

APPENDIX A – LEGAL MANDATES UPDATE

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 & 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.

Legal Mandates were listed in the Phase 1 GMP. However, due to omissions and updates, a complete updated list of legal mandates impacting Pontiac Lake State Recreation Area follows.

STATE STATUTE

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT (NREPA) AND AMENDMENTS	
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 365 Endangered Species Protection	The department shall perform those acts necessary for the conservation, protection, restoration, and propagation of endangered and threatened species of fish, wildlife, and plants in cooperation with the federal government, pursuant to the endangered species act of 1973, Public Law 93-205, 87 Stat. 884, and with rules promulgated by the secretary of the interior under that act.

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	
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 Pontiac Lake State Recreation Area.

Land Use Orders of the Director

5.2 Possession or consumption of alcoholic beverages in certain state parks and recreation areas, prohibited conduct.

Order 5.2 A person shall not do any of the following:

(7) Possess or consume an alcoholic beverage at any time within the following described locations:

- (e) Pontiac Lake RA - All state-owned lands in section 18, T3N R9E, and sections 12 and 13, T3N R8E, without written authorization of the park manager.

5.10 Shooting ranges at state parks and recreation areas, designation by Director; prohibited conduct at certain ranges.

Order 5.10 (1) The following are designated shooting ranges:

- (d) Pontiac Lake RA shooting range, Oakland County.

5.12 Certain state parks and recreation areas, requirements for use, certain conduct prohibited.

Order 5.12 The following conduct shall apply to use of Michigan SPs and RAs:

(5) Pontiac Lake RA, prohibited conduct. A person shall not do any of the following at the Pontiac Lake RA:

- (a) Possess or fly a hang glider on any state-owned lands within the Pontiac Lake RA.
- (b) Enter into a pen area or buffer zone around a pen area established by the department from June 10 to July 15 for the temporary holding of geese. This prohibition shall not apply to a person issued a written permit by the district wildlife supervisor allowing entry into the area.

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.

7.71 Pontiac Lake recreation area, unlawful acts, exceptions; posting required.

Sec. 7.71 (1) A person shall not take any waterfowl after 8:00 a.m. from September 1 to Labor Day on all those state-owned lands in section 18, T3N R9E.

(2) A person shall not take any waterfowl from September 1 to September 15 on those state-owned lands in sections 12 and 13, T3N R8E, south of Gale Road; or on those state-owned lands in that area bounded on the north by the park entrance road, on the north and east by Cross Road and Maceday Lake Road, on the south by Gale Road, and on the west by the north-south mid- section line of section 11, T3N R8E.

(3) Signs containing the hunting closure shall be posted in such a manner and at such locations as will provide reasonable notice of the closure to the public.

History: Am. 2, 2016, Eff. April 15, 2016.

Watercraft Controls

PONTIAC LAKE - R281.763.12- Speed restriction, distance from shoreline and islands.

12. On the waters of Pontiac Lake, township of White Lake and township of Waterford, county of Oakland, state of Michigan, persons operating vessels shall, in addition to the restrictions set forth in section 18 of Act No. 245, Public Acts of 1959, as amended, maintain a distance of 100 feet from the shoreline and from any island, except when proceeding at a slow-no wake speed and except when picking up or dropping off water skiers, so long as such operation is otherwise conducted with due regard to the safety of persons and property and in a line perpendicular to the shoreline insofar as it is reasonably possible, and in accordance with the laws of this state.

History: Eff. May 15, 1968

PONTIAC LAKE - R281.763.13 - Water skiers' distances.

13. Persons navigating, steering or controlling themselves while being towed on water skis, water sleds, surfboards, or similar contrivances shall maintain a distance of 100 feet from the shoreline and from any island, raft, buoyed or occupied bathing area or vessel moored or at anchor, except when being picked up or dropped off, so long as such operation is otherwise conducted with due regard to the safety of persons and property and in a line perpendicular to the shoreline insofar as it is reasonably possible, and in accordance with the laws of this state.

History: Eff. May 15, 1968

APPENDIX B – STAKEHOLDER AND PUBLIC INPUT SUMMARY

Over the duration of the Phase 2 General Management Plan development process, the planning team ensured a variety of opportunities for stakeholder and public input and feedback.

Stakeholder Workshop

A stakeholder meeting was held on August 12, 2019 at the Oakland County Conference Center, Waterford, Michigan to guide the Phase 2 GMP for Pontiac Lake Recreation Area. Participants were invited to provide their input, identifying strengths, weaknesses, opportunities and threats related to the park. A total of 14 participants represented government, business and tourism and non-profit organizations from around the region. The meeting began with a short presentation of the Phase 1 GMP that was completed in 2012 and a review of the planning process for this Phase 2 GMP. Input gathered at the meeting is listed below:

STRENGTHS

- Well maintained
- Managed well
- Easy to access
- Scenic yet visible entry
- Natural riparian buffer
- Natural oasis within the suburbs
- Good neighbors
- Diverse recreation options
- Connection to other parks
- Affordable shooting range

WEAKNESSES

- Vandalism
- Litter
- Short camping season
- Understaffed (shooting range and beach)
- Lack of funding for capital improvements
- Congestion/speeding on adjacent road
- Distance from parking lot to beach
- Lack of hunting access
- Shooting range not open enough
- Campground has old electric, water and dump station

- Limited capacity for the surrounding community

OPPORTUNITIES

- Storm shelter for high-use days
- Education regarding new rules associated with new trends
- Education regarding natural resources and nature
- Marketing targeted toward younger generation
- STEM education opportunities with model airplanes
- Forest management education
- Improve adjacent roads to improve safety in and out of the park
- Add staff and funding for the park
- Promote partnerships and volunteer groups
- Market community involvement opportunities
- Enable volunteers to help park staff by simplifying the process
- Stable volunteers and partner groups
- Support Townships in efforts to connect regional trails to the park

THREATS

- Urban sprawl
- Invasive Species
- Vandalism
- Water Quality
- Changes in DNR management and Funding
- Aging infrastructure
- Recreation trend changes – technology
- Relevancy to younger generation
- Isolation of natural species
- Natural disasters
- Drones and changes in FAA policy
- E-Bikes
- Evidence of drug use
- Lack of forest diversity/succession stages
- Loss of trail connections (ROW)

Stakeholder Meeting Attendees	
Name	Stakeholder Affiliation
Cheryl Bush	Oakland County International Airport
Jason Meechhof	Backcountry Hunters and Anglers
Jeffrey Patterson	Pontiac Miniature Aircraft Club
George Dzahristos	Pontiac Miniature Aircraft Club
Ian Ableson	Six Rivers Land Conservancy
Ryan Dividock	Oakland County EDCA
Brad Jackson Jr.	Tacom
Susie Sulla	Pontiac Lake Horsemen's Association
Caryn Robinson	Pontiac Lake Horsemen's Association
Gordon Marshall	Oakland County International Airport
Curt Spicer	Pontiac Miniature Aircraft Club
Sargent Will Dolehanty	Waterford Police Department
Rad Jackson Sr.	Tacom
Kristen Wiltfang	Oakland County EDCA

Planning Team Attendees: Matt Lincoln (Park Planner/Land Liaison), Dakota Hewlett (Trail Specialist), Tom Bissett (Unit Supervisor), Alex Koptyev (Shooting Range Manager)

Virtual Public Input Meeting

A virtual public input meeting was held online, June 11, 2020, from 6 to 7pm to review the Phase 2 GMP and comment on the draft 10-year action goals. The draft Phase 2 GMP was also posted on the DNR's website and comments were invited via e-mail. A press release advertising the virtual public input meeting was issued to 4,100 recipients two weeks in advance via the Government Delivery System.

The meeting began with an overview of the Phase 2 GMP process followed by an overview of the Phase 1 GMP. The 10-year action goals for the park were then presented and participants were able to ask questions or comment. In addition, an online survey was e-mailed to participants the following day, which also provided another opportunity to comment on the 10-year action goals. The virtual public input meeting was recorded, and the video was posted on the GMP website on June 18. Additional comments were gathered via e-mail until June 25th.

The press release for the meeting, feedback received at the meeting, a list of attendees, comments received, as well as survey results are provided below.

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MICHIGAN DEPARTMENT OF NATURAL RESOURCES

- DNR News -

May 28, 2020

Contact: [Matt Lincoln](#), 517-284-6111

DNR to host virtual meeting June 11 for Pontiac Lake State Recreation Area management planning



The Michigan Department of Natural Resources will host a virtual public meeting at 6 p.m. Thursday, June 11, to gather public feedback on a new draft phase 2 general management plan for Pontiac Lake State Recreation Area in Oakland County.

The original March 19 meeting in Waterford was canceled due to COVID-19 health and safety concerns.

The virtual public meeting will be formatted similar to other open houses, including a review of the draft plan and planning process, followed by an opportunity for people to share feedback and questions with DNR staff.

Advance registration for the GoToWebinar meeting is required, and a recording of the meeting will be posted by June 18. A meeting registration link and copy of the draft management plan are available at Michigan.gov/PontiacLake.

People also can share comments via email through June 25 to LincolnM@Michigan.gov.

The phase 2 general management plan defines a long-range (10- to 20-year) planning and management strategy that will help the DNR protect and preserve the site's natural and cultural resources and provide access to land- and water-based public recreation and educational opportunities. Get more information on the DNR's management plan process at Michigan.gov/ParkManagementPlans.



The 3,745-acre [Pontiac Lake State Recreation Area](#) provides outdoor activities compatible with the park's natural resources. The recreation area includes the headwaters of the Clinton, Huron and Shiawassee rivers and year-round recreational opportunities within its scenic interior. Camping, horseback riding, picnicking, swimming, hiking, biking, paddling, hunting, fishing and sightseeing are popular activities enjoyed by visitors.

For more information about the June 11 virtual public meeting or draft management plan, contact Matt Lincoln, a land liaison, grants coordinator and planning analyst with the DNR Parks and Recreation Division, by email at LincolnM@Michigan.gov or phone at 517-284-6111.

Note to editors: Accompanying photos are available below for download./

- [Pontiac Lake State Recreation Area - equestrian riders](#)
- [Pontiac Lake State Recreation Area - swimming](#)

DNR COVID-19 RESPONSE: For details on affected DNR facilities and services, [visit this webpage](#). Follow state actions and guidelines at Michigan.gov/Coronavirus.



Invitations to respond started arriving in mailboxes March 1, 2020.

Michigan.gov/Census2020 ▶



Webinar Attendees

Sarah Scott
Joe Borro
Sandy Fitzpatrick
Richard Horton
Evan Moen
Susan Moore

David Nemshick
Nicole Rasmussen
Caryn Robinson
Curt Spicer
Joe Seward
Andrea Voorheis

DNR Employees Present:

Vicki McGhee
John Terpstra
Tom Bissett
Debbie Jensen

Matt Lincoln
Mike Terrell
Alex Koptjev

Meeting attendees were asked to review and help prioritize action goals by completing an online survey. The survey was also shared on the park website. Twenty five responses were collected. The total number of votes for each goal, and associated comments, are illustrated in the following survey results.

