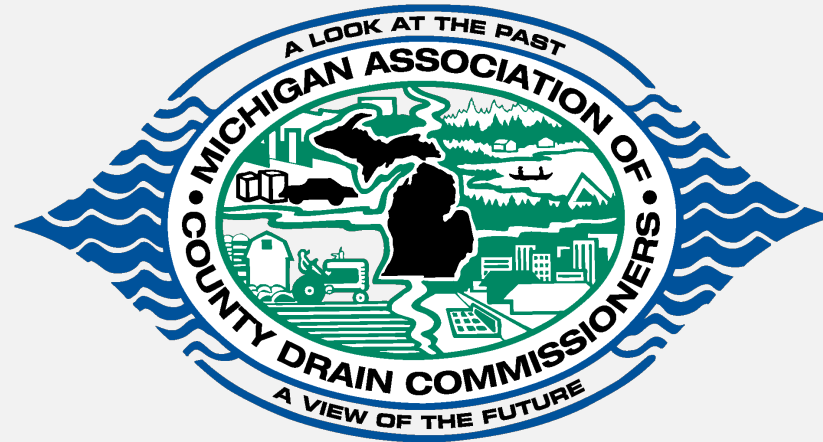


MICHIGAN ASSOCIATION OF COUNTY DRAIN COMMISSIONERS



What's New with EGLE's Dam Safety Program

Luke Trumble, P.E., Supervisor
Dam Safety Unit, EGLE-WRD

Wednesday, July 26, 2023
macdc.us

OUTLINE

- Part 315 and Part 307 Requirements/Amendments
- Program updates since Winter Conference 2023
- What's on the Horizon



PART 315 REQUIREMENTS/AMENDMENTS

- Part 315, Dam Safety
 - All dams > 6 feet high AND impounding \geq 5 acres
 - Requires regular engineering inspection
 - Spillway requirements based on downstream hazard potential
 - Design/permitting criteria
 - O&M requirements
 - Compliance and enforcement authority



PART 315 REQUIREMENTS/AMENDMENTS

Current

- Engineering Inspections
 - Low Hazard – 5 years
 - Significant Hazard – 4 years
 - High Hazard – 3 years
- Spillway Capacity
 - Low Hazard – 100 year or flood of record
 - Significant Hazard – 200 year or flood of record
 - High Hazard – 200 year (1/2 PMF if over 40 feet high) or flood of record
- Emergency Action Plans
 - High and Significant Hazard Potential
 - No Exercise Requirements
- No Registration Requirements

Recommended

- Engineering Inspections
 - Low Hazard – 5 years (visual)
 - Significant Hazard – 2 years (visual), 10 years (in-depth evaluation)
 - High Hazard – 1 year (visual), 10 years (in-depth evaluation)
- Spillway Capacity
 - Low Hazard – 100 year or flood of record
 - Significant Hazard – ½ PMF or IDF
 - High Hazard – PMF or IDF
- Emergency Action Plans
 - High and Significant Hazard Potential
 - 5-year Exercise Requirement
- 15-year Registration



PART 307 REQUIREMENTS/AMENDMENTS

- Part 307, Inland Lake Levels
 - All dams with court established normal lake levels
 - Requires regular engineering inspection
 - Design review criteria
 - O&M requirements
 - Compliance and enforcement authority

- **Dams can be regulated under both Part 315 and Part 307**



PART 307 REQUIREMENTS/AMENDMENTS

Current

- Normal Lake Level Definition
 - Static level or levels
 - No allowance for deviations
- No Restrictions on Delegated Authority

Recommended

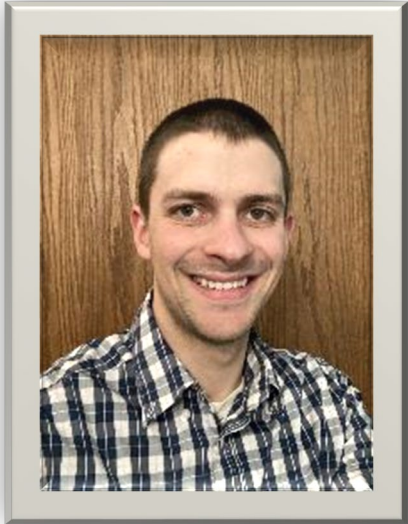
- Normal Lake Level Definition
 - Target Level or levels
 - Allowances for deviations
 - Flood/Drought
 - Maintenance/Drawdown
- Some Restrictions on who can be appointed as Delegated Authority



