# Clearinghouse Design to Facilitate Market-based Solutions to Water Quality Improvements in Wisconsin

Project Report

**September 2022**

*Dairy Research Institute (DRI), through financial support from the EPA Great Lakes Restoration Initiative in the amount of $437,000 (GL 00E02795-0), engaged Newtrient LLC and Michael Best Strategies (MBS) to support the development of a Clearinghouse design in the Great Lakes region.*

**Contact:**
Chris Kopman
10255 W. Higgins Road
Rosemont, IL 60018
ckopman@newtrient.com

DAIRY RESEARCH INSTITUTE
NUTRITION • PRODUCTS • SUSTAINABILITY

NEWTRIENT

Michael Best Strategies

# Table of Contents

## Project Overview

The Dairy Research Institute (DRI), through EPA Great Lakes Restoration Initiative Grant funding in the amount of $437,000, has engaged Newtrient, LLC and Michael Best Strategies (MBS) to identify and design the functional elements of a market-based, water quality trading Clearinghouse. The project provides recommendations concerning the effective formation, management and operation of a Clearinghouse designed to establish, promote and operate a transparent water quality trading marketplace in the Great Lakes region. A well-designed Clearinghouse will provide an extra element of certainty and accessibility needed for farms, businesses, and municipalities to work together to drive sustainable water quality benefits.

The project includes phases 1 – 7 outlined below:

- Phase 1: RFP to Select Qualified Consultants
- Phase 2: Identification & Design of Clearinghouse Functional Elements
- Phase 3: Development of Recommendations for Implementation
- Phase 4: Education & Outreach
- Phase 5: Estimate Potential Impact of Clearinghouse
- Phase 6: Deep Dive on Seed Funding Options
- Phase 7: Final Report

The project follows the policy enactment of 2019 Wisconsin Act 151, allowing the buying and selling of water quality improvements through a central Clearinghouse. The findings of this report will be shared broadly with Wisconsin agencies and other stakeholders to provide insights and considerations that inform future efforts on market-based water quality solutions.

## Phase 1: RFP to Select Qualified Consultants

Upon award of the GLRI grant funding, DRI completed Phase 1 of the project, which included executing a competitive RFP process resulting in the selection of the Newtrient and MBS team to execute the scope outlined in phases 2 through 7 of the project.

### Formation of Steering Committee

At the onset of the project, a Steering Committee was formed to gather a full range of stakeholder perspectives regarding the potential design and operations of a clean water Clearinghouse in Wisconsin.

Newtrient and MBS selected stakeholders and stakeholder groups who have served as long-time proponents of water quality solutions in Wisconsin to help shape the development of an effective, sustainable Clearinghouse.

The Steering Committee was key to informing recommendations due to its diverse experience in policy, regulation, legal and administrative opportunities and limitations and community interests. The stakeholder groups engaged through the Steering Committee include:

1) agriculture organizations;

2) industry trade organizations;

3) municipal organizations;

4) state and local government entities; and,

5) environmental groups.

The Steering Committee is comprised of the following representatives from their respective organizations:

- Angela L. Biggs, USDA Natural Resources Conservation Service
- Jason Culotta, Midwest Food Products Association
- Karen Gefvert, Wisconsin Farm Bureau Federation
- Krysta Harden, Dairy Research Institute

- John Holevoet, Dairy Business Association of Wisconsin
- Tamas Houlihan, Wisconsin Potato & Vegetable Growers Association
- Scott Laeser, Clean Wisconsin
- Amber Meyer Smith, Clean Wisconsin
- Alex Madorsky, The Nature Conservancy
- Russ Rasmussen, Private Citizen *(former water policy official with WDNR and EPA Region 5)*
- Scott Manley, Wisconsin Manufacturers & Commerce
- Kevin L. Shafer, P.E., Milwaukee Metropolitan Sewerage District
- Pat Stevens, Wisconsin Paper Council
- John Umhoefer, Wisconsin Cheese Makers Association
- Robert Welch, Wisconsin Corn Growers Association
- Vanessa Wishart, Municipal Environmental Group – Wastewater Division

The Steering Committee served as the primary advisor to Newtrient and MBS throughout the duration of the project to review progress and provide feedback for each phase to be incorporated into the final report. Led by Newtrient and MBS, the Steering Committee convened at the conclusion of key project phases, including:

- **November 2020:** Review and provide input on recommendations for the design of the functional elements of a Clearinghouse

- **May 2021:** Review and provide input on recommendations for implementation of the functional elements of a Clearinghouse

- **December 2021:** Review insights gathered through outreach sessions with key stakeholders and provide input on strategies to build awareness of the Clearinghouse as a viable solution

- **May 2022:** Review and provide input on an analysis of the market participation potential in water quality trading through a Clearinghouse approach and seed funding options

## Phase 2: Identification & Design of Functional Elements

The initial work in Phase 2 provided input into the recommendations for the Clearinghouse design. This phase began with a comprehensive review of Wisconsin's existing water quality compliance alternatives including related statutes, regulations, guidance documents and other relevant material. A list of historic barriers to participation in existing water quality marketplaces was then compiled from both the buyer and seller perspectives. This was followed by extensive research to identify best practices and effective approaches that have been used in practice in Clearinghouses or similar entities on a national basis to address identified barriers.

The Newtrient/MBS team then utilized the findings of the research to design functional elements of the Clearinghouse, within the context of the Wisconsin water quality trading program and statutory requirements, in an attempt to address the historic barriers. A summary of key functional element recommendations was created and utilized to seek feedback and input from the Steering Committee. Feedback from these stakeholders was documented and is summarized within the phase 2 section of this report.

A summary of the recommended Clearinghouse functional elements, including the rationale supporting each and a discussion of the alternatives considered, is included in the phase 2 section of this report.

### Research to Inform Functional Design Elements

#### *Overview of Existing Water Quality Compliance Alternative Programs, Statutes and Regulations*

At the onset of the project, a review of the applicable Wisconsin programs and statutes was completed. This review included both Wisconsin's existing water quality trading program, alternative compliance options, as well as 2019 Wisconsin Act 151 (enacted March 2020). The latter is directly relevant to this project as it requires the state to establish a Clearinghouse to facilitate water quality trading. The goal of this review was to identify important requirements and functions that should be considered when designing and establishing such a Clearinghouse, a key deliverable of this project. The following is a summary of the findings from this review:

In Wisconsin, efforts to reduce nutrient impairments of surface waters have focused in particular on reducing levels of total phosphorus entering surface waters. Phosphorus enters rivers, streams, lakes and other surface waters through point source discharges (such as municipal and industrial wastewater treatment facilities) and nonpoint sources (runoff from urban and forested areas and agricultural land). While phosphorus is an essential, beneficial nutrient for plant growth, excess phosphorus entering surface waters can impair water quality. Nationally, the United States Environmental Protection Agency (USEPA) reports that 15,000 water bodies are impaired by nutrients,

encompassing more than 101,000 miles of rivers and streams and 3.5 million acres of lakes and reservoirs.[1]

### Wisconsin's Phosphorus Standards and Total Maximum Daily Loads

In December 2010, Wisconsin adopted more stringent phosphorus water quality standards via administrative rule. These changes included updating phosphorus water quality standards by establishing numeric water quality criteria for phosphorus in various classes of surface waters in Wisconsin.

Wisconsin is also developing and implementing Total Maximum Daily Loads (TMDLs) for total phosphorus in several major watersheds listed pursuant to Sec. 303(d) of the Federal Clean Water Act as impaired for phosphorus or total suspended solids (TSS). TMDLs are often referred to as "pollution budgets." TMDLs establish maximum levels of pollution that a waterbody can receive (waste load allocations and load allocation) that, together with a margin of safety, will allow the water body to meet water quality standards. TMDLs are used to target the level of pollution reductions needed to achieve water quality standards.

### Implementation of Water Quality Standards and TMDLs

Discharges of pollutants from point sources into waters of the United States are regulated pursuant to the Federal Clean Water Act (CWA or the Act). Section 402 of the Clean Water Act requires point sources to obtain a permit for these discharges, with such permits containing effluent limitations, monitoring requirements, and reporting obligations.[2]

The State of Wisconsin, through the Wisconsin Department of Natural Resources (WDNR), administers the Section 402 National Pollutant Discharge Elimination System (NPDES) permit program pursuant to delegated authority from USEPA.[3] In Wisconsin, this program is known as the Wisconsin Pollutant Discharge Elimination System (WPDES) permit program.[4]

Existing phosphorous levels in waterways receiving phosphorous from a permitted point source are compared with the applicable water quality criterion to calculate a water quality-based effluent limitation (WQBEL). If a TMDL has been developed for a receiving or downstream water body, a WQBEL may be derived based on the waste load allocation "budgeted" for the relevant discharge. WQBELs are typically more stringent than existing technology-based effluent limitations. Thus, once the WQBELs

---

[1] U.S. Envtl. Protection Agency, Office of Water, The Facts About Nutrient Pollution https://www.epa.gov/sites/production/files/2015-03/documents/facts_about_nutrient_pollution_what_is_hypoxia.pdf.

[2] Federal Water Pollution Control Act Amendments of 1972 (Clean Water Act) § 402, 33 U.S.C. § 1342.

[3] *See* Memorandum of Agreement Between the State of Wisconsin Department of Natural Resources and United States Environmental Protection Agency, Region V and Addendums, https://www.epa.gov/sites/production/files/2013-09/documents/wi-moa-npdes.pdf.

[4] WDNR's authority to administer the WPDES program is contained in Chapter 283, Wis. Stats., and various chapters of the Wisconsin Administrative Code.

are implemented, permittees must work to achieve these stringent standards. Compliance with new limits often requires costly technology and facility upgrades that may not be economically feasible for point sources.

### Market-Based Water Quality Programs in Wisconsin

To help address the economic and practical challenges associated with meeting strict WQBELs for phosphorus, Wisconsin has adopted three compliance options related to the phosphorous standard: water quality trading, adaptive management and the statewide multi-discharger phosphorus variance (MDV). These compliance options are designed to achieve water quality improvements while providing regulatory flexibility for sources that may have difficulty meeting WQBELs. These compliance options demonstrate the state's commitment to workable, innovative solutions that improve water quality in economically sustainable ways.

- **Water Quality Trading.** Water quality trading allows a permitted source to comply with phosphorous standards by entering into a "trade" to offset its permit obligation. Specifically, a point source works with another point source or nonpoint source to have the other source reduce its phosphorous contributions within a particular watershed beyond what it would be legally required to do. For example, a permitted industrial wastewater treatment facility could enter into a water quality trade where it would compensate another wastewater treatment plant for reducing its discharge below permitted levels or with a farm that implements practices or technologies to reduce phosphorus losses to waters of the state, generating an offset or credit.

  Wisconsin law provides several general requirements for executing a water quality trade:

  1. The trade is documented and made enforceable through binding, written agreement(s).[5]
  2. The trade (i) results in an improvement in water quality; (ii) the increase in pollutants and the reduction in pollutants provided for in trading agreement(s) involve the same pollutant or water quality standard; and (iii) the increase in pollutants and the reduction in pollutants occur within the same basin or portion of a basin.[6]
  3. Terms and conditions relating to the trade are included in new, reissued, or modified Wisconsin Pollutant Discharge Elimination System (WPDES) permits issued by the Wisconsin Department of Natural Resources (WDNR).[7]

[5] Wis. Stat. § 283.84(1).
[6] Wis. Stat. § 283.84(1m).
[7] Wis. Stat. § 283.84(3r), (4).

WDNR has also issued detailed guidance for implementing the water quality trading program.[8]

- **Adaptive Management.** Under adaptive management, an eligible point source agrees to work with other sources of phosphorous within the same watershed to reduce phosphorous loadings through an adaptive management plan. The participating point source is then assigned an interim effluent limitation. If implementing an adaptive management plan over a ten-year period produces water quality improvements, future permits can include a recalculated WQBEL. If implementing an adaptive management plan leads to the achievement of phosphorous water quality criteria in receiving waters—obviating the need for a WQBEL—the source may be required to simply continue complying with the last interim effluent limit the source was assigned under adaptive management.

  A source that cannot meet the interim effluent limitation or a recalculated WQBEL after the adaptive management plan is implemented can also engage in water quality trading to comply with phosphorous water quality standards. In this way, adaptive management considers water quality improvements in the receiving water instead of focusing solely on the offsets approach employed in water quality trading.

- **Multi-Discharger Variance.** Approved by EPA in 2014, the statewide multi-discharger variance for phosphorous extends the timeline for complying with stringent effluent limitations. Under the MDV, eligible sources commit to incremental reductions in phosphorous over the course of a twenty-year period, while also agreeing to either complete a watershed project or make annual conservation payments to participating county land and water conservation offices.

