



Water Partnership Workshop

Sept 11, 2025
9-4 pm

Madison, WI
Fluno Center

Outcomes report

Hosted by Water@UW-Madison and Wisconsin Sea Grant, this pilot workshop brought together community groups and water researchers for facilitated discussions with the goal of sparking new, community-engaged research projects. In total, 74 people attended the full day workshop with discussions happening across eight tables, focused on different water-related topics.

This report synthesizes key insights, community context, action items, and goals from the workshop, integrating detailed notes from all discussion tables. The report also highlights cross-cutting themes and takeaways for consideration.

Here are the topics the groups discussed:

1. Organic and Conventional Farming Tradeoffs
2. Dam Decommissioning and Agency Decision Making
3. Enhancing the Reach of Science Communication on Timely Environmental Issues
4. Neonicotinoid Insecticide Application and Environmental Impact
5. Do Urban Stormwater Practices Protect Trout Streams?
6. Envisioning Ecology Beyond a Western Scientific Framework

7. Emerging Contaminants and Cumulative Impacts
8. Table 8: Management Pathways to a Healthy Future for the Madison Lakes

Here is a summary of the group discussions by topic. Cross-cutting takehomes follow.

Topic 1: Organic and Conventional Farming Tradeoffs

Statement of the Problem/Opportunity

Farmers must navigate tradeoffs between organic and conventional practices that have unique ties to water quality. Organic systems may increase erosion risks, while conventional systems often employ pesticides. Existing tools and data are not well-suited to help farmers make informed decisions, especially those with varied crop rotations.

The WI Farmers Union (WFU) is a "big tent" organization driven by its members and committed to building ecological services and ensuring the continued viability of small farms.

Key Insights

- Organic farming raises erosion concerns; conventional farming often depends on pesticides.
- Decision-support tools like SNAP+ and COMET-Farm are often complex and not widely adopted by farmers due to poor fit at small scales.
- Water quality data and tools provided by agencies are often too technical or granular for practical farm use.
- Interestholder engagement is needed to guide tool development and outreach.
- Extension staff face challenges bridging academic research and field-level support.

Future Actions & Goals

- **Develop a decision tree tool** that provides simple, actionable guidance for farmers navigating water-related tradeoffs in organic and conventional systems.
- **Host interestholder engagement meetings** to ensure tools are relevant, identify gaps in current resources, and foster bidirectional communication between researchers and producers.
- **Translate water quality data** into formats that are accessible and meaningful for farmers, enabling better decision-making.
- **Coordinate outreach efforts** through established venues such as the Marbleseed Conference and DATCP's Producer-Led Watershed Conference to share research and gather feedback.
- **Strengthen collaboration between UW researchers and Extension staff** to improve the delivery of technical knowledge and practical support to farmers.

Measures of Success

- Creation and adoption of a decision-support tool.
- Increased farmer engagement and feedback through outreach events.
- Improved use of water quality data in farm management.
- Enhanced collaboration between researchers, Extension staff, and producers.

Topic 2: Dam Decommissioning and Agency Decision Making

Statement of the Problem/Opportunity

Aging dams in the Coon Creek watershed pose safety risks and liability concerns. As federal and county agencies consider decommissioning, there is an opportunity to rethink flood management strategies and improve community engagement in decision-making. Current review processes are slow and may overlook local knowledge and community concerns.

Coon Creek was the site of the nation's very first watershed demonstration project in the 1930s, fostering a historical "spirit of collaboration and openness." The vision is to renew this experimental model. Coon Creek Community Watershed Council (CCCWC) is leading the way and fostering collaborations across the watershed.

Key Insights

- The watershed lacks an early warning system for dam failure and flooding. Aging dams pose safety and liability risks.
- Coon Creek has a legacy of innovation, making it a strong candidate for piloting new approaches.
- Community involvement and participatory science are essential for data collection and flood mitigation.
- Stream gauges are critical for monitoring and modeling future conditions.
- Federal and county agencies face resource and liability challenges in managing dam infrastructure

Future Actions & Goals

- **Install stream gauges** throughout the watershed to support early warning systems and long-term monitoring.
- **Engage residents and farmers** in participatory science efforts to collect data and implement flood mitigation strategies on private property.
- **Leverage Coon Creek's history of innovation** to pilot new flood management approaches and collaborative planning.

