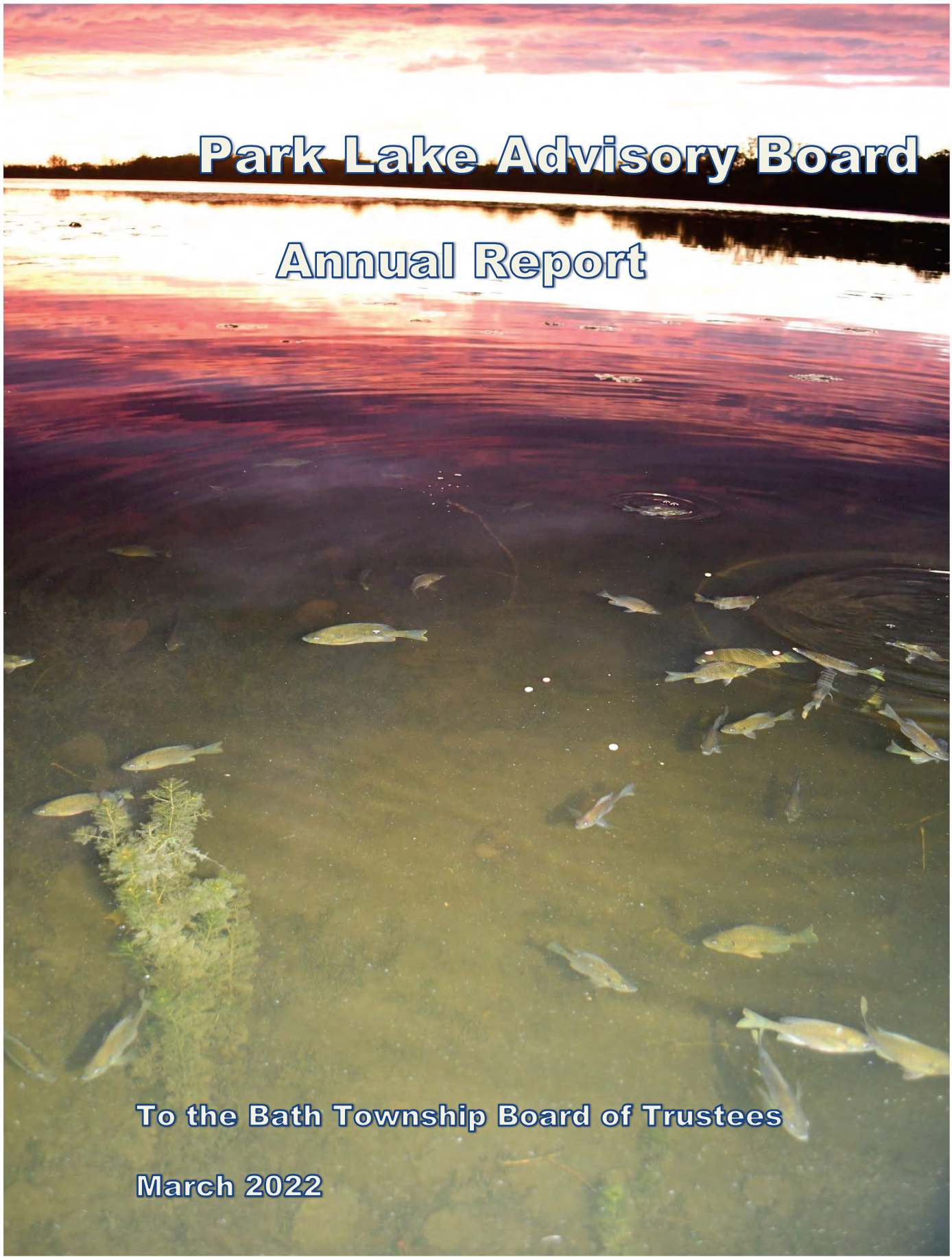

Park Lake Advisory Board
Annual Report
To the Bath Township Board of Trustees
March 2022

Table of Contents

Executive Summary and Accomplishments 2021

The mission of the Park Lake Advisory Board is to advise the township on how best to preserve the natural integrity of Park Lake and the surrounding area to benefit the people and wildlife using the lake. Our vision is that we will apply modern conservation techniques to the entire watershed/ecosystem to improve environmental conditions, wildlife habitat and recreational resources. The COVID pandemic has had some effect on our regularly scheduled meetings, but nonetheless we met our primary goals for the year. Some of the major accomplishments and issues identified during 2021 include:

- The Mid-Michigan District Health Department began monitoring the beach for E. coli, and unfortunately levels were high enough to trigger a closure of the beach for much of the summer. The likely source of the E. coli is the geese using the beach. The Park Lake Advisory Board and the Friends of Park Lake are looking into potential ways of alleviating this problem, and the Bath Township Board of Trustees approved funds to help manage the goose problem
- The board continued to monitor the weed problem on Park Lake. The lake has been treated to varying degrees and with different herbicides for the past several years, leading to substantial variation in the amount of weed cover each year. The lake was treated with a new herbicide (ProcellaCOR ®) for the past three years with varying success. Plant survey of the lake each year showed near elimination of Eurasian water milfoil by August, and as such, we recommend continuing with this program of treatment.
- In cooperation with Friends of Park Lake, participated in the Michigan Cooperative Lake Monitoring Program to sample water quality parameters and to map aquatic vegetation in the lake. Detailed results of this sampling are provided in appendices to this report.
- Continued to collaborate with the Parks and Recreation Committee and Friends of Park Lake to develop a plan for a nature trail near Park Lake to enhance recreational opportunities around the lake. Funds for this project were approved to start in 2022.
- Continued to monitor the lake level with respect to the optimal operation of the water control structure.
- Our observations on boating use of the lake indicate the high value Park Lake provides to the community as an important recreational outlet, particularly in these stressful times.
- Members of the Park Lake Advisory Board and the Friends of Park Lake met with township leadership and with residents concerned about the excessive muck that is filling in the lake, particularly on the western side. Short of dredging, no solutions could be offered at the present time, but the Board will continue discussions on options for managing this problem.
- A new biologist (Addie Dutton) with the Fisheries Division of the DNR has been hired for our region, and the chair met virtually with her to discuss the state of the fishery in Park Lake and potential management options. For the time being, stocking channel catfish to help reduce the population of stunted panfish appears to be the best option.

The minutes of our meetings are available on the township website. Within this report, we provide a copy of the initial action/future item lists for January 2021 and January 2022 to provide insight into activities that took place over the course of 2021 and plans for 2022.

Recognition of Township, County and Community Activities in the Park Lake Area

- The Bath Public Works Department (as well as dedicated citizens!) continued the clean-up and removal of vegetation from public areas and continued maintenance of the beach area.
- In 2021 the Friends of Park Lake contributed funds to install a boat cleaning station on the lake. The Friends of Park Lake also organized over 25 volunteers to plant 100+ white spruce trees to provide a sound barrier from I69. This was a cooperative effort between FOPL, MDOT and the township, and brings the collective total to over 200 trees planted. The FPOL also placed a boat cleaning station at the boat launch, and has worked toward monitoring the usage of the cleaning station. The annual Summer Solstice Festival was not held due to COVID restrictions so it was scaled back, and re-scheduled as a Summer Fun Day. The FOPL hosted Sheila Moore with the Mid-Michigan District Health Department to discuss the E. coli problem at the beach and potential solutions.
- The Friends of Park also played a key role in getting $50,000 funding approved for the proposed nature trail around Park Lake.
- The Friends of Park Lake is a member of the MiCorps Cooperative Lakes Monitoring Program (CLMP), and in conjunction with the Park Lake Advisory Board, monitored the lake for water clarity, and aquatic plant coverage. This program provides a mechanism for educating and training people in scientific methods for lake sampling and assessment. A few new individuals have become involved, and the Friends of Park Lake and the Park Lake Advisory Board are hoping to increase this number over time.
- The Friends of Park Lake and the Ingham Conservation District worked together as part of the Mid-Michigan Cooperative Invasive Species Management Area (CISMA) across Ingham, Clinton, Eaton and Ionia Counties. The CISMA has focused on strategic management through education, prevention, early detection, rapid response, and control of terrestrial and aquatic species across jurisdictional lines.