At base, each of these compliance options attempts to redirect resources that would be spent on expensive phosphorous removal technologies to lower cost pollution control strategies. These compliance tools aim to ensure that permitted sources—which are often already subject to relatively stringent phosphorous effluent limitations—can remain competitive in a global marketplace and stay in business. Because these sources are often key employers and economic drivers in their communities, ensuring a compliance pathway that is sustainable by being both economically sound and environmentally protective is especially critical.

### 2019 Wisconsin Act 151

In early 2020, Wisconsin Gov. Evers signed into law a bipartisan bill designed to accelerate the use of market-based mechanisms to improve water quality. Designated 2019 Wisconsin Act 151 (Act 151), the bill directed the State of Wisconsin to procure

[8] Wis. Dept. of Natural Resources, Guidance for Implementing Water Quality Trading in WPDES Permits, Guidance No. 3200-3400-3800-2020-03, https://dnr.wi.gov/water/wsSWIMSDocument.ashx?documentSeqNo=83858832 (June 1, 2020).

services from, and ultimately contract with, an entity to serve as a Clean Water Clearinghouse (Clearinghouse) for the state.

Act 151 envisions that the Clearinghouse would facilitate an innovative, transparent, stable, and effective water quality trading marketplace. The marketplace would build on Wisconsin's existing water quality trading framework. Aided by the Clearinghouse, existing sources of pollutant loadings including agricultural and nonpoint sources could finance water quality initiatives and generate credits for sale under the water quality trading program. By facilitating a marketplace for trading, the Clearinghouse can reduce current barriers to participation by addressing challenges in identifying suitable trading partners and reducing transaction costs and risk of default.

### Clearinghouse Minimum Qualifications

To be selected as the Clearinghouse through the state-led procurement process, the Clearinghouse must show that it can do all of the following:

1. Establish contract terms, conditions, and information required to document and enforce Clearinghouse transactions in a commercially reasonable manner[9];
2. Establish a risk management policy that requires a commercially reasonable amount of financial reserves, insurance, reserve credit pool, or other risk management mechanism for use in the event that a credit generator defaults on an agreement to generate credits[10];
3. Establish a commercially reasonable process for soliciting and entering trading transactions[11];
4. Establish a clearly defined fee structure describing how the Clearinghouse will be paid for facilitating and executing Clearinghouse transactions[12];
5. Facilitate Clearinghouse transactions[13]; and
6. Satisfy requirements to transact business in the state.[14]

### Clearinghouse-Facilitated Trades

In addition to meeting the general statutory requirements for water quality trades outlined above, trades facilitated by the Clearinghouse must meet certain additional requirements under Act 151:

1. Any water quality credit generated through a Clearinghouse-facilitated transaction must require the credit generator to undertake at least 1.2 times that amount in water pollution reduction activities[15];

[9] Wis. Stat. § 16.9685(2)(a).
[10] Wis. Stat. § 16.9685(2)(b).
[11] Wis. Stat. § 16.9685(2)(c).
[12] Wis. Stat. § 16.9685(2)(d).
[13] Wis. Stat. § 16.9685(2)(e).
[14] Wis. Stat. § 16.9685(2)(f).
[15] Wis. Stat. § 16.9685(3)(a).

2. The transaction must use methods approved by WDNR to determine the amount of credits that may be produced by various water pollution activities, including tables and models based on the best available science[16];
3. Credit buyer must reach a binding, written agreement with the Clearinghouse to purchase credits[17];
4. The transaction must involve credits submitted for verification by the Clearinghouse and certified by WDNR[18];
5. The transaction must involve credits generated in the same "applicable hydrologic area" rather than "within the same basin or portion of a basin." The "applicable hydrologic area" must be the largest area possible to facilitate implementation while achieving water quality standards and TMDL load allocations[19];

## Clearinghouse Activities

### Mandatory Functions

By law, the Wisconsin Clearinghouse must undertake the following activities:

1. Facilitate a financially stable market for water quality credits.[20]
2. Generate water quality credits by entering contracts with point sources, farmers, landowners and other parties to undertake voluntary water pollution reduction activities, *while:*
    a. Using WDNR-approved methods to determine the amount of credits that may be generated by implementing the water pollution reduction activity;
    b. Requiring a maintenance schedule for practices or technologies that generate water pollution reductions;
    c. Minimizing transaction costs;
    d. Maximizing the performance of water pollution reduction activities; and
    e. Reducing the amount of pollutants introduced into the applicable hydrologic area.[21]
3. Verify credits generated by submitting relevant information regarding the water pollution reduction activity to WDNR.[22]
4. Maintain a bank of water quality credits generated by Clearinghouse transactions.[23]
5. Sell water quality credits that have been certified by WDNR.[24]

[16] Wis. Stat. § 16.9685(3)(d).
[17] Wis. Stat. § 16.9685(3)(d).
[18] Wis. Stat. § 283.84(1)(f).
[19] Wis. Stat. § 283.84(1m)(e).
[20] Wis. Stat. § 16.9685(3).
[21] Wis. Stat. § 16.9685(3)(a), (f).
[22] Wis. Stat. § 16.9685(3)(g).
[23] Wis. Stat. § 16.9685(3)(b).
[24] Wis. Stat. § 16.9685(3)(c), (4).

6. Establish and maintain a registry of all credits generated and sold in the state through the Clearinghouse or other third-party brokers on an Internet-based platform.[25]
7. Annually report to WDNR and the Wisconsin Department of Administration (WDOA) pertinent information on water quality credits generated, verified, and incorporated into WDPES permits.[26]
8. Enter a data-sharing agreement with WDNR to facilitate the Clearinghouse's ability to collect and make publicly available pertinent information relating to water quality improvement programs administered in Wisconsin.[27]

### Optional Activities

The Wisconsin Clearinghouse may optionally pursue the following activities:

1. Recommend to WDNR additional methods for determining the amount of credits that may be produced by various water pollution reduction activities[28];
2. Establish and maintain a reserve pool of credits as a risk management mechanism[29];
3. Hold excess funds in trust for the purpose of making grants in collaboration with county land conservation offices, WDNR, or Department of Agriculture, Trade and Consumer Protection, for targeted water pollution prevention, water pollution remediation, and other environmental enhancement projects that improve the water quality of this state[30];
4. Conduct research on other innovative approaches to environmental improvement[31]; and
5. Upon the recommendation of WDNR, contract with the Wisconsin Department of Administration (WDOA) to further the implementation of any adaptive management, water quality trading, or future market-based water quality programs in Wisconsin.[32]

### Program Administration

The Clearinghouse procurement and development process will be handled by two state agencies: the Wisconsin Department of Administration and Wisconsin Department of Natural Resources. WDOA's principal responsibility is to follow state processes for soliciting the services of a Clearinghouse, enter into a five-year contract with a

[25] Wis. Stat. § 16.9685(3)(h).
[26] Wis. Stat. § 16.9685(3)(h).
[27] Wis. Stat. § 16.9685(3)(h).
[28] Wis. Stat. § 16.9685(3)(d). The United States Environmental Protection Agency (EPA) recently issued a call for comments on policy proposals relating to the "baseline" for credit generation activities, with a particular focus on watersheds with federally approved Total Maximum Daily Loads (TMDLs). See further discussion below under "Recent EPA Developments."
[29] Wis. Stat. § 16.9685(5)(c).
[30] Wis. Stat. § 16.9685(5)(b).
[31] Wis. Stat. § 16.9685(5)(d).
[32] Wis. Stat. § 16.9685(6).

Clearinghouse, and ensure that the Clearinghouse operates in accordance with state law.[33]

In addition to providing substantial input on the solicitation, contracting and supervision of the Clearinghouse, WDNR is responsible for assisting the Clearinghouse in its work by:

1. Approving methods for determining the amount of water quality credits that may be produced by various water pollution reduction activities[34];
2. Approving maintenance schedules for technologies and practices that generate water pollution reductions[35];
3. Within 45 days of receiving information from the Clearinghouse relating to a water quality credit and a related water pollution reduction activity, certifying the amount of credits and duration of credits available for sale[36];
4. Determining "applicable hydrologic areas" for purposes of water quality trades facilitated by the Clearinghouse. The "applicable hydrologic area" must be the largest area possible to facilitate implementation while achieving water quality standards and TMDL load allocations[37]; and
5. Determining how to incorporate water quality credits purchased from the Clearinghouse in new and reissued WPDES permits.[38]

### Recent U.S. EPA Policy Development

Coordination with EPA is also key to developing a successful water quality trading program. WPDES permits are issued pursuant to authority delegated to the State of Wisconsin by EPA to implement Section 402 of the federal Clean Water Act. Wisconsin's program, including water quality trading used as a compliance mechanism in WPDES permits, must meet minimum federal requirements in addition to state statutes and rules.

For more than 15 years, EPA's approach to water quality trading was driven by its 2003 Water Quality Trading Policy. That policy set out "detailed and prescriptive recommendations" for the administration of trading programs. In light of technological innovation, EPA has concluded that this policy may be "too prescriptive to be widely effective and implementable." In February 2019, EPA announced six new "market-based principles" to guide water quality trading activities.[39] These six principles can be summarized as follows:

---

[34] Wis. Stat. § 16.9685(3)(d). The Clearinghouse may recommend appropriate methods to WDNR for consideration. *See id.*

[35] Wis. Stat. § 16.9685(3)(f)(4.).

[36] Wis. Stat. §§ 16.9685(4); 283.84(1e).

[37] Wis. Stat. § 283.84(1m)(e).

[38] Wis. Stat. § 283.84(3r).

[39] Memorandum from David P. Ross, Assistant Administrator, U.S. Envtl. Protection Agency to Regional Administrators, Regions 1-10, U.S. Envtl. Protection Agency, "Updating the Environmental Protection Agency's

- **States, tribes, and stakeholders should consider implementing water quality trading and other market-based programs on a watershed scale.** Among other things, EPA noted that working within larger geographic areas may promote more market opportunities and participation.
- **The EPA encourages the use of adaptive management strategies for implementing market-based programs.** "Market-based programs should include adaptive management concepts to allow improvement and refinement over time without sacrificing regulatory certainty for existing market participants," EPA wrote.
- **Water quality credits and offsets may be banked for future use.** Banking of credits for future use rewards early adopters, reduces the risk of practice failures, and broadens and strengthens the market for buyers and sellers, EPA said.
- **The EPA encourages simplicity and flexibility in implementing baseline concepts.** "Overly rigid and expensive baseline requirements are often a barrier to entry into a market-based program," and may create regulatory and market uncertainty, EPA observed.
- **A single project may generate credits for multiple markets.** EPA encouraged states to consider allowing single projects to generate multiple types of credits (e.g., air emission, water improvement, habitat and wetland restoration credits). "The ability to generate multiple types of credits may create additional financial incentives for landowners, conservationists and innovators to participate in market-based environmental improvement projects and may promote portfolio diversification and increased financial opportunity for existing and future credit providers," EPA said.
- **Financing opportunities exist to assist with deployment of nonpoint land use practices.** EPA encourages states to make use of innovative financing mechanisms and available federal support, including mechanisms listed in the memorandum.

On September 19, 2019, EPA requested public comment on policy approaches for addressing "baseline" issues associated with the use of water quality trading as a compliance option for permittees holding National Pollutant Discharge Elimination System (NPDES) permits, with a particular focus on watersheds with EPA-approved Total Maximum Daily Loads (TMDLs).[40] The issue of "baseline" for credit generation purposes is critical. Establishing the point at which credits will be generated is necessary to ensure that water quality trading will lead to overall improvement in water

(EPA) Water Quality Trading Policy to Promote Market-Based Mechanisms for Improving Water Quality" (Feb. 6, 2019).

[40] Water Quality Trading Under the National Pollutant Discharge Elimination System, 84 Fed. Reg. 49,293 (Sept. 19, 2019).

quality. At the same time, if the baseline is too restrictive, an artificial barrier to market participation is erected. EPA sought comment on several innovative policy approaches in both written form and through live testimony.

