

Protection 101: CWA 319 Guidelines, the Vision, and Incorporating Protection Plans into Watershed-Wide Planning

Wonderful Waters of Wisconsin: Healthy Watersheds, High-Quality Waters



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Environmental Management Division

Water Quality Program

Central Office



Water
Resources
(Field)

Wastewater
(Field)



Water Eval

Monitoring

Permits

Wastewater

Lakes &
Rivers

Acknowledgements

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Cadmus Group

Extension Lakes

Landmark Conservancy

Michigan DNR

The Nature Conservancy

The River Alliance of Wisconsin

US EPA

..and more!

Agenda

- NPS Protection Background
- Wonderful Waters of Wisconsin
Overview
- Protection Planning
- Resources & Examples



Brian Malloy / Travel Wisconsin

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”



86,000 Miles of Streams



17,000 Lakes



5.3 Million Acres of Wetlands

650 Miles of Great Lakes Shoreline

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

Can we improve the balance?



NPS Protection Integration 1.0

“Wisconsin’s NPS program is committed to *balancing restoration of impaired waters with the protection of unimpaired/high quality waters*, since a significant portion of the assessed waters meet water quality standards . . .”

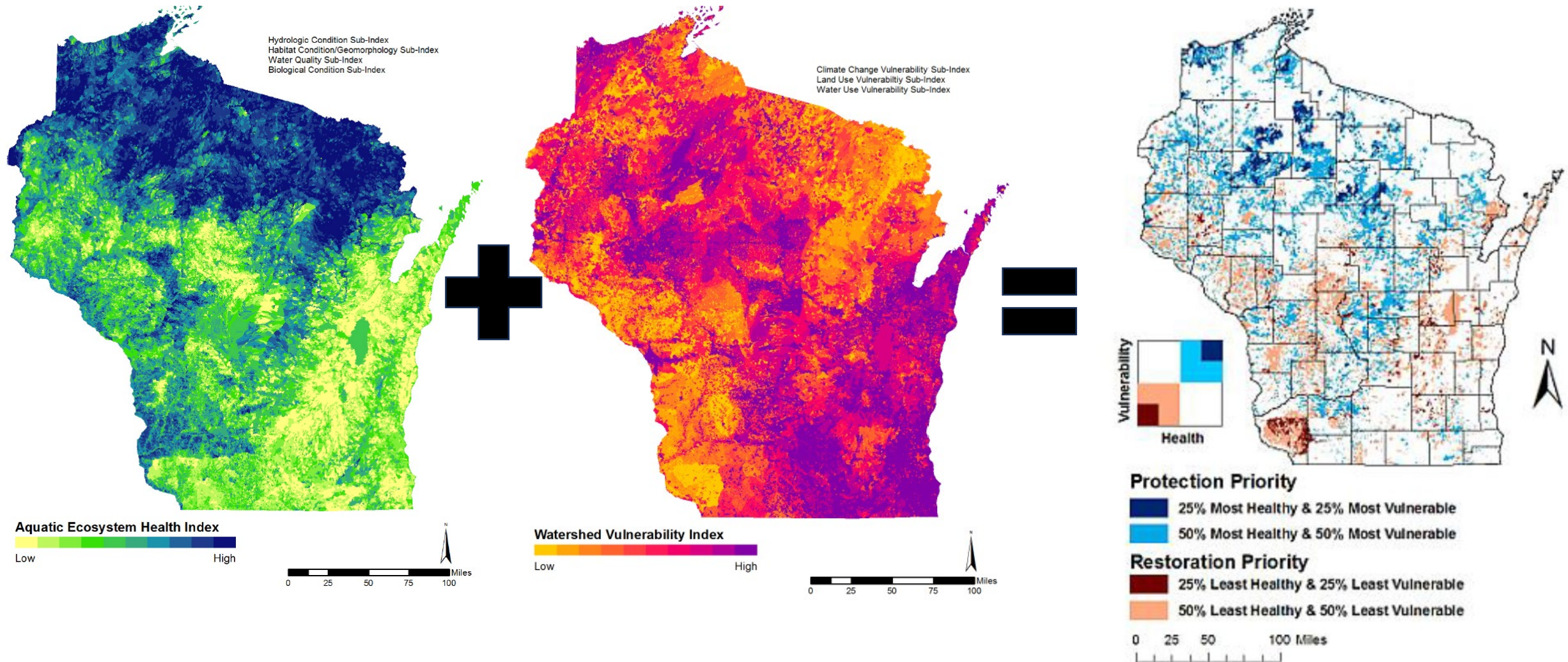
WISCONSIN'S NONPOINT SOURCE PROGRAM MANAGEMENT PLAN *FFY 2021-2025*

Approved by EPA on
April 8, 2021

*Wisconsin's
approach to
addressing water
quality impacts from
nonpoint source
pollution.*