Q1 Prioritize your top four draft action goals. Select the corresponding checkboxes for four of the following action goals:

ANSWER CHOICES	RESPONSES
a. Implement invasive species control, with a strong emphasis on early detection and rapid response	36.00% 9
b. Support volunteer stewardship projects in the park.	40.00% 10
c. Enhance opportunities for natural resource based education including but not limited to volunteer interpreters, partnerships with local teachers, fact shack and/or mobile hunting education trailer at beach	12.00% 3
d. Evaluate future proposals as may be submitted to connect the park with a regional trail system	56.00% 14
e. Explore acquisition of property within proposed General Management Plan project boundary	32.00% 8
f. Review Airport Vegetation Management agreement with Oakland County International Airport to develop a long-term management plan	4.00% 1
g. Contract with vendor to provide alternative lodging in the modern campground	4.00% 1
h. Explore feasibility and cost benefit to install an electric/solar powered hand pump at the equestrian campground	56.00% 14
i. Develop a Natural Resource Stewardship Plan for the park	20.00% 5
j. Explore feasibility and cost benefit to add electric to some equestrian campsites	52.00% 13
k. Design and Construction – Replace day-use restrooms, exploring options for concession and accessibility between parking lot and beach	20.00% 5
l. Design and Construction – Electrical improvement to 50-amp service in modern campground	4.00% 1
m. Design and Construction – Improve dump station to accommodate current capacity	16.00% 4
n. Design - Reconstruct or resurface park roads and parking lots	12.00% 3
o. Design and Construction - Replace 2 modern campground toilet/shower buildings	8.00% 2
p. Design and Construction – Replace contact station with accessible structure	8.00% 2
q. Develop a disc golf course near the beach day-use area	4.00% 1
r. Upgrade existing campsites to meet current ADA requirements at modern campground	4.00% 1
s. Construct a gaga-ball pit or other low-cost play opportunities at the modern campground	0.00% 0
t. Construct a visitor parking lot for modern campground	4.00% 1
u. Construct a pavilion at the shooting range for education and events	8.00% 2
Total Respondents: 25	

Q2 Should any goals be added to the list? Suggest any action goal(s) you think should be added to the above, if any and explain why.

10	How about a shuttle service from campground to the lake?	6/23/2020 7:10 PM
11	Improve trail signage and markings.	6/17/2020 8:42 AM
12	Trails are one of the most important action items to work on. the Township is very interested in an interconnecting trail south on Teggerdine to M-59. that would connect to the planned Township Triangle Trail that would intern connect with the new "Stanley Park" (former Brendel campground)	6/15/2020 10:18 AM
13	Would love to have water and or water/sewer connections to the modern campground.	6/14/2020 4:26 PM

#	RESPONSES	DATE
1	Expand and improve surface day staging area on Teggeddine road to accommodate more users.	6/28/2020 7:25 AM
2	Please extend the equestrian camping season through the first weekend in November so that equestrians may hold Halloween and early Turkey Trot events. Please allow Mounted Archers of Detroit to host a competition in the park. Please keep the equestrian campground separate. Please work to foster collaborative relationships between hikers, mountain bikers, and equestrians. Please improve road access to Equestrian campground and increase lot size at Teggeddine staging. I love Pontiac Lake Rec, it is my favorite park. Thank you for making and keeping it a wonderful retreat.	6/25/2020 11:22 PM
3	Improve the dog park at the beach area with a shelter and water stations. Enlarge and improve the day use parking lot on Teggeddine. Improve the hiking trails around the modern campground for families with an interactive or interpretive trail. Improve the hiking trail from campground to beach with a rest stop with access to water and a shade shelter and bench. Improve the hiking trail signs and add a system of numbers so if people get lost they can call in the number and be found easily.	6/25/2020 11:00 PM
4	The Equestrian campground should be just that. Equestrian Campground ONLY. The day staging area for horses be improved. Longer camping	6/25/2020 4:09 PM
5	A larger staging area for day-use equestrian trails parking. Modernizing equestrian camping area. Additional picnic tables in the equestrian area is needed. Access to water in the equestrian camping area.	6/25/2020 12:09 PM
6	Porta potty in equestrian far camp area. Better signage on trails. Longer camping season. Fall is best time. Extended season.	6/24/2020 8:53 PM
7	Allowing year around access to the equestrian campground for day use parking. The parking on Teggeddine is far too small to accommodate the amount of trucks and trailers that come sometimes from long distances only to find that there is no where to park, it is very inadequate! I have experienced it over capacity and people not able to get in multiple times. I have never seen such a situation at Kensington, Highland, Proud Lake or Brighton equestrian staging areas in any season. Unfortunately horse trailers have such limited parking areas at the local parks and when the general public, who have many parking options at each and every park, choose to park their vehicles in the only place we can park we have no other choice than to turn around and try another park or go home and it's not fair to our horses who have already been in the trailer all the way there.	6/24/2020 6:11 PM
8	Electric power at campground for horse only rigs or power to the well at least. Improvements to staging area parking on Teggeddine. Better signage. Enlarging the staging area on Teggeddine to accommodate larger or more rigs. Horse only camping. More access to horse trails and adding opportunities for horse trail connectivity. No e bikes allowed on trails. Better signage. Better opportunities to access and park your big trailers during the day year round. Designated Horse only camping. Longer camping season. Thank you for the opportunity to provide my input. Take care!	6/24/2020 4:09 PM
9	I selected reconstruct the roads. The dirt road leading back to the horse campground needs to be widened. If you have two rigs meet up and have to pass it each other, it is way too narrow and at some points not possible. We have had to actually back up several hundred feet to allow the other vehicle to pass. It also has horrible blind spots and we have had cars go way to fast and almost crash when they come around a corner and see a big horse rig coming the other way. We desperately needs a much larger day staging area/parking space for the horses. If you get three larger rigs in there it's full. This has always been an issue, especially with the short camping season (access to park in the horse campground) but with Covid-19 shutting the campground down for so long, we were unable to utilize the park at all until the campground opened again. We missed so many opportunities we would have ridden at the park this spring. We need to keep the horse campgrounds, as horse only. I would LOVE to get some more modern amenities such as electric in there, but our fear is that will make the horse camping area attractive to non-horse riders. There are so many safety issues that will arise if horse and non-horse camping ever gets combined. If you look at the state parks as a whole and the percentage of campsites horse people have compared to non-horse people, we are already so limited to the parks we can camp in and the facilities available to us. If these campgrounds are no longer horse-only, the horse people will lose what little we have. I marked above, I would love to see a connected trail system. But PLEASE don't lose the horse people. we have seen	6/24/2020 2:31 PM

this happen many times before. Trail systems that were actually spear headed by equestrians, end up getting combined and paved and eventually in some cases lost to us completely. Please make sure if that plans happens, that horse riders are kept in mind along with everyone else. I also marked power for the well head at the horse campground, All someone needs to do is go use that hand pump and fill a 5 gallon bucket of water and you will agree it is needed. I HATE that pump. my arms hurt just thinking about it.

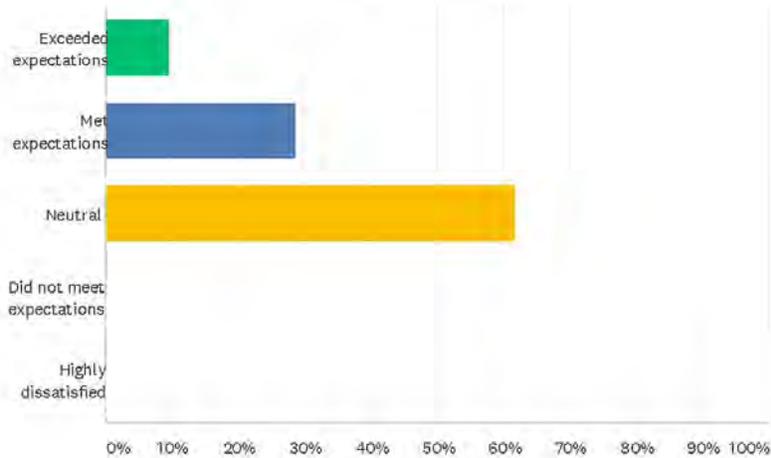
Q3 Should any goals be removed from the list? Suggest any action goal(s) you think should be removed from the above, if any and explain why.

Answered: 5 Skipped: 20

#	RESPONSES	DATE
1	Visitor parking lot at modern campground. There is plenty of parking at sites for visitors.	6/28/2020 7:25 AM
2	No electric campsites in equestrian camp	6/28/2020 6:26 AM
3	I don't see any that should be removed. there are a lot of great ideas above.	6/24/2020 2:31 PM
4	I do not remember seeing very many visitor's parking lots, at least not of any size at Campground sites. Most of the state campgrounds I have been to, which is several, allow visitors to enter the campground area with a passport or a day pass and park at the camp site of the campers being visited up to a prescribe time of day. Pontiac Lake is the exception. Before a visitor can visit a camper, they have to register and check in, filling out a pass and placing it on their car. Either way, why would they need a larger visitor's parking lot. I understand the need for a visitor's parking lot if the campground was next a lake or beach, but this is not the case at the Pontiac campgrounds. The lake and its recreation area has a very large parking lot. Holy does not have much of a visitors parking lot except at the lake. Same for Highland Recreation and Seven Lakes. The Visitors lot is at the lake and other recreation areas of these State Parks with only a smaller visitors lot at or near the campground	6/23/2020 7:10 PM
5	Remove G, L, and S.	6/13/2020 8:48 AM

Q4 Please rate the virtual public input meeting held on June 11, 2020 by selecting one of the following options.

Answered: 21 Skipped: 4



ANSWER CHOICES	RESPONSES	
Exceeded expectations	9.52%	2
Met expectations	28.57%	6
Neutral	61.90%	13
Did not meet expectations	0.00%	0
Highly dissatisfied	0.00%	0
TOTAL		21

Q5 Please explain the reason for your rating in the previous question.

Answered: 12 Skipped: 13

#	RESPONSES	DATE
1	We believe we would have had more participation with face to face interaction.	6/28/2020 7:25 AM
2	did not attend	6/28/2020 6:45 AM
3	Some folks find it hard to participate electronically so they don't and we might lose some valuable input.	6/25/2020 11:00 PM
4	Just joined this year.	6/25/2020 9:15 PM
5	NA	6/24/2020 4:09 PM
6	Very informative!	6/24/2020 3:54 PM
7	I think the meeting explained very well the process and the projects you are looking at for the plan.	6/24/2020 2:31 PM
8	I used to attend these Webex's for the company I worked for, normally at least 2 a week. I believe they stifled input from many participants. I felt that when a groups met together in one room, people were more comfortable to engage in conversation that was ripe with new thoughts and ideas and were not afraid to bring new items or thoughts up for discussion that often led to creative ideas and sometimes a completely new directions. Webex's tend to not hold the attending people's attention and most want to just get it over with so they can do other things and agree with many proposals just to get the meeting to move forward and end.	6/23/2020 7:10 PM
9	Though I think people might have been quieter than with an in-person meeting, the virtual meeting made it easier for me to attend. I'd love to see a virtual attendance option at future public input meetings, even once things get back to "normal".	6/17/2020 8:42 AM
10	I was unfortunately unable to attend	6/15/2020 10:18 AM
11	I missed the meeting but love the park and hope it continues to be updated.	6/14/2020 4:26 PM
12	Unfortunately I was unable to attend the virtual meeting due to a work conflict.	6/13/2020 8:48 AM

Questions and Comments Collected During Webinar

- Are there any specific trail connectivity projects underway now or planned short term?
White Lake Township has initiated plans in the past for a regional trail along Teggerdine Road, but status of these plans is unknown.
- What is the Airport Vegetation Management agreement?
This is an agreement with the Oakland County International Airport where vegetation in take-off and landing zones must be maintained at a specific height so as to not impede air traffic. Part of this zone is located in the park.
- Please add improvement to day use staging and hunter parking access on Teggerdine
- Thanks Matt, Debbie & Tom. Joe Borro MTN bike trail coordinator. Appreciate all the work.
- Dogs off leash are an issue on some of the trails. I haven't checked each trail head/parking area but can we ensure the leash law is posted by the trail heads?
This is a continuous problem not only here but in other parks as well. Signs are posted at trailheads and is enforced when park staff encounters violations.
- Has anyone ever looked into adding snow shoe trails/events for the winter?

