SEWRPC High-Quality Lakes Workshop

Wonderful Waters of Wisconsin
Tools to Protect Healthy Watersheds & High-Quality Waters

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Agenda

- Wonderful Waters of Wisconsin Overview
- Tools for Exploring Watershed Protection
- Protection Best Practices

Acknowledgements

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Extension Lakes

Landmark Conservancy

Michigan DNR

The Nature Conservancy

The River Alliance of Wisconsin

US EPA

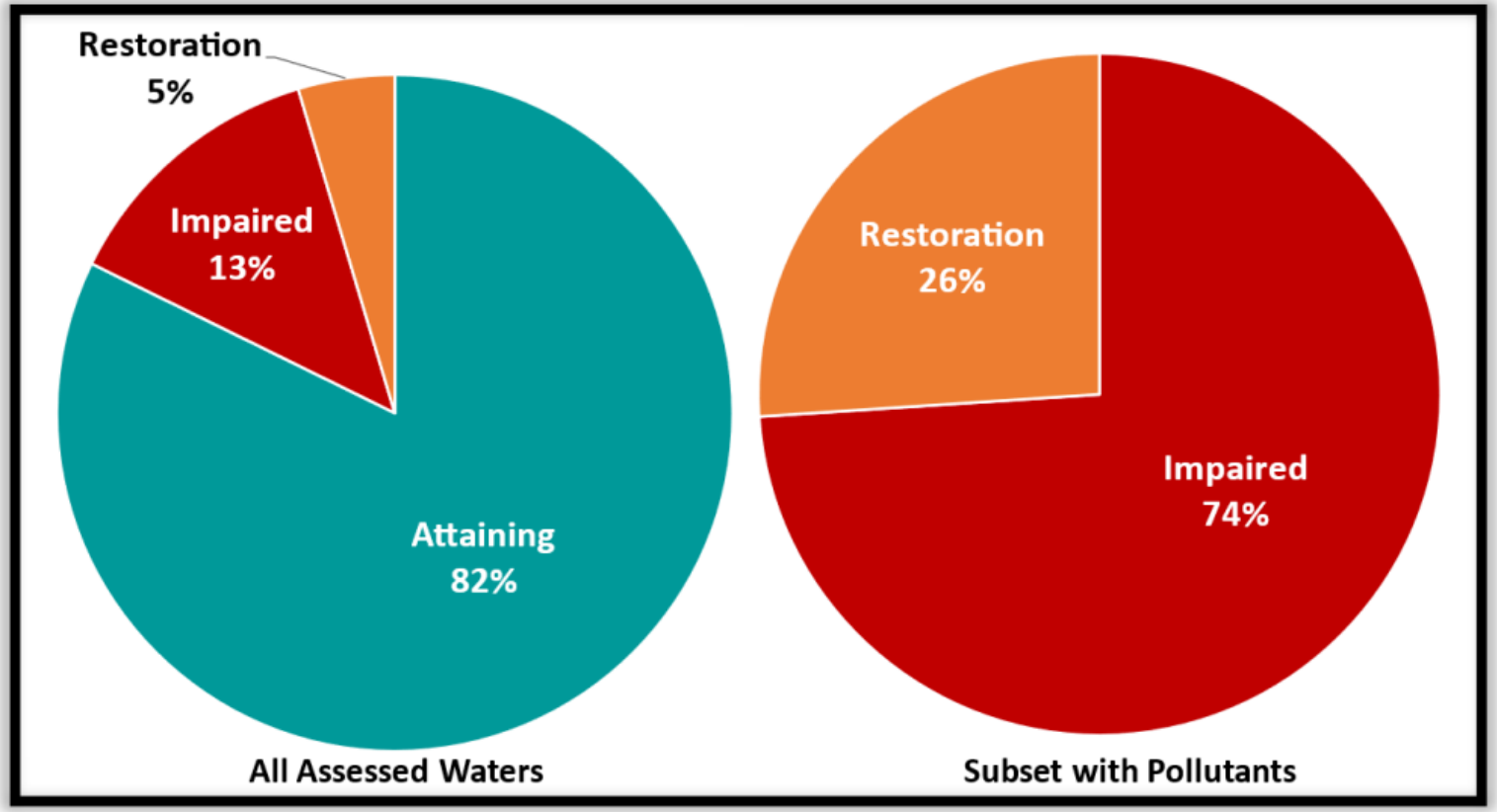
...and more!

Why Is Protection Important?

82%

of assessed waters in Wisconsin are *attaining standards* under the Clean Water Act

“An ounce of prevention is worth a pound of cure”



Credit: 2024 Wisconsin Water Quality Report to Congress | WI DNR

In Wisconsin (and nationally) available funds and resources have largely been invested in the restoration of impaired waters.

Can we improve the balance?

