

# “Building a Water Quality Trading Program: Options & Considerations”

## Trading Practitioner Focus Summary by Troutman Sanders

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Photo courtesy of Willamette Partnership.

### Introduction

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. The work that lies ahead to achieve clean water requires additional tools and new approaches. Water quality trading (WQT) is a tool that provides utilities and other point source dischargers regulated under the CWA a flexible compliance alternative and a way to achieve broader watershed improvements at lower cost.

Practitioners, ranging from soil and water conservation district staff, engineers and consultants, third party brokers, private mitigation bankers, and eco-entrepreneurs, have played essential roles in water quality trading programs across the country. Practitioners have helped stakeholders build water quality trading programs, worked with farmers to bring credits to market, restored wetlands to generate credits, overseen verification of credit projects, and helped administer trading programs. These diverse roles are critical to supporting various elements of water quality trading programs and ultimately a successful program launch and sustainable program.

### What is Water Quality Trading?

Water quality trading is a flexible approach that provides a regulated entity the choice of installing onsite technology or practices or working with other sources offsite to 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 beneficial for landowners,

communities, and the environment. Trading also provides room for the private and public sectors to work together to generate, transact, and track water quality improvements.

### How does it work?

A *buyer* (i.e., a regulated CWA discharger such as a municipal wastewater facility, electric power utility, or industrial plant) 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 may opt for implementing conservation practices, such as planting cover crops during the winter or practice no-till farming, that reduce nutrients leaving their fields. These practices generate reductions that, in turn, can produce credits that can be sold on the market. Under a trading program, a regulated entity, such as an electric power utility, may purchase those credits to meet its CWA requirement. Alternatively, a company may wish to purchase credits in a non-regulatory context to support its corporate sustainability goals. Regardless of whether the credits are exchanged within a regulatory or non-regulatory context, the transaction results in the reimbursement of the farmers for their costs while simultaneously providing environmental uplift to the river and the ecosystem supporting the river.

### Who Plays What Roles in a Trading Program?

One of the most challenging but ultimately rewarding aspects of WQT is that many stakeholders must be 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 utilities) and corporations involved in achieving sustainability goals; *Sellers*—often practitioners who work with farmers, ranchers or landowners who can generate credits by implementing improvements on land or facilities; *Brokers/Aggregators*—sellers that pool a number of credits together by working with multiple landowners or farmers; *Green Investors/Financial Backers*—members of the investment/financial community who invest in and can help to capitalize the market, the framework, and a program's many elements; *Other Practitioners*—a variety of actors playing roles such as developing programs, verification, and monitoring; and *Regulators*—agencies with responsibility for overseeing the implementation of the Clean Water Act (CWA) standards and permits.

### What are the potential benefits of WQT?

The core benefit of WQT is achieving improvements in water quality at a lower cost. For utilities serving growing cities, in particular, trading can provide a more flexible way to anticipate and meet the demand for growth as the rate base to support the costs of compliance arrives. For example, the marginal cost of pollution reduction working with 10 more farmers to install filter strips can be done faster with lower marginal cost than adding a new treatment process or retrofitting built-out urban areas.

#### DISCLAIMER:

The contributors to the National Network engaged in an extensive dialogue to develop this document, Building a Water Quality Trading Program. 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.

For practitioners, WQT provides an opportunity to link new revenue opportunities to their interest in restoring streams and work with landowners to improve water quality. Other benefits include: reducing costs and increasing speed of CWA compliance on a watershed scale; providing options and flexibility in meeting CWA requirements; creating new revenue streams for farmers and landowners; creating additional environmental benefits beyond water quality such as habitat; increasing capacity building within a community by encouraging greater collaboration across rural and urban, agriculture and industrial sectors; and increasing accountability and providing new tools for tracking water quality improvements from nonpoint sources.

