



Protection Updates

Cybertown
June 2021



Presentation Overview

- ❑ **A brief (re)orientation:** key terms + Healthy Watersheds Program efforts to date
 - New Administration priorities: 30x30 land conservation goal
- ❑ **Integrating protection in CWA Programs**
 - 303(d) program (e.g., Program Vision and ELI Protection Compendium)
 - 319 program (e.g., NPS protection report)
- ❑ **Coordinating with the broader protection community**
 - Healthy Watersheds Consortium Grant Program
 - Land trust guide
- ❑ **Wisconsin Spotlight**
- ❑ **Learning Exchange:** Small group breakouts

Healthy Water(sheds) Protection

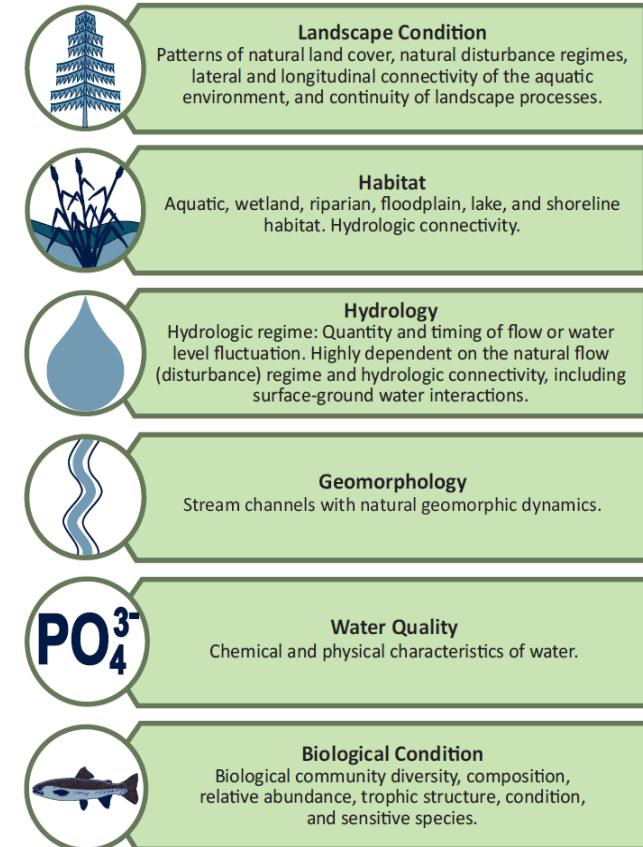
❑ CWA §101(a):

“The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

❑ WQ is a central focus of CWA protection work.

(e.g., WQS, 319, 303(d), etc.)

❑ The HW approach is based on a systems-level understanding of watershed condition.

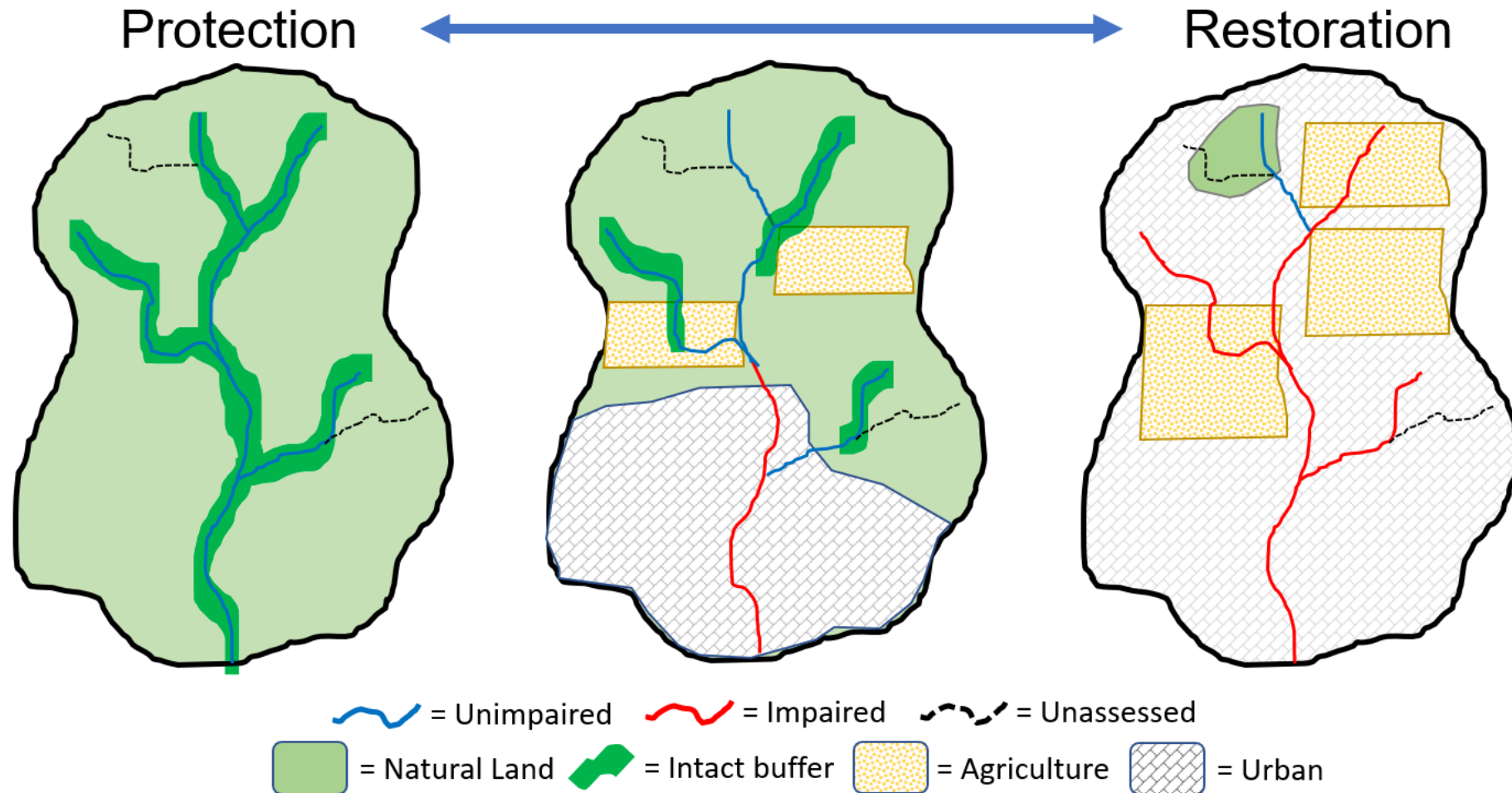


Index of Watershed Health

OWOW Healthy Watersheds efforts to date

- ❑ **Est. HW assessment framework + roadmap to integrate efforts in EPA and partner programs ('10-14)**
 - *HW Concepts, Assessments, and Management Approaches* (2012)
 - Increased protection focus in 319 guidelines and 303d Vision (2013)
- ❑ **EPA-supported HW integrated assessments ('13-16)**
 - ~12 projects, most state scale. E.g., California (2013), Tennessee (2015)
- ❑ **Accelerating HW protection and assessment ('15-present)**
 - HW Consortium Grant (2015) - \$3.75M from NSMB
 - Data integration with RPS and WSIO → *Preliminary HW Assessments* (2017)
- ❑ **Strengthening CWA integration and connections to protection community**
 - ELI 303d Protection Compendium (2020), NPS Protection Report (2021)
 - Land conservation community (2021)
 - Data Integration and updates to How's My Waterway

Protection can play a critical role in achieving watershed goals across a range of settings.



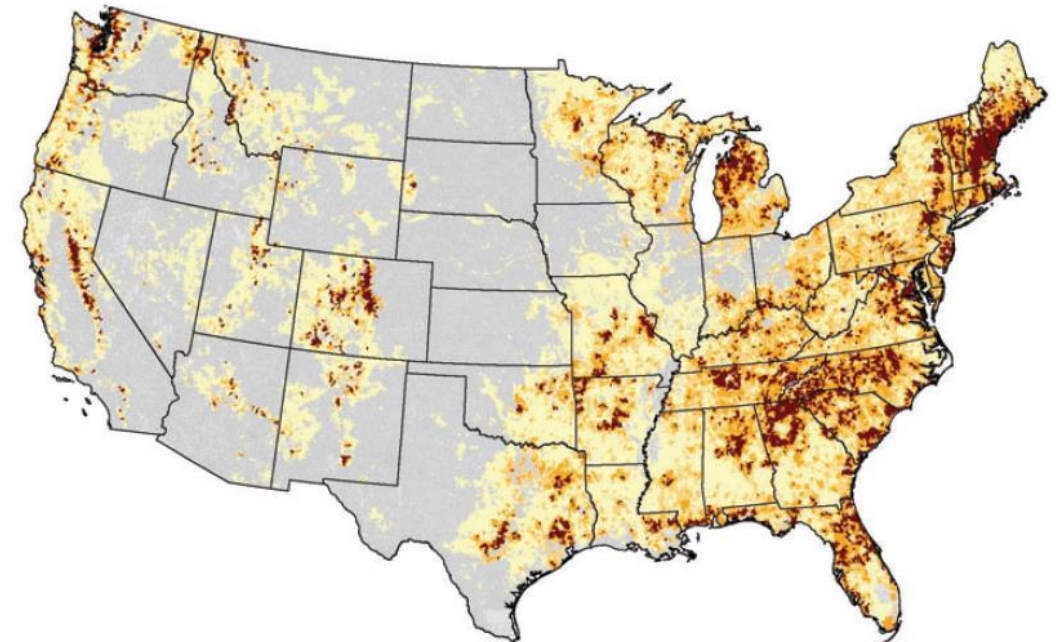
The next 10 years will be a critical period to ensure that land protection is targeted in areas important for protecting water quality.

❑ **Tackling the Climate Crisis (January 2021 EO):**

30x30 land conservation goal: **Protect an additional 300M+ acres of conterminous US by 2030.** Currently 12% protected lands (USGS).

