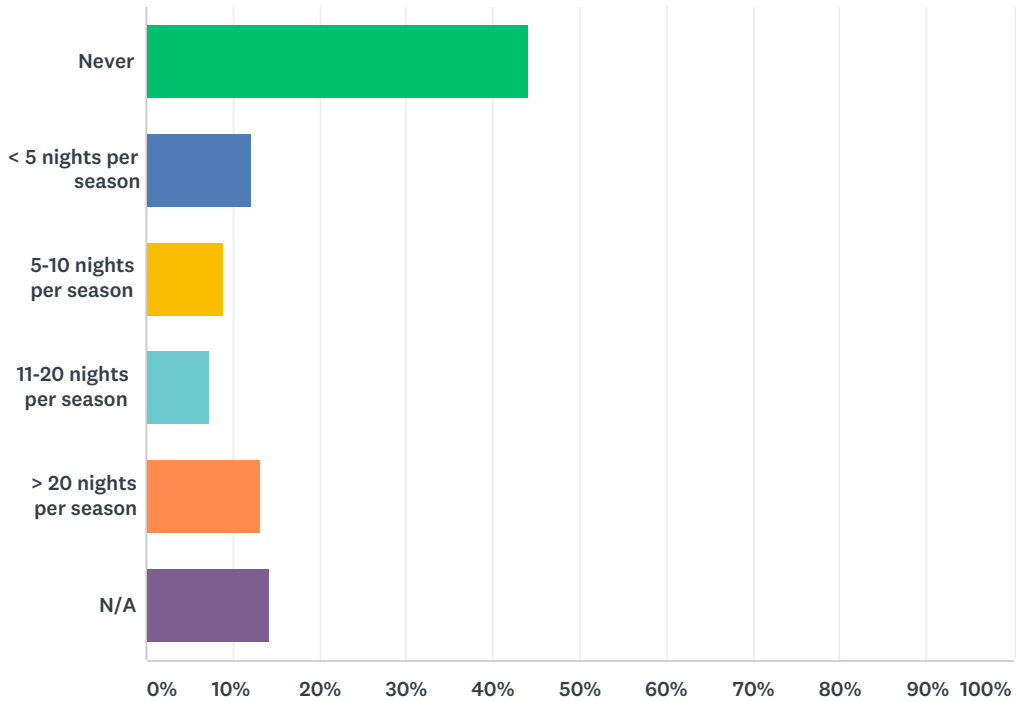
Answered: 2,292 Skipped: 1,451



ANSWER CHOICES	RESPONSES	
None	18.06%	414
< 10 times per season	20.33%	466
10-20 times per season	16.49%	378
21-30 times per season	10.43%	239
31-40 times per season	5.93%	136
> 40 times per season	14.18%	325
N/A	14.57%	334
TOTAL		2,292

Q22 How often do you spend the night on your boat at your home state harbor or municipal marina?

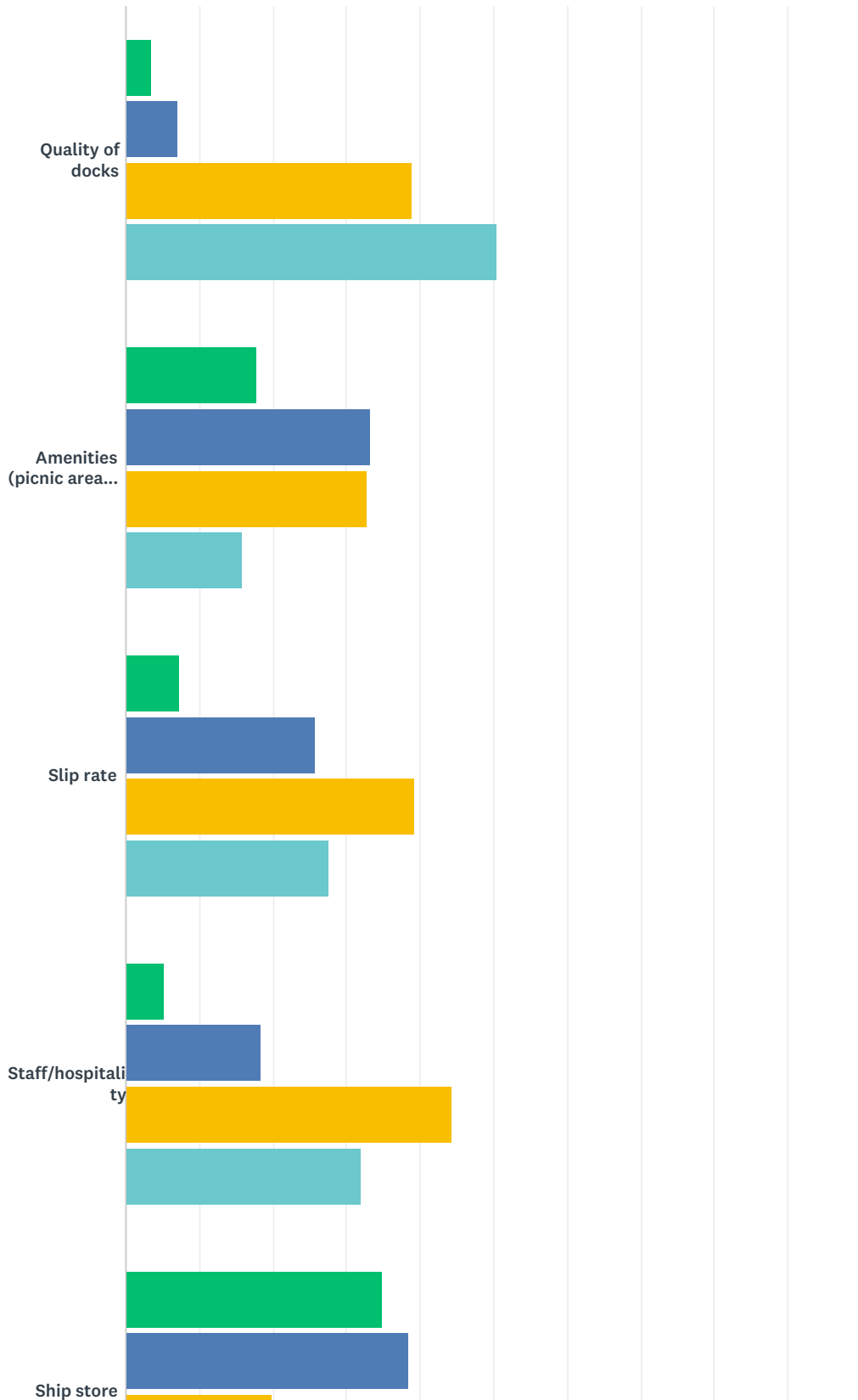
Answered: 2,327 Skipped: 1,416



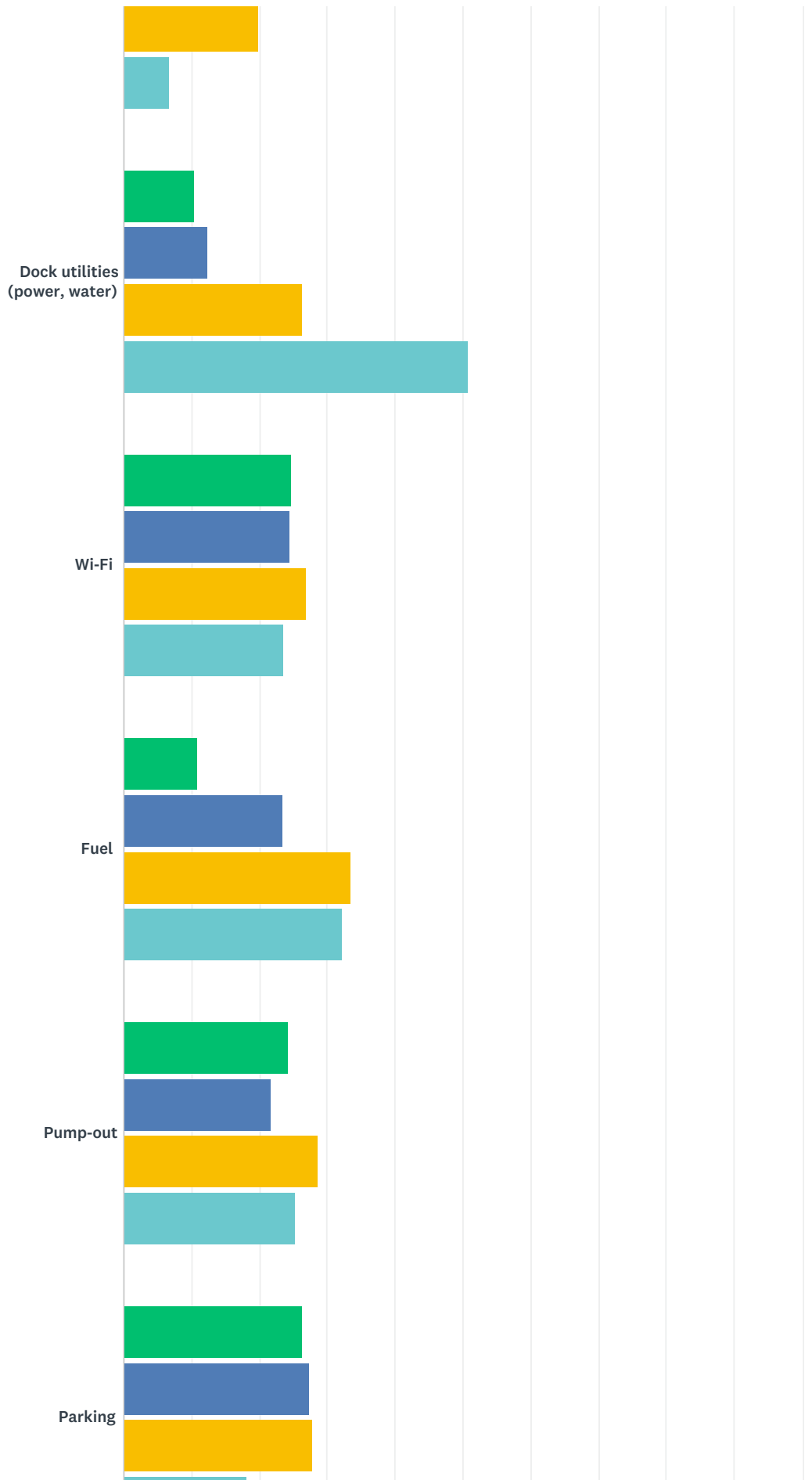
ANSWER CHOICES	RESPONSES	
Never	44.22%	1,029
< 5 nights per season	12.20%	284
5-10 nights per season	9.02%	210
11-20 nights per season	7.22%	168
> 20 nights per season	13.19%	307
N/A	14.14%	329
TOTAL		2,327

Q23 For transient (short-term slip rental) state harbor or municipal marinas, please rate the importance of the following marina features:

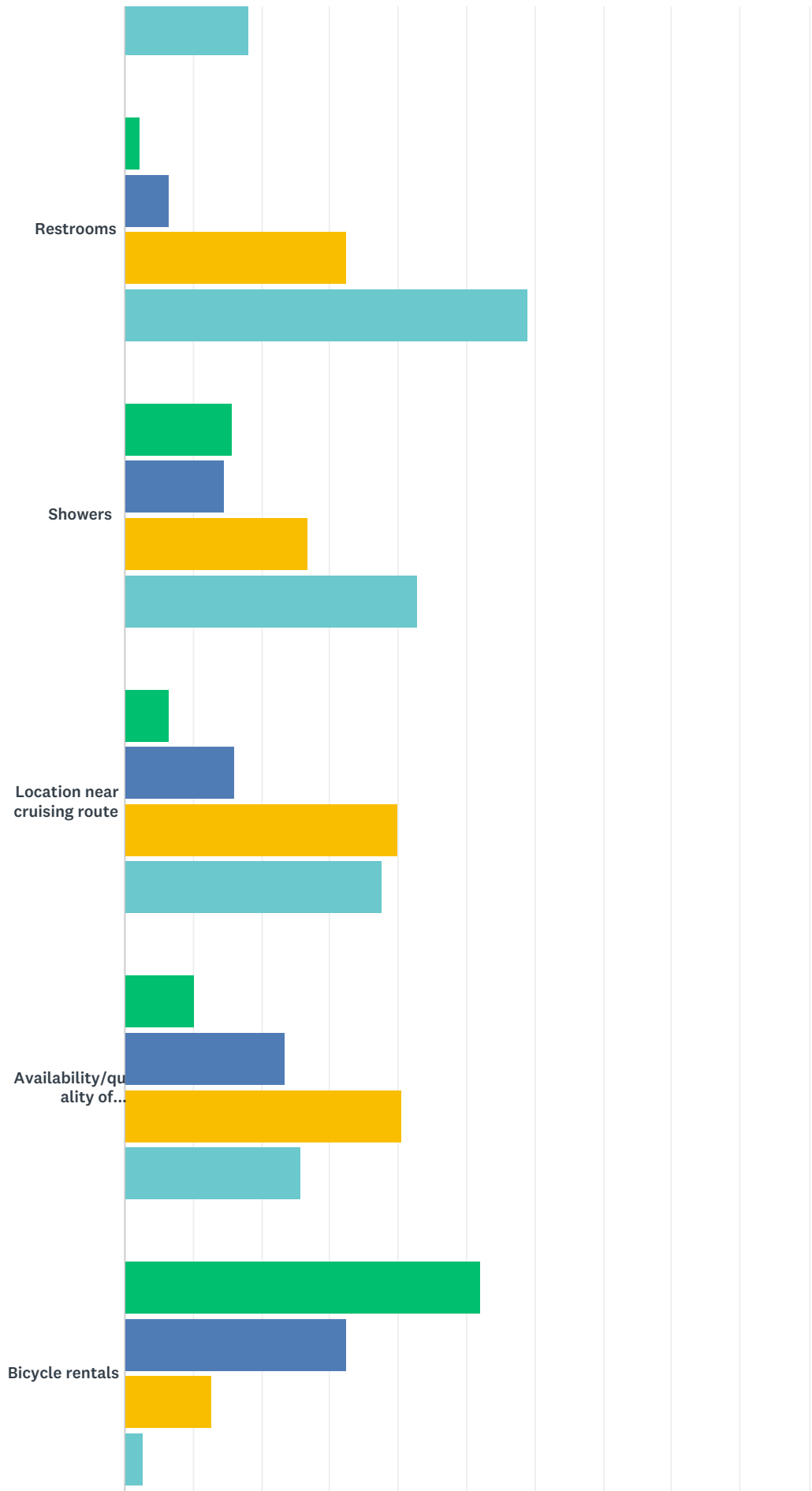
Answered: 1,859 Skipped: 1,884



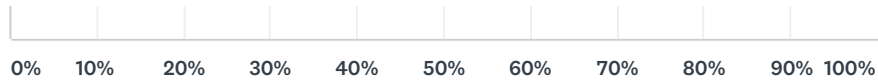
MSWC Boater Trends Survey



MSWC Boater Trends Survey



MSWC Boater Trends Survey



■ Not Important
 ■ Somewhat Important
 ■ Important
 ■ Very Important

	NOT IMPORTANT	SOMEWHAT IMPORTANT	IMPORTANT	VERY IMPORTANT	TOTAL	WEIGHTED AVERAGE
Quality of docks	3.47% 63	7.21% 131	38.91% 707	50.41% 916	1,817	3.36
Amenities (picnic areas, play areas, etc)	17.80% 313	33.33% 586	32.94% 579	15.93% 280	1,758	2.47
Slip rate	7.34% 133	25.76% 467	39.27% 712	27.63% 501	1,813	2.87
Staff/hospitality	5.32% 94	18.39% 325	44.31% 783	31.98% 565	1,767	3.03
Ship store	34.89% 613	38.59% 678	19.86% 349	6.66% 117	1,757	1.98
Dock utilities (power, water)	10.52% 189	12.41% 223	26.32% 473	50.75% 912	1,797	3.17
Wi-Fi	24.73% 440	24.56% 437	27.04% 481	23.66% 421	1,779	2.50
Fuel	10.86% 194	23.46% 419	33.54% 599	32.14% 574	1,786	2.87
Pump-out	24.29% 429	21.74% 384	28.60% 505	25.37% 448	1,766	2.55
Parking	26.46% 462	27.49% 480	27.89% 487	18.16% 317	1,746	2.38
Restrooms	2.22% 40	6.45% 116	32.35% 582	58.98% 1,061	1,799	3.48
Showers	15.65% 276	14.63% 258	26.87% 474	42.86% 756	1,764	2.97
Location near cruising route	6.46% 115	16.01% 285	39.94% 711	37.58% 669	1,780	3.09
Availability/quality of adjacent attractions (shops, restaurants, etc)	10.21% 181	23.41% 415	40.67% 721	25.72% 456	1,773	2.82
Bicycle rentals	52.14% 914	32.52% 570	12.72% 223	2.62% 46	1,753	1.66

#	OTHER (PLEASE SPECIFY)	DATE
1	Helpfull staff	10/10/2019 10:17 PM
2	N/A	10/9/2019 8:58 PM
3	Cable TV	10/7/2019 8:42 AM
4	pump out the bathrooms timely so they don't smell	10/7/2019 7:18 AM
5	Clean facilities	10/7/2019 6:41 AM
6	NA	10/6/2019 5:17 AM
7	Courtesy vehicle, dog walk, laundry	10/5/2019 10:59 AM
8	proximity to public launch with enough depth to float my boat (4 foot draft)	10/4/2019 9:20 PM

MSWC Boater Trends Survey

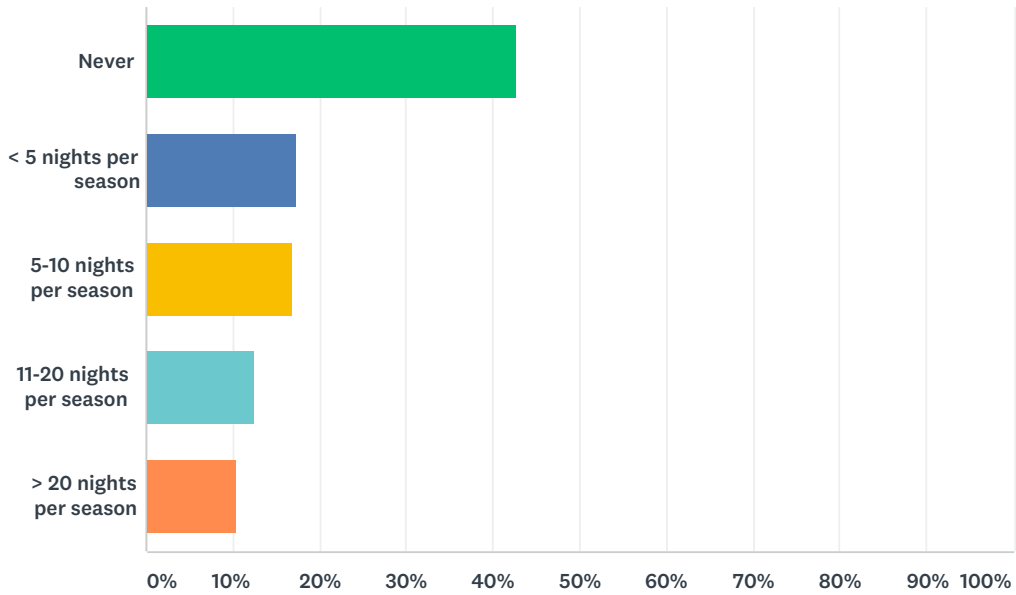
9	Security	10/4/2019 6:57 PM
10	Dosen't apply...	10/4/2019 5:22 PM
11	Love the marinas that have a fire pit.	10/4/2019 4:27 PM
12	Pool, washer/dryer	10/4/2019 4:04 PM
13	Food/grocery delivery to marina	10/4/2019 1:52 PM
14	Laundry facilities	10/4/2019 12:54 PM
15	Ease of Navigation (elimination of weed beds)	10/4/2019 12:44 PM
16	Non-polluted waters.	10/4/2019 12:18 PM
17	Availability of grocery shopping	10/4/2019 11:50 AM
18	Safe area / security for overnight	10/4/2019 11:38 AM
19	Available transient slips	10/4/2019 11:29 AM
20	DO NOT USE A STORAGE FOR BOATS.	10/4/2019 11:17 AM
21	Well trained staff	10/4/2019 10:46 AM
22	Laundry facilities important	10/4/2019 10:43 AM
23	n/a	10/4/2019 10:41 AM
24	Limit size of speed boats	10/3/2019 9:19 AM
25	Golf cart rentals or E bikes	10/2/2019 12:38 PM
26	Clean facilities	10/2/2019 10:35 AM
27	safe environment	10/2/2019 8:58 AM
28	Dock hand training in how to assist captains with docking is critically important and completely lacking at many MI state/municipal harbors	10/2/2019 8:58 AM
29	Wifi never works well, needs improvement	10/1/2019 8:25 AM
30	na	9/30/2019 5:01 PM
31	Laundry, dish washing sinks	9/30/2019 3:16 PM
32	N/A	9/30/2019 7:49 AM
33	At least dual 30 amp electrical hookup or one 50 amp hookup	9/28/2019 9:10 AM
34	fish cleaning	9/28/2019 12:55 AM
35	Reservation system	9/27/2019 6:16 PM
36	wheeled cart available	9/27/2019 1:23 PM
37	Number of transient wells available	9/27/2019 12:05 PM
38	Ability to make reservation easily	9/27/2019 11:59 AM
39	Adjacent tent camp area for kayaking water trail users	9/27/2019 11:47 AM
40	aquatic invasive species awareness and control	9/27/2019 10:58 AM
41	Make the reservation system work	9/27/2019 8:18 AM
42	lake water surge, pool, clean	9/27/2019 8:18 AM
43	Staff well educated in helping tie up	9/27/2019 8:16 AM
44	good ramp and parking	9/27/2019 7:18 AM
45	Staff	9/27/2019 7:08 AM
46	none	9/27/2019 6:54 AM
47	Safety and up keep of docks. Being close to restaurants/shopping areas	9/26/2019 11:00 PM
48	cleanliness	9/26/2019 9:52 PM

MSWC Boater Trends Survey

49	Available dock hands for docking	9/26/2019 9:41 PM
50	Need parking for boat trailers	9/26/2019 9:35 PM
51	DeTour's Harbor Master Richard drives customers away	9/26/2019 9:27 PM
52	establish a	9/26/2019 9:14 PM
53	Dog park	9/26/2019 8:35 PM
54	Laundry facilities	9/26/2019 8:30 PM
55	Pet friendly	9/26/2019 8:14 PM
56	Clubhouse. Laundry.	9/26/2019 8:03 PM
57	launch ramp	9/26/2019 7:59 PM
58	We'll trained staff, clean docks, toilets, showers, crime prevention	9/26/2019 7:19 PM
59	I want a hot shower in the am, available beer and spirits, a store for steaks if fish are not biting, nice to have a barbique available, friendly waitresses at the local AFFORDIBLE tavern.	9/26/2019 6:34 PM
60	N/A	9/26/2019 6:09 PM
61	We need more transient slips	9/26/2019 6:09 PM
62	Cleanliness!!!	9/26/2019 6:08 PM
63	We often bring own bikes	9/26/2019 5:00 PM
64	Not applicable	9/26/2019 4:37 PM
65	Clean Bathrooms, I am tired of paying for filthy bathrooms.	9/26/2019 4:29 PM
66	Fish cleaning station	9/26/2019 4:14 PM
67	Parking is Horrible at Duncan Keith	9/26/2019 4:12 PM
68	Again.....laundry	9/26/2019 4:05 PM
69	Security, especially near Detroit area	9/26/2019 3:52 PM
70	Posting about Swimmer's Itch and other hazards that will ruin my family vacation	9/26/2019 3:45 PM
71	Quality customer oriented staff	9/26/2019 3:37 PM
72	reservations on short (less than 3 days) notice directly with the marina and not through the State system.	9/26/2019 1:27 PM

Q24 At transient (short-term slip rental) marinas, how often do you spend the night on your boat ?

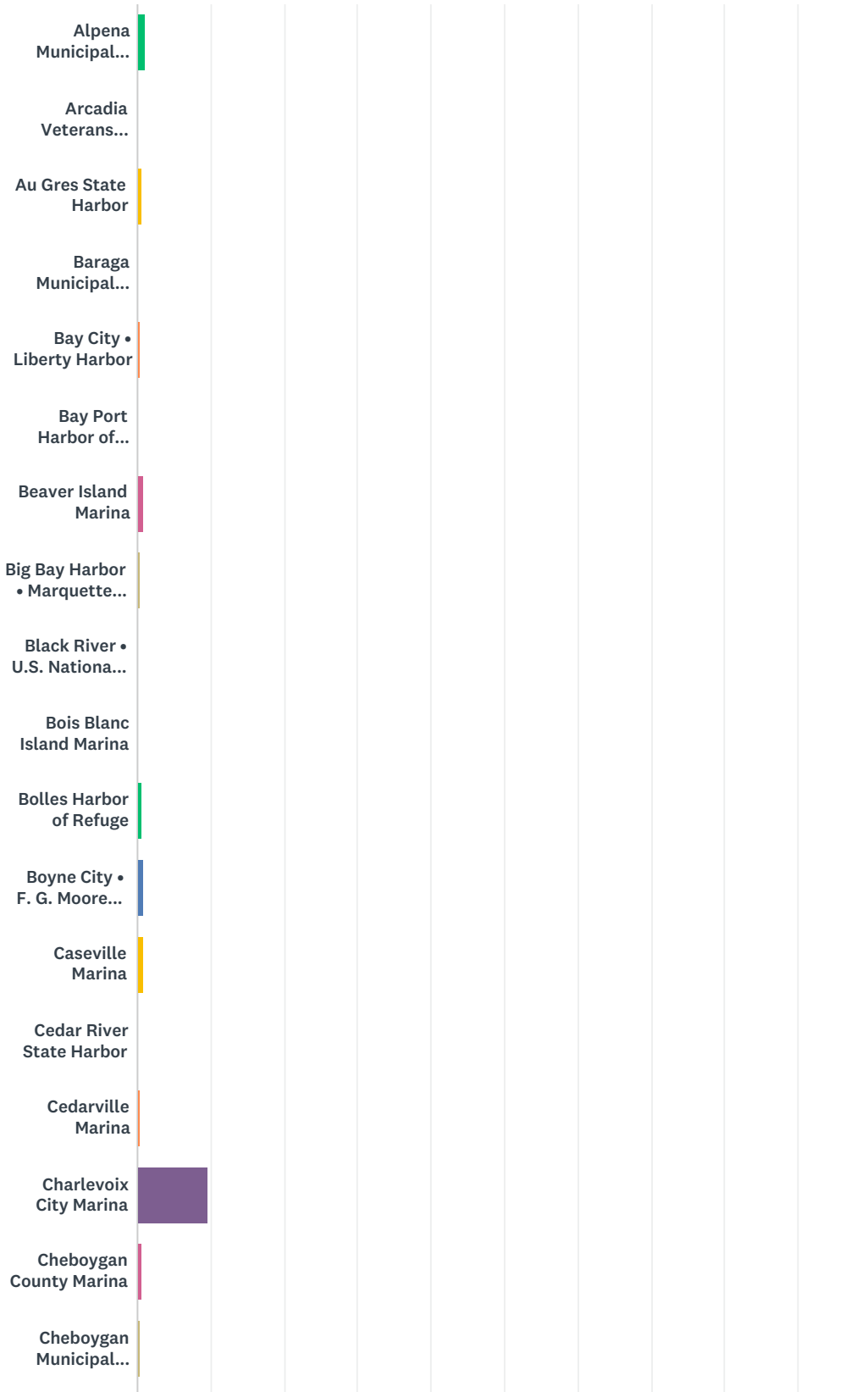
Answered: 2,187 Skipped: 1,556



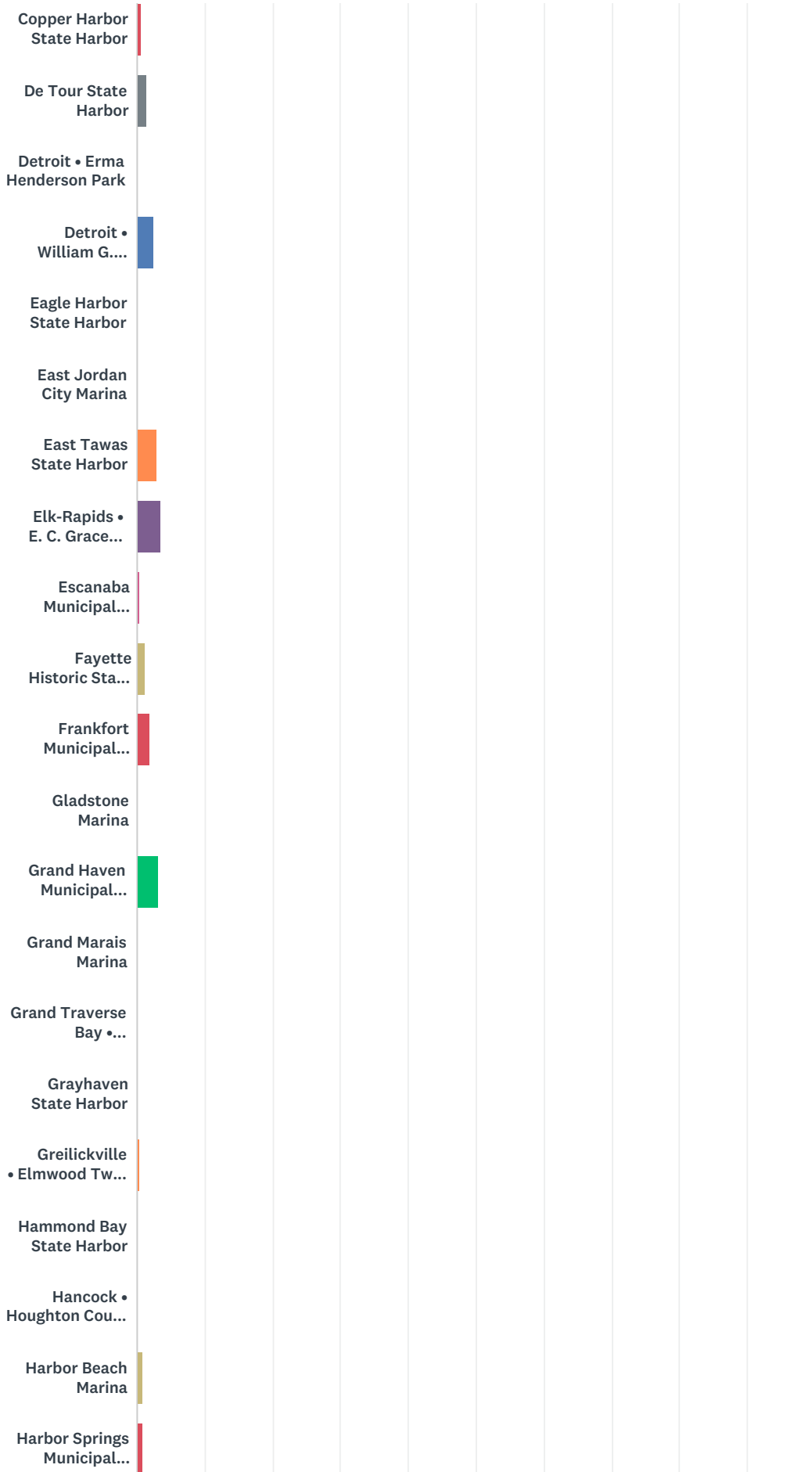
ANSWER CHOICES	RESPONSES	
Never	42.71%	934
< 5 nights per season	17.38%	380
5-10 nights per season	17.01%	372
11-20 nights per season	12.53%	274
> 20 nights per season	10.38%	227
TOTAL		2,187

Q25 What is the best state harbor or municipal marina you have visited? (please use drop down list)

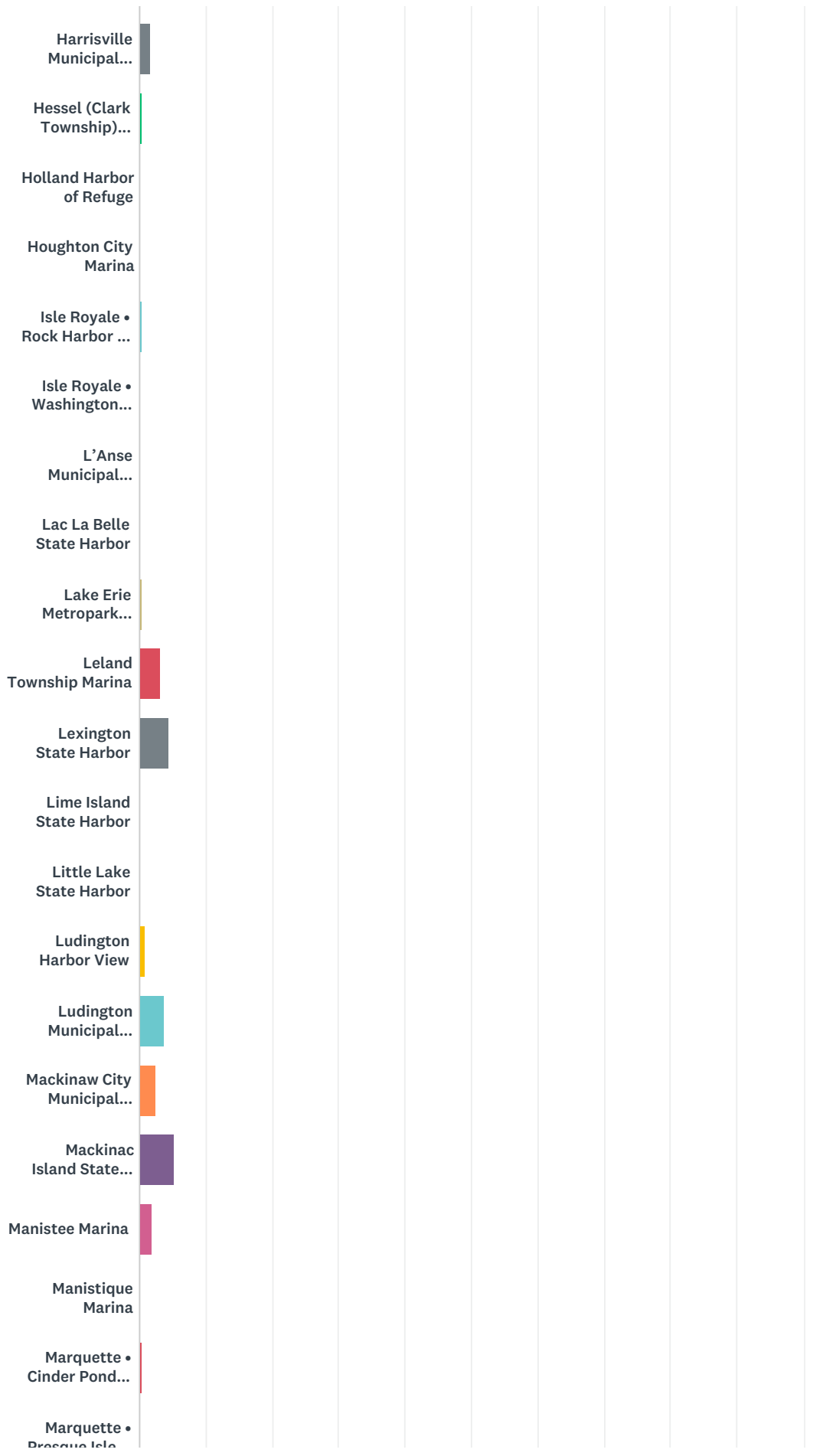
Answered: 1,732 Skipped: 2,011



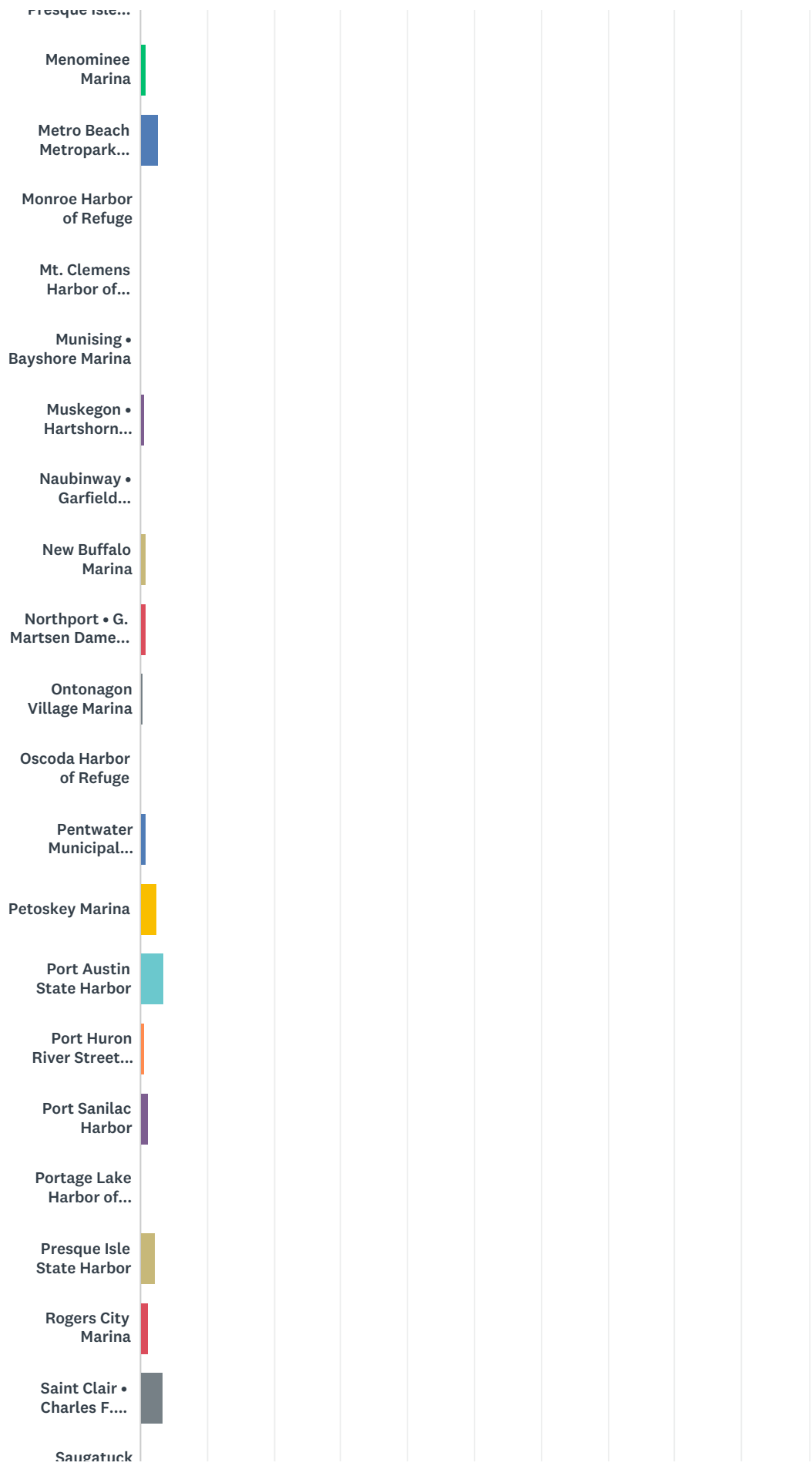
MSWC Boater Trends Survey



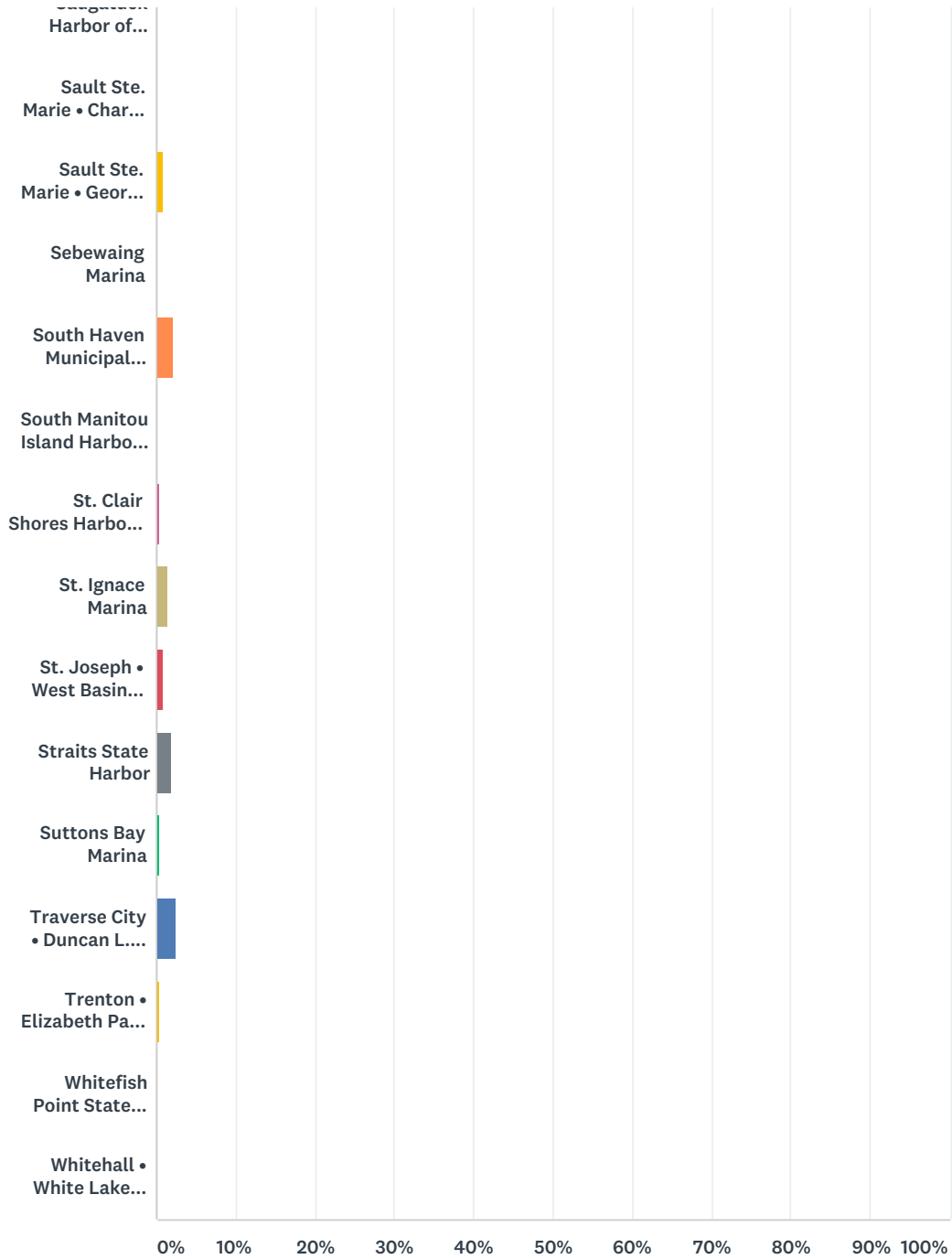
MSWC Boater Trends Survey



MSWC Boater Trends Survey



MSWC Boater Trends Survey



ANSWER CHOICES	RESPONSES	
Alpena Municipal Harbor	0.98%	17
Arcadia Veterans Memorial Marina	0.23%	4
Au Gres State Harbor	0.69%	12
Baraga Municipal Marina	0.12%	2
Bay City • Liberty Harbor	0.52%	9
Bay Port Harbor of Refuge	0.12%	2
Beaver Island Marina	0.75%	13