## WHY SHOULD PRACTITIONERS CARE?

In many ways, practitioners are the community that has been most supportive of WQT. They are drawn to the promise that WQT can help improve water quality faster, at a watershed scale, and at lower cost. Practitioners will care most that: A) there is a sustainable demand for purchasing water quality credits, and B) that there is a clear framework, guided by clear standards and expectations that will help to create a robust trading market. Within those criteria, practitioners often have a lot of flexibility to help WQT programs innovate to meet program goals.

### What role can practitioners play?

Practitioners are often the individuals and organizations that help design and build a WQT program, facilitate market operations, and work with landowners to generate a credit. They are the third parties that help diverse interests come together and fill important gaps in terms of skills, capacities, and ability to manage risk in a WQT program. Practitioners can play a wide variety of roles. Utilities, regulatory agencies, agriculture, environmental groups, and other stakeholders building WQT programs should think about where practitioners can be most helpful and at which stages of program development.

### Practitioner Challenges:

There are a few challenges that often frustrate practitioner participation in WQT. These include:

- Slow time to develop and gain approval for WQT programs;
- Unpredictable demand for credits in terms of when and how much credit utilities may need to purchase;
- Unclear standards regarding the role of private sector participation in generating, aggregating, or selling credits;
- Program recalibration and adjustments demanded by regulators (for example, transitioning from a pre- to post-TMDL program), creating added uncertainty in markets; and
- Divergent state practices, standards, definitions, metrics, and trading currencies (affecting the fungibility of credits), that frustrate regional or interstate trading.
- Getting involved: Practitioners have an important role to play in shaping how WQT programs are built and operated.

## 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 represent a diversity of agricultural operations, wastewater and stormwater utilities, environmental groups, regulatory agencies, and practitioners delivering trading programs. This diversity is similar to that found in most emerging 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.



Photo of bare riparian area courtesy of Willamette Partnership.

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.

As trading programs have developed, they have been guided by the same goals as those set out in the CWA—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. While a WQT program should be designed to be consistent with the 2003 U.S. EPA Trading Policy and the CWA, the document provides additional guiding principles for successful programs. EPA's Policy and the CWA provide considerable flexibility in how trading programs are developed and implemented.

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 conditions. In-depth presentation and discussion of these key elements of successful programs along with references to existing WQT programs makes up the bulk of *Building a Water Quality Trading Program* publication. 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* therefore does not provide explicit recommendations. It provides 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;
- Application 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;
- Expedite 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.

## CRITICAL ISSUES FOR PRACTITIONERS

### Overview

The design of elements in a WQT program will ultimately determine whether or not it makes sense for a practitioner to participate in a trading program and in what role or roles. The National Network document focuses on the work needed after a trading program has been found feasible, that is, there is a need to reduce pollutant discharges, there are enough credit sellers, and there is enough agency and stakeholder support for trading to move forward. Practitioners will want to make sure they engage early on in WQT conversations to ensure that state policy and watershed trading design provide room for practitioners to participate in trading. The following issues may be of particular interest to practitioners as they explore that balance between consistent and predictable standards, flexibility to prioritize investments, and room for both private and public practitioners to participate on an even playing field.

## #1: How does trading get built into permit requirements?

A NPDES permit or other regulatory instrument will include, directly or by reference to other documents, the requirements that need to be met for trading. Section 1 of the National Network document discusses how trading gets incorporated into regulatory documents, from a state's policy and guidance (Section 1.1.1) for trading to the elements that need to be in a permit-specific trading plan (Section 1.3.1). These regulatory documents will often shape and influence the roles of a practitioner participating in a trading program. Without clear authority for trading built into state policy and/or regulations, including the use of trading in permits, it will be difficult for trading to move forward.

### ***What are the options:***

A state's authority for trading can originate in legislation, rules, policies, guidance, TMDLs, watershed trading frameworks, and individual and general permits (Section 1.1). A practitioner will want to make sure trading expectations are consistent across these documents and provide a framework for trading that is workable. Depending on watershed conditions, trading could be appropriate in TMDL watersheds, pre-TMDL waters, in watersheds with no impairment (to manage impacts from future growth), or impaired watersheds covered by an alternative to a TMDL (Section 1.2). Section 1.3 discusses some of the trading elements to consider including in a permit, how to reference a watershed trading framework that might apply to multiple utilities, and which permit sections to include different information on trading.

