

The top half of the image features a close-up, slightly blurred view of teal-colored water with gentle ripples and waves. The bottom half of the image is a solid, dark teal background.

Leslie Meyers – Antrim County Drain Commissioner and Operator of Dams

ERCOL Lake Levels 2025

What did the fish say when it hit the wall?



Dam!



Court Ordered Lake Levels

Based on The Inland Lake Level Act of 1961

Elk and Skegemog Lakes Court-Ordered Lake Level (1973)

- Summer Lake Level at 590.8
(April 15–November 1)
- Winter Lake Level at 590.2
(November 1–April 15)

Intermediate Lake Court-Ordered Lake Level (1990)

- Summer Lake Level at 607.15
(May 15–November 1)
- Winter Lake Level at 606.54
(November 1–May 15)

Houston, We have Problems!



Elk Rapids Overflow
Spillway



Bellaire Dam



Bridge St. Culvert
Ellsworth

Plus Numerous Sedimentation Issues Throughout the System.

Our Watershed

- 505 square mile area
- 4 Counties
- 200 miles of shoreline
- 75 miles of waterways
- 14 Lakes, 7 rivers and over 200 streams
- 40' of drop in elevation
- Provides 60% of the water for Grand Traverse Bay



Lake Level Committee

- Established in 2016 – Reps from all Lake Associations and DC
- Grant from USACE - \$225k County - \$75k



Hydrologic Engineering Center (HEC)

Hydrologic Model System (HMS)

- Hydrologic Model
- Transforms rainfall amounts into quantity of runoff.

River Analysis System (RAS)

- Hydraulic Model
- Computes streamflow characteristics, i.e. depth, width and flow velocity

Models how rainfall lands and collects throughout the watershed.

Follow – Up Study

- 2022 Study specific to the hydraulic capacities for the two dams
- Funded in partnership with Antrim County and 4 lake associations
- \$27k

Draft

**Elk Rapids Chain of Lakes
Hydraulic (HEC-RAS) Analysis and Support
Bellaire (Intermediate) Dam
Elk River Hydroelectric Dam**

**Based upon U.S. Army Corps of Engineers
Hydraulic HEC-RAS Model and Modeling Report June 2022**



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Follow-up Findings

- Additional modeling for the study revealed higher volumes than dams can handle
- Bellaire has no freeboard and a 100 year storm (1%) will overtop the dam. Additional spillway capacity will be needed
- Elk Rapids can handle a 100 year (1%) flood with ½ foot freeboard
- Elk Rapids overflow spillway in need of major repair
- The need to begin long term planning as EGLE and FERC will likely up the ante in needed freeboard due to national flooding events
- Plan for 500 or 200 year instead of 100 year floods







