

Threatened & Endangered Species and T&E Habitats Encountered during Road and Bridge Projects



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Project Review for T&E Mussels



Michigan Mussel Protocol

“Michigan Freshwater Mussel Survey Protocols and Relocation Procedures”

- Joint effort from FWS, DNR, MNFI, MDOT, DEQ
- Official roll-out of **maps, regulatory agency staff direction, outreach, etc.**, are forthcoming.



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Michigan Mussel Protocol

Development of Stream Groups
representing stream segments
known to support populations of
rare mussel species.

- Element occurrence (EO) data
- Species distribution model

Purpose of Stream Groups

- Determine the required level of effort.
- Survey/Relocation authorization process...
 - FWS or DNR Fisheries



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Stream Groups

Group 1:

- Stream and segments known to support mussels considered to be **special concern** by the **state**.

Group 2:

- Stream and river segments known to support populations of **state threatened and endangered** mussels.

Group 3:

- Stream and river segments known to support populations of **federally listed** mussels.

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Stream
Group 3



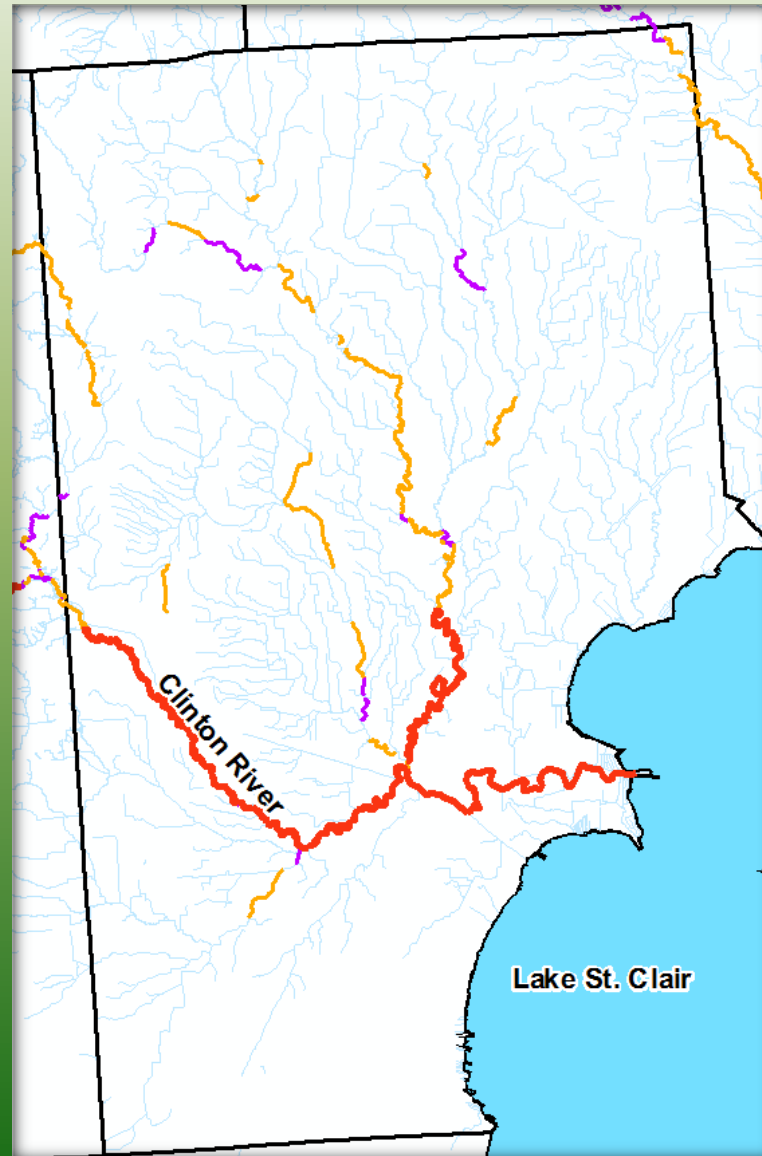
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A Closer View...

Macomb County

Stream Group map data may also be made publically available.



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What's this mean for DEQ *resource* permitting?

DEQ MP and GP Categories/Activities where No Required Review for T&E Mussels (draft)

Examples:

- small culverts
- clear-span bridge

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What's this mean for DEQ resource permitting?

DEQ MP and GP Project Categories that Require Review from DEQ, *and possibly DNR, FWS*

Example MP/GP Categories (draft):

- large culverts
- temporary construction access/dewatering



Initial screening by DEQ should include:

- consideration of **Stream Groups** per the “Protocol”
- **previous survey effort** within the project area
- **reconnaissance survey** by DEQ or qualified individual

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What's this mean for DEQ resource permitting?

