

Waterways Facilities Assessment

Webinar Presentation

April 9, 2020


Waterways Facilities Assessment

Background

- Plan goals were to address the following and supported by April 2018 Waterways Commission Resolution:
  - 1. Complete facility assessment of public harbors
  - 2. Complete facility assessment of public boating access sites
  - 3. Complete a water trail program plan
  - 4. Complete a strategy to address funding assistance for lake aquatic weed management
  - 5. Identify funding options to address priorities of the plan

- Funded with FY19 Waterways funds October 1, 2018 to execute parts 1 and 2 (and some of 5) with consultant under contract in January 2019

Waterways Facilities Assessment

Two Phase Approach

- Phase 1 – Infrastructure Assessment/Cost Development
  - 192 Boating Access Sites/BAS (130 DNR, 62 Local Grant-In-Aid/GIA)
    - Out of over 1,300 total
  - 75 Harbors (19 DNR, 56 Local Grant-In-Aid/GIA)
    - Out of 83 total
  - 2 Locks/Dams (Cheboygan and Alanson)
- Phase 2 – Trend Identification, Strategic Planning, and Design Review

Waterways Facilities Assessment

Phase 1
Infrastructure Assessment/Cost Development

Waterways Facilities Assessment

Phase 1
Infrastr. Assessment/Cost Development

- Spring 2019 – surveyed facility operators for identification of infrastructure needs over next 5, 10, and 20 years

- Data collected
  - Boating Access Sites – Launch area, piers, parking, utilities, buildings, walkways, ADA compliance, dredging, shoreline protection, wave attenuation
  - Harbors – dock types, slip counts, dock age/condition, utilities, buildings, parking, walkways, ADA compliance, dredging, shoreline protection, wave attenuation, haul out
  - Locks & Dams – amenities, age, physical condition

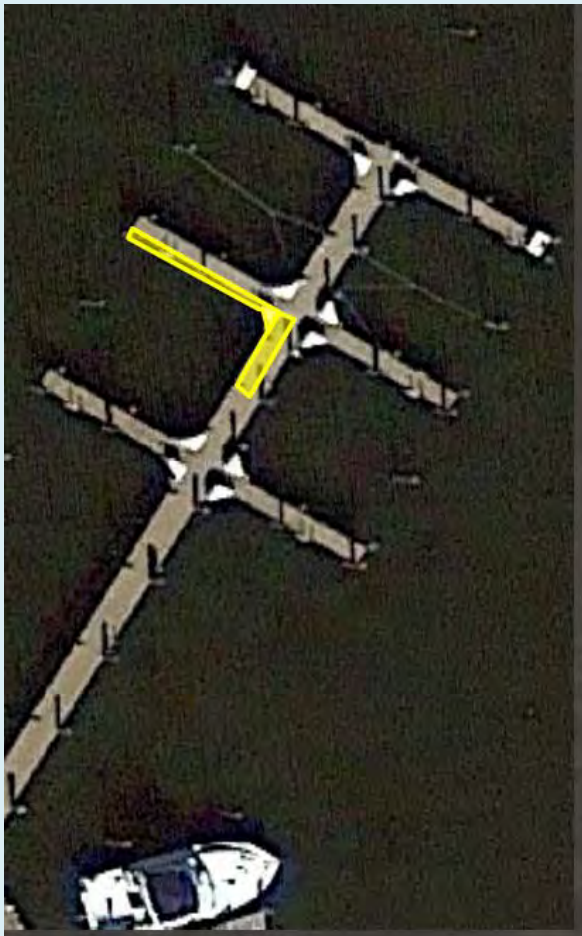
Waterways Facilities Assessment

Phase 1

NOT EVERYONE IS AN ENGINEER,
SO HOW WAS THE DATA COLLECTED?

Waterways Facilities Assessment

Waterways Facilities Assessment



Estimating Costs By Slip Count – Fixed Dock

- *Typical Double 40’ Slip:*
  - *2’ x 40’ Finger Pier = 80sf*
  - *4’ x 19’ Main Pier = 76sf*
  - *Total 156sf / 40’ Slip*
  - *25 Years Old – New Decking Required at $25sf = $3,900*
  - *40 Years Old – Replacement at $80sf = $12,480*
  - *Replace Electrical Pedestal 30/50amp = $3,500*
  - *Multiply Similar Factors by Slips Size*
  - *Apply Escalation Factors As Needed*

Waterways Facilities Assessment

Phase 1

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**

- 0-20 Years

DNR Harbors	$102,721,750	GIA Harbors	$376,333,333
DNR BASs	$177,840,003	GIA BASs	$98,981,906
DNR Total	**$280,561,753**	**GIA Total**	**$475,315,239**

Waterways Facilities Assessment

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- 0-5 Years is current focus
  - $128,083,425 of projected need
  - $57,875,000 of projected Waterways Fund budget

Waterways Facilities Assessment

Phase 1

- $57,875,000 of $128,083,425 = only 45% of need met
- This does not reflect
  - Data collected on only 192 of 1,300+ total BAS facilities
  - Data collected on only 75 of 83 total harbor facilities
  - Figure does not include lock and dam needs
  - Data collected only for baseline improvements (not expansions or new developments)
  - US Army Corps of Engineers' infrastructure or channel needs

Waterways Facilities Assessment

Phase 2
Trend Identification, Strategic Planning, and Design Review

Waterways Facilities Assessment

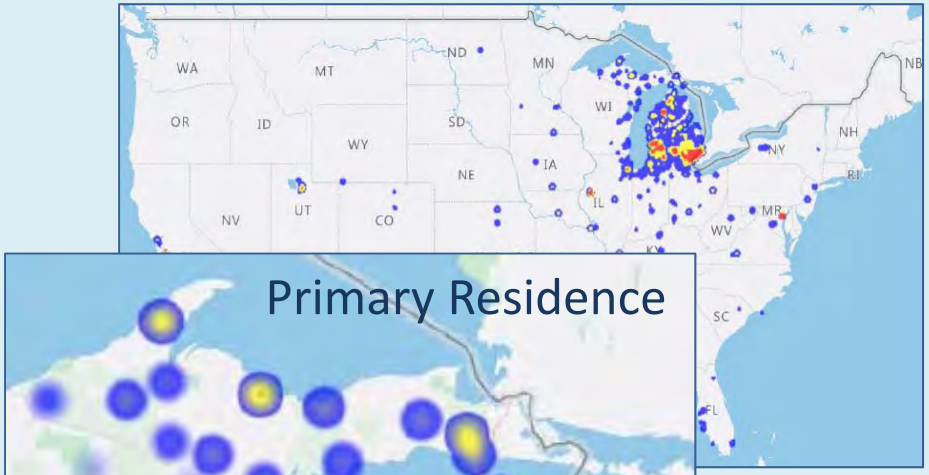
Phase 2
Trend Identification, Strategic Planning, and Design Review

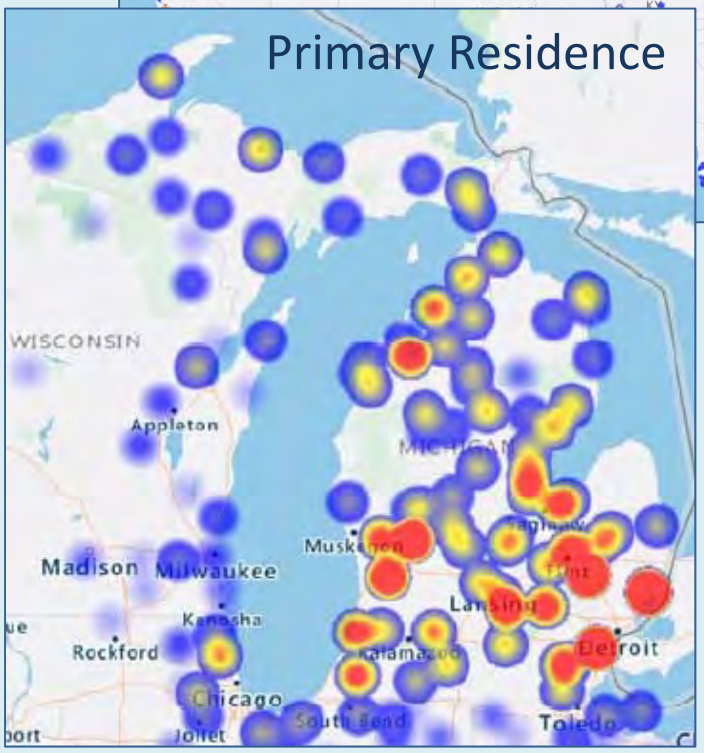
- September/October 2019, sent out 2 different surveys to:
  - Operators – 295 facilities
  - Boaters through
    - DNR News Digest to 23,000 subscribers
    - Marketing Bulletin to 17,000 subscribers
    - DNR Facebook
    - Michigan State Waterways Commission
    - Michigan Boating Industries Association (MBIA)

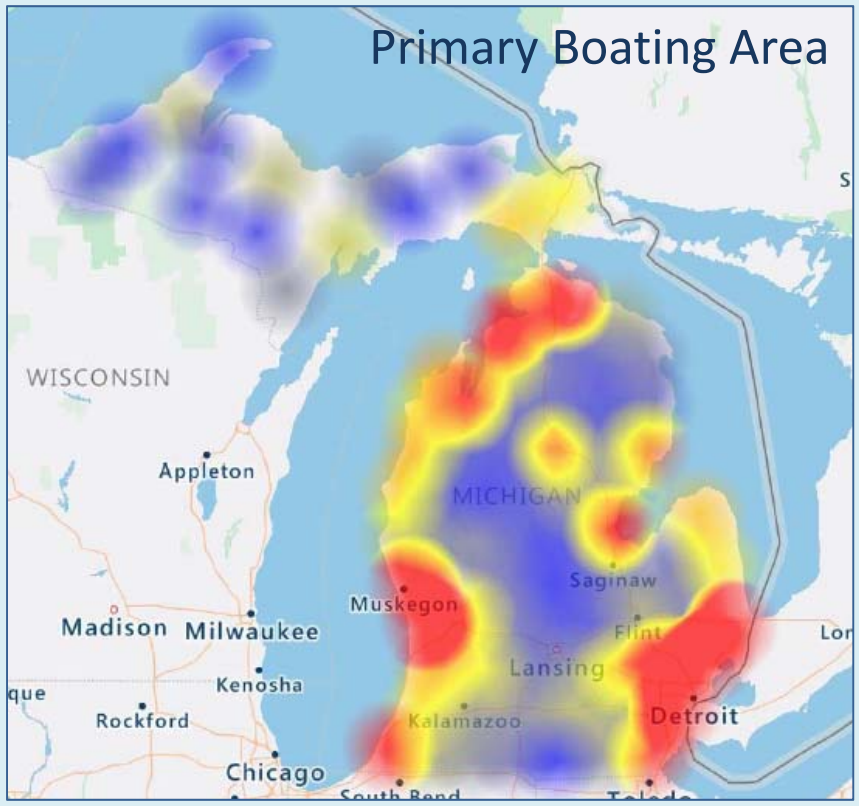
Waterways Facilities Assessment

- Operator Survey Response
  - 74% Responded

Waterways Facilities Assessment







- Boater Survey Response
  - 3,748 Responded

Waterways Facilities Assessment

Phase 2

- Operator Survey questions focused on:
  - Occupancy and demand
  - Vessel changes witnessed (length, width, depth, etc.)
  - Boater usage trends
  - Amenity importance
  - General challenges
  - Future planning

Waterways Facilities Assessment

Phase 2

- Boater Survey questions focused on:
  - Facility type(s) used, how used, and how often
  - Vessel type(s) used (including paddle craft) and how often
  - Reasons for boating
  - Future boat purchases (upgrade, downgrade, same)
  - Residence location vs. boating location
  - Facility use frequency and preferences
  - Distance traveled to get to facility by land
  - Vessel storage and location
  - Amenity priority
  - Improvements needed

Waterways Facilities Assessment

Phase 2

- Study Recommendations (excerpt)
  - Increase state funding
  - Collaborate with neighbors and local communities on infrastructure
  - Lay out facilities for more pedestrian friendly connections
  - Encourage boating be more accessible to broader population
  - Tackle large projects in phases and based on market demand
  - Consider more flexible broadside mooring
  - Design facilities for changing boat sizes and types
  - Prepare designs for extremes such as high water (e.g. floating docks)
  - Advance more sustainable design in operations and development
  - AIS management and prevention (with dedicated funding)
  - Consider expansion to support more paddle craft use
  - Consider public/private partnerships