MSWC Boater Trends Survey

Big Bay Harbor • Marquette County	0.35%	6
Black River • U.S. National Forest	0.17%	3
Bois Blanc Island Marina	0.12%	2
Bolles Harbor of Refuge	0.64%	11
Boyne City • F. G. Moore Municipal Marina	0.87%	15
Caseville Marina	0.87%	15
Cedar River State Harbor	0.29%	5
Cedarville Marina	0.35%	6
Charlevoix City Marina	9.58%	166
Cheboygan County Marina	0.69%	12
Cheboygan Municipal Marina	0.52%	9
Copper Harbor State Harbor	0.58%	10
De Tour State Harbor	1.44%	25
Detroit • Erma Henderson Park	0.12%	2
Detroit • William G. Milliken State Park and Harbor	2.42%	42
Eagle Harbor State Harbor	0.23%	4
East Jordan City Marina	0.23%	4
East Tawas State Harbor	2.83%	49
Elk-Rapids • E. C. Grace Memorial Harbor	3.46%	60
Escanaba Municipal Marina	0.35%	6
Fayette Historic State Park • Snail Shell Harbor	1.27%	22
Frankfort Municipal Marina	1.96%	34
Gladstone Marina	0.29%	5
Grand Haven Municipal Marina	3.06%	53
Grand Marais Marina	0.17%	3
Grand Traverse Bay • Schoolcraft Twp. Marina	0.17%	3
Grayhaven State Harbor	0.23%	4
Greilickville • Elmwood Twp. Marina	0.35%	6
Hammond Bay State Harbor	0.23%	4
Hancock • Houghton County Marina	0.06%	1
Harbor Beach Marina	0.75%	13
Harbor Springs Municipal Marina	0.81%	14
Harrisville Municipal Marina	1.62%	28
Hessel (Clark Township) Marina	0.40%	7
Holland Harbor of Refuge	0.06%	1

MSWC Boater Trends Survey

Houghton City Marina	0.23%	4
Isle Royale • Rock Harbor • Harbor of Refuge	0.35%	6
Isle Royale • Washington Harbor • Harbor of Refuge	0.00%	0
L'Anse Municipal Marina	0.06%	1
Lac La Belle State Harbor	0.12%	2
Lake Erie Metropark Harbor of Refuge	0.52%	9
Leland Township Marina	3.23%	56
Lexington State Harbor	4.39%	76
Lime Island State Harbor	0.06%	1
Little Lake State Harbor	0.06%	1
Ludington Harbor View	0.92%	16
Ludington Municipal Marina	3.81%	66
Mackinaw City Municipal Marina	2.54%	44
Mackinac Island State Harbor	5.25%	91
Manistee Marina	1.85%	32
Manistique Marina	0.06%	1
Marquette • Cinder Pond Marina	0.40%	7
Marquette • Presque Isle Marina	0.17%	3
Menominee Marina	0.92%	16
Metro Beach Metropark Marina	2.66%	46
Monroe Harbor of Refuge	0.23%	4
Mt. Clemens Harbor of Refuge	0.06%	1
Munising • Bayshore Marina	0.29%	5
Muskegon • Hartshorn Marina	0.58%	10
Naubinway • Garfield Township Marina	0.06%	1
New Buffalo Marina	0.87%	15
Northport • G. Martsen Dame Marina	0.87%	15
Ontonagon Village Marina	0.35%	6
Oscoda Harbor of Refuge	0.23%	4
Pentwater Municipal Marina	0.81%	14
Petoskey Marina	2.42%	42
Port Austin State Harbor	3.52%	61
Port Huron River Street Marina	0.64%	11
Port Sanilac Harbor	1.15%	20

MSWC Boater Trends Survey

Portage Lake Harbor of Refuge	0.00%	0
Presque Isle State Harbor	2.25%	39
Rogers City Marina	1.15%	20
Saint Clair • Charles F. Moore Harbor	3.29%	57
Saugatuck Harbor of Refuge	0.23%	4
Sault Ste. Marie • Charles T. Harvey Marina	0.00%	0
Sault Ste. Marie • George Kemp Marina	0.75%	13
Sebewaing Marina	0.17%	3
South Haven Municipal Marina	2.19%	38
South Manitou Island Harbor of Refuge	0.06%	1
St. Clair Shores Harbor of Refuge	0.35%	6
St. Ignace Marina	1.56%	27
St. Joseph • West Basin Marina	0.87%	15
Straits State Harbor	1.96%	34
Suttons Bay Marina	0.35%	6
Traverse City • Duncan L. Clinch Marina	2.54%	44
Trenton • Elizabeth Park Marina	0.46%	8
Whitefish Point State Harbor	0.12%	2
Whitehall • White Lake Municipal Marina	0.17%	3
TOTAL		1,732

#	PLEASE EXPLAIN WHY THIS IS THE BEST HARBOR OR MARINA IN YOUR OPINION:	DATE
1	very nice marina everything is right there people are helpful the city is fun & the PARKING IS FREE	10/15/2019 1:53 PM
2	Location to downtown and other boating destinations.	10/13/2019 7:22 PM
3	Slip quality, restrooms, access to town, positive personnel	10/11/2019 11:08 AM
4	The staff is a;ways helpfull and friendly	10/10/2019 10:17 PM
5	sheltered, quality of staff and service. Immediate access to shopping and dining. quality dock construction. very good shower facilities. Expert harbor master.	10/10/2019 1:53 PM
6	Location	10/10/2019 7:21 AM
7	Proximity to all, professional staff, & great shower	10/10/2019 1:42 AM
8	N/A	10/9/2019 8:58 PM
9	close to town and attractions	10/9/2019 11:11 AM
10	New and nice	10/9/2019 8:41 AM
11	It is accessible to inland waterways & deep fishing & tourist attractions.	10/8/2019 7:01 PM
12	It's the only one we have used	10/8/2019 4:57 PM
13	got everything	10/8/2019 2:31 PM
14	all ways good to work with	10/8/2019 8:37 AM

MSWC Boater Trends Survey

15	Location, nice people and employees, nice bathrooms.	10/8/2019 7:59 AM
16	Very well maintained, and great staff, excellent rule enforcement!	10/7/2019 11:47 PM
17	The staff at Mackinac Island State Harbor are outstanding!	10/7/2019 11:17 PM
18	golf. cart transport ,store,picnic tables,cleanliness	10/7/2019 10:16 PM
19	Large parking area	10/7/2019 7:23 PM
20	Infrastructure, facilities very accessible to provisioning centers and attractions.	10/7/2019 5:45 PM
21	Ease of docking, friendliness, close to restaurants, clean and modern showers and restrooms.	10/7/2019 5:01 PM
22	Close to restaurants and shops. Nice docks. Good staff. Well protected from the lake.	10/7/2019 3:49 PM
23	Large, clean, services available at adjacent private marina.	10/7/2019 2:52 PM
24	Beach, Town, Fuel, Pump out	10/7/2019 1:42 PM
25	Natural and pristine area	10/7/2019 1:02 PM
26	Great location	10/7/2019 12:21 PM
27	Quality of staff, amenities, and condition of facility	10/7/2019 10:57 AM
28	Condition and proximity	10/7/2019 10:54 AM
29	Clean	10/7/2019 9:32 AM
30	nice town within walking distance, nice facilities	10/7/2019 9:03 AM
31	The staff. Hands down the most helpful, knowledgeable and attentive staff.	10/7/2019 8:50 AM
32	Common area with BBQ, picnic tables and laundry, Inside gathering room with tables sofas,refrigerator, microwave, TV and compute.	10/7/2019 8:42 AM
33	Great facilities and helpful staff	10/7/2019 8:17 AM
34	Location.	10/7/2019 8:15 AM
35	Marina lounge, very nice and would come in handy for inclement weather, new docks w/wifi and repeater for service on outer docks	10/7/2019 7:49 AM
36	It's where I use my boat	10/7/2019 7:44 AM
37	I like the upgrades, fish cleaning station	10/7/2019 7:44 AM
38	Close to a cottage that the family owns - less than 3 miles.	10/7/2019 7:29 AM
39	it has real bathrooms, not port a johns that stink cuz the state doesn't want to spend the money to pump them out	10/7/2019 7:18 AM
40	Great fishing	10/7/2019 7:02 AM
41	Nice club house usually not crowded. Needs some maintenance. Also need to do a better job cleaning showers and bug control in showers and bathrooms.	10/7/2019 6:41 AM
42	Location	10/7/2019 12:42 AM
43	Great floating docks, clean marina	10/6/2019 11:22 PM
44	Clean, friendly staff	10/6/2019 9:23 PM
45	It was brand new when I was there and everything was perfect. Town and the ferry were close and everything was very convenient.	10/6/2019 8:31 PM
46	Uncrowded, close to our property	10/6/2019 8:28 PM
47	Close proximity to town and fairly clean restrooms and showers	10/6/2019 7:07 PM
48	most ramps	10/6/2019 6:22 PM
49	The services and town restaurants	10/6/2019 3:46 PM
50	Access- efficiency	10/6/2019 2:57 PM
51	Close	10/6/2019 1:33 PM

MSWC Boater Trends Survey

52	Clean, courteous staff, well run, easy to launch ,Truck Trailer parking nearby, They make an effort to make your stay enjoyable! Marsten Dame Municipal in Northport is also fantastic. I wish Mackinac Island State Harbor was as nice as these two Marinas. For such a wonderful place like Mackinac Island, it should have a showpiece marina like Northport and Elk Rapids! The staff tries to do a good job , but the marina itself is in need of a nicer docks and the Washrooms are awful.	10/6/2019 1:18 PM
53	Excellent facilities, and great town nearby.	10/6/2019 12:46 PM
54	close proximity to food and shopping	10/6/2019 12:15 PM
55	Location is convenient. The town is closer by and very nice.	10/6/2019 11:35 AM
56	Location. Great town. Only saw few hours from home port. Protection from bad weather.	10/6/2019 11:28 AM
57	Good cost, nearby activities and attractions, wide docks, restrooms/showers, dock utilities, staff, Friday night music in the park and the RESTAURANT	10/6/2019 10:32 AM
58	Convenient	10/6/2019 10:25 AM
59	Clean, well kept. Staff outside visible, working, assisting boaters, cleaning, etc.	10/6/2019 9:43 AM
60	Closest to me. Proximity to large number of inland lakes.	10/6/2019 9:22 AM
61	Large, new floating docks, great bathhouse and friendly staff	10/6/2019 9:08 AM
62	close to home, easy to get to, nice marina and a great town with lots to see and do	10/6/2019 9:03 AM
63	Well kept. Good restroom facilities. Clean facility. Friendly staff.	10/6/2019 9:01 AM
64	The amenities and access	10/6/2019 8:58 AM
65	fuel prices	10/6/2019 8:57 AM
66	Well kept Marina	10/6/2019 8:37 AM
67	Easy access to store restaurants	10/6/2019 8:21 AM
68	Always stay at New Buffalo as it is a day sale from Chicago. Have stayed at South Haven and St Joe. Both very nice. Last 15 years have always had grandchildren with us. New Buffalo has a great beach and river..	10/6/2019 8:13 AM
69	Love the area, local attractions, clean facilities and great staff	10/6/2019 7:53 AM
70	Close to town and clean	10/6/2019 7:45 AM
71	Very good facilities	10/6/2019 6:57 AM
72	water clarity, clean facility, walk distance to town, quality of docks, excellent launch there too.	10/6/2019 6:42 AM
73	Staff, facilities	10/6/2019 6:38 AM
74	beautiful	10/6/2019 6:13 AM
75	Facilities are so nice and has everthing. So many slips. Very well kept	10/6/2019 5:41 AM
76	Clean, picnic area, ample parking.nothi	10/5/2019 10:37 PM
77	good crue	10/5/2019 10:32 PM
78	easy access to town, very protected and lots of areas to cruise to	10/5/2019 10:25 PM
79	never used one	10/5/2019 9:59 PM
80	Location	10/5/2019 9:18 PM
81	Floating docks and clean restrooms	10/5/2019 8:54 PM
82	The people were great, proximity to restaurants/bars. Very clean, great facilities (shower and restrooms), nice docks, staff at marina were excellent. Beautiful location too!	10/5/2019 8:51 PM
83	Excellent docks, great facilities, well managed and close to town with several good restaurants.	10/5/2019 8:37 PM
84	Location	10/5/2019 7:05 PM
85	It's the only one I have usrd	10/5/2019 7:01 PM
86	Clean, fuel, showers,restrooms, nearby activities	10/5/2019 6:46 PM
87	Only one I have used lately	10/5/2019 6:11 PM

MSWC Boater Trends Survey

88	Safe harbor, floating docks in excellent condition, extremely nice facilities (baths, sitting/tv area, etc.), good ramp & parking for long boat & trailer, great staff, conveniently located to waterway & town w/shopping, restaurants, etc. within walking distance. This is the best marina we have visited.	10/5/2019 5:57 PM
89	new	10/5/2019 4:41 PM
90	Close to great walleye fishing p	10/5/2019 4:01 PM
91	Amenities were fantastic, close to dunes and manitou islands. Good restaurants to eat also	10/5/2019 3:06 PM
92	Close to town.Clean	10/5/2019 2:46 PM
93	Nice clean facilities. Not on your DNR reservation system! Great staff. Nice location. Great WiFi, gas dock, pump out, beach, etc. Close to grocery store. Great laundry facilities and boaters lounge.	10/5/2019 2:16 PM
94	Hospitality of the crew, price, availability, excellent bathroom facilities	10/5/2019 1:47 PM
95	docks are in good shape, clean facilities, well staffed, lots of things to do in the area.	10/5/2019 1:37 PM
96	Great people and amenities. Nice quiet town within walking distance. Courtesy car rides are very nice. Very clean and well looked after.	10/5/2019 1:25 PM
97	What I use most	10/5/2019 12:10 PM
98	Location	10/5/2019 12:08 PM
99	Very convient, Excellent staff nice docks	10/5/2019 12:07 PM
100	Attractions, facilities,,staff, ease of access.	10/5/2019 11:32 AM
101	excellent facilities, quieter (Clinch is way too loud). Quality staff & onsite amenities	10/5/2019 11:27 AM
102	Great location, friendly staff, close for provisions and farmers market. Also have a courtesy vehicle	10/5/2019 10:59 AM
103	excellent service and clean restrooms	10/5/2019 10:55 AM
104	It's location on lake Huron and the town itself.	10/5/2019 10:40 AM
105	Good facility and the staff friendly and helpful	10/5/2019 10:36 AM
106	good destination, good facilities, good restaurant, etc. options within walking distance	10/5/2019 10:31 AM
107	Lots of activity	10/5/2019 10:29 AM
108	Nice updated facility. Close to town.	10/5/2019 10:14 AM
109	friendly and helpful staff, access to town	10/5/2019 10:05 AM
110	close to downtown and events	10/5/2019 10:04 AM
111	Beautiful	10/5/2019 10:02 AM
112	Good management. Clean facilities. Good dockage. Good protection from the weather.	10/5/2019 9:45 AM
113	location	10/5/2019 9:33 AM
114	It has a little bit of everything. Proximity to home	10/5/2019 9:30 AM
115	Staff	10/5/2019 9:28 AM
116	The only one we've used	10/5/2019 8:51 AM
117	Close to shops. Friendly staff.	10/5/2019 8:48 AM
118	Na	10/5/2019 8:46 AM
119	Clean, excellent always some one there to assist...DNR there..GIVE THEM A PLAQUE AND RECOGNIZE EVERYONE WHO WORKS THERE.	10/5/2019 8:41 AM
120	It's near Fishtown and I love Fishtown	10/5/2019 8:38 AM
121	Too many to choose just one. Availability, Staff/Service & overall cleanliness. We've stayed in the following municipal/state marinas & they were all great: Cheboygan, Charlevoix, Frankfort, Grand Haven, Harrisonville, Ludington, Lexington, Mackinaw City Straits State Harbor, Manistee, Pentwater, Petosky, Port Huron River Street, Port Sanilac, South Haven,	10/5/2019 8:10 AM
122	Well maintained	10/5/2019 8:03 AM
123	Offers all amenities	10/5/2019 7:54 AM

MSWC Boater Trends Survey

124	Great location and very good condition	10/5/2019 7:45 AM
125	good launch, solid docks, location to attractions, clean bathrooms/showers	10/5/2019 7:26 AM
126	Great town within walking distance. Best dock master however was at Harrisville.	10/5/2019 7:12 AM
127	Facilities and shore fishing opportunities	10/5/2019 6:48 AM
128	ONLY ONE I REMEMBER	10/5/2019 6:09 AM
129	Cleanliness of the marina was very impressive. Electrical stansions, spider webs swept, and seaweed raked daily. New docks. Bathrooms spotless. Every need was met.	10/5/2019 5:57 AM
130	Location, nice marina	10/5/2019 5:13 AM
131	Cleanest, nicest docks	10/5/2019 4:42 AM
132	Is it clean has nice showers picnic tables shore power grass area	10/5/2019 2:55 AM
133	Small tidy near town walk to grocery people nice library super close	10/5/2019 12:35 AM
134	Quiet and not commercialized. A step back into the past being you dock right in the same place that once was a busy harbor but now is a ghost town.	10/5/2019 12:26 AM
135	Good docks--Crytal lake at Benzonia is best launch, however the long distance and grade from dock is tough on 82 and 76 year olds ☐	10/4/2019 11:25 PM
136	The people the size of the marina	10/4/2019 10:56 PM
137	Great harbor and restaurant and facilities	10/4/2019 10:55 PM
138	Good socks, friendly and helpful staff, nice amenities.	10/4/2019 10:50 PM
139	Great docks, showers and staff	10/4/2019 10:47 PM
140	Most helpful and friendliest staff.	10/4/2019 10:37 PM
141	Numbers of slips and service	10/4/2019 10:33 PM
142	no bridges	10/4/2019 10:15 PM
143	Easy	10/4/2019 9:58 PM
144	Location	10/4/2019 9:48 PM
145	It is in a great location and has everything you need for staying	10/4/2019 9:25 PM
146	The public launch is deep enough to float my sailboat off of the trailer. The public launch allows long-term truck and trailer parking. The marina is close to Lake Michigan and fairly close to my home (Goshen IN).	10/4/2019 9:20 PM
147	Has everything	10/4/2019 9:13 PM
148	Condition of the marina, friendliness and help of the staff, fuel dock with pump out.	10/4/2019 9:12 PM
149	Great place with a bathroom, laundry and wifi facilities. Also Tawas has great location next to shops and restaurants	10/4/2019 8:57 PM
150	Clean friendly and knowledgeable staff	10/4/2019 8:53 PM
151	Not too far from my marina but far enough to feel like a decent trip. Plenty of shops and restaurants in town decent facilities	10/4/2019 8:52 PM
152	Nice location and great staff	10/4/2019 8:49 PM
153	Friendly, clean, updated,	10/4/2019 8:32 PM
154	Close	10/4/2019 8:17 PM
155	Availability of slips, easy in and out, many walkable amenities	10/4/2019 8:15 PM
156	It's large and beautiful	10/4/2019 8:12 PM
157	Clean, modern, friendly, good service, nice area.	10/4/2019 7:59 PM
158	Good all around harbor	10/4/2019 7:56 PM
159	Clean	10/4/2019 7:55 PM

MSWC Boater Trends Survey

160	Location Location Location... great access to town and the staff is amazing! Marina itself is in great condition too!	10/4/2019 7:55 PM
161	Friendly	10/4/2019 7:50 PM
162	Folks are friendly and makes your stay very enjoyable. Close travel to Mackinaw City and Island, as well as, Cheboygan river, Mullet, Burt and Indian River.	10/4/2019 7:47 PM
163	Beautiful	10/4/2019 7:41 PM
164	Only one I have used	10/4/2019 7:31 PM
165	All of the above.	10/4/2019 7:28 PM
166	Love the dock master and staff at the harbor Also, Harbor Springs!	10/4/2019 7:27 PM
167	Its closest to home	10/4/2019 7:16 PM
168	PROTECTED RESTAURANTS WIFI	10/4/2019 7:16 PM
169	Great service, friendly staff, close to my marina	10/4/2019 7:02 PM
170	Availability, easy to reserve on the website.	10/4/2019 6:57 PM
171	New facilities. Close to city. Wind powered.	10/4/2019 6:46 PM
172	Love the remote setting!	10/4/2019 6:29 PM
173	Location	10/4/2019 6:27 PM
174	Bathrooms>Showers have been updated , WiFi available . Nice location and friendly staff.	10/4/2019 6:25 PM
175	Close to town amenities and close to Lake Michigan	10/4/2019 6:02 PM
176	Small town culture and location for visiting other harbors	10/4/2019 5:58 PM
177	access, and very nice	10/4/2019 5:57 PM
178	I use this harbor all most all summer. It's maintained well.	10/4/2019 5:45 PM
179	Good ramps, clean bathrooms and available fuel there and other marinas in the Les Cheneaux Islands. We also like Elmwood Township. That's being renovated now. That doesn't have transient slip space. Only day use ramps.	10/4/2019 5:45 PM
180	Clean, friendly staff, close to food and hotels.	10/4/2019 5:43 PM
181	Very friendly, helpful staff. Always ready to find us a shopper slip so we can walk to town for a meal.	10/4/2019 5:38 PM
182	Every time I go there everything is all set up in advance and never a hasel .	10/4/2019 5:35 PM
183	The proximity to the city, being in a park area, being in Northern Michigan, always accommodating staff, a good spot to head out to Beaver Island or Mackinac Island.	10/4/2019 5:34 PM
184	Close by, great activity,s food and drinks. Wife says shopping.....	10/4/2019 5:25 PM
185	amenities in town	10/4/2019 5:06 PM
186	good access and plenty of parking	10/4/2019 5:02 PM
187	Accessible, Scenic Views, Shore Fishing, Picnic Area, Boat Access and Nearby Commercial Amenities	10/4/2019 4:59 PM
188	Very clean , very friendly staff	10/4/2019 4:56 PM
189	The staff, quality of the marina, and location.	10/4/2019 4:51 PM
190	Protected harbour, Restaurants, some shopping, great water front views, friendly	10/4/2019 4:50 PM
191	Clean, quick access to the lake and within 15 minutes from home	10/4/2019 4:34 PM
192	Lots of memories	10/4/2019 4:30 PM
193	close to me and where mostly do boating	10/4/2019 4:28 PM
194	close to my normal cruising area	10/4/2019 4:28 PM
195	It's a beautiful harbor that has beach access and is only 4 hours from the Detroit area.	10/4/2019 4:27 PM

MSWC Boater Trends Survey

196	Overall condition, service, local amenities	10/4/2019 4:23 PM
197	Everyone is friendly and helpful	10/4/2019 4:19 PM
198	Staff is helpful, easy to fuel, quiet, well protected from waves, lots to do in area, great availability even at last minute.	10/4/2019 4:04 PM
199	Staff, location, facilities	10/4/2019 4:00 PM
200	always clean and very friendly	10/4/2019 3:57 PM
201	Staff	10/4/2019 3:42 PM
202	Facilities, harbor quality and access to town.	10/4/2019 3:42 PM
203	Extremely helpful, friendly staff, wonderful town to visit.	10/4/2019 3:40 PM
204	Lots of activities	10/4/2019 3:36 PM
205	Beautiful view, nice harbor, restaurant on site (hop	10/4/2019 3:34 PM
206	Only one thus far. First year having my boat.	10/4/2019 3:33 PM
207	Location, bikes, service	10/4/2019 3:26 PM
208	new	10/4/2019 3:23 PM
209	courteous staff, clean facilities,good docks, WiFi,friendly harbour master.	10/4/2019 3:19 PM
210	Proximity to HS residence. Close by amenities, restrooms. Could use more load/unload ramps during peak times.	10/4/2019 3:14 PM
211	Great, helpful people, clean restrooms	10/4/2019 3:12 PM
212	Top of the line help and management	10/4/2019 3:00 PM
213	x	10/4/2019 2:58 PM
214	Very dog friendly	10/4/2019 2:56 PM
215	Location. Facilities. Overall environment!	10/4/2019 2:55 PM
216	Location	10/4/2019 2:53 PM
217	location to fishing and resort	10/4/2019 2:47 PM
218	Because I lived 6 ml. north of it. Also used Leland's	10/4/2019 2:42 PM
219	It's the only I been to other than GLSBC	10/4/2019 2:38 PM
220	Proximity to the city	10/4/2019 2:35 PM
221	close to shopping and other ports of call.	10/4/2019 2:35 PM
222	Other boaters	10/4/2019 2:34 PM
223	DOCKS ,PARKING AND RESTROOM CLOSE TO WHERE I FISH.	10/4/2019 2:33 PM
224	My town	10/4/2019 2:28 PM
225	Very well kept	10/4/2019 2:23 PM
226	laundry, grills, bath rooms, the staff is very good.	10/4/2019 2:01 PM
227	Local attractions	10/4/2019 1:59 PM
228	Lots of things to do things to do	10/4/2019 1:58 PM
229	The waterfront is beautiful and the pedestrian tunnel makes it easy to go to the store in Petoskey. (We also love Elk Rapids.)	10/4/2019 1:57 PM
230	Easy on and off of boat, wonderful little town, clean, good structures for group activities	10/4/2019 1:55 PM
231	Closest to my residence	10/4/2019 1:53 PM
232	Friendly, people are there during posted hours	10/4/2019 1:53 PM
233	Access to town	10/4/2019 1:52 PM

MSWC Boater Trends Survey

234	Even though fuel was a little bit of a ride up the inlet, the facilities were clean, and many attractions in the nearby town.	10/4/2019 1:52 PM
235	Excellent Staff, docks. Mac City, view	10/4/2019 1:47 PM
236	location , security	10/4/2019 1:44 PM
237	You can walk to downtown restaurants and shops	10/4/2019 1:41 PM
238	excellent location: gateway to the north; great facilities ; phenomenal staff. Can' say enough about the marina staff: friendly, professional, competent.	10/4/2019 1:37 PM
239	Closest to excellent fishing	10/4/2019 1:34 PM
240	Good launching area	10/4/2019 1:33 PM
241	Location	10/4/2019 1:32 PM
242	Only	10/4/2019 1:32 PM
243	very friendly and accommodating staff, fair rates, good amenities, lots to do in town, town right there	10/4/2019 1:26 PM
244	Isolation and walking trails	10/4/2019 1:25 PM
245	Clean	10/4/2019 1:24 PM
246	Location and nice facilities. Slips are hard to get in and out of.	10/4/2019 1:21 PM
247	Interesting town	10/4/2019 1:21 PM
248	Location&management	10/4/2019 1:20 PM
249	Location, large number of transient slips, good docks, clean marina, good laundry, good fuel dock, good pump-out	10/4/2019 1:20 PM
250	Nice	10/4/2019 1:19 PM
251	Proximity to park stores and restrauents.	10/4/2019 1:15 PM
252	Just like it	10/4/2019 1:14 PM
253	Just a really nice place and good access to the town	10/4/2019 1:12 PM
254	Friendly staff, fuel availability, access to Lake Michigan, good docks, showers, and restrooms.	10/4/2019 1:12 PM
255	Just go there and like it ..	10/4/2019 1:03 PM
256	It is the only one I have used	10/4/2019 1:02 PM
257	Parking bathroom easy launch	10/4/2019 12:58 PM
258	Modern, clean facilities with laundry and private showers. Nice boaters lounge. Town very close by with shops and restaurants.	10/4/2019 12:54 PM
259	helpful staff, easy to understand for first time approach and nice facilities with an easy walk to town and restaurants. Douglas/Saugatuck is close 2nd as the summer transit system is fantastic.	10/4/2019 12:51 PM
260	It is extremely well run, friendly, clean, we have been going there since 1976	10/4/2019 12:48 PM
261	Was very clean, easy to navigate (no weed beds in the fairways) close to town for entertainment and eats, very friendly staff and patrons	10/4/2019 12:44 PM
262	Location on route;nice restaurant on site	10/4/2019 12:43 PM
263	Not a user of others	10/4/2019 12:43 PM
264	Because it's close to home	10/4/2019 12:40 PM
265	Had help launching my boat	10/4/2019 12:40 PM
266	Fishing	10/4/2019 12:33 PM
267	Very clean, good location	10/4/2019 12:31 PM
268	Many docks lots of parking.	10/4/2019 12:31 PM
269	Things to do	10/4/2019 12:24 PM

MSWC Boater Trends Survey

270	Fish cleaning stations, bathrooms, parking	10/4/2019 12:24 PM
271	modern, very clean bathrooms and showers. Nice "club room" to hang out and do laundry or get out of the elements. Great staff! Did I mention, modern and Very Clean bathrooms and showers.....	10/4/2019 12:22 PM
272	well maintained	10/4/2019 12:18 PM
273	Superior Harbor staff, well maintained marina, exceptional amenities, proximity to restaurants, shopping, museums, library, playground, American Legion, lighthouse, beaches. Ease of navigation for bicycling .	10/4/2019 12:18 PM
274	just a nice place	10/4/2019 12:17 PM
275	Location	10/4/2019 12:17 PM
276	Great staff! WiFi and power are dependable. Pleasant town with restaurants and grocery within walking distance.	10/4/2019 12:13 PM
277	Very clean and in good shape.	10/4/2019 12:12 PM
278	Great location, clean facilities and well run	10/4/2019 12:10 PM
279	walking distance to library and town, ample parking for with and without trailers, fuel, showers, bathrooms, shelters, fireworks, boat display contest...	10/4/2019 12:08 PM
280	Great location, clean, new amenities, friendly staff	10/4/2019 12:07 PM
281	Close to downtown	10/4/2019 12:07 PM
282	I liked the old Marina because it was more spread out New one is cramped...gas dock is messed up But still like it	10/4/2019 12:07 PM
283	Infrastructure and brand new.	10/4/2019 12:06 PM
284	Very nice and clean. Updated docks and walking distance to shops and restaurants	10/4/2019 12:06 PM
285	It's the only one I've used! :)	10/4/2019 12:06 PM
286	Was nice	10/4/2019 12:04 PM
287	Good parking and most of the time little wait at the ramps	10/4/2019 12:00 PM
288	It was just a nice place bigger fish cleaning station	10/4/2019 12:00 PM
289	nice spot for a few days	10/4/2019 12:00 PM
290	Quality of staff, cleanliness of facilities	10/4/2019 11:59 AM
291	everything needed is there or close by.	10/4/2019 11:57 AM
292	For fishing , their cleaning station. Plus security great. Close by stores and shops.	10/4/2019 11:57 AM
293	in downtown	10/4/2019 11:56 AM
294	The new shower and dock facilities are great.	10/4/2019 11:53 AM
295	Not a ton of adjacent attractions, but what is there is great. Little general store has everything including hot food. Free bicycle rental to get the mile or so down the road to the lighthouse. Very nice docks and restroom facilities.	10/4/2019 11:52 AM
296	Ease of access immediately off Green Bay. Excellent facilities, closeness of needed provisioning, quality of docks.	10/4/2019 11:50 AM
297	Facilities at marina are very clean and well maintained.	10/4/2019 11:49 AM
298	The hospitality of the staff is second to none.	10/4/2019 11:48 AM
299	Close to home ,the ramps are awesome ,right on lake erie ,	10/4/2019 11:46 AM
300	A number of great marinas in the northern area of Lk. Michigan. Leland & Elk Rapids are great. Northport is charming, HS & Petosky are very good.	10/4/2019 11:46 AM
301	The recent renovations, the proximity to East Tawas and shopping	10/4/2019 11:45 AM
302	It had the most amenities available within walking distance of harbor	10/4/2019 11:45 AM
303	peaceful, great amenities, wonderful staff, private bathrooms, walking distance to lots of things	10/4/2019 11:44 AM

MSWC Boater Trends Survey

304	New clean and amenities where really nice. Friendly staff as well	10/4/2019 11:42 AM
305	Staff support and facility quality.	10/4/2019 11:42 AM
306	nice harbor master	10/4/2019 11:38 AM
307	clean, friendly staff very helpful	10/4/2019 11:38 AM
308	The facilities are very nice and the staff is very attentive.	10/4/2019 11:38 AM
309	Only one I use	10/4/2019 11:36 AM
310	Best docks (floating), best staff, best harbor master	10/4/2019 11:32 AM
311	Location. The Ferry Wakes have been increasing a increasing hazard since Star-Line acquisition of Arnold Transport Ferry's.	10/4/2019 11:32 AM
312	Easy access. Nice facility Close to town restaurants and shops	10/4/2019 11:30 AM
313	Very clean an improved facility. Staff was excellent and many nice restaurants and shops in walking distance.	10/4/2019 11:29 AM
314	Location. Every amenity is there.	10/4/2019 11:29 AM
315	Location to Detroit	10/4/2019 11:27 AM
316	quality of docks	10/4/2019 11:26 AM
317	Love that place	10/4/2019 11:26 AM
318	location in town. Great staff. very clean. washing machines on site.	10/4/2019 11:25 AM
319	Because the Island is our favorite get away but close. Mackinaw city would be a second choice	10/4/2019 11:25 AM
320	Easy access to the city within walking distance. Very clean, great staff. I love to bring visitors to show off the wonderful facilities.	10/4/2019 11:24 AM
321	Ease of docking, fuel,WiFi, cleanliness,personnel,downtown area,and bicycles	10/4/2019 11:24 AM
322	Wonderful staff, great dock master, most beautiful harbor in Michigan, close to restaurants and shops, very accommodative	10/4/2019 11:22 AM
323	Easy access, good facilities, friendly staff	10/4/2019 11:22 AM
324	Close, nice place to stay	10/4/2019 11:21 AM
325	Location, location	10/4/2019 11:21 AM
326	Well protected, nice docks, clean facilities.	10/4/2019 11:20 AM
327	clear water, beautiful surroundings, good docks and restaurant nearby.	10/4/2019 11:20 AM
328	Go see it	10/4/2019 11:18 AM
329	It is very well laid out, ample number of slips, clean nice restrooms and lots of parking	10/4/2019 11:17 AM
330	Nice facilities (bathroom, shower, covered picnic area, grills), docks in excellent condition, service very good, excellent location to downtown Traverse City	10/4/2019 11:17 AM
331	IS IS THE CLOSES TO MY HOME.	10/4/2019 11:17 AM
332	Great friendly well trained staff. Excellent well maintained and clean facilities. Free transportation to restaurants and stores.	10/4/2019 11:17 AM
333	Location	10/4/2019 11:16 AM
334	Like the ramps and location	10/4/2019 11:15 AM
335	Elmwood Marina (west grand traverse bay) is the best marina. Excellent condition, clean, large docks, excellent launch, courtesy of staff, amenities. Top-notch!	10/4/2019 11:15 AM
336	Location, staff, access to stores and restaurants !!	10/4/2019 11:15 AM
337	If the Mackinac Island marina had improved shower facilities, it would be my opinion of the best.	10/4/2019 11:14 AM
338	Good docks and facilities, showers, grills, TV, wifi, and close to shopping and restaurants.	10/4/2019 11:13 AM
339	easy access to Lk Michigan as well as inland water. Close proximity to town. great docks	10/4/2019 11:13 AM

MSWC Boater Trends Survey

340	Activities available	10/4/2019 11:12 AM
341	Good docks and facilities, as well as proximity to town, restaurants, shops, etc.	10/4/2019 11:11 AM
342	Great facilities & a very friendly and knowledgeable staff.	10/4/2019 11:09 AM
343	professional at handling volume.	10/4/2019 11:06 AM
344	Location and friendliness of staff	10/4/2019 11:05 AM
345	Very nice docks, floating	10/4/2019 11:04 AM
346	The great attraction of Mackinaw Island	10/4/2019 11:02 AM
347	The facilities are in great shape, it's very well protected, the bath/shower house is very nice.	10/4/2019 11:00 AM
348	easy in, easy out, & decent bathrooms	10/4/2019 11:00 AM
349	See item 23	10/4/2019 10:58 AM
350	Amenities, cleanliness, availabililty	10/4/2019 10:58 AM
351	This is just this year. Pressure Isle usually is but the fuel fiasco made it horrible. I hope you have fixed it and have worked something out with the Portage restaurant so that they can reopen. I was highly disappointed this year not being able to rest my usual 2-3 days there.	10/4/2019 10:58 AM
352	Excellent on all the types of service listed above	10/4/2019 10:57 AM
353	In prime vacation area	10/4/2019 10:57 AM
354	Enjoy	10/4/2019 10:56 AM
355	deep	10/4/2019 10:56 AM
356	Cause no one is there, Lol, if you changed the name people would find that there is a newer marina in mackinaw city,, Hellooooooo	10/4/2019 10:56 AM
357	New, high quality docks, bathrooms and showers.	10/4/2019 10:56 AM
358	staff is professional and friendly.	10/4/2019 10:55 AM
359	Nice location	10/4/2019 10:54 AM
360	Location but very bad docks. Great staff	10/4/2019 10:53 AM
361	Kept up very well, friendly staff, great location.	10/4/2019 10:53 AM
362	Close to town.	10/4/2019 10:53 AM
363	Attractive and race destination	10/4/2019 10:52 AM
364	Good bath house facilities and docks, plus great staff. Rental prices are reasonable and close to shopping and restaurants.	10/4/2019 10:52 AM
365	it is a difficult choice but this is just a beautiful place and well maintained .	10/4/2019 10:52 AM
366	great people and location	10/4/2019 10:51 AM
367	Location, quality of docks and facilities	10/4/2019 10:51 AM
368	READY ACCESS TO TOWN , GOOD FACILITIES, FRIENDLY STAFF, GENERALLY OUT OF SMOKE FROM BADGER.	10/4/2019 10:51 AM
369	attentive staff	10/4/2019 10:50 AM
370	bathrooms	10/4/2019 10:49 AM
371	Quality of personnel, and surrounding area.	10/4/2019 10:49 AM
372	Clean, easy walk to town for shopping and food	10/4/2019 10:49 AM
373	The location. To town.	10/4/2019 10:49 AM
374	Access to Lk Michigan. Excellent facilities. Easy access to local shops and restaurants. Very helpful staff.	10/4/2019 10:48 AM
375	Well maintained	10/4/2019 10:47 AM
376	Next to our rack storage at The Wharf and home marina for many of the WMO events	10/4/2019 10:47 AM

MSWC Boater Trends Survey

377	Located next to Sheplers Hoist where we winter store our sailboat. Great showers, wi-fi, power, staff, parking, recycling (including used oil), dumpster, diesel fuel, pumpout.	10/4/2019 10:47 AM
378	Wonderful staff, nice facility, excellent harbor protection	10/4/2019 10:46 AM
379	The docks were in excellent condition; staff met us to help us dock; staff very friendly. And I think they should change the time of day they clean the restrooms to a time in the evening. An hour mid-morning is not a good time to close them!	10/4/2019 10:46 AM
380	Staff, amenities, location to dining	10/4/2019 10:46 AM
381	Is walking distance to down town has gas showers and restrooms.	10/4/2019 10:45 AM
382	Staff City amenities	10/4/2019 10:44 AM
383	Nice	10/4/2019 10:44 AM
384	Clean, good staff, nice docks, area restaurants and bars	10/4/2019 10:43 AM
385	Parking	10/4/2019 10:43 AM
386	The town	10/4/2019 10:43 AM
387	Close to great cruising water.	10/4/2019 10:42 AM
388	good staff and facilities	10/4/2019 10:42 AM
389	New, well maintained, and not crowded	10/4/2019 10:42 AM
390	Close to town, always have an available slip and help with docking	10/4/2019 10:42 AM
391	amenities	10/4/2019 10:42 AM
392	Nice people	10/4/2019 10:41 AM
393	Beautiful location	10/4/2019 10:41 AM
394	EZ access. Good parking. Clean. Very Good docks and ramp.	10/4/2019 10:41 AM
395	Walking and bike trails.water park and golf	10/4/2019 10:41 AM
396	It's the only one I've used	10/4/2019 10:40 AM
397	It has is all and is clean and friendly staff.	10/4/2019 10:40 AM
398	very fun town and nice facilities	10/4/2019 10:39 AM
399	clean fresh but could use wi fi	10/4/2019 10:39 AM
400	great facilities, Proximity to Downtown East Tawas is perfect	10/4/2019 10:39 AM
401	proximity to home, everything I need is available close by	10/4/2019 10:39 AM
402	Great docks. Protected beach	10/4/2019 10:38 AM
403	location to restaurants	10/4/2019 10:38 AM
404	Graet location to everything	10/4/2019 10:38 AM
405	Good docks, fuel, very friendly accommodating staff,within walking distance to town and hotels, restaurants etc.	10/4/2019 10:38 AM
406	Proximity	10/4/2019 10:37 AM
407	Great facility and a marvelous staff.	10/4/2019 10:37 AM
408	Location, good docks, wifi, Affordable	10/4/2019 10:36 AM
409	Cleanliness of grounds, quality docks, restroom facilities.	10/4/2019 10:36 AM
410	New docks are great and easy access to downtown. Shepherd is also a ecellent repair facility	10/4/2019 10:36 AM
411	meets all my expectations	10/4/2019 10:35 AM
412	Well run and courteous.	10/4/2019 10:34 AM
413	Close to town, nice facilities.	10/4/2019 10:34 AM
414	Availability, restaurants and variety of hometown events, Jazz Festival etc.	10/4/2019 10:34 AM

