

August 2026 Monthly HOHL Committee Reports

Communication Committee – Sue Gelderbloom – Committee Chair

The Communications Committee continues to make steady progress in strengthening outreach and engagement efforts.

- **Email Campaigns** Currently our email list to 462. There was no August *Ripple Effect*. The August *Committee Reflections* covering July's meetings was published late in the month.
- **Social Media & Website**
 - We are continuing to post frequently on **Facebook** and **Instagram**
 - Our **YouTube** channel is up and we continue to collect videos (currently 21 videos). We have videos taken at the "Celebrate HL" as well as the dive videos of the bottom on the lake taken earlier this summer. Everyone is encouraged capture short video of what they love about Higgins Lake. A photo releases form is in NC>communications>videos and in NC>SubChairs. These videos will be used in our social media outreach.
 - Our **Geofencing** campaign described last month ran from July 24 to Aug 8. We experienced some issues with the messages not being delivered. The subgroup met every couple of days to monitor the response. The target area was redefined part way through but had little impact on the results. We suspended the planned second month. The graphics and videos that were generated in the effort, will be used on social media.
 - The **website** has mostly recovered from the facelift but still has a few pages that need to be reworked. The deep dive videos, link to water tests as well as the Higgins Lake Water Shed density map have been added to the website.
- **Community Outreach**

We are still attending or providing materials to **associations** meetings We attended 2 in August and have 3 in scheduled in September. That will finish this outreach summer 2027.

We are selling HOHL **Tee shirt** off the website for all that are interested. They are heather gray with the logo on the front and the tag line on the.

"Celebrate Higgins Lake and Beyond" outreach was held August 8th at the Gerrish township marina. Results of the celebration were:

- 10 Tables of educational material
- Recorded 16 Videos (what I love about Higgins Lake)
- Obtained 25 email addresses
- 24 kids did the scavenger hunt
- Handed out 22 water testing kits
- Gave out over 10-yard sign
- Sold 5 tee shirts
- Ran out of the 100 hotdogs at 2:30
- Music was a great addition
- HLPOA underwater videos were a hit
- The interactive watershed map was of great interest
- People loved the Muskegon Watershed demo
- Invasive Species was a wonderful hands-on (maybe just looking)
- MSU Invasive Species had great handouts
- Fisheries were very informative
- Higgins Lake watershed and underground flow was great visual

Overall, the event was considered a success and is planned again next year for July 31, 2027

- **Collaboration & Research**

The committee continues to collaborate with the Higgins Lake Watershed Information Map effort.

- **Committee Development**

The committee met on Aug 4 and Aug 11

Geofence subgroup met July 23, July 30, Aug 4, Aug 7, and Aug 11

Scheduled meeting is for Sept 8.

Fertilizer Committee (No report) – Tim O’Rourke – Committee Chair

IT Committee – Ed Panyard – Committee Chair

Higgins Lake Watershed Information Map

- Completed major development and QA work toward public release of the Watershed Information Map, including separate Public and Research presentations, simplified public controls, Help/About content, watershed and terrain layers, PLSS information, and improved parcel-density displays.
- Reworked parcel density using H3 hexagons, fractional parcel allocation, land-only area, and fixed public density classifications. Added extensive automated browser testing with Playwright; the overall automated test suite now exceeds 700 tests.
- Implemented map versioning and provenance so methodology version, local-data revision, software build, and build run can be identified. Incorporated Map Product Advisory Group feedback after Steering formally recognized the map as an HOHL tool.
- Created and privately distributed the hoh-lake.org Watershed Map page using the existing iframe approach. Zoning-data cleanup is paused pending possible better parcel-by-parcel information from township sources.

Nextcloud

- Investigated the Nextcloud Desktop 34.0.1 Mac synchronization failure in which some larger folders could appear fully synchronized without transferring. Tested 34.0.2 successfully and instructed HOHL Mac users to update; early results are good and the issue remains under observation.
- Began design and implementation work on the next Nextcloud server/storage configuration, with faster storage reserved for the database and active information and larger-capacity storage used where appropriate for bulk data.