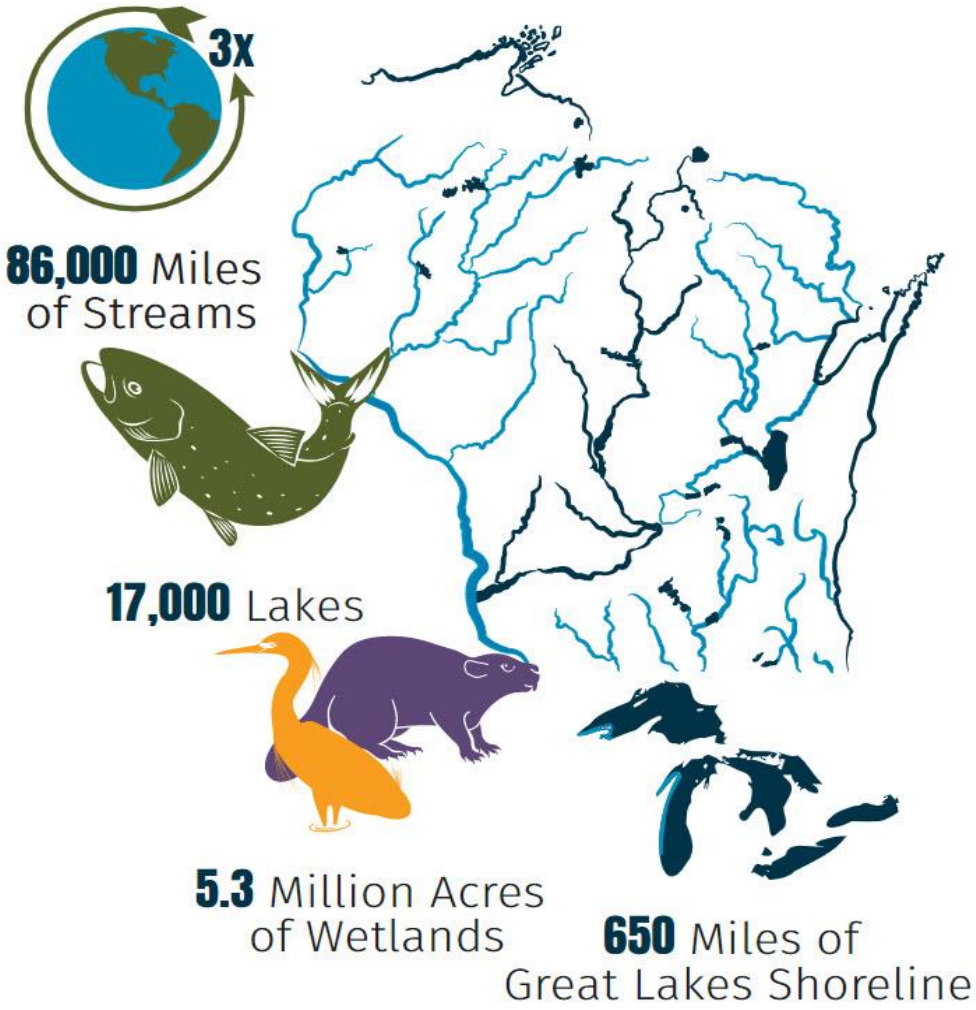
2019
Modeling & Assessment

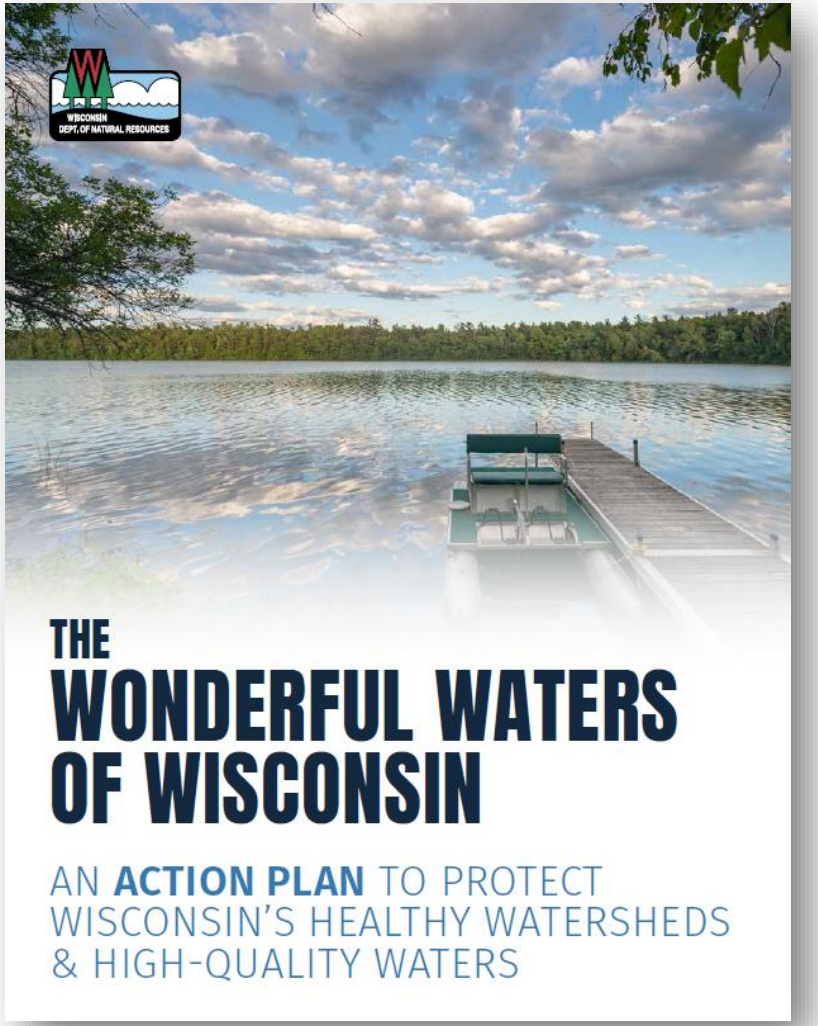
→

2021
Kick Off & Partner Input

→

2022
Action Plan Launch





Action Plan Objectives

ACTION 1F

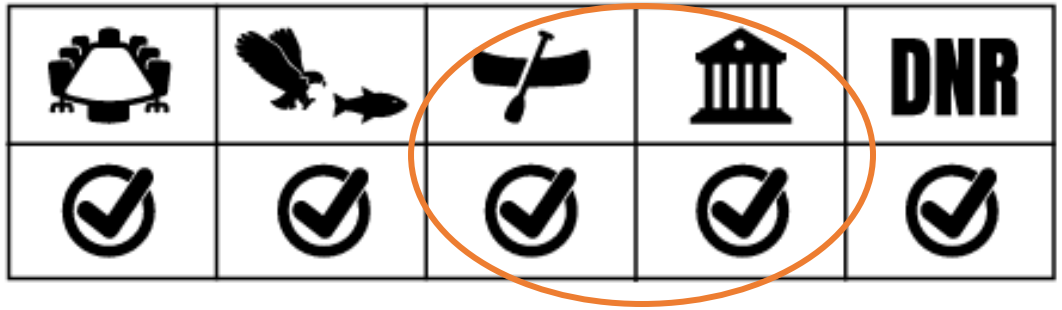
Promote and Provide Technical Assistance to Non-Traditional Groups and Partners

STRATEGIES FOR SUCCESS

- Expand the perception of what a "partner" is when it comes to watershed protection.
- Connect with water resource users like anglers, conservation clubs, boaters, and businesses.
- Integrate HWHQW into existing Farmer Led Councils in healthy watershed priority areas.

GENERAL READINESS:

LEVERAGING PARTNERSHIPS:



What is a Healthy Watershed (HW)?

An area draining to a stream, lake or wetland where natural land cover supports the:

- dynamic processes,
- habitat size and connectivity,
- and water quality conditions able to support healthy biological communities.

