United States Environmental Protection Agency
Office of Water (4204) Washington, DC 20460
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Funding Water Conservation and Reuse with the Clean Water State Revolving Fund

The Problem

Total demand on the nation's public water supply systems has nearly tripled since 1950. As water use has escalated, so has the need to collect and treat an increasing volume of wastewater. The 1996 Clean Water Needs Survey documented a national wastewater investment need of $140 billion over the next 20 years**.** Because facilities that collect and treat wastewater are sized to meet flow projections, when flows are inflated by wasteful water use, it costs more than necessary in capital and operating costs to assure safe and efficient services. **Water conservation and reuse programs can be developed to help systems avoid, downsize, or postpone wastewater projects.** There are also benefits from increased treatment plant efficiency and reduced energy costs. In addition to lowering costs and improving the reliability of wastewater systems, water conservation and reuse are important for meeting the environmental goals of many states and communities.

Water Conservation and Reuse/Clean Water State Revolving Fund Collaboration

The Clean Water State Revolving Fund (CWSRF) programs in every state and Puerto Rico work 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 repaid to the CWSRFs over terms as long as twenty years. Repaid funds are then recycled to fund other water quality projects. These CWSRF resources can help augment the financial resources currently available to fund the following types of water conservation and reuse projects:

Structural Measures (eligible when the equipment or facility is publicly-owned)

- ✓ Installation of meters
- ✓ Plumbing fixture retrofits or replacements (e.g., in government buildings, public housing)
- ✓ Use of efficient landscape irrigation equipment (e.g., in public parks, golf courses, etc.)
- ✓ Recycling gray water (in municipal buildings)
- ✓ Reuse of wastewater (public purposes)

Nonstructural Measures

- ✓ Use of incentive-based wastewater service charges
- ✓ Use of ordinances or regulations to conserve water use
- ✓ Public education programs

Capacity of the CWSRF

Nationally, the CWSRF has in excess of $27 billion in assets (includes loans already made and current funds available to make loans). Currently, the CWSRF is funding approximately $3 billion in water quality projects each year.

Getting a Project Funded

The Clean Water Act (CWA) of 1987 authorized the CWSRF to fund point source (§212), nonpoint source (§319), and estuary (§320) projects. Water conservation and reuse activities/projects may be considered point source if they are developed as a component of a wastewater treatment works (§212) project. As stipulated in §603(c) of the CWA, §212 projects must be publicly owned to receive CWSRF funds. Some water conservation and reuse projects, however, may be classified under the nonpoint source (NPS) category if they are part of a larger polluted runoff abatement activity. Included in a long list of eligible CWSRF loan recipients for NPS and estuary projects are community groups, individuals, agricultural associations and nonprofit organizations. Since the CWSRF program is managed by the states, project funding varies according to the priorities, policies, and laws within each state. Eligible applicants also vary by state. The necessary first step in obtaining CWSRF funding is to get the activity/project in a state's Intended Use Plan. Contact your state's CWSRF program for details.

Sources of Loan Repayment

Each state must approve a source of loan repayment as part of the application process. Though finding a source of repayment may prove challenging, it does not have to be burdensome. Many users of the CWSRF have demonstrated

a high degree of creativity in identifying sources of loan repayment. The source of repayment need not come from the project itself.
Some possibilities include

- Fees paid by developers
- recreational fees (fishing licenses, park entrance fees)
- Stormwater management fees
- Wastewater user charges
- Donations or dues made to nonprofit groups and associations

Learning by Example

Maui, Hawaii used CWSRF funding to upgrade the filtration, disinfection and ancillary facilities at the Kihei wastewater treatment plant to produce a consistently high quality effluent. The reclaimed water will be used to help meet the needs of golf courses, resort areas, county parks, community centers and schools affecting 1,200 acres. The loan repayment will be from the city's general fund.

Royal City, Washington is using a CWSRF loan to build a new wastewater treatment facility in which the reclaimed water will be used to augment irrigation water in the summer, and enhance local wetlands and lakes in the winter. Repayment will be from user charges.

The **East Alamosa Water and Sanitation District in Colorado** is using a CWSRF loan for the purchase and installation of publicly owned water meters in the distribution system. Metering provides essential data for charging fees based on actual customer use. This has been found to contribute directly to water conservation. The water meters will reduce water usage by an estimated 3,050,000 gallons per year. Loan repayment will be made from wastewater user charges.

In 1991, **California** initiated an agricultural water conservation program using their CWSRF. State districts use CWSRF loans to purchase irrigation equipment that is then leased to farmers so that they can convert from furrows/siphon tube irrigation to sprinkler/gated pipe irrigation. By changing irrigation methods, farmers can use less water and reduce subsurface drainage. To date, approximately $45 million has been loaned to 7 districts to operate this program. The districts pay back the loan with money collected from leasing the equipment.

San Diego, California initiated a Public Facilities Retrofit program in 1992. While not funded from the CWSRF, this project would be eligible for a CWSRF loan. Seventy city-owned structures were retrofitted with low-flush toilets (toilets that require 1.6 gallons or less per flush). The water savings resulting from this project are estimated as almost 8.5 million gallons per year. Since then, the City has retrofitted 290 additional public buildings.

Houston, Texas has implemented a water conservation education program as one part of a comprehensive plan to reduce water use that has resulted in an overall savings of $3.70 for every $1.00 invested in water conservation. The education program promotes retrofitting of older structures with efficient fixtures, and works through city schools, a T-shirt design contest, a display used at festivals and meetings, and a public speaking program. Although not funded from the CWSRF, these types of activities would be eligible for funding.

Challenges Ahead

EPA encourages states to use their CWSRF resources to finance the widest variety of water quality projects while addressing high priority projects in targeted watersheds. Those interested in advancing water conservation and reuse should seek out their CWSRF programs, gain an understanding of how their state program works, and participate in the annual process that determines which projects are funded.

For more information on the CWSRF, or for a program representative in your state, contact:

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