There are a few places where snowshoeing could take place, but it would interfere with snowmobiling and mountain biking. An organized event may be something that could take place with proper protocols in place.

7. If we create a marketing friends type organization we could promote activities like snow shoeing
There appears to be a lot of interest for creation of a friends group for the park. Start by talking to Tom Bissett about it. The mountain bike community would support for sure.
8. Can you explain what the alternative lodging is that is being installed at the park?
We currently have 2 cabins with electricity that have been installed in the campground with 10 more planned for the future.

Project Website

A webpage was maintained through the duration of the planning process and was updated with maps, meeting information and the draft plan. Contact information was provided for members of the public to submit comments or ask questions.

E-mailed/Mailed Comments

1. My questions-comments relate to the weeds throughout the lake. My comment is why is it so bad. My question is what can we who own property on the Lake do to curtail the growth of the weeds, and what is the amount of money that needs to be generated to get rid of the weeds and the algae? Does the State contribute anything towards controlling the weeds, or does the cost of spraying and harvesting fall solely on the SAD? Should the amount of the SAD be increased and if so should a large amount of money be spent now so we address the problem right now and right away instead of doing it piecemeal? Thanks

Thanks for inquiring. The lake association has always contracted with weed harvesters, and have this year as well, however, they started cutting later this year due to COVID-19. The park does not contribute to weed control in the lake. I would suggest contacting an environmental consultant that specializes in aquatic environments to develop and lake management plan, which would prescribe the best way to handle weed control in the lake.

2. Hello, To whom it may concern, My concern is that the land area be protected permanently from any development in terms of protecting the water and watershed. With this goes the wildlife and plant protection. Hunting, fishing and hiking should get preference. Additional land should be added to the area to keep development away. Open land is in short supply in this area. Thanks for your time.

APPENDIX C – 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

February 27, 2018

Introduction

As part of the management planning process for Pontiac Lake Recreation Area (RA), 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 21, 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 Pontiac Lake there were many instances where this occurred with the two parking areas located near the beach/picnic area on Pontiac Lake. Hence, visitors using those areas are somewhat underrepresented in the sample compared to their actual proportion in the number of park day visits.

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 modern campground (176 sites) and in the equestrian campground (25 sites). On a sample day, a survey administrator would randomly choose a campsite number between 1 and 202 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 22 sample days in summer and 5 in fall. All day use sites were sampled on all sample days in both seasons, while campers were sampled all 22 sample days in the summer and 4 of the 5 days in the fall as the campgrounds were closed on the last sample day November 11, 2017. Table 1 shows that a total of 3,392 vehicles were counted in day use parking areas over the 27 sample days (3,258 vehicles in the summer and 134 in the fall) with a total of 1,862 questionnaires distributed (1,730 questionnaires in summer and 132 in fall) in day use lots. The busiest lots were the two lots at the beach/picnic area on Pontiac Lake, as well as the adjacent

Pontiac Lake BAS. Campers were sampled on 22 summer and 4 fall days with a total of 360 surveys distributed (320 in summer and 40 in fall).

Survey Results: Uses

Seventy-three completed questionnaires were returned by camper respondents and 191 by day use respondents as of the December 31, 2017 cutoff for a total of 264 respondents. Since the last survey date was November 11, this provided almost seven weeks for surveys to be returned after the last sampling date. The response rate for day visitors was 10%, for campers 20% and for the combined group 12%.

Activities and Party Characteristics

The average amount of time a day visitor vehicle was in the park was 3.7 hours and the day visitor party averaged 2.1 people per vehicle. Many day visitors were grouped with others in other vehicles as the average day visitor group had 5.2 people. For camper respondents, mean people per vehicle was somewhat lower, averaging 2.4 people per vehicle.

A total of 11 percent of day use respondents and 7 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, bicycle on a paved road, nature observation and picnic. For day visitors the five most common activities were hiking, swimming, sunbathing, picnicking and bicycling on an unpaved trail.

When campers were asked the one most important park activity to them, the only four mentioned in descending order were camping, horseback riding, hiking and fishing (Table 3). When day visitors were asked this question, their five most common responses in descending order were swimming, hikings, bicycling, fishing and a tie among power boating, shooting at the range and picnicking.

Local Spending

Park visitor spending in the local area of Pontiac Lake RA was substantial (Table 4). Campers from a single vehicle reported spending an average of \$127 in the 24 hours prior to being surveyed with 86% spending something within 20 miles of the park. The greatest average amounts were for food and beverages from a store, lodging fees and vehicle related expenditures. Day visitor spending averaged \$52 per vehicle with 74% of them spending something in the local area in the past 24 hours. The greatest portion of day visitor spending was on grocery and convenience store food/drink, restaurant spending and vehicle related expenses.

Satisfaction

When asked to rate their satisfaction with their Pontiac Lake RA experience the day they were sampled, day visitors and campers were highly satisfied with a mean rating of 8.3 on a scale of 1 – 9 where 1 is highly dissatisfied, 5 is neutral and 9 is highly satisfied for all respondents (Table

5). More than sixty percent of day visitors and half of camper respondents gave their experience the highest satisfaction rating (9). Only four percent of campers and none of the day visitor respondents rated their experience as dissatisfying, with six percent of campers and three percent 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 enjoyment of the campground as a whole, the generally wonderful/total experience at Pontiac Lake or the nature and wildlife in the recreation area (Table 6). For day visitors, the most common positive comments related to the clean, well maintained and patrolled atmosphere, good trails or a generally wonderful overall experience. The most common concerns voiced related to the ratings were poor access to the lake for campers, poor fishing experiences by day visitors and some responses that were difficult to understand. Considering the overall ratings and comments, these comments of concern were made by a very few respondents.

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 Pontiac Lake RA. 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 and day visitors most commonly suggested that there was nothing to improve. The two other most frequent suggestions from campers were to update and increase the amount and quality of facilities such as restrooms and provide a better playground opportunity for young children. For day visitors, the two most frequent other suggestions were to better maintain facilities in day use areas and provide better concessions and vending machine options.

When asked what one most important thing should not be changed at Pontiac Lake RA (Table 8), campers were most likely to suggest the campground stay the same. They also supported the recreation passport and the current value provided by it and their camping fees as well as keeping current park staff. For day visitors, the most common suggestion was keep the park as it is. Suggestions of specific aspects not to change were most likely to be keep the beach/lake situation the same and keep the same level of park and facility maintenance.

Demographics

Distinct respondent campers had a mean age of 51, with ages ranging from 26-75. Sixty-eight percent of distinct camper respondents were female and 32% male. For distinct day visitors, the mean age was 50, with ages ranging from 17-90. Fifty-two percent of distinct day visitor respondents were female and 48% male.

The vast majority of distinct campers and day visitors were Michigan residents (Table 9). Canada, Illinois, California, Louisiana and Florida were the second most common origins of campers. The most common day visitor origins following Michigan were Ohio, New York and Pennsylvania.

Summary

Pontiac Lake is a large recreation area in the highly populated south eastern region of Michigan. Many visitors are coming relatively short distances to enjoy the very wide range of activities including some unique ones offered at relatively few to no other state parks and recreation areas (horseback riding, a shooting range and the radio controlled flying field). With the heavy use of the beach and adjacent picnic area, it was surprising that the mean number of occupants per day use vehicle was relatively low (2.1) compared to beach oriented parks such as Warren Dunes State Park. Spending related to park experiences is lower per vehicle for day visitors than some other parks studied as many visitors are likely actively picnicking and enjoying beach and water activities within a few miles of their primary home, thus not eating at restaurants or securing lodging in the area or the park. Campers however, have a much higher level of spending that is on par with that reported by campers elsewhere in the Michigan State Park system. With the intense use the recreation area receives, there is significant recognition by park visitors of the effective operational work done by park staff to maintain facilities, pick up litter and patrol the area. Finally, it is noteworthy with this high level of use and many diverse uses, there is little mention of conflicts among users and a number of campers in particular noted the good behavior of their fellow park visitors. 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 improved restrooms. Overall the site is highly appreciated by park visitors with a strong nod to park maintenance and patrol efforts.

Acknowledgements

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 Pontiac Lake RA day use areas and campgrounds.

Parking Lot/Area	Summer Count	Summer Surveys Dist.	Fall Count	Fall Surveys Dist.	Total Count	Total Surveys Dist.
Pontiac Lake BAS	307	269	25	25	332	294
Pontiac Lake Day Use Lot East	1039	514	22	22	1061	536
Pontiac Lake Day Use Lot West	1622	666	45	45	1667	711
Shooting Range	86	86	8	8	94	94
Gale Road	13	13	7	6	20	19
Pontiac Lake Road	3	3	2	2	5	5
White Lake Road	2	2	3	3	5	5
Org. Camp/Eq. Trail	39	38	3	3	42	41
Tackels Boat Launch	82	81	6	6	88	87
Equestrian Staging	8	8	5	5	13	13
Radio Cont. Aircraft	51	44	3	3	54	47
Cross Road	6	6	5	4	11	10
Other legal parking along roadways in park	0	0	0	0	0	0
Total	3258	1730	134	132	3392	1862
Campers Sampled in Campground	NA	320	NA	40	NA	360

Table 2. Percent Pontiac Lake RA respondents participating in selected recreational activities during sample day in 2017.

Activity	Campers	Day Visitors	All
Hike/walk	75%	37%	48%
Swim	22	37	33
Camp	89	4	27
Sunbathe	26	26	26
Picnic	28	25	26
Nature observation	29	12	16
Bike on unpaved trail	7	15	13
Bicycle on paved road	29	4	11
Photography	15	7	10
Fish from boat	4	10	9
Shoot at range	10	9	9
Fish from shore	7	7	7
Power boating	1	10	7
Hunt	1	5	4
Paddle canoe/kayak	1	5	4
Pick berries/mushrooms	6	3	3
Radio controlled airplane use	1	4	3
Horseback ride	6	2	3
Metal detect	4	<1	2
All others	2	8	6

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

Activity	Campers	Day Visitors	All
Camp	87%	2%	25%
Swim	0	18	23
Hike	4	17	13
Bicycle	0	13	10
Fish	2	11	8
Power boat	0	6	4
Shoot at range	0	6	4
Picnic	0	6	4
Horseback ride	6	2	3
Radio controlled airplane use	0	4	3
Paddle canoe/kayak	0	4	3
Hunt	0	2	2
Sunbathe	0	2	1
Nature observation	0	1	1
Metal detect	0	1	<1
Photography	0	0	0
Pick berries/mushrooms	0	0	0
All others	0	5	4
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 Pontiac Lake RA in 2017 (a).

Item	Campers Mean \$ (% spent something)	Day Visitors Mean \$ (% spent something)	All Mean \$ (% spent something)
Grocery and convenience store food & drink	\$43 (69%)	\$21 (45%)	\$27 (52%)
Vehicle related	19 (44)	12 (48)	14 (47)
Restaurant & bar meals & drinks	17 (31)	13 (46)	14 (41)
Lodging fees	34 (53)	1 (3)	10 (16)
Sporting goods	7 (12)	5 (15)	6 (14)
All other items including souvenirs	7 (11)	<1 (4)	2 (6)
Total	\$127 (86%)	\$52 (74%)	\$73 (78%)

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

Table 5. Rating of satisfaction with Pontiac LakeRAuse experience by on-site respondents on the day sampled in 2017.