NPS Protection Integration 1.0

Overlaying Health and Vulnerability Index to identify Protection and Restoration Priorities (2013)



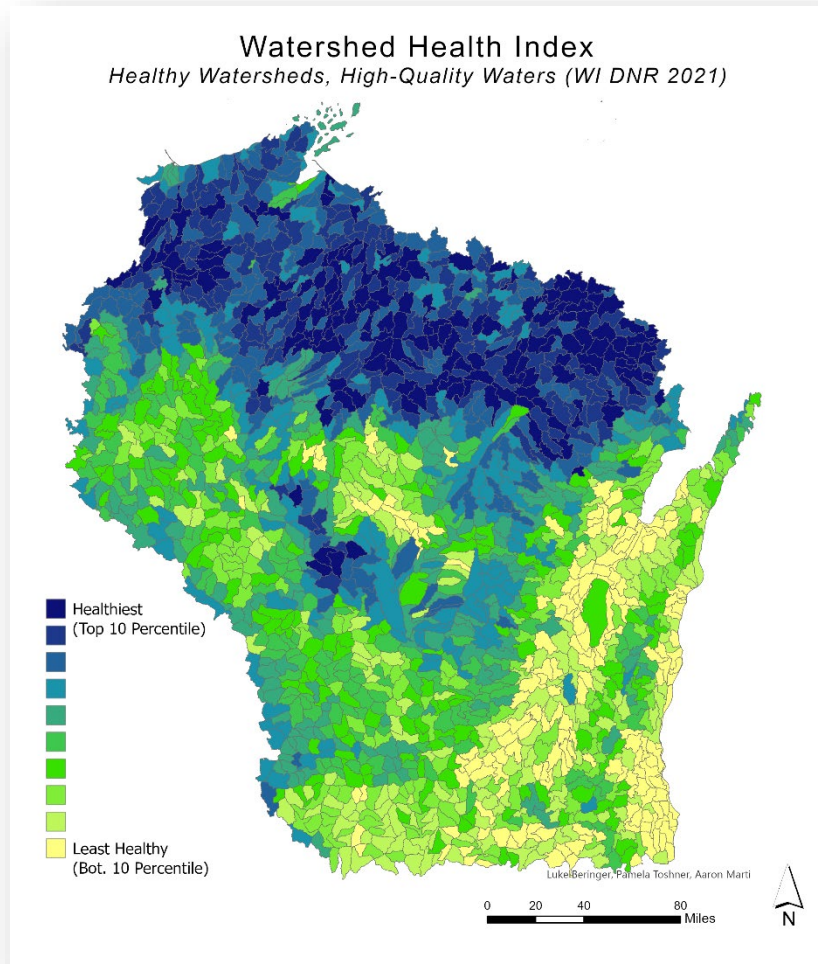
NPS Protection Integration 1.0

Development of a statewide Healthy Waters Protection Program was identified in plan as future activity to enhance the effectiveness of Wisconsin's NPS program

Table 5.1 WDNR Bureau of Watershed Management & Bureau of Water Quality Objectives & Milestones Applicable to the NPS Program

Objective Annual Milestones	Milestones					Lead WDNR Section
	FY 21	FY 22	FY 23	FY 24	FY 25	
Objective: Keep healthy water healthy by building a statewide Healthy Waters Program.						
1. Designate and charter a core work group of Water Quality Bureau staff.	X	X	X	X	X	Lakes and Rivers, Water Evaluation, Monitoring
2. Draft and implement a statewide Healthy Waters Strategy.	X	X	X	X	X	Lakes and Rivers, Water Evaluation, Monitoring

2026 - 2030 WI NPS Plan Update *(Pending Approval)*



Adopted the Healthy Watersheds, High-Quality Waters Modeling & Assessment (2021)

Goals and Objectives pulled directly from 2022 Statewide Action Plan

Added Protection Planning Guidance as a Milestone

Listed available desktop tools for protection plan development and implementation

Introducing Version 2.0 - Wonderful Waters of Wisconsin



Year 3 Progress Report Coming Soon!

