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## WEBSITE AVAILABILITY

All information contained in this document is available at [www.wri.org/nn-wqt](http://www.wri.org/nn-wqt).

Information on the National Network is available at [www.willamettepartnership.org/nn-wqt](http://www.willamettepartnership.org/nn-wqt).

## POINT OF CONTACT

Willamette Partnership  
[info@willamettepartnership.org](mailto:info@willamettepartnership.org)

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### DISCLAIMER:

The contributors to the National Network engaged in extensive dialogue to develop this document, *Building a Water Quality Trading Program: Options and Considerations*. National Network contributors believe that it represents a comprehensive, contextual, balanced, and robust collection of information on different, representative water quality trading programs. Practitioners from new and evolving water quality trading programs may look to this document as an important source of information as they build and update their trading programs.

This document does not represent a consensus opinion, endorsement, or particular recommendation from any one National Network contributor. It seeks to cover the broad range of topics related to water quality trading to assist local stakeholders to develop and implement trading programs that meet local needs and conditions. This document does not create any binding requirements or standards of practice. Ultimately, stakeholders, state regulators, and/or U.S. EPA will clarify those requirements that apply to any particular trading programs or trading program participants.

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# EXECUTIVE SUMMARY

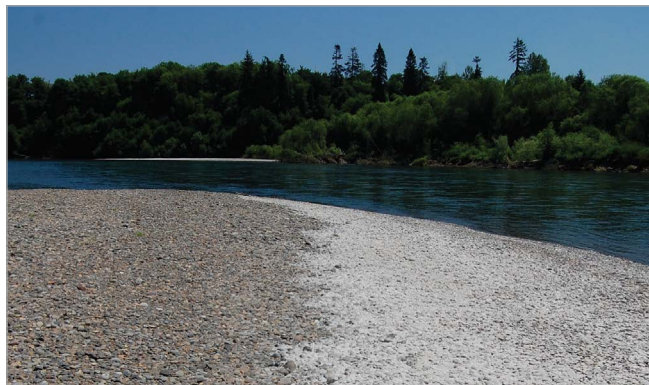
The United States has made significant progress in cleaning its rivers, lakes, and oceans. Investment in wastewater treatment plant technology, conservation practices with land managers, and restoration of natural systems is working in many places. The public supports clean water, yet there is still a long way to go in achieving the vision of fishable, swimmable waters. More than half of the country's streams, lakes, and estuaries are not meeting the water quality standards established under the Clean Water Act to provide clean drinking water, recreation, fish and wildlife habitat, and other designated uses.<sup>1</sup>

The work that lies ahead to achieve clean water will require additional tools and new approaches that can account for watershed dynamics, allow flexibility on how to achieve clear, enforceable goals, and target investment where it can most effectively improve water quality. Water quality trading, under the right conditions, can fit these criteria.

## Water Quality Trading Programs: Potential & Key Dilemmas

Water quality trading (WQT) is a flexible approach that provides one source the choice of installing onsite technology or practices or working with other sources offsite to generate equal or greater pollutant reductions. However, moving a WQT program forward can be challenging for several reasons:

- The Clean Water Act does not apply evenly to all sources of pollution within a watershed, generating debate about who is responsible for reducing what pollution and when;
- Where watershed science is incomplete, it can be difficult to build an effective, efficient WQT program. It can be more challenging to set clear water quality goals and determine the contribution of individual projects toward those goals;



*When designed well and combined with other tools, water quality trading can help achieve water quality goals in a way that is beneficial for landowners, communities, and the environment. Photo courtesy of Willamette Partnership.*

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<sup>1</sup> U.S. Environmental Protection Agency, *National Summary of State Information*, (March 2015), available at [http://ofmpub.epa.gov/waters10/attains\\_nation\\_cy.control#STREAM/CREEK/RIVER](http://ofmpub.epa.gov/waters10/attains_nation_cy.control#STREAM/CREEK/RIVER).

- A successful trading program involves multiple stakeholders who bring different perspectives and vocabularies. The lack of a common vocabulary can hinder communication and development of shared understanding;
- Different stakeholders have different tolerances for risk and uncertainty. There needs to be a holistic look at risk management in WQT. If every program design decision is the lowest risk option from an ecological perspective, WQT may not be cost effective. Conversely, if every decision entails ecological risk, WQT may not achieve water quality objectives;
- It can be easy to lose sight of the bigger water quality vision when talking about the details of a WQT program, but talking about WQT at a high level without going into detail may limit confidence in a program's ability to succeed; and
- There are no easy ways to share the lessons learned from two decades of experience with new trading programs, so opportunities for reducing start-up costs and effort may be lost.

These challenges can lead to long discussions or disputes around:

- The pollution reductions expected from market participants prior to buying and selling credits (i.e., baseline requirements);
- How to manage uncertain science or other risks (e.g., selecting credit quantification methods or setting the right trading ratio); and
- How to engage the public to provide comments and shape how trades will work.

