State Perspectives on the National Network on Water Quality Trading's *"Building a Water Quality Trading Program: Options and Considerations"*

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 continually supports clean water, yet there is still a long way to go in achieving the goal. More than half of the country's streams, lakes, and estuaries are not meeting the water quality standards established under the Clean Water Act (CWA) to provide clean drinking water, recreation, fish and wildlife habitat, and other designated uses. Across the country, wastewater and stormwater utilities are making significant investments in clean water, but nonpoint sources are the largest contributors of pollutants, such as nutrients, to state waters. Therefore, the work that lies ahead to achieve the goals of the CWA will require additional tools and new approaches. Water quality trading (WQT) is a tool that can provide regulators and the regulated community an alternative way to achieve those CWA goals and broader watershed improvements at lower cost.

What is Water Quality Trading? Water quality trading is an innovative, flexible approach that allows a point source to substitute installing cost-prohibitive onsite technology or practices with lower cost payments to other offsite sources that generate equal or greater pollutant reductions. When designed well and combined with other efforts in the watershed, WQT can help achieve water quality goals in a way that is compliant with the CWA and beneficial for landowners, communities, and the environment. This market-based approach to allocating reductions across sources enables the private and public sectors to work together to generate, transact, and track water quality improvements.

How Does it Work? A *buyer* (e.g., a pollution source such as a municipal wastewater facility) purchases water quality improvements, or credits, from a seller (e.g., a farmer or landowner) that reduces pollutants beyond what they would otherwise be required to do. Sources with high costs of reducing pollution purchase needed pollution credits from sources (either regulated or non-regulated) with lower costs. The cost difference provides the economic incentive for trading to occur. For example, farmers implement conservation practices like planting cover crops during the winter that reduce nutrients leaving their field, thus generating a credit.

A permitted source such as an electric power utility buys the resulting credits to meet a CWA regulatory requirement or a corporation buys a credit to satisfy a sustainability goal. The transaction pays the farmers for their reductions while improving the overall health of the river. In addition, installation of conservation practices can result in more efficient use of fertilizers and so lower on-farm costs.

Who Plays What Roles in a Trading Program? One of the most challenging but ultimately rewarding aspects of WQT is that many stakeholders must get involved during program design and implementation to make it successful. Key actors include: *Buyers/Permittees*—usually regulated point sources (e.g., municipal and industrial wastewater facilities) and corporations involved in achieving sustainability goals; *Sellers*—usually farmers, ranchers, landowners or other regulated point sources that generate credits by implementing improvements on current land or at facilities that reduce pollutant loadings to waters; *Aggregators*—sellers that pool a number of credits from working with multiple projects by landowners, farmers or other sources; *Permitting authorities/Regulators*—under the CWA state water quality agencies set water quality standards and issue permits; *Third Parties*—a variety of actors playing roles such as developing programs, verification, and monitoring.

What Are the Potential Benefits of WQT? The core benefit of WQT is complying with the CWA and achieving improvements in water quality, while doing so at a lower cost. For utilities serving growing cities in particular, trading can provide a more flexible and cost-effective way to anticipate and meet the demand for growth as compliance requirements under the CWA increase. For example, the marginal cost of working with multiple farmers to install filter strips can be done faster and with lower marginal cost than adding a new treatment process to a wastewater facility.

Other benefits include: increased speed of complying with the CWA; creation of new revenue streams for farmers and landowners; creation of additional environmental benefits beyond water quality such as wildlife habitat; increased accountability and new tools for tracking water quality improvements from nonpoint sources; and building of new relationships between rural and urban communities, agriculture and utilities.

BENEFITS, ROLES and CHALLENGES for STATE REGULATORS

How Can State Water Quality Agencies Benefit? By incentivizing reductions in nonpoint source pollution, WQT can help improve water quality while simultaneously helping utilities comply with CWA requirements at lower cost. Trading also facilitates working at the watershed level to make water quality improvements that will make the biggest difference.