Waterways Facilities Assessment

Harbor Use Trends

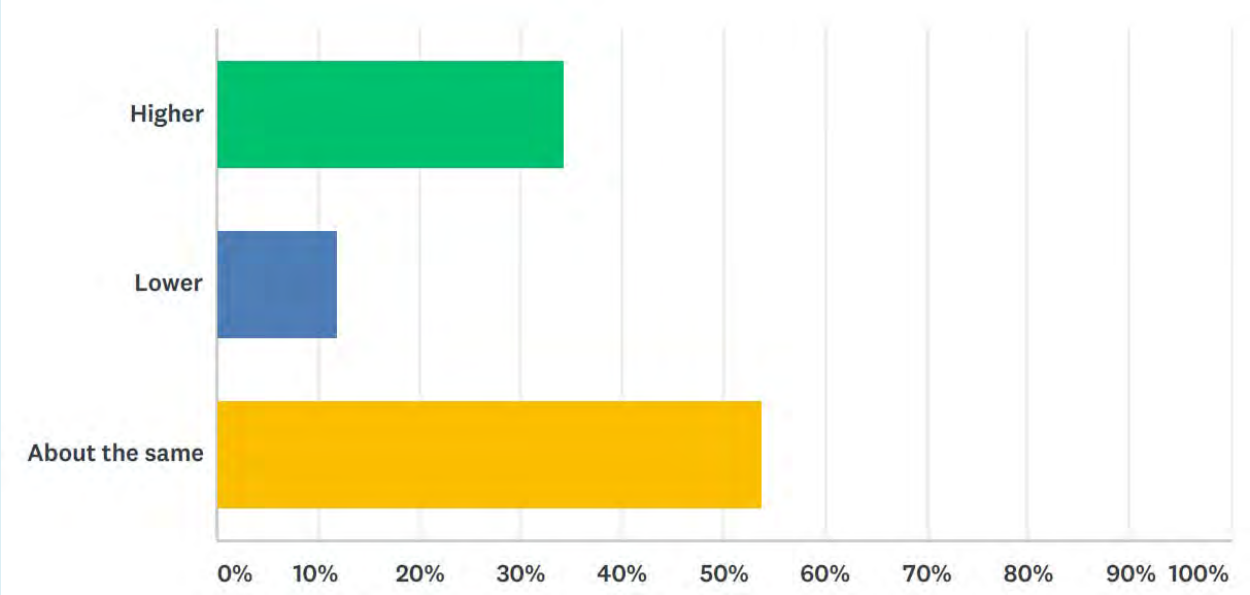
Operator Trends Analysis

Participation

- *Operator Trend Survey was completed on September 30*
- *Statewide, 74% of the 295 facilities responded.*
- *67 of 83 Harbors*
- *165 of 210 BAS Facilities*
- *1 of 2 Lock & Dam Facilities*

Operator Trends Analysis - Harbors

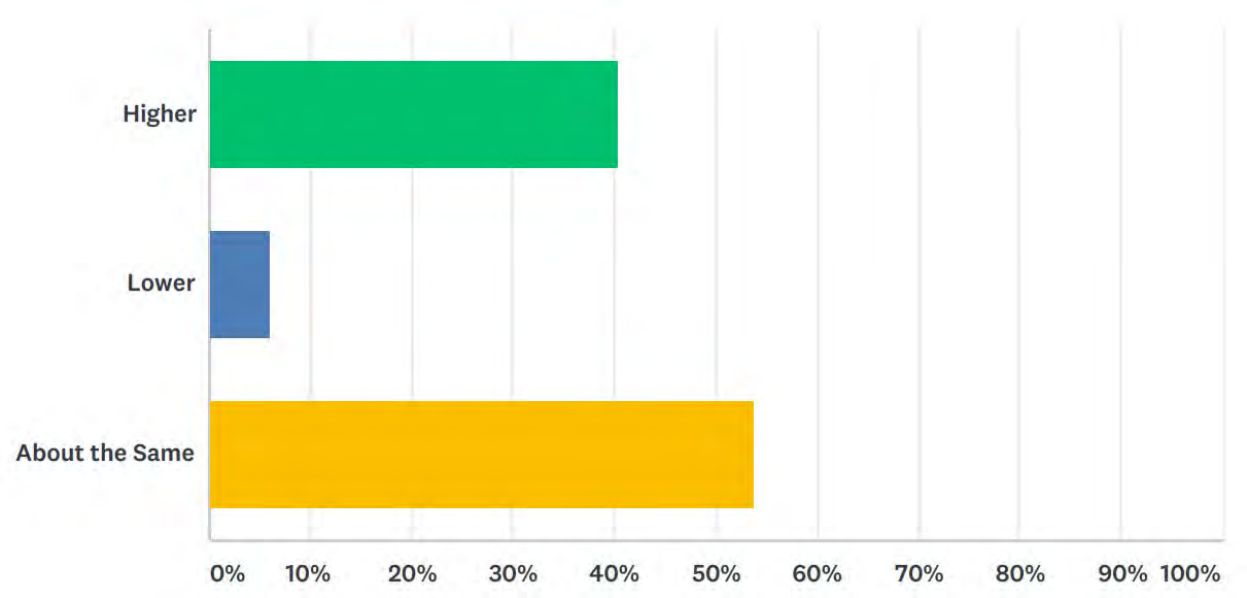
2019 Seasonal Occupancy:



Seasonal occupancy only declined due to external issues such as weather, flooding, damage, or ongoing construction activities. No facilities indicated any decrease in *demand* for slips.

Operator Trends Analysis - Harbors

Seasonal Occupancy Five Year Trend:



While 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 indicate any increased demand.

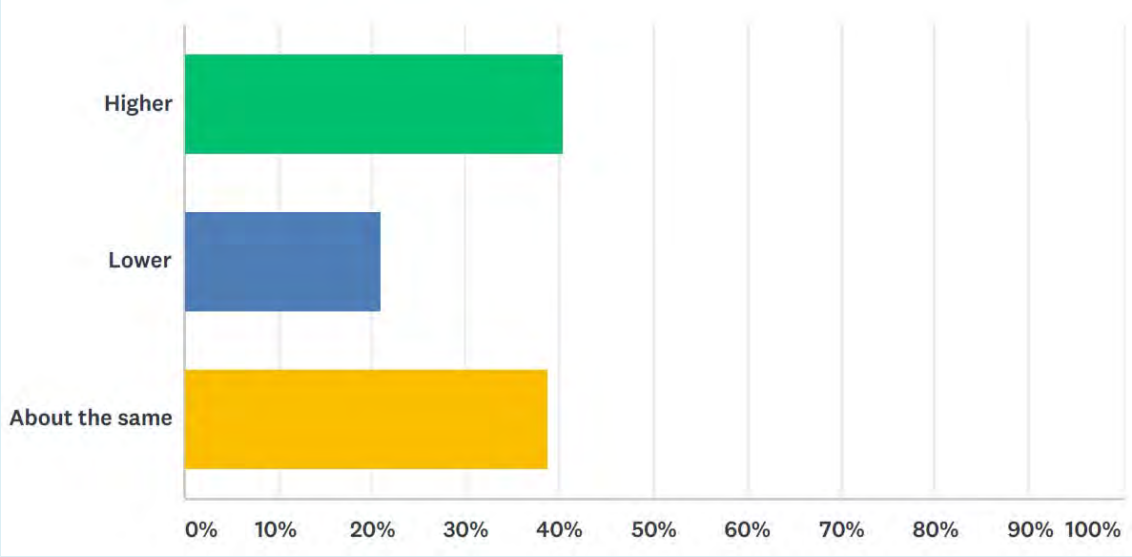
Operator Trends Analysis - Harbors

Seasonal Waiting Lists

- 65.67% (44) indicated they have a waiting list to lease a slip in their harbor.
  - 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
- 26.19% (11) indicated a wait time of five or more seasons
  - 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

Operator Trends Analysis - Harbors

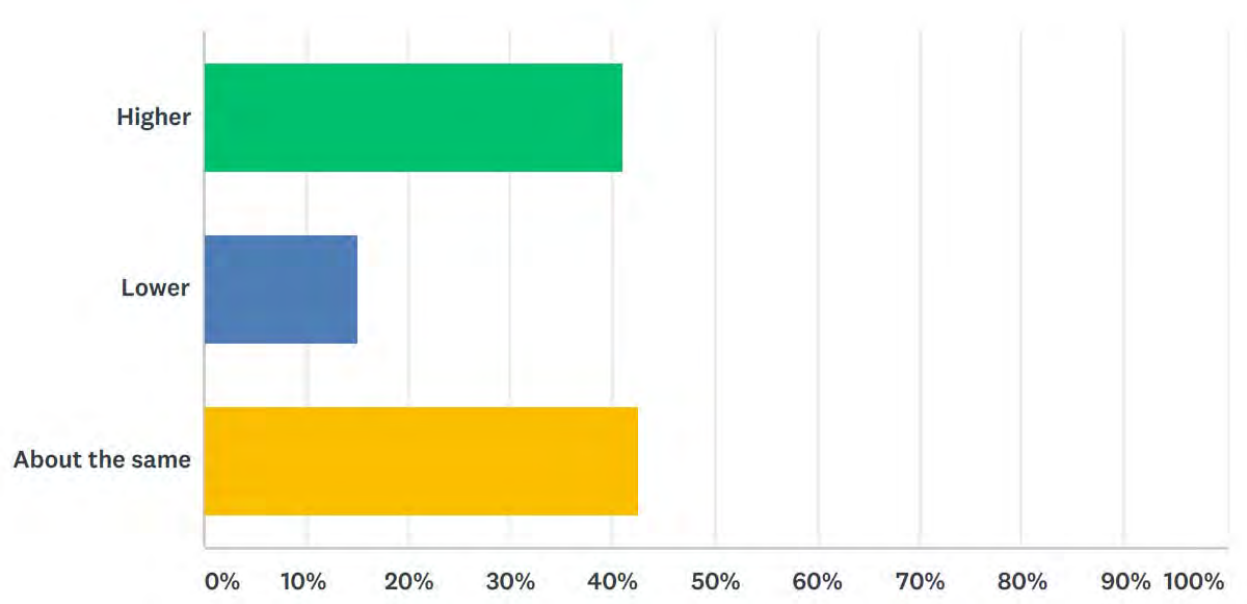
2019 Transient Occupancy:



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

Operator Trends Analysis - Harbors

Transient Occupancy Five Year Trend:



- 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

Operator Trends Analysis - Harbors

Operational Challenges

- Finding, Hiring, and Retaining Qualified Staff
- High Water
- Not Enough Slips
- Inadequate Power
- Quality of Dock Infrastructure

Operator Trends Analysis - Harbors

Most Important Operational Change Needed

- Wi-Fi for Operations
- Increasing the number of staff, improving training, and raising staff pay to attract more and better employees

Most Important Infrastructure Change Needed

- Modernize upland buildings
- Upgrade the dock infrastructure
- Boater Wi-Fi
- Showers/Restrooms
- Enlarging/updating Fuel Dock
- Updating Utilities on the docks.

