

Stakeholder Readiness

Purpose

The first three chapters of this Handbook suggested how to assess your watershed's potential to create a viable water quality trading market based on pollutant suitability, watershed and discharger characteristics, the financial attractiveness of likely trades, and an understanding of the infrastructure required to enable trading. As you pursue further consideration of trading opportunities, you will need to reach out to other potential participants and stakeholders to begin exploring water quality trading opportunities in the watershed. This chapter will help answer the following questions:

- Which other participants will be needed to create a viable water quality trading market in your watershed?
- Do key participants have a reasonable level of interest in considering water quality trading as a potential mitigation option?

After completing this section and reflecting on the lessons in the first three chapters of this Handbook, you should have a better understanding of how to engage other stakeholders in the watershed to discuss water quality trading opportunities. The previous chapter on market infrastructure, may have helped you begin to identify parties to include in discussions about water quality trading in your watershed. Because each situation will present unique challenges, this chapter does not prescribe a specific path for you to follow, but does offer tools to assist you in identifying and engaging the necessary players.

Approach

This chapter recognizes that water quality trading requires the participation of certain parties. In addition to dischargers, there are many other critical players that must be engaged in development of a viable water quality trading system. Each watershed will have a unique set of potential participants. This chapter suggests a two step approach for engaging stakeholders. The first step involves identifying essential participants by using tools such as a checklist of potential participants, a description of their roles, and a series of questions that can help evaluate how the conditions in your watershed will influence your priority list of participants. The second step is designed to improve your understanding of the interests of priority participants so that you will be better prepared to recruit them. It includes a review of key benefits of trading that can help you begin discussions. It also suggests several likely stakeholder needs and interests and offers tips for responding to them. Finally, this section gives with three examples of how trading programs have provided for stakeholder participation.

IDENTIFYING AND PRIORITIZING POTENTIAL PARTICIPANTS

A wide range of parties may have an interest in participating in discussions about water quality trading in your watershed. To begin the process of identifying key parties, you should focus on the water quality problem that is being addressed. Looking at potential solutions to the problem will help you identify those parties whose behavior needs to

change. The first Chapters have prepared you for this phase by increasing your understanding of the suitability of the pollutant, the conditions in the watershed, the control cost differentials among dischargers, and the market infrastructure needs. In identifying parties that need to work together to consider the viability of trading, each category of participants can be important for different reasons.

Dischargers in the watershed. Dischargers include municipal and industrial point sources, and nonpoint sources located in relevant urban and rural areas. You should focus especially on any dischargers that need to achieve substantial reductions and may be capable of overcontrolling their discharges. Dischargers make up the pool of potential trading partners. As discussed in Chapter 2, it will be important to engage dischargers to gather information to evaluate financial attractiveness. It will also be important to build an understanding of the water quality challenges individual dischargers face to help identify those that will be essential parties to viable water quality trades. For example, at an early decision point in the Lower Boise River discussions, the group recognized that a viable program could not be developed without the involvement of nonpoint sources from the agricultural community. Other watersheds may need the participation of a major point source facing imminent and more stringent permit limitations.

Federal, tribal, state, and local government. The participation of federal, tribal, state, and local regulatory agencies in the watershed will be essential to assess whether and how trading might fit within current regulatory requirements. EPA has federal oversight responsibilities under the Clean Water Act (CWA) and also implements the NPDES program in some states (e.g., Idaho and Alaska). Most states and some tribes have delegated CWA authorities. Participation of NPDES permitting and TMDL development authorities will be needed to interpret CWA requirements, formulate new rules where possible and necessary, and, perhaps, to provide technical and scientific expertise. Depending on the market's design, it is also likely that these agencies will need to approve elements of the trading program. Other governmental agencies may need to be involved because of their responsibilities for protecting fish and wildlife, regulating water supply, managing irrigation projects, land management, or other activities affecting the watershed. These agencies may also be able to provide valuable technical assistance. Tribal governments may be interested for a variety of reasons, including potential impacts on businesses they operate and their treaty rights to harvest fish and shellfish in the watershed.