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 Hydrologic Unit Code (HUC) 12 scale



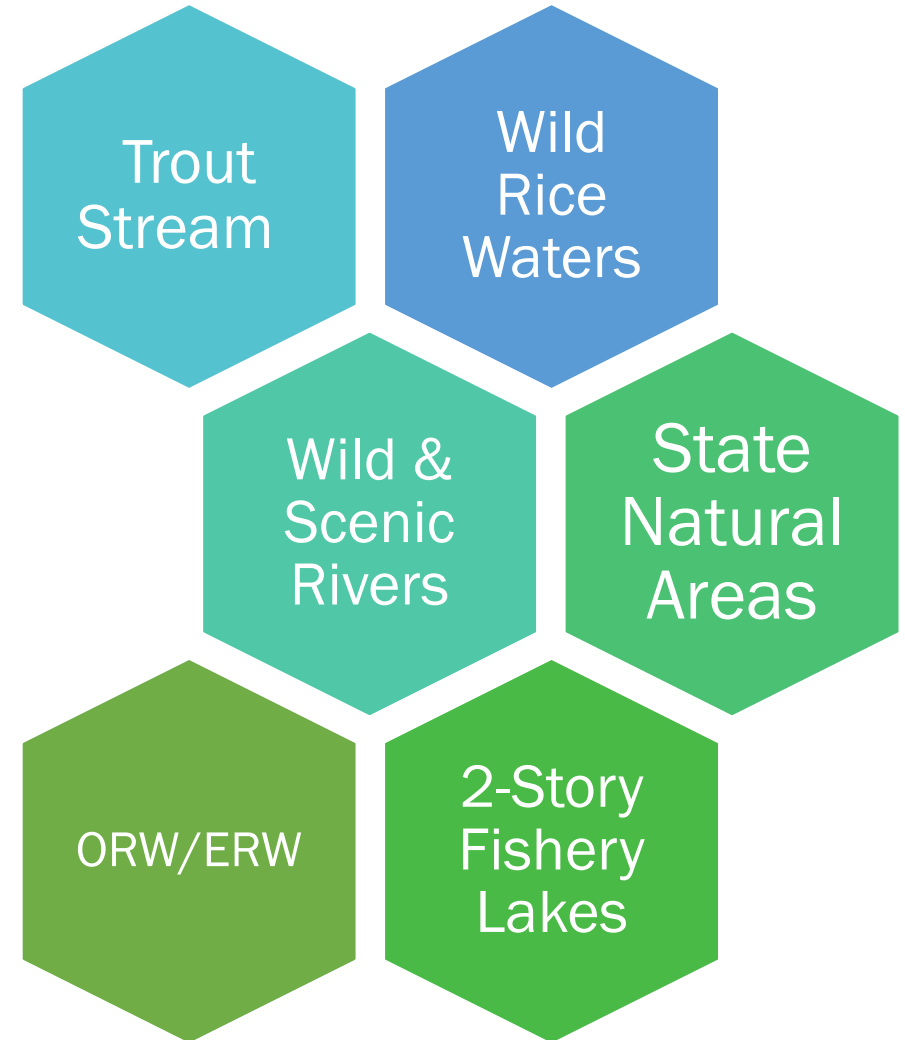
Photo Credit: Robert Timmons

What are High-Quality Waters (HQW)?

