



Notice of Public Meeting

Committee:	Land Management Committee
Date:	Friday, November 6th, 2026
Time:	8:00 a.m.
Location:	3 rd Floor County Board Room, 407 S. 2 nd Street, Alma, WI 54610
Remote Access:	https://teams.microsoft.com/meet/239226884893858?p=AqrIAq64ERuYv2TKpF

This meeting is open to the public, but portions of the meeting may be closed if this notice indicates that the committee may convene in closed session.

The following matters may be reviewed, discussed and acted upon at this meeting, and deviations from the order shown may occur:

Land Management Hearing and Meeting	
1.	Call to Order
2.	Roll Call of Members
3.	Verification of Open Meetings Law Compliance
4.	Approve Agenda
5.	Approve Minutes from Previous Meeting
6.	Public Comment
7.	Election of Land and Water Board Candidates (pick 3) Wisconsin Land and Water 2027-2028 Election
8.	Trout Unlimited Road/Stream Crossing data presentation
9.	Discussion on Data centers
10.	Discussion on Remonumentation
11.	Surveyor Report
12.	Director Report
13.	Chairperson Report
14.	Correspondence
15.	Future Agenda Items
16.	Next Meeting Date and Time
17.	Adjourn

Date: October 30, 2026

Max Weiss, Chair

By: Lisa Schmitt, County Clerk

Board Members: If unable to attend, please contact the Chair. If the Chair is unavailable, please contact the County Clerk's Office at 608-685-6209. If the Chair and the County Clerk are not available, please call the Administrative Coordinator at 608-685-6234.

Persons with Disabilities: Buffalo County shall attempt to provide reasonable accommodations to the public for access to its public meetings, provided reasonable notice of special need is given. If you require special accommodations to attend this meeting, please contact the County Clerk's Office at 608-685-6209.

Public Access to the Courthouse: The South Entrance will be the only access to the building after 4:00 p.m. Monday – Thursday and after 12:00 p.m. on Fridays.

Persons who are members of another governmental body, but who are not members of this committee, may attend this meeting. Their attendance could result in a quorum of another governmental body being present. Such a quorum is unintended, and they are not meeting to exercise the authority, duties, or responsibilities of any other governmental body.

BUFFALO COUNTY MINUTES

Committee of the Board:
Date of the Meeting:

Land Management
Friday, June 5th, 2026

The Meeting and Hearing was called to order at 8:04 a.m.

Land Management Members Present: Mr. Max Weiss, Mr. Chris Lindstrom, Mr. Robert Sendelbach, Mr. Steve Nelson, Mr. William Bruegger, Mr. Joe Bragger

Others Present for All or Parts of the Meeting: Mr. Cale Severson, Mr. Lee Engfer, Ms. Abigail Soderberg, Mr. Briar Golden, Mr. Ron Jasperson, Mr. Marty Wenger, Mr. Mike O'Connor, Mr. Dennis Bork. Online-Ms. Jaqueline Schneider, Mr. Alex Dunlevy, Mr. Joe Krumrie

Meeting verified with Open Meeting law compliance

Approval of Agenda-Mr. Bruegger motioned to approve, Mr. Bragger second, carried.

Approval of minutes- Mr. Sendelbach motioned to approve minutes, second Mr. Lindstrom, carried.

Public comments- None

Public Hearing

Reading of the notice of public hearing—Ms. Abigail Soderberg read the notice
Comprehensive Land Use Plan-Mr. Golden spoke on the update being presented

Public testimony-- none

Correspondence-none

Adjournment- Hearing was adjourned at 8:32

Review/Discussion/Action regarding An Ordinance to adopt the Comprehensive Land Use Plan-Mr. Bragger motioned to approve the update seconded by Mr. Lindstrom. Unanimous vote yes. Carried.

Marty Wenger—Mr. Wenger inquired about the road frontage requirement. Discussions were held on how the number was devised, uniform land divisions, and what the conflicting definitions were.

General discussion on data centers—WCA came out with documentation on how Counties should proceed. General discussion followed.

GIS/LIO report—Ms. Schneider spoke on her work as of late

Surveyor report-Maxville field work is done, working on mapping

Director report-Mr. Severson discussed his and staffs work on zoning and the Comprehensive Land use plan.

Committee chair report-Mr. Weiss said he and Mr. Severson will attend the Nelson town meeting on September 15th.

Public Correspondence: none

Future agenda items- update on information learned about data centers and the results of Town of Nelson meeting.

Review/Discussion/Action regarding the Next Meeting Date and Time: The next meeting date and time will be October 2nd at 8am.

Adjournment: Adjourned at 9:50am

Respectfully Submitted,

Cale Severson
Land Management Director

Road-Stream Crossing Inventory Report: Buffalo County, Wisconsin



Photos: Left- Unnamed Stream at Ziegeweid Valley Rd, Middle- Eagle Creek at Co Rd G, Right- Doelle Creek at John Deere Rd

Sara Strassman, Ernie Ludke, Maggie Dremsa

Trout Unlimited, Driftless Area Program, La Crosse, Wisconsin

Introduction:

Road-stream crossings can impede aquatic organism passage, increase flood risk, and pose infrastructure hazards when in poor condition (Dauwalter et al. 2017; Knox et al. 2017). Assessment of fish passage, flood flow capacity, and structural condition have become increasingly important as changing precipitation patterns and more frequent or intense rainfall events can place stress on road-stream crossings.

Undersized culverts can restrict streamflow, increase upstream water levels, and contribute to flooding, especially when culverts are not properly sized to accommodate streamflow and channel characteristics. Bankfull width represents the top of the stream channel at which water begins to overflow onto the floodplain, and it can be used to determine whether a structure is undersized or not. When culverts are too narrow or affect aquatic connectivity, they may disrupt sediment transport, alter stream hydraulics, and increase flood related risks. In addition, poorly designed or deteriorating crossings can limit fish movement and other aquatic organisms which reduce aquatic connectivity.

Assessments conducted using [Great Lakes Stream Crossing Inventory](#) (MiDNR 2020) provide a standardized approach to documenting crossing characteristics, evaluating aquatic organism passage, and identifying potential stream connectivity and structural concerns. These assessments can help prioritize maintenance, replacement, and restoration efforts to improve and protect aquatic habitats while reducing infrastructure risks.

Road Stream Crossing Inventory

We identified road-stream crossings in Buffalo County, Wisconsin, prioritized them for inventory, and then inventoried crossings in the field during June to August 2024. Road-stream crossings identified by Winston and Diebel (2015) were used as targets for field surveys. The crossings were prioritized for surveying by:

1. WDNR Brook Trout Reserve
2. Class I Trout Stream
3. Class II Trout Stream
4. Class III Trout Stream
5. Other

A field crew identified a watershed for inventory each week during the field season, navigated to the crossings within each watershed using ESRI Field Maps mobile application, and inventoried each crossing using the Great Lakes Stream Crossing Inventory Protocol. The Great Lakes protocol measures various factors, such as outlet drop, constriction, structure condition, and similar site conditions. These attributes are used to assess fish passage, general structure condition, and flood risk.