On April 5, 2022, EPA issued an updated memorandum titled "Accelerating Nutrient Pollution Reductions in the Nation's Waters", representing the Agency's latest policy statement concerning, among other topics, water quality trading.[41] The memorandum announced five governing principles and three primary implementation strategies. Among the three strategies described in the memorandum include efforts to "deepen collaborative partnerships with agriculture" and to "redouble…efforts to support states and tribes" in nutrient reductions. Toward both strategies, the memorandum described the use of EPA funding and technical assistance to "drive market-based approaches, including water quality trading, third-party credit aggregation and banking, and strong agriculture-water sector partnerships." The memorandum commits the Agency's Office of Water to (i) finalize a policy statement concerning flexibilities for implementing market-based approaches – such as the water quality trading charge of the Clearinghouse—within the NPDES permit program and (ii) initiate a rulemaking to explicitly authorize the inclusion of market-based approaches, including trading, in NPDES permits. The memorandum sent clear signals of USEPA's support for market-based water quality trading programs such as to be advanced by the Clearinghouse and flexibility to utilize existing funding sources available under Clean Water Act programs to spur such activity.

***Historic Barriers to Participation in Water Quality Trading***

While water quality trading is not a new concept, historic markets have suffered from limited participation, primarily due to barriers encountered by both the supply and demand sides. The team compiled the following list of historic barriers based on experience, research, and stakeholder input:

- Resource Constraints
  Potential buyers and sellers must spend a substantial amount of time and resources educating themselves about water quality trading, building new relationships, developing projects, and negotiating and executing agreements.

- Lack of Technical Expertise
  A lack of technical expertise is a common barrier for permit holders that are smaller in size with limited resources, and thus do not have access to the expertise needed to evaluate water quality trading as a compliance option.

- Regulatory Uncertainty

[41] Memorandum from Radhika Fox, Assistant Administrator, U.S. Envtl. Protection Agency to State Environmental Commissioners, and Directors State Agriculture Secretaries, Commissioners, and Directors Tribal Environmental and Natural Resource Directors, U.S. Envtl. Protection Agency,"Accelerating Nutrient Pollution Reductions in the Nation's Waters" (Apr. 5, 2022).

Credit buyers require a level of certainty and reliability in the offsets as a means of permit compliance. Potential project failure or breach of a bi-lateral trading agreement expose buyers to the risk of not meeting regulatory requirements.

- Economic Uncertainty
  Credit sellers desire economic certainty when considering investing in the implementation of a practice or technology that results in credit generation.
- Lengthy Contracting Processes
  A lengthy or cumbersome contracting process for buyers and sellers to transact credits, paired with the lengthy lead time in credit generation, are common barriers to more frequent participation in water quality trading.
- High Transaction Costs
  Bi-lateral trades typically incur high transaction costs due to the unique nature of each agreement.

The project team focused on designing a Clearinghouse with innovative solutions that address these historic barriers to water quality trading, and thus increasing the likelihood of greater participation and liquidity in the market along with enhanced environmental outcomes.

## Best Practices and Effective Approaches

Extensive research was conducted to identify best practices and effective approaches that have been used in practice in clearinghouses or similar entities to address the above historic barriers to participation in water quality trading.

Below is a summary of the programs and markets that were reviewed along with highlights of some key program elements identified as having potential applicability to a Clearinghouse in Wisconsin.

- ***Ohio River Basin Water Quality Trading Project:***
  The Ohio River Basin Water Quality Trading Project was developed in 2009 to test Water Quality Trading (WQT) as an innovative way to manage nutrient pollution in the Ohio River Basin (ORB) while meeting social, economic, and ecological criteria required for a viable trading project over the long run. The nonprofit research organization, the Electric Power Research Institute (EPRI), led the development of the program along with a collaboration of companies, farmers, state and federal agencies, and environmental group input. A primary driver for the project was the anticipated promulgation of nutrient criteria and resulting effluent limitations in Ohio, Kentucky, West Virginia, and along the main stem of the Ohio River.

An initial goal of the project was to build the most robust set of protocols to date and address key gaps in the knowledge base of WQT programs for nutrients. Focused on environmental impacts from diverse sources, the project facilitates broad industrial and agricultural collaborations to achieve a common commitment to improving water quality as well as broader environmental indicators. A robust WQT program would provide a cost-effective option for power companies to meet the water-quality based effluent limit (WQBEL) portion of their NPDES permits. The credit program is backed by watershed modeling, on-the-ground project verification, and rigorous credit registration with Markit Environmental Registry.

A thorough review of the Ohio River Basin Water Quality Trading Project was completed in which the following program elements were identified as providing insights to a potential Wisconsin Clearinghouse:

### Risk Management

A credit reserve was established to account for uncertainty and/or failure. Credits were allowed to be withdrawn from the reserve, as necessary, to replace credits that are lost or fail to materialize. A credit reserve, or buffer pool, was established at 10% of the total credit pool, with an additional 10% of total credit pool being immediately retired. Thus, the program had mechanisms to provide a total buffer of 20% to address risk associated with credit loss.

The buffer pool concept deployed for the Ohio River Basin Water Quality Trading Project provides an example of a practical mechanism that could be utilized to manage risk related to credit default for a Clearinghouse in Wisconsin.

### Credit Registry

In August of 2012, EPRI received a USDA Conservation Innovation Grant (CIG) of $1 million to deploy an innovative, secure and proven online credit registry to support the pilot program in the Ohio River Basin Water Quality Trading Project. The 2012 grant funding added a key component that is critical to the long-term success of water quality trading in the region: transparent, efficient and robust market infrastructure. This infrastructure, provided by Markit, was launched in March of 2013 and included a sophisticated and defensible credit registry (Link: IHS Registry), documentation flow tools, and a secure transaction platform. Credits are assigned unique serial numbers to ensure diligent tracking, verification and monitoring. The registry system tracks credits through the credit lifecycle and provides appropriate public access to the documentation for each credit listing.

The credit registry developed for the Ohio River Basin Water Quality Trading Project may be more robust than what may be needed at the onset of launching a Clearinghouse in Wisconsin, however, it does provide valuable insights in structure, navigation and data sharing.

- ***PENNVEST Clearinghouse / Nutrient Credit Trading (NCT) Program in Pennsylvania:***
  Pennsylvania's Department of Environmental Protection (DEP) implemented a Nutrient Credit Trading (NCT) Program in 2004 focused on reducing phosphorus and nitrogen pollution in the Chesapeake Bay. The NCT scope included the Potomac and Susquehanna River watersheds. To increase participation in the program, the Pennsylvania Infrastructure Investment Authority (PENNVEST) designed and implemented a central Clearinghouse in 2010 to reduce transaction costs and other risks that impeded market activity.

  A thorough review of the PENNVEST Clearinghouse / Nutrient Credit Trading (NCT) Program was completed in which the following program elements were identified as providing insights to a potential Wisconsin Clearinghouse:

  ### Risk Management
  As part of the NCT, DEP has established a reserve as a set aside to address pollutant reduction failures and uncertainty. All calculation methodologies to determine credit generation must include a 10% set aside for DEP's credit reserve.

  The credit reserve concept deployed for the NCT program provides an example of a practical mechanism that could be utilized to manage risk related to credit default for a Clearinghouse in Wisconsin.

  ### Market Events
  The PENNVEST clearinghouse offered various market events to enrolled participants to meet their needs and reflect market evolution and experience, including forward contract auctions and spot contract auctions. The competitive auctions, in which multiple bidders and offerors may participate, were used to establish the market clearing price and quantity of transacted credits. The PENNVEST Nutrient Credit Clearinghouse Rulebook (Link: PENNVEST) includes a detailed review of the auction methodology and rules. PENNVEST utilized IHS Markit to execute the auction services (Link: IHS Markit) from 2010 to 2018.

  The market event concepts, including the auction approach, provide an example of mechanisms that could be utilized to allow market-based factors to establish the pricing and quantity of credits through demand and supply signals from market participants.

  ### Credit Registry
  The Department of Environmental Protection (DEP) maintains a registry (Link: DEP Registry) with information on credit certification, verified credits, and credits that are registered as sold. The reporting is provided on a compliance year basis

and contains information related to the buyers and sellers involved in DEP-approved registrations.

The credit registry developed for the PENNVEST Clearinghouse is less sophisticated than the registry used in the Ohio River Basin and is more representative of what may be needed at the onset of launching a Clearinghouse in Wisconsin.

- ***Soil and Water Outcomes Fund:***
  The Soil and Water Outcomes Fund (https://www.theoutcomesfund.com/) was launched in 2020 to provides financial incentives directly to farmers who transition to on-farm conservation practices that yield positive environmental outcomes like carbon sequestration and water quality improvement. The Soil and Water Outcomes Fund is a partnership of AgOutcomes, a subsidiary of the Iowa Soybean Association, and ReHarvest Partners, a subsidiary of Quantified Ventures. AgOutcomes leads the agronomic and farmer relations elements of the operation and ReHarvest Partners manages the financial and contracting aspects of the Soil and Water Outcomes Fund.

  While this program was relatively early in its existence when reviewed by our project team, a relevant program element that was identified as providing insights to a potential Wisconsin Clearinghouse was the use of a specific partner to focus specifically on the financial and contracting aspects of the program. This model highlights the leveraging of specific technical expertise to execute transaction and credit transfer procedures.

- ***Other Markets & Information Sources:***
  A review of additional current and previous water quality trading programs was completed to identify best practices and key program elements that could have potential applicability to a Clearinghouse in Wisconsin. A comprehensive listing of current and previous water quality programs can be found at The Environmental Trading Network (http://www.envtn.org/). Programs were reviewed from California, Colorado, Connecticut, Iowa, Maryland, Ohio, Oregon, Pennsylvania, Virginia and the Chesapeake Bay as part of this project.

  In addition, a review of previous efforts to advance water quality trading was completed to identify best practices and key program elements that could have potential applicability to a Clearinghouse in Wisconsin. An example is the National Network on Water Quality Trading (http://nnwqt.org/) which published a 2018 report titled “Breaking Down Barriers: Priority Actions for Advancing Water Quality Trading”.

There were varying levels of detail available on these additional programs researched. The research across the programs and efforts to advance water quality trading identified several concepts that were applicable to a Clearinghouse design but contained limited programmatic detail to inform the design for a Clearinghouse in Wisconsin. The concepts identified from this research that are applicable to the design of a Clearinghouse in Wisconsin include:

- Simplified transaction process
- Standardized contract templates
- Predictable transaction costs
- Risk management methods (e.g., reserve pools, insurance products)

### Summary of Stakeholder Input on Design Elements

The project team met with Steering Committee members to review and seek input on recommendations for this phase of the project, which was focused on designing elements needed for a Clearinghouse to effectively address historic barriers to water quality program participation along with other considerations. Below is a summary of the comments from the Steering Committee.

| Design Element | Summary of Steering Committee Comments |
|---|---|
| **Legal Structure** | • Most of the participants did *NOT* have a strong preference on the legal entity.<br>• Potential options widely ranged depending on the sector responding.<br>• No strong preference on whether the entity was located in-or-out of state.<br>• Many voiced that the legal entity should have strong relationships and a diverse skillset, but that the entity best equipped to perform the Clearinghouse services would be preferred, as opposed to adherence to any particularized organizational form. |
| **Transaction and Credit Transfer Procedures** | • For the buying and selling of credits, most recognized the need for a contract, but were not able to communicate specific details or preferences on the contract at the time of the interviews. |
| **Market Events & Credit Pricing** | • Most stakeholder representatives agreed a free, auction type approach would be the best option.<br>• Several voiced that a free, auction type approach may not be a long-term option and questioned what the transition will look like if pricing were to become more stable over time. |

| | |
|---|---|
| **Trading Platform** | • All believed the trading platform should be completely web-based and easy to use.<br>• Many mentioned that it probably would not be the farmers/sellers using the platform, but rather a hired consultant/crop adviser, etc. |
| **Risk Management Methods** | • General fear of "something new" was raised and the need to have ample communications and messaging to introduce the Clearinghouse concept and get participants on board.<br>• From the seller side, the biggest concerns were related to reporting requirements and costs of participating.<br>• From the buyer side, the concerns were most often linked back to the uncertainty and unpredictability inherent in farming and the counterbalancing necessity of credit reliance for a permit term, proper/credible verification, and the cost of participating.<br>• Many mentioned the need for an insurance option or buffer pool/reserve pool to help mitigate some of the actual or perceived risks. |
| **Credit Verification** | • Verification preferences differed widely based on the sector.<br>• Across the board, the responses were focused on the number of regional differences and relationships when it comes to who might be eligible to conduct the verification.<br>• Several strongly voiced that private consultants would be the right fit, citing resource limitations within the Clearinghouse or DNR to perform this function.<br>• While acknowledging the DNR approval role, many felt having DNR perform the credit verifier role could have too much of a regulatory "feel".<br>• Many believed the cost of verification should be built into the sale or cost of the credits. |
| **Credit Registry & Reporting** | • For the credit registry, many voiced that transparency was key to the legitimacy and success of the Clearinghouse.<br>• The potential buyers did not indicate concerns around sharing information publicly, stating it was the price of doing business and this group is already transparent. |

| | |
|---|---|
| | • There were concerns to not release so much information that it may raise public discussion around permit reissuance.<br>• The potential sellers did voice concerns regarding the level of information shared, preferring as little as possible, yet still transparent and trustworthy. Concerns were raised around privacy and the competitive nature of land use. |
| **Seeding the Market** | • All stakeholder representatives understood and supported the need for seed funding.<br>• When asked to identify the potential sources of such seed funding, there were a variety of responses. No single source of funding prominently stood out as the preferred option.<br>• Many suggested that the Clearinghouse consider a combination of diverse sources for the initial seed funding, including Great Lakes Restoration Initiative, Clean Water Act programs, private foundations (specifically with a Midwest focus), point sources, private sector groups, a collection of dairy/ag companies providing a grant, and the Regional Conservation Partnership Program.<br>• There were several questions about the amount of seed funding needed and how that would be determined. |

## Clearinghouse Design Element Recommendations

**The following recommendations for the design of the functional elements of a Clearinghouse are based on the research conducted as part of this project and input from diverse stakeholders:**

- **Legal Structure**

  There are a variety of potential legal structures for the Clearinghouse and considerations including consistency with the legislative intent, neutrality, funding, and broad perspective. Below is a summary of the legal structures for consideration along with additional detail as it pertains to the Clearinghouse.

