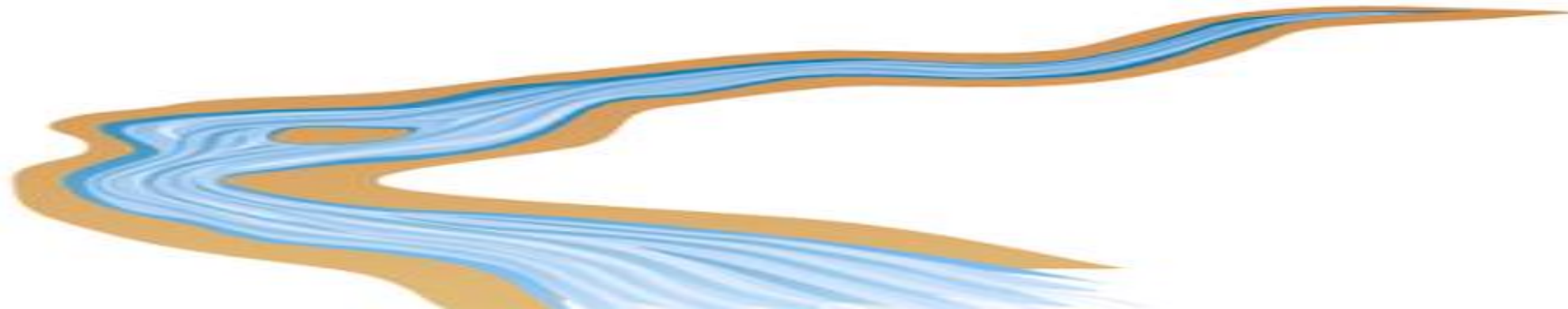


MOCO LCD 2021 Stream Crossing Assessment

Mykel Yancey and Lily Adams

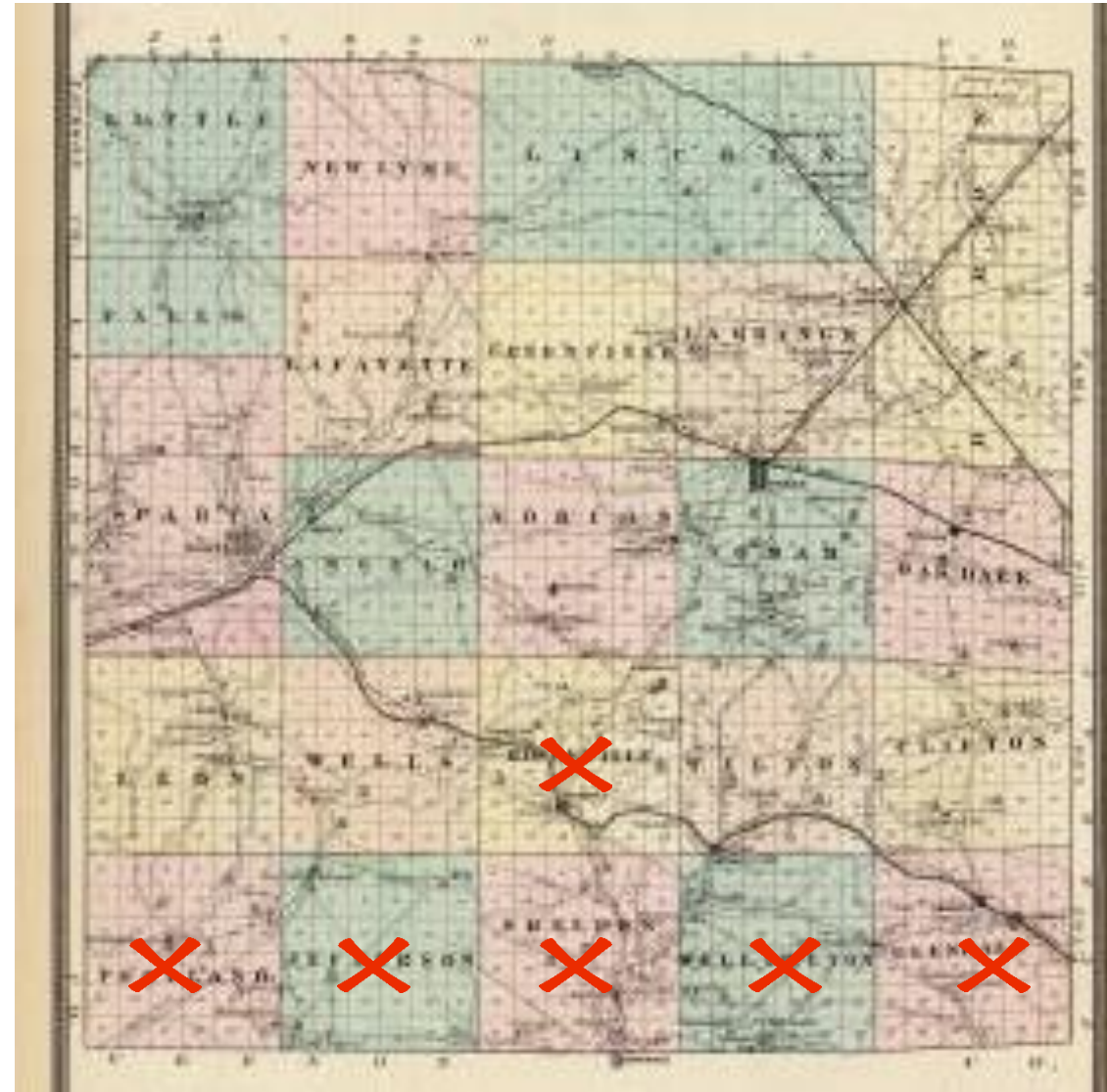


Meet the Crew



Our Mission

- Using ArcGIS software, conduct assessments of all water crossings in the Southern townships (highest rate of damage from 2018 and 2019 flood events) to help delegate areas of destruction in highest need of reconstruction
 - Portland, Jefferson, Sheldon, Wellington, Glendale, Ridgeville, Wells, and Leon