DEQ Application Processing

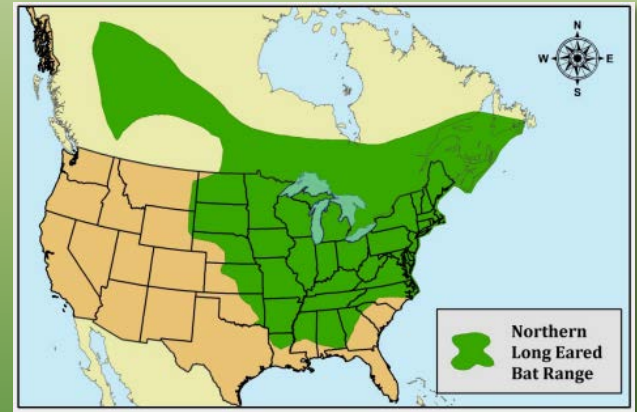
- If initial screening indicates **federally listed mussels are *likely present***, then the permit application will be **Red-Filed**.
 - During the Red File process, DEQ, FWS, and applicant will discuss necessary survey effort and appropriate process under the Endangered Species Act to authorize relocation activities.
- If initial screening indicates **state listed mussels are *likely present***, then the permit application will be **Public-Noticed**
 - **PN to DNR Fisheries Division staff and Wildlife Division staff.**
 - During the Public Notice process, DEQ, DNR, and applicant will discuss necessary survey effort and relocation plan.



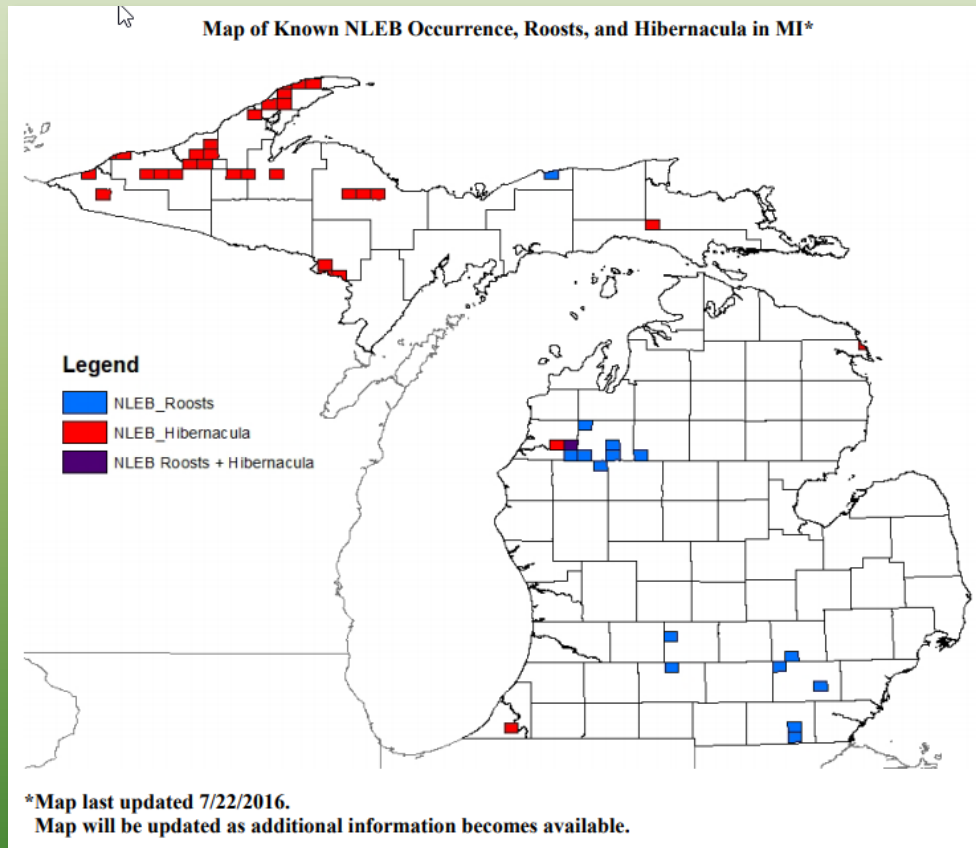
Northern Long-eared Bat

(US Listed T, with 4(d) Rule)

- Wide Range
- All maturing hardwood forest types.
- Roost cavity “generalist”.
- Species is US Listed primarily because of white-nose syndrome (WNS)
- *No major threats to habitat.*