Soil Erosion,
Sedimentation and Dredging

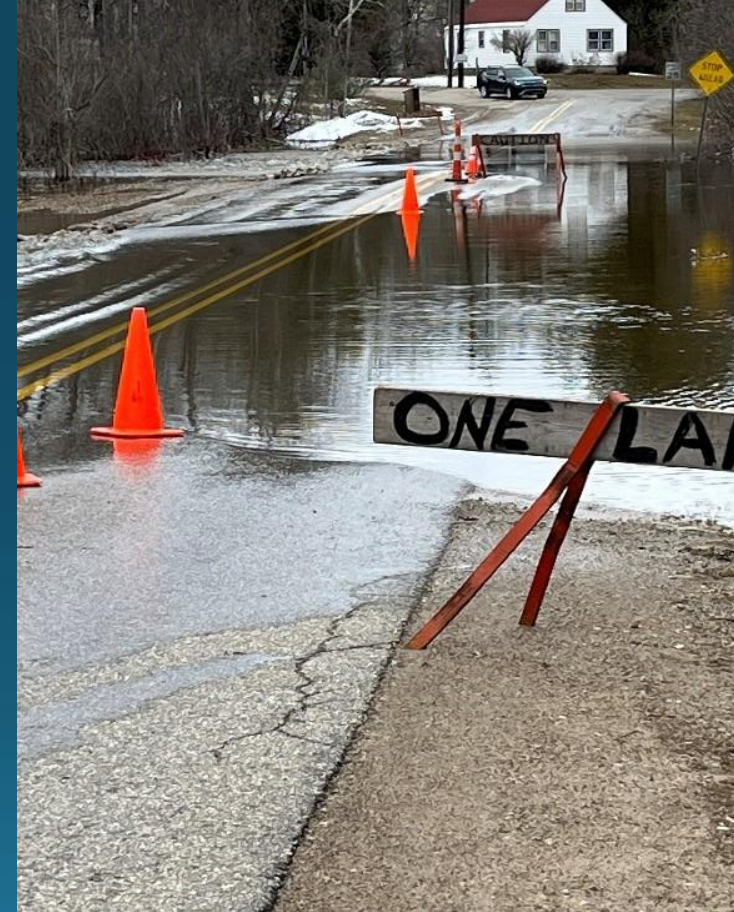
Lake Level Committee Expanded

- Added municipal leaders throughout the watershed.
- Added Engineering
- Volunteers that included:
 - ✓ Drain Attorney
 - ✓ Dam Engineer
 - ✓ Grant Writer
- Grant from Great Lakes Energy for 16 rain gauges

Dam Risk Reduction Grant Program

- Received \$450k from EGLE for engineering a fix to Bellaire Dam
- \$50 k match from Dams Reserve
- Work began September 2024

March 28 – April 3, 2025



May 1, 2025 AC Resolution 2025-12

- Delegated Authority to ACDC for Part 307
- Authorized the Drain Commissioner to talk to all counties and municipalities relating to Part 307 and the Chain of Lakes
- Approved hiring of legal counsel and engineers
- Approved initial spending up to \$125K

Resolutions from partner Counties

- KC has signed on. Awaiting GTC and CC
- Confirms Antrim County Drain Commissioner as delegated authority for Lower Chain
- Authorizes filing petition in Circuit Court to update lake level order and confirm the special assessment district boundaries
- Authorizes retaining legal counsel, finance counsel, and engineers to prepare recommendations and assist in the Part 307 process

May and June 2025

- Hired Engineering and Legal Counsel
- Field Trip and Prioritization completed
 - ✓ Additional Gauges
 - ✓ Bellaire Dam
 - ✓ ER Overflow Spillway
 - ✓ Bridge Street Culvert
 - ✓ Dredging, Soil Erosion, Sedimentation Control
- Realization that Grants were not going to cover this.