❑ **USFS Forests on the Edge report (2014):**

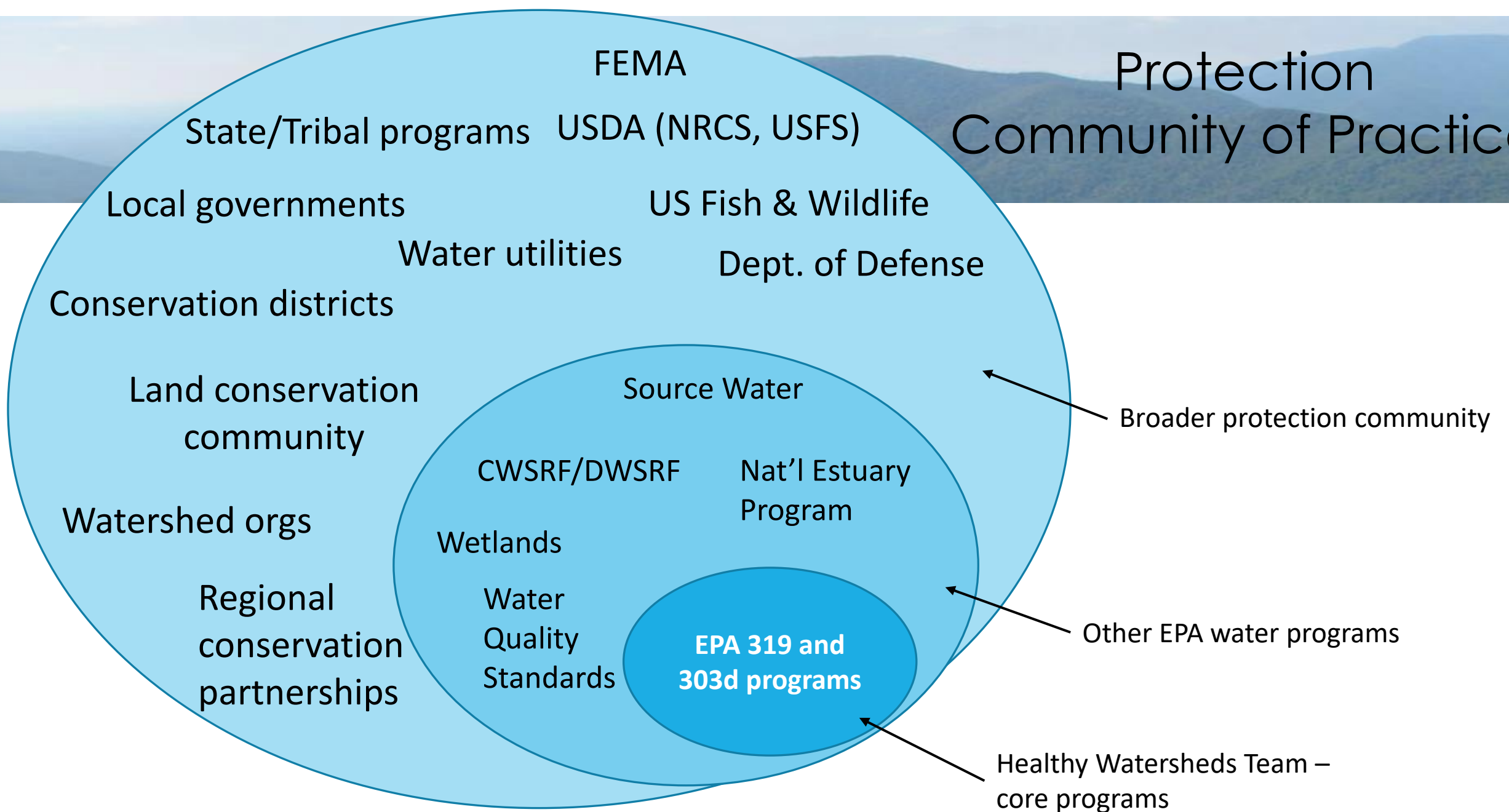
By 2030, 150M+ acres of conterminous US will experience a substantial **increase in land development** for housing.



Percentage of each Subwatershed to Experience Increased Housing Density in Private Forest
■ 90th Percentile
■ 75th Percentile
■ 50th Percentile
■ Less than 50th Percentile
■ Insufficient private forest for this analysis

Private Forests, Housing Growth, and America's Water Supply (US Forest Service 2014)

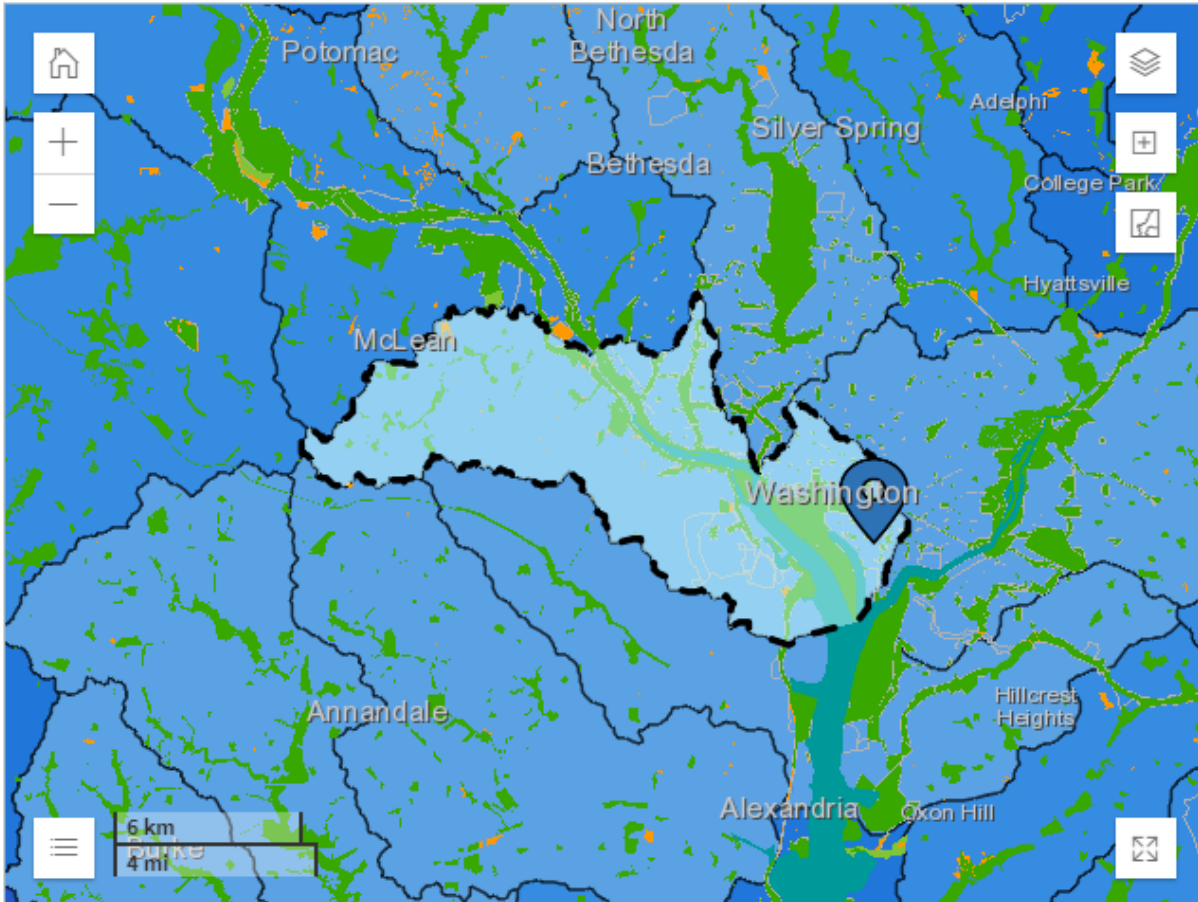
Protection Community of Practice



How's My Waterway Protect Page

Let's get started!

2024 OR



Esri, HERE, NPS | U.S. Geological Survey, Gap Analysis Project (GAP), September 2018, Protected Areas Datab... Powered by Esri

2024, Washington, District of Columbia
WATERSHED: Pimmit Run-Potomac River (020700100103)

- Public Life
- Drinking Water
- Monitoring
- Identified Issues
- Restore
- Protect**



Protect

Show Text

You can help keep your water clean. Together we can protect water for future generations.

- Watershed Health and Protection**
- Tips

Learn about watershed health scores in relation to your state, the location of designated Wild and Scenic Rivers and if there are any protection projects or protected areas in your watershed.

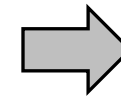
Expand All

- Watershed Health Scores** >
- Wild and Scenic Rivers** >
- Protected Areas** >

Protection Projects >

CWA 303(d) Program Vision

“The Clean Water Act Section 303(d) Program provides for effective integration of implementation efforts to **restore and protect the nation’s aquatic resources, where the nation’s waters are assessed, restoration and **protection objectives** are systematically prioritized, and Total Maximum Daily Loads and alternative approaches are adaptively implemented to achieve water quality goals with the collaboration of States, federal agencies, tribes, stakeholders, and the public”**



Six Goals

- Prioritization
- Assessment
- **Protection**
- Alternatives
- Engagement
- Integration

Long-term Vision and associated Goals are not regulation, policy, or new mandates

Protection Goal – For the 2016 reporting cycle and beyond, in addition to the traditional TMDL development priorities and schedules for waters in need of restoration, States identify protection planning priorities and approaches along with schedules to help prevent impairments in healthy waters, in a manner consistent with each State's systematic prioritization

- ❑ CWA objective to *restore and maintain the chemical, physical, and biological integrity of the nation's waters*, but protection efforts have lagged
- ❑ Encourage more systematic consideration of management actions to prevent impairments
- ❑ Encourage identifying and prioritizing healthy waters for implementation of protective management activities as part of State priorities

303(d) Vision and Protection Analysis

Higher Quality

1. Protecting Waters of Higher Quality (e.g., Tier 2 or 2.5 waters, “highly valued waters,” “exceptional waters,” “outstanding state waters”)

2. Programmatic Protection: Implementation of the TMDL or “alternative” should not only reduce pollution levels in the impaired segments but also ensure that unimpaired segments at least do not degrade.

4. Legacy Protection: After restoration, the TMDL for the water body remains operative and shifts its classification from a TMDL for an impaired water body to a protection TMDL. This revised role of the TMDL ensures that the water body does not slip back into impairment.

Impaired



22 Plans



6 Regions

R1, R2, R4,
R5, R6, R10



6 States

AK, MA, NJ,
TN, TX, WI

3. Protection from Impairment: If a water body is showing a trend of reduced water quality but is not yet impaired for a particular pollutant/parameter, or if it is close to impaired or simply targeted for protection by the state, a protection plan can be created to hasten implementation that keeps the water body from becoming impaired for that pollutant/parameter.

