United States Environmental Protection Agency | Office of Water (4204) Washington, D.C. 20460 | EPA 832-F-00-001

Protecting Drinking Water with the Clean Water State Revolving Fund

Safe drinking water is one of the most fundamental resources for the protection of public health. About 250 million people in the United States get their drinking water from a public water system. The Safe Drinking Water Act (SDWA) Amendments of 1996 developed a new tool for the protection of drinking water--the Source Water Assessment and Protection Program. Through this program, state drinking water agencies assess the threats to each community's drinking water. Communities and public water systems can then work together to decide how to best protect drinking water sources.

Funds are available from the Drinking Water State Revolving Fund (DWSRF) to finance a variety of assessment and protection activities. States can use DWSRF funds to manage their source water protection programs and conduct assessments. States can also provide loans to water systems to acquire land needed for protection and implement protection measures. However, the Clean Water State Revolving Fund (CWSRF) program authorized by the Clean Water Act can also be a powerful tool to help states finance a variety of protection activities. The CWSRF program can provide assistance to communities, water systems, and other organizations (including land conservation associations), for projects that protect source water and enhance water quality.

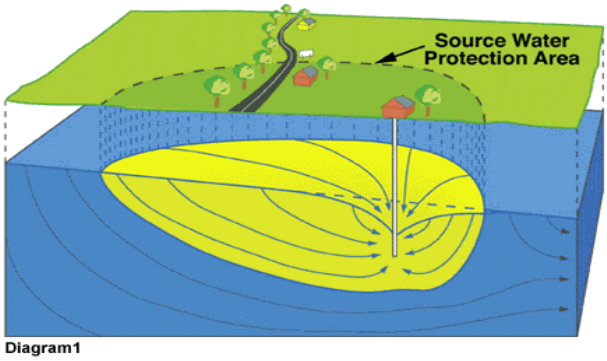

Figure 1

What Is A Source Water Assessment?

Source water is the water from the rivers, streams, lakes and ground water that your system uses to supply your community with drinking water. Each state will perform source water assessments between 2000 and 2003, as required by SDWA. Although each state may take a different approach, assessments generally involve four steps:

1. *Identify the source water protection area*. For each ground water well or surface water intake, the land area that contributes water to the drinking water supply is identified and mapped (Figure 1). Contaminants from land uses and spills within this area could threaten water pulled into the well or intake.

2. *Identify contaminant threats to the source water*. This inventory identifies land uses or activities in the source water protection area that could potentially contaminate the drinking water supply. (Figure 2) A list of types of facilities and activities, with contaminants they may release, can be found at www.epa.gov/safewater/swp/intro4.html.

3. *Determine susceptibility of source water to contamination*. Through analysis of contaminant threats in the source water protection area and other factors, a state can determine the susceptibility of the source water to contamination. This determination helps to identify priority protection actions that a community could take to prevent contaminants from reaching source water.

4. *Make information available to the public.* After the state completes the assessments, the information for each water system is summarized and made available to the public. This information is a valuable starting point for local communities to take an active role in protecting source water and preventing contamination of their drinking water.

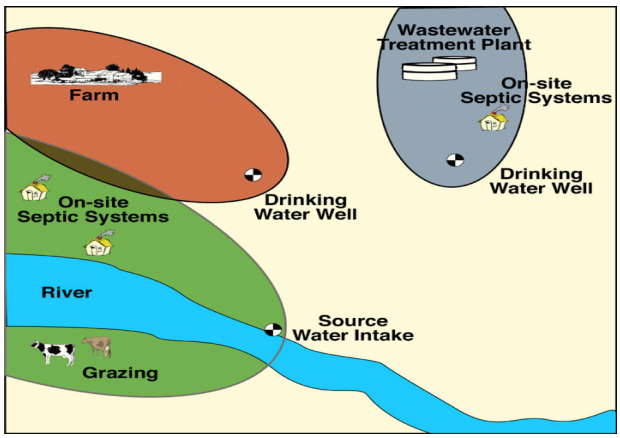

Figure 2

What is Source Water Protection?

The protection activities that a community pursues will depend on the needs of the community. The following is a list of some of the common protection measures communities have used to protect their source water.

< **Managing Contaminants** - Projects can reduce the threat of contamination through cleanup or remediation of pollution. Development of management plans can control non-point and point sources of pollution that threaten source water quality (See Box 1).

< **Use Prohibitions** - Local ordinances can be used to prohibit the storage or use of dangerous materials in a protection area.

< **Zoning Ordinances** - By defining the types of activity that can occur within a district and specifying appropriate regulations, a community can prevent activities that could be harmful to drinking water. A compendium of ordinances that exist around the country can be found at www.epa.gov/r5water/ordcom.

< **Subdivision Ordinances** - Subdivision ordinances can be used to set housing density standards, require open space set-asides, and regulate the timing of development and growth in a community.

< **Purchase of Property or Development Rights** - A community can establish control over the activities in a source water protection area by using funds to acquire land or conservation easements.

< **Public Education** - Activities such as developing fact sheets and posters or holding workshops or fairs can build community support for protection.

< **Local Health Regulations** - Local regulatory measures such as sanitary setbacks can avoid contamination by preventing the installation of septic tanks close to a drinking water well.

Box 1
Managing Contaminants With CWSRF Funds

U Removal of leaking underground storage tank (UST) and remediation of contaminated soil and ground water. Nebraska and Wyoming have used the CWSRF for numerous UST projects.

U Remediation of contamination from underground injection wells and/or inactive municipal hazardous waste sites has been funded by the New York CWSRF program.

U Agricultural best management practices (BMPs) such as:
- ! No-till equipment to reduce runoff to surface drinking water supplies or
- ! Manure management measures for animal feeding operations (AFOs).