Lake Gauges – Hyfi



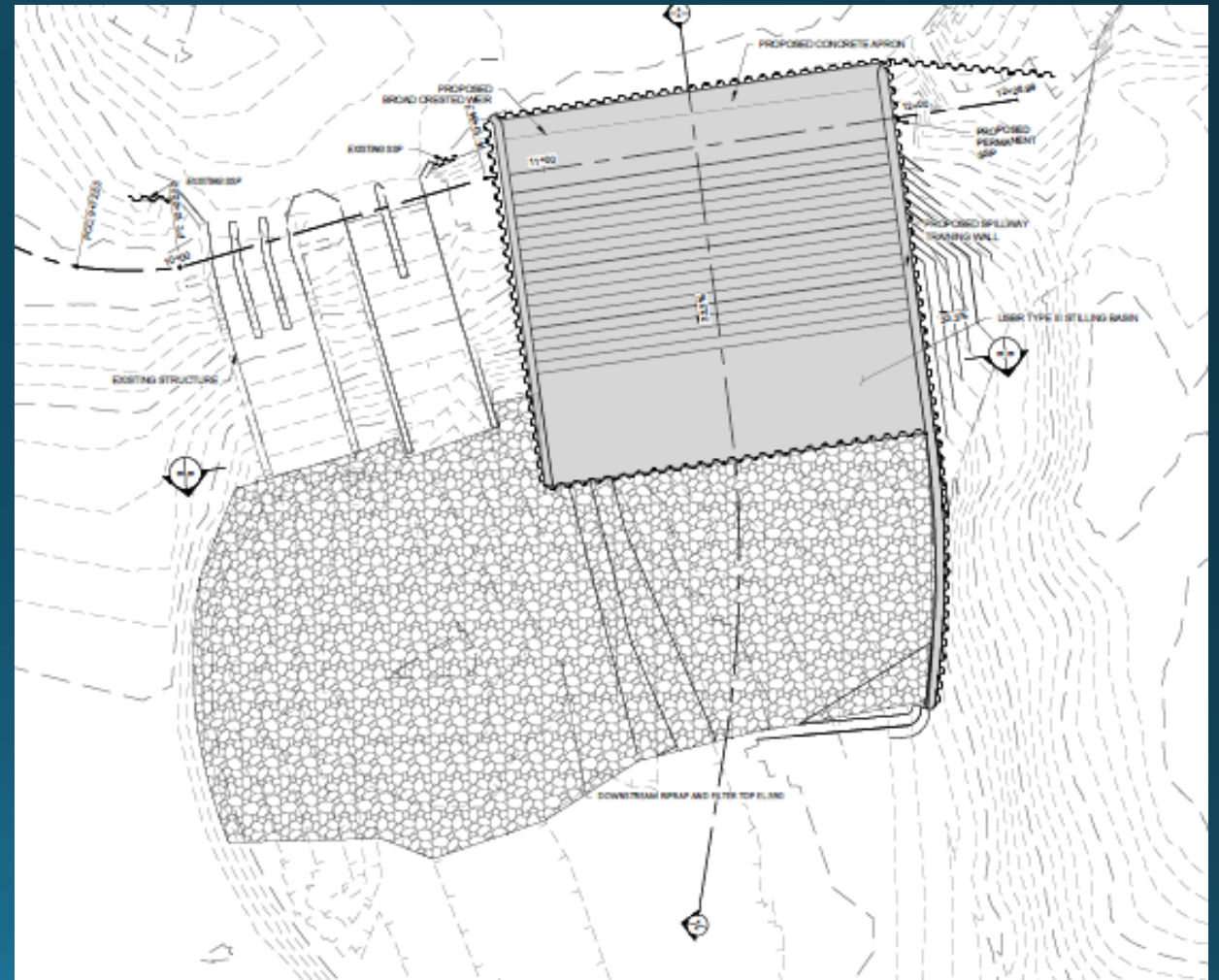
- Old State Bridge
- Bellaire Dam
- Morhman Bridge
- Bridge Street Culvert
- 6 Mile Lake****
- Elk Rapids Dam
- <https://go.hyfi.io/map>

Elk Rapids Spillway

- Contract to be signed September 2025 for Elk Rapids Dam inspection
- FERC has canceled their last two inspections
- Prudent to review the entire dam now.

Design Phase underway for Bellaire

- Estimated cost: 6.2 Million
- Cement weir spillway system
- Improvements to gate systems
- Increased capacity to 500-yr storm



Ellsworth – Bridge Street Culvert

- Study Contract to be Signed – September 26, 2025
- What options do we have?