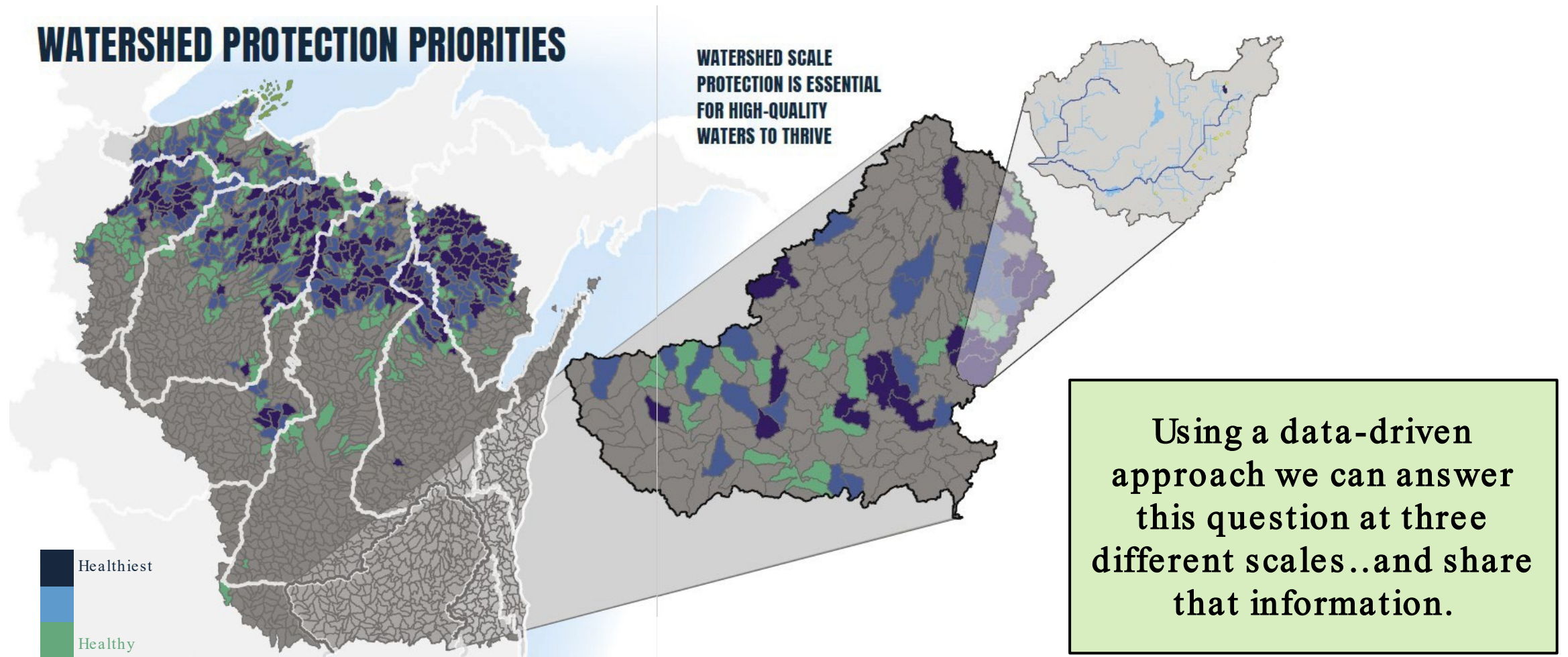
Lakes, streams and rivers with at least two of the following attributes:

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

Also includes unique wetlands and those with “least disturbed” conditions.



Where are Wisconsin's HWHQW?



2022 Statewide Action Plan

ACTION 2E

Continue to Learn from Protection Planning and Implementation Efforts Beyond Wisconsin

STRATEGIES FOR SUCCESS

- Work with EPA and other partners to identify water resource protection examples that may be applicable to HWHQW.
- Evaluate other state's water resources protection successes – e.g. Maine's alternative protection-based 9-Key-Element Protection Plan template - and develop similar strategies for HWHQW.

GENERAL READINESS:

	NEXT (3-5 YEARS)
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LEVERAGING PARTNERSHIPS:

				DNR
				

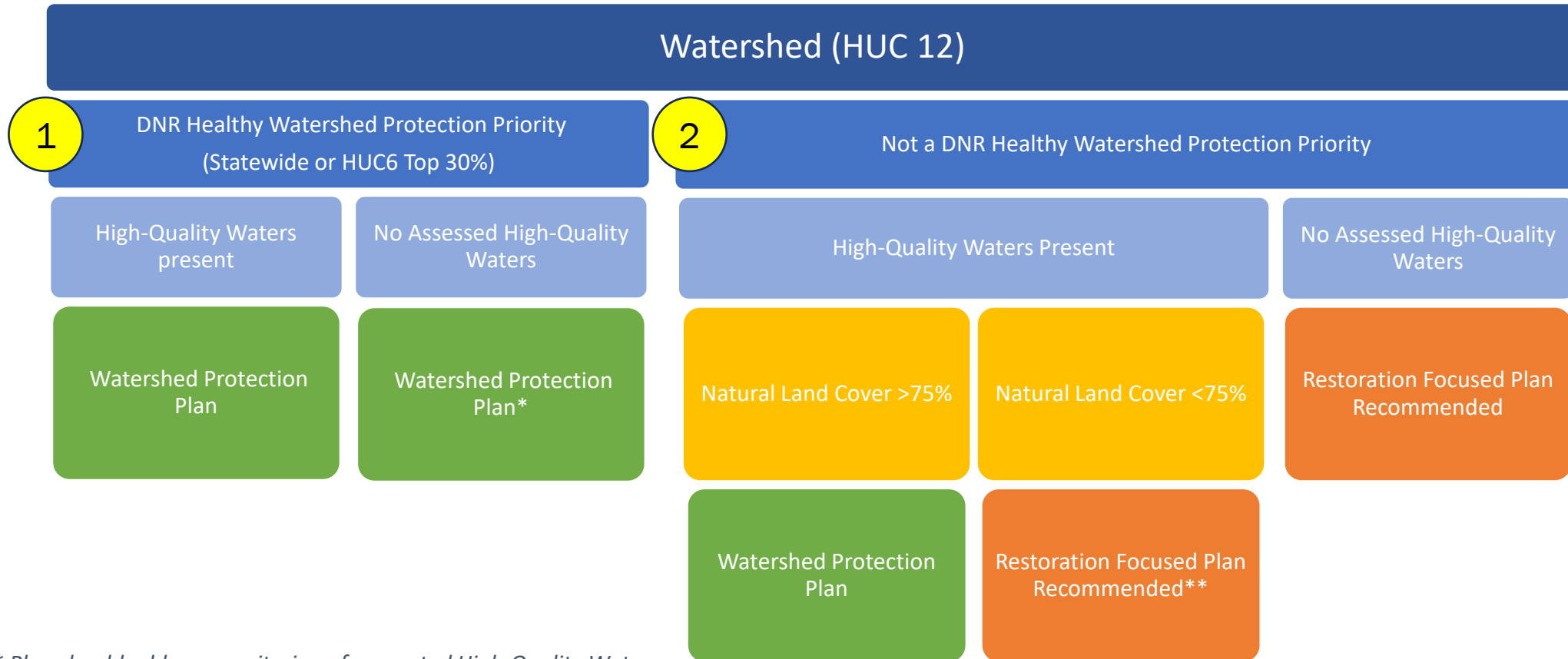
On schedule!
2025-2027



THE WONDERFUL WATERS OF WISCONSIN

AN **ACTION PLAN** TO PROTECT
WISCONSIN'S HEALTHY WATERSHEDS
& HIGH-QUALITY WATERS

Alternative Watershed-Based Plan for “Protecting Priority Healthy Waters”



* Plan should address monitoring of suspected High-Quality Waters.