Rating Scale	Campers %	Day Visitors %	All %
1 (very dissatisfied)	1.4%	0%	0.4%
2	0	0	0
3	0	0	0
4	2.7	0	0.8
5 (neutral)	5.5	3.2	3.8
6	2.7	2.1	2.3
7	6.8	13.8	11.8
8	28.8	17.5	20.6
9 (very satisfied)	52.1	63.5	60.3
Total	100.0%	100.0%	100.0%
Mean Rating (a)	8.0	8.4	8.3

(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 Pontiac Lake RA use by on-site respondents on the day sampled in 2017. (a)

Reason	Campers	Day Visitors	All
Clean, well maintained/patrolled	7%	22%	18%
Good trails	6	18	15
Generally like, wonderful, amazing, being outdoors	14	9	11
Like campground	33	0	9
Nature, wildlife, quiet	10	6	7
Like lake/beach	0	8	6
Like easy access to water and trails	0	5	4
Like shooting range	0	3	2
Poor lake access	4	1	2
Positive, friendly staff	3	1	2
Convenient, close to home	3	1	2
Uncrowded	0	2	2
Good behavior by other park users	6	0	2
Poor maintenance/patrol	3	1	2
Poor fishing	0	2	1
Like bicycling opportunities	0	2	1
Good parking	0	2	1
Like radio controlled flying field	0	2	1
Like many activities available	0	2	1
Other positives with one response or hard to classify	2	6	5
Other negatives with one response or hard to classify	5	6	6
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 Pontiac Lake RA by distinct on-site user survey respondents in 2017 (a).

Improvement	Campers	Day Visitors	All
Nothing to improve/change	21%	23%	22%
Update and increase facilities	20	5	11
Better maintenance of facilities	7	13	10
Better playground for young children	11	8	9
Improve/provide concessions/vending machines	3	10	7
Improve trail maintenance/system	6	6	6
More enforcement/patrol	3	5	4
Improve campground maintenance	7	2	4
More parking	0	5	3
Improve fish populations	0	5	3
Improve access for the disabled	3	3	3
Improve shore/pier fishing opportunities	0	4	3
Better signage/information	4	1	2
Improve campground utilities	4	<1	2
Improve campground store	3	0	1
Be open longer hours	0	2	1
Reduce fees	3	0	1
Better firewood	2	0	1
Other suggestions made by one respondent or difficult to classify	2	11	7
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 Pontiac Lake RA for distinct on-site user survey respondents in 2017. (a)

Don't change	Campers	Day Visitors	All
Don't know/Keep as is	23	26	24%
Cost/price/value/passport	20	6	12
Campgrounds	30	<1	12
Staff/personnel	9	8	8
Beach/lake	0	12	8
Level of maintenance	<1	12	7
Easy access to lake/facilities/activities	4	9	7
Nature/wildness/quiet/wildlife	8	4	5
Non-motorized trail system	1	6	4
Facilities	1	6	4
Convenient access/location	1	3	2
Fishing	0	2	1
Rules/regulations	<1	1	1
Other hard to classify or less than 1% of responses	3	5	5
Total	100%	100%	100%

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

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

State	% Campers Originating	% Day Visitors Originating	% All Originating
Michigan	80%	92%	88%
Ohio	0	4	3
International	3	0	1
Illinois	3	0	1
California	3	0	1
Florida	3	0	1
New York	0	2	1
Louisiana	3	0	1
Pennsylvania	0	2	1
South Dakota	3	0	1
Minnesota	3	0	1
Total	100%	100%	100%

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

Appendix B. On-site questionnaire

Pontiac Lake Recreation Area Use Assessment

_____ Date

Dear Driver:

Michigan State University (MSU) and the Michigan DNR are cooperating to measure recreation use of Pontiac 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.

<input type="checkbox"/> Hiking/Walking/Running	<input type="checkbox"/> Photography	<input type="checkbox"/> Paddling watercraft
<input type="checkbox"/> Bicycling paved road/trail	<input type="checkbox"/> Camping	<input type="checkbox"/> Horseback riding
<input type="checkbox"/> Bicycling unpaved trail	<input type="checkbox"/> Picnicking	<input type="checkbox"/> Sunbathing
<input type="checkbox"/> Fishing from boat	<input type="checkbox"/> Hunting/Scouting	<input type="checkbox"/> Swimming
<input type="checkbox"/> Fishing from shore/dock	<input type="checkbox"/> Power boating	<input type="checkbox"/> Shooting range use
<input type="checkbox"/> Pick berries/mushrooms	<input type="checkbox"/> RC Aircraft	<input type="checkbox"/> Metal detecting
<input type="checkbox"/> Nature observation (birding, etc.)	<input type="checkbox"/> 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 at Pontiac L RA
___ 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 Pontiac Lake Recreation Area 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 Pontiac Lake RA** experience. #_____ **Rating**

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

11. What ONE change would you recommend to improve Pontiac Lake RA?_____

12. What ONE thing would you recommend not change at Pontiac Lake RA?_____

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 Pontiac Lake RA in **2016** (last year)? _____ #days

Thanks for your help in improving the management of Pontiac Lake RA.

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. Pontiac Lake Sampling Schedule 2017

- 27 sample days prescribed, 27 accomplished in day use, 26 in campground (closed 10/30 so missed last sample day of 11/11).
- 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.
- Pontiac Lake RA sampling will begin at one of the following times each sample day: 9 AM, Noon, 3PM and 6PM.

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

Day	Date	Sample Time Start
Tues	6/20	9AM
Sun	6/25	9AM
Mon	6/26	3PM
Wed	6/28	6PM
Fri	6/30	3PM
Sun	7/2	3PM
Thu	7/6	6PM
Sat	7/8	Noon
Tues	7/11	Noon
Sat	7/15	6PM
Fri	7/21	9AM
Sun	7/23	6PM
Wed	7/26	3PM
Mon	7/31	Noon
Wed	8/2	Noon
Thu	8/10	9AM
Sat	8/12	Noon
Fri	8/18	6PM
Mon	8/21	6PM
Sat	8/26	3PM
Tues	8/29	3PM
Thu	8/31	3PM
Sat	9/2	Noon
Thu	9/28	6PM
Sun	10/8	9AM
Tue	10/24	Noon
Fri	11/11	9AM

APPENDIX D – RESOURCE MAPS

Regional Overview

Oakland County Recreation Land and Trails

Recreational Opportunities

Park Amenities

Park Boundary

Funding Sources

Geology

Land Cover, 1800's

Natural Communities

Soils

Elevation

Water Resources

Flood Elevation



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Pontiac Lake Recreation Area - Regional Overview



- County Boundary
- Municipal District
- Pontiac Lake Recreation Area
- Lakes and Rivers

Updated: 11/08/2019





MICHIGAN DEPARTMENT OF NATURAL RESOURCES

Oakland County Recreation Land and Trails

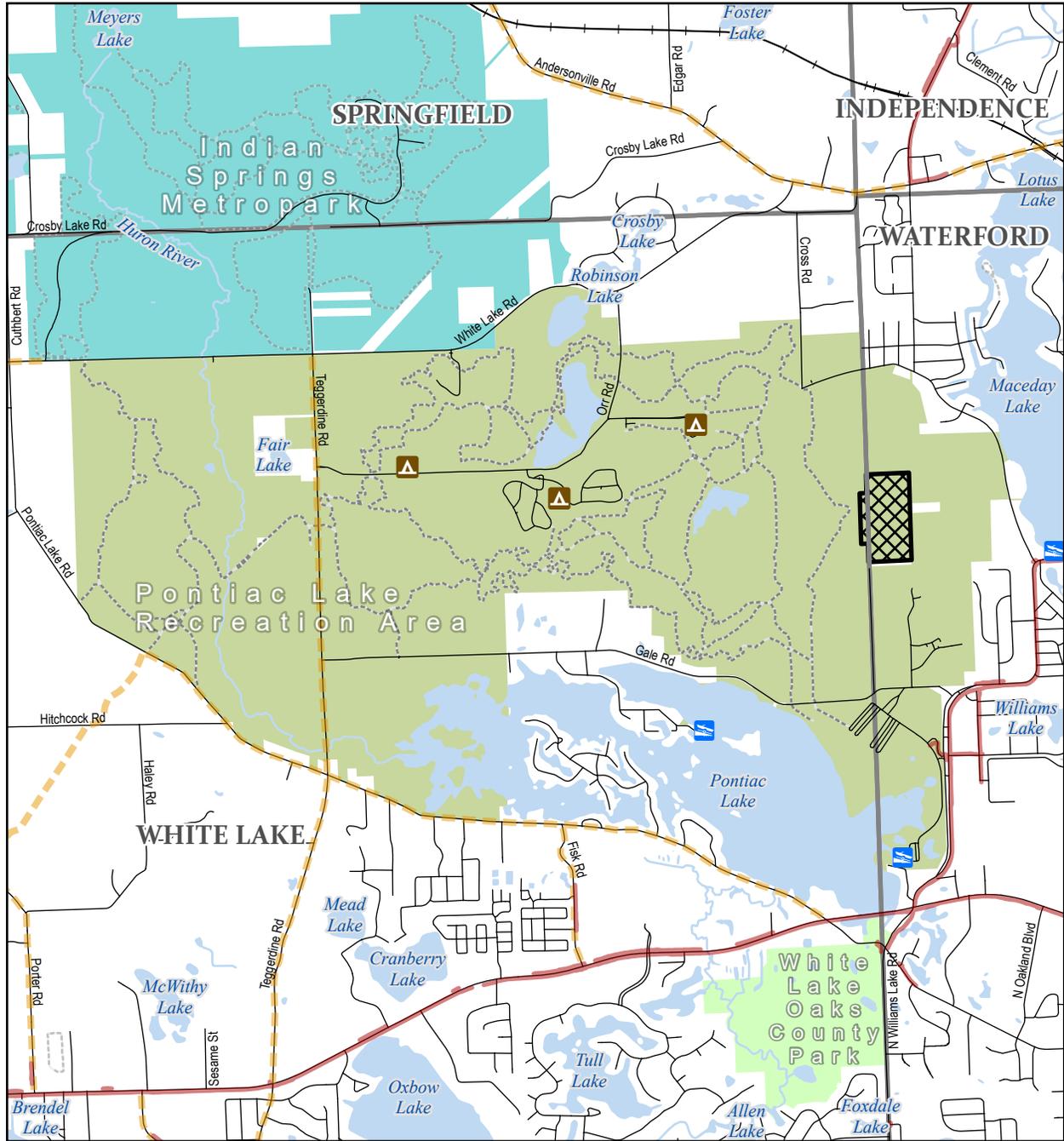


- County Boundary
- Municipal District
- State Recreation Lands
- County Park
- Huron-Clinton Metropolitan Authority
- Trail
- Water Trail
- Proposed Trail
- Park Path or Road Right of Way Sidepath



Updated: 11/08/2019

Municipality boundaries, trails, Oakland County Parks, and Huron-Clinton Metropolitan Authority data from Oakland County Access Oakland Open Data Portal



