



MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

# Overcoming Obstacles: Michigan Water Resources Permitting

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## Sustainable Forestry Conference April 2023

Kayla Knoll

Water Resources Division

[knollk1@michigan.gov](mailto:knollk1@michigan.gov)

906-869-4703

# Presentation Overview

1. EGLE's regulatory authority
2. When is an EGLE permit required?
3. Part 303 - Wetlands + exemptions
4. Part 301 - Streams + bankfull
5. Permit categories
6. How to apply for a permit
7. Application Checklist



**Keep an eye out for Sally  
Permitting Pro-Tips**





# Michigan's Regulatory Authority

## **1972 - Federal Clean Water Act**

- Aims to protect and improve the quality of the country's water resources and ensure that they are safe for drinking, swimming, and other activities.
- Section 404 regulates the discharge of dredged or fill material into the waters of the United States, including wetlands.

## **1984 - State Regulatory Authority**

- Michigan became the first state to receive EPA approval to administer the Clean Water Act Section 404 Program

# Michigan's Regulatory Authority

State Authority to issue federal permits for most projects (1 vs 2)

Local staff familiar with local resources and needs

One permit application!

Faster permit decisions

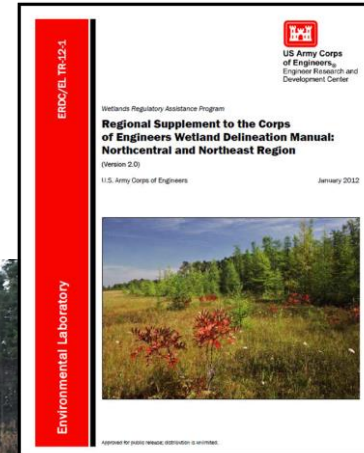
Benefits  
to  
Michigan

# Michigan's Regulatory Authority

## Part 303, Wetlands Protection

Section 30301(w) “Wetland means land characterized by the presence of water at a frequency and duration to support wetland vegetation, or aquatic life, and is commonly referred to as a bog, swamp, or marsh.”

1. Hydric Soils
2. Wetland Vegetation
3. Hydrology



# *Regulated Activities - 30304*

## A Part 303 permit is required to:



- Place fill material in a wetland
- Remove soil or minerals from a wetland
- Drain surface water from a wetland
- Construct, operate or maintain a use/development in a wetland

# Wetlands: when is a permit required?

Part 303, Wetlands Protection, provides some exemptions for forestry activities...

1. Lumbering and silviculture activities, including harvesting for the production of forest products **if...**
  - These activities shall be part of an **ongoing silvicultural operation**.
  - Minor drainage does not include drainage associated with the immediate or gradual conversion of a wetland to a non-wetland.
  - Wetland altered under this subdivision (exemption) **shall not be used for a purpose other than the purpose described in this section** without a permit from the department.
2. Construction of forest roads or temporary roads for moving forestry equipment, **if...**
  - The roads are constructed and maintained in a manner to ensure that any **adverse effect on the wetland will be minimized**.



**Sally Pro Tip: Design harvest plan to meet the exemptions!**

# Example roads that meet Forestry BMPs

## Forest Roads and Organic Soils

- Native soils are thick (15-20 in) organic muck over sand.
- Minimal fill placed over geotextile fabric.
- Allows for groundwater hydrology to move through the road fill (sand).
- Minimum width necessary to convey the equipment expected to traverse to road.
- Does not impact wetland areas outside/ adjacent to the roadbed.





# Example roads that meet Forestry BMPs

## Forest Roads on Clay and Heavy Soils

- Freeze in winter roads for seasonal harvests.
- Corduroy or matting for areas with a high-water table or prone to ponding.
- Conduct harvest during the dry season. Avoid areas that collect surface water drainage.