** Restoration plans are strongly encouraged to include protection priorities, such as High-Quality Waters.

Protection Planning Guidance

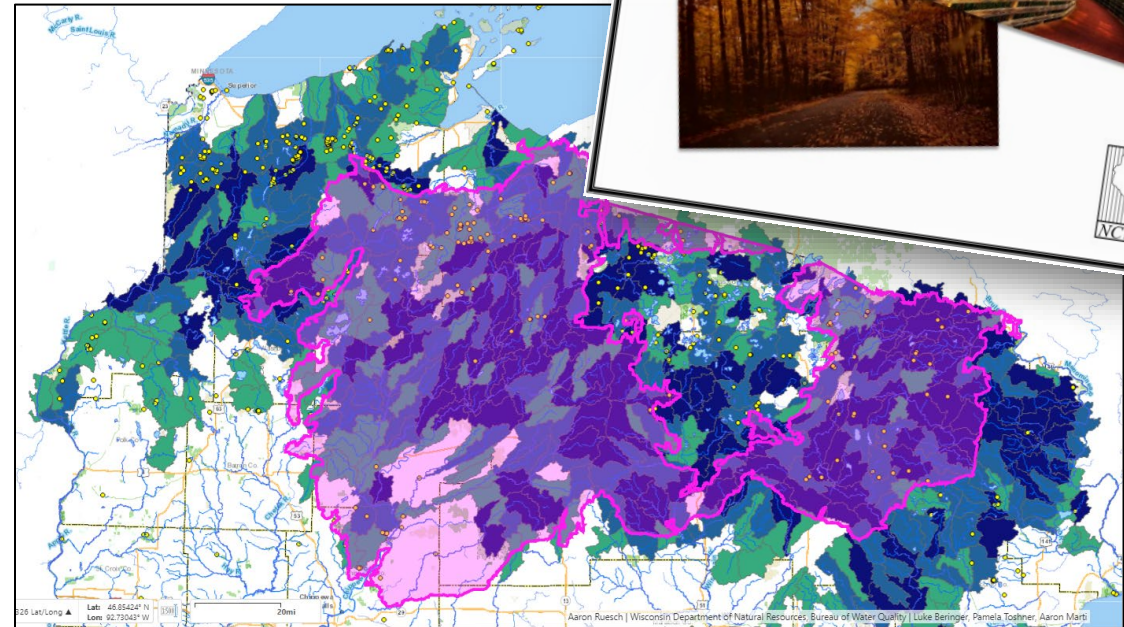
- Utilizes EPA's 319 Guidelines: Alternative Watershed-Based Plans (aka 5 Elements) as framework
- Guidance targets partners and funding beyond EPA/ 319.
- EPA review/ approval required if 319 funds sought.
- Wisconsin's 319 funding eligibility likely needs to be modified for protection projects.



Protection Planning in Action

Integrating protection priorities into resource assessments and shaping protection goals and objectives

- Department Regional Master Planning
- County Land & Water Plans
- 9KE Watershed Based Plans
 - Lake St. Croix
 - White River
 - Fish Creek
- WI DNR Surface Water Grants
 - County Lakes Planning
 - Management Implementation
 - Shoreland Health Practices



North Central Forest Master Plan Boundaries



Multiple Desktop Tools for Exploring Wonderful Waters

Watershed Restoration & Protection Viewer

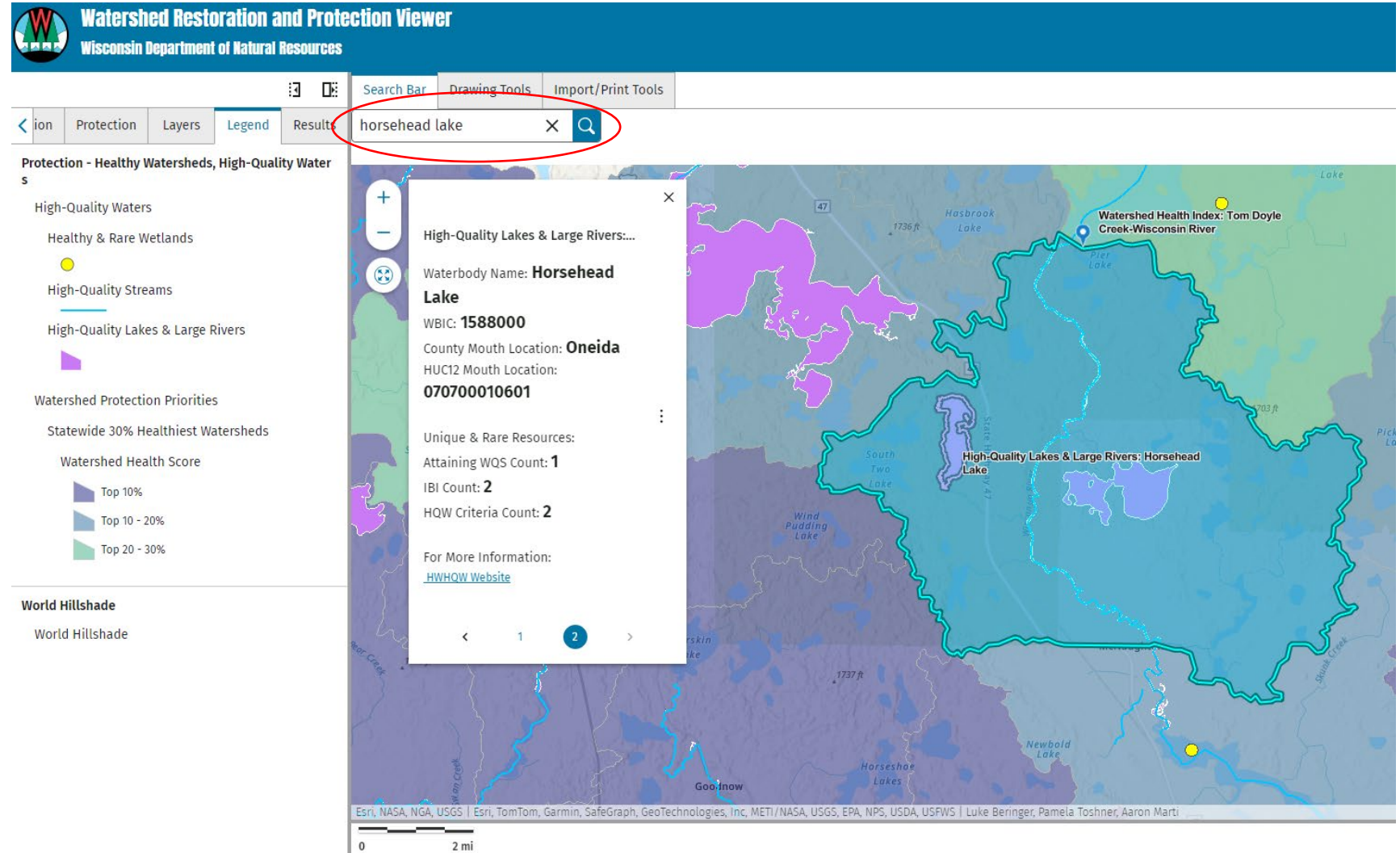
Turn on the *High-Quality Waters & Watershed Protection Priorities* Layer