In addition to local government agencies that operate treatment plants which are NPDES permitted point source dischargers, other agencies may operate water or power utilities that impact water quality in the watershed. Other government agencies may need to be involved because their activities contribute to nonpoint source runoff or storm water discharges related to transportation, construction, or urban drainage systems.

Local businesses. Some local businesses will have a direct interest in water quality trading because they are dischargers. Certain businesses may utilize public water treatment facilities. As indirect dischargers, these businesses may face rate increases resulting from investment in control technologies and will have an interest in trading. Affected businesses may include significant industrial water users, land owners, canal companies, developers, recreation and tourism interests in the watershed, commercial fishermen, and others.

Interest groups. Groups or associations representing affected businesses and local governments will have an interest in discussions about trading in the watershed. Examples of these groups include Farm Bureau chapters, water users associations, and associations of local county officials or wastewater treatment authorities. Of critical

importance are active citizen environmental groups in the watershed. Many environmental groups are watching trading efforts carefully to ensure that all CWA-related substantive and procedural requirements are met and that TMDL water quality objectives are fully supported by proposed water quality trades. Many environmental group members are very knowledgeable about watershed conditions and challenges. In addition, some watersheds have councils or watershed management organizations with various planning and implementation responsibilities. It is important to include these groups in market design.

College and university resources. Local colleges and universities may be good sources of information and technical assistance to support trading development efforts.

As you consider which participants should be included, the first step is to identify the range of potential participants. The checklist provided below will assist you in this effort.

Checklist of Potential Participants

- *Dischargers in the watershed*
 - › *Individual Point Sources (including wastewater and storm water dischargers)*
 - *Municipal*
 - *Industrial (Direct and Indirect)*
 - › *Individual Nonpoint Sources*
 - *Urban entities*
 - *Farmland owners/operators*
 - *Canal companies*
 - *Irrigation districts*
 - *Forest land managers*
 - *Range land managers*
- *Federal agencies*
 - › *The Regional U.S. EPA Office*
 - › *U.S. Department of Agriculture*
 - *Natural Resource Conservation Service (NRCS)*
 - *Resource Conservation and Development Councils*
 - *Soil and Water Conservation Districts*
 - › *U.S. Bureau of Reclamation (USBR) (related to irrigation activity)*
 - › *U.S. Fish and Wildlife Service*
 - › *National Marine Fisheries Service*
- *State/Tribal Government*
 - › *Department of Environmental Conservation (DEC, DEQ, etc.)*
 - › *Department of Fish and Game*
 - › *Department of Water Resources*
 - › *Court-appointed water master*
 - › *Tribal Councils*
- *Local Government*
 - › *Municipal utilities*
 - *Water supply*
 - *Power*
 - › *Cities*
 - › *Counties*
- *Local Businesses*
 - *Significant industrial users (dischargers to POTW treatment systems)*
 - *Developers*
 - *Power companies*
- *Interest Groups*
 - *Associations*
 - *Water users*
 - *Local business (e.g., Farm Bureau)*
 - *Local government*
 - *Environmental Groups*
 - *Watershed groups*
- *Colleges and Universities (and other water quality research facilities in the area)*

BENEFITS OF WATER QUALITY TRADING

In discussing water quality trading opportunities with potential participants, it may be helpful to keep in mind the following benefits.

Water quality trading can result in significant cost savings. Water quality trading is a business-like way to solve water quality problems by focusing on cost-effective, local solutions. Typically, a party facing relatively high pollutant reduction costs compensates

another party to achieve an equivalent, though less costly, pollutant reduction. Cost savings for a municipality could result in lower sewage treatment bills to citizens. For an industry, trading may translate into lower operating costs and/or more capital available for productive investment enabling a stronger competitive position and more economic opportunity in the community. For some sources, trading may be a source of revenue. In the right circumstances, trading markets can help participants achieve needed water quality improvements at the lowest possible cost to society.