- **Coordinate with agencies and academic partners** (e.g., UniverCity Alliance) to match community needs with student research and technical support.
- **Explore modeling and scenario planning tools** to help communities visualize future conditions and make informed decisions.

Measures of Success

- Successful installation and maintenance of stream gauges.
- Increased community participation in monitoring and mitigation efforts through participatory science opportunities.
- Improved flood preparedness and communication infrastructure.
- Development of innovative, locally-informed flood management strategies.

Table 3: Enhancing the Reach of Science Communication on Timely Environmental Issues

Statement of the Problem/Opportunity

Effective communication about environmental contaminants—such as PFAS, microplastics, and lead—is essential for public health and environmental stewardship. However, outreach efforts often fall short due to language barriers, lack of cultural relevance, and limited engagement. There is an opportunity to rethink how scientific knowledge is framed and delivered to better serve many audiences.

Wisconsin EcoLatinos is a grassroots organization that works with Latino communities across Wisconsin to take action on environmental issues.

Key Insights

- Communities need clear, culturally relevant information to make informed decisions about water safety and contamination. Outreach on contaminants (PFAS, microplastics, lead) is sometimes limited due to language barriers, lack of cultural relevance, and widespread misinformation.
- Bottled water lacks standardized regulations, contributing to confusion and misinformation.
- Outreach must extend beyond major cities to include rural areas.
- Trusted community messengers and integration of arts can enhance communication effectiveness.
- Community science and social science approaches are valuable for understanding perceptions and misinformation.

Future Actions & Goals

- **Conduct a baseline survey** in Rock County to assess community perceptions of water sources and contaminants.
- **Identify contamination hotspots** and exposure risks using available data.
- **Build partnerships** with water utilities, health departments, scientists (especially water epidemiologists), and community-based organizations.
- **Expand outreach** to rural communities across Wisconsin.
- **Develop culturally relevant messaging** by integrating arts and leveraging trusted community voices.
- **Create a communication framework** that includes participatory science, social science research, and public education strategies.

Measures of Success

- Completion of the baseline survey and analysis of results.
- Increased awareness and behavior change in targeted communities.
- Broader geographic and demographic reach of outreach efforts.
- Stronger partnerships between academic, governmental, and community organizations.

Table 4: Neonicotinoid Insecticide Application and Environmental Impact

Statement of the Problem/Opportunity

Recent monitoring in the Black Earth Creek Watershed has detected neonicotinoid insecticides in water samples, coinciding with long-term declines in aquatic macroinvertebrate populations. There is a growing need to understand the ecological impacts of neonicotinoids—including direct and indirect effects—and to explore alternatives that balance agricultural needs with watershed health.

The Black Earth Creek Watershed Association (BECWA) is an all-volunteer-led organization dedicated to protecting a "world class trout fishing" resource, backed by decades of public investment.

Key Insights

- Neonicotinoid contamination is directly correlated with long-term declines in aquatic macroinvertebrates, threatening the fishery and ecosystem health.
- Use of neonicotinoids has increased in the U.S. while being restricted in Europe and Canada—there are differing regulatory approaches.
- Farmers face tradeoffs between prophylactic seed treatments and reactive pest control, often influenced by economic pressures and crop insurance.

- International data (e.g., from Cornell and Quebec) show limited benefits from neonicotinoid use when integrated pest management is applied.
- Chemical companies often control both seed and pesticide markets, complicating farmer decision-making.
- Overuse of neonicotinoids is rooted in market structures (e.g. seed bundling, where seeds are sold pre-coated with insecticides and fungicides) and slow policy processes. There is a call to propose policy/market mechanisms that incentivize sustainable agriculture practices and address economic barriers to change.

Future Actions & Goals

- **Facilitate interstholder meetings** with farmers to share reliable, evidence-based information about neonicotinoid impacts and alternatives.
- **Synthesize existing data** from international sources (e.g., EU, Canada, Cornell) to inform local decision-making and policy.
- **Explore integrated pest management** strategies that require documented need before pesticide use, reducing unnecessary applications.
- **Investigate economic incentives and insurance structures** that influence pesticide use, including the role of seed-pesticide bundling.
- **Promote cross-regional collaboration** to compare ecological outcomes in areas with restricted neonicotinoid use.

Measures of Success

- Increased farmer awareness and informed decision-making regarding pesticide use.
- Adoption of Integrated Pest Management practices and reduced prophylactic pesticide application.
- Decreasing pesticide concentrations in streams and healthier macroinvertebrate populations.
- Stronger connections between research, policy, and agricultural practice.

