Activity Update

Funding Decentralized Wastewater Systems Using the Clean Water State Revolving Fund

The Clean Water State Revolving Fund (CWSRF) is a low-interest or no-interest source of funding for the installation, repair, or upgrade of "decentralized" wastewater systems in small-town, rural, and suburban areas.

Decentralized systems treat approximately 4 billion gallons of wastewater daily.

Decentralized wastewater systems, also known as septic or onsite systems, include individual onsite and/or cluster wastewater systems used to collect, treat, and disperse relatively small volumes of wastewater. An individual onsite wastewater treatment system relies on natural processes and/or mechanical components to collect, treat, and disperse or reclaim wastewater from a single dwelling or building. A cluster system is a wastewater collection and treatment system under some form of common ownership that collects wastewater from two or more dwellings or buildings and conveys it to a treatment and dispersal system located on a suitable site near the dwellings or buildings. Decentralized projects may include a combination of these systems.

There are an estimated 26 million households that use decentralized wastewater systems. While an estimated 10-20% of homes experience malfunctions each year, appropriately managed onsite systems can perform effectively to protect human health and the environment and are a key component of our nation's wastewater infrastructure. EPA recommends that decentralized systems be managed under a central management entity with enforceable program requirements, as stated in the *EPA Voluntary Management Guidelines*.

Clean Water State Revolving Fund

Challenges

ASSOCIATED WITH DECENTRALIZED WASTEWATER SYSTEMS

BACKGROUND

In the 1970s and 1980s, large federal investments in the construction of wastewater facilities focused primarily on large, centralized collection and treatment systems. This effort did not recognize the benefits of properly managed decentralized wastewater systems in achieving the goals of the Clean Water and Safe Drinking Water Acts.

PROBLEMS

In many existing communities, the initial decision to install a particular system (i.e., to hook up to a centralized system or to use a decentralized system) is primarily made in the private sector by the developer of a property, based on affordability, profitability, and availability of a central sewer system. In small communities with limited or no access to a centralized system, developers typically choose the most common, affordable, and easily installed systems. Once installed, these conventional onsite systems are often not inspected or maintained except in emergency situations when wastewater backs up into homes and backyards.

Nationwide data shows that conventional onsite system failures can be attributed to the following:

- Improper placement and/or site evaluation
- Improper system selection and design
- Poor installation practices
- Improper operation or insufficient maintenance

Malfunctioning systems can cause contamination of groundwater and nearby surface waters. Many state and local regulatory codes have not been updated to discourage or eliminate inadequate practices and/or allow the use of new technologies with demonstrated performance. As a result, small communities may incur significant burdens where more affordable alternative wastewater systems are not considered or permitted.

Decentralized Cluster Wastewater Systems

A SUSTAINABLE SOLUTION

Both individual and cluster onsite wastewater treatment systems offer an approach to wastewater management that is characterized by *smaller, simpler wastewater systems* sized for specific areas, communities, or developments and not generally intended to serve all of the foreseeable needs of a large service area. By focusing on smaller areas where the wastewater is treated and reused close to where the wastewater is generated, decentralized/cluster systems can provide several advantages over conventional centralized collection/treatment/discharge wastewater systems.

BENEFITS

- More cost-effective due to lower capital costs
- Simple, easy-to-maintain technologies with lower O&M requirements and lower energy consumption
- Can be designed for a variety of site, size, and soil conditions, e.g., shallow water tables
- Can provide consistently high levels of treatment and can meet groundwater standards with subsurface drip irrigation
- Can provide enhanced opportunities for wastewater reuse due to the proximity of the treatment systems to the areas where the wastewater is produced (eliminating the need to transport raw wastewater or treated reuse water long distances)
- Provide greater opportunity for "green development," such as conservation subdivisions, cluster/village development, preservation of green space, and land use planning

The key to being able to achieve these benefits of onsite wastewater systems is **proper management**—including planning, design, construction, operation and maintenance, and adequate user fees to provide financial stability for the system.

Funding Assistance

FOR DECENTRALIZED WASTEWATER SYSTEMS

STIMULUS FUNDS

The American Recovery and Reinvestment Act of 2009 (ARRA; also known as "Stimulus Funds") provides an additional $4 billion for the Clean Water SRF. These funds are to remain available for obligation or award to states only until September 30, 2010. All communities receiving ARRA funds must have their projects under signed construction contracts by February 17, 2010. States can capture these funds through the state/EPA capitalization grant process. Twenty percent of each state's capitalization grant can go toward "Green Reserve" projects, which are defined as: green infrastructure, energy efficiency projects, water efficiency projects, or innovative environmental projects. States have only 180 days from the date of the ARRA legislation or until August 17, 2009 to qualify projects for the 20% grant funds. Decentralized wastewater systems are well-positioned for Green Reserve funding as "categorically qualifying," innovative environmental projects. States may use ARRA funds for decentralized wastewater treatment solutions to existing deficient or failing onsite systems. More information can be found at **http://www.epa.gov/water/eparecovery/**.

THE CLEAN WATER STATE REVOLVING FUND (CWSRF)

The U.S. EPA encourages states to open their CWSRFs to the widest variety of water quality projects. Those interested in implementing or upgrading a decentralized treatment system should seek out their CWSRF program, determine whether their state CWSRF has the legal authority to make loans for decentralized projects, and participate in the annual process that determines which projects are funded.

States have developed mechanisms for providing CWSRF capital to communities for the construction of small or privately owned wastewater treatment systems. Pass-through loans, clean water "sister" financing agencies, and other local clean water funds all facilitate the movement of funds from state-level CWSRF capitalization grants to local, private projects. Read our "Clean Water Success Stories" for examples of how these funding mechanisms work.

HOW IT WORKS

CWSRF 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 CWSRFs over terms as long as 20 years. Repaid funds are recycled to fund other water quality projects. These CWSRF resources can help supplement the limited financial resources currently available for decentralized treatment systems.

Projects that may be eligible for CWSRF funding include:

- New system installation (single and clustered systems) to correct an existing nonpoint source problem
- Replacement, upgrade, or modification of inadequate or failing systems
- Costs associated with the establishment of a centralized management entity* (permitting fees, legal fees, etc.)
- Capital associated with management programs (trucks, storage buildings, spare parts, etc.)

* We encourage the establishment or designation of a management entity for all decentralized projects.

Acceptable management entities include cities and counties, special governmental units (sanitary districts, county service districts, etc.), public or private utilities, private corporations, and nonprofit organizations.

CALL TO ACTION

The 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 implementing or upgrading a decentralized treatment system should seek out their CWSRF program, learn how their state program works, and participate in the annual process that determines which projects are funded.

Funding Assistance

FOR DECENTRALIZED WASTEWATER SYSTEMS

CAPACITY OF THE CWSRF

Nationally, with over $70 billion in cumulative available funds, the