### ***What the Network discussed:***

Much of the Network's debate over building trading into a state's regulatory program centered on providing the same level of consistency with the Clean Water Act as other treatment options. To the extent that meeting water quality based effluent limits is dependent on trading, there needs to be enough detail in regulatory documents, such as permits, to allow for compliance and enforcement. How much detail must be included in permit, for example for a trading program and specific trade to be legally and publicly defensible, was a topic of considerable debate (Section 1.1.2).

**What practitioners should look for or consider:**

There needs to be enough information included in the permit or an associated trading framework to provide regulatory agencies, environmental groups, and others with the confidence they know how trading will work and that there are provisions to ensure credits are real. How much and what information to include is part of establishing an adequate administrative record upon which each permittee and regulatory agency must help to establish the legal defensibility of the trading program and individual trades. A NPDES permittee, who purchases credits for compliance, will want to ensure maximum flexibility in their permits to make minor adjustments to their trading programs, just as they do with other treatment technologies. Providing too much specificity in a permit, for example by specifically linking a landowner or management practice with credits purchased, may create hardship in the future if and when that landowner or practice no longer generates credits. In such case, the permittee may be required to make a minor or major modification to the permit itself. This balance of detail and flexibility will be important for practitioners to consider and help other stakeholders understand.

**#2: Who is Eligible to Participate?**

Ideally, trading programs want to include as many permittees and landowners who can generate credits as possible to ensure a robust demand and supply of credits. Section 2 describes who can trade what, where, and how. Section 3 describes the minimum pollution reduction and other eligibility requirements buyers (Section 3.1) and sellers (Section 3.2) need to meet before participating in trading.

**What are the options:**

Practitioners will need to understand some of the basic preconditions for trading to educate themselves and others regarding the boundaries where trading may or may not be appropriate. Section 2 describes trading areas (Section 2.3.), appropriate pollutants for trading (Section 2.4), and which types of actions can generate credits (Section 2.5). Section 3 goes on to describe the eligibility requirements for buyers and sellers. NPDES

permittees need to meet technology-based effluent limits (TBELs) before purchasing credits, cannot create localized impacts, and need to be consistent with anti-backsliding and anti-degradation requirements (Sections 3.1.1-3.1.5). Nonpoint source sellers will need to meet their baseline requirements (Section 3.2.1) prior to generating credits, which can affect the price or availability of credits for utilities.

**What the Network discussed:**

Network participants were fairly consistent in their expectations for utility buyer eligibility criteria. Most of the debate centered on nonpoint source baselines, and how to derive those baseline levels in situations with or without a TMDL. “Derived from a TMDL” meant different things to different participants. Figure 3.2.1 provides a decision tree for identifying some of the options around setting nonpoint source baselines.

**What practitioners should look for or consider:**

Eligibility criteria are important go-no-go conditions that are important to understand to see whether trading is appropriate. Nonpoint source baseline, for example, can often be a confusing and controversial element of a trading program. Many states define baseline as simply meeting state requirements (e.g., having a nutrient management plan, complying with agronomic rates of nutrient application, maintaining riparian buffers), although a baseline can be more complicated depending upon whether or not a TMDL has been established. In cases where a TMDL has been established, does the baseline require an individual landowner to achieve the percent load allocation assigned to the entire sector (e.g., 70% reduction) before the landowner can generate and sell credits? Or does the trading program allow some flexibility (e.g., a phase-in period) when landowners can enter the market?

If set too high, a baseline can increase credit prices or reduce the supply of credits and, in some cases, it can create such high hurdles that there are no incentives for landowners to participate in a trading program. If set too low and a permittee’s waste load allocation is dependent on nonpoint source load allocations being met, there could be risk of water quality goals not being

met. In such a case, the regulators may be called upon to readjust an agreed-upon baseline for the entire sector, adding uncertainty to the market. Practitioners should think about the timing of when these baseline levels need to be met, and how that timing matches with the credit needs for the utility. Particular attention should be paid to how clear the expectations for generating a credit are.