[Link to Storymap](#)

Protection: Compendium of State Approaches

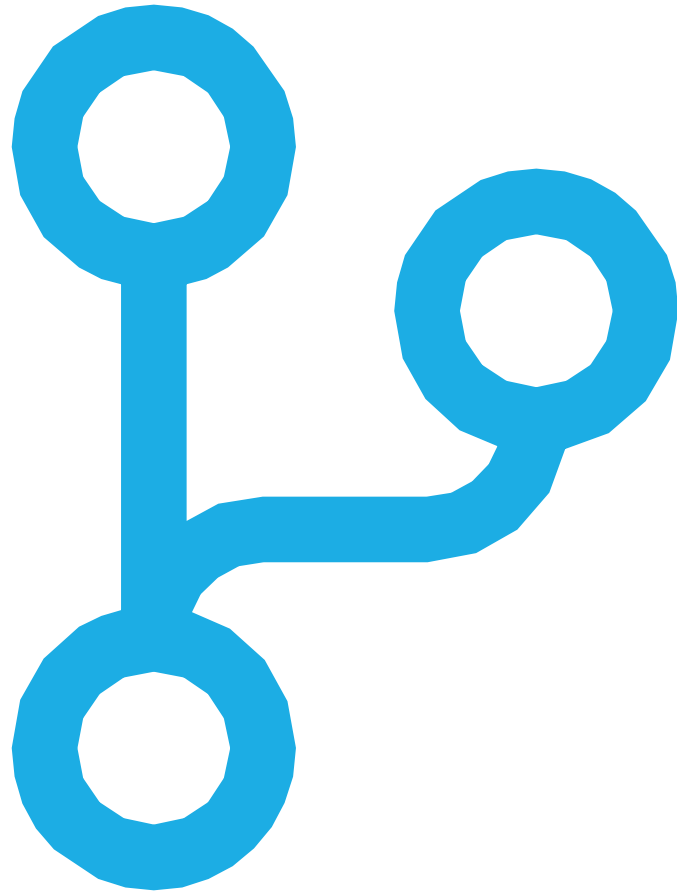
How State CWA 303(d)
Programs Are Protecting
Waters

“Protection,” in the context of the
Clean Water Act (CWA), is action taken
to maintain the integrity of the



ELI 'Protection' Compendium

- ❑ **Highlights examples of how state CWA 303(d) programs have pursued the protection of healthy waters**
- ❑ Updates of EPA's Protection FAQs clarifying the scope of the protection concept, approaches and practices, and measures of success in the context of the 303(d) Vision.
- ❑ CWSRF and DWSRF white papers detail the federal statutory and regulatory provisions regarding the use of state revolving funds (SRF) for protection efforts.
- ❑ Story Map compilation that reveals examples of how and where most water-relevant protection occurs, by what techniques, and the major players.
- ❑ **Deliverable completed summer 2020**



Nonpoint Source (NPS) Program



Presentation Overview

Goal:

Provide an update on protection activities underway in EPA's National Nonpoint Source Program.

- 1. Healthy Watersheds Consortium Grant Program**
 - 2. Land conservation community – outreach and coordination**
 - 3. NPS protection report**
- 

Healthy Watersheds Consortium (HWC) Grant Program

- ❑ **Established in 2015** via cooperative agreement with the US Endowment for Forestry and Communities. Runs through FY2021.
- ❑ **Goals:**
 - Spur programs and local projects to protect high quality waterways through **large-scale strategic conservation** of intact watersheds.
 - Grow the network of funders and partners to protect healthy watersheds, leveraging with \$3.75M in EPA funds.
- ❑ **\$10M in funding** (EPA, NRCS, US Endowment) awarded to 56 projects
 - **Project types:** (1) watershed action, (2) building watershed protection capacity, (3) advancing the state of practice
- ❑ **Preliminary Results:** protected 735,000 land acres and >3,000 stream miles

Healthy Watersheds Consortium (HWC) Grant Program

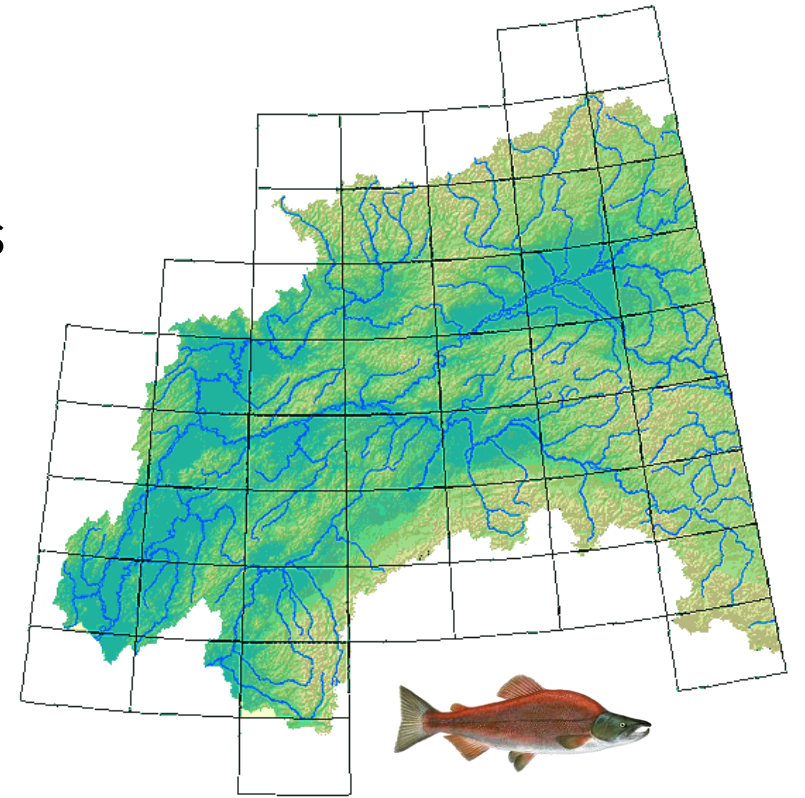
HWC grantees include:

- Land trusts
- Watershed organizations and non-profits
- Conservation partnerships & networks
- State and tribal government agencies
- Water utilities
- Conservation Districts
- Local government, NEP, etc...



HWC Grantee: Alaska Dept. of Fish & Game

- ❑ **Goal:** Survey state fish populations to inform the Anadromous Waters Catalog (AWC)
 - Anadromous Fish Act
 - AWC - a law-mandated, regulatory atlas of AK waters that support key fish species
- ❑ **Results:**
 - Added 70 waterbodies (972km) to the AWC
 - **AWC waters receive additional protection under state law**
 - Created a relationship with the National Park Service, who will continue to build off work
 - Informed the Ambler Road proposal



AWC waters of Alaska's interior region.

HWC Grantee: The Nature Conservancy, NM

- ❑ **Goal:** Use more advanced techniques to monitor the impact of wildfire mitigation efforts within the Rio Grande Watershed
 - **RGWF Goal:** Restore/protect 600,000 acres by 2034 via wetland restoration and prescribed burns
- ❑ **Results:**
 - Drone-based monitoring of over 171 acres
 - Monitoring database app for multiple partner use
 - **Improved state prescribed fire policy**
 - Developing a “State of the Watershed” report that analyzes the impact of completed protection activities on watershed function



HWC Grants - Current Activities & Next Steps

❑ **Cooperative agreement ends October 2021**

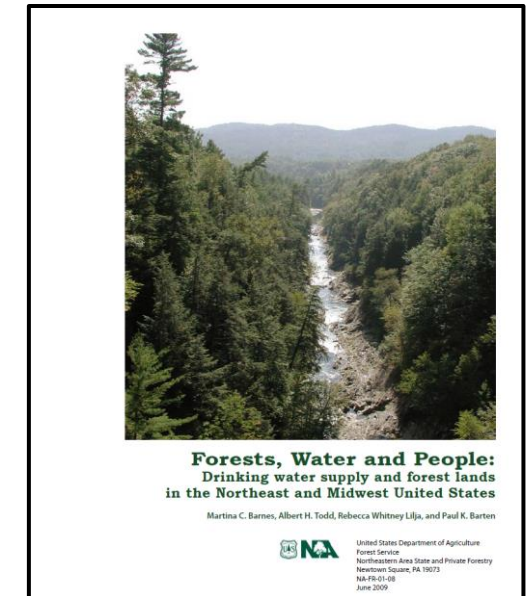
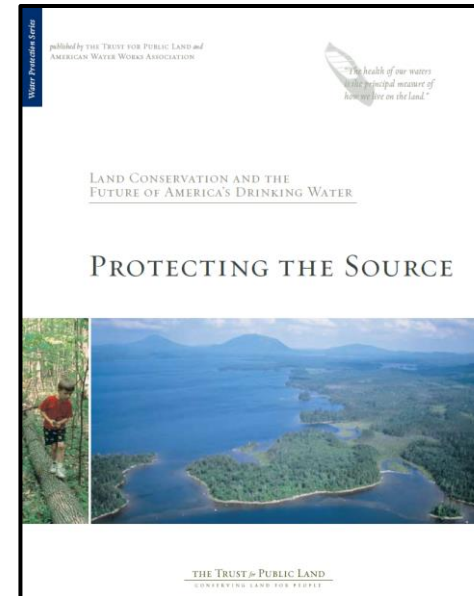
- Program Evaluation - What impact did HWC support play in projects, specifically to address obstacles? E.g., funding, capacity.

❑ **EPA is pursuing opportunities to showcase HWC program, lessons learned.** E.g., October 2021 Land Trust Alliance Rally session

❑ *Like 319 grants, program has demonstrated the **critical role of multi-year grants serving as “force multipliers” to accelerate watershed protection.**

Land Conservation Community: Key Partners in Watershed Protection

- ❑ Land conservation has long been recognized as a key watershed protection strategy.
- ❑ **Water quality & wetlands** is cited as #2 conservation priority among land trusts (2015 Land Trust Census).
- ❑ Land trusts can be key partners in WQ work.
 - E.g., land conservation to complement restoration, landowner and community engagement.
- ❑ See [Land Trust Alliance's 'Find a Land Trust' web tool](#) to explore 1,400+ land trusts in US.



