



MICHIGAN DEPARTMENT OF NATURAL RESOURCES



An aerial view of the beach shelter and shore line of Indian Lake. Photo credit: Tyler Leipprandt and Michigan Sky Media LLC

Indian Lake State Park

GENERAL MANAGEMENT PLAN

APPROVED JULY 22, 2024

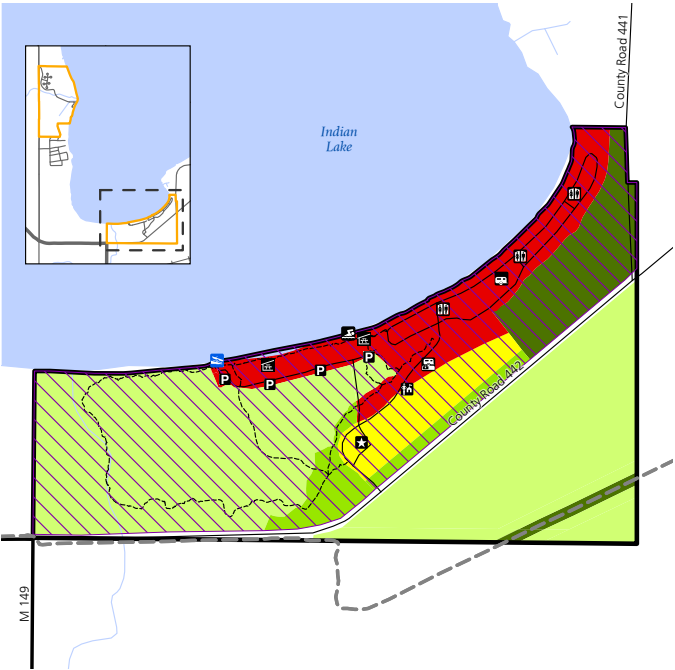
Prepared with the assistance of Beckett & Raeder, Inc

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INDIAN LAKE STATE PARK GENERAL MANAGEMENT PLAN
Management Zones - West Unit
Date: 9/1/2023 Beckett&Raeder

Indian Lake State Park Boundary	Parking Lot	Primitive
State Roads	Carry-down Boating Access	Natural Resource Recreation
Roads	Contact Station	
Trails	Campground	
Rivers / Streams		
Lakes		



INDIAN LAKE STATE PARK GENERAL MANAGEMENT PLAN
Management Zones - South Unit
Date: 2/19/2024 Beckett&Raeder

Indian Lake State Park Boundary	Hiking Trail	Boating Access	Primitive
State Roads	Snowmobile Trail	Beach	Natural Resource Recreation
Roads	Parking Lot	Restroom	Backcountry
Rivers / Streams	Contact Station	Picnic Shelter	Developed Recreation
Lakes	Park Headquarters		Administrative Services
	Sanitation Station		Cultural Landscape Overlay
	Modern Campground		

This project was directed by Deborah Jensen, Management Plan Administrator, Department of Natural Resources, DNR Parks & Recreation Division with assistance from Beckett & Raeder, Inc.

PLAN APPROVALS:



DNR Chief, Parks & Recreation Division



DNR Natural Resources Deputy



DNR Director, Department of Natural Resources

7/17/2024

Date

7/19/2024

Date

7/22/2024

Date

PLAN APPROVALS

PLAN APPROVAL RECOMMENDATIONS

The following dates reference when the plans were presented for recommendation. In some instances, additional time was allotted for plan review following the presentation with subsequent approval received by email.

APPROVAL BODY`	APPROVAL DATE
PRD - Section Chiefs	3/12/2024
DNR- Resource Management Bureau	4/16/2024
MSPAC- Stewardship Subcommittee	5/22/2024
NRC- Michigan State Parks Advisory Committee	6/13/2024

RESOLUTION NO. 06-2024-03**MICHIGAN STATE PARKS ADVISORY COMMITTEE (MSPAC)****RESOLUTION TO RECOMMEND APPROVAL OF THE
“INDIAN LAKE STATE PARK GENERAL MANAGEMENT PLAN”****ADOPTED: June 13, 2024**

WHEREAS, the Michigan Department of Natural Resources’ (DNR) Parks and Recreation Division has completed the General Management Plan for Indian Lake State Park; and

WHEREAS, the planning process reflects sensitivity to natural resource values, historic and cultural resource values, recreation and education opportunities, and is inclusive of all DNR programs and representative of eco-management; and

WHEREAS, the planning process was further inclusive of stakeholder, constituent, and public input; and

WHEREAS, the General Management Plan represents sound guidance for future planning phases that will be consistent with the mission of the DNR and the Parks and Recreation Division, and reflective of the purpose and significance of Indian Lake State Park; and

WHEREAS, the General Management Plan is consistent with the recommendations of the Michigan State Parks and Outdoor Recreation Blue Ribbon Panel and the Parks and Recreation Division’s strategic plan; and

WHEREAS, the General Management Plan has been reviewed and recommended for approval by the Parks and Recreation Division and the MSPAC Stewardship Subcommittee.

THEREFORE, BE IT RESOLVED, that the Michigan State Parks Advisory Committee recommends approval of the Indian Lake State Park General Management Plan; and

THEREFORE, BE IT FURTHER RESOLVED that the Michigan State Parks Advisory Committee further recommends that the DNR Director approve the General Management Plan for Indian Lake State Park;

Submitted by: Michigan State Park Advisory Committee

Motioned by: Chris Graham
Seconded by: Chuck Nelson

Yeas:	10
Nays:	0
Abstained:	0
Absent:	2

This Resolution was adopted by the Michigan State Parks Advisory Committee at their meeting on June 13, 2024, as Resolution No. 06-2024-03.

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A child walks down a wooded trail. Photo credit: DNR Photo Ambassador Jamie Ball



Stone steps and terraced retaining walls on the shoreline of Indian Lake

General Management Plan Executive Summary

Indian Lake State Park is a 567-acre park in Thompson Township, Schoolcraft County, in the Upper Peninsula of Michigan. It is located on the shores of Indian Lake, providing campers with water access to the fourth largest inland lake in the U.P. The park consists of two separate units, providing both modern and semi-modern overnight experiences as well as mini cabins. Visitors enjoy beachgoing and boating, hunting and fishing, gathering with friends and family at historic CCC-constructed shelters, and visiting area attractions such as the nearby Palms Book State Park with the iconic Big Spring, known as Kitch-iti-iki.

The purpose of this general management plan (GMP) is to guide the future long-term management and development of Indian Lake State Park. Overall, this plan seeks to uphold the Michigan Department of Natural Resources (DNR) Parks & Recreation Division's (PRD) Mission: "to acquire, protect, and preserve the natural and cultural features of Michigan's unique resources, and to provide access to land and water based public recreation and educational opportunities." The management plan brings together DNR staff, stakeholders,

and the public into a process that defines the following for the state park:

- Purpose and significance that captures the unique identity of Indian Lake State Park.
- Twenty-year management zone plan reflecting the resource protection goals and level of development appropriate for different areas of the state park.
- Ten-year action plan that addresses the desired future condition within the state park as a whole and within each of the designated management zones.

The supporting analysis, included as Appendix A of this plan, provides important background information on Indian Lake State Park that informs this planning initiative. It includes a comprehensive review of the state park setting, area demographics, history, land ownership, legal mandates, and cultural, natural, and recreation resources. Furthermore, several existing planning documents, including the DNR Evergreen Goals and the Michigan Statewide Comprehensive Outdoor Recreation Plan, were used as guiding references (see Chapter One).

Significance of Indian Lake State Park

This general management plan was developed in consideration of the property's significant features that make it distinct from other parks in the state park system. Indian Lake State Park was determined significant due to the aspects that are summarized below. The full statements of significance can be found in Chapter Three.

- Indian Lake State Park's modern south campground unit and adjacent day-use area is a popular destination for gatherings of family and friends who return year after year.
- Indian Lake, the fourth largest inland lake in the Upper Peninsula, is excellent for swimming, boating, fishing, and other water sports and is a highlight of the park experience.
- Indian Lake State Park is a jumping-off point to explore nearby Upper Peninsula attractions such as Palms Book State Park, many natural wonders and historic sites the area has to offer, including state and federal land with abundant recreation opportunities.

- The park features stunning and unique stone- and log-built beach and picnic shelters constructed by the Civilian Conservation Corps which are significant examples of CCC-era architecture.
- Indian Lake State Park benefits from a very active friends group, The Friends of Indian Lake and Palms Book State Parks, who fundraise for the park and facilitate events.
- A wooded dune and swale natural community is located in the South Unit of the park, which is part of a larger complex that expands into the surrounding region. This area is also considered a Special Conservation Area focused on natural resource protection.

Management Zones

A key goal in the development of this general management plan is to continue to protect the park's natural and cultural resources, while providing recreation and education opportunities. Taking this into account, the planning team, with stakeholder and public input, established appropriate management zones for the park from a palette of nine standard zones. The management zone map and a thorough



Visitors to the campground gather on the stone retaining walls to watch a sunset

review of each management zone are found in Chapter Four of this plan. A condensed description of each of the applied management zones is as follows:

Primitive Zone

The primary purpose of the Primitive Zone is the protection of natural resources and natural processes. The zone is managed for low-impact recreational experiences in a primitive, natural landscape. Only dispersed, self-reliant, and low-frequency use is allowed. Attaining and maintaining a high-quality natural resource condition dictates the extent to which recreational improvements or uses are allowed. This zone covers 43% of the park and includes sensitive low-lying wetland areas in the park, including the dune and swale complex in the South Unit.

Backcountry Zone

The character of this zone is natural, with minimal evidence of human impact through recreational use. While the Primitive Zone is highly restrictive for recreational use and human impact, this zone allows for slightly increased use, including bicycle and equestrian use if appropriate, and modifications of the landscape (e.g. trail development) to accommodate that use. This zone covers 2% of the park and includes upland areas of the South Unit along County Road 442 and west of the park entrance road.

Natural Resource Recreation Zone

The Natural Resource Recreation zone supports active recreation conducted in a natural setting with medium to high-density use. There is an emphasis on resource quality over recreation, but moderate to high levels of use may be accommodated. This zone covers 45% of the park and includes the snowmobile trail south of the county road and wooded area east of the campground in the South Unit, and the upland portions and day use area of the West Unit.

Developed Recreation Zone

The Developed Recreation Zone supports active recreation with high density of use conducted in areas not designated for natural resource significance. In this zone, recreation dominates with natural resource attributes enhanced as possible. This zone is approximately 7% of the park and includes the campground, day use area, and boat launch in the South Unit.

Administrative Services Zone

This zone encompasses the developed areas required for program administration and operations. Typically, it will include offices, contact stations, maintenance facilities and all

related land base required to conduct the business of running a state park or park. This zone covers 3% of the park and includes the park headquarters, shop area, service yard, and wastewater lagoon.

Cultural Landscape Overlay

This zone addresses the overall cultural setting of a site, including historic structures and ethnographic sites. For example, a location associated with a particular cultural resource, such as an abandoned mine townsite representative of a bygone era, would qualify as a Cultural Landscape Zone. In this park, the Cultural Landscape Zone is used as an overlay (sub-set) of the management zones, and as such, the guidance for the underlying zone will also apply. The cultural landscape zone covers 33% of the park and includes the possible area of the Civilian Conservation Corps camp at the park in the South Unit.

Ten-Year Action Plan

Once the planning team has established management zones to guide Indian Lake State Park for the next 20 years, action steps are identified that are desired to be implemented within the next ten years. The actions are broken down into categories pertaining either to an area of management and operations, infrastructure/development projects that require capital outlay, small infrastructure and development projects, or partner projects. Future improvements will be considered in the context of efficiency, environmental sustainability, and resiliency. Below is a summary of the action plan for the park. The full ten-year action plan can be found in Chapter Five.

Management and Operations

Projects related to the management and operations of the park include invasive species detection and removal efforts, continuing to explore land acquisition of properties within the Project Boundary, completing a natural resource stewardship plan, analyzing the options for the future of the West Campground, acquiring approval for funding of a park supervisor position, determining the appropriate re-use of the historic contact station, revising the areas of the park open to metal detecting, and providing opportunities for education and interpretation.

Infrastructure and Development: Capital Outlay

Projects within the next ten years that require capital outlay funds to complete include the removal of three campground toilet/shower buildings and replacing them with two new buildings, replacing the water and sewer distribution systems, upgrading the sewage lagoon, relocating and upgrading the sanitation station, and implementing the next phase of the shoreline stabilization plan. These projects are funded by the

EXECUTIVE SUMMARY

American Rescue Plan Act (ARPA), which provided \$250 million in federal relief programming for critical state park and trail infrastructure through the Building Michigan Together Plan, signed into law in March 2022. Federal funding conditions require these projects to be completed by the end of 2026. In addition, infrastructure upgrades such as replacing the vehicular bridge deck to the day-use area in the West Unit, resurfacing the shoreline trail between the beach shelter and the picnic shelter, replacing the headquarters building, and repurposing or removing the former park manager's residence are also included in the action plan.

Infrastructure and Development: Small Projects

Small projects for the park would improve the accessibility of the stone picnic shelter, correct roof leaks in the beach shelter, improve the trails in the South Unit to address wet areas, and naturalize and stabilize the shoreline at the West Campground day use area and add a small sandy beach.

Partner Projects

One project that could be completed with the assistance of the Friends of Indian Lake and Palms Book State Parks is to develop an accessible playground to be shared between day users and campers in the South Unit.



A campfire burns at a lakeside campsite as the sun sets



The day use area's stone picnic shelter with visitors enjoying a meal outdoors

Chapter One:

Core Values & Guiding Resources

1.1 Mission Statements

Throughout the planning process, the core values of the Department of Natural Resources (DNR) were the foundation of the planning team's decisions. These include the mission statement of the DNR, the DNR Evergreen Goals, and the DNR Parks & Recreation Division (PRD) Mission Statement. These values set the protection of natural and cultural resources and the provision of recreational and educational opportunities at the forefront of the plan.

DNR Mission Statement

The Michigan Department of Natural Resources is committed to the conservation, protection, management, use, and enjoyment of the state's natural and cultural resources for current and future generations.

DNR Evergreen Goals

- **Protect** natural and cultural resources
- **Ensure** sustainable recreation use and enjoyment
- **Enable** strong natural resource-based economies
- **Foster** effective business practices and good governance
- **Improve** and build strong relationships and partnerships, internally and externally

PRD Mission Statement

The Parks & Recreation Division's mission is to acquire, protect, and preserve the natural and cultural features of Michigan's unique resources, and to provide access to land and water based public recreation and educational opportunities.

1.2 Guiding References

The general management planning process is guided and shaped by several resources developed to provide recommendations for managing Michigan's parks and recreation system. In particular, these resources have helped shape the ten-year action plan established in this plan.

Michigan State Parks & Outdoor Recreation Blue Ribbon Panel Report (2012)

The Blue Ribbon Panel's report to Governor Snyder identifies a number of recommendations for system-wide changes to programs, management, infrastructure type, and investment strategies that set up the visionary framework for the next 30-50 years of park and outdoor recreation management in Michigan. Recommendations in the report include:

- Identify and protect important natural, cultural, historic, and prehistoric resources

- Diversify funding
- Prioritize development of statewide and regional systems of connected trail networks
- Encourage connections between communities and their recreational assets to strengthen regional identities
- Integrate tourism and economic development marketing
- Prioritize investment in parks and recreation

Michigan Statewide Comprehensive Outdoor Recreation Plan 2023-2027 (SCORP)

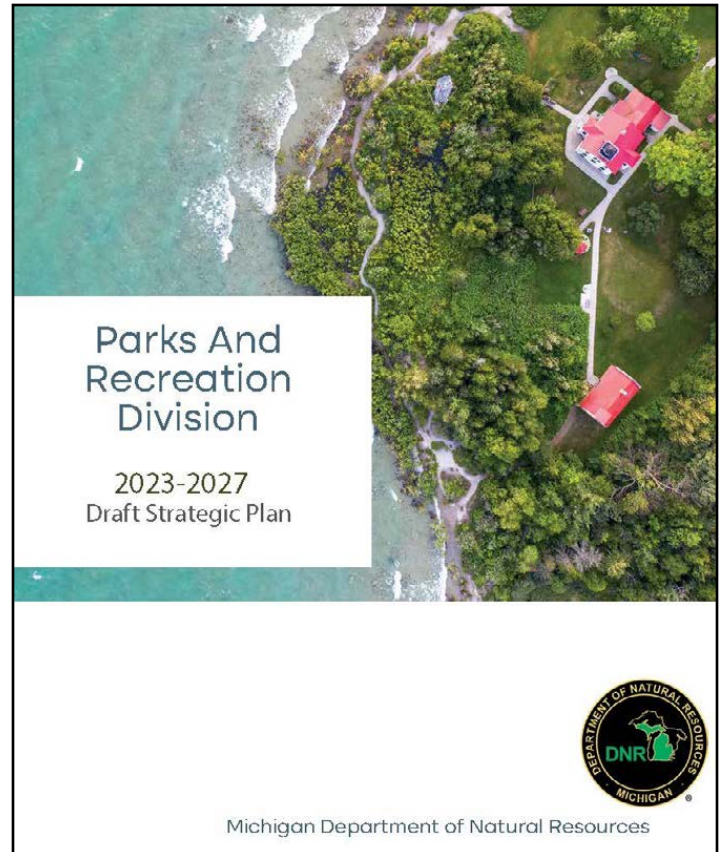
SCORP is a five-year strategic plan that shapes investment by the state and local communities in priority outdoor recreation infrastructure and programming. The plan's overarching goal is to "ensure that Michigan's outdoor recreation assets are equitably distributed, developed and managed to provide convenient and welcoming access to the outdoors for healthful, outdoor physical activity; and while sustaining our lands, waters and wildlife for current and future generations, drive broad-based economic and quality-of-life benefits to people and communities," with the following strategies:

- Improve collaboration: Outdoor recreation stakeholders collaborate and cooperate to ensure that Michigan's recreation system meets the needs of residents and visitors.
- Improve and expand recreational access: Recreation opportunities are connected and accessible to residents and visitors of all backgrounds, abilities, means and geographic locations.
- Enhance health benefits: Outdoor recreation increases the physical activity and health of Michigan's residents and visitors.
- Enhance prosperity: Outdoor recreation advances economic prosperity and supports a high quality of life as well as talent retention in Michigan's communities.

DNR Public Land Strategy – The Power of Public Lands (2021-2027)

The public land strategy provides a framework for the conservation and management of DNR-managed public land to ensure the best use of the state's natural and cultural resources for the benefit of Michigan residents and visitors. The strategy sets priorities and guides actions for the best use of the 4.6 million acres of state forests, parks, trails, game and wildlife areas, and other public lands the Michigan DNR is entrusted to manage on behalf of the people. The plan identifies three broad goals with strategies and measurable objectives for each goal. These goals are to:

- Protect natural and cultural resources
- Provide access to outdoor public recreation opportunities
- Perform responsible natural resource management



Michigan DNR PRD Strategic Plan Cover

PRD Strategic Plan (2023-2027)

The PRD Strategic Plan is the overarching document that guides the Parks and Recreation Division in carrying out its mission. This plan establishes long-range goals, objectives, and strategies for Michigan's state parks and recreation system for the 5-year period beginning in 2023. The goals identified in the plan are:

- Preserve, protect, maintain and restore Michigan's natural and cultural resources on PRD administered lands.
- Foster appreciation for natural and cultural resources by providing inclusive and diverse recreation and education experiences.
- Sustainably fund PRD programs, operations, maintenance and facilities.
- Integrate environmentally sustainable practices into PRD culture.

Michigan Department of Natural Resources Trail Plan (2022-2032)

The 2022-2032 Michigan DNR Trails Plan guides the direction of more than 13,400 miles of Michigan's diverse trail opportunities and lays out key goals to ensure these assets are sustained and remain relevant into the future. To further elevate Michigan's national reputation as the Trails State, the DNR will pursue the following goals over the next ten years:

- Sustainable maintenance and development: Manage Michigan's state-designated trails system to sustainably maintain and improve existing conditions while supporting the DNR's long-term natural and cultural resource management goals.
- Funding: Develop and refine funding structures to ensure state-designated trails provide quality recreation and transportation experiences.
- Planning and collaboration: Model trail planning best practices to maintain and improve strong relationships and partnerships with the public, stakeholders and other governmental agencies.
- Marketing, promotion and education: Promote Michigan's diverse trail opportunities to residents and visitors, accurately depicting experiences found throughout the state.

1.3 Summary of Legal Mandates

For all park general management plans, legal mandates are identified that serve to further guide the development of the plan, park management, and park operations. For the DNR's planning purposes, the term "Legal Mandates" refers to not only state law, but also the administrative tools of "Policy" and "Directive" of the Natural Resources Commission, the

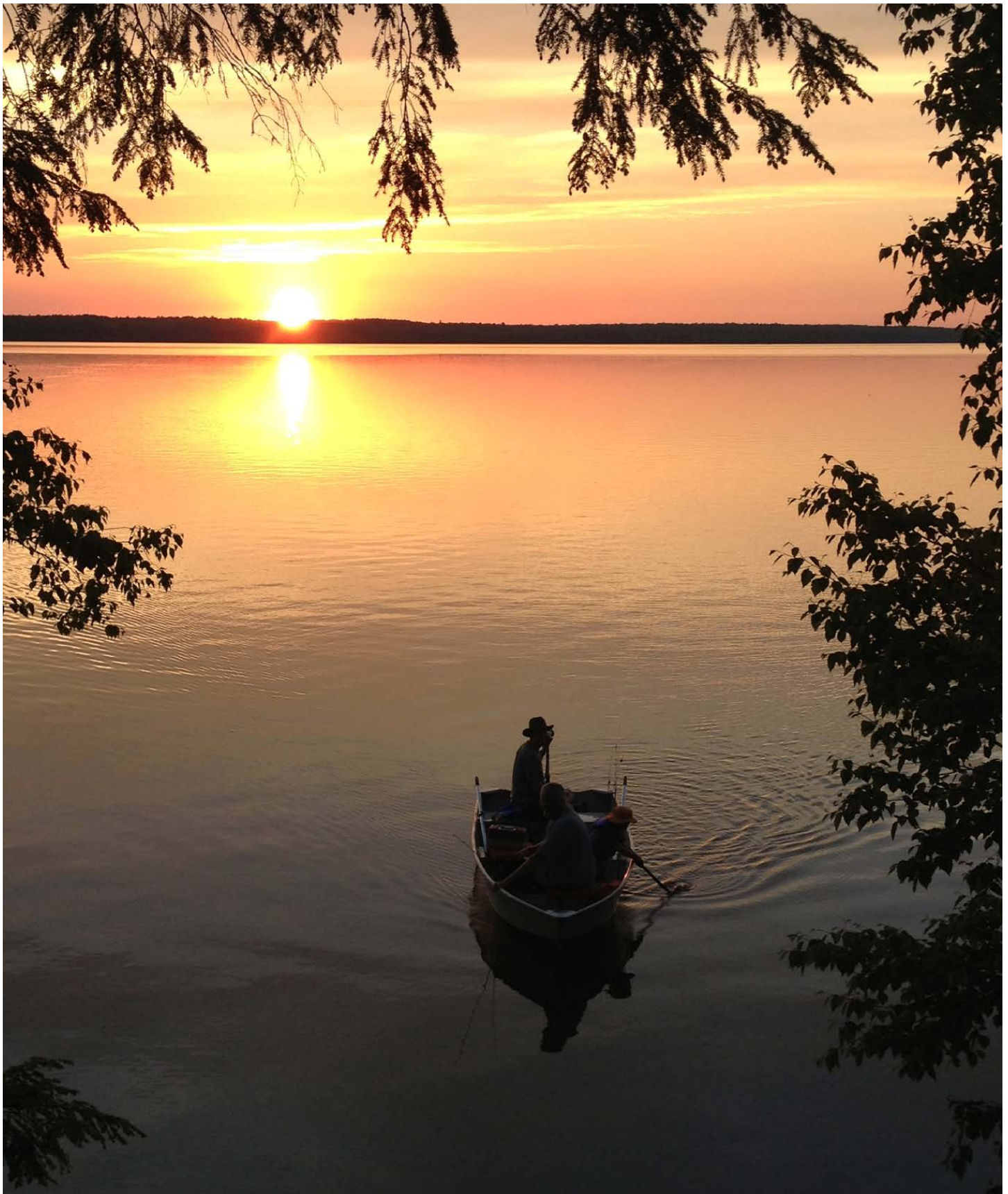
Department of Natural Resources, and the Parks & Recreation Division. The general and site-specific legal mandates applicable to Indian Lake State Park are listed in Appendix A: Supporting Analysis.

The legal mandates that most directly impact planning and management at Indian Lake State Park focus on the following areas:

- Federal mandates to provide accessible facilities
- Preservation of natural and cultural resources
- Water resources and wetlands protection
- Hunting area controls
- Requirement for a Recreation Passport for entry into the park
- Public health code requirements for campgrounds, swimming areas, and swimmers' itch



Michigan DNR Trails Plan Cover



A fishing boat glides toward shore as the sun sets on Indian Lake



A truck launches a pontoon boat at the Indian Lake State Park boat launch

Chapter Two: Plan Process Overview

2.1 Planning Objectives

Indian Lake State Park was established by a land swap, trading state-owned timber land for land owned privately by a lumberman during Michigan's lumber industry era. The land was prized for the sandy beach; the Indian Lake shoreline has remained a draw for visitors to this day. The campground provides a family-friendly gathering location as well as a jumping-off point for Upper Peninsula adventures. However, the park faces challenges due to aging infrastructure and increased visitation, prompting a need for planning for the future.

This general management planning process sets out a framework for protecting the park's resources while providing for meaningful visitor experiences. The long-range vision and management objectives for Indian Lake State Park are derived from the missions of the DNR and the Parks & Recreation Division (PRD), applicable legal directives, the purpose of the park, and the park's significant natural and cultural resources.

The objective of the general management plan (GMP) is to bring together PRD staff, staff from other resource divisions, stakeholders, and the public into a planning process that

defines and clarifies the unique purpose and significance of Indian Lake State Park. Collectively, those attributes will be reinforced in the planning and management decisions that impact the park. Through this process, the team creates a 20-year management zone plan to guide park planning decisions as well as a 10-year action plan to establish specific action strategies for the park. Each GMP is reviewed every five years to ensure there have been no major changes that would warrant a revision to the approved plan.

2.2 Planning Process

The planning team met periodically over a 16-month period to develop the GMP, beginning in October 2022 and ending in February 2024. Throughout the process, the team sought the input of the public and stakeholders to guide the decisions made in the plan. A stakeholder workshop was held in April 2023 to gather insight from organizations tied to the park. In addition, an online public input survey was available for interested parties to comment on their current use of the park and their priorities for the future. Following the input sessions and survey, the team developed a ten-year action plan and developed the draft plan.

2.3 Planning Team

This plan was developed with the direct assistance, input, and expertise provided by all members of the planning team. The planning process and document development was facilitated by Beckett & Raeder, Inc.

2.4 Summary of Input Opportunities

Public input is a critical part of the planning for Indian Lake State Park. Below is a summary of the public and stakeholder input methods that were used to inform the development of the GMP. Several different methods were used to ensure everyone had an opportunity for input. Full reports for each of the outreach methods are included in Appendix B of this plan.

Project Website

Information about the general management planning process was hosted on a webpage for the project. This was updated with results of the public input survey, the draft of the GMP, and notifications about the public meeting. The website contained contact information so that the public could contact the planning team at any time with questions, concerns, and input.

On-Site Survey

Another method designed to give representative user feedback to guide the management plan, but in less depth than the online public input survey, was an on-site use and user study undertaken in association with Michigan State University. The study included a survey of a representative sample of park visitors to provide an overall estimate of mean user hours per vehicle in day use parking areas, assess local spending, ascertain the opinion of park users about the future management options and approaches, and provide a profile of park visitors, both campers and day users. This on-site approach sampled users on systematically selected days and times across June – November of 2017. It used a windshield survey at the day use parking area and the same survey handed to a sample of up to 20 camping parties on sample days to ensure representation of the full range of park users.

Overall the site is highly appreciated by park visitors for its natural setting, enjoyable campground and strong park maintenance and patrol efforts. Like visitors to many Michigan state parks, there is interest among both campers and day visitors in updating and adding more facilities such as better showers and improved access to the lake. A full report can be found in Appendix D.

Stakeholder Input Workshop

To gather targeted input from individuals and groups in the community representing governmental, non-profit, and

Planning Team

DIVISION	TITLE	NAME
PRD	Management Plan Administrator	Debbie Jensen
PRD	Unit Supervisor	Dennis Green
PRD	Lead Ranger	Abbie Klink
PRD	District Supervisor	Eric Cowing
PRD	Regional Planner	Keith Cheli
PRD	Ecologist	Ben Travis
PRD	Historic Architect	Robb McKay
PRD	Lands Liason	Matt Lincoln
MHC	Archaeologist	Stacy Tchorzynski
MOD	Interpreter	Theresa Neal
FD (Fisheries)	Fisheries Biologist	Darren Kramer
FRD (Forestry)	Forester	Scott Kentner
LED (Law)	Lieutenant	Skip Hagy
MMS (Minerals)	Geologist	Peter Rose
WLD (Wildlife)	Wildlife Biologist	Heather Shaw
PRD	Commercial Services Admin.	Lori Green

business/tourism entities, the planning team invited over 40 stakeholders to participate in a facilitated input workshop held on May 16, 2023, from 10:00 am to 12:00 p.m. at the Comfort Inn in Manistique, Michigan. Representatives of the Michigan Department of Natural Resources (DNR) provided the stakeholders with a brief overview of Indian Lake State Park, including its natural features, cultural resources, and recreational offerings. The stakeholders were also presented the general management plan process, timeline, and an explanation of the plan elements that their input would inform: the statements of significance and the management zone map.

The stakeholders were divided into two small-table discussion groups, which completed a series of exercises describing the park's context, the park itself, opportunities for partnerships, the park's potential benefit to the larger community, and the stakeholders' vision for the park's future. Each table then reported out to the larger group. The top priorities identified at the stakeholder workshop included improving the nature trail and maintaining the wilderness atmosphere of the park. The results of the table exercises can be found in Appendix B.

Online Public Input Survey

One of the methods the planning team used to gather input from park users was an online survey. This approach provides a convenient way for those who have access to the internet to provide feedback, though it is not designed to be statistically representative of Indian Lake State Park users or uses, as respondents self-select. The online survey provides valuable information about what certain individuals or groups hope to see in the park's future management.

The survey was advertised to a diverse range of people through various means. A press release was sent to Subscribers of Statewide DNR News, which included over 87,600 recipients and promoted on social media. The survey link was also sent to over 40 stakeholders the planning team had identified who were invited to share the survey. It was also sent to those who had made reservations (camping or shelter) at Indian Lake State Park in the last 3 seasons: an additional 10,737 recipients.

Responses were collected from April 26, 2023 through May 25, 2023. During the collection period, 593 individuals responded to the survey. The survey included questions on what activities visitors like to participate in, their overall experience at the park, and their opinions on overnight accommodations, fishing, hunting, the day-use amenities, trails, programs, and how they think the park could be improved.

Overall, the survey indicated a high level of satisfaction from park visitors. Some respondents indicated a desire for more modern amenities at the West Unit, however, this was not universal and the planning team determined it was not financially viable to provide modern amenities at this location. The emphasis instead will be to focus on enhancement to the lakeshore area at the West Unit.

At the South Unit, improvements to the campground toilet shower buildings and general campground improvements were highly desired and will be accommodated through projects currently in the design phase. A full report can be found in Appendix B.

Tribal Communication

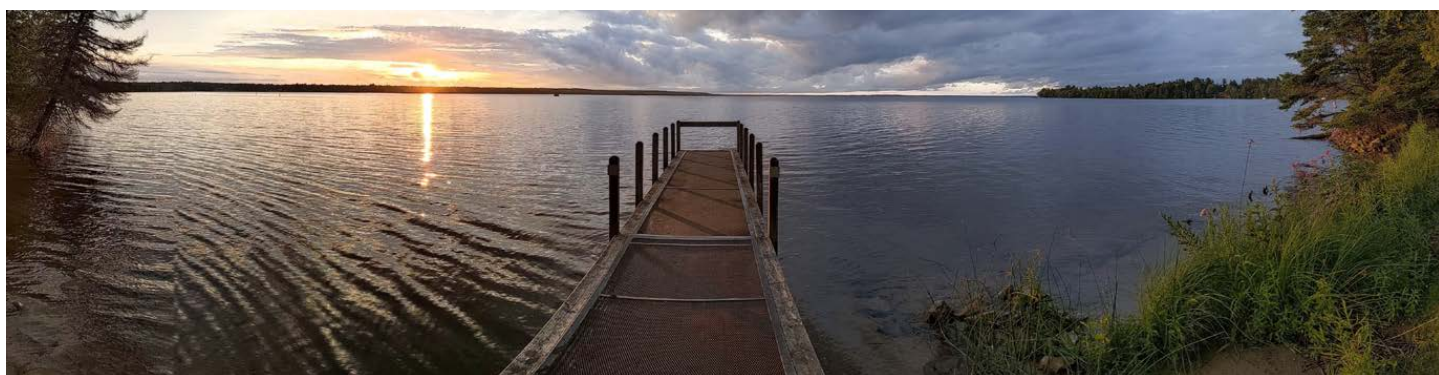
The department's tribal coordinator reached out to the twelve federally-recognized tribes in Michigan with a letter notifying them of the GMP process and timeline and inviting input. During the planning process, members of the Planning Team met with Marie Richards, Repatriation and Historic Preservation Specialist with the Sault Tribe of Chippewa Indians to discuss Tribal interests within the park and the Indian Lake area.