## A National Network Forms to Discuss These Dilemmas

The National Network on Water Quality Trading was established in 2013 to discuss these challenges and to develop information resources for others interested in building trading programs that meet clean water goals. The Network's 18 initial participating organizations represent a diversity of agricultural operations, wastewater utilities, environmental groups, regulatory agencies, and practitioners delivering trading programs. This diversity is similar to that found in most emerging programs in the country. Over the past two years, the Network's dialogue has focused on identifying common trading issues and the options, considerations, and examples important to building a trading program.

This publication, *Building a Water Quality Trading Program: Options and Considerations*, is the product of that dialogue. The document focuses on trades wherein permitted wastewater and/or stormwater facilities (point sources) purchase water quality benefits from nonpoint sources (often agriculture) that reduce pollution above and beyond what they are required to do. It provides some essential tools for new and evolving water quality trading programs, including:

- A vision and set of guiding principles to anchor trading program decisions;
- Options with pros/cons and examples for each of the 11 elements common to trading programs across the country;
- Consistently defined and used terminology; and
- A depth of references and dialogue supporting the reasoning behind the Network's choices of options and considerations.

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## Characteristics of Successful Trading: Guiding Principles

As trading programs have developed, they have been guided by the same goals as those set out in the Clean Water Act—to restore fishable, swimmable waters in ways that eliminate harmful pollution and support clean water as an important part of healthy communities and healthy economies. Along the way, trading program developers have had to wrestle with tough ecological, economic, and social tradeoffs and face the reality that trading often represents one small, though potentially important, part of meeting those larger CWA goals cost effectively.

A water quality trading program should be consistent with the 2003 U.S. EPA Trading Policy and the CWA<sup>2</sup> and consider the following guiding principles:

1. Accomplish regulatory and environmental goals;
2. Be based on sound science;
3. Provide sufficient accountability, transparency, accessibility, and public participation to ensure that promised water quality improvements are delivered;
4. Produce no localized water quality problems;
5. Be consistent with the CWA regulatory framework; and
6. Include appropriate compliance and enforcement provisions to ensure long-term success.

## Characteristics of Successful Trading: Common Elements

The Network has identified 11 elements common to many trading programs to consider when designing and implementing WQT programs. Regarding each of these elements, there is no “one size fits all” solution. Instead, considerations can make different options more or less viable under different conditions. The elements that should be considered in the design of a new trading program include:

1. Identifying and establishing regulatory instruments to support trading;
2. Defining who is eligible to trade, where trading can occur, and what is being traded;
3. Determining eligibility for participants in the trading program;
4. Quantifying water quality benefits;
5. Managing risk and uncertainty in the trading program;
6. Defining credit characteristics;
7. Establishing project implementation and assurance guidelines;
8. Establishing procedures for project review, certification, and tracking;
9. Ensuring compliance and enforcement;
10. Establishing adaptive management guidelines for ongoing program improvement and performance tracking; and
11. Defining roles, responsibilities, transaction models, and stakeholder engagement processes.

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<sup>2</sup> See U.S. Environmental Protection Agency, *Water Quality Trading Policy*, 68 Fed. Reg. 1608, p. 1610, (“CWA Requirements. Water quality trading and other market-based programs must be consistent with the CWA.”) (Jan. 13, 2003) (final policy) (hereafter “2003 U.S. EPA Trading Policy”), available at <http://www.gpo.gov/fdsys/pkg/FR-2003-01-13/pdf/03-620.pdf>.

## Prospects for Trading in the Future

National Network participants immediately recognized that trading programs are built to fit the unique ecological, social, and other conditions of a watershed, and emphasized the importance of sensitivity to local needs. *Building a Water Quality Trading Program: Options and Considerations* therefore does not provide explicit recommendations. It provides options and considerations intended to facilitate easier and more consistent decision-making across a range of new and evolving trading programs.

There is a growing interest in trading programs. Several states are contemplating new statewide trading statutes or rules, and more wastewater utilities are using trading approaches. However, not everyone is persuaded that trading programs are being designed in ways consistent with the Clean Water Act and other environmental goals. Further growth in trading, and its success in improving water quality, will depend on:

- Clear and consistent documentation of assumptions and decisions underlying trading program development and operations;
- Serious consideration of watershed science and goals in guiding the practical workings of trading programs;
- Incorporation of WQT into a suite of water quality protection goals and tools; and
- Regular, informative communications to the public to build confidence that progress is being made toward clean water goals in a timely way.

New and emerging trading programs can use this document to help meet some of these future challenges by using the information to:

- Provide consistent language for new trading programs;
- Speed decisions through the options and examples to frame local dialogue; and
- Understand how different stakeholder groups may perceive different trading program design choices.

The Network and its participants will continue to build the tools and information resources needed to support water quality trading programs as they emerge and evolve, including information targeted for stakeholder groups, issues, and places.