PROGRAM UPDATES



Mike Size



Thomas Horak

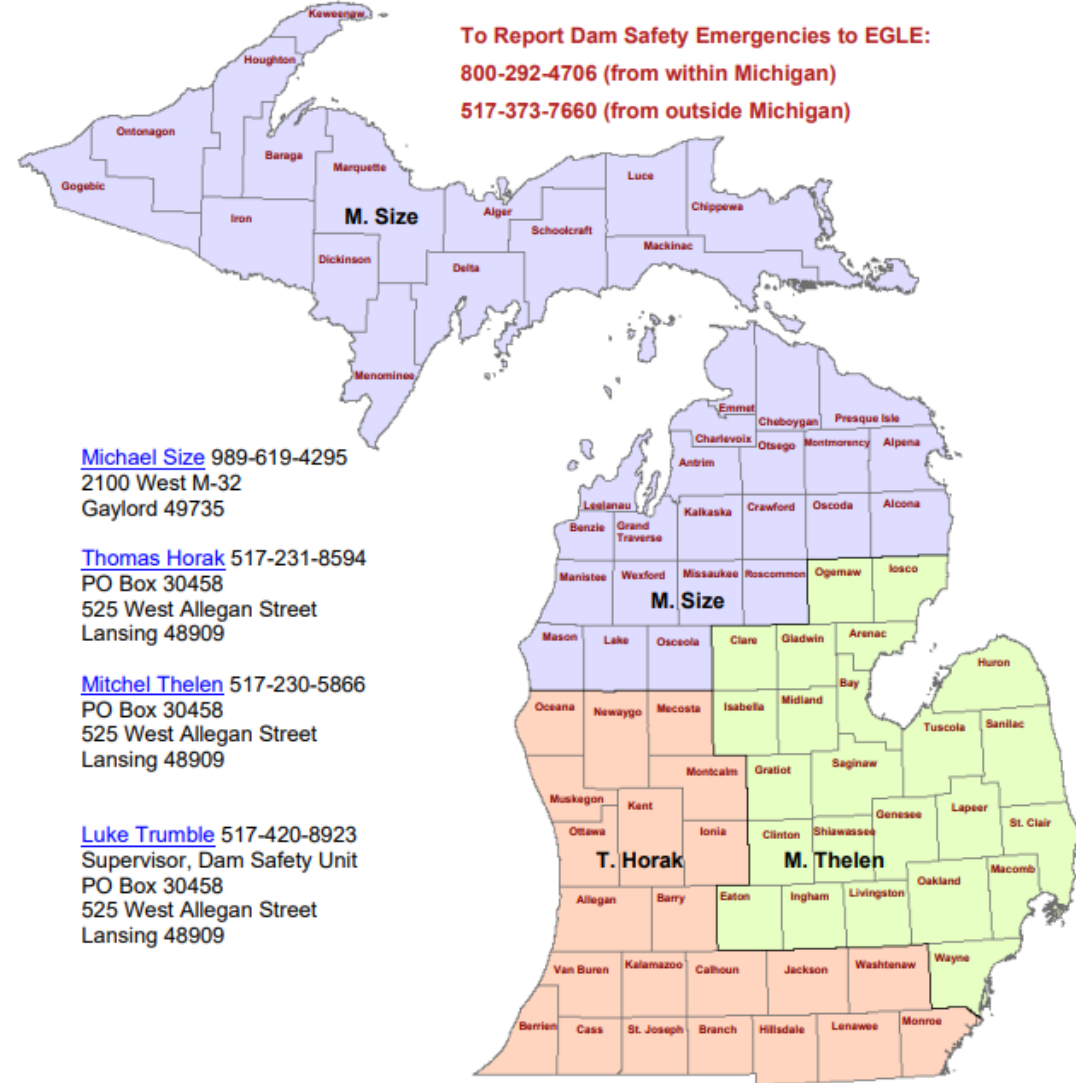


Mitch Thelen

Dam Safety Staff

www.mi.gov/damsafety

To Report Dam Safety Emergencies to EGLE:
800-292-4706 (from within Michigan)
517-373-7660 (from outside Michigan)