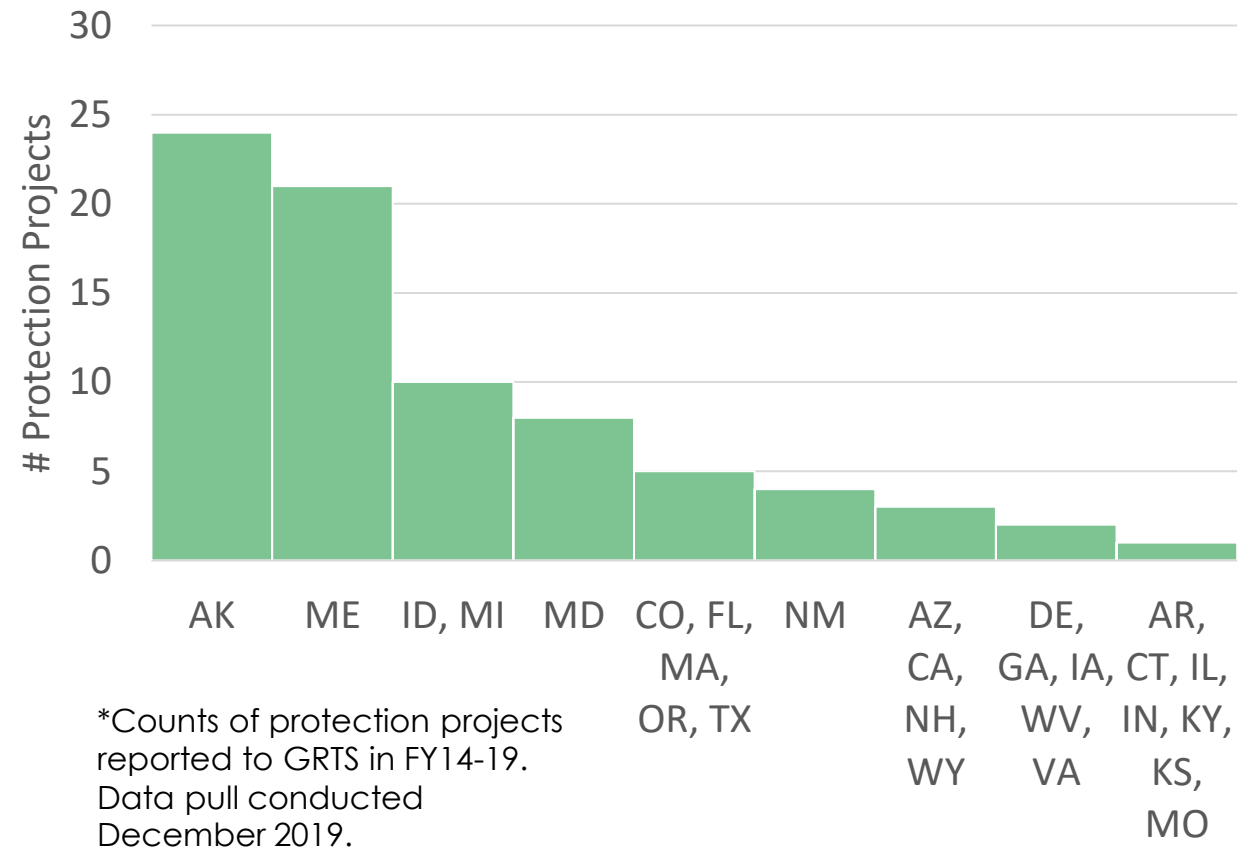
Land Conservation Community: Key Partners in Watershed Protection

EPA is currently developing educational materials for land conservation community:

- ❑ 2021 Land Trust Alliance Rally healthy watersheds protection session
- ❑ Guide for land trust staff with intro-level information on CWA programs and watershed protection concepts related to:
 - Land conservation
 - Land stewardship
 - Watershed-based partnerships
 - Community outreach

Protection in the National NPS Program

- ❑ 319 Guidelines provide states flexibility to fund protection, where included in NPS management program plan.
- ❑ States define protection priorities (e.g., SW protection, high quality waters)
- ❑ To date, limited use of 319 funds for protection implementation projects (< 5% all GRTS projects, 2014-2019)
- ❑ Watershed planning – opportunity to integrate protection, including alongside restoration



NPS Protection Report:

Approaches for integrating the protection of healthy waters in NPS management programs

Goal: compile information on the ways in which states and partners have integrated protection in NPS management efforts, based on reviews of 13 states, 22 protection-oriented watershed plans, and supporting literature review.

Topics covered in report:

- Prioritizing watersheds for protection
- Integrating protection in watershed planning
- Implementing protection projects
- Tracking protection actions and outcomes
- Protection partnerships

*Draft report currently being reviewed by EPA. Final report expected Fall 2021.

Integrating protection in watershed planning

Common components of plans:



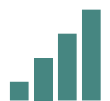
Evaluated **watershed threats**



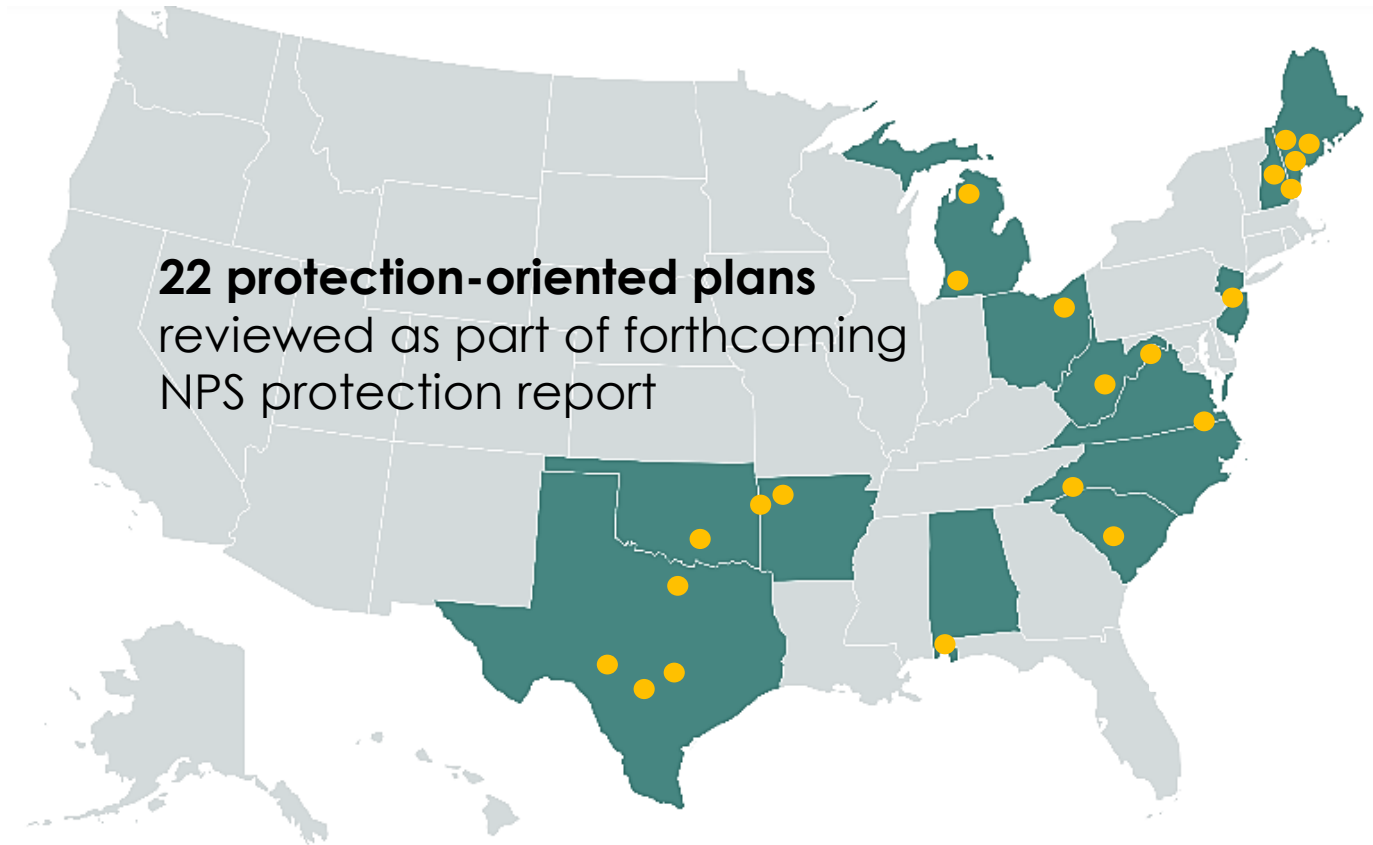
Identified **protection priority areas**



Incorporated **protection-based management strategies**

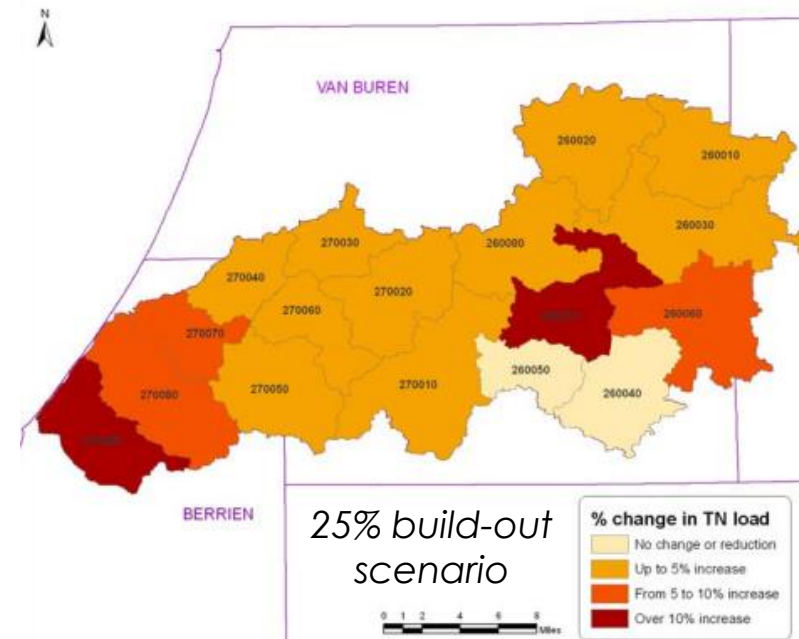
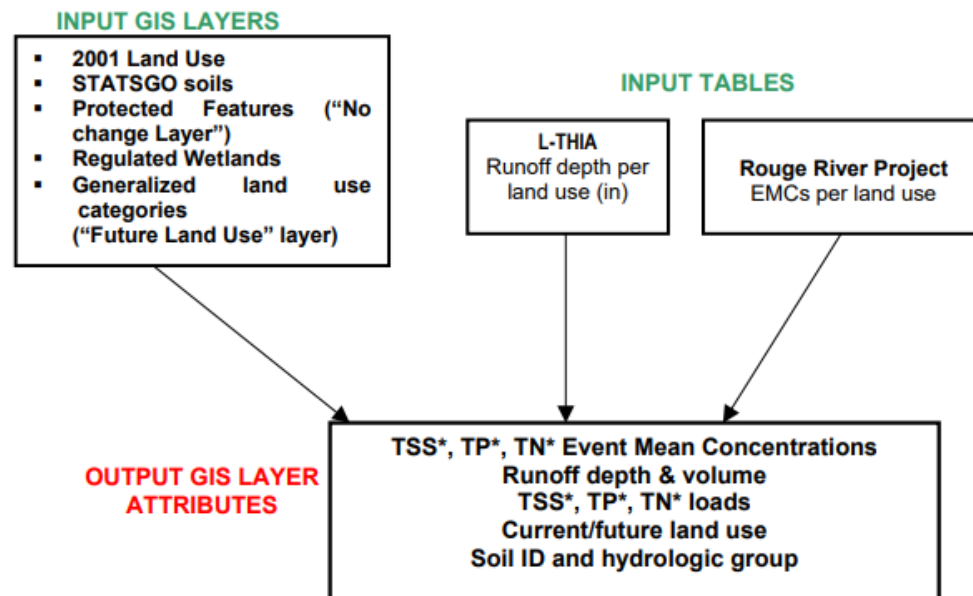


Included **protection-based measures of success**



Evaluating Watershed Threats: 2008 Paw Paw River Watershed Management Plan (MI)

- ❑ **Used local zoning data** to predict land use threats and estimate loads (HUC14)
- ❑ **Targeted watersheds** vulnerable to increased NPS pollution



Closing Thoughts

- ❑ **State and Tribal water programs** can be leaders in protection work.
 - Align protection goals and strategies across programs – e.g., 319 management plans & 303(d) Vision priorities.
 - Facilitate discussions to support state financing of protection – e.g., SRF.
 - Support watershed or regional-based protection partnerships – e.g., planning, training workshops.