Aquatic Plant Management

As in past years, the reduction in the abundance of aquatic plants remains a major concern for the management of Park Lake. In addition to exotic species such as Eurasian watermilfoil (*Myriophyllum spicatum*), curly-leaf pondweed (*Potamogeton crispus*) and starry stonewort (Nitellopsis obtuse), excessive growth of native species such as eelgrass or wild celery (*Vallisneria americana*), water lilies (*Nymphaea sp.* and *Nuphar sp.*) and most recently *Elodea* is problematic. Steve Hanson with PLM Lake & Land Management Corp. provided lake and aquatic plant management services in 2021, and their activities are summarized below. Lake residents often have questions about permit requirements for managing aquatic and emergent plants on their property. The Michigan DEQ oversees such permits, and provides the following web resources to help answer questions for residents:

http://www.michigan.gov/deq/0,4561,7-135-3313_3681_28734-161112--,00.html
https://www.michigan.gov/documents/deq/wrd-anc-faq_565051_7.pdf

Due to the increase of Eurasian watermilfoil over the past few years, a whole lake treatment for milfoil was implemented using Fluridone in 2016, and no Eurasian watermilfoil was found during the August 2016 survey. Eurasian watermilfoil distribution was limited in 2017, allowing for a reduction in the amount of herbicide application. Although Eurasian watermilfoil rebounded greatly in 2018 (see appendix D), treatments were limited due to the timing of its resurgence. Select portions of the lake were treated in 2019-2021with a new herbicide (ProcellaCOR®) that has proven to be selective for treating Eurasian watermilfoil, and importantly, has a 3-year guarantee for areas treated (with some limiting conditions). Results of the plant surveys in 2019 and 2020 indicate that the ProcellaCOR treatment was more effective than anticipated, with Eurasian watermilfoil being found at less than 5% of sites examined. A resurgence was observed in 2021, and the supplier of ProcellaCOR provided for warrantee work at 6 acres in the lake. It should be noted that even with highly effective treatments, there is often some amount of residual plants in the lake as well as seeds in the sediments that can serve as a source of regrowth. Although starry stonewort has been widespread in Park Lake since 2018, it did not appear to grow high enough in the water column to impact boating or swimming and as such has not recently been a target for treatment.

Results of plant sampling for 2021 are presented in Appendix D. Among the non-native species, Eurasian water milfoil increased to some extent, being found at 29% of sites sampled. Steve Hanson of PLM indicated that he too found somewhat higher levels of Eurasian water milfoil than expected, including areas that were treated with ProCellCor, which has a 3-year warranty. Representatives of the manufacturer visited the lake, and based on their observations, they honored the warranty for areas treated. Prevalence of starry stonewort was somewhat higher than 2020, with approximately 80% of sites being occupied. Spiny naiad was found in 4% of sites in the 2021 survey, but has never been abundant in the lake and is unlikely to become problematic. Curly-leaf pondweed was found during our 2019 survey but was not seen in the 2020 or 2021 survey. Observations during the spring indicated substantial growth of this species in localized patches and warrants closer observation in upcoming years. The prevalence of native plants such as pond weeds (*Potamogeton* and *Najas*) and native milfoil generally remained at similar levels as seen in 2019. An exception

was the native plant *Elodea* which showed a tremendous increase in prevalence – from 4% in 2018 to 19% in 2019 to 57% in 2020, and reaching 80% in 2021. The cause of this rapid increase is unknown, but is potentially due to the opening of space caused by the diminished abundance of Eurasian watermilfoil. Although *Elodea* is a native plant, its lush growth form can be a serious impediment to boating.

Management activities conducted during the 2021 season by PLM included water quality monitoring (sampled on April 22nd and September 16th), vegetation surveys (conducted in May and September) and herbicide treatments. Results of the water quality and vegetation surveys are provided in Appendix S. The first treatment was conducted on June 3rd. This treatment encompassed 6 acres of previously untreated area of Eurasian watermilfoil in general areas of the lake and 6 acres of no-cost retreat areas using ProcellaCOR. Shoreline residential areas for residents who requested individual treatments using a more broad spectrum herbicide were also treated at this time. Results of the ProcellaCOR treatment were good as there has been a significant decline in Eurasian watermilfoil lake-wide over the past three seasons. As a result, native plant species have increased, most notably Elodea. A second treatment took place only in the requested residential areas on July 14th. These treatments have been reasonably successful at maintaining an open waterfront for lake access. PLM plans to continue with this additional treatment service during the 2022 season.

The management plan for 2022 includes possible ProcellaCOR treatments for remaining Eurasian watermilfoil as determined by an early summer vegetation survey. Water quality monitoring and vegetation surveys will continue to monitor the success of the management program.