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

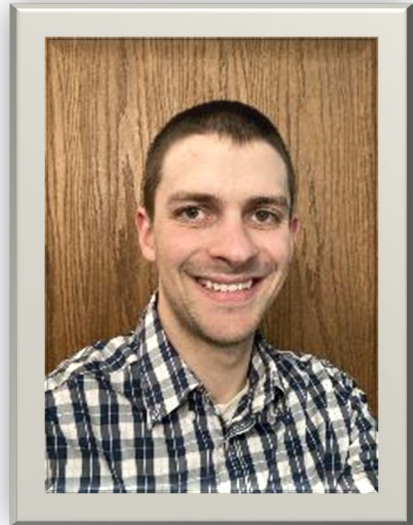
Water Resources Division

www.michigan.gov/wrd ↔ 517-284-5567

PROGRAM UPDATES



Mike Size



Thomas Horak

Region 1
Marquette
Gaylord
Cadillac

Region 2
Bay City
Lansing
(Vacant)

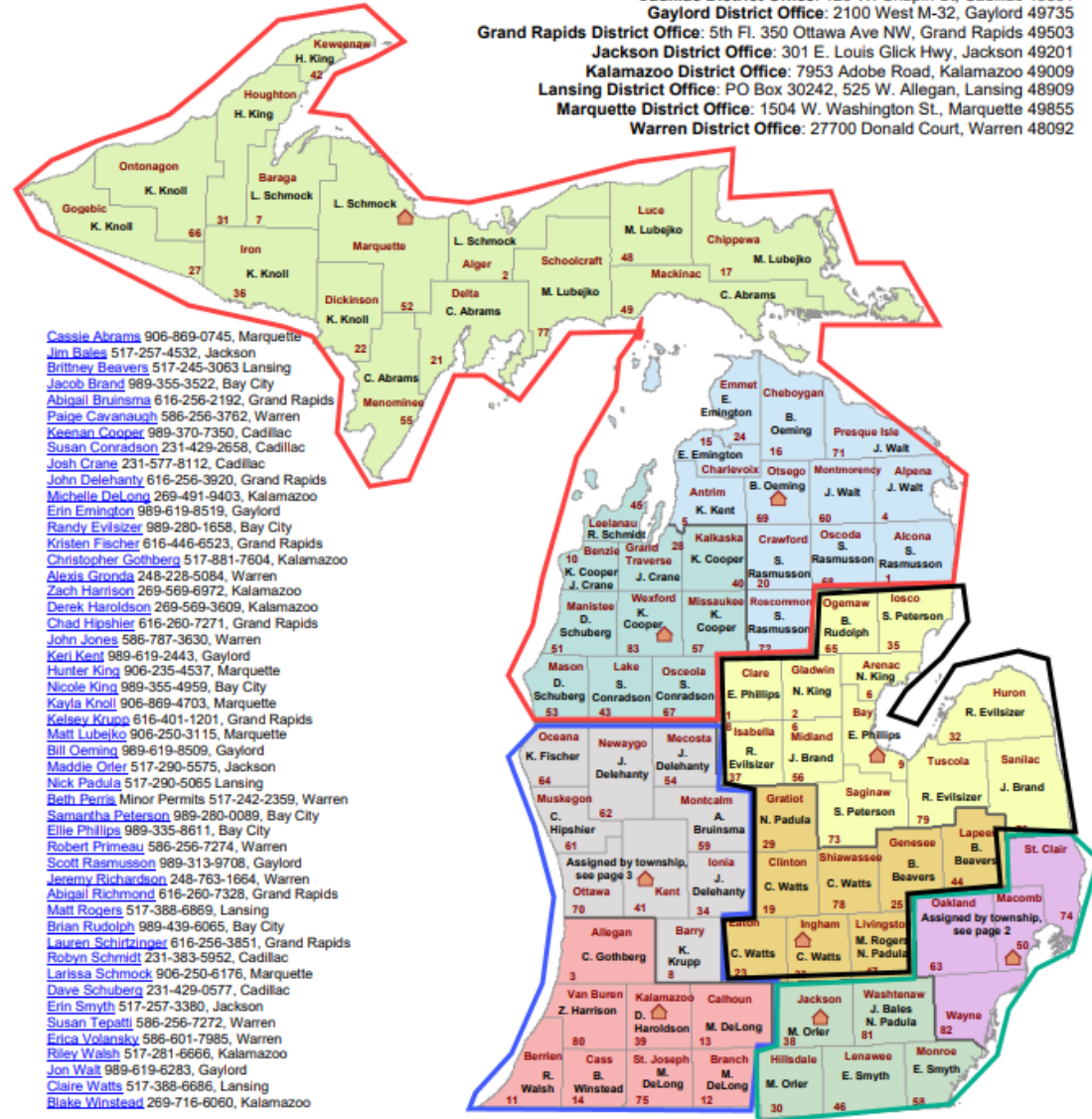
Region 3
Grand Rapids
Kalamazoo

Region 4
Warren
Jackson
(Vacant)

Land/Water Interface Permitting Staff

www.mi.gov/jointpermit

Bay City District Office: 401 Ketchum Street, Suite B, Bay City 48708
 Cadillac District Office: 120 W. Chapin St, Cadillac 49601
 Gaylord District Office: 2100 West M-32, Gaylord 49735
 Grand Rapids District Office: 5th Fl. 350 Ottawa Ave NW, Grand Rapids 49503
 Jackson District Office: 301 E. Louis Glick Hwy, Jackson 49201
 Kalamazoo District Office: 7953 Adobe Road, Kalamazoo 49009