Northern Long-eared Bat



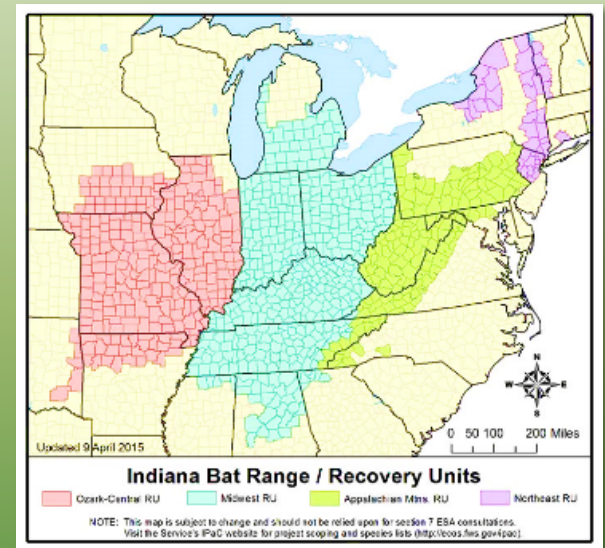
- Check FWS ELFO website to see if project is in a township with NLEB hibernaculum.
- Check FWS ELFO website to see if a tree removal project is in a township with known NLEB roost tree(s).

<https://www.fws.gov/midwest/eastlansing/te>

Indiana Bat (US Listed E)



- Southern Michigan (and southward).
- Prefers riparian, open, hardwood forests.
- Prefers roosting under loose bark (*not* typically in other types of cavities such as hollow areas).
- Originally Listed because of threats to habitat.
 - *Was* making a recovery.
 - Now has to deal with WNS.



Indiana Bat (US Listed E)

Tree cutting in suitable I-bat Habitat?

Open hardwood understory, loose bark.

If so, then...

- DEQ can condition permit to **prohibit tree removal during “warm” season** (April 1 – Sept. 30). *Or*, DEQ will **Red File** the project.

Eastern Massasauga



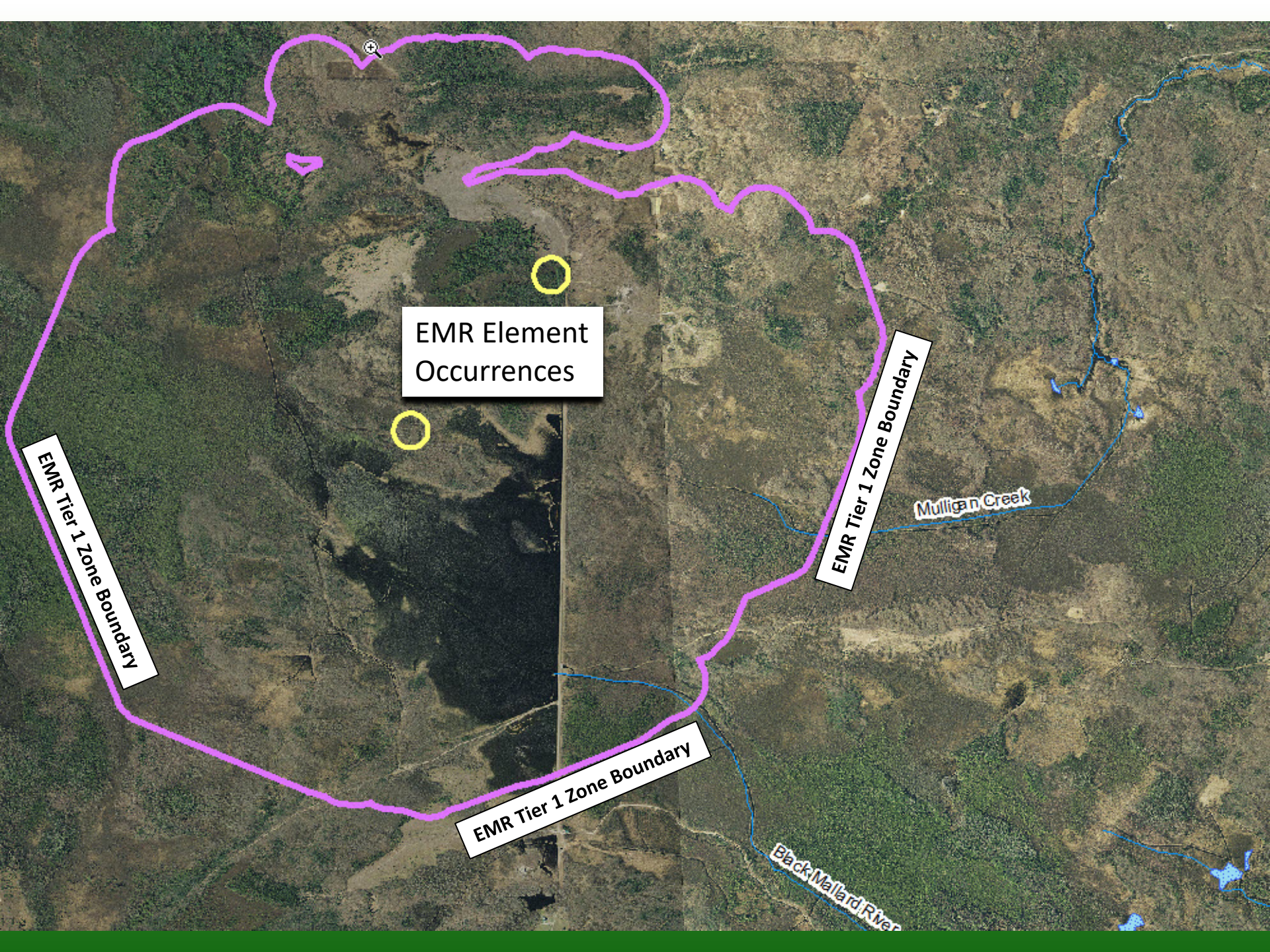
Special Procedures for a Federally Listed Reptile