Aquatic Organism Passability Score

The ability of an aquatic organism to move upstream or downstream through a stream system is an organism's aquatic passability. Organisms should be able to travel freely through a road-stream crossing with no difficulties reaching spawning, food, or habitat protection areas. If a road-stream crossing is improperly designed for a channel and stream flow, it can be an issue for aquatic organisms to pass.

Fish passability through a road crossing is rated on a scale of 0 to 4: with 0 being a crossing is currently unassessed, 1 is a crossing that is a barrier to passage at all times, 2 is a crossing that is a barrier at most flows, 3 is a barrier at high flows, and 4 is a crossing that is not a barrier at all. The following conditions will cause a crossing to be assessed as a barrier: outlet of a structure is perched, ratio of structure water depth to stream water depth is less than 0.1, and/or water velocity in the structure is greater than 3.0ft/sec at baseflow. Structures with the following conditions are assessed as barriers at most flows: water depth in the structure is less than 0.2ft, water velocity is 2 to 3ft/sec at baseflow, the structure is longer than 30ft and does not have

natural substrate through its entire length. Finally, structures with the following conditions are considered barriers at high flows: the structure width to bankfull stream ratio is less than 0.5 or there is a scour pool downstream of the crossing.

Overall Score:

The overall score of a structure is calculated based on 24 metrics. Generally, the higher the score the structure is given, the greater the need for improvements. A score of 30 or greater is an indication that the crossing should be observed more closely for future replacement (GLSCI, MI DNR).

The following conditions will increase the overall score, indicating the crossing is either more likely to fail or has an impact on stream functions. The maximum number of points for each criterion is in parenthesis.

- Multiple structures/culverts (4 points)
- Poor alignment (angle at which water enters structure) (4 points)
- Trash rack over inlet (1 point)
- General deterioration of the structure (7 points)
- Percent plugged with material (4 points)
- Percent crushed (4 points)
- Smaller constriction ratio/ bankfull width to structure width (7 points)
- Aquatic organism passability score (10 points)
- Large perch height (4 points)
- Larger expansion ratio/ scour pool to bankfull width (2 points)
- Upstream ponding (4 points)
- Upstream sediment wedge (3 points)
- Road sediment deposition (3 points)
- Overall channel stability (3 points)
- Stream entrenchment (3 points)
- Road core integrity (4 points)
- Frequent road overtopping (2 points)

- Diversion potential (7 points)
- Location of low point (3 points)
- Runoff path (1 point)
- Downstream fill depth height (7 points)
- Inlet and outlet armoring (1 point)
- Extent of erosion (6 points)
- Time sensitive needs (4 points)

At approximately 25% of the road-stream crossings inventoried, water quality data was conducted. Water quality data was collected using WiseH2O mobile application ([mH2O App — MobileH2O, LLC](#)). Sampling sites were selected at stream headwaters, mouths, and confluences to get an understanding of changing water quality through the watershed. Water quality data is summarized in Appendix A.

Inventory Results:

Across Buffalo County, Trout Unlimited crew members surveyed 186 road-stream crossings throughout the 2024 summer field season assessing structures on perennial streams located on public roads (figure 1,2).

Structures on private roads or ones that were dry on the day of assessment were left and marked private or dry (figure 3). Out of the 186 crossings surveyed, there were 117 bridges, 68 culverts, and 1 ford (table 1). The crew members surveyed the structures looking for their overall barrier potential to aquatic organisms, the structure's condition, and their potential risks to washouts and flooding.

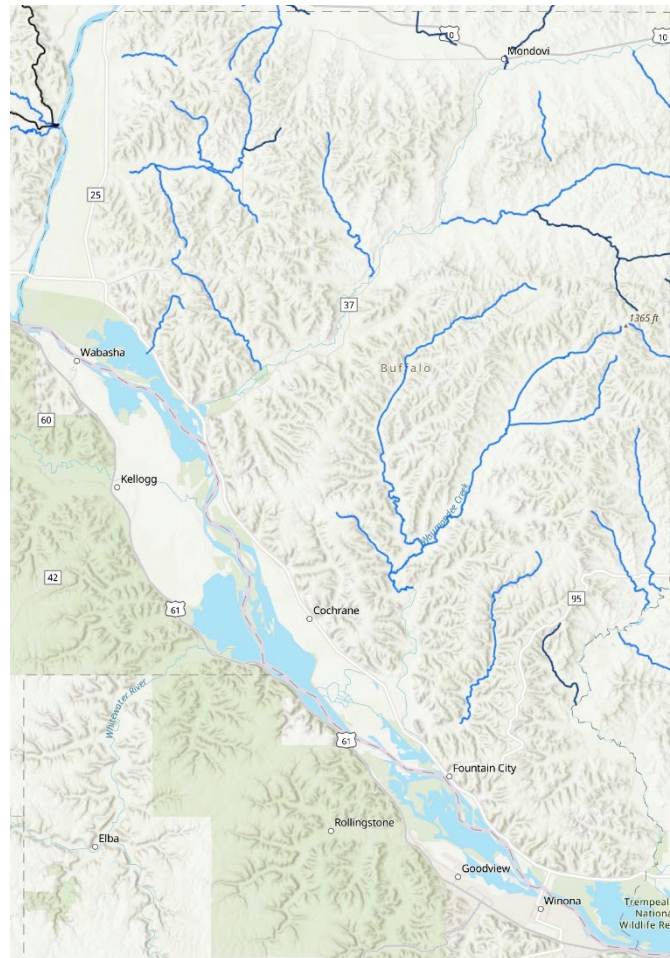


Figure 1: Trout streams located in Buffalo County (Class I streams are green, class II streams are light blue, and class III streams are dark blue)