MICHIGAN DEPARTMENT OF NATURAL RESOURCES

Pontiac Lake Recreation Area - Recreational Opportunities

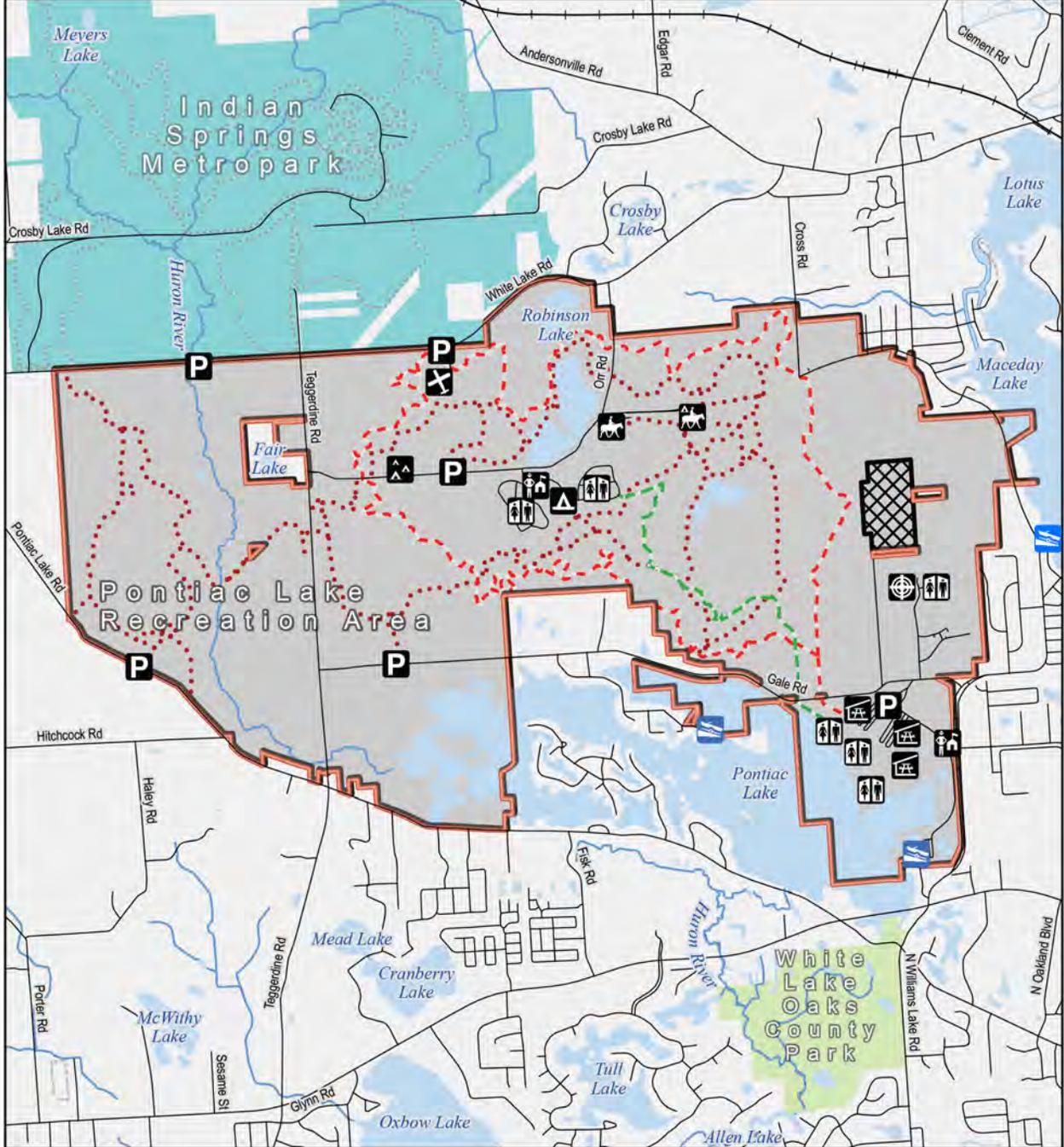


- | | |
|--------------------------------------|--|
| Municipal District | River/Stream |
| State Recreation Area | Lake/Pond |
| County Park | Boating Access Site |
| Huron-Clinton Metropolitan Authority | State Park Campground |
| Closed to Public | Trail Path |
| Road | Sidepath |
| Railroad | Proposed Sidepath/Sidewalk/Trail/Park Path |



Updated: 11/08/2019

Municipality boundaries, trails, Oakland County Parks, and Huron-Clinton Metropolitan Authority data from Oakland County Access Oakland Open Data Portal



MICHIGAN DEPARTMENT OF NATURAL RESOURCES



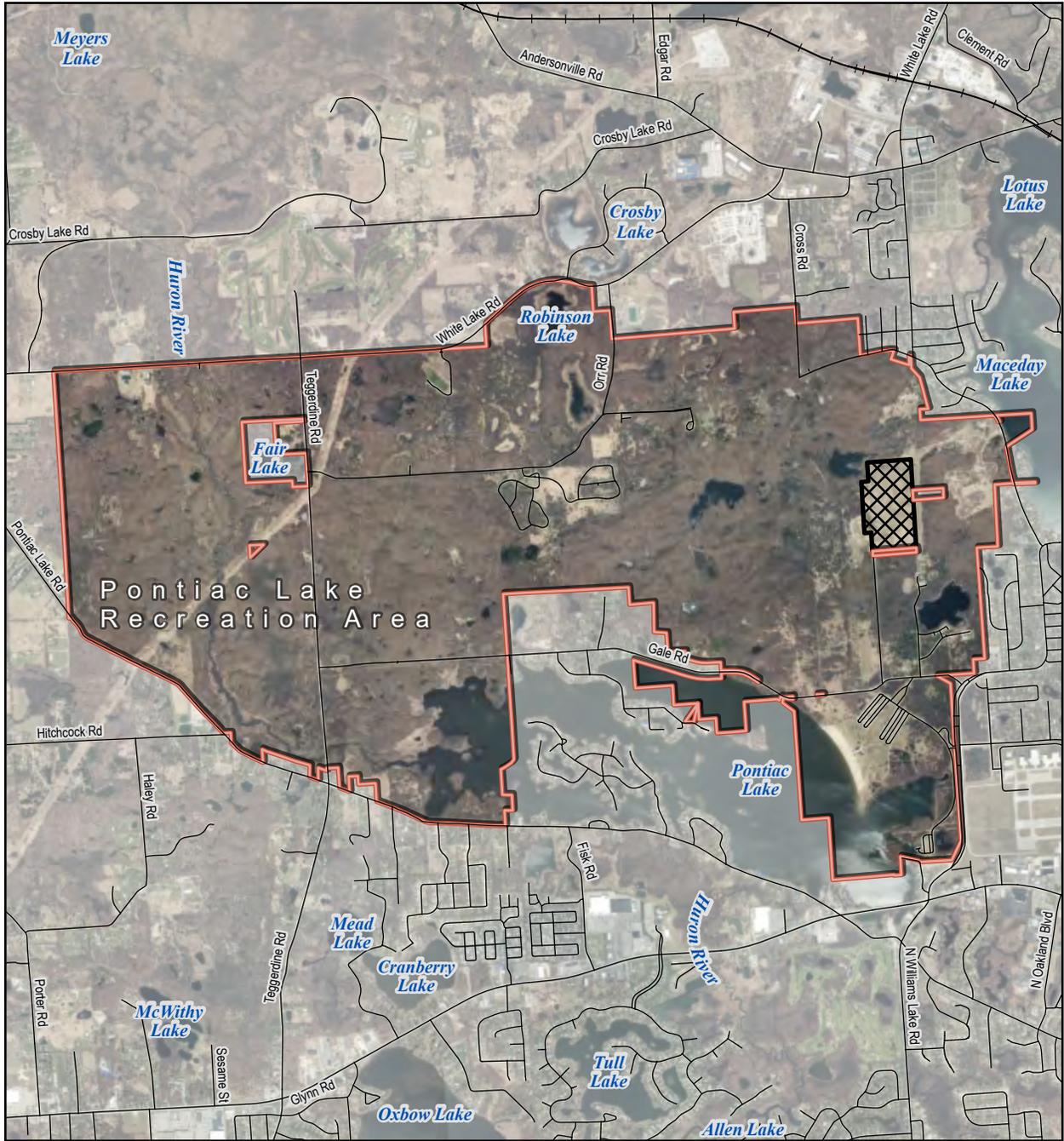
Pontiac Lake Recreation Area - Park Amenities

- | | | | |
|--------------------------------------|-----------------------------|------------------------------|---------------------|
| State Recreation Area Boundary* | River/Stream | Other Trail | Boating Access Site |
| Closed to Public | Lake/Pond | State Park Campground | Barn/Riding Stable |
| County Park | Designated Equestrian Trail | Group/Organizational Camping | Contact Station |
| Huron-Clinton Metropolitan Authority | Designated Bicycle Trail | Equestrian Camping | Toilet/Shower |
| Road | Designated Hiking Trail | | Pavilion |
| Railroad | | | Shooting Range |
| | | | RC Aircraft Field |
| | | | Parking Lot |

Updated: 11/08/2019

*All state lands within boundary open to hunting. Early goose hunting restrictions in some areas.





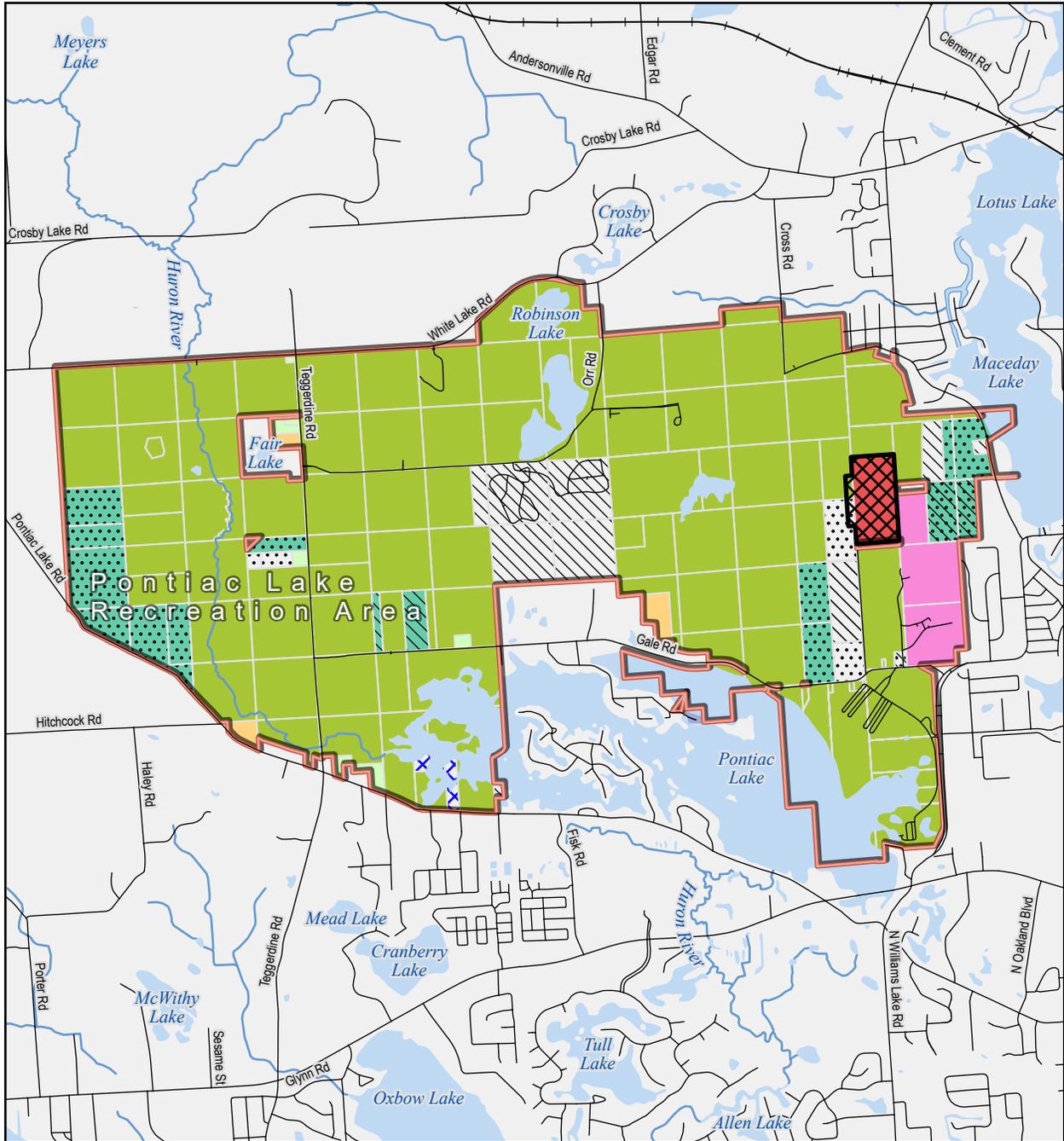
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Pontiac Lake Recreation Area - Park Boundary