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!



Multiple Desktop 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!


Wisconsin Department of Natural Resources

Intro Watersheds Lake Tools Stream Tools

Landcover Geology and Soils Healthy Watersheds, High-Quality Waters

Watershed Health High-Quality Waters

Select waterbody



Search: → ⓘ

Reach information

Waterbody name: Horsehead Lake
Waterbody type: Lake
Natural Community: Shallow Headwater
Watershed size (sq mi; sq km): 2.03; 5.27
HYDROID: 600013242
HUC12: 070700010601
HUC12 Name: Tom Doyle Creek-Wisconsin River
HUC6 Name: Wisconsin
High-Quality Water: Yes
Ecoregion: Northern Lakes and Forests
Minimum elevation (ft; m): 1,580.5; 481.7
Maximum elevation (ft; m): 1,580.5; 481.7
Average gradient (%): 0

Healthy Watersheds, High-Quality Waters (HWHQW)

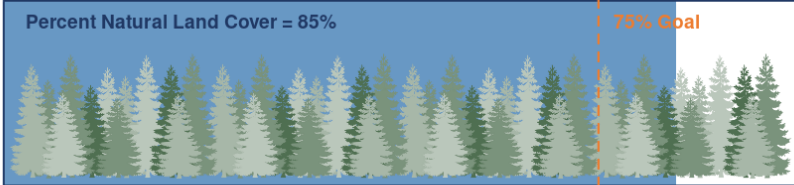
The DNR Healthy Watersheds, High-Quality Waters (HWHQW) assessment identifies priority watersheds (HUC12) and high-quality lakes, rivers, streams, and wetlands throughout Wisconsin. The 30% healthiest watersheds in the state and in each major drainage basin (HUC6) are the geographic protection priorities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

How to read this graphic:

The HWHQW assessment includes a Watershed Health Index that uses the following six categories to model watershed health: landscape condition, hydrology, geomorphology, habitat, water quality, and biology. Natural land cover is a key component driving watershed health. For geographic priority watersheds (top 30% healthiest), a recommended protection strategy will populate below based on the percent natural land cover. Watersheds not identified as a geographic protection priority may be a better fit for restoration-related programs and funding.