Operator Trends Analysis - Harbors

Trends

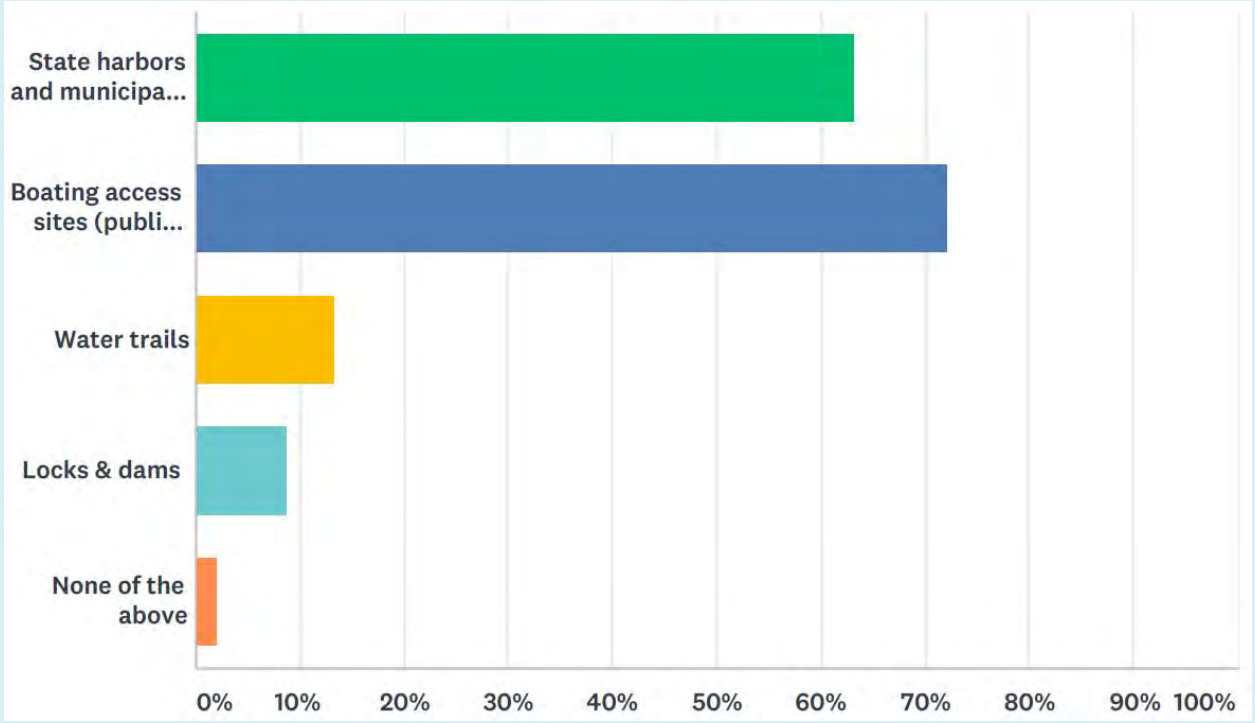
- Longer and wider boats with higher power demands, preferably on floating docks
- Plan for complete renovation and/or major upgrades to our docks and landside boater amenities
- Increase the amount of broadside docking
- The rise of the “cottage boater”
- Pets and pet friendly facilities
- Climate change, higher and more rapidly changing water levels, adding wave attenuation and/or breakwaters, and preparing for increased winter damage

Boater Trends Analysis

Participation

- *Boater Trend Survey was open from September 26 through October 7, 2019.*
- *The survey was distributed by MDNR staff by DNR email bulletin and by DNR news digest.*
- *27-questions, including both multiple choice questions and the opportunity for each boater to provide open ended comments*
- *3,748 people responded to the survey*

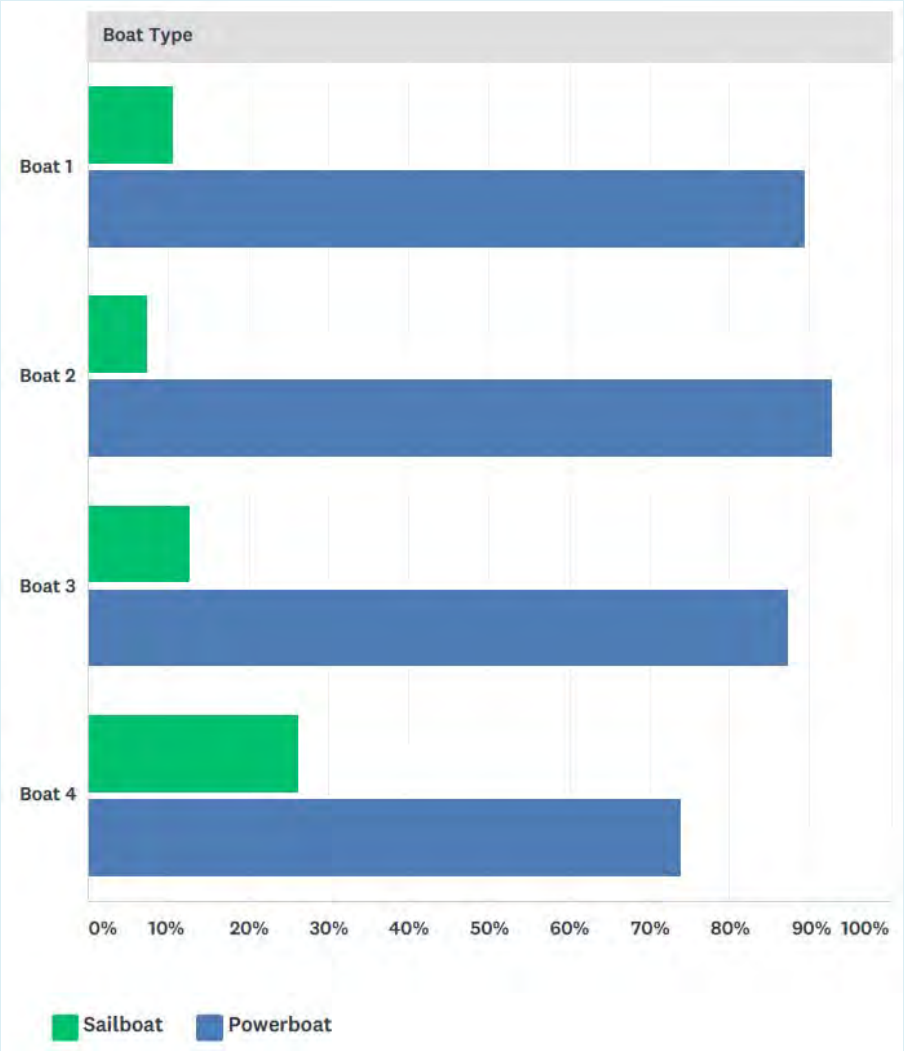
Boater Trends Analysis *Facility Types Used:*



Boater Trends Analysis

Boat Type

Breakdown



Boater Trends Analysis

Boat Type

Breakdown

All Boaters

	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**

Port to Port Boaters

	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**

- The total number of boats identified in the survey was 4,973.
- 92% of boat owners own at least two boats, not including personal watercraft or paddlecraft

Boater Trends Analysis

Boat Size Breakdown

	< 8'		8' - 10'		11' - 15'		16' - 25'	
Boat 1	0.23%	8	0.56%	19	8.32%	284	52.36%	1788
Boat 2	2.65%	31	6.68%	78	31.08%	363	49.40%	577
Boat 3	4.55%	14	16.56%	51	34.42%	106	37.34%	115
Boat 4	6.02%	5	10.84%	9	44.58%	37	33.73%	28
	1.17%	**58**	**3.16%**	**157**	**15.88%**	**790**	**50.42%**	**2508**

26' - 29'		30' – 34'		35' – 39'		40'- 44'	
9.63%	329	9.43%	322	8.90%	304	5.30%	181
4.54%	53	2.48%	29	1.54%	18	1.11%	13
3.90%	12	0.32%	1	1.30%	4	0.65%	2
1.20%	1	1.20%	1	1.20%	1	1.20%	1
7.94%	**395**	**7.10%**	**353**	**6.57%**	**327**	**3.96%**	**197**

45'-49'		50'-60'		>60'		Total
3.05%	104	1.82%	62	0.41%	14	3415
0.17%	2	0.26%	3	0.09%	1	1168
0.65%	2	0.00%	0	0.32%	1	308
0.00%	0	0.00%	0	0.00%	0	83
2.17%	**108**	**1.31%**	**65**	**0.32%**	**16**	**4974**

Boater Trends Analysis

Boat Draft and Beam Breakdown

Draft

	< 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**

Beam

	< 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**

Boater Trends Analysis

Paddle Craft and PWC Breakdown

Number of Craft Owned

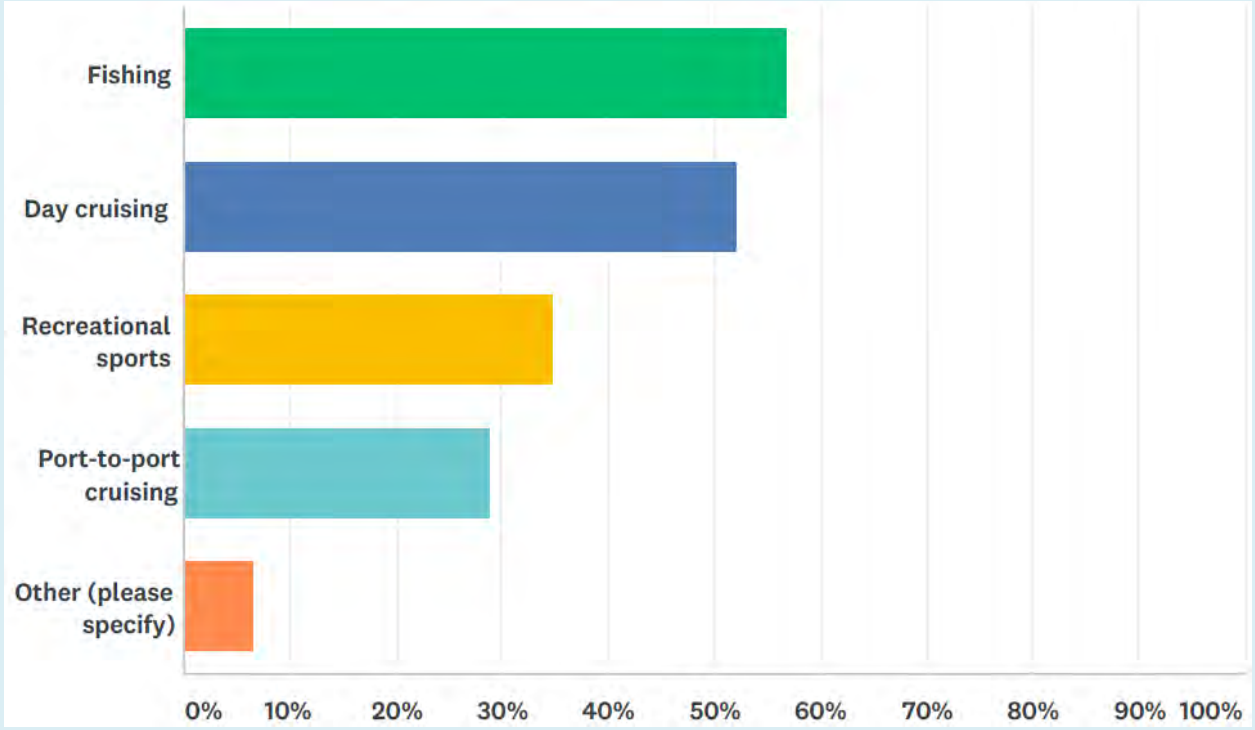
	1		2		3		4		5 or more		Total
Personal Watercraft (jet skis)	63.11%	260	29.85%	123	4.61%	19	1.46%	6	0.97%	4	412
Kayaks	25.02%	331	46.33%	613	12.09%	160	9.90%	131	6.65%	88	1323
Paddleboards	60.59%	206	31.18%	106	5.00%	17	2.06%	7	1.18%	4	340
Canoes	77.04%	547	15.49%	110	4.65%	33	1.69%	12	1.13%	8	710
Other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