-  State Recreation Area Boundary
-  Closed to Public
-  Road
-  Railroad





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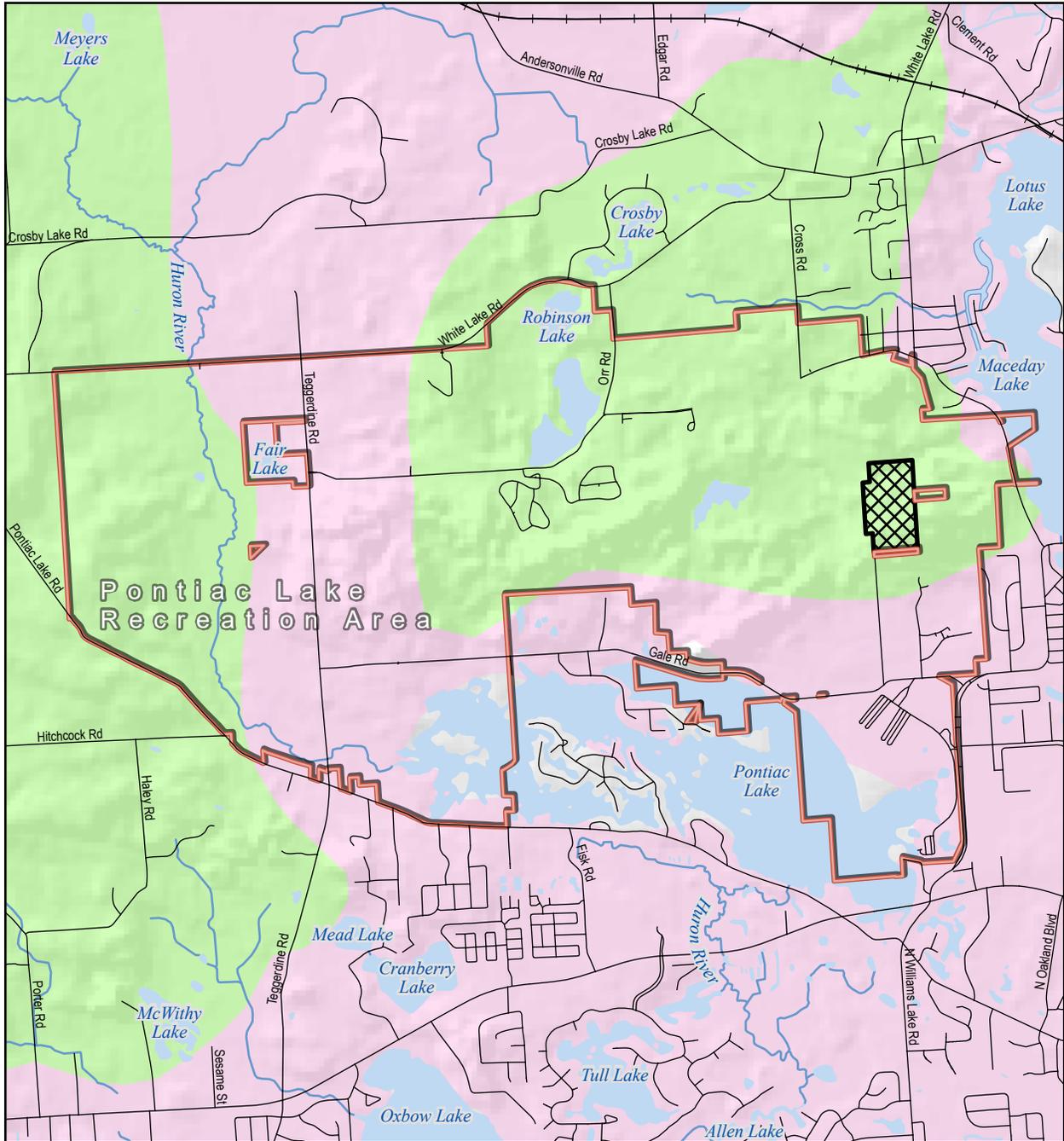


Pontiac Lake Recreation Area - Funding Sources

- | | | |
|--------------------------------|--|------------------------|
| State Recreation Area Boundary | Federal Land and Water Conservation Fund | Pittman/Robertson Fund |
| Closed to Public | General Fund/Game & Fish Fund | Recreation Bond Fund |
| Road | Michigan Natural Resources Trust Fund | Special Legislation |
| Railroad | Michigan Land Trust Fund | State Game Fund |
| River/Stream | Land Exchange | Tax Reverted Land |
| Lake/Pond | | |

Updated: 11/08/2019





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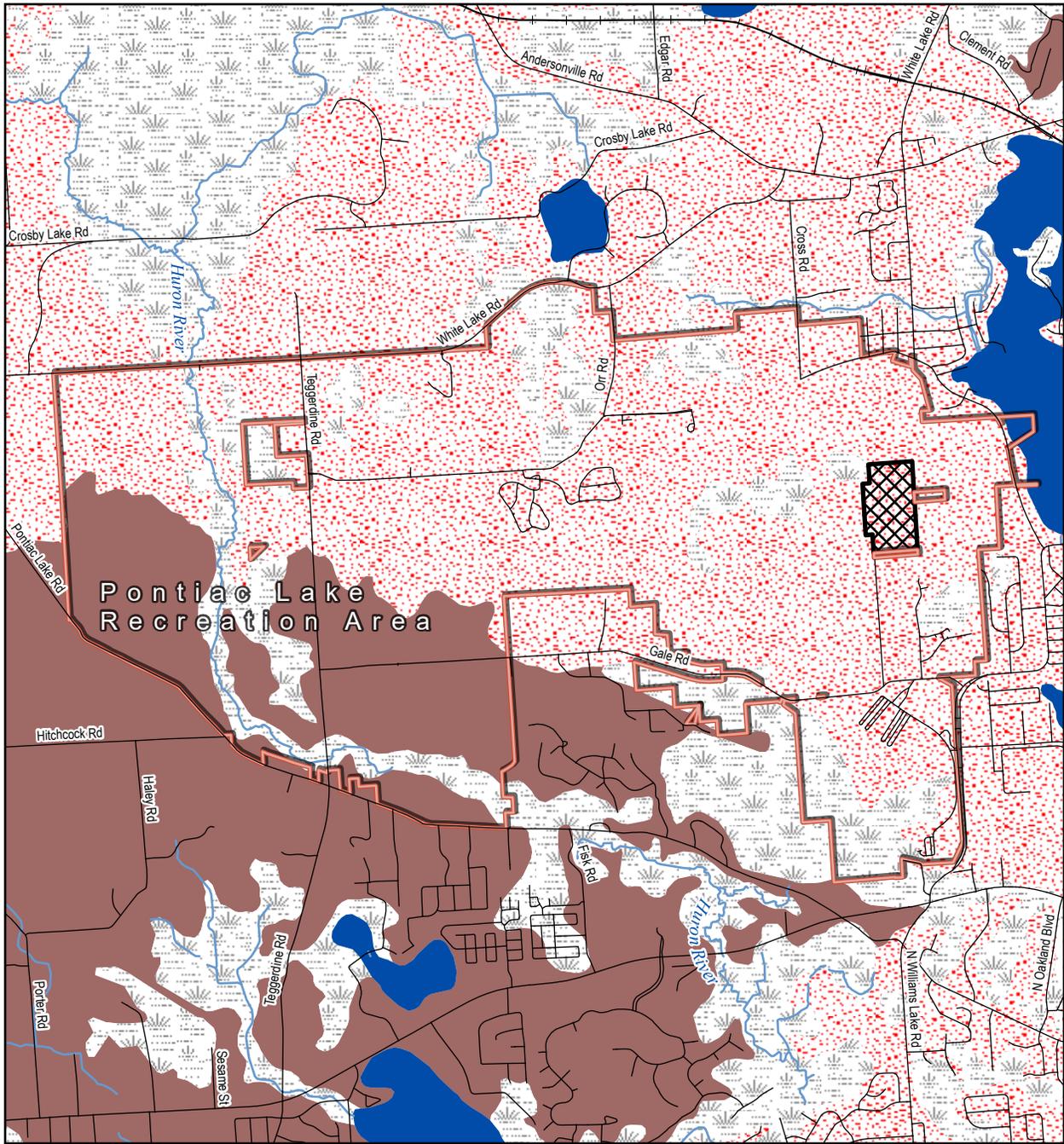
Pontiac Lake Recreation Area - Geology

- | | |
|--------------------------------|--|
| State Recreation Area Boundary | Lake/Pond |
| Closed to Public | Geomorphology* |
| Road | End Moraines of Coarse-Textured Till |
| Railroad | Glacial Outwash Sand and Gravel and Postglacial Alluvium |
| River/Stream | |



Updated: 11/08/2019

*Michigan Department of Environment, Great Lakes, and Energy Michigan Quaternary Geology