  501(c)(3) nonprofit corporation *(charitable organization)*

  A 501(c)(3) nonprofit would be a viable option. This structure is consistent with the legislation in the following ways:

  i. The statute provides that each credit generated result in at least 1.2 times that amount in water pollution reduction activities. This

requirement aligns with a 501(c)(3) purpose of environmental sustainability.

ii. The statute specifically provides that the Clearinghouse may hold excess funds in trust for the purpose of making grants, in collaboration with government entities. Grant-making is a common 501(c)(3) activity.

iii. The statute provides that the Clearinghouse may also conduct research on other innovative approaches to environmental improvement. Research is a common 501(c)(3) activity.

iv. The statute provides that if the contract with the Clearinghouse is terminated or the Clearinghouse ceases to function, the DNR will continue to administer all credit transactions of the Clearinghouse. This provision of the statute suggests maintenance of the Clearinghouse is a contingent responsibility of the government. Lessening the burdens of government is a common 501(c)(3) activity.

From a funding perspective, a 501(c)(3) can accept government grants only available to 501(c)(3) organizations. Additionally, many charitable foundations would be more comfortable funding a nonprofit 501(c)(3).

In addition, the statute provides that the Clearinghouse is responsible for determining the number of credits that may be produced by various water pollution reduction activities (using methods approved by the DNR) and may recommend additional methods to the DNR. In contrast to alternative structures, a 501(c)(3) organization has no incentive to, and would be prohibited from, promoting one method over another for purposes of generating a financial benefit to any one or more private parties, and has no obligation to operate for the financial or other benefit of any stakeholder.

In addition, this structure has the potential to bring broad perspective to the Clearinghouse. The board of the entity could be comprised of individuals from various industries impacted by the Clearinghouse activities that could also provide a broad perspective to the Clearinghouse operations and activities.

Lastly, from a taxation perspective, income from the exchange of credits would be tax free.

There are some potential considerations that could be considered a negative to the 501(c)(3) entity. The 501(c)(3) may not operate as efficiently as a for-profit model where investors demand lean operations and measurable returns. In addition, no ability of a for-profit sponsor to extract net profits via dividends from a 501(c)(3).

## 501(c)(6) nonprofit corporation *(trade group)*

A 501(c)(6) nonprofit corporation could also be a viable option. Within this type of structure, there tends to be a great deal of industry coordination, providing opportunities for agriculture to coordinate in advancing an entire industry. In addition, income from the exchange of credits would be tax free. Lastly, the entity could be operated by a diverse election of a board of directors.

On the other side, a 501(c)(6) while tax exempt could not accept government grants or charitable foundation funding that is limited to 501(c)(3) entities.

There could also be a perceived lack of neutrality within this type of structure. A trade group would be incentivized to recommend methods developed by an industry for which the trade organization was established to advance. This could lead to a narrower, industry-specific and driven perspective.

## For-profit Corporation

There are also a variety of reasons that could make a for-profit corporation a viable option for the entity or structure. From an efficiency standpoint, the statute states the Clearinghouse must seek to minimize transaction costs, maximize the performance of water pollution reduction activities and reduce the overall amount of pollutants introduced into the applicable hydrologic area.

i. A for-profit company would be incentivized to minimize transaction costs so as to maximize bottom line revenue consistent with the statutory directive.
ii. Social objectives align with a profit motive: the more credits it sells, the more pollution reduction activities will occur.

The funding behind a for-profit corporation could deliver equity issuance and bonds, issuing equity and bonds to investors to fund activities.

Similar to the previous structures, this approach allows investor members to control the operations of the Clearinghouse via election of board members.

There could be a few potential challenges. For example, there could be a perception or even opportunity for the corporation to seek private gain (profit) in the marketplace that should be neutral and effectively carried out. In addition, this structure could result in a narrower perspective as the governance would likely represent an owner-specific perspective.

A corporation also incurs “double” taxation (i.e., income tax imposed on income of the Clearinghouse entity and then on distributions to Clearinghouse owners).

## For-profit Benefit Corporation

There are also a variety of reasons that could make a for-profit benefit corporation a viable option for the entity, many of which are the same as the reasons listed above for the for-profit corporation.

For-profit benefit corporations do allow for social impact bonds as a potential funding source. These bonds could be issued by the Clearinghouse and structured as “social impact bonds” to attract additional investors.

From a neutrality perspective, the benefit of corporation model would allow the company to determine the number of credits that may be produced by various activities with primary consideration for environmental impact and return to investors as a secondary consideration.

Many of the potential cautions match those listed above for the “for-profit corporation,” with the exception that there is a potential mitigation of lack of neutrality.

**For-profit LLC**

For-profit LLC’s carry many of the same benefits and considerations as the for-profit corporation listed above.

There is one thing to note as it relates to for-profit LLCs and taxation. An LLC incurs “single” taxation (i.e., no entity level income tax to the Clearinghouse; rather, the Clearinghouse owners incur pass-through entity income tax on income of the Clearinghouse, but no further income tax to owners on corresponding distributions from the Clearinghouse).

*Recommendation:*

The research for this project and feedback received from stakeholders did not provide any clear consensus on the preferred legal structure for the Clearinghouse. Rather, the legal structure selected for the Clearinghouse should maximize the delivery of the benefits of the program and meet the statutory requirements of 2019 Wis Act 151. Given the analysis on legal structures discussed earlier, we would recommend either a 501(c)(3) or for-profit corporate entity as preferred structures for the Clearinghouse in Wisconsin.

- **Transaction and Credit Transfer Procedures**

  The statute requires that the Clearinghouse establish contract terms, conditions and information required to document and enforce transactions in a commercially reasonable matter [Wis. Stat. § 16.9685(2)(a)]. The Clearinghouse will be required to solicit participants and establish a reasonable process for entering transactions and facilitating transactions.

The following principles and best practices were identified in our research for consideration in designing the procedures for transactions and credit transfers:

- Utilize simple, straight-forward transaction procedures
- Leverage standardized contract templates
- Establish clearly defined roles and responsibilities
- Leverage partnerships to access technical expertise
- Utilize technology to reduce transaction costs and ensure reliability and trust

While satisfying its obligations to document and enforce transactions in a commercially reasonable matter, the Clearinghouse should design the procedures for transactions and credit transfers, to the extent possible, to mitigate historic barriers encountered by buyers and sellers including resource constraints, lack of trust, lengthy contracting processes, and high transaction costs.

*Recommendation:*
The research for this project highlighted principles and best practices that should apply to transaction and credit transfer procedures for the Clearinghouse. Most importantly, the Clearinghouse should have simple, straight-forward procedures and clearly defined roles and responsibilities that are well documented and provide for ease of interaction for potential buyers and sellers. The Clearinghouse should leverage partnerships where needed to access legal and regulatory expertise in financial markets, with the goal of establishing routine transactions that clear quickly using standardized legal documents and an automated technological platform.

### Market Events & Credit Pricing

The most relevant example, within a Clearinghouse context, of market events and credit pricing approaches was sourced from the PENNVEST Clearinghouse in Pennsylvania. PENNVEST had clearly established schedules for market events related to credit trading. Forward contracts were available periodically throughout the year and could be for either single or multi-year contracts. Spot contracts were offered annually, generally near or at the end of the compliance year and were typically for a single year contract.

PENNVEST utilized a competitive auction approach to determine the price and quantity of credits sold in the market. The auction rules were established by PENNVEST while the auction was executed via a third-party service provider. This approach resulted in a market approach to pricing, with the Clearinghouse not playing a role in negotiating, influencing, or establishing credit pricing.

What role, if any, a Clearinghouse should play in negotiating, influencing, or establishing pricing was an important question highlighted during this research. This was also an important topic about which we sought input during meetings with the project Steering Committee and stakeholders. Feedback from these groups is documented in the Phase 2 and Phase 4 sections of this report.

***Recommendation:***
The research for this project and feedback received from stakeholders supported market events that included the offering of both forward contracts and spot contracts. It is recommended that forward contracts include credit offerings that align with the point source community's 5-year permit cycle. Credit offerings that span a longer timeframe, such as 20 years, may be desired in some cases to align with facility planning for point sources, and may also be desired in some cases by credit sellers to finance credit generating projects with large investments.

Most stakeholders envisioned the Clearinghouse operating as a true market, playing no role in negotiating, influencing, or establishing credit pricing. It is recommended that the Clearinghouse utilize an "auction" or similar form of open price discovery methodology to determine credit pricing, which could fluctuate due to timing, supply, demand, or geography to meet the unique needs of the participants in the transaction. The Clearinghouse role would be to facilitate the auction process, but would not play a role in negotiating, influencing, or establishing pricing.

- **Trading Platform**

The Clearinghouse will need to develop and maintain an internet-based trading platform to conduct water quality credit transactions. Furthermore, the Clearinghouse should break the "trade" paradigm, which implies a bilateral transaction requiring the credit producer to strike a deal with the credit purchaser. This has historically been a significant barrier to the effectiveness of similar programs. Instead, the Clearinghouse should develop a platform that creates a true marketplace – a bank or pool of credits for purchase and that no longer requires the credit purchaser and credit producer to meet and strike a deal. The approach will require the acceptance of a new brand of "trade agreements" whereby the permittee's plan is to transact with the Clearinghouse, rather than



*Recommendation:*
The research for this project and feedback received from stakeholders supported an internet-based, transparent trading platform. It is recommended that the Clearinghouse develop and maintain an

enter into bi-lateral agreements with credit generators.

- **Risk Management Methods**

  Given the barrier of regulatory certainty for water quality offset buyers, risk management tools were evaluated to guard against project (and Clearinghouse) default. The statute requires that the Clearinghouse establish a risk management policy that requires a commercially reasonable amount of financial reserves, insurance, reserve credit pool, or other risk management mechanism for use in the event that a credit generator defaults on an agreement to generate credits [Wis. Stat. § 16.9685(2)(b)].

  Several risk management methods were identified during research for this project. The most common risk management utilized by water quality trading programs was a reserve, or buffer, pool of credits. A reserve credit pool is typically deployed in the following manner:

  - A portion of credits from each credit generating project is withheld from the credits available for sale (typically 10-20% of credits are held in reserve)
  - The resulting credits are held in reserve by the administering entity
  - Any transacted credits that default are replaced by credits sourced from the reserve credit pool

  The reserve credit pool provides an extra element of certainty for credit buyers and is targeted to address the historic barrier of regulatory certainty that is frequently cited by potential point source purchasers.

  The other risk management method identified during research for the project was an insurance-based product to guard against project default. However, the concept of an insurance-based product was only referenced as a potential solution; there were no examples of this solution being deployed in any program and thus no details to draw on related to this concept.

  *Recommendation:*

  Based on research of best practices and input from diverse stakeholders, it is recommended that the Clearinghouse establish a “credit reserve pool” to serve as a backstop to project default and act as a risk management mechanism. In this approach, a portion of the verified credits generated from each project would be withheld from the marketplace and held in reserve by the Clearinghouse and would be available to be remedy credit invalidation.

- **Credit Verification**
  Credit verification will need to follow guidelines and processes approved by the DNR. However, a relevant example of how to execute the credit verification process was sourced from the Ohio River Basin Water Quality Trading Project. This project worked with the state agency to contract with the state soil and water conservation districts to periodically monitor, inspect and verify the practices implemented in credit generating projects.