Public Meeting

The public was invited to share their thoughts about the Indian Lake State Park Draft General Management Plan at a virtual public meeting that was hosted online by the Department of Natural Resources (DNR) on November 29, 2023, from 6:00- 7:30 p.m. The meeting was hosted jointly with the public meeting for the Palms Book State Park General Management Plan. The general public was notified about the meeting through a press release, internet postings, and email notifications. A total of 17 attendees were recorded.

The meeting began with an introduction of planning team members, followed by an overview of the general management plan process, Indian Lake State Park, and the draft general management plan contents. The presentation was followed by a question and answer period, which included a question about plans to improve the Indian Lake Pathway condition in collaboration with a volunteer group.

At the end of the meeting, attendees were asked to visit the interactive public input survey link to review and comment on the statements of significance, management zone plan, and ten-year actions. There was also a section for additional feedback on the management plan and the input process. The survey link was posted to the park's website along with a recording of the meeting. The survey link was open through December 17, 2023. Comments could also be submitted during that time via email. Input received from the public was minimal, but the team did revise a section of the park history description in the Supporting Analysis based on the public review.



A panoramic view of Indian Lake from the accessible skid pier in the campground

2.5 Climate Adaptation Planning

The following shows select anticipated climate change impacts and vulnerabilities that could impact infrastructure and recreation at Indian Lake State Park, drawn from ecosystem-based vulnerability assessments lead by the Northern Institute of Applied Climate Science. Impacts related solely to vegetation cover are not included here. Source: Northern Institute of Applied Climate Science summary of vulnerability assessments – www.adaptationworkbook.org/explore-impacts.

- Northern Michigan temperatures will increase between 4°F and 10°F by the end of the century, with more warming during winter.
- Northern Michigan's winter snowpack will be reduced from 30-80% by the end of the century.
- Intense precipitation events will continue to become more frequent in northern Michigan.
- Many invasive species, insect pests, and pathogens in northern Michigan forests will increase or become more damaging by the end of the century.
- Surface water temperatures are expected to rise due to warming air temperatures.

Some of the potential impacts of the changes to park use and management include:

- Extended use season, which could have both benefits in terms of revenue and challenges in terms of staffing
- Less snow could result in a shortened use season for winter trail use
- Shoreline/ trail erosion

- Flooding due to increased precipitation/high waters
- More insect pests impacting visitors and vegetation
- Increased frequency and intensity of storms
- Higher temperatures affecting visitor comfort and safety, desire to be close to and access to the water and higher demands on electricity for camper cooling systems.

A variety of adaptation strategies, approaches and tactics will be considered to address these impacts in both the short- and long-term park management and development decisions.

Approaches include:

- Resistance: Improving defenses against change and disturbance to retain a relatively unchanged condition
- Resilience: Accommodating some degree of change to allow return to prior condition following disturbance
- Transition: Intentionally facilitating change to align a system to new conditions.

Adaptation planning is critical for communities and facilities, including Indian Lake State Park, that encounter risks such as those identified above. Increasing resilience and mitigating hazards will continue to be an important goal for the park management staff and will be considered as part of all action items moving forward. Specifically at Indian Lake State Park, actions will focus on mitigating effects from increased erosion, invasive species, improving trail conditions through wet areas, and tree diseases that threaten the park's resources, as well as increased usage that may result from a longer warm season. In addition, the shoreline at the West Unit will be naturalized and stabilized and a small sandy beach will be added.



Dredging operations are performed during the winter on the frozen Indian Lake



A child plays in the sand

Chapter Three:

Purpose and Significance

3.1 Purpose of Indian Lake State Park

Park purpose statements are based on park legislation, legislative history, special designations and Department of Natural Resources (DNR) policies. These statements reaffirm the reasons for which Indian Lake State Park was included as part of the state park system.

- To be used as a public park, for the purposes of public recreation or the preservation of natural beauty or historic association in accordance with Act 218, Public Acts of 1919, which created the Michigan State Park Commission.
- To preserve and protect Indian Lake State Park's unique natural and cultural resources for current and future generations.
- To provide access to land and water based public recreational opportunities, specifically to provide frontage and a swimming beach on Indian Lake.
- To provide educational and interpretive opportunities for the public that reflect the DNR mission and the unique qualities of Indian Lake State Park.

3.2 Statements of Significance

Each general management plan (GMP) developed by the Michigan DNR Parks and Recreation Division (PRD) is built upon the foundation of the park's significant features that make it distinct from other parks in the state's system. Indian Lake State Park was determined significant due to the following:

Strong Family Camping Tradition

Indian Lake State Park's modern south campground unit is a popular destination for gatherings of family and friends. Many visitors use the day use area for events such as reunions and graduations and then camp together just steps away. The campground experience is quiet and family-friendly, prompting generations to return year after year to campsites perched on a bluff overlooking Indian Lake with prime sunset viewing. A different camping experience is available at the West Unit, with clusters of more rustic campsites among a mature forest.

Water Recreation

The highlight of Indian Lake State Park is its namesake, Indian Lake, the fourth largest inland lake in the Upper Peninsula. The lake is excellent for swimming, with shallow warmer waters and a sandy bottom. The boat launch at the park is

very popular and one of only two improved public boating access sites on the lake. Visitors eagerly return to the park for the excellent year-round fishing access and water sports. In addition to Indian Lake, the park is only three miles from the swimming and water recreation opportunities on Lake Michigan.

Upper Peninsula Tourism Hub

Indian Lake State Park is located nearby several Upper Peninsula attractions such as Palms Book State Park, featuring the heavily visited G'chi-dikibi (Big Spring). Visitors to the campground can use the park as a jumping-off point for the Indian Lake Pathway, many natural wonders, and historic sites the area has to offer, including state and federal land with abundant recreation opportunities.

Historic Pavilions

The beach and picnic shelters at Indian Lake State Park are prime examples of CCC-era architecture. The unique stone and log shelters are enjoyed by visitors for picnics, events,

and casual beach days. A paved trail follows the traditional route along the lakeshore between the two shelters through a tunnel of cedar.

Active Friends Group

Indian Lake State Park benefits from a very active friends group. The Friends of Indian Lake and Palms Book State Parks raise funds to support the park and organize many events that are enjoyed throughout the camping season.

Wooded Dune and Swale Complex

A wooded dune and swale natural community is located in the South Unit of the park, which is part of a larger complex that expands into the surrounding region. This system of parallel wetland swales and forested upland beach ridges (dunes) is unique to the Great Lakes region and has ecological significance due to the rare vegetation and wildlife found here. This area is also considered a Special Conservation Area focused on natural resource protection.



A kayak floats on the still waters of Indian Lake

3.3 Public Affirmation of Significance

Stakeholder and public input assisted the planning team with affirming the significant features and opportunities at Indian Lake State Park. The feedback from the online survey confirmed that the natural setting, family-friendly atmosphere, and camping on the shores of Indian Lake are key aspects of the park. Comments from survey respondents relating to those significant features are provided below.

"Indian Lake park is a TREASURE! It needs to be preserved and respected, old growth forests and historic campgrounds are rare and special."

"Love this park. Mini cabin "camping" is great especially if you have older parents or friends who don't have all the camping gear needed for tent camping. Centrally located to lots of other things to see with a 1 to 1 1/2-hour drive."

"Love the lakefront campsites with all the tall majestic pine trees. and the sunsets over the lake... just breathtaking!!!"

"I have been going to this park for 48 years now - it is my home away from home - I love it here! The sunsets over the lake are always an awesome sight to see - it's just such a relaxing place to be."

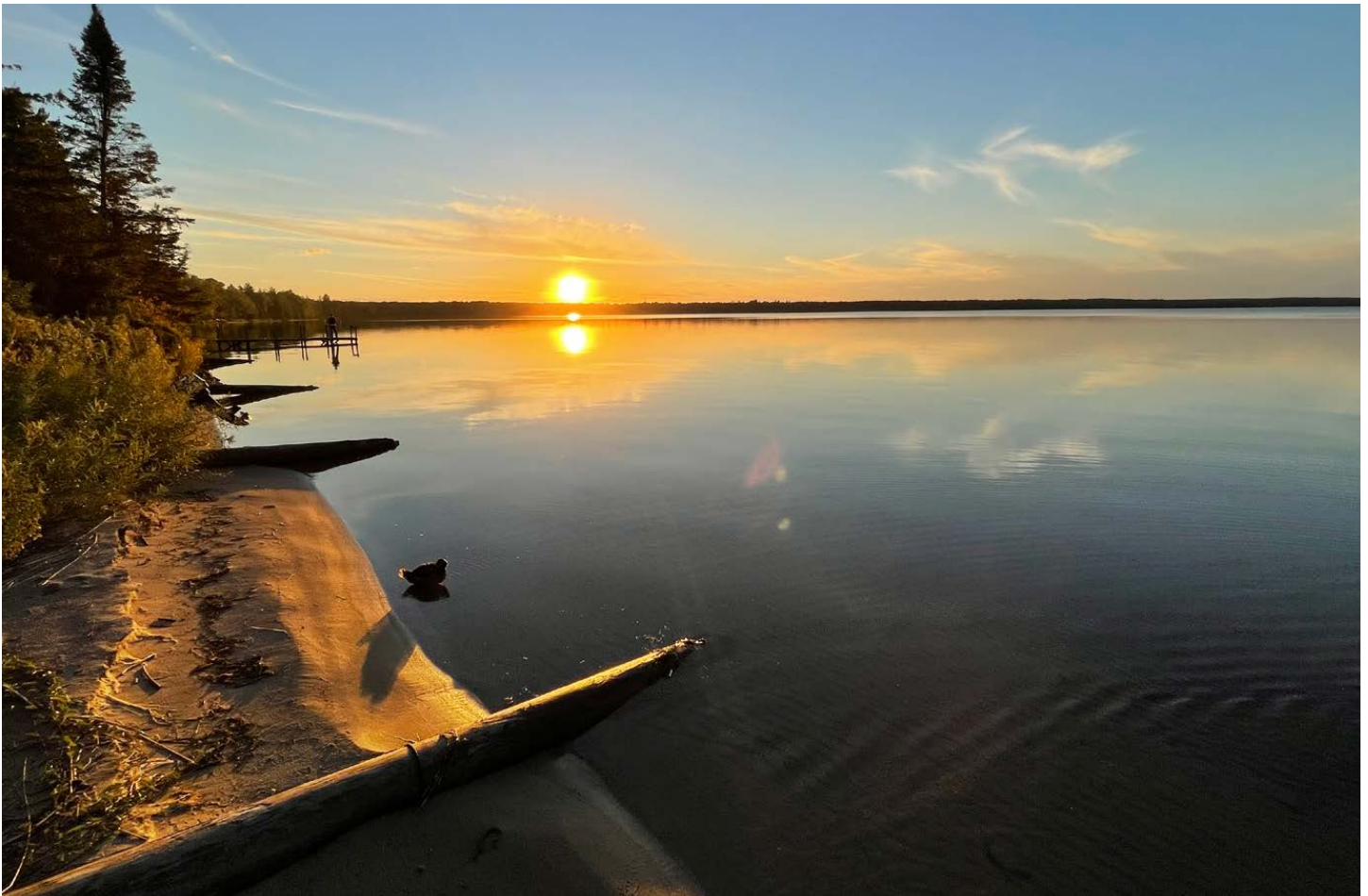
"Pleasure to be on the water, lake is very nice."

"When we are camping during the week, these [day use] areas are very quiet and we love to sit on the beach on a bench or play with our dog. We LOVE the CCC buildings"

"The shallow, sandy beach along the South Unit is perfect for kids. The West Unit lakeshore area is a nice area to bring a dog."

"The beach was really nice for kids to play in the sand. It was also relatively shallow water so kids had room to play in the water also".

"[What I like most about the day use area is the] large beach shelter. We hold family reunions there."



The Indian Lake shoreline is golden in the light of the sunset

3.4 Community Connection

Indian Lake State Park has long served as a favorite summer camping tradition for families and friends to return to year after year. The beautiful location on Indian Lake, quiet campground, and day use amenities perfect for gatherings and events has made this park popular for community celebrations, weddings, and reunions. Many visitors speak of returning for decades and with multiple generations. In addition, the park serves as a base from which visitors can explore the Upper Peninsula and the attractions in the region, including Palms Book State Park and the Big Spring.

The Friends of Indian Lake and Palms Book State Parks have been dedicated partners in ensuring the enduring success of the park. They have been instrumental in providing programming for the park, including concerts in the park, magic shows, author readings, bike rodeos, and appearances by Santa Claus.

Indian Lake State Park is also located close to Manistique, Michigan, where visitors can find lodging, restaurants, and shopping. The synergy between the town and the park supports private resorts and establishments, such as the Big Springs Inn and Tavern. Spending related to visiting Indian Lake State Park is substantial and is as high per vehicle as major southwest Michigan beach parks and for both campers and day visitors. Local spending encompasses many sectors of the local economy providing significant economic benefits to the community. This is especially important in a region where tourism related income and jobs are an important pillar of the local economy.



A snowman decoration beside the park's weekly events board



Inflatable Christmas-themed decorations are set up at a campsite for Christmas in July

Management Zone Progression Table

MANAGEMENT ZONE	NATURAL RESOURCE IMPACTS	VISITOR USE	DEVELOPMENT LEVEL
ECOLOGICALLY SENSITIVE	None	Restricted	None
PRIMITIVE	Very low	Low (dispersed)	Very low
BACKCOUNTRY	Low	Low to moderate	Low
CULTURAL LANDSCAPE	Low to moderate	Moderate	Moderate
NATURAL RESOURCE RECREATION	Moderate	Moderate to high	Moderate
SCENIC	Moderate	Moderate to high	Moderate
HISTORY EDUCATION	Moderate to high	High	Moderate to high
DEVELOPED RECREATION	High	High	High
ADMINISTRATIVE SERVICES	High	High (primarily staff)	High

Chapter Four:

Management Zones

The 20-year management zone plan was developed in keeping with the park's purpose and significance. The primary goal in the development of the management zones is to protect and enhance the park's natural and cultural resources while also supporting outdoor recreation and education opportunities. From a palette of nine management zones, the planning team studied the park and applied zones that best fit distinct areas of the park based on existing and desired future conditions. Management zones describe a variety of activities that may be appropriate within the zone and address the desired future condition for the following categories:

- Natural resources
- Historic/cultural resources
- Recreation opportunities
- Education/interpretation opportunities
- Visitor experience
- Management focus

The resource condition, visitor experience, and level of development vary in each of the nine standard zones, as indicated in the figure above. Indian Lake State Park was divided into the following five standard zones and one overlay:

- Primitive zone
- Backcountry zone
- Natural resource recreation zone

- Developed recreation zone
- Administrative services zone
- Cultural landscape overlay

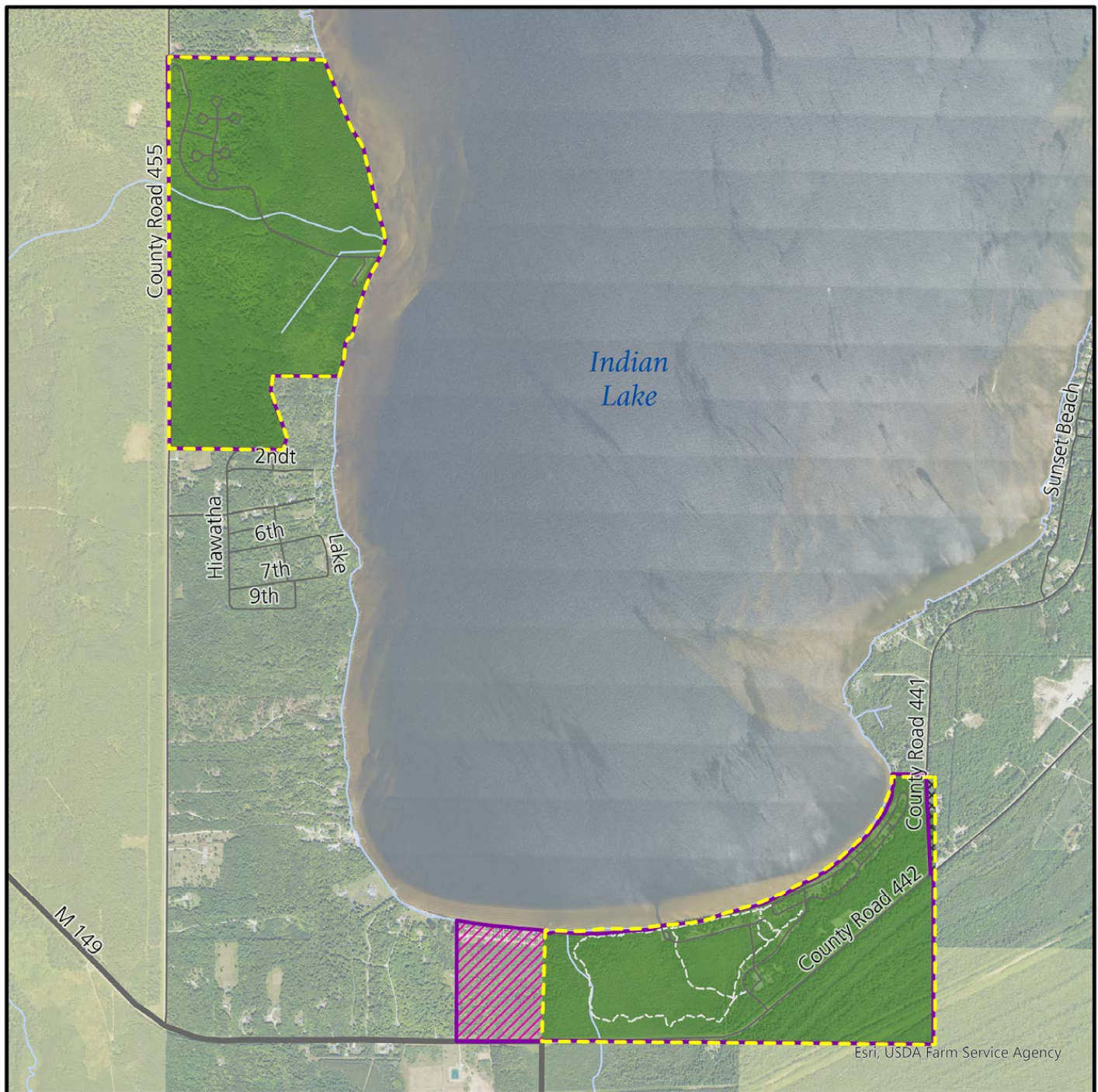
Examples of recreation activities and development that may be allowed in each zone are general and may not necessarily be appropriate or allowed at this location.

4.1 Project Boundary

Project boundaries are geographic lines that help define the state's public lands acquisition and disposal strategy (land strategy). These boundaries contain a majority of state ownership, as well as privately owned lands that, should they ever become available for sale, would be a priority for the DNR to pursue acquiring.

The DNR undertook a comprehensive statewide project boundary review in 2020. The GMP planning team reviewed the project boundary for Indian Lake State Park and supports the 2020 Project Boundary approved by the Natural Resources Commission and the Director of the DNR with the following revisions:

- The private campground parcel to the west of the park is recommended to be added to the project boundary. This parcel would provide additional opportunities for cabins and would connect to snowmobile trails and ice fishing opportunities.



INDIAN LAKE STATE PARK GENERAL MANAGEMENT PLAN

Proposed Project Boundary

Data Sources: Michigan CGI Data Library, Michigan Department of Natural Resources

0 500 1,000 Feet

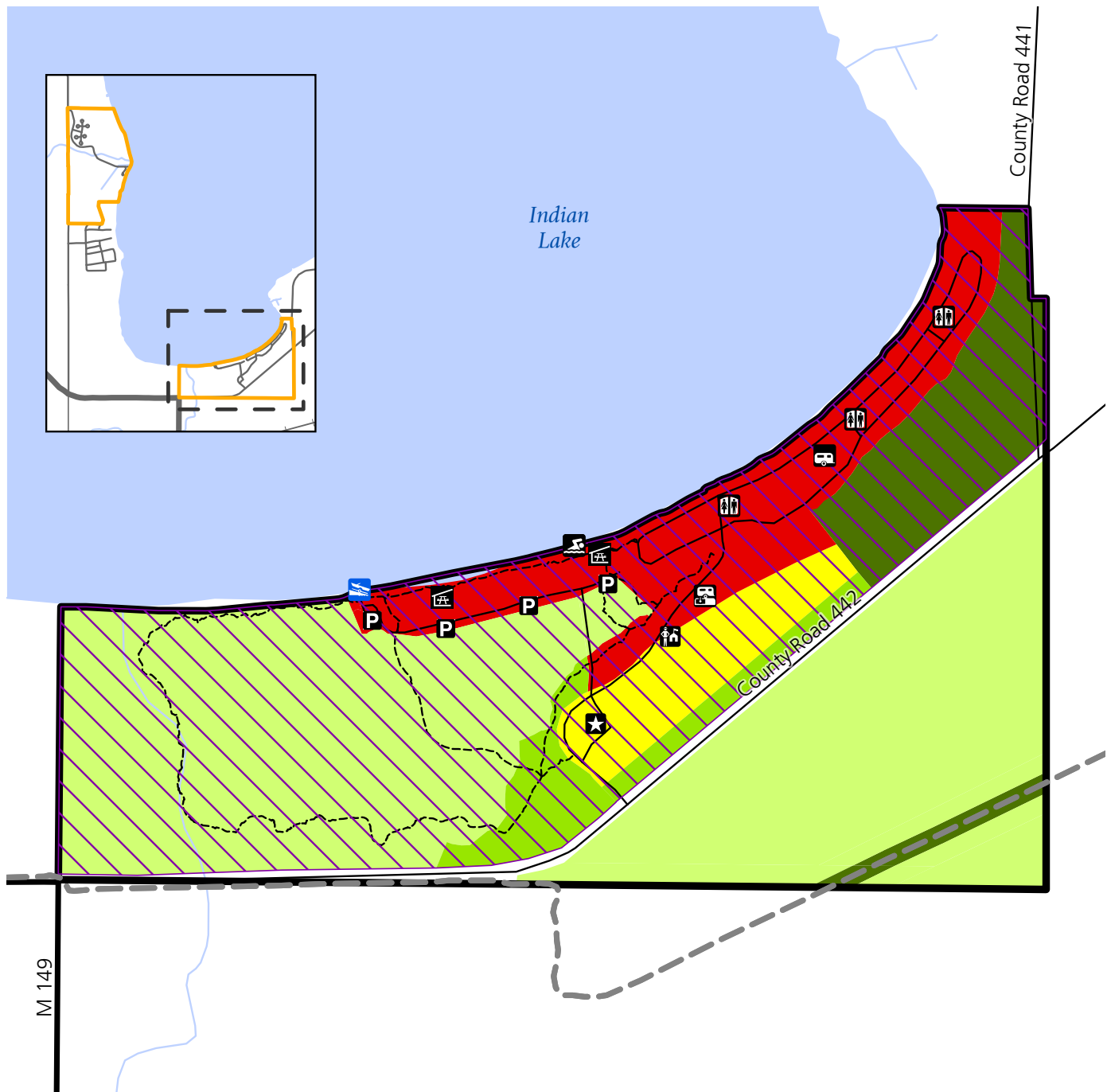


Date: 2/10/2024 Beckett & Raeder

- Indian Lake State Park Boundary
- State Forest
- State Roads
- Roads
- Trails
- Rivers / Streams
- Lakes

- 2020 NRC Approved Project Boundary
- GMP Proposed Project Boundary
- To be added to the Project Boundary
- To be removed from the Project Boundary

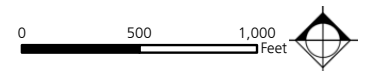
*A project boundary is a geographic area in which the DNR is seeking to acquire property that supports the mission of the DNR on a willing buyer / willing seller basis, approved by the Natural Resources Commission in 2020



INDIAN LAKE STATE PARK GENERAL MANAGEMENT PLAN

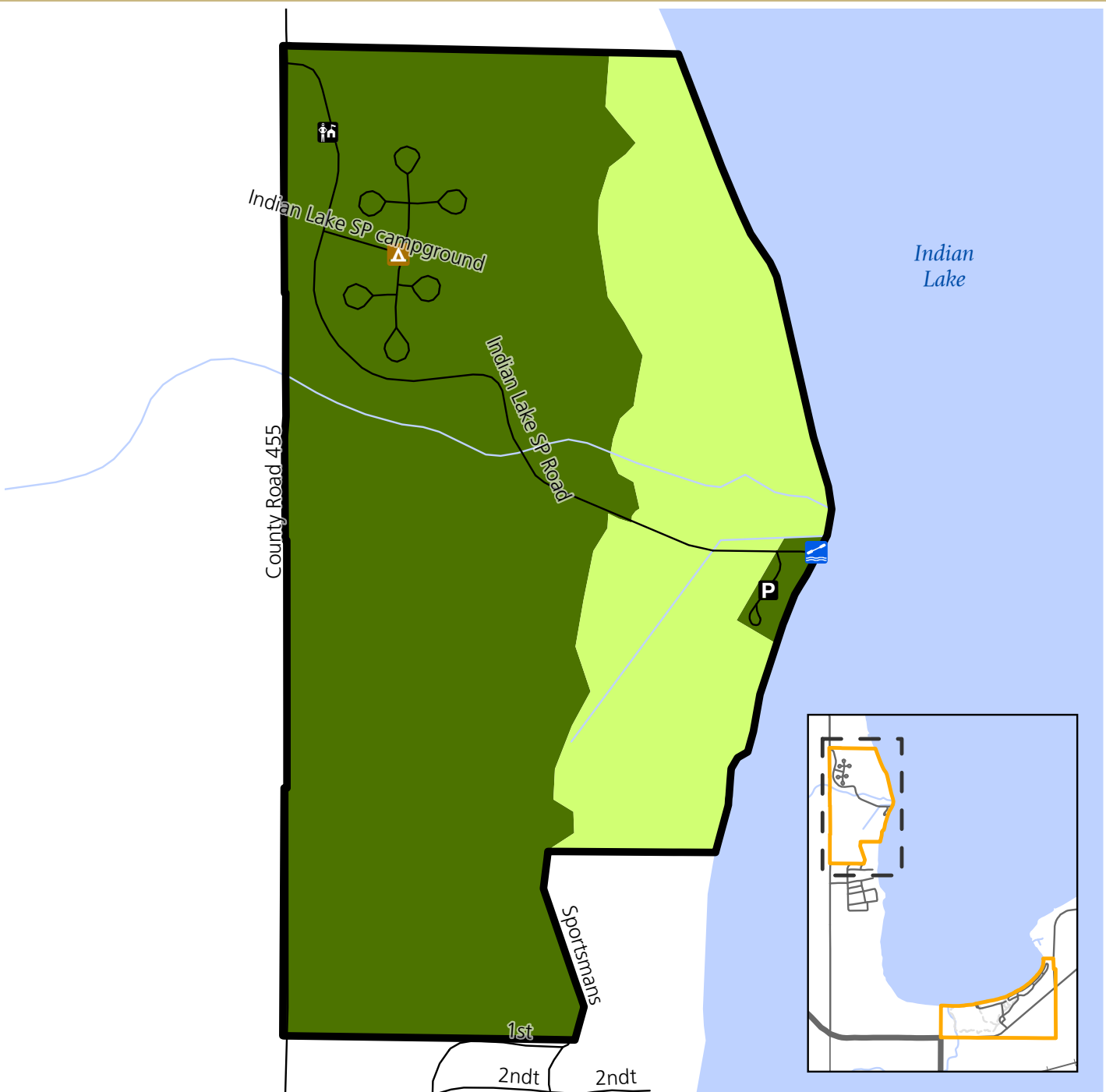
Management Zones - South Unit

Data Sources: Michigan CGI Data Library, Michigan Department of Natural Resources



Date: 2/10/2024 **Beckett&Raeder**

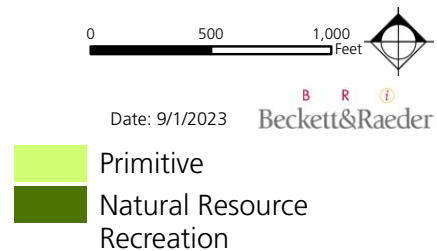
- | | | | |
|---------------------------------|--------------------|----------------|-----------------------------|
| Indian Lake State Park Boundary | Hiking Trail | Boating Access | Primitive |
| State Roads | Snowmobile Trail | Beach | Natural Resource Recreation |
| Roads | Parking Lot | Restroom | Backcountry |
| Rivers / Streams | Contact Station | Picnic Shelter | Developed Recreation |
| Lakes | Park Headquarters | | Administrative Services |
| | Sanitation Station | | Cultural Landscape Overlay |
| | Modern Campground | | |



INDIAN LAKE STATE PARK GENERAL MANAGEMENT PLAN Management Zones - West Unit

Data Sources: Michigan CGI Data Library, Michigan Department of Natural Resources

- Indian Lake State Park Boundary
- State Roads
- Roads
- Trails
- Rivers / Streams
- Lakes
- Parking Lot
- Carry-down Boating Access
- Contact Station
- Campground



- A small sliver of currently-owned park land on the east side of County Road 441 is recommended to be disposed of so that the park ownership would remain entirely on the west side of County Road 441. This area is recommended to be removed from the project boundary.

If the land within the project boundary were purchased, it would add 38.6 acres to the park.

4.2 Primitive Zone

The primary purpose of the Primitive Zone is the protection of natural resources and natural processes. The zone is managed for low-impact recreational experiences in a primitive, natural landscape. Only dispersed, self-reliant, and low-frequency use is allowed. Attaining and maintaining a high-quality natural resource condition dictates the extent to which recreational improvements or uses are allowed. This zone covers 45% of the park and includes sensitive low-lying wetland areas in the park, including the dune and swale complex in the South Unit.

Natural Resources

- Native species and natural processes take precedence over visitor accommodation.
- Native Michigan natural communities/ecosystem components and processes are maintained, restored and protected.
- Human-caused habitat fragmentation is eliminated.
- Non-native species are controlled or eliminated.
- Natural hydrology is maintained or restored.
- Vegetative management is only allowed to restore and maintain natural ecological structure and processes (such as removal of invasive species), and to manage pests and disease.
- Where agricultural fields currently exist, a strategy should be developed to bring these areas into compliance with the intent (nature/character) of the zone.
- New agricultural fields may be allowed but only as a specific and limited phase of an Ecological Restoration Plan or as a critical component of a plan for managing species of greatest conservation need.
- Haying may be used as a short-term vegetation management treatment.
- Prescribed fire is allowed to mimic natural disturbance or control invasive species.

Cultural Resources

- Archaeological resources are preserved.
- Ethnographic resources are protected.
- Extant historic structures may be preserved, but more often are removed or allowed to molder in place.

Recreation Opportunities

- Recreation is dispersed.
- Self-reliant, non-mechanized (no bicycle, horse, or motorized use) outdoor activities (e.g., hiking, backpacking, primitive camping, cross-country skiing, hunting/trapping/fishing, nature observation).
- Trail density is low. Trail routes are point to point and not sinuous in design. Trails are single track and natural surface (except as needed to protect the resource), although existing two-tracks may be allowed to remain.

Education Opportunities

- Primarily off-site.
- Interpretive signage is allowed at trail heads and at overlooks.

Visitor Experience

- Low visitor to visitor encounters.
- Visitors are engaged in high solitude, off-trail or trailed, self-reliant outdoor activities.
- High time commitment.
- High challenge and adventure.
- Discovery area with minimal on-site interpretation.
- Low noise tolerance.
- Low interaction with DNR staff.

Management Focus

- Maintain low-impact character of the zone, with emphasis on natural resource quality.

Development

- Very low level for visitor accommodation (e.g., foot trails).
- Site hardening only allowed to protect sensitive resources (e.g., boardwalk).
- Little evidence of human activity



Creek in the Primitive Zone

4.3 Backcountry Zone

The character of this zone is natural, with minimal evidence of human impact through recreational use. While the Primitive Zone is highly restrictive for recreational use and human impact, this zone allows for slightly increased use, including bicycle and equestrian use as appropriate, and modifications of the landscape (e.g. trail development) to accommodate that use. This zone covers 2% of the park and includes upland areas of the South Unit along County Road 442 and west of the park entrance road.