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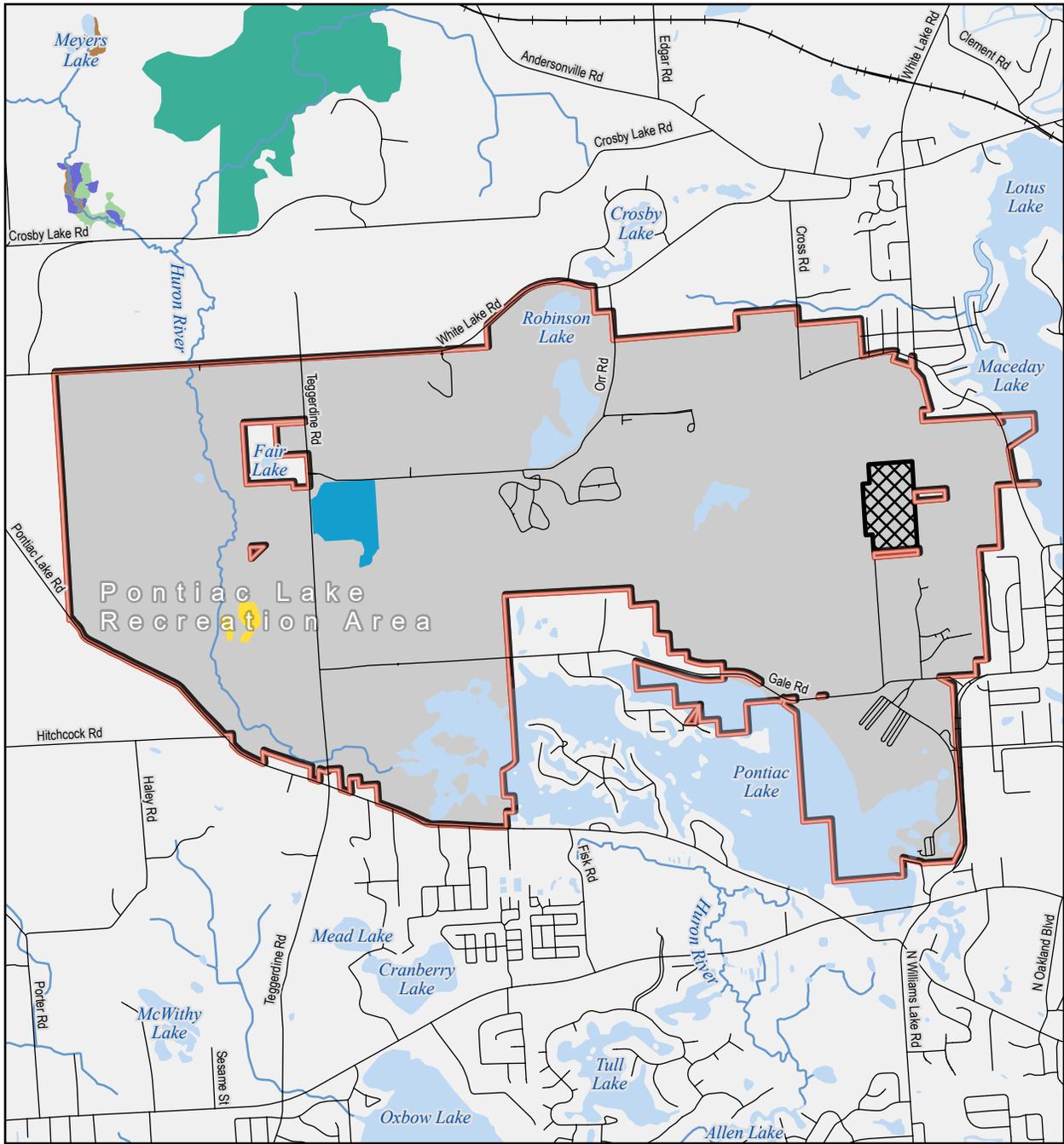
Pontiac Lake Recreation Area - Land Cover, 1800s

- | | | | |
|---|--------------------------------|---|------------------|
|  | State Recreation Area Boundary |  | Oak |
|  | Closed to Public |  | Oak/Pine Barrens |
|  | Road |  | Wetland |
|  | Railroad |  | Water |
|  | River/Stream | | |



Updated: 11/08/2019

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



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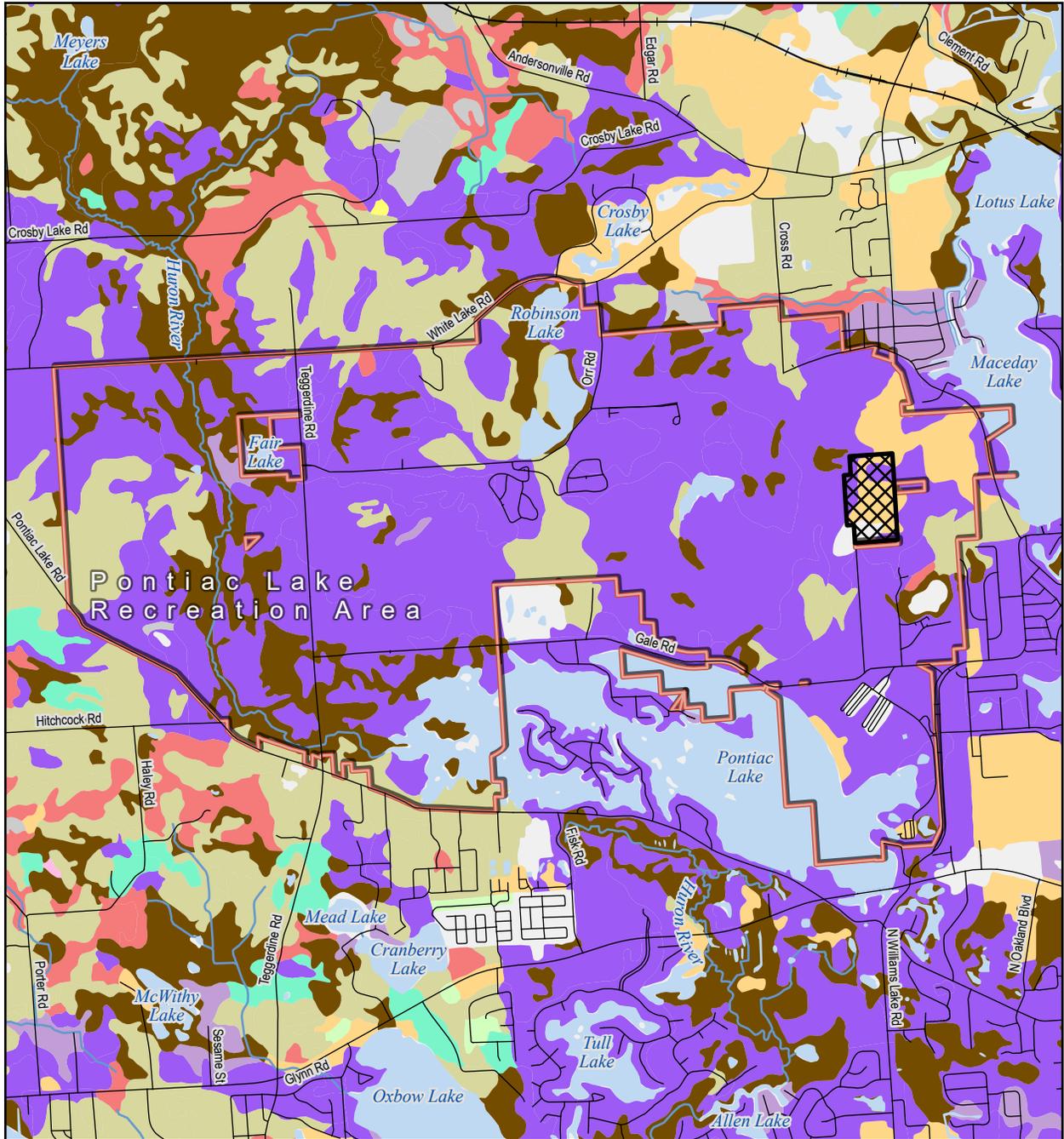


Pontiac Lake Recreation Area - Natural Communities

- | | |
|--------------------------------|-----------------------------|
| State Recreation Area Boundary | Natural Communities* |
| Closed to Public | Dry-mesic Southern Forest |
| Road | Mesic Southern Forest |
| Railroad | Prairie Fen |
| River/Stream | Southern Hardwood Swamp |
| Lake/Pond | Southern Wet Meadow |
| | Wet-mesic Prairie |



Updated: 11/08/2019
 *Natural Communities of Michigan (Michigan Natural Features Inventory)



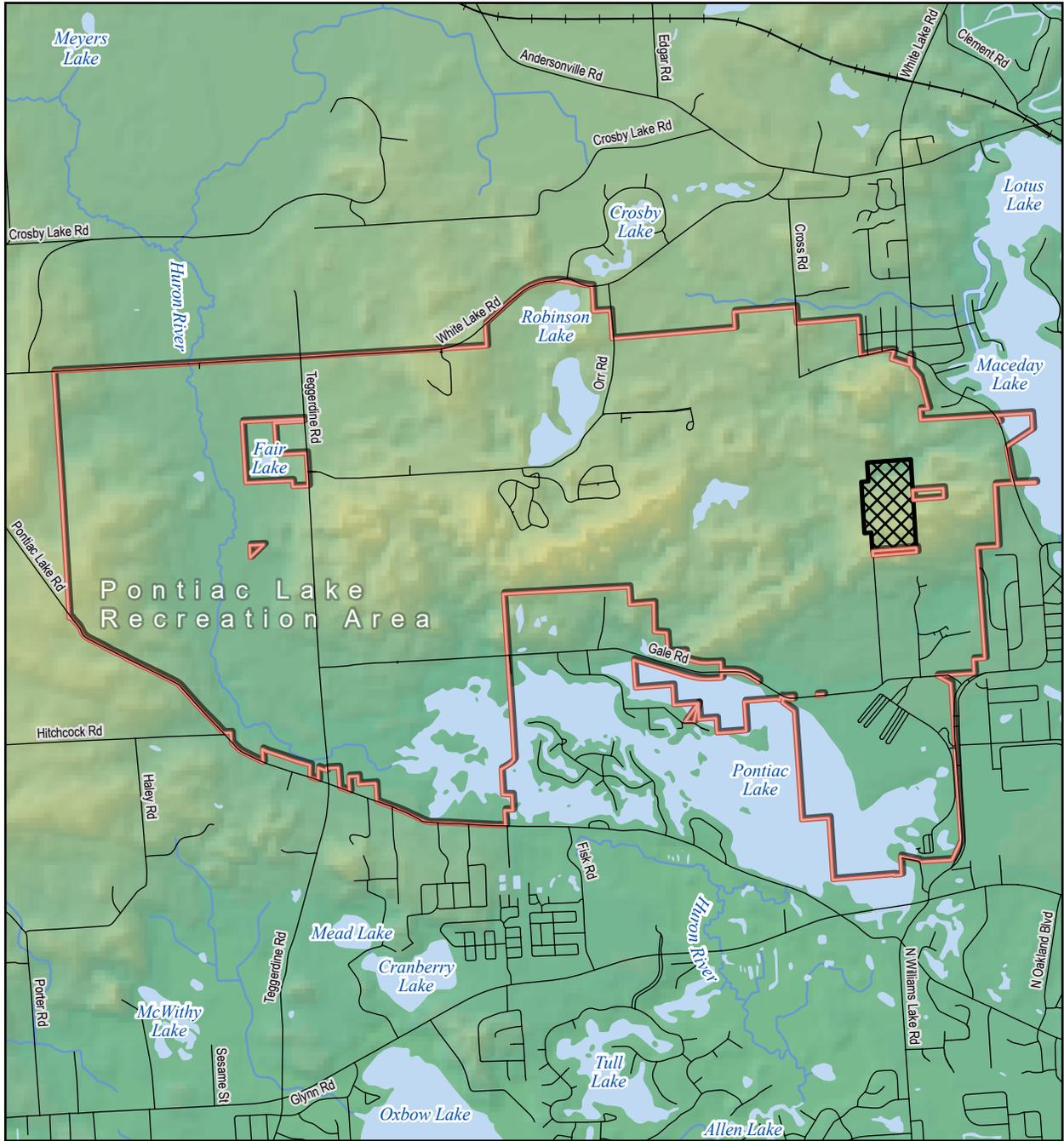
MICHIGAN DEPARTMENT OF NATURAL RESOURCES
Pontiac Lake Recreation Area - Soils



- | | | |
|--------------------------------|---------------------|-----------------|
| State Recreation Area Boundary | Soils* | Fine sandy loam |
| Closed to Public | Sand | Sandy clay loam |
| Road | Fine sand | Loam |
| Railroad | Loamy sand | Silty clay loam |
| River/Stream | Loamy fine sand | Muck |
| Lake/Pond | Gravelly sandy loam | |
| | Sandy loam | |