  This approach should be considered in a Clearinghouse design for Wisconsin as it provides a model of leveraging a network of local resources that could be utilized by a Clearinghouse to complete credit verification in a timely and cost-efficient manner.

  *Recommendation:*
  Credit verification will need to follow guidelines and processes approved by the DNR; however, the Clearinghouse would be responsible for executing the verification process. It is recommended that the Clearinghouse establish relationships with regional or local entities that are qualified and trained in credit verification. This would likely require relationship building with more than one outside consultant given geographic differences across the state. This approach would allow the Clearinghouse to leverage a network of resources that could be utilized to complete credit verification in a timely and cost-efficient manner.

- **Credit Registry & Reporting**
  Several credit registry examples were highlighted during research for this project. The Ohio River Basin Water Quality Trading Project developed a robust credit registry in partnership with Markit that was funded through a $1M Conservation Innovation Grant. In Pennsylvania, the DEP maintains a less sophisticated registry for the Nutrient Credit Trading Program. These two examples provide a good contrast of options for potential functionality to be included in a credit registry. While these two examples have different levels of sophistication and functionality, there are similarities in the type of information that each makes available.

  *Recommendation:*
  The research for this project and feedback received from stakeholders supported the Clearinghouse establishing a registry for credits to ensure proper and transparent documentation…

*Recommendation (continued):*

It is recommended that the registry be online and available to the public to promote transparency, interest and confidence in the market. The registry should include the following information:

- Information related to the source of credits (i.e., project information including location, type of practice or technology installed, date of installation, etc.)
- The quantity of credits verified (i.e., pounds of phosphorus avoided)
- Information related to the purchase of credits (i.e., name, location, quantity retired, etc.)

Importantly, a data privacy policy will need to be developed to clearly outline what information will be made public and what information will be kept confidential. The policy should address concerns about confidentiality and competitive interests in land use.

- **Seeding the Market**

To create a viable and sustainable market for water quality trading in Wisconsin, the Clearinghouse must assume an active role in working with credit generators and credit purchasers to spur interest in generating and purchasing credits. A Clearinghouse that has a "bank" of verified (or verifiable) credits and projects available that pre-dates credit sales to buyers would address many of the barriers to participation identified above for certain credit purchasers including resource constraints, lack of technical expertise, regulatory uncertainty and lengthy contracting processes.

We do not believe it will be viable to ask credit generators to commit funding to credit generating practices or projects "on-spec". Rather, credit generators will need to be assured of a market to some extent by the Clearinghouse for market-wide credit generating activities that improve water quality to take place. As such, "seed" funding would be needed to be available to incent credit generators to undertake credit generating practices to build a bank of available credits for purchase.

As noted, the seed funding expenditures will likely precede commitments from buyers to purchase credits, and thus will represent an up-front, at-risk investment that will be required to set the stage for the Clearinghouse to create a successful market over the long-term. A further discussion of seed funding options is included in Phase 6 of this report.

*Recommendation:*
The research for this project and feedback received from stakeholders highlighted the importance of the Clearinghouse assuming an active role in working with credit generators and credit purchasers to generate interest in transacting credits. It is critical, therefore, that the Clearinghouse incentivize credit generation (seed the market) early in the tenure of the Clearinghouse to demonstrate viability of the market.

The project team does not believe it will be viable in the long-term to expect significant water quality market development to occur where credit generators are expected to take on all costs on the hope of market development or otherwise on speculation.

## Phase 3: Development of Recommendations for Implementation

The work in Phase 3 consisted of desktop research and select interviews to identify processes, guidelines and procedures that have been used in practice to attempt to implement and operate Clearinghouses or similar water quality trading platforms. Newtrient and MBS evaluated the findings of the research and developed implementation recommendations for a sustainable and streamlined Clearinghouse design that best fit the proposed Clearinghouse in Wisconsin, including the designed functional elements from Phase 2 and administrative functions required within the Clearinghouse.

A summary of the recommendations for implementation, including the rationale supporting each recommendation and a discussion of the alternatives considered, is included in the phase 3 section of this report.

### *Best Practices and Effective Approaches*

The programs and markets that were researched in phase 2 of this project and covered earlier in this report were viewed from an implementation perspective for phase 3. Where possible, interviews were conducted with key personnel from those programs to gain further insights on implementing select design elements.

### Summary of Stakeholder Input on Implementation Recommendations

The project team met with Steering Committee members to review and seek input on recommendations for this phase of the project, which was focused on implementing elements needed for a Clearinghouse to effectively address historic barriers to water quality program participation along with other considerations. Below is a summary of the comments from the Steering Committee.

Note: Feedback was only solicited from the Steering Committee on select areas related to implementation recommendations.

| Design Element | Summary of Steering Committee Comments |
|---|---|
| **Market Events & Credit Pricing** | • Stakeholders voiced support for a 5-year contract offering that would be in sync with the permit duration.<br>• Stakeholders also voiced support a 20-year contract offering that might appeal to credit sellers looking to finance credit generating project with large |

| | |
|---|---|
| | investments, and also appeal to credit buyers that are considering long-term facility planning.<br>• Several stakeholders voiced support for a price floor on credit pricing.<br>• It was suggested that the Clearinghouse should provide pricing examples to educate market participants on credit pricing. |
| **List of Services & Fee Structure** | • Simple fee structure should be utilized.<br>• Consider sliding fee % that lowers for large volume transactions.<br>• Point on transaction is appropriate time for fees to be assessed. |

## Clearinghouse Implementation Recommendations

**The following recommendations for the implementation of the functional elements of a Clearinghouse are based on the research conducted as part of this project and input from diverse stakeholders:**

- **Eligibility Requirements & Enrollment Procedures**

  The potential participants must be eligible and enrolled prior to any market participation. Eligible credit sellers could include point and nonpoint source dischargers. Eligible credit buyers could include point source dischargers (industrial and municipal) as well as other entities such as non-profits and environmental groups. Eligibility requirements would typically be established by the applicable statute or governing body.

  The enrollment procedures will need to capture pertinent information on the applicant including at a minimum the name, address and contact information for the applicant as well as sufficient information to confirm eligibility. The enrollment procedures should also include a confirmation from the applicant that they will abide by all rules established by the Clearinghouse.

  *Recommendation:*
  Potential participants must be eligible and enrolled prior to any market participation. The Clearinghouse should have clearly documented guidelines on what entities are eligible to participate in the market from a buyer and seller perspective based on specifications established by the applicable statute or governing body. Confirmation of eligibility from an applicant should occur in the enrollment process and be validated on an ongoing basis.

  The Clearinghouse shall provide an enrollment application document that potential participants would complete and submit to the Clearinghouse. The form should contain at a minimum the name, address and contact information for the applicant as well as sufficient information to confirm eligibility based on the program requirements established by the applicable statute or governing body. The enrollment procedures should also include a confirmation from the applicant that they will abide by all rules established by the Clearinghouse.

- **Transaction and Credit Transfer Procedures**

  **Contractual:** Typically, contracts for water quality trading would be bi-lateral agreements between the buyer and seller. However, credits that are transacted through the Clearinghouse will consist of two separate contracts, including one contract with the Clearinghouse and the buyer and a separate contract with the Clearinghouse and the seller.

  **Financial:** The Clearinghouse should seek to execute financial transactions related to water quality trading in a secure and efficient manner. This is an area where leveraging a partnership with a service provider with financial transactional experience should be considered.

  *Recommendation:*
  The research for this project and feedback received from stakeholders highlighted the importance of the Clearinghouse assuming an active role in working with credit generators and credit purchasers to generate interest in transacting credits. It is critical, therefore, that the Clearinghouse incentivize credit generation (seed the market) early in the tenure of the Clearinghouse to demonstrate viability of the market.

  The project team does not believe it will be viable in the long-term to expect significant water quality market development to occur where credit generators are expected to take on all costs on the hope of market development or otherwise on speculation.

- **Market Events & Credit Pricing**

  It is preferred that the market and market events are clear and simple for all potential participants. The Clearinghouse should seek to operate as a true market, with the Clearinghouse playing no role in negotiating, influencing, or establishing credit pricing.

  *Recommendation:*
  From a timing perspective, it is recommended that market events include credit offerings that align with 5-year permit cycles as well as credit offerings that span a longer timeframe, such as 20 years, which may be desired by some participants seeking certainty over a longer period. The frequency of credit offerings should be dictated by the level of interest from market participants.

  There are various auction types that could be deployed to establish credit pricing, including sealed bid, ascending bid or descending bid. Regardless of the type of auction methodology deployed, the Clearinghouse would need to develop rules to determine transacted quantities and pricing based on bids from buyers and offers from sellers. The Clearinghouse should establish a minimum, or floor, price for pricing of credits.

*Recommendation (continued):*
In addition, the Clearinghouse should play a role in making pertinent information available to all parties related to credit pricing including:

- Factors to consider when submitting pricing bids or offers
- Pricing examples/tools to educated buyers and sellers
- Auction results including the price and quantities transacted, along with the range of bid and offer prices, quantities bid and offered and listing of participants

The Clearinghouse could consider having a third-party entity execute the auction process to provide an additional layer of independence.

- **Risk Management Methods**
  The most practical risk management mechanism for the Clearinghouse to utilize is to establish a "credit reserve pool" to serve as a backstop to project default. In this approach, a portion of the verified credits generated from each project would be withheld from the marketplace and held in reserve by the Clearinghouse and would be available to be remedy credit invalidation.

*Recommendation:*
It is recommended that the Clearinghouse establish a "credit reserve pool" with the following considerations:

- A fixed % of credits from each generating project would be held back from the market and included in the buffer/ reserve pool
  (note: each hydrological trading area would need a pool)
- Seek to identify a source of funding to "underwrite" the credits assigned to the buffer/ reserve pool which would allow credit generators to receive value for this portion of credits.

The Clearinghouse could also pursue the development of an insurance-backed mechanism that could serve as an alternative to a credit reserve pool, however, this would likely be a longer-term solution that is developed over time as the market matures.

In addition, the contracts that the Clearinghouse enters into with both the credit generator and the credit buyer should include enforceable performance terms as an additional element of risk management.

- **Credit Verification**
  The Clearinghouse would be responsible for ensuring that the credit verification process is deployed uniformly across all credit generating projects and develop an audit function to periodically audit the credit verification process and results.

  *Recommendation:*
  As stated in the design element recommendations in phase 2 of this report, it is recommended that the Clearinghouse establish relationships with regional or local entities that are qualified and trained in credit verification. This approach would allow the Clearinghouse to leverage a network of resources that could be utilized to complete credit verification in a timely and cost-efficient manner.

- **Credit Registry & Reporting**
  The Clearinghouse will need to establish to serve as information source for credits to promote transparency, interest and confidence in the market.

  *Recommendation:*
  As stated in the design element recommendations in phase 2 of this report, it is recommended that the Clearinghouse establish an on-line registry that is available to the public to promote transparency, interest and confidence in the market. The Clearinghouse will need to develop a data privacy policy that clearly outlines what information will be made public and what information will be kept confidential. The policy should address concerns about confidentiality and competitive interests in land use.

- **Seeding the Market**
  The Clearinghouse will need to assume an active role in working with credit generators and credit purchasers to generate interest in transacting credits. It is critical, therefore, that the Clearinghouse incentivize credit generation (seed the market) early in the tenure of the Clearinghouse to demonstrate viability of the market.

  *Recommendation:*
  While there is not an obvious or perfect source of funding for the Clearinghouse, there are a variety of potential sources of such “seed funding” for the Clearinghouse. Sources evaluated included Federal and State programs as well as private funding alternatives. Further information on seed funding research is below in Phase 6 of this report.

### List of Services and Fee Structure

The Clearinghouse will need to develop the capabilities to provide the services required to operate the core functions of the Clearinghouse and develop a fee structure to be applied to purchase and sale transactions.

*Recommendation:*
It is recommended that the Clearinghouse provide the following services, at a minimum, to successfully operate a Clearinghouse:

- Conduct outreach with prospective buyers and sellers
- Maintain a bank of credits for sale
- Offer risk management mechanisms
- Execute credit purchase and sale transactions
- Manage transaction registry
- Verify credits

For services provided by the Clearinghouse, it is recommended that the Clearinghouse establish a simple and straightforward fee structure. For simplicity, it is recommended that fees be applied at the time of transaction execution for credit sales and purchases. The Clearinghouse could consider a sliding fee percentage that decreases for large volume transactions.

- ### Roles and Responsibilities for Interactions with State Agencies

The Clearinghouse will need to work closely with the DNR in the credit verification process, from establishing standards and protocols to verifying actual credits. The Clearinghouse can play an important role in cooperating with credit producers and credit purchasers as those entities interact with the DNR, provided the Clearinghouse maintains strict compliance with applicable laws.