MSWC Boater Trends Survey

415	Access to Lake Erie and Detroit river	10/4/2019 10:34 AM
416	The beauty and serenity of Presque Isle Harbor is fantastic, mackinaw, st clair, Leland Lexington port sanilac and other are great too.	10/4/2019 10:34 AM
417	It is in wonderful condition, with every desirable amenity. Great location to downtown.	10/4/2019 10:34 AM
418	It's best for me because I live just a short walk away and have a seasonal slip there.	10/4/2019 10:33 AM
419	Kari is a delightful harbor master.	10/4/2019 10:32 AM
420	Very Good staff and consistently good over almost 30 years. Close to shopping, restaurants and a nice place to walk and see the sights.	10/4/2019 10:32 AM
421	Its close proximity to town, great bathroom facilities, library with movies for rent near by, Gas grills provided	10/4/2019 10:32 AM
422	nice docks, great protection, clean, friendly office people, location for stuff in town and location on the water, nice fuel dock	10/4/2019 10:31 AM
423	It was a great visit; our only visit to a State Marina also. We came from Georgian Bay, Canada.	10/4/2019 10:31 AM
424	remote, high docs, quiet, friendly	10/4/2019 10:31 AM
425	Close to town, helpful staff, nice docks	10/4/2019 10:31 AM
426	Great location, nice facilities	10/4/2019 10:31 AM
427	Have been going there for 60 years / family cottage nearby	10/4/2019 10:30 AM
428	Convenient	10/4/2019 10:30 AM
429	Many activities.	10/4/2019 10:30 AM
430	Proximity to Downtown Detroit	10/4/2019 10:29 AM
431	Amenities, staff attitudes, availability of nearby shopping/dining.	10/4/2019 10:29 AM
432	Very nice area and marina	10/4/2019 10:28 AM
433	Location	10/4/2019 10:27 AM
434	Location and facility	10/4/2019 10:27 AM
435	Docks, great staff, great location, proximity to shopping, restaurants	10/4/2019 10:25 AM
436	good docks, friendly service, amenities and local attractions	10/4/2019 10:25 AM
437	Quality of personal and close to city amenities	10/4/2019 10:24 AM
438	Location and condition of the facilities	10/4/2019 8:42 AM
439	Good amenities, clean, close to downtown.	10/3/2019 9:56 PM
440	Clean,new, very nice staff!	10/3/2019 9:09 PM
441	Quality dock, safe harbor, clean showers/baths, fun city activities, restaurants, shopping, reservations taken	10/3/2019 8:33 PM
442	Location	10/3/2019 8:30 PM
443	Location, suitable amenities	10/3/2019 5:37 PM
444	Quality docks, very nice staff, nice bathrooms/showers, close to shopping and restaurants, musical fountain.	10/3/2019 5:32 PM
445	Just a fun place to be.	10/3/2019 4:50 PM
446	Port Austin is a close contender in the race for best harbor. The attendants we have had service us are both knowledgeable and courteous. They insure proper fuel service is provided by use of paper sheets signed by the captain requesting gas or diesel. They insure the harbor stays clean without fuel spill or leakage. The bathrooms/showers are kept clean. These same things can be said about Port Austin. However, the beauty of Presque Isle wins.	10/3/2019 1:24 PM
447	Close to shopping. Town has lots of activities	10/3/2019 10:58 AM
448	the lay out and service along with access to town	10/3/2019 9:46 AM

MSWC Boater Trends Survey

449	Good docks and facility. Location is great.	10/3/2019 9:23 AM
450	Only one that I have visited by pontoon	10/3/2019 9:19 AM
451	The old harbor master was organized and a good host. The facilities were well maintained, and the staff was friendly. However, that has now changed.	10/3/2019 8:55 AM
452	Very accommodating for transient dock usage (i.e. shopper dock), we make frequent trips from our Peninsula Twp home (Old Mission Peninsula).	10/3/2019 8:38 AM
453	Location	10/3/2019 8:27 AM
454	Beauty of surrounding land and water.	10/3/2019 8:23 AM
455	service, staff, cost, haul out	10/3/2019 8:20 AM
456	Lots of things to do there, good docks, good showers and restrooms. Pet friendly! Par 3 golf, swimming, walking or biking, nature area	10/3/2019 7:37 AM
457	Accommodated a group, knowledgeable staff, proximity to activities InThe D, BBQ area. However, no fuel	10/2/2019 10:42 PM
458	Great staff, nearby shopping, restaurants, entertainment, nice showers and restrooms, nice docks.	10/2/2019 10:13 PM
459	Well maintained, nice staff, easy access to city and Mackinac Island	10/2/2019 9:01 PM
460	Location, people friendliness, close to town. Music in the park.	10/2/2019 8:04 PM
461	Easy access. Multiple lanes. Close to home.	10/2/2019 7:50 PM
462	New, clean restrooms and showers plenty of parking and a strait shot to the island.	10/2/2019 7:27 PM
463	Safe, great location, has everything we need. The problem is it is to hard to get in on the weekends. There are not enough transient slips	10/2/2019 4:40 PM
464	My Jump off pinot for Chicago	10/2/2019 4:36 PM
465	mostly because of the quality of use. better taken care of than state operated ones ive been to.	10/2/2019 4:35 PM
466	mostly location	10/2/2019 4:14 PM
467	friendly staff, excellent facilities, good fishing	10/2/2019 3:04 PM
468	Ease of access & parking	10/2/2019 2:34 PM
469	Easy access and the staff is very friendly.. They have carts available to transport materials to your boat. Large parking lot with lots of room	10/2/2019 2:23 PM
470	Only one I have visited, seemed nice.	10/2/2019 2:07 PM
471	close to hoe and very well maintained	10/2/2019 2:02 PM
472	clean, friendly and easy to navagate	10/2/2019 12:57 PM
473	Good docks. Close to downtown	10/2/2019 12:42 PM
474	Restaurant nature walks bike rental light house showers	10/2/2019 12:38 PM
475	Close to the town	10/2/2019 12:18 PM
476	GREAT CITY, GREAT LOCATION, WELL PROTECTED	10/2/2019 11:56 AM
477	Closeness to downtown shopping and restaurants	10/2/2019 11:20 AM
478	Great location and close to downtown area	10/2/2019 10:35 AM
479	Newer facilities	10/2/2019 10:24 AM
480	Clean, nice docks, excellent location, well maintained, excellent ramps. Many state harbors are of this quality	10/2/2019 9:58 AM
481	Location to town & Lake. Bathroom facilities, docks swept, power is easily accessible, staff are pleasant. The only downside to S. Haven is boat ramp docks are tiny so have to run from St Joe and hope Lk. M isn't crazy rough to start your vacation. Once in marina even bad storm surges in slips are manageable.	10/2/2019 9:07 AM
482	Clean well-kept friendly staff	10/2/2019 9:01 AM

MSWC Boater Trends Survey

483	Beautiful, comfortable, good docks, close to activity	10/2/2019 8:58 AM
484	Mark Held is the assistant harbor master and runs the operation well. It always comes down to a person who is committed to making a difference. He has trained the dock hands to be as capable as he is in assisting boaters with docking. He also has a wealth of information on Frankfort and surrounding areas. He enforces a strong ethic among the harbor hands to keep bathrooms clean and run the operation well. The only thing Frankfort Municipal needs to improve is that they need to become part of the MI DNR reservation system. They run an extraordinarily antiquated, first-come-first-served transient slip system that leaves them clueless for the first half of each day as to whether they can accommodate an arriving boat.	10/2/2019 8:58 AM
485	Selected in error	10/2/2019 8:06 AM
486	Location! Quality of staff and their services. There are many state docks that have excellent people working there. I started cruising in 1960 as a young teen and have been thrilled to watch the system develop. Only wish budget limits allowed me to cruise more these days.	10/2/2019 8:04 AM
487	location to home	10/2/2019 7:50 AM
488	Nice	10/2/2019 7:42 AM
489	New docks, clean facilities, and friendly staff.	10/2/2019 7:42 AM
490	Gerish Township Marina is local marina i use and is not on your list	10/2/2019 7:39 AM
491	Fishing opportunity and plenty space to park/launch	10/2/2019 7:35 AM
492	Salmon fishing	10/2/2019 7:27 AM
493	The park makes it like visiting a resort	10/2/2019 7:21 AM
494	Have not visited many other than Menominee.	10/1/2019 11:22 PM
495	location	10/1/2019 11:07 PM
496	Great location and views	10/1/2019 10:27 PM
497	Proximity to Lake St Clair	10/1/2019 8:36 PM
498	Close to my fishing grounds.	10/1/2019 8:26 PM
499	only one	10/1/2019 7:51 PM
500	None , recreational passport is required and as a taxpayer I own that property already .	10/1/2019 7:27 PM
501	New, clean, ease of lunch and parking	10/1/2019 7:24 PM
502	location to attractions and cheapest way to spend the night on mackinac	10/1/2019 7:21 PM
503	Many docks, clean. Many parking spaces	10/1/2019 7:09 PM
504	Beautiful, great staff, clean, fuel and pumpout, easy to get to, great location	10/1/2019 5:20 PM
505	Location to cruising areas	10/1/2019 3:38 PM
506	Nice town nearby	10/1/2019 2:12 PM
507	The whole marina and staff are tops. Clean kept up docks in great repair.great pump outs ,staff well trained and ready	10/1/2019 1:58 PM
508	Clean, good parking, # of docks	10/1/2019 1:49 PM
509	Great Staff, great location	10/1/2019 1:34 PM
510	Location, location. location!	10/1/2019 1:00 PM
511	great bathrooms clean, good docks	10/1/2019 12:37 PM
512	Location, location, location.	10/1/2019 12:24 PM
513	Good facilities and parking	10/1/2019 12:09 PM
514	Very helpful and friendly	10/1/2019 11:30 AM
515	Slip availability, proximity to town, rest rooms and showers	10/1/2019 10:46 AM
516	Beautiful clean harbor with very engaged and attentive staff.	10/1/2019 10:39 AM

MSWC Boater Trends Survey

517	This has the only one we have been to this year.	10/1/2019 10:20 AM
518	Docks, location, facilities and friendly staff	10/1/2019 9:39 AM
519	Sheltered	10/1/2019 9:20 AM
520	Proximity to restaurants and stores	10/1/2019 8:57 AM
521	Meets all criteria I listed. Unfortunately it is too far away from our home.	10/1/2019 8:25 AM
522	Location and activities. Restaurants	10/1/2019 7:51 AM
523	clean restrooms, showers and proximity to activities	10/1/2019 7:16 AM
524	Good location.	10/1/2019 6:15 AM
525	it well kept	10/1/2019 6:10 AM
526	I like it	10/1/2019 6:08 AM
527	Location, historical significance, scenery	10/1/2019 2:28 AM
528	Nice location and very pretty place	9/30/2019 11:43 PM
529	Most things to do	9/30/2019 11:18 PM
530	It's the best equipped of the handful that I have used.	9/30/2019 8:18 PM
531	Big lots of room	9/30/2019 8:01 PM
532	Lots of parking and friendly staff	9/30/2019 7:58 PM
533	Well maintained, never doubled up on my slip. High quality floating docks. Excellent staff and service. Close to lake Michigan. Fish cleaning station.	9/30/2019 7:57 PM
534	This is the one we visit most often while camping at Tawas Point State Park	9/30/2019 7:30 PM
535	Excellent staff, large public area, spotless rest rooms and showers, ease of fuel	9/30/2019 6:53 PM
536	Close to home and our personal dock	9/30/2019 6:20 PM
537	This is a well maintained marina with an outstanding group of people working there. It is close to town which makes it very convenient.	9/30/2019 6:13 PM
538	Close by.	9/30/2019 6:09 PM
539	great service, clean , well maintained.great location	9/30/2019 6:05 PM
540	Great Staff and awesome location to start tris to the North Channel	9/30/2019 6:00 PM
541	Location to fishing	9/30/2019 5:47 PM
542	Staff, facilities, proximity to local stores and restaurants	9/30/2019 5:41 PM
543	It has a place for walking dogs, easy access to stores, restaurants, friendly, well equipped	9/30/2019 5:39 PM
544	Amenities	9/30/2019 5:27 PM
545	Has it all: access to great boating, good docks, great staff, proximity to town, marine services available locally, very protected	9/30/2019 5:23 PM
546	The facilities are good and there is a lot to see and do within walking distance.	9/30/2019 4:57 PM
547	large, clean	9/30/2019 4:51 PM
548	Lovely area	9/30/2019 4:51 PM
549	The take care of it. It is maintained, clean and has gas, pump out, and friendly staff.	9/30/2019 4:45 PM
550	Great staff - helpful - wish it had a fuel dock.	9/30/2019 4:42 PM
551	Very comfortable and friendly. Town is awesome!	9/30/2019 4:36 PM
552	Showers, Lockers, Bathroom facilities almost the feeling of a elite club.	9/30/2019 4:31 PM
553	Great amenities and location.	9/30/2019 4:28 PM
554	Love the location and friendly staff.	9/30/2019 4:11 PM
555	Nice people	9/30/2019 4:09 PM

MSWC Boater Trends Survey

556	It offers a place to dock your boat and spend the night.	9/30/2019 4:05 PM
557	Extremely friendly and helpful	9/30/2019 3:54 PM
558	Nicest town to visit.	9/30/2019 3:50 PM
559	great dock, facilities	9/30/2019 3:41 PM
560	Ease of access, facilities, staff	9/30/2019 3:34 PM
561	Cleanliness, friendly, helpful staff. Local restaurants and shops within walking distance. Location to the open lake.	9/30/2019 3:27 PM
562	It is beautiful, has access to Lake Michigan and Lake Charlevoix, is close to shopping and restaurants, and has easily accessed fuel and bathroom facilities.	9/30/2019 3:24 PM
563	The only one we have visited.	9/30/2019 3:18 PM
564	It is the only one I am familiar with	9/30/2019 3:16 PM
565	clean/ easy access	9/30/2019 3:16 PM
566	Proximity to town, restaurants, parks, nice restrooms, fish cleaning station and dish washing sinks	9/30/2019 3:16 PM
567	I like all the one i go to that i picked	9/30/2019 3:15 PM
568	Location	9/30/2019 3:14 PM
569	It's good quality and has a fish cleaning station.	9/30/2019 3:07 PM
570	it's the only one I use.	9/30/2019 3:07 PM
571	It is the one I use the most	9/30/2019 3:02 PM
572	Access to fishing Areas, amenities.	9/30/2019 3:02 PM
573	Location, design and layout of park and marina, and proximity to down town	9/30/2019 3:01 PM
574	Good fishing location	9/30/2019 2:58 PM
575	Closest to me. Closest to Mouth Of Boardman River.	9/30/2019 2:55 PM
576	No fees currently and short walk to entire downtown	9/30/2019 2:53 PM
577	Well protected harbor, close to restaurants, pubs, shops, friendly staff and Harbor Master, clean boater only bathroom and shower facilities, and great location.	9/30/2019 2:31 PM
578	We chose this for our home Port because the location has beautiful surroundings, convenience of nearby restaurants and stores, and the clearest cleanest water anywhere we've seen. Including the North Channel in Canada!	9/30/2019 2:27 PM
579	location	9/30/2019 12:24 PM
580	Accommodations are nice and there plenty of space for maneuvering while docking	9/30/2019 12:02 PM
581	recently remodeled. nice and clean	9/30/2019 11:55 AM
582	Great staff great facility	9/30/2019 11:37 AM
583	This Marina is the best run - Laura the Harbormaster makes this her marina and the (her) staff understands this message. This Harbor is spotless	9/30/2019 11:21 AM
584	Excellent docks, close proximity bathrooms, shops, Walmart, restaurants, quick access to Tawas Bay for sailing, and excellent stop on my way north from Bay City	9/30/2019 11:17 AM
585	Liked the restrooms & showers onsite. Convenient location to area restaurants and shops. Slips were okay but could be improved.	9/30/2019 11:14 AM
586	Ideal location, exceptional cleanliness, outstanding staff	9/30/2019 10:40 AM
587	Only one that I have been to	9/30/2019 10:09 AM
588	close to amenities/downtown	9/30/2019 9:54 AM
589	fish cleaning	9/30/2019 9:42 AM
590	Beautiful area, good facility/docks/restrooms, close to restaurants and stores	9/30/2019 9:37 AM
591	Friendly people, has everything you need	9/30/2019 9:31 AM

MSWC Boater Trends Survey

592	Very clean, very polite staff even though we did not use a dock we did speak with the staff.	9/30/2019 9:09 AM
593	The quality of the docks, the cleanliness of the restrooms and the peaceful location make this one of our favorite.	9/30/2019 8:38 AM
594	Great amenities, helpful staff, courtesy vehicle	9/30/2019 7:58 AM
595	I've only visited a few, the people working at the marina make this the best I've visited.	9/30/2019 7:49 AM
596	It is well cared for and easy access to the water.	9/30/2019 1:25 AM
597	Not busy, but has points of interest, i.e. lighthouses to visit, just a relaxing area.	9/29/2019 11:05 PM
598	clean, friendly, local attractions	9/29/2019 10:47 PM
599	Helpful staff Great parking Close restaurants	9/29/2019 10:30 PM
600	just a fun place and great jumping off point to go to North Channel	9/29/2019 10:05 PM
601	Close to my recreational property	9/29/2019 9:20 PM
602	I can't say Rock Harbor is special but provides refuge and restocking point when paddling I.R.	9/29/2019 9:14 PM
603	Lots of slips and car parking. New nice showers and restrooms. Proximity to shopping and dining.	9/29/2019 9:11 PM
604	Excellant staff and facilities	9/29/2019 8:20 PM
605	location, staff, community nearby, condition of dock/s, restroom/showers; also, equally strong were Petoskey, and Charlevoix -- for all the same reasons	9/29/2019 7:44 PM
606	Clean, great dock hands, Close to shops restaurants etc, clean water, and group party accommodations	9/29/2019 6:12 PM
607	Great docks, showers/restrooms, staff, bike availability, fuel, campfire ring with wood	9/29/2019 5:51 PM
608	It is the newest harbor i have visited and really enjoyed it. Constructed very well and has many amenities that I utillized. Accessible to fishing on Lake Huron.	9/29/2019 3:17 PM
609	location and surrounding things	9/29/2019 2:48 PM
610	Nice location. Nice marina & amenities. Town within walking distance. Park for dog walking. Activities nearby. Restaurants nearby.	9/29/2019 2:44 PM
611	Peaceful, secluded harbor within a historic park	9/29/2019 2:41 PM
612	Staff	9/29/2019 1:31 PM
613	convenient, beautiful destination, lot to do	9/29/2019 1:13 PM
614	Very helpful friendly staff. Quaint harbor and free bikes for riding and transportation to town. South Haven is another favorite.	9/29/2019 1:02 PM
615	Most modern	9/29/2019 12:41 PM
616	Excellent facilities, staff, close to town	9/29/2019 11:52 AM
617	like the location	9/29/2019 11:43 AM
618	great wifi, big community room great staff	9/29/2019 11:17 AM
619	Location	9/29/2019 11:10 AM
620	Close to home	9/29/2019 10:12 AM
621	na	9/29/2019 8:30 AM
622	Good picnic area, sailors lounge/restrooms and walking distance to shops and restaurants.	9/29/2019 8:23 AM
623	Staff is extremely helpful.	9/29/2019 8:14 AM
624	Good location to Lake Michigan, nice marina facilities, close to town, great boating area	9/29/2019 7:51 AM
625	Location	9/29/2019 6:56 AM
626	Very nice place. Staff is great	9/29/2019 12:16 AM
627	Location and view	9/28/2019 11:13 PM
628	Very good staff, clean facilities and great shops and restaurants within walking distance	9/28/2019 10:58 PM

MSWC Boater Trends Survey

629	Natural scenery	9/28/2019 9:46 PM
630	Great Harbor Master and staff. They take pride in the marina and it shows each visit.	9/28/2019 9:16 PM
631	Cleen friendly and accommodating. The harbor master Sue is a rock star. We love her.	9/28/2019 8:11 PM
632	Just a beautiful place, nice marina, friendly staff. Close to everything, great boating area.	9/28/2019 8:11 PM
633	Staff!!! Very well managed! Town amenities and location.	9/28/2019 7:06 PM
634	Used it a lot.	9/28/2019 4:28 PM
635	Facilities are nice Lots to do ashore Pretty town	9/28/2019 2:42 PM
636	Facilities, downtown, beach, entertainment	9/28/2019 1:46 PM
637	Great facilities. Ease of getting in docks. Good power. Activities and restaurants within walking distance.	9/28/2019 1:38 PM
638	Close to everything. Facilities are awesome! Staff is great.	9/28/2019 1:11 PM
639	It's the only one I've been to in Michigan. Staff were very helpful and pleasant. The facilities were clean and comfortable.	9/28/2019 1:06 PM
640	Clean, beautiful, great staff, walk to town, fresh flowers in bathrooms, all amenities, wide docks.	9/28/2019 12:43 PM
641	Location	9/28/2019 12:27 PM
642	easy access	9/28/2019 12:25 PM
643	Excellent facility and the best staff ever	9/28/2019 12:17 PM
644	only one we ever use	9/28/2019 11:19 AM
645	nice docks, great staff, clean rest rooms	9/28/2019 11:17 AM
646	Quiet. Park like setting. Close to Downtown	9/28/2019 11:02 AM
647	Nice ramp, nice docks, nice restrooms, lots of places to boat Mackinaw Island, Wilderness State Park beach, sometimes we trailer to Cheboygan and the Inland Waterway, lots to do. The big negative, it is sooo far away for us.	9/28/2019 11:00 AM
648	close to amenities	9/28/2019 10:59 AM
649	Good boaters facilities and the proximity to Traverse City	9/28/2019 10:44 AM
650	Location to town	9/28/2019 10:36 AM
651	Good services, close to attractions/interests	9/28/2019 10:13 AM
652	Always clean and well maintained-launch has a dock creating ease of accessibility and the staff is available to answer questions.	9/28/2019 9:22 AM
653	Location and facilities	9/28/2019 9:10 AM
654	Beautiful location, nice docks, and interesting area. Very clean and quiet	9/28/2019 8:57 AM
655	Not overcrowded, great staff, close to town and restaurants, well maintained.	9/28/2019 8:37 AM
656	Great setup and staff. Close to town	9/28/2019 8:22 AM
657	Fish cleaning station.	9/28/2019 7:48 AM
658	Newest one in my area	9/28/2019 4:35 AM
659	close to alot things restaurants stores etc. W.G. Milliken is our next fav, but very difficult to get into in 2019	9/28/2019 3:11 AM
660	Facilities were very well maintained and staff was always friendly	9/28/2019 2:04 AM
661	location	9/28/2019 12:55 AM
662	It was easy to figure out where to turn around, park, and drop the boat. There was also adequate room for multiple launchings at once. This is one of the few launches I've used after dark, and everything went off without a hitch.	9/28/2019 12:49 AM
663	ease of launching a lot of parking	9/27/2019 11:28 PM
664	It is the only MI marina I have used to date.	9/27/2019 10:46 PM

MSWC Boater Trends Survey

665	Always safe harborage	9/27/2019 10:37 PM
666	Right in town. Great bathrooms and showers. Clean. Newer docks.	9/27/2019 10:23 PM
667	Location in relation to other destinations, cost, amenities	9/27/2019 10:11 PM
668	Convenient location on our summer cruises. Great place to watch big ships. Customs check in point.	9/27/2019 10:06 PM
669	Easy access to town.	9/27/2019 9:48 PM
670	Great city	9/27/2019 9:48 PM
671	The staff is AMAZING and the location is perfect for us.	9/27/2019 9:20 PM
672	Pristine harbor conditions, friendly helpful staff, dock close to parking, beautiful upnorth location	9/27/2019 9:18 PM
673	Quality of slips, good help, location, showers/restrooms, cost	9/27/2019 9:14 PM
674	Boater facilities.	9/27/2019 9:09 PM
675	Very pretty. Good restaurant. Good docks, feel, and staff	9/27/2019 9:02 PM
676	Boat go in and out all day no major problems, a little steep still, parking good. Seward Alaska is one of the best ever. Au Gres harbor is good launch good parking bathrooms need work at most launches.	9/27/2019 8:55 PM
677	Closest to me for short travel	9/27/2019 8:46 PM
678	Centrally located	9/27/2019 7:55 PM
679	Only one used recently	9/27/2019 7:46 PM
680	Close to Lake Michigan and the city of Ludington. Central located between other ports. Very nice facility.	9/27/2019 7:35 PM
681	Good Parking , Nice launch ramps. The state recreation passport should cover launch fees. shouldnt have to pay to launch there. Plus its close to home for me.	9/27/2019 7:34 PM
682	Every thing in town you need. All new. Safe harbor for everyone.	9/27/2019 7:01 PM
683	Is in out and plenty of room	9/27/2019 6:43 PM
684	personnel, town	9/27/2019 6:42 PM
685	Location, and facilities	9/27/2019 6:31 PM
686	Most wonderful location in Michigan	9/27/2019 6:28 PM
687	Helpful staff. Great location to town and great amenities at the marina. A fun town	9/27/2019 6:16 PM
688	Nice people & excellent facilities, especially the boaters lounge and showers in the old water works.	9/27/2019 6:16 PM
689	Easy access very nice everything is close and walking distance	9/27/2019 5:39 PM
690	close by	9/27/2019 5:36 PM
691	They always treat us well and do their best to accommodate us any way they can. Great water, great beach, great rock hunting, nice restaurants and shops.	9/27/2019 5:10 PM
692	Nice area. Not too far away from where we live. Restaurants and things to do. Sheltered from wave action.	9/27/2019 4:47 PM
693	Excellent staff. Very professional!	9/27/2019 4:43 PM
694	Amenities of bike trails, deli, restaurants etc. Great town in beautiful area	9/27/2019 3:45 PM
695	Amenities and in town	9/27/2019 3:29 PM
696	Harbor Springs is very paddler friendly, enforces its no-wake zone within the harbor; the power boaters are more responsible in this area; and the city has two areas for kayak launches.	9/27/2019 3:26 PM
697	Beautiful!	9/27/2019 3:17 PM
698	Very well maintained and access is great. Hard question to answer because we also love to visit Beaver Island, Petoskey, Arcadia, Frankfurt, Mackinac City and the list goes on. If there's a choice between private and municipal, we choose the municipal marinas.	9/27/2019 3:07 PM

MSWC Boater Trends Survey

699	Has everything you could want in a marina	9/27/2019 2:43 PM
700	Nice park like setting with nice new washrooms.	9/27/2019 2:39 PM
701	Nice	9/27/2019 2:27 PM
702	Clean, walking to parks restaurants shops	9/27/2019 2:22 PM
703	Clean. Lots to do near by.	9/27/2019 2:13 PM
704	nicely redone and beautiful park	9/27/2019 2:12 PM
705	Location & Town	9/27/2019 2:10 PM
706	Has everything we need and is not too far away	9/27/2019 1:56 PM
707	Friendly staff, clean and updated facilities.	9/27/2019 1:51 PM
708	nicely kept, management always on staff, in the heart of downtown detroit. easy in easy out.	9/27/2019 1:38 PM
709	Close to down town, easy access to city, good lighting	9/27/2019 1:32 PM
710	Perfect location for transit to and from Lake Superior	9/27/2019 1:23 PM
711	Modern facilities. Good ramp and parking. Excellent starting point for cruising northern great lakes.	9/27/2019 1:22 PM
712	beautiful setting, nice facilities adn close to shops and restaurants	9/27/2019 1:13 PM
713	Staff, location, showers, restrooms, fuel, pump out, shops and dining, beach access.	9/27/2019 1:06 PM
714	High quality facility!	9/27/2019 1:02 PM
715	Ease to salmon fishing and lots of parking and restroom	9/27/2019 12:38 PM
716	Large docks, nice bathroom's and shower areas, close to town	9/27/2019 12:36 PM
717	location	9/27/2019 12:27 PM
718	Location, nice facilities, close to town	9/27/2019 12:19 PM
719	Great docks (until they put in the new overly sensitive power pedestals). Great town and activities.	9/27/2019 12:11 PM
720	Location, condition, and block ice availability.	9/27/2019 12:05 PM
721	The boater's lounge is amazing, the staff is incredibly helpful, the rate is fantastic, and right at the base of town.	9/27/2019 11:59 AM
722	I love the Leland area, fishtown, rock hunting	9/27/2019 11:52 AM
723	Not one stands out above the rest	9/27/2019 11:50 AM
724	People, docks, protection.	9/27/2019 11:50 AM
725	Amenities for kayakers.	9/27/2019 11:47 AM
726	Location and amenities	9/27/2019 11:40 AM
727	Plenty of parking, and very well maintained ramps.	9/27/2019 11:35 AM
728	Good facilities and attractions but could have more capacity.	9/27/2019 11:35 AM
729	protected and everything a person could need.	9/27/2019 11:24 AM
730	the people there are the best!!!!!!	9/27/2019 11:24 AM
731	closest for my use	9/27/2019 11:24 AM
732	Access to everything needed; clean showers and restrooms	9/27/2019 11:15 AM
733	all top notch !	9/27/2019 11:09 AM
734	Slips have posts between them for good docking. Friendly and helpful staff, good showers and amenities.	9/27/2019 10:58 AM
735	fishing	9/27/2019 10:57 AM
736	Clean nice staff	9/27/2019 10:46 AM
737	Excellent location, great amenities, and very friendly staff	9/27/2019 10:42 AM

MSWC Boater Trends Survey

738	Easy parking and sand beach	9/27/2019 10:40 AM
739	Close proximity to South Haven and our cottage. Nice staff and good size slips	9/27/2019 10:33 AM
740	View from slip. Very scenic. Close to shops, etc. This is difficult choice -- your marina personnel are great and most all marinas are in good to excellent shape. I have stayed in at least 37 of your listed harbors. Many more than once.	9/27/2019 10:28 AM
741	Facilities, docks and closeness to restaurants and grocery store	9/27/2019 10:27 AM
742	Boaters lounge is great	9/27/2019 10:23 AM
743	Location	9/27/2019 10:19 AM
744	Location	9/27/2019 10:19 AM
745	had a nice time there	9/27/2019 10:13 AM
746	Always an open slip.	9/27/2019 10:10 AM
747	Great people and good ramp	9/27/2019 10:07 AM
748	There are many great harbors and it was hard to choose one but Port Austin for me kind of checks most of the boxes, new floating docks, showers and rest rooms very clean, walk right in to town and a harbor master that really knows how to run a marina. She keeps her staff constantly doing something such as cleaning pedestals, sweeping the docks of spiders, raking out sea weed and she has trained them to actually know how to help dock a boat which unfortunately is very rare at most of the marinas.	9/27/2019 10:01 AM
749	location and service	9/27/2019 9:58 AM
750	New, fresh, protected and quiet.	9/27/2019 9:58 AM
751	The docks are well constructed, wide and clean. The proximity to town is very convenient, and the harbor house / showers are clean and modern.	9/27/2019 9:57 AM
752	It's far enough away from the crowds to be peaceful, but close to restaurants, groceries, and activities. The facilities are fantastic, too! And, it has all the amenities.	9/27/2019 9:53 AM
753	Peaceful	9/27/2019 9:47 AM
754	Great docks, facilities, and location.	9/27/2019 9:44 AM
755	Close to great fishing , and the place we where staying	9/27/2019 9:42 AM
756	Location, facility, staff	9/27/2019 9:33 AM
757	Best staff in the state! Location to Potagannissing Bay and St Mary's River	9/27/2019 9:32 AM
758	Bathroom are very nice. Close to town.	9/27/2019 9:30 AM
759	Because Tawas wasn't a choice.	9/27/2019 9:29 AM
760	very clean and easy to get in and out of. Bicycle availability, great friendly staff and close to restaurants and grocery shopping.	9/27/2019 9:29 AM
761	It is really clean and updated. Close to anything you need or want to do.	9/27/2019 9:29 AM
762	CLOSE TO TOWN, CLEAN CLOSE TO BEACH	9/27/2019 9:28 AM
763	Staff, locale	9/27/2019 9:26 AM
764	Convenient	9/27/2019 9:26 AM
765	amenities and location to town	9/27/2019 9:22 AM
766	Multiple choices for nearby on land and in water activities	9/27/2019 9:21 AM
767	Nice facility. Easy access to town resources	9/27/2019 9:21 AM
768	good fish cleaning station	9/27/2019 9:18 AM
769	Excellent facilities	9/27/2019 9:12 AM
770	Clean marina, well managed, and close to town.	9/27/2019 9:10 AM
771	Well protected, good staff, nice amenities, fuel and pump out available, proximity to city.	9/27/2019 9:10 AM

MSWC Boater Trends Survey

772	Recent improvements Staff Proximity to downtown	9/27/2019 9:08 AM
773	Can always count on getting a slip, without a hassle.	9/27/2019 9:08 AM
774	Clean, good facilities, helpful staff	9/27/2019 9:06 AM
775	Use most often	9/27/2019 8:49 AM
776	Port Austin hands down is a great harbor as they have a big beach, play ground, shopping and eateries all within walking distance. A nice farmers market on Saturdays and they have kayak rentals to go explore the coast and rock formations on Lake Huron.	9/27/2019 8:47 AM
777	N/A	9/27/2019 8:46 AM
778	Location	9/27/2019 8:46 AM
779	Storms	9/27/2019 8:46 AM
780	Quality of the building and all the amenities found at marina the building. Top notch!	9/27/2019 8:46 AM
781	Restroom/shower setup	9/27/2019 8:45 AM
782	Allows access to Mackinac Island	9/27/2019 8:38 AM
783	They are very accommodating. They go above and beyond taking care of the Marina grounds. Common area in the facility is very nice.	9/27/2019 8:32 AM
784	Close to attractions in Detroit	9/27/2019 8:31 AM
785	only one I have stayed at	9/27/2019 8:31 AM
786	clean	9/27/2019 8:24 AM
787	Has everything. Bicycle, town, on Lake Michigan.	9/27/2019 8:24 AM
788	I have not went to enough harbors to give a clear answer.	9/27/2019 8:23 AM
789	It's new and updated.	9/27/2019 8:23 AM
790	Location	9/27/2019 8:18 AM
791	It is in an important location when cruising up and down the coast. The town is located right there.	9/27/2019 8:18 AM
792	Proximity to downtown, well protected.	9/27/2019 8:16 AM
793	Excellent boathouse, showers and restrooms	9/27/2019 8:14 AM
794	Clean friendly good docks shuttle service	9/27/2019 8:13 AM
795	Very short run to lake access. Staff is very accommodating and helpful.	9/27/2019 8:10 AM
796	great staff	9/27/2019 8:09 AM
797	Staff, location	9/27/2019 8:09 AM
798	Walking distance to shops & restaurants. Clean bath & shower facilities.	9/27/2019 8:07 AM
799	The staff is great, we trailer over from Wisconsin and Mark always finds us room for the trucks and trailers for the week.	9/27/2019 8:04 AM
800	Good facilities and nice people	9/27/2019 7:58 AM
801	location, cleanliness, newness of facilities.	9/27/2019 7:58 AM
802	Nice people	9/27/2019 7:57 AM
803	Awesome upgrades and staff!!	9/27/2019 7:51 AM
804	Location	9/27/2019 7:49 AM
805	close to my home	9/27/2019 7:46 AM
806	Super friendly people and close to city	9/27/2019 7:44 AM
807	New, Clean, Great help.	9/27/2019 7:44 AM
808	Clean	9/27/2019 7:43 AM
809	It was new when we were boating, very nice. Close to the Under Water Park.	9/27/2019 7:26 AM

MSWC Boater Trends Survey

810	Location, Facility, Staff, Recreation, City, Shopping	9/27/2019 7:22 AM
811	We no longer do that type of boating	9/27/2019 7:20 AM
812	it has all the things that you have already asked. Plus the nicest people you will find at any marina. The small town of Northport is so welcoming to all at the marina. A two block walk from the boat will get you anything you might need	9/27/2019 7:18 AM
813	Distance from home port and the Lexington town / events.	9/27/2019 7:08 AM
814	easiest access from launch	9/27/2019 6:54 AM
815	GREAT STAFF FANTASTIC HARBOR MASTER VERY CLEAN FACILITY	9/27/2019 6:54 AM
816	Elmwood Twp Marina is the best but you don't have it listed. Duncan Clinch is second Elk Rapids third.	9/27/2019 6:47 AM
817	Close to town	9/27/2019 6:36 AM
818	location, facilities	9/27/2019 6:27 AM
819	Fish cleaning station. Plenty of ramps and parking.	9/27/2019 6:25 AM
820	Very clean easy access	9/27/2019 6:14 AM
821	Location to city and cruising area.	9/27/2019 6:05 AM
822	Location	9/27/2019 6:00 AM
823	close to home	9/27/2019 5:57 AM
824	Only one I've used	9/27/2019 5:56 AM
825	Location to downtown, quality of docks, power, security	9/27/2019 5:38 AM
826	Live in Grindstone Midway point for fishing	9/27/2019 5:25 AM
827	Close to shops, good bathrooms, nice docks, close to big water, had boat in rack storage at nearby marina	9/27/2019 5:10 AM
828	Right down town...clean restrooms....close to good restaurants...close to marine store...friendly staff.	9/27/2019 5:07 AM
829	plenty of parking, close to my destination	9/27/2019 4:58 AM
830	Friendly attentive staff Desirable location near downtown and beaches Recreational boardwalk parks nearby	9/27/2019 4:37 AM
831	Always well maintained and staffed and convenient access to a welcoming community as well as an easy destination for slower sailboats.	9/27/2019 4:01 AM
832	Great location great staff and all the amenities i need for a great day on the water.	9/27/2019 3:28 AM
833	i like the location	9/27/2019 3:04 AM
834	N/a	9/27/2019 12:28 AM
835	We really enjoy the quiet and historic significance. Our next favorite is Leland, which could really be much bigger considering the demand.	9/27/2019 12:17 AM
836	closest	9/27/2019 12:15 AM
837	Floating docks & bathrooms	9/26/2019 11:56 PM
838	Well protected, very good docks, helpful staff, very nice restrooms and showers, laundromat, bicycle availability at no additional cost. Menominee runs a very close second, and then Frankfort. St. Ignace is also in this group.	9/26/2019 11:41 PM
839	Very nice harbor in good sailing grounds. And there are good food options within walking distance of the harbor	9/26/2019 11:24 PM
840	Protected ramps and security over transit docks	9/26/2019 11:24 PM
841	not too far from where I keep my boat and has a wide variety of things to do	9/26/2019 11:07 PM
842	Has everything I need	9/26/2019 11:07 PM
843	Convenient and well maintained	9/26/2019 11:06 PM

MSWC Boater Trends Survey

844	Staff is always friendly and accommodating. There is a place for my dog to go to the bathroom. It's centrally located with a great selection of shops, restaurants, amenities, entertainment, etc. People in town are friendly too.	9/26/2019 11:06 PM
845	Easy/closeness ability to walk to a busy town. Farmers Market and grocery stores. Concerts. Most of all Great restaurants! More decks at marinas that are very popular. Since there are only a few months that people can use their boats. More docks are needed at busy/popular municipal marinas. Example: Mackinac Island/Traverse City. That will insure more monies.	9/26/2019 11:00 PM
846	clean launching, staff	9/26/2019 10:59 PM
847	Beautiful facilities, great staff, great location	9/26/2019 10:56 PM
848	Clean great small town with shopping and restaurants. Our go to harbor when crossing Lake Michigan.	9/26/2019 10:56 PM
849	end of mac race	9/26/2019 10:51 PM
850	Great facilities close to town	9/26/2019 10:48 PM
851	Location, amenities, gas and pump out, and nearby fish cleaning station.	9/26/2019 10:47 PM
852	Clean, friendly staff & close to entertainment	9/26/2019 10:44 PM
853	I use my boat to fish. I do not party in it, I do not sleep in it, I do not use it for any purpose except to get me to the FISH.	9/26/2019 10:43 PM
854	It is most convenient.	9/26/2019 10:42 PM
855	Area	9/26/2019 10:33 PM
856	clean, curesty car, very freindly staff and town is right there.	9/26/2019 10:27 PM
857	Clean! Close to town, restaurants and shopping...	9/26/2019 10:26 PM
858	Great facilities and staff!	9/26/2019 10:18 PM
859	They had updated facilities. Bathroom, Showers. Etc....	9/26/2019 10:12 PM
860	It's the only one I have visited	9/26/2019 10:03 PM
861	With all the recent improvements it has become one of my favorites. The staff are incredible. Really do need to get Wifi.	9/26/2019 10:01 PM
862	Close to town, Clean, Fuel, Protected	9/26/2019 9:58 PM
863	Nice bathroom facilities and showers. Allowed overnight parking for truck and trailer. Close to downtown amenities.	9/26/2019 9:53 PM
864	close to city, overall good workers, donuts and coffee complimentary, clean, however, last time we were there they needed better WiFi	9/26/2019 9:52 PM
865	The harbormaster was extremely helpful in coordinating critical repairs on my boat.	9/26/2019 9:51 PM
866	Location, quality of docks, close to downtown.	9/26/2019 9:50 PM
867	well maintained	9/26/2019 9:45 PM
868	Small . Fairly undeveloped. Grass. waterfront. Necessary amenities.	9/26/2019 9:42 PM
869	Great personnel who help with everything and clean showers. Close to shopping and Restaurant's.	9/26/2019 9:41 PM
870	It's the only one I ever used but I've checked out several and I liked Rogers City the most. Many of the Michigan Waterway sites are very nice though.	9/26/2019 9:37 PM
871	I like ludington There is nice docks, staff, kept clean mostly. Lots to do in town in walking distance.	9/26/2019 9:36 PM
872	It has floating docks, good service, within walking distance of town	9/26/2019 9:35 PM
873	Perfect everything-cost, location, pool, hot tub, floating docks vs fixed, staff, boaters lounge, fuel dock, rest rooms/showers, the list goes on.....	9/26/2019 9:35 PM
874	Beautiful, full of attractions	9/26/2019 9:34 PM
875	Great location. Great staff. Restaurants nearby. Not that far from home	9/26/2019 9:30 PM
876	Clean, Parking, ramps, restrooms, Break wall protected, Lighting,	9/26/2019 9:28 PM