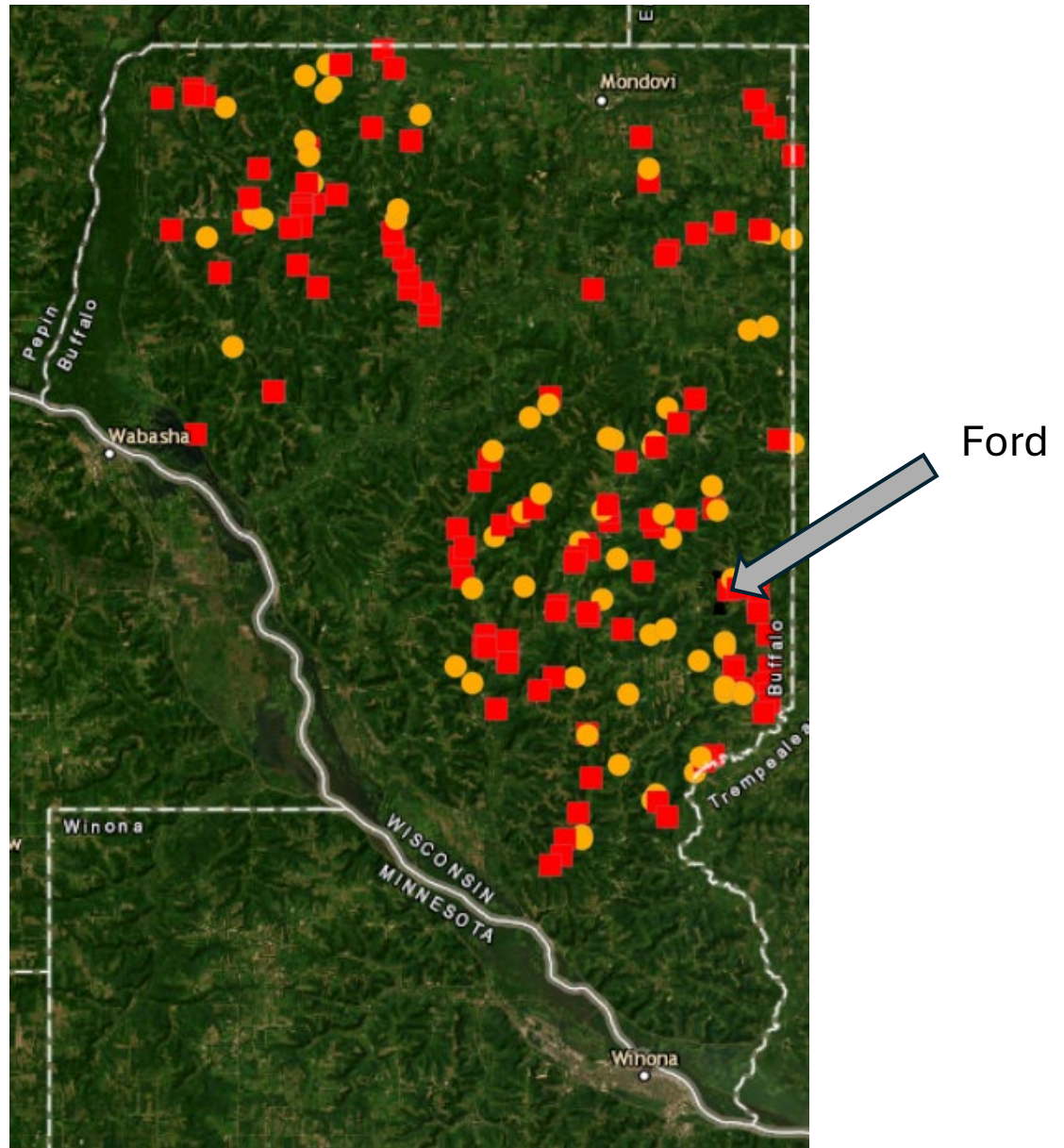


Figure 2: Crossings surveyed (bridges are squares, culverts are circles, and the ford is marked as two black triangles)

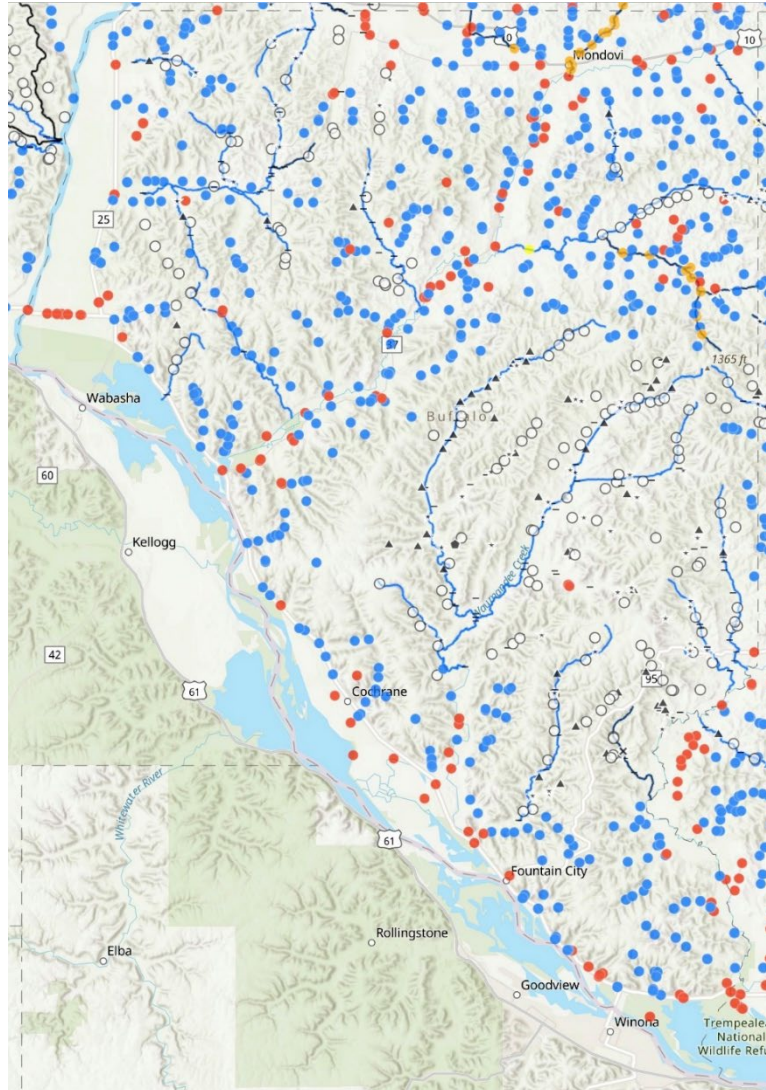


Figure 3: Crossings surveyed on trout streams (stars are fully assessed sites, triangles are private, black lines are bridge adequate and circles are dry crossings)

Crossings prioritized for assessments in the county were on trout streams, or small tributaries that flow into the trout streams, and most of those crossings surveyed were bridges. Typically, bridges are more flood resilient and do not impact fish passage, so to identify more flood prone structures, assessments of structures not on trout streams are recommended.

County Level Breakdown

Metric	Totals
Total Crossings	1,078
Total Crossings Visited	398
Dry/ephemeral	155
Inaccessible-private	57
Fully Assessed Crossings	186

