

Endangered Plant Species



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Protecting Michigan's Threatened/Endangered Plant Species

- Currently in Michigan there are approximately 425 listed plant species
 - Endangered - In danger of becoming extinct
 - Threatened - Very rare
 - Special Concern - Rare or declining populations

MDOT ROW contains 52 listed plants in 18 different plant communities at over 700 known locations



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What are the Legal Protections for Listed Plants

- Endangered plants are protected from “take” by the state/federal Endangered Species Acts
- Take is defined as “to collect, pick, cut, dig-up, or destroy in any manner”
- The U.S. Forest Service maintains a list of “sensitive plant species” for lands they manage



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Regulatory Agency Coordination



- **State Regulation - MDNR**
 - Natural Resources Environmental Protection Act
 - Part 365 – Endangered Species Act
 - 3-4 months MDNR Permit

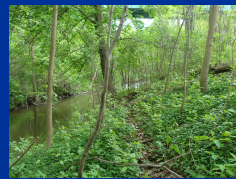


- **Federal Regulation - USFWS**
 - Endangered Species Act of 1973 as amended
 - Informal Section 7 Consultation
 - 1-2 months Letter Concurrence
 - Formal Section 7 Consultation
 - 8-20 months Biological Assessment

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Work Areas with the Highest Impacts

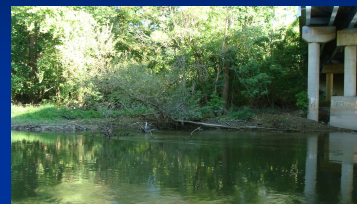
- Within MDOT's ROW, these plant communities tend to contain most of the listed plant species:
 - Prairies
 - Wetlands
 - Rivers/floodplains
 - Forested habitats
 - Open sand dunes
 - Coastal wetlands
 - Oak savannas



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High Risk Work Types

- Bridges over water
- Scour/rip-rap
- Ditch cleanouts
- Culverts
- Hydrology changes
- Protected Areas



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High Risk Work Types

- Backslope grading
- Additional ROW
- Guardrail upgrades
- ROW fencing
- Tree and shrub cutting
- USFS and MDNR lands



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Projects, Plants and NEPA...

- First Avoidance
 - Protective fencing
 - Work restrictions
 - Seasonal restrictions
- Second Minimization
 - Change design
 - Construction options
- Third Mitigation
 - Transplanting
 - Habitat restoration/plantings
 - Control of invasive species
 - Follow-up monitoring



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Project Example

I-75 Bridge over the River Raisin

- Substructure repair
- Beams/pier/abutments
- Deck patch/paint
- Pin/hanger/joints
- Scour countermeasures

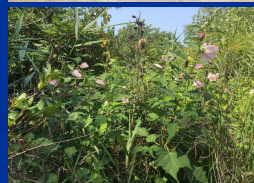
6 species known in area
2 season survey required
Fast timeline (2019 const)



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Species Present

- Water Willow
 - 3000+ plants
 - State Threatened
- Cup Plant
 - 100 plant in 2 clumps
 - State Threatened
- Swamp Rose Mallow
 - 100's in wet ditch
 - State Special Concern



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Impact Analysis

- Coordination between design and construction
- Mapping of species and habitat over plans
- Coordination with construction staff
 - Equipment needed
 - Const alternatives
 - Site access



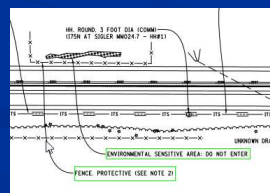
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Avoidance

- Design changes
- Protective fencing
- Signage
- Special Provisions
- No work in wetlands



We still had impacts under the bridge...MDNR permit required



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Minimization

- Equipment alternatives
- Construction methods
- Minimize access corridor (30 ft to 15 ft)
- Eliminate scour work
- Ground protection SP
- Fencing/signage

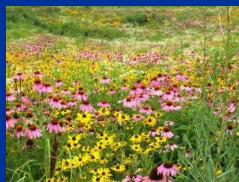
We avoided 700 plants



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Typical Mitigation Measures

- Transplanting
- Seed collection
- Stockpiling topsoil
- Habitat restoration
- Habitat creation
- Invasive monitoring



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Questions..?
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