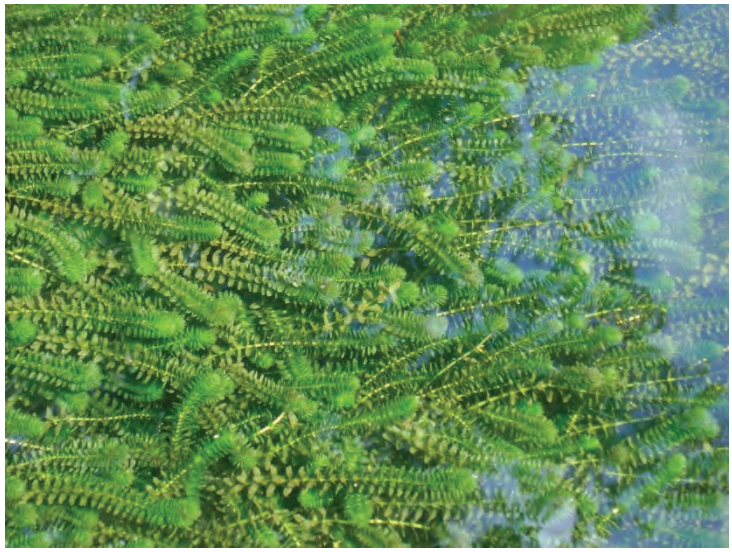


Image of Elodea, a native plant that has grown tremendously in Park Lake. Image courtesy of Wiki Commons.

Background to the Park Lake Advisory Board

The Park Lake Improvement League actively pursued the care of Park Lake during the 1940's, 1950's and 1960's, operating under the guidance of the Bath Township Board of Trustees. Many projects were successfully undertaken, the most important of which was the excavation of the canals around Oak Island, the construction of dikes and a water control device, occurring in 1947. The Clinton County Court first set the lake level at 846.25 feet above sea level on December 4, 1947; the level was later recommended to 845 feet above sea level by the Michigan Conservation Department. During 2012, the Clinton County Drain Commissioner petitioned the Clinton County Circuit court to reinstate the legal lake level at 845.2 feet above sea level (NAVD88 datum; note that previous lake levels were based on earlier surveying standards, so don't exactly match the reference points currently used), and the Court rendered a judgment in agreement. Subsequent to that judgment, a new lake level control structure was installed and became operational in July of 2014.

The Park Lake Advisory Board (PLAB) was formally established in December of 2003 with membership by appointment of the Township Supervisor. The Park Lake Advisory Board operates using a set procedure that includes regularly scheduled meetings, a standard agenda and published minutes. Regular meetings are scheduled for the third Wednesday of each month and are held in the Township Hall or virtually during the recent COVID pandemic. The PLAB has established a mission statement with supporting goals, and a vision statement outlining the philosophy under which the PLAB operates. The board maintains an Action Item list to clearly identify upcoming tasks as well as the advisory board member(s) responsible for updates. This list is reviewed monthly to ensure that progress on important activities is completed in a timely fashion. The board has also developed a Future Item list to provide guidance on issues that are important, but that the Board cannot or feels should not be acted upon in the near term. An Annual Report is submitted to the Township Board of Trustees.

Proposed Goals and Objectives for Park Lake Management

Primary goals

To maximize the recreational and quality of life benefits that Park Lake provides to lakeshore and township residents, as well as the general public, while maintaining the lake's ability to support a diversity of wildlife and plants. To work with Friends of Park Lake and other groups to inform, educate, and involve the public toward the betterment of the lake, and to instill a sense of community with Park Lake at its core.

Brief background relevant to goals

There are approximately 120 lakeshore properties in addition to township and county lands that make up about 50% of the lakeshore. The lake provides opportunities for swimming, boating, fishing, and hunting in addition to the aesthetic qualities of the lake. Use of the lake by various user groups contributes to the economy of the township in addition to the increased property values for lakeshore owners. The primary impairments to these benefits

include (1) excessive weed growth; (2) accumulation of organic sediments; and (3) lack of a water control structure to maintain water depth. The lake hosts a wide variety of plants and wildlife, and the natural habitats provided on township property helps greatly to maintain this biodiversity.