# Example roads that DO NOT meet BMPs

Rutting is **not exempt**



Ditch and fill roads are **not exempt**



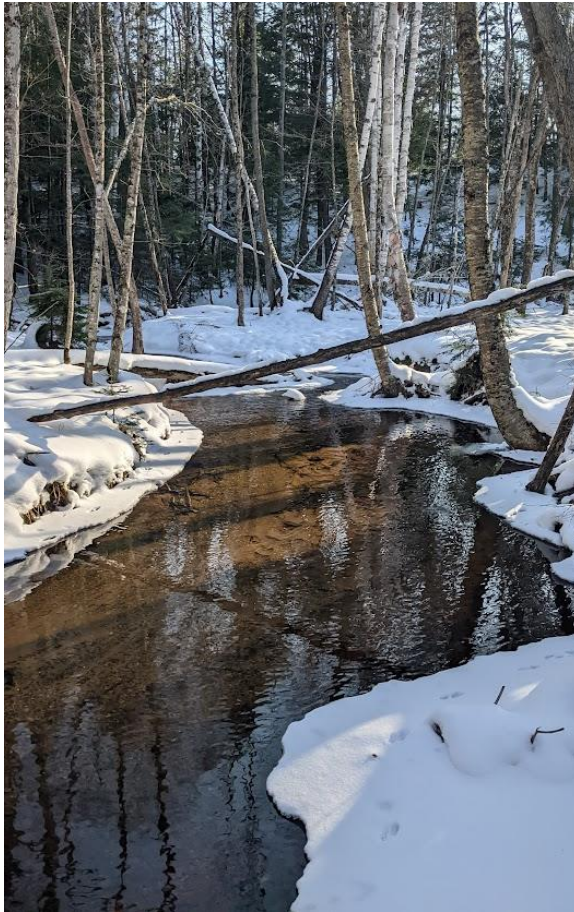


Know your environment and your equipment



# Michigan's Regulatory Authority

## Part 301, Inland Lakes and Streams



A stream is a natural or unnatural channel (this includes drains and ditches) that has definite **beds**, **banks** and **visible evidence of continued flow** or continued occurrence of water.

1. Bed
2. Banks
3. Visible evidence of continued flow

# Stream Crossings: when is a permit required?

## **ALL stream crossings require a permit!**

- Not all regulated streams flow throughout the year.
- Ephemeral streams are regulated in Michigan and require permits that address the stream's structure and intermittent flow.



# What's wrong with this crossing?



# Stream Crossings Fundamentals

- Goal is for the crossing to have no impact on the stream.
- In general, a bridge is less impactful than a culvert and a temporary bridge is least impactful.
- All crossings must span AT LEAST bankfull.
- Clear span bridge must span 1.2x bankfull width.

# Bankfull

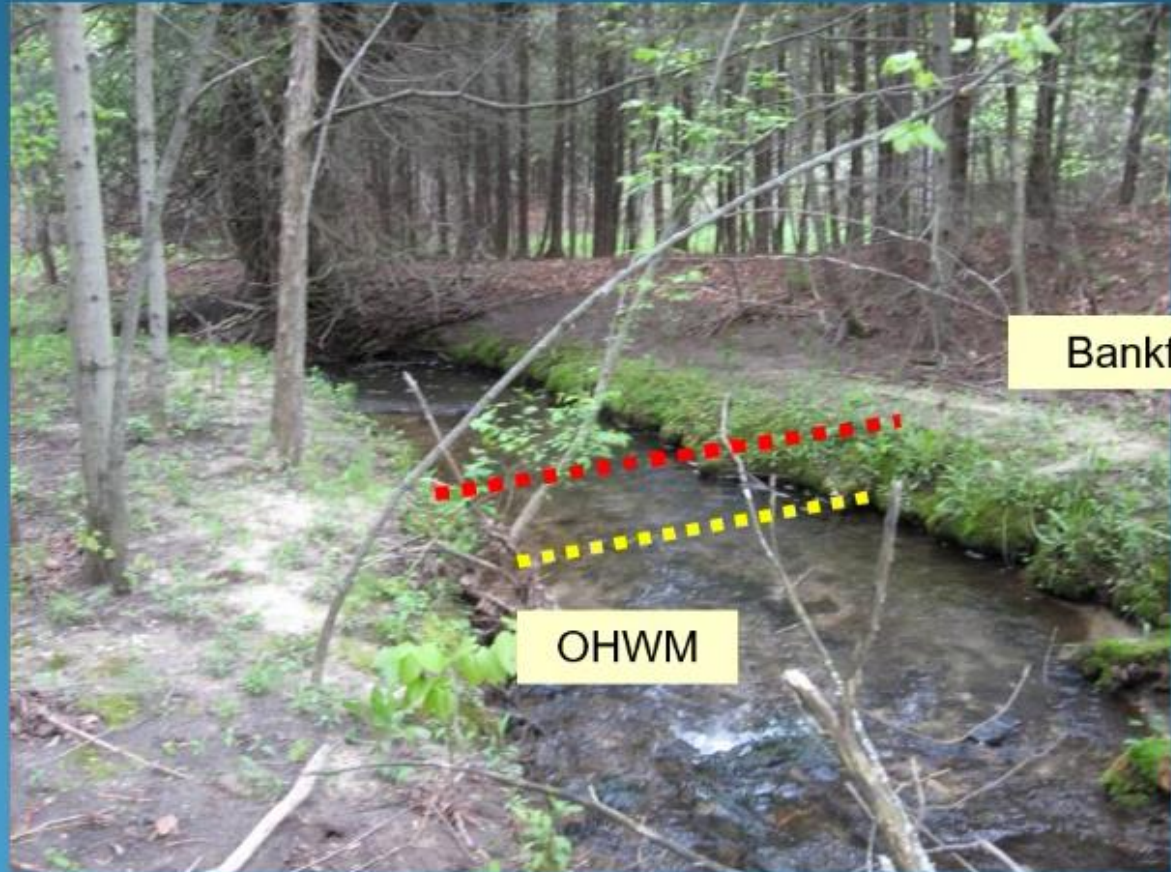
- Bankfull stage is the elevation where water fills the channel and just begins to overflow onto the floodplain.
- Measure the bankfull width from that **point of inflection (where slope flattens)**, over to where it meets the opposite bank.