What Role Can State Regulators Play? As the primary implementers of the CWA, state regulators have the responsibility to establish water quality standards that are protective of the beneficial uses of their waters. Additionally, in all but five cases (including the District of Columbia), state regulators have the authority and responsibility to issue permits to point sources that establish limits on the discharge of pollutants to state waters, and to monitor and enforce compliance by permitees. These limits are based on regulatory requirements that must be as stringent as federal requirements, and the cost of compliance is continually increasing. At the same time, nonpoint sources of pollution are not regulated under the CWA, but account for the majority of pollutant loadings to states' waters. Therefore, by establishing and overseeing effective and accountable WQT programs, regulators can offer a new

mechanism to reduce these loadings and meet water quality standards while helping wastewater and industrial facilities comply with their permit requirements more quickly and at lower cost.

Challenges and Critical Issues: For state regulators, building a trading program can require considerable expertise and resources to 1) determine feasibility for WQT on a state-wide level, when and where it is appropriate, and who is eligible to participate, 2) consider multiple options and mechanisms for using WQT to meet the goals of the CWA, including how to achieve and document compliance with permit limits via trading, 3) set clear expectations on what counts as a credit and when, and 4) reliably certify, verify and register projects. Some of the critical issues for states include:

- Time and resources needed to develop WQT programs, including but not limited to rulemaking, guidance, watershed trading frameworks, early and continued stakeholder engagement, and effectiveness tracking;
- Making sure that baseline pollutant reduction expectations for buyers and sellers are both clear and leave room for trading;
- Accurately quantifying/estimating the credits, in terms of water quality improvements, generated from nonpoint sources' implementation of BMPs so that equivalency or better is achieved relative to permit limits
- Setting trading ratios that are well-documented and account for load attenuation and/or uncertainty;
- Defining permit conditions that specify pollutants, trading areas, and timing of credits that match with discharge limits and make trading possible;
- Facilitation of transactions in an accountable but cost-effective way;
- Setting clear expectations for project screening, review, tracking, what happens if a project is not meeting performance expectations, and who plays what roles; and
- Monitoring the reductions actually achieved through BMP implementation

Getting Involved: State regulators can utilize and share the National Network's publication, *Building a Water Quality Trading Program: Options and Considerations* (see next section below) to help overcome these challenges, consider key elements of successful programs and different options that are responsive to state-specific needs and situations, strike the right balance between regulatory certainty, detail, and flexibility, and develop WQT programs that are legally defensible, accountable to the public, and effective in achieving water quality improvements.

NATIONAL NETWORK AND THE OPTIONS & CONSIDERATIONS GUIDE

The National Network on Water Quality Trading (Network) was established in 2013 to discuss WQT challenges and develop information resources for others interested in building trading programs that meet clean water goals. The Network's 18 initial participants, including ACWA, 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 WQT programs in the country. Since 2013, the Network's dialogue has focused on identifying common trading issues and the options, considerations, and examples important to building a trading program. This dialogue is captured in the publication, *Building a Water Quality Trading Program: Options and Considerations*. The document covers 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 essential tools for new and evolving WQT programs.

While a WQT program should be designed to be consistent with the 2003 U.S. EPA Trading Policy and the CWA, this document provides additional guiding principles for successful programs. In addition, the Network has identified 11 elements common to many trading programs that should be considered when designing and implementing WQT programs. For each of these elements, there is no "one size fits all solution." Instead, there are considerations that make different options more or less viable under different ecological, social, and regulatory conditions. These considerations were the product of discussions and debate among Network participants, including discussion on ensuring consistency with the CWA, utilizing different forms of authority for trading, what details to include in a permit and where, determining nonpoint source baselines in situations with and without a TMDL, and roles of permittees vs. agencies vs. third parties. In-depth presentation and discussion of the 11 key elements of successful programs along with references to existing WQT programs makes up the bulk of the *Building a Water Quality Trading Program* publication, therefore providing options and considerations to help facilitate easier and more consistent decision-making across a range of new and evolving trading programs.

Interest is growing in trading programs across the nation. 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 that are consistent with the CWA and other environmental goals. Further growth in trading, and its success in improving water quality depends 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 use in new trading programs;
- Speed decisions, through use of 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 specific stakeholder groups, issues, and places.