HOHL Website, Research, and Support

- Supported WordPress/Elementor work for the Watershed Map page, navigation, formatting, and Google Analytics/Site Kit planning.
- Revisited the proposed public AI research-query capability for the HOHL Zotero collection. The preferred architecture is now a strictly read-only copy of Zotero's SQLite database with an OpenAI API-based query service, avoiding the need to run Zotero on the VPS.
- Reviewed Apache/PHP logging for the geofencing signup process and the feasibility of combining logs for better source and failure reporting. Also supported Zoom AI Companion note retrieval and GPS/location recording for the August HLPOA dive work.

Ongoing Work

- Complete public Watershed Map rollout and analytics; resolve zoning-data questions; monitor Nextcloud 34.0.2; continue Nextcloud server/storage work; and begin the Zotero/OpenAI research-query implementation as priorities permit.

Road Ends Committee (No report) – Tim O’Rourke, Committee Chair

Science Committee Report – Brad Gibson, Committee Chair

Non-Nutrient Source Contamination to Higgins Lake, August 19, 2026

Status summary: The subcommittee has completed initial research on several non-nutrient contaminant categories and is now gathering remaining data before drafting a report for the Science Committee.

Completed research areas

- Researched data, articles, and publications regarding PFAS, pharmaceuticals, copper and other heavy metals, microplastics, microcystins related to algal blooms, and chlorides as potential contaminants to Higgins Lake.
- Discussed the studies and a potential outline of the findings.

Remaining research areas

- Gather and review data on forest fire smoke, watercraft exhaust from two- and four-stroke engines, petroleum by-products, and bilge flushing.
- Use the completed and remaining research findings to draft a report for presentation to the full Science Committee.

Deliverable and next steps

Timeframe

- Should have final report available to Science Committee in one to two months.

Nearshore Subcommittee: Members: Ethan Brand, Bob Frye, Brad Gibson, Mark Luttenton, John Schreck, Rick Shoemaker, Fred Swinehart.

- E. coli: After our last subcommittee meeting in May, a few changes were made to the draft report and a Revision 5 was emailed to all subcommittee members on June 25. While significant differences of opinion still exist on some aspects of the report, we are unlikely to obtain complete consensus. It was generally understood that those members with dissenting opinions would submit them in writing (preferably in a Word document, not just comments in an email), and we would add them as an addendum to the report for final submittal to the full Science Committee. Unsure if further comments are forthcoming. Nearly complete.
- Nearshore water chemistry and biological conditions: Based on a data summary from Mark Luttenton's 2018 research, we started looking at this topic back in February, 2026. Some questions were identified and most addressed, but not much discussion/progress since. This topic covers a wide range of water quality parameters including: Total phosphorus, nitrogen (nitrates), chlorides, specific conductance, turbidity, benthic algae (Chladophora), etc. Anticipating a full report following the format agreed upon by the Science Committee, it appears that a substantial amount of work on this topic remains.
Estimated time to complete: 3-4 months.
- Other nearshore topics yet to be addressed:
 1. Swimmer's Itch: this issue has come back this year and has been assigned to the Nearshore Subcommittee. Ethan has extensive background and will likely lead this assessment.

2. Sediment analysis/changes over time.
3. Marl deposition.
4. Macroinvertebrate populations: abundance, diversity, distribution.
5. Aquatic plant abundance, diversity, distribution.
6. Phytoplankton abundance, diversity, distribution.
7. Zooplankton abundance, diversity, distribution.
8. Impact of lake level fluctuations.
9. Microplastics.
10. Algae blooms/Harmful Algae Blooms (HABs).
11. Other issues not yet identified.

Given the sporadic frequency of our subcommittee meetings, the difficulty of scheduling more effective in-person meetings, and our experience with the E. coli report (i.e., 8 months in the making), **it is not likely that this entire body of work will be completed by the end of this year.**

Estimated time to complete: 8-12 months.

Deep Water Subcommittee: Members: Ethan Brand, Mark Luttenton, Mike Matusak, John Ogren, John Schreck, Rick Shoemaker.

A Zoom subcommittee meeting was held on July 8 with only half the group available (Ethan, John Ogren, and Rick). Ethan committed to creating a comprehensive draft report summarizing the Michigan Clean Water Corps (MiCorps) 20+ years of deep-water data, with special focus on Dissolved Oxygen. Rick agreed to prepare a draft report on trophic state (biological productivity). John Ogren agreed to provide an update on HLPOA's initiative on the diving assessment of the lake bottom, designed to monitor changes over time including the impact of invasive aquatic plant species and zebra/quagga mussels.