MSWC Boater Trends Survey

877	The staff is super friendly, professional, informative, and welcoming. Showers/Bathrooms, etc. very clean.	9/26/2019 9:27 PM
878	Long docks for launching, lots of staff, very clean restrooms and showers, pavillion, gas pumpout, and public beach with a town steps away.	9/26/2019 9:25 PM
879	Boyne is very nice too. The shower facility, surrounding town, size & availability of a slip, and the price.	9/26/2019 9:25 PM
880	Super staff, great facility and near restaurants.	9/26/2019 9:24 PM
881	small, has all the necessary amenities I need for a comfy stay	9/26/2019 9:23 PM
882	Great facilities, docks, staff, closed to town, bikes available	9/26/2019 9:22 PM
883	Great facility, friendly, competent staff, lots to do in the area, access to beach, nice facility with conference center, clean showers and restrooms	9/26/2019 9:22 PM
884	Close to town, nice docks, clean, ship viewing, staff.	9/26/2019 9:22 PM
885	Friendly, not crowded, good facilities	9/26/2019 9:21 PM
886	Proximity	9/26/2019 9:21 PM
887	new, clean, great staff	9/26/2019 9:19 PM
888	I love the location	9/26/2019 9:18 PM
889	Clean , shopping restaurant	9/26/2019 9:16 PM
890	Excellent staff, facilities, and protection from rough seas	9/26/2019 9:13 PM
891	Location, docks , facilities, setting.	9/26/2019 9:13 PM
892	Clean, neat, well organized, comfortable facilities	9/26/2019 9:09 PM
893	Clean nice folks large harbor good showers	9/26/2019 9:08 PM
894	Location	9/26/2019 9:07 PM
895	Harbor Master and personnel knowledge and handling boats arrivals and departures.	9/26/2019 9:07 PM
896	The dock master and crew are helpful and efficient. They have a shuttle to restaurants and the showers and restrooms are clean.	9/26/2019 9:05 PM
897	I like the location, condition of the facility, boaters lounge.	9/26/2019 9:02 PM
898	New harbor with many amenities. Close to stores and restaurants	9/26/2019 8:58 PM
899	Great docks, good staff, clean restrooms, good location for entering North Channel.	9/26/2019 8:57 PM
900	Easy unload and parking	9/26/2019 8:56 PM
901	Excellent docks, restrooms and showers. Best in the state.	9/26/2019 8:54 PM
902	The facilities,the location, the stay	9/26/2019 8:54 PM
903	Close to Detroit	9/26/2019 8:51 PM
904	Hal's always friendly staff. They are out on the docks and help with docking and keeping docks clean ...(birds, you know).	9/26/2019 8:49 PM
905	All new and close to my cottage	9/26/2019 8:46 PM
906	Floating docks, friendly staff, great small town.	9/26/2019 8:45 PM
907	Great staff, proximity to downtown, beautiful lake.	9/26/2019 8:38 PM
908	Over all amenities, location and security	9/26/2019 8:37 PM
909	location while cruising	9/26/2019 8:36 PM
910	Well kept.	9/26/2019 8:35 PM
911	Everything you could want or need. Awesome location.	9/26/2019 8:33 PM
912	Only One I've used.	9/26/2019 8:31 PM

MSWC Boater Trends Survey

913	Friendly staff, love the town being so close to the marina, close to bike trails, the town has plenty to do and great sunsets just a short walk away.	9/26/2019 8:30 PM
914	Location	9/26/2019 8:25 PM
915	Great Staff, great boater restrooms, showers, and lounge. I like having coffee available to be made by boaters in the lounge. It is in town. Good parking for trailer near launch and plenty of street parking at Marina. All should be so nice!	9/26/2019 8:24 PM
916	Run right, clean, WiFi , close to stores,restaurants	9/26/2019 8:20 PM
917	location, never full	9/26/2019 8:17 PM
918	Actually my home marina is Port Hope Village Marina.48468 1 block from my house Awesome place!!	9/26/2019 8:16 PM
919	Nice location good shopping and restaurants nearby	9/26/2019 8:15 PM
920	Walking distance to other amenities and public transportation.	9/26/2019 8:15 PM
921	They have great everything, docks ,staff ,utilities, bathrooms, fuel and pump out. Our favorite marine is Mackinaw Island. There are many very nice marines in northern Michigan that we've stayed at.	9/26/2019 8:15 PM
922	Always calm water, (on a river), close to restaurants, good docks, fuel, is close, firepits with chairs.	9/26/2019 8:15 PM
923	Neat, well maintained, helpful staff, on island	9/26/2019 8:14 PM
924	Location, dock quality,nearby attractions, facility quality.	9/26/2019 8:13 PM
925	Because of location but the launch stinks. Launch docks have post (DNR designed) that might work on inland lakes but sux on Lake Superior. Posts break equipment whence docking with equipment sticking over side. Miserable to launch and recover. Parking for only 13 vehicles and trailers. Could have been designed for double that. Ridiculous!	9/26/2019 8:12 PM
926	Friendly and helpful staff. Beautiful setting. Updated bathrooms.	9/26/2019 8:10 PM
927	Very clean showers, close to shopping and eating, power, water	9/26/2019 8:08 PM
928	Floating docks. Clubhouse with TV. Accommodating staff.	9/26/2019 8:03 PM
929	Lots to do in town.	9/26/2019 8:02 PM
930	Near many attractions in Detroit	9/26/2019 8:00 PM
931	It is a tie between Frankfort and Manistee. I like the layout, and they are clean	9/26/2019 7:59 PM
932	newly renovated and close to town	9/26/2019 7:59 PM
933	Perfect setting with easy access to retail who's and beaches.	9/26/2019 7:57 PM
934	Outstanding staff, the best i have come in contact with.	9/26/2019 7:54 PM
935	Only one visited.	9/26/2019 7:52 PM
936	Great harbor master, staff, amenities, fuel prices.	9/26/2019 7:51 PM
937	close to home	9/26/2019 7:51 PM
938	It is the only one I have visited recently.	9/26/2019 7:51 PM
939	Close proximity to pictured rocks , grand island , very short distance to shops , restaurants, etc also very friendly staff. .	9/26/2019 7:48 PM
940	Proximity to commerce	9/26/2019 7:45 PM
941	They do their jobs	9/26/2019 7:45 PM
942	Nice launch, nice bathroom and facilities good dock good location to town	9/26/2019 7:44 PM
943	Close to hotels, so locks, lake superior	9/26/2019 7:41 PM
944	It's the only one I've used as a transient. Nice facility but slip walkways need to be raised!	9/26/2019 7:39 PM
945	Well run in s great locstion	9/26/2019 7:37 PM
946	Staff	9/26/2019 7:36 PM

MSWC Boater Trends Survey

947	Very nice people and it's where I fish	9/26/2019 7:36 PM
948	we love the beach, the mini golf, the concessions, the golf course, like to play catch on the grass, like nine grass to play on	9/26/2019 7:35 PM
949	Great location, great staff, close to attractions, beautiful area	9/26/2019 7:25 PM
950	Excellent condition and staff	9/26/2019 7:24 PM
951	Ease of use and a very protected harbor with docks in good condition.	9/26/2019 7:21 PM
952	They have a cheeseburger fest	9/26/2019 7:21 PM
953	Staff, hospitality, docks, facilities	9/26/2019 7:20 PM
954	Superb management and staff, understand and provide services that exceed expectations.	9/26/2019 7:19 PM
955	Great boat launch and parking	9/26/2019 7:17 PM
956	Very clean very knowledgeable staff and wonderful water	9/26/2019 7:17 PM
957	open, room to move around, good facilities.	9/26/2019 7:16 PM
958	Convenient, clean	9/26/2019 7:13 PM
959	Close to fishing , great amenities, good price	9/26/2019 7:08 PM
960	Clean and location	9/26/2019 7:05 PM
961	Location and cost, especially "rustic" rate	9/26/2019 7:04 PM
962	Beautiful place, great staff, and lots of things to do!	9/26/2019 7:04 PM
963	I like it there it is in town	9/26/2019 7:04 PM
964	Reasonable access. Parking available. Area for kids to play	9/26/2019 7:00 PM
965	clean, good ramps, not busy, fish cleaning station	9/26/2019 6:59 PM
966	except for grocery availability it has access to everything we need.	9/26/2019 6:59 PM
967	Location/vistas	9/26/2019 6:59 PM
968	Beautiful docks and slips, friendly and helpful staff, pristine and locked restrooms and showers, dock utilities for easy hook-ups, short walk to anything you want to eat!	9/26/2019 6:57 PM
969	they care	9/26/2019 6:55 PM
970	Meets most of my needs, senior discount	9/26/2019 6:53 PM
971	very nice docks, was a very good restaurant in the harbor, nice walks available	9/26/2019 6:52 PM
972	Location	9/26/2019 6:52 PM
973	Clean, close to town, friendly staff	9/26/2019 6:49 PM
974	Very good docks, showers, restrooms, fuel, pump out & responsive staff.	9/26/2019 6:49 PM
975	has all i need and close to fishing area	9/26/2019 6:47 PM
976	Professional staff and quality of dock/slips.	9/26/2019 6:45 PM
977	Total facility and modern.	9/26/2019 6:44 PM
978	Floating docks, good restrooms/showers, proximity to restaurants & grocery store, able to anchor in lake if marina too busy	9/26/2019 6:43 PM
979	Staff is amazing	9/26/2019 6:43 PM
980	The island understands transient boaters needs	9/26/2019 6:43 PM
981	Clean facilities, clean water, great setting	9/26/2019 6:41 PM
982	Gas grills for cooking	9/26/2019 6:40 PM
983	great location and view, nearby food and shopping	9/26/2019 6:40 PM
984	Easy and nice facilities	9/26/2019 6:40 PM
985	Excellent staff and amenities	9/26/2019 6:39 PM

MSWC Boater Trends Survey

986	comfortable showers and bathrooms, easy access to downtown, clean, slips good sized	9/26/2019 6:36 PM
987	Great location and staff. Clean, everything is in good condition.	9/26/2019 6:36 PM
988	Docks and building are nice. Amenities within walking distance.	9/26/2019 6:34 PM
989	It is close to home base, Usually the State employees are friendly, There is good and varied restaurants/taverns available, "fudgy shops and t-shirt souvenir shops close by and a place to get eggs and bacon with toast in the am. Spirits in the waning hours at dock.	9/26/2019 6:34 PM
990	By far the nicest bath house and staff is great. Also we can call for info on slip availability instead of the state website which quite frankly sucks	9/26/2019 6:31 PM
991	It was the best of 3 I visited.	9/26/2019 6:31 PM
992	facilities available	9/26/2019 6:29 PM
993	Very clean, excellent staff	9/26/2019 6:28 PM
994	Good location to town and sheltered	9/26/2019 6:24 PM
995	Plenty of docks, plenty of parking, clean facilities, fish cleaning station	9/26/2019 6:23 PM
996	Safe, well-maintained, in the middle of town	9/26/2019 6:20 PM
997	Large parking great staff and amenities	9/26/2019 6:20 PM
998	Clean!!! Nice facility, friendly staff, clean updated bathrooms, nice air conditioned day space	9/26/2019 6:17 PM
999	NA	9/26/2019 6:09 PM
1000	clean, great staff, wifi, local points of interest, transportation to Alpena, local store, restaurant, laundry, free bikes, convenient anchorage if I so choose	9/26/2019 6:09 PM
1001	Nice amenities and great town.	9/26/2019 6:09 PM
1002	Great location, friendly staff	9/26/2019 6:09 PM
1003	Location. Location. Location	9/26/2019 6:08 PM
1004	Cleanliness	9/26/2019 6:08 PM
1005	I've only used Hessel and Cedarville. Cedarville is nicer but closed for the season due to restoration work so Hessel gets the vote.	9/26/2019 6:06 PM
1006	Unlike any other place in the world	9/26/2019 6:06 PM
1007	Location, shower facilities.	9/26/2019 6:04 PM
1008	pretty view, close to town	9/26/2019 6:00 PM
1009	Service, facilities	9/26/2019 5:59 PM
1010	Near to town, walking distance	9/26/2019 5:57 PM
1011	Close to town. Has good bathrooms.	9/26/2019 5:56 PM
1012	Recently upgraded, takes boats > 7'3" draft, nice facilities, walking distance to town / restaurants	9/26/2019 5:55 PM
1013	Close to Mackinaw Island.	9/26/2019 5:53 PM
1014	Close to good fishing	9/26/2019 5:52 PM
1015	Great docks and staff. Great restaurants and shopping. Beautiful sunsets.	9/26/2019 5:52 PM
1016	Great location	9/26/2019 5:49 PM
1017	well maintained, professional staff, excellent docks, excellent harbor master...St Ignace Harbor a close second....excellent harbor...!!!	9/26/2019 5:48 PM
1018	Always very clean, maintained, and friendly staff.	9/26/2019 5:46 PM
1019	Tied with Mackinaw City. Proximity to grills, dog run, town is best on island but no club house and bathrooms are nicer in Mackinaw City.	9/26/2019 5:45 PM
1020	Friendly helpful staff and a nice facility with great amenities.	9/26/2019 5:43 PM
1021	Clean, great staff, awesome facility.	9/26/2019 5:40 PM

MSWC Boater Trends Survey

1022	Newer restrooms & showers. Close to beach and downtown. they are building a boaters bar grill.	9/26/2019 5:40 PM
1023	I have only been to 2	9/26/2019 5:40 PM
1024	Tough question. Detour because the facilities are great, floating docks and view of the freighters. However many of the other marinas we like just as well, for different reasons. There is really no BEST marina but many of them we really enjoy.	9/26/2019 5:39 PM
1025	Fish cleaning stations	9/26/2019 5:39 PM
1026	Scenic and not crowded	9/26/2019 5:38 PM
1027	Good staff and amenities. Close to small town with restaurants, entertainment, and groceries.	9/26/2019 5:36 PM
1028	Beautiful docks, clean restrooms, laundry right there. Lovely views, close to all shopping and restaurants.	9/26/2019 5:36 PM
1029	Lots of things to do in Detroit, bike rentals	9/26/2019 5:35 PM
1030	Clean restrooms and shower facilities. Helpful, friendly staff.	9/26/2019 5:35 PM
1031	New, very nice facilities, right downtown, entertainment	9/26/2019 5:33 PM
1032	The staff was very helpful and friendly. Clean and everything we needed for our stay.	9/26/2019 5:33 PM
1033	It is close to restaurants and grocery stores. It's location is in an area where it is really needed.Keep pr	9/26/2019 5:32 PM
1034	Best facilities and location to amenities.	9/26/2019 5:31 PM
1035	Great location	9/26/2019 5:31 PM
1036	close to town,good shopping	9/26/2019 5:30 PM
1037	The Harbor Master there is an incredible Lady who great to deal with . The docks that they have put in are fantastic. Laura is awesome. The only problem I have with the state marina you do not give Seniors a discount..	9/26/2019 5:30 PM
1038	Love the ambience of the area	9/26/2019 5:29 PM
1039	It has everything in close proximity in walking distance	9/26/2019 5:29 PM
1040	cleanliness, politeness of staff, washer and dryer, internet, restroom and showers, correct power, dock staff that know how to the up a boat	9/26/2019 5:28 PM
1041	Proximity to restaurants and activities	9/26/2019 5:28 PM
1042	They have a Harbor master and a dock hand that do their job.	9/26/2019 5:27 PM
1043	Love the location. Very accommodating harbor staff	9/26/2019 5:26 PM
1044	Close to home port, Clean grounds, clean washroom facilities, no or low crime, safe haven between other ports, great activities,	9/26/2019 5:26 PM
1045	Facilities, proximity to town, cost, docks	9/26/2019 5:26 PM
1046	The bathrooms were immaculate. The staff was very courteous and helpful. Nice beach close to the boat.	9/26/2019 5:23 PM
1047	Best club house and bath facilities	9/26/2019 5:23 PM
1048	Close to downtown area.	9/26/2019 5:23 PM
1049	Availability, restrooms and other indoor facilities, and location next to an attractive downtown.	9/26/2019 5:22 PM
1050	cuz	9/26/2019 5:20 PM
1051	Cleanliness, access to the city.	9/26/2019 5:19 PM
1052	Clean, safe, quiet, proximity to events and restaurants	9/26/2019 5:19 PM
1053	Kevin the manager was wonderful, the place was absolutely spotless. The docks were great. Lots of stuff to see and do in Marquette.	9/26/2019 5:17 PM
1054	Great facility and the town is awesome. we love all the restaurants,bars and shops.	9/26/2019 5:16 PM
1055	I own a slip in South Haven	9/26/2019 5:15 PM

MSWC Boater Trends Survey

1056	Close to town, has everything you need, clean easy to get into	9/26/2019 5:11 PM
1057	Good quality docks, clean restrooms/showers, adjacent to neat town with several options for restaurants, bars and stores.	9/26/2019 5:09 PM
1058	Hospitality is great. Dock hands run out to help you secure your boat. Great people, clean Marina, great boating!!	9/26/2019 5:09 PM
1059	Good all around with access to everything	9/26/2019 5:08 PM
1060	Close to everything and lots of activities.	9/26/2019 5:02 PM
1061	Well kept and beautiful area.	9/26/2019 5:01 PM
1062	The setting and amenities are awesome	9/26/2019 5:00 PM
1063	Close to our house for overnight trips, nice showers clean bathrooms. Close walking distance to restaurants, bars, breakfast. Meeting place for boaters we know from different ports.	9/26/2019 5:00 PM
1064	Great newer restroom building and close proximity to town attractions.	9/26/2019 5:00 PM
1065	The people.	9/26/2019 4:59 PM
1066	Good facilities... great location. Well maintained	9/26/2019 4:58 PM
1067	Close to town. Lots of activities in town.	9/26/2019 4:57 PM
1068	The island is the perfect mix of amenities and distance from shopping / night life. The fact there are no cars makes the place unbelievably quiet and peaceful.	9/26/2019 4:57 PM
1069	Awesome facilities and staff!	9/26/2019 4:57 PM
1070	Very clean and nice to go there	9/26/2019 4:57 PM
1071	Staff is outstanding,extremely helpful	9/26/2019 4:56 PM
1072	Busy Board Walk, Good walking opportunities, adjacent to downtown, close to home port of Muskegon, facilities all in good condition.	9/26/2019 4:55 PM
1073	quality marina and docks, laid back, great facilities, quiet at night.	9/26/2019 4:55 PM
1074	It's where I keep my boat.	9/26/2019 4:53 PM
1075	Location and staff	9/26/2019 4:53 PM
1076	Clean, location to restaurant shops picnic areas	9/26/2019 4:50 PM
1077	a larger variety of things to do in the area, as well as being relatively clean.	9/26/2019 4:50 PM
1078	Great location and environment	9/26/2019 4:50 PM
1079	Ease-of-use	9/26/2019 4:49 PM
1080	Close to Lake Michigan and love the river walk. Good amenities.	9/26/2019 4:49 PM
1081	Clean	9/26/2019 4:49 PM
1082	Great staff, good amenities, wifi worked	9/26/2019 4:49 PM
1083	Ease of docking	9/26/2019 4:48 PM
1084	staff and location	9/26/2019 4:47 PM
1085	location and convenience	9/26/2019 4:47 PM
1086	Many launching docks and the pit toilets are kept clean.	9/26/2019 4:47 PM
1087	Great staff and ultra clean facilities	9/26/2019 4:45 PM
1088	Capabilities	9/26/2019 4:45 PM
1089	Quiet, beautiful setting	9/26/2019 4:43 PM
1090	Convenience to downtown	9/26/2019 4:43 PM
1091	Clean, good docks and a fantastic town.	9/26/2019 4:42 PM
1092	Staff are very friendly and helpful.It is very clean. There are nice facilities.	9/26/2019 4:42 PM

MSWC Boater Trends Survey

1093	New floating docks and much closer to showers/bathrooms	9/26/2019 4:41 PM
1094	GOOD DOCKS, GREAT PEOPLE, RESTROOM CLEAN AND CLOSE TO THE DOCKS, HARBOR IS RIGHT BY DOWNTOWN AREA	9/26/2019 4:40 PM
1095	It clean and friendly	9/26/2019 4:40 PM
1096	staff accommodated my needs with enthusiasm, timeliness, and cleanliness	9/26/2019 4:40 PM
1097	Location and near town	9/26/2019 4:39 PM
1098	Has everything	9/26/2019 4:39 PM
1099	Good ammenities	9/26/2019 4:37 PM
1100	good fishing	9/26/2019 4:35 PM
1101	Well Maintained and quiet.	9/26/2019 4:34 PM
1102	Have the most experience at this marina.	9/26/2019 4:34 PM
1103	Plenty of Parking, killer location, tons of slips, fantastic employees, clean bathrooms, clean showers, acceptable number of launches, absolutely love staying there.	9/26/2019 4:34 PM
1104	Good docks, nice facilities, good WiFi, close to town and walking.	9/26/2019 4:33 PM
1105	scenic, historic	9/26/2019 4:33 PM
1106	Good docks, helpful staff, clean facility, cloce proximity to town, waterfront.	9/26/2019 4:32 PM
1107	Very scenic, feeling of remoteness	9/26/2019 4:30 PM
1108	Location	9/26/2019 4:30 PM
1109	Very close to the St. Clair River and it's protected from the winds !	9/26/2019 4:29 PM
1110	I like the location and it is clean and well maintained.	9/26/2019 4:29 PM
1111	Only one I've been too.	9/26/2019 4:29 PM
1112	I certainly would not be the staff. Well, Had a real problem once, but the Island is the reason I would choose this state harbor.	9/26/2019 4:28 PM
1113	Area,museum	9/26/2019 4:27 PM
1114	Excellent, friendly service	9/26/2019 4:26 PM
1115	nice amenities and close to everything	9/26/2019 4:26 PM
1116	Nice and clean updated	9/26/2019 4:25 PM
1117	Very clean. Employees at the marina are very helpful, kind and always pleasant.	9/26/2019 4:23 PM
1118	Great staff. Nice showers	9/26/2019 4:23 PM
1119	Staff, service, location	9/26/2019 4:22 PM
1120	It's a beautiful harbor with fantastic sunsets!	9/26/2019 4:21 PM
1121	Excellent location for Lake Huron transit. Excellent protection, facilities and close restaurant and store.	9/26/2019 4:21 PM
1122	great access	9/26/2019 4:20 PM
1123	O	9/26/2019 4:19 PM
1124	conveyance	9/26/2019 4:19 PM
1125	All new docks	9/26/2019 4:18 PM
1126	Location,Location,Location!!!	9/26/2019 4:17 PM
1127	Clean & beautiful Location	9/26/2019 4:17 PM
1128	Great staff and facilities	9/26/2019 4:16 PM
1129	It's near by	9/26/2019 4:16 PM

MSWC Boater Trends Survey

1130	Quality of docks, friendly harbor master, nice facilities, only state harbor I know of with laundry facilities.	9/26/2019 4:16 PM
1131	Location, amenities, launch, clean, location	9/26/2019 4:16 PM
1132	Great Proximity to downtown, Great docks, great staff, Great showers and bathrooms.	9/26/2019 4:15 PM
1133	Great docks, friendly staff, Wifi, close to attractions, fuel, pump out, great ramp, ample parking	9/26/2019 4:15 PM
1134	Great parking and access to inland lakes or lake huron	9/26/2019 4:15 PM
1135	town,fuel,docks,bikes,staff,showers	9/26/2019 4:15 PM
1136	All needed services. First rate fish cleaning station. Close to great fishing.	9/26/2019 4:14 PM
1137	Marina staff is excellent, location is very close to many important amenities	9/26/2019 4:13 PM
1138	Friendly helpful staff, clean bathrooms and showers, great town with lots of bars/restaurants/shps	9/26/2019 4:12 PM
1139	I love Duncan Keith but the parking is horrible	9/26/2019 4:12 PM
1140	Its Mackinac Island	9/26/2019 4:11 PM
1141	Clean, clean water and deep water.	9/26/2019 4:11 PM
1142	Proximity to lake. Great park in ng	9/26/2019 4:10 PM
1143	Great location, access, staff and facilities	9/26/2019 4:09 PM
1144	Location, everything I like, good dog walking. Its on the St. Marys, the best cruising ground in the state.	9/26/2019 4:09 PM
1145	The docks are power-washed to keep the black mold away. You could eat off the bathroom floor. The harbormasters keep the grounds immaculate. I show appreciation by helping & machining parts for them on occasion.	9/26/2019 4:09 PM
1146	Cherryfest	9/26/2019 4:08 PM
1147	We loved it! The staff was amazing and the docks were amazing!	9/26/2019 4:08 PM
1148	I just love the area	9/26/2019 4:08 PM
1149	Good location for fishing	9/26/2019 4:08 PM
1150	Location, boater's lounge and facilities	9/26/2019 4:08 PM
1151	Proximity to Grand Haven downtown area	9/26/2019 4:08 PM
1152	Close to home and west Bay access	9/26/2019 4:07 PM
1153	Unique location and attractions	9/26/2019 4:07 PM
1154	NEWER FACILITIES WITH FLOATING DOCKS, ALONG WITH A VARIETY OF CITY SERVICES AVAILABLE	9/26/2019 4:07 PM
1155	excellent facilities - harbor house, showers and laundry, and great staff. Two really good aspects are the van to take you somewhere and the fact that they will move our dinghy from the lower side to the upper side.	9/26/2019 4:07 PM
1156	I rent a slip there and it is close to my home. The facilities are well maintained. It provides convenient and safe location for my boat and good parking for the daysailing that I do.	9/26/2019 4:07 PM
1157	Location to fishing	9/26/2019 4:06 PM
1158	Ideal location in downtown Charlevoix	9/26/2019 4:06 PM
1159	The staff and the facilities	9/26/2019 4:05 PM
1160	HarborMaster is wonderful; facility is very clean. Close to a great town, just wish they had laundry facilities.....but we worked that out.	9/26/2019 4:05 PM
1161	There is a lot to do close by.	9/26/2019 4:04 PM
1162	Location, amenities, quality of docks	9/26/2019 4:04 PM
1163	size & ammenities	9/26/2019 4:04 PM
1164	Love the sunsets and it is often the only one we can get into on busy summer weeks	9/26/2019 4:04 PM

MSWC Boater Trends Survey

1165	Big bay is incredibly important on our routes to other sites.	9/26/2019 4:03 PM
1166	close and nice facilities	9/26/2019 4:02 PM
1167	Good power, restaurants close, Clean	9/26/2019 4:02 PM
1168	Location, peace, quiet, staff	9/26/2019 4:02 PM
1169	It's where I enjoy visiting the most on my way back from the Chicago to Mackinac yacht race.	9/26/2019 4:01 PM
1170	Excellence absolutely everywhere.	9/26/2019 4:01 PM
1171	Docks & amenities were nice, walking distance to downtown	9/26/2019 4:00 PM
1172	Well maintained, excellent ramps and docks, good parking for a boat trailer and vehicle.	9/26/2019 4:00 PM
1173	Proximity to home, good facilities, close stores, amenities and restaurants	9/26/2019 3:59 PM
1174	staff, facilities, docks close to the city, excellent docks and dock assistance	9/26/2019 3:59 PM
1175	Good protection and right near the big lake	9/26/2019 3:58 PM
1176	Great location, staff, docks with picnic tables, well maintained, fuel, etc.	9/26/2019 3:58 PM
1177	Nice facilities. Within walking distance of parks, restaurants, beach, etc. Nice area	9/26/2019 3:57 PM
1178	New Docks, location	9/26/2019 3:57 PM
1179	Location	9/26/2019 3:57 PM
1180	Friendly staff. Beautiful location. Store nearby. Good docks and facilities.	9/26/2019 3:57 PM
1181	location, view, quality of docks and facilities	9/26/2019 3:57 PM
1182	This is a HARD question. MOST ALL the marina's we visited Summer 2019 had issues with WIFI! We were able to sit in the office at a nice table and work with NICE WIFI in Mackinaw City. We LIVE on our boat in the great lakes in the summer and WORK from the boat. WE NEED A STRONG WIFI SIGNAL to work on the boat. We were very disappointed with the WIFI signals at all the state harbors/marinas we visited. We cut our time short at some marinas since we couldn't work, we had to leave and try to find somewhere with a good WIFI signal.	9/26/2019 3:57 PM
1183	great docks, scenery, and store.	9/26/2019 3:56 PM
1184	Very attractive, easy in and out, nice facilities and proximity to town	9/26/2019 3:56 PM
1185	Best Dock crew and great location	9/26/2019 3:56 PM
1186	location	9/26/2019 3:56 PM
1187	Adequate-size slips, protected harbor, nearby restaurant & grocery, convenient fueling.	9/26/2019 3:56 PM
1188	Spotless grounds and showers/baths. Attentive staff. Rules enforcement.	9/26/2019 3:56 PM
1189	Location	9/26/2019 3:56 PM
1190	Great location and staffing	9/26/2019 3:55 PM
1191	Location	9/26/2019 3:55 PM
1192	top notch on everything	9/26/2019 3:55 PM
1193	Staff, proximity to town, availability of fuel and pump outs, amenities	9/26/2019 3:55 PM
1194	Just a great marina. Bathrooms second to none. Simple breakfast in the club house. Great access to restaurants. Beautiful views.	9/26/2019 3:54 PM
1195	vacation	9/26/2019 3:54 PM
1196	Location to town, bikes available, nice restroom/showers	9/26/2019 3:54 PM
1197	Friendly service and great amenities.	9/26/2019 3:54 PM
1198	Quality docks, electric, location, location, location. Great staff, scenic.	9/26/2019 3:54 PM
1199	only one i have stayed at	9/26/2019 3:53 PM
1200	Newer facilities. Clean facilities. Nice staff. Great location for downtown activities and supplies	9/26/2019 3:53 PM
1201	cleanliness, good condition of facilities	9/26/2019 3:53 PM

MSWC Boater Trends Survey

1202	Great place and great docks, fuel across the Straits	9/26/2019 3:52 PM
1203	Location and harbor master	9/26/2019 3:52 PM
1204	Walking distance to town. Great staff	9/26/2019 3:52 PM
1205	Great docks, great staff, well run, clean facilities, friendly people, great location well protected, crystal clear water, right in town	9/26/2019 3:52 PM
1206	setting, quality of docks, amenities, close to other stores/ restaurants, etc.	9/26/2019 3:52 PM
1207	new,clean, great staff	9/26/2019 3:52 PM
1208	Close to home, yet close to activities in Detroit. Condition of marina is excellent. Staff is friendly. Marina is secure.	9/26/2019 3:51 PM
1209	The set up was very nice, well protected, and had all amenities needed.	9/26/2019 3:51 PM
1210	the view	9/26/2019 3:50 PM
1211	security, clean	9/26/2019 3:50 PM
1212	It's the only Michigan marina we've visited but plan on more in the future.	9/26/2019 3:49 PM
1213	Copper Harbor	9/26/2019 3:49 PM
1214	New and well equipped to meet the needs of boaters	9/26/2019 3:49 PM
1215	Nice docks, in off the lake winds, things to do, places to shop and eat	9/26/2019 3:48 PM
1216	location and beauty....remote	9/26/2019 3:47 PM
1217	Close by, the staff is very good and the proximity to amenities (restaurants, etc.)	9/26/2019 3:47 PM
1218	I only use this one and Mackinaw City and both are great but like Mac Isle better.	9/26/2019 3:47 PM
1219	Just liked it there. :-)	9/26/2019 3:47 PM
1220	Close proximity to everything. Nice dockage. Wonderful staff that assist docking	9/26/2019 3:46 PM
1221	Everything is right there	9/26/2019 3:46 PM
1222	Staff comes out to help you dock. The marina is very clean. The restroom are always very clean. The shuttle service is excellent. Great wifi. Great picnic area with covered area.	9/26/2019 3:46 PM
1223	Friendly staff; nice docks, clean restrooms and showers that are decent, close to activities in Mackinaw City.	9/26/2019 3:46 PM
1224	Walking distance to many attractions	9/26/2019 3:46 PM
1225	The facilities are clean and beautiful.	9/26/2019 3:45 PM
1226	It's the island!	9/26/2019 3:45 PM
1227	Location, proximity to city	9/26/2019 3:45 PM
1228	Clean easy access good parking	9/26/2019 3:45 PM
1229	Mike the Harbor Master and his staff are fabulous - friendly, courteous, accommodating to boaters' needs, and he knows all of his boaters by first name, including transients. Close to town, clean, well maintained, especially restrooms.	9/26/2019 3:45 PM
1230	Views, attractions, proximity to good boating	9/26/2019 3:45 PM
1231	Close to home / clean / friendly	9/26/2019 3:45 PM
1232	Good location, quiet at night. Seems well maintained.	9/26/2019 3:44 PM
1233	Friendly and helpful staff, close proximity to Boyne City, well maintained docks and facilities	9/26/2019 3:44 PM
1234	Good location, friendly staff,walking distance to attractions.	9/26/2019 3:44 PM
1235	Great staff nice amenities	9/26/2019 3:44 PM
1236	Location	9/26/2019 3:44 PM
1237	So many things to do there.	9/26/2019 3:44 PM
1238	Only one I've stayed at	9/26/2019 3:44 PM

MSWC Boater Trends Survey

1239	Close to down town Grand Haven	9/26/2019 3:44 PM
1240	Centrally located for our needs and the facilities are first rate. Also, Charlavoix is a wonderful little town.	9/26/2019 3:44 PM
1241	Good Docks and Deep water	9/26/2019 3:43 PM
1242	The natural beauty of the harbor	9/26/2019 3:43 PM
1243	Location, staff, the ability to re-provision, mechanical help in the area.	9/26/2019 3:43 PM
1244	Great Staff, Clean, good docks	9/26/2019 3:43 PM
1245	Great marina and staff	9/26/2019 3:42 PM
1246	Near everything. Clean, wide lanes, easy to dock.	9/26/2019 3:42 PM
1247	Shuttle service, attractive town, nice docks and facilities	9/26/2019 3:41 PM
1248	Fabulous Staff, nice docks and facility, great playground and beach nearby, and easy dinghy ride into town for restaurants etc.	9/26/2019 3:41 PM
1249	location, restrooms, showers, docks, gas & service	9/26/2019 3:41 PM
1250	Professional and friendly service.....have fuel, electrical hook ups	9/26/2019 3:41 PM
1251	It is actually the only one we have stayed at. We intend to stay at more in the next two seasons.	9/26/2019 3:41 PM
1252	Close to downtown Detroit	9/26/2019 3:40 PM
1253	Relaxation and the lack of people and cars unique gift shops	9/26/2019 3:40 PM
1254	Ease of use	9/26/2019 3:40 PM
1255	close to home, off the big river but close to it, facility is almost 50 years old but been upgraded constantly	9/26/2019 3:40 PM
1256	Location, and set up	9/26/2019 3:39 PM
1257	Nice and clean.	9/26/2019 3:39 PM
1258	amazing facility - love the location	9/26/2019 3:39 PM
1259	Friendly staff, helpful, protected harbor, nice facilities.	9/26/2019 3:39 PM
1260	nice docks right in town	9/26/2019 3:39 PM
1261	Location	9/26/2019 3:38 PM
1262	Clean, friendly,helpful	9/26/2019 3:38 PM
1263	clean and convenient	9/26/2019 3:38 PM
1264	The bathroom were very clean and up to date. Staff was very friendly and helpful	9/26/2019 3:38 PM
1265	Best Staff, Best Harbor Master ever time I have stayed	9/26/2019 3:38 PM
1266	Staff is the best in Michigan	9/26/2019 3:37 PM
1267	good docks, good fuel price, short walk to town, nice grilling area, friendly and helpful staff	9/26/2019 3:37 PM
1268	beautiful, great staff, nice location	9/26/2019 3:37 PM
1269	Great staff. Clean showers & baths. Access to town - restaurants, etc.	9/26/2019 3:37 PM
1270	Customer oriented friendly staff	9/26/2019 3:37 PM
1271	Many launches, lots of parking, have not visited many other marina's besides L'Anse, and Baraga, Typically use South Entry, Eagle Harbor, Baraga, and Ontonagon.	9/26/2019 3:37 PM
1272	great location and great town	9/26/2019 3:36 PM
1273	Easy to access from the water and lots to do nearby	9/26/2019 3:36 PM
1274	its the one I use the most of	9/26/2019 3:35 PM
1275	Good docks, staff, and building with showers, heads, TV, close to businesses.	9/26/2019 3:35 PM
1276	Wonderful destination and lots of amenities	9/26/2019 3:34 PM

MSWC Boater Trends Survey

1277	nicely situated, friendly and helpful staff, nice atmosphere and town	9/26/2019 3:34 PM
1278	I keep my boat in private marina in this harbor and regular use the state harbor fuel dock.	9/26/2019 3:34 PM
1279	Close to town Best harbor master around PAT	9/26/2019 3:34 PM
1280	location	9/26/2019 3:33 PM
1281	cleanliness, staff, proximity to town	9/26/2019 3:33 PM
1282	this is the one we us most.	9/26/2019 3:33 PM
1283	Beautiful water and proximity to town. Great docks	9/26/2019 3:33 PM
1284	On my route north in L. Michigan, capable dock staff, power, rest rooms, showers, town of Frankfort.	9/26/2019 3:33 PM
1285	Quaint village, right on lake michigan. Great staff, reasonable fuel costs, nice docks and Russ the harbor master.	9/26/2019 3:33 PM
1286	its the only one I've visited.	9/26/2019 3:32 PM
1287	Location right on downtown. Nice slips to get in and out of easily.	9/26/2019 3:32 PM
1288	Great location	9/26/2019 3:32 PM
1289	Very clean	9/26/2019 3:32 PM
1290	Great staff that are accommodating. Facilities are clean and location is great.	9/26/2019 3:32 PM
1291	Only one I've visited overnight.	9/26/2019 3:31 PM
1292	I have only stayed at Metro Beach and Port Sanilac. I have walked through the Mackinac Island marina. Metro Beach has an excellent bathhouse and plenty to do within the metropark. It is a well-kept marina.	9/26/2019 3:31 PM
1293	Use of fish cleaning stations	9/26/2019 3:30 PM
1294	Location	9/26/2019 3:30 PM
1295	Newer floating docks	9/26/2019 3:30 PM
1296	No crime	9/26/2019 3:30 PM
1297	Nice town nice marina right downtown	9/26/2019 3:29 PM
1298	Clean, New and easy to use.	9/26/2019 3:29 PM
1299	Nice facility but poor tourism	9/26/2019 3:28 PM
1300	The location is the only reason. The city is great. The marina staff is sub-par. The shore power is sub-par.	9/26/2019 3:27 PM
1301	Location	9/26/2019 3:26 PM
1302	fantastic staff and more amenities than I needed.	9/26/2019 3:25 PM
1303	Like the town	9/26/2019 3:10 PM
1304	Town within walking distance Location - Love the town, access to Lake Michigan, close to cruise to other cities like Traverse City, Charlevoix, Suttons Bay	9/26/2019 2:58 PM
1305	BEST OF EVERYTHING	9/26/2019 2:56 PM
1306	Convenient for transiting the Sault, close to city services, restaurants, etc., outstanding staff, clean and well run, Easy access to fuel and pump-out.	9/26/2019 2:49 PM
1307	Shopping	9/26/2019 2:05 PM
1308	Location & easy to get to.	9/26/2019 1:41 PM
1309	good facility-close to town, excellent staff, well protected	9/26/2019 1:27 PM
1310	Great location, docks and always a good staff.	9/26/2019 12:49 PM
1311	Fish cleaning station, clean, good quality docks.	9/26/2019 12:42 PM
1312	Amenities...location	9/26/2019 12:37 PM

MSWC Boater Trends Survey

1313	It's close to home the restrooms and showers are always clean and the people are very nice	9/26/2019 12:33 PM
1314	my only experience	9/26/2019 12:28 PM
1315	great restroom and shower facilities short walk to town and restaurants	9/26/2019 12:27 PM
1316	Easy in, easy out, quickly.	9/26/2019 12:24 PM
1317	Access to lake, east in and out, good docks	9/26/2019 12:23 PM
1318	Closest to me I go hear the most often	9/26/2019 12:20 PM
1319	Location Location!	9/26/2019 12:17 PM
1320	Extremely clean, not congested, well managed layout.	9/26/2019 12:12 PM
1321	They are the nicest group of guys and gals on the lakes.	9/26/2019 12:11 PM
1322	Great location Staff excellent	9/26/2019 12:08 PM
1323	Love the location and peacefulness	9/26/2019 12:08 PM
1324	CLOSE TO TOWN & BEACH. AND, GREAT FIRE WORKS DISPLAY.	9/26/2019 12:06 PM
1325	Great location	9/26/2019 11:56 AM
1326	Expanded the docks, different height docks, Clean	9/26/2019 11:48 AM
1327	Well maintained, helpful staff, close to shops and attractions, has everything you could want or need	9/26/2019 11:43 AM
1328	Great amenities and close to town activities.	9/26/2019 11:42 AM
1329	Adjacent to great downtown, nice marina, good amenities	9/26/2019 11:41 AM
1330	Nice town.	9/26/2019 11:39 AM
1331	Enjoy Mackinac Island - docking conditions although are not very good due to ferry wakes and winds from the southeast.	9/26/2019 11:34 AM
1332	This is the marina we have been going to for years; but it has been getting very difficult to get in/out coming into town to launch a boat. We seem to be going less because of this issue. Almost need to consider to move the marina away from the congestion of the town.	9/26/2019 11:30 AM
1333	Has everything needed	9/26/2019 11:28 AM
1334	Nice docks, clean restroom and showers, close to town.	9/26/2019 11:28 AM
1335	Facilities are well kept with lots of amenities, easy launch, great helpful staff, everything is close, friendly people, ample parking, ship store	9/26/2019 11:25 AM
1336	Location is close to private marina and town. Staff is great. Restrooms.	9/26/2019 11:18 AM
1337	The layout and amount of room	9/26/2019 11:17 AM
1338	Location, Facilities, Free Bicycles	9/26/2019 11:08 AM
1339	Has all the amenities needed	9/26/2019 11:08 AM
1340	Clean, has all features we need, close to boating activity, great harbor master	9/26/2019 11:06 AM
1341	Nice docs. Clean. Walking distance to everything.	9/26/2019 11:03 AM

MSWC Boater Trends Survey

Q26 What is the most important improvement to a particular state harbor or municipal marina to make it more desirable to you?