- ❑ **Watershed planning** is still important to guide protection. Planning in healthier watersheds may present different opportunities & challenges.
 - Setting protection-based water quality goals and measures of success.
 - Engaging different partners (e.g., land trusts, local gov'ts) in proactive management strategies.



Thank you!





Wisconsin Spotlight

WI Protection Approaches & Healthy Watersheds Initiative

Session #5: Updates on Protection

Wednesday, June 9, 2021

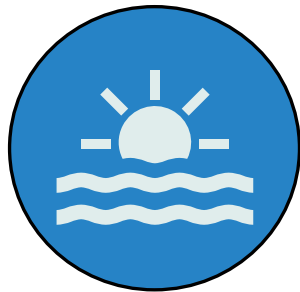
Ashley Beranek

Water Quality
Bureau

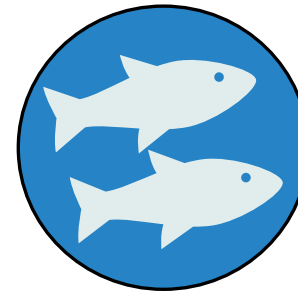


Protection Approach: 'Default' Protections

Existing designations in administrative code that result in additional requirements for dischargers.



Outstanding and
Exceptional
Resource waters



Trout waters

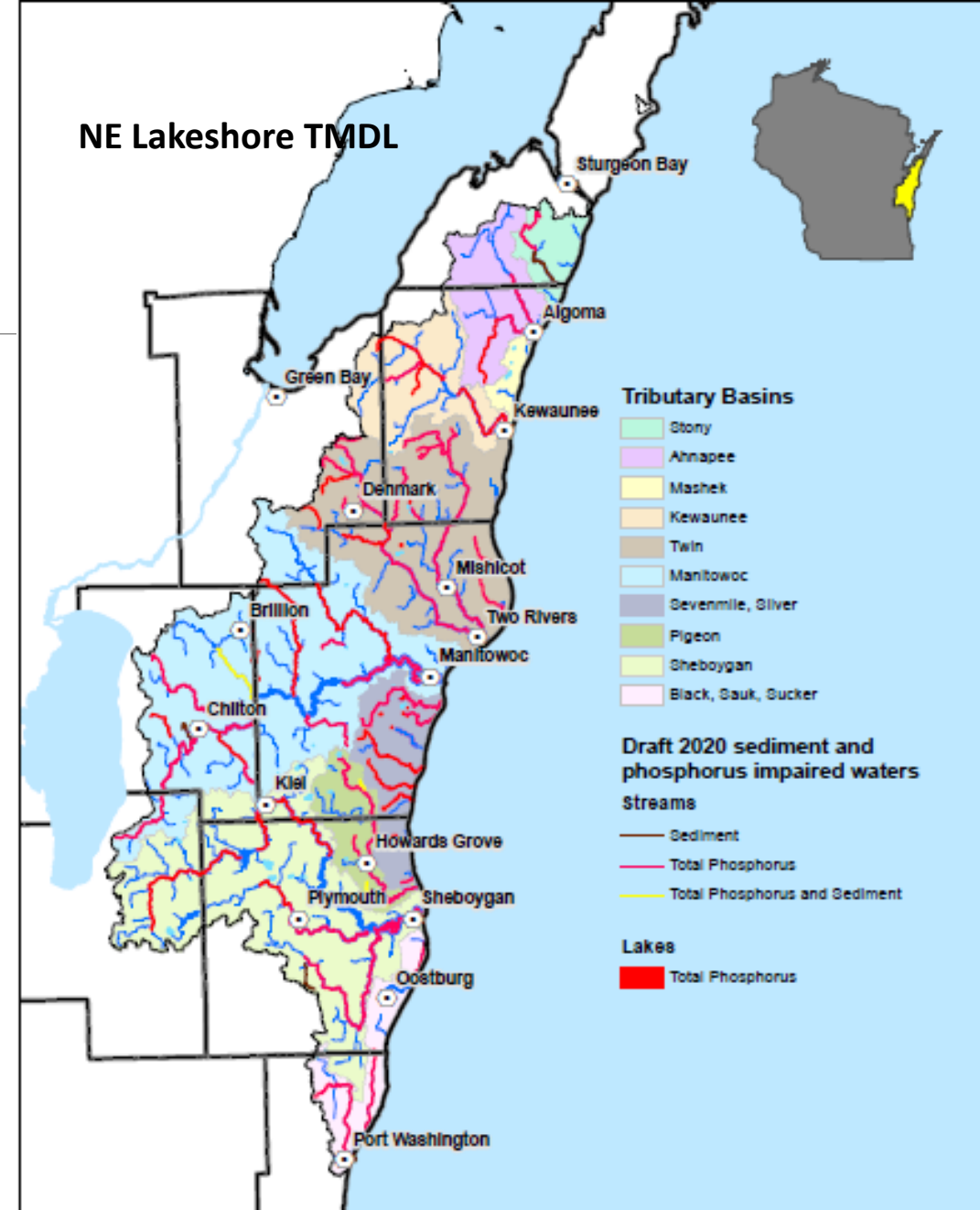
- Antidegradation - new or increased discharges are either prohibited or allowed only in extreme and unique situations.

Protection Approach: TMDLs as Protection Plans

Numeric water quality criteria for lakes, rivers, and streams requires that TMDL allocations meet criteria for all waters in a watershed.

These allocations results in protection TMDLs for unlisted waters.

Watershed delineation is critical to allocation development.

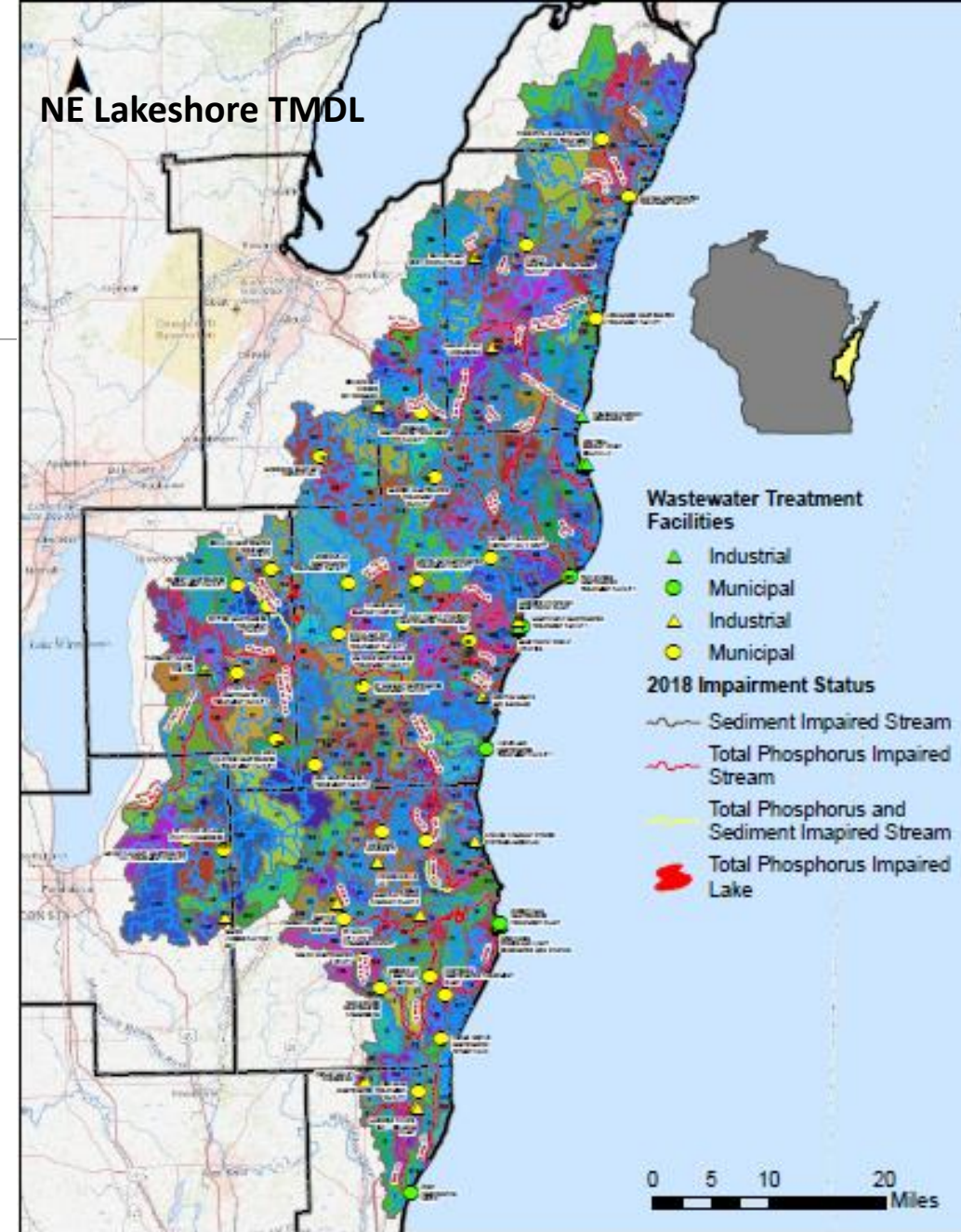


Protection Approach: TMDLs as Protection Plans

Start with a HUC-12 size (15 – 62 square miles)

Delineation factors:

1. Changes in criteria between rivers and streams (75 and 100 ug/L TP).
2. Impact of lakes and reservoirs.
3. Changes in flow and stream class.
4. Location of point source outfalls.
5. Changes in land use
6. Changes in gradient or stream characteristics
7. Impaired reaches
8. Monitoring locations

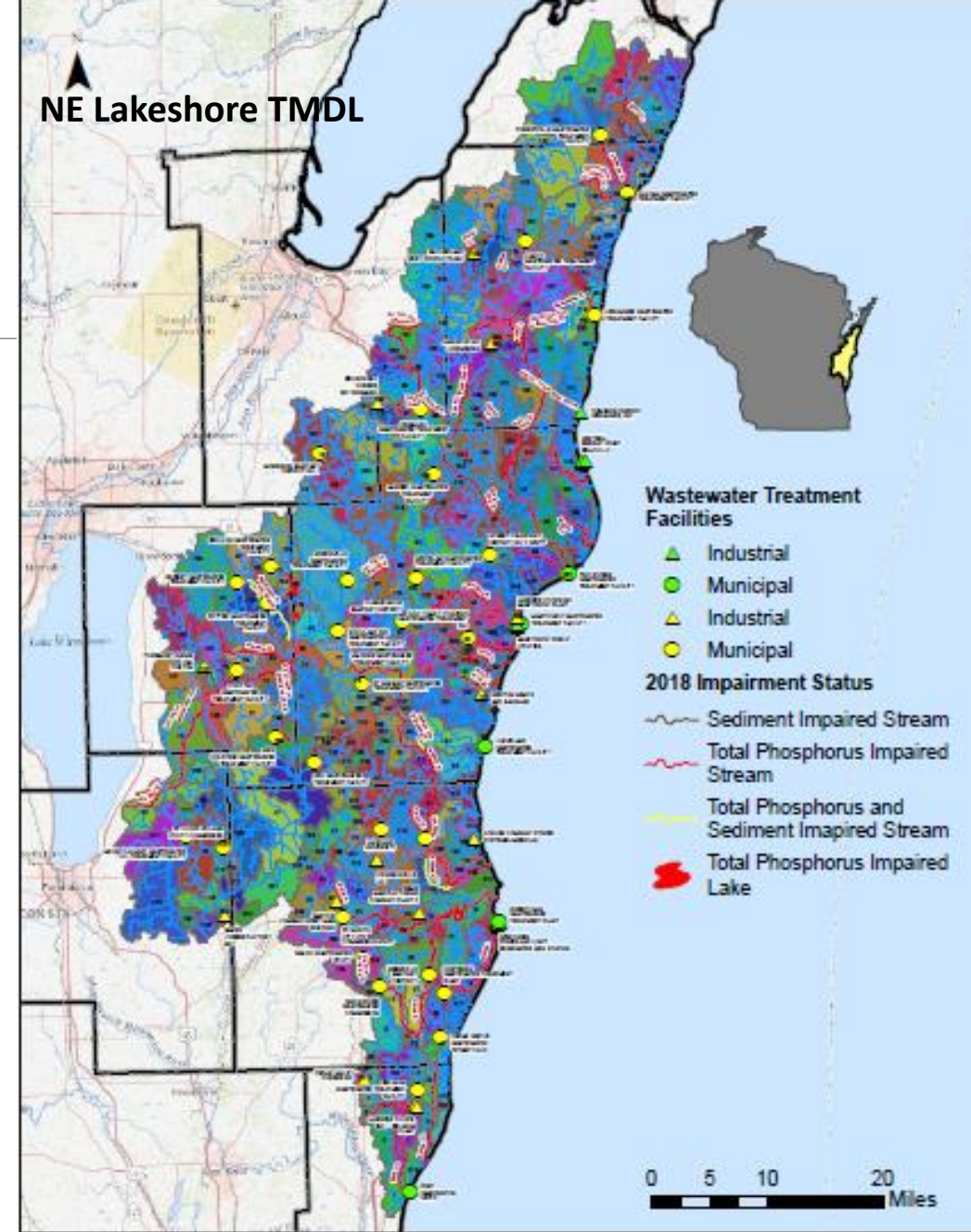


Protection Approach: TMDLs as Protection Plans

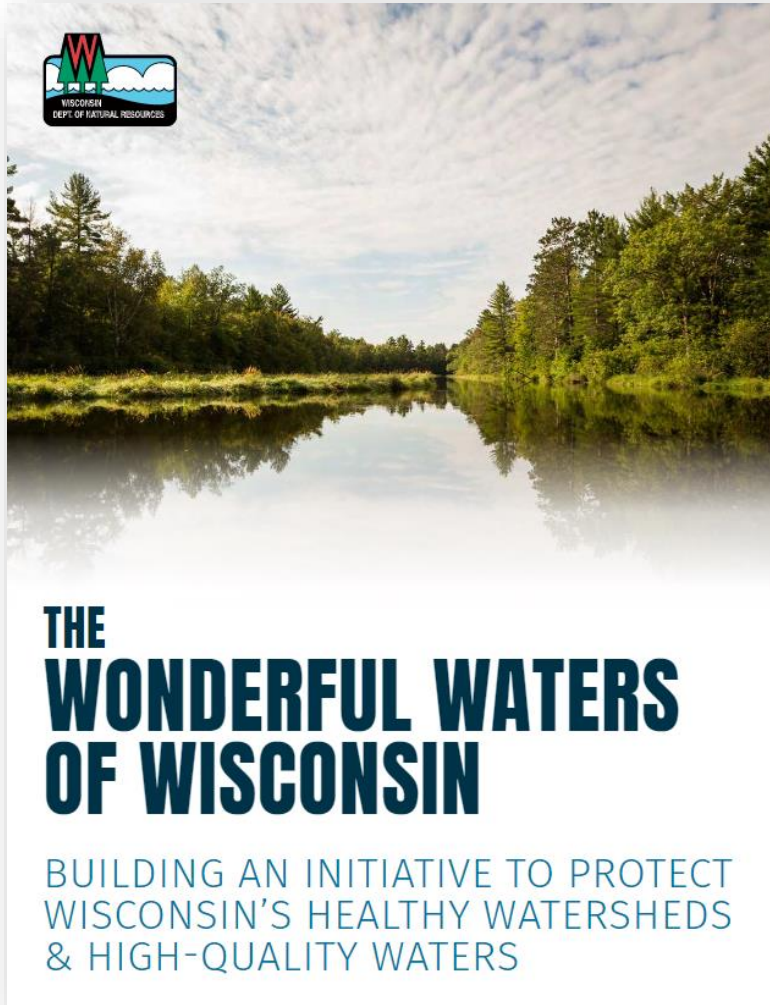
Development of protection 9 Key and other plans.

If later listed, a water is added to the TMDL, preventing placement on the 303(d) list.

- Waters added to a TMDL are public noticed during the 303(d) list public comment period.



Healthy Watersheds, High Quality Waters (HWHQW) Initiative



Initiative a result of WDNR's Water Quality Strategic Plan, Goal 1: Emphasize the protection and promotion of healthy waters in the state.

Team: staff with diverse work experience from across the state

- River/stream and lake biologists, fisheries, wetlands, modeling, standards, listing, communications, TMDLs, AIS

Greater balance between restoration and protection.

Healthy Watersheds, High Quality Waters (HWHQW) Initiative

Goals are to identify:

1

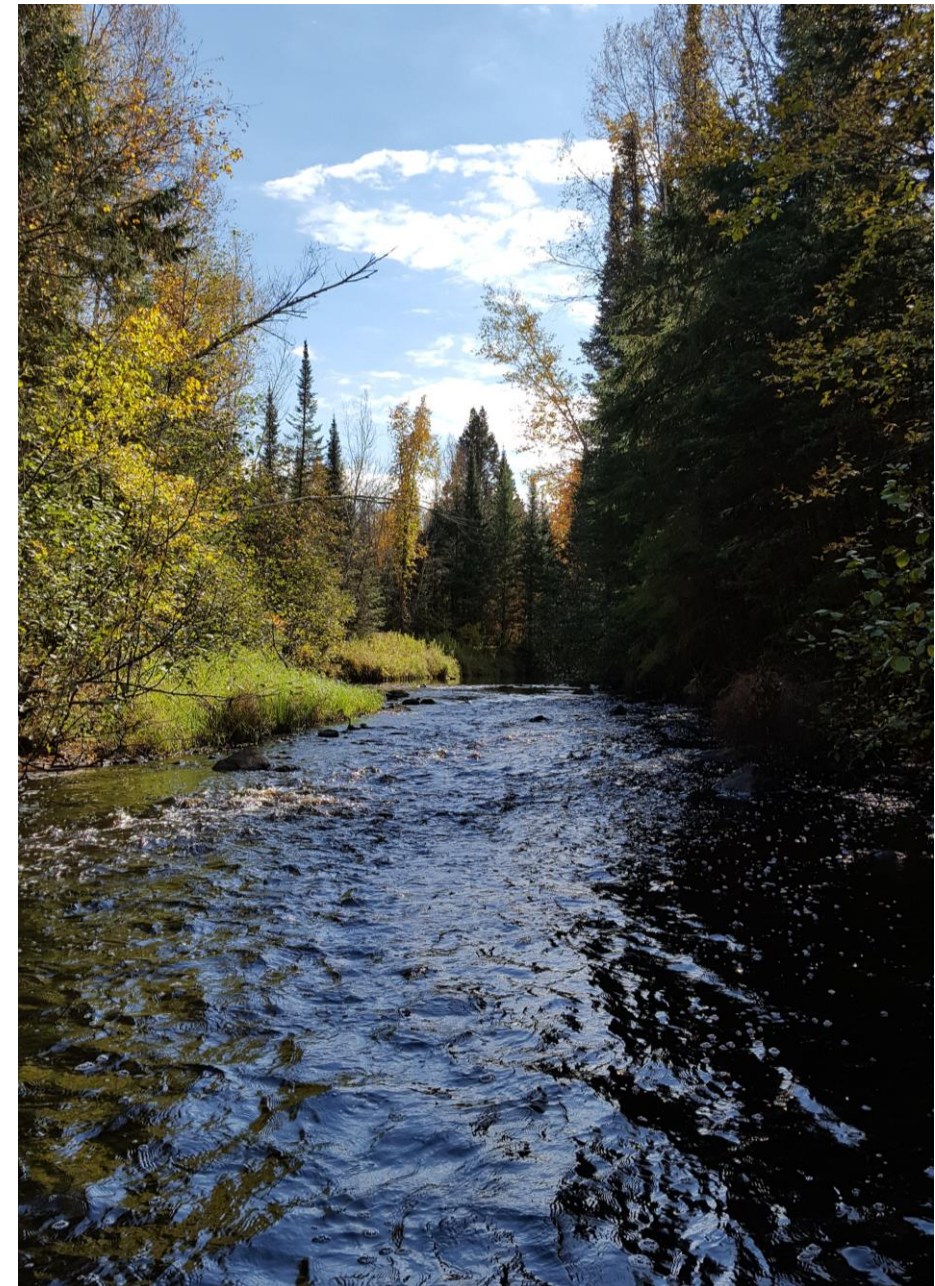
Healthy Watersheds

2

High Quality Waters

3

Protection Potential



Healthy Watersheds, High Quality Waters (HWHQW) Initiative

1

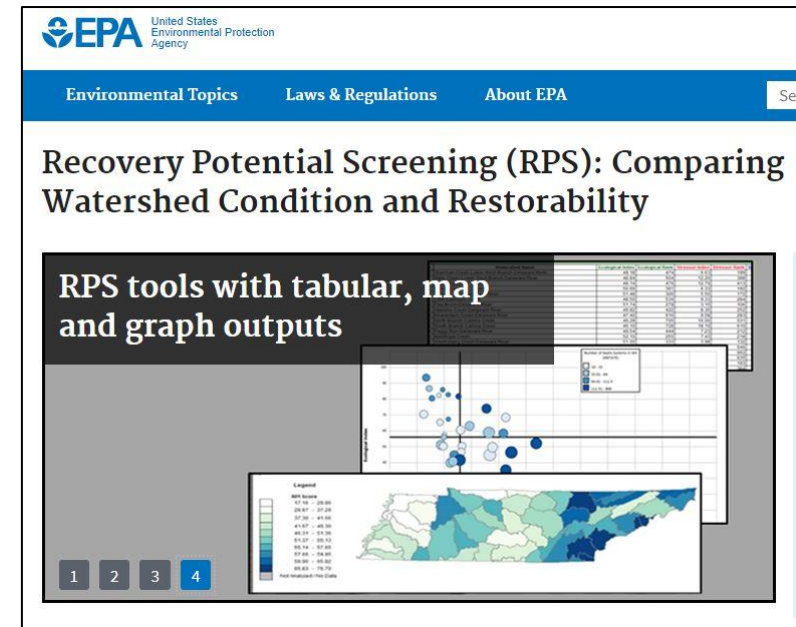
Healthy Watersheds (HW)

EPA's Recovery Potential Screening Tool

- Original Intent for TMDL & Impaired Watershed Prioritization
- Recovery of impairment or Protect “the best of what’s left” in impaired WS (e.g basin)
- Our purpose: Prevent initial impairment

Benefits

- HUC12 scale = Base Unit
- Over 200+ metrics updated frequently (WSIO)
- EPA and contractor (Cadmus) support
- Customization and Repeatability

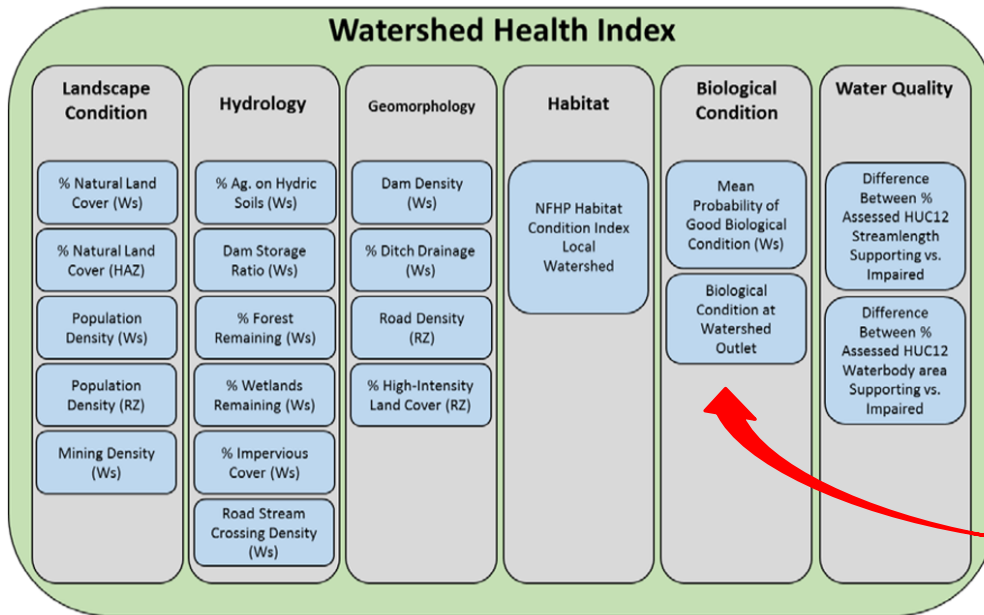


Healthy Watersheds, High Quality Waters (HWHQW) Initiative

1

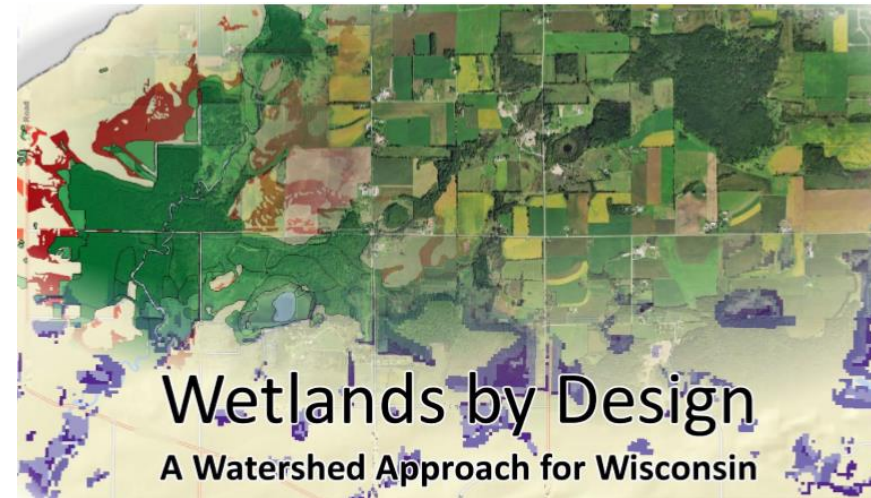
Healthy Watersheds (HW)

<https://freshwaternet.org/projects/wetlands-by-design/>



= Metric score
 = Sub-Index score (avg. of normalized metric scores)
 = Index score (avg. of sub-index scores)

Watershed (Ws)
 Riparian Zone (RZ)
 Hydrologically Active Zone (HAZ)



Watershed-scale estimates of current wetland functions AND lost wetland functions

Figure 3. PHWA Watershed Health Index and Sub-Index structure with component indicators (blue boxes). Indicators measure watershed-wide (Ws), riparian zone (RZ) or hydrologically active zone (HAZ) attributes as marked.

Healthy Watersheds, High Quality Waters (HWHQW) Initiative

1

Healthy Watersheds (HW)

**Ecological = WI's modified Preliminary Healthy Watershed Assessment-
Watershed Health Index
(26 Variables, 6 Indices)**

Landscape Condition (5)

- Mining Density
+ % WS Ag on N
Sensitive Soils
(WI NRCS 590)

Hydrology (7)

+ WbD Surface
Water Supply

Geomorphology (5)

+ WbD Flood
Abatement

Habitat Condition (2)

+ WbD Fish and
Aquatic Life Habitat

Biologic Condition (3)

+ WI Modeled
Hilsenhoff BI for
Streams

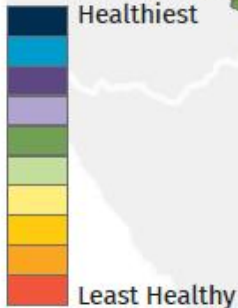
Water Quality (4)

+ WbD Nutrient
Transformation
+ WbD Sediment Retention

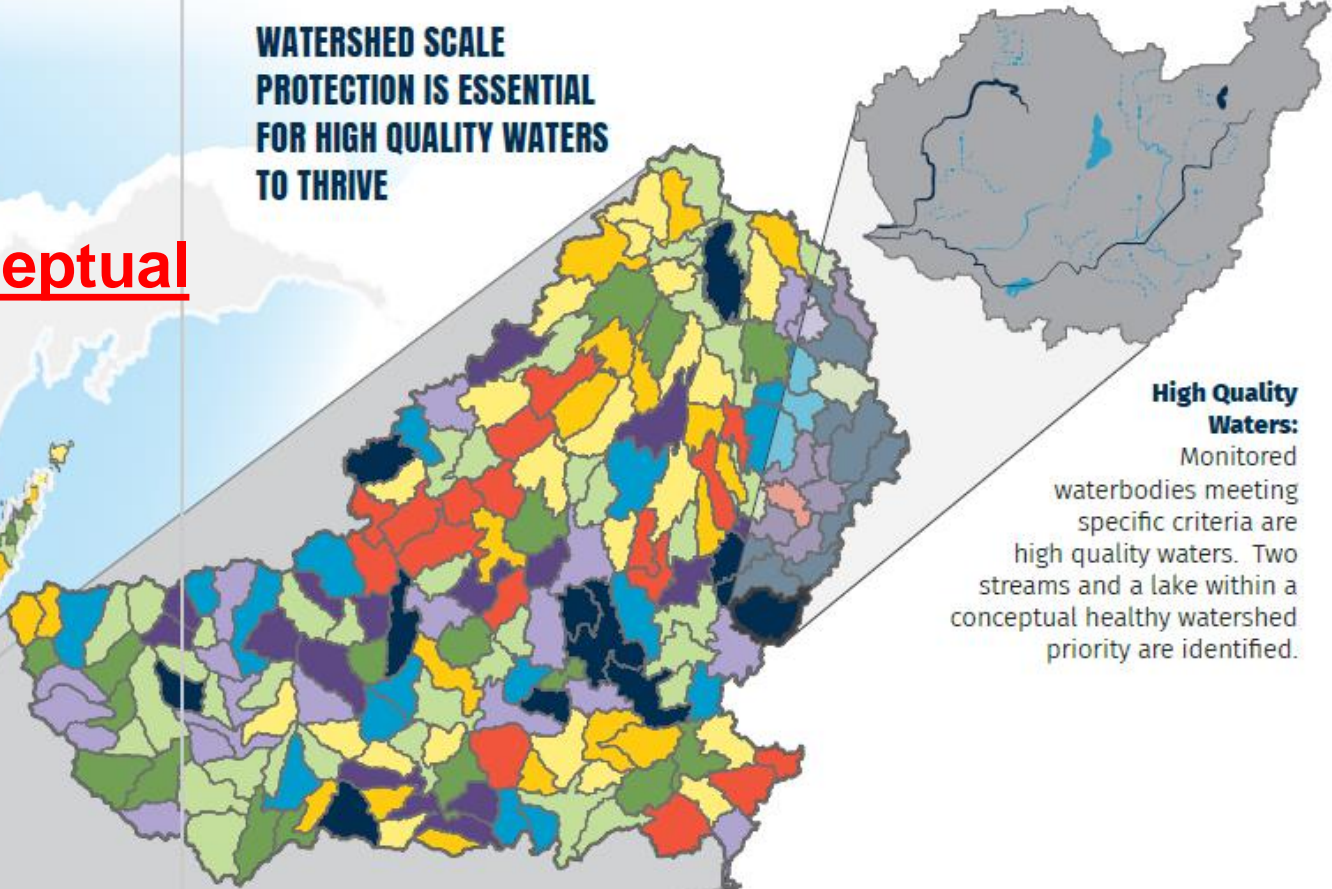
WATERSHED HEALTH MAPS

WATERSHED SCALE
PROTECTION IS ESSENTIAL
FOR HIGH QUALITY WATERS
TO THRIVE

conceptual



Statewide Scale



High Quality Waters:
Monitored waterbodies meeting specific criteria are high quality waters. Two streams and a lake within a conceptual healthy watershed priority are identified.