Table 1: Overview of crossings visited in Buffalo County

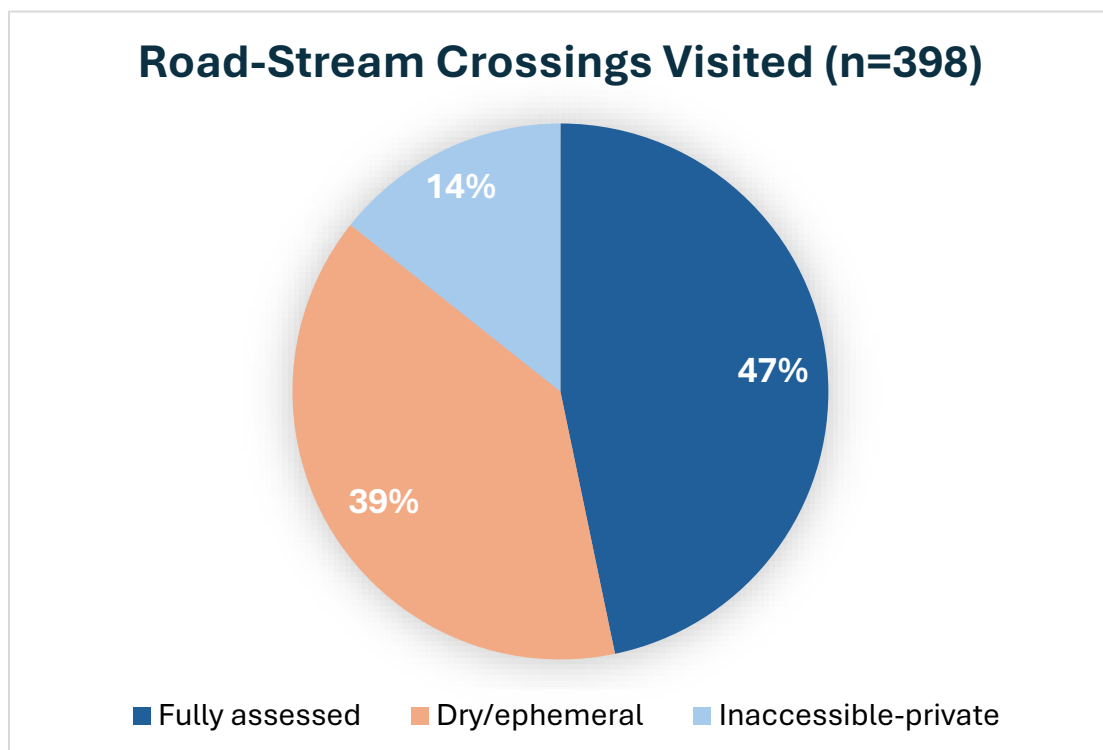


Figure 4: Breakdown of crossings visited

County Level Breakdown of Crossings Surveyed

Metric	Totals
Total Structures Inventoried	186
Culverts	68
Bridges	117
Fords	1
Barrier at High Flows	12
Barrier at Most Flows	19
Not a Barrier	107
Not Fully Assessed	13
Potential Behavioral Barrier (lack of substrate in structure)	1
No Deficiencies	17
Not New, Good Condition	55
Good Condition	58
Moderate Deterioration	40
Moderate to Major Deterioration	10
Major Deterioration	1
Major Deterioration, piping evident	1
Undersized	54
Complete Barriers	34

Table 2: Overview of data collected at the fully surveyed crossings in Buffalo County

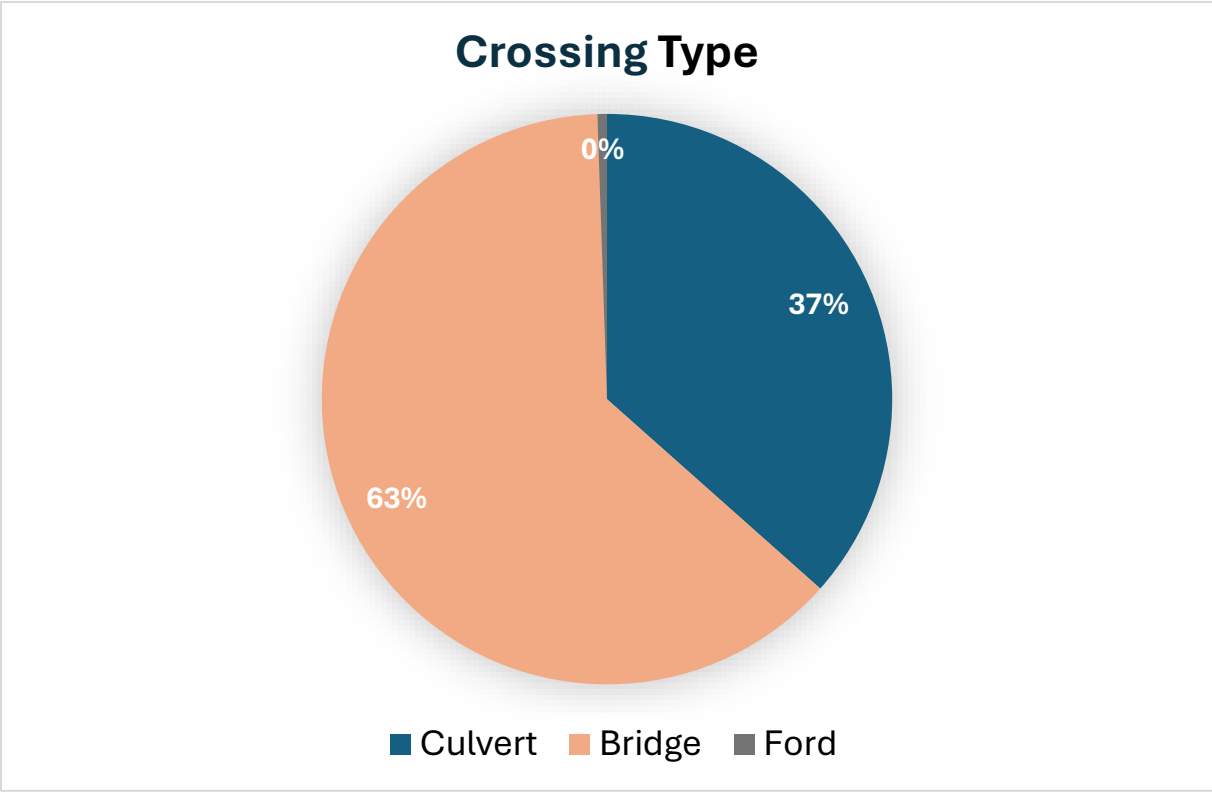


Figure 5 : Breakdown of types of crossings fully surveyed (n=186)