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

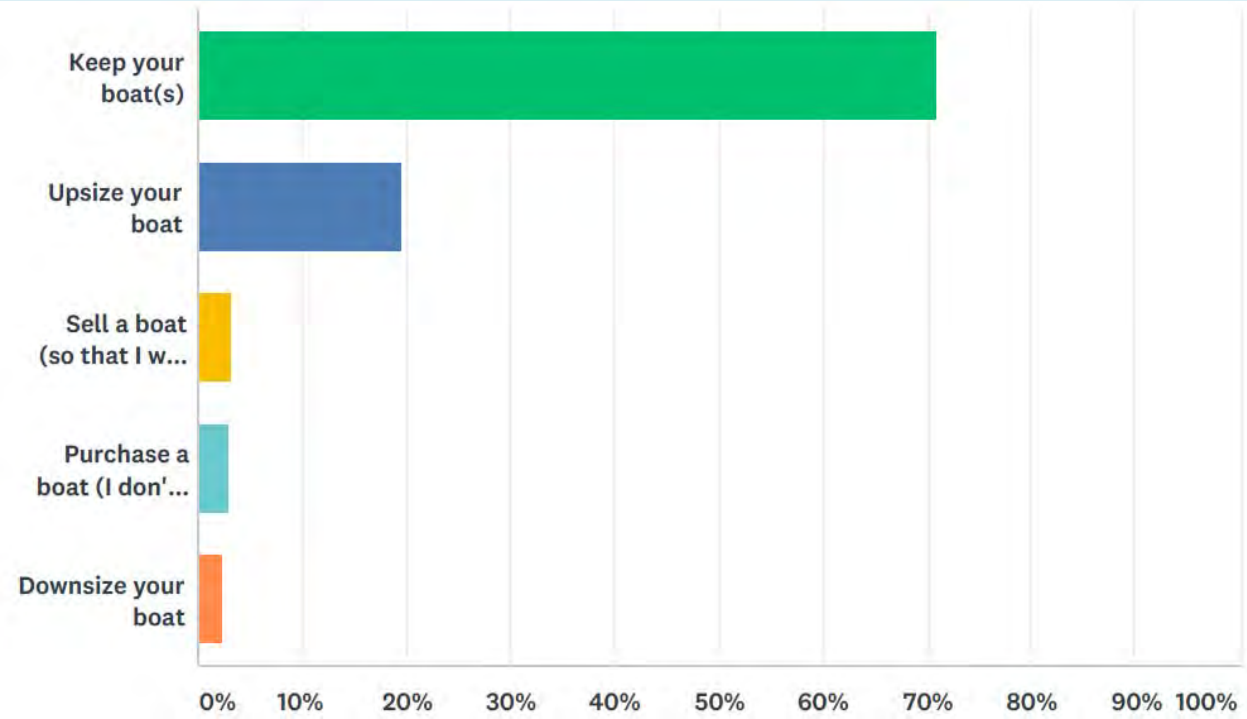
Boater Trends Analysis

Primary Boating Activity



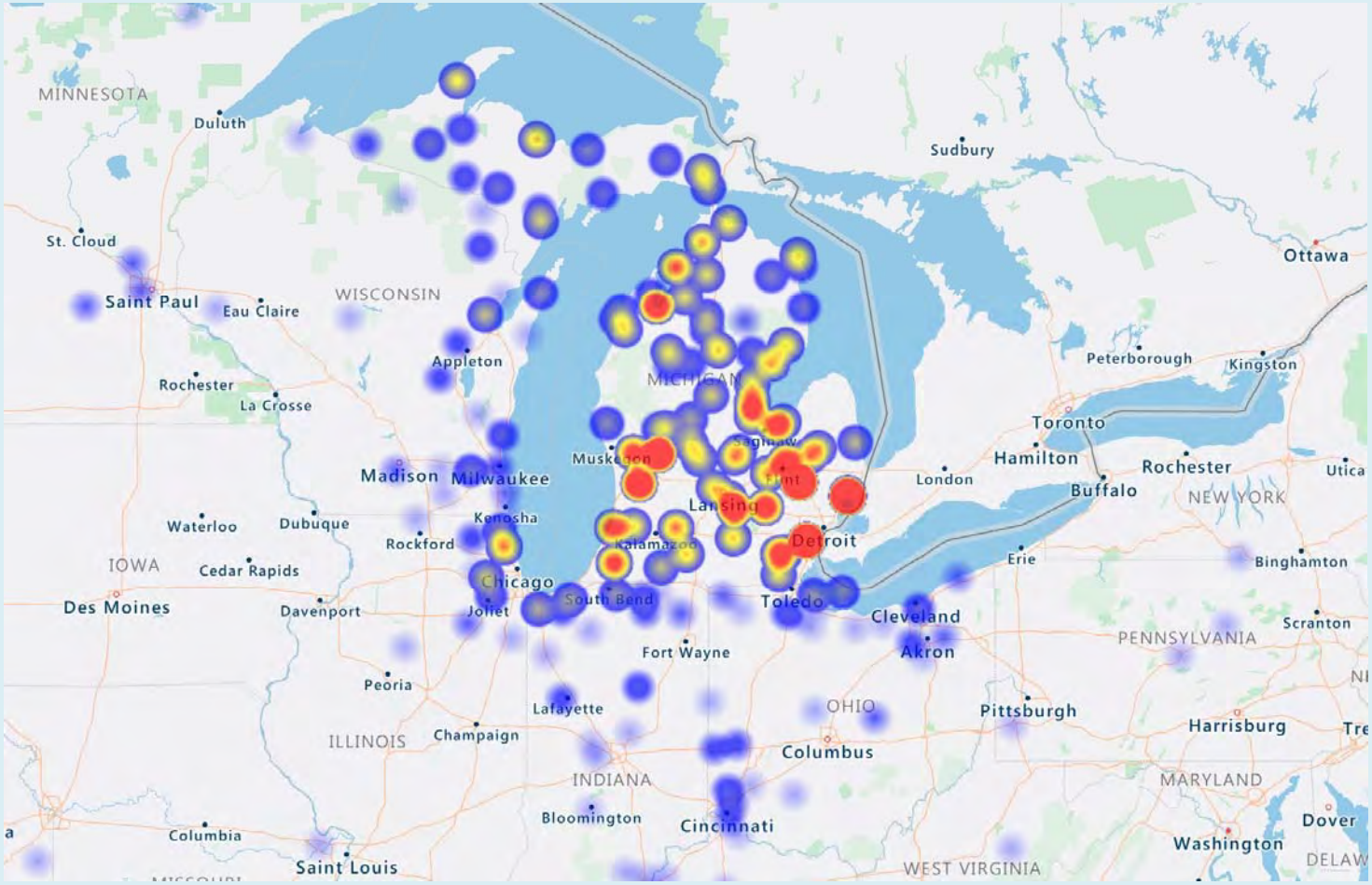
Boater Trends Analysis

Boat Ownership Plans



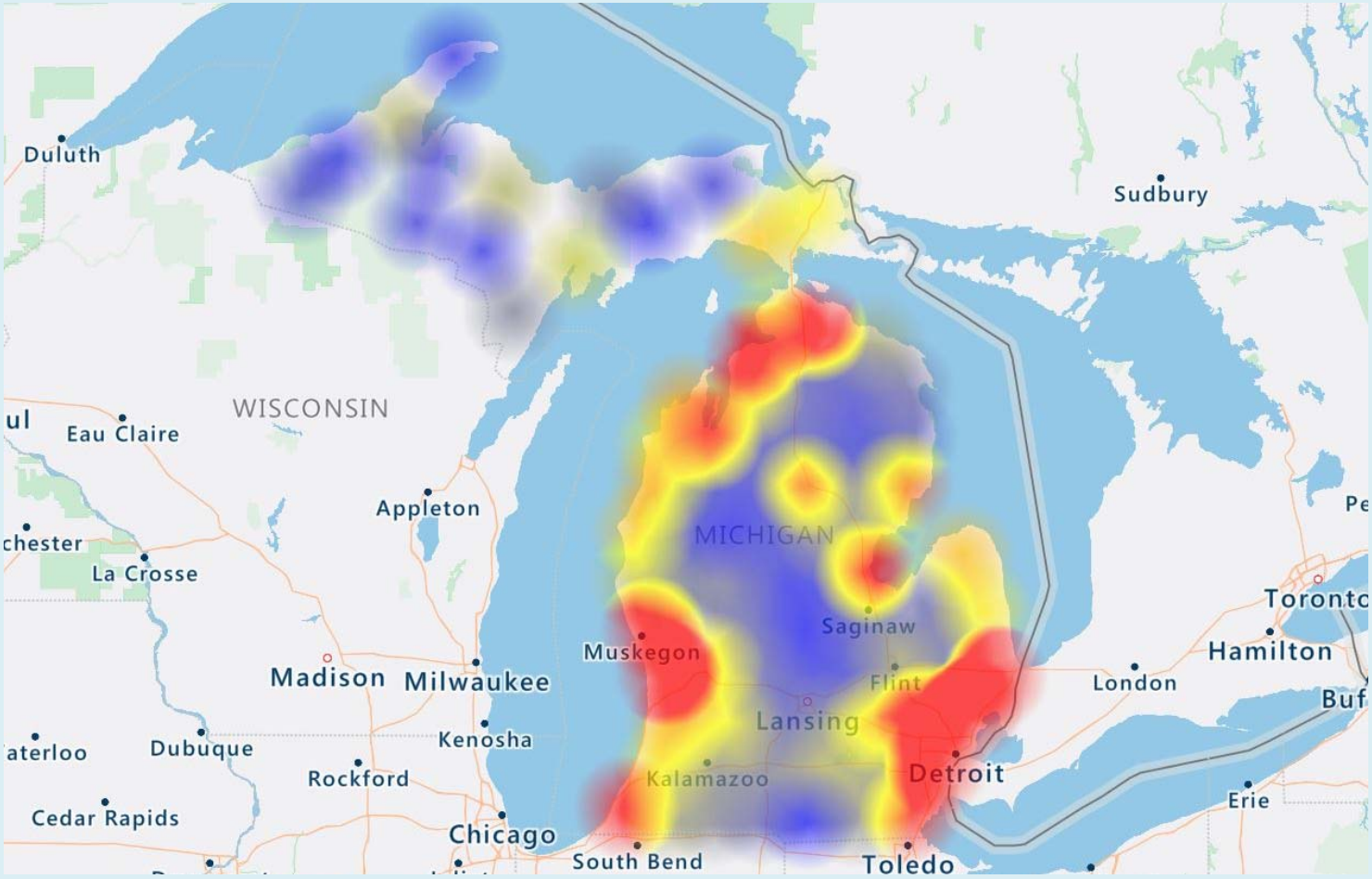
Boater Trends Analysis

Primary Boating Residence



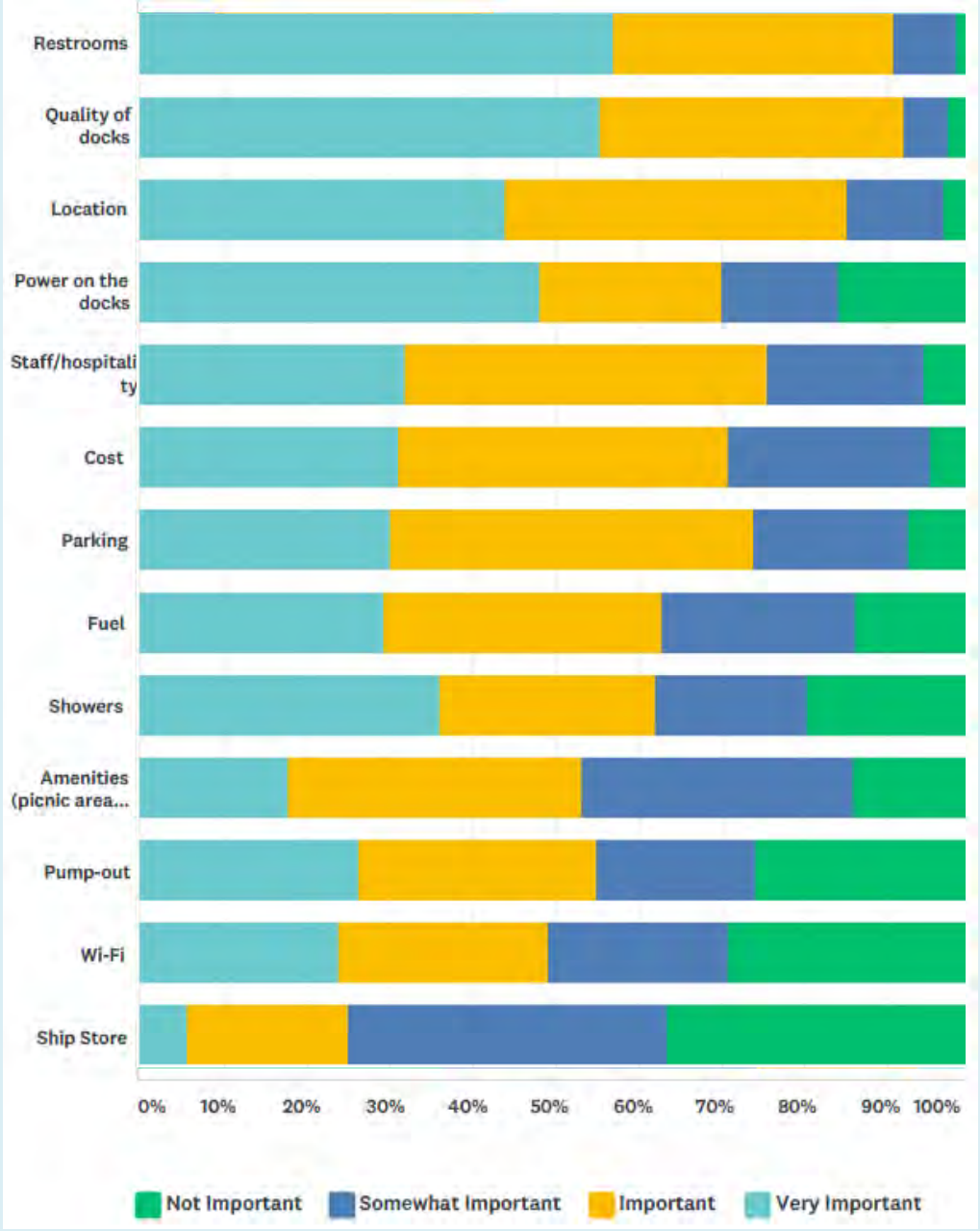
Boater Trends Analysis

Primary Boating Location



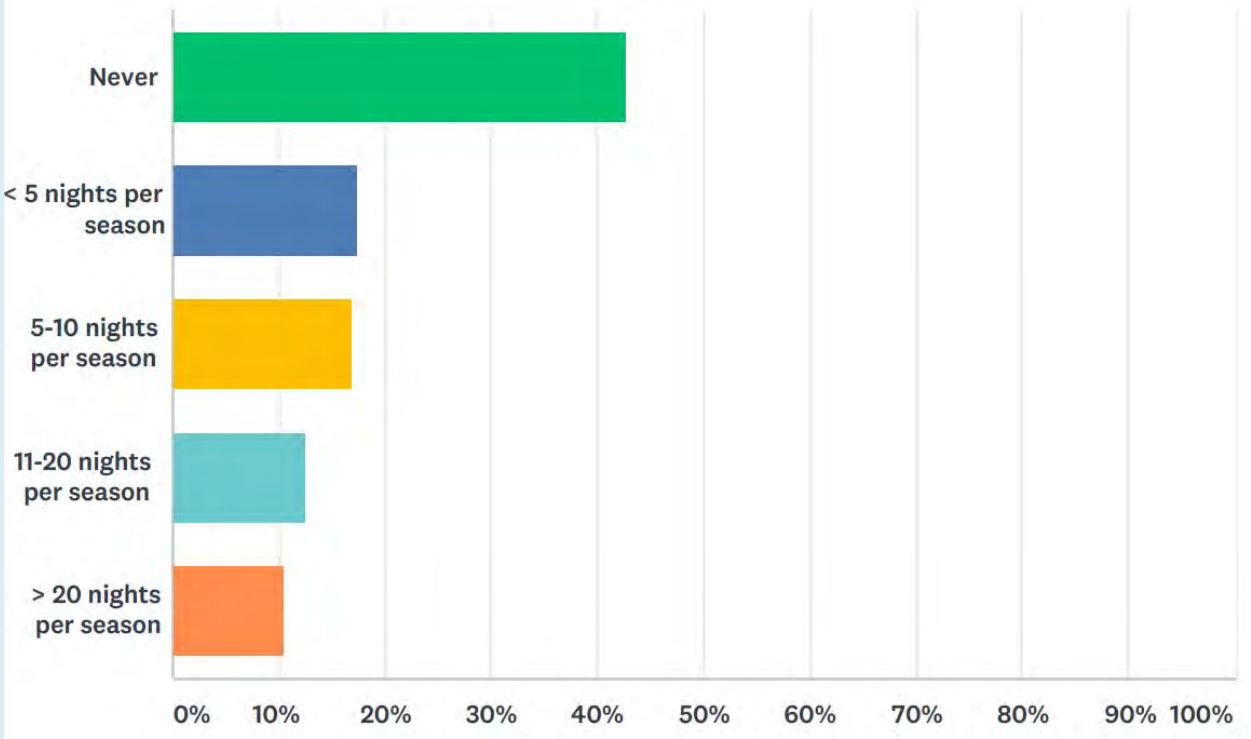
Boater Trends Analysis

Home Marina Importance Of Features



Boater Trends Analysis

Frequency of Nights Spent on Boat at Transient Harbors



Boater Trends Analysis

Most Important Improvements to Harbor Facilities

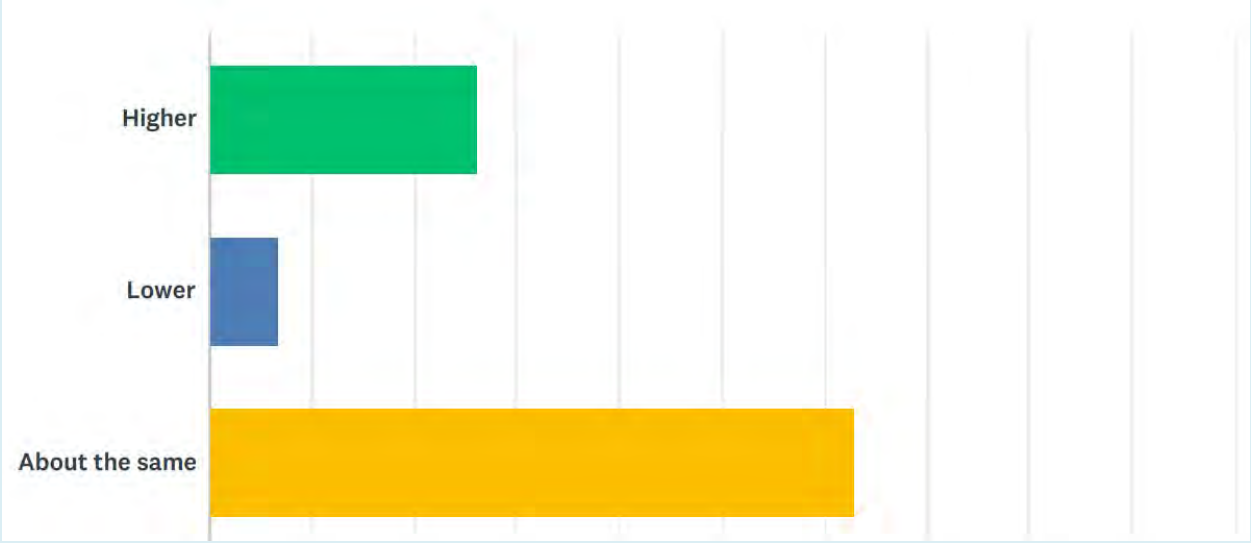