Natural Resources

- Natural resources may be modified slightly to support visitor use, but tolerance for natural resource impacts for visitor accommodations is low.
- Native Michigan natural communities/ ecosystem components and processes are maintained, restored and protected.
- Human-caused habitat fragmentation is minimized.
- Non-native species are controlled or eliminated.
- Natural hydrology is maintained or restored.
- Vegetative management is only allowed to restore and maintain natural ecological structure and processes (such as removal of invasive species), and to manage pests and disease.
- Where agricultural fields currently exist, a strategy should be developed to bring these areas into compliance with the intent (nature/character) of the zone.
- New agricultural fields may be allowed but only as a specific and limited phase of an Ecological Restoration Plan or as a critical component of a plan for managing

species of greatest conservation need.

- Haying may be used as a short- or long-term vegetation management treatment but the goal is native ecosystems.
- Prescribed fire is allowed to mimic natural disturbance or control invasive species.

Cultural Resources

- Archaeological resources are preserved.
- Ethnographic resources protected.
- Extant historic resources are preserved, rehabilitated, removed, or allowed to molder in place.

Recreation Opportunities

- Moderate levels of recreation compatible with the natural character of the zone.
- Visitors engaged in non-motorized outdoor activities in diverse land and water natural settings (e.g. hiking, backpacking, backcountry camping, bicycling, horseback riding, canoeing, kayaking, fishing, hunting/ trapping, nature observation, cross-country skiing, and snowshoeing).
- Trails are more point to point than sinuous in design. Trail purpose is viewing and access more than challenge.

Education Opportunities

- Interpretive signage at trail heads, on the trail, and at overlooks is allowed.
- Moderate off-site interpretation.

Visitor Experience

- Moderate visitor to visitor encounters.
- Visitors engaged in non-motorized outdoor activities in diverse land and water natural settings.
- High time commitment.
- Moderate challenge and adventure.
- Discovery area with minimal on-site interpretation.
- Low noise tolerance.
- Low interaction with DNR staff.

Management Focus

- Maintain low-impact character of the zone, with emphasis on natural resource quality.

Development

- Low level of development to support visitor access to outdoor activities (e.g. trails, trailhead parking, marked routes, designated backcountry campsites, vault toilets, water pumps) and educational opportunities.
- Development shall be unobtrusive and blend with natural environment.
- Site hardening (e.g. boardwalks, fencing, pedestrian paths) may be necessary to protect sensitive resources.



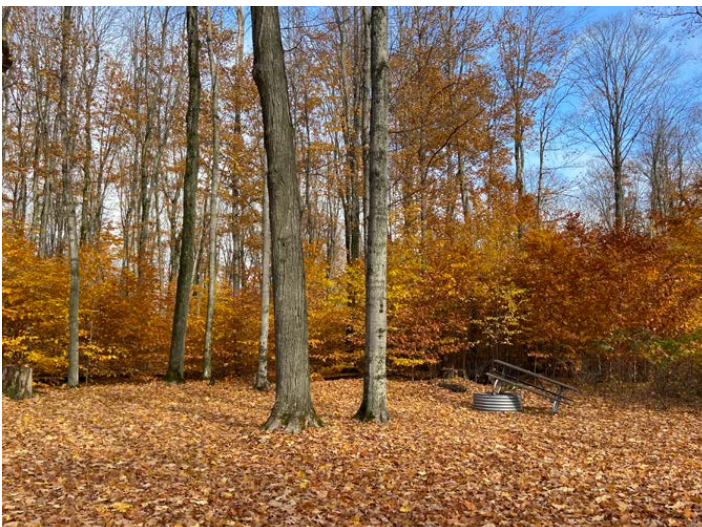
A trail sign in the Backcountry Zone

4.4 Natural Resource Recreation Zone

The Natural Resource Recreation zone supports active recreation conducted in a natural setting with medium to high-density use. There is an emphasis on resource quality over recreation, but moderate to high levels of use may be accommodated. This zone covers 43% of the park and includes the snowmobile trail south of the County Road and the wooded area east of the campground in the South Unit, and the upland portions and day use area of the West Unit.

Natural Resources

- Natural resources support visitor activities with only moderate impacts.
- Natural resources are managed or modified to support visitor activities but protected to the degree possible and appear natural.
- Human-caused habitat fragmentation is minimized.
- Non-native species are controlled or eliminated.
- Natural hydrology is maintained or restored.
- This zone will reflect native Michigan natural communities/ecosystems and natural processes, with vegetative management to restore and maintain natural ecological structure and processes (such as removing of invasive species), to address hazard trees, and to manage pests and disease. Vegetation may also be managed to facilitate recreational use and maintaining an aesthetically appealing landscape.
- Where agricultural fields currently exist, a strategy should be developed to bring these areas into compliance with the intent (nature/character) of the zone.
- New agricultural fields may be allowed in the zone but only as a specific and limited phase of an 'Ecological Restoration Plan' or as a critical component of a plan for managing species of greatest conservation need.
- Agricultural haying may be used as a long-term vegetation management treatment.



The campground in the West Unit is wooded and more rustic

Cultural Resources

- Archaeological resources are preserved.
- Ethnographic resources are protected.
- Extant historic resources may be preserved, restored, allowed to molder in place, or adaptively used for operational or educational purposes.

Recreation Opportunities

- Moderate to high levels of recreation compatible with the natural character of the zone.
- Visitors engaged in outdoor activities in diverse land and water natural settings (e.g. hiking, backpacking, backcountry and rustic camping, bicycling, horseback riding, boating, canoeing, kayaking, fishing, hunting/trapping, nature observation, cross-country skiing, snowshoeing and snowmobiling).
- Except in areas with Exemplary Natural Communities, trails may be sinuous to provide for recreational challenge. Multi-use linear trails may be permitted in this zone.

Education Opportunities

- Interpretive signage may be provided at trail heads, on the trail, at overlooks and in campgrounds.

Visitor Experience

- Moderate to high visitor to visitor encounters accommodated.
- Visitors engaged in outdoor activities in diverse land and water natural settings for recreation and education.
- Variable time commitment.
- Variable challenge and adventure.
- Moderate noise tolerance.
- Moderate interaction with DNR staff.
- Moderate accessibility.

Management Focus

- Maintain use of zone in accordance with PRD's mission.
- Public safety.
- Protection of resources.

Development

- Moderate level of development of facilities for support of visitor activities (e.g. vault toilets, concrete/asphalt/gravel walkways and parking, trails, benches, picnic tables, rustic campsites, rustic cabins and shelters) for recreation and educational opportunities.
- Site hardening (e.g. boardwalks, fencing, surfaced pedestrian paths) as necessary to protect sensitive resources and provide accessibility.

4.5 Developed Recreation Zone

The Developed Recreation Zone supports active recreation with high density of use conducted in areas not designated for natural resource significance. In this zone, recreation dominates with natural resource attributes enhanced as possible. This zone is approximately 7% of the park and includes the campground, day use area, and boat launch in the South Unit.

Natural Resources

- Natural resources may be actively managed and modified to support visitor activities.
- Water quality is maintained or restored.
- Vegetative management will address hazard trees, invasive species, and pests and disease, and will also be allowed to facilitate development, recreational use, and to maintain an aesthetically appealing landscape. Native vegetation is still emphasized. PRD's tree planting standards should be followed in this zone.

Cultural Resources

- Archaeological resources are preserved.
- Ethnographic resources are protected.
- Extant historic resources may be preserved, restored, or adaptively used to support visitor activities, operational or educational purposes.

Recreation Opportunities

- High levels of recreation activity in a highly structured environment.
- Visitors engaged in activities in diverse natural and modified land and water settings (e.g., hiking, modern and semi-modern camping, bicycling, horseback riding, boating, canoeing, kayaking, fishing, hunting/trapping, cross-country skiing, snowshoeing, snowmobiling, day use beach, swimming, picnicking, disc golf, and other day use activities where people congregate).
- Except in areas with Exemplary Natural Communities, trails may be sinuous to provide for recreational challenge. Multi-use linear trails are allowed in this zone.

Education Opportunities

- Interpretive signage may be provided at campgrounds, day use facilities, boating facilities, registration buildings, trail heads, on the trail, and at overlooks.
- Active programming at campgrounds and other areas where people congregate.

Visitor Experience

- High visitor to visitor encounters accommodated.
- Visitors engaged in activities in diverse land and water settings for recreation and education.
- Variable time commitment.

- Variable challenge and adventure.
- Variable level of exertion.
- High noise tolerance.
- High interaction with DNR staff.
- High accessibility.

Management Focus

- Maintain use of zone in accordance with PRD's mission.
- Management of people.
- Public safety.
- Protection of resources.
- Public accessibility.

Development

- High level of development of facilities for support of visitor activities (e.g., modern restrooms, walkways and parking, trails, benches, picnic tables, picnic shelters, modern and semi-modern campgrounds, modern cabins and shelters) for recreation and educational opportunities.
- Site hardening (e.g., boardwalks, fencing, surfaced pedestrian paths) as necessary to protect sensitive resources and provide accessibility.
- Strive for universal access in all new developments.



Campsites in the South Unit can have views of Indian Lake

4.6 Administrative Services Zone

This zone encompasses the developed areas required for program administration and operations. Typically, it will include offices, contact stations, maintenance facilities and all related land base required to conduct the business of running a state park or park. This zone covers 3% of the park and includes the park headquarters, shop area, service yard, and wastewater lagoon.

Natural Resources

- Natural resources may be actively managed and modified to support administrative and support activities.
- Vegetative management (primarily tree removal for safety) is allowed.

Cultural Resources

- Cultural resources and structures are preserved, adapted, or rehabilitated to support administrative activities.
- Historic structures should be re-purposed before new construction where possible.
- Non-utilized or non-stabilized structures may be removed.

Recreation Opportunities

- None

Education Opportunities

- Person-to-person contact at park headquarters for general information, both verbally and written (brochures, maps, etc.).
- Informational kiosk.

Visitor Experience

- Business and information only.
- High noise tolerance.
- High accessibility.

Management Focus

- The business of running a park.
- Appropriate facilities for staff, equipment and materials.
- Employee safety.
- Public access to office.

Development

- High level of development of facilities for support of administrative activities (e.g., office space, meeting rooms, employee locker room, employee eating area, shop space, storage space and related)
- Provide maximum level of accessibility for public.



The workshop/garage at the Indian Lake headquarters

4.7 Cultural Landscape Overlay

This zone addresses the overall cultural setting of a site, including historic structures and ethnographic sites. For example, a location associated with a particular cultural resource, such as an abandoned mine townsite representative of a bygone era, would qualify as a Cultural Landscape Zone. In this park, the Cultural Landscape Zone is used as an overlay (sub-set) of the management zones, and as such, the guidance for the underlying zone will also apply. The cultural landscape zone covers 33% of the park and includes the possible area of the Civilian Conservation Corps camp at the park in the South Unit.

Natural Resources

- Prescriptive description of the underlying zone will apply.

Cultural Resources

- Resources may include historic buildings, structures, and other landscape characteristics and features which represent the evolution of the cultural resource, temporal change, and the continuum of time.
- Cultural resources are preserved or rehabilitated for visitor understanding and/or for compatible adaptive use by DNR or partners.
- Historic structures may be adaptively used for operational uses or educational purposes or preserved simply for their historic value.

Recreation Opportunities

- Visitors engaged in sightseeing, recreational, and educational activities in a cultural setting (e.g. automobile, bicycle, walking, hiking tour), compatible with and sensitive to the setting.
- Recreation opportunities as allowed by the underlying zone designation.

Education Opportunities

- Interpretive signage may be used at trail heads, on the trail, overlooks, and other points of interest.
- Moderate off-site interpretation.

Visitor Experience

- Visitor experience varies in accordance with the underlying zone.

Management Focus

- Maintain cultural character of the zone, and if a sub-set of a resource zone, maintain emphasis on natural resource quality.
- Keep development consistent with the zone.

Development

- Non-historic development and activities that do not conflict with the cultural landscape are tolerated.
- Level of development consistent with the underlying zone.



The historic beach shelter was constructed by the Civilian Conservation Corps



The shoreline of the West Unit day use area

Chapter Five:

Ten-Year Action Plan

5.1 Current Issues and Opportunities Overview

Indian Lake State Park currently faces several key issues that contribute to the need for long-range planning and action. These include:

- The Indian Lake shoreline has faced issues with erosion. Efforts to naturalize the shoreline to manage erosion have started to be implemented but must continue.
- The infrastructure at the park is aging, including the toilet/shower buildings, the water and sewer distribution systems, headquarters building, vehicular bridge and pavements.
- Indian Lake State Park is popular with families; however, the playground equipment provided at the park is outdated.
- The electric service at the West Shore Campground is aging; the service is difficult to maintain and often not adequate for the electric needs of campers, as it is 20-amp service only.
- Some trails in low-lying areas of the park are wet, and trail maintenance and footbridge replacement is necessary.
- The park has seen increased visitor usage, which drives the need for an upgraded sewage lagoon and an upgraded sanitation station.
- Invasive species such as phragmites and birch bark disease are a threat to the park's ecosystem.

- The West Shore campground is underutilized but is also not listed on the reservation system.
- There is potential to reuse the former manager's residence and the historic contact station, but the best use for these structures is yet to be determined.
- Several historic buildings exist within the park and these buildings require assessment and maintenance.
- The South Unit boat launch is popular, but also has limited parking, and requires annual dredging.

5.2 Indian Lake State Park Ten-Year Action Plan

The planning team has developed a 10-year action plan that it believes includes actions necessary to guide management and development within Indian Lake State Park to achieve the desired resource protection and user experience. Action items are recommended that address natural resources, cultural resources, recreation opportunities, education/interpretation opportunities, and development. Any future improvements will be considered in the context of efficiency, environmental sustainability and resiliency. These actions apply either to the whole park or to specific locations within the park, as appropriate, and according to the management zone. Refer to the zone descriptions in Chapter Four for appropriate activities in each zone.

Management plans do not guarantee future funding to achieve the actions identified but are based on funding realities and sound investment policies. PRD will seek internal funding, alternative funding sources, partnerships and other potential mechanisms for implementing the desired future conditions defined in this plan. On an annual basis, PRD districts determine priorities for project planning and project capital outlay. Each district's top projects are then evaluated at a state-wide level for available funds. Some projects are also funded by the American Rescue Plan Act (ARPA), which provided \$250 million in federal relief programming for critical state park and trail infrastructure through the Building Michigan Together Plan, signed into law in March 2022. Federal funding conditions require these projects to be completed by the end of 2026.

Action items are prioritized based on health, safety, and welfare, as well as ease of implementation (cost, ability to implement with own staff, partnerships, etc.). Priority Level 1 projects indicate those that should be addressed within the next 2 years. Priority Level 2 projects include those that

should be addressed within 3-5 years. Priority Level 3 projects are desired but can be tackled in the next 6-10 years once funding has been identified. Some goals are intended to continue throughout the plan timeframe and are an “ongoing” priority. Opinion of probable costs have been developed for each capital outlay action goal identified (see Appendix C), and these projects will be included in the statewide master project list. The following tables outline the actions planned for the next ten years. In the program input column, the bolded party is the program lead.



Bank erosion in the South Unit along the shoreline of Indian Lake

Management and Operations

The following action items relate to the management and operations of the park.

ACTION	PRIORITY	MANAGEMENT ZONE	PROGRAM INPUT FROM
Continue to work proactively to develop and implement measures to prevent, detect and control invasive species in collaboration with local entities as appropriate.	Ongoing	All	Stewardship Park Manager Lake to Lake CISMA
Continue to explore land acquisition of properties within the GMP Proposed Project Boundary.	Ongoing	All	Park Manager Lands Liaison
Review all proposed earthwork activities for potential impact on cultural resources.	Ongoing	All	Park Manager Field Planner Stewardship
Complete a natural resource stewardship plan for the state park, identifying targets for conservation and related natural resource management strategies, including invasive species management and forest health.	1	All	Stewardship Park Manager
Analyze the options of improving, abandoning, or offering a different level of electric service at the West Campground, and consider adding the unit to the reservation system.	1	Natural Resource Recreation	Regional Planner Park Manager District Supervisor
Acquire funding and approval to fill the park supervisor position.	2	All	District Supervisor
Determine appropriate re-use of the historic contact station at the West Unit, such as converting it to an overnight accommodation.	2	Developed Recreation	Park Manager Regional Planner Historic Architect
Close the South Unit to metal detecting and re-evaluate if the West Unit should continue to be open.	2	All	Archaeologist Park Manager Stewardship Policy Analyst
Provide opportunities for interpretation of historic Civilian Conservation Corps-constructed buildings, shoreline naturalization efforts, and dredging at the boat launch.	3	All	Park Manager Stewardship Michigan History Center Marketing and Outreach

Infrastructure & Development: Capital Outlay, South Unit

The following actions are larger projects that require the use of capital outlay funds. These projects apply to the South Unit of the park.

ACTION	PRIORITY	MANAGEMENT ZONE	PROGRAM INPUT FROM
Remove all three campground toilet/shower buildings and replace them with two new restroom buildings. (ARPA) ¹	1	Developed Recreation	Regional Planner Park Manager
Replace the water distribution system. (ARPA)	1	Developed Recreation	Regional Planner Park Manager
Replace sewer distribution system and upgrade the sewage lagoon. (ARPA)	1	Developed Recreation	Regional Planner Park Manager
Relocate and upgrade the sanitation station. (ARPA)	1	Developed Recreation	Regional Planner Park Manager
Implement Phase II of the shoreline naturalization/stabilization plan. (ARPA)	1	Developed Recreation	Regional Planner Park Manager
Resurface the shoreline trail between the beach shelter and the picnic shelter.	3	Developed Recreation	Regional Planner Park Manager
Replace the headquarters building.	3	Administrative Services	Regional Planner Park Manager
Repurpose or remove the former park manager's residence.	3	Administrative Services	Regional Planner Park Manager

¹ These projects are funded by the American Rescue Plan Act (ARPA), which provided \$250 million in federal relief programming for critical state park and trail infrastructure through the Building Michigan Together Plan, signed into law in March 2022.

Infrastructure & Development: Capital Outlay, West Unit

The following actions are larger projects that require the use of capital outlay funds. These projects apply to the West Unit of the park.

ACTION	PRIORITY	MANAGEMENT ZONE	PROGRAM INPUT FROM
Replace the vehicular road bridge deck to the day use area.	2	Developed Recreation	Regional Planner Park Manager

Infrastructure & Development: Small Projects, South Unit

The following action items are funded through the Small Projects funding source. These projects apply to the South Unit of the park.

ACTION	PRIORITY	MANAGEMENT ZONE	PROGRAM INPUT FROM
Provide barrier-free accessibility to the stone picnic shelter.	1	Developed Recreation	Park Manager Historic Architect
Investigate and correct roof leaks in the beach shelter.	1	Developed Recreation	Park Manager Historic Architect
Improve trails in the South Unit to address wet areas in partnership with local volunteers.	2	Primitive Zone	Park Manager Regional Planner Stewardship



A trail through a wet area in the park is muddy, with logs placed in the trail to provide firmer ground.

Infrastructure & Development: Small Projects, West Unit

The following action items could be funded through the Small Projects funding source. These projects apply to the West Unit of the park.

Partner Projects

The following action items could be completed with the assistance of a partner organization.

ACTION	PRIORITY	MANAGEMENT ZONE	PROGRAM INPUT FROM
Develop an accessible playground to be shared between day users and campers.	3	Developed Recreation	Regional Planner Park Manager Friends of Indian Lake and Palms Book State Parks



The South Unit campground seen with trees of beautiful fall color



One of the mini cabins in the South Unit campground

Chapter Six:

Implementation Strategy

This chapter of the general management plan (GMP) provides guidance for implementation of the action plan and maintaining the plan so it remains relevant in the long term. These guidelines will also help the park align the action goals with park, district and statewide annual funding processes and annual tasks outlined in the Parks and Recreation Division's Strategic Plan or other planning documents. Although the implementation of the GMP will require commitment from staff at every level, it will be the primary responsibility of the Unit Supervisor/Manager to oversee plan implementation.

A long range plan such as this must maintain a degree of flexibility in order to be responsive to changing circumstances or opportunities that cannot be foreseen. It is recognized that some goals may be accomplished in a short time frame, while others may carry over through multiple years. It will be important to track progress so that the plan remains a relevant park management tool. The GMP will be reviewed every five years to ensure it remains viable.

All proposed changes in the park should be reviewed to ensure they are in compliance with the approved Management Zones.

6.1 Implementation Toolbox

The following is a list of items to consider when reviewing and prioritizing the implementation of action items identified in the GMP.

Coordination/ Communication

- Meet regularly with the Regional Field Planner and District Supervisor to coordinate and prioritize large capital projects for capital outlay requests.
- Maintain an open dialogue with local partners and stakeholders to coordinate community-related projects as identified in the action items.
- Follow-up regularly on progress for action items that are not the primary responsibility of the Unit Supervisor with the responsible program position.

Funding

- Estimated costs for capital outlay projects are included in the Opinion of Probable costs section. These costs should be refined and adjusted by the Regional Field Planner as designs and studies are completed.
- Identify potential funding sources for each project/task. Liaise with PRD grants coordinator as appropriate.
- Align potential funding sources with the annual capital outlay funding requests.
- Request District Small Project funding through the District Supervisor for small projects identified in the 10-year Action Plan.

Scheduling

- Further prioritize projects based on need, funding, staffing and other constraints and opportunities.
- Incorporate project/task assignments into annual staff performance objectives

6.2 Documentation of Changes

The Unit Supervisor should keep a record of any major changes to the park since approval of the GMP and note potential updates that may be required in the future. Documenting these changes will assist in the five-year plan review or when the GMP is updated. Changes may include:

- New user requests or conflicts
- Emerging recreation, funding or partnership opportunities
- Changes in land management
- Land transactions or changes to the Approved Project Boundary
- Major infrastructure projects or removal of structures

Changes may be documented by marking up the park's copy of the GMP or maintaining a log that is kept with it. In reviewing the action plan for changes, documentation should be provided for goals that may become irrelevant or are no longer viable, as well as proposed new action items, including justification.

The management zoning map should also be reviewed regularly. Any proposed changes to the map related to land acquisition or disposal, errors in the original zoning, or land management changes should be documented. Note that the park zoning is intended to be a long-term document: changes will only be considered with adequate justification and are subject to a formal review and approval process.



A young child sits on a log near the shore of Indian Lake

6.3 Documentation of Accomplishments

As action items are completed, the Unit Supervisor should mark them as such in the park's copy of the GMP, including the completion date. This will also help to maintain a log of accomplishments for district and division-wide reporting purposes, including PRD's strategic plan.

6.4 Five-Year Review Process

General management plans are reviewed every five years from the date of approval of either the Phase 2 plan or the complete GMP. The planning team for the five-year review is made up of the Park Management Plan Administrator, Unit Supervisor, Regional Field Planner and District Supervisor, with other team members included as may be necessary. A Five-Year Review Form will be used to record all changes to the plan within the past five years. Upon reviewing the GMP and the documented changes, the planning team will determine whether the changes warrant a complete update of the plan.

If there are no major changes required in either the zoning or the action plan, the planning team will complete the Five-Year Review Form and attach it as a supplement to the existing GMP. If zoning changes are needed, the GMP will be revised or updated following the complete GMP planning process led by the Park Management Plan Administrator. If changes to the action plan only are required, the Phase 2 GMP planning process will be implemented.



Two visitors smile on a sunny day at Indian Lake

Park Profile

ITEM	DESCRIPTION
AREA	567
COUNTY	Schoolcraft
TOWNSHIP	Thompson
LATITUDE	45.941834
LONGITUDE	-86.333130
ADDRESS	8970 W County Road 442 Manistique MI, 49854
PHONE	(906) 341-2355



Appendix A: Supporting Analysis

A.1 Park Overview

Indian Lake State Park is located on the shores of Indian Lake, in the south-central area of Michigan's Upper Peninsula. The park is made up of two units three miles apart: the main unit on the south shores of the lake (245 acres) and the other on the west (322 acres). The state park offers boating, fishing, swimming, picnicking, hiking, and two different campgrounds, one with modern facilities and one semi-modern (electric only).

Location & Community

Indian Lake State Park is in Thompson Township, Schoolcraft County, about 5 miles west of downtown Manistique. The park is just 3 miles north of US-2, a major east-west route across the Upper Peninsula. Following US Hwy 2 westbound and then traveling north on M-149, the south unit can be accessed off Co Hwy 442, while the west unit is on Co Hwy 455. The city of Manistique is located on Lake Michigan at the mouth of the Manistique River and features a lighthouse, pier, harbor, restaurants and bars, and hotels. The Manistique area is known for its natural scenery, four seasons of outdoor

recreation, and numerous historical landmarks. The park is adjacent to the Shingleton State Forest Management Unit and the boundary of the Hiawatha National Forest.

Indian Lake State Park is 7 miles away at its south unit, and just 3 miles away at its west unit, from Palms Book State Park, which is on the north-west shore of Indian Lake. Palms Book State Park contains the popular attraction of Kitch-iti-iki (Big Spring) natural spring and is administered by Indian lake State Park.

A.2 Demographics

According to the U.S. Census Bureau, Schoolcraft County had an estimated population of just 8,030 in 2021, which is the fourth lowest populated county in the state. This is down 0.2% from 2020. The county is largely rural and forested, with much of its western portion within Hiawatha National Forest. This results in a low population density of just 6.9 people per square mile, compared to an average of 178.0 in the State of Michigan. Almost one third of housing units are reported to be for seasonal, recreational, or occasional use.

Several factors stand out in the county's demographic makeup. The American Indian population is noticeably higher than the state average: 9.2% in Schoolcraft County compared to 0.7% in Michigan as a whole. This reflects the area's history and impacts the culture of the region. The county has a higher percentage of people over the age of 65 and less children under the age of 18 than the state average. Also, 17.1% of people in the county under the age of 65 reported having a disability, compared to 10.2% in Michigan as a whole. Less people in Schoolcraft have a bachelor's degree compared to the state. Additionally, the median and per-capita income are notably lower in this area as well.

A.3 Regional Recreation Resources

Federal Recreation Resources

- **Pictured Rocks National Lakeshore** is approximately 50 miles north of the state park along Lake Superior. Pictured Rocks is known for its beautiful sandstone cliffs, waterfalls, and pristine beaches. Boating tours provide opportunities to view the cliffs and recreation opportunities include camping, backpacking and over 100 miles of trails.
- **Hiawatha National Forest**, touches three of the five great lakes; Superior, Huron, and Michigan and covers nearly one million acres of land in the Upper Peninsula. The vast national forest land offers extensive summer and winter recreational activities, including trails, camping, cabins,

hunting and fishing.

- **Seney National Wildlife Refuge** was established in 1935 as a breeding ground for migrant birds as well as other wildlife and is located 45 miles northeast of Indian Lake State Park. The refuge is 95,238 acres, including 25,150 acres of the Seney Wilderness Area. This area also contains the Strangmoor Bog National Natural Landmark.
- **Grand Island, Bay de Noc National Recreation Trail** is a 40-mile hiking and equestrian trail that parallels the Whitefish River following the approximate location of an ancient Ojibwe Indian portage route between Lake Superior and Lake Michigan. The trail is 40 miles east of Indian Lake.
- **Grand Island National Recreation Area** is located in Lake Superior about one-half mile from Munising and is accessible via passenger ferry. The recreation area offers scenic views, bike and hike trails, cabins and camping opportunities, cultural sights and kayaking around the shoreline. The main trail route goes around the entire perimeter of the island which is 20 miles long and offers many views and exploration stops.

State Recreation Resources

State Parks and Recreation Areas

- **Palms Book State Park** (373 acres) is known for Kitch-iti-iki, Michigan's largest freshwater spring, featuring crystal-clear waters which can be viewed from a self-

POPULATION QUICKFACT	SCHOOLCRAFT CO.	MICHIGAN
Population estimates, July 1, 2021	8,030	10,050,811
Population estimates base, April 1, 2020	8,047	10,077,331
Population, percent change	-0.2%	-0.3%
Persons under 5 years, percent	4.4%	5.5%
Persons under 18 years, percent	17.5%	21.4%
Persons 65 years and over, percent	28.3%	18.1%
Female persons, percent	49.9%	50.4%
White alone, percent	86.4%	79.0%
Black or African American alone, percent	2.9%	14.1%
American Indian and Alaska Native alone, percent	9.2%	0.7%
Asian alone, percent	0.2%	3.4%
Two or More Races, percent	3.8%	2.7%
Hispanic or Latino, percent	1.5%	5.6%
White alone, not Hispanic or Latino, percent	85.3%	74.2%
Language other than English spoken at home, percent of persons age 5 years+, 2016-2020	2.1%	9.7%
High school graduate or higher, percent age 25+, 2016 – 2020	89.7%	91.3%
Bachelor's degree or higher, percent age 25+, 2016 – 2020	18.9%	30.0%
With a disability, under age 65 years, percent, 2016-2020	17.1%	10.2%
Median household income (in 2017 dollars), 2016- 2020	\$48,443	\$59,234
Per capita income in past 12 months (in 2020 dollars), 2016 – 2020	\$27,936	\$ 32,854
Persons in poverty, percent	11.9%	13.1%

operated observational raft. The park also offers a boating access site on Indian Lake and is open to hunting.

- **Fayette Historic State Park** (711 acres) features more than 20 historic buildings from a 19th century industrial town. Recreation and education opportunities include a visitor's center and self-interpretive tour of the townsite, modern campground, modern lodge, harbor slips, boat launch, beach, 5 miles of trails, and scenic views of cliffs.
- **Wagner Falls Scenic Site** (35 acres) is located approximately 50 miles north of Indian Lake. The main attraction of this scenic viewing site is a waterfall from Wagner Creek, which flows into a shallow gorge containing Anna River.

State Forest

The region contains many acres of state forest land comprised of three forest management units (FMUs). State forest land is managed by the DNR for natural resource values such as timber and wildlife, as well as dispersed public recreational pursuits, such as hunting, fishing, wildlife viewing, trail use and dispersed camping. Campgrounds and trails within the state forest are managed by the Parks and Recreation Division.

- **Shingleton FMU** is about 380,000 acres of land stretching through Schoolcraft and Alger counties and into eastern Delta County and the Garden Peninsula. The forest land is adjacent to both units of Indian Lake State Park. The Shingleton Management Unit contains a large amount of lowland, often associated with streams and rivers. A deer wintering complex, a Grouse Enhanced Management Site, and special conservation areas are found in this unit. Much of the area is remote, without roads. Recreation opportunities include hunting, trapping, fishing, and ORV-riding.
- **State Forest Campgrounds (SFCG)**
 - Mead Creek SFCG (managed by Indian Lake SP) 6 miles southwest of Germfask, offers 10 rustic camp sites on the Manistique River with water access for small watercraft and fishing.
 - Merwin Creek SFCG (managed by Schoolcraft County) 9 miles northwest of Gulliver, offers 10 rustic camp sites and access to the Manistique River for fishing and boating.
 - Portage Bay SFCG (managed by Fayette Historic State Park) 3 miles south of Garden offers 23 rustic camp sites and access to Lake Michigan and the 2.7-mile Ninga Aki Pathway.
 - Fox River SFCG (managed by Indian Lake SP) 5 miles northwest of Seney offers 7 rustic camp sites on a forested bluff along the Fox River with access to quality fishing and hiking on the Fox River Pathway.
 - East Branch of Fox River SFCG (managed by Indian Lake SP) 8 miles north of Seney offers 19 rustic sites with access to the Fox River, known for its wild brook trout fishery, scenery, history and recreational values.
 - Cusino Lake SFCG (managed by Indian Lake SP) 24

miles northeast of Shingleton,, (managed by Indian Lake SP) offers 6 rustic sites with opportunities for paddle sports and fishing on 140-acre Cusino Lake.

- Canoe Lake SFCG (managed by Indian Lake SP), located 18.3 miles northeast of Shingleton, offers 4 rustic sites with opportunities for paddle sports and fishing and nearby access to snowmobile and ORV trails.
- Ross Lake SFCG (managed by Indian Lake SP), located 22 miles northeast of Shingleton, offers 10 rustic sites with opportunities for paddle sports and fishing.
- South Gemini Lake SFCG (managed by Indian Lake SP) located 16.8 miles northeast of Shingleton and less than 10 miles from Pictured Rocks National Lakeshore, offers 17 rustic sites with opportunities for paddle sports, fishing, and hiking on the 1.5-mile Gemini Lake Pathway.
- North Gemini Lake SFCG (managed by Indian Lake SP) located 20 miles northeast of Shingleton and about 5 miles from Pictured Rocks National Lakeshore, offers 8 rustic sites with opportunities for paddle sports, fishing, and hiking on the 1.5-mile Gemini Lake Pathway.