- MiCorps Dissolved Oxygen Data: Work in progress with Ethan anticipating a draft report by the end of August.
- Trophic State (biological productivity): Rick has prepared a preliminary draft report (using the approved Science Committee reporting format); conclusions and recommendations sections left blank, pending further comment and discussion from all subcommittee members. Report was sent to all subcommittee members on July 28; awaiting input. If we can get a full subcommittee meeting scheduled soon, and if we can get agreement on major conclusions and recommendations, we may have a report done by September but doesn't seem likely at this point.
- Lake Bottom Diving Survey: John Ogren submitted a brief update from HLPOA Environmental Committee (Fred Swinehart).

Estimated time to complete: 2-3 months.

Other Deep Water topics yet to be addressed:

1. Aquatic plant abundance, distribution, diversity and trends.
2. Algae/macroalgae abundance, distribution, diversity, and trends.
3. Other issues not yet identified. Several of the topics identified in the Nearshore list may also need to be evaluated by the Deep Water subcommittee.

Estimated time to complete all Deep Water work: 6-8 months.

Status of Changing Fisheries Report - August 16, 2026

Subcommittee Members: Melanie Brown, John Davis, Sue Gelderbloom, and Ed Panyard

Questions to address in the paper from the Science Committee have been further refined and some of them have been distributed to subcommittee members.

Outline for paper is created with table of contents and formatting of headers.

Drafted some parts of :

- Cover page
- Intro
- Food web overall with figure
- Completed graphic with common fish, but need to alter format to work in google doc.
- Plant Life and Phytoplankton,
- Benthic macro invertebrates,
- historical info on plants, fish populations, stocking program,
- historical chemical and physical properties
- human impacts including invasives, fishing, water quality
- references list with some needed to be added to Zotero
- Starting appendices of tables with historical comparisons for plants, fish stocking,

Need to develop comparisons of present and past conditions for all of the different factors that overall could have an impact on game fish.

There are still quite a few Zotero papers to review and incorporate but more are identified as we try to address the details.

Estimated time to get a draft completed is likely 6 months.

Recreation Subcommittee Report - 8/18/2026

Recreation subcommittee members; John Ogren, John Barta, Ed Panyard, Gary McCrerie

What we've done:

- Full subcommittee meeting attendees (all virtual)
 - 11/25/2025
 - 01/19/2026
- J Barta and E Panyard multiple meeting times and dates specifically regarding Geo-fencing .
- Significant discussions regarding Higgins Lake topics Included:
 - The use of camera systems to document usage at the three DNR access sites (exploratory).
 - Reporting Violations via Central Dispatch- Spread the awareness of using Central Dispatch to report boating and road end infractions.
 - Compare DNR boat access management practices to those in Wisconsin and Minnesota.
 - Research the recreational limits of boat activity on Higgins Lake.
 - Increased emphasis on Boat Operator Training - QR Codes for Boater Education and Compliance.
 - CD3 Boat Cleaning Units
 - Swimmer's Itch Coordination
 - Firework effects on Higgins Lake
 - Geofencing combined task with Communications committee.

- Visitor Data and AIS Risk - Answer question - who is visiting the lake? The HLF/HLPOA data collection project for 2023-2026 will be used to determine:
 - Local vs visitors,
 - Where are visitors coming from,
 - Where are they launching,
 - And what will the parked trailers surveys tell us.
 - Lead the Rec Committee to additional questions and resolutions.

What we have left to do

- Continue collecting data at access sites
- Add collected data file to Zotero database.
- Review Gibson 1993 report on Higgins Lake Boat capacity
- Continue review of chemical composition of chemicals in Fireworks and effect on lakes.
- Comment on chemicals discovered in fireworks and potential hazards of wood-processing plant in Grayling (Arauco's Particle Board & Laminate Facility). Weyerhaeuser Company provides forest products for building homes and daily use. The company provides paper, absorbent pulp, textile fabrics and specialty fibers. Newsprint, packaging paper and boards.
- Swimmer's itch information will defer to HLSIO expertise. Contact the HLSIO.
- Schedule next Recreation meeting
- Explore QR code implementation
- Address CD3 usage and staffing with DNR
- Develop outreach on Central Dispatch reporting
- Coordinate swimmer's itch summary with HLSIO
- Prepare and deliver Science Committee presentation
- Follow-up on all other open items.