Key Watershed Information:

Watershed (HUC12) Name: **Tom Doyle Creek-Wisconsin River**
Statewide Watershed Health Priority? **Yes**
Major Drainage Basin (HUC6) Watershed Health Priority? **Yes**
Percent Natural Land Cover within Watershed (HUC12): **85 %**

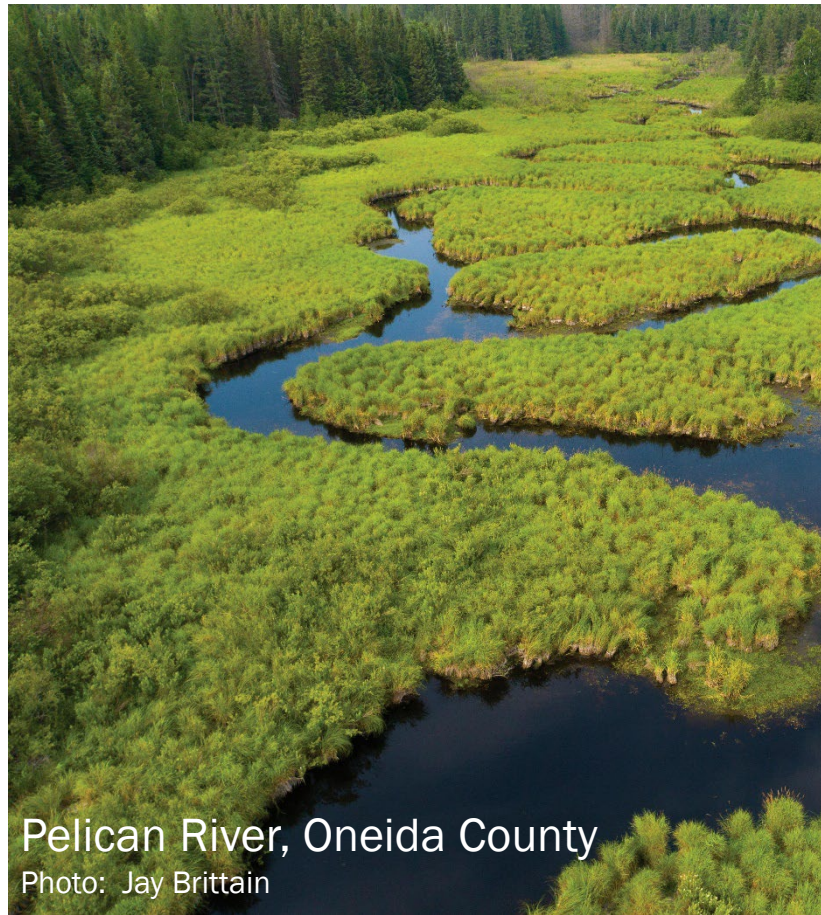


Percent Natural Land Cover = 85% **75% Goal**

Recommended Protection Strategy: PROTECTION

When **75% or more** of the watershed is in natural land cover, water quality and aquatic habitat support healthy fisheries, wildlife communities and beneficial recreational uses. Water quality and land use best practices need to go above and beyond minimum standards to adequately protect water resources. If the natural land cover is permanently protected (e.g. public land, conservation easements), vigilance is needed to ensure the land remains protected into the future.

Coming soon!



Pelican River, Oneida County

Photo: Jay Brittain

PROTECTION BEST PRACTICES TOOLKIT

Protect Land

Enhance Natural Cover

Restore Hydrology

Land Use Planning

PROTECT LAND

When identifying land to protect that will have the highest water quality benefits, consider prioritizing the following criteria. Additional resources can be found within the [EPA Advancing Watershed Protection Through Land Conservation: A Guide for Land Trusts](#).

- **Riparian Zones** with well established vegetation, including trees and shrubs, can help to filter and slow down runoff, provide shading for coldwater resources, and are more resilient to flooding.
- **Headwater streams and wetlands** strongly influence the health of downstream watersheds and are especially vulnerable to land alteration
- **Large tracts of intact natural land cover (greater than 75%)**, especially wetlands and forests. These lands act as natural infrastructure to support watershed health by maintaining natural flow regimes, preserving hydrologic connectivity, and regulating pollutants, and so much more.
- **Land that is naturally prone to erosion** such as steep slopes and bluffs, streambanks, or areas with bare soils. In addition to protecting these areas, it is also encouraged to have a natural resource professional to inspect the land for signs of existing erosion and implement the necessary erosion control best management practices.
- Just like **proximity to public protected lands** is often used to prioritize areas for habitat conservation, maintaining large corridors of undeveloped land supports water quality and ensures those benefits continue beyond county, state, and federal lands.

CONNECT WITH US

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Visit *dnr.wisconsin.gov* and search “Healthy Watersheds” to learn more!



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"WILD WISCONSIN:
OFF THE RECORD"