- Improve Restrooms and Showers
- Infrastructure Improvements
  - Need for More Slips at Popular Harbors
  - Floating Docks Preferred
  - Improve Maintenance
  - Wi-Fi
  - Shore Power
- Quality of Staff / Training

Waterways Facilities Assessment

Boating Access Site Trends

Operator Trends Analysis - BAS

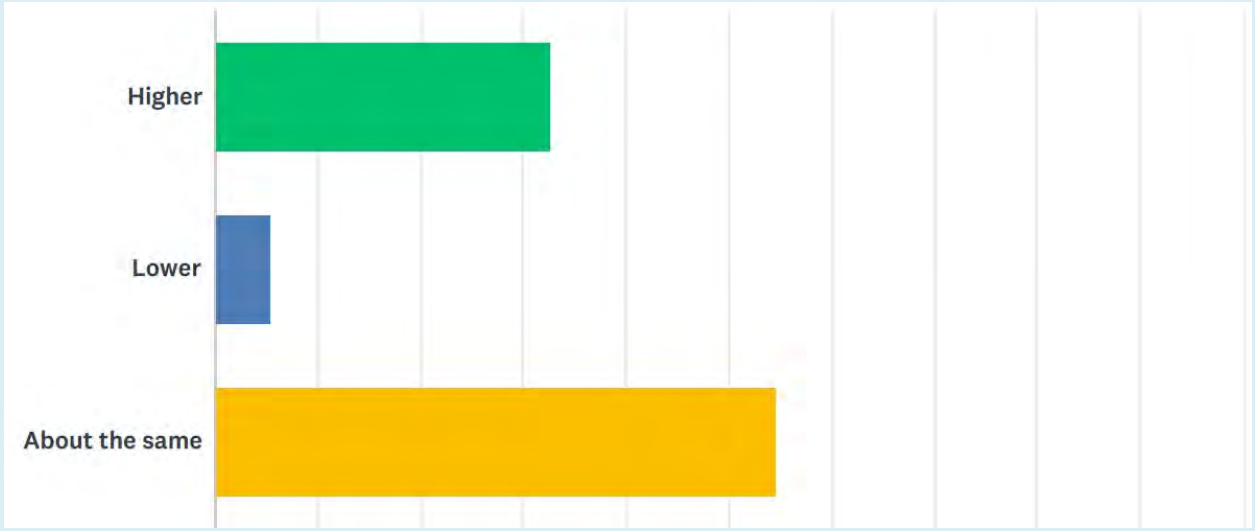
2019 BAS Demand



Likely reasons for lower usage in some facilities was related to damage and flooding from high water levels

Operator Trends Analysis - BAS

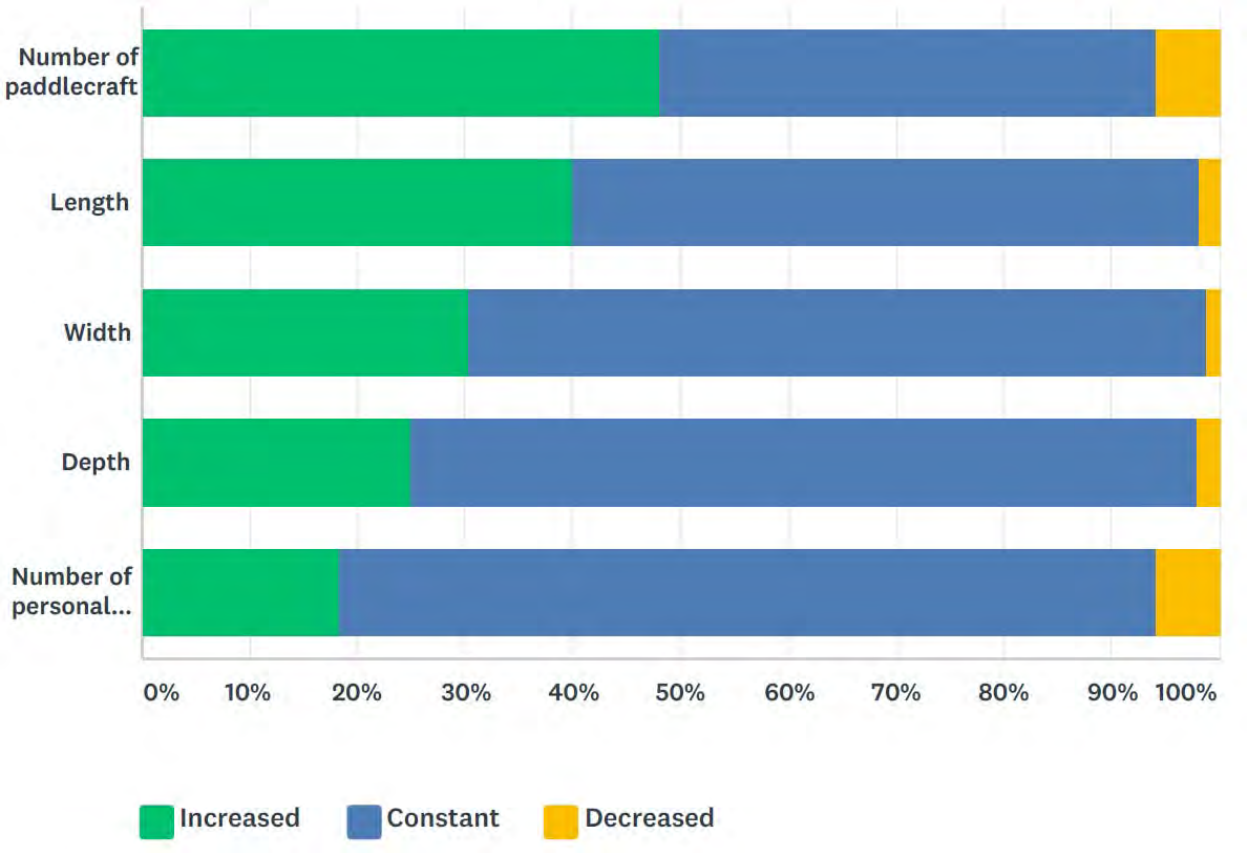
BAS Demand Five Year Trend



Likely reasons for higher usage in some facilities was related to recent facility renovations and higher water attracting more boaters.

