

Typical Permitting Challenges (Culvert Projects)

Brad Knight, Director

*Planning & Environmental
Concerns/Information Technology
Department*



Permitting Challenges for a Culvert Project

- EGLE Permitting & Compliance
- Section 106 Clearance
- Threatened & Endangered Species

EGLE Permitting - Challenges



Previously installed culverts and other drainage structures were designed prior to modern environmental regulations such as stream, lake, and wetland impacts.



Culvert replacements often require significant changes to the stream environment.



Common issues during culvert replacement include expanding to bankfull width, alignment, elevation (perched or buried culverts), and scour/erosion issues.



EGLE Permitting - Solutions

- Early Coordination:
 - Schedule a Volunteer Preliminary Review (VPR) as early as possible. This can be done through the MiEnviro Portal.
 - The VPR will formally establish all environmental requirements for your project.
 - Identifying required changes can help engineers create acceptable designs, reducing the likelihood of delays.
- Alternative Solutions:
 - Sheet pile head walls and steeper slopes can minimize aquatic resource impacts.
 - Reduced impacts means fewer mitigation requirements.
 - Example: Minimizing wetland impacts can be a significant saving, as wetland mitigation can cost upwards of \$100,000 per acre.

MDOT LAP Section 106 Clearance - Challenges

- Projects that include ground disturbance often require a Section 106 review
 - This includes the use of heavy machinery outside the existing road footprint
- Culvert work is always within and/or adjacent to streams/rivers
 - A stream environment is more likely to be archeologically sensitive
- Biggest challenge: Timing of MDOT cultural reviews are not in sync with the design process.
 - The cultural review team requests design information 12 – 18 months prior to grade inspection (GI). This is very difficult to provide for most projects.



MDOT LAP Section 106 Clearance - Solutions

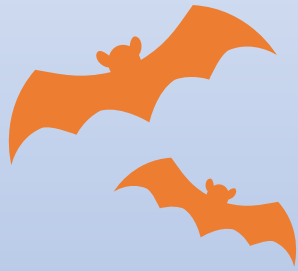
Early Coordination & Communication with LAP Historian and Archeologist

- Early communication with MDOT cultural team on projects that require significant ROW acquisition or significant excavation need.
- A pre-screening application was launched in November 2024. Pre-screening may determine if your project area is adjacent to sensitive areas.
- Incorporate this information into design plans to avoid sensitive areas where possible.
- It is recommended to take reasonable action to avoid survey if possible.

Provide Documentation of Previously Disturbed Ground

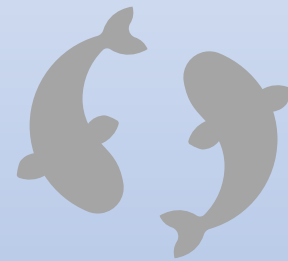
- Existing culvert replacement in Southfield MI that was adjacent to known sensitive areas.
 - Archeological survey was avoided by providing the location of all existing underground features and associated excavations within the culvert work area.

Threatened & Endangered Species - Challenges



Habitat & Tree Removal

Federal and State regulations protect species such as the Indiana Bat and migratory birds.



Work within an Aquatic Environment

Federal and State regulations protect species such as the Snuffbox Mussel or fish spawning habitat.

Threatened & Endangered Species – Tree Removal Solution

Bundling common actions across your region can minimize cost and streamline seasonally restricted actions.

