



Community Involvement in Drinking Water Source Assessments



*Do you know where your community's drinking water comes from?
What are the major threats to your drinking water quality?*

Community members and civic or youth groups can help answer these questions and use the information to protect their drinking water sources. By working with their state's program to assess drinking water sources, community groups can help to identify potential threats to the quality of their drinking water. They can also help local officials develop and implement a plan of action to prevent water quality problems.

Your state is now required to assess all the ground water and surface water sources that supply water to public water systems, and you can be involved in the process. These assessments will identify the major potential sources of contamination to drinking water supplies, and will determine how susceptible the water systems are to contamination. The results will be

This fact sheet explains the four steps of source water assessments ; how communities can participate in the assessment process; and how communities can utilize assessment information for source water protection . [Downloadable](#)

provided to the public to help communities plan for protection activities.

Each state is moving forward to implement assessments of its public water systems, as required under the federal Safe Drinking Water Act. Assessments must be completed by 2003 for every public water system--for major metropolitan areas and the smallest towns, including schools, restaurants and other public facilities that have wells or surface water supplies. Assessments will not be conducted for drinking water systems that have less than fifteen service connections or that regularly serve less than twenty-five individuals, since these are not considered public water systems.

SOURCE WATER ASSESSMENTS

The source water assessment programs created by states differ since they are tailored to each state's water resources and drinking water priorities. However, each assessment must include four major elements:

- delineating (or mapping) the source water assessment area
- conducting an inventory of potential sources of

- contamination in the delineated area
- determining the susceptibility of the water supply to those contamination sources
- releasing the results of the determinations to the public

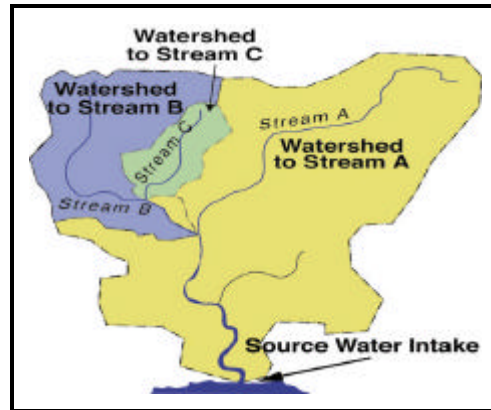
These steps are described in more detail below, with information on how citizens and organizations can join in the assessment process.

STEP 1: DELINEATE THE SOURCE WATER ASSESSMENT AREA

For each ground water well or surface water intake that supplies public drinking water, the land area that could contribute water and pollutants to the water supply must be delineated or mapped. Significant potential sources of contamination will then be identified in this delineated area during Step 2 of the assessment process.

For ground water supplies, states commonly use information about the flow of underground water to delineate source water assessment boundaries. This results in a map of land areas where, if pollutants are spilled or discharged on the surface, they could filter through the soil to the ground water and be drawn into a particular well. Some states may use a simpler mapping approach, by drawing a circle of a certain radius around the well.

For a community that uses surface water from a stream, river, lake or reservoir, the land area in the watershed upstream of the intake is identified on the map. A watershed boundary is drawn using a topographic map, and includes the land areas where rain or melted snow flows over or through the ground and eventually enters the water source upstream of the water system's intake.



Some states plan to divide the watershed area into segments--areas closest to the intake where most types of contamination sources can impact the water supply, and other more distant areas. The entire watershed up to the state's boundaries is required to be delineated, but the inventory of potential pollution sources may be more detailed in segments that are closer to the intake.

After the state has completed its assessment for a water system, the community may decide to undertake protection efforts for targeted sources of contamination. An initial step could be to expand upon the state's delineation process. Particularly for smaller ground water systems, where states may not have the resources to conduct a detailed delineation, additional scientific methods can be used to more accurately delineate the area that contributes ground water to the well.

Community members can seek assistance from the environmental sciences, geology or engineering departments of local colleges, or from environmental consulting firms to assist in creating more detailed delineations. Sometimes these services are provided by professors, graduate students or local firms for a reduced fee or none at all. In addition, local water resource information is often available from other sources such as the federal Natural

Resource Conservation Service, the United States Geological Survey, and the state's Cooperative Extension Service.