 Lansing District Office: PO Box 30242, 525 W. Allegan, Lansing 48909
 Marquette District Office: 1504 W. Washington St., Marquette 49855
 Warren District Office: 27700 Donald Court, Warren 48092

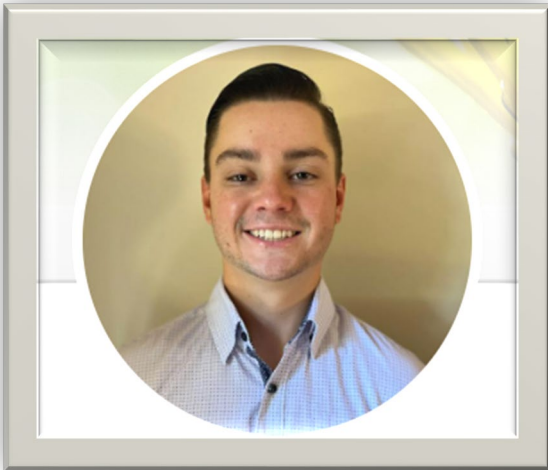


PROGRAM UPDATES



Mitch Thelen

- Statewide coverage
- Program Development
- Internal/External Training
- Mentoring



Mason Manuszak

- Statewide coverage
- Grant Administrator
 - Dam Risk Reduction
 - FEMA NDSP/HHPD
 - Local Grants
- Dam Removal/Stream Restoration

PROGRAM UPDATES

- Vacancies
 - Region 3 Engineer
 - Covering Bay City and Lansing District Counties
 - Region 4 Engineer (New)
 - Covering Warren and Jackson District Counties
 - Statewide Emergency Response Specialist (New)
 - Develop/Improve/Exercise Emergency Action Plans
 - Perform Dam Breach Inundation Studies/Mapping
 - Administer Dam Emergency Response Fund