Table 5: Do Urban Stormwater Practices Protect Trout Streams?

Statement of the Problem/Opportunity

Urban development is expanding rapidly in Dane County, raising concerns about the ability of current stormwater best management practices (BMPs) to protect sensitive ecosystems like Black Earth Creek—a premier trout stream. A major development near Festge Springs presents an opportunity to study stormwater management efficacy. This project presents an opportunity for cross-sector collaboration that may inform future development projects.

Trout Unlimited connects national cold-water conservation goals with local action, focusing on on-the-ground stream habitat restoration with stream-side landowners.

Key Insights

- Urbanization increases impervious surfaces, threatening water quality and stream temperature critical for trout habitats.
- Dane County is expected to grow by 200,000 people over the next 25 years.
- There is a knowledge gap between developers, regulators, and the public regarding stormwater science and policy.
- BMP effectiveness varies by location and context; more site-specific understanding is needed.
- Interestholder mapping and interdisciplinary collaboration are essential for effective watershed management.
- Existing groundwater models need refinement to address localized impacts.

Future Actions & Goals

- **Develop an interestholder roster** to identify key players in stormwater management, including developers, regulators, engineers, community groups, and researchers.
- **Initiate outreach and education efforts** to improve public understanding of BMPs and their role in protecting trout streams.
- **Refine the Dane County groundwater model** by creating an inset model specific to the Festge Springs area to better predict impacts.
- **Engage interdisciplinary researchers** to assess BMP effectiveness and guide future development practices.
- **Within established development timelines**, identify opportunities for timely intervention and collaborative planning decisions.

Measures of Success

- Completion of an interestholder map and contact list.
- Enhanced public and developer awareness of BMPs and their ecological efficacy.
- Development and application of a localized groundwater infiltration model.
- Integration of scientific insights into planning and permitting processes.

Table 6: Envisioning Ecology Beyond a Western Scientific Framework

Statement of the Problem/Opportunity

Water sovereignty and stewardship are central concerns for tribal communities, including the Lac du Flambeau Band of Lake Superior Chippewa Indians. However, there remains a significant lack of understanding and recognition of sovereign nation land and water rights. Environmental degradation threatens these rights and tribal knowledge is not often incorporated in Wisconsin's water management policy and practice. Barriers to meaningful collaboration and co-management persist, highlighting the need for structural change in how partnerships are formed and sustained, and how land and water rights are exercised and upheld.

The Lac du Flambeau Band resides near *Waaswaagani-zaaga'igan* in Wisconsin, and the surrounding area includes over 200 other lakes. They are a sovereign nation and maintain a deep and abiding relationship with land and water with rights to thrive, hunt, fish, and gather.

Key Insights

- Tribal communities possess deep ecological knowledge and cultural practices that are essential for sustainable water management.
- Historical and ongoing issues, especially dispossession of land, treaty violations and environmental contamination, continue to impact tribal water rights and access.
- Current legal frameworks are inadequate for recognizing sovereignty rights, and fail to fully incorporate tribal knowledge.
- Conferring legal agency of natural entities and ecosystems is of interest to tribal communities.
- Existing resources (e.g., tribal historical preservation officers, university labs, community networks) can be leveraged to support initiatives.
- Trust and involvement is foundational—many voices (e.g., youth, artists, rural communities) are missing from current conversations.

Future Actions & Goals

- Develop an education initiative focused on land and water rights, sovereignty, and self-determination that includes outreach, curriculum development, and awareness-building efforts.
- Begin a collaborative project exploring the rights of nature and co-management practices informed by tribal and Western knowledge systems.
- Build infrastructure for a community of practice, connecting researchers, tribal leaders, and other interestholders.
- Engage in policy and legal analysis to support tribal sovereignty.
- Expand participation by overcoming barriers to engagement (e.g., access, language, trust).

Measures of Success

- Continue legal analyses on treaties and legislation.
- Increased collaboration between tribal communities and academic institutions.
- Visible policy changes or legal recognitions.
- Community-led initiatives that reflect tribal values and priorities.
- Sustained engagement through funding and institutional support.