ArcGIS

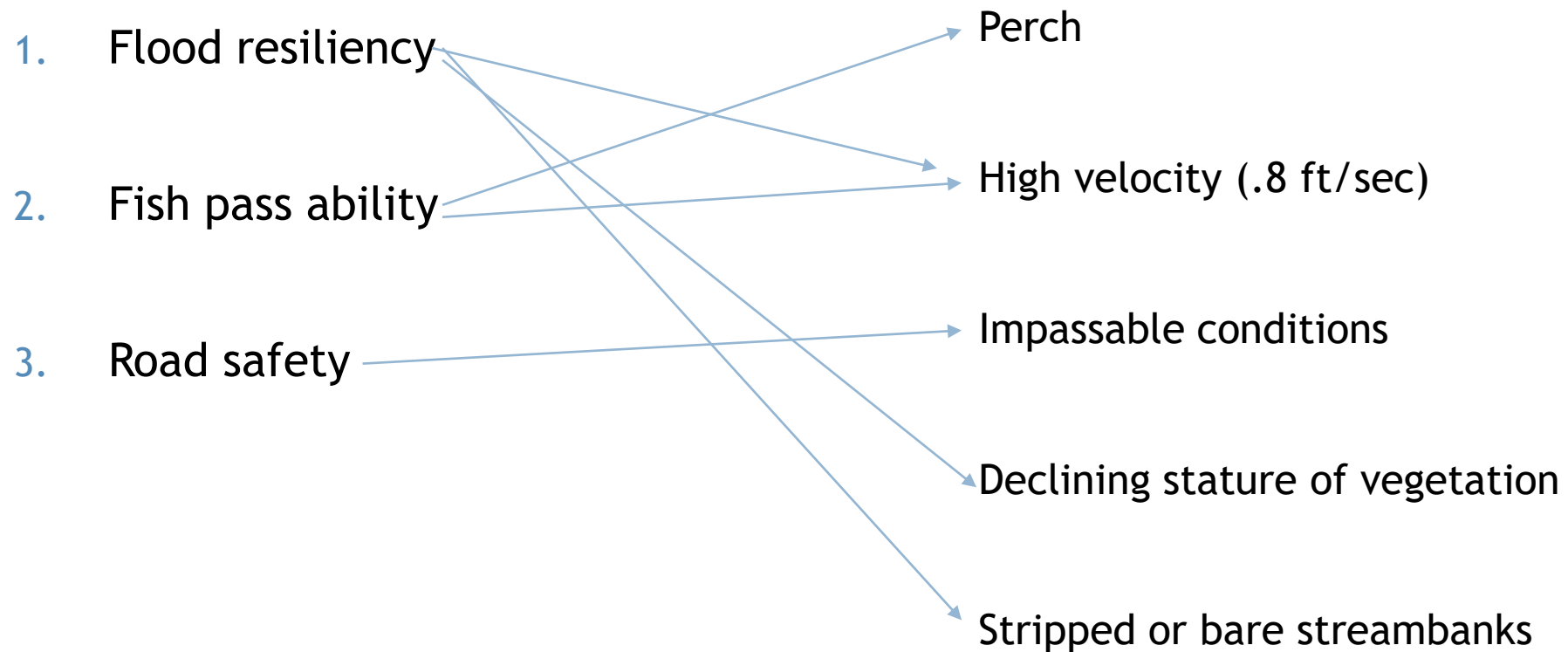
About ArcGIS

This feature class is an inventory of stream crossings, culverts, and bridges in the Great Lakes Region. Data gathered and contained in this feature class is based on the Great Lakes Stream Crossing Inventory Protocol.

- Developed by Michael Rubley, and the Michigan Department of Natural Resources
- With this site, we are able to look at a general percentage of **aquatic passability, flood resiliency, sizing standards, buried depth standards, crossing conditions, and site erosion.**



Our Biggest Concerns



General Findings

- 29.65% of structures surveyed are barriers
- 20.70 tons of erosion per year
- 39.93% of structures are undersized according to the sizing standards
 - Minimum size: 1.2 times bankfull width
 - Ideal size: 1.2 times bankfull width plus 2 ft.
 - Bankfull width calculated at representative reach