Water quality trading provides flexibility to dischargers in meeting pollutant load reductions. Trading opens up new options for meeting TMDL load allocations. Although water quality trading cannot compensate for common technology based standards, trading can be used to access the water quality improvements that are created by other discharger's adoption of different technologies, expanding options for meeting TMDL obligations. In addition to possible cost reduction benefits, trading provides opportunities for creating new value to businesses and consumers through the use of creative ideas for improving water quality in the watershed.

Water quality trading is voluntary. Successful trades will occur only if both parties perceive they will gain benefits from the trade. Some dischargers, especially nonpoint dischargers, are more likely to come to the table to discuss reductions in a voluntary context. Voluntary approaches may lead to more effective and immediate water quality improvements. Because most trading systems are designed to fit within existing regulatory frameworks, trading typically will not create new regulatory control obligations.

Water quality trading provides incentives for overcontrol beyond current limits. For point sources, trading provides financial incentives for installing pollution control technology beyond TMDL waste load allocations because increments of pollution reduction beyond TMDL allocations can be sold to other dischargers. Nonpoint sources can be compensated for installation of best management practices that result in pollution reductions beyond meeting their load allocations. Trading provides additional incentives to create reductions where the incentives and disincentives (such as enforceable requirements for nonpoint source management) are relatively weak or nonexistent. These additional incentives can accelerate the rate of water quality improvements in many areas.

Water quality trading places a greater emphasis on measuring water quality outcomes and will provide additional data about the watershed. Trading will provide additional information, through monitoring and specific nonpoint source screening criteria, regarding water quality in and the dynamics of the watershed. This information will provide a better understanding of watershed conditions and increase awareness of the progress of water quality improvements.

Water quality trading can result in other ancillary environmental benefits. Trading provides incentives to use control options such as wetland restoration, floodplain protection, or other management practices that both improve water quality and provide additional fish and wildlife habitat.

LIKELY PARTICIPANT NEEDS AND INTERESTS RELATING TO WATER QUALITY TRADING

Even if participants understand the benefits of trading, they will have legitimate needs and concerns that must be addressed. The following list of likely needs and interests also includes some suggestions for responding to them.

Lack of a Market Driver. Dischargers are likely to be interested in exploring alternative pollution reduction options only if they are facing an imminent change to their regulatory requirements.

***Response:** In the watersheds being evaluated for trading viability, the market driver is the TMDL (or similar framework). The TMDL provides waste load allocations for point sources and load allocations for nonpoint sources dischargers that generally require new pollutant discharge reductions. The allocations will result in new permit limits for point source dischargers and goals for nonpoint sources. Watersheds with new TMDL's generally have a sufficient incentive to explore trading as a possible cost-effective pollution control option.*

Monitoring of nonpoint discharges will be costly, technically challenging, and will lead to increased regulation. Some nonpoint dischargers may be concerned that trading will require on-site monitoring to measure pollution reductions. Monitoring may be perceived as intrusive, costly, unreliable, and a precursor to additional regulatory requirements.

***Response:** Effective monitoring of nonpoint source discharges for trading purposes is designed to determine the value of the pollution reduction credits being generated. These credits, when established through monitoring, become a valuable commodity that can be sold to willing buyers. Those who participate in the discussions about trading in the watershed can help shape a monitoring program that meets their needs. Depending on the market infrastructure developed, the cost burden associated with monitoring can be assigned to an appropriate party.*

It is better to wait for regulators to enforce TMDL requirements than to proactively expend resources designing a new, untested compliance strategy. Participation in discussions about trading in the watershed could represent a significant investment in time and resources. Unless participants see the potential benefits, they will be reluctant to commit the resources and prefer to see greater emphasis on meeting TMDL load allocations employing traditional approaches.

***Response:** Trading discussions among dischargers and regulators provides new opportunities for meeting the TMDL requirements for improved water quality that incorporates the concerns of local participants. Potential participants should also be made aware of the key benefits of trading suggested above, especially the opportunity trading provides for more effective and immediate water quality improvements.*

If trading results in more efficient pollution reduction, it could provide incentives for additional development in the watershed. Participants often bring different perspectives about the broad goals of water quality trading. Some groups may only support trading if they believe it will achieve early reductions and improve water quality beyond the requirements of the TMDL. They may not support the flexibility of trading if they believe it will lead to growth and development in the watershed.