PROGRAM UPDATES

Dam Risk Reduction Grant Program

- \$15.3 million to be awarded in 2023
- 16 Projects Funded
 - 7 Dam Removals
 - 5 Dam Repairs
 - 4 Engineering Studies
- Projects prioritized by level of risk eliminated/reduced and availability of funding
- 59 pre-proposals received
- 25 invited to submit full applications
- \$54 million in total requests
 - Demonstrates a strong demand for dam safety grant funding
- Future Funding
 - \$28.2 million from PA 53
 - \$25 million from FY23 Budget
 - ~4 years at current funding levels



Brooklyn Hydropower Dam

Hazard Level: High

Project Name: Upper River Raisin Watershed Restoration and Connectivity Project

Project Type: Dam Removal

Organization Name: River Raisin Watershed Council

Location: Brooklyn, MI, Jackson County

Award Amount: \$2,532,850.00



Peninsular Paper Dam

Hazard Level: High

Project Name: Removal of Peninsular Paper Dam,
Ypsilanti, Michigan

Project Type: Dam Removal

Organization Name: City of Ypsilanti

Location: Ypsilanti, MI, Washtenaw County

Award Amount: \$3,781,654.00



Hamilton Dam

Hazard Level: High

Project Name: Flint River Restoration Project –
Hamilton Dam Removal

Project Type: Dam Removal

Organization Name: Genesee County Parks and
Recreation

Location: Flint, MI, Genesee County

Award Amount: \$1,500,000.00



Sanback Dam

Hazard Level: Significant

Project Name: Sanback Dam Removal and Stream Restoration

Project Type: Dam Removal Design

Organization Name: Huron Pines

Location: Rose City, MI, Ogemaw County

Award Amount: \$300,000.00



Albion Dams

Hazard Level: Significant

Project Name: Albion Dams Removal Project

Project Type: Dam Removal

Organization Name: City of Albion

Location: Albion, MI, Calhoun County

Award Amount: \$1,000,000.00



Carp River Intake Dam

Hazard Level: High

Project Name: Carp River Intake Dam Modifications Project

Project Type: Partial Dam Removal

Organization Name: A. Lindberg & Sons, Inc.

Location: Marquette, MI, Marquette County

Award Amount: \$473,724.00



Heron Dam

Hazard Level: High

Project Name: Heron Dam Renovations

Project Type: Dam Removal

Organization Name: Michigan DNR Parks and Recreation
Division

Location: Holly, MI, Oakland County

Award Amount: \$530,000.00



Republic Dam

Hazard Level: Significant

Project Name: Republic Dam Removal and Rock Arch Rapids Construction

Project Type: Dam Replacement

Organization Name: Michigamme River Basin Authority

Location: Republic, MI, Marquette County

Award Amount: \$750,000.00



White Cloud Dam

Hazard Level: High

Project Name: White Cloud Dam Repairs and Engineering Analysis/Feasibility Study

Project Type: Dam Repair

Organization Name: City of White Cloud

Location: White Cloud, MI, Newaygo County

Award Amount: \$222,712.00



Standish Dam

Hazard Level: Significant

Project Name: Standish Dam Rehabilitation Project

Project Type: Dam Repair

Organization Name: City of Tecumseh

Location: Tecumseh, MI, Lenawee County

Award Amount: \$425,000.00



Forest Lake Dam

Hazard Level: Significant

Project Name: Forest Lake Dam Risk Reduction Project

Project Type: Dam Repair

Organization Name: Forest Lake Property Owners Association

Location: Alger, MI, Arenac County

Award Amount: \$2,320,497.29



Tyler and Beyer Dams

Hazard Level: Tyler: Significant Beyer: Low

Project Name: Tyler and Beyer Dam Removals and Willow Run Creek Restoration

Project Type: Dam Removal

Organization Name: Washtenaw County Water Resources Commissioner

Location: Ypsilanti Township, MI, Washtenaw County

Award Amount: \$1,000,000.00



Ford Manchester Dam

Hazard Level: High

Project Name: Ford Manchester Dam

Project Type: Engineering Study

Organization Name: Village of Manchester

Location: Manchester, MI, Washtenaw County

Award Amount: \$71,060.00



Baldwin Dam

Hazard Level: Significant

Project Name: Final Design and Permitting of the Baldwin River Dam Removal Project