Tier 1 zones:

- Areas *known* to be occupied by EMR or *highly likely* to be occupied by EMR based on high potential for EMR habitat and *proximity to known occupied sites*.

Tier 2 zones:

- Areas that *likely* have potential habitat and *may* be occupied by EMR.



EMR Element Occurrences

EMR Tier 1 Zone Boundary

EMR Tier 1 Zone Boundary

EMR Tier 1 Zone Boundary

Mulligan Creek

Black Mallard River

EMR Best Management Practices

General BMP Examples

FWS typically require these for projects within a Tier 1 zone. Added as “conditions” to DEQ permit.

- **Wildlife safe materials** for erosion control and site restoration.
- Require **reporting of any EMR observations** during project implementation to USFWS within 24 hours.



EMR Best Management Practices

Activity Specific BMP Examples

FWS may require these, depending on project type...

Added as “conditions” to DEQ wetland/stream permit.


- **Ditching and ground disturbance work only in warm months when snakes can escape.**
- When **grading** during active (warm) season
 - Use **exclusionary fencing**
 - Exclusionary fencing areas first **“cleared” by qualified individual.**

Federally Listed Endangered and Threatened Species

Federal Critical Habitat

Three Species in Michigan




 Hines Emerald Dragonfly



 Piping Plover



 Poweshiek Skipperling



Other Federal-listed Species:



Karner Blue



Southern Lower Peninsula



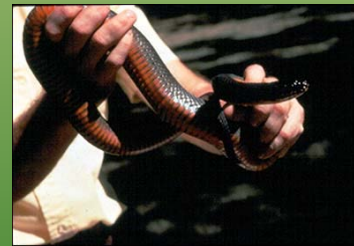
Prairie White
Fringed Orchid



Kirtland's Snake



Mitchell's Satyr



Copperbelly
Water Snake

Other Federal-listed Species:



Straits and
Tip-of-Mitt



Houghton's
Goldenrod



Michigan
Monkey Flower



Dwarf Lake Iris

State-listed Species



Throughout Michigan



Lake Sturgeon, T



River Redhorse, T



Merlin, T



Red-shouldered Hawk, T

State-listed Species



Throughout Lower Peninsula



Cerulean Warbler, T



Ginseng, T



Henslow's Sparrow, E

State-listed Species



Southern Lower Peninsula



Blanchard's
Cricket Frog, T



Orange
Fringed
Orchid, E



Goldenseal, T



Spotted
Turtle, T



White Lady
Slipper, T



Cup Plant, T

State-listed Species



SE Lower Peninsula



Eastern Lower Peninsula



Eastern Fox
Snake, T



Channel
Darter, E

State “Listed” Rare Communities



Bog / Muskeg



Fen
(many types)



Floodplain Forest



State “Listed” Rare Communities



Southern
Hardwood
Swamp

Hardwood
Conifer Swamp

Rich Conifer
Swamp



State “Listed” Rare Communities



Mesic Prairie



Lakeplain Wet-mesic Prairie



Mesic Sand Prairie

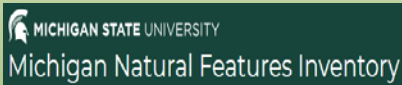


Dry Sand Prairie

Resources



Ecological consultants having experience with T&E habitat investigations.



MNFI has consulting services and offers subscriptions to element occurrences (EO) database. Natural community and T&E species abstracts and information *online, free-of-charge*.



USFWS IPaC - Information for Planning and Consultation



DEQ will screen for T&E during permit application process.



DNR Fisheries “local” biologists will often respond to direct inquiries regarding potential impacts to a species at a potential project site. DNR is also responsible for the actual *T&E permitting* (e.g., permit to *move* a colony of T&E plants).

Questions?