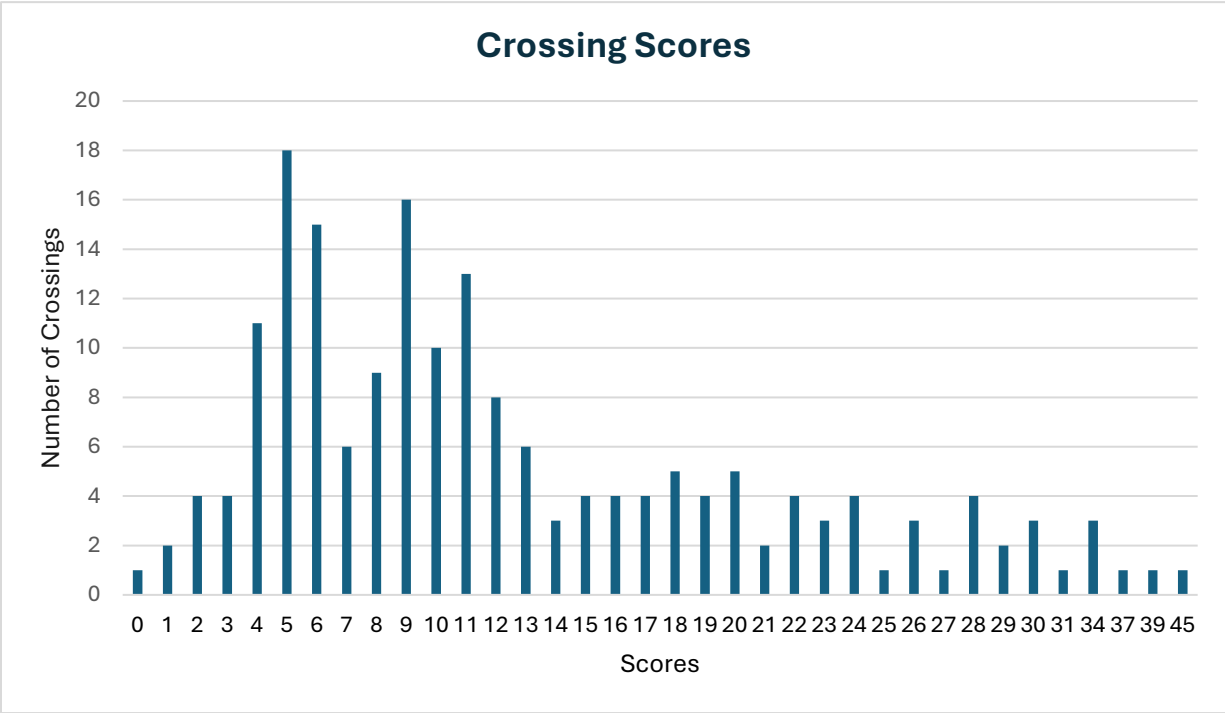


Figure 6: Graph depicting crossing scores in Buffalo County

Crossing Condition

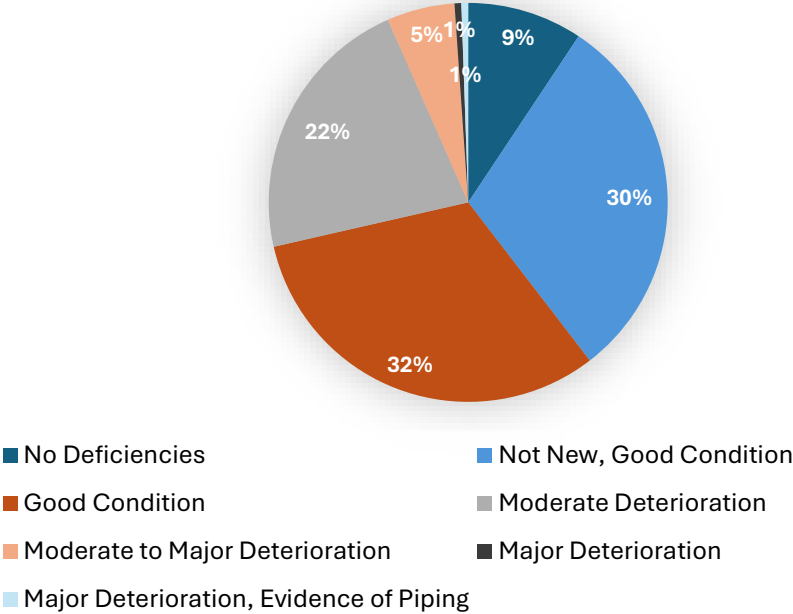


Figure 7: structure condition in Lafayette County

Passability

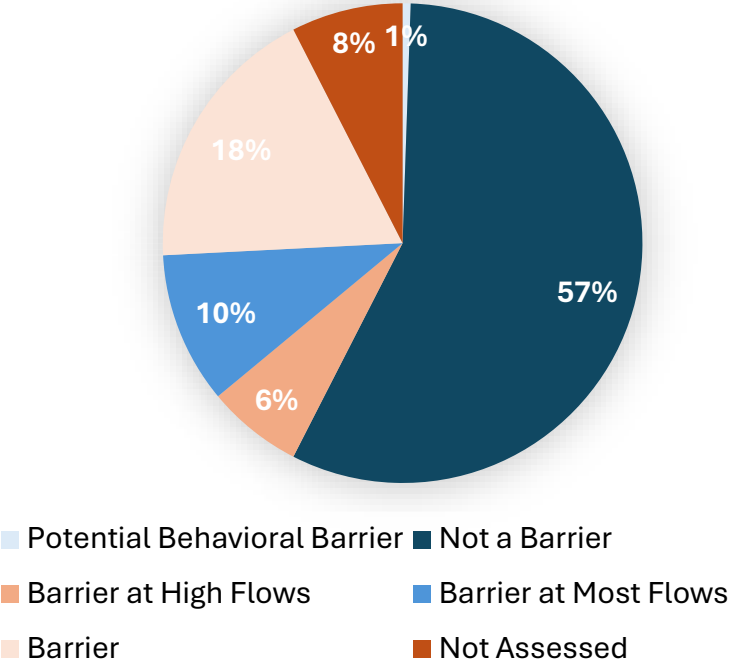


Figure 8: passability levels in Buffalo County

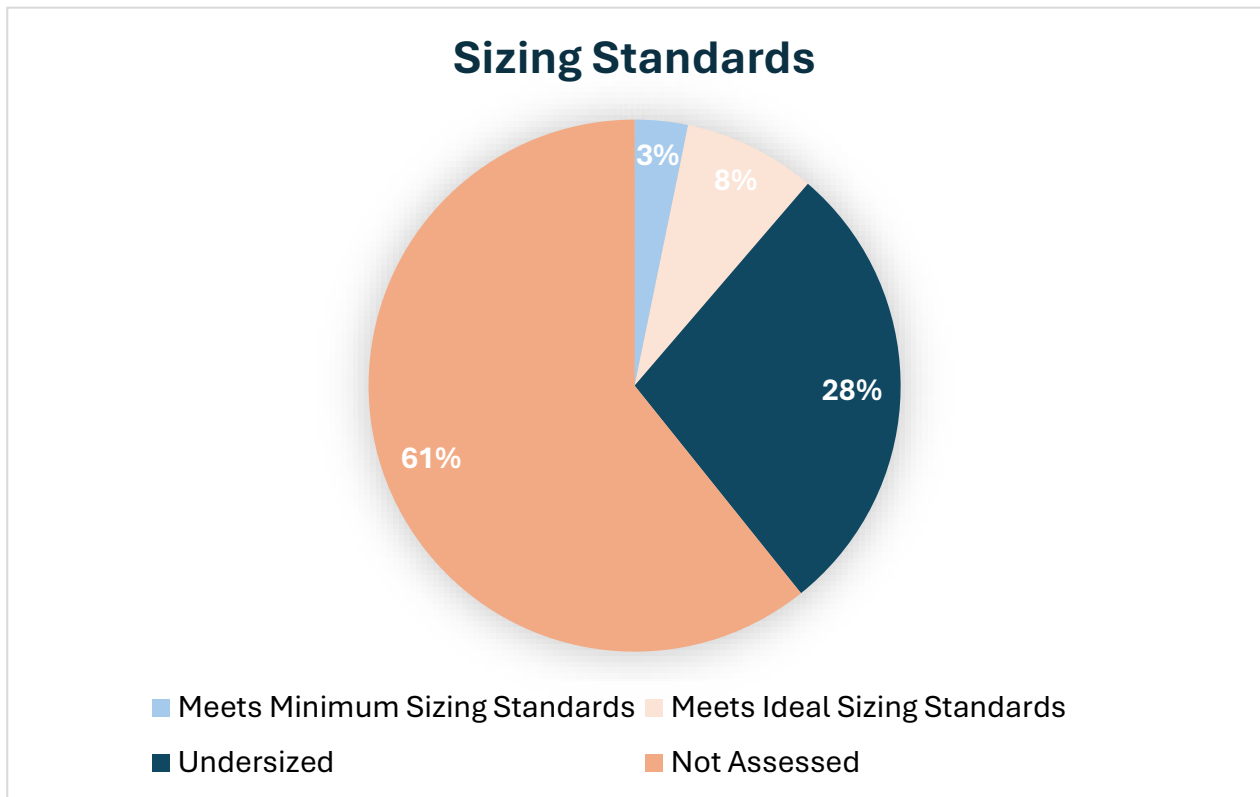


Figure 9: Graph depicts the sizing width standards of the crossings throughout Lafayette County. Minimum sizing standards are 1.2 times bankfull width, and ideal sizing standards are 1.2 times bankfull width +2 feet.

*Note: The surveys on bridges were not fully completed due to them not affecting aquatic passage, so sizing standards for bridges are not available

Top 5 Worst Offenders Across Buffalo County

Crossing Name; Site ID	Fish Passability	Overall Score	Full Report
Eagle Creek at Unnamed Road; 4317-8	Barrier	45	Link to report
Unnamed Stream at Simons Rd; 4314-41	Barrier	39	Link to report
Eagle Creek at Waumandee Glencoe Rd; 4317-19	Barrier	37	Link to report
Center Creek at Co Rd KK; 5558-10	Barrier	34	Link to report
Unnamed Stream at Co Rd F; 5558-43	Barrier	34	Link to report

Table 3: List of top scoring structures across Buffalo County

1. Eagle Creek at Unnamed Rd; Glencoe, WI, 44.23201/-91.68111

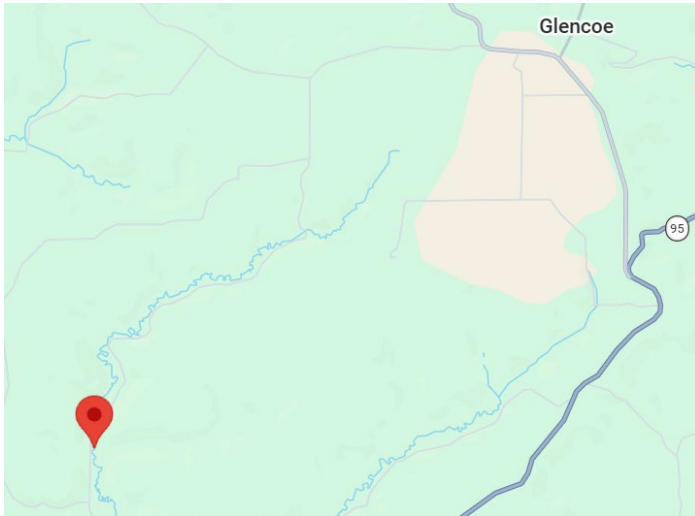


Figure 10: Map showing site location



Figure 11: Outlet image

Site notes: Two 19 foot-long, 1.8ft by 2.0ft and 1.3ft by 1.3ft metal culverts with a 0.3 ft perch height that impedes aquatic passage. These culverts are also very undersized, constricting water flow which increases water velocities.

2. Unnamed Stream at Simons Rd; Lookout, WI 44.40512/-91.62172



Figure 12: Map showing site location



Figure 13: Outlet image

Site notes: An 18-foot long, 8ft by 8ft concrete box culvert with a large 4.0ft perch that impedes aquatic organism passage.

3. *Eagle Creek at Waumandee Glencoe Rd; Glencoe, WI 44.25412/-91.65086*



Figure 14: Map showing site location



Figure 15: Outlet image

Site Notes: A 31-foot long, 11.5ft by 7.0ft pipe arch metal culvert. The culvert has a 1.0ft perch that freefalls into a large 3.5ft deep scour pool.

4. Center Creek at Co Rd KK; Urne, WI, 44.4951/-91.96302



Figure 16: Map showing site location



Figure 17: Inlet image

Site notes: A 195-foot long, 12ft by 10ft concrete box culvert. The upstream concrete apron is slanted disconnecting the stream which is creating upstream ponding. Aquatic organisms cannot pass through the culvert due to the upstream apron as well as the lack of substrate and water levels in the culvert.