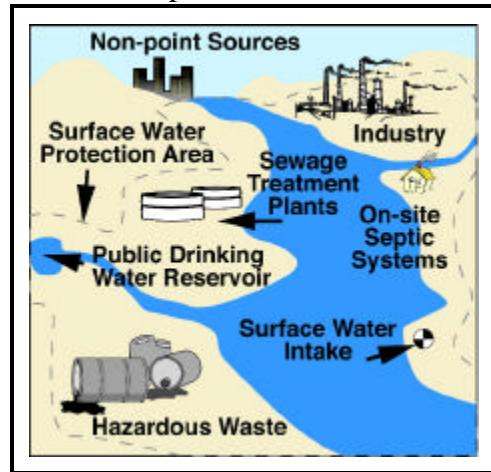
STEP 2: CONDUCT AN INVENTORY OF POTENTIAL SOURCES OF CONTAMINATION

Community groups can become especially involved in the second step of an assessment-identifying potential sources of pollutants that could contaminate the water supply. This inventory usually results in a list and a map of facilities and activities within the delineated area that may release contaminants into the ground water supply (for wells) or the watershed of the river or lake (for surface water sources).

Some examples of the many different types of potential pollutant sources include landfills, underground or above-ground fuel storage tanks, residential or commercial septic systems, storm water runoff from streets and lawns, farms that apply pesticides and fertilizers, and sludge disposal sites.

Some states are asking communities to conduct the inventory themselves, in order to obtain detailed information about potential contaminant sources. Others will use computer databases and focus the inventory on land uses and activities that are currently mapped or regulated. Although this approach may not address sources of contaminants that are not currently regulated, such as smaller livestock areas or auto salvage yards, the database inventories could include industries and sewage treatment plants that discharge wastewater, hazardous waste sites, mining operations, particular land use categories (such as industrial, agricultural and urban areas), and various facilities that have environmental permits.

Community groups such as watershed organizations, local environmental committees or scout troops can enhance the



state's assessment by conducting site-specific inventories of potential pollutant sources that may not be on state databases or maps. Local inventories may provide information on abandoned dump sites, businesses with septic tanks or floor drains such as dry cleaners or car repair shops, pesticide mixing and storage areas, golf courses, and other land uses that may release pollutants to ground water or surface water. Community groups can coordinate their local inventory with the state's assessment process or can enhance a completed assessment with a more detailed inventory.

A helpful document to aid community groups is EPA's "Drinking Water Contaminant Source Index," which is a list of potential contaminant sources and the pollutants they can release. You can find this publication at www.epa.gov/safewater/swp/sources1.html on the EPA web site.

STEP 3 - DETERMINE THE SUSCEPTIBILITY OF THE WATER SUPPLY TO CONTAMINATION

For the susceptibility analysis, the state combines the inventory results with other relevant information to decide how likely will a water supply become contaminated by

identified potential sources of contamination. This critical step makes the assessments useful for communities, since it provides information that local decision-makers may use to prioritize approaches for protecting the drinking water supply. Local information provided to the state by local community groups about contaminant sources, water resource characteristics or environmental management practices may be used in the susceptibility determination process. Some states prioritize the potential for contamination from identified potential contamination sources or specific chemicals that could pollute the water. Other states assign susceptibility rankings of high, medium or low to the water sources.

STEP 4: RELEASE THE ASSESSMENT RESULTS TO THE PUBLIC

After a state completes the assessment of a particular water system, it will summarize the information for the public. Such summaries help communities understand the potential threats to their water supplies and identify priority needs for protecting the water from contamination. States will make the assessment summaries available to the public in a variety of ways. Some states plan to convene public workshops, while others will have copies available in public libraries and from local government offices or water suppliers. Many also plan to post the assessment summaries on the Internet. The results of the assessments will also be included in the annual water quality reports that community water systems are required to prepare for their customers. Community groups can convene local meetings to discuss the results and begin the process of protecting the drinking water source.

SOURCE WATER PROTECTION

Whether using the state's assessment or expanding it into a more detailed local assessment, communities can use information gathered through the assessment process to create a broader source water protection program. Community groups and local officials, working in cooperation with local, regional and state government agencies can plan how to manage identified potential contamination sources and prevent new contaminant threats in the source water assessment area.

Communities use a wide array of different source water protection methods to prevent contamination of their drinking water supplies. One management option involves regulations, such as prohibiting or restricting land uses that may release contaminants in critical source water areas. Along with regulations, many communities hold local events and distribute information to educate and encourage citizens and businesses to recycle used oil, limit their use of pesticides, participate in watershed cleanup activities and a multitude of other prevention activities. Another aspect of a source water protection program can be the purchase of land or creation of conservation easements to serve as a protection zone near the drinking water source. For an effective protection program, communities should consider using a variety of prevention measures.

For further information on your state's Source Water Assessment Program and how to participate, contact the agency in your state that is managing the program. Look at the EPA web page at www.epa.gov/safewater/protect.html or call the EPA Safe Drinking Water Hotline at **1-800-426-4791** to find more information and state contacts. The web page also lists other organizations that may be active with source water assessments and protection in your area.

Your local water supplier may also have more information about opportunities to become involved in the source water assessment process. You can call the phone number on your water bill or contact your local health department for information on your water supplier.