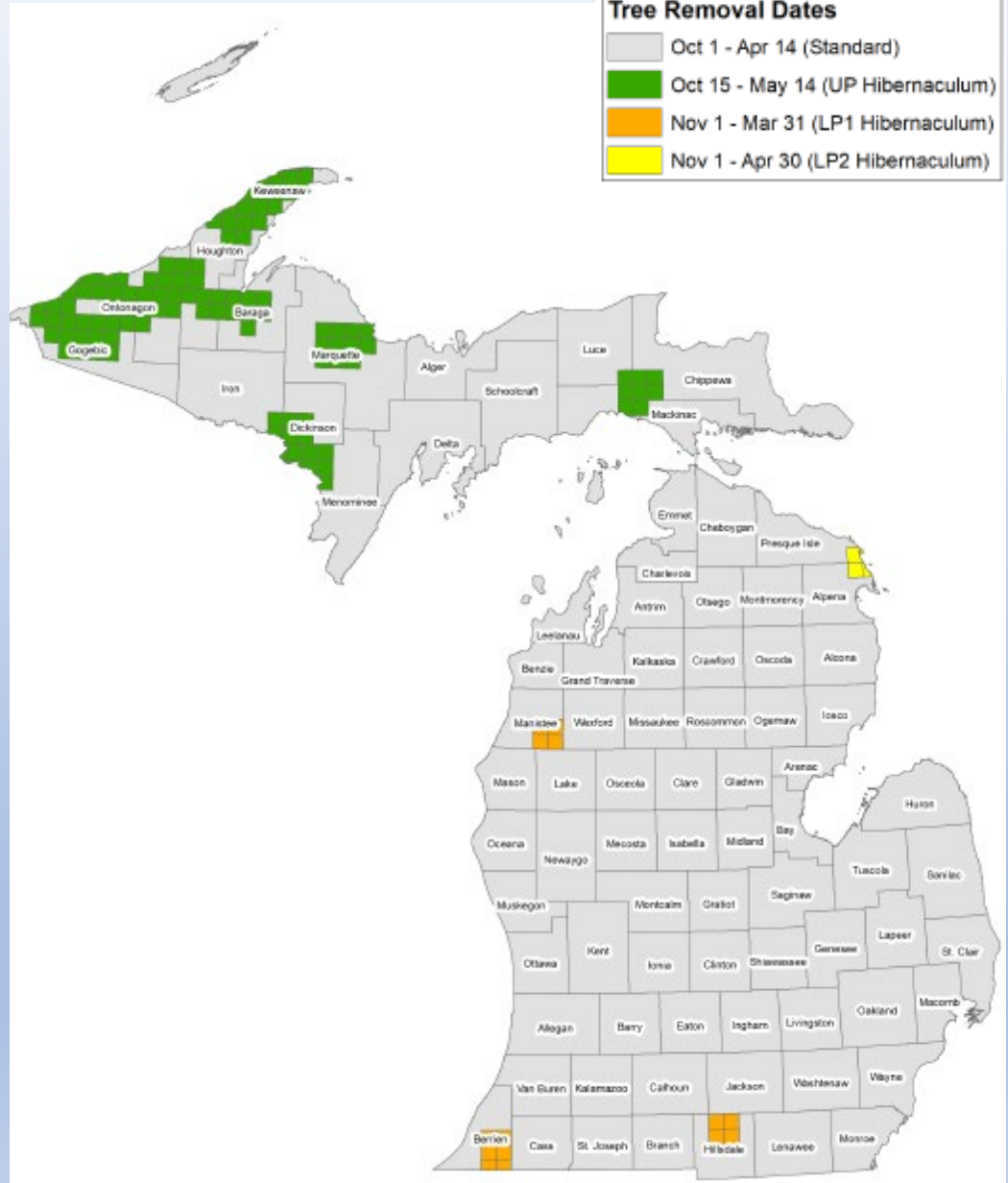
- Complete all tree clearing between October 1st through April 14th (if in the Standard zone).
 - This also ensures you are following the migratory bird rules: no tree clearing from April 15th through August 15th.
- Bundling all anticipated tree removal actions into a single contract will ensure your tree clearing is completed during the approved timeline and may reduce overall costs.
- Utilizing MTF funds for tree clearing activities is another strategy to ensure removals occur in during the appropriate timeline.

Legend

Statewide Federal Bats

Tree Removal Dates

- Oct 1 - Apr 14 (Standard)
- Oct 15 - May 14 (UP Hibernaculum)
- Nov 1 - Mar 31 (LP1 Hibernaculum)
- Nov 1 - Apr 30 (LP2 Hibernaculum)