Vision statement

The vision for Park Lake is to maximize the recreational and quality of life benefits that the lake provides to lakeshore and township residents, as well as the general public, while maintaining the lake's ability to support a diversity of wildlife and plants. To work with Friends of Park Lake and other groups to inform, educate, and involve the public toward the betterment of the lake, and to instill a sense of community with Park Lake at its core. The management of the lake will take an ecologically sound approach to rehabilitate the lake from the deleterious effects of human-caused eutrophication in order to enhance the use of the lake.

Impediments

Although all lakes naturally fill in over time, Park Lake has suffered from human impacts that have greatly accelerated these natural processes. Because of this, many of the beneficial uses of the lake (e.g., boating, swimming, fishing, hunting, scenic beauty) have been impaired by excessive plant growth and sedimentation of the lake. In addition to this, invasive plants such as Eurasian watermilfoil, starry stonewort, purple loosestrife, and Phragmites threaten both human uses as well as the ecological health of the lake and the surrounding riparian zone. The following objectives are intended to address these impediments and rehabilitate the lake.

Background and Objectives

Boating

Park Lake has a public boat launch maintained by the township, providing free access to the lake for lakeshore residents, township residents, as well as the general public. The boat launch does not have a boat wash station, and it has been observed that boats arriving and departing Park Lake sometimes carry invasive weeds. Many private residences have boat docks, but variation in water level sometimes limits the size of boats that can be launched or docked on the lake. Excessive weed growth also limits areas of the lake accessible to motor boats, and in some areas, even limits accessibility to canoes and kayaks. The shallow nature and modest size of Park Lake make it generally unsuitable as an "all sports lake", and our qualitative observations suggest that canoe and kayak use of the lake have increased substantially without apparent conflicts with fishing boats.

a. Maintain boat launch for "small" watercraft by keeping suitable water depth via lake level control structure, dredging in the area (if necessary), and reducing weed abundance near the boat launch so as to not be an impediment.

b. Reduce weed abundance along the inhabited shoreline to provide lakeshore owners the ability to access the lake by boat.

c. Maintain overall weed levels to a point where boating is feasible (during normal water levels) for the majority (i.e., >50%) of the lake.

d. Advertise Park Lake as a desirable destination for canoeing and kayaking (e.g., at the Quiet Water Symposium).

e. Monitor boat usage, and if problems appear, draft an ordinance (as allowed by DNR) to limit boat speed or horsepower in order to promote safe use of the lake by all users. Work with the Township, Sheriff and DNR to encourage enforcement of existing regulations.

f. Collaborate with Friends of Park Lake to explore the feasibility of installing a boat wash station to minimize transfer of invasive species into and out of Park Lake

Fishing

Park Lake supports a diverse warm-water fishery, with anglers targeting bluegill, pumpkinseed, black crappie, largemouth bass, northern pike, yellow perch, and channel catfish. Discussions with anglers suggest that catch rates are modest, as is the size structure of the catch. Anecdotal information indicates that some competitive anglers use Park Lake for "practice fishing" for largemouth bass, and in recent years the township has hosted an ice-fishing derby. Fish populations in the lake are all self-sustaining, with the exception of channel catfish which are stocked every other year by the Michigan DNR. The most recent stocking was on June 23, 2021 when 3,700 juvenile channel catfish were stocked. Common carp occur in the lake, but do not appear to be causing any problems with water quality or with the fishery for other species, and in fact have recently supported a bow fishery. In 2010 the township installed a fishing dock near the public beach to provide access for anglers without boats. This dock is used extensively, providing a substantial benefit to anglers without boat access.

a. Direct fishery management actions are outside of the purview of the township, but we support the continued stocking of channel catfish to provide a fishery, as well as the benefits they provide in maintaining the size-structure of panfish.

b. Maintain spawning habitat quality; avoid potential impediments to fish reproduction such as applying weed treatments directly on spawning grounds or manipulating water levels during spawning periods.

c. Work with the Park and Recreation department to maximize the benefits accruing from the fishing dock maintained by the township.

Swimming

Park Lake has a public swimming beach maintained by the township. Access to the beach is free, but no lifeguards are present, and the public is allowed to swim at their own risk. Until 2021, the water by the beach was not regularly tested for coliform bacteria or other indicators of water quality impairment with regards to swimming. The beach is sand, but the shoreline sometimes has problems with excessive goose excrement. The swimming area is relatively

narrow, and is being encroached by weed growth and organic sediment deposition. The remainder of the lake is generally too weedy and soft-bottomed to provide a high-quality swimming experience.