Updated: 11/08/2019
 *Natural Resource Conservation Service (NRCS) Map Sheets, Soil Survey Geographic (SSURGO) Database, 2000





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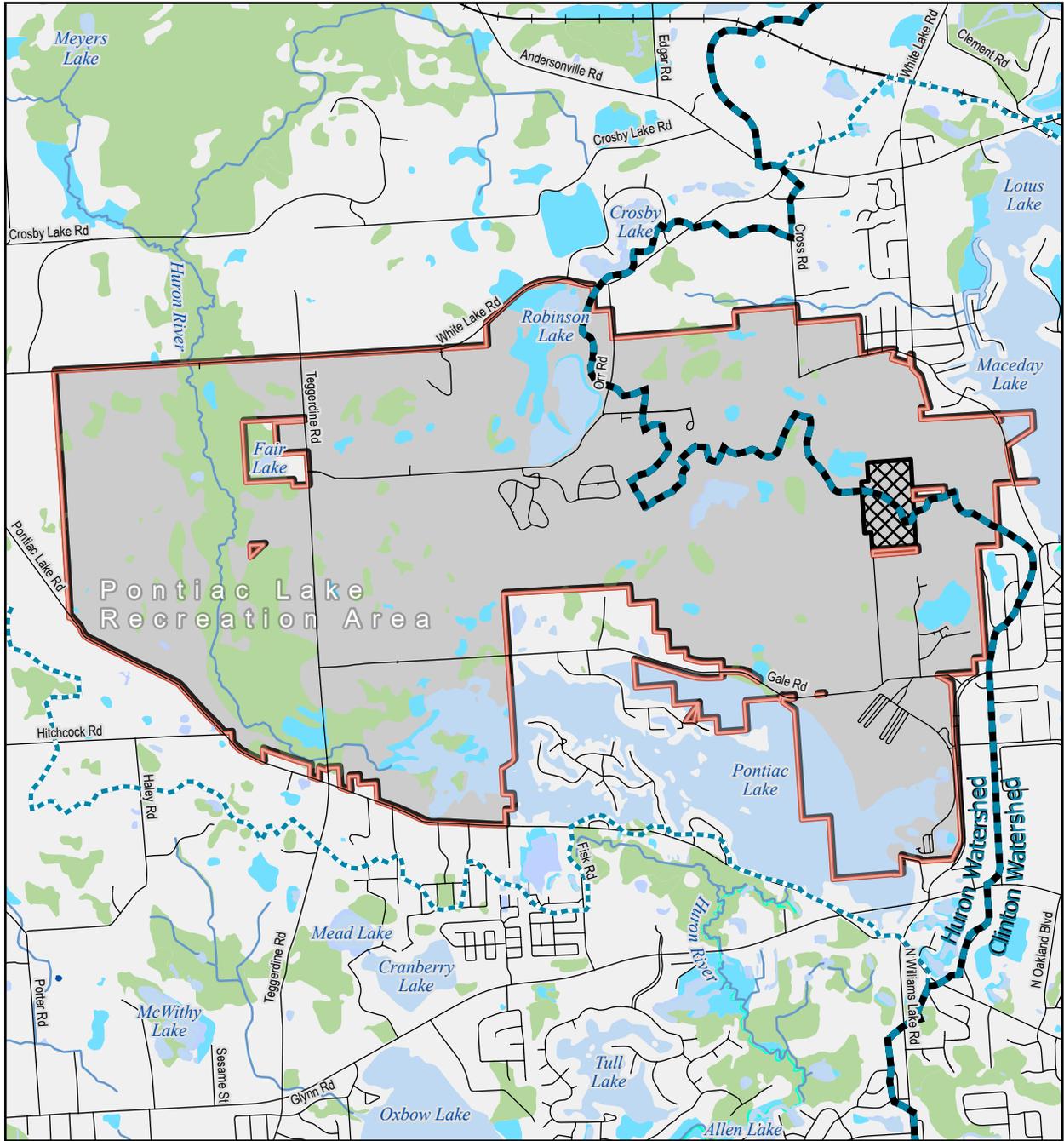
Pontiac Lake Recreation Area - Elevation

- | | |
|--|---|
|  State Recreation Area Boundary |  Lake/Pond |
|  Closed to Public | Elevation (feet) |
|  Road |  687 |
|  Railroad |  |
|  River/Stream |  142 |



Updated: 11/08/2019

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



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Pontiac Lake Recreation Area - Water Resources

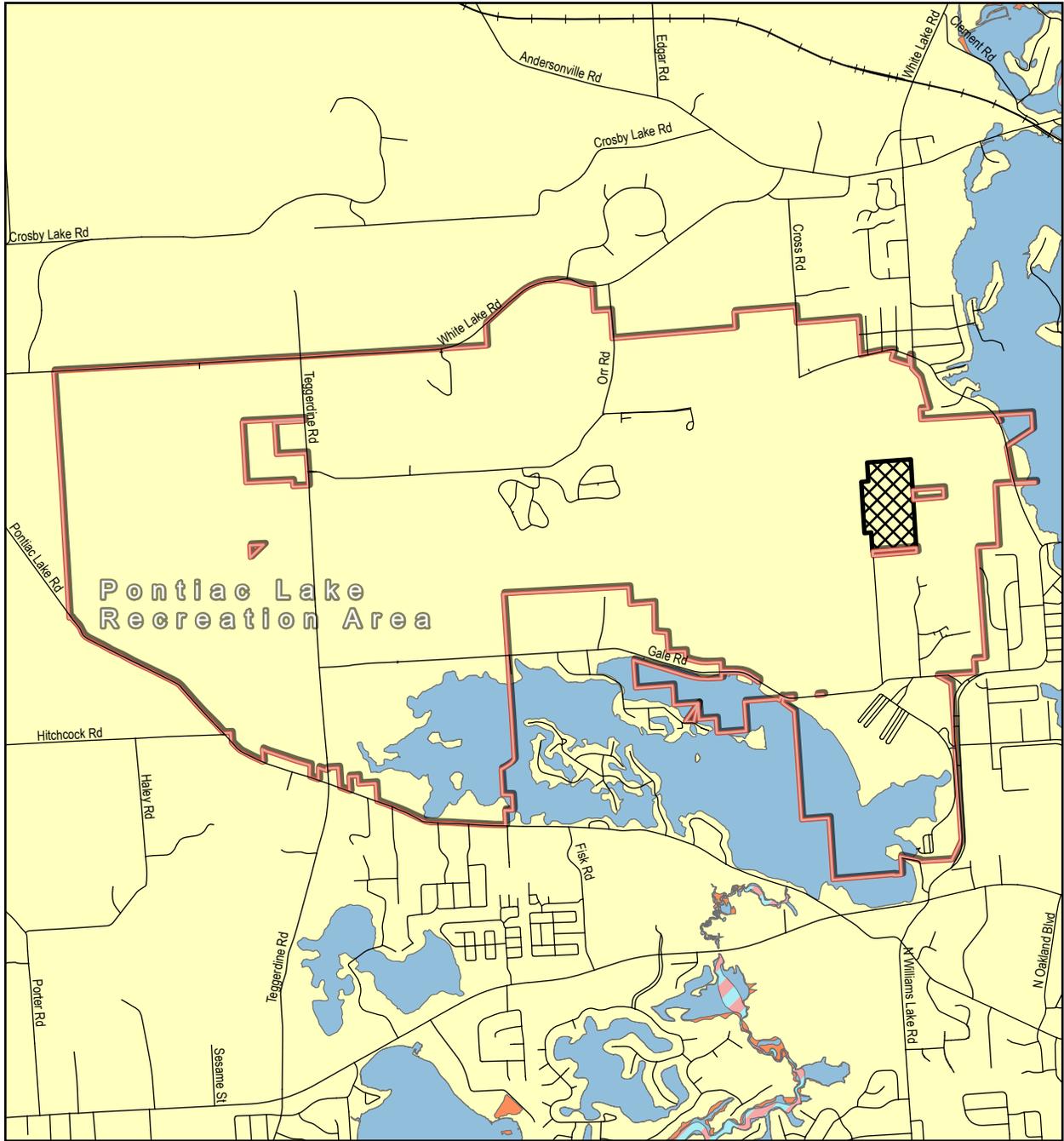
- | | | |
|--------------------------------|-----------------------------|------------------------------------|
| State Recreation Area Boundary | Lake/Pond | Freshwater Forested/ Shrub Wetland |
| Closed to Public | Major Watershed* | Freshwater Pond |
| Road | Subwatershed* | Riverine |
| Railroad | Wetlands** | Other |
| River/Stream | Freshwater Emergent Wetland | |



Updated: 11/08/2019

*Michigan Department of Environment, Great Lakes, and Energy watershed boundaries

**The National Wetlands Inventory (NWI) dataset (2012)



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Pontiac Lake Recreation Area - Flood Elevation

- | | |
|--------------------------------|---|
| State Recreation Area Boundary | Flood Elevation* |
| Closed to Public | 1-percent-annual-chance Flood Hazard Area |
| Road | 0.2-percent-annual-chance Flood Hazard Area |
| Railroad | Floodway |
| | Area of Minimal Flood Hazard |



Updated: 11/08/2019

*Federal Emergency Management Agency National Flood Hazard Layer

APPENDIX E – CAPITAL OUTLAY PROJECTS OPINION OF PROBABLE COST

October 23, 2019

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). One-time appropriations from the state General Fund may also be earmarked for specific needs but are not guaranteed. The annual capital outlay budget for state parks varies significantly from year to year, as illustrated by the table below. The state park system is 100 years old and much of the infrastructure is aging. Identified infrastructure needs across the state park system (excluding Belle Isle Park, trail infrastructure, and state waterways infrastructure) is currently estimated to be over \$273 million.

Fiscal Year	Total Annual Capital Outlay Project Budget**	Identified Infrastructure Needs
FY19	\$ 18,925,000	\$ 273,498,836
FY18	\$ 14,520,000	\$ 264,089,912
FY17	\$ 10,400,000	\$ 285,513,487
FY16	\$ 8,661,000	\$ 312,594,557
FY15	\$ 6,051,500	\$ 303,808,685

***Capital Outlay funds dedicated to funding state park projects; excluding funds for Belle Isle Park, major emergency repairs, District Major Maintenance Projects, etc.*

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.

Estimated Cost of Proposed Developments

The following table provides an estimate of probable cost for each capital outlay development project proposed at Pontiac Lake Recreation Area over the next ten years. Management and operations actions and small projects, which are funded out of district or park funds, 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 2019 prices and should be adjusted according to the consumer price index and the market at the time of implementation.

The following action goals 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, however the costs listed below do not guarantee funding and will likely be effected by the COVID-19 crisis. 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 & DEVELOPMENT: CAPITAL OUTLAY		
Action Goals	Priority	Opinion of Probable Costs*
Design and Construction – Replace day-use restrooms exploring options for concession and accessibility between parking lot and beach	1	\$550,000
Design and Construction – Electrical improvement to 50-amp service in modern campground	1	\$800,000
Design and Construction – Improve dump station to accommodate current capacity	2	2,250,000
Design - Reconstruct or resurface park roads and parking lots	2	\$500,000
Design and Construction - Replace 2 modern campground toilet/shower buildings	3	\$1,600,000
Design and Construction – Replace contact station with accessible structure	3	\$450,000
Design and Construction – Expand Teggerdine Road parking lot	3	\$75,000
**TOTAL OPINION OF PROBABLE COSTS (10 YEARS)		\$6,225,000

**Does not guarantee funding.*

***Excludes costs yet to be identified by studies to determine best way to proceed and costs associated with projects that are already funded.*