Modeled at the HUC12 scale

Photo Credit: Robert Timmons

Landscape	• 6 Metrics • Ex: % Natural Land Cover
Hydrology	• 6 Metrics • Ex: Density of road-stream crossings
Geomorphology	• 5 Metrics • Ex: % Ditch Drainage
Habitat	• 2 Metrics • Ex: Fish and Aquatic Habitat (WBD)
Biologic	• 3 Metrics • Ex: USEPA River & Stream Biologic Condition
Water Quality	• 4 Metrics • Ex: % CWA 303(d) Supporting Area/Length

Watershed Health Index

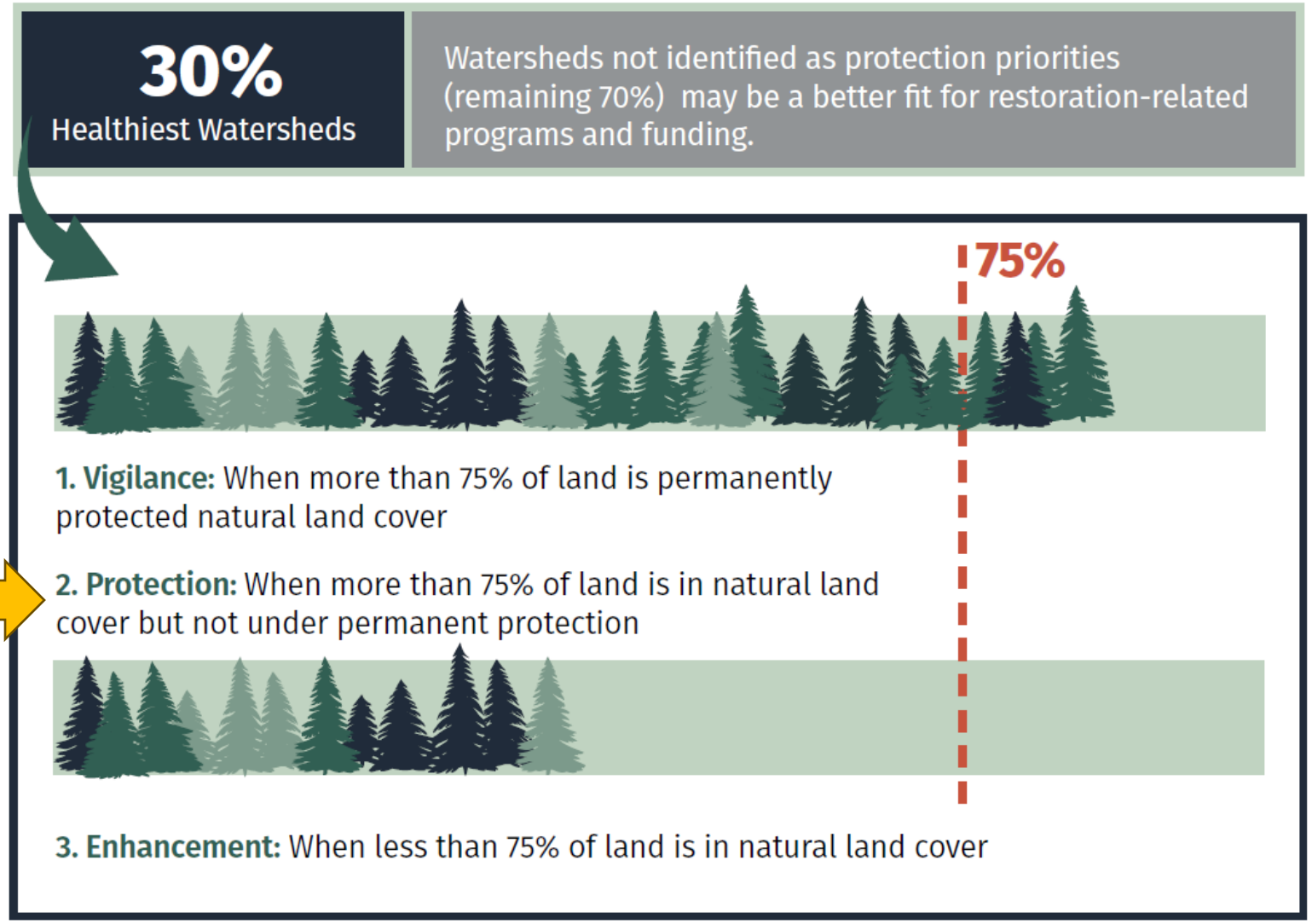
6 Sub Indices
26 Metrics

Keeping It Natural

Natural Land Cover:

- Forests
- Wetlands
- Shrubland
- Grassland
- Barrens

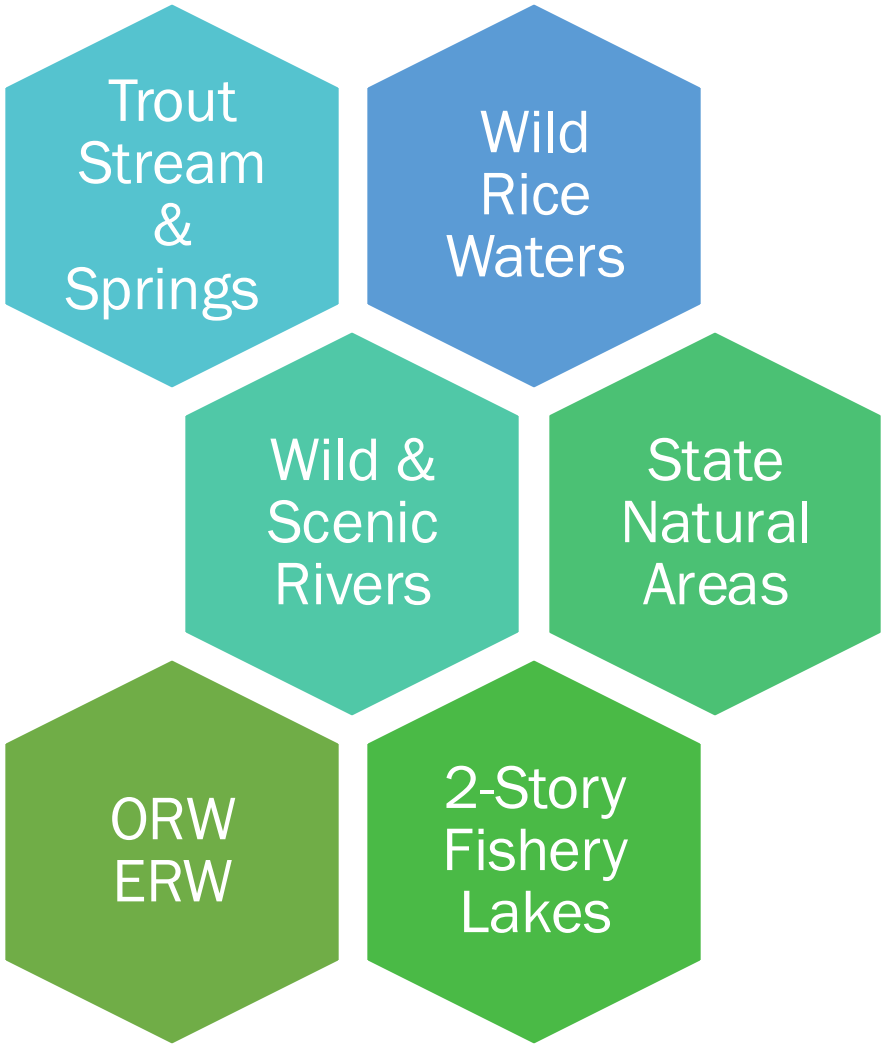
The HWHQW Action Plan uses a **75% threshold** to determine the protection strategy



What are High-Quality Waters (HQW)?

