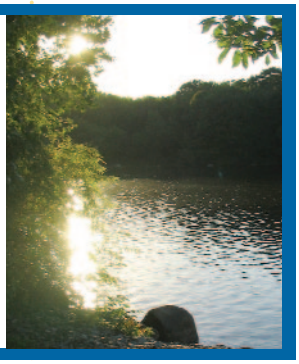
> *The wise use of water is quite possibly the truest indicator of human intelligence, measurable by what we are smart enough to keep out of it, including oil, soil, toxics, and old tires.*
>
> DAVID W. ORR, *EARTH IN MIND: ON EDUCATION, ENVIRONMENT, AND THE HUMAN PROSPECT*

3

Getting Started on Source Water Protection

SOURCE PROTECTION

One thing we can't live without is clean water. Whether your water supply source currently enjoys relatively few potential threats or it has more extensive industrialized land uses, the way to ensure adequate quantity and safe water quality for the future is to act now to protect water supply resources. Your Source Water Assessment report is an excellent starting point for raising the issues associated with source water protection and for getting the planning and action ball rolling. With your Source Water Assessment report in hand, there are a number of basic steps you can take from the outset.



Establish your source water protection action team.

To implement a successful local source water protection program, municipal officials must understand the importance of source water protection. To get the ball rolling and keep it rolling, you need to identify a person, entity (e.g., health department, planning department, conservation commission), or team that has responsibility for keeping water protection goals on the community radar screen. Its responsibility will be to set priorities, work to incorporate key recommendations into town plans and ordinances, identify emerging concerns, work with other communities in the watershed, and keep local officials and the public involved, educated, and informed on a continuing basis.

While larger communities may have the staff and the resources to tackle source water protection in-house, collaboration among stakeholders allows you to draw from the diverse experience and expertise of the community as a whole—municipal departments, regional agencies and associations, businesses, educators, citizen organizations, and residents. The team approach can also help:

- produce advocates
- create powerful and long-lasting partnerships that will facilitate source water planning, implementation, and public acceptance
- provide an action support base

Verify and update your Source Water Assessment report.

Although states used the most current information to identify known and potential source water threats and to rank susceptibility factors, the report should be reviewed carefully by those who know the area best—water system personnel and members of the community.

Compare general assessment findings with watershed features and actual water quality conditions to validate results and review technical assumptions. Many of these assessments were completed as early as 2000, so if the information hasn't been verified and updated by now, it should be. Water systems and municipalities are encouraged to forward corrections or new potential sources of contamination in their source water protection area to the state Drinking Water Program on an annual basis.

Establish community water quality goals and action priorities.

Source water protection requires an ongoing community-wide commitment. It is important that communities establish clear source protection goals (e.g., maintaining water quality, improving water quality). With these goals in mind, communities need to employ a science-based strategy for establishing priorities, determining which land uses need attention, and developing a framework for action. Present and future land use decisions can then be made accordingly.

It is important to hone your source water protection program by routinely asking relevant questions and periodically reviewing and updating priorities and strategies to address new information, the changing nature of potential threats, and local needs. Management practices for controlling development impacts are continually evolving and local development standards need to reviewed and updated to reflect state-of-the-art standards.

CASE STUDY

Updating Your Source Water Protection Assessment

Work with water utilities to update Source Water Assessment information and maps. Community volunteers, such as watershed associations, civic groups, high school students, can help verify, enhance, and update your report information. You may also want to add additional features to your maps, such as the 100-year floodplain, tax map information, soils information, and high-density development. Take ownership of your Source Water Assessment. Get in on the action.

In **Rhode Island,** many local Source Water Assessment committees recruited volunteer land use survey teams to update GIS maps used in the assessment of major community supplies. To assist communities with carrying out these surveys, the Cooperative Extension at the University of Rhode Island created a handbook, "A Model for Public Education and Outreach," for working with volunteers. The informative handbook includes instructions for updating maps along with examples. This document can be accessed at: *www.uri.edu/ce/wq/program/html/SWAP_LUInv.htm.*

Vermont has prepared a simple two-page flyer, "Preparing a Source Protection Plan Update" that includes the following steps:

- ✓ Inspect the source protection area and update your potential contamination source maps and inventory.
- ✓ Weigh risks from new potential contamination sources and identify risk management measures.
- ✓ Update the landowner list.
- ✓ Communicate with relevant landowners in the source protection area about actions they can take to protect water.
- ✓ Summarize progress in reducing threats to your source.

Check out the flyer at: *www.vermontdrinkingwater.org/swapp.htm.*

Monitor known and potential contamination sources to ensure compliance with federal, state, and local requirements.