Table 7: Emerging Contaminants and Cumulative Impacts

Statement of the Problem/Opportunity

Emerging contaminants—including PFAS, microplastics, pharmaceuticals, heavy metals, and compounds like 6-PPD—pose growing risks to public and environmental health. However, data on their prevalence, effects, and interactions is fragmented and incomplete. There is an urgent need for centralized data, cumulative risk assessments, and culturally relevant communication strategies.

The Great Lakes Intertribal Epidemiology Center (GLITEC) is a federally funded organization serving 11 Tribes in Wisconsin (plus others in Minnesota and Michigan) and urban organizations, providing essential technical research and health program assistance.

Key Insights

- Data on emerging contaminants is scattered across agencies and regions, making it difficult to identify gaps or coordinate sampling.
- Cumulative impacts of contaminant mixtures are poorly understood, complicating risk assessment and mitigation.
- Communication efforts are hindered by inconsistent messaging and lack of centralized information.
- Testing and monitoring are expensive, limiting the scope of research and public health protection.
- There is interest in building a collaborative ethic into contaminant research and policy.

Future Actions & Goals

- **Create a centralized database** for emerging contaminant data, accessible to agencies, researchers, and communicators.
- **Form a Wisconsin-based interestholder group** to coordinate efforts, identify data gaps, and guide future sampling and research.

- **Develop cumulative risk assessment frameworks** that account for contaminant mixtures and regional variations.
- **Improve communication strategies** by standardizing messaging and making information accessible to a variety of communities.
- **Explore funding mechanisms** to support expanded testing and monitoring, especially in areas where financial resources are scarce.

Measures of Success

- Establishment and use of a centralized contaminant data repository.
- Formation of a coordinated interestholder group with clear objectives.
- Development of preliminary cumulative risk models.
- Improved public understanding and engagement through consistent communication.
- Increased sampling coverage and data availability across regions.

Table 8: Management Pathways to a Healthy Future for the Madison Lakes

Statement of the Problem/Opportunity

Madison’s lakes—here represented by Kegonsa and Waubesa—present a number of management challenges related to nutrient runoff, algal blooms, and aquatic plants. These eutrophic lakes exist within a watershed shaped by both urban and agricultural pressures. There is an opportunity to define what “healthy” means for these lakes and to align management actions with measurable improvements.

The Lake Waubesa Conservation Association (LWCA) is a dedicated local group, proud of the Waubesa wetlands, committed to protecting the lake’s water quality via a DNR-funded Lake Management Plan. The Friends of Lake Kegonsa Society (FOLKS) is made up of riparian lake property owners dedicated to protecting and enhancing the health of the lake and recreational opportunities.

Key Insights

- Phosphorus is the primary nutrient of concern, with localized inputs requiring targeted interventions.
- Community-based organizations have strong capacity for education and outreach.
- Infrastructure, policy, and jurisdictional complexity affect the feasibility of lake management solutions.
- Technological innovations (e.g., nanobubbles, remote sensing) claim potential but real efficacy can vary, and some require further research.

Future Actions & Goals

- **Launch a public education campaign** focused on reducing phosphorus runoff, targeting residents around Lakes Kegonsa and Waubesa.
- **Develop an educational curriculum** that includes actionable interventions and historical context, leveraging the expertise and reach of lake associations and community groups.
- **Measure campaign impact** through pre- and post-surveys, tracking behavior change and phosphorus levels in the lakes.
- **Identify and advocate for infrastructure improvements** and policy changes at the county level to support nutrient reduction.

Measures of Success

- Number of residents reached and engaged through the education campaign.
- Observable changes in human behavior resulting in reduced runoff and phosphorus concentrations.
- Reduction in phosphorus levels in targeted lakes.
- Implementation of infrastructure or policy changes influenced by community advocacy.

Cross-Cutting Themes and Takeaways

The workshop revealed shared systemic challenges and collective priorities across all water issues:

1. **Data Translation and Usability:** A universal theme is that scientific data and tools are consistently **too complex** for practical use by interestholders. The consensus is that researchers must prioritize **translating research into simple, actionable decision-support tools** and guidance.
2. **Trust-First Collaboration:** Building trust is a fundamental prerequisite for effective solutions. This requires **bidirectional communication** and the involvement of **trusted community messengers**, especially with Tribal communities, where the necessity of the **"speed of trust"** must dictate the pace of partnership.
3. **Community-Engaged Science:** Empowering local interestholders through **participatory and community science** is essential for gathering local data (e.g., stream gauges) and fostering greater public understanding, accountability, and behavior change regarding water quality.