5. *Unnamed Stream at Co Rd F; Urne, WI, 44.52427/-91.88628*



Figure 18: Map showing site location



Figure 19: Outlet image

Site notes: A 55 foot-long, 2.5ft by 2.5ft metal culvert with a 2.0ft perch height and 2ft deep scour pool at the outlet.

Crossings with the Worst Deterioration

Crossing Name; Site ID	Fish Passability	Site Condition/Notes	Full Report
Eagle Creek at Unnamed Road; 4317-8	Barrier	Major deterioration; undersized double culvert with concrete headwall/deck slab that is cracking	Link to report
Elk Creek at Hovey Valley Rd; 4310-4	Not a barrier	Major deterioration, evidence of piping; upstream guardrail damaged and loose	Link to report
Elk Creek at Co Rd H; 4310-3	Barrier	Moderate to major deterioration; large crack in decking	Link to report
Unnamed Stream at Co Rd CC	Not a barrier	Moderate to major deterioration; small and deteriorating wingwalls	Link to report
Unnamed Stream at Boland Valley Road; 4520-61	Barrier	Moderate to major deterioration; inlet concrete apron is not flush with metal culvert which is creating a perch of the concrete into the inlet. Two metal culvers put together, and the upstream culvert has shape changes at the seam	Link to report
Doelle Creek at John Deere Rd; 4521-16	Barrier at most flows	Moderate to major deterioration; moderate shape changes inside culvert	Link to report
Unnamed Stream at Christ Rd; 4314- 36	Barrier	Moderate deterioration; minor shape changes throughout culvert	Link to report

Table 4: List of top deteriorating structures

Visit the Dashboard for a Complete Report of the County

The report above identifies the structures most at risk for failure or aquatic organism barriers; however, a more comprehensive list of the structures across the county can be found on the [Michigan DNR Stream Crossing Dashboard](#). The dashboard allows users to filter structures based on criteria such as location, passability, overall score, and condition, providing a useful resource for identifying and prioritizing structures for further assessment.

Appendix A

Water Quality Summary

Using the WiseH2O mobile application, crew members sampled water quality at approximately 25% of the road-stream crossings. The application utilizes test strips with a photo calibration card as well as user defined entries to capture data. The platform serves monitoring, educational, and outreach purposes. Data is entered on the observation page. Results can be viewed on the results map by parameter. Impacts of results and educational pages further explain each criterion to create bins for results and the impact those levels have on trout and ecosystems. The figure below shows data entry platform.