Project Type: Dam Removal Design

Organization Name: Conservation Resource Alliance

Location: Baldwin, MI, Lake County

Award Amount: \$115,000.00



Clarkston Mill Pond Dam

Hazard Level: High

Project Name: Clarkston Mill Pond Dam Replacement
(Phase 1 – Planning and Design)

Project Type: Engineering Design

Organization Name: City of the Village of Clarkston

Location: Clarkston, MI, Oakland County

Award Amount: \$106,000.00



Saline River Dam

Hazard Level: Significant

Project Name: Saline River Dam Removal Feasibility Study

Project Type: Engineering Study

Organization Name: City of Saline

Location: Saline, MI, Washtenaw County

Award Amount: \$192,000.00



ON THE HORIZON

Provide funding to dam owners for improvements, maintenance, and removals and for EGLE to take emergency actions when needed, including:

- **Create an Emergency Fund** in EGLE so that emergency response can be taken when there are imminent threat or significant risk associated with dams, should the owner fail to do so in a timely manner (Requested for the 2022 Budget).
 - One-time funding of \$6M in FY22 budget. Two emergency projects underway in 2023.
 - Long-term funding needed.
- **Develop a grant program to substantially enhance dam removal** based on analysis of risk and benefits to the public trust, including scoping and construction costs.
 - Grant program up and running. First awards being made now. Additional \$25 million in funding secured in FY24 budget.
 - Long-term funding needed.



ON THE HORIZON

Maintain long term adequate funding for the Dam Safety Program, including:

- **Provide additional FTEs** to EGLE to adequately staff the program and implement dam safety reforms that will improve protections to public safety, including compliance and enforcement staff.
 - Three additional FTEs added since 2021
 - Additional staff needed to implement MDSTF recommendations.
- **Develop a contract for Engineering Services** (at \$200,000 per 4 year period) to include assisting with complex and time consuming design reviews, dam inspections, construction assurance reviews for complex projects or dam removal projects, and dam reevaluations.
 - Funded from PA 53.
 - RFP under development.
 - Long-term funding needed.



ON THE HORIZON

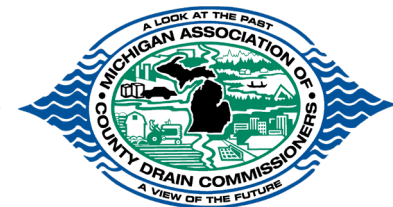
Amend Part 307 and Part 315 of the NREPA to ensure the safety of dams and protect public safety, including:

- **Update the definitions in Part 315**, including the definition of a dam, hazard classifications, and abandonment.
 - **Require dams to be licensed** every 15 years during which the dam owner must demonstrate proof of financial responsibility or remove the dam. Require all dam owners to maintain insurance sufficient to cover any and all liabilities that would result from catastrophic failure of the dam.
 - **Improve design and permitting requirements**, including frequent construction inspections, a first-filling plan, modern design flood standards, a standardized list of required analysis and report formats, third-party independent engineering reviews for complex designs, and qualifications based selection for dam design consultants.
- **Legislative action needed.**



ON THE HORIZON

- **Improve the use of Emergency Action Plans (EAP's)** at dams and statewide.
- **Improve inspections and reevaluations** to increase safety of dams, including amending inspection frequencies to “annual” for high hazard dams and “biennial” for significant hazard dams.
- **Require surveillance and monitoring plans** for high and significant hazard dams.
- **Require owners to maintain dam operation and maintenance manuals/records.**
- **Improve Safety and Security at dams**, including requirements for plans/exercises.
- **Provide authority in Part 307 of the NREPA for EGLE to order emergency drawdowns** of a court-ordered lake level, similar to Part 315.
- **Require disclosure during real estate transactions and local government approvals** if a parcel is within an inundation zone.
- **Legislative action needed.**



THANK YOU!

Questions?