***Response:** It will be important to come to an early understanding about the goals of water quality trading in the watershed. For example, is the goal for trading to produce more cost-effective TMDL implementation or do stakeholders expect trading to produce environmental improvements beyond those required by the TMDL? In general, the focus has been on cost-effectiveness, while*

producing some ancillary benefits. There is no CWA requirement or EPA guidance that requires trading programs to achieve environmental outcomes in excess of TMDL requirements. However, there are water quality benefits from more active engagement by nonpoint sources that leads to more immediate improvements, additional habitat improvements, and increased instream flows, rather than simply end-of-the-pipe traditional controls.

Trading reduces the degree of certainty in meeting water pollution reduction targets. Some groups are concerned that trading does not include enough safeguards to ensure that it will produce real reductions in the amount of pollutants entering the watershed. They perceive that trading could sacrifice almost guaranteed, enforceable reductions from point sources in return for uncertain, unenforceable nonpoint source reductions elsewhere.

***Response:** Trading systems can be designed to use monitoring, specific nonpoint source screening criteria, and other mechanisms to assure that only verified reductions can be traded. They also use discounting factors to account for the uncertainty of nonpoint management practices. Conservative river ratios are also used to predict the amount of pollution that will reach downstream compliance points.*

Trading can create “hotspots,” or localized areas with high levels of pollution within a watershed. Concerns are often raised that a trading program may improve the watershed’s overall water quality, but may leave certain areas with highly degraded water quality.

***Response:** Trading programs can be designed to avoid unacceptable localized impacts by considering the characteristics of the pollutant, the watershed conditions, the location of potential trading partners, the type of trades, the scope of the trading area, and the use of effective monitoring programs in the design of trading programs. Programs should consider specific mechanisms related to the direction of trades (e.g., upstream versus downstream) and the use of caps and ratios to avoid localized impacts. EPA’s Water Quality Trading Policy supports trades only in the same watershed or the boundary established by a TMDL. This policy helps ensure that water quality standards are maintained or achieved throughout the trading area and contiguous waters.*

Trading provides less opportunity for public participation in pollution reduction activities. There is rising public interest in watershed related activities. Citizen groups are interested in becoming involved in decisions that affect local watersheds. These groups will be concerned about whether trading will change conventional public participation opportunities such as public notice and comment for NPDES permit modifications. Representatives of these groups will want to be engaged in discussions about the design and implementation of trading programs. Groups will be particularly sensitive to issues relating to monitoring and enforcement.

***Response:** Participating in the early stages of a trading program development provides a more meaningful opportunity for public involvement than responding to an already developed proposal. Concerns about enforcement and monitoring can be raised during program design. All public participation requirements applicable during implementation must also be satisfied by the market according to EPA guidance. However, it may be harder to influence the specifics of a market approach once the details have been established. Early participation will*

help all parties understand the information and assumptions used in the market's development

STAKEHOLDER PARTICIPATION IN MARKET INFRASTRUCTURE

Each of the three trading programs described in the Market Infrastructure chapter provided for stakeholder involvement during the development stage. This section briefly describes the range of stakeholder participants, the function and authority of the stakeholder group and any other key opportunities for stakeholder involvement that were provided during program development in two of those markets.

Lower Boise River Effluent Trading Demonstration Project

As described in the market characterization, participants in the Lower Boise River project worked together to develop a trading program framework. The project was launched with a state workshop to educate all attendees about the trading concept and to direct participation in the Lower Boise. Participants included wide representation from federal, state, and local agencies with water quality responsibilities, agriculture, municipalities, industry, and the environmental community. Participants included: the Idaho Water Users Association; the Idaho Farm Bureau; Pioneer Irrigation District; the Payette River Water Master; the Canyon Soil Conservation District; the Idaho Soil Conservation Commission; the Natural Resources Conservation Service; Idaho Rivers United; the Ada County Highway District; the Association of Idaho Cities; the Cities of Boise, Meridian, Nampa, and Middleton; the U.S. Bureau of Reclamation; the Southwest Idaho Resource Conservation and Development Council; Micron; Simplot; American Wetlands; Idaho Power Company; Idaho Division of Environmental Quality; US EPA; and the Boise State University Environmental Finance Center.