State Forest Wildlife Areas

- **Rainey Wildlife Area** is a 100-acre site bordering Smith Creek, Smith's Slough, and Indian Lake. It includes hiking trails, boardwalks, and an elevated observation platform. There are no modern facilities and the area offers a peaceful immersion into nature with great opportunities to view wildlife.
- **Garden Grade Grouse Enhanced Management Site (GEMS)** is 7,000 acres at the top of the Garden Peninsula with a significant aspen component. This area is specifically managed for ruffed grouse and other young forest dependent wildlife. There are over 14 miles of hunter walking trails and numerous wildlife openings which offer bountiful small game hunting opportunities as well as bird watching and hiking during non-hunting seasons.

State Fish Hatchery

- **Thompson State Fish Hatchery** is located 1.5 miles north of the intersection of US-2 and M-149, near the town of Thompson. The hatchery produces a variety of species including Chinook salmon, steelhead, muskellunge, and walleye. It also has an interpretive area where visitors can learn about the importance of small tributaries to the Great Lakes, how watersheds work, and how a hatchery operates.

State and Regional Trails

The area surrounding Indian Lake State Park contains a number of different trail systems.

- Indian Lake Pathway is located on the west side of Indian Lake and provides 8.5 miles of trail for hiking, biking and cross-country skiing.

- The bicycle route of the Iron Belle Trail is a 791-mile linear trail from Belle Isle in Detroit to Ironwood in the Upper Peninsula. The route runs along US-2, just a few miles south of Indian Lake.
- The Haywire Grade Trail is a 32-mile rail-trail from Manistique in the south to Shingleton in the north and is designated both as a Pure Michigan Trail and a heritage trail. It is the state's first rail-trail, opened in 1970, and follows the route of the old Manistique and Lake Superior Railroad. The Haywire Grade is open to all motorized and non-motorized uses.
- The Moss Lake Motorcycle Trail (26 miles) is located about 25 miles east of Indian Lake State Park.
- The Marquette-Manistique Route allows for ORV and ATV use. The trail runs north-south along Highway 94 until it reaches Munising, where the trail then heads east-west along Highway 28.
- There are a number of snowmobile routes in the area surrounding the park. Route UP2 generally runs east to west across the Upper Peninsula. UP2, UP7, UP41, UP413, and UP 411 are all snowmobile trails which surround Indian Lake State Park.
- Bruno's Run, located in the Hiawatha National Forest, offers a 10-mile loop for hikers, bikers, and skiers, scenery of small lakes and streams with a variety of trees and vegetation.
- Valley Spur Trail System offers a 27-mile system of looped trails in the Hiawatha National Forest, 5 miles south of Munising. The trails are open for hiking and mountain biking and are groomed for cross-country skiing as conditions allow from December through March. This area connects to the North Country National Scenic Trail.
- Ninga Aki Pathway has a trailhead at the Portage Bay State Forest Campground and provides a total of 2.7 miles of hiking and cross-country ski trails. Part of the trail runs along the Lake Michigan shoreline.

Municipal Parks and Recreation

- **City of Manistique Lakeshore Campground** offers over 50 modern and rustic campsites on Lake Michigan.
- **Manistique Marina** is located at the south end of Cedar Street, on the Manistique River. It operates from Memorial Day weekend through Labor Day weekend and provides several boating slips with water and electrical hookups available for rent by the day, week, month, or season.
- **Carl D. Bradley Lakeview Memorial Park** (Formerly Lakeview Park) on the shore of Lake Michigan in Manistique, features a pier, lighthouse, beach and lakefront boardwalk.
- **Manistique's Central Park** is home to a recreation center that offers a large multi-purpose facility available year-round for functions ranging from hockey to weddings. It also includes a half mile walking path around Manistique's Quarry Lake. Summer concerts, soccer and baseball, sledding, tennis and basketball courts, archery, horseback riding, and the county fair are all hosted here.

- **Rapid River Falls**, an 80-acre park off US highway 41 in northern Delta County, is frequently used as a stop for travelers between Escanaba and Marquette. Locals use it for picnics and gatherings, including outdoor weddings. The river has several small rapids within it.
- **Thompson Rogers Roadside Park** is located on US-2, 4 miles south of Indian Lake. This park provides opportunities for swimming, walking, picnicking, and kayaking.

Water Recreation

Recreational boating facilities and opportunities exist along the Big and Little Bay De Noc in Delta County. Over 200 miles of shoreline on Lake Michigan provides campgrounds, public access, recreational harbors, and picnic areas for guests. The following boating access sites are managed out of Indian Lake State Park:

Boating Access

SITE NAMES	DESCRIPTION
Thompson Creek	Carry-down launching area for car top boats and canoes only
McDonald Lake	Hard surface ramp able to accommodate most trailerable watercraft
Dodge Lake	Hard surface ramp able to accommodate most trailerable watercraft
Ashford Lake	Carry-down launching area for car top boats and canoes only
Seul Choix Pointe	Hard surface ramp able to accommodate most trailerable watercraft.
Manistique River	Gravel surface ramp suitable for medium-sized and smaller boats only. 6 parking spaces available. Leased to the City of Manistique.
Merwin Creek State Forest Campground	Gravel surface ramp suitable for medium-sized and smaller boats only. 10 parking spaces available.

The Indian River Canoe Trailhead at Fish Lake is approximately 36 miles northwest of Manistique, and about 15 miles south of Munising. The Indian River from Fish Lake to Indian Lake, a total of almost 36 miles, offers excellent canoeing.

Schoolcraft County has an abundance of pristine lakes, rivers and bays for fishing.

Private Recreational Areas

There are several private campgrounds and resorts located directly on the shores of Indian Lake.

- **Resorts and Campgrounds** – there are several private resorts and campgrounds located around Indian Lake.

- **Commercial Forest Land** – the Commercial Forest program provides a property tax incentive to private landowners to retain and manage their forestland for long-term timber production and to provide foot access to the public for hunting and fishing. Thousands of acres in Schoolcraft County are enrolled in this program.

There are also a number of hotels, motels and rental properties in and around Manistique. Several golf courses and the Kewadin Casino in Manistique are other attractions in the area.

Historic Places

- **Bishop Baraga Historical Site**, on the east side of Indian Lake, commemorates the many missions founded by Baraga in northern Michigan. The shrine includes a chapel, Indian dwellings and buildings recreated in the early 1980's on the original mission's site based on historical information.
- **Manistique Light and Boardwalk** is at the mouth of the Manistique River. Built in 1916, this lighthouse is listed on the National Register of Historic Places. The boardwalk is two miles long on the Lake Michigan shoreline.
- **Schoolcraft County Historic Park** contains an historic 200 ft tall brick water tower constructed in 1922 and a museum. The tower is listed on the National and State Historic Registers.
- **Seul Choix Point Lighthouse Park and Museum** is owned by the Department of Natural Resources and operated by the Gulliver Historical Society. The lighthouse, completed in 1895, is both a Michigan Historic Site and a National History Landmark. The museum displays how it would have looked from 1900-1930.
- **Nahma** was a historic lumbering/sawmill community, established by the Bay de Noquet Company in 1881. The large brick and steel burner, used to dispose of waste from the sawmill, is an iconic landmark that remains today. The Nahma Township Historical Society operates a museum open on weekends during the summer.
- **Thompson Christmas Ship Site** marker was erected in 2006 by Michigan Historical Commission-Michigan Historical Center (Marker Number S696). The site explains the history of one of the last schooners on the great lakes.

The first Europeans believed to have visited the area were members of the French explorer Jean Nicolet's expedition party. In 1670, Rene Robert de La Salle reportedly visited the area aboard the Griffin sailing ship. In 1833, Father Frederick Baraga established his first Catholic Mission on the eastern shore of Indian Lake. At this mission, he converted local Anishinaabek to Catholicism. After this, Father Baraga went on to continue his missionary work but frequently returned to the Mission Church at Indian Lake. In 1853, he became the bishop of Sault St. Marie. Today, Baraga Park marks where Father Baraga held his first mass. By the 1850s, Anishinaabe residents settled around Indian Lake, once called M'O'Nistique Lake, in log cabins at the mouth of the Manistique River.

The 1836 Treaty of Washington between the Anishinaabek people and the U.S. ceded northern lower Michigan and the eastern portion of the Upper Peninsula to the United States, including what is now Schoolcraft County. The treaty was signed in Washington by Henry Schoolcraft, Indian Commissioner of the United States, for whom the county is named. Henry Schoolcraft explored the area with the expedition of Lewis Cass. The Odawa and Ojibway Tribes successfully fought against removal of Native Americans that occurred following the 1836 Treaty and secured their claims to land in northern Michigan through the 1855 Treaty of Detroit.

Schoolcraft County was founded in 1843 and officially organized in 1871, with the City of Manistique as the county seat. The county was largely settled as a result of the lumber boom, beginning in the 1880s. Manistique was the largest mill town in the area, its development driven by the logs transported down the Manistique River, which were then shipped from the town's harbor.

After the area was logged, large swaths of land were drained and sold for farming. However, the land was not very productive, and much was abandoned and reverted to the state or federal government for non-payment of taxes. Forested lands now make up about two-thirds of the county and this public land supports the recreation and tourism that has become a major economic factor in the area.

A.4 History of Indian Lake State Park

History of the Area

Anishinaabek, meaning Original People, have lived in the Great Lakes Region since time immemorial. The area around Indian Lake has a rich Native American history and remains significant to Great Lakes Anishinaabek. Anishinaabe ancestors settled all along the upper Great Lakes and lived by hunting, fishing, and harvesting. Travel and trade connected local communities with other communities along the lakeshore and beyond.

History of the Park

In the late nineteenth century, the Indian Lake area was heavily logged and the lake was clogged with cut timber. Much of the land that now makes up the park's south unit was owned by a lumberman named Russell Watson. Michigan State Park superintendent, P.J. Hoffmaster, visited the area in 1931 and was so impressed by the lake's sandy beach that he facilitated a trade between state owned timber land and land owned by Watson on the lake's southeast shore. In 1932, 239 acres, including 6,600 feet of lake front, were obtained through land exchange, establishing Indian Lake State Park.

The following year, the Civilian Conservation Corps (CCC) established Camp Manistique 104-S. Improvements were begun by the CCC in preparation to open it as a state park campground. Additional help was received by the Civil Works Administration (CWA) and Federal Emergency Relief Administration (FERA). The land was cleared of dead wood and trees, a road, parking lot, two miles of foot trails and four public latrines were installed, five acres of wetlands were filled and a quarter of a mile of beach was cleared. Ten acres of the land was cleared for a campground. A log bathhouse, garage, workshop, septic, well, and foot bridges were built. Work continued in preparation for the park opening, with the construction of a caretaker's log residence, a stone and log campground toilet, water system and power improvements. Considerable grading, planting and general landscape work was also undertaken.

The park opened to the public in spring 1937. CCC work in the park continued through June 1938 with the completion of a park water system, construction of picnic area and toilets and a 100-car parking area. Additional acreage was acquired between 1939 and 1942 through land exchange and tax reversion. This land was intended for expansion of the campground.

From 1950 until 1980 new development and improvements continued to be installed and updated in the south unit. In 1961, tax reverted land and the purchase of the Sportsman Subdivision created what is now called the west unit of Indian Lake State Park. A masterplan for the west unit was approved in 1964, designed to provide additional camping. The new campground, with two toilet shower buildings and 20-amp electrical service, was opened in 1966. Construction of a day use beach area and boat launch in that unit followed.

In 1991 West Shore Campground became semi-modern due to a failing sewage system. 1998 appears to be the last year the northern camping loop at West Shore was operational. In 2000, the two toilet buildings, and sewage lift station were removed.

A.5 Land Ownership

Funding Sources

The state acquired the lands encompassed by Indian Lake State Park through a variety of funding sources. Often, conditions attached to the original funding source or other details of the property transaction encumber the future use or disposition of the land. The funding source map at the end of Appendix A identifies the sources used in acquiring land within Indian State Park. The following outlines in more detail each funding source associated with the park.

Land Exchange- Public Act (P.A.) 193 of 1911 authorized the state to acquire land through private exchange deeds.

- The initial 279.5 acres of the park were received from Russell Wilson through a land exchange in 1933.
- 39.5 acres was received through a land exchange with William Rowe in 1942.
- 15.36 acres were received through a land exchange with Edward Jewell in 1939. The state retains the rights to aboriginal antiquities to an additional 0.24 acres adjacent to this parcel sold in 2002.

Special Legislation- P.A. 17 of 1921 allowed for land to be transferred to the new Department of Conservation. Seven parcels, adding up to 108.04 acres, were purchased using special legislature funding between 1955 and 1961. Most of this land was purchased from the Indian Lake Co., platted as the Sportsmen's Subdivision.

Tax Reversion- The state acquired the balance of the land through tax reversion due to non-payment of taxes. Four parcels totaling 124.5 acres of tax reverted land were acquired by the state in 1939.

Mineral Rights- The DNR owns 100% of mineral rights within the park.

Easements

The following easements grant access or construction rights on Indian Lake State Park property. The documentation was obtained through the Michigan Land Ownership Tracking System and may not be complete.

- Wisconsin Electric Power Company
 - overhead electrical lines were installed in 1936 traveling thru parcels 185005,7, and 8. In 1984, underground electric lines were added.
 - In 1949, the company installed both electric lines overhead and underground.
 - In 1966, a total distance of 141 rods to construct three separate buried electric lines into the new portion of Indian Lake State Park were installed. This proposal was granted to avoid cutting down mature trees to put up power lines along the road.
- Lakehead Pipe Line (now Enbridge Energy Partners)- easement granted in 1953 for a 60 foot wide right of way, with 20 feet on the left and 40 feet on the right, for the purpose of transporting petroleum and other products.
- Schoolcraft County Road Commission- 66 feet for a highway was granted in 1959.
- GTE Telephone Operations – easement for installation of telephone lines through parcel 185007 in 1963, running northerly along the west side of the park entrance road for 1260 feet, then northeasterly for 250 feet.

- General Telephone Company- in 1974, the General Telephone Company was granted an easement through 5 parcels for telephone cables/lines, north of Country Road 442. The lines connected to a house, sanitation station, and gate house.
- Great Lakes Gas Transmission Company- 30 ft wide easement to construct and maintain a pipeline in 1990.
- Carlson Family- in 1992, an easement was granted in parcel 185005, south of country road for access to a private property. They have the right to a postal address along with right of survivorship. The roadway connecting the country road to the grantee's property shall be 33 feet wide and travel about 200 ft southwest. The grantees may not obstruct the snowmobiling trail, install a gate, or park within the easement.
- The Great Lakes Gas Transmission Limited Partnership- granted an easement to conduct and maintain a pipeline in 1993.

Leases and Operating Agreements

The following agreements are in place at Indian Lake State Park:

Operating Agreements- There are currently operating agreements with five different companies to deliver camping rentals to customers at Indian Lake State Park, and one agreement with Northland Outfitters River Rentals for watercraft delivery and retrieval on the Manistique River.

Concessions

- Emerald City Vending, drink vending machines

A Memorandum of Understanding is in place with the Friends of Indian Lake and Palms Book State Park, intended to provide a framework for a collaborative working relationship.

A.6 Legal Mandates

For all park general management plans, legal mandates are identified that serve to further guide the development of the general management plan and subsequent action plans. For our planning purposes, the term “Legal Mandates” refers not only to federal and state law, but also the administrative tools of “Policy” and “Directive” of the Natural Resource Commission, the Department, and the Parks and Recreation Division. Examples include Orders of the Director, Park and Recreation Areas State Land Rules and all other laws, commission orders, and rules or directives that apply to the park. Specific to Indian Lake State Park, the following legal mandates have been identified.

Federal Statute

Endangered Species Act, 1973

This Act authorizes the determination and listing of species as endangered and threatened, and prohibits unauthorized taking, possession, sale and transport of endangered species.

Bald and Golden Eagle Protection Act, 1940 and Amendments

This Act prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." "Disturb" includes actions that may result in injury to the eagle, a decrease in its productivity or nest abandonment.

National Historic Preservation Act, 1966 As Amended

This is the primary federal law governing the preservation of cultural and historic resources in the United States. The law establishes a national preservation program and a system of procedural protections which encourage the identification and protection of cultural and historic resources of national, state, tribal and local significance. Projects that receive federal support in any form may be subject to compliance with Section 106 of the NHPA to ensure that impacts on historic properties are considered and that any adverse effects are avoided, minimized or mitigated.

Americans With Disabilities Act Of 1990, As Amended

This federal civil rights legislation prohibits discrimination and guarantees that people with disabilities have the same opportunities to participate in the mainstream of American life. It includes standards for accessible design that sets the minimum requirements for newly designed or altered State and local government facilities, public accommodations, and commercial facilities to be readily accessible to and usable by individuals with disabilities.

State Statute - Natural Resources and Environmental Protection Act (NREPA) and Amendments

SECTION	DESCRIPTION
PA 451 OF 1994, PART 5	Gives the DNR authority to make rules to support its mission. This includes State Land Rules, Land Use Orders, Wildlife Conservation Orders, Fisheries Orders and Watercraft Control.
PA 451 OF 1994, PART 31 WATER RESOURCES PROTECTION	Provides authority to EGLE to require a permit for any occupation, construction, filling, or grade change within the 100-year floodplain of a river, stream, drain, or inland lake.
PA 451 OF 1994, PART 301 INLAND LAKES AND STREAMS	Requires a permit from the state (EGLE) to undertake certain activities relating to inland lakes and streams, such as dredging, fill, marinas, structures, alteration of flow, etc.
PA 451 OF 1994, PART 303 WETLANDS PROTECTION	Requires a permit from the state (EGLE) to undertake certain activities in regulated wetlands, such as, dredging, fill, construction or drainage.
PA 451 OF 1994, PART 419: HUNTING AREA CONTROL	Section 324.41901 establishes the powers of the Department to establish safety zones for hunting.
PA 451 OF 1994, PART 741 STATE PARK SYSTEM	The department shall create, maintain, operate, promote, and make available for public use and enjoyment a system of state parks to preserve and protect Michigan's significant natural resources and areas of natural beauty or historic significance, to provide open space for public recreation, and to provide an opportunity to understand Michigan's natural resources and the need to protect and manage those resources.
PA 35 OF 2010, PART 741 RECREATION PASSPORT	This act amended the Michigan Motor Vehicle Code to provide for a State Park and State-operated public boating access site "Recreation Passport" that a Michigan resident may obtain by paying an additional fee when registering a motor vehicle.
PA 451 OF 1994, PART 761 ABORIGINAL RECORDS AND ANTIQUITIES	The state reserves the exclusive right and privilege to all aboriginal records and other antiquities including those found on the bottomlands of the Great Lakes.

Public Health Code

SECTION	DESCRIPTION
PA 368 OF 1978, PART 125, CAMPGROUNDS, SWIMMING AREAS AND SWIMMERS' ITCH	Established to protect and promote the public health by establishing health code requirements and regulations that all public (including DNR) and private campgrounds must meet. Includes permitting, licensing, inspections and rules regarding sanitation, safety standards and public health. Also covers testing and evaluating quality of water at bathing beaches, safety, and rescue equipment.

Orders

The following Orders apply to Indian Lake State Park:

LAND USE ORDERS OF THE DIRECTOR**5.16a Entry, use and occupancy of certain state parks, recreation areas and scenic sites, prohibited conduct. .**

Order 5.16a (1) A person shall not do any of the following:

- (a) Enter any of the following state-owned lands with a motor vehicle unless a valid Michigan recreation passport has been purchased and affixed to the vehicle:
- (35) Indian lake SP, Schoolcraft county

WILDLIFE CONSERVATION ORDERS

Wildlife is owned by all the people of the state of Michigan, and protection is administered and managed by the Michigan DNR. Hunting and trapping regulations including methods of take, bag limits, license quotas, and season dates are established by the Natural Resources Commission (NRC) and are described in the Wildlife Conservation Orders.

7.5 Indian lake state park, hunting and trapping allowed; exception.

Sec. 7.5 Hunting and trapping shall be allowed during the established seasons on those lands in the south shore unit lying south of county road P-442 in the NE 1/4 of the SE 1/4, the SW 1/4 of the SE 1/4, and the SE 1/4 of the SE 1/4 of section 17, and in all state-owned lands in the west shore unit in the S 1/2 of section 6 and the N 1/2 of section 7, T41N R16W, within Indian lake state park; except the entire park shall be closed to the taking of waterfowl from September 1 to Labor day.

History: Eff. Mar 31, 1989; Am. 2, 2016, Eff. April 15, 2016.

STATE LAND RULES

Parks and Recreation Areas – State Land Rules are issued by authority conferred on the Michigan DNR by Section 504 of PA 451 of 1994 MCL 324.504. The rules cover entry, use and occupation of state lands and unlawful acts.

A.7 Landscape Context and Natural Resources

The "Regional Landscape Ecosystem of Michigan, Minnesota and Wisconsin", written by Dennis Albert in 1995, divided the landscape into smaller units based on local climate, landforms (usually of glacial origin), soil and vegetation – not jurisdictional boundaries. This analysis is "foundational" in that it is a starting point for many conservation related decisions. Such an integration of climate, geology, soil and vegetation information, alongside the human history of the land, allows ecologist planners to fulfill the important task of first understanding the natural resource conditions and then applying that knowledge to most appropriately design conservation strategies. Indian Lake State Park is located in the Escanaba-Door Peninsular sub-

subsection (VIII.1.3), characterized by milder climate than adjacent sub-subsections. Geologically, the area contains the Niagaran series dolomite and limestone bedrock. The landforms include sand lake plain, ground moraine and shallow former Lake Michigan bays with low beach-ridge and swale microtopography; soils range from excessively drained sands on old beach ridges, to poorly drained sands between beach ridges, stony loamy sands on upland moraines, to organic hydric soils in lowland areas; vegetation is mostly forest ranging from lowland conifer to upland northern hardwood forest.

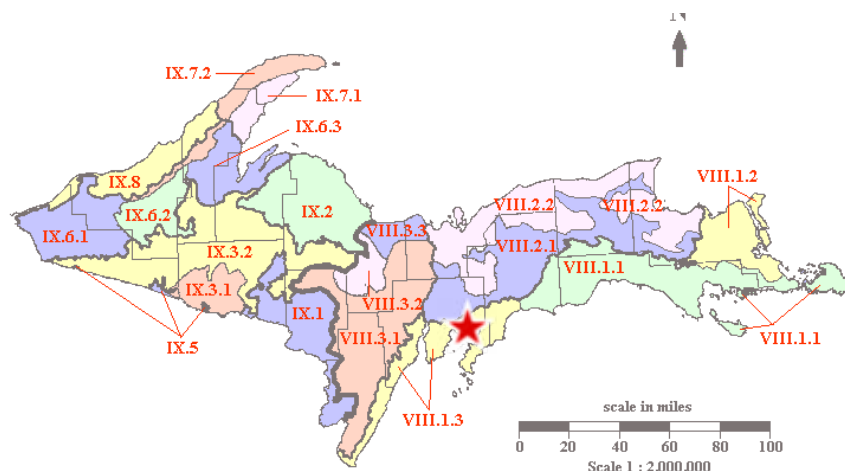
Climate

The growing season is approximately 140-160 days. The average snowfall is 60 inches and the average rainfall is 30 to 32 inches. Extreme low temperatures have reached a minimum of -46.5 degrees Fahrenheit inland and -30.5 degrees on the shoreline. The average warm season is 3.4 months with an average high temperature being between 66- and 76-degrees Fahrenheit. The cold season is 3.5 months with the average low ranging from 21 to 11 degrees Fahrenheit.

Water Resources

The Manistique watershed drains about 1,461 square miles with most of the landcover consisting of wetlands and forests. Historical logging and subsequent wildfires in the area have contributed to shaping the vegetative landscape present today.

The southern unit of Indian Lake State Park has approximately one mile of frontage on Indian Lake, the fourth largest inland lake in Michigan's Upper Peninsula, with an area of 8,638 acres. The lake is approximately 5.5 miles long and 3.5 miles wide. Indian Lake consists of a single basin and reaches a



Source: Albert, Dennis A. 1995. Regional landscape ecosystems of Michigan, Minnesota and Wisconsin: a Working Map and Classification.

maximum depth of approximately 16 feet and areas <15 feet in depth constitute over 90% of the lake's surface area. The Indian River (a nationally designated wild and scenic river between Hovey Lake and Indian Lake) is the largest tributary to Indian Lake and empties into the northwest corner near Lange's Bay and exits the lake in the east. The Indian River forms the outlet and flows in a southeastern direction to the Manistique River. The lake level is maintained by a dam ("Carpenter Dam") on the Indian River approximately 1.5 miles downstream of Indian Lake. The legal lake level was set at 613.27 feet in 1945 although the dam gates are opened, and the lake level is lowered 18-24 inches through the winter to protect the shoreline and residences from the effects of ice. Several other smaller creeks are tributary to Indian Lake including Dead Creek, Smith Creek, Silver Creek and DuFour Creek. The west unit of the park has approximately 3,000 feet of frontage on Silver Creek, in addition to 4,600 feet of Indian lake frontage, with limited access due to wetlands. Both units of the park have substantial areas of forested/shrub wetland.

Topography

Flat lakebed, deltaic deposits of sand, parabolic dune field, and shallow embayment's containing transverse dunes are characteristic of the Escanaba/Door Peninsula Sub-subsection. There is a beach-ridge and swale topography, consisting of dozens of low, linear beach ridges alternating with shallow swales. These commonly form a narrow 1 to 2-mile-wide bands along the shorelines of protected embayment's of Lake Michigan. There are large areas which are composed of lacustrine sand deposits that are flat, regional slope is typically only 9 to 10 feet per mile.

The topography of the south unit of Indian Lake State Park is essentially flat. The lake surface elevation is at approximately 610 feet, with the land rising to 620 feet along County

Highway 442. However, there is a bluff approximately 25 feet high at the east end of the campground. The west unit has more variation in topography with land sloping down from a high elevation of over 670 feet at the park entrance towards the lakeshore and towards Silver Creek, which runs through the park draining into the lake.

Soils

The south unit is composed of rubicon sands in the area of the entrance road and the campground, which are excessively drained soils of outwash plains. The remainder of the site is characterized as muck, varying from poorly drained to moderately well drained, associated with beach ridges and outwash plains.

The west unit of the park also exhibits mucky, poorly drained soils along the lakeshore. The remainder of the site is largely made up of moderately to well-drained fine loamy sand with slopes of 1-6%.

Geology and Mineral Resources

The geology in the area of Indian Lake consists of resistant Paleozoic dolomite bedrock with relatively thin cover of glacial sediments. In places, bedrock is exposed at the surface. Indian River follows a pre-glacial bedrock valley that sloped gradually to the southeast toward what is Lake Michigan today. During the last Ice Age, continental ice sheets also followed this valley, widening it. The valley would have widened more extensively in areas of weaker bedrock (shales) north of Indian Lake and south where the Lake Michigan basin now exists. Towards the end of the glacial period, outwash from the melting ice filled some of the valley to the north and Indian Lake was an embayment connected to the post-glacial Nipissing Great Lakes (what are now lakes Superior, Michigan, and Huron). At that time, the Indian River would have formed a delta at the shoreline where it emptied into Lake Nipissing.

The now inland Indian Lake became isolated from the Great Lake to the south (present-day Lake Michigan) either by coalescence of sand bars across the mouth of the bay or by subaerial exposure of a strip of land resulting from dropping lake levels and isostatic rebound of the earth's crust following retreat of the continental ice sheet. The south unit of the park consists primarily of a succession of beach ridges and swales providing evidence of changing levels of Lake Michigan. The park unit on the west shore of the lake sits mostly on a ridge of dolomite bedrock.

Some karst features have been identified in the Manistique area related to the shallow carbonate bedrock. G'chi-dikibi is one example. Multiple rock quarries occur in the area, mining the dolomitic bedrock for aggregate and crushed stone. Elsewhere in the UP the highly pure dolomite and limestone is

mined for lime, cement, and fertilizer products. There is little potential for mineral development within Indian Lake State Park.

Early 1800's Vegetation

According to the General Land Office survey (c. 1800's), the park vegetation was characterized by extensive white cedar swamps on poorly drained soils of the lake plain, which extended inland for miles from Lake Michigan. The swamps were interrupted by narrow, low beach rides, which supported upland conifer forests.

At the south unit of Indian Lake State Park, the shoreline was documented as cedar swamp and the inland areas as mixed conifer swamp. The west unit shoreline was also cedar swamp, with beech, sugar maple and hemlock forests further inland.

Current Vegetation

There are significant differences between historic and current vegetation at this park. Some general patterns are evident at a landscape scale but differences become complex at the local "stand" level. After Euro-American settlement, there was intensive logging. Post-logging fires were common throughout northern Michigan including at Indian Lake State Park where various post-logging fire-scars are evident. In general, the combination of clear-cutting, followed by intense fires in some areas, were not analogous to the disturbance regime from which the forests developed. The forests developed in numerous "pathways", which were often harvested again in some fashion during the 20th century.

For example, the history of these post-logging forests are still visible. On the upland ridges at Indian Lake State Park, there are a few, fire-scarred old-growth white and red pine, scattered remnants of early secessional forest dominated by birch and aspen, with overstories dominated in places by eastern hemlock regenerating on the downed material of the old growth pines. Similarly, lowland areas exhibit a different but a sequential pathway nonetheless, including stands displaying old growth white cedar, cedar stumps, and conversion of some areas of cedar to other dominate trees such as balsam fir, aspen, and even maple. Today, beech bark disease complex and emerald ash borer have drastically reduced the presence of mature beech and ash trees at Indian Lake State Park.

In total at Indian Lake State Park, northern hardwood forest covers the most land area at 199 acres (37% of total park area), while lowland deciduous forest comprises 17% of the park at 90 acres. 69 acres of upland conifer forest (13%), 66 acres of lowland conifer forest (12%) and 24 acres of cedar forest (4%) are also present.

The 91-acre wooded dune and swale complex natural community found at Indian Lake State Park is noteworthy. It is located south of Country Road 442 and is part of an extensive wooded dune and swale complex covering a large area outside the park boundary. This series of old Lake Michigan beach-ridges and intervening swales is an ecologically important habitat consisting of dozens of low, linear beach ridges alternating with shallow depressions (swales), forming a narrow 1- to 2-mile band along the shoreline of Lake Michigan. Wooded dune and swale complex has characteristics of both wetlands and uplands. This community has a very distinctive, repeated pattern on aerial imagery.

Rare Flora and Fauna (From MNFI report and/or GIS)

The Michigan Natural Features Inventory (MNFI) Biotics database documents six rare native plants and nine rare animals within the park. Additionally, nine rare freshwater mussels are known from the waters within the park and the near shore areas of Lake Erie adjacent to the park. Sullivan's milkweed, a native constituent of lakeplain prairie was relocated to the park from the nearby I-75 as part of a MDOT mitigation.

Global Rank Key

G3: Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a

Animals

COMMON NAME	SCIENTIFIC NAME	STATE STATUS
bald eagle	<i>Haliaeetus leucocephalus</i>	special concern
Campeloma spire snail	<i>Cincinnatia cincinnatiensis</i>	special concern
Cisco	<i>Coregonus artedii</i>	threatened
lake sturgeon	<i>Acipenser fulvescens</i>	threatened
little brown bat	<i>Myotis lucifugus</i>	special concern
Yellow banded bumble bee	<i>Bombus terricola</i>	special concern

Plants

COMMON NAME	SCIENTIFIC NAME	STATE STATUS
sedge	<i>Carex albolutescens</i>	threatened

Natural Community Elements

NATURAL COMMUNITY	GLOBAL/STATE RANK
Wooded dune and Swale Complex	G3/S3

Wildlife

The park is part of a deer wintering complex (DWC). In the northern portions of the Upper Peninsula (UP) of Michigan, deer encounter deep snow which limits access to food. Deer have adapted to deep snow conditions by migrating to find suitable food and shelter to survive the winter. A deer wintering complex is the landscape mosaic of food and cover resources used by deer in winter conditions. Stated another way, a DWC is a local area where weather, forest cover, timber harvest, past deer patterns and behavioral conditions, and ecological conditions interact, resulting in a specific local area important to deer survivorship during typical winters. Deer wintering complexes have sometimes been called "deer yards," but because there are differences

restricted range (e.g. a single western state, a physiographic region in the East) or because of other factor(s) making it vulnerable to extinction throughout its range; in terms of occurrences, in the range of 21 to 100.

State Rank Key

S3: Rare or uncommon in state (on the order of 21 to 100 occurrences).

In addition, osprey (*Pandion haliaetus*, state status special concern), calypso orchid (*Calypso bulbosa*, state status threatened), Lake Huron tansy (*Tanacetum bipinnatum*, state status threatened), dwarf lake iris (*Iris lacustris*, state status threatened), narrow-leaved gentian (*Gentiana linearis*, state status threatened), and limestone bedrock lakeshore community have been documented in the vicinity of the park.