Increasingly, to offset urban growth and attendant impacts on water quality, nutrient and stormwater trading are becoming a significant part of many municipal trading programs. For example, many municipal separate storm sewer systems (MS4s) are looking for more cost effective ways to deal with urban runoff and local water quality impairments. In these cases, MS4s, as part of their CWA permits (and possibly TMDL allocations), may seek to use a combination of practices and options, including reducing impervious services through green infrastructure and/or purchasing credits or offsets from stream restoration projects or land conversion that reduces flows and/or nutrients. Additional considerations may involve whether trading is allowed outside of local jurisdictional boundaries; such elements are often informed by political sensitivities and concerns regarding the best use of local taxpayer monies.

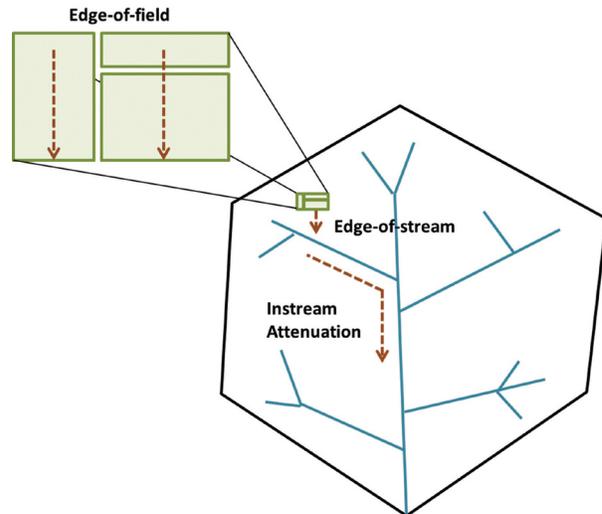
Anyone wishing to help develop and participate in local trading programs must clearly understand the local water quality goals (e.g., sediments, nutrients, etc.), the parameters causing impairment, state and local political sensitivities, public acceptance, and the rules applicable to trading in these local situations. These are the type of state and local concerns that must be thoughtfully addressed before proceeding.

### #3: How are credits quantified?

Water quality improvements generated by land management practices must be quantified before a credit can be generated and sold on the market. Section 4 describes various quantification approaches for estimating water quality improvements: A) at the edge-of-field, B) that are delivered into the stream, and C) attenuate or flow downstream to a point of concern. Figure 4.0 (replicated below) summarizes these levels of quantification. Once water quality improvements are quantified, they are combined with baseline requirements (Section 3.2.1) and any trading ratios

(Section 5) to come up with an estimated credit quantity (Section 4).

**Figure 4.0 Scale in quantifying water quality benefits**



#### ***What are the options and what the Network discussed:***

There are several approaches available to quantify water quality improvements, including modeling, pre-determined BMP effectiveness rates (e.g., expressed as reduction efficiencies or quantitative values), direct monitoring, and using a combination of approaches (Section 4.1.4). The quantification approach will need to be approved by a regulatory agency, and likely reviewed by stakeholders, prior to its use to generate credits.

#### ***What practitioners should look for or consider:***

Quantification may be one of the most important elements of a trading program. A credit quantification methods should be accurate, repeatable, sensitive to changes at the site level, transparent and easy to understand, and practical and cost-effective to use. Practitioners will want to ensure that the quantification method is trusted by key stakeholders, requires data inputs that are available and cost-effective to collect, and produces results that are easy to understand and predict. For practitioners interested in selling credits, the quantification method (Section 4.1.4), baseline level (Section 3.2.1), and trading ratio (Section 5) have some of the greatest implications for potential credit sales revenue.

