

PAW PAW LAKE MANAGEMENT PROGRAM 2024 - YEAR IN REVIEW

PREPARED FOR:
WATERVLIET & COLOMA TOWNSHIP BOARDS
BERRIEN COUNTY, MI

Since 2012, a management plan has been underway to monitor and improve conditions in Paw Paw Lake. The plan is being implemented under the direction of Coloma and Watervliet Charter Townships via a working group with assistance from environmental and engineering consultants. Funded through special assessment districts under Michigan's Public Act 188, the plan encompasses both in-lake and watershed improvement components. The working group is comprised of representatives from Watervliet Charter Township and Coloma Charter Township. Progressive Companies assists with the overall coordination of project activities and in-lake improvements, while Spicer Group's primary focus is watershed management. The Paw Paw Lake Association (PPLA) and the Paw Paw Lake Foundation (PPLF) are kept abreast of activities to synchronize efforts and avoid duplicity.

This program update provides a brief overview of recent management activities related to watershed projects, plant control, water quality monitoring, 2024 public hearings, and plans for 2025.

Watershed Projects

Branch & Derby Intercounty Drain Maintenance –

The intercounty drain board approved a \$30,000 project for obstruction removal and slope stabilization in the drain's downstream area. This maintenance initiative will continue annually for 5+ years, focusing on resolving major obstructions and erosion issues progressively from downstream to upstream in the drain network. Additionally, the Paw Paw Lake Foundation (PPLF) and the SAD jointly funded a flood bench to address heavy erosion, which was completed in September alongside the maintenance project.



Flood bench established on Branch & Derby drain (September 2024)

Catch Basin Cleanout Project –

Spicer Group inspected over 300 catch basins to assess sediment accumulation since their last cleanout. They found that 218 basins need cleaning and are now developing a cleanout plan for the SAD, including timelines for future cleanings. This data will also help Spicer recommend optimal locations for new treatment structures to enhance sediment capture efficiency.



M-140 Sediment basin nearing capacity and slated for cleanout in 2025 (October 2024)

M-140 Basin Cleanout –

Spicer Group is in the beginning stages of preparing bidding documentation for the planned cleanout of the M-140 sediment basin in Winter 2024/ Spring 2025.

Aquatic Plant Control

Scientists from Progressive conduct GPS-guided surveys of the lake to identify problem areas, and georeferenced plant control maps are provided to the plant control contractor, PLM Lake & Land Management. Primary plants targeted for control in Paw Paw Lake include Eurasian milfoil, curly-leaf pondweed, and starry stonewort. These plants are non-native (exotic) species that tend to be highly invasive if left unchecked. Plant control activities in 2024 consisted of 4 plant surveys and 3 herbicide treatments, totaling 165.5 acres. In addition to the surveys of the lake to identify invasive plant locations, a detailed aquatic vegetation survey was conducted on August 26 to evaluate the type and abundance of all plants in the lake. These inventory surveys take place annually as part of an effort to track plant community changes over time.



Eurasian milfoil (*Myriophyllum spicatum*)

Water Quality Monitoring

Regular spring and summer monitoring of water quality conditions in Paw Paw Lake is a key component of the management program. Samples are collected at 10 foot intervals over the 3 deepest basins of the lake and are analyzed for total phosphorus, temperature, and dissolved oxygen. In addition, chlorophyll-a levels and water transparency are measured from the surface at each of the 3 sites. Over time, monitoring data can be helpful in determining general trends in water quality and the effectiveness of various lake management strategies. 2024 water quality data will be available in the spring of 2025 following the completion of the feasibility study detailed below.

Alum/Dredging Feasibility Study

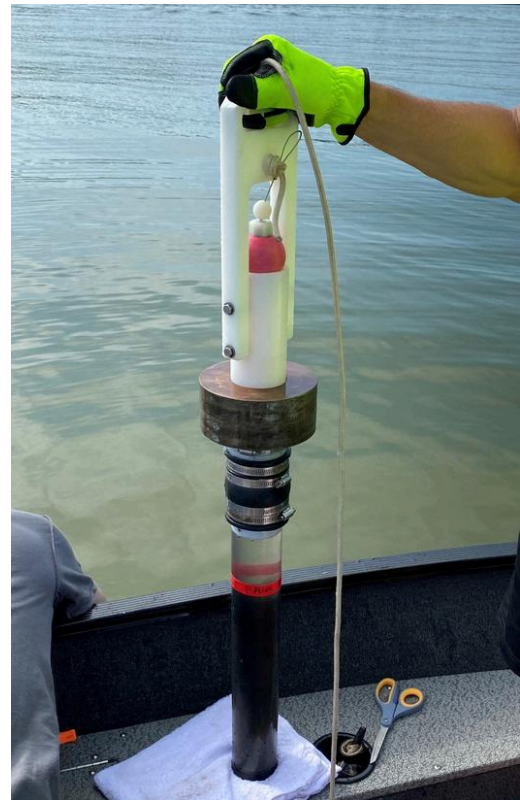
As part of a study to assess the potential need and feasibility of canal dredging and aluminum sulfate (alum) treatment in the lake, Progressive is examining the lake's physical, chemical, and biological characteristics. This includes monthly water quality sampling with expanded parameters during thermal stratification, a canal assessment and sediment sampling, and a sediment study conducted by Barr Engineering to estimate internal phosphorus release rates and determine appropriate mitigation options. The feasibility study is expected to be completed by spring 2025.

2024 Public Hearings

The Township Boards of Coloma Charter Township and Watervliet Charter Township held joint Public Hearings on June 8 at the Coloma Charter Township Hall. A new 4-year program as outlined in the Paw Paw Lake Management Plan (available on the website referenced in the QR code below) was presented and discussed. After the public comment discussion period ended, the 2 township boards unanimously continued the Paw Paw Lake management project according to the plan and renewed assessments for 4 additional years.

What to Expect in 2025

Continued efforts in the Paw Paw Lake watershed will include the potential installation of stormwater treatment structures at strategic locations identified in the stormwater catch basin network surrounding the lake during the 2024 inventory and clean outs. Collaborative efforts between the working group, the PPLF, Ducks Unlimited, and the USDA Soil Conservation Service will be implemented in key watershed locations with the goal of reduced sediment and nutrient inputs to the lake. Invasive species management will continue in Paw Paw Lake, aiming to control invasives and promote the growth and coverage of beneficial native aquatic plant species to enhance the lake's overall health and ecology. Updates on the project and educational outreach will be provided primarily through the Paw Paw Lake Management website (see QR code below).



Sediment core sample



pawpawlakemanagement.org

An up to date informational
website detailing the management
efforts on Paw Paw Lake.