AIS Report - 8/18/2026

AIS subcommittee members; John Ogren, Bob Frye, John Barta

What we've done:

- Met five times (all virtual)
 - 11/17/2025
 - 12/19/2025
 - 01/09/2026
 - 01/16/2026
 - 02/16/2026
- Significant discussions regarding all Higgins Lake invasive species. Topics Included:
 - Identification of all invasives (plant and animal)
 - Extent of problem
 - Discussion to prevent new invasives
 - Discussion to manage current invasives
- AIS files in Zotero have been reviewed.
- A proposed, comprehensive AIS report (70+ pages) has been prepared. This report could be a first draft of a final report to be delivered to the greater Science Committee (after significant AIS subcommittee review). That report was delivered to subcommittee members on 8/17/2028.

What we have left to do

- Several new files need to be curated and added to Zotero.
- AIS subcommittee members review AIS report drafted by John Barta.
- AIS subcommittee members schedule a meeting to discuss the document prepared by John Barta.
- Discuss the final AIS report.

Septic Committee Report – Jim Ostling, Committee Chair

The full Septic Committee met on Aug. 25. The regularly scheduled Aug. 11 meeting was canceled so the Township Planning Commission could meet jointly with the committee to discuss the Septic Ordinance. Mark Jarski from the Health Department and Jim Ostling attended to answer questions.

Septic Ordinance Draft Submitted –The Township Planning Commission continues to review the draft ordinance. The Septic Committee met on Aug 25 and reviewed a paper prepared by Ostling suggesting potential changes or additions to the proposed ordinance. A copy of the paper is attached for your review.

New Map – We prepared a grant application for the Higgins Lake Foundation to consider funding the development of the Demonstration Map for Sovereign Park. The grant was approved and Fleis and Vanderbrink advised of the pending funding. They will be starting work as soon as we get a Professional Service Agreement approved and signed by the Gerrish Board. This map is intended to be the first of several to help tell the story of groundwater and the effect of on-site septic around the lake going forward.

Data update – We have been working with Ed on the development of the Density map for the Lake. Happy to see that it has now been released and available to the public. It is very enlightening as to the density of areas around the lake and how the EPA views that density.

EGLE grant – We are working with EGLE to finalize the paperwork for the grant we received earlier this year. There are funds for communications, public outreach, data gathering, database development, etc.

Testing - Work continues the testing process by the septic committee. We have created a matrix to capture that time and location of tests over the years and are beginning to populate the matrix. Ethan Brand has provided an initial list of tests that have been done or will need to be done. We will use this, among other things, as a “key” to the various types of testing.

Ostling is working on the EXCEL version of the matrix and will then work with Ed to determine the best way to get the info into a database. Melanie has weighed in on this work to keep us focused.

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Celebrating Higgins Lake – The Celebrate Higgins Lake Day was a big success. Congratulations to the Communications Committee and everyone that participated.

Chair Comment – Our primary focus continues to be on the development of a septic ordinance. As the Planning Commission deliberates on the final draft to be sent to the township Board, the Committee will continue to provide comments and input for their consideration. We are also starting work on the testing that has been done around the lake over the years and how we can assemble that testing into a searchable database useful for others to conduct research and draw conclusions as to trends and conditions of Higgins. As we work through both efforts, the eventual impact is coming into focus.

- The condition of septic systems around the Township is unknown.
- The data describing the conditions is severely lacking.
- There was no central repository for studies – now there is.
- There appears to be significant support for our efforts from the community.
- There are also naysayers that object to our approach.
- Gathering data prior to establishing rules is critical.
- Citizens recognize the need to do something

We will continue with the Septic Committees work and support all other committees in their efforts toward the Health of Higgins Lake Initiative.

HEALTH OF HIGGINS LAKE STEERING COMMITTEE MINUTES
2997 E. Higgins Lake Drive, Roscommon, MI 48653
Tuesday, August 18, 2026

Call to Order: 7:00 PM

Pledge of Allegiance

Roll Call: Biggar present, Booser not present, Chaney present, Fisher present, Walker present

Public Audience: Sue Gelderbloom, Tim O'Rourke, Edward Panyard, Charlene Cornell, Jim Ostling, Brad Gibson, Jean Laurence, Duncan Lawrence, Alicia McCoy

Changes to the Agenda: None

Approval of Agenda:

A motion by Biggar and supported by Fisher to approve the 8/18/2026 agenda as presented and be forwarded to the Gerrish Township Board Members for review. All members voted Aye. Motion carried.