Lakes, streams and rivers with at ***least two*** of the following attributes:

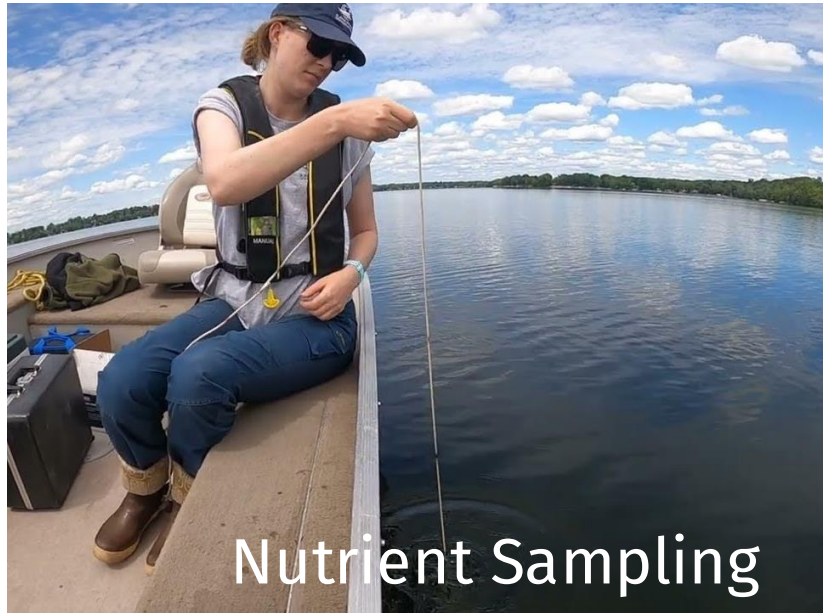
1. Unique or rare resource
2. Attaining state water quality standards
3. Good-to-excellent biotic integrity



What are High-Quality Waters (HQW)?

Lakes, streams and rivers with at ***least two*** of the following attributes:

1. Unique or rare resource
2. Attaining state water quality standards (Category 2A/2B)
3. Good-to-excellent biotic integrity


Nutrient Sampling

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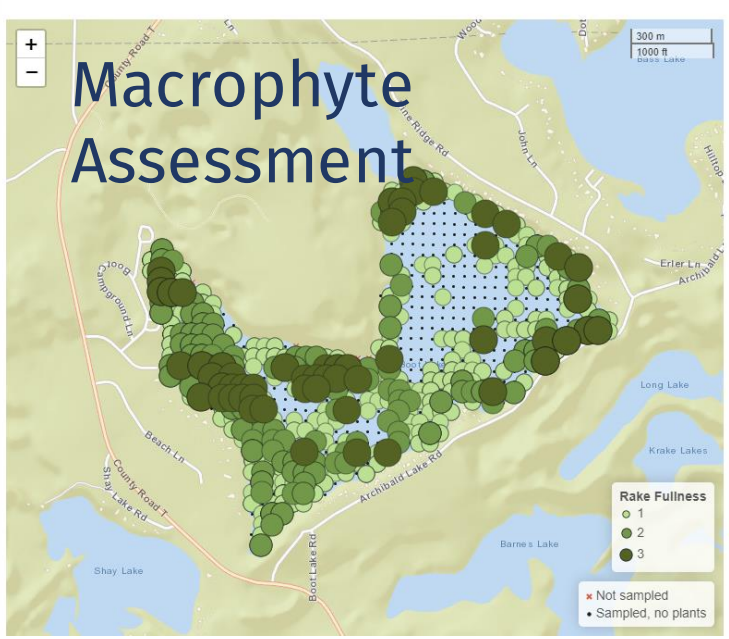


What are High-Quality Waters (HQW)?

Wetlands with at least one of the following attributes:

1. Unique and Rare Natural Community (NHI Working List)
2. Biotic Integrity
   - Reference Quality Wetlands
   - Floristic Quality Assessment - Wetlands with Overall Disturbance or Plant Community Condition Scores of 1 or 2

Photo Credit: Sally Jarosz, WDNR

Healthy Watersheds, High-Quality Waters FAQ

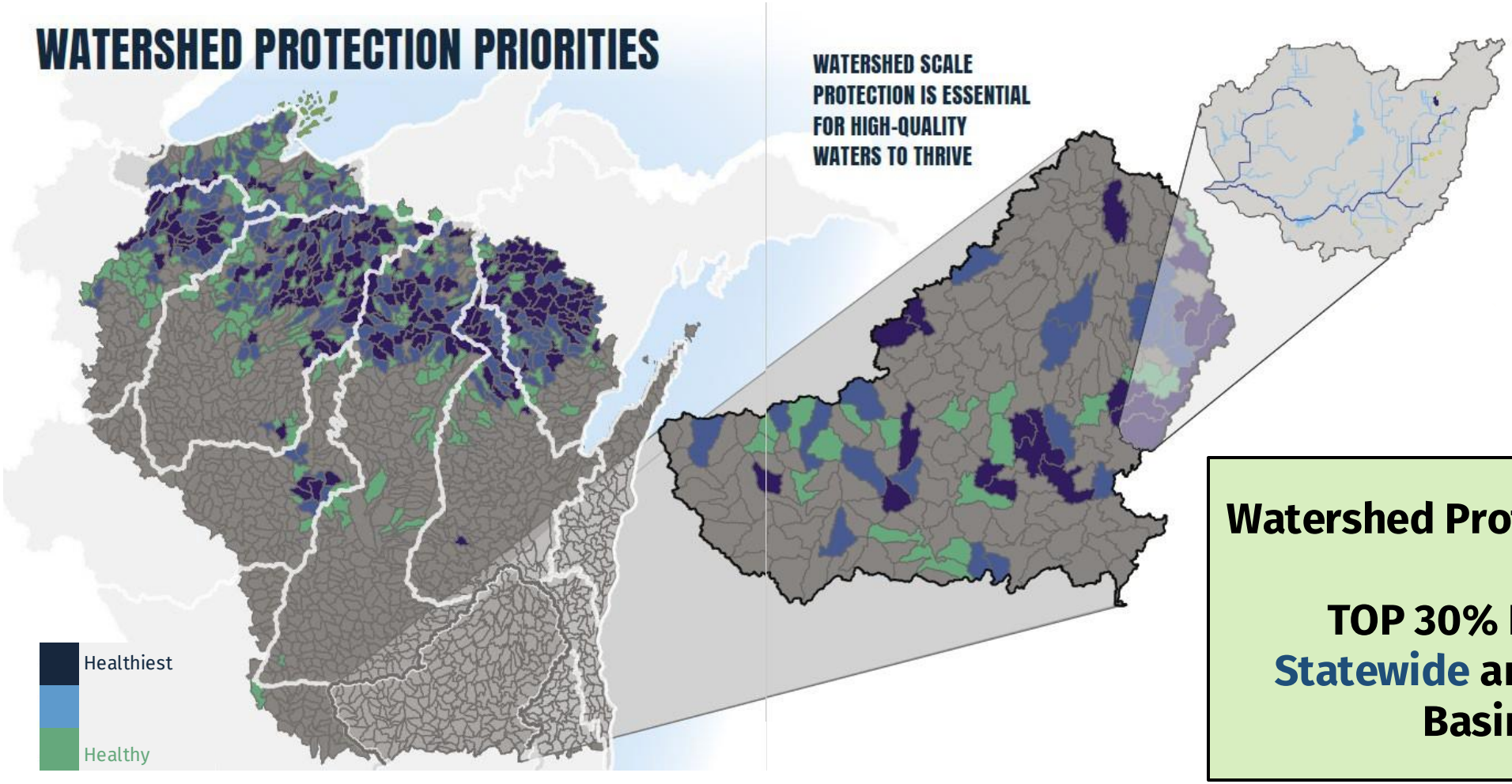
1. Why isn't my waterbody on the high-quality waters list?