Answered: 1,052 Skipped: 2,691

#	RESPONSES	DATE
1	public slips in Cheboygan a place to put your boat for a week or so	10/15/2019 1:53 PM
2	Facilities (showers, bathrooms lounge area)	10/13/2019 7:22 PM
3	upgrade showers and restroom facilities	10/11/2019 11:08 AM
4	Clean modern bath house	10/10/2019 10:17 PM
5	quality of the docks and power access.	10/10/2019 1:53 PM
6	Improve toilet shower rooms. Create boaters only lounge/gathering room	10/10/2019 7:21 AM
7	good showers	10/10/2019 1:42 AM
8	N/A	10/9/2019 8:58 PM
9	new	10/9/2019 8:41 AM
10	Trees for shade & wind protection, cover for rain & picnic table, clean bathrooms, water available, dock lights.	10/8/2019 7:01 PM
11	accessability in high water	10/8/2019 2:31 PM
12	detour boat launch, very poor long term parking for trucks with trailers!!! i Left there 4 day early this summer.	10/8/2019 8:37 AM
13	Lexington needs to monitor obnoxious boaters with better rule enforcement!	10/7/2019 11:47 PM
14	Showers and laundromat facilities.	10/7/2019 11:17 PM
15	shopping,restaurants	10/7/2019 10:16 PM
16	More trailer parking areas	10/7/2019 7:23 PM
17	Fish cleaning station	10/7/2019 4:19 PM
18	Clean. Docks that are easy to get on and off the boat.	10/7/2019 3:49 PM
19	Clean docks, sea gull deterrents must be improved	10/7/2019 1:42 PM
20	More slips and launch sites available	10/7/2019 12:21 PM
21	Maintain docks	10/7/2019 10:54 AM
22	Easier booking for reservations.	10/7/2019 9:40 AM
23	Manage who has access to the area	10/7/2019 9:32 AM
24	Availability local to 49799	10/7/2019 9:02 AM
25	Improved parking at Hessel (Clark Township) Marina	10/7/2019 8:50 AM
26	St. Clair Boat Harbor has gone downhill. No more cable, poor WiFi and removal of security and transportation, back from restaurants after 9:00 pm.	10/7/2019 8:42 AM
27	Better control by the staff of loud boaters. There needs to be someone on site during the quite time to inforce the rules.	10/7/2019 8:15 AM
28	Cell phone service in marinas, I had no service in many marinas(Sprint) the lounges being added to marinas are a very nice addition	10/7/2019 7:49 AM
29	Keep Presque Isle Portage Resturant open	10/7/2019 7:44 AM
30	Again wash down system for boats	10/7/2019 7:44 AM
31	Weed control in August	10/7/2019 7:29 AM

MSWC Boater Trends Survey

32	Have garbage cans and empty them and pump out the porta johns	10/7/2019 7:18 AM
33	Bootjack boat launch needs a longer dock	10/7/2019 7:17 AM
34	Better launch docks	10/7/2019 7:02 AM
35	Cleanliness and pleasant helpful staff	10/7/2019 6:41 AM
36	Clean bathrooms and safe floating docks	10/6/2019 8:31 PM
37	Upgrade/update the showers in the William Milliken State Harbor	10/6/2019 7:07 PM
38	number of ramps and parking	10/6/2019 6:22 PM
39	More ramps	10/6/2019 5:51 PM
40	Fix the pot holes in the launch ramp area!	10/6/2019 4:36 PM
41	Fish cleaning facilities	10/6/2019 4:01 PM
42	Safe docks, power hook-up	10/6/2019 2:57 PM
43	Docks	10/6/2019 1:33 PM
44	Good Floating Docks.	10/6/2019 1:18 PM
45	Floating docks if not presently in place.	10/6/2019 12:46 PM
46	reservation system that's fair and fish cleaning stations	10/6/2019 12:15 PM
47	Cleanliness of facilities and docks.	10/6/2019 11:35 AM
48	Lexington needs wifi available.	10/6/2019 11:28 AM
49	Better wi-fi	10/6/2019 10:32 AM
50	More short term docks	10/6/2019 10:25 AM
51	Straits State Harbor would be such a beautiful facility if it was better maintained. Staff sits inside while there are spiders taking over docks and utility hookups, geese poop everywhere, no one is outside working. Now wi-fi this year on docks either. And funny, hardly any boats there all summer. I wonder why. Mackinac Island a totally different story, clean, staff helping/visible/friendly, and the place is busier than ever.	10/6/2019 9:43 AM
52	There okthere	10/6/2019 9:23 AM
53	Floating docks	10/6/2019 9:08 AM
54	clean restrooms / showers	10/6/2019 9:03 AM
55	Rebuild the restroom facility in Alpena. There is a porta-potty there now. They need a new restroom facility for all boaters and fishermen to use.	10/6/2019 9:01 AM
56	Direction of in and out	10/6/2019 8:58 AM
57	Availability	10/6/2019 8:21 AM
58	Floating docks at New Buffalo. With the water levels rising might be a good investment. Get rid of geese.	10/6/2019 8:13 AM
59	Proximity to attractions. A means of getting	10/6/2019 7:53 AM
60	Rest rooms	10/6/2019 7:45 AM
61	Events would be awesome. Jimmy buffet weekend Pontoon barge in weekend	10/6/2019 6:57 AM
62	Simply well maintained without things out of order.	10/6/2019 6:42 AM
63	launch ramp with a nice angle, hard surface deep enough for a 25' boat, and no holes from jerks powerloading. The 4x4 & 4x6 posts at the launch ramp docks end at just the right height to rip your spray rails off.	10/6/2019 2:54 AM
64	Nothing	10/5/2019 10:37 PM
65	sw break wall for caseville	10/5/2019 10:32 PM
66	just keep them maintained	10/5/2019 10:25 PM
67	Power washing to remove invasive species before departing	10/5/2019 10:08 PM

MSWC Boater Trends Survey

68	no wave makers on inland lakes	10/5/2019 9:59 PM
69	clean restrooms	10/5/2019 9:06 PM
70	I like floating docks because t fluctuations in water levels	10/5/2019 8:54 PM
71	Update showers/restroom at a few (Alpena, Cheboygan, Lexington)	10/5/2019 8:51 PM
72	We love to stay at Presque Isle Harbor but will not stop there until the restaurant is reopened and diesel is available.	10/5/2019 8:37 PM
73	Cleaning station	10/5/2019 7:05 PM
74	It's fine	10/5/2019 7:01 PM
75	I think the ones I have used are good	10/5/2019 6:11 PM
76	Nothing in particular, but wi-fi would be very helpful, as we work while traveling.	10/5/2019 5:57 PM
77	good docks	10/5/2019 4:41 PM
78	Fish cleaning stations again	10/5/2019 4:01 PM
79	Amenities. Love the places that have a grill to use.	10/5/2019 3:06 PM
80	Hot showers	10/5/2019 2:46 PM
81	Keep up the staff and bathrooms	10/5/2019 1:47 PM
82	BETTER WI-FI!!!!	10/5/2019 1:25 PM
83	Leland more slips.	10/5/2019 12:10 PM
84	Restrooms, showers, parking, power	10/5/2019 12:08 PM
85	South Haven South needs to correct shore power problems before someone gets injured!!!!	10/5/2019 12:07 PM
86	Availability, ease of reservations.	10/5/2019 11:32 AM
87	Love Suttons Bay- Would like to see upgrades to the restroom/shower	10/5/2019 11:27 AM
88	New docks , courtesy vehicle	10/5/2019 10:59 AM
89	clean modern bathhouse	10/5/2019 10:55 AM
90	Cleanliness	10/5/2019 10:40 AM
91	one night reservations options. (some require 2 nights - minimum)	10/5/2019 10:31 AM
92	Lower the price of spending the night. Daytime rates are affordable, but to spend the night is outrageous!	10/5/2019 10:29 AM
93	restrict public use of restrooms and showers	10/5/2019 10:05 AM
94	Cheaper rates	10/5/2019 9:45 AM
95	number of slips	10/5/2019 9:33 AM
96	One outgoing at peek times of incoming	10/5/2019 9:30 AM
97	Helpful staff	10/5/2019 9:28 AM
98	Lexington is good	10/5/2019 8:51 AM
99	Better wi-fi.	10/5/2019 8:48 AM
100	LIGHTING, IN RURAL AREAS ADD SOME SOLAR LIGHTING..MAKE SURE DURING ICE FISHING THERE ARE SAFETY RINGS WITH ROPES AN A INFLATABLE RAFTS TO HELP IF SOMEONE FALLS IN.	10/5/2019 8:41 AM
101	Parking	10/5/2019 8:38 AM
102	Flexibility. Registration system was sometimes hard to use and marinas have to be helpful in scheduling a slip.	10/5/2019 8:10 AM
103	Cleanliness	10/5/2019 8:03 AM
104	Cedar River night entrance lighting	10/5/2019 7:54 AM

MSWC Boater Trends Survey

105	Floating docks.	10/5/2019 7:45 AM
106	Clean the restrooms. They are filthy.	10/5/2019 7:38 AM
107	As we travel with bikes it would be nice to have trails for riding close by.	10/5/2019 7:12 AM
108	New docks should be floating to keep up with the ever changing lake levels. Overall cleanliness.	10/5/2019 5:57 AM
109	Fish cleaning station	10/5/2019 4:42 AM
110	Storage racks for kayaks	10/5/2019 2:55 AM
111	Really enjoyed them all	10/5/2019 12:35 AM
112	Cory lake needs longer dock in St Joseph county as it's extremely difficult to retrieve even with very slight wind	10/4/2019 11:25 PM
113	New docks	10/4/2019 10:56 PM
114	None really	10/4/2019 10:55 PM
115	Spacious and clean rest rooms	10/4/2019 10:47 PM
116	Install breakwater to protect ramp from wave and wind action, docks long enough for larger boats. Update and replace dock decking.	10/4/2019 10:37 PM
117	Depth	10/4/2019 10:33 PM
118	more parking	10/4/2019 10:15 PM
119	None	10/4/2019 9:58 PM
120	Just keep up the good work	10/4/2019 9:48 PM
121	Proximity to a public launch that is deep enough to float a boat with 4 foot draft	10/4/2019 9:20 PM
122	Wifi service at the boat	10/4/2019 9:13 PM
123	Less surge from Mackinac ferries that create waves throwing the boat and people around.	10/4/2019 9:12 PM
124	Quarters to stay off the boat if want, like to sit and shower. Wifi is nice and gas.	10/4/2019 8:57 PM
125	Updated showers and restrooms	10/4/2019 8:52 PM
126	open 7days a week	10/4/2019 8:49 PM
127	WiFi that works, updated facilities	10/4/2019 8:32 PM
128	Clean, maintained restrooms	10/4/2019 8:12 PM
129	Whitefish Point Harbor is shown on the charts to have a depth of 11 feet. I grounded on sand and rock in the center of the entrance there with a boat of 5 ft draft, causing serious damage. This harbor needs dredging.	10/4/2019 8:11 PM
130	Ramps to accommodate larger boats (28 ft pontoon).	10/4/2019 7:59 PM
131	Improve WiFi	10/4/2019 7:55 PM
132	Mackinac Island showers and restrooms need improvement! Shocking that they are in such poor condition.	10/4/2019 7:55 PM
133	Up grad bathroom at miliken Marina	10/4/2019 7:50 PM
134	Quality and safe docks.	10/4/2019 7:47 PM
135	Don't know	10/4/2019 7:31 PM
136	Quality of docks and bathroom/showers	10/4/2019 7:28 PM
137	More slip availability	10/4/2019 7:27 PM
138	Lower cost	10/4/2019 7:16 PM
139	WASHROOMS	10/4/2019 7:16 PM
140	Remove hand lines from shorter docks in Manistee. They prevent easy access to boat for loading equipment and just getting onto the boat and don't provide any safety advantage.	10/4/2019 7:02 PM
141	Reduce the cost	10/4/2019 6:57 PM

MSWC Boater Trends Survey

142	Easiness of docking, exiting and entering boat.	10/4/2019 6:46 PM
143	Floating docks	10/4/2019 6:29 PM
144	Update, modernize. Enlarge,	10/4/2019 6:27 PM
145	Bathrooms/Showers	10/4/2019 6:25 PM
146	Accessibility to Lake Michigan	10/4/2019 6:02 PM
147	Floating docks and bus service	10/4/2019 5:58 PM
148	er	10/4/2019 5:45 PM
149	Pressure Isle.. rates are ridiculously high for the area. No restaurant anymore. We used to take our 1947 Chris Craft there for the June Boat Show. DNR needs to not require a 3 year lease for a new restaurant!	10/4/2019 5:45 PM
150	Friendly staff.	10/4/2019 5:43 PM
151	Clinch Marina needs more car with trailer parking	10/4/2019 5:38 PM
152	Currently the high water makes it difficult at some marina, e.g., South Haven, to get on the my boat. Raising the docks or changing to floating docks would help.	10/4/2019 5:34 PM
153	All the harbor s that we have used are very nice.	10/4/2019 5:25 PM
154	improved slips	10/4/2019 5:06 PM
155	clean bathroom	10/4/2019 5:02 PM
156	The dock we rented was 6" under water yet we had to pay full price!	10/4/2019 4:59 PM
157	Safe, walkable access from urban neighborhood to municipal marina and welcoming atmosphere for all people who wish to use the space for both motorized and non-motorized watercraft, picknicking, shore fishing and scenic views	10/4/2019 4:59 PM
158	clean washrooms	10/4/2019 4:56 PM
159	Location and the conditions of the docks.	10/4/2019 4:51 PM
160	Lexington needs cable and wifi, upgrade washrooms	10/4/2019 4:50 PM
161	Add fire pits	10/4/2019 4:29 PM
162	make it larger or increase the numbers of marina's	10/4/2019 4:28 PM
163	updated restrooms and showers	10/4/2019 4:28 PM
164	Would love to see fire-pit availability	10/4/2019 4:27 PM
165	Docks, power, WiFi, service, and restrooms	10/4/2019 4:23 PM
166	Up keep	10/4/2019 4:19 PM
167	Add a pool to South Haven Municipal (Basin)	10/4/2019 4:04 PM
168	Bath house, docks	10/4/2019 4:00 PM
169	Dredging to ensure adequate draft in transit lanes.	10/4/2019 3:42 PM
170	Install protective breakwalls to prevent surge at the ramps.	10/4/2019 3:40 PM
171	Some way of reducing wakes from incoming passenger ferries	10/4/2019 3:36 PM
172	nice, clean, showers	10/4/2019 3:26 PM
173	Lime Isalnd boat slips Mackinaw Island breakwall to avoid swells	10/4/2019 3:23 PM
174	more dock age	10/4/2019 3:19 PM
175	See 25	10/4/2019 3:14 PM
176	Clean, free of bird crap	10/4/2019 3:12 PM
177	Better showers	10/4/2019 3:01 PM
178	x	10/4/2019 2:58 PM

MSWC Boater Trends Survey

179	Upgrade bathrooms	10/4/2019 2:55 PM
180	customer service	10/4/2019 2:47 PM
181	Keep it clean	10/4/2019 2:38 PM
182	showers, lounge area, cooking amenities	10/4/2019 2:35 PM
183	Bathroom renovations	10/4/2019 2:34 PM
184	Upgrade the docks	10/4/2019 2:28 PM
185	Nice showers and bathrooms that are private. Grills and power on the docks.	10/4/2019 2:00 PM
186	N/A	10/4/2019 1:59 PM
187	Docks	10/4/2019 1:58 PM
188	Overall staff are excellent- but I'd make sure new hires are properly trained. A new dockhand damaged my boat, because she wasn't familiar with how to deal with a docking sailboat. (She tied off the bow line while we were still underway, causing the bow to hit the dock.)	10/4/2019 1:57 PM
189	Cleaning docks of green mold, which make them slippery	10/4/2019 1:55 PM
190	Allow more summer seasonal slip rentals. We do not have enough seasonal slips. the boaters go to another area i.e. Drummond Is; Cedarville	10/4/2019 1:53 PM
191	People there to answer phone calls	10/4/2019 1:53 PM
192	Fix docks at Harbor Beach	10/4/2019 1:52 PM
193	Clean restrooms and showers are very important and a sound electrical infrastructure.	10/4/2019 1:52 PM
194	smooth black top/clean modern restrooms	10/4/2019 1:41 PM
195	there is always room for "improvement" in any situation. Regarding specifically Frankfort I can offer none. Michigan boating facilities are a treasure, Frankfort the "jewel"	10/4/2019 1:37 PM
196	Fish cleaning facilities	10/4/2019 1:34 PM
197	More ramps and parking	10/4/2019 1:33 PM
198	Availability	10/4/2019 1:32 PM
199	restrooms and showers	10/4/2019 1:26 PM
200	Electric	10/4/2019 1:25 PM
201	Clean	10/4/2019 1:24 PM
202	Availability	10/4/2019 1:21 PM
203	Management	10/4/2019 1:20 PM
204	Frankfort needs to upgrade or replace their docks	10/4/2019 1:20 PM
205	Bathrooms	10/4/2019 1:19 PM
206	Sturdy docks	10/4/2019 1:15 PM
207	Better out houses	10/4/2019 1:12 PM
208	Showers at Mackinaw Island.	10/4/2019 1:12 PM
209	More short term "shopper's" docks available	10/4/2019 1:11 PM
210	?	10/4/2019 1:03 PM
211	more individual slips for smaller boat, like 19' sailboat	10/4/2019 1:02 PM
212	We would love to return to Mackinac Island but cannot endure the ferry wakes. Would love to see them slow down!	10/4/2019 12:54 PM
213	The bathrooms at St Clair men's is woefully inadequate & needs updating....too small for the traffic of those in Marina & trailer boats	10/4/2019 12:48 PM
214	Lexington Harbor is plagued with seaweed for the last couple of years fouling props, rudders and keels, this needs to be cleaned up!	10/4/2019 12:44 PM

MSWC Boater Trends Survey

215	Restroom facility	10/4/2019 12:43 PM
216	??	10/4/2019 12:42 PM
217	None	10/4/2019 12:40 PM
218	Safety and cleanliness	10/4/2019 12:31 PM
219	High water tolerance	10/4/2019 12:31 PM
220	Grand Haven - make it affordable during Coast Guard Festival. It is currently so high priced that only the wealthy can afford a slip during that time period.	10/4/2019 12:25 PM
221	Great bathroom, fish cleaning stations	10/4/2019 12:24 PM
222	Safe and upgraded docks - modernize bathrooms and showers	10/4/2019 12:22 PM
223	Keeping the water clean. Sulfide mining on our waters would cause us to end Green Bay waters boating. Perhaps re-locate our residence to another state with cleaner waters.	10/4/2019 12:18 PM
224	WiFi	10/4/2019 12:13 PM
225	More slips	10/4/2019 12:12 PM
226	Keep slips in top shaoe	10/4/2019 12:10 PM
227	Clean restrooms, wifi	10/4/2019 12:07 PM
228	Safe docks.	10/4/2019 12:07 PM
229	Liberty Marina in Bay city could use some bubblers,stagnant water there	10/4/2019 12:07 PM
230	Appropriate staff training on tying up a boat and radio communications.	10/4/2019 12:06 PM
231	Ease of using the ramp.	10/4/2019 12:06 PM
232	Docks	10/4/2019 12:06 PM
233	I wish costs could be lower for seasonal slip purchasers.	10/4/2019 12:06 PM
234	Hot shower facilities, better lighting on ramp area.	10/4/2019 12:05 PM
235	Eliminate geese and droppings	10/4/2019 12:00 PM
236	Curb Appeal	10/4/2019 12:00 PM
237	cheaper rates ? becoming overpriced for transients the amount of business they bring in to a community	10/4/2019 12:00 PM
238	Dock upgrades	10/4/2019 11:59 AM
239	Fish cleaning faciities	10/4/2019 11:57 AM
240	nothing	10/4/2019 11:57 AM
241	Return to use of Ambassador Park launch facility illegally seized by Maroun family. Add new bathrooms and security.	10/4/2019 11:57 AM
242	none	10/4/2019 11:56 AM
243	see above	10/4/2019 11:53 AM
244	Reduce transient docking cost of Leland township harbor	10/4/2019 11:50 AM
245	Clean	10/4/2019 11:49 AM
246	The ramps and docks ,	10/4/2019 11:46 AM
247	good docks and keep them clean -especially in bath/shower area, good club house-	10/4/2019 11:46 AM
248	Overall condition of the facility	10/4/2019 11:45 AM
249	nice private bathrooms-shouldn't have to share with everyone not staying at the harbor	10/4/2019 11:44 AM
250	ease of access amenities and local shopping	10/4/2019 11:42 AM
251	Mackinac Island could use wider docks. Floating docks could be desirable as water levels vary.	10/4/2019 11:42 AM
252	good staff	10/4/2019 11:38 AM

MSWC Boater Trends Survey

253	South Haven. Clean well ventilated, possibly air conditioned bathroom facilities. Also, good power supply for the larger boats.	10/4/2019 11:38 AM
254	I don't know. Maybe a pool.	10/4/2019 11:32 AM
255	Trailer Parking Availability	10/4/2019 11:32 AM
256	Mooring cleats. Steps available because of high water levels	10/4/2019 11:30 AM
257	All of it upgraded. From docks to electric and fuel. Many still need betterWiFi.	10/4/2019 11:29 AM
258	Floating docks for changing lake levels.	10/4/2019 11:29 AM
259	More availability of slips	10/4/2019 11:27 AM
260	Slip barriers to separates adjacent slips	10/4/2019 11:26 AM
261	To be properly maintained and floating docks	10/4/2019 11:25 AM
262	Every state facility has been top notch. Just keep them up. 93 octane Premium gas would help.	10/4/2019 11:24 AM
263	Well marked entrance channel	10/4/2019 11:24 AM
264	Improving pump out facilities unifo	10/4/2019 11:22 AM
265	Cost	10/4/2019 11:21 AM
266	Fish cleaning station.	10/4/2019 11:20 AM
267	maintenance and cleanliness. also make sure that it is deep enough for sail boats.	10/4/2019 11:20 AM
268	NA	10/4/2019 11:17 AM
269	All that I have been to are in very good condition. Most important thing to me is quality dock, restroom (including shower)	10/4/2019 11:17 AM
270	GOOD PARKING AND REST ROOMS	10/4/2019 11:17 AM
271	New and clean restrooms and showers.	10/4/2019 11:17 AM
272	Wi Fi	10/4/2019 11:16 AM
273	Fish cleaning stations	10/4/2019 11:15 AM
274	improve the launches that are underwater from the increased depth of lake Michigan	10/4/2019 11:15 AM
275	Straits harbor, different sink and shower controls, current ones are on timers with no temp control and they "suck"!!	10/4/2019 11:15 AM
276	Improvement of shower and restroom facilities, especially the Mackinac Island marina. Mackinac Island marina would be the very best marina if it had an improved shower facility.	10/4/2019 11:14 AM
277	Mackinaw Island needs a new marina isolated from the ferry wakes!!!!!! Their shower facilities are also subpar.	10/4/2019 11:13 AM
278	no wake. Mackinaw Island - ferry traffic creates constant wave action inside marina.	10/4/2019 11:13 AM
279	Good and clean restrooms and showers.	10/4/2019 11:11 AM
280	Docks	10/4/2019 11:08 AM
281	more access	10/4/2019 11:06 AM
282	Dockage and cleats	10/4/2019 11:05 AM
283	Really don't know	10/4/2019 11:04 AM
284	Improve slips and add reliable wifi.	10/4/2019 11:02 AM
285	24hr self serve pump out facilities	10/4/2019 11:00 AM
286	make sure bathrooms are OPEN!	10/4/2019 11:00 AM
287	More seasonal slips	10/4/2019 10:58 AM
288	Enough larger transient slips	10/4/2019 10:58 AM
289	Harbor Beach. Dredge it and mark it well! Fix the docks. It could be really good like the old days.	10/4/2019 10:58 AM

MSWC Boater Trends Survey

290	Marina should only be open to boaters. Drive through and loopers not allowed.	10/4/2019 10:57 AM
291	easy of entry in to usa from canada	10/4/2019 10:56 AM
292	Re build the bath houses on mackinaw island!!!!	10/4/2019 10:56 AM
293	Ice maker	10/4/2019 10:56 AM
294	upgrade restrooms and shower facilities. need to improve the wi-fi systems.	10/4/2019 10:55 AM
295	New buffalo could use better restroom and shower facilities.	10/4/2019 10:54 AM
296	Docks	10/4/2019 10:53 AM
297	Poles between docks to prevent boats from swinging into the boat dock next to you. More help from the dock attendance.	10/4/2019 10:53 AM
298	In slip pump out	10/4/2019 10:52 AM
299	New Buffalo municipal marina- no improvements needed	10/4/2019 10:52 AM
300	add a restauaunt concession.	10/4/2019 10:52 AM
301	shower/bathroom quality	10/4/2019 10:51 AM
302	Improve Wifi so we can stream movies on board and place protection on docks to protect you boat's haul	10/4/2019 10:51 AM
303	THE BEST IMPROVEMENT WOULD BE 240VT POWER RATHER THAN 208.	10/4/2019 10:51 AM
304	bathroom facilities	10/4/2019 10:49 AM
305	Quality of personal. Some harbors, the management is never seen. The difference between Lexington and Port Sanilac is night and day. In Lexington, the boaters are a nuisance to the staff, and Port Sanilac is very welcoming. Port Sanilac needs updating but the experience makes up for the lack of spending on new slips.	10/4/2019 10:49 AM
306	Bathroom with shower.	10/4/2019 10:49 AM
307	The boat launches at some state parks are not very good. In particular, Aloha, Burt Lake, and Young State Parks are dreadful.	10/4/2019 10:48 AM
308	good showers	10/4/2019 10:47 AM
309	better wifi	10/4/2019 10:46 AM
310	The docks need to be up-to-date; enough shower facilities	10/4/2019 10:46 AM
311	More slips for 40' boats	10/4/2019 10:46 AM
312	Bath houses and docks	10/4/2019 10:45 AM
313	More launches	10/4/2019 10:43 AM
314	Security cameras. Patrols. Over all apperance	10/4/2019 10:43 AM
315	Make getting reservation easier on line	10/4/2019 10:43 AM
316	Docks	10/4/2019 10:42 AM
317	Quiet overnights	10/4/2019 10:42 AM
318	Leland could use expansion and better harbor entrance	10/4/2019 10:42 AM
319	Can't think of any.	10/4/2019 10:41 AM
320	The geese poop is out of hand	10/4/2019 10:41 AM
321	more transient slips	10/4/2019 10:40 AM
322	Clean	10/4/2019 10:40 AM
323	stop charging for the seawall docking in Grand Haven and add power if there is going to be a charge	10/4/2019 10:39 AM
324	wi fi	10/4/2019 10:39 AM
325	East Tawas State Harbor needs WiFi	10/4/2019 10:39 AM

MSWC Boater Trends Survey

326	Can't think of anything	10/4/2019 10:39 AM
327	Power availability. Beatrooms	10/4/2019 10:38 AM
328	floating docks	10/4/2019 10:38 AM
329	Better docks	10/4/2019 10:38 AM
330	We live in Ohio and have a permanent slip at CIC. There are no Ohio harbors to compare with those in Michigan. Michigan facilitates some of the finest cruising in the U.S.	10/4/2019 10:38 AM
331	Good docks and clean facilities	10/4/2019 10:37 AM
332	Harbour store	10/4/2019 10:36 AM
333	Grand haven: provide a dinghy dock adequate enough for more than 2-4 boats to access at a time. Current setup is unacceptable, with only two cleats and a very small end of a floating dock to pull up to.	10/4/2019 10:36 AM
334	Good docks	10/4/2019 10:36 AM
335	A/C in bathrooms.	10/4/2019 10:34 AM
336	Make more of them	10/4/2019 10:34 AM
337	Manuka Lake DNR Ramp was closed due to high water. Fixing and re-opening would be the most important thing of all the locations I used this summer.	10/4/2019 10:34 AM
338	My slip at Petoskey Marina could use new cleats.	10/4/2019 10:33 AM
339	Safe dockage for getting in and out.	10/4/2019 10:32 AM
340	I prefer green spaces, quiet marinas and the "small town" feel.	10/4/2019 10:32 AM
341	no complaints about Mackinac except the waves due to the Ferrys.	10/4/2019 10:31 AM
342	Higher docs for bigger boats. All the floating docks are too low. When we pull in to dock it's at least 8 foot down from our deck to the dock, makes it impossible to hop off and tie up easily. Also getting pets, people and supplies on and off boat is next to impossible.	10/4/2019 10:31 AM
343	Large, tall pilings on docks and between slips. Multiple 50 amp power connections. Facilities to accommodate multiple large vessels that travel together in a group	10/4/2019 10:31 AM
344	More parking for vehicle and trailer, protected boat launch	10/4/2019 10:31 AM
345	Get rid of phragmite at East Tawas Harbor	10/4/2019 10:30 AM
346	Reservation system for crowded and popular marinas that hold reservations when they won't be used; inadequate and difficult cancellation process.	10/4/2019 10:30 AM
347	Oscoda needs alot of work. Parking lot is crumbling. Lights dont work. Horrible amenities	10/4/2019 10:28 AM
348	Location	10/4/2019 10:27 AM
349	Floating docks	10/4/2019 10:25 AM
350	floating docks and clean restrooms	10/4/2019 10:25 AM
351	New Buffalo needs floating docks as it is underwater	10/4/2019 10:24 AM
352	Safety for boat and occupants	10/3/2019 8:33 PM
353	Showers	10/3/2019 8:30 PM
354	sheltered, floating docks	10/3/2019 5:37 PM
355	Lower pricing for Michigan boats	10/3/2019 4:50 PM
356	The one thing that can be improved at a number of state run facilities, especially at Lexington State Harbor, is improve the professionalism and knowledge of the personnel working there. They need to understand they are providing a service to the boaters. There are facilities where the personnel spend more time in the office on their personal electronic devices instead of answering calls to the harbor on the VHF radio or cleaning the docks. They should also be enforcing the rules and regulations at the harbors. This includes cleanliness of the harbor waters caused by fuel spills and leakage.	10/3/2019 1:24 PM
357	Lexington needs to have WIFI.	10/3/2019 10:58 AM

MSWC Boater Trends Survey

358	room to maneuver when docking.	10/3/2019 9:23 AM
359	Limit size of speed boats	10/3/2019 9:19 AM
360	Well trained staff	10/3/2019 8:55 AM
361	Temporary dock availability for 1-3 hours use during daytime	10/3/2019 8:38 AM
362	Floating docks.	10/3/2019 8:23 AM
363	access to fuel through out the boating season, April-November	10/3/2019 8:20 AM
364	Floating Docks	10/3/2019 4:42 AM
365	Fuel (completed ?) and re-open restaurant at Presque Isle State Harbor	10/2/2019 10:42 PM
366	Lexington state harbor has just about everything we need or want. Maybe a boating parts store for emergency repairs, etc.	10/2/2019 10:13 PM
367	Daily removal of animal feces	10/2/2019 9:50 PM
368	Floating docks / piers.	10/2/2019 9:01 PM
369	Quality docks and dredging	10/2/2019 8:04 PM
370	Lower rates	10/2/2019 7:50 PM
371	Mackinac island state harbor, the fairies need to slow down coming into harbor! I have had ropes break and had damage to my boat from these fairies as have a lot of other people! I get it's a working harbor but it's Ridiculous!!!!!!!!!!!!	10/2/2019 7:27 PM
372	Clean, safe, good wells and hook-ups	10/2/2019 4:40 PM
373	Floating docks (Why is William Milleken not on the list?)	10/2/2019 4:36 PM
374	enforcement of law	10/2/2019 4:35 PM
375	the new buffalo transient slips were under water all year. i was disappointed to pay and get there with my boat just to find out the slip was covered in algae an unusable	10/2/2019 4:14 PM
376	I am happy with what I have used although parking in Ludington is occasionally a challenge.	10/2/2019 3:04 PM
377	Lower cost of slips	10/2/2019 2:34 PM
378	make Caseville a safe harbor of refuge again. Needs improvement - add a break wall or design something to reduce the waves up the river	10/2/2019 2:23 PM
379	Staff	10/2/2019 12:42 PM
380	Good amenities , fuel , restaurant bar Nearby activities	10/2/2019 12:38 PM
381	Shuttle	10/2/2019 12:18 PM
382	MORE SLIPS	10/2/2019 11:56 AM
383	Unknown	10/2/2019 11:20 AM
384	Ironton, there were bums sleeping under the bridge, one slip holder befriended a bum which made him feel like he could come and go at all hours on the docks. They got drunk and in a fight, police were called and they were aware of the situation before this. Myself and several other slip holders felt abandoned and like we had to fend for ourselves with the lack of Marina staff and minimal hours or attendance. I have never been back since this happened 2 or 3 summers ago. Better staffing, more hours staff is there and safety of slip holders.	10/2/2019 11:20 AM
385	Clean bathrooms	10/2/2019 10:35 AM
386	Remodel or replace older buildings	10/2/2019 10:24 AM
387	Need more space access to downtown detroit and belle isle has none, that is the biggest mystery why no access to belle isle!?	10/2/2019 9:58 AM
388	Longer RAMPS!!! The Great Lakes and St. Clair are the biggest freshwater with the tiniest ramps. Charlevoix Great, St.joe good both on opposite ends of Lake MI. St. Clair NOTHING. A modest 10ft more would create separation from most fishing/day boats and allow at least the bows of boats like ours to be tied to something as we launch.	10/2/2019 9:07 AM
389	Keeping it clean safe and updated	10/2/2019 9:06 AM

MSWC Boater Trends Survey

390	Availability of slips	10/2/2019 9:01 AM
391	West Basin Marina in St. Joseph has a decade long reputation for the most horrible boater service level of any MI harbor we visit each summer (and we visit 15 - 20 each summer). They literally don't answer their telephone for most of the day. They also don't respond to VHF radio calls. Their excuses have varied over the years, but if you're trying to reach them before you arrive or as you arrive, you won't be able to. There has been more than one harbor master over this time and nothing has changed. The consistent staffing feature over the years is one very long term employee who the rest of the staff know to have absolutely no heart for boater service. Maybe, he is poison in the culture. Whatever the reason, we have always noted West Basin Marina to be the worst run harbor of the 15 - 20 MI harbors we visit each year.	10/2/2019 8:58 AM
392	Weed removal	10/2/2019 8:30 AM
393	ADA kayak launches	10/2/2019 8:06 AM
394	Solid quality docks, fuel, pump outs that work.	10/2/2019 8:04 AM
395	dock repair & dredging	10/2/2019 7:50 AM
396	Newer and clean facilities.	10/2/2019 7:42 AM
397	Dock space or dock availability	10/2/2019 7:39 AM
398	Make fishing better offshore	10/2/2019 7:35 AM
399	on-line never works if you give a 30'+ length. you have to call direct and they say don't put length and it will show many available.	10/1/2019 11:07 PM
400	Underwater condition of the actual ramps	10/1/2019 8:36 PM
401	Short term rental.	10/1/2019 8:26 PM
402	remove the recreational passport	10/1/2019 7:27 PM
403	Harbor Beach parking	10/1/2019 7:24 PM
404	Clean bathroom/showers, accessible, good Wi-Fi	10/1/2019 5:20 PM
405	Nearby to towns, shops restaurants	10/1/2019 2:12 PM
406	build a cleaning station	10/1/2019 1:49 PM
407	Improved break wall at Mackinaw Island. East winds are really bad.	10/1/2019 1:34 PM
408	None	10/1/2019 1:00 PM
409	docks and bathrooms	10/1/2019 12:37 PM
410	clean restrooms	10/1/2019 12:24 PM
411	more launch lanes	10/1/2019 12:14 PM
412	.	10/1/2019 12:09 PM
413	The harbor master and staff	10/1/2019 11:30 AM
414	n/a	10/1/2019 10:20 AM
415	Dockage and restroom	10/1/2019 9:39 AM
416	W.C. Clinch needs more trailer parking	10/1/2019 9:04 AM
417	Make it easier to tell availability of slips on approach.	10/1/2019 8:57 AM
418	Lexington restroom/shower facilities are extremely poor.	10/1/2019 8:25 AM
419	Grand haven more spots. Fills up quickly	10/1/2019 7:51 AM
420	clean the bathrooms!	10/1/2019 6:10 AM
421	Boat cleaning area	9/30/2019 9:23 PM
422	No suggestions	9/30/2019 8:18 PM
423	Fix the parking at bay city Patterson launch	9/30/2019 7:58 PM
424	Must have a good fish cleaning area.	9/30/2019 7:57 PM

MSWC Boater Trends Survey

425	have free shoppers dock available to be able to visit the town	9/30/2019 7:30 PM
426	Non-slip firm bottom on and at the end og ramp	9/30/2019 7:16 PM
427	Good rest rooms with lots of parking	9/30/2019 6:53 PM
428	Create more seasonal docks at high demand locations like Boyne City. It would also be great if they were more affordable.	9/30/2019 6:13 PM
429	Safety.	9/30/2019 6:09 PM
430	update docks, replace docks that are in poor condition	9/30/2019 6:05 PM
431	More tranisent slips	9/30/2019 6:00 PM
432	Grilling and gathering area	9/30/2019 5:41 PM
433	Staff training	9/30/2019 5:39 PM
434	More slips	9/30/2019 5:27 PM
435	Careful attention to impact of boating on water quality	9/30/2019 5:23 PM
436	clean	9/30/2019 4:51 PM
437	Keeping it safe and clean	9/30/2019 4:51 PM
438	Lac La Belle Marina, Do not let boats and trailers use up all the docks and parking areas all summer. Post and enforce the rules. It is a nice Marina, make it available for the public to use.	9/30/2019 4:45 PM
439	Add fuel to Mackinac	9/30/2019 4:42 PM
440	Harbor Beach. Staff needs to be friendlier.	9/30/2019 4:36 PM
441	More River Boat Launches	9/30/2019 4:31 PM
442	More docks	9/30/2019 4:11 PM
443	Safe and well kept boat launch	9/30/2019 4:09 PM
444	Muskegon Hartshorn Marina should remain under the operations of the city and not privatize. It belongs to the people of Muskegon not outsiders recruited by the privatization group that pushed out the locals.	9/30/2019 4:05 PM
445	More day spots	9/30/2019 3:54 PM
446	Eliminate Geese and their feces	9/30/2019 3:46 PM
447	rates, protected from wind, fuel, restaurant or store	9/30/2019 3:41 PM
448	Maintenance of docks	9/30/2019 3:27 PM
449	East Jordan City Marina - needs new shoppers dock and fuel dock!	9/30/2019 3:24 PM
450	Docks, clesnliness	9/30/2019 3:22 PM
451	cold showers at Lealand Harbor, bad WIFI at Ludington Municipal Marina, weeds at several marinas, staff not available in the evening at several marinas, restrooms at Pentwater Marina. Transient dock availability Duncan L. Clinch in Traverse City is difficult. Diesel fuel not available on Mackinac Island	9/30/2019 3:16 PM
452	Rest rooms	9/30/2019 3:15 PM
453	Small boat friendly	9/30/2019 3:09 PM
454	Fish cleaning stations.	9/30/2019 3:07 PM
455	Maintenance of docks (keeping up with water levels).	9/30/2019 3:07 PM
456	removal of weeds	9/30/2019 3:02 PM
457	Accessible	9/30/2019 3:02 PM
458	Fuel at Grindstone Harbor, more slips at Port Austin.	9/30/2019 3:02 PM
459	more dock space, many times cannot find open space to stop	9/30/2019 2:53 PM
460	No ideas at this time	9/30/2019 2:31 PM

MSWC Boater Trends Survey

461	cleanliness and convenience - clean facilities, mostly including bathrooms and showers	9/30/2019 2:27 PM
462	Fishing cleaning station at Port Austin Harbor	9/30/2019 12:02 PM
463	clean bathrooms	9/30/2019 11:55 AM
464	Docks in good shape	9/30/2019 11:37 AM
465	Cleanliness and upkeep	9/30/2019 11:21 AM
466	Location	9/30/2019 11:17 AM
467	Nice to have a few permanent dock bumpers on slips.	9/30/2019 11:14 AM
468	Quality of docks	9/30/2019 10:40 AM
469	better access across river to downtown	9/30/2019 9:54 AM
470	fish cleaning	9/30/2019 9:42 AM
471	I have no issues with any of them	9/30/2019 9:31 AM
472	Friendly staff.	9/30/2019 9:09 AM
473	Torch Lake (River) - More docks! During the summer months, there is always a line!!! Clean up the parking lot (Pave), add trash receptacles.	9/30/2019 8:53 AM
474	Updated and clean restrooms with private and CLEAN showers.	9/30/2019 8:38 AM
475	Copper Harbor - easier to contact staff	9/30/2019 7:58 AM
476	Reduce the cost to last years pricing. Eliminate the \$8.00 booking fee. Give war veteran discount.	9/29/2019 10:30 PM
477	Garbage cans	9/29/2019 9:20 PM
478	Muskegon Lake's Fisherman's Landing and the Public Launch need better lighting in the launch areas as there are many fisher-persons fishing at night. Better buoy and marker lighting.	9/29/2019 9:14 PM
479	Staff assistance, lower fuel prices	9/29/2019 8:20 PM
480	add better wifi; and remove the rust colored hooks that are on some of the dock posts (or cover them with white plastic ??)	9/29/2019 7:44 PM
481	Stronger WiFi	9/29/2019 5:51 PM
482	We need more harbors built like the East Tawas facility which would include a nice motel or hotel complex.	9/29/2019 3:17 PM
483	Wifi availability. Ride service to local attractions. Skilled deckhands to assist with docking.	9/29/2019 2:44 PM
484	Parking	9/29/2019 1:31 PM
485	Great as it is	9/29/2019 1:13 PM
486	New Buffalo docks and facilities sub par.	9/29/2019 1:02 PM
487	Dock quality	9/29/2019 12:41 PM
488	cleaner	9/29/2019 11:43 AM
489	WIFI, WIFI, WIFI !!!!	9/29/2019 11:17 AM
490	Bike share or rental in Petoskey	9/29/2019 8:23 AM
491	Better launch ramps. longer docks at boat ramps	9/29/2019 7:51 AM
492	Dedicated kayak and canoe launch facilities	9/29/2019 6:56 AM
493	Good launch at Mackinaw City State Marina. New docks and picnic tables at Mackinac Island Marina.	9/28/2019 11:13 PM
494	CLEAN REST ROOMS	9/28/2019 11:00 PM
495	WIFI availability and cell service	9/28/2019 10:58 PM
496	Fix the electrical	9/28/2019 9:46 PM
497	WiFi	9/28/2019 9:16 PM