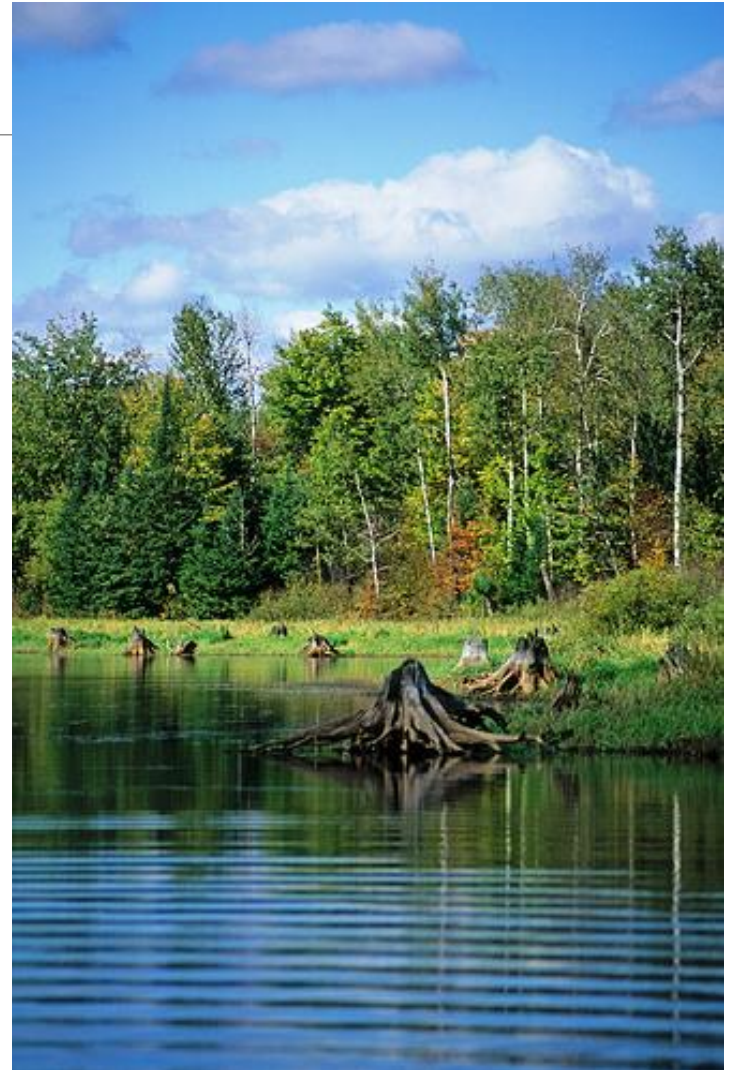
Watershed Scale

Healthy Watersheds, High Quality Waters (HWHQW) Initiative

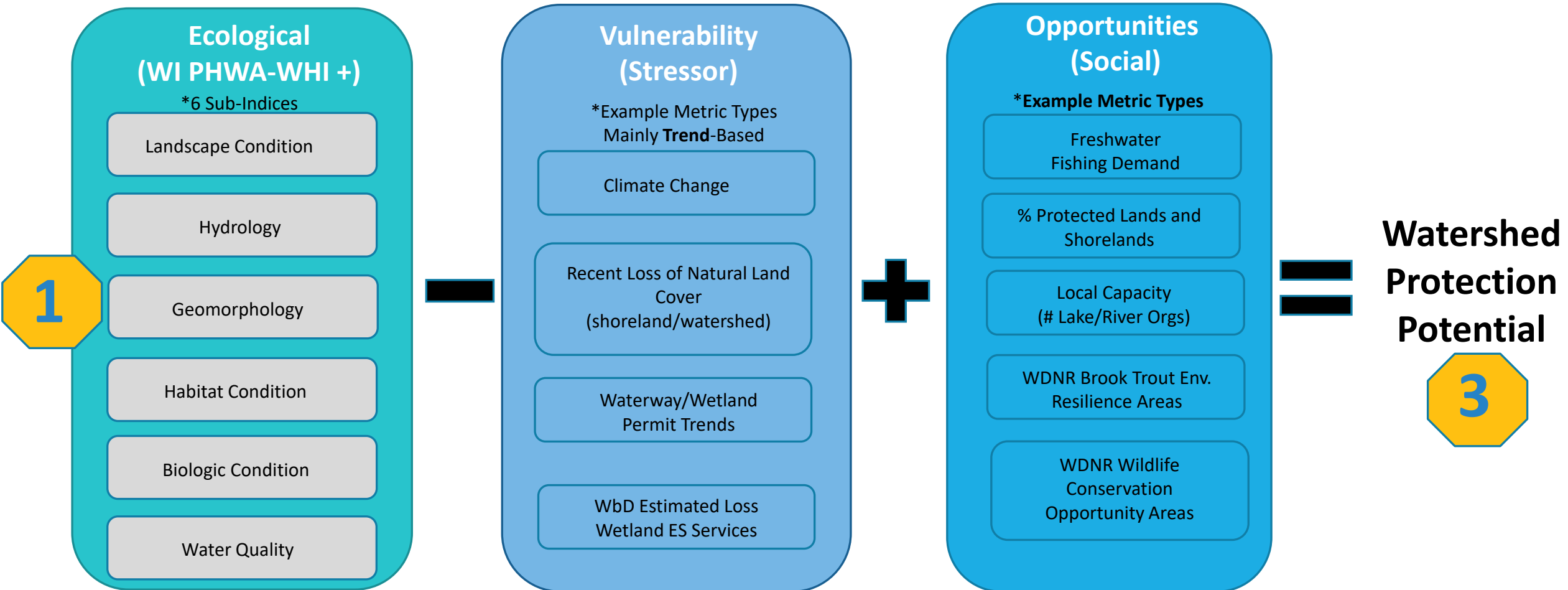
2

High Quality Waters (HQW)

- Only done for monitored lakes, streams, and rivers.
- Defined as a water that meets 2 of the following attributes:
 - Unique or Rare Resource (e.g. trout stream, wild rice water)
 - Attaining State Water Quality Standards
 - Good to Excellent Biotic Integrity
- Also included rare wetlands with good and excellent biological conditions.



Healthy Watersheds, High Quality Waters (HWHQW) Initiative



Healthy Watersheds, High Quality Waters (HWHQW) Initiative

Kickoff Strategy – reach out to interested parties, get feedback.

June 2 was our last partner outreach meeting.

Participants included:

- Local, State, Tribe, & Federal Government
- Business Partners, including Tourism, Real Estate & Agriculture
- Lake, River & Watershed Management



Learning Exchange

1. **Takeaways from presentations**

Reactions or thoughts that came to mind? Any follow up questions from what you heard? How are you doing protection work?

2. **Future of protection**

What EPA guidance, resources, tools etc. would help your program focus more resources on protection? Especially as we move into Vision 2.0?

3. **What more would you like to learn on this topic?**

Discussion Notes

Breakout Group #1 –
Steve Epting
(facilitator)

[Discussion Notes](#)

Region 1

- Eric Perkins (EPA)
- Mary Garren (EPA)
- Wendy Garland (ME)
- Jennifer Sheppard (MA)
- Jenny Peet (MA)
- Sean Regalado (VT)

Region 2

- Chris Seslar (EPA)
- Daniel Gurdak (EPA)
- Yaso Sivaganesh (NJ)
- Eric Wiegert (NY)
- Lauren Townley (NY)
- Susan Van Patten (NY)

Join on your computer or mobile app

[Click here to join the meeting](#)

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[+1 202-991-0477,,236446594#](#)

Phone Conference ID: 236 446 594#

Breakout Group #2 –
Sequoia Bua-lam
(facilitator)

[Discussion Notes](#)

Region 3

- Hannah Sanders (EPA)
- Michael Hoffmann (EPA)
- Matt Stover (MD)
- Nicole Christ (MD)
- Craig Lott (VA)
- Lucy Smith (VA)
- Nicole Sandberg (VA)
- Sara Jordan (VA)

Region 4

- Susanna Bains (EPA)
- Ben Ralys (FL)
- Veronica Craw (GA)
- Dennis Boarders (TN)

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Breakout Group #3 –
Ashley Beranek
(facilitator)

[Discussion Notes](#)

Region 5

- Christine Urban (EPA)
- Donna Keclik (EPA)
- Gary Kohlhepp (MI)
- Sarah Becker (OH)

Region 7

- David Hebert (Tribe)
- Joe Stokes (EPA)
- Anna McElfresh (MO)
- Meghan Schrik (MO)
- Venessa Madden (KS)

Region 6

- Rachel Renz (EPA)
- Selena Medrano (EPA)
- Tina Gassen (LA)

Other: Karen Kesler (EPA)

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Breakout Group #4 –
Miranda Chien-Hale
(facilitator)

[Discussion Notes](#)

Region 8

- Deanna Tarum (MT)
- Kristy Fortman (MT)
- Alan Wittmuss (SD)
- Christine Osborne (UT)
- Sarah Wheeler (CO)

Region 9

- Sofia Sotomayor (EPA)
- Carey Nagoda (CA)
- Chad Loflen (CA)
- Daniel Sussman (CA)
- Francisco Costa (CA)
- Katherine Carter (CA)

Region 10

- Jeremy Reiman (WA)
- Sara Parkin (ID)

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Thank you!

Questions?