*Recommendation:*
The Clearinghouse will need to establish a collaborative relationship with DNR to establish and grow a successful Clearinghouse program that contributes toward the achievement of water quality objectives. It is recommended that the Clearinghouse work with DNR to clearly outline roles and responsibilities at the onset of a Clearinghouse program in each of the functional elements outlined in phases 2 and 3.

## Phase 4: Education & Outreach

Phase 4 focused on conducting education and outreach sessions with key stakeholder groups to socialize the design elements developed in Phase 2 and the implementation recommendations developed in Phase 3.

The goal of these sessions was twofold:

1. Gather insights and feedback while building awareness of the Clearinghouse concept and educating on how the functional elements should reduce or mitigate historical barriers to water quality trading presented in the traditional bi-lateral trading approach;

2. Gauge the level of interest from stakeholder groups to utilize the Clearinghouse to facilitate water quality transactions. This input was obtained through various channels including surveys, one-on-one interviews, focus group discussions or other methods deemed appropriate based on interest and feedback from earlier project phases.

Due to the COVID-19 public health emergency, many stakeholder meetings were canceled, postponed, or converted to virtual meetings during Phase 4; therefore, it was necessary for the team to adjust the strategy for education and outreach.

To pivot, Newtrient and the team prepared a short presentation, outlining the Clearinghouse approach and the learnings and input from the project. The team requested that each member of the Steering Committee host “focus groups” with key Wisconsin stakeholders to introduce the project findings and gather additional input. Each Steering Committee member was responsible for organizing a small group representing their membership and stakeholders, specifically those interested in water quality improvement solutions in Wisconsin who were willing to join a 60-minute session**.** During the sessions, the team provided an overview of the Clearinghouse concept, shared recommendations and learnings from the project and asked a series of questions gauging interest in participation in a Clearinghouse approach. A sampling of the questions included:

- *Are you currently buying or selling water quality credits? If yes, through which program? If no, what is the reason?*
- *Would you be interested in buying or selling water quality credits through a Clearinghouse approach?*
- *What practices would you consider enrolling in this type of approach?*
- *What would be an appropriate transaction price to encourage you to participate in a Clearinghouse approach?*

From these sessions, we learned that many participants, across all sectors, were not familiar with a market-based approach, or Clearinghouse. This was a new concept for many of the stakeholders, but it was obvious the interest was there due to the number of questions we received during the sessions.

Once participants had a better understanding of the concept, we heard many recurring themes, including:

- A need to solve for the look-back period and find a way to "reward" early adopters
- A need to better understand which practices would be eligible, and how the quality of credits would be accounted
- The need for clarity on the enrollment process for sellers and the necessity for a quick and easy credit purchasing process
- The importance of the timing of payments
- The need for a strong level of regulatory certainty and an understanding of the regulating agencies level of interaction
- The size of markets and locations will determine the level of interest; a bigger market is preferred
- Full transparency on market activities
- The solution needs to be competitive with current and emerging solutions that address water quality improvements.

**Below is a further breakdown of input from** sessions with key stakeholder groups organized **by key design elements and sector:**

| **Legal Structure** | |
|---|---|
| **Agriculture** | • Would be beneficial to have people with actual farm experience. Farmers would appreciate someone that speaks the same language. We recognize they have to understand the function of nutrient management in terms of budget, point and nonpoint, but also need to understand what a livestock farm with certain characteristics is capable of doing.<br>• A nonprofit would be much more trusted. I'm not locked into that opinion. It just stands to reason if view Clearinghouse as neutral third party trying to facilitate a deal - would have more buy in from our farmers/members.<br>• Non-governmental entity is preferable. No strong viewpoint one way or other on corporate structure. Nonprofit structure likely more appealing to build confidence and avoid |

| | |
|---|---|
| | appearance of profiteering. Farm community and industrial point sources would probably would not see that as bad thing either. It's a way to save money in other areas. But private, slight preference for non-profit. Ultimately, no strong opinion one way or another. |
| **Industrial** | • My presumption would be a nonprofit makes sense. A for profit could work as well, but given nature of what trying to accomplish, nonprofit would be my first choice. It comes back to transparency. Parties need trust in the institution overseeing the Clearinghouse. I could envision a nonprofit with a board on the structure side – the board members representing several sectors. Then have the DNR separately validating the credits. That model would create the confidence to make it work.<br>• From our perspective, be more legal precedence for a for-profit when it comes to transactions. Would want our internal counsel to look at contract language. It would be an expected exercise.<br>• No preference. non-profit, for-profit, bank, law firm - it's whoever wants to take it on and can do it. Need to have strong audit function to know where money comes in and goes out. I'm agnostic on who that should be. |
| **Municipal** | • No strong opinion. For our clients, if it is an entity that can produce verifiable credits and simplify the process.<br>• I don't have preference either way. From my standpoint, what is easiest entity to deal with when we are purchasing the credits I always prefer in-state. |
| **Environmental** | • Several ways to structure it --the best way to structure depends on where will be seeking and receiving money.<br>• Short answer is no. Whatever is most helpful in getting the Clearinghouse off the ground. I'd assume the biggest initial hurdle is going to be in standing it up. Some characteristics or qualities ---current water quality trading program is helpful. Relationships in agricultural community, knowledge are critical. Nothing happens until credits are generated. Seems Clearinghouse is going to have to be an expert cat herder, bringing all parties to table. It's key to be fluent in several professional arenas that have not always worked together.<br>• Not critical that it be in-state entity. Real opportunity to leverage existing relationships in agricultural community - agronomists as an example. |
| **Governmental** | • Need to have government involvement. If no government involvement, not a fatal flaw. But I feel need a certain amount of government participation…even if as an advisor |

| Transaction and Credit Transfer Procedures | |
|---|---|
| **Agriculture** | • Have not given much thought to this, but need for the contract. |
| **Industrial** | • There probably is a model that exists where both parties are appropriately represented and protected. Assumption is yes it should in place in order to instill confidence. |
| **Environmental** | • Having a contracting process that is straight forward and easy for people to understand is important, especially when dealing with some farmers. Think it's important to have a template established so people can understand the basic elements of a contract. Need to think more about that in terms of compliance provisions.<br><br>• Cost of the project is something. Not sure if something that could be done right away. Many grant applications have different scoring mechanisms. We are rated. May be further down the line - if can establish a rubric so farmers feel they will be rewarded for doing best things possible to get the credits, it would be worth looking at.<br><br>• Probably be some farmers who will look at it and think "I don't want to expose the entirety of my business model for something where I may not be a participant." Most members are comfortable with "rapid transparency". |
| **Governmental** | • Certification process that makes people qualified to make that call. And, that there would be a standardized form, method or process to check the boxes.<br><br>• Agriculture would have more sensitivity than buyers. Farm Bill has restrictions on what can be shared (information) regarding grants needed for practices. It can be aggregated. But something that would identify a particular farm to share that information. |
| **Market Events & Credit Pricing** | |
| **Agriculture** | • I'm of same mindset - our members would be as well that having a free-market price would be best…at least in the start. I wonder about long-term -- what the transition would look like away from that if we get to point where pricing is more stable. May be worth getting some thought on whether should be permanent system, or starting point?<br><br>• *(When asked about Clearinghouse having limited role*) To me that is the only solution. To get buyer and seller come forward in a true market is the way to do it.<br><br>• Our members would see auction, free market setting the pricing as a good approach initially. |

| | |
|---|---|
| | • I understand the advantage to an auction. In practice it will be tricky, especially at first. If a sanitary district is the buyer of credits, I can't see them saying here's a big check for 20 years of credits. Would expect payment be made yearly. As seller of credits, I need to put in a big investment. I need to go to bank to get a loan for the project. I need to know the price of what I am getting for my credits in order to go to the bank. If do not know what price will be until go to auction - I will be out a lot of money to pay an engineer to put in the project. If there is a set price, then I can tell bank and engineer what to expect and it will be easier to move project forward.<br>• *(When asked about collecting information on pricing)* Good question. Reach out to NRCS. Other option would be a survey of farmers implementing some of these practices in various geographic areas. Discovery farms may be helpful.<br>• *(When asked about collecting information on pricing)* Trade associations like WMC could be good resource. Wisconsin Cheese Makers Association, or Paper Council. Start with those who are more closely aligned.<br>• Needs to be transparent marketplace. Doesn't need to be an auction though.<br>• A market floor price is not that appealing to me - I'm not sure it is necessary. Some of seed funding could be monetized quickly. This would be bonus. If work already occurring, not sure setting minimum prices is necessary and not helpful in getting more people trading.<br>• If there is a way to have history of trades, that is appealing. Background information on general cost of what they are trying to accomplish. Those who are sellers, some idea of amount of offset they want to offer, how much savings to potential purchasers. Need to provide enough information on both parties. Trading parties, actual costs on what is being offered. That's important to help build trust. There will be sensitivity on information. |
| **Industrial** | • Need to have a price that is less than the buy-out option (dollars/pound) annually. Then the question becomes how many different entities the buyer is dealing with. And what kind of logistical nightmare it will be for compliance people to manage that? Is it more difficult doing that than paying the penalty and being done?<br>• Yes, market-driven makes sense. I see variations. may be higher costs at onset. Then the costs may drop. |

| | |
|---|---|
| | • There is more certainty by paying premium at times than via a Clearinghouse.<br><br>• If it is an auction, or some other closed market -based mechanism, that makes sense. To the extent you can arrive at a true market price for the credits between sellers and purchasers. That should be the desired outcome. Want to make sure it is insulated from ability of third-party investors to manipulate the market price and availability of credits.<br><br>• Clearinghouse could not set price on own**.** Think of this like the Chicago mercantile market. |
| **Municipal** | • At this point my thoughts on auction are not well formed. Most trades I work on are direct negotiations with a landowner. Auction is beneficial to all parties, with trades that are higher value.<br><br>• *(Things to consider for submitting bid)* Higher quality projects, how geographical limitations are set up, elements of ease of verifying credits being generated. |
| **Environmental** | • Auction process would be sensible way to do it. Could be just initial and people in future may want to set prices outside, but still use the Clearinghouse structure.<br><br>• *(When asked about Clearinghouse having limited role*.) I see some pros and cons. A lot of traction to having the market set the price. One concern I have is that it may end up with widely varying prices for the same thing. You need to be transparent about this totally. It's key that the Clearinghouse not controlling the auction - but informing the auction.<br><br>• *(In response to auction approach)* Starting out want both sides to see it is fair and transparent process. But as initially start things up, benefit of auction process is something everyone can look at and see it makes sense.<br><br>• *(When asked about how pricing could be established)* Trying to figure out pricing and what people need can be a challenge. Look at what other states may be doing. Any preexisting information you have? |
| **Governmental** | • The Clearinghouse should not get involved in directing the farmer in how to price his product, but maybe some sort of a checklist, pamphlet or something that is developed and vetted by someone at the university.<br><br>• *(When asked about how pricing could be established)* Potentially putting together a subgroup on both sides. |

| Trading Platform | |
|---|---|
| **Agriculture** | • 100% backing web-based but needs to be easy for farmers (broadband issues) and most likely will be used by consultants on behalf of farmers. |
| **Environmental** | • Live updating of information would be great. The flashier you can make it with more images and less verbiage is good.<br><br>• I suspect, based on what I've seen in the state, there will be folks executing the paperwork side of this for both credit buyers and credit generators. Not an Amazon type transaction. Farms would want to find easy to use "snap plus" type of software. I don't think you can count on credit generators. Not sure how many will be. Don't necessarily have to teach a lot of people to use the platform. Clearinghouse will have to develop a software for running the platform. Maybe doing a lot of handholding initially for people using it. |
| **Risk Management Methods** | |
| **Agriculture** | • One of the most significant concerns with members is fact farming is uncertain. That is number one perceived risk. How risks are transferred or handled. The other is duration of practices and what happens. Consider looking at long term contract - up to 15 years - concern whether contracts could be fulfilled if a failure in a business.<br><br>• I think we have a lower threshold on nonpoint side than the point side… other than fear of the new.<br><br>• What are reporting requirements? Costs to participating in Clearinghouse. Making sure long-term compliance is covered is biggest factor. I foresee much more anxiety on producer side.<br><br>• The one that stands out is the risk of being exposed for pollution and the potential for a class action lawsuit. The risk, as list of buying or selling is made public, will we have certain groups could be getting names from the Clearinghouse site and filing lawsuits? Is there a way to provide anonymity or privacy on who participates?<br><br>• The cost of credits could be an issue. Set capacity within the industry of what they could tolerate. Length of the credit term. The longer it is available for industry to use it after they paid for it, the more valuable it is to them.<br><br>• Who is on the hook for the permit? How do you create a system that is solid? Tons of internal pressures for larger corporations that need absolute certainty. |