Cisco has been documented in Indian Lake. This species is listed as threatened in the state. The fish live in the deep areas of the Great Lakes. However, they can be found in shallower depths when spawning over rocky substrates which may be what attracted them to Indian Lake. Common Loon has been seen in the lake and is listed as state threatened which offers legal protection. Lake Sturgeon have also been documented in the lake, total population size is not known, they are listed as state threatened.

or variations in accepted definitions of "deer yard", this term is not ideal for a description or for our use. A "deer concentration area" is a localized site or area where deer are found during any individual winter, and this can vary widely.

The Indian Lake Deer Wintering Complex is located in Schoolcraft County NE and NW of the city of Manistique and encompasses the majority of Indian Lake State Park. Deer survival relies heavily on this area for food and shelter in the winter, and deer use has been documented in parts of this complex by the DNR since 1937. The entire deer wintering complex encompasses 50,519 acres and is predominantly comprised of hemlock and cedar for shelter, and aspen and maple for food sources. This complex surrounds Indian Lake to the eastern and western boundaries.

Numerous game species can be found within Indian Lake State Park and surrounding areas, and include ruffed grouse, American woodcock, wild turkey, and black bear. Other frequent residents might include coyote, red fox, American marten, and otter.

Due to the close vicinity to Lake Michigan, a large variety of neotropical migratory birds can be found throughout major migration periods both within the park and outside of its boundaries.

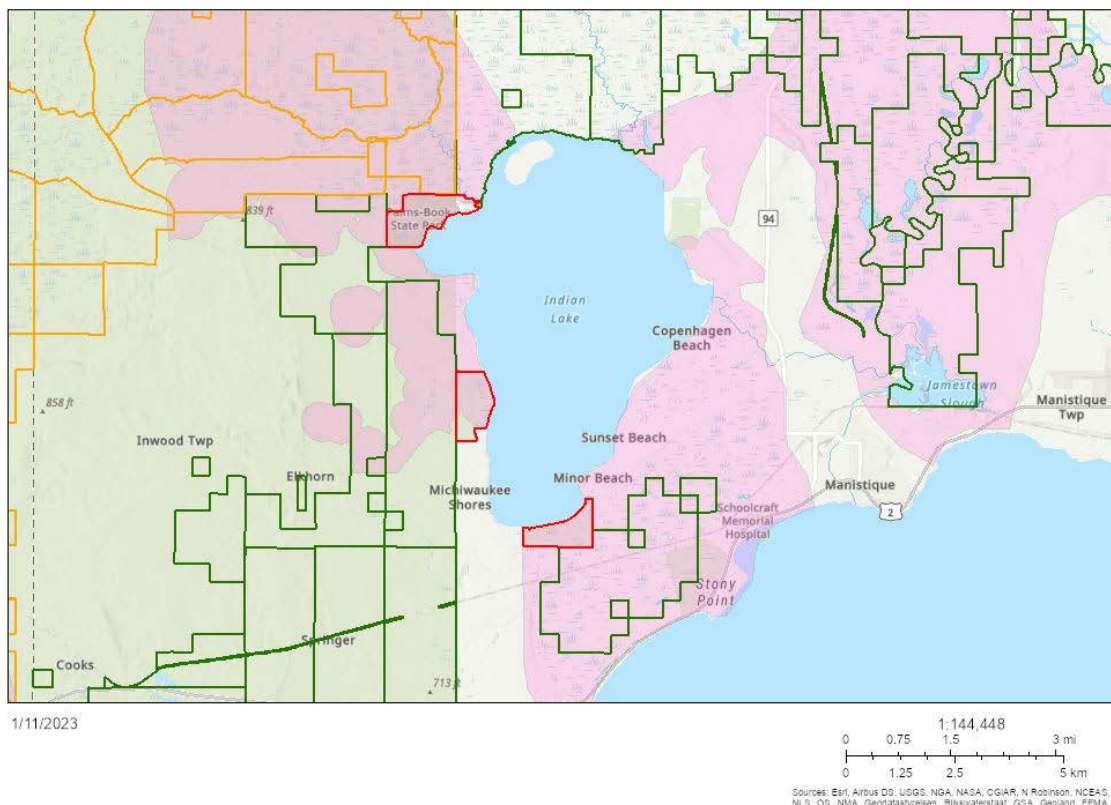
Fisheries

Indian Lake supports a diverse fish community with 36 species documented during fisheries surveys (1928-2010) completed by MDNR including lake sturgeon and cisco. Both species are listed as state-threatened species which are protected under the Endangered Species Act of the State of Michigan (Part 365 of PA 451, 1994 Michigan Natural Resources and Environmental Protection Act).

Fisheries management efforts in Indian Lake have mainly concentrated around stocking walleye to supplement modest levels of natural reproduction. Walleye stocking efforts occurring from 1934-1941, 1966-2005, and 2011 to the present while the MDNR has partnered with local constituents to raise and stock walleye on a regular schedule in Indian Lake for over 20 years. Other species previously stocked were yellow perch (1930s), northern pike (1940s and 1960s) and tiger muskellunge (1970s-1980s and early 1990s). Only walleye have been stocked in Indian Lake since 1991.

Indian Lake provides popular recreational sport fisheries for yellow perch, walleye, smallmouth bass, and northern pike during open-water and winter (i.e. ice fishing) seasons. Anglers may also encounter cisco, brown trout, rock bass, and bluegill when fishing.

Indian Lake DWC



A map depicting the extents of the Indian Lake Deer Wintering Complex which includes Indian Lake State Park

A.8 Recreational Resources

Camping:

Indian Lake South-Modern has 143 sites with either 20/30 amp or 50-amp electric service. Indian Lake West-Semi-modern has 72 sites with 20/30-amp service and no modern bathrooms.

Mini Cabin:

The South-Modern campground has two mini-cabins available for rent. Each cabin has one set of bunk beds, one single and one double, a table, four chairs, electric heater, microwave, a portable fan and a dorm fridge. An ADA accessible fire pit, grill and picnic table are provided outside.

Modern Restrooms/Vault Toilet:

Three toilet/shower buildings are provided in the south campground, with vault toilets in the west unit.

Sanitation Station:

A sanitary dump station is provided for campers in the south unit.

Picnic Area/Picnic Shelter:

Two picnic shelters are located in the day use area and can be reserved up to a year in advance. The area also has fire pits, picnic tables and grills available.

Playground:

There is limited play equipment located near the center of the campground.

Boat Rental:

Kayaks and rowboats are available for rent seasonally through the park, available on a first come, first served basis.

Boat Launch:

A boat launch is located west of the day-use beach area. This is a hard surface ramp with sufficient water depth and lake or impoundment size to accommodate most trailerable watercraft. Indian Lake has a maximum depth of 18 feet with about 90 percent of the lake with less than 15 feet deep. It is best suited for smaller boats.

Beach/Beach House/Swimming:

A designated swimming beach and beach house/picnic shelter is located west of the campground. The clean sandy beaches and shallow water make an attractive swimming area.

Fishing:

Perch, walleye, northern pike, muskellunge, rock bass, smallmouth bass, bluegill, sturgeon and brown trout have been fished from Indian Lake.

Hiking:

There are two miles of trails in the south unit, including the Chippewa Nature Loop and Dufour Creek Loop. One section near the lake is paved and ADA accessible. The trails are also open to cross-country skiing although they are not groomed.

Hunting:

Hunting is allowed in the south unit south of County Road 422 and in the west unit, in accordance with state regulations, except the entire park shall be closed to the taking of waterfowl from September 1 to Labor Day.

Metal Detecting:

Metal detecting may be allowed in some areas of some parks. Refer to the DNR website for up-to-date information (<https://www.michigan.gov/dnr/places/state-parks/metal-detecting>). Any items found must be reviewed by park staff and may be retained for further investigation.

A.9 Historic and Cultural Resources

Today, only two of the original six structures which were built by the CCC remain: a toilet shelter building and bathhouse. The limestone shelter/toilet building is one of two large limestone structures found within the Michigan state park system. This shelter is an unusual design for Michigan and appears to be more fitting for a design done in the southwest. The log and stone bathhouse (now called the Beach Shelter) has undergone a number of interior changes over the years, but the exterior still retains its Depression era feel. Both structures are located in the day use area.

STRUCTURES	DMB#
Shelter/Toilet	80191
Bathhouse	80194

The buildings and associated features are considered eligible for listing on the National Register of Historic places as an historic district. The district would likely include the beach shelter, bathhouse, Beach Trail and the west part of the picnic area. The original plantings and remnants of footbridges can still be seen along the trail and would be contributing elements.

There has been no archaeological survey conducted in either park unit. However the CCC camp and associated ruins and artifacts are reported as archaeological site 20ST280.

In the west unit, the contact station is considered worthy of preservation. Built in 1966, The building was designed with large extended gable ends and is the only contact station in the state park system with this feature still intact.

A.10 Programming and Events

State Park Explorer Programs are provided during the summer months by a trained Explorer Guide. Program focus on specific features of Indian Lake State Park, such as local wildlife, invasive species, local history and recreation.

In addition, a series of summer programs are held at the park in partnership with Friends Group. These events include concerts in the park, magic shows, Civilian Conservation Corp speakers and Christmas in July.

Ideally the Friends Group will work with the Explorer Guide to determine summer schedule so programs and events complement one another.

A.11 Park Use Statistics

Camping and Day Use Numbers

Indian Lake State Park is primarily a summer use park, with most visitors between May and September. In FY2021, Indian Lake State Park had an estimated 25,746 day use visitors and 42,008 campers, for a total of 67,754 visitors. Camping numbers are derived from the central reservation system,

while day use numbers are estimated using car counts multiplied by a standard number of people (3.5) per vehicle. Although the south shore campground is more popular at weekends, it enjoys heavy use throughout the week. The west shore campground is busiest in July and August, with generally lower use mid-week.

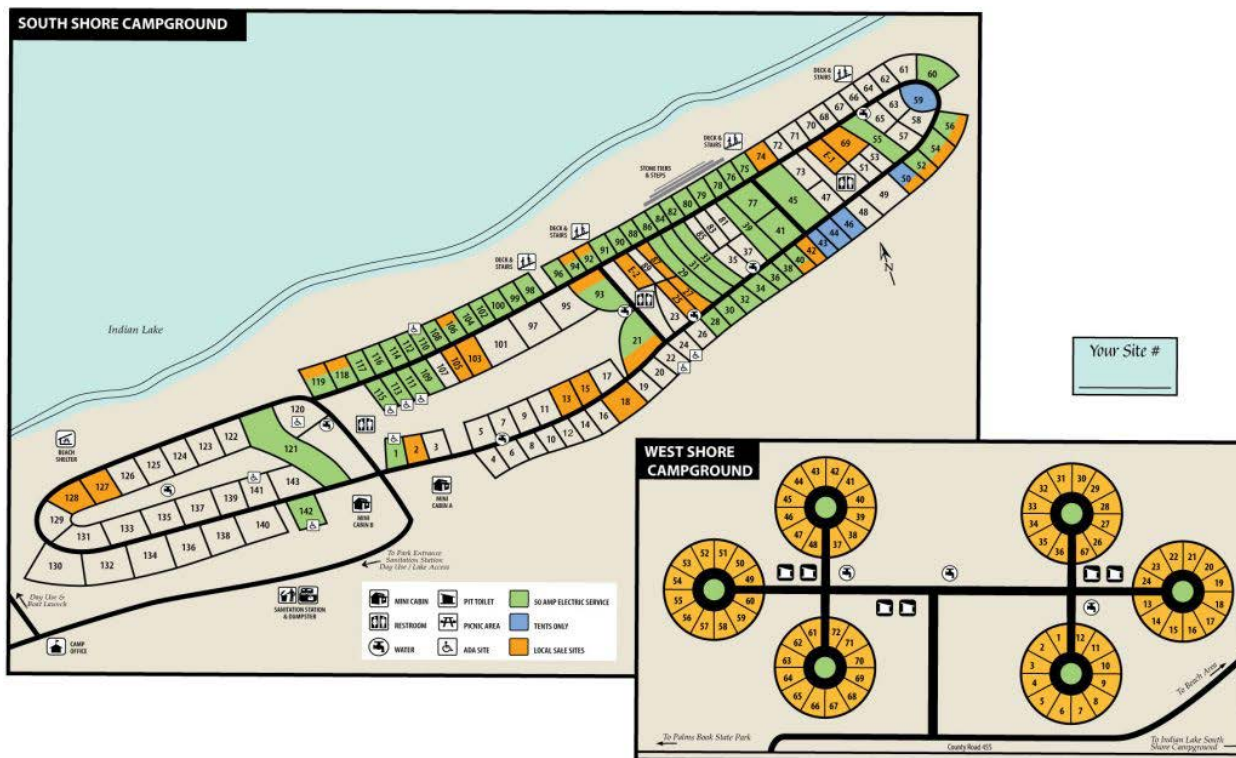
While day use numbers fluctuate, camping numbers have risen over the last 5 years (with the exception of 2020) by approximately 13%, corresponding with a general increase in travel in Michigan's Upper Peninsula.

FY	DAY-USE NUMBERS	CAMPER NUMBERS
2017	21,295	36,921
2018	19,411	36,777
2019	23,625	38,627
2020*	10,630	32,428
2021	25,746	42,008

*Use numbers were impacted by COVID-19

The shelters are a popular feature in the park, with over 50 reservations per year, accommodating over 2,000 guests.

Visitors to Indian Lake State Park include those who reside in the nearby communities of Gladstone, Manistique and Escanaba, as well as travelers from Michigan's lower peninsula, as indicated below. Over the last 10 years, visitors from further afield have become more numerous. Out of state locations



Indian Lake State Park campground map

such as Chicago, Green Bay and Minneapolis feature in the top 20 cities for camping reservations.

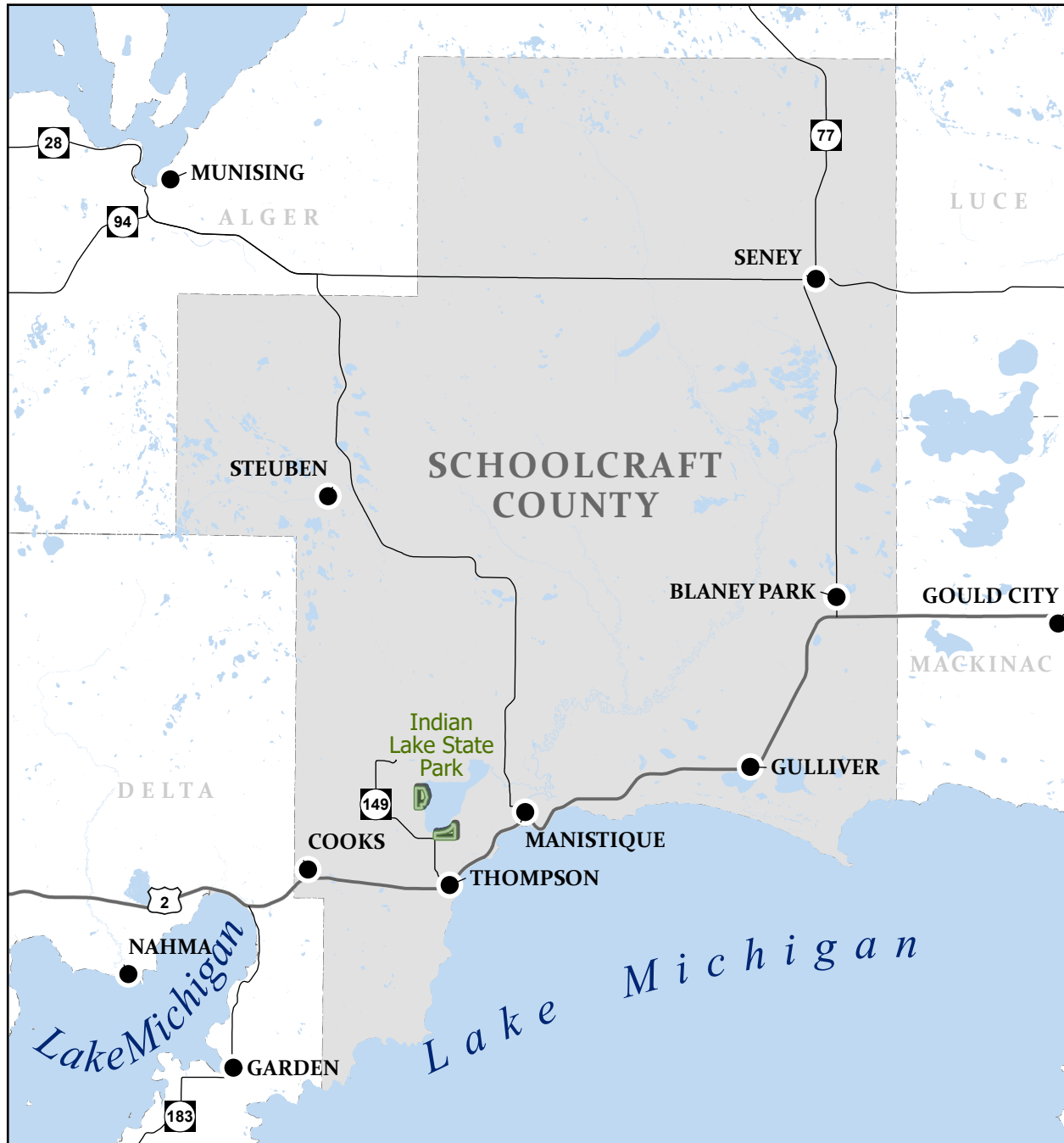
Top 10 Cities for Camping Reservations Indian Lake State Park (2021)

CITY & STATE	RESERVATIONS
GRAND RAPIDS, MI	126
TRAVERSE CITY, MI	113
GLADSTONE, MI	82
ANN ARBOR, MI	66
MANISTIQUE, MI	63
ESCANABA, MI	56
MARQUETTE, MI	56
LANSING, MI	52
SAGINAW, MI	51
MENOMINEE, MI	49

A 2018 on-site survey conducted by Michigan State University indicated that out of state visitors accounted for approximately 17% of visitors, primarily from Wisconsin, Indiana, Ohio and Pennsylvania. The full onsite survey report is included in Appendix C.

A.12 Park Resource Maps

Regional Overview Map






MICHIGAN DEPARTMENT OF NATURAL RESOURCES

Indian Lake State Park - Regional Overview

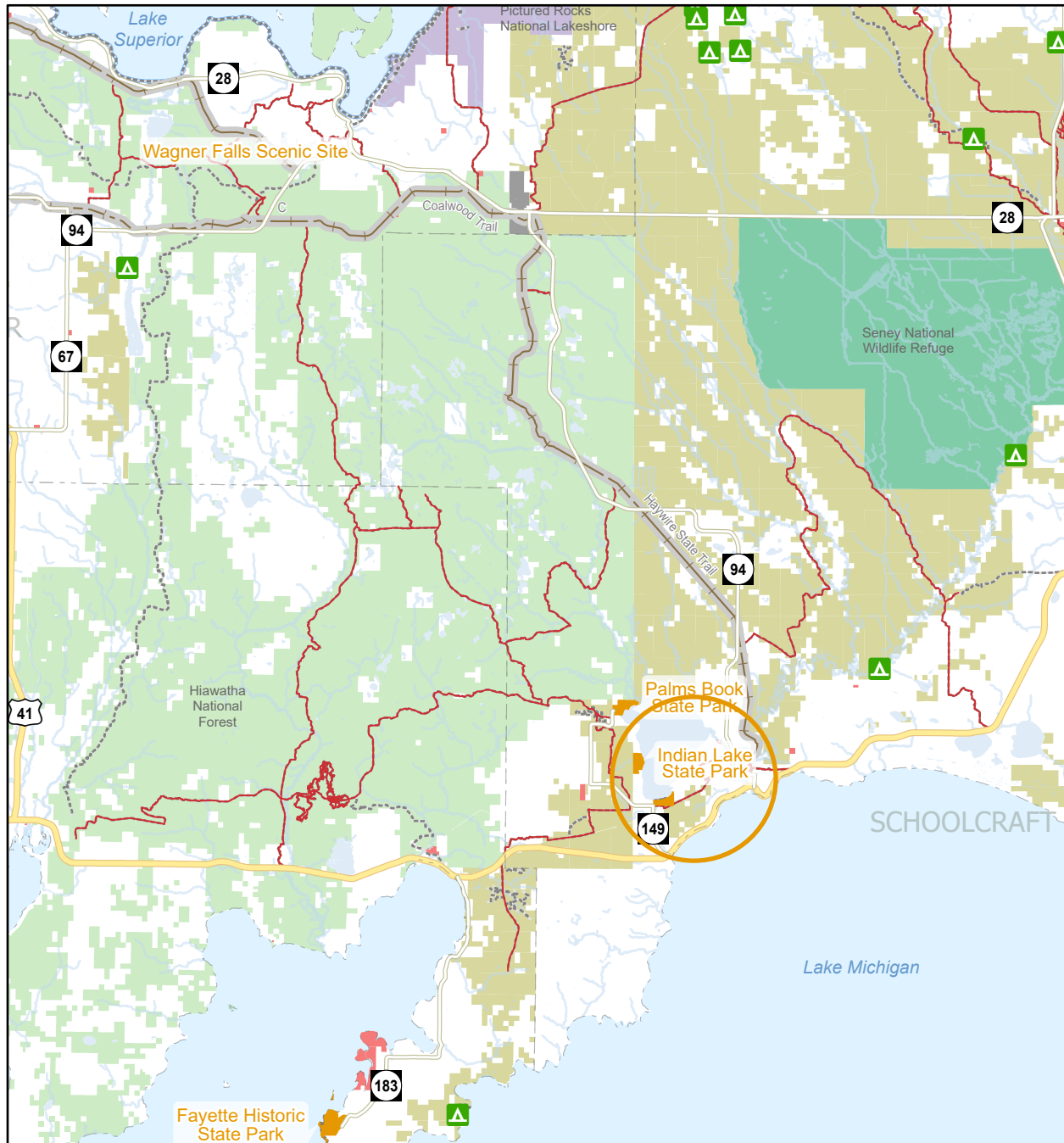


Updated: 10/04/2022

-  County Boundary
-  Indian Lake State Park
-  Waterbody



Regional Recreation Resources Map



MICHIGAN DEPARTMENT OF NATURAL RESOURCES



Indian Lake State Park - Regional Recreational Resources

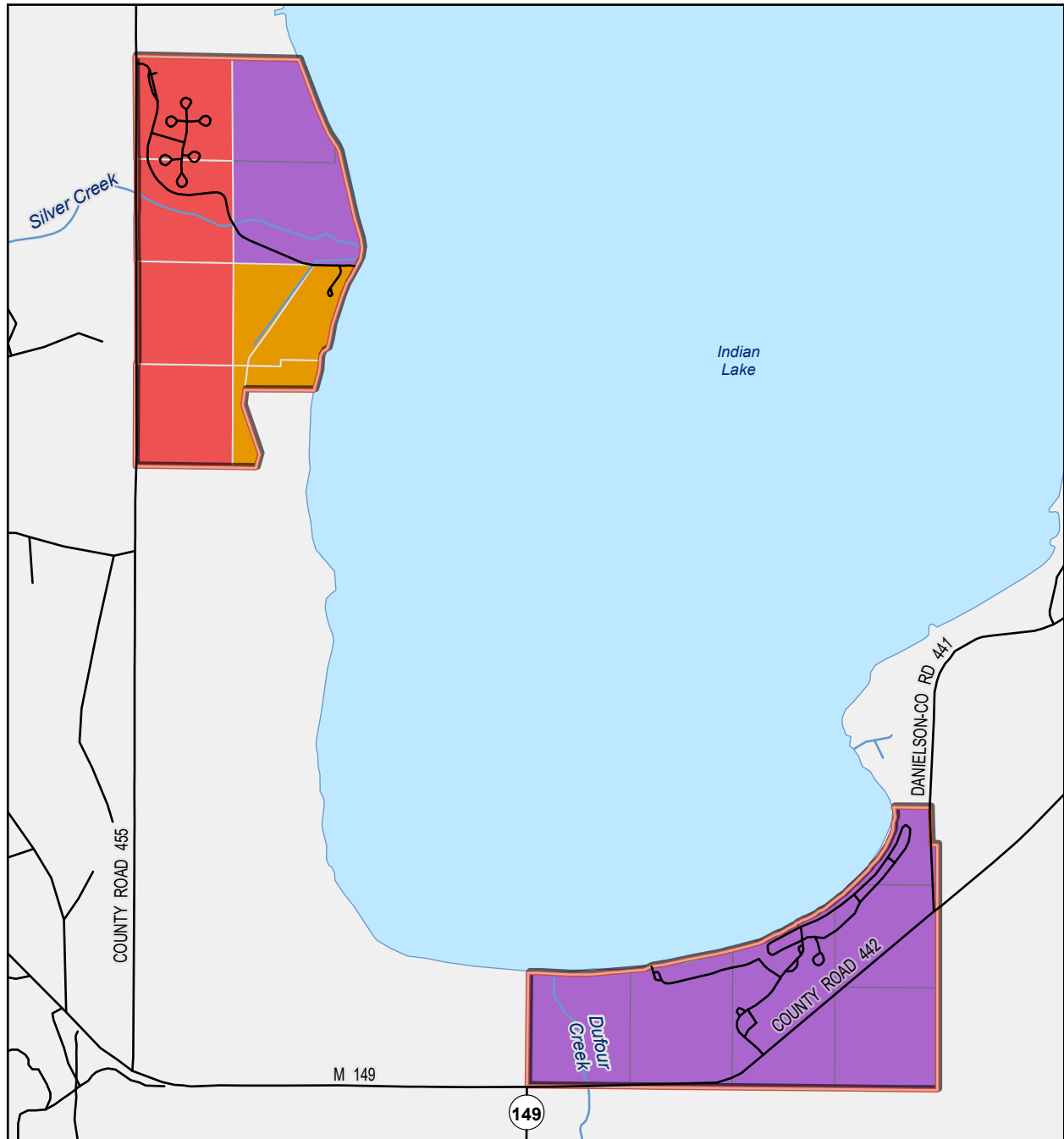


Undated: 01/27/2023

- County Boundary
- State Park/Recreation Area/Historic Park
- State Forest
- State Game/Wildlife Management Area
- Other Conservation Lands
- State Forest Campground
- Non-motorized Trail
- Motorized Trail
- Railtrail
- Designated Water Trail
- US Fish and Wildlife Service
- US Forest Service
- National Park Service



Funding Sources Map



MICHIGAN DEPARTMENT OF NATURAL RESOURCES

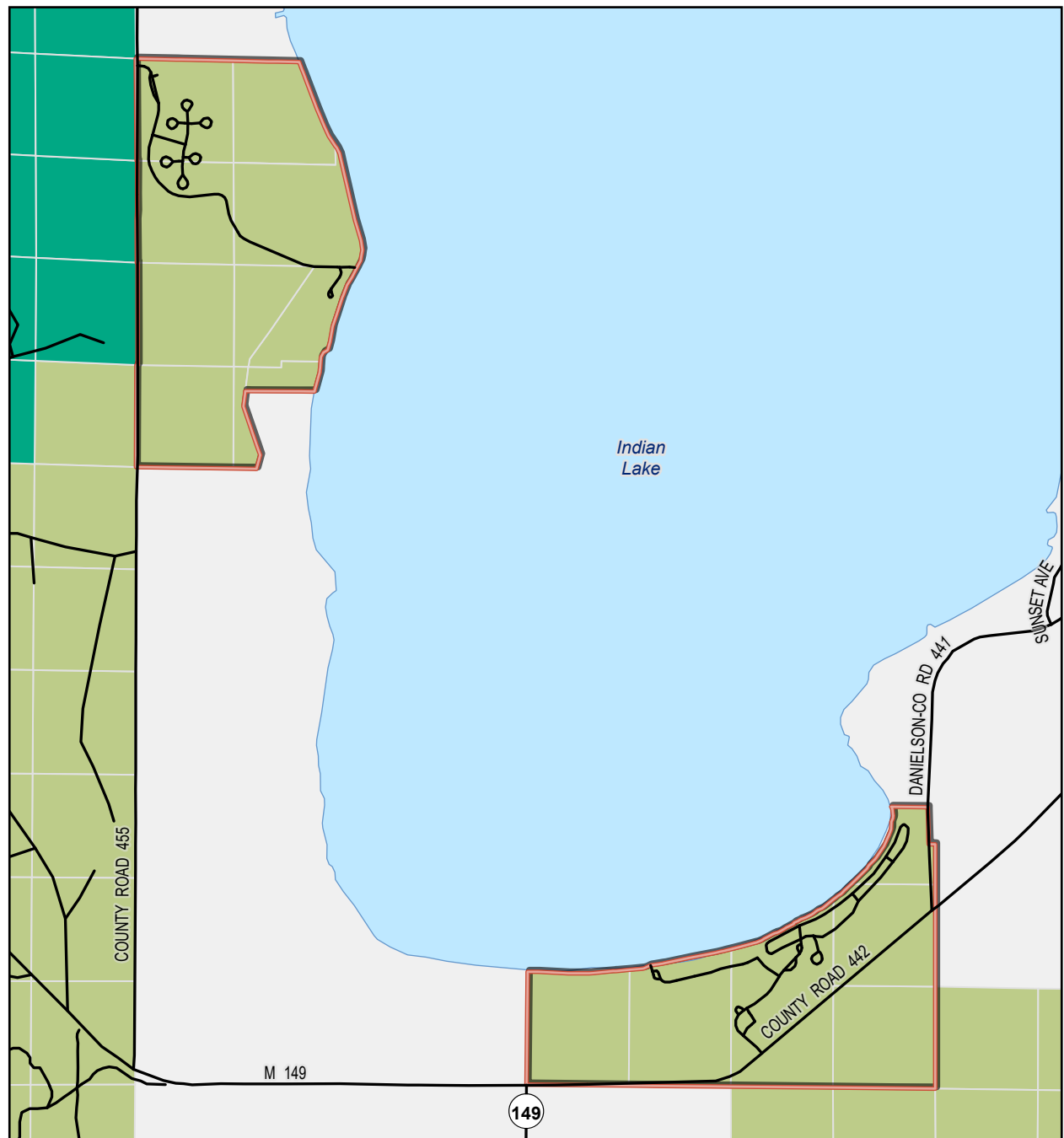
Indian Lake State Park - Funding Sources

- | | |
|---------------------|-----------------------|
| State Park Boundary | Funding Source |
| Road | Tax Reverted Land |
| River/Stream | Land Exchange |
| Lake/Pond | Special Legislation |



Updated: 01/27/2023

Ownership Rights Map



MICHIGAN DEPARTMENT OF NATURAL RESOURCES

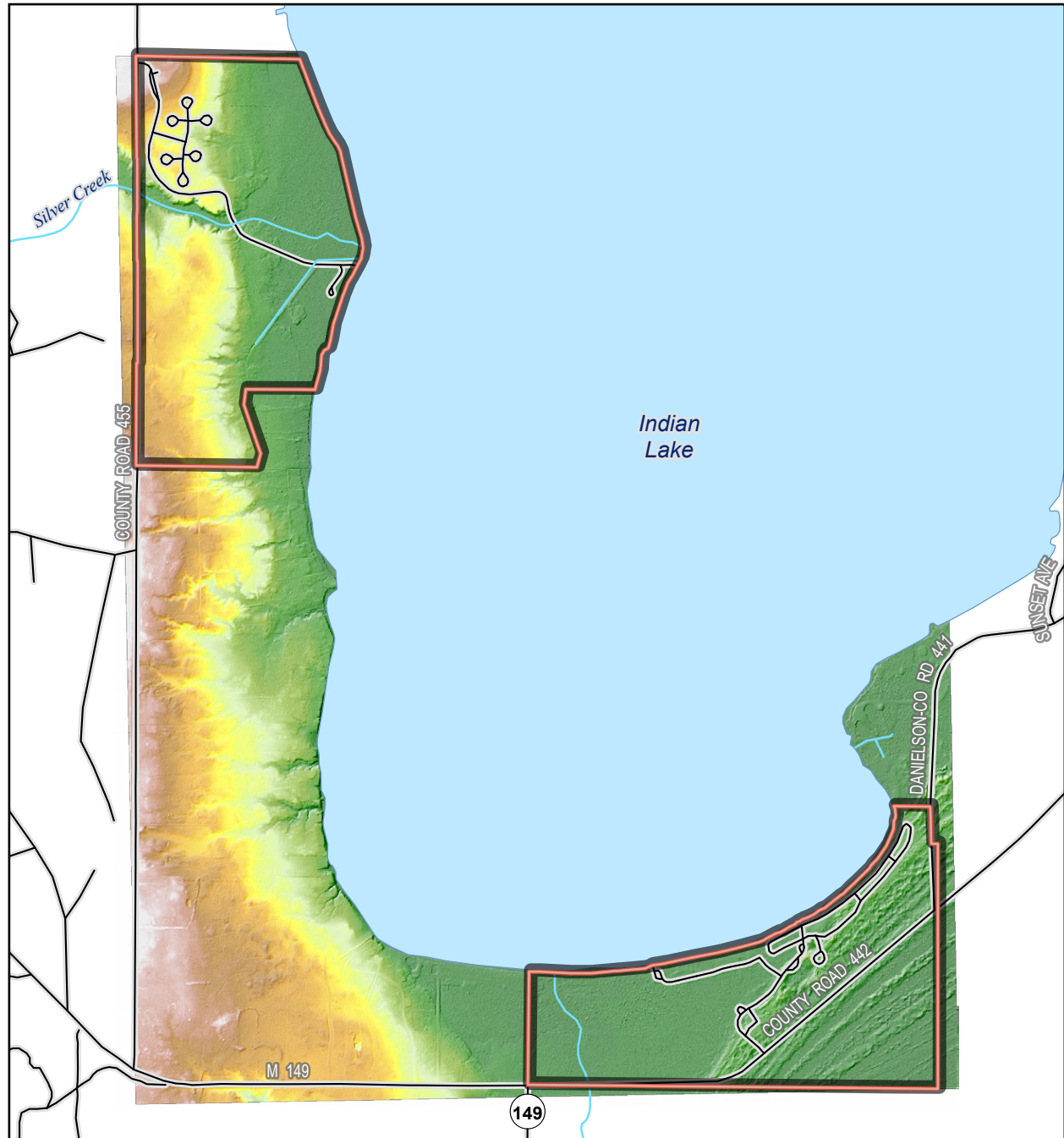
Indian Lake State Park - Ownership Rights