In 2021, the Mid-Michigan District Health Department began monitoring the beach for E. coli, and unfortunately levels were high enough to trigger a closure of the beach for much of the summer. The likely source of the E. coli is the geese using the beach. The Park Lake Advisory Board and the Friends of Park Lake are looking into potential ways of alleviating this problem, and the Bath Township Board of Trustees approved funds to help manage the goose problem.

a. Minimize weed growth in the vicinity of the beach to maintain the quality of the swimming area. Continue to import sand as needed to maintain the beach.

b. Determine if it is possible and cost-effective to extend the depth of the sand bottomed beach area to reach a depth of at least 4.5 feet (under normal lake levels).

c. Deter waterfowl use of the beach area to the point where the beach quality is acceptable to most beach users.

d. Test water on an annual basis for coliform bacteria or other indicators of the suitability of lake water for swimming.

Lake aesthetic quality

The natural habitats present along the south and much of the western shoreline provides a highly desirable lake experience for many lakeshore owners. However, excessive plant growth in some areas limits the visual appeal and accessibility of the lake for some owners. Water clarity in the lake currently averages approximately 10 feet as measured by a Secchi disk. This level of water clarity is generally viewed as being of high quality for lakes in this region. The soft-textured organic sediments that are prevalent along much of the shoreline diminish the aesthetic quality of the lake. In 2018, Jennifer Jermalowicz-Jones of Restorative Lake Sciences will conduct a study to determine the feasibility of using aeration to combat this problem.

The lake level control structure that was installed in 2014 has increased the average lake level by 1 to 2 feet for much of the year and has expanded the area of the lake. Some lakefront property owners are temporarily experiencing problems with erosion due to the water level returning to a height that it has not been at for many years but was historically. We anticipate that this erosion will diminish as the lakeshore plants adjust to the higher water level and develop new root systems.

Since 2016 the Bath Township Parks and Recreation Committee and the Park Lake Advisory Board has worked on evaluating potential opportunities to provide public access and recreational opportunities on existing township owned properties on the south side of Park Lake. These discussion resulted in the development of a prospectus for creating a non-motorized trail. Public support and input was gathered through a public meeting in May of 2019, and CIP proposals for funding trail development were submitted following this meeting. The goal of trail development is to create a quality recreation experience that also provide an opportunity to educate the residents of the township of the value of the wetlands to Park Lake and on the diverse communities of plants, fish and wildlife occupy this relatively undeveloped area adjacent to the lake.

Objectives for Lake aesthetic quality:

a. Continue to monitor water levels in the lake to determine if the lake water control structure is holding water levels as desired.

b. Maintain natural shoreline along township and county-owned property.

c. Cooperate with the Parks and Recreation Committee to develop plans for Park Lake Preserve.

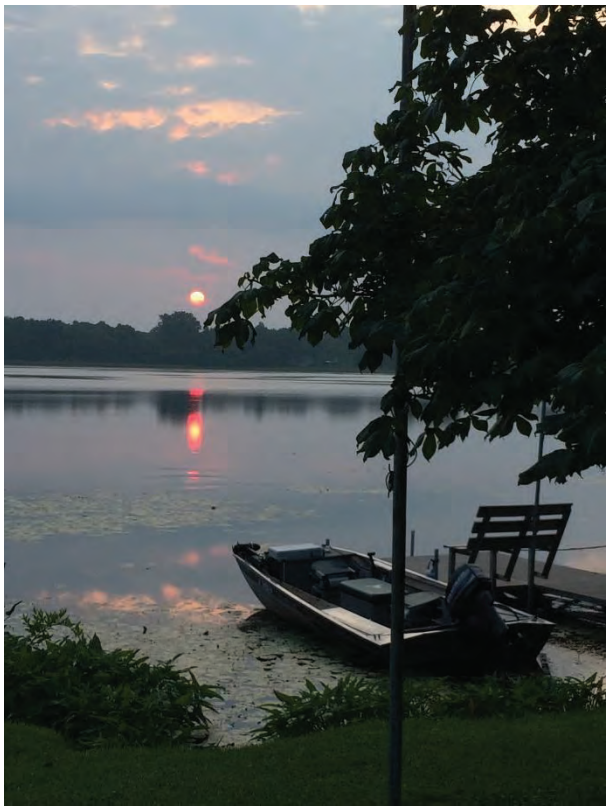
d. Management of weed abundance to allow for boating will likely maintain aesthetic quality; explore alternative weed control methods.