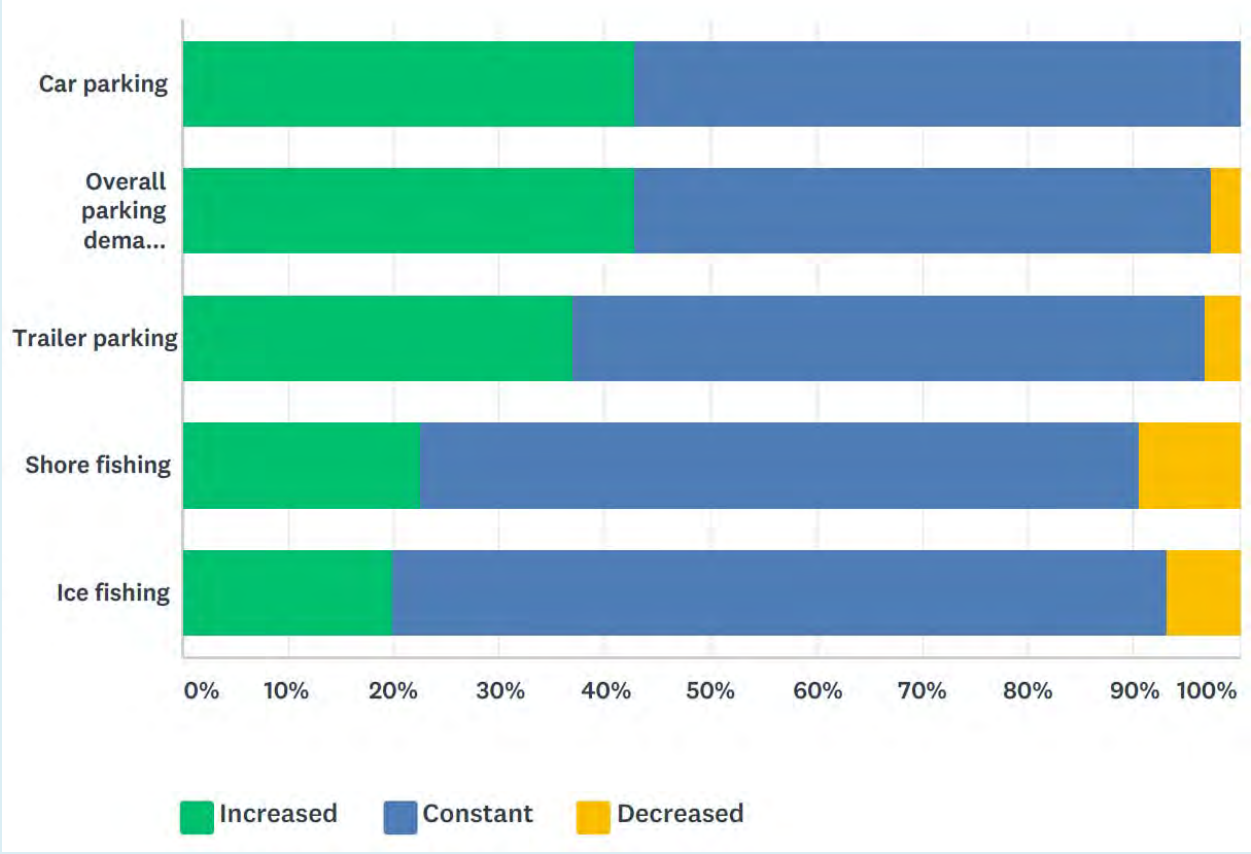
Operator Trends Analysis - BAS

BAS Changes in Boats



Operator Trends Analysis - BAS

BAS Changes in Use of Facilities

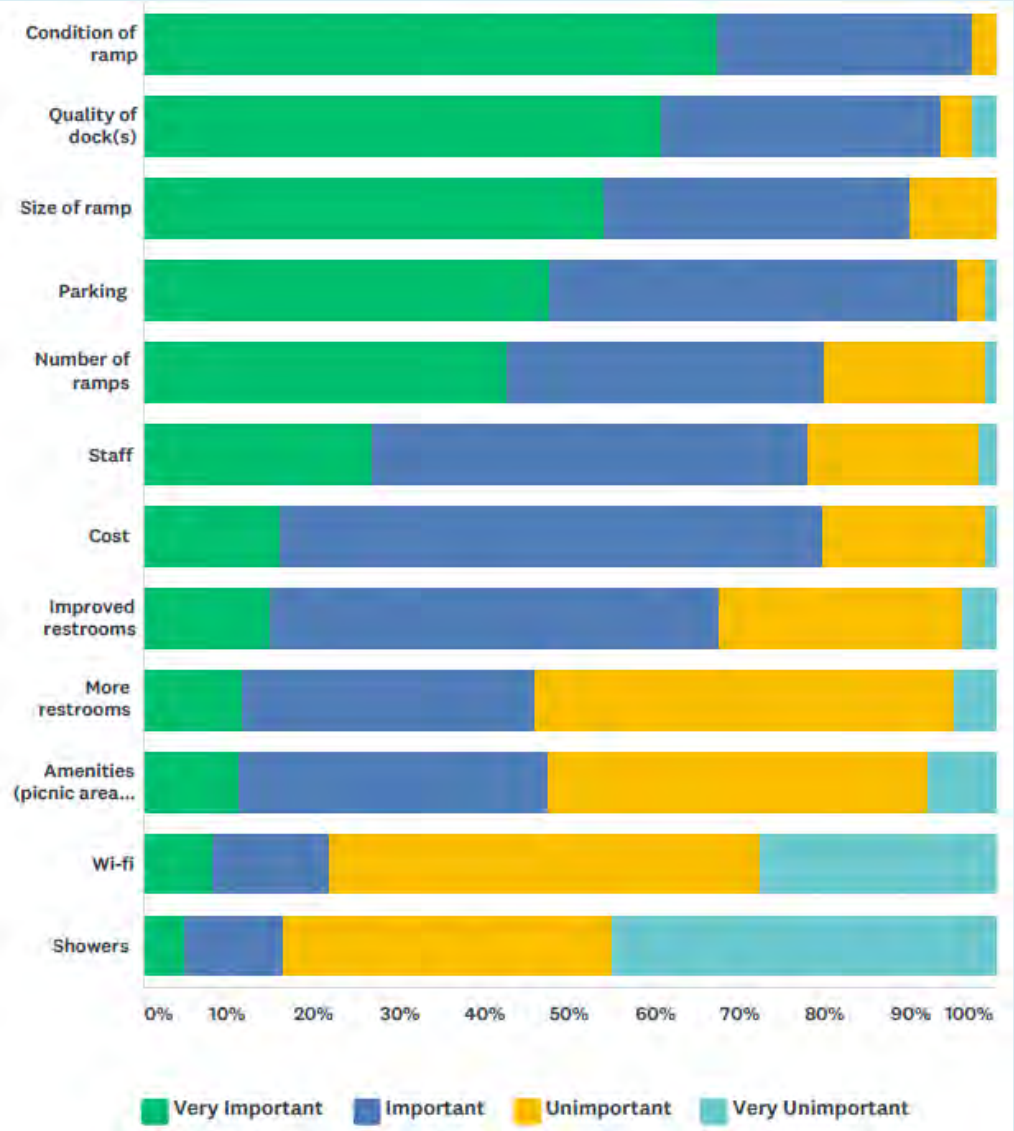


Operator Trends Analysis - BAS

BAS Changes

Importance

To Boaters



Operator Trends Analysis - BAS

Operational Challenges

- Finding, Hiring, and Retaining Qualified Staff
- Funding
- Traffic / Congestion
- Parking Capacity
- Conflicts Between Trailers and Car Toppers
- Condition of Parking Lots
- Bird Droppings

Operator Trends Analysis - BAS

Most Important Operational Change Needed

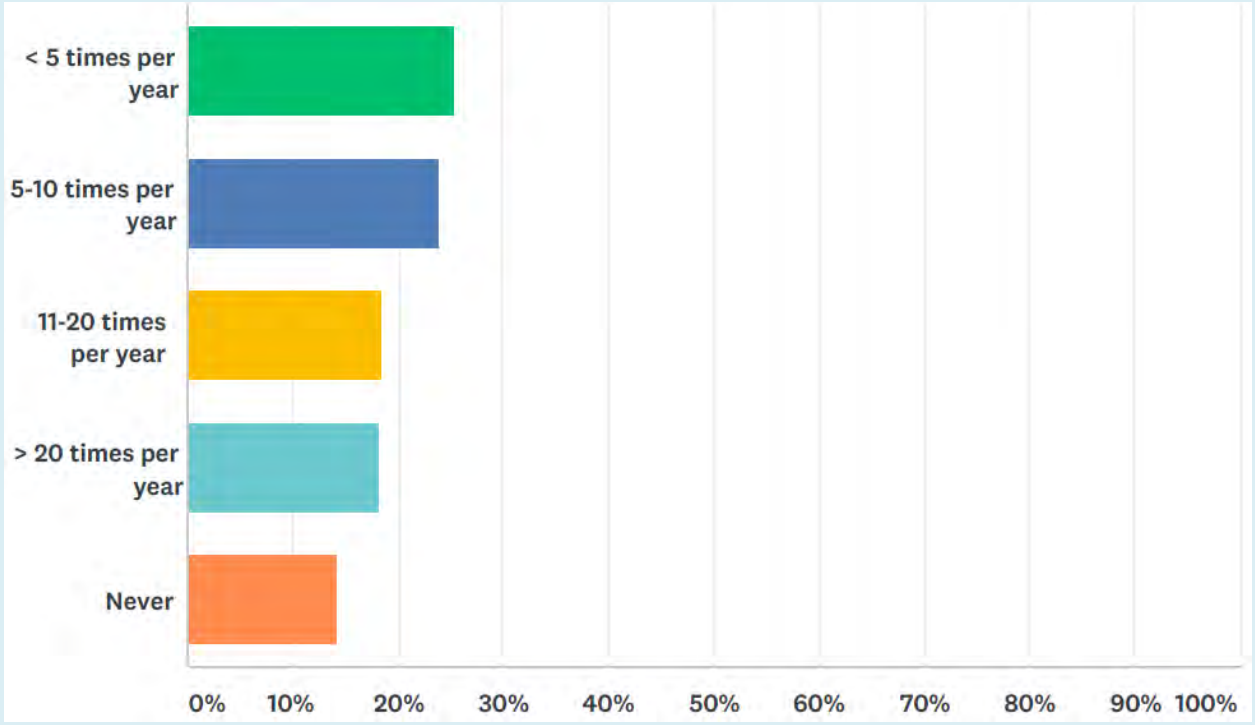
- Increasing the number of staff, improving training, and raising staff pay to attract more and better employees
- Automated Pay Stations

Most Important Infrastructure Change Needed

- More Parking Overall
- More Parking for Vehicles Without Trailers
- Updating Facilities
- Resurface Roads and Parking Lots
- Dedicated Paddlecraft Launch Facilities (ADA)