Participants were supported by a contractor providing neutral facilitation, process support, and various forms of analysis. Process support from neutral parties was important for recruiting participation and managing the program development process to allow EPA and Idaho DEQ to be involved as project participants.

As the participants worked together to pursue the development of a trading system, they recognized that state and federal regulatory agencies would maintain their existing authorities, but the group would develop and provide recommendations for their consideration that would likely carry significant weight. The participants were divided into three main teams: 1) the Framework Team, charged with developing the mechanisms, rules, and procedures for dynamic trading in the watershed; 2) the Point Source-Point Source Model Trade Team, responsible for developing a model trade between two point sources; and 3) the Point Source-Nonpoint Source Model Trade Team, tasked with developing a model trade between a point source and a nonpoint source. Smaller workgroups were also formed to work through specific parts of the trading system. These workgroups also provided an opportunity for stakeholder groups to identify and resolve issues specifically related to their interests and needs. These included the Agriculture Workgroup, the Ratios Workgroup, the Trading Framework Workgroup, the Indirect Dischargers Workgroup, and the Association Workgroup. Stakeholder participation was supported by a state-run small grants program, facilitating production of materials for the workgroups. Idaho DEQ is also preparing for public comment a state water quality trading guidance, model permit language for point source to point source trading, and the BMP list for the Lower Boise project.

Connecticut's Nitrogen Credit Exchange Program

As described in the Market Infrastructure section, a nitrogen trading program was established in Connecticut as a means for attaining the nitrogen reduction requirements outlined in the TMDL waste load allocations. Connecticut's program does not include nonpoint sources of nitrogen discharge and is limited to the 79 municipal wastewater treatment plants in the region. Because of this limitation to point sources, the range of interested stakeholders was generally more restricted than other trading projects that included rural and urban nonpoint sources.

Public involvement in the program has been provided through a traditional administrative process of public workshops and hearings, through the legislative process required during the passage of implementing legislation, and through ongoing monthly meetings of the Nitrogen Credit Advisory Board. In addition, a number of individual meetings were held with affected sources, cities and towns, and other interested parties.

Administrative Process

Prior to the development of the trading program, a series of six informational public workshops were held in the region on the Waste Load Allocations proposed in the nitrogen TMDL for Long Island Sound. Nitrogen trading was one of the options discussed at the workshops for meeting the TMDL load allocations. These workshops were attended by affected point sources, local communities, and local and national environmental groups.

Another series of public workshops were held by the Connecticut Department of Environmental Protection to increase public understanding of the General Permit for Nitrogen Discharges and the Nitrogen Credit Exchange Program. Invitations and public notices were issued for these workshops and they were attended by point sources and other interested parties.

Following the informational meetings, a two day formal public hearing was held to receive comments on the General Permit for Nitrogen. The agency formally responded to these comments and made several changes to the General Permit.

Legislative Process

Several components of the program required enabling state legislation for implementation. Legislation was introduced in the Connecticut General Assembly to implement the Nitrogen Credit Exchange Program. Opportunity for stakeholder groups and the general public to comment on the program were provided through the normal legislative process, which included hearings in relevant legislative committees. As a result of the legislative process, a number of changes were made to the proposed program.

Nitrogen Credit Advisory Board

The legislation established a Nitrogen Credit Advisory Board to assist and advise the Commissioner of Environmental Protection in administering the program. In addition to three representatives of state agencies, the board includes nine public members. The legislation requires that public members reflect a range of interests and experience and is well balanced with regard to buyers and sellers of credits, large and small municipalities, and representatives from different geographic regions of the state. In addition, members

with experience in wastewater treatment, environmental law, or finance will be included. The Board has been conducting monthly meetings that are open to the public.