# Bankfull vs. Ordinary High-Water Mark

- Bankfull features are tied to a specific, recurring flow.
- OHWM is a lower elevation than Bankfull
- Stream energy usually lower at OHWM; does not form channel
- OHWM is a regulatory line
- Bankfull is basis for natural channel dimensions



Similar in width on some stream types (narrow, deeper); more different on others (wider, shallower, meandering)

# Measuring Bankfull Width for Culverts

(after finding a consistent BF elevation)



- Measure bankfull width in the middle of a riffle (narrowest part of natural stream)
- No riffles (sand bed stream) = measure in straight runs at narrowest part
- Do not measure width at pools/bends (widest part of natural stream)
- Measure width at multiple riffles
- Away from the influence of structures (culverts, bridges, outfalls, pipes, log jams, etc.)
- Use field indicators or, if none available in the riffle, use the bankfull height above water surface

# Common Bankfull Field Indicators

Physical evidence of the location of the water surface at the bankfull discharge

## Primary

- Change in bank slope – flowing onto a floodplain
- Deposition and depositional features – silt, sand, debris, point bars, small benches
- Change in particle size – from coarse to fine

## Secondary

- Scour line – exposed roots
- Vegetation – absence of woody, perennial vegetation (use caution)



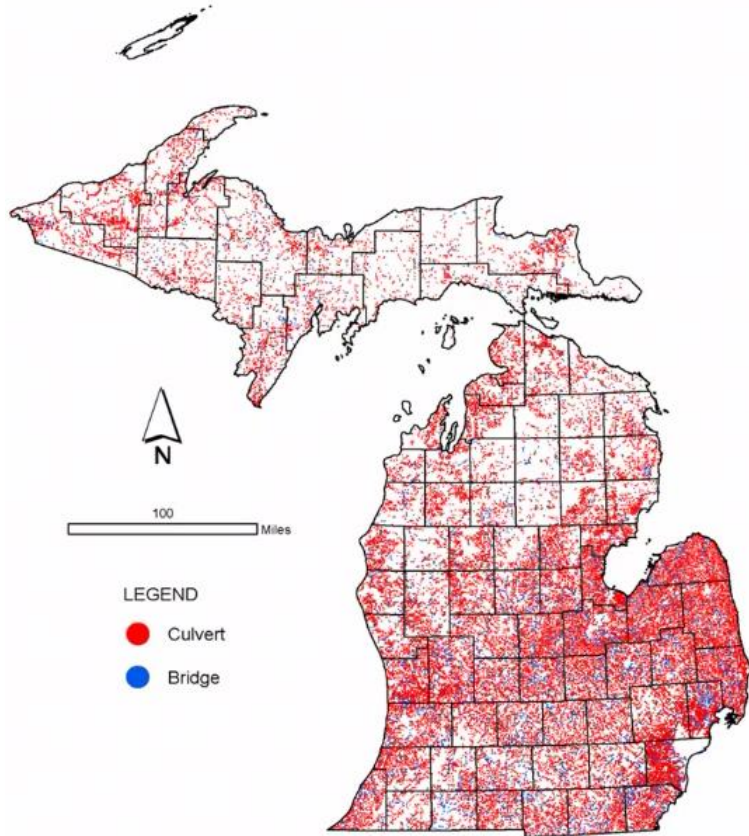
# Bankfull Examples



Slope break to flat floodplain;  
no higher feature

# Bankfull - Why Care?

## ROAD/HYDROLOGY INTERSECTIONS



Road Stream Crossings = 67,511

Culverts = 60,700

Bridges = 6,811



With all the stream crossings in Michigan, undersized culverts have the potential to cause large scale impacts to:

- Hydrology
- Sediment transport
- Fish and wildlife passage
- Movement of woody debris

# Bankfull - Why Care?

Undersized culvert on Bismarck Creek Tributary May 2022



# GP/MP Categories for Forestry Operations

The WRD has a many permit categories that are designed to meet the project needs of the forestry industry:

## General Permits - \$50

- Clear Span Bridge – (must span 1.2x bankfull)
- Culvert & Bridges - Small (<30-feet in length)
- Removal of Structures (log jams, beaver dams, old culverts, etc.)
- Snow Road Stream Crossings for Forestry Operations

## Minor Projects - \$100

- Culverts & Bridges -Large (>30-feet and <100-feet)
- Ford Stream Crossings for Commercial Forestry Operations



**Sally Pro Tip: design project to meet GP/MPs!**

# General Permit and Minor Project Categories

Temporary Clear Span Bridge (portable bridge) →  
**Preferred crossing for forestry operations**

Benefits:

- Quickest permit review
- \$50 application fee
- Bridges are reusable!
- No maintenance required; no clogging by beavers



**Sally Pro Tip: use temporary clear span bridges whenever feasible!**

## C. Clear Span Bridge

Category applies to:  Part 31, Floodplain Regulatory Authority  
 Part 301, Inland Lakes and Streams  
 Part 303, Wetlands Protection  
 Part 325, Great Lakes Submerged Lands

New or replacement clear span bridges on streams that meet all of the following:

- Any abutments or foundations must be placed a minimum of 1.2 times the bankfull width.
- The lowest bottom beam elevation is at or above the natural ground elevations on either bank and spans the entire bankfull width.
- No filling or dredging in the bankfull channel or adjacent wetlands is included in this category, unless approved by EGLE based on site conditions.
- The structure will allow passage of watercraft that could be expected to navigate the water involved.
- The bridge shall be anchored to prevent floatation during periods of high water.
- Placement of up to 500 square feet of fill per bridge in wetlands associated with the stream crossing to facilitate placement of the bridge abutments.



# How to apply for a permit?

## MI Enviro Portal

Web-based application for managing permitting, compliance, and preapplication requests

### Steps:

1. Create an account
2. Click “Start a new form”
3. Click “I want to start a new application”
4. Type JPA in the filter box. Select “EGLE/Joint Permit Application”
5. Click “Begin” and provide the information requested
6. Upload requests documents including location map, detailed site plan and cross sections, authorization letter
7. Submit Payment
8. Correction requests are sent from EGLE staff through the portal



# What to include with the application?

- Authorization letter
- Summary of proposed activities
- Alternatives analysis
- Bankfull stream width measurements
- Slope
- Location map
- Plan and cross-section view maps of existing and proposed conditions
- Photographs
- Spoils disposal location map



**Sally Pro Tip: Complete applications = faster permit processing**

# Pro-Tips Summary

- Plan and design timber harvest to follow BMPs and meet exemptions under Part 303
- Design project to meet GP/MPs
  - Crossings must span at least bankfull
- Use Temporary Clear Span Bridges!
- Complete permit applications = faster processing



# When in doubt... contact WRD



Free office or virtual pre-application meeting to discuss the location, design and methods of your proposed road construction and harvest.



We can discuss details of the exemptions to ensure that your project design does not require permitting.