MSWC Boater Trends Survey

498	Club houses like the one in South Haven!!! Its nice to be able to have a place to get out of the weather and to gather with a group of boaters.	9/28/2019 8:11 PM
499	More marinas need to be updated to the floating docks with the changing water levels.	9/28/2019 8:11 PM
500	Straits laundry costs excessive! I walk to city marina to do laundry.	9/28/2019 7:06 PM
501	Functional electricity	9/28/2019 2:42 PM
502	Docking space for ease of parking. Correct height docks. Easy Fuel access.	9/28/2019 1:38 PM
503	Cheybogan County Marina needs a lot of work! Frankfort Municipal also is in bad shape!	9/28/2019 1:11 PM
504	floating piers	9/28/2019 1:06 PM
505	Floating docks	9/28/2019 12:27 PM
506	Floating docks	9/28/2019 12:17 PM
507	more parking and more ramps	9/28/2019 11:19 AM
508	wave protection	9/28/2019 11:17 AM
509	New Buffalo-better customer service	9/28/2019 11:02 AM
510	Someone to manage the ramp at busy times, law and order!	9/28/2019 11:00 AM
511	None I can think of at the moment	9/28/2019 10:13 AM
512	Frankfort - electrical hookup upgrade - need dual 30 amp Pentwater - electrical hookup upgrade - need dual 30 amp	9/28/2019 9:10 AM
513	Availability seems to be an issue for a 48' boat at popular marinas like Leland, Charlevoix. Charlevoix harbormaster wants a "donation" in order to get a slip.	9/28/2019 8:57 AM
514	Clean the shower heads in the showers.	9/28/2019 8:37 AM
515	Mackinac Island Docks and Seawall	9/28/2019 8:22 AM
516	Fish cleaning station.	9/28/2019 7:48 AM
517	Lexington, Harbor master office location, and condition of docks very poor.	9/28/2019 4:35 AM
518	Reservation system often says full yet when we phone we can get a spot	9/28/2019 3:11 AM
519	Dock Utilities	9/28/2019 2:04 AM
520	fish cleaning station	9/28/2019 12:55 AM
521	Wixom Lake access needs two more launches.	9/28/2019 12:49 AM
522	Lake Orion boat launch in Lake Orion Michigan needs repairs badly!	9/28/2019 12:05 AM
523	lower cost	9/27/2019 11:28 PM
524	Good restrooms/showers	9/27/2019 10:11 PM
525	Better showers with heat at Mackinaw Island. Add more slips at Mackinaw Island	9/27/2019 10:06 PM
526	Showers without 30-second timers.	9/27/2019 9:48 PM
527	showers/restrooms	9/27/2019 9:14 PM
528	Boater facilities.	9/27/2019 9:09 PM
529	Improve, slope, add good clean bathrooms and fish cleaning stations to all boat launches, many of Canada's providential parks have great fish cleaning stations. read question wrong .	9/27/2019 8:55 PM
530	Floating docks	9/27/2019 8:46 PM
531	Ability to reserve a specific slip	9/27/2019 8:08 PM
532	Good docks	9/27/2019 7:55 PM
533	Better Parking	9/27/2019 7:34 PM
534	Cost of day use. Fuel costs. Clean to make you feel welcome.	9/27/2019 7:01 PM
535	Maintenance	9/27/2019 6:28 PM

MSWC Boater Trends Survey

536	Friendly and helpful staff, Clean and working amenities. Safe and functioning electricity and water at the docks. Safe docks!	9/27/2019 6:16 PM
537	Nothing	9/27/2019 5:39 PM
538	Docks that can adjust to the changing water heights.	9/27/2019 5:10 PM
539	Cedarville needs to allow a 35 foot boat.	9/27/2019 4:43 PM
540	Bike trails	9/27/2019 3:45 PM
541	Reduce the cost!	9/27/2019 3:29 PM
542	Beauty, parking, amenities	9/27/2019 3:17 PM
543	I wish there was one in Holland on Lake Macatawa.	9/27/2019 3:07 PM
544	Whatever the size or quantity of ammenities, clean, well maintained facilites are of paramount importance	9/27/2019 2:43 PM
545	At WG Milliken Harbour there are not enough transient slips as so many have been converted to seasonal. Such a great spot for transients to spend time (and money) in downtown Detroit but large groups can't get in there.	9/27/2019 2:39 PM
546	Nice boat ramps with lots of parking	9/27/2019 2:27 PM
547	Full Flooting docks	9/27/2019 2:10 PM
548	Slip availability, price, cleanliness	9/27/2019 1:56 PM
549	Tawas dock Please have staff spray birds/droppings off of docks Thanks!	9/27/2019 1:54 PM
550	Mackinaw Island, get better trained staff, update/replace facilities, have fuel available.	9/27/2019 1:51 PM
551	supplies for sale	9/27/2019 1:38 PM
552	See comments below--applicable to Lac La Belle State Harbor.	9/27/2019 1:26 PM
553	Docks	9/27/2019 1:24 PM
554	continue your "constant improvement" efforts	9/27/2019 1:23 PM
555	shower and bathroom facility upgrades; allow customers to reserve specific slips	9/27/2019 1:13 PM
556	Docks, restrooms, power, showers, access to local town.	9/27/2019 1:06 PM
557	More of them to chose from.	9/27/2019 1:02 PM
558	Fish cleaning	9/27/2019 12:38 PM
559	Improve the don't dock at tawas	9/27/2019 12:36 PM
560	Better education & manners of the users.	9/27/2019 12:27 PM
561	Clean restroom and showers	9/27/2019 12:19 PM
562	Need to turn down the sensitivity of the new power pedestals in Charlevoix.	9/27/2019 12:11 PM
563	New Buffalo needs floating docks -- they are practically underwater.	9/27/2019 11:59 AM
564	Soft launch areas for paddlers	9/27/2019 11:47 AM
565	More capacity and parking.	9/27/2019 11:35 AM
566	N/A	9/27/2019 11:24 AM
567	fuel availability	9/27/2019 11:24 AM
568	Fix ALL of the docks at Manistee Municipal Marina!	9/27/2019 11:15 AM
569	Restrooms as described above	9/27/2019 11:09 AM
570	Invasive species inspection. Lower rates and better showers. (Especially the showers on Mackinac Island which are pathetic.)	9/27/2019 10:58 AM
571	floating docks due to the water levels	9/27/2019 10:57 AM
572	Price	9/27/2019 10:46 AM

MSWC Boater Trends Survey

573	The Fuel Dock at East Tawas State Dock has a very dangerous configuration. The fuel dock used to be out in the harbor making it more accessible, but now is tucked inside and there is 30+foot slip right next to it making it difficult and dangerous to enter. This needs to be re-examined.	9/27/2019 10:42 AM
574	Capacity at Mackinac Island	9/27/2019 10:38 AM
575	Service facilities such as haul-out, mast service and availability of engine repair, etc. Improve comfort station.	9/27/2019 10:29 AM
576	Petoskey has quite a surge at times. Given the great location and proximity to downtown, surge reduction would be a great improvement.	9/27/2019 10:28 AM
577	Petosky- some of the docks were underwater for our stay. They are too low and it also it makes it hard to get on and off your boat.	9/27/2019 10:27 AM
578	Fast WIFI, floating docks, Good depths, Free pump outs	9/27/2019 10:23 AM
579	Mac Island - reduced ferry wake	9/27/2019 10:19 AM
580	East Tawas needs wifi capability. It is the only marina I have visited in the last 5 or 6 years that doesn't have this capability. We have friends that will bypass the marina because of the lack of wifi.	9/27/2019 10:19 AM
581	Clinch marina is my local marina. The spider webs and spiders must be addressed. Very bad!!	9/27/2019 10:10 AM
582	Maintain them	9/27/2019 10:07 AM
583	The DOCKS	9/27/2019 10:01 AM
584	Additional slips and mooring balls	9/27/2019 9:58 AM
585	Update and water level to dock.	9/27/2019 9:58 AM
586	Floating docks.	9/27/2019 9:57 AM
587	I love Alpena, too, but the facilities need updating.	9/27/2019 9:53 AM
588	Overnight parking	9/27/2019 9:47 AM
589	Better restrooms and showers	9/27/2019 9:44 AM
590	Fish cleaning station	9/27/2019 9:42 AM
591	George Kemp. The staff is relatively inattentive and doesn't answer the VHF.	9/27/2019 9:32 AM
592	have longer hours and keep open longer in the season spring and fall.	9/27/2019 9:29 AM
593	Get rid of the geese. They are nasty and crap all over the docks.	9/27/2019 9:29 AM
594	UPDATE SHOWERS	9/27/2019 9:28 AM
595	Online reservation	9/27/2019 9:26 AM
596	Bicycle	9/27/2019 9:26 AM
597	clean and modern facility (Docks, buildings, grounds...)	9/27/2019 9:21 AM
598	Mackinac island state harbour. Improve breakwall. Slowdown ferries.	9/27/2019 9:12 AM
599	Ease of making reservations	9/27/2019 9:10 AM
600	Quality and cleanliness of docks.	9/27/2019 9:10 AM
601	Harbor Springs improve the marina office, restrooms, showers	9/27/2019 9:08 AM
602	Most marinas are very well equipped and staff very well	9/27/2019 9:08 AM
603	Hancock / Houghton Co: NEEDS NEW BATH ROOM / SHOWER FACILTIES!	9/27/2019 9:06 AM
604	Appearance and quality	9/27/2019 8:47 AM
605	N/A	9/27/2019 8:46 AM
606	WIFI available to ALL docks, not just the "big boat" docks!	9/27/2019 8:46 AM
607	Train your staff. Too many times I pull into a State marina and the staff does not even know how to tie my boat up on arrival to the dock.	9/27/2019 8:32 AM
608	Better bathhouse facilities	9/27/2019 8:31 AM

MSWC Boater Trends Survey

609	great harbor, some employees, such as deck hands tend to have a little ambition to help, that could be improved.	9/27/2019 8:31 AM
610	I don't use them	9/27/2019 8:24 AM
611	Free short term parking while you get meals. Have gone from Drummond to Detour state marina. Bought over 100 gallons of fuel and had to pay \$10 so I could go to the Mainsail for lunch. Come On! Lets help out the local businesses.	9/27/2019 8:24 AM
612	Ease of use	9/27/2019 8:23 AM
613	Make the reservation system work	9/27/2019 8:18 AM
614	That the marina pays for itself and it not funded by taxes	9/27/2019 8:18 AM
615	Spray for spiders along docks. Better wi'fi.	9/27/2019 8:16 AM
616	To have excellent showed and restrooms	9/27/2019 8:14 AM
617	Milliken State Harbor. Needs major plumbing work on the showers. They continually flood the whole bathroom. Also very dark in there.	9/27/2019 8:07 AM
618	Parking	9/27/2019 7:58 AM
619	Keep up on the maintenance	9/27/2019 7:58 AM
620	Staff hospitality can be improved & bikes for transportation	9/27/2019 7:58 AM
621	Improve and add to Hartshorns restrooms	9/27/2019 7:49 AM
622	clean bath/shower area	9/27/2019 7:46 AM
623	SPRAY FOR SPIDERS CONSTANTLY	9/27/2019 7:44 AM
624	All sailboats should tie-off their halyards, clank, clank, clank all night long- - It becomes music if you get past the clank clank-clank. haha	9/27/2019 7:26 AM
625	Dock maintenance and facility amenities!	9/27/2019 7:22 AM
626	more seasonal slips at northport or Ieland	9/27/2019 7:18 AM
627	Bath house then docks.	9/27/2019 7:08 AM
628	Modern clean Bathrooms	9/27/2019 7:00 AM
629	Better launch ramps and docks. Only one boat can launch at a time	9/27/2019 6:59 AM
630	Restructure your fee system using the hotel/motel model and consider clientele type (ability to pay) and the cost to serve in your fees.	9/27/2019 6:56 AM
631	none	9/27/2019 6:54 AM
632	WI FI	9/27/2019 6:54 AM
633	Service from staff, power and clean bathrooms	9/27/2019 6:47 AM
634	Solid ramps and docks.	9/27/2019 6:25 AM
635	none	9/27/2019 6:05 AM
636	Cleanliness	9/27/2019 6:00 AM
637	cost	9/27/2019 5:57 AM
638	Increase availability to transient boaters.	9/27/2019 5:38 AM
639	Docks are a must	9/27/2019 5:25 AM
640	Floating docks	9/27/2019 5:07 AM
641	ample parking and restrooms	9/27/2019 4:58 AM
642	Bathroom and shower facilities	9/27/2019 4:37 AM
643	More docks.	9/27/2019 3:28 AM
644	24 hour boat launch	9/27/2019 12:30 AM
645	N/a	9/27/2019 12:28 AM

MSWC Boater Trends Survey

646	Enlarge Leland Township Harbor... Please.	9/27/2019 12:17 AM
647	Bathrooms & access to restaurants	9/26/2019 11:56 PM
648	Hartshorn/Muskegon: Floating docks need replacement and restrooms/showers are old and rundown and need replacing.	9/26/2019 11:41 PM
649	Hot tub open until after dusk	9/26/2019 11:24 PM
650	Lower rates	9/26/2019 11:07 PM
651	Great docks and good staffstaffing	9/26/2019 11:06 PM
652	The bathrooms and showers at the Rogers City Marina were very outdated.	9/26/2019 11:06 PM
653	See above notes	9/26/2019 11:00 PM
654	Up to date facilities, docks etc	9/26/2019 10:56 PM
655	Clean and great staff	9/26/2019 10:56 PM
656	Level loading ramp	9/26/2019 10:54 PM
657	handycapped with stroke in 2013	9/26/2019 10:51 PM
658	Fish Cleaning Stations. I use the one at the harbor in Alpena. It is the best. I think it is provided by the City. You may want to check with them as to how to operate an excellent facility.	9/26/2019 10:43 PM
659	Ample parking	9/26/2019 10:42 PM
660	Area with multiple attractions modernization	9/26/2019 10:33 PM
661	better price.	9/26/2019 10:27 PM
662	Keeping it family oriented... and clean, friendly atmosphere.	9/26/2019 10:26 PM
663	Efficient and friendly staff.	9/26/2019 10:18 PM
664	Fix the bathrooms	9/26/2019 10:12 PM
665	None	9/26/2019 10:03 PM
666	Cleanliness of the entire facility and caring staff are always the most important.	9/26/2019 10:01 PM
667	More room at fuel dock	9/26/2019 9:58 PM
668	Good restrooms and shower facilities.	9/26/2019 9:53 PM
669	Making sure all harbors have gasoline to sell. We were unable to purchase fuel in Presque Ille this summer and barely made it to Roger's City the next morning.	9/26/2019 9:51 PM
670	Keep the seasonal boats that we see every time out of the transient slips (read Leland with not very many other options within 50 miles).	9/26/2019 9:50 PM
671	fix the ramps	9/26/2019 9:45 PM
672	Up keep	9/26/2019 9:42 PM
673	Better showers at the Charlevoix marina on Round Lake. They don't even use full shower curtains, they cut them in half, minimal privacy.	9/26/2019 9:41 PM
674	Better docks like the ones recently installed at East Tawas, but bubbling them in the winter ruined the ice fishing for a lot of people that can't afford sleds or quads and have to walk out.	9/26/2019 9:37 PM
675	Ac in the bath house!	9/26/2019 9:36 PM
676	St Ignace needs a dedicated place to park a boat trailer overnight	9/26/2019 9:35 PM
677	Lower cost at Leland, price doubled overnight when updates were done so I just by pass it now	9/26/2019 9:35 PM
678	wi-fi	9/26/2019 9:34 PM
679	None	9/26/2019 9:30 PM
680	More then one ramp	9/26/2019 9:28 PM
681	Customer Service at DeTour State Harbor. Richard is horribly unfriendly, rude, obnoxious, to most anyone who visits. The support staff is wonderful. He is driving customers out with his attitude and arrogance.	9/26/2019 9:27 PM

MSWC Boater Trends Survey

682	wifi	9/26/2019 9:25 PM
683	Availability and price	9/26/2019 9:25 PM
684	Lower costs.	9/26/2019 9:24 PM
685	quiet	9/26/2019 9:23 PM
686	Frankfort harbor needs improvements to infrastructure docks, shore power, aging bathrooms/showers	9/26/2019 9:22 PM
687	Not having to walk 200 yards to the restroom like at Suttons Bay!	9/26/2019 9:22 PM
688	Fuel availability	9/26/2019 9:22 PM
689	Great docks	9/26/2019 9:21 PM
690	Cost,#of docks,parking	9/26/2019 9:21 PM
691	longer season	9/26/2019 9:19 PM
692	Slow ferry boats	9/26/2019 9:16 PM
693	reading area	9/26/2019 9:14 PM
694	Additional breakwall at Mackinaw Island to protect the marina from the constant ferry wake	9/26/2019 9:13 PM
695	Were at Lexington last year and felt the docks needed improvement. The staff there could have been more helpful as well.	9/26/2019 9:13 PM
696	Harbor Beach marina: Myself, and others, had made on-line reservations. When we arrived at marina, they had no information about on-line reservations.	9/26/2019 9:09 PM
697	WiFi would be nice.	9/26/2019 9:08 PM
698	Clean restrooms ability	9/26/2019 9:07 PM
699	Lexington - a shuttle or gulf cart ride to town.	9/26/2019 9:05 PM
700	Nothing I can think of.	9/26/2019 9:02 PM
701	Docks, bathrooms showers	9/26/2019 8:58 PM
702	Mackinac Island-slow down ferry boats. Will not return there until the wakes are better. Too hard on the boat and us.	9/26/2019 8:57 PM
703	Clean showers and restrooms	9/26/2019 8:54 PM
704	Dock hands that know what they are doing	9/26/2019 8:54 PM
705	Better lighting on navigation buoys for safety entering unknown harbor after dark and better lighting on ramp.	9/26/2019 8:38 PM
706	Restrooms/showers, and access to restaurants	9/26/2019 8:36 PM
707	No geese	9/26/2019 8:35 PM
708	Good lighting	9/26/2019 8:33 PM
709	So. Haven could improve the showers.	9/26/2019 8:30 PM
710	I am happy with the marinas I use on a regular basis.	9/26/2019 8:24 PM
711	Wifi at all marinas	9/26/2019 8:20 PM
712	Lawn cut trash picked up. Geese deterrent !!	9/26/2019 8:16 PM
713	Docks and bathrooms.	9/26/2019 8:15 PM
714	Access to fuel, and store. Lac St. Clair Municipal Marina.	9/26/2019 8:15 PM
715	Everything was fine	9/26/2019 8:14 PM
716	Lighting in showers and restrooms is too dim.	9/26/2019 8:13 PM
717	See comment 25. Eliminate those stupid posts.	9/26/2019 8:12 PM
718	Updated shower houses	9/26/2019 8:10 PM

MSWC Boater Trends Survey

719	Clean showers	9/26/2019 8:08 PM
720	Clubhouse with TV.	9/26/2019 8:03 PM
721	Better WiFi and docks.	9/26/2019 8:02 PM
722	shuttle service to town or more slip availability	9/26/2019 7:59 PM
723	WiFi	9/26/2019 7:57 PM
724	Upgraded docks	9/26/2019 7:51 PM
725	a fish cleaning station	9/26/2019 7:51 PM
726	Restrooms open to the public, not just those with boats in the harbor.	9/26/2019 7:51 PM
727	Munising Bayshore Marina needs , at least Thirty more seasonal slips as the waiting list is quite extensive.	9/26/2019 7:48 PM
728	East Tawas Dock should be a port for cruise ships as this is gaining popularity around the Great Lakes	9/26/2019 7:45 PM
729	Updated bathrooms	9/26/2019 7:45 PM
730	Launch, docks and amenities. A pool is a definite plus!	9/26/2019 7:43 PM
731	Cleaner bathroom and shower at East Jordan City Marina	9/26/2019 7:42 PM
732	Again, I have thoroughly enjoyed the states marina facility	9/26/2019 7:41 PM
733	Clean the beach at Bay City State Park	9/26/2019 7:39 PM
734	See above	9/26/2019 7:39 PM
735	shore fishing access	9/26/2019 7:37 PM
736	Rest rooms and dock quality	9/26/2019 7:36 PM
737	Pool	9/26/2019 7:35 PM
738	Bathrooms and activities	9/26/2019 7:35 PM
739	Not too far to bathrooms, near local stores, rental bikes	9/26/2019 7:35 PM
740	Fish cleaning station at harley ensign	9/26/2019 7:32 PM
741	Just more availability. Hard to get into	9/26/2019 7:25 PM
742	More transient slips	9/26/2019 7:24 PM
743	facilities, protection- Mackinac Island	9/26/2019 7:20 PM
744	Whitefish point - ensure transient docks are in good condition	9/26/2019 7:19 PM
745	Docks	9/26/2019 7:17 PM
746	Floating docks	9/26/2019 7:17 PM
747	Unsure	9/26/2019 7:16 PM
748	Good maintenence, clean	9/26/2019 7:13 PM
749	Open earlier	9/26/2019 7:13 PM
750	Docks	9/26/2019 7:08 PM
751	Same day reservations	9/26/2019 7:05 PM
752	More slips.	9/26/2019 7:04 PM
753	Quantity of available seasonal slips	9/26/2019 7:00 PM
754	Houghton Lake can use longer docks to make it easier to load/unload boats.	9/26/2019 7:00 PM
755	Presque Isle Marina. It is a fishing port, but there is no fish cleaning station	9/26/2019 6:59 PM
756	Better facilities	9/26/2019 6:59 PM
757	Staff to direct and help the noobs.	9/26/2019 6:57 PM

MSWC Boater Trends Survey

758	Parking	9/26/2019 6:53 PM
759	WIFI for straits state harbor and Mackinac Island marina	9/26/2019 6:52 PM
760	Bathroom Improvements	9/26/2019 6:52 PM
761	Shoot the geese	9/26/2019 6:49 PM
762	Improve WiFi coverage, many times it is not able to handle full slips	9/26/2019 6:49 PM
763	pet areas	9/26/2019 6:47 PM
764	Leland Marina staff member was very rude and unwelcoming. We were hoping to have lunch and shop in Leland however he would not even let us approach the dock to discuss options. We are kind, courteous, and professional adults who were not even given the opportunity to ask questions. This man was extremely unprofessional and very unfriendly.	9/26/2019 6:45 PM
765	Quality docks with power/water	9/26/2019 6:44 PM
766	Modern/clean restrooms/showers	9/26/2019 6:43 PM
767	South havens south side bathrooms	9/26/2019 6:43 PM
768	Fuel and Restaurant at Presque Isle State Harbor. Year 2019 was a shame, a true shame, how services fell apart.	9/26/2019 6:43 PM
769	I have no problem with them as is	9/26/2019 6:40 PM
770	In Ontonagon a place to leave small boats in the water over night	9/26/2019 6:40 PM
771	Protected safe up to date facilities	9/26/2019 6:39 PM
772	toilets and showers	9/26/2019 6:36 PM
773	Food	9/26/2019 6:36 PM
774	Need more parking and more slips.	9/26/2019 6:36 PM
775	Having adequate paved parking.	9/26/2019 6:34 PM
776	good condition, friendly, protected	9/26/2019 6:34 PM
777	Dry out the restroom. showers. COST...Lower it during the Week for Christ sakes.	9/26/2019 6:34 PM
778	Good	9/26/2019 6:31 PM
779	more spaces	9/26/2019 6:25 PM
780	Docks	9/26/2019 6:24 PM
781	Cost	9/26/2019 6:23 PM
782	dock safety and repair	9/26/2019 6:20 PM
783	Grand Haven needs more launch slips and improved Docks and multiple docks	9/26/2019 6:20 PM
784	Facility - clean & updated. & price - we are NOT rich...	9/26/2019 6:17 PM
785	Hourly rent, if you were in the area for the day or few hours	9/26/2019 6:15 PM
786	?	9/26/2019 6:09 PM
787	Na	9/26/2019 6:09 PM
788	new docks	9/26/2019 6:09 PM
789	Dock post higher to catch rub rail of bigger boats.	9/26/2019 6:09 PM
790	More transient slips - Muskegon river	9/26/2019 6:09 PM
791	More garbage diaposal.	9/26/2019 6:08 PM
792	Staff training	9/26/2019 6:08 PM
793	parking	9/26/2019 6:06 PM
794	bathroom facilities	9/26/2019 6:06 PM
795	Accessable slips for newer boaters.	9/26/2019 6:04 PM

MSWC Boater Trends Survey

796	Showers, docks	9/26/2019 5:59 PM
797	Access	9/26/2019 5:59 PM
798	Ability to accept boats > 7'3" draft	9/26/2019 5:55 PM
799	Quality of docks, cleats, and power	9/26/2019 5:54 PM
800	Location	9/26/2019 5:53 PM
801	Transient slips	9/26/2019 5:52 PM
802	Open the Portage Restaurant in Presque Isle.	9/26/2019 5:52 PM
803	Docks and dock protection (placing bumper material where needed)	9/26/2019 5:49 PM
804	bois blanc harbor needs an east breakwall..and parking enforcement badly...!!!!	9/26/2019 5:48 PM
805	the slip specific program needs to end because I was asked to change slips in an almost empty harbor for one other boat	9/26/2019 5:46 PM
806	We cruise 15 miles to get to Mackinac Island and hope there is a slip. They won't assign a slip unless reservation is made online or you are in the harbor. We have gotten there only to find out there is nothing available.	9/26/2019 5:45 PM
807	Different Harbor Master	9/26/2019 5:40 PM
808	Nice docks with power & water. Good restroom facilities.	9/26/2019 5:40 PM
809	Floating docks if not there. bathroom facilities if not upgraded. How about a portable pump out?	9/26/2019 5:39 PM
810	Clean restrooms	9/26/2019 5:39 PM
811	Out side large sink for washing dishes	9/26/2019 5:36 PM
812	More amenities	9/26/2019 5:36 PM
813	wifi	9/26/2019 5:35 PM
814	Up to date, clean facilities	9/26/2019 5:33 PM
815	A walk bridge to town would be great. I also know that is not feasible to build. Great marina	9/26/2019 5:33 PM
816	Cleanliness, safety	9/26/2019 5:32 PM
817	Manistee, eliminate sewage overflows ans odors from city system improving water quality.	9/26/2019 5:32 PM
818	Showers and rest rooms	9/26/2019 5:31 PM
819	Slip fees at Grand Haven Municipal marina are outrageous	9/26/2019 5:31 PM
820	ship store	9/26/2019 5:30 PM
821	The docks	9/26/2019 5:30 PM
822	Shower facilities	9/26/2019 5:29 PM
823	Cost	9/26/2019 5:29 PM
824	improvement of restroom, showers and air-conditioning , water/dryer and internet, cleanliness	9/26/2019 5:28 PM
825	Breakwall at Mackinac island	9/26/2019 5:28 PM
826	Wifi	9/26/2019 5:26 PM
827	Needs WiFi for guests, Hydro electric repairs or updating,	9/26/2019 5:26 PM
828	FLOATING DOCKS	9/26/2019 5:26 PM
829	Shower/bathroom facilities.	9/26/2019 5:23 PM
830	Electrical at Frankfort	9/26/2019 5:23 PM
831	floating docks	9/26/2019 5:22 PM
832	food services	9/26/2019 5:20 PM
833	Update restrooms/showers	9/26/2019 5:19 PM
834	clean shower facilities	9/26/2019 5:19 PM

MSWC Boater Trends Survey

835	Better marked and maintained entrance channel to Cedar River	9/26/2019 5:17 PM
836	Grand Marais needs functional bathrooms. Munising needs better dock help	9/26/2019 5:17 PM
837	Floating docks	9/26/2019 5:11 PM
838	Quality docks	9/26/2019 5:09 PM
839	fish cleaning stations	9/26/2019 5:09 PM
840	Ensure places like clinch marina in TC are following transient slip rules. We witnessed boats in the same transient slips for the entire summer. Very hard to get slips even during middle of the week in TC this summer	9/26/2019 5:09 PM
841	Ease of access	9/26/2019 5:08 PM
842	more parking	9/26/2019 5:07 PM
843	Clean out weed beds.	9/26/2019 5:02 PM
844	dock and pier fishing opportunities	9/26/2019 5:01 PM
845	well staffed and clean	9/26/2019 5:00 PM
846	Upgrading bathroom buildings...some are pretty tired. Pentwater, Grand Haven and many others are older. Manistee is also quite nice.	9/26/2019 5:00 PM
847	Dock hands to help out	9/26/2019 4:57 PM
848	Clean restrooms	9/26/2019 4:57 PM
849	Keep clean, decent prices and good accessibility	9/26/2019 4:57 PM
850	Condition of docks.	9/26/2019 4:53 PM
851	Safety, Clean	9/26/2019 4:51 PM
852	Docks at east Jordan	9/26/2019 4:51 PM
853	Rest rooms	9/26/2019 4:50 PM
854	Power	9/26/2019 4:50 PM
855	Staff - if they are good the marina is good	9/26/2019 4:49 PM
856	Eagle River in Keewenaw County needs TOTAL renovation!!!!!!!!!!!!!!!!!!!!	9/26/2019 4:47 PM
857	Get rid of geese	9/26/2019 4:45 PM
858	It seems all the marinas have staff which is trained in guiding you to your slip and are there to lend a hand in docking.	9/26/2019 4:42 PM
859	Good restrooms. Helpful staff.	9/26/2019 4:42 PM
860	Floating docks	9/26/2019 4:41 PM
861	Number of launches	9/26/2019 4:39 PM
862	Cleanliness and enforcement of Slow No Wake Laws	9/26/2019 4:37 PM
863	Docks & WiFi	9/26/2019 4:35 PM
864	price	9/26/2019 4:35 PM
865	Decent showers.	9/26/2019 4:34 PM
866	It really pisses me off when they put big boulders around the launch area. If you have a long trailer, it can be very difficult to navigate around them. The are flat out a safety hazard if you ask me.	9/26/2019 4:34 PM
867	WiFi	9/26/2019 4:33 PM
868	good pump out system	9/26/2019 4:33 PM
869	Good docks, electrical hookups, clean restrooms.	9/26/2019 4:32 PM
870	Overall cleanliness	9/26/2019 4:30 PM
871	Accessibility	9/26/2019 4:30 PM

MSWC Boater Trends Survey

872	Easy entry into the water and good docks !	9/26/2019 4:29 PM
873	Sturdy the docks and electric	9/26/2019 4:29 PM
874	Move or shutdown Harbor Beach. I reallllly hate that place.	9/26/2019 4:28 PM
875	Knowledgeable staff	9/26/2019 4:27 PM
876	Docks	9/26/2019 4:27 PM
877	to be open longer hours	9/26/2019 4:26 PM
878	more last-minute reservations	9/26/2019 4:26 PM
879	new facilites	9/26/2019 4:23 PM
880	Well maintained sturdy docks. Dock hands that are trained and helpful to assist boaters when needed.	9/26/2019 4:23 PM
881	New bathroom and showers	9/26/2019 4:23 PM
882	Quality power, WiFi and water	9/26/2019 4:22 PM
883	Lexington Harbor weed removal!	9/26/2019 4:21 PM
884	paved ramps	9/26/2019 4:20 PM
885	O	9/26/2019 4:19 PM
886	docks	9/26/2019 4:19 PM
887	ease of access	9/26/2019 4:18 PM
888	Ludington could have more parking	9/26/2019 4:17 PM
889	Up to date docks & restrooms	9/26/2019 4:17 PM
890	Care and condition of docks	9/26/2019 4:16 PM
891	Upgrade docks. Notify seasonal slip holder of dates well in advance. I had no idea the power was being shut off at Lexington on 9/22/19 and it is a MAJOR inconvenience to relocate for 3 weeks until haul out. I will not return to Lexington for seasonal dockage.	9/26/2019 4:16 PM
892	Not enough marinas have 45'+ slips, almost impossible to get in with out 6 month reservation	9/26/2019 4:16 PM
893	Docks	9/26/2019 4:15 PM
894	ADD Wifi at East Tawas State Dock	9/26/2019 4:15 PM
895	Extend the break wall at Mack Island and slow down the ferries	9/26/2019 4:15 PM
896	Floating docks	9/26/2019 4:14 PM
897	Make more locations as nice as the Straits State Marina	9/26/2019 4:13 PM
898	Clean showers/bathrooms	9/26/2019 4:12 PM
899	PARKING PARKING PARKING at DUNCAN KEITH MARINA	9/26/2019 4:12 PM
900	Updated bathroom facilities	9/26/2019 4:11 PM
901	Floating docks at Mac Island and wake protection from ferries.	9/26/2019 4:11 PM
902	Parking	9/26/2019 4:10 PM
903	None	9/26/2019 4:09 PM
904	Straits Harbor, longer season, FEWER GEESE. Mackinac Island Harbor - some floating docks.	9/26/2019 4:09 PM
905	THIS PLACE NEEDS WIFI ! I could help put it in if you needed help. Let's help keep this place up to date with the times by offering WiFi to transient boaters.	9/26/2019 4:09 PM
906	Parking	9/26/2019 4:08 PM
907	Improve the docks	9/26/2019 4:08 PM
908	Fish cleaning station	9/26/2019 4:08 PM
909	Add a boater's lounge with microwave, tables, chairs, TV, that's always available.	9/26/2019 4:08 PM

MSWC Boater Trends Survey

910	Protected launch ramp	9/26/2019 4:07 PM
911	More slips	9/26/2019 4:07 PM
912	CLOSE BY CITY AMENITIES	9/26/2019 4:07 PM
913	Pump outs at the slips	9/26/2019 4:07 PM
914	Can't think of anything.	9/26/2019 4:07 PM
915	Add WiFi to Chinook Pier in Grand Haven!	9/26/2019 4:05 PM
916	MANY of the ones we stayed at this summer either needed their restroom/shower facilities upgraded or cleaning lessons give to the staff. No one wants to shower in a facility where there is weeks worth of hair in the drain.....that's if the drain is even working properly. Over filled garbage; lack of soap; no shower curtains; I could go on, and on	9/26/2019 4:05 PM
917	Dredging of Black River	9/26/2019 4:04 PM
918	well maintained	9/26/2019 4:04 PM
919	Really need availability, in the last two years the reservation system makes it very hard to get into a marina or to stay there if the weather turns bad over the weekend. As a small boat sailor safe harbor is the most important thing.	9/26/2019 4:04 PM
920	low cost	9/26/2019 4:02 PM
921	Mackinac Island wider and Longer docks, plenty of power as the new boats take more power to run than ever--many take two 100 amps	9/26/2019 4:02 PM
922	New, stable docks	9/26/2019 4:02 PM
923	Have signs where to pay.....bumpers on the wall	9/26/2019 4:01 PM
924	Clean and well maintained bathrooms	9/26/2019 4:01 PM
925	Muskegon/hartshorn is pricey for the amenities it has.	9/26/2019 4:01 PM
926	Restrooms\Showers	9/26/2019 4:00 PM
927	Northport... needs floating docks, ditto for several others	9/26/2019 3:59 PM
928	Wifi	9/26/2019 3:58 PM
929	Restrooms	9/26/2019 3:57 PM
930	Electrical service at slips	9/26/2019 3:57 PM
931	Bike rentals would be great.	9/26/2019 3:57 PM
932	quality of docking and electrical hookup	9/26/2019 3:57 PM
933	STRONG WIFI SIGNAL at the DOCKS!!!! Very important. We still have to work to pay for all the gas we buy from you. Can't work without WIFI!!!! Next year we are shortening our "summer" because of the WIFI situation. Can't be off the grid that long. We live in FL and will come up the middle of June and be home the end of August. We were up on the boat Summer 2019 from May until Sept. But-- WIFI sucked so we have regrouped. We would do the bare minimum as far as our company was concerned but really needed to do more but the signal would be so weak we would just sit and spin. Very frustrating.	9/26/2019 3:57 PM
934	pools and hot-tubs	9/26/2019 3:56 PM
935	Air condition the restrooms/showers	9/26/2019 3:56 PM
936	Reduce surge from ferry wake at Straits, Mackinac Island and St. Ignace	9/26/2019 3:56 PM
937	Convert Mackinaw City Municipal to 100% floating dock system.	9/26/2019 3:56 PM
938	Things to do when at marina.	9/26/2019 3:56 PM
939	Longer hours during the season.	9/26/2019 3:55 PM
940	More ramps	9/26/2019 3:55 PM
941	24hr access.	9/26/2019 3:54 PM
942	Wifi	9/26/2019 3:53 PM

MSWC Boater Trends Survey

943	new shower rooms and docks	9/26/2019 3:53 PM
944	beach for kayak, canoe, paddle board, small sailboat	9/26/2019 3:53 PM
945	Restaurant access	9/26/2019 3:52 PM
946	Change the reservation system	9/26/2019 3:52 PM
947	Allow same day reservations. First come first serve doesn't work well for boating.	9/26/2019 3:52 PM
948	New Buffalo Municipal harbor has become a dump. The bathrooms are filthy, the staff is nowhere to be found most of the time, the docks are in rough shape. Needs a total overhaul. Could be an amazing place, but no one there seems to care anymore.	9/26/2019 3:52 PM
949	quality of docks, and boater service amenities	9/26/2019 3:52 PM
950	depth and entrance marking	9/26/2019 3:52 PM
951	Grills and free bike usage for shopping	9/26/2019 3:51 PM
952	Wi-Fi	9/26/2019 3:51 PM
953	N/A	9/26/2019 3:51 PM
954	Bolles harbor needs to have security and \$\$ taker ALL THE TIME.....NOT JUST FISHING SEASON. POLICE THE POWER LOADING PEOPLE!	9/26/2019 3:50 PM
955	Customer service. Michigan City has the best customer service and staff. Our experience at New Buffalo was with a high school-age student running the office and mistakenly having 2 boats in same slip. Our engine was affected by the green algae in the river along the municipal slips in New Buffalo and we needed service. This was 2 years ago and we haven't returned.	9/26/2019 3:49 PM
956	Better web site for reservations	9/26/2019 3:49 PM
957	Just keep docking areas free of debris, no logs and such to cause damage to your boat	9/26/2019 3:48 PM
958	My opinion is you are doing a great job !	9/26/2019 3:47 PM
959	Maintenance of the facilities, slips, etc.	9/26/2019 3:47 PM
960	Ability to reserve day dock on day of dock as well as up to two weeks before.	9/26/2019 3:47 PM
961	Really good dock lighting so we can see better at night.	9/26/2019 3:47 PM
962	Dockage and availability of staff to assist. Pentwater Municipal marina needs to be like Charlevoix city marina	9/26/2019 3:46 PM
963	GET INTERNET THAT WORKS IN YOUR HARBORS AND MARINAS!!!! They all have them, few WORK WELL!!!!	9/26/2019 3:46 PM
964	Better bathrooms!	9/26/2019 3:46 PM
965	Grand Haven Municipal needs WiFi access for all slips not just a few large slips..	9/26/2019 3:46 PM
966	Clean	9/26/2019 3:45 PM
967	Location	9/26/2019 3:45 PM
968	Availability	9/26/2019 3:45 PM
969	Posting signage about Swimmer's Itch	9/26/2019 3:45 PM
970	Lexington - replace the docks!!!	9/26/2019 3:45 PM
971	Packing	9/26/2019 3:45 PM
972	dock repair	9/26/2019 3:44 PM
973	Nice docks	9/26/2019 3:44 PM
974	Available slips	9/26/2019 3:43 PM
975	Helpful staff.	9/26/2019 3:43 PM
976	Add Laundry facilities to East Tawas State Dock.	9/26/2019 3:43 PM
977	None	9/26/2019 3:42 PM

MSWC Boater Trends Survey

978	Port Austin needs more seasonal slips, there is a waiting list years long to use an empty marina as most slips are transient.	9/26/2019 3:42 PM
979	The sand bars inside the Lexington harbor should be marked.	9/26/2019 3:41 PM
980	updated and clean/well maintained rest room and shower facilities	9/26/2019 3:41 PM
981	restrooms, showers	9/26/2019 3:41 PM
982	Need State launch sites on Detroit River.....Alter Rd site is for saleSt Jean is City owned and needs much improvement..	9/26/2019 3:41 PM
983	Floating docks, with modern power supplies, and CLEAN restroom/shower facilities.	9/26/2019 3:41 PM
984	Wifi and internet / cable ready	9/26/2019 3:40 PM
985	Fish cleaning station	9/26/2019 3:40 PM
986	pricing has become much higher	9/26/2019 3:40 PM
987	Clean	9/26/2019 3:39 PM
988	Nice bathrooms and laundry facility.	9/26/2019 3:39 PM
989	cable	9/26/2019 3:39 PM
990	N/A	9/26/2019 3:38 PM
991	Good WiFi in East Tawas	9/26/2019 3:38 PM
992	More fuel pumps	9/26/2019 3:37 PM
993	floating docks!!!!!!!!!!!!!!!!!!!!	9/26/2019 3:37 PM
994	small craft, paddle craft facilities	9/26/2019 3:37 PM
995	Good showers	9/26/2019 3:37 PM
996	Mackinaw Island - breakwall to eliminate wake from ferry boats.	9/26/2019 3:37 PM
997	Customer oriented and trained staff	9/26/2019 3:37 PM
998	Ramp angle is important. Most ramps into superior are shallow angles causing you to wear waterproof boots to launch your boat.	9/26/2019 3:37 PM
999	Bolles Harbor needs to be dredged!	9/26/2019 3:36 PM
1000	gulliver Michigan boat launch needs a better break wall or better docking	9/26/2019 3:35 PM
1001	Pentwater could have more transient slips	9/26/2019 3:35 PM
1002	docks	9/26/2019 3:34 PM
1003	seasonal wells or rack storage	9/26/2019 3:34 PM
1004	The ones I have visited so far are all excellent	9/26/2019 3:34 PM
1005	restrooms for boater only	9/26/2019 3:33 PM
1006	Floating docks	9/26/2019 3:33 PM
1007	Improve the Manistee docks. Some improvements have been made recently which are great.	9/26/2019 3:33 PM
1008	Floating docks to deal with fluctuating water levels.	9/26/2019 3:33 PM
1009	Wifi	9/26/2019 3:32 PM
1010	Port Austin needs more fuel pumps. The set up is a joke and only a government ran marina could rebuild an entire marina and have one pump.	9/26/2019 3:31 PM
1011	Bathhouses being well-maintained is one of the most important aspects of a state harbor.	9/26/2019 3:31 PM
1012	stop the meanness in new buffalo	9/26/2019 3:30 PM
1013	Parking	9/26/2019 3:30 PM
1014	Lexington, put floating docks in	9/26/2019 3:30 PM
1015	Put under Private control	9/26/2019 3:30 PM

MSWC Boater Trends Survey

1016	Used to be bathrooms and showers, now we have a boat that we don't have to use the marina facilities. Bathrooms and showers and the most important thing still.	9/26/2019 3:29 PM
1017	Reliable shore power	9/26/2019 3:27 PM
1018	Slip availability	9/26/2019 3:26 PM
1019	Clean and air conditioned restrooms	9/26/2019 3:10 PM
1020	Nice docks and ramps	9/26/2019 2:58 PM
1021	Available dock space and easy way to reserve slip	9/26/2019 2:56 PM
1022	Stable docks and clean facilities	9/26/2019 2:49 PM
1023	PREVENT OVER USE	9/26/2019 2:43 PM
1024	Wifi	9/26/2019 2:22 PM
1025	ability to make reservation on short (less than 3 days) directly with the marina. Often marinas appear full because people have made reservations in advance on the State system and not cancelled. Harbor masters should be able to book a transient if a reservation has not been confirmed 3 days prior to the start date.	9/26/2019 1:27 PM
1026	Eliminate the surge of water which is generated by the ferry causing all boats in marina to substantial rocking when this occurs.	9/26/2019 12:49 PM
1027	Rest rooms/ shower facilities and dock amenities/WiFi, cable tv at docks, dock conditions	9/26/2019 12:42 PM
1028	Cost.....	9/26/2019 12:37 PM
1029	wider docks	9/26/2019 12:27 PM
1030	Larger entrance and exits - bigger turn around areas at put in and take out launch. Just go to the launches on the 4th of July week and you'll see what I mean. Oh, a large convex mirror at the end of the dock would help with put ins about 10' tall. The other cool thing would be lights at the docks for the night fishermen.	9/26/2019 12:24 PM
1031	They're good already	9/26/2019 12:17 PM
1032	Location. Number of slips. Online reservation.	9/26/2019 12:12 PM
1033	Upgrading the docks to floating because of the water depth fluctuations	9/26/2019 12:08 PM
1034	None	9/26/2019 12:08 PM
1035	N/A	9/26/2019 12:06 PM
1036	Clean and accessible with many slips	9/26/2019 11:56 AM
1037	Fish cleaning station	9/26/2019 11:48 AM
1038	Docking assistance	9/26/2019 11:42 AM
1039	Good docks, rest room/showers	9/26/2019 11:41 AM
1040	Swimming areas near harbor.	9/26/2019 11:39 AM
1041	Slow the ferries down.	9/26/2019 11:34 AM
1042	relaxation; peace, easy access in/out road ways.	9/26/2019 11:30 AM
1043	Update equipment and staff	9/26/2019 11:28 AM
1044	Stayed at Port Austin recently. The harbor is way too big! Had white caps inside the harbor! Worst night I have ever spent on any boat. Then the river empties into the harbor making the water in the harbor dirty. A lot of state money wasted on that harbor in my opinion. Will never go back.	9/26/2019 11:28 AM
1045	Be sure at least one staff member on duty is well experienced in boat operations (launch and recovery, docking, etc.)	9/26/2019 11:25 AM
1046	Online booking specific sites	9/26/2019 11:18 AM
1047	See above answer	9/26/2019 11:17 AM
1048	Holland needs food options	9/26/2019 11:08 AM
1049	Available dock space	9/26/2019 11:07 AM

MSWC Boater Trends Survey

1050	Need rescue/tow services on the Lake Huron side, none available at this time.	9/26/2019 11:06 AM
1051	Cleanliness	9/26/2019 11:03 AM
1052	na	9/26/2019 10:41 AM

Q27 What is the most important improvement that could be made to the overall state harbor and municipal marina system that would enhance your experience?