- The waterbody did not meet the criteria to be listed
- The waterbody may not have enough monitoring data
- The monitoring data may not be accessible to DNR (e.g. collected by UW or tribes)

2. My lake or stream is impaired but still on the high-quality waters list. How can that be?

- Attaining water quality standards was 1 of 3 criteria to be a high-quality water. If the lake or stream met the other 2 criteria (good to excellent biotic conditions and unique or rare resource) it met the majority of evidence criteria

Where are Wisconsin's HWHQW?



Watershed Protection Priorities
=
TOP 30% HEALTHIEST
Statewide and at the HUC6
Basin Scale

Tools for Exploring Wonderful Waters

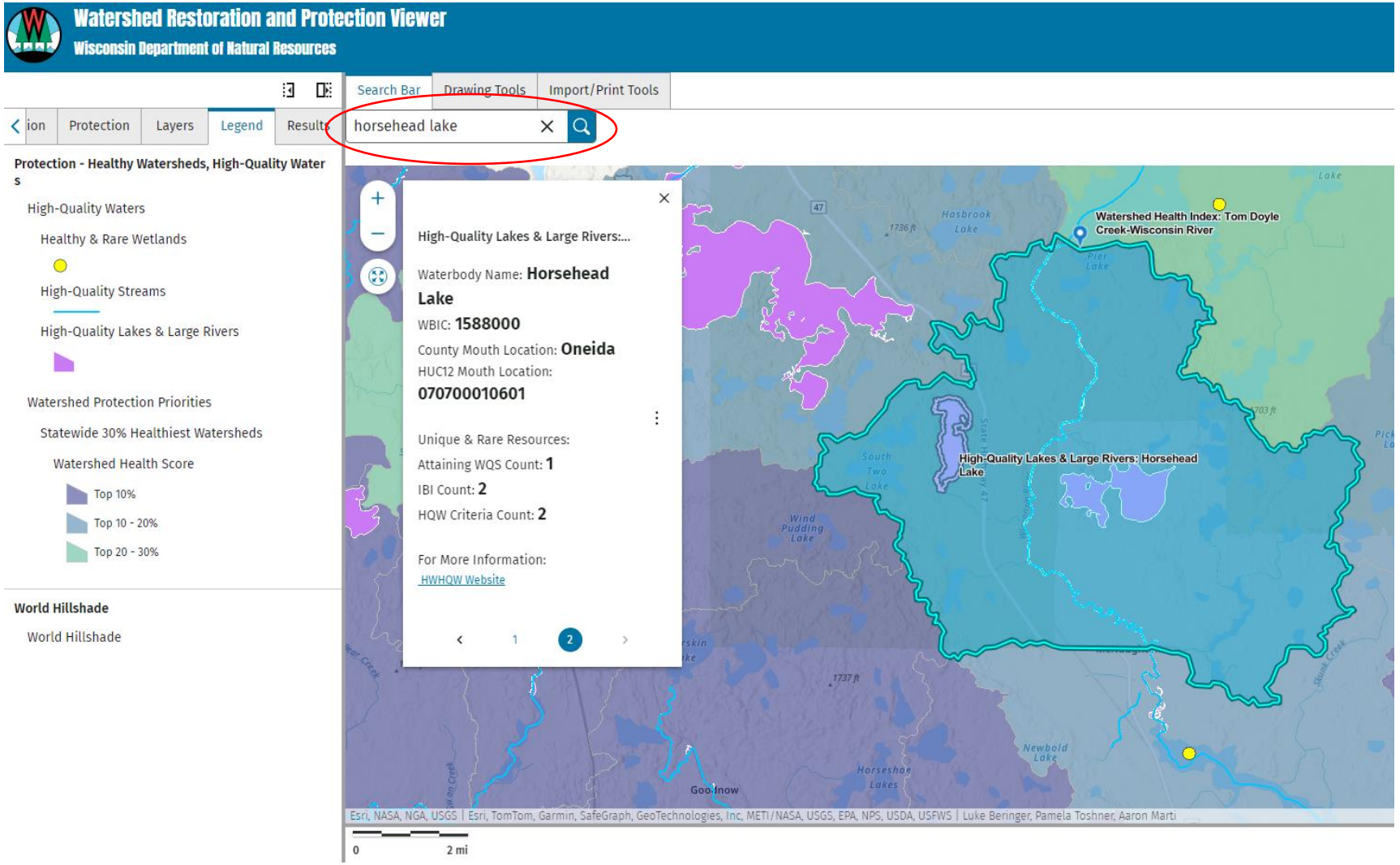