e. Maintain water clarity to average between 6 and 12 feet Secchi disk measurement. Monitoring of water clarity via Secchi disk, and monitoring water phosphorus (which is the major nutrient driving algae growth) is encouraged.

f. Sample lake sediments to determine if contaminants in the sediment are at levels that would impair the biological functioning of Park Lake, or if the sediments are contaminated at a level that would forestall dredging options.

g. Explore methods for conversion or removal of excessive near-shore organic sediments to a more sand or gravel texture.

h. Reduce cattail density along township land to improve “viewscape” provided by the lake.



Plant diversity

The shoreline of Park Lake is currently dominated by native plant species, such as cattails, swamp loosestrife, and arrow arum among others. There are also riparian wetlands that contain species such as sundew, pitcher plant, ferns and mosses. Mixed in with these native species are a number of non-native plants, with purple loosestrife and common reed (Phragmites) having a high potential for being invasive. Within the lake itself, sampling over time indicates that over 90% of the lake is less than 10 feet deep and sustains heavy aquatic plant growth. Although many of the dominant species are native plants (e.g., *Chara*, pondweeds, water lilies), there is also a preponderance of non-native plants (e.g., Eurasian watermilfoil, starry stonewort). The prevalence of these species varies greatly from year to year, depending on treatment as well as responding to natural variation in lake conditions.

Objectives for the aquatic plant community include:

a. Maintain a balance of areas where plant growth is suppressed to allow for human uses with areas where native plant growth is unimpeded. Initial targets for this balance are to have a minimum of 50% of the lake where boating can be conducted unimpeded during normal water levels.

b. Continue monitoring plant distribution, focusing on potentially problematic species, particularly *Phragmites*, Eurasian watermilfoil, starry stonewort, curly-leaf pondweed and purple loosestrife.

c. Work with Friends of Park Lake to raise public awareness of invasive plant species, and benefits of native plant species.

Wildlife diversity

Park Lake supports a diverse fish community, with at least 19 species of fish caught in sampling conducted from 2011 through 2019 by students from MSU (Appendix H). No fishery survey was conducted in 2020 due to COVID restrictions. Bird usage of the lake, particularly by waterfowl, is also high; seeing hundreds to thousands of ducks and geese is common during spring and autumn migrations. There has also been documentation of successful nesting by Least Bittern, a state-listed threatened bird species, along the lake. In the wetland habitats adjacent to the lake, there is a variety of reptiles and amphibians. The increase in lake level due to the water control structure installed in 2014 is anticipated to increase the productivity of the lake riparian area. Observations by members of the Park Lake Advisory Board suggest that usage of the lake by waterfowl has increased. A visual survey of goose and swan nests readily visible from a kayak tour of the lake edge was conducted in April of 2019-2021. The length of the kayak track was approximately 2 ¾ miles each year. Interestingly, 9 active goose nests or broods were observed each year (Appendix O).

Objectives for wildlife include:

a. Maintain the quality of the lake and surrounding habitats to support the current levels of biodiversity seen on and near the lake.

b. Minimize negative impacts (e.g., nutrient input, coliform bacteria) of excessive goose population on the lake.

The excessive E. coli levels observed along the beach in 2021 triggered a beach closure for much of the summer. Recommended options for goose management were provided to the Township Board of Trustees, and are attached as an appendix to this document. Some web sites containing additional information about goose control and management are listed below. It is important to note that goose control outside of the legal hunting season requires special permits.

https://www.michigan.gov/dnr/0,4570,7-350-79136_79608_83071-137162--,00.html

https://www.michigan.gov/dnr/0,8817,7-350-79136_79608_83071_83072_83445_84979-232661--,00.html

https://www.michigan.gov/dnr/0,4570,7-350-79136_79608_97892---,00.html

https://www.michigan.gov/dnr/0,4570,7-350-79136_79608_83071_83072_83445---,00.html

https://www.michigan.gov/documents/dnr/canada_goose_info_circular_646731_7.pdf

DNR Nuisance Wildlife (click on Canada geese): https://www.michigan.gov/dnr/0,4570,7-350-79136_79608_97892---,00.html

Control techniques: https://www.michigan.gov/dnr/0,8817,7-350-79136_79608_83071_83072_83445---,00.html

A goose nest on top of a muskrat hut.