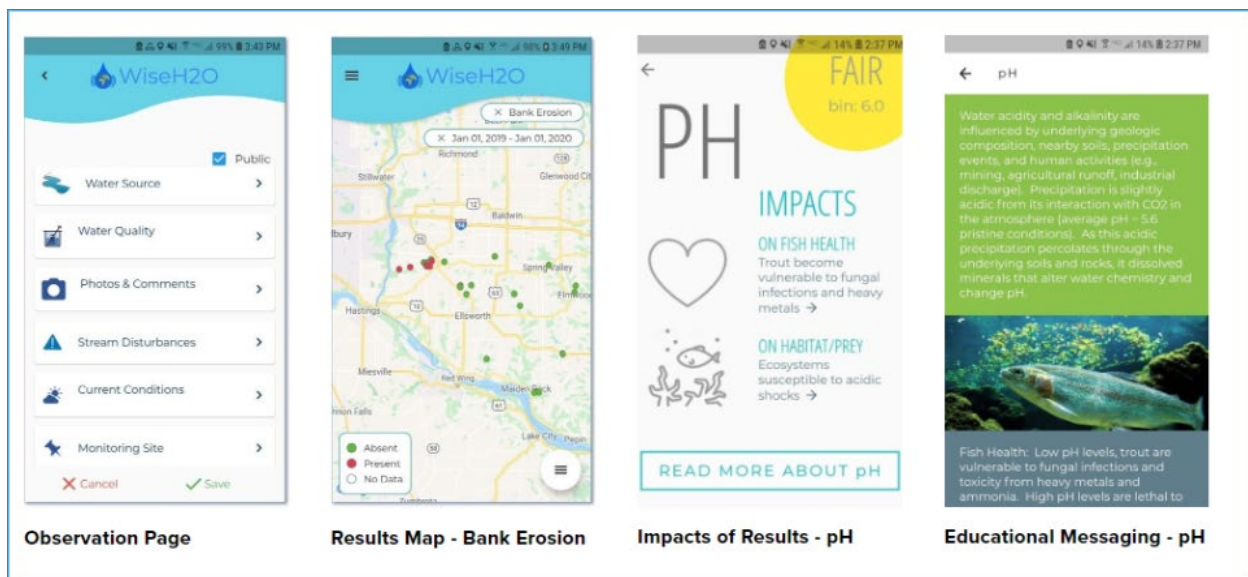
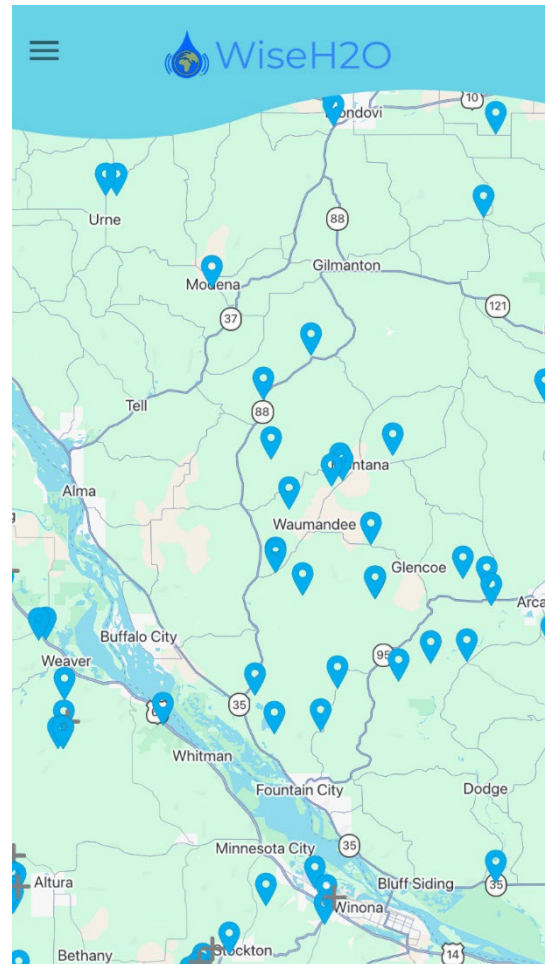


Figure 20: WiseH2O Data Entry Platform and Reference Pages

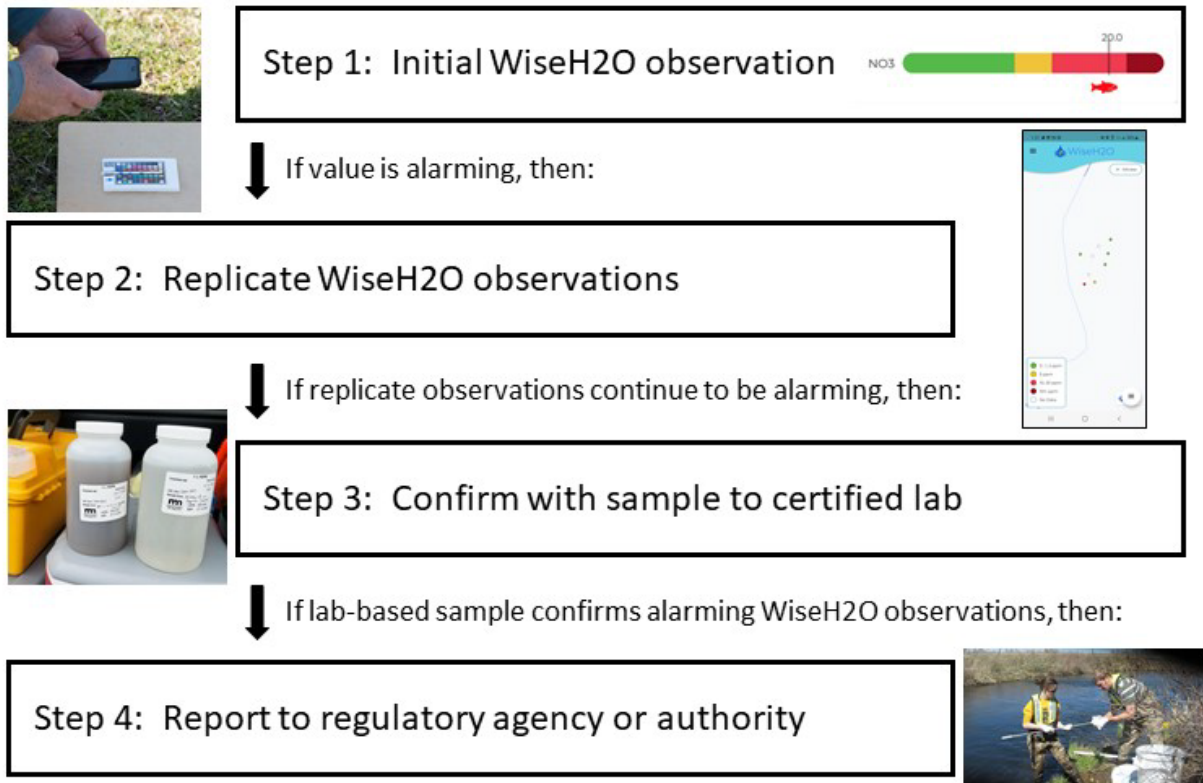
The survey crew members sampled at approximately 25 sites across Buffalo County during the 2024 field season. The full sampling parameters, dates, and locations can be downloaded through the Angler Science Driftless Program webpage at: [Angler Science Driftless Area Program — MobileH2O, LLC.](#)