| | |
|---|---|
| | • The big concern from a management perspective is violating a clean water act permit. If that happens, the company is looking at incredibly serious fines that include imprisonment for people who sign the permit document (plant manager and CEO). Enforcement actions can also be 100% civil. Could have very, very significant legal costs and monetary judgments. If we could get an ironclad guarantee once you purchase credits, no matter what happens on the generation side, you will be held harmless then that would be an absolute prerequisite. |
| **Municipal** | • Historically major challenges we have seen is verification. Ensuring credits will be available for permittees, while verifying compliance. There are endless challenges on administrative side. For some clients needing larger amounts of credit, administrative needs are a big challenge. Trade ratio side, upstream-downstream trading, geographic area, management plans - details can be very challenging. That is a significant benefit of the Clearinghouse. Our clients would no longer have to deal with so many administrative issues.<br><br>• In our world, can build a deep tunnel or treatment plant. Pretty sure use of public dollars and will get a certain return from investment on improvements in water quality. One of unsure items with this approach, how do we show what we are paying for can apply to our current requirements? Is that a risk the Clearinghouse would take on? Might be good to look at insurance. |
| **Environmental** | • If on the seller side and trying to implement a big investment in manure processing on a big farm, that won't cash flow in 5 years, you might have concerns about permit cycle where technology and point source cycle available sooner.<br><br>• On permit purchasing side, risk of credits being insufficient for permit compliance is biggest concern. A reserve pool is the more sensible way to do it. The cost of that is built into the price of all credits purchased.<br><br>• End of day, it is important that the risk is borne by the credit generators, purchasers, and Clearinghouse and not by the department or the water body into which the permittee discharges.<br><br>• Working with the agricultural field**.** They are stakeholders we need to work with if want to improve water quality. Same true for sewerage districts. Need to have members see those areas are part of the solution, and it's an ongoing dialogue. Once there is increased understanding, they are quick to see the importance of working with both point and nonpoint sources of pollution.<br><br>• Buffer pool would be key to trust building and program implementation |

| | |
|---|---|
| | • A reserve pool/cost of insurance is built into the price of credits purchased. That would be a good risk management mechanism |
| **Credit Verification** | |
| **Agriculture** | • Dependent on relationships with land and water staff and DNR staff which may vary regionally. Not a one size fits all.<br>• Private consultants<br>• To the extent possible build mechanism with private consultants to turn over data for quick check or quick verification versus labor intensive activities of government department is better option<br>• Having a Clearinghouse do verification would be preferable. Wisconsin Wetlands Association has trust and respect of our industry as well. There is room for multiple parties to serve in that role. If strictly one organization, a lot of farms might say forget it, I don't trust them.<br>• Private consultants. Period. |
| **Industrial** | • No comment. Suspect that having the department verify on the front end is essential.<br>• No comment if it has DNR stamp of approval.<br>• You need that ironclad guarantee from state and federal regulators that purchase of credit from compliance purposes will satisfy the Clean Water Act. DNR and EPA would have to sign off it to verify and say are legitimate credits. So, there must be some role from environmental regulators for that verification.<br>• It would end up being some sort of approved third-party vendor, approved by DNR and the Clearinghouse. Clearinghouse would contract a third party which seems to make the most sense. |
| **Municipal** | • I don't have strong opinion on it, if appropriate person with necessary knowledge to engage is doing this work<br>• Could be DNR or someone they contract, or it could also be a non-profit.<br>• Permittee consultant or consultant for farmer because it provides an additional level of security. Significantly more on the inspection front --photographic documentation. |
| **Environmental** | • Need to consider if DNR may not have the capacity for credit verification. Clearinghouse staff to do verification themselves, or whether independent 3rd party contractors would likely |

| | |
|---|---|
| | make more sense. Whichever is economically feasible is best option.<br><br>• Not anything specific. I know this was an issue we pegged during bill process. Want DNR to be a part of the verification process. no other specifics beyond that. |
| **Governmental** | • Make sure the verification is compliance-based.<br><br>• I'm thinking want to do a certification program – DNR, Clearinghouse or private consultant should go through certification process. |
| **Credit Registry & Reporting** | |
| **Agriculture** | • Some hesitation on releasing actual data - field practices to the public. Cannot be named on "who" is conducting the trade. There is a balancing act of being transparent while also not oversharing and turning people off on oversharing.<br><br>• If selling credits, you are happy and would want to promote what doing. If a buyer, however, you don't necessarily want information out there. There are things that probably have to be public record. |
| **Industrial** | • The amount of transparency depends on the sector. I would not imagine there would be any sensitivity among the municipal wastewater treatment plants buying credits. I would have to talk with the paper industry and food processors about their comfort level.<br><br>• Chicago Mercantile is invisible and anonymous trading. that is why it is successful. No one knows who sold and who bought. Price should be transparent. but not the transactors. Mask the buyers and sellers.<br><br>• There can be sensitivities with information being publicly available. But with Clearinghouse, that is the tradeoff. Could have companies that may hesitate. But it's like an e-trade platform except everyone sees what the purchases have been. |
| **Environmental** | • More transparency at outset will be helpful to establish legitimacy among all the stakeholders watching this process. |
| **Seeding the Market** | |
| **Agriculture** | • Consider GLRI (Great Lakes Resource Initiative).<br><br>• Clean water act grant money could be better than pursuing state funding. At first glance, government funding seems preferable. |

| | |
|---|---|
| | • Water Act would be a natural fit, or consider environmental groups, like The Nature Conservancy.<br><br>• The missing data that we need to make this work is "what are buyers willing to pay for a pound of phosphorous.?" Right now, I can't tell a farmer what someone will pay for a pound of phosphorous.<br><br>• Private foundations that play in this space and consider those with Midwestern focus.<br><br>• I wonder if government point sources would be a good first start. Private funding would be good, if available. Also consider Madison Metropolitan Sewerage District engaged as it could public good and smart financial move. I am open to asking anyone. |
| **Industrial** | • How much are we thinking is needed for seed funding? That determines what potential revenue sources there are. Smaller number, more opportunities. It may depend on where those markets are that need cash support to stand up.<br><br>• When I hear state funding, it appears that it may be more difficult.<br><br>• *(In response to utilizing EPAs WIFIA program)* Both of those sources of funding are probably viable. I'm not real familiar, not involved in policy discussion surrounding either of those funding sources. It's my sense that the political dynamics surrounding water quality in the legislature should be strongly considered. Any conversation about funding, seed funding for credit bank needs to be viewed through that lens if funding is dependent on an act of the legislature.<br><br>• I personally believe state should seed fund this and we could lobby for the funding. It would take a separate effort.<br><br>• That's not our wheelhouse. In terms of understanding who in the market might see that as a good investment is not in my area of expertise, you may want to talk to someone at Bankers Association. Also consider some of money the state allocates every year for stewardship program.<br><br>• *(In response to point sources)* Trouble is that it would be viewed as a separate tax. If there was a way to construe it as an expended fee on the other side; that is the only possible way to frame it. Even so, there may be some in the point source community that would not support. |
| **Municipal** | • Big picture there is a need for seed funding. From municipal perspective one of biggest risks of trading is confirming compliance. I envision Clearinghouse providing that certainty that can be missing form current trading regime is to have some backup credits available. If there is a problem with a |

| | |
|---|---|
| | practice a permittee is relying on, have reserve credits to ensure they are compliant. Availability of seed funding, to get marketplace up and running before permittees want to get into the credits, is good. I'm not sure about the best source. Conceptually, clean water act makes sense to me.<br><br>• Utilizing the clean water fund loans makes sense. A lot of this comes down to DNR decisions.<br><br>• USDA funds comes to mind and farm bill programs may be a source.<br><br>• *It* depends on financial climate at the time. Most of municipal clients at this time with pandemic, concern about budgets and what they will look like in next couple of years. Would need assurance that credit purchases would be good investment. We've been pushing for more flexibility in trading for a long time and are coming up to end where permits need to make decisions now on phosphorous emissions. We are starting to see some costs of facilities treatment for phosphorous start to come down. if those treatment costs are coming down a bit, provides certainty for municipality to go upgrade route, even if more expensive than trading, to ensure compliance. There is a window now where trading makes sense and see engagement on municipal side for potential of seed money.<br><br>• There may be funding through some of the farm bill programs to do some of this work, especially under the RCPP. |
| **Environmental** | • Seed funding is important to get the process off the ground for sellers and purchasers interested in participating but don't have band width and economic incentive to do it. There may be a few opportunities at the state level, although budgets may be tight. Through DNR and DATCP might be ability to leverage existing programs. Or through WHEDC to leverage agricultural programs in state agencies.<br><br>• Our biggest concern in this arena, given limited water funding we have seen in Wisconsin for a while, is how much money it could pull away from already underfunded water quality programs. There is logic to having seed funding upfront to get it off the ground. It is a bit of a chicken or egg scenario - need funding first? or Credits/demand first? Our biggest concern is what does that come at the expense of? Would have to see how it fits in the context of broader water quality focused funding. Without specific numbers, not sure how this would play out.<br><br>• A couple of advantages to federal versus state. There's increased money at the federal level and with new administration coming in, there will be some interest at the federal level. |

| | |
|---|---|
| | • It is hard to see a situation where you could generate that first chunk of funding from people who would benefit from the credit generation because they could use it or sell the credits.<br><br>• *(In response to point sources)* I do think it could be. We're always cognizant about the amount of public money that goes to meeting permit requirements. Don't want to see much public money diverted from other public benefits to serve something to help meet point sources. Still not knowing how much money we're talking about and other stakeholder willingness to provide some funding, the point sources seem like a viable and reasonable solution. |
| **Governmental** | • Consider some sort of special legislation to create something in 319 program or revolving loan program**.** Or, although maybe a stretch, private funding. Any interest in some of the larger agricultural corporations or others that might be willing to put up some grant funding. Or other non-profit granting organizations that traditionally provide grants for various environmental projects<br><br>• NRCS RCPP would be a good fit to try to start a project.<br><br>• May need some legislative programming<br><br>• I had envisioned the Clearinghouse would get to a point where revolving credits become self-sufficient. Once the Clearinghouse gets rolling, there are enough buyers and sellers of credits that seed money becomes the "safety margin" necessary in this endeavor. This also provides farms some flexibility. To me, the seed money is something that evolves into that safety margin as the market moves forward. The forgivable loan would make that more difficult. |

To finalize phase 4, Newtrient and Michael Best hosted a session on January 19, 2022, at the Dairy Strong Conference in Wisconsin. A final meeting was then held with the Steering Committee to review the results of this project phase and to preview the work planned for Phase 5.

## Phase 5: Estimate Potential Impact of Clearinghouse

The work in Phase 5 was to complete an analysis of the potential credit supply and demand for Wisconsin's Upper Fox and Lower Fox River basins.

Newtrient and MBS began with an assessment of the credit demand potential as the key driver of potential market opportunity.

### Lower Fox River Basin

The Lower Fox River Basin TMDL was approved by EPA in 2012. Based on the most recent Lower Fox Dischargers TMDL Implementation Schedule provided by Wisconsin DNR (updated January 2021), a majority of the industrial and municipal permit holders have either met their TMDL waste load allocation target or have selected their compliance option to ultimately achieve their target[42]. Given the length of time that has passed since the TMDL was approved and the subsequent actions taken by permit holders to make progress towards targets, there is limited demand for water quality trading within the Lower Fox River Basin.

### Upper Fox and Wolf River Basin

The Upper Fox and Wolf River Basin TMDL was approved by EPA in 2020. An assessment of credit demand potential was completed using the approved TMDL final report inclusive of appendices documents was sourced from Wisconsin DNR.[43]

The following methodology was used to estimate credit demand potential:

#### *Permitted Point Sources*

A database was created using facility level data sourced from Appendix G table 5 and Appendix K table 1. Key data captured at the facility level included Baseline Flow, Baseline Total Phosphorus (TP) Load and TP Wasteload Allocations. For each facility an Implied TP Wasteload Reduction was calculated by subtracting the TP Wasteload Allocation from Total Baseline TP Load. The facility level data was segmented by the Industrial, Municipal and Industrial categories. For each category, the facility level data was then aggregated into large, medium and small delineations based on Baseline Flow volumes.