Answered: 959 Skipped: 2,784

#	RESPONSES	DATE
1	WiFi and other entertainment options.	10/13/2019 7:22 PM
2	ease of making reservations	10/11/2019 11:08 AM
3	Floating docks. Better no wake signage. Control ferry wake at Mackinaw Island	10/10/2019 10:17 PM
4	Trained docking attendants.	10/10/2019 1:53 PM
5	Live feed cameras to check conditions	10/10/2019 7:21 AM
6	extended apron	10/10/2019 1:42 AM
7	N/A	10/9/2019 8:58 PM
8	better web site	10/9/2019 11:11 AM
9	remodel	10/9/2019 8:41 AM
10	Dock lights, easy access to rest rooms & gazebo with table for inclement weather.	10/8/2019 7:01 PM
11	accessability in high water	10/8/2019 2:31 PM
12	boat slips on lake leelanau, i would be a heavy user if there was. there is no slip public or private (HELP) !!	10/8/2019 8:37 AM
13	Ease of access, parking and facilities as well as proximity to attractions.	10/8/2019 8:26 AM
14	Polite and caring and helpful staff,	10/7/2019 11:47 PM
15	Laundromat facilities	10/7/2019 11:17 PM
16	more fishing piers	10/7/2019 10:16 PM
17	You really need to realize that 4-6 million walleye migrant the dertiort and st Clair rivers. They need more access and a huge world class DNR launch on Belle Isle.	10/7/2019 9:36 PM
18	More trailer parking areas	10/7/2019 7:23 PM
19	An emphasis on water quality and sustainability.	10/7/2019 5:45 PM
20	Quiet hours.	10/7/2019 5:01 PM
21	Fish cleaning station	10/7/2019 4:19 PM
22	Additional State harbors South of Detroit	10/7/2019 1:42 PM
23	Lower prices	10/7/2019 1:02 PM
24	Accurate information about various marinas and harbors on the State's website	10/7/2019 10:57 AM
25	better staff training	10/7/2019 10:54 AM
26	More facilities in the Downriver (Detroit) area.	10/7/2019 9:40 AM
27	on line scheduling is cumbersome, if that is going to be the only way to reserve, it needs to be easier	10/7/2019 9:03 AM
28	Pick the best and try to make the rest all the same, or as close as possible.	10/7/2019 8:42 AM
29	Don't charge service fee for online reservations	10/7/2019 8:17 AM
30	See # 26 above.	10/7/2019 8:15 AM
31	Cell phone service	10/7/2019 7:49 AM

MSWC Boater Trends Survey

32	Reduce Seasonal costs	10/7/2019 7:44 AM
33	Designated launch and retrieve lanes	10/7/2019 7:44 AM
34	Weed control in August. At times have trouble getting the boat out of the Lexington Harbor without damaging the boat or motor. Too many weeds at that time of year - often avoid using the harbor when I would like to use it.	10/7/2019 7:29 AM
35	Have garbage cans and empty them and pump out the porta johns	10/7/2019 7:18 AM
36	Better launch docks	10/7/2019 7:02 AM
37	More detailed printed guides	10/7/2019 6:41 AM
38	Water is trails need basic restroom cavities properly spaced	10/7/2019 12:13 AM
39	Clean bathrooms and safe floating docks	10/6/2019 8:31 PM
40	updated showers	10/6/2019 7:07 PM
41	more parking and ramps	10/6/2019 6:22 PM
42	More ramps	10/6/2019 5:51 PM
43	Adding fish cleaning facilities	10/6/2019 4:01 PM
44	Safe docks	10/6/2019 3:46 PM
45	Power and water hook up	10/6/2019 2:57 PM
46	More docks	10/6/2019 1:33 PM
47	Quit gouging us for online reservations and that \$8 fee!	10/6/2019 1:18 PM
48	no recommendations	10/6/2019 12:46 PM
49	camping spaces in front of slips for for smaller boats some us seniors can not maneuver big boats anymore but like the marina comunity	10/6/2019 12:15 PM
50	Facility maintenance.	10/6/2019 11:35 AM
51	Quality of docks.	10/6/2019 11:28 AM
52	More attractions(functions) example- Friday night music in the park at Lexington	10/6/2019 10:32 AM
53	Hire staff that wants to work, keep it well maintained.	10/6/2019 9:43 AM
54	There ok	10/6/2019 9:23 AM
55	Online reservation system should show number of slips available in each size like previous site so you can plan for group cruising	10/6/2019 9:08 AM
56	fair prices, fuel docks and clean restrooms	10/6/2019 9:03 AM
57	Keep them open for recreational boaters and fishermen to use and continue to support tourism throughout our beautiful state.	10/6/2019 9:01 AM
58	Many rent year round, and cant get transit	10/6/2019 8:58 AM
59	Clean bathrooms	10/6/2019 8:58 AM
60	More slips	10/6/2019 8:21 AM
61	Personnel training	10/6/2019 7:53 AM
62	Restrooms	10/6/2019 7:45 AM
63	Longer docks	10/6/2019 7:16 AM
64	Great facilities	10/6/2019 6:57 AM
65	Maintenance	10/6/2019 6:42 AM
66	Simplify on line reservations	10/6/2019 6:38 AM
67	The system focuses on power boats while paddle craft are increasing rapidly without adequate facilities.	10/6/2019 5:17 AM

MSWC Boater Trends Survey

68	Minnesota does a lot of interesting things: Invasive species info, Volunteer hosts at ramps with local knowledge, regulations, and help'.	10/6/2019 2:54 AM
69	None	10/5/2019 10:37 PM
70	lisen to the the boaters	10/5/2019 10:32 PM
71	think michigans harbors are the best of any state i've been to	10/5/2019 10:25 PM
72	Power washing to remove invasive species before departing	10/5/2019 10:08 PM
73	NO WAVE MAKERS ON INLAND LAKES	10/5/2019 9:59 PM
74	large clean restrooms	10/5/2019 9:06 PM
75	Need more of them	10/5/2019 8:54 PM
76	Ability to cancel/postpone a reservation when weather prohibits our ability to safely make it to our reservations-or use our next sight reservation where we are "stuck" because of weather (if it is all in the same system). Understandable if it was overbooked...but, when it is not, that would be nice!	10/5/2019 8:51 PM
77	Continue to upgrade docks with floating docks including several 60 foot floating docks.	10/5/2019 8:37 PM
78	Basically happy great resource always friendly	10/5/2019 7:05 PM
79	Unknown	10/5/2019 7:01 PM
80	Knowledge of area restaurants, sites, activities w/in walking distance & ability to rent a car, taxi or uber.	10/5/2019 5:57 PM
81	clean	10/5/2019 4:41 PM
82	have facilities which are said to be there to be operational	10/5/2019 4:09 PM
83	again, fish cleaning stations	10/5/2019 4:01 PM
84	Shower/ bathhouse. Individual ones.	10/5/2019 3:06 PM
85	More of them. Closer together	10/5/2019 2:46 PM
86	Get rid of the DNR reservation system or make it more friendly for boaters. We are not motorhomes & are weather dependent. I can't predict if I'm going to be at Beaver Island or any other place on a specific date. I can only be close. I don't care what specific slip I get, I just want a slip. Don't make me move 1 slip over (same size) because someone reserved "A8". It doesn't matter & not boater friendly.	10/5/2019 2:16 PM
87	bathrooms	10/5/2019 1:47 PM
88	clear deep water access and remove weeds	10/5/2019 1:37 PM
89	BETTER WI-FI! 100%	10/5/2019 1:25 PM
90	Better reservations	10/5/2019 12:10 PM
91	More docks	10/5/2019 12:08 PM
92	Things are fine now	10/5/2019 12:07 PM
93	See above.	10/5/2019 11:32 AM
94	RECYCLING PROGRAM- boaters have a lot of waste- cardboard, plastic, glass that could easily be part of city's recycling programs	10/5/2019 11:27 AM
95	H	10/5/2019 11:20 AM
96	Courtesy vehicle	10/5/2019 10:59 AM
97	Can't think of anything now	10/5/2019 10:40 AM
98	more slips available in some locations.	10/5/2019 10:31 AM
99	Price to high.	10/5/2019 10:29 AM
100	discounts for transient slips at other state/municipal marinas than where seasonal slip has been purchased	10/5/2019 10:05 AM
101	More marinas closer together.	10/5/2019 9:45 AM

MSWC Boater Trends Survey

102	number of slips	10/5/2019 9:33 AM
103	Nothing	10/5/2019 8:51 AM
104	Better wi-fi	10/5/2019 8:48 AM
105	ASK THE WORKERS THEY KNOW WHAT THEY NEED AN WANT..GIVE THE WORKERS RAISES	10/5/2019 8:41 AM
106	Parking	10/5/2019 8:38 AM
107	Maintaining facilities/price, info about area. Honestly, all the harbors/municipal marinas have been excellent!	10/5/2019 8:10 AM
108	Availability	10/5/2019 8:03 AM
109	We really enjoyed our stay travelling with a new boat from Taverse City down into lake Erie this past season. We found your municipal docks for the most part very good!	10/5/2019 7:12 AM
110	Shore fishing opportunities increased	10/5/2019 6:48 AM
111	New docks should be floating to keep up with the ever changing lake levels. Overall cleanliness.	10/5/2019 5:57 AM
112	Fish cleaning station	10/5/2019 4:42 AM
113	Storage for kayaks and paddle boards and clean restrooms maybe jet ski rentals	10/5/2019 2:55 AM
114	Really enjoyed them all	10/5/2019 12:35 AM
115	Good launch and retrieve docks	10/4/2019 11:25 PM
116	Make reisivaion for a boat club's more then one boat.	10/4/2019 10:56 PM
117	More harbors and slips	10/4/2019 10:55 PM
118	Improve launching facilities; install breakwater s to protect ramps and increase lengthy of ramps to accommodate larger boats.	10/4/2019 10:37 PM
119	None	10/4/2019 10:33 PM
120	parking for boat owners	10/4/2019 10:15 PM
121	Cost	10/4/2019 9:58 PM
122	Just keep up the good work you have allready done	10/4/2019 9:48 PM
123	Tent camping	10/4/2019 9:34 PM
124	More public launches deep enough to float a boat with a 4 foot draft off of its trailer	10/4/2019 9:20 PM
125	Better patrol of the docks for safety and noise control	10/4/2019 9:13 PM
126	Can't think of specifics unless I can itemize a certain marina.	10/4/2019 9:12 PM
127	Bathrooms and wifi	10/4/2019 8:57 PM
128	Cleanliness	10/4/2019 8:52 PM
129	Ramps to accommodate larger boats (28 ft pontoon).	10/4/2019 7:59 PM
130	Better reservations site	10/4/2019 7:55 PM
131	Increased availability!	10/4/2019 7:55 PM
132	Can't say anything. Most we frequent have friendly staff, that is what makes the difference! Clean bathroom second.	10/4/2019 7:47 PM
133	Keep them clean.	10/4/2019 7:31 PM
134	Offering more slip for a boat our size	10/4/2019 7:27 PM
135	WASHROOMS AND CABLE TV AND WIFI	10/4/2019 7:16 PM
136	Reduce the cost	10/4/2019 6:57 PM
137	Make sure dock attendants understand how to catch lines and secure them when docking. If available, send two dock hands.	10/4/2019 6:46 PM
138	Great showers	10/4/2019 6:29 PM

MSWC Boater Trends Survey

139	Add additional marinas	10/4/2019 6:27 PM
140	Better WiFi service and coverage at slips	10/4/2019 6:25 PM
141	Fish cleaning stations	10/4/2019 6:02 PM
142	Bus service	10/4/2019 5:58 PM
143	Long ramp docks and concrete ramps everywhere there's a boat ramp. We have a 22' 1947 Christ Craft. We have to have a long ramp dock. Traverse City Ramp Dock has been under water all Summer!	10/4/2019 5:45 PM
144	Helpful staff	10/4/2019 5:43 PM
145	More Marinas	10/4/2019 5:38 PM
146	Sometimes the decision of a harbor is day-to-day based on a number of factors. It would be good on the day of a stay if a marina could handle the reservation instead of being directed to your online reservation system. This is one change that would be greatly appreciated.	10/4/2019 5:34 PM
147	Due to high water , the drop off for launching a boat farther than the docks. Need longer docks. Hopefully you understand what I'm saying.. were in our upper 50s with a larger boat .	10/4/2019 5:25 PM
148	slips	10/4/2019 5:06 PM
149	access and parking	10/4/2019 5:02 PM
150	Integrate non-motorized watercraft launch areas with motorized launches in a safe, welcoming way	10/4/2019 4:59 PM
151	cleaner washrooms	10/4/2019 4:56 PM
152	Make the on line reservation system easier to use	10/4/2019 4:51 PM
153	Freshen up the washrooms etc.	10/4/2019 4:50 PM
154	Get rid of that terrible reservation system.	10/4/2019 4:29 PM
155	more of them	10/4/2019 4:28 PM
156	no comment	10/4/2019 4:28 PM
157	Clean docks, restrooms and friendly, knowledgeable staff	10/4/2019 4:27 PM
158	Keep staff trained and helpful when docking and fueling	10/4/2019 4:04 PM
159	Online reservation system	10/4/2019 4:00 PM
160	Increase the number of harbors of refuge.	10/4/2019 3:42 PM
161	Convince	10/4/2019 3:42 PM
162	Install protective breakwalls to prevent surge at the ramps.	10/4/2019 3:40 PM
163	The state harbor system is one of the great things about this state and what keeps us boating. Continuing to maintain existing facilities is all I ask.	10/4/2019 3:36 PM
164	Uniform maintenance	10/4/2019 3:34 PM
165	Improved availability.	10/4/2019 3:33 PM
166	not losing the reservation fee when we cancel due to weather.	10/4/2019 3:26 PM
167	all harbors have good WiFi.	10/4/2019 3:19 PM
168	Better help and management on site	10/4/2019 3:00 PM
169	x	10/4/2019 2:58 PM
170	accessibility to recycling	10/4/2019 2:56 PM
171	customer service	10/4/2019 2:47 PM
172	Lighting - Dock area and Parking area	10/4/2019 2:38 PM
173	offer more amenities for those that don't have cooking abilities aboard their boats.	10/4/2019 2:35 PM
174	Better customer service	10/4/2019 2:34 PM

MSWC Boater Trends Survey

175	Stop upgrading over pedestals so that the majority of boats can not obtain shore power!!!!	10/4/2019 2:28 PM
176	Trash disposal facilities	10/4/2019 2:16 PM
177	N/A	10/4/2019 1:59 PM
178	Parking	10/4/2019 1:58 PM
179	I don't want you to get to big a head, but we've sailed in many regions and the Michigan State Harbors are our favorites. Keep up the good work! :-)	10/4/2019 1:57 PM
180	Easier access boarding and unloading for low profile boats	10/4/2019 1:55 PM
181	Consistency	10/4/2019 1:52 PM
182	See above	10/4/2019 1:52 PM
183	I can think of none. Continue the excellent maintenance of existing facilities; make modifications as the DNA determines; focus on marina staff training.	10/4/2019 1:37 PM
184	Fuel and restrooms	10/4/2019 1:34 PM
185	More ramps and parking	10/4/2019 1:33 PM
186	Availability	10/4/2019 1:32 PM
187	put a harbor in sagutuck	10/4/2019 1:26 PM
188	Clean rest room an up keep of park	10/4/2019 1:24 PM
189	Slips are often hard to rent without prior reservations. Reservations are hard to make when cruising, weather often changes our plans.	10/4/2019 1:21 PM
190	Wifi	10/4/2019 1:21 PM
191	Have diesel fuel at every marina	10/4/2019 1:20 PM
192	Not charge for over night stay	10/4/2019 1:12 PM
193	Possibly longer staff hours in mid summer.	10/4/2019 1:12 PM
194	??	10/4/2019 1:03 PM
195	Individual slip as opposed to a shared slip with 3 other boats	10/4/2019 1:02 PM
196	Better staff that help boaters come in and service them.	10/4/2019 12:59 PM
197	No more outhouses	10/4/2019 12:58 PM
198	Would love to see the \$8 reservation fee be removed from the website. You now have a GREAT site, easy to use, but the fee is prohibitive. Most online systems are free.	10/4/2019 12:54 PM
199	Not much except St Clair!	10/4/2019 12:48 PM
200	At many of the harbor the mooring cleats are out on the gangways too far which is a big toe smasher, this seems to be consistent at most harbors, moving these outward would allow for wider usable gangways	10/4/2019 12:44 PM
201	no fee reservation system (penalty applicable if not cancelled say before noon)	10/4/2019 12:43 PM
202	??	10/4/2019 12:42 PM
203	None	10/4/2019 12:40 PM
204	High water enhancement, fewer geese.	10/4/2019 12:31 PM
205	some dock should be longer so larger boats could use them	10/4/2019 12:27 PM
206	Better bathroom, fish cleaning stations	10/4/2019 12:24 PM
207	Safe and upgraded docks - modernize bathrooms and showers	10/4/2019 12:22 PM
208	Sewer hook-up on slips.	10/4/2019 12:18 PM
209	Ground transportation to town when it's too far to walk.	10/4/2019 12:13 PM
210	More slips	10/4/2019 12:12 PM
211	A seasonal slip for my boat	10/4/2019 12:10 PM

MSWC Boater Trends Survey

212	Walking distance to restaurants and shopping.	10/4/2019 12:07 PM
213	If you have paid for the state park fee on your license plates fee,you should get a discount on your slip fees, transient and seasonal	10/4/2019 12:07 PM
214	Additional improvements to the reservation system. Staff training.	10/4/2019 12:06 PM
215	Improved boat raamps.	10/4/2019 12:06 PM
216	Continue maintenance of needed docks	10/4/2019 12:06 PM
217	Hot shower facilities	10/4/2019 12:05 PM
218	low cost	10/4/2019 12:00 PM
219	Curb appeal	10/4/2019 12:00 PM
220	cheaper rates encourage transient boating	10/4/2019 12:00 PM
221	Staff training	10/4/2019 11:59 AM
222	keeping it dredged	10/4/2019 11:58 AM
223	pump outs	10/4/2019 11:57 AM
224	Adding fish processing or cleaning stations. Improved bathrooms with showers. Proper disposal systems for litter.	10/4/2019 11:57 AM
225	No overall needs. Keep up the great work!	10/4/2019 11:50 AM
226	Transportation to restaurants , shopping and entertainment	10/4/2019 11:49 AM
227	better maintenance of rest rooms	10/4/2019 11:46 AM
228	very well run, the variety of towns. Haven't had a bad experience, just some are newer/nicer than others.	10/4/2019 11:46 AM
229	wash machines and dryers at the harbor	10/4/2019 11:45 AM
230	updates private bathrooms and showers	10/4/2019 11:44 AM
231	Training of the staff to handle docking larger boats.	10/4/2019 11:42 AM
232	have all with electrical & water	10/4/2019 11:38 AM
233	The DNR booking system is not always accurate and calling the marina doesn't usually help.	10/4/2019 11:38 AM
234	longer docks at launch!	10/4/2019 11:32 AM
235	Make the water go down (haha)	10/4/2019 11:32 AM
236	Web notice of availability/cancellation for booked harbors or automatic booking upon cancelation.	10/4/2019 11:32 AM
237	Easier, marina dedicated website for slip reservations. We dread making reservations in Michigan on the current website.	10/4/2019 11:30 AM
238	Better WiFi and facilities all updated	10/4/2019 11:29 AM
239	Security	10/4/2019 11:26 AM
240	Have more shot term transient slips available. At day of arrival	10/4/2019 11:25 AM
241	All of the facilities are fantastic that I have been too. 93 octane Premium gas would help.	10/4/2019 11:24 AM
242	A 21st century online slip reservation system.	10/4/2019 11:24 AM
243	Uniformity of rules and charges	10/4/2019 11:22 AM
244	Better fuel facilities	10/4/2019 11:22 AM
245	More ramps	10/4/2019 11:21 AM
246	Fish cleaning station.	10/4/2019 11:20 AM
247	maintenance including regular dredging as needed and making sure restrooms and showers are clean.	10/4/2019 11:20 AM
248	NA	10/4/2019 11:17 AM

MSWC Boater Trends Survey

249	More seasonal slips. None at Leland or Northport, two of my favorite locations, not enough at others (Traverse City, Harbor Springs)	10/4/2019 11:17 AM
250	GOOD PARKING AND REST ROOMS	10/4/2019 11:17 AM
251	More marina's on the reservation system, especially Leland.	10/4/2019 11:17 AM
252	Wi Fi	10/4/2019 11:16 AM
253	Allow over night camping and parking	10/4/2019 11:15 AM
254	add more transient slips!!!!	10/4/2019 11:15 AM
255	spider control!!!!!! Get the glitches out of the online booking system!!	10/4/2019 11:15 AM
256	Shower facilities.	10/4/2019 11:14 AM
257	Except for Mackinaw Island, most facilities are adequate. Most shower and restroom facilities for boaters need more hooks on the walls to hang towels, and articles while getting dressed.	10/4/2019 11:13 AM
258	I live and play out of Lake Macatawa. Recent changes to No Wake have many within our community confused (myself included). The wake area was actually made larger, no wake smaller. With present water levels, increased traffic and boat activity, many marinas deal with unsafe docking conditions, especially during summer weekends. Many homeowners on Lake Macatawa are no longer able to safely dock or keep their private vessels in front of their homes. There are several examples nearby where bodies of water in similar size or larger are 100% NO WAKE. The policies that are being applied to Lake Macatawa need serious review and opportunity for the boating community to provide feedback. Please feel free to contact me. I am willing to host forum discussion.	10/4/2019 11:13 AM
259	No specific item.	10/4/2019 11:11 AM
260	Get a new reservation system that actually works!	10/4/2019 11:09 AM
261	Docks and Power	10/4/2019 11:08 AM
262	manage public concerns	10/4/2019 11:06 AM
263	Friendliness of staff	10/4/2019 11:05 AM
264	More of them	10/4/2019 11:04 AM
265	Simplify the dnr online reservation system.	10/4/2019 11:02 AM
266	Better staffing. It is often impossible to get ahold of anyone at the marina on the phone. This is particularly important when cruising and I need to know if slips are available now.	10/4/2019 11:00 AM
267	maybe more "marina traffic directors" especially in the early fishing season and summer weekends when busiest.	10/4/2019 11:00 AM
268	See item 23	10/4/2019 10:58 AM
269	Availablility, bathroom, shower, freezer, ice	10/4/2019 10:58 AM
270	Better nav aids.	10/4/2019 10:58 AM
271	Munising Bay needs more slips for long term use	10/4/2019 10:57 AM
272	All docks, dock lights, water lines etc. working	10/4/2019 10:57 AM
273	more marinas	10/4/2019 10:56 AM
274	Cleaner bath rooms	10/4/2019 10:56 AM
275	quantity of slips.	10/4/2019 10:56 AM
276	water filtration system at the port sanilac marina. the water quality was very bad !!!!	10/4/2019 10:55 AM
277	New docks no weeds	10/4/2019 10:53 AM
278	Price for what you get. some dockage is to high for the services you get.	10/4/2019 10:53 AM
279	Good shore angler access, good launching routes away from shore anglers	10/4/2019 10:53 AM
280	Keep boat/trailer parking areas clean of large debris piles and keep launches clean of debris.	10/4/2019 10:52 AM

MSWC Boater Trends Survey

281	Stay open until 7Pm in September especially if boaters call ahead so that dock attendant is available to catch a line. Allow state employees to accept tips or collect tips at the dockmaster station and divide at the end of the season.	10/4/2019 10:52 AM
282	a more consistent method to book slip reservations.	10/4/2019 10:51 AM
283	Mobile pump out on docks	10/4/2019 10:51 AM
284	GET RID OF RESERVATION SYSTEM AND GO BACK TO FIRST COME .	10/4/2019 10:51 AM
285	bathroom facilities	10/4/2019 10:49 AM
286	Make sure that personel have handheld VHF radios to communicate with incoming vessels.	10/4/2019 10:49 AM
287	Bathroom with shower.	10/4/2019 10:49 AM
288	Improve the boat launches at the state parks.	10/4/2019 10:48 AM
289	better showers at Mackinac Island.	10/4/2019 10:47 AM
290	better communication regarding slip availability	10/4/2019 10:46 AM
291	Docks need to be in very good shape	10/4/2019 10:46 AM
292	Staff training	10/4/2019 10:46 AM
293	Better bath houses	10/4/2019 10:45 AM
294	Navigational aids	10/4/2019 10:43 AM
295	Security cameras .	10/4/2019 10:43 AM
296	Make getting reservation easier on line	10/4/2019 10:43 AM
297	Having laundry facilities is very important. Would be nice to be able to wash clothes and towels while traveling by boat.	10/4/2019 10:43 AM
298	Modern amenities	10/4/2019 10:42 AM
299	Mackinac dock expansion and possible permanant moorings becusase of the poor anchoring/holding ground. There's never enough dockage so mooring system would be useful	10/4/2019 10:42 AM
300	floating docks	10/4/2019 10:42 AM
301	Reservations system is wacky	10/4/2019 10:41 AM
302	All very good from what I've seen. Thanks.	10/4/2019 10:41 AM
303	Employees have poor attitudes more times than not.	10/4/2019 10:41 AM
304	More docks	10/4/2019 10:40 AM
305	lower the lake levels lol	10/4/2019 10:39 AM
306	I could go more often and still work	10/4/2019 10:39 AM
307	Add Wifi	10/4/2019 10:39 AM
308	Can't think of anything	10/4/2019 10:39 AM
309	Maintain the current high level of care and concern for the boating public	10/4/2019 10:38 AM
310	Good docks	10/4/2019 10:37 AM
311	Better on-line reservation system - it's hard to to get to	10/4/2019 10:36 AM
312	Easier access to online reservations. System is not accurate when looking for slip availability.	10/4/2019 10:36 AM
313	Bath facilities	10/4/2019 10:36 AM
314	Better wifi.	10/4/2019 10:34 AM
315	Need more of them	10/4/2019 10:34 AM
316	The marina could hand out an info sheet to every boater illustrating basic watercraft safety, rules of the road, right of way, etc. Many boaters, especially at peak times around holidays, seem to be oblivious to this.	10/4/2019 10:33 AM
317	Easier reservations	10/4/2019 10:32 AM

MSWC Boater Trends Survey

318	Up to date information on the internet.	10/4/2019 10:32 AM
319	The reservation system is really my only major complaint. We get up early in the morning 6 months in advance to reserve slips the day they are available to reserve, and they are frequently sold out before they even are technically even available to reserve.	10/4/2019 10:32 AM
320	nothing comes to mind; we enjoyed our stay.	10/4/2019 10:31 AM
321	They need to have draft information on the website. I can never tell on line if I can even get into some marina's due to my 6 ft draft.	10/4/2019 10:31 AM
322	Higher docs for bigger boats. All the floating docks are too low. When we pull in to dock it's at least 8 foot down from our deck to the dock, makes it impossible to hop off and tie up easily. Also getting pets, people and supplies on and off boat is next to impossible.	10/4/2019 10:31 AM
323	Require all marinas to be on the reservation system	10/4/2019 10:31 AM
324	Good bumpers on all slips, keep ducks off of docks to avoid stepping in their feces	10/4/2019 10:31 AM
325	Keep channels open when levels drop	10/4/2019 10:30 AM
326	Manage phragmite	10/4/2019 10:30 AM
327	see above	10/4/2019 10:30 AM
328	Don't know	10/4/2019 10:27 AM
329	better website with ease of selecting slips with proper beam and draft	10/4/2019 10:25 AM
330	They are what they are enjoy them and make the best of what's available. Be prepared plan ahead.	10/3/2019 10:22 PM
331	Cheap gas!!!	10/3/2019 8:33 PM
332	Shore power	10/3/2019 8:30 PM
333	\$	10/3/2019 4:50 PM
334	Standard formalized training and education for the workers at every state run harbor. If they can not perform these duties, they should not be working there. All of the harbor workers must be knowledgeable to prevent harm or injury to themselves, customers, customers vessels and harbor facilities. It is very easy for a good situation to turn ugly and it is important to prevent injury. Again the state personnel working the docks must knowledgeable and fully understand their job function and description. I would say the harbormaster at Port Austin runs a tight ship. With well trained and MOTIVATED employees.	10/3/2019 1:24 PM
335	Charge for use and use \$ for removal of foreign weeds and fish that have been brought into the lake by unclean boats.	10/3/2019 9:19 AM
336	Well trained staff	10/3/2019 8:55 AM
337	I like online reservation system for transient slip booking. Just making it more user friendly on all devices.	10/3/2019 8:38 AM
338	Connect all public marinas, state or municipal, to state harbor reservation system. City marinas, like Northport, currently are not.	10/3/2019 8:23 AM
339	heated storage	10/3/2019 8:20 AM
340	WiFi and broadband Interconnect	10/2/2019 10:42 PM
341	Now that they've changed the website I don't think there's anything to do for the entire system.	10/2/2019 10:13 PM
342	Daily removal of animal feces	10/2/2019 9:50 PM
343	Floating docks / piers.	10/2/2019 9:01 PM
344	Include in cost of recreation pass.	10/2/2019 7:50 PM
345	Updated bathrooms and better WiFi!	10/2/2019 7:27 PM
346	Easier to navigate the reservation site	10/2/2019 4:36 PM
347	the new buffalo transient slips were under water all year. i was disappointed to pay and get there with my boat just to find out the slip was covered in algae an unusable	10/2/2019 4:14 PM
348	More slips for paddlecrafts	10/2/2019 2:34 PM

MSWC Boater Trends Survey

349	Better online website for booking	10/2/2019 12:42 PM
350	Friendly staff clean and good docks with pilings between wells	10/2/2019 12:38 PM
351	RAISE THE DOCKS	10/2/2019 11:56 AM
352	Unknown.	10/2/2019 11:20 AM
353	Clean bathrooms	10/2/2019 10:35 AM
354	Curtail leases with municipal harbors.	10/2/2019 10:24 AM
355	Keep rates low	10/2/2019 9:58 AM
356	LONGER RAMPS! Michigan State Harbors are some of the nicest in the country. Training of the staff in Detroit (Miliken) would be nice, but doesn't keep us from staying their at least a few nights a season and has a great location to the D and has clean docks. Bathrooms aren't great but still very acceptable. South Haven favorite by far. Charlevoix awesome, the list goes on.	10/2/2019 9:07 AM
357	Clean	10/2/2019 9:06 AM
358	New locations Belle Isle in Detroit	10/2/2019 9:01 AM
359	Interesting places to tie up, like downtown Detroit	10/2/2019 8:58 AM
360	Stronger oversight of the harbor masters in the system and how they train their staff is the most important improvement to make. We visit 15-20 MI harbors each summer and notice clear differences in how staff are trained and managed. The area where training is most lacking is how to handle lines in the docking process to assist (rather than simply watch) the docking process. Most dock hands will hold a line that is given to them but don't understand the need to use the lines in a proactive way to help control the position of the boat in the slip especial in cross winds, etc. They are simply not trained not competent in assisting the docking process. The worst example of this is South Haven Municipal. There are dock hands who are eager to help but appear to have had no training at all. The problem in South Haven is compounded by their hiring summer workers from other countries who literally lack the English language skills to even respond effectively to direct requests from a captain during docking.	10/2/2019 8:58 AM
361	ADA kayak launches	10/2/2019 8:06 AM
362	dock repair & dredging	10/2/2019 7:50 AM
363	more docks	10/2/2019 7:39 AM
364	Limit or eliminate charter boat dockage	10/2/2019 7:35 AM
365	Safety for everyone	10/2/2019 12:38 AM
366	Warm weather year round!	10/1/2019 10:27 PM
367	I duck hunt frequently. A warm up building with benches for changing clothes/waders would be a great addition	10/1/2019 8:36 PM
368	remove the recreational passport	10/1/2019 7:27 PM
369	Boat trailer wash station	10/1/2019 7:24 PM
370	There are not enough slips for seasonal nor transient on the North west side of lower penninsula	10/1/2019 7:21 PM
371	Good docks and Wi-Fi	10/1/2019 5:20 PM
372	Bike rentals avail.	10/1/2019 2:12 PM
373	build a cleaning station	10/1/2019 1:49 PM
374	Delete the pick a slip option - let staff manage assignments. This process forces boats to change slips when assigned boat arrives even if open slips are available.	10/1/2019 1:34 PM
375	None	10/1/2019 1:00 PM
376	Onsite grilling, picnic areas and/or shuttle service to local restaurants. Public areas on land for socializing.	10/1/2019 12:52 PM
377	cleanliness and get rid of the goose poop	10/1/2019 12:37 PM
378	.	10/1/2019 12:09 PM
379	Friendly and helpful staff	10/1/2019 11:30 AM

MSWC Boater Trends Survey

380	Don't know	10/1/2019 10:20 AM
381	Get rid of reservations. They don't work on the water and we've been turned away from empty marinas.	10/1/2019 8:25 AM
382	Allow shore fishermen to fish on any unoccupied finger, or slip that does not have a boat tied up.	10/1/2019 7:36 AM
383	clean the bathrooms!	10/1/2019 6:10 AM
384	No suggestions	9/30/2019 8:18 PM
385	Parking	9/30/2019 7:58 PM
386	Clean facility, quality fish cleaning facility.	9/30/2019 7:57 PM
387	Vastly improved fishery!	9/30/2019 7:16 PM
388	Improve it for small craft	9/30/2019 6:20 PM
389	See 26	9/30/2019 6:13 PM
390	WiFi.	9/30/2019 6:09 PM
391	Allow overnight vehicle and trailer parking. This is a real issue when we trailer our boat to State Harbors to start a multi day trip. We have always had difficulty finding spots to put our truck and trailer. We would pay for this service.	9/30/2019 6:00 PM
392	Maps made available	9/30/2019 5:47 PM
393	Condition of docks and dock facilities	9/30/2019 5:41 PM
394	Better wifi	9/30/2019 5:39 PM
395	Abailibilty	9/30/2019 5:27 PM
396	Careful attention to impact of boating on water quality	9/30/2019 5:23 PM
397	clean	9/30/2019 4:51 PM
398	The state is doing a good job, keep it up. Captain Bob Meyers, Lac La Belle	9/30/2019 4:45 PM
399	It is fine!	9/30/2019 4:36 PM
400	fsd	9/30/2019 4:31 PM
401	More docks	9/30/2019 4:11 PM
402	Do something when water is high.	9/30/2019 4:09 PM
403	The state needs an inspection schedule and needs to make sure the money collected from the Marina goes back to the Marina for improvement. No regular inspection allows corruption and miss allocation of monies received as state grants.	9/30/2019 4:05 PM
404	eliminate geese and their feces	9/30/2019 3:46 PM
405	staff, lighting, vendors	9/30/2019 3:41 PM
406	the depth of the end concrete slabs as they should go out further for low water conditions and longer docks for same conditions. This was not an issue this summer due to high water levels. Current and wave diversion i.e. break walls, weirs etc. They are available but not substantial at times.	9/30/2019 3:33 PM
407	Continual ease and accuracy of website for reservations, etc.	9/30/2019 3:27 PM
408	Have more online systems and credit card pay for reserving slips.	9/30/2019 3:24 PM
409	Several marinas are in need of updating to docks and restrooms. Would like to see all marinas added to the Michigan online reservation system. Waiting list added to Michigan online reservation system that would send an email if a slip opens up if unavailable when trying to reserve. Marina email addresses available to request information prior to arrival, would be helpful for late/after hours arrivals. Dish washing sinks, Ludington Municipal is the only marina that I have visited with them, they keep a lot of dish detergent out of the lakes. Monitors with weather information and radar available 24 hours per day. Marina news letters.	9/30/2019 3:16 PM
410	Cost	9/30/2019 3:09 PM
411	Having room for me to put in and park during walleye peak season.	9/30/2019 3:07 PM

MSWC Boater Trends Survey

412	mostly satisfied.	9/30/2019 3:07 PM
413	Not sure	9/30/2019 3:02 PM
414	More Slips and Fuel.	9/30/2019 3:02 PM
415	Improve the reservation system and website.	9/30/2019 2:31 PM
416	quality of safe docks with proper lighting on the docks at night	9/30/2019 2:27 PM
417	Fish cleaning stations	9/30/2019 12:02 PM
418	clean bath and shower facilities	9/30/2019 11:55 AM
419	Floating docks	9/30/2019 11:37 AM
420	Cleanliness	9/30/2019 11:21 AM
421	Maybe later hours or have an open slip list if you arrive after 8:00 pm	9/30/2019 11:17 AM
422	Docks should be maintained, no loose boards or nail heads/screws sticking up.	9/30/2019 11:14 AM
423	Extended dates for opening/closing	9/30/2019 10:40 AM
424	Kayak friendly	9/30/2019 10:40 AM
425	cheaper rates	9/30/2019 9:54 AM
426	fish cleaning	9/30/2019 9:42 AM
427	Fuel at Mackinac Isle	9/30/2019 9:37 AM
428	To be able to book in advance at municipal marinas	9/30/2019 9:31 AM
429	CLEAN restrooms.	9/30/2019 9:09 AM
430	Have nice docking facilities at ALL state launches (paving).	9/30/2019 8:53 AM
431	Installing floating docks at all marinas.	9/30/2019 8:38 AM
432	Better marking visibility on the water	9/30/2019 7:58 AM
433	Price	9/30/2019 1:25 AM
434	if you are paying for a seasonal, it seems excessive to have to pay full price again as a transient I would travel more at a reduced rate. I payed \$2,200 for my last seasonal rental and \$54 per night for every day traveling.	9/29/2019 10:47 PM
435	Reduce the cost to last years pricing. Eliminate the \$8.00 booking fee. Give war veteran discounts	9/29/2019 10:30 PM
436	Signs with rules on them, don't give me a ticket stating I need a recreational passport but not a sign in front stating it before I enter	9/29/2019 9:20 PM
437	Extend the cement ramps further into the water so prop wash does not become an issue. I've had my own trailer fall into those washed out depressions.	9/29/2019 9:14 PM
438	Nice restrooms and restaurants	9/29/2019 9:11 PM
439	Upgraded facilities and helpful staff	9/29/2019 8:20 PM
440	add better wifi	9/29/2019 7:44 PM
441	Pool	9/29/2019 6:12 PM
442	Upkeep of facilities	9/29/2019 5:51 PM
443	I would appreciate enhancing the L'Anse Harbor system expanding its operation and including many of the amenities like the East Tawas State Harbor has. There is great potential there, a gold mine waiting to be discovered.	9/29/2019 3:17 PM
444	Wifi availability.	9/29/2019 2:44 PM
445	It is excellent	9/29/2019 1:31 PM
446	Never been displeased	9/29/2019 1:13 PM
447	floating docks	9/29/2019 12:41 PM
448	facilities	9/29/2019 11:43 AM