- | | |
|---------------------|-------------------------|
| State Park Boundary | Ownership Rights |
| Road | Mineral & Surface |
| River/Stream | Surface |
| Lake/Pond | |



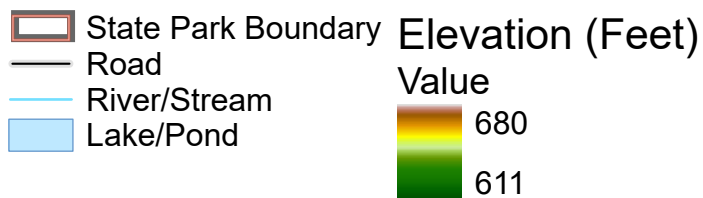
Updated: 09/29/2022

Topography Map



MICHIGAN DEPARTMENT OF NATURAL RESOURCES

Indian Lake State Park - Topography



Updated: 10/18/2022

*Slope calculated from the 30 meter resolution National Elevation Dataset DEM for Michigan using Arc/Info GRID v9.0



Land Cover, 1800s Map



MICHIGAN DEPARTMENT OF NATURAL RESOURCES

Indian Lake State Park - Land Cover, 1800s

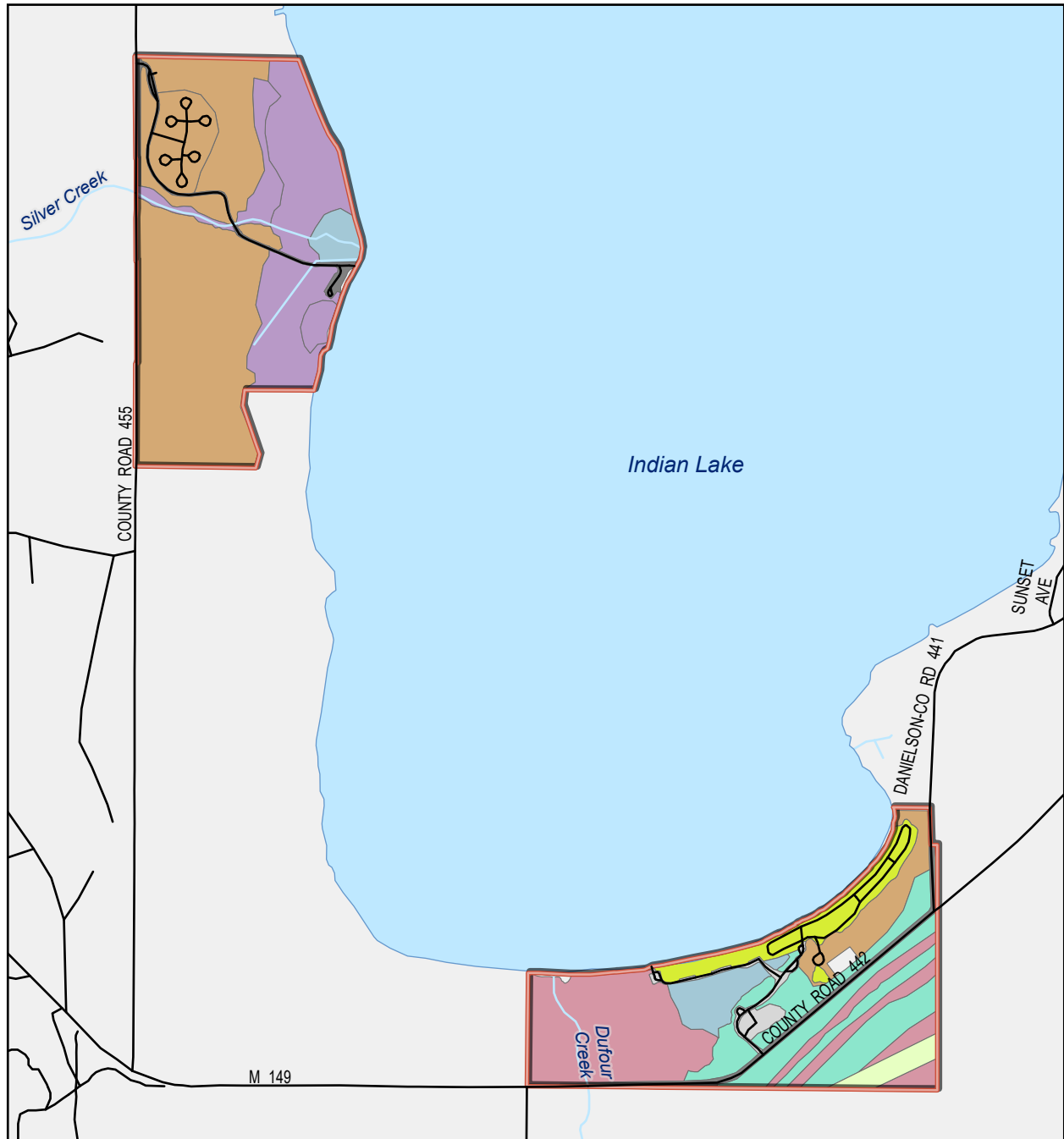
- | | |
|---------------------|-------------------|
| State Park Boundary | Cedar Swamp |
| Road | Low Conifer Swamp |
| River/Stream | R Pine/W Pine |
| Land Cover* | Lake |
| Beech/Sugar Maple | |

Updated: 09/23/2022

*Mapping derived from original notes of the State of Michigan General Land Office Survey conducted in the early to mid 1800s

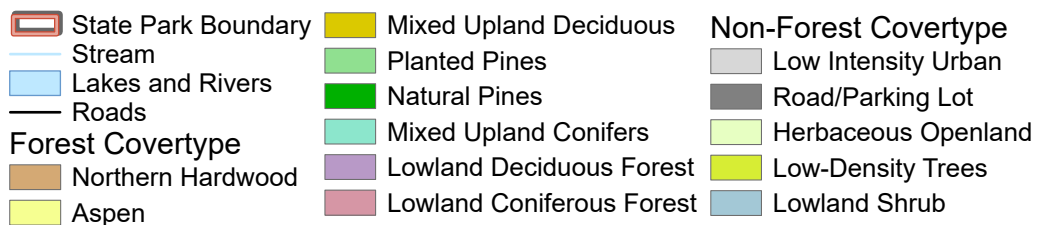


Land Cover Map



MICHIGAN DEPARTMENT OF NATURAL RESOURCES

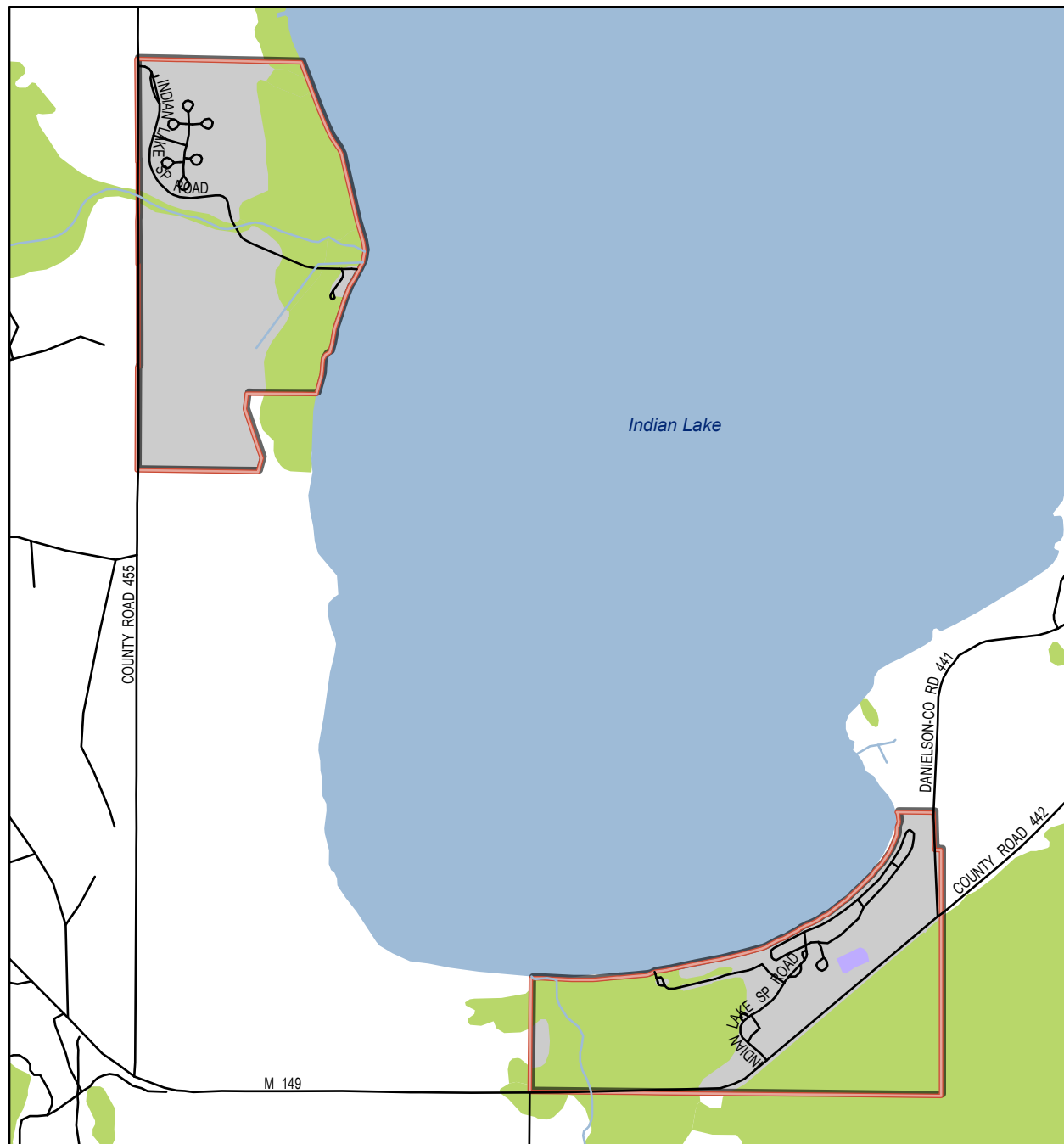
Indian Lake State Park - Land Cover



Updated: 01/26/2023
 *Michigan Forest Inventory, Michigan DNR



Wetlands Map



MICHIGAN DEPARTMENT OF NATURAL RESOURCES

0 0.4 0.8 Miles



Indian Lake State Park - Wetlands

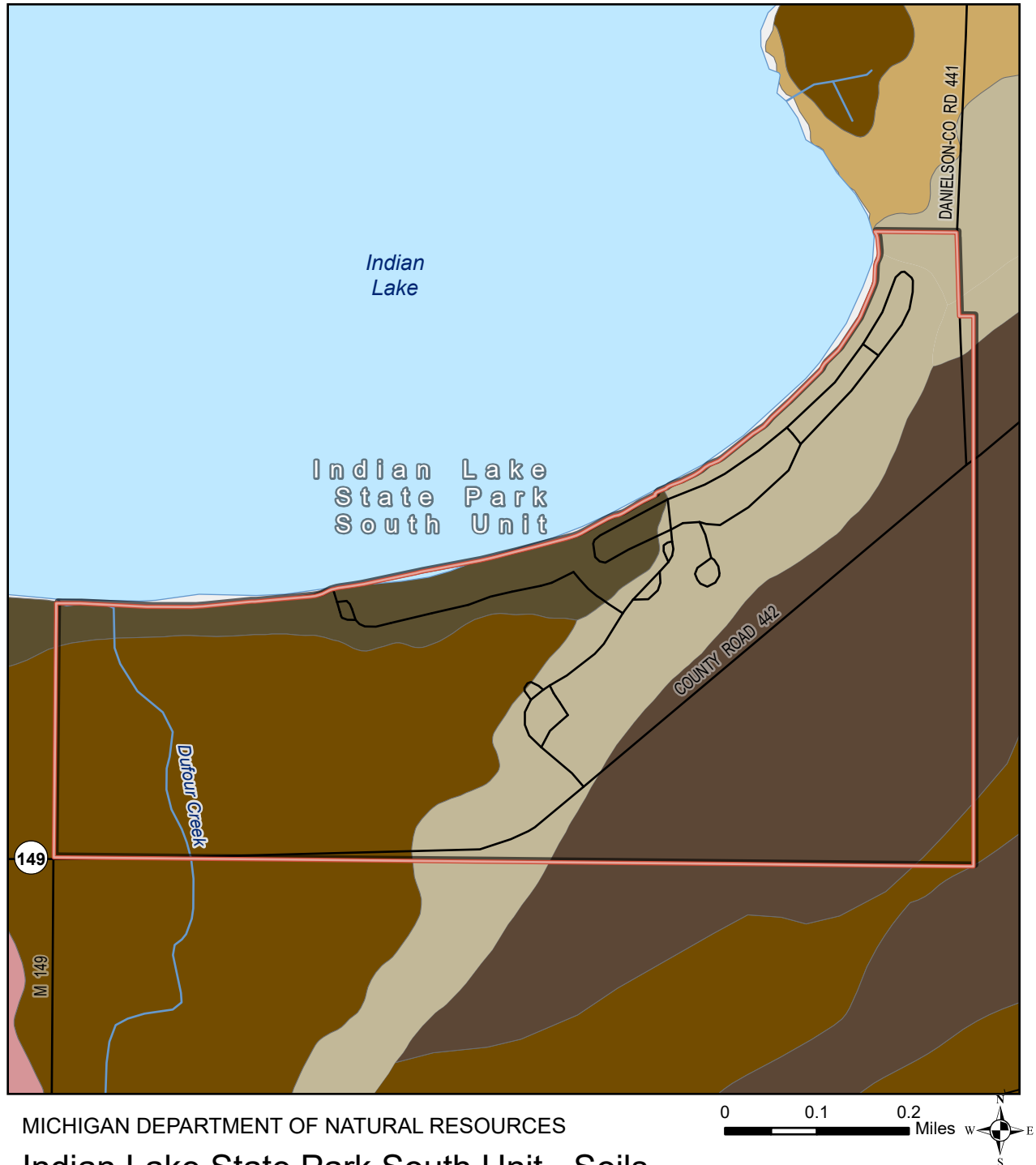
- State Park Boundary
- Wetlands*
- Roads
- Rivers/Streams
- Lakes/Ponds
- Freshwater Forested/Shrub Wetland
- Freshwater Pond



Updated: 09/29/2022 9:16 AM

*The National Wetlands Inventory (NWI) dataset (2013)

South Unit Soils Map



MICHIGAN DEPARTMENT OF NATURAL RESOURCES

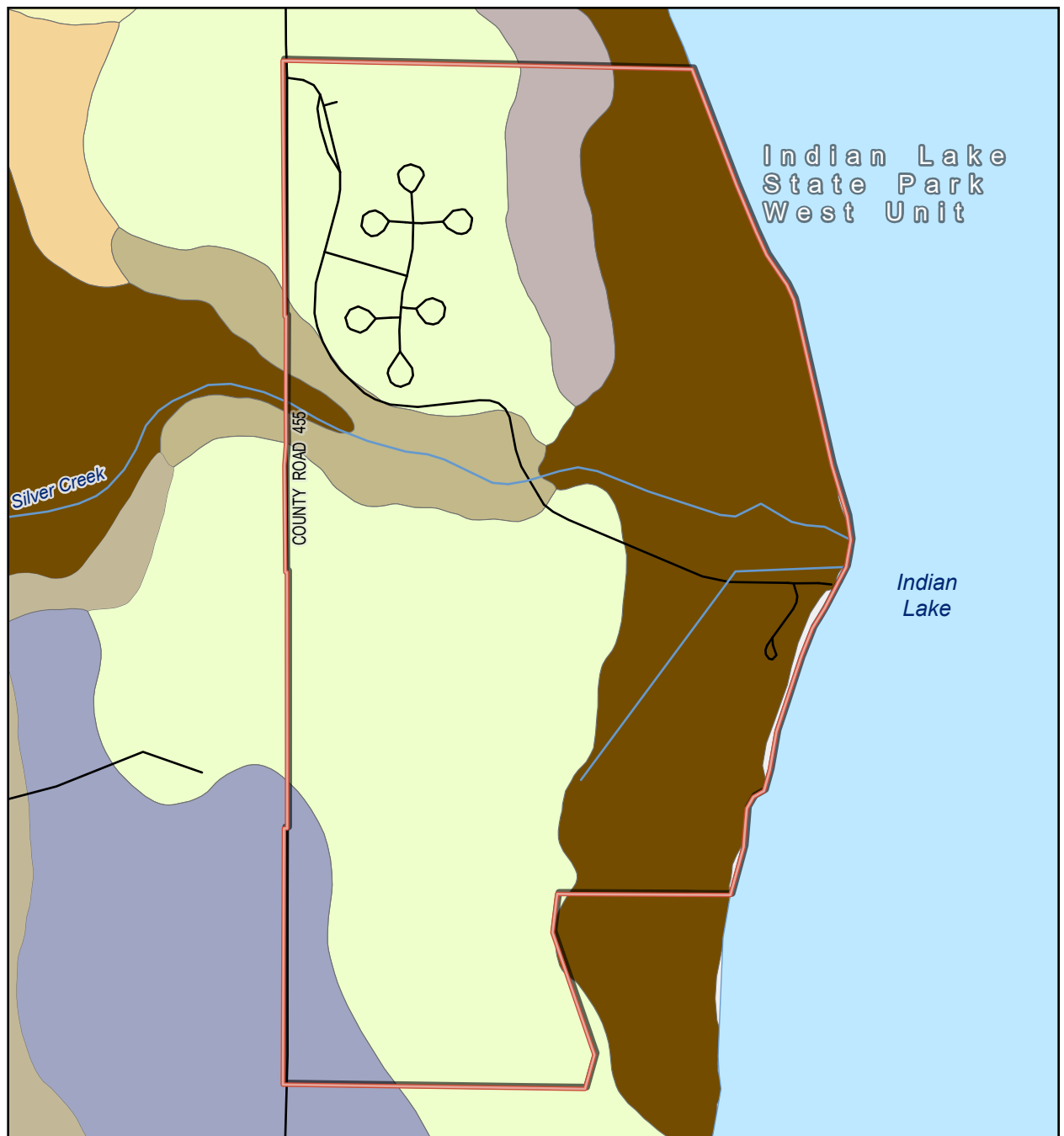
Indian Lake State Park South Unit - Soils

- | | | |
|---------------------|---------------------------|---|
| State Park Boundary | Au Gres-Deford loamy sand | Hendrie-Annaias poorly drained silty loam |
| Road | Muck | Rubicon sand |
| River/Stream | Deford muck | Wurtsmith muck |
| Lake/Pond | | |

Updated: 12/01/2022



West Unit Soils Map



MICHIGAN DEPARTMENT OF NATURAL RESOURCES

Indian Lake State Park West Unit - Soils

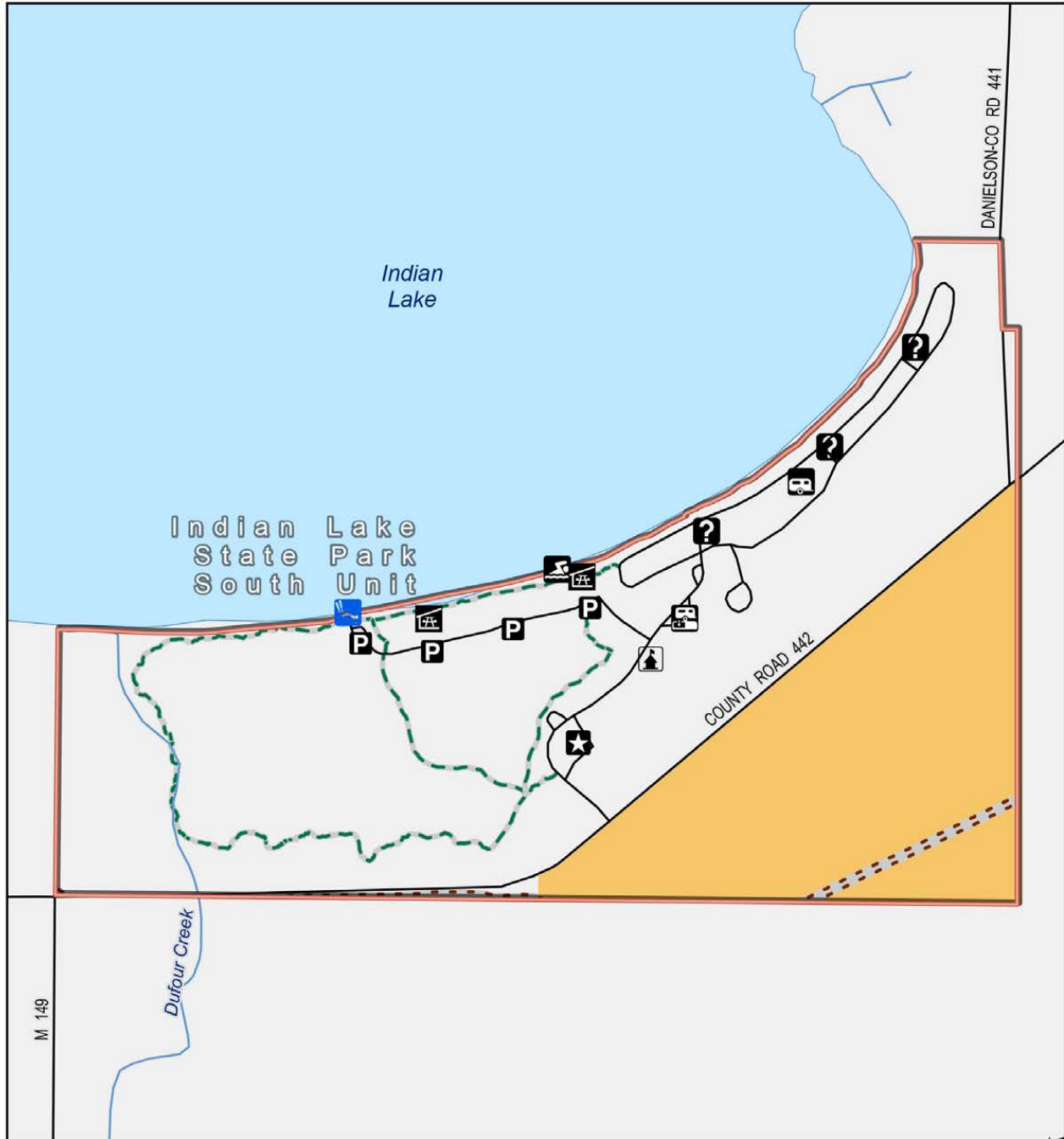
- State Park Boundary
- Road
- River/Stream
- Lake/Pond
- Muck

Updated: 12/01/2022

- Garlic sand
- Greylock-McMillan sandy loam
- Kalkaska sand
- Karlin loamy fine sand
- McMillan-Greylock fine sandy loam
- Noseum fine sandy loam
- Rubicon sand



South Unit Park Amenities Map



MICHIGAN DEPARTMENT OF NATURAL RESOURCES



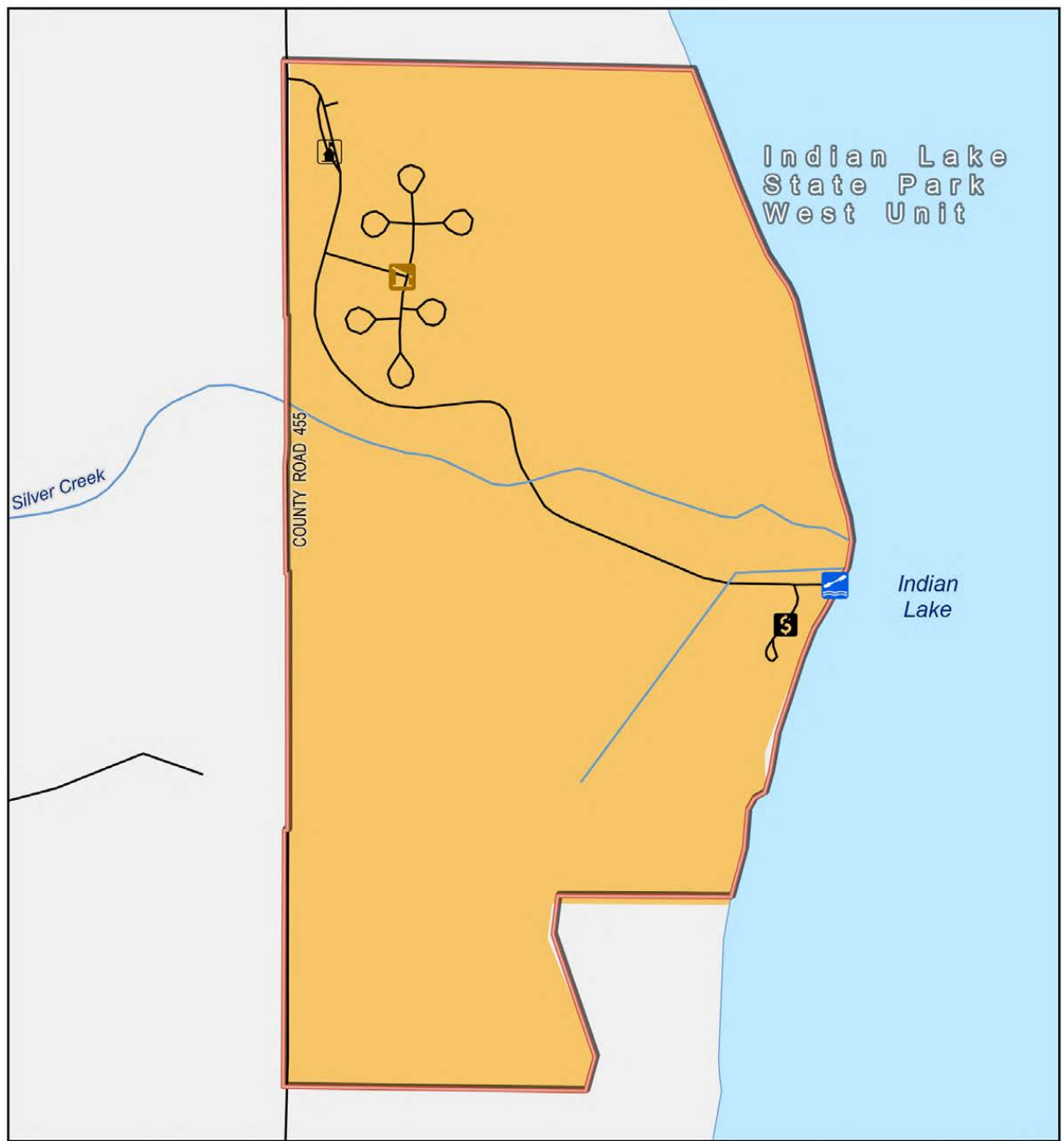
Indian Lake State Park South Unit - Park Amenities

- | | | | |
|---------------------|---------------------|-------------------|--------------------|
| State Park Boundary | Hiking Trail | Modern Campground | Restroom |
| Road | Lake/Pond | Beach | Sanitation Station |
| River/Stream | Open to Hunting | Contact Station | Park Headquarters |
| Snowmobile Trail | Boating Access Site | Picnic Shelter | Parking Lot |



Updated: 11/23/2022

West Unit Park Amenities Map



MICHIGAN DEPARTMENT OF NATURAL RESOURCES



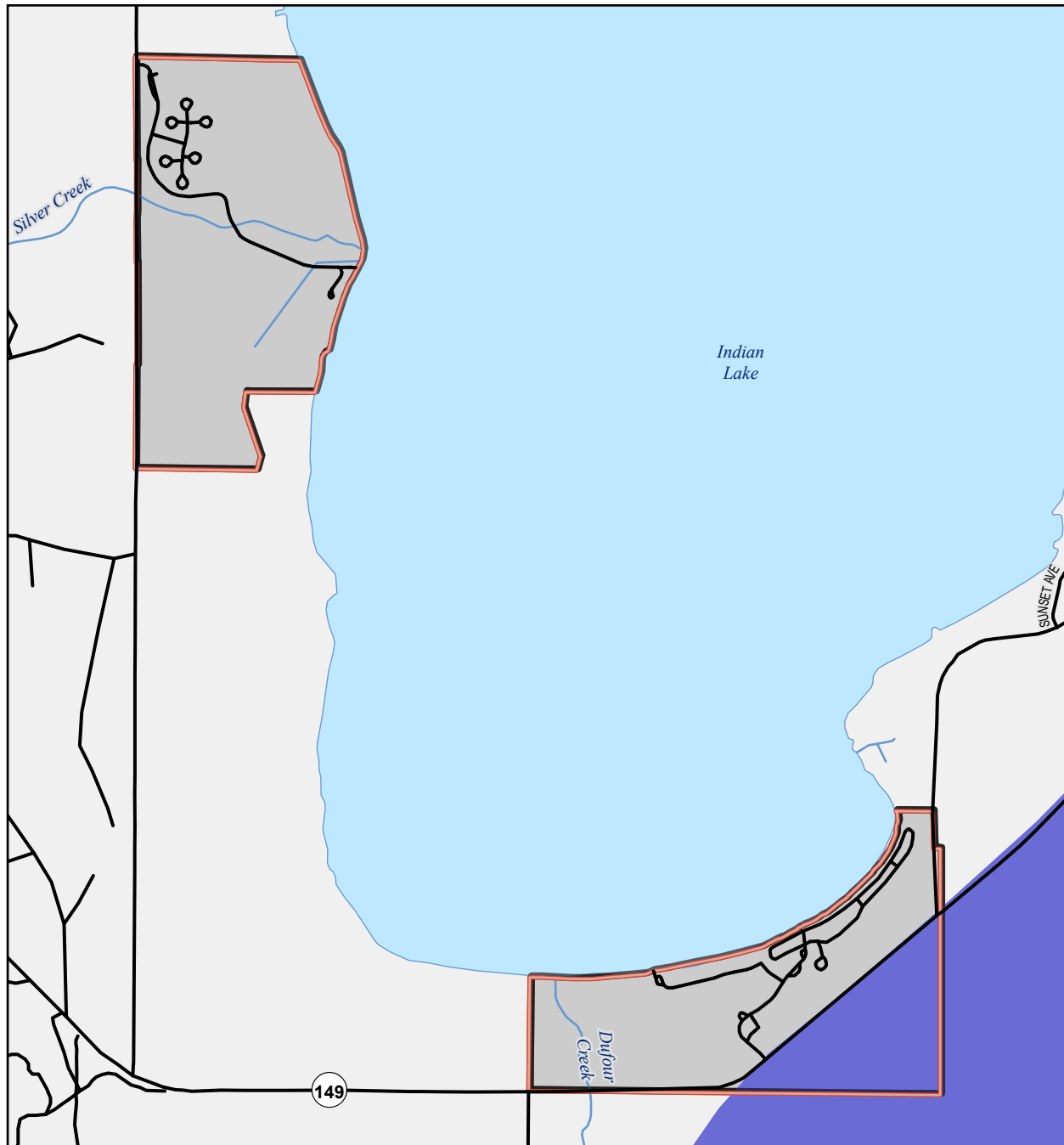
Indian Lake State Park West Unit - Park Amenities

- | | | |
|---------------------|--------------------------------|-----------------|
| State Park Boundary | Lake/Pond | Campground |
| Road | Open to Hunting | Parking Lot |
| River/Stream | Carry-Down Boating Access Site | Contact Station |