Do the owners of some of the identified pollution sources have a good or bad compliance history? A poor compliance history could be a red flag that you need to take measures to ensure that the property or business owner stays in compliance. Contact the enforcement and compliance division of your state environmental agency for compliance data. This would include having the water supplier or municipality conduct compliance visits.

Investigate funding options for implementing your source water protection strategy.

Does your community have a strategy for financing the development and implementation of your source water protection program? If not, see Chapter 9 for details.

Educate the public about your source water protection program.

Do both your community and water supplier have strategies for educating the various sectors of the community about the importance of protecting drinking water sources, steps you are taking, and the kinds of best management practices (BMPs) they can implement? A successful source water protection program relies heavily on public support. Public education should be an ongoing process that is a part of your long-term source protection program. This can be accomplished in many ways, including:

Surveys of the public Assess water knowledge and prioritize activities to address public concerns.

Highway signs Identify watershed and recharge areas.

Guidance Provide BMPs on such subjects as protecting critical areas, storing household hazardous waste, lawn care and gardening, and septic systems.

Speakers Provide experts on various source protection topics with community groups.

Newsletters Keep the public up-to-date on issues and events.

Media coverage Encourage local papers and radio and television stations to help keep the community informed about issues, events, and BMPs.

Schools Encourage school districts to participate in source protection activities and incorporate source protection into their curriculum.

Volunteer monitoring Encourage students and adult community members to participate in collecting and analyzing surface water samples for a variety of constituents, evaluating the health of aquatic biological communities, and inventorying watershed conditions and land uses.

Watershed festivals Create events to celebrate water in your community.

Household hazardous waste collection days Hold a special day for having the community take their household hazardous waste to a central location for proper disposal. This is also a good way to educate the public on these issues.

Local government Make sure all departments of your community are up to speed on and participating in your source protection program.

Make sure you have a security plan and an up-to-date emergency response plan for drinking water sources in your community.

Communities and water suppliers need to ask themselves if there is a plan in place to ensure drinking water security and to respond should their water supply become compromised, vandalized, or contaminated. Recognizing the risk and cost of replacing a water supply source can help you get the public's attention in your efforts to protect source water. Drinking water security relies on many different people working together. For this reason, it is important to communicate with and help educate law enforcement officials and others in your community about drinking water security.

WEB SITE

For more information, brochures, and posters about drinking water security, visit *www.epa.gov/ne/homeland.*

CASE STUDY

The High Cost of Vandalism at a Community Water System

Vandalism cannot be taken lightly, and addressing a potential threat is time consuming and expensive. An investigation in response to vandalism can cost more than $10,000. For example, in 2002, the hatch on a finished-water storage tank was found open at a drinking water system in a small northern New England community. State agencies, state police, and the FBI were called in to investigate the situation. Ultimately, five students from a local college were accused of breaking the latch on the hatch to the town's water reservoir.

But it was no joke. Water samples had to be taken to determine if water contamination had occurred. The community was on a "do not drink" order while the water system was shut down for days. Health officials in the state tested the water for total bacteria content, inorganic chemicals, volatile organic chemicals, and semi-volatile organic chemicals. The tests took place over a period of 24 hours to seven days.

After the incident, town officials agreed to have a new high-tech security system installed on the water system that would notify authorities of any breaches. In 2003, another water tank in the community was vandalized. Fortunately, the new technology that had been installed triggered immediate notification of the breach. But again state officials had to conduct tests on the water to detect contaminants. As an additional precaution, the town decided to drain the reservoir, a 750,000-gallon tank fully enclosed in concrete.

The new reality faced by communities is that even simple acts of vandalism can have significant effects because state agencies will need to investigate the possibility that the system has been compromised. This unfortunate situation can be a major burden on a community's resources and budget.

Top 10 Steps Municipal Officials Can Take to Ensure Drinking Water Security

- Communicate with your drinking water utility personnel and become familiar with your water utility operations and facilities.
- Prepare for emergency situations by coordinating community emergency plans with utility emergency operating plans.
- Promote the development of vulnerability assessments for drinking water utilities.
- Inform water utilities of any threats or suspicious activities associated with drinking water supplies.
- Establish "Community Watch Groups" to help notice and report any suspicious activity in and around local water utilities.
- Include community source water protection areas in routine inspections or patrols.
- Fully investigate vandalism or tampering of water supplies.
- Prepare to respond to water supply emergencies, and practice for them.
- Provide funding for security upgrades for drinking water systems and sources.
- Update emergency contact lists for drinking water facilities.

? Vulnerability Assessment

The Bioterrorism Act of June 2002 requires water suppliers to look at the major components of their water systems, identify the threats to each component, and then estimate the potential effects of those threats on their system and its operations.