Figure 21: Map showing water quality sampling sites



A Word About Precision & Accuracy

It is important to clarify that the data collected using this method is meant for screening level interpretation only. Trout Unlimited follows a tiered evaluation process for this data. First, upon measuring a parameter that is in the unhealthy range reported by the app, we recommend replicating testing with WiseH2O. Participants should return on a few different occasions to assess whether exceedances continue. Second, if exceedances continue to occur, participants are asked to confirm samples with a certified lab, if possible. If lab-based results appear concerning, consultation with state water quality biologists is recommended.



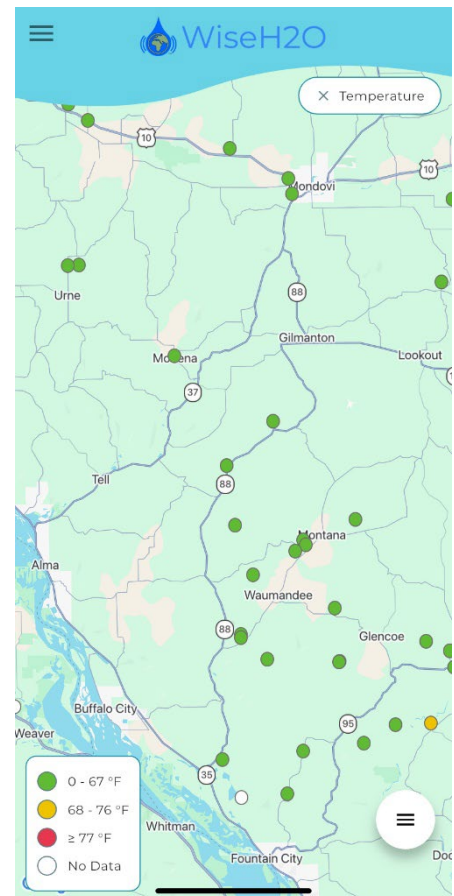
The reason for resampling and for lab verification is that the level of precision of the testing strips is not sufficient to draw management conclusions from a single sample. The application organizes the data into bins that represent a range of values. For example, Total Phosphate falls into Bin 0 when the concentration detected is anything less than 100 ppb. However, the Wisconsin total phosphorus standard is 100 ppb, so our tests can predict if a sample is generally above or below that criterion but cannot provide a precise concentration for values that might be slightly below or above that threshold.

Test Strip	LaMotte 5-Way					Hach 2-in-1 Nitrate/Nitrite		LaMotte Ortho-Phosphate
Analyte	Alkalinity	Hardness	Nitrate	Nitrite	pH	Nitrate	Nitrite	
Range	0-240	0-180	0-200	0-10	6-9	0-50	0-3	0-2500
Unit	ppm	ppm	ppm	ppm	-	ppm	ppm	ppb
Bin 1	0	0	0	0	6.0	0	0.0	0
2	40	30	20	0.5	6.5	1	0.15	100
3	80	60	40	1	7.0	2	0.3	200
4	120	120	80	3	7.5	5	1.0	300
5	180	180	160	5	8.0	10	1.5	500
6	240		200	10	8.5	20	3.0	1000
7					9.0	50		2500

Summary of Important Trout Stream Metrics:

Water temperatures that exceed 67F can have a negative effect on a trout's health. High water temperatures, especially those that exceed 76F, can cause stress or mortality. It is important to monitor watershed temperatures to determine where trout can thrive. Majority of water temperatures fell within the healthy range. One temperature fell above the recommended temperature on Trout Run Creek at 69F.

Figure 22: Map of water temperature



Nitrate and Phosphate

Excess nitrate & phosphate typically cause excessive aquatic vegetation and algae growth that can impair habitat, macroinvertebrate life and dissolved oxygen levels. These indirect mechanisms usually constitute the primary impacts to trout.

Nitrate levels across the county all fell within optimal ranges; however, there were locations where phosphate read higher than normal.

Streams that had contained phosphorus levels above 0ppm:

- Elk Creek: 100ppm
- Harvey Creek: 100ppm
- Rossman Creek: 300ppm

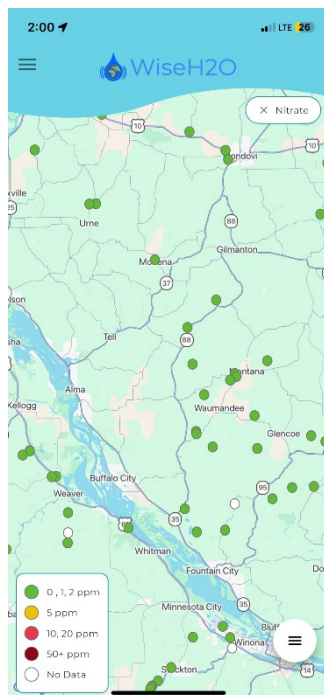


Figure 23: Map of nitrate levels

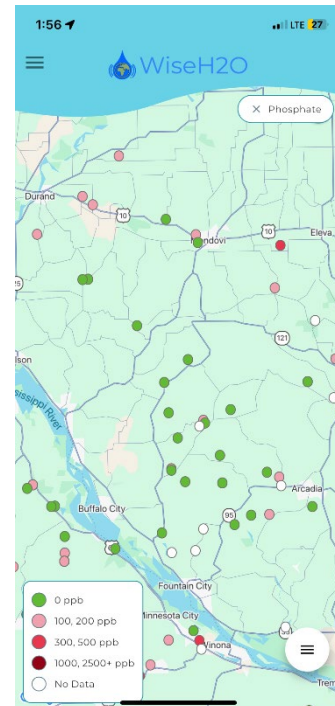


Figure 24: Map of phosphate levels

References

- Dauwalter, D. C., J. Hastings, M. Melchoir, and J. D. Welter. 2017. Preface: a look back at Driftless Area science to plan for resiliency in an uncertain future. D. C. Dauwalter, editor. A look back at Driftless Area science to plan for resiliency in an uncertain future, volume Special Publication of the 11th Annual Driftless Area Symposium, La Crosse, Wisconsin.*
- MiDNR. 2020. Great Lakes stream crossing inventory instructions (updated). Michigan Department of Natural Resources, Lansing, Michigan.*
- Winston, D., and M. Diebel. 2015. A screening method for identifying fish passage barriers at road crossings using LiDAR-derived elevation data. Bureau of Science Services, Wisconsin Department of Natural Resources, Madison.*