Updated: 11/23/2022







Exemplary Natural Communities Map



MICHIGAN DEPARTMENT OF NATURAL RESOURCES



Indian Lake State Park - Exemplary Natural Communities

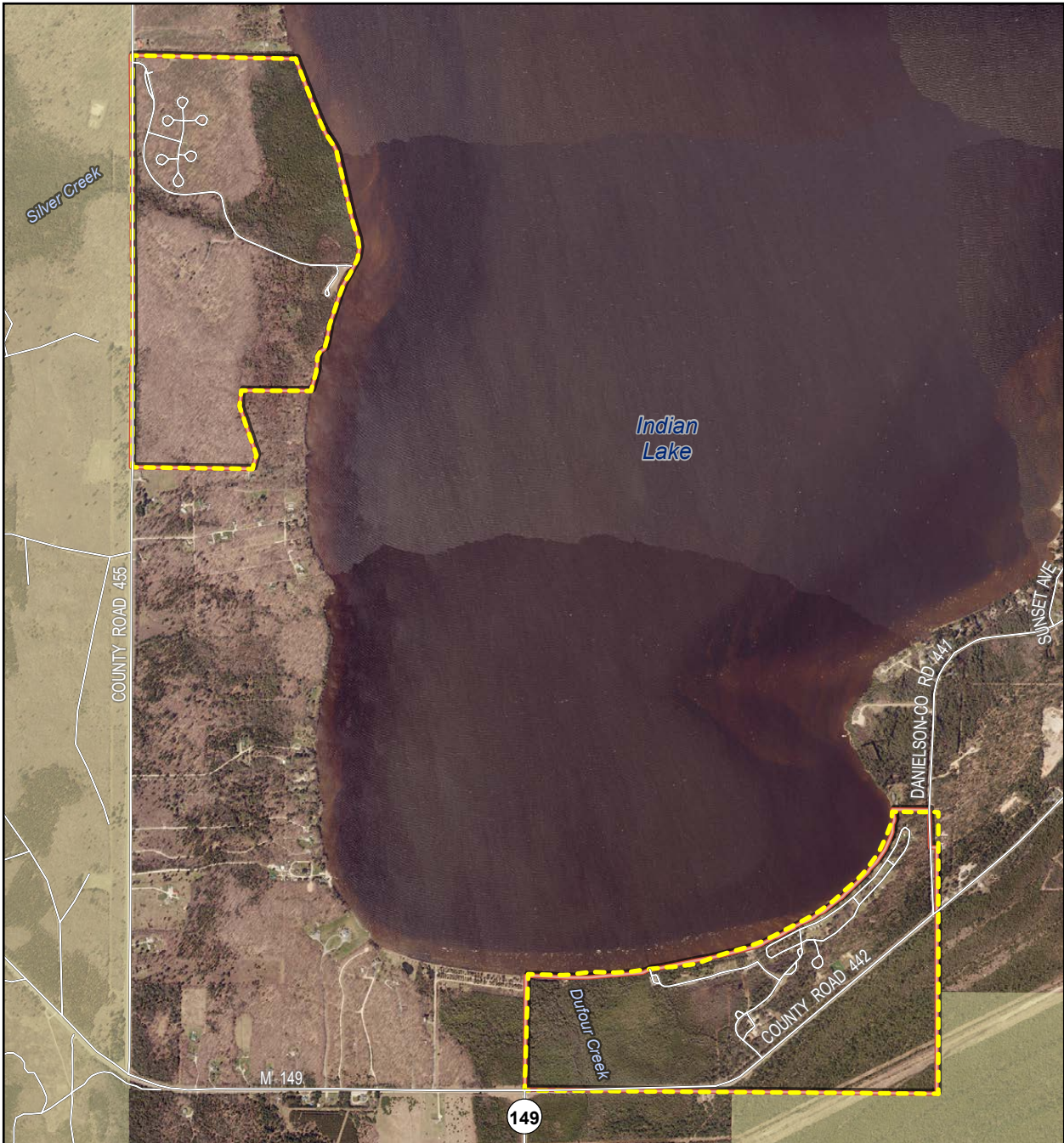
-  State Park Boundary
-  Road
-  River/Stream
-  Lake/Pond
-  Natural Communities*
-  Wooded Dune and Swale Complex

Updated: 02/15/2023

*Natural Communities of Michigan (Michigan Natural Features Inventory)



Park Boundary Map



MICHIGAN DEPARTMENT OF NATURAL RESOURCES

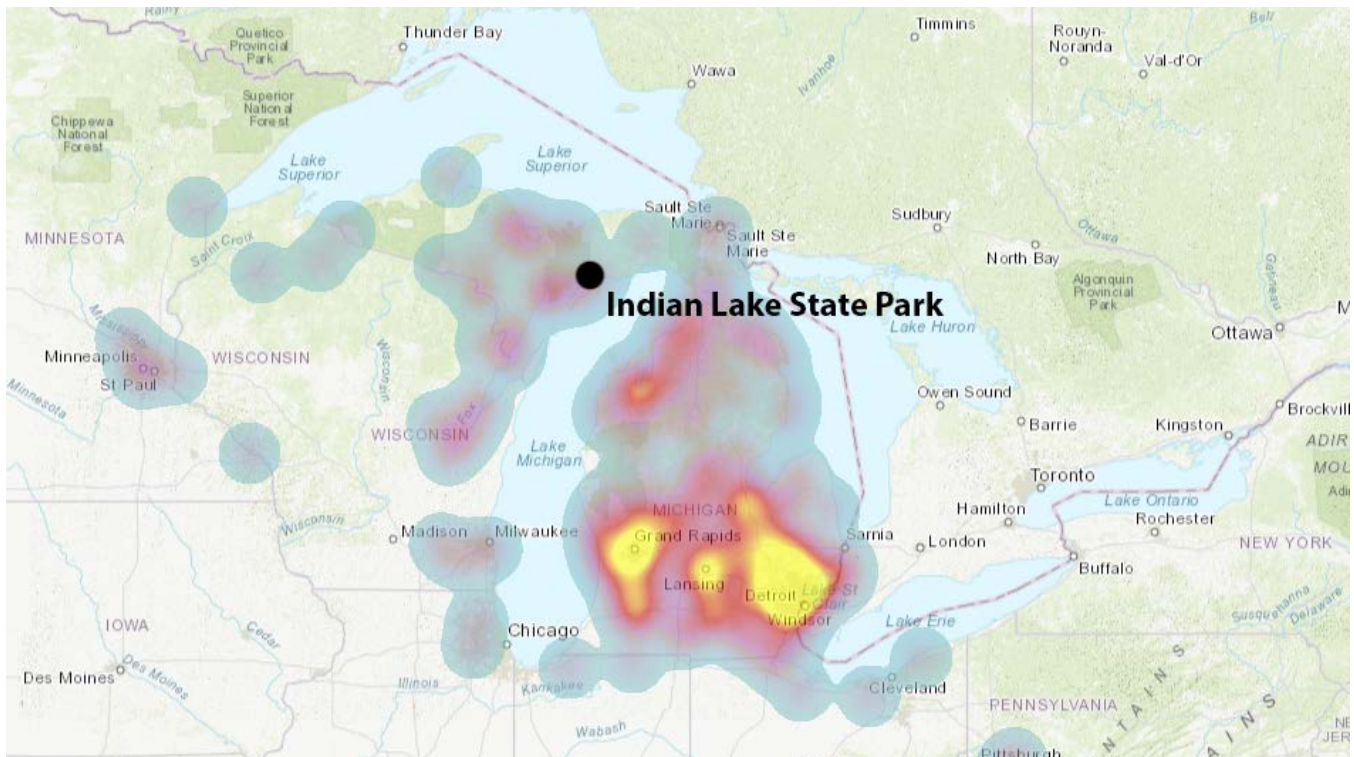
Indian Lake State Park - Park Boundary

- State Park Boundary
- NRC 2020 Approved Project Boundary*
- Road
- State Forest



Updated: 10/20/2022

*A project boundary is a geographic area in which the DNR is seeking to acquire property that supports the mission of the DNR on a willing buyer / willing seller basis, approved by the Natural Resources Commission in 2020



Heat Map depicting the zip code of survey respondents' primary residence. Warmer colors represent a greater concentration of respondents. A small number of respondents are located beyond the map extents. Many survey respondents were located in the Southern Lower Peninsula.

Appendix

B: Public and Stakeholder Input

B.1 Summary of Public Input Survey

One of the methods the planning team used to gather input from park users was an online survey. This approach provides a convenient way for those who have access to the internet to provide feedback, though it is not designed to be statistically representative of Indian Lake State Park users or uses, as respondents self-select. The online survey provides valuable information about what certain individuals or groups (those who are likely to receive DNR communication about the survey and are motivated to comment about the state park) hope to see in the park's future management.

The survey was advertised to a diverse range of people through various means. A press release was sent to Subscribers of Statewide DNR News, which included over 87,600 recipients and promoted on social media. The survey link was also sent to over 40 stakeholders the planning team had identified who were invited to share the survey. It was also sent to those who had made reservations (camping or shelter) at Indian Lake State Park in the last 3 seasons: an additional 10,737 recipients.

Responses were collected from April 26 through May 25, 2023. During the collection period, 593 individuals responded to the survey. Of those respondents, 584 (98%) have visited the park and went on to answer the remainder of the questions in the survey. Of those that did not visit the park, the reasons for not visiting were that the park was too far away, the respondent was unable to get their desired date for reservation or that they intended to visit but have not yet. The highest number of respondents were between 50 and 64 years old (37%), and most were located in the metro areas in the southern Lower Peninsula of Michigan. A small number of respondents were located outside of this regional area and are not shown on the map.

Your Visit

Indian Lake State Park is primarily a camping destination for those that live far away, or a beach and boating spot for locals. Most respondents (49%) visit less than once per year. Survey respondents were most likely to visit in the summer season (83%), with fall being the second most visited time at 45%. Only 3% of respondents visit the park year-round. On their last

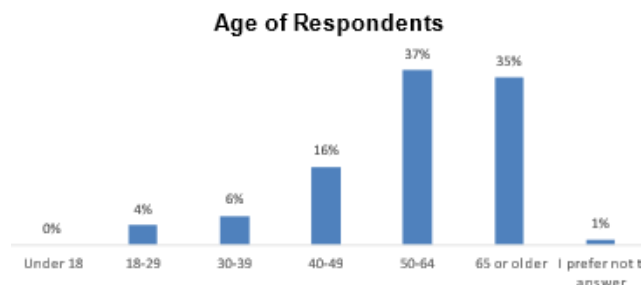
visit, survey respondents were most commonly traveling with their spouse/partner (84%), though between 18% and 27% of respondents also travel with children under 12, older children, extended family, friends, and pets.

Respondents were asked what three words they would use to describe the park to someone who had never visited. The top ten most common words were beautiful, clean, friendly, lake, nice, peaceful, quiet, relaxing, scenic, and spacious. The word cloud below shows the top 60 most-mentioned words, with the increasing size of the word indicating a more frequent response.

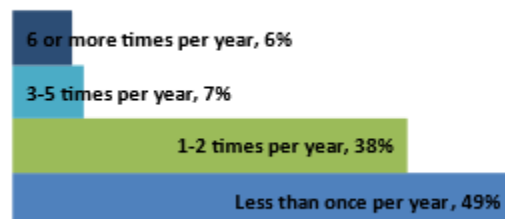
Visitors participate in a range of activities at Indian Lake State Park. The most common activities respondents reported participating in are camping (88%), going to the beach (59%), hiking/dog walking (51%), nature viewing/study (50%), swimming/wading (46%), fishing (35%) and photography (31%). Responses specified in the “other” category included other water-related activities such as sailing, working as a park ranger, using the park as a base for exploring the local area, and using ORVs outside the park. When asked what activity the primary reason for their visit was, the most common answers were camping (76%), fishing (4%), and hiking/dog walking (3%).

Overnight Accommodations

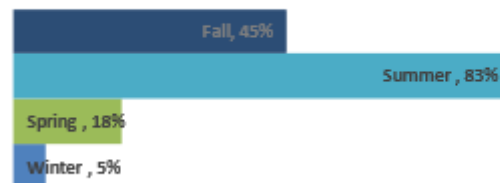
Of those who responded to the survey, 72% have stayed overnight at the park. Respondents were asked to rate their



How often do you visit the park?

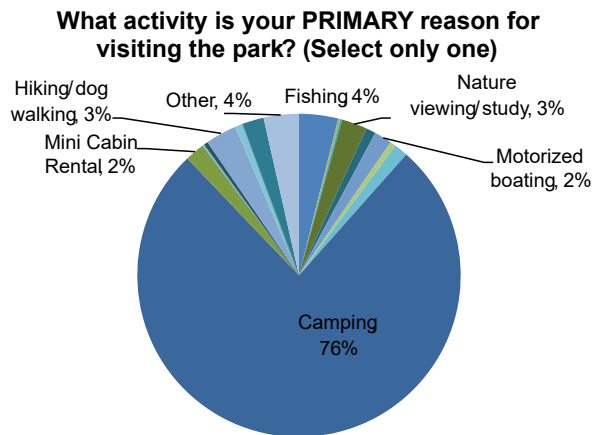


In what seasons do you typically visit the park? (Select all that apply)



Words most frequently used to describe the park. Larger word size indicates a more frequent response.

satisfaction with overnight accommodations on a scale of 1 to 9, with 1 indicating highly unsatisfied and 9 meaning highly satisfied. Visitors to the modern campground were generally satisfied with their experience, with 46% saying they were very satisfied. A small number of respondents had used the mini cabins, but they were generally satisfied with their experience. On average, satisfaction with the West Unit campground was slightly lower than satisfaction with the South Unit Campground.

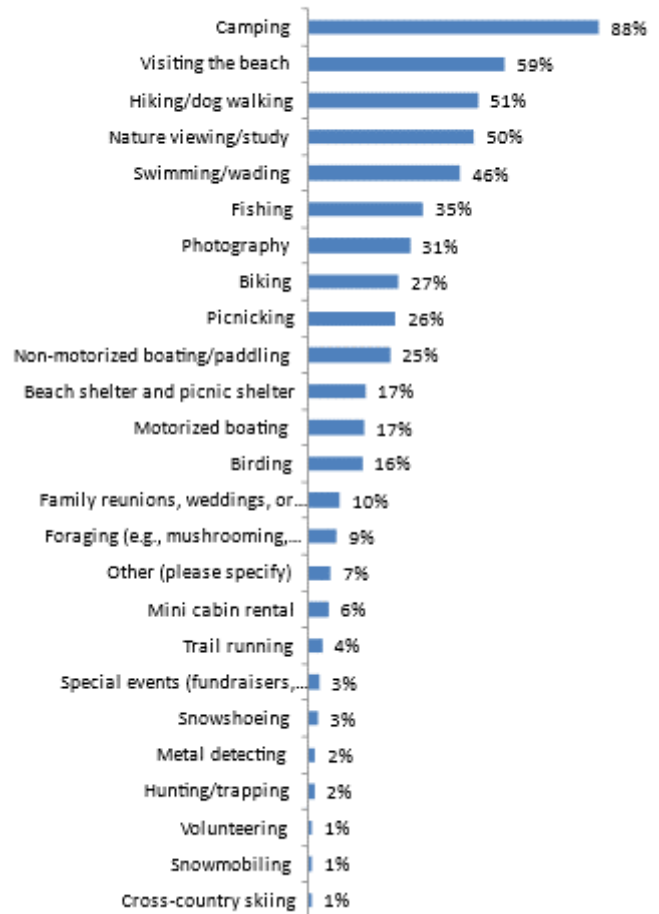


Seventy-three percent of respondents were previously aware that there is a West Campground Unit at Indian Lake State Park, and 19% have used it. Respondents were asked to consider some potential changes to this campground and how it would affect their decision to stay at the campground. On average, respondents felt that making the sites available in the camping reservation system and upgrading the campground electric with a corresponding increase in fee would make them more likely to stay at the unit. In contrast, converting the sites to fully rustic with a corresponding decrease in fee and allowing ingress and egress of ORVs within the campground would make respondents less likely to visit this unit. Respondents could also add their own ideas as to what would make them more likely to stay, and these include improvements to the boat launch; additional facilities and amenities such as restrooms/showers, full hook-up sites, and wi-fi access; recreational amenities such as access to hiking and ORV trails, fishing cribs, beach area improvements, and a kayak launch; and improvements to the sites such as larger size, leveled or paved sites, and more privacy between sites.

When asked what they liked most about the overnight experience at Indian Lake State Park, respondents mentioned things like the quiet and relaxing family-friendly atmosphere, beautiful sunsets, proximity to the lake and water access for recreation, the availability of nearby towns and attractions, and amenities like the showers and restrooms.

Five randomly selected comments follow:

Please check ALL the activities in which you participate at Indian Lake State Park. (Select all that apply)



What did you like most about the experience?

- The rest & re-cooperate factor before going back to city & work.
- Beautiful sunsets and safe walking my dogs.
- Quiet at night.
- Large site with a view of the lake.
- The privacy, space, friendly campers, the lake on the west side is not busy.

When asked if anything could be done to improve the overnight experience, around 49% of respondents indicated that no changes were needed. The other half of respondents suggested improvements to the toilet/shower facilities, campsite improvements such as full hook-up sites, gravel pads, larger spaces, or tent-only spots; enhancing the natural surroundings such as planting trees; improving recreational activities like improving the playground, options for ORV usage, planned activities for children; and others. Five randomly selected comments follow:

Is there anything that could improve your overnight experience?

- The East end bathrooms should be replaced with more shower stalls like the one you have by the campground host. Doesn't have to be elaborate like the one at Wells State Park.
- Campsite was pull-thru but hard to access, branches ripped off antenna
- More room to get large campers into tight spots.
- Leaving the rustic aspect of the west shore with upgrades to the lake access."
- Get rid of swimmers itch.

Campers were also asked if they visited other destinations in the area while camping, and 81% responded that they did. Common responses were Palms Book State Park, Fayette Historic State Park, Pictured Rocks, Manistique, Lake Michigan, Escanaba, Munising, Seney Wildlife Refuge, Fish Hatchery, and various other locations in the Upper Peninsula.

Day Use facilities

Sixty-one percent of respondents have used the park's beach, playground, boat launch, restrooms, fishing piers, park trails, or picnic shelters in the past. Users were asked their level of satisfaction with each of the day use facilities, on a scale of very satisfied to very unsatisfied. The beach, park trails, beach shelter, and picnic area were the most heavily used, and users were generally satisfied with their experience; however, when the satisfaction levels were averaged, users were most satisfied with the picnic areas, and least satisfied with the West Unit lakeshore day use area.

When asked what they liked the most about the day use facilities, respondents mentioned that the facilities were clean

and well-maintained, that they enjoyed the natural scenic beauty of the park setting, the historic and rustic charm of the structures, ease of access to the facilities, the family-friendly nature of the beach, and the way the day use facilities were well suited to community and social events.

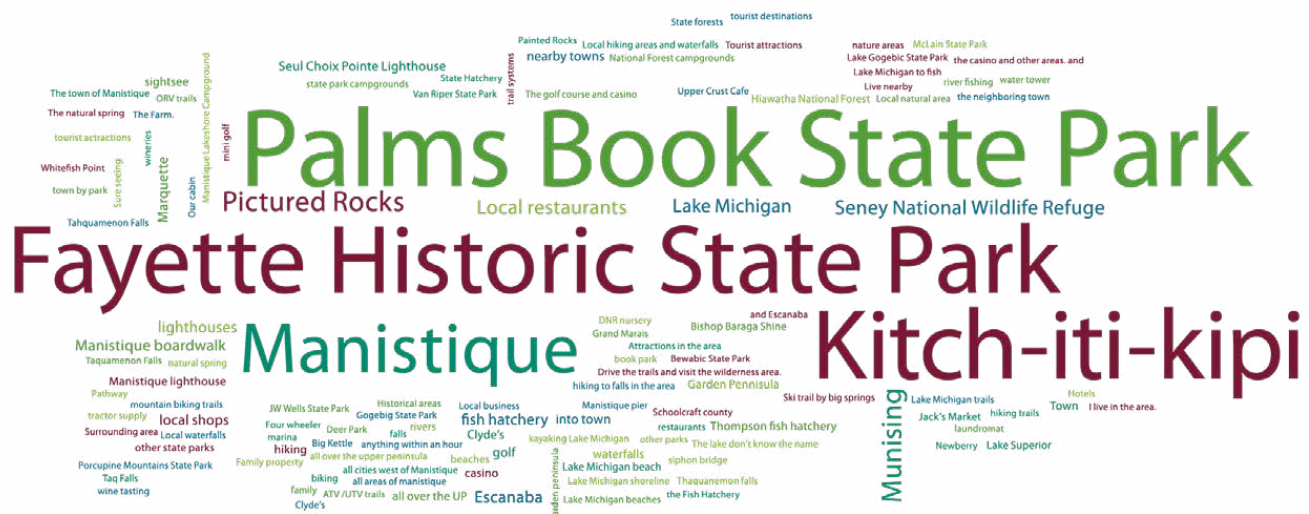
What did you like most about the day use facilities?

- The beach was really nice for kids to play in the sand. It was also relatively shallow water so kids had room to play in the water also.
- Beautiful area, nice sand beach.
- Cover from rain, able to fit our family of 100+ on the grounds with enough room for food. (Beach Shelter) Close to the beach and it can be fully reserved.
- I love the trails.
- Fresh air.

About 70% of respondents indicated that there were no changes needed to the day use areas. For the 30% that wanted changes, common themes were adjustments to the boat launch area (dredging, ramps on both sides, better maintenance), the addition of a pavilion to the area, more trails or better maintenance of existing trails, accessibility of beach area, more picnic tables, and updates to the shelters. Five randomly selected are below.

Please describe what could be done to improve your experience at the day use area:

- West Shore Day use could use more picnic tables and a beach.
- Perhaps fix up the trails a bit. It was pretty muddy and could use some boards to walk over marshy areas.
- Updating and continual cleaning of areas always makes them more attractive.



Word cloud of destinations visited by visitors of Indian Lake State Park

- Boat launch has 2 ramps but only one is used due to shallowness. We need 4 feet of depth to launch our sailboat which is very difficult with the lack of depth.
- My wife and I are avid kayakers and would like the launch points within the campground to be more accessible.

Fishing

30 percent of survey respondents use the park for fishing access. They most frequently fish from a motorized boat (65%), the shoreline (37%), or a non-motorized boat (30%). The most commonly targeted species was walleye (58%) followed by yellow perch (48%), Northern pike (34%) and no particular species (33%).

Comments left by anglers related to the enjoyment of being on the water and the beauty of the lake, concerns about the shallowness of the water and the need for regular dredging at the boat launch, requests for additional fishing access points such as a pier or area for shore fishing; requests for improvements to the boat launch such as longer docks, more parking, and multiple launch areas; and positive feedback about the fishing experience. Five randomly selected comments are below:

Please enter any comments you may have about fishing at the park.

- Great fishing but could use an area for shore fishing for kids.
- The boat launch is too short. The dock needs to be longer.
- The kids love the walking pier at the boat launch.
- It's perfect for using a small boat or kayak.
- We caught lots of fish.

Special Events or Programs

Only 13% of respondents have participated in a special event or program at the park. They commented on their positive experiences and enjoyment of activities, such as music events, educational programs, nature walks, and activities for children. Respondents appreciated the Friends of Indian Lake State Park and the events they organize. Five randomly selected responses follow:

Please enter any comments you may have on the special events or programs in which you participated.

- Back in the '60s, there was a naturalist on duty who presented wonderful programs on nature and wildlife.
- I think the park events that the Friends of Indian Lake State Park put on have been very well attended (especially the live music).
- Love the events/programs for kids, staff are always awesome and very friendly and knowledgeable.
- We really enjoy going to the programs offered for kids in

the park.

- Both the Bat presentation and the Nighttime sky (stars) presentation were well done and educational.

Respondents were asked for ideas of other events or programs they would like to see at the park. A wide variety of suggestions were given, ranging from nature identification programs, winter recreational activities, programming for teens and youth such as music or other educational programs, stargazing, or social events for campers.

Other Thoughts

Finally, respondents could share any other comments they had about the park, and optionally submit a photograph of their experience. Themes within the responses to this question are wide-ranging and included:

- **Boat Launch and Dredging:** Several comments mention the need for regular dredging of the boat launch, deeper water, and the addition of plates or DEPS (Dock Edge Protection System) to prevent sand from filling in the launch.
- **Campground Facilities:** Many respondents commented on the need for restroom and shower upgrades, larger and modernized restrooms, and improved signage. Some also mentioned the need for gravel pads on wet sites and the desire for rustic camping availability.
- **Park Maintenance and Land Preservation:** There are multiple comments emphasizing the importance of maintaining and preserving the park, acquiring more land, and keeping the park natural.
- **Park Enjoyment:** Many respondents expressed their love for the park, praising its beauty, peacefulness, sunsets, and the old-fashioned vacation vibe it offers. They appreciate the proximity to their homes and consider it an excellent community asset.
- **Park Staff:** Several comments mention the helpfulness and knowledge of the campground hosts and park staff. They appreciate their assistance and the cleanliness of the park.
- **Suggestions for Improvement:** Various suggestions for improvement include adding fishing piers, a protected marina or break wall, larger restrooms, pickleball court, more extensive walking trails, laundry service, park store, upgraded bathrooms, and additional sites with power.
- **Crowd Management and Site Spacing:** Some respondents express concerns about the campground's crowding and lack of spacing between campers. They prefer the current site spacing and emphasize the importance of not packing campers too closely together.
- **Positive Feedback:** Many respondents express their overall satisfaction with the park, mentioning its cleanliness, beautiful setting, quietness, and enjoyable experiences. They appreciate the opportunity to camp and engage in outdoor activities.
- **Miscellaneous Suggestions:** Other suggestions include

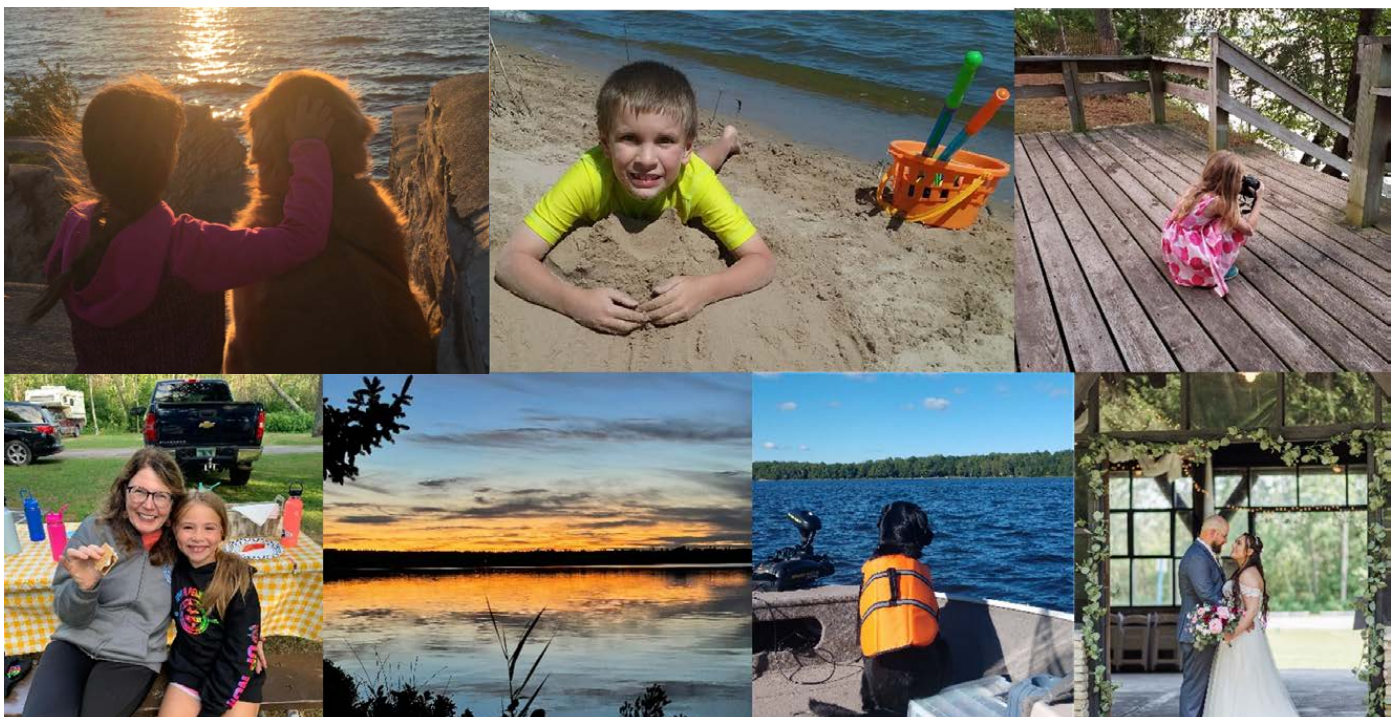
maintaining horseshoe pits, improving road conditions, offering winter access to the ice, limiting hunting and trapping, preserving the natural "wild" areas, and repairing or upgrading specific facilities like the amphitheater seating area or dump station.

Five randomly selected comments follow:

Please share any other thoughts you may have on the park.

- I'm glad it is available.
- Roads need to be repaved and widened in some areas. A few blacktop sites with full hook up would be great. People are willing to pay for these extras.
- Nice park overall. Pickelball court would be nice.
- Beautiful to walk around, kayak, paddle boarding, beautiful sunsets, very peaceful.
- We loved our stay at Indian Lake State Park. The Ranger was welcoming and helpful providing a map of the park. The facilities were clean and well kept. Camping site was level and fire ring and picnic table were well situated on the site. The grounds were beautiful! Can't wait to visit again.

Survey participants could leave a photo of their experience at Indian Lake State Park, and 103 images were submitted. These photographs will be used to bring the General Management Plan to life! The DNR appreciates everyone who took the time to participate in the survey.



Additional photos of Indian Lake State Park visitors enjoying their stay

B.2 Summary of Stakeholder Input Workshop

To gather targeted input from individuals and groups in the community representing governmental, non-profit, and business/tourism entities, the planning team invited over 40 stakeholders to participate in a facilitated input workshop held on May 16, 2023, from 10:00 am to 12:00 p.m. at the Comfort Inn in Manistique, Michigan. Representatives of the Michigan Department of Natural Resources (DNR) provided the stakeholders with a brief overview of Indian Lake State Park, including its natural features, cultural resources, and recreational offerings. The stakeholders were also presented the general management plan process, timeline, and an explanation of the plan elements that their input would inform: the statements of significance and a draft of the management zone map.

The stakeholders were divided into two small-table discussion groups, which completed a series of exercises describing the park's context, the park itself, opportunities for partnerships, the park's potential benefit to the larger community, and the stakeholders' vision for the park's future. Each table then reported out to the larger group. The results of the table exercises are outlined below.

Stakeholder Workshop Attendees

NAME	REPRESENTING
DENNIS AND JUDY MCGUIRE	Big Spring (Park Store Concessionaire at Palms Book SP)
ELISE DESIARLAIS	Lake to Lake CISMA
JOAN ECCLESINE	Manistique City Council
ASHLEY REITTER	Schoolcraft Conservation District
GARY DEGRAND	Schoolcraft County Motorized Trails Association
WINCH DILLER	Schoolcraft County Motorized Trails Association
CONNIE DILLER	Schoolcraft County Motorized Trails Association, Manistique Area Tourist Council
VICTORIA GEORGE	Schoolcraft Tourism & Commerce

Icebreaker Question

When the stakeholders introduced themselves, they were asked to describe what matters most to them about the park. Their responses are listed herein.

What matters most to me about Indian Lake State Park is...

NAME	STATEMENT
Winch Diller	Winter and summer access via Trail 7 & 2 West, Snowmobile and ORV
Ashley Reitter	Recreation access for all. Preserving the beauty of both parks.
Elise Desiarlais	Maintaining the natural environments that both residents and visitors come to enjoy
Joan Ecclesine	Viability of both sites. Star sites of Schoolcraft County, Tourism Area, Tourist Council
Connie Diller	Marketing our beautiful parks and keeping them natural, so everyone can enjoy our area
Gary DeGrand	Accessibility- ORV- Snowmobile

Exercise 1: Say one word or phrase that describes the park right now.

Stakeholders enjoy the natural beauty and wilderness feel of Indian Lake State Park. They mentioned the fun camping experience, historic buildings, spacious sites, and nice amenities. However, they noted that the paths were worn out.

WORD OR PHRASE	MENTIONED AT TABLE #
Wilderness feel	1
Spacious sites	1
More sites?	1
Worn out (paths)	2
Historic buildings	2
Fun camping	2
Natural beauty	2
Amenities- nice especially for up here	2

Exercise 2: Say one word or phrase that you want to describe the park in the future.

In the future, stakeholders desired the park to offer additional campsites and other accommodations such as cabins or yurts, improve infrastructure such as septic and water systems, and improve trails and trail access. They wanted these items balanced with maintaining natural habitats, keeping the natural look and feel of the park, and having the park be sustainable.