Approval of 7/21/2026 Meeting Minutes:

A motion by Fisher and supported by Biggar to approve the 7/21/26 Steering Committee Minutes as presented and be forwarded to the Gerrish Township Board Members for review. All members voted Aye. Motion carried.

Public Comments: None

Presentations:

Community Partner Showcase – Higgins Lake Swimmer's Itch Organization – Duncan Lawrence presented a slide presentation and discussed how swimmer's itch is spread, issues with swimmer's itch in Higgins Lake, and what HLSIO is doing to help alleviate swimmer's itch in the lake. HLSIO would like the public to report incidence of swimmer's itch and sightings of the Mergansers on the lake on their website, HLSIO.org. Also, the public can report on the Fish and Wildlife Service website, info_R3MBMB@fws.gov.

Subcommittee Monthly Reports and Updates:

- **Communications** – Sue Gelderbloom reports they are distributing information to over 400 emails currently.
- **IT** – Ed Panyard reports they are working on the map, keeping NextCloud running and working with Communications on their projects.
- **Road Ends and Fertilizers** - Tim O'Rourke reports water samples are being collected at some road ends, and they are close to having enough information for a spreadsheet and a presentation for the Science committee to review before the Steering Committee meeting on September 29 at 7PM. Tim reports they have new volunteers for the Fertilizer subcommittee but are still looking for additional members.
- **Science** – Brad Gibson reports they have added 40 reports to their database. They are working on timelines within their subcommittees and will get a report out soon.

- **Septic** – Jim Ostling reports they have had a joint meeting with the Planning Commission to answer questions about the Septic Ordinance draft. He noted that GT/HOHL Septic applied for a grant and were awarded \$16,500 with the Higgins Lake Foundation for a demonstration map for Sovereign Park.

Old Business:

- **HL Watershed Management Plan (HLWMP) Update** – Jim Fisher met with Jack Biggar, Higgins Lake Foundation and EGLE to discuss the process of updating the plan. The goal is to meet with the HOH-Lake subcommittees to obtain data to help update the plan. Jim and Jennie will meet to identify community partners to round out a HLWMP advisory/steering committee.
- **Celebration of Higgins Lake and Beyond Review** – Sue Gelderbloom reported that the celebration was successful with 10 tables of educational presentations and materials, the team recorded 16 videos (What I love about Higgins Lake), obtained 25 email addresses, 24 children did the scavenger hunt, handed out 22 water testing kits, gave out over 10 yard signs, sold 5 tee shirts and ran out of 100 hot dogs by 2:30 pm. They had a debrief and are tentatively planning on July 31, 2027, from 11:00 am – 2:30 pm for next year's celebration.
- **Digital Outreach Review** – Sue Gelderbloom reports the Geofencing results were not as expected. They have decided not to subscribe for another month.

Approval to Submit WLNS Bill:

A motion by Biggar and supported by Chaney to submit the WLNS (Geofence Campaign) bill as presented to the Gerrish Township Board for review. All members voted Aye. Motion carried.

- **Watershed Info Map** – Ed Panyard reports that the map will be useful for the subcommittees to use. He reports that they are reviewing and looking for guidance from the subcommittees on how they might release the map to the public.

Motion:

The HOHL Steering Committee formally recognizes the Higgins Lake Watershed Information Map as an official HOHL information and educational tool and an authorized HOHL Informational Technology (IT) activity. HOHL IT subcommittee will develop and maintain the Map, with HOHL Communications participating in decisions regarding its public release and presentation. The Map and associated intellectual property remain privately and are provided to HOHL for use without charge.

Motion by Biggar, supported by Chaney to be approved as amended and forwarded to Gerrish Township Members for review. All members voted Aye. Motion carried.

- **Project and Funding Proposal Guidelines** – Jennie Walker

A motion by Biggar, supported by Fisher that the HOHL Project and Funding Proposal Guidelines be approved as presented. All members voted Aye. Motion carried.

New Business: None

Public Comments: None

Announcements: Next meeting will be September 29, 2026, at 7:00 pm.

Adjournment:

Motion by Biggar, supported by Chaney to adjourn the meeting at 8:36 pm. Motion carried.

Jennie Walker, Chairperson & Date

Jolie Booser, Secretary & Date