SAD – Special Assessment District

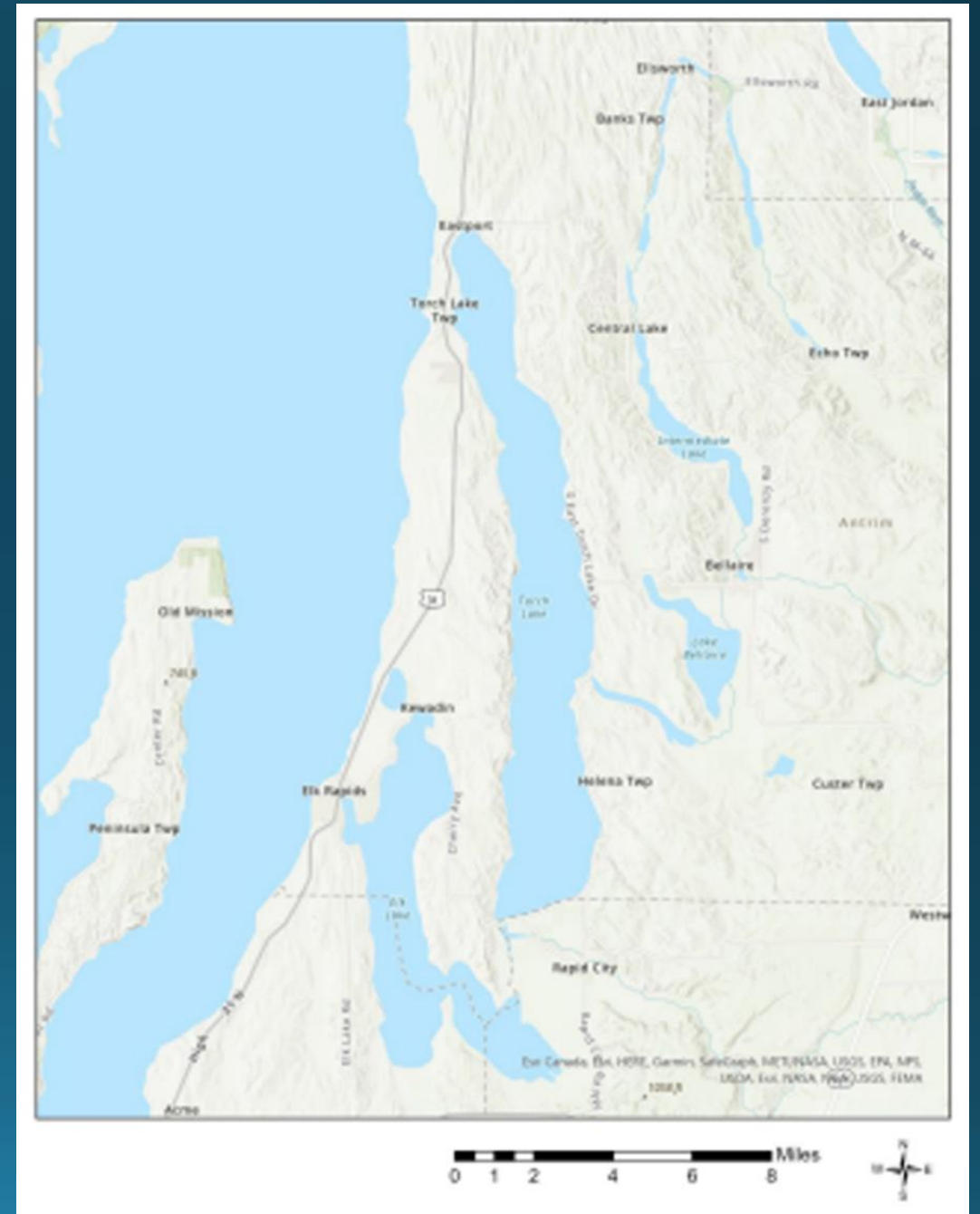
Special assessments are the **funding mechanism** for:

- Operation costs
- Inspections
- Repairs and improvements
- Updating court orders

Without an accurate special assessment district in place, County General Fund(s) is responsible for funding

SAD Cont.

- Necessary to separate into **two unique districts** for the Lower Chain and Upper Chain
- Updated special assessment district for Lower Chain should include **all properties with private legal access** to the Lower Chain of Lakes
- Without assessments, **County General Funds are responsible for all costs** to operate and maintain the lake levels and infrastructure



SAD Methodology

- Access may be:
 - Direct (lakefront)
 - Indirect (deeded, platted, etc.)



Methodology Cont.

- Assessment depends on intensity of use

- Marina
- Residential
- Commercial
- Keyhole
- Condo
- Neighborhood Park
- Resorts

Also included:

- Municipalities
- County
- Conservancy
- DNR

What Needs To Be Done Now?

- ✓ Appoint delegated authority(s)
- ✓ Engineering study for repairs
- ✓ Update order to include all lakes
- ✓ Clarify measurement location for legal levels
- ✓ Add variation language
- ✓ Clarify and confirm special assessment district boundaries

What is the Special Assessment Schedule?

- Fall 2026 - Complete Special Assessment District definition and apportionment
- December 2026 – Place assessments on December tax roll
- March 2027 – Assessment payments begin
- Otherwise we kick the can down the road to Dec 2027 and March 2028

Way More to Come!

- New Website
- Update Meetings
- Public Hearings

What can you do?

- Legacy
- Help me save money
- Mussel Reconnaissance
- PR Peeps
- Bake Sales

Questions??????

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