In aggregate, the Implied TP Wasteload Reduction for large and medium facilities would suggest a significant theoretical market for credits. However, large and medium facilities typically have a wider array of compliance options available, and thus are unlikely to elect water quality trading as the primary compliance option. Thus, a conservative assumption of 500 credits per facility on the low side and 1,500 credits per facility on the high side were used for large and medium facilities. In contrast, small facilities typically have a more limited set of compliance options, and thus are more likely to elect water

[42] Wis. Dept. of Natural Resources, Lower Fox Dischargers TMDL Implementation Schedule, https://dnr.wisconsin.gov/sites/default/files/topic/TMDLs/DischargerImplementationStatus.pdf (Jan 2021).
[43] Wis. Dept. of Natural Resources, Upper Fox and Wolf Rivers TMDL, Retrieved Sept 2022 from https://dnr.wisconsin.gov/topic/TMDLs/FoxWolf/index.html

quality trading as the primary compliance option. Therefore, for small facilities the credit potential was assumed at 75% of the Implied TP Wasteload Reduction on the low side and at 100% of the Implied TP Wasteload Reduction on the high side.

### *Municipal Separate Storm Sewer Systems (MS4's)*

A database was created using MS4 level data sourced from Appendix G table 6 and Appendix H table 5. Key data captured at the MS4 level included Baseline TP Load and TP Wasteload Allocations. For each MS4 an Implied TP Wasteload Reduction was calculated by subtracting the TP Wasteload Allocation from Total Baseline TP Load. The MS4 level data was then aggregated. Given the potential of water quality trading as a viable solution for MS4's, the credit potential was assumed at 75% of the Implied TP Wasteload Reduction on the low side and at 100% of the Implied TP Wasteload Reduction on the high side.

### *Summary of Credit Demand Potential*

Using the above methodology, the combined annual credit demand potential across permitted point sources and MS4's projects to be ~28,000 on the low side and ~45,000 on the high side. Assuming a value of $60 per credit, this would project to a market size of ~$1.6M on the low side and ~$3.0M on the high side.

It is important to note that given the conservative assumptions utilized for large and medium permitted point sources, the projected market potential is between 20-35% of the theoretical market based on total Implied TP Wasteload Reduction for the TMDL.

The table below summarizes the credit demand potential analysis.

**Upper Fox & Wolf Basins**
**Completed 2022**

| | | TMDL Data | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | # Facilities | Total Baseline Flow (MGD) | Average Baseline Flow (MGD) | Total Baseline TP Load (lbs/yr) | TP Wasteload Allocation Current Criteria (lbs/yr) | Implied TP Wasteload Reduction (lbs/yr) | Potential Credit Market Low | Potential Credit Market High | Newtrient Analysis Comment |
| Industrial Point Sources: | | | | | | | | | |
| Large | - | - | - | - | - | - | - | - | Low @ 500 per facility / High @ 1,500 per facility |
| Medium | 1 | 2.0 | 2.0 | 6,093 | 1,038 | 5,055 | 500 | 1,500 | Low @ 500 per facility / High @ 1,500 per facility |
| Small | 11 | 2.9 | 0.3 | 3,118 | 714 | 2,404 | 1,803 | 2,404 | Low @ 75% / High @ 100% |
| Sub-total | 12 | 4.9 | | 9,211 | 1,752 | 7,459 | 2,303 | 3,904 | |
| Municipal Point Sources: | | | | | | | | | |
| Large | 2 | 31.1 | 15.6 | 94,743 | 16,147 | 78,596 | 1,000 | 3,000 | Low @ 500 per facility / High @ 1,500 per facility |
| Medium | 6 | 10.5 | 1.7 | 31,852 | 5,795 | 26,057 | 3,000 | 9,000 | Low @ 500 per facility / High @ 1,500 per facility |
| Small | 48 | 10.4 | 0.2 | 31,631 | 5,408 | 26,223 | 19,667 | 26,223 | Low @ 75% / High @ 100% |
| Sub-total | 56 | 52.0 | | 158,226 | 27,350 | 130,876 | 23,667 | 38,223 | |
| Tribal Point Sources: | | | | | | | | | |
| Large | - | - | - | - | - | - | - | - | Low @ 500 per facility / High @ 1,500 per facility |
| Medium | - | - | - | - | - | - | - | - | Low @ 500 per facility / High @ 1,500 per facility |
| Small | 6 | 0.6 | 0.1 | 2,539 | 436 | 2,103 | 1,577 | 2,103 | Low @ 75% / High @ 100% |
| Sub-total | 6 | 0.6 | | 2,539 | 436 | 2,103 | 1,577 | 2,103 | |
| Total Point Sources | 74 | 57.5 | | 169,976 | 29,538 | 140,438 | 27,548 | 44,230 | |
| MS4 | 47 | n/a | | 1,852 | 306 | 1,546 | 387 | 1,160 | Low @ 25% / High @ 75% |
| Total | 121 | | | 171,828 | 29,844 | 141,984 | 27,934 | 45,390 | |
| | | | | | | | $ 60 | $ 60 | Assume value per credit is $60 |
| | | | | | | | $ 1,676,041 | $ 2,723,373 | Estimate Annual Market |
| | | | | | | | $1.6-3.0 MM Range in UF WB | | |
| | | | | | | | 20-35% of Theoretical Market | | |

From a credit supply perspective, an assessment for the Lower Fox River Basin was deemed not relevant given the limited demand potential for water quality trading. For the Upper Fox and Wolf River Basin, the credit supply potential was considered in the context of the credit demand potential analysis outlined above. In reviewing the TMDL report and supporting data, it was determined that the prevalence of agriculture and other non-point sources could provide a sufficient source of credit supply.

## Phase 6: Deep Dive on Seed Funding Options

Implementation of the Clearinghouse will require both business start-up and ongoing operating costs and the costs of "seeding the market" to establish the creation of a supply of water quality credits that can be marketed by the Clearinghouse to interested credit buyers. To create a viable and sustainable market for water quality trading in Wisconsin, it is critical that the Clearinghouse incentivize credit generation (seed the market) early in the tenure of the Clearinghouse to demonstrate viability of the market.

It is reasonable to anticipate that the Clearinghouse should be able to cover its own operating costs out of its business model (i.e., via transaction fees). However, it will be challenging for the Clearinghouse, or credit generators, to assume the risk of funding credit generating practices or technologies in advance of an established market where resulting credits can be sold. Newtrient and MBS have identified a range of $3MM - $5MM initial funding for the "seeding of the Clearinghouse."

Thus, Newtrient and MBS have identified the need for a source of "seed" funding as an important need to create a successful market over the long-term. Identifying potential source of funding is challenging, given seed funding represents an up-front, at-risk investment. Given the risk involved, interest from traditional financing sources may be limited. Funding sources that are focused on environmental outcomes are likely more suitable, given that even if the market ultimately failed to take hold, the investment in seed funding will have procured verified water quality improvements, significantly reduced nutrient runoff, and thus accomplished an important public purpose.

All project stakeholders and Steering Committee representatives understood and supported the need for the above-described seed funding. When asked to identify the potential sources of such seed funding, there were a variety of responses. No single source of funding prominently stood out as the preferred option. Many suggested that the Clearinghouse consider a combination of diverse sources for the initial seed funding, including Great Lakes Restoration Initiative (GLRI), Clean Water Act programs, Private foundations (specifically with Midwest focus), point sources, private sector groups, a collection of dairy/ag companies providing a grant, and Regional Conservation Partnership Program (RCPP).

Newtrient and MBS researched and identified potential sources of such "seed funding" for the Clearinghouse. Sources evaluated included Federal and State programs as well as private funding alternatives, including:

***Government: Existing Programs***

- **Municipal Pass-through via the Clean Water Fund Program**
  - **Program Administrators:** WI (DOA), Office of Capital Finance and Wisconsin Department of Natural Resources
  - **Source of Funds**: EPA, SRFs, as well as state funding

- **Description:** Designed to aid municipalities in financing water quality trading projects and projects other than a wastewater treatment plant upgrade
- **Clearinghouse Fit within the Program**: It may be possible for the state to leverage its Pilot Projects Program beyond simply financing "bilateral" transactions and, instead, tap the program to fund credit-generating projects more broadly within applicable hydrologic areas, such that a stream of saleable credits is generated more than those the municipality requires for its WPDES compliance.
- **Conclusions and Recommendations**: With some creative thinking and a willingness to find a way to achieve success, the municipal pass-through via the Clean Water Fund program may provide an avenue under current law to seed markets in each of the state's applicable hydrologic areas where a viable market is most likely to be established (i.e., where potential credit generation and potential credit use result in adequate supply and demand to create a market)

- **Wisconsin Non-Point Source Program**
  - **Program Administrators**: Wisconsin DNR and Wisconsin DATCP
  - **Source of Funds**: Various – state GPR, state bond revenue, federal Section 319 grant funds, others
  - **Description:** Includes six core funding program efforts to abate non-point source pollution (e.g., Targeted Runoff Management grants, Notice of Discharge grants) implemented in conjunction with County land and water conservation departments
  - **Clearinghouse Fit within the Program:** Under existing law, grant programs are largely limited to providing grants for specific urban and agriculture nonpoint source pollution reduction efforts (e.g., funding watershed planning and defined Best Management Practices). Existing grant programs are fully utilizing, with unmet need in many years. Clearinghouse seed funding would likely require new or increased funding and additional programmatic authority.
  - **Conclusions and Recommendations:** Collaboration with existing nonpoint source management program partners will be key to the success of any Clearinghouse, but existing grant programs are not likely source of seed funding.

- **Conservation Innovation Grants (CIG)**
  - **Program Administrators:** Natural Resources Conservation Services (NRCS)
  - **Source of Funds:** Environmental Quality Incentive Program (EQIP)
  - **Description**: Annual, competitive grants that drive public and private sector innovation in resource conservation. CIG projects inspire creative problem-solving, boosting production on farms, ranches, and private forests through improvements in water quality, soil health and wildlife habitat. National and State CIG – Public and private grantees develop the

tools, technologies, and strategies to support the next generation conservation efforts on working lands and develop market-based solutions to resource challenges. Natural resource concerns change from year to year.
    - **Clearinghouse Fit within the Program:** Focus on innovation and market-based solutions make this a potential fit. National CIG maximum funding historically has been $1 or $2 million (lower for State CIGs). CIG funding must be matched at least 1:1 with non-federal funding.
    - **Conclusions and Recommendations**: Recommend Clearinghouse entity pursue a National or State CIG funding opportunity for seed funding

- **Regional Conservation Partnerships Program (RCPP)**
    - **Program Administrators**: Natural Resources Conservation Services (NRCS)
    - **Source of Funds:** Farm Bill
    - **Description**: Promotes coordination of NRCS conservation activities with partners that offer value-added contributions to expand our collective ability to address on-farm, watershed, and regional natural resource concerns. Through RCPP, NRCS seeks to co-invest with partners to implement projects that demonstrate innovative solutions to conservation challenges and provide measurable improvements and outcomes tied to the resource concerns they seek to address. Partners are expected to amplify the impact of RCPP funding in an amount equal or greater than the NRCS investment. There are two types of funding opportunities under RCPP: RCPP Classic and RCPP Alternative Funding Arrangements (AFA).
    - **Clearinghouse Fit within the Program:** The RCPP Alternative Funding Arrangement could be a potential fit
    - **Conclusions and Recommendations:** Recommend Clearinghouse entity review funding opportunity when available for fit with the program requirements

***Government: Emerging Programs***

During the project several new potential funding sources emerged that may be a source to be considered in the future when more details are available. The two Federal opportunities include the Bipartisan Infrastructure Law and the Inflation Reduction Act. Additionally, there is the potential for funding opportunities related to the EPA memorandum titled “Accelerating Nutrient Pollution Reductions in the Nation’s Waters” that was issued on April 5, 2022 and discussed further in phase 2 of this report.

***Private Funding Alternatives***

There are numerous philanthropic, non-profit or private foundation groups that could be potential funding sources for seed funding. The requirements and specifications vary significantly by organization, and thus potential fit will need to be assessed with a specific Clearinghouse proposal outlined.

## Conclusion

Over the last two years, the project captured a full range of perspectives and best practices from key stakeholders and potential Clearinghouse participants in the state of Wisconsin. The result is a set of recommendations regarding the design and operation of a well-designed Clearinghouse, one that provides the certainty and accessibility needed for farms, businesses, and municipalities to work together to drive sustainable water quality benefit – setting Wisconsin apart as a leader in innovative water quality improvements.

As Wisconsin transitions from water quality Clearinghouse policy enactment to implementation of market-based water quality solutions, the findings of this report will be shared broadly with Wisconsin stakeholders as well as DOA and DNR with the intent to provide recommendations that inform the implementation of a successful Clearinghouse in Wisconsin.