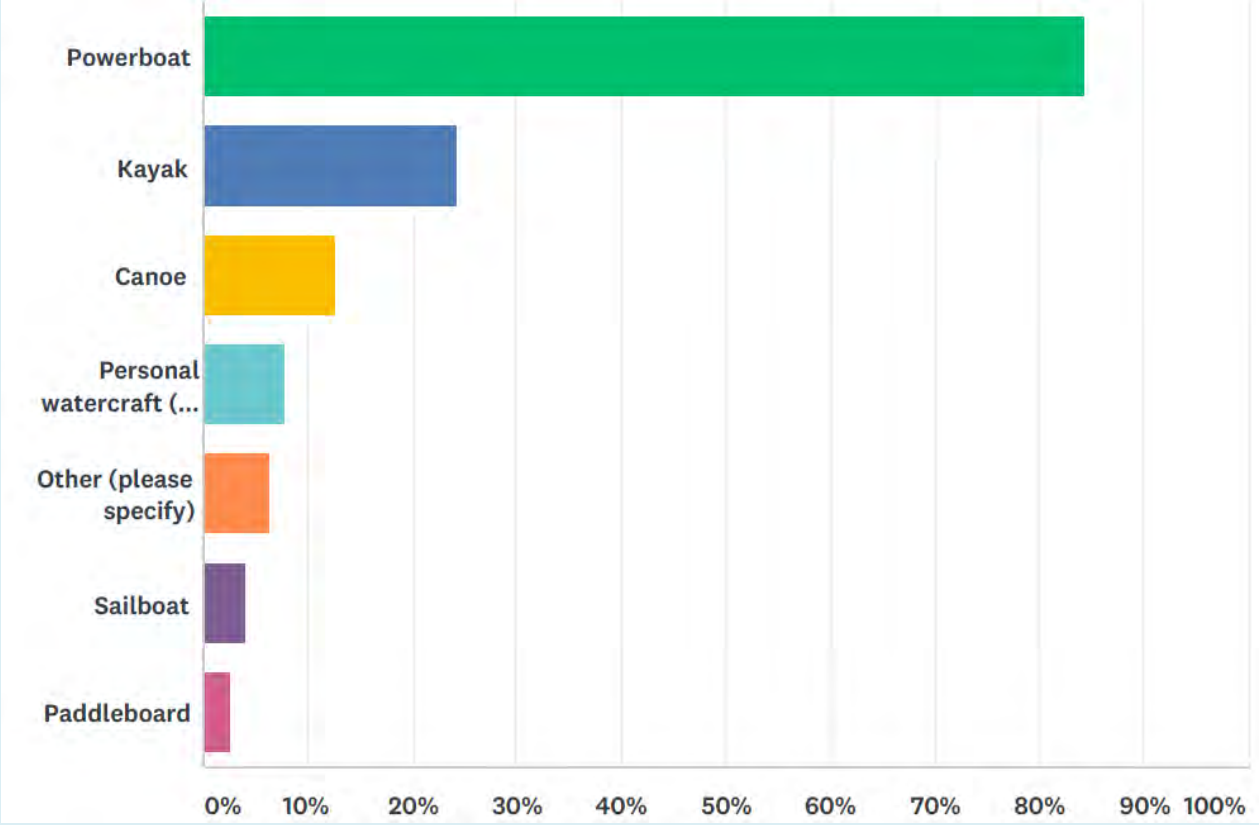
Boater Trends Analysis

BAS Frequency of Use



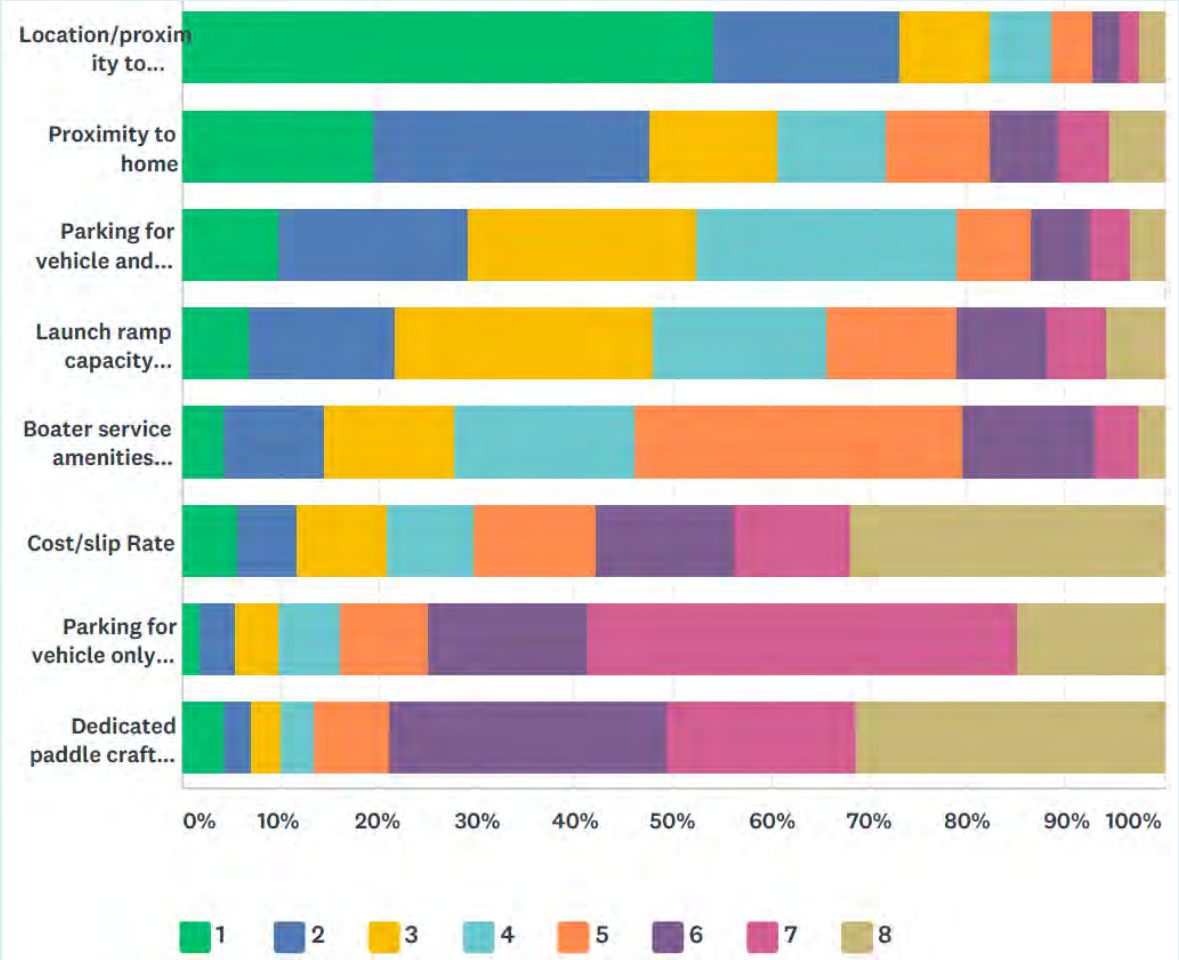
Boater Trends Analysis

BAS Boat Type



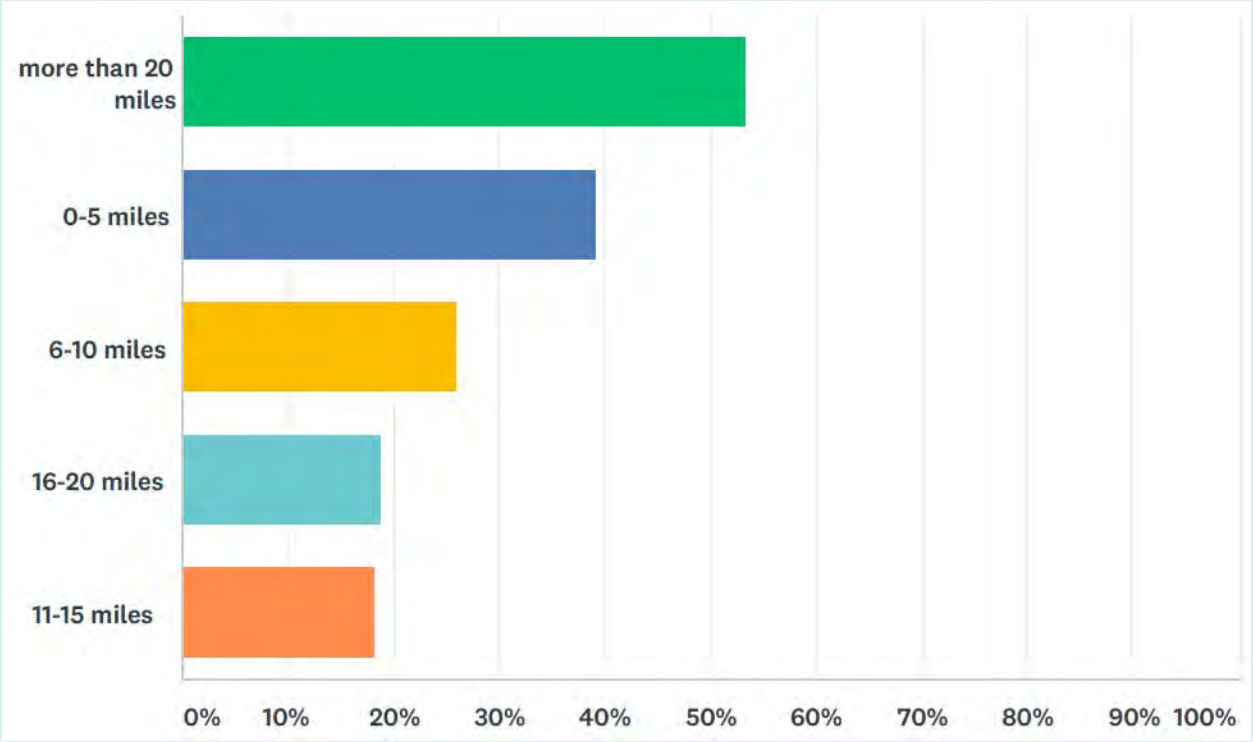
Boater Trends Analysis

BAS Preference Criteria



Boater Trends Analysis

Distance Driven to BAS



Boater Trends Analysis

Most Important Improvements to BAS Facilities

- Increasing the length of docks
- 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 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

Operator Trends Analysis – Locks & Dams

Trends

- Primary Focus Remains on Navigation and Water Level Management Functions
- No Landside Recreational Amenities Currently Provided
- No Documented Significant Changes in Boat Size or Demand
- No Records Kept on Number of Boats Using the Facilities
- Cheboygan's Major Issue is Water Level Management
- Alanson's Major Issue is Maintenance

Waterways Facilities Assessment

Harbor Design Strategies

Boater Trends Analysis

Name the Best Harbor In Michigan

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

Why Do Boaters Prefer the Harbors They Do?

- *Proximity to a Really Special Town to Visit*
- *Shops and Restaurants*
- *Quality of Staff and Level of Customer Service*
- *Quality of Marina Facilities*
- *Location of Harbor Near Home*

Planning and Development Guidelines

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

Lexington State Harbor / BAS


A
B
C
D
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N

Planning and Development Guidelines

Accessibility Design Principles

- Make boating accessible to everyone, regardless of age, income, or abilities
- Go beyond ADA to make boats accessible, not just docks
- Encourage boat rentals and the “sharing economy” to lower the cost of boating and make boating easier for newcomers


KEY WEST
SUZUKI

Planning and Development Guidelines

Market Based Design Principles

- Recognize 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
- Construct and renovate facilities in phases where necessary based on measured, actual market demand
- Consider more flexible broadside mooring, especially for transient facilities

Planning and Development Guidelines

Resilience Design Principles

- Prepare for increasingly volatile water level fluctuations
- Utilize floating docks where appropriate 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
- Incorporate natural shoreline and habitat features where possible
- Incorporate Michigan Clean Marina standards and certify all public harbor facilities