Minnesota's CWSRF has given loans for thousands of these types of projects.

U Landfill monitoring wells and upgrades. Three Alaskan cities have used the CWSRF to fund landfill-related projects.

U Restoration of wetlands. Washington loaned CWSRF money to the City of Port Townsend to preserve wetlands.

U Septic tanks. CWSRFs in Massachusetts and Maine have funded the replacement of failed individual systems. Delaware is using the CWSRF to provide incentives to repair failing septic systems.

Financing Source Water Protection . . . **The Clean Water State Revolving Fund**

For more than 10 years, the CWSRF program has been financing projects to protect the quality of surface water and ground water throughout the country. The SRF programs in each state and Puerto Rico operate like banks. Federal and state contributions are used to capitalize or set up the programs. These assets, in turn, are used to make *low or no-interest loans* for important water quality projects. Funds are then repaid to the CWSRF over terms as long as twenty years. Repaid funds are recycled to fund other water quality projects. States develop annual Intended Use Plans (IUPs) that describe how they will use funds in the program to support water quality objectives.

Capacity of the CWSRF

Nationally, the CWSRF has in excess of $30 billion in assets and has issued $26 billion in loans since 1988. The CWSRF currently is funding nearly $3 billion worth of water quality projects annually. Clearly, the CWSRF can be a powerful financial resource for funding source water protection projects.

Who May Qualify

The Clean Water Act (CWA) of 1987 authorized the CWSRF to fund point source (§212), nonpoint source (§319), and estuary (§320) projects. The CWSRF may fund source water protection projects for eligible loan recipients, including public water systems, community groups, individuals, conservation districts, and nonprofit organizations.

The CWSRF allows funding for a wide variety of protection projects. However, since the program is managed by the states, project funding varies according to the priorities, policies, and laws within each state. The types of applicants eligible for assistance may also vary by state.

Getting a Project Funded

Given that each state administers its own CWSRF program differently, the first step in seeking a CWSRF loan is to contact a state CWSRF representative - who can be found on the CWSRF website *www.epa.gov/owm/finan.htm* Your state representative will be able to guide you through the proper channels. Here are some suggested questions to ask your representative:

- Has the state committed to funding source water protection activities in its CWSRF IUP?
- If not, what can I do to help get these projects listed on the IUP?
- Can an individual or private entity receive a CWSRF loan for source water protection activities?
- If not, can I receive a CWSRF loan through my county?

Success Story
Pine Barrens, New York

The ground water aquifer beneath the Pine Barrens of New York is the sole source water aquifer for 2.6 million people in the region. Road construction, housing and commercial development have vastly reduced the rate at which water recharges the underlying aquifer. At the same time, water continues to be withdrawn at an increasing rate as population and commercial/industrial activity increases. Salt water intrusion can occur in coastal areas when recharge cannot keep up with withdrawal. An additional impact of increased development is that septic tank effluent can move through the porous soils of the Pine Barrens and reach the aquifer relatively untreated.

The New York CWSRF program made a loan of $75 million to Suffolk County for land acquisition in the Pine Barrens Wilderness and Water Protection Preserve on Long Island. The acquisition is part of a larger plan by state, local and private organizations to protect the main recharge zone for Suffolk County's drinking water.

Sources of Loan Repayment

Each state must approve a source of loan repayment as part of the application process. Although finding a source of repayment can prove challenging, it is not impossible. Many users of the CWSRF have demonstrated a high level of creativity in developing sources of repayment and have found that the source of repayment need not

come from the project itself.

Some potential repayment sources include:

- property owner's ability to pay (determined during loan application)
- fees paid by developers
- recreational fees (fishing licenses, entrance fees)
- dedicated portions of local, county, or state taxes or fees
- drinking water fees
- donations or dues made to nonprofit groups
- storm water management fees
- wastewater user charges

Success Story
Fresno, California

The Fresno Metropolitan Flood Control District received a $20 million CWSRF loan to implement non-point source control measures in the Central Fresno County service area and regional ground water basins, which serve as the primary source of drinking water for the area. The measures are intended to reduce run-off and microbial pollutants from regional urban and agricultural lands by constructing treatment facilities and implementing source control measures. The primary strategy of the plan is to retain all runoff within the District.

The SRF loan will support the construction of thirty storm water retention/detention facilities in the high growth perimeter of the Fresno/Clovis metropolitan areas and seven storm water quality control basins along the San Joaquin River. The District Board of Directors adopted a resolution authorizing the repayment of the loan through a Drainage Fee Ordinance.

Challenges Ahead

EPA encourages states to open their CWSRFs to the widest variety of water quality projects while still addressing their highest priority projects. Those interested in source water protection should seek out their CWSRF program, learn how their state program works and participate in the annual process that determines which projects are funded.

Other Federal Funding Sources

For additional information about funding programs for water quality activities, including source water protection, visit the EPA Watershed Program page at www.epa.gov/OWOW/watershed/.

For more information about EPA programs, or for a program representative in your state, contact:

Clean Water State Revolving Fund Branch
U. S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW (Mailcode 4202)
Washington, D.C. 20460
Phone: (202) 260-7360 Fax: (202) 260-1827
www.epa.gov/owm/finan.htm

Drinking Water State Revolving Fund Program
U. S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW (Mailcode 4606)
Washington, D.C. 20460
Fax: (202) 401-2345
www.epa.gov/safewater/dwsrf.html

Source Water Program
1200 Pennsylvania Avenue, NW (Mailcode 4606)
Washington D.C. 20460
Fax: (202) 260-0732
www.epa.gov/safewater/protect.html