MSWC Boater Trends Survey

449	WIFI, WIFI, WIFI !!!!	9/29/2019 11:17 AM
450	Website reservations system not as user friendly as it could be. We would use it if there were no fees.	9/29/2019 8:23 AM
451	Better launch ramps. longer docks at boat ramps.	9/29/2019 7:51 AM
452	More dedicated kayak and canoe launch facilities	9/29/2019 6:56 AM
453	READ #26	9/28/2019 11:00 PM
454	fix electrical	9/28/2019 9:46 PM
455	WiFi. A second would be access to rental or marina vehicle in remote harbors like they have at Drummond Island.	9/28/2019 9:16 PM
456	The addition of club houses like the one at the South Haven Municipal Marina.	9/28/2019 8:11 PM
457	See #26	9/28/2019 8:11 PM
458	MI residents should have priority. Reservation system should be more user friendly- shows not available and if you call there's space.	9/28/2019 7:06 PM
459	Wi fi	9/28/2019 2:42 PM
460	Harbor. Master	9/28/2019 1:46 PM
461	Clean amenities. Safe shore power hookups. Helpful and happy dock masters.	9/28/2019 1:38 PM
462	Expansion, more slips, rates are a little steep. Bathroom facilities need compliance to Clean Water efforts.	9/28/2019 1:11 PM
463	Book through Dockwa.	9/28/2019 12:43 PM
464	Pump out at docks	9/28/2019 12:27 PM
465	Wi fi	9/28/2019 12:08 PM
466	more parking and more ramps	9/28/2019 11:19 AM
467	More locations	9/28/2019 11:17 AM
468	Parking of boat trailers, keep vehicles with no trailers out when busy.	9/28/2019 11:00 AM
469	More floating docks WITHOUT posts (common in Wisconsin and Illinois. best docks system found on our past 6 week cruise: Bay Harbor (the village, not the yacht club)	9/28/2019 10:44 AM
470	None I can think of at the moment	9/28/2019 10:13 AM
471	Increased number	9/28/2019 9:22 AM
472	Floating docks	9/28/2019 9:10 AM
473	The website needs to reflect accurate availability and current conditions of the docks.	9/28/2019 8:57 AM
474	update the bathroom/shower facilities	9/28/2019 8:37 AM
475	Better general maintenance	9/28/2019 8:22 AM
476	Exsperanced staffing	9/28/2019 4:35 AM
477	Keep showers clean and in good repair	9/28/2019 3:11 AM
478	fish cleaning stations	9/28/2019 12:55 AM
479	Trash cans/dumpsters located close to the launch itself. Fishing rod holders for shore angling.	9/28/2019 12:49 AM
480	Lake Orion boat launch being repaved and possibly adding another launch pad	9/28/2019 12:05 AM
481	Better WiFi coverage	9/27/2019 10:23 PM
482	Dock quality	9/27/2019 10:11 PM
483	Reservation system should be separate from state parks to avoid confusion	9/27/2019 10:06 PM
484	Most things are very good.	9/27/2019 9:48 PM
485	Boater facilities & docks.	9/27/2019 9:09 PM

MSWC Boater Trends Survey

486	Depth.	9/27/2019 9:02 PM
487	fishing docks	9/27/2019 8:58 PM
488	Improve slope, straighten approach, clean bathrooms (PURE MICHIGAN) , Fish cleaning stations. Do not allow someone to design a boat launch that has never used one, and make dam sure the launch really works. Michigan has some dam bad launches.	9/27/2019 8:55 PM
489	Floating docks	9/27/2019 8:46 PM
490	Wifi	9/27/2019 7:55 PM
491	Allow private groups to help keep it maintained	9/27/2019 7:01 PM
492	Maintenance	9/27/2019 6:31 PM
493	Ongoing maintenance	9/27/2019 6:28 PM
494	Having a well attended to facility. Clean, etc.	9/27/2019 6:16 PM
495	Modify the reservation system so that boaters aren't encouraged to be out in bad weather just to get to a Marina where they have reserved a slip and had to pay either a non-refundable deposit or the entire charge prior to their arrival. Using the campground model for reservations boaters doesn't work and can put lives in jeopardy.	9/27/2019 6:16 PM
496	Nothing	9/27/2019 5:39 PM
497	Keeping restroom/shower facilities updated	9/27/2019 5:10 PM
498	Better website for booking. It should be easier to navigate and should store my information for my boat so I don't have to keep filling it in as I book multiple harbors and dates. And, fix the WIFI at the State Harbor at Mackinaw City	9/27/2019 3:45 PM
499	More of them	9/27/2019 3:42 PM
500	Reduce the cost!	9/27/2019 3:29 PM
501	I don't use any other than Harbor Springs. I have numerous launch sites for my sea kayak that don't involve state or municipal marinas/harbors.	9/27/2019 3:26 PM
502	Area beautification	9/27/2019 3:17 PM
503	It would be nice if the online reservation system included all of the marinas.	9/27/2019 3:07 PM
504	Unknown	9/27/2019 2:43 PM
505	Adding wifi.	9/27/2019 2:39 PM
506	Nice boat ramps and parking	9/27/2019 2:27 PM
507	See item 26	9/27/2019 1:56 PM
508	Drop the registration booking fees. Hire mature and experienced dock masters. Train staff better.	9/27/2019 1:51 PM
509	doing a good job	9/27/2019 1:38 PM
510	Allow docks and slips at end of road.	9/27/2019 1:33 PM
511	Simple addition of trash cans at some Houghton and Keweenaw County facilities would be nice to prevent littering and people throwing trash in outhouses. 110v outlets would be handy for using onboard battery chargers. Fish cleaning stations would be beneficial to local users.	9/27/2019 1:26 PM
512	Longer and bigger docks	9/27/2019 1:24 PM
513	Do not allow reservation of a specific slip number.	9/27/2019 1:23 PM
514	I would like to see improvements made to inland lake state owned public launch sites as most of my boating are on inland lakes.	9/27/2019 1:15 PM
515	Quality of Available slips.	9/27/2019 1:06 PM
516	Less cost per day	9/27/2019 1:02 PM
517	Time of being open	9/27/2019 12:38 PM
518	Upgrade the old wooden dock surface	9/27/2019 12:36 PM
519	Better education & manners of the users. Boat ramp & marina etiquette, sharing, etc.	9/27/2019 12:27 PM

MSWC Boater Trends Survey

520	It's great now	9/27/2019 12:19 PM
521	Need to turn down the sensitivity of the new power pedestals you are forcing the marina's to put in. Many boats are no longer traveling to these marina's.	9/27/2019 12:11 PM
522	I would like the reservation system to become modernized and use something like Dockwa. Additionally, I think the restroom/shower situation is a little uneven. They are usually fine but never great.	9/27/2019 11:59 AM
523	Clean restrooms and showers.	9/27/2019 11:50 AM
524	State wifi	9/27/2019 11:47 AM
525	Travel great Loop. Michigan has best marinas by far	9/27/2019 11:40 AM
526	N/A	9/27/2019 11:24 AM
527	better reservation system	9/27/2019 11:24 AM
528	attractions availability	9/27/2019 11:24 AM
529	We would like to be able to reserve specific docks	9/27/2019 11:15 AM
530	Invasive species inspection at launch sites.	9/27/2019 10:58 AM
531	Wi fi	9/27/2019 10:46 AM
532	better wi-fi	9/27/2019 10:42 AM
533	Not all boats are brought by trailer.	9/27/2019 10:40 AM
534	Bathrooms and showers	9/27/2019 10:38 AM
535	We're working on all of the above.	9/27/2019 10:29 AM
536	Free?? Just kidding! Surveyed Harbor Beach past summer --Did not tie up. Your program of progressive improvements to harbor system is great. Keep it up!	9/27/2019 10:28 AM
537	Fast WIFI Good depths, free working pump outs	9/27/2019 10:23 AM
538	Sterling State Park is great. Hellenberg Field in Monroe is too dangerous to use. Thefts of truck while we are out fishing. Lack of access to River Raisin.	9/27/2019 10:22 AM
539	Improved wi-fi reception	9/27/2019 10:19 AM
540	Maintain them	9/27/2019 10:07 AM
541	TRAINED DOCK HANDS!!!!!!!	9/27/2019 10:01 AM
542	Ongoing maintenance and regular renovations of slips and facilities. Keep them up to standards for the long-term - it is an amazing resource for Michigan. Let's keep them that way for future generations.	9/27/2019 9:58 AM
543	See 26	9/27/2019 9:58 AM
544	Keep docks well maintained.	9/27/2019 9:57 AM
545	We stopped going to East Tawas because of the new poorly-designed fuel dock. They've made it impossible for sailboats to maneuver in there. Really sad.	9/27/2019 9:53 AM
546	Overnight parking	9/27/2019 9:47 AM
547	Allow boaters to call direct to the marina's for dockage.	9/27/2019 9:44 AM
548	Reduced and PUBLICIZED shoulder season rates (Pre-June 15 and post Sept 7).	9/27/2019 9:32 AM
549	dock assistance when coming into marina	9/27/2019 9:29 AM
550	ALL GOOD	9/27/2019 9:28 AM
551	Online reservation	9/27/2019 9:26 AM
552	Bicycle	9/27/2019 9:26 AM
553	A bit confusing to tell which marinas are in the system. Related, consider listing the marina by town, then the "assigned name" when that is some politically assigned name. Hard to know where the "Samuel B. Schmedlap Marina" is when trying to plan a route of successive ports.	9/27/2019 9:21 AM

MSWC Boater Trends Survey

554	Reservations are difficult - the reservation system should be easily managed - reservations should be cancellable due to weather conditions.	9/27/2019 9:10 AM
555	Trained staff. Some like Leland are terrific, but other marinas don't seem to train their staff and can be less than helpful in docking.	9/27/2019 9:10 AM
556	Keep them updated and clean	9/27/2019 9:08 AM
557	Making it easy to get reservations and get accommodated.	9/27/2019 9:08 AM
558	More winter storage for larger boats (>30').	9/27/2019 9:06 AM
559	Appearance and quality as well as having near by things to do.	9/27/2019 8:47 AM
560	N/A	9/27/2019 8:46 AM
561	WIFI at all docks.	9/27/2019 8:46 AM
562	Build more!	9/27/2019 8:45 AM
563	Revamp the reservation process. It's terrible. You go on line and they indicate only a couple of slips are open and you go to the marina and it's maybe 25 occupied!	9/27/2019 8:32 AM
564	I don't use them	9/27/2019 8:24 AM
565	Michigan has short season. Not enough slips in popular cruising times. Leave more slips available for transient boaters during the popular times. Less reservations at these times.	9/27/2019 8:24 AM
566	Make accessible by small or large boat	9/27/2019 8:23 AM
567	Make the reservation system work, if not possible, let the local harbormaster control some of the reservations.	9/27/2019 8:18 AM
568	that it is self-sufficient; does not rely on tax dollars	9/27/2019 8:18 AM
569	Hi speed internet or cable TV	9/27/2019 8:16 AM
570	Harbor staff for incoming dockage.	9/27/2019 8:07 AM
571	Making reservations	9/27/2019 8:04 AM
572	Keep up on the maintenance	9/27/2019 7:58 AM
573	Helpful staff & improved navigation aids	9/27/2019 7:58 AM
574	Bathroom facilities	9/27/2019 7:49 AM
575	same	9/27/2019 7:46 AM
576	The online reservations can be difficult to use	9/27/2019 7:44 AM
577	SPRAY FOR SPIDERS CONSTANTLY	9/27/2019 7:44 AM
578	Lower cost.	9/27/2019 7:26 AM
579	Improved launches, parking, Maintenance.	9/27/2019 7:22 AM
580	the reservation system is helpful	9/27/2019 7:18 AM
581	The access site at Halfway Creek is a complete disaster the access road is impassable the dock is to short for even the smallest of boats. The fact that it is on the Ohio State line makes it an embarrassment to the State of Michigan!	9/27/2019 7:09 AM
582	Bath house then docks.	9/27/2019 7:08 AM
583	Paddle friendly launch sites. like Ez-dock	9/27/2019 7:08 AM
584	Keep them dredged and update the bathroom facilities	9/27/2019 7:00 AM
585	More dock space	9/27/2019 6:59 AM
586	See answer to question 26.	9/27/2019 6:56 AM
587	none	9/27/2019 6:54 AM
588	NONE	9/27/2019 6:54 AM

MSWC Boater Trends Survey

589	Allow harbor masters to assign slips, not automated system. They have a better idea of who goes where. Too much moving around with the auto assignment which is wasteful and poor time management.	9/27/2019 6:47 AM
590	none	9/27/2019 6:05 AM
591	Family friendly	9/27/2019 6:00 AM
592	ease of use	9/27/2019 5:57 AM
593	Waterway in and out	9/27/2019 5:25 AM
594	Better protection for boats at ramp docks, map of lake near launch areas	9/27/2019 5:10 AM
595	Clean restrooms	9/27/2019 5:07 AM
596	more parking	9/27/2019 4:58 AM
597	Bathroom and shower facilities	9/27/2019 4:37 AM
598	Consistently adequate depth of the harbor--in good years and bad....	9/27/2019 4:01 AM
599	More parking.	9/27/2019 3:28 AM
600	WiFi	9/27/2019 2:27 AM
601	Being open 24 hours	9/27/2019 12:30 AM
602	N/a	9/27/2019 12:28 AM
603	Restroom facilities	9/26/2019 11:56 PM
604	A systematic approach to upgrade/replace as necessary without having to get specific funding grants for each event.	9/26/2019 11:41 PM
605	Maintenance	9/26/2019 11:07 PM
606	Allow for season passes to stay at multiple marinas.	9/26/2019 11:06 PM
607	Safty. Clean restrooms/showers. More docks	9/26/2019 11:00 PM
608	24 hr restroom access	9/26/2019 10:59 PM
609	Maintenance of docks and facilities	9/26/2019 10:56 PM
610	Same day booking	9/26/2019 10:48 PM
611	Fish Cleaning Stations!	9/26/2019 10:43 PM
612	Keep the cost low.	9/26/2019 10:42 PM
613	Nice long ramps	9/26/2019 10:38 PM
614	Some sort of dock bumpers at all docks and better tie downs	9/26/2019 10:35 PM
615	Modernization	9/26/2019 10:33 PM
616	that they all have to same price if they are run by the state	9/26/2019 10:27 PM
617	Keeping them nice and clean with good facilities	9/26/2019 10:26 PM
618	More Harbors on the Great Lakes	9/26/2019 10:18 PM
619	Keeping the cost affordable. Most boaters are not rich and the cost has been going up which keeps us from traveling as much as we would like.	9/26/2019 10:01 PM
620	Flexible reservations due to weather	9/26/2019 9:58 PM
621	Availability of bicycle rental/sharing for local transportation.	9/26/2019 9:53 PM
622	Do a much better job with timely installation of gasoline tanks.	9/26/2019 9:51 PM
623	Make it easier to get a transient slip without having to guess weeks in advance how weather will impact trip itinerary.	9/26/2019 9:50 PM
624	most ramps are gravel and should be concrete	9/26/2019 9:45 PM
625	Up keep	9/26/2019 9:42 PM

MSWC Boater Trends Survey

626	More dock hands.	9/26/2019 9:41 PM
627	Good docks, parking and restrooms or toilets are the most important things to me and my buddies.	9/26/2019 9:37 PM
628	Nicer shower heads in showers	9/26/2019 9:36 PM
629	More floating docks	9/26/2019 9:35 PM
630	lower cost and improve facilities, pretty basic stuff. Use Ludington Harbor View as your model and everything else will fall into place	9/26/2019 9:35 PM
631	Friendly staff	9/26/2019 9:34 PM
632	Good restroom facilities at launch sites.	9/26/2019 9:30 PM
633	Up keep during the Yr.	9/26/2019 9:28 PM
634	cleanliness and wifi	9/26/2019 9:25 PM
635	Availability and price	9/26/2019 9:25 PM
636	Lower costs.	9/26/2019 9:24 PM
637	Get more municipal marinas and state marinas into the online registration system. It would be extremely helpful not to have to be first there to get a slip like at Harbor Springs	9/26/2019 9:22 PM
638	maybe a food place or restraunt there so you dont have to always try to find a place to eat or get a soft drink	9/26/2019 9:22 PM
639	A marina in Cross Village.	9/26/2019 9:22 PM
640	1. US Customs at DeTour Village. 2. No cost reservations	9/26/2019 9:21 PM
641	Not sure	9/26/2019 9:21 PM
642	longer season	9/26/2019 9:19 PM
643	Slow down ferry boats when they enter the harbor	9/26/2019 9:16 PM
644	longer docks and someone please answer the phone during business hours.	9/26/2019 9:14 PM
645	Revamp the reservation website. It takes way too many clicks to confirm a reservation. The boat/payment information should already be stored in the system under each users account.	9/26/2019 9:13 PM
646	Restrooms / showers kept clean.	9/26/2019 9:09 PM
647	Ability to reserve by phone	9/26/2019 9:07 PM
648	None	9/26/2019 8:58 PM
649	Competitive fuel prices.	9/26/2019 8:57 PM
650	Build new restrooms at state docks that should have been updated 40 years ago.	9/26/2019 8:54 PM
651	Improve your web site, it's awful	9/26/2019 8:54 PM
652	Online reservation system needs some tweaking. (1) should allow changes to be made in a multi-day reservation and process a credit. Had to delay an arrival for a day in Charlevoix due to extreme weather; local staff were unable to process the credit, had to call DNR which made the adjustment. My 50 years of computer experience tells me that it would still be a good idea to give the local staff the option of adjusting reservations.	9/26/2019 8:49 PM
653	Allow reservations with local dockmaster.	9/26/2019 8:45 PM
654	Better lighting on navigation buoys for safety entering unknown harbor after dark and better lighting on ramp.	9/26/2019 8:38 PM
655	No geese	9/26/2019 8:35 PM
656	Bathrooms and updated showers are important especially to women.	9/26/2019 8:30 PM
657	Dock improvements and bathroom improvements	9/26/2019 8:26 PM
658	Make them more like Manistee.	9/26/2019 8:24 PM
659	Wifi	9/26/2019 8:20 PM
660	Heavy fines for littering..... and Enforced	9/26/2019 8:16 PM

MSWC Boater Trends Survey

661	Good parking and amenities.	9/26/2019 8:15 PM
662	More slips at Mackinaw Island	9/26/2019 8:15 PM
663	Access to fuel, food.	9/26/2019 8:15 PM
664	Everything was fine	9/26/2019 8:14 PM
665	Keep the facilities clean!	9/26/2019 8:13 PM
666	Clubhouse with TV, laundry, longer season with staff, uniform pricing.	9/26/2019 8:03 PM
667	Solid WiFi and clean bathrooms.	9/26/2019 8:02 PM
668	put ALL of them on the reservation system (i.e. Suttons Bay, Northport, Harbor Springs, etc. on not on the reservation website	9/26/2019 7:59 PM
669	On line reservation system	9/26/2019 7:57 PM
670	Training for staff	9/26/2019 7:51 PM
671	a fish cleaning station. you have some of the best fishing around an no fish cleaning station	9/26/2019 7:51 PM
672	See my answer to # 26.	9/26/2019 7:51 PM
673	Grand Marais needs to expand also .	9/26/2019 7:48 PM
674	Continuing improvements to infrastructure	9/26/2019 7:45 PM
675	Selling diesel fuel	9/26/2019 7:45 PM
676	Launches	9/26/2019 7:43 PM
677	I think it is fine as is.	9/26/2019 7:39 PM
678	Adjustments for water levels	9/26/2019 7:36 PM
679	A Store to buy small food items	9/26/2019 7:35 PM
680	Near local cities/stores accessibility, rental bikes.	9/26/2019 7:35 PM
681	Fish cleaning station	9/26/2019 7:32 PM
682	Professional staff.	9/26/2019 7:25 PM
683	Improve, simplify on line reservation system	9/26/2019 7:20 PM
684	Appoint experienced boaters to Waterways Commission.	9/26/2019 7:19 PM
685	Docks	9/26/2019 7:17 PM
686	More floating docks with the changes in the water levels	9/26/2019 7:17 PM
687	Not sure, havent been to a horrible marina.	9/26/2019 7:16 PM
688	Cost	9/26/2019 7:13 PM
689	Very satisfied overall	9/26/2019 7:13 PM
690	Floating docks	9/26/2019 7:08 PM
691	Fix the reservation system	9/26/2019 7:05 PM
692	An ice station would be great.	9/26/2019 7:00 PM
693	keep the price down	9/26/2019 6:59 PM
694	Better facilities	9/26/2019 6:59 PM
695	Keep the maintenance and improvement efforts going. All changes have bee positive at my favorites and will benefit from on-going maintenance!	9/26/2019 6:57 PM
696	a user friendly reservation system.. the existing system is not easy or flexible in the event of weather issues	9/26/2019 6:55 PM
697	More available on Detroit River System	9/26/2019 6:53 PM
698	Bathroom Improvements	9/26/2019 6:52 PM
699	pet areas	9/26/2019 6:47 PM

MSWC Boater Trends Survey

700	Reservations through the website are challenging in light of the knowledge that slips are held (by local Harbor Master) for transient boaters who are "regulars". Eliminating this practice would make it fair for all boaters who wish to reserve slips, particularly on holidays.	9/26/2019 6:45 PM
701	Safe harbor from wind or storms	9/26/2019 6:44 PM
702	Eliinate the online reservation system. Its a pain to deal with	9/26/2019 6:43 PM
703	Join the "now" and install ROBUST WiFi and broadband internet connectivity.	9/26/2019 6:43 PM
704	Properly trained and knowledgeable staff	9/26/2019 6:39 PM
705	Clean restrooms	9/26/2019 6:36 PM
706	Perhaps a reduced daily transient rate before Memorial Day and after Labor Day. I would have spent probably 4-6 more nights in the Marina in May and Sept, but I don't see why I should pay full price when demand is so low and slips are empty.	9/26/2019 6:36 PM
707	Lower the Cost. the Marinas sit nearly empty during the week drop the cost by 5 to 10 bucks a day it swill help me and the local economy.	9/26/2019 6:34 PM
708	Let us call an individual marina on the phone. Don't always have access to internet to use the website and we have found many times there have been cancellations that are not reflected on the website. You created a fix for a problem that didn't exist	9/26/2019 6:31 PM
709	Docks	9/26/2019 6:24 PM
710	Cost	9/26/2019 6:23 PM
711	The computerized reservation system is cumbersome and availability charts hopelessly inaccurate	9/26/2019 6:20 PM
712	Upgrades are needed to docks and amenities	9/26/2019 6:20 PM
713	Update Pentwater Municipal facilities- they are old, outdated, falling apart, & dirty! Keep prices manageable- under \$2000/ annual seasonal slip	9/26/2019 6:17 PM
714	Hourly rates	9/26/2019 6:15 PM
715	?	9/26/2019 6:09 PM
716	Na	9/26/2019 6:09 PM
717	wifi	9/26/2019 6:09 PM
718	Longer boating season	9/26/2019 6:09 PM
719	More transient slips	9/26/2019 6:09 PM
720	More law enforcement. Sick of ppl abusing Homestead dam, harrassment of other sportsmen, ignoring the 100' sign	9/26/2019 6:08 PM
721	parking	9/26/2019 6:06 PM
722	docks and bathroom facilities. We hate your on line reservation system with the \$8 shake down fee.	9/26/2019 6:06 PM
723	Picking out your slip online like you do a campsite.	9/26/2019 6:04 PM
724	Bathroom, gas ,power	9/26/2019 5:59 PM
725	Inclusion in the Recreation Passport (discount if purchased), better communication of wells > 7' depth	9/26/2019 5:55 PM
726	Fixing the roads to get to them.	9/26/2019 5:55 PM
727	Quality of docks	9/26/2019 5:54 PM
728	Large enough to handle lots of boats.	9/26/2019 5:53 PM
729	Plenty of transient slips	9/26/2019 5:52 PM
730	Improve the DNR reservation web site	9/26/2019 5:52 PM
731	Your doing a great job improving the marinas and the reservation system!	9/26/2019 5:49 PM
732	Years past had some poor harbor masters...last few years...excellent...nice to have seen this transition first hand.	9/26/2019 5:48 PM

MSWC Boater Trends Survey

733	the slip specific program needs to end because I was asked to change slips in an almost empty harbor for one other boat	9/26/2019 5:46 PM
734	See above.	9/26/2019 5:45 PM
735	Add stores or bait shops.	9/26/2019 5:43 PM
736	Staff training and customer service	9/26/2019 5:40 PM
737	Nice docks with power & water. Good restroom facilities.	9/26/2019 5:40 PM
738	Just keeping them in good condition. A serious update to the White Fish Point marina would be great.	9/26/2019 5:39 PM
739	Fish cleaning stations	9/26/2019 5:39 PM
740	More amenities	9/26/2019 5:36 PM
741	nice docks	9/26/2019 5:35 PM
742	Keeping shower and restrooms clean and up to date.	9/26/2019 5:35 PM
743	Docks at Pentwater	9/26/2019 5:33 PM
744	More garbage cans	9/26/2019 5:32 PM
745	Keep costs reasonable.	9/26/2019 5:32 PM
746	Better ability to make reservations. I like to talk to the marina staff.	9/26/2019 5:31 PM
747	easier reservation system	9/26/2019 5:30 PM
748	Key pad access for boaters to bath and shower	9/26/2019 5:30 PM
749	People of Michigan should have first rights to use marinas over out of state boaters	9/26/2019 5:29 PM
750	same as above	9/26/2019 5:28 PM
751	Docks for guests/transients should be closest to restrooms/showers, not farthest away.	9/26/2019 5:28 PM
752	Wifi	9/26/2019 5:26 PM
753	Needs WiFi for guests	9/26/2019 5:26 PM
754	Floating Docks	9/26/2019 5:26 PM
755	Improve showers and bathrooms.	9/26/2019 5:23 PM
756	More harbors near towns, especially in drowned river-mouth lakes.	9/26/2019 5:22 PM
757	floating docks	9/26/2019 5:22 PM
758	?	9/26/2019 5:20 PM
759	Floating docks	9/26/2019 5:19 PM
760	phone app to navigate, make reservations, etc.	9/26/2019 5:19 PM
761	Make it easier to make reservations for multiple boats in a group	9/26/2019 5:17 PM
762	Improve the reservation system so same day reservations can be made. On the great lakes, weather often pre-empts safe travel, making advanced reservations difficult more than a day in advance.	9/26/2019 5:17 PM
763	Floating docks	9/26/2019 5:11 PM
764	None	9/26/2019 5:09 PM
765	fish cleaning stations	9/26/2019 5:09 PM
766	More slip availability	9/26/2019 5:09 PM
767	Less expensive	9/26/2019 5:08 PM
768	dock and pier fishing opportunities	9/26/2019 5:01 PM
769	More floating docks	9/26/2019 5:00 PM
770	Alcohol sales	9/26/2019 4:57 PM

MSWC Boater Trends Survey

771	Upkeep of facilities	9/26/2019 4:57 PM
772	Trash clean up and accessibility	9/26/2019 4:57 PM
773	More attention to east side (lake Huron) facilities.	9/26/2019 4:56 PM
774	If each marina had fuel and pump out facilities.	9/26/2019 4:53 PM
775	Safety, Clean	9/26/2019 4:51 PM
776	restrooms with municipal water that are open all hours of the day/year	9/26/2019 4:50 PM
777	Well staffed is most important	9/26/2019 4:49 PM
778	Make sure Launch docks are long enough for larger boats with higher post. I have watched people struggle and fall into water while launching because the docks are so short a 23 ft boat needs to be floated off past the dock. Very Dangerous. The short post gouge the sides of boats instead of hitting the rub rails.	9/26/2019 4:49 PM
779	allow for phone reservations	9/26/2019 4:47 PM
780	Renovate Eagle Harbor site!!	9/26/2019 4:47 PM
781	Wifi available	9/26/2019 4:45 PM
782	Easier to register electronically	9/26/2019 4:43 PM
783	Keep up with the maintenance.	9/26/2019 4:42 PM
784	Upgraded, clean bathrooms and showers	9/26/2019 4:41 PM
785	BETTER AVAILABILITY FOR RESERVATIONS	9/26/2019 4:40 PM
786	mooring facilities within breakwalls	9/26/2019 4:40 PM
787	Rest rooms ,number of launches and docking areas where you can just set up and be out of the way for boats going in and out	9/26/2019 4:39 PM
788	Wi-fi is now available at most state marinas	9/26/2019 4:38 PM
789	Enforce Slow No Wake Laws	9/26/2019 4:37 PM
790	WiFi in at marinas, that can reach the furthest dock.	9/26/2019 4:34 PM
791	Decent showers.	9/26/2019 4:34 PM
792	Nicer bathrooms at some locations would be good (Saginaw River Mouth for example), but overall the state harbor and marina system is excellent. If I am confusing DNR sites with State Marina system I apologize.	9/26/2019 4:34 PM
793	WiFi	9/26/2019 4:33 PM
794	With exception of Muskegon municipal, all other marinas are good to very good. Muskegon desparately needs an immediate upgrade for the entire marina.	9/26/2019 4:32 PM
795	Can't think of anything specific	9/26/2019 4:30 PM
796	More of Them!	9/26/2019 4:29 PM
797	Clean and maintain the bathrooms. I a sick and tired of paying a premium for dockage and getting filthy bathrooms.	9/26/2019 4:29 PM
798	Many state harbors are in dire need of new Shower and Restroom facilities. Lexington and Mackinac Island haven't been updated in 20 or more years.	9/26/2019 4:28 PM
799	Electric power	9/26/2019 4:27 PM
800	be able to utilize empty docks	9/26/2019 4:26 PM
801	easier reservations	9/26/2019 4:26 PM
802	Facilities being well maintained and clean.	9/26/2019 4:23 PM
803	Updated clubhouse and showers	9/26/2019 4:23 PM
804	Reservation system	9/26/2019 4:22 PM

MSWC Boater Trends Survey

805	They're all very well managed. Would have been good if Presque Isle fuel tank "improvements" could have been done off season.	9/26/2019 4:21 PM
806	number of ramps that are paved and parking	9/26/2019 4:20 PM
807	O	9/26/2019 4:19 PM
808	amenities	9/26/2019 4:19 PM
809	ease of access	9/26/2019 4:18 PM
810	Maintain the very fine services we have today	9/26/2019 4:17 PM
811	Keep docks up to date. Include a swim area !	9/26/2019 4:17 PM
812	consistency in operations	9/26/2019 4:16 PM
813	Eliminate the reservation system, maintenance to docks, quality of employees	9/26/2019 4:16 PM
814	Onsite stores with boating type things... Boat wash, hull cleaner, brushes, etc..	9/26/2019 4:15 PM
815	better reservation system	9/26/2019 4:15 PM
816	Improve the reservation system	9/26/2019 4:15 PM
817	Floating docks	9/26/2019 4:14 PM
818	Better staffing, many employees are not knowledgeable about boating rules and safety	9/26/2019 4:13 PM
819	Clean showers/bathrooms	9/26/2019 4:12 PM
820	PARKING PARKING PARKING at DUNCAN KEITH MARINA	9/26/2019 4:12 PM
821	Continue with upkeep and upgrades on your beautiful system.	9/26/2019 4:11 PM
822	Parking	9/26/2019 4:10 PM
823	Allow online reservations for boats drawing 9'. There is plenty of water in these harbors in recent years. The onus is on the owners.	9/26/2019 4:09 PM
824	Longer season in fall.	9/26/2019 4:09 PM
825	Pressure wash the docks on all of them. Most everyone's boat is white. When the docks are wet with dew or rain you track that black crud on the dock boards into your boat. Canadian marina docks in the North Channel are the WORST. Entirely black slime coated. About 100% coated. Let's not have Michigan docks look this bad, ever.	9/26/2019 4:09 PM
826	Improve the reservation system	9/26/2019 4:08 PM
827	Better maintenance	9/26/2019 4:07 PM
828	SOLUTION FOR THE GEESE DROPPINGS PROBLEM	9/26/2019 4:07 PM
829	cant think of anything significant	9/26/2019 4:07 PM
830	Keep things clean!!!! The docks as well as the facilities. The HarborMaster in Harrisville is proof it can be done. That marina is my 2nd choice for Best.....just nothing else there.	9/26/2019 4:05 PM
831	Hours	9/26/2019 4:04 PM
832	keep in good repair	9/26/2019 4:04 PM
833	Really need to have safe harbor if weather starts to look threatening but often in traverse bay everything is full on weekends. Often trailer boaters who may not have the same safety needs as cruising sailors. We cannot pull our boat out of the water have but don't want to ride out a storm at anchor	9/26/2019 4:04 PM
834	more slips	9/26/2019 4:02 PM
835	More available docks-more power	9/26/2019 4:02 PM
836	Easier, more intuitive online booking	9/26/2019 4:02 PM
837	Fixed bumpers on seawall	9/26/2019 4:01 PM
838	The online reservation system should be more clear and the harbor staff should pay more attention to it.	9/26/2019 4:01 PM

MSWC Boater Trends Survey

839	Bathrooms	9/26/2019 4:01 PM
840	Continued dock maintenance	9/26/2019 4:00 PM
841	regular and significant infrastructure investment	9/26/2019 3:59 PM
842	Docks	9/26/2019 3:58 PM
843	Better wifi service	9/26/2019 3:57 PM
844	gas discount with stay	9/26/2019 3:57 PM
845	ENHANCE ALL THE WIFI SIGNALS. STRONG WIFI signals at the docks.	9/26/2019 3:57 PM
846	pools and hot-tubs	9/26/2019 3:56 PM
847	Better training for the dock hands	9/26/2019 3:56 PM
848	Reliable WiFi throughout facility.	9/26/2019 3:56 PM
849	Sell a seasonal pass that would be good at all harbors for the year. A "seasonal transient" would be the term I would use. In addition, open the entire season to reservations at one time vs. the 6 month restriction. This would prevent weekend reservations (Friday-Saturday) from having scheduling priority over someone that might want to reserve Saturday to Saturday.	9/26/2019 3:56 PM
850	Information on area	9/26/2019 3:56 PM
851	Less People.	9/26/2019 3:55 PM
852	Free of charge	9/26/2019 3:55 PM
853	24hr access.	9/26/2019 3:54 PM
854	Wifi	9/26/2019 3:53 PM
855	Cleanliness	9/26/2019 3:53 PM
856	Internet - WiFi Also. We need a public harbor facility on Lake Huron near the mouth of the Ausable River. There already is a sea wall in place and wonder parking and launch facilities, but only out house for bathrooms. I wish i could keep my sailboat there for winter storage so i could leave my mast vertical position. Ausable Township approves of an idea to coordinate with the state to build harbor facilities much like Harrisville. My cell no. 989-820-4589 Chuck Webb, Oscoda, MI	9/26/2019 3:53 PM
857	I can't think of any needed state wide improvement. I think MI deserves credit for a very good existing network. I have served in the Coast Guard over a fair portion of the US, and some of the globe. I chose upon retiring from the CG to return to MI, in part due to good public access to high quality water.	9/26/2019 3:53 PM
858	Police power loading idiots	9/26/2019 3:52 PM
859	Scrap the existing reservation system	9/26/2019 3:52 PM
860	Better reservation system	9/26/2019 3:52 PM
861	The reservation website needs a lot of help. Also the reservations platform in Leland is a mess as well.	9/26/2019 3:52 PM
862	boater service amenities, spaces for cooking	9/26/2019 3:52 PM
863	A well maintained site, with at least basic amenities.	9/26/2019 3:51 PM
864	STOP MAKING FISHERMEN PAY AND LETTING "PLEASURE BOATERS" launch free,Example...No money takers in Summer on Sundays when only pleasure boaters are using ramp. and TICKET POWER LOADERS	9/26/2019 3:50 PM
865	Improve management and customer service. Add slips if possible in popular harbors like South Haven.	9/26/2019 3:49 PM
866	Same as above	9/26/2019 3:49 PM
867	That debris is kept clear and that DNR officers actually man their station and check for the sticker	9/26/2019 3:48 PM
868	Services to transients	9/26/2019 3:47 PM
869	Easy reservation system	9/26/2019 3:47 PM
870	More day docking which would not need amenities.	9/26/2019 3:47 PM

MSWC Boater Trends Survey

871	TV with weather channel playing at the facilities for updates.	9/26/2019 3:47 PM
872	Friendly assistance	9/26/2019 3:46 PM
873	local transportation available	9/26/2019 3:46 PM
874	Helpful staff. Clean restrooms and showers. Wifi service.	9/26/2019 3:46 PM
875	Normal showers that flow like at home!!!!	9/26/2019 3:46 PM
876	Easy App experience	9/26/2019 3:46 PM
877	Drop the online fee to reserve camp site and marina slips.	9/26/2019 3:46 PM
878	Parking	9/26/2019 3:45 PM
879	Increased numbers	9/26/2019 3:45 PM
880	Posting about Swimmer's Itch - warnings and how to avoid	9/26/2019 3:45 PM
881	replace docks with floating docks to accommodate fluctuating water levels	9/26/2019 3:45 PM
882	Availability	9/26/2019 3:45 PM
883	More of them	9/26/2019 3:45 PM
884	Reduce overnight fee.	9/26/2019 3:44 PM
885	Utilities available for more extended season	9/26/2019 3:44 PM
886	more locations	9/26/2019 3:44 PM
887	Power washing at launch facilities	9/26/2019 3:44 PM
888	Quality and cleanliness of the facility and availability of slips	9/26/2019 3:43 PM
889	Lower the fees.	9/26/2019 3:43 PM
890	WiFi	9/26/2019 3:42 PM
891	A little easier to identify and select open slips	9/26/2019 3:41 PM
892	Privatize harbor and marina services.....turn a state expense into a state revenue system.	9/26/2019 3:41 PM
893	Haven't visited enough of them to make an OVERALL suggestion...	9/26/2019 3:41 PM
894	More transient slips	9/26/2019 3:40 PM
895	Cable and internet	9/26/2019 3:40 PM
896	Rest rooms	9/26/2019 3:40 PM
897	once again I don't like the state reservation system	9/26/2019 3:40 PM
898	Fish cleaning station	9/26/2019 3:39 PM
899	Have a More transient wells	9/26/2019 3:39 PM
900	Clean facilities. You are doing a good job.	9/26/2019 3:39 PM
901	Clean restrooms, clean docks	9/26/2019 3:38 PM
902	more of them	9/26/2019 3:38 PM
903	Clean and up-dated restroom and shower facilities.	9/26/2019 3:38 PM
904	Train the staff to be as good as Charleviox City Marina staff and managers.	9/26/2019 3:38 PM
905	Website	9/26/2019 3:37 PM
906	Floating docks!!!!!!!!!!!!!!!!!!!!	9/26/2019 3:37 PM
907	small craft, paddle craft facilities	9/26/2019 3:37 PM
908	Allow single night reservations	9/26/2019 3:37 PM
909	A reservation system that "understands" how boaters travel. We do not move in poor weather so reservations MUST be flexible and easy to change.	9/26/2019 3:37 PM
910	Customer oriented and trained staff.	9/26/2019 3:37 PM

MSWC Boater Trends Survey

911	Ramp angle is important. Most ramps into superior are shallow angles causing you to wear waterproof boots to launch your boat.	9/26/2019 3:37 PM
912	more access for non-motorized, especially ADA accessible ones!	9/26/2019 3:36 PM
913	cheaper rates	9/26/2019 3:35 PM
914	more slips	9/26/2019 3:34 PM
915	rack storage	9/26/2019 3:34 PM
916	Keep clean and pay attention to boaters	9/26/2019 3:34 PM
917	availability	9/26/2019 3:33 PM
918	land transportation if needed.	9/26/2019 3:33 PM
919	Make sure the channel is deep enough	9/26/2019 3:33 PM
920	Being able to book a slip online less than 24 hours before arrival. Right now there is a hold after 5pm the day before. With weather conditions as they are on Lake Michigan and Huron we are not always sure what each day will bring.	9/26/2019 3:33 PM
921	more harbors	9/26/2019 3:32 PM
922	I like the online booking system. Getting that as up to date as possible would be great!	9/26/2019 3:32 PM
923	Website	9/26/2019 3:31 PM
924	kindness	9/26/2019 3:30 PM
925	Not allowing private parties to reserve blocks of slips for special events such as Grand Haven Salmon tournament, should have equal opportunity for all	9/26/2019 3:30 PM
926	Wi Fi at all marinas	9/26/2019 3:30 PM
927	get rid of the incompetent employees.	9/26/2019 3:30 PM
928	I like the online slip ordering system, but it still could use some work to be a little easier to figure out.	9/26/2019 3:29 PM
929	showers	9/26/2019 3:26 PM
930	Availability of wells	9/26/2019 3:10 PM
931	Larger and lower cost	9/26/2019 2:58 PM
932	Improve your reservation system	9/26/2019 2:56 PM
933	The on-line reservation system is HORRIBLE. It was developed by people who have no idea about cruising boats, their needs and their usage of services ... or about creating an easy to use web site.	9/26/2019 2:49 PM
934	See 26-the reservation system for camp grounds does not make sense for cruisers. Because of weather, you often don't know where you will be able to be until 3 or so days before.	9/26/2019 1:27 PM
935	The most important improvement would be your online reservation system. For the past few years, we have been unable to book online and, as a result, have not been able to travel as often as we like. I very much dislike traveling to a marina without a reservation because so often when I arrive a person with a reservation doesn't cancel and the slip remains open and I can't have it. It seems because your online system is so poor, it would be better to return to the first come, first serve policy. I'll bet many boaters request this because of the conversations I've had with several disappointed boaters with the system.	9/26/2019 12:57 PM
936	Reliable online booking. Had numerous issues this season, in particular early year reservation causing me to have to book multiple Revelations to obtain the 4 day period as the system would not allow multiple day reservation.	9/26/2019 12:49 PM
937	Having fuel dock open past 9pm, or early in AM to fuel up before fishing	9/26/2019 12:42 PM
938	Cost	9/26/2019 12:37 PM
939	the ability to save all payment info and boat info on the website for multiple bookings	9/26/2019 12:27 PM
940	Well, you could put in restaurants that reflect the local history - state owned but privately run. National parks have some of those - Grand Canyon comes to mind.	9/26/2019 12:24 PM

MSWC Boater Trends Survey

941	Ability for folks with inflatables to easily ready the vessel and then drag it to the water. This involves a side area that won't get in the way of trailered boats launching and waiting to launch. LSC Metropark just installed a beautiful launching beach to the right of the daysail area. Kudos!	9/26/2019 12:17 PM
942	Online reservation.	9/26/2019 12:12 PM
943	Uncertain	9/26/2019 12:08 PM
944	Clean up goose manure	9/26/2019 12:08 PM
945	HAVE THE MARINAS UPDATE THEIR WEB SIGHTS.	9/26/2019 12:06 PM
946	State of Michigan does a fine job!	9/26/2019 11:56 AM
947	Fish cleaning stations	9/26/2019 11:48 AM
948	Docking assistance	9/26/2019 11:42 AM
949	Better online reservation system. Hard to change reservations due to weather which happens often	9/26/2019 11:41 AM
950	More docks at busy harbors.	9/26/2019 11:39 AM
951	New Buffalo slips seem to need improvement. The flooding left slips rusted and dirty. Bathrooms need a make over soon. Love the new picnic area; very nice.	9/26/2019 11:30 AM
952	Provide more services	9/26/2019 11:28 AM
953	Make sure that boater have easy access (walking distance) to stores and other amenities. My wife like to shop and there needs to be some shops within walking distance.	9/26/2019 11:28 AM
954	Allow day pass reservation on the reservation system even when there is an overnight one at another location. (e.g. Mackinac Island day when staying overnight at Mackinaw City)	9/26/2019 11:25 AM
955	Online booking specific sites	9/26/2019 11:18 AM
956	Road maintenance	9/26/2019 11:17 AM
957	better web site	9/26/2019 11:08 AM
958	Availablity	9/26/2019 11:03 AM
959	na	9/26/2019 10:41 AM