Outreach/education

Park Lake provides a wonderful opportunity to engage the community in learning about its natural resources and how to protect them. It has the potential to be a natural laboratory and can engage students and adult learners in the community. Opportunities exist to educate the general public about water quality, invasive species, natural history, and fish and wildlife species. With more community engagement it is likely that stewardship of the lake will become a community endeavor and initiatives for lake improvements will be easier to accomplish with more people invested in its natural history. We have not formalized our outreach and education plans as of yet, but we would like to start to build this component into our mission over time. Friends of Park Lake already perform some outreach and education activities, and we can partner with them to reach a broader audience. Other ideas include class room visits to the lake, learning labs and tours on the lake, and public seminars in the community. Outreach and education activities would complement the development of the Park Lake Preserve.

Grant opportunities

The current funding climate is such that grants to support management on individual lakes are becoming less common, and collaborative efforts are being supported.

a. Initiate discussions with nearby lakes facing similar problems to better position the township for grant applications, as well as general sharing of lake management information.

b. Collaborate with other Township entities to pool resources and explore opportunities that benefit multiple stakeholders within the Township.

Park Lake Advisory Board Action Item List Jan 2021

Action Item	Status
5-year plan for Lake Improvement	Ongoing review and revision.
Phragmites problem	Check in spring – Dan checked in 2020, and it appears that the Phragmites along the lake is under control. There were patches near the dike and Webster Road that will likely need treatment in 2021. Dan will contact the local CISMA.
Coliform bacteria testing	Will plan for July 2021.
Waterless boat cleaning station	Discuss this as an option.
Lake monitoring	Plans for 2021
Purple Loosestrife control	Purchase beetles for control, or work with Friends of Park Lake for purchase. Web site for order is: https://integratedweedcontrol.com/pricing/ Insects available in May, but not sure when need to order

Park Lake Advisory Board Action Item List Jan 2022

Action Item	Status
Phragmites problem	Dan will contact the local CISMA regarding treatment of plants near dike.
Coliform bacteria testing	Rely on Mid-Michigan Health Dept for testing.
Boat ramp paking area renovations	Waiting on start of discussions by BOT
Lake monitoring	Sampling has wrapped up for the year.
Purple Loosestrife control	Discuss need for 2022. Information from Shikha Singh Kieser and Associates. 536 E. Michigan Ave, Suite 300, Kalamazoo, MI 49007 Estimate 300-500 beetles per pot for $180 http://www.kieser-associates.com/
Explore grants	
Work to develop informational brochures	
Goose Management	Work with BOT to develop action plan.

Park Lake Advisory Board Future Item List Jan 2021

Future Item	Status
Work with Friends of Park Lake to develop informational brochures on fish and aquatic plants	Initiate when the appropriate board members have time available.
Research means to restore canals leading to water control systems	
Explore grant possibilities for Park Lake	Ongoing.
Monitor use of lake by motorized vehicles during winter for potential conflicts	Ongoing.
Explore methods to achieve lake restoration and sediment removal	Cheryl has touched base with Susan Jones about testing sediments for contaminants, but our need for testing is currently a low priority
Considering developing an amphibian (frog, toad, salamander) monitoring program	1) Michigan Frog and Toad 2) Great Lakes Marsh Monitoring Program (https://www.birdscanada.org/volunteer/glmmp/)

Park Lake Advisory Board Future Item List Jan 2022

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Research means to restore canals leading to water control systems	
Monitor use of lake by motorized vehicles during winter for potential conflicts	Ongoing.
Explore methods to achieve lake restoration and sediment removal	Cheryl has touched base with Susan Jones about testing sediments for contaminants, but our need for testing is currently a low priority
Considering developing an amphibian (frog, toad, salamander) monitoring program	1) Michigan Frog and Toad Survey (https://www.michigan.gov/dnr/0,4570,7-350-79135_79218_79616_83198---,00.html) and (https://www.michigan.gov/dnr/0,4570,7-350-79135_79218_79616_83198---,00.html?utm_campaign=news%20digest%20feb2020%20week4&utm_medium=digest&utm_source=govdelivery) 2) Great Lakes Marsh Monitoring Program (https://www.birdscanada.org/volunteer/glmmp/)