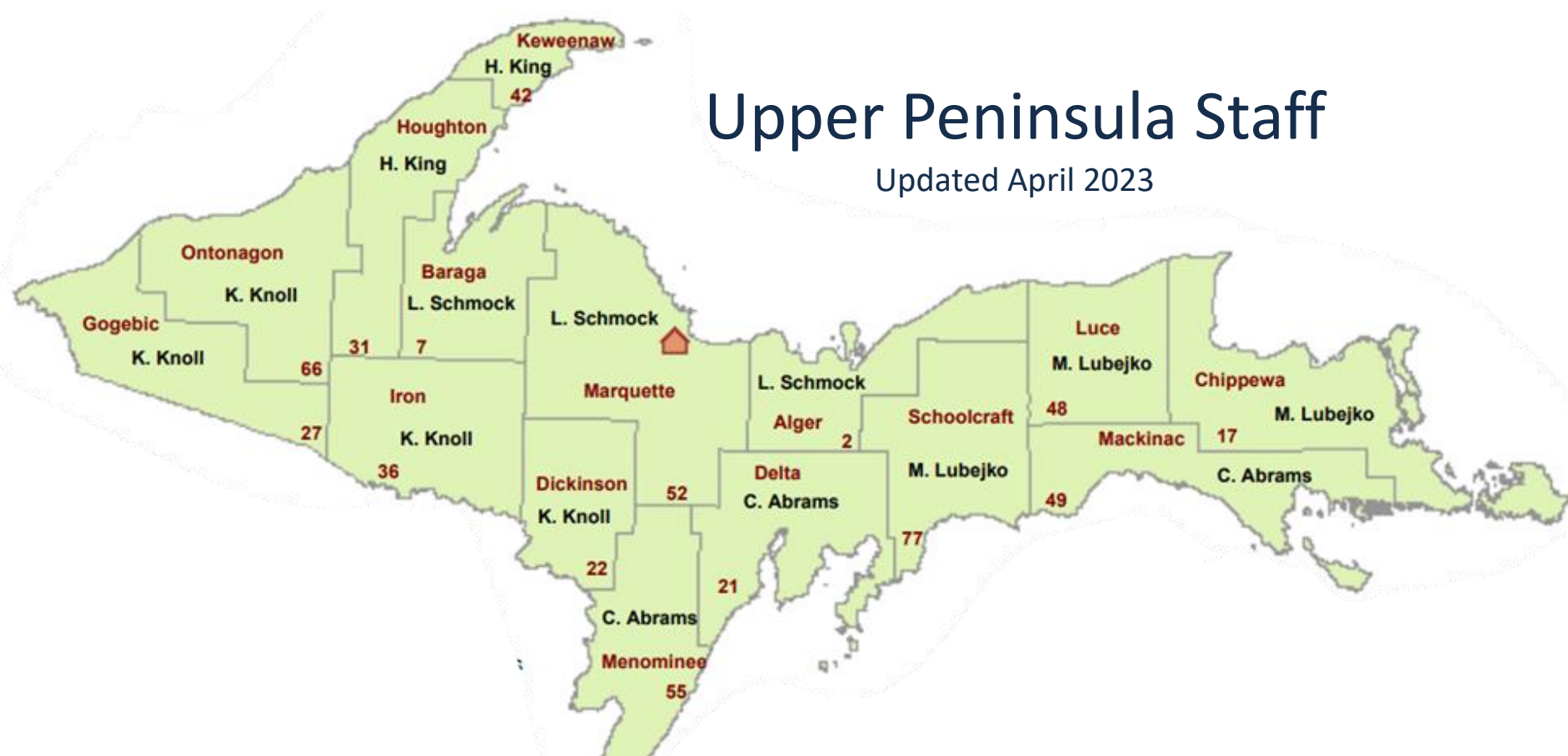
Talk about what permits may be necessary and what information will be needed with an application.



On-site pre-application meeting to review your site and discuss alternatives to meet exemptions or permit categories.

# Upper Peninsula Staff

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Staff	Phone	Email
Cassie Abrams	906-869-0745	AbramsC1@michigan.gov
Kayla Knoll	906-869-4703	knollK1@michigan.gov
Hunter King	906-235-4537	kingH@michigan.gov
Matt Lubejko	906-250-3115	LubejkoM@michigan.gov
Larissa Schmock	906-250-6176	SchmockL@michigan.gov

Questions?