## #4: What are the trade ratios?

Trade ratios are used to adjust water quality improvements based on various forms of risk and uncertainty. A trading ratio is a numeric value used to adjust available credits for a seller or credit obligation of a buyer based on various forms of risk and uncertainty. A ratio is multiplied by the number of credits that would otherwise be required (i.e., the amount of water quality benefits reduced by baseline obligations), used to ensure that the environmental benefit of a credit-generating project is equivalent to or greater than the reduction that would occur if the buyer installed treatment technology on site. Trading ratios are often expressed as a number of credits needed per unit of discharge (e.g., a 2:1 ratio means that two credits need to be bought per one unit of impact), or as a discount factor (e.g., a 10% reduction factor applied to the estimated credits). Figure 5.1 (replicated below) identifies some of the factors commonly included in a trading ratio, and how the National Network document treats trading ratios slightly differently than the U.S. EPA 2007 Permit Writer's Toolkit.

**Figure 5.1 Treatment of trading ratio topics in the 2007 Permit Writer's Toolkit and this document**

	Trading Ratios	Quantification of Water Quality Benefits
2007 U.S. EPA Permit Writer's Toolkit	<ul style="list-style-type: none"> <li>• Delivery</li> <li>• Location</li> <li>• Equivalency</li> <li>• Uncertainty</li> <li>• Retirement</li> </ul>	<ul style="list-style-type: none"> <li>• Edge-of-field</li> </ul>
National Network	<ul style="list-style-type: none"> <li>• Retirement</li> <li>• Reserve</li> </ul>	<ul style="list-style-type: none"> <li>• Edge-of-field</li> <li>• Delivery</li> <li>• Location</li> <li>• Equivalency</li> <li>• Uncertainty</li> </ul>

### ***What are the options:***

Trading ratios can be combined into a single factor or kept separate (see Section 5.1.5). There are times where certain ratio types may not be relevant because those risks are already accounted for in other parts of trading program design (see Section 5.2).

### ***What the Network discussed:***

Network participants did not spend much time discussing what the "right" ratio was. The numeric value(s) for a trade ratio will depend on the local context. There was wide agreement that the logic and justification behind trade ratio selection needs to be documented. The Network also discussed the need for a holistic approach (see Section 5.2) to managing risk that takes into account eligibility requirements, conservative quantification approaches, and other tools for managing risk beyond trading ratios.

### ***What practitioners should look for or consider:***

The most common trading ratio for point-source to nonpoint-source trading is 2:1 but can vary depending upon the level of uncertainty and the amount of nonpoint source uplift in the watershed that is being sought. If all risks are managed at every part of a trading program, the costs of trading will become too burdensome and stifle trading markets. Setting the ratio too low, although beneficial for the buyers of credits, has the potential to erode public confidence in the effectiveness in trading as a watershed tool. Setting the ratio too high, while increasing the demand for credits and beneficial for sellers, will also increase the cost for buyers, potentially reducing the cost-effectiveness of trading. Practitioners can help weigh and balance these competing factors and promote a balanced approach that appropriately manages the risks and uncertainties in a trading program with the overall benefits. Practitioners can also help articulate where the real sources of risk are, and help design and develop local options for how best to manage those risks.

## #5: What roles should a practitioner play in trading?

Practitioners serve a critical niche to helping shape, design and develop the various elements of a sustainable trading program ranging for early advocacy, feasibility and project development to full-scale market implementation. Each role requires different skills and capacities.

### ***What are the options:***

Section 11 describes options for when it may make sense for permittees, agency staff, or practitioners to perform roles around:

- Early screening of projects for eligibility;
- Initial and ongoing project review;
- Managing a credit ledger;
- Creating a central credit registry;
- Overseeing trading program improvement; and
- Facilitating transactions.

### ***What the Network discussed:***

For the most part, Network participants thought permittees, agencies, or practitioners could fulfill different roles. Particularly for project review and tracking, some groups wanted to ensure some protections against possible conflicts of interest between whoever is implementing projects and whoever is confirming those projects are functioning as proposed.