Planning and Development Guidelines

Expanding Boating Access 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

Planning and Development Guidelines

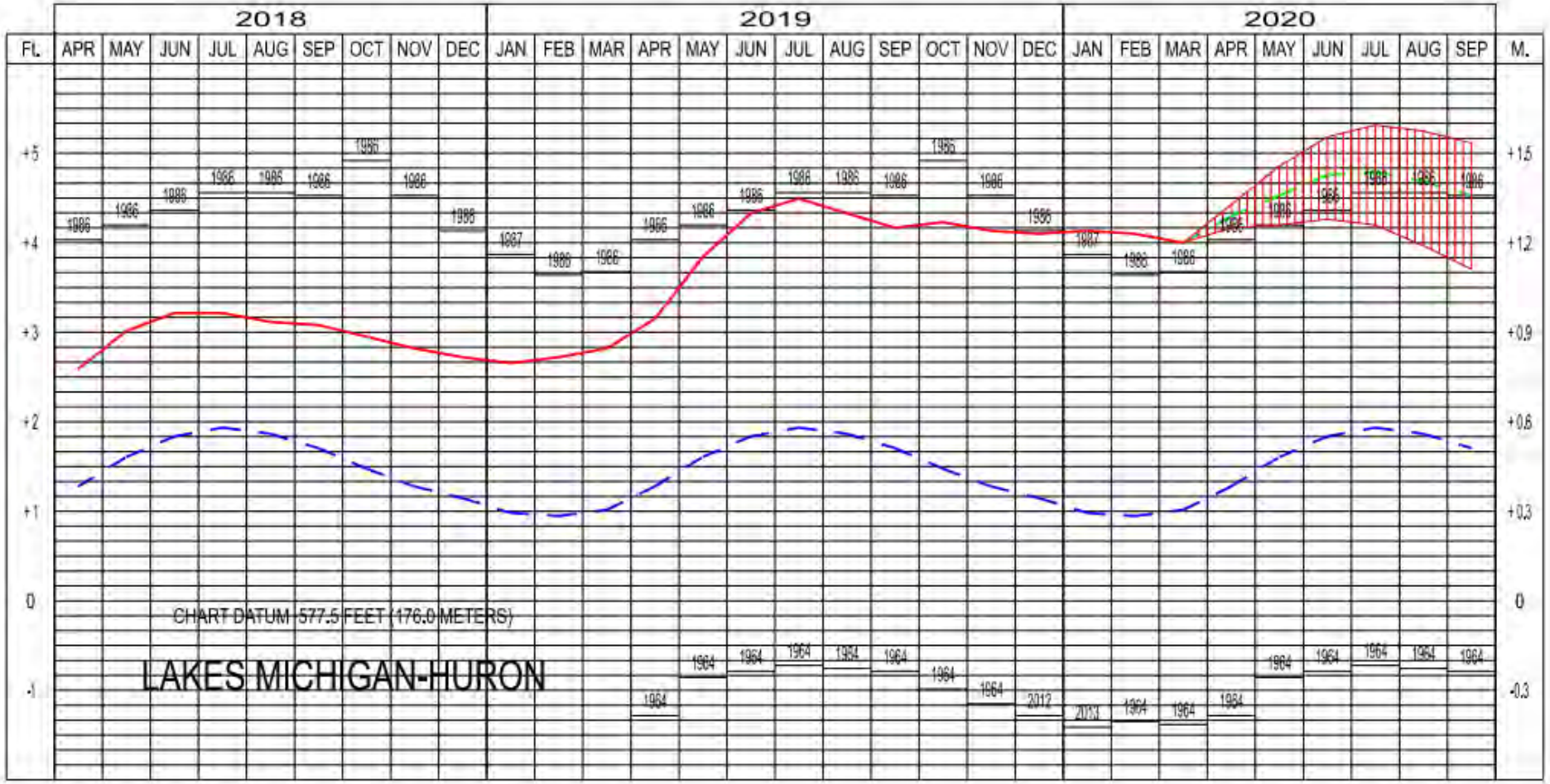
Expanding Boating Design Principles

- 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
- Expand opportunities for youth sailing and boating classes

Waterways Facilities Assessment

High Water Impacts

LAKES MICHIGAN-HURON WATER LEVELS - APRIL 2020



LEGEND

LAKE LEVELS

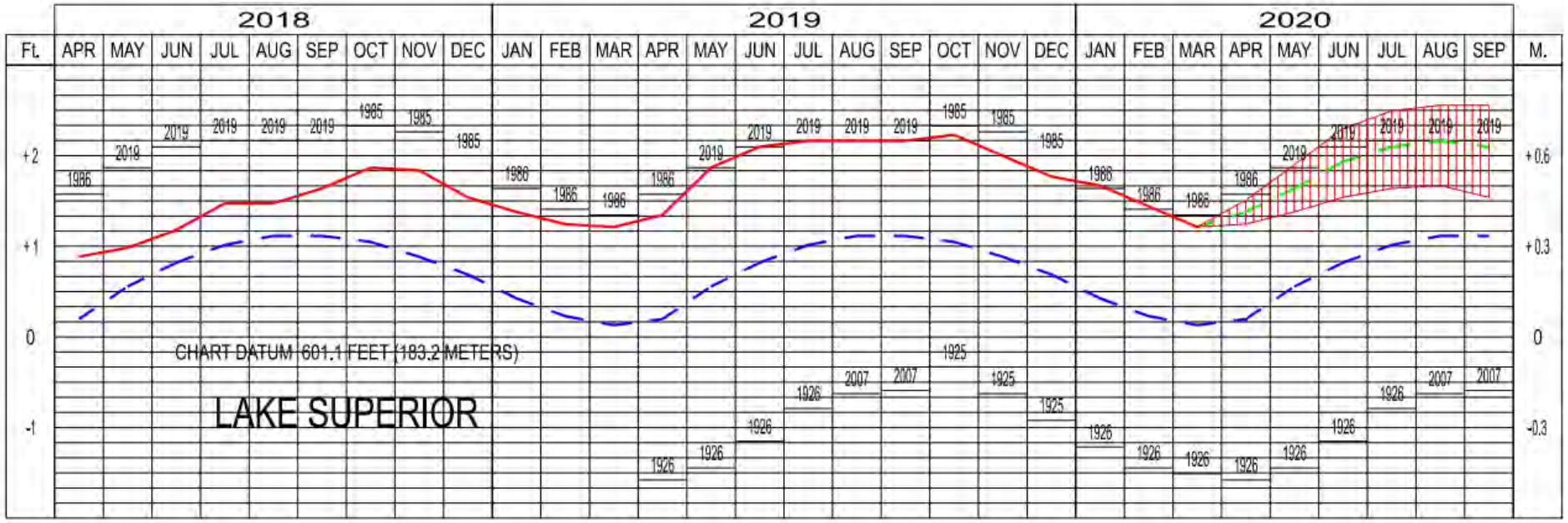
RECORDED

PROJECTED

	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
AVERAGE **									
MAXIMUM **	1965	1985	1973	1973					
MINIMUM **	1936	1934	1926	1934					

** Average, Maximum and Minimum for period 1918-2019

LAKE SUPERIOR WATER LEVELS - APRIL 2020



LEGEND

LAKE LEVELS

RECORDED

PROJECTED

AVERAGE **

MAXIMUM **

MINIMUM **

	APR	MAY	JUN	JUL
MAXIMUM **	1985	1985	1973	1973
MINIMUM **	1936	1934	1926	1934

** Average, Maximum and Minimum for period 1918-2019

Climate and Regulatory Factors - 2013

- *"It is still unclear how much of the recent trend in lake levels may be attributed to climate change."*

- *"Future projections of lake levels for the Great Lakes vary, though most indicate a greater decline…with increasing greenhouse gasses."*

GLISA – Great Lakes Integrated Sciences & Assessments Center

Climate and Regulatory Factors - 2019

- *It is now clear that a pattern of wetter spring weather has more than offset increased evaporation*

- *Future projections for the Great Lakes now suggest greater volatility in water levels from historic highs to lows, with less suggestion of significantly higher highs or lower lows*

  NOAA and USACE June 2019

Waterways Facilities Assessment

Funding Strategies

Strategic Planning

Projected Costs By 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**

Strategic Planning

Historic and Projected Capital Outlay

Parks and Recreation Division Projected Capital Outlay Appropriations
(State approp. + Federal approp. = Total)

- FY20 $10,000,000 + $1,075,000 = $11,075,000
- FY19 $8,500,000 + $1,718,000 = $10,218,000
- FY18 $8,500,000 + $1,075,000 = $9,575,000
- FY17 $5,000,100 + $1,075,000 + $4,800,000 (state supplemental) = $10,875,100
- FY16 $4,575,000 + $2,145,500 + $100,000 (federal funding supplemental) = $6,820,500

Strategic Planning

Projected Funding Shortfall

Assuming $11,075,000 in Capital Budgets in Today's Dollars:

FY2020-2024 $25.6m Cost	$13.95 Million Yearly Shortfall
FY2025-2029 $48.4m Cost	$35.3 Million Yearly Shortfall
FY2030-2040 $38.6m Cost	$22.8 Million Yearly Shortfall

Potential Shortfall Response Strategies

- Increase State Funding
- Increase Federal Grant Funding
- Increase Revenue Generation
- Increase Partnerships / Cost Sharing
- Grant-in-Aid Revenue Sharing
- Offer No/Low Interest Loans Instead of Grants
- Decrease Capital Costs
- Improve / Increase Staffing
- Reduce the Number of Facilities

Funding Strategies

- Modernize Registration System
  - Register Paddlecraft (650,000 estimated) $5 each = $3.25 million
  - Register Pontoon Boats as Powerboats (55,515 estimated) avg. $23 increase to $78.50 = $3 million
- Increase Slip / Launch Fees?
  - Is $11 Rec Passport Realistic?
  - Parking Fees?
- Increase Registration Fees?
- Individual Power Metering?
- Wi-Fi Subscriptions?
- New Revenue Generation?

Funding Strategies

- Modernize Registration System
  - Pontoon Boats 1/3 Powerboat Market
  - 55,515 Pontoon Boats = +$3 million if Powerboats


$9
77724


$9
6246


$0
Events

Registration Revenue Summary

- Registration Rates Not Increased Since 1993
  - Inflation Since 1993 = 82.32%, or 25% of 0-5 year shortfall
- Modernize Pontoon Boat Classification
  - 27% of 0-5 year shortfall
- Register Paddlecraft Like Minnesota and Ohio
  - 25% of 0-5 year shortfall

Long Term Funding Strategies

- Harbor Maintenance Trust Fund
  - 1% of All Revenues from All Facilities Fund Improvements at Harbor of Refuge / Remote Facilities
- Grant-in-Aid Contribution
  - 1% of Gross Revenues to Harbor Maintenance Trust Fund

Long Term Funding Strategies

- Market Rates
  - Increase Rates at High Demand Facilities Until Waiting List Drops to 10% of Capacity
    - Clinch Marina has 119 Slips, With 250 Names on the Waiting List
    - Elmwood Township Marina has 171 Slips, with 130 Names on the Waiting List
    - Leland? Mackinac Island?
- Loans vs Grants
- Public Private Partnerships
- New Revenue Generating Opportunities
  - Paddlecraft Rental
  - Boat Rental

Long Term Funding Strategies

- Public Private Partnerships
- New Revenue Generating Opportunities
  - Paddlecraft Rental
  - Boat Rental

Guiding Principles

- Health, Safety, and Welfare
  - Harbor of Refuge System is Paramount, Maintain the Goal of Maximum 15 miles to Harbor of Refuge
  - Facility Safety – ESD Upgrades, ADA Compliance
- Economic Impact To Community
  - Consider the Economic Value of the Harbor Relative to the Location
- Partnership and Contribution to the Waterways System
  - Grant Match Requested
  - Loan vs Grant?
  - % of Gross to Waterways Program
- Economic Viability
  - Will Investment Improve Financial Performance and Occupancy?

Waterways Facilities Assessment

Grant Funding Opportunities

Grant Funding Opportunities

- Waterways Program Grants
  - High Water Damage Emergency Repair Grants
- USFWS Boating Infrastructure Grants (BIG)
- Clean Vessel Act (CVA) Grants
- Michigan Natural Resources Trust Fund Grants
  - Land Acquisition
  - Construction
- Recreation Passport Grant
- Land and Water Conservation Grant
- Coastal Zone Management Grant

Waterways Facilities Assessment

Next Steps

- Collaborate with local communities who own Grant-in-Aid boating facilities to confirm strategies to address the identified needs.
- Refine the critical project list to ensure alignment with current available funding.
- Review options to ensure that cost-effective solutions are pursued to address the aging infrastructure needs.
- Ensure that recreational boating needs and trends are considered to ensure “sustainable contraction” principles are applied.
- Maximize strategies to leverage existing funds.
- Assess options to enhance revenue to address the future projected needs

Waterways Facilities Assessment

gweykamp@edgewaterresources.com

www.Michigan.gov/dnrwaterways