ITEMS	MENTIONED AT TABLE #
Playground development	1
More sites, keep natural (camping)	1
Some ADA paved trails	1
Cabins- yurts	1
Nature trails hiking (improved)	1
Sustainability	2
Trail access	2
Natural habitats	2
Fix septic/water systems	2
Designated funding	2

Exercise 3: What improvements or changes would you like to see at the state park? What things would stay the same?

The items to change or improve that received the most votes from stakeholders were improving trail access and condition, improving WiFi/cell phone service, and adding a boat wash/ORV wash. The top items to remain the same were the wilderness atmosphere and to preserve the buildings that were constructed by the Civilian Conservation Corps.

Improvements or Changes

ITEMS	TABLE #	TOTAL VOTES
Trail access	2	5
Wi-Fi / cell phone service	1	4
Nature trail improvement	1	3
Boat wash/ORV wash units	2	3
Park interpreter (for programs)	2	2
Community fire pit	1	0
Water/septic systems	2	0
Adjust for capacity	2	0

Stay the Same

ITEMS	TABLE #	TOTAL VOTES
Wilderness atmosphere	1	3
Preserve CCC Buildings	2	2
The beach	2	2
History	1	0

Exercise 4: What are some collaboration and partnership opportunities that the state park presents for local communities and stakeholders?

Stakeholders suggested a variety of potential collaboration and partnership opportunities, such as local tourism organizations to promote the park, local school groups for conservation education and working with park interpreters, conservation and invasive species management groups, and nature/wildlife groups such as the Audubon and Ducks Unlimited. The Township should seek to collaborate with the park during the recreation planning process.

GROUP OR STAKEHOLDER NAME	COLLABORATION OR PARTNERSHIP IDEA	TABLE #
Township	Recreation plans- collaboration	1
Manistique Area Tourist Council		1
Schoolcraft Tourism + Commerce		1
Manistique Area Schools-DSISD	Teach conservation	1
(None listed)	Kayak-Canoe-Boating Safety +Education	1
Schoolcraft County Motorized Trails Association	Trail access	2
Lake to Lake Cooperative Invasive Species Management Area	Invasive species prevention + management	2
Schools/Outdoor Learning	Working with park interpreter	2
Boy Scouts/Girl Scouts		2
Schoolcraft Conservation District	Programs/events conservation/presentation	2
Birders/Audubon		2
Ducks Unlimited		2

Final Exercise: Collective Priorities

Finally, the top-voted items from exercise 3 from each table were combined onto one “Collective Priorities” exercise, and each attendee could vote among these items. The top-voted item from the process was to improve the nature trail and trail access, which was tied with maintaining the wilderness atmosphere of the park. This input will be considered by the planning team when creating a 10-year action plan.

PRIORITY	VOTES
Improve Nature Trail/Trail Access	8
Maintain wilderness atmosphere	8
Add Boat Wash/ORV Wash	5
Improve WIFI/Cell Service	3



A stakeholder presents the results from their group

B.3 Tribal Engagement

The following letter was sent via email to:

- Bay Mills Indian Community
- Grand Traverse Band of Ottawa and Chippewa Indians
- Hannahville Indian Community
- Keweenaw Bay Indian Community
- Lac Vieux Desert Band of Lake Superior Chippewa Indians
- Little Traverse Bay Bands of Odawa Indians
- Little River Band of Ottawa Indians
- Gun Lake Tribe of Pottawatomi Indians
- Nottawaseppi Huron Band of the Potawatomi
- Pokagon Band of Potawatomi
- Saginaw Chippewa Indian Tribe
- Sault Tribe of Chippewa Indians

Dear Tribal Leaders:

The Parks and Recreation Division (PRD) of the Department of Natural Resources (DNR) is in the process of developing general management plans for the following state parks:

- William C. Sterling State Park in Monroe County
- Duck Lake State Park in Muskegon County
- Indian Lake State Park in Schoolcraft County
- Palms Book State Park in Schoolcraft County

Negwegon State Park (phase 2 plan update) in Alpena and Alcona Counties

The DNR uses general management plans (GMPs) to define a long-range planning and management strategy that will protect the natural, cultural and historic resources of the site, while considering education and recreation opportunities. A planning team, representing various specialties within the DNR, has been established and is meeting regularly to develop the GMPs for these sites.

The planning process includes several opportunities for input, including a stakeholder meeting and online survey. In addition, the draft plans will be available for review and comment prior to adoption.

For additional information on our management plan process, please visit our website at www.michigan.gov/parkmanagementplans

We would like to give the Tribes the opportunity to meet with us to discuss the management plan process and any thoughts you may have in relation to any of these properties.

Please contact Ms. Debbie Jensen, PRD Management Plan Administrator, at Jensend1@michigan.gov if you would like any additional information or would like to arrange a meeting.

Sincerely,

Trevor J. VanDyke

Director, Legislative & Legal Affairs Office & Tribal Liaison
Executive Division, Michigan Department of Natural Resources
Constitution Hall, 525 West Allegan Street
P.O. Box 30028
(517) 284-6243

vandyket1@michigan.gov



B.4 Summary of Draft Plan Public Input

The public was invited to share their thoughts about the Indian Lake State Park Draft General Management Plan at a virtual public meeting that was hosted online by the Department of Natural Resources (DNR) on November 29, 2023, from 6:00 - 7:30 p.m. The meeting was hosted jointly with the public meeting for the Palms Book State Park General Management Plan. The general public was notified about the meeting through a press release, internet postings, and email notifications. A total of 17 attendees were recorded.

The meeting began with an introduction of planning team members, followed by an overview of the general management plan process, Indian Lake State Park, and the draft general management plan contents. The presentation was followed by a question and answer period, which included a question about plans to improve the Indian Lake Pathway condition in collaboration with a volunteer group.

At the end of the meeting, attendees were asked to visit the interactive public input survey link to review and comment on the statements of significance, management zone plan, and ten-year actions. There was also a section for additional feedback on the management plan and the input process. The survey link was posted to the park's website along with a recording of the meeting. The survey link was open through December 17, 2023. Comments could also be submitted during that time via email.

Public Input Received

There were no comments received on the statements of significance or the draft management zone map.

To assist with action prioritization, survey respondents were asked to select their top five actions. Each time an item was selected is considered one "vote" for that item, and all votes for each action item are totaled in the adjacent table. The list is sorted with the actions receiving the most votes positioned at the top of the list.

Additional Comments

Comment 1: On Page A-6, Section "A.4 History of Indian Lake State Park," "History of the Park", the plan currently states: "1998 appears to be the last year the northern camping loop at West Shore was operational. In 2000, the two toilet buildings, and sewage lift station were removed." I believe the reference should be to the SOUTHERN camping loop which was last operational in 1998. The SOUTHERN unit is the one which has been removed and obliterated, while the NORTHERN loop is the one still extant and open for camping."

Meeting Satisfaction

When asked about satisfaction with the public meeting format,

three people that participated all had attended the public input meeting and gave an average ranking of 4.5 out of 5 with no comments.

ACTION ITEMS	VOTES
d. Analyze the options of improving, abandoning, or offering a different level of electric service at the West Campground, and consider adding the unit to the reservation system.	2
f. Determine appropriate re-use of the historic contact station at the West Unit, such as converting it to an overnight accommodation.	2
i. Remove all three campground toilet/shower buildings and replace them with two new restroom buildings.	2
k. Replace sewer distribution system and upgrade the sewage lagoon.	2
m. Implement Phase II of the shoreline naturalization/stabilization plan.	2
s. Investigate and correct roof leaks in the beach shelter.	2
t. Improve trails in the South Unit to address wet areas in partnership with local volunteers.	2
a. Continue to work proactively to develop and implement measures to prevent, detect and control aquatic and terrestrial invasive species.	1
b. Continue to explore land acquisition of properties within the GMP Proposed Project Boundary.	1
c. Complete a natural resource stewardship plan for the state park, identifying targets for conservation and related natural resource management strategies.	1
e. Acquire funding and approval to fill the park supervisor position.	1
g. Close the South Unit to metal detecting and re-evaluate if the West Unit should continue to be open.	1
h. Provide opportunities for interpretation of historic Civilian Conservation Corps-constructed buildings, shoreline naturalization efforts, and dredging at the boat launch.	1
j. Replace the water distribution system.	1
l. Relocate and upgrade the sanitation station.	1
q. Replace the vehicular road bridge deck to the West Unit day use area.	1
v. Naturalize and stabilize the shoreline at the West Campground Unit day use area and add a small sandy beach.	1
n. Resurface the walkway between the shelters.	0
o. Replace the headquarters building.	0
p. Repurpose or remove the former park manager's residence.	0
r. Improve accessibility of the stone picnic shelter.	0
u. Develop an accessible playground to be shared between day users and campers.	0

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Appendix C:

Opinion of Probable Costs

C.1 State Park Funding

The primary funding sources for state park improvement and development projects are Recreation Passport sales (motor vehicle registration fee), the Park Endowment Fund (generated from royalties from oil, gas and mineral extraction on public land) and the Park Improvement Fund (from camping and other state park user fees). The annual capital outlay budget for state parks varies significantly from year to year, averaging approximately \$14 million per year over the past five years. Although this funding will have a big impact, the amount of need is still estimated to be in the hundreds of millions due to the aging infrastructure in the state park system.

With such a large gap between financial need and budget, all projects are carefully analyzed to look at innovative solutions to increase efficiencies or downsize assets.

C.2 Estimated Cost of Proposed Developments

The following table provides an estimate of probable cost for each capital outlay development project proposed at Aloha State Park over the next ten years. Management and operations actions, small projects, which are funded out of district or park funds, and those lead by partners, are not included in this list but may have additional financial implications. The costs are based on information available

at the time and will be refined as conceptual and detailed designs are completed. Where noted, the costs may only include studies or project planning, which will provide direction for development costs if determined appropriate. The costs are based on 2022 prices and should be adjusted according to the consumer price index and the market at the time of implementation.

The following action items are ranked in terms of priority based on health, safety, and welfare, as well identified need and ease of implementation (cost, ability to implement with own staff, partnerships etc.). Priority Level 1 projects indicate those that should be addressed within the next 2 years. Priority Level 2 projects include those that should be addressed within 2-5 years. Priority Level 3 projects are desired but can be tackled in the next 5-10 years once funding has been identified.

PRD will seek future internal funding, alternative funding sources, partnerships and other potential mechanisms for implementing the desired future conditions defined in this plan. Costs listed below do not guarantee funding. On an annual basis, PRD districts determine priorities for project planning and project capital outlay. Each district's top projects are then evaluated at a state-wide level for available funds.

Infrastructure and Development: Capital Outlay, South Unit

ACTION ITEMS	PRIORITY	OPINION OF PROBABLE COST
Remove all three campground toilet/shower buildings and replace them with two new restroom buildings. (ARPA)	1	\$3,400,000
Replace the water distribution system. (ARPA)	1	\$600,000
Replace sewer distribution system and upgrade the sewage lagoon. (ARPA)	1	\$1,300,000
Relocate and upgrade the sanitation station. (ARPA)	1	\$400,000
Implement Phase II of the shoreline naturalization/stabilization plan. (ARPA)	1	\$650,000
Resurface the walkway between the shelters.	3	\$200,000
Replace the headquarters building.	3	\$900,000
Repurpose or remove the former park manager's residence.	3	\$75,000
TOTAL		\$7,525,000

Infrastructure and Development: Capital Outlay, West Unit

ACTION ITEMS	PRIORITY	OPINION OF PROBABLE COST
Replace the vehicular road bridge deck to the day use area.	2	\$275,000
TOTAL		\$275,000

Appendix D:

On-Site Survey Report

Indian Lake State Park 2017 On-Site Use and User Study Report

By Charles M. Nelson and Thomas Braum, Department of Community Sustainability
Michigan State University, East Lansing, MI 48824
March 21, 2018

Introduction

As part of the management planning process for Indian Lake State Park (SP), an on-site study was conducted of a representative sample of park visitors to provide an overall estimate of mean user hours per vehicle in day use parking areas, assess local spending, ascertain the opinion of park users about the future management options and approaches and provide a profile of park visitors, both campers and day users. This on-site approach sampled users on systematically selected days and times across June- November of 2017. It used a windshield survey at all day use parking areas and the same survey handed to a sample of up to 20 camping parties on sample days to ensure representation of the full range of park users.

Methods

The on-site study methodology and questionnaire were developed by the senior author in cooperation with the DNR Park Planner Debbie Jensen of the DNR Park and Recreation Division (PRD) staff. The questionnaire is found in Appendix B and is very similar to an instrument that was used in 2016 in the pilot project of integrating visitor surveys into the state park management planning process at Sleepy Hollow State Park. A sampling calendar of 27 sample days was developed that proportionally allocated sampling days across June- November based on seasonal estimates of park use for summer and fall provided by the DNR (Appendices C and D). The survey commenced in the field on June 24, 2017.

On a sample day, the survey administrator (a Michigan State Park employee) would begin sampling at one of the day use parking areas at the beginning of the designated sample period (9AM, Noon, 3PM or 6PM) per the sampling schedule. The survey administrator would count all vehicles present upon entering the lot. Once the count is made, a questionnaire with location, questionnaire number and time is distributed to each vehicle front windshield or directly handed to the driver if he/she is at the vehicle. If it is raining, surveys are enclosed in a clear plastic bag and placed on the windshield. While most vehicles receive a questionnaire, occasionally one leaves before a survey can be administered, hence the number of surveys distributed is slightly less than the vehicle count. Also, if there are more than 50 vehicles in a lot, it is the intention that all are counted, but only the first 50 counted receive a questionnaire to limit confusion and keep to a time schedule to complete all other vehicle counts and survey distribution. At Indian Lake there were no instances where this occurred.

This method does not capture input from those arriving by bicycle and on foot, only those arriving by vehicle. However, those arriving by vehicle directly support the Michigan State Park system through the purchase of the Recreation Passport or, in the case of non-residents, through the purchase of the non-resident motor vehicle permit. Those arriving by bicycle or on foot, if they have not purchased the Passport or a non-resident motor vehicle permit, are not providing such direct financial support.

For campers, surveys were distributed in the two campgrounds including the 145-site modern campground and the 72 site semi-modern West campground. On a sample day, a survey administrator would randomly choose a campsite number between 1 and 217 and proceeded to sample the next 20 campsites where campers were present by handing them with a questionnaire. If there were less than 20 sites with campers present, then the number of occupied sites with camper present received a questionnaire. If there were more than 20 present, only 20 were distributed.

Respondents returned the questionnaire by U. S. mail using the postage paid, business reply feature of the postcard. Cards were directly delivered to Dr. Nelson at MSU.

Results

Results are presented in three ways. The first is observations/vehicle counts done by the survey administrator. These provide an assessment of use levels for each facility/parking area. The second is survey responses to questions 1-10, which focus on the respondent's experience the day they were sampled. Since these questions ask about the specific day's experience, there is no possibility of oversampling frequent users as each use is a use, whether done by a person who visits the park one time or 100 times in a year. However, Questions 11-16 are weighted to account for frequency of use bias as they ask about suggested improvements, things not to change and demographic information that defines the distinct park user. A frequent user, such as one who visits the park 100 times a year has 100 times greater chance of receiving a survey than one who visits the park once a year. To be able to use a one person, one vote rule where each person has an equal say in suggesting potential changes or the lack of them, the data is weighted to eliminate the frequency of use bias in sampling. For distinct users the data is weighted by the reciprocal of the number of uses the previous year (Q 16). If a person used the park once in the previous year, their weight is 1/1. If they used it 100 times, their weight is 1/100.

All results tables are provided in Appendix A and are numbered as they are in the text of this report.

Observations

There were 21 scheduled sample days in Summer and 6 in Fall. All were sampled for both day users and campers on all sample days. Table 1 shows that a total of 209 vehicles were counted in day use parking areas over the 27 completed sample days (209 vehicles in the summer and 0 in the fall) with a total of 177 questionnaires distributed (177 questionnaires in summer and 0 in fall) in day use lots. The busiest lot was the south BAS/day use lot adjacent to the modern Indian Lake campground with picnic pavilions. Campers were sampled on 21 summer and 6 fall days with a total of 431 surveys distributed (378 in summer and 53 in fall).

Survey Results: Uses

One hundred twenty-nine completed questionnaires were returned by camper respondents and 39 by day use respondents as of the December 31, 2017 cutoff for a total of 159 respondents. Since the last survey date was November 17, this provided almost seven weeks for surveys to be returned after the last sampling date. The response rate for day visitors was 22%, for campers 28% and for the combined group 26%.

Activities and Party Characteristics

The average amount of time a day visitor vehicle was parked where it was sampled for day visitors was 7.2 hours and the mean day visitor party averaged 3.6 people per vehicle. Many day visitors were grouped with others in other vehicles as the median day visitor group had 4.0 people. The median is used as the distribution for day use vehicles was skewed, ranging from 1 to 130, which related to all attendees in many vehicles at a high school graduation party in the day use pavilion on one sample day. For camper respondents, mean people per vehicle was lower, averaging 2.6 people per vehicle.

A total of 5 percent of day use respondents and 14 percent of camper respondents reported on the day they were sampled that one or more people in their vehicle had a physical impairment that seriously limited him/her from participation in work or recreation. These persons would be classified as disabled under the Americans with Disabilities Act.

Park visitors participated in a wide range of activities. Table 2 shows that the five most common activities for campers in order of participation were camping, hiking, bicycling on a paved road, photography and nature observation. For day visitors the five most common activities were picnicking, hiking and a tie among nature observation, fishing from a boat and camping. To use the lake, many campers drive a vehicle with boat trailer to the lake for water based activities.

When campers were asked the one most important park activity to them, the only five mentioned in descending order were camping, fishing, hiking, nature observation and photography (Table 3). When day visitors were asked this question, their five most common responses in descending order were picnicking, camping, fishing, power boating and hiking.

Local Spending

Park visitor spending in the local area of Indian Lake SP was substantial (Table 4). Campers from a single vehicle reported spending an average of \$148 in the 24 hours prior to being surveyed with 74% spending something within 20 miles of the park. The greatest average amounts were for lodging fees, food and beverages from a store and vehicle related. Day visitor spending averaged \$170 per vehicle with 90% of them spending something in the local area in the past 24 hours. The greatest portion of day visitor spending was on lodging, grocery and convenience store food/drink, vehicle related expenses and restaurant spending.

Satisfaction

When asked to rate their satisfaction with their Indian Lake SP experience the day they were sampled, day visitors were highly satisfied with a mean rating of 8.2, while the average rating for campers was even higher at 8.6 on a scale of 1 – 9 where 1 is highly dissatisfied, 5 is neutral and 9 is highly satisfied for all respondents (Table 5). Three-quarters of day visitors and over 70% of camper respondents gave their experience the highest satisfaction rating (9). No campers and three percent of the day visitor respondents rated their experience as dissatisfying, with two percent of campers and 11% of day visitors rating it as neutral.

When asked an open ended question about the one most important reason for their experience rating, campers were most likely to mention the nature aspects of the park, that it was well maintained and patrolled or that they specifically like the campground at Indian Lake SP (Table 6). For day visitors, the most common positive comments related to a generally wonderful overall experience, good maintenance and patrol or natural aspects of the park. The most common concerns voiced by a very few campers and day users related to the ratings were a desire for more updated facilities at both the campground and day use areas. poor campground in general and poor campground maintenance.

Distinct Users Opinions

To understand the opinions of distinct users, one open ended question asked visitors to identify the one most important change they would like at Indian Lake SP. This information is weighted as previously discussed to insure frequent users who are more likely to be sampled are not over represented in the results. If a respondent provided more than one desired change, only the first change was recorded in data entry. Campers most commonly suggested that facilities be updated, especially showers (Table 7). The three other most frequent suggestions from campers were no improvements needed, improve campground utilities and to have more events/activities available. For day visitors, the three most frequent suggestions were no improvements needed, improved boat/water access sites a tie among provide better information and signage about the SP, update and improve facilities, provide more events/activities and provide non-residents the opportunity to buy the passport.

When asked what one most important thing should not be changed at Indian Lake SP (Table 8), campers were most likely to suggest the campground facilities stay the same. They also were likely to support keeping the natural aspects of the SP and the current level of maintenance. For day visitors the most common suggestion of what not to change was that they didn't want any changes or to specifically retain the existing day use facilities.

Demographics

Distinct respondent campers had a mean age of 55, with ages ranging from 18-82. Fifty-three percent of distinct camper respondents were female and 47% male. For distinct day visitors, the mean age was 55, with ages ranging from 20-74. Sixty-four percent of distinct day visitor respondents were female and 36% male.

The vast majority of distinct campers and day visitors were Michigan residents (Table 9). Wisconsin, Indiana, Ohio and Pennsylvania were the most common non-resident origins of campers. The most common day visitor origins following Michigan were Wisconsin and Indiana.

Summary

Indian Lake is a long established Upper Peninsula state park with a two significant campgrounds, a large adjacent lake with a popular fishery and adjacent to the "Big Spring" at Palms Book just north of the park boundary. The day use area provides not only a place for boating and picnicking, but the pavilion/shelter areas are popular for local residents to get together with friends and hold events such as family reunions, graduation celebrations, etc. Those traveling the UP along US 2 may be attracted to Palms Book to see the spring and "discover" Indian Lake SP. Satisfaction by visitors is very high, especially with camping

experiences. With a high mean age for both camping and day use respondents, such a high satisfaction rating reflects well on the maintenance and management efforts of park staff.

Spending related to park experiences is substantial and is as high per vehicle as major SW Michigan beach parks and the for both campers and day visitors. Because many are a considerable distance from home, whether camping or day visitors, they are often staying at a motel/hotel or camping at Indian Lake SP. Local spending encompasses many sectors of the local economy providing significant economic benefits to the community. This is especially important in a region where tourism related income and jobs are an important pillar of the local economy. Like visitors to many Michigan State Park and Recreation Areas, there is interest among both campers and day visitors in updating and adding more facilities such as better showers and improved access to the lake. Overall the site is highly appreciated by park visitors for its natural setting, enjoyable campground and strong park maintenance and patrol efforts.

Acknowledgments

The authors would like to thank Michigan DNR Park and Recreation Division permanent and seasonal field staff for their distribution of the survey instrument, record keeping of the number of surveys distributed and counting vehicles during sampling. We also greatly appreciate the cooperation throughout the project with Division Planning staff.

Appendix A. Tables of Results

Table 1. Vehicle counts and surveys distributed on-site 2017 at Indian Lake SP day use areas and campgrounds.

Parking Lot/Area	Summer Count	Summer Surveys Dist.	Fall Count	Fall Surveys Dist.	Total Count	Total Surveys Dist.
Indian Lake South BAS and Day Use Area	198	166	0	0	198	166
Indian Lake West BAS	11	11	0	0	11	11
Total	209	177	0	0	209	177
Campers Sampled in Campgrounds	NA	378	NA	53	NA	431

Table 2. Percent Indian Lake SP respondents participating in selected recreational activities during sample day in 2017.

Activity	Campers	Day Visitors	All
Camp	98%	28%	80%
Hike/walk	75	44	68
Photography	42	26	38
Nature observation	38	28	36
Picnic	26	51	32
Bicycle on a paved road	39	10	32
Swim	30	10	26
Fish from a boat	21	28	22
Sunbathe	27	10	22
Paddle canoe/kayak	20	3	16
Bicycle on an unpaved trail	12	8	11

Activity	Campers	Day Visitors	All
Fish from shore	9	8	9
Power boating	8	10	8
Pick berries/mushrooms	4	3	4
Hunt	2	3	2
Metal detect	2	0	2
All others	4	15	7

Table 3. Table 3. Percent Indian Lake SP on-site respondents one most important recreational activity during sample day in 2017. (a)

Activity	Campers	Day Visitors	All
Camp	90%	22%	73%
Fish	6	19	9
Picnic	0	33	8
Hike	2	3	2
Nature observation	1	0	<1
Photography	1	0	<1
Swim	0	0	0
Pick berries/mushrooms	0	0	0
Nature observation	0	0	0
Picnic	0	0	0
Bicycle	0	0	0
Power boat	0	0	0
Hunt	0	0	0
Metal detect	0	0	0
Sunbathe	0	0	0
All others	1	17	5
Total	100%	100%	100%

(a) Total may not add to 100% due to rounding

Table 4. Expenditures of on-site respondents during past 24 hours within 20 miles of Indian Lake SP in 2017 (a).

Item	Campers Mean \$ (% spent something)	Day Visitors Mean \$ (% spent something)	All Mean \$ (% spent something)
Lodging fees	\$48 (33%)	\$44 (66%)	\$45 (38%)
Grocery and convenience store food & drink	37 (56)	36 (78)	36 (73)
Vehicle related	24 (49)	31 (58)	29 (56)
Restaurant & bar meals & drinks	22 (36)	23 (50)	23 (46)
Sporting goods	5 (23)	10 (20)	8 (21)
All other items including souvenirs	12 (18)	16 (31)	15 (28)
Total	\$148 (74%)	\$170 (95%)	\$156 (90%)

(a) Total may not exactly add up due to rounding.

Table 5. Rating of satisfaction with Indian Lake SP use experience by on-site respondents on the day sampled in 2017.

Rating Scale	Campers %	Day Visitors %	All %
1 (very dissatisfied)	0%	3%	<1%
2	0	0	0
3	0	0	0

Rating Scale	Campers %	Day Visitors %	All %
4	0	0	0
5 (neutral)	2	11	4
6	0	0	0
7	9	3	8
8	18	8	16
9 (very satisfied)	72	76	72
Total	100%	100%	100%
Mean Rating (a)	8.6	8.2	8.5

(a) Rating Scale: 1=highly dissatisfied; 5=neutral; 9=highly satisfied

Table 6. Response to open-ended questions about one most important reason for satisfaction rating with Indian Lake SP use by on-site respondents on the day sampled in 2017. (a)

Reason	Campers	Day Visitors	All
Nature, wildlife, quiet	28%	12%	24%
Clean, well maintained/ patrolled	22	12	19
Like campground	22	3	18
Generally like, wonderful, amazing	10	24	13
Like easy access to surface waters and trails	1	9	3
Positive, friendly staff	3	0	3
Poor facilities	2	2	2
Don't like campground	3	0	2
Like facilities	0	6	1
Convenient, close to home	1	3	1
Poor maintenance/patrol	1	0	<1
Good fishing	1	0	<1
Other positives with one response or hard to classify	0	6	1
Other negatives with one response or hard to classify	2	3	2
Total	100%	100%	100%

(a) Total may not add to 100% due to rounding.

Table 7. Response to open ended question about one most important improvement at Indian Lake SP by distinct on-site user survey respondents in 2017 (a).

Improvement	Campers	Day Visitors	All
Nothing to improve/change	19%	60%	28%
Update and increase facilities (e.g. showers)	32	6	27
Improve campground utilities	8	0	6
More events/activities in park	5	6	5
Better water/beach access/ maintenance	2	13	5
Better signage/information	4	6	4
Expand campground	4	3	4
Improve facility maintenance	4	<1	3
More rental watercraft available	4	0	3

Improvement	Campers	Day Visitors	All
Improve trail maintenance/system	3	0	2
Better playground	2	0	2
Improve campground store/concessions	2	0	1
Passport available to non-residents	0	6	1
Lower campground fee	2	0	1
Other suggestions made by one respondent or difficult to classify	4	0	3
Total	100%	100%	100%

(a) Total may not add to 100% due to rounding.

Table 8. Response to open ended question about one most important thing not to change at Indian Lake SP for distinct on-site user survey respondents in 2017. (a)

Don't change	Campers	Day Visitors	All
Campground	34%	6%	28%
Don't know/Keep as is	12	39	18
Nature/wildness/quiet/wildlife	16	7	14
Facilities	4	21	11
Level of maintenance	10	0	8
Cost/price/value/passport	4	0	3
Rules/regulations	4	0	3
Easy access to lake/river/activities	2	2	2
Staff/personnel	2	<1	2
Programs/events	2	0	2
Parking	0	7	2
Historic pavilions	0	7	2
Beach/lake	2	0	2
Other hard to classify or less than 1% of responses	2	7	3
Total	100%	100%	100%

(a) Total may not add to 100% due to rounding.

Table 9. Origins of distinct park visitors to Indian Lake RA by state for on-site user survey respondents in 2017 (a)

State	% Campers Originating	% Day Visitors Originating	% All Originating
Michigan	81%	88%	83%
Wisconsin	6	0	4
Indiana	4	6	3
Ohio	3	0	2
Pennsylvania	3	0	2
Illinois	0	4	1
New York	0	4	1
Iowa	0	4	1
Colorado	1	0	1
Total	100%	100%	100%

(a) Total may not add to 100% due to rounding.

Appendix B. On-Site Questionnaire

Indian Lake State Park Use Assessment _____ Date

Dear Driver:

Michigan State University (MSU) and the Michigan DNR are cooperating to measure recreation use of Indian Lake State Park as part of updating the park management plan. Please take the 4 minutes needed to complete this form and mail it to us postage paid or put it in one of the drop boxes in the park marked "Park Surveys". You will be anonymous and your name will not be connected with study results. You indicate your voluntary agreement to participate by completing and returning this survey.

1. Please check ALL of the activities in which one or more of the people from your vehicle participated while you were in the park today.

☐ Hiking/Walking/Running ☐ Photography ☐ Paddling watercraft
☐ Bicycling paved road/trail ☐ Camping ☐ Sunbathing
☐ Bicycling unpaved road/trail ☐ Picnicking ☐ Swimming
☐ Fishing from boat ☐ Hunting/Scouting ☐ Metal detecting
☐ Fishing from shore/dock ☐ Power boating
☐ Pick berries/mushrooms
☐ Nature observation (birding, etc.) ☐ Other(_____)

2. Which ONE activity was the MAIN reason visited the park today? _____

3. How many HOURS was your vehicle in the park today? _____ # HOURS

4. Including you, how many PEOPLE came here in this vehicle? _____ # PEOPLE

5. Including other vehicles, how many people are in your group? _____ # PEOPLE

6. Does anyone in your vehicle have a physical impairment that seriously limits his/her participation in work or recreation? ☐ Yes ☐ No

7. Where did you stay last night (check one)? ☐ Campground in Indian L. SP
☐ Own principal home ☐ Another campground ☐ Another's home/2nd home
☐ Hotel/motel/rental cabin ☐ Own 2nd home ☐ Other (_____)

8. During the past 24 hours, how much did you and those in your vehicle spend within 20 miles of Indian Lake State Park on the following items.

Vehicle related (gas, oil, trip related repair, etc.) \$ _____
 Restaurant & bar meals & drinks \$ _____
 Grocery or convenience store food, drink or ice \$ _____

Sporting goods (fishing supplies, camping gear, etc.)\$_____

Lodging fees (camping, motel, cabin rental, etc.) \$_____

All other items (watercraft rental, souvenirs, etc.) \$_____

9. Please rate on a scale of 1-9 (w/ 1 highly dissatisfied; 5 neutral; and 9 highly satisfied), how satisfied you were with today's Indian Lake SP experience. #_____Rating

10. What is the ONE most important reason for your rating?_____

11. What ONE change would you recommend to improve Indian Lake SP?_____

12. What ONE thing would you recommend not change at Indian Lake SP?_____

13. What is your principal home zip code? _____

14. Your age?_____ years

15. Please circle your gender. M or F

16. How many days did you visit Indian Lake SP in 2016 (last year)? _____ #days

Thanks for your help in improving the management of Indian Lake SP.

Dr. Chuck Nelson, Project Director

MSU Dept. Community Sustainability, 480 Wilson Rd.,

East Lansing, MI 48824 Phone (517) 432-0272 nelsonc@msu.edu _____Time

_____Site

_____Ques #

Appendix C. Indian Lake Sampling Schedule 2017

- 27 sample days prescribed, 27 accomplished in day use and campground.
- Based on Summer and Fall use levels per 2016 DNR park use data
- For our study purposes
 - Summer sampling June-August
 - Fall sampling September- November
- Sample days are divided the same way with 2/3 on weekdays and 1/3 on weekends similar to calendar.
- Indian Lake RA sampling will begin at one of the following times each sample day: 9 AM, Noon, 3PM and 6PM.

Appendix D. Indian Lake Recreation Area Planned On-Site Sampling Calendar (a)

Day	Date	Sampling Start Time
Sat	6/24	3PM
Wed	6/28	9AM
Fri	6/30	3PM
Sat	7/1	9AM
Mon	7/3	Noon
Thu	7/6	Noon
Sun	7/9	9AM
Thu	7/13	3PM
Sun	7/16	Noon
Tues	7/18	9AM
Sat	7/22	6PM
Wed	7/26	6PM
Mon	7/31	6PM
Fri	8/4	9AM
Mon	8/7	3PM
Sat	8/12	Noon
Tues	8/15	Noon
Thu	8/17	9AM
Sun	8/20	3PM
Fri	8/25	6PM
Wed	8/30	3PM
Wed	9/13	Noon
Sat	9/30	3PM
Tues	10/10	6PM
Sun	10/15	9AM
Thu	11/2	3PM
Fri	11/17	9AM