Threatened & Endangered Species – Mussels Scenario

Project Scenario: Culvert construction is scheduled for Summer 2026

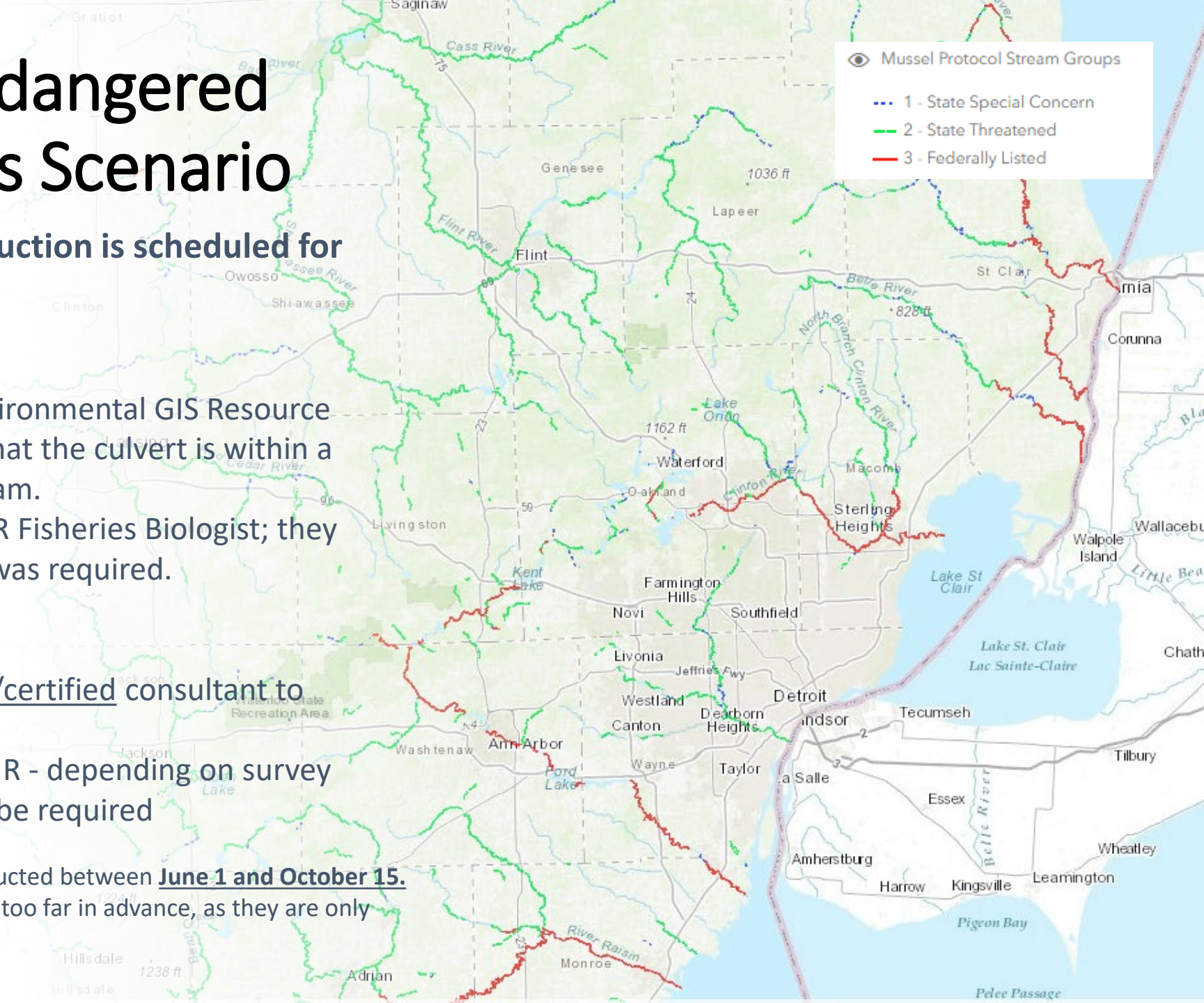
November 2024

- Checked the MDOT Dynamic Environmental GIS Resource (DEGR) online mapper to learn that the culvert is within a designated Mussel Protocol Stream.
- Coordinated with the local MDNR Fisheries Biologist; they concluded that a mussel survey was required.

June 2025

- Will hire a qualified & permitted/certified consultant to conduct a mussel survey
- Will share the findings with MDNR - depending on survey results, a mussel relocation may be required

Notes: All surveys & relocations must be conducted between **June 1 and October 15**. Do not complete the survey and/or relocation too far in advance, as they are only valid for approx. 3 years.



Summary

Utilize available resources to anticipate potential environmental issues

Early consultation at the federal and state level is essential to avoid project delays

Summary – Resources

- **MiEnviro Portal:** <https://www.michigan.gov/egle/maps-data/mienviroportal>
 - Use the portal to schedule your VPR and request State-specific protected species
- **MDOT DEGR Map:** <https://milogintp.michigan.gov/mdot-degr/degr/>
 - Use the MDOT mapping resource to learn about protected resources such as: T&E species, parkland, air quality, wetlands, cemeteries, historic sites, and other protected lands.
- **Michigan Wetland Mapper:** <https://www.michigan.gov/egle/maps-data/wetlands-map-viewer>
 - Provides cursory-level information about the presence of wetland indicators at your site
- **MDNR Fisheries:** <https://www.michigan.gov/dnr/managing-resources/fisheries/units>
 - This DNR resource can provide cursory-level information about protect fish habitats.

Summary – Coordination

- MDOT LAP Program: <https://www.michigan.gov/mdot/business/local-government/local-agency-program>
 - Contact your LAP program representative for more information regarding the environmental and cultural clearance process and begin discussions right away
- USFWS: <https://www.fws.gov/office/michigan-ecological-services>
 - The USFWS has a Michigan Field Office dedicated to providing consultations for federally funded projects.
- MDNR: <https://www.michigan.gov/dnr/managing-resources/fisheries/units>
 - Visit the DNR website to learn with fisheries management unit your project is in and reach out to schedule consultation as needed