Kentuck Lake, Vilas County

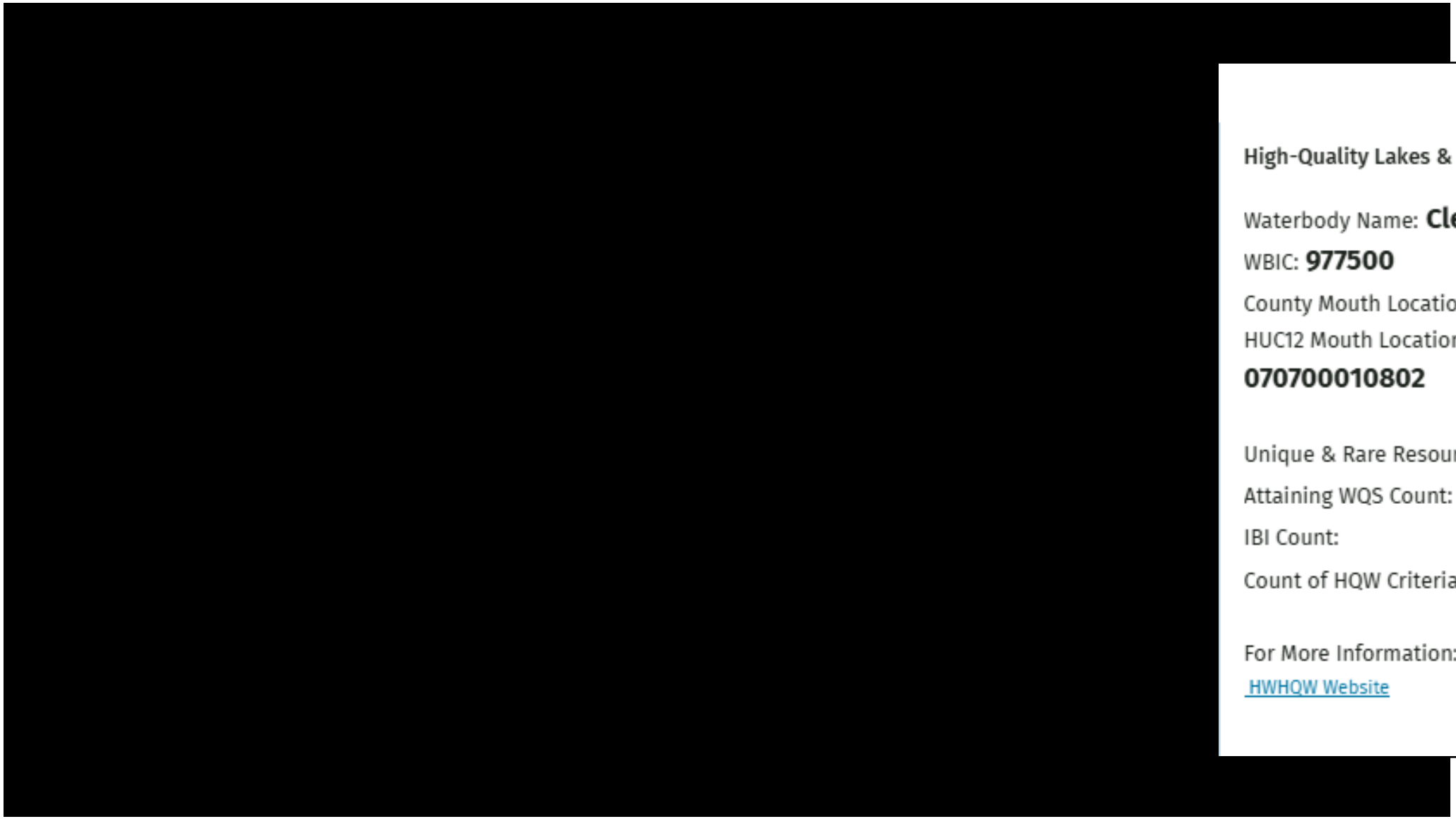
Tools for Exploring Wonderful Waters:
Watershed Restoration & Protection Viewer

Turn on the *High-Quality Waters & Watershed Protection Priorities* Layer

Search by waterbody name or click on a waterbody on the map

Learn if the water is in a protection priority and if it's high-quality!




High-Quality Lakes & Large Rivers:...
Waterbody Name: Clear Lake
WBIC: 977500
County Mouth Location: Oneida
HUC12 Mouth Location:
070700010802
Unique & Rare Resources Count: 2
Attaining WQS Count: 2
IBI Count:
Count of HQW Criteria Met: 2/3
For More Information:
HWHQW Website

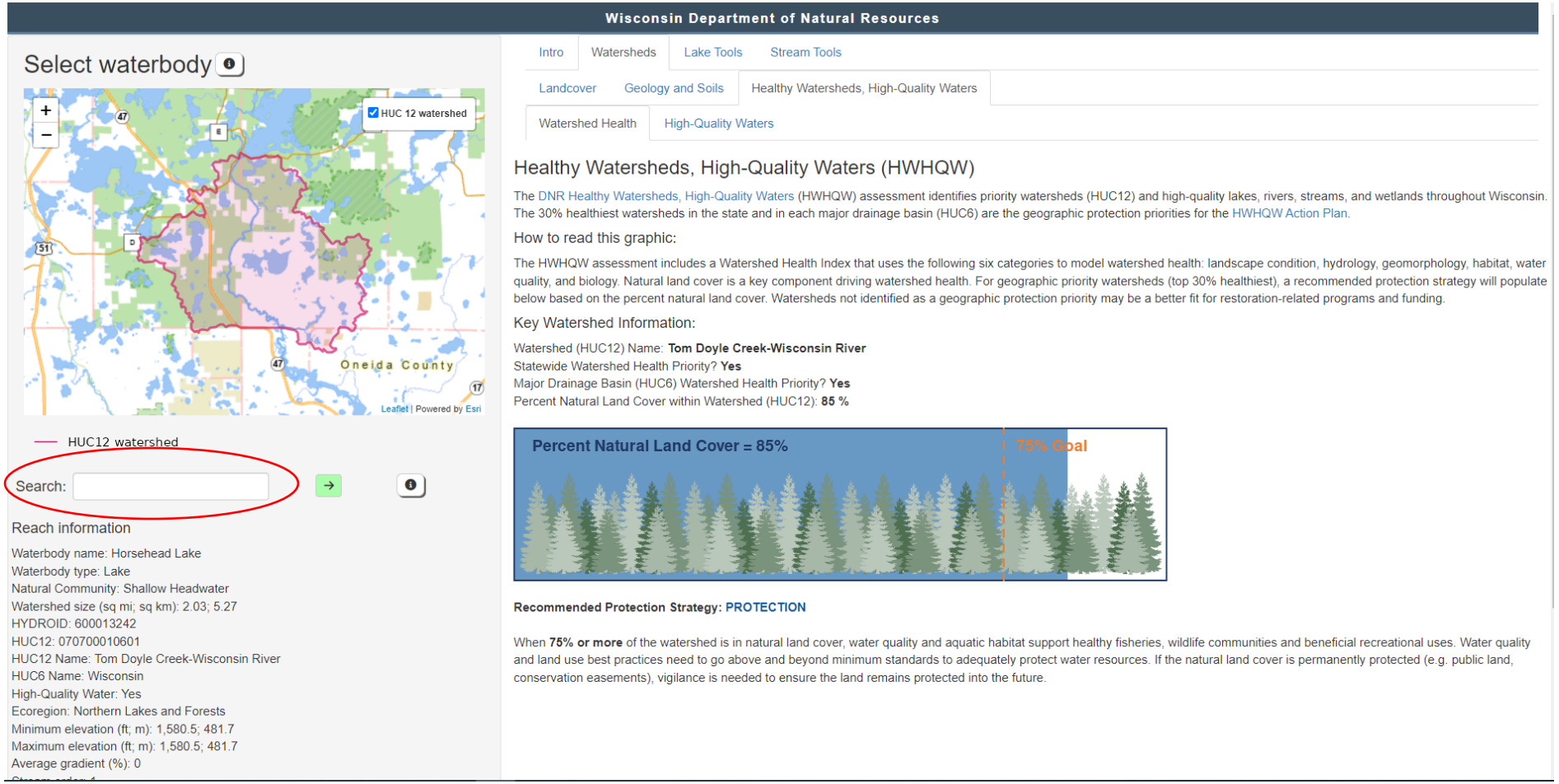
Tools for Exploring Wonderful Waters:

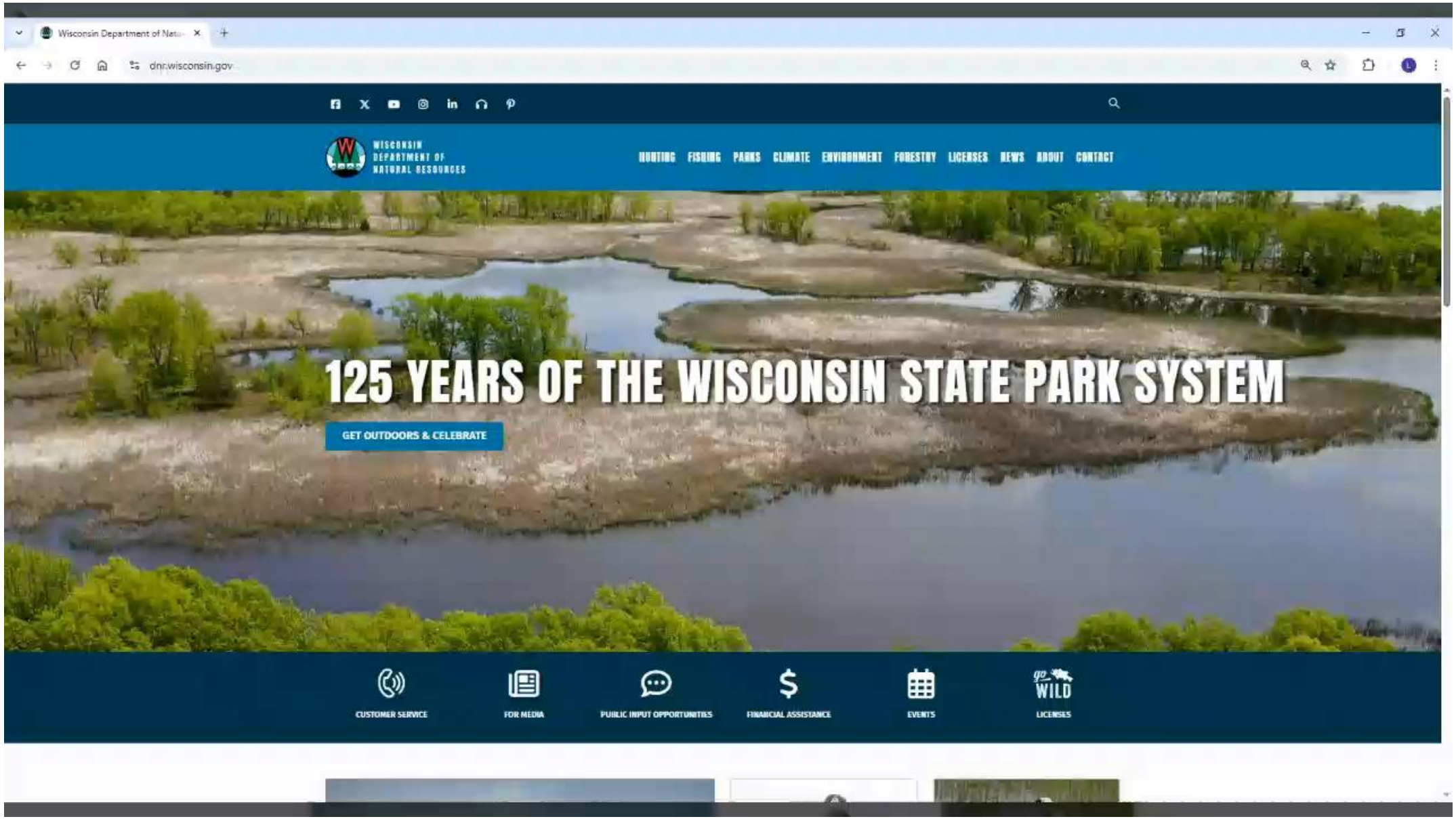
Wisconsin Water Explorer (WEX)

Search by waterbody name or click on a waterbody on the map

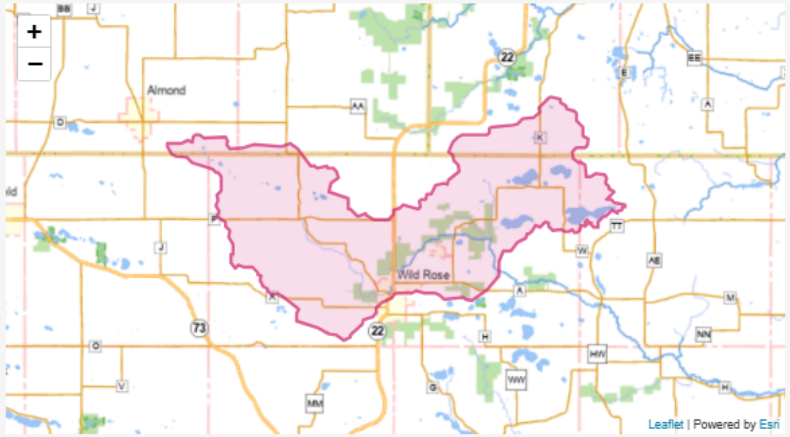
Go to the *Watersheds* → *Healthy Watersheds, High-Quality Waters* tab

Learn if the water is in a protection priority and if it's high-quality!




dnr.wisconsin.gov
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
HUNTING FISHING PARKS CLIMATE ENVIRONMENT FORESTRY LICENSES NEWS ABOUT CONTACT
125 YEARS OF THE WISCONSIN STATE PARK SYSTEM
GET OUTDOORS & CELEBRATE
CUSTOMER SERVICE
FOR MEDIA
PUBLIC INPUT OPPORTUNITIES
FINANCIAL ASSISTANCE
EVENTS
go WILD
LICENSES

Select waterbody



HUC12 watershed

Search:

Reach information

Waterbody name: Pine River
Waterbody type: Stream
Natural Community: Cool-Cold Mainstem
Watershed size (sq mi; sq km): 42.1; 109
HYDROID: 200082396
HUC12: 040302022001
HUC12 Name: Humphrey Creek-Pine River
HUC6 Name: Fox
High-Quality Water: Yes
Ecoregion: North Central Hardwood Forests
Sinuosity (m/m): 1.3
Minimum elevation (ft; m): 869.5; 265
Maximum elevation (ft; m): 875.3; 266.8
Average gradient (%): 0.10097
Stream order: 3
Dam directly above: Not Present
Drainage: Not internally drained

Download Watershed Shapefile
Download Raw Data

Healthy Watersheds, High-Quality Waters (HWHQW)

The DNR Healthy Watersheds, High-Quality Waters (HWHQW) assessment identifies priority watersheds (HUC12) and high-quality lakes, rivers, streams, and wetlands throughout Wisconsin. The 30% healthiest watersheds in the state and in each major drainage basin (HUC6) are the geographic protection priorities for the HWHQW Action Plan.

How to read this graphic:

High-quality waters (HQW) are defined as lakes, rivers, and streams that meet two of three categories: unique and rare natural communities, attaining water quality standards, and good-to-excellent biotic integrity. Please note that a waterbody may not be identified as high-quality because it has not been monitored, the DNR does not have access to the monitoring results, or it did not meet the assessment criteria.

Does Pine River meet High-Quality Water Criteria? Yes

Unique & Rare Resources	Attaining Water Quality Standards	Index of Biotic Integrity (IBI)	Total Count of HQW Criteria
✓	✓	✓	3

List of High-Quality Waters by Watershed (HUC12)

Listed below are all of the High-Quality waters identified to date that are located within the **Humphrey Creek-Pine River** watershed. Taking a community-based watershed management approach to protect water resources can often leverage additional partnerships and funding than managing a single lake, river, stream or wetland alone. Furthermore, protection strategies benefiting multiple water resources can be integrated into local and regional planning efforts.

Watershed HUC12 Code:	040302022001
Waterbody Name	**Waterbody Identification Code (WBIC)**
Davies Creek	250800
Gilbert Lake	186400
Kaminski Creek	250100
Long Lake	191100
Pine Lake	196100
Pine River	247800
Twin Lake	182300
Unnamed	250900

Taking Action to Protect Water Resources

Kentuck Creek, Vilas County

Best Practices for Watershed Protection

Protect Land

- Riparian Areas
- High Natural Land Cover
- Headwater streams & wetlands
- Proximity to public lands
- Source Water Protection Areas
- Areas prone to erosion
- Development Threats

Fee Title Acquisition

Conservation Easement

Deed Restrictions/Covenant

Enrolled Land (ex. MFL)

Conservation Pledges

Best Practices for Watershed Protection

Enhance Natural Land Cover

- Plant native flowers, grasses, trees & shrubs
  - Ex. County Tree & Shrub Sales
- Large Scale forest protection & reforestation
- Protect and restore shorelands
  - Ex. Healthy Lakes & Rivers Program

Best Practices for Watershed Protection

Slow the Flow

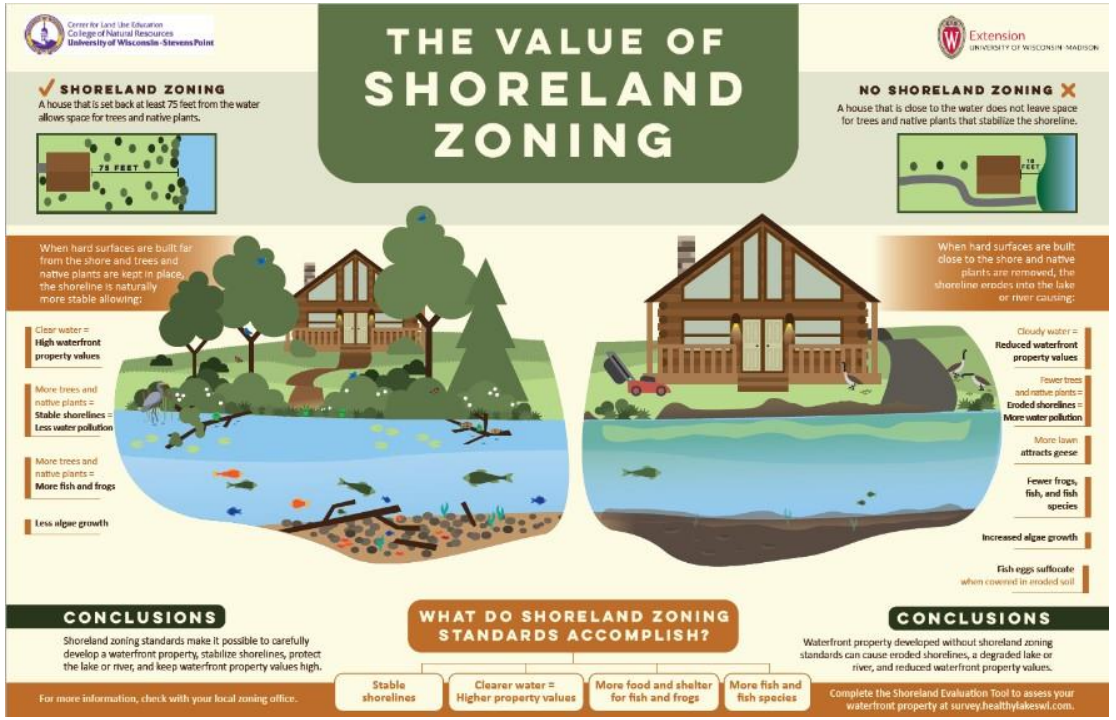
- Right size infrastructure for stream flow, fish passage, and flood management
- Protect high-functioning wetlands & restore wetlands to improve watershed storage
- Divert & Infiltrate stormwater run-off
- Implement Forestry WQ BMPs to control erosion

Undersized culvert at Elvoy Creek in Forest County that will be replaced with a 30-ft-wide bridge to restore flows and allow fish passage

Best Practices for Watershed Protection

Plan for Future Land & Water Resource Uses

- Incorporate HWHQW into planning documents, natural resource management, etc.
- Develop ordinances & voluntary programs to protect water resources
- Utilize Shoreland Zoning to protect Water Quality
- Promote Conservation Planning Tools



Food for Thought

- Where do you see opportunities within your organization to use the Wonderful Waters of Wisconsin Action Plan or modeling data?
- What resources do you need to be successful in implementing watershed protection activities?
- What do you see as the biggest threats and opportunities for healthy watersheds where you live and/or work?
- How can your organization make the case for prioritizing protection?

CONNECT WITH US

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OFF THE RECORD"