### ***What practitioners should look for or consider:***

The early formation period of any trading program is a critical time, as this is when ideas begin to shape and form the framework and elements that will guide the program. It is also a time where public engagement and acceptance becomes most important and practitioners can help to educate the lay public and public officials who may be less familiar with trading. Although there may be a tendency for agencies to want to control and oversee the early development and implementation of trading programs, the perspective and involvement of practitioners can make the difference between the

failure and success of a program. It is also important to keep in mind that the U.S. EPA does not approve trading programs, it has the authority to disapprove permits upon which trading credits are used for CWA compliance. The EPA regional offices often take an active interest in program design, development and implementation; as such, it will be important to keep them apprised of major decision-making.

**Engineers/Consultants** - These practitioners will be involved early in determining the feasibility of a trading program and providing the scientific and technical support and knowhow upon which a trading program will be constructed. Given the limited resources and capacities of many state and local governments, it will be important for these professionals to work closely with the agencies in the development of regulations and/or policies and underlying assumptions that go to the technical defensibility of support for a program. Since many wastewater and industrial facilities already have contract engineers/consultants helping to support their operational needs, these professionals will be helpful in translating the technical/operational needs and demands of potential credit buyers (and potentially sellers if pollutants are over-controlled) into management decisions regarding the scope and nature of the market transaction (e.g., how many credits are needed, for how long a period, and what pollutants).

**NPDES Permittee/Credit Buyers** - Given that trading is a voluntary approach, it is essential that permittees or credit buyers, who retain liability, have clear input into the market development as to their needs and expectations. For example, most wastewater utilities have a long planning horizon (e.g., 25 years) and will therefore desire a predictable supply of credits over a longer period of time rather than having to seek out and rely upon credits year to year. Similarly, MS4s seeking to offset growth will be faced with the decision of whether to purchase credits annually or for a longer period of time (e.g., perpetuity, 30 years, 10 years, etc.). These regulated entities will also need to understand what their liabilities are under their CWA permit, and help shape the options that best balance their financial, legal and operational needs and interests.

**Landowners/Credit Sellers** - Landowners and credit generators will also want to be at the table early in the process to help shape, among other things, the decisions regarding the types of management practices eligible for generating credits and options for management practice verification (i.e., how often do practices need to be verified, does verification need to include in-person field visits or is a desk top exercise sufficient, do all practices need to be verified or only a percentage?). Landowners can also help ground truth the types of management practices that will be deployed, prioritize those that will be most prevalent and cost-effective given local conditions, and help to gauge the general level of landowner interest in participating in the program. As noted earlier, baseline determinations are critical for sellers and will determine whether the program offers sufficient financial incentives for the landowner to participate.

**Aggregators/Bankers** - Once a trading framework begins to take shape and there is a growing enthusiasm about an emerging market, aggregators/bankers will help keep the momentum going as they begin to identify viable projects (e.g., no-till farming, buffers, saturated) and connect the buyers and sellers of credits. In many cases, these individuals will already have strong pre-existing relationships with the landowners and be able to marshal projects that will begin to generate credits. These individuals may also be instrumental in helping to establish a mechanism for verifying practices and identifying trusted third parties, such as soil conservation personnel, who can serve in that verification role. It will also be important for aggregators/bankers to understand the expectations of and tools required by the regulators in terms of credit accounting and tracking.

**Green Investors/P3s** - As trading markets continue to develop and grow in scale, so does the interest of private investors. Although the limited size and volume of the trading market has yet to attract significant capital interest, that is beginning to change as more stringent loading reductions are being imposed in impaired watersheds. These regulatory drivers are beginning to present unique opportunities for trading programs to scale-up from a local or state level into a full-blown regional or interstate trading program. There are growing opportunities for investors to enter into public private partnerships (P3s) with the state and local government to privately finance targeted and strategic projects and activities designed to achieve water quality improvements (e.g., stormwater utilities).

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

**WEBSITE AVAILABILITY:**

*Building a Water Quality Trading Program: Options and Considerations* is available for download at [www.wri.org/nn-wqt](http://www.wri.org/nn-wqt).