Stream Crossing Dashboard

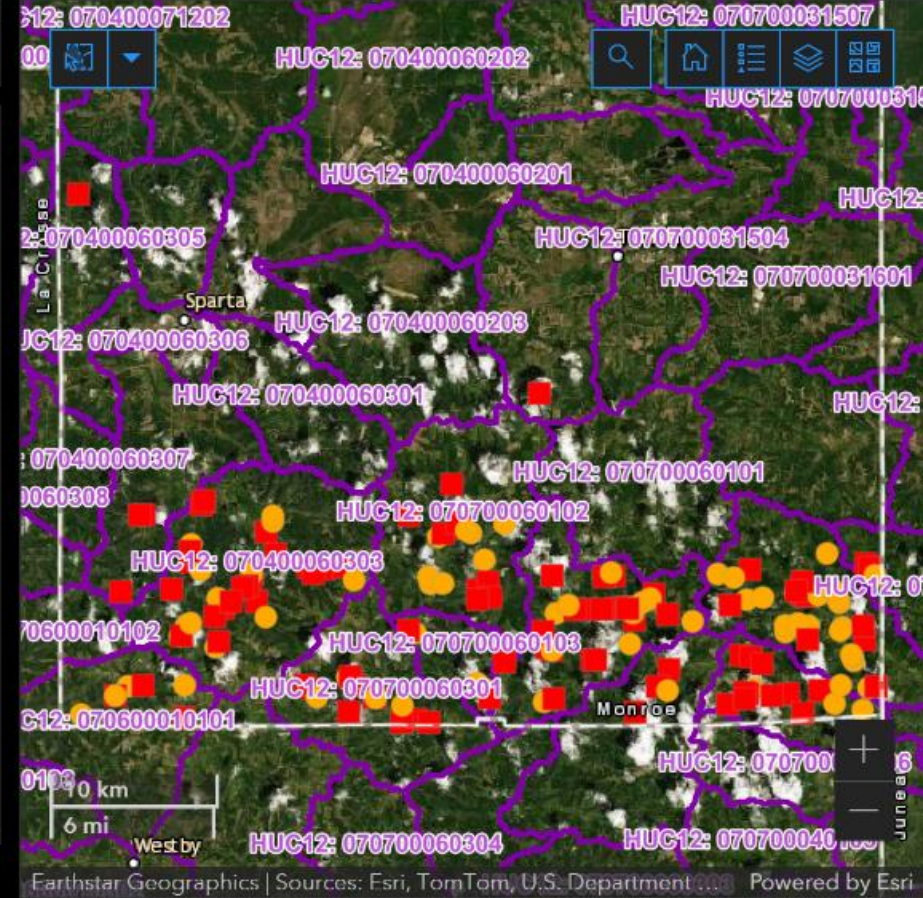
Select State
No category selected

County
None

172

1

20.69
Tons/Yr



Stream Crossing List
(Select Sites from List to view photos and Additional Erosion Information)

- Minnesota:
- Poe Creek:
- Unnamed:
- Unnamed:
- Unnamed:
- Unnamed:
- Baraboo River:
- Unnamed:
- Moore Creek:
- Moore Creek:
- Moore Creek:
- Moore Creek:
- :
- Unknown:
- :
- :
- :
- :
- :

Last update: a minute ago

Stream Crossing :
Time Sensitive Maintenance Needs:

Additional Site Comments:

Select Site From Stream Crossing List

Last update: a minute ago

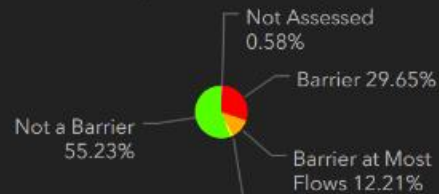
Additional Structures
(Select Sites from Map or Stream Crossing List)

Select Site From Stream Crossing List

Last update: a minute ago

Multiple Structures

Aquatic Passability



Last update: a minute ago

Aquatic Passability

Stream Crossing Condition



Last update: a minute ago

Crossing Condition

Site Erosion

Crossing Type



Last update: a minute ago

Pie chart

Overall Score



Marigold Rd

Poor unprotected
embankments

Perch height: 4.5
ft.

Flood Resiliency: ✘

Fish Passability: ✘

Road Safety: ✔





Mentor Rd

Extreme woody debris buildup at inlet

Flood Resiliency: ❌

Fish Passability: ❌

Road Safety: ✅





County PC

Water depth: .08 ft.

Perch height: 3.2 ft.

Flood Resiliency: ✓

Fish Passability: ✗

Road Safety: ✓





Midway Rd

Water depth: .01 ft.

Inside perch height:
2.7 ft.

Flood Resiliency: ✓

Fish Passability: ✗

Road Safety: ✓





Market Rd

Deterioration

Perch

Undermine of high relief structure

Replaced three times





Nebraska Rd

Ideal size: 7.3 ft.

Past size: 7.28 ft.

Current size: 6.3 ft.





Thank you to:

**Trout Unlimited, Portland and Ridgeville
Township, Monroe County Highway
Department for providing funding for our
research,**

**Ben Anderson and Bob Micheel for their
oversight,**

Wisconsin DNR for survey training!

<https://midnr.maps.arcgis.com/apps/dashboards/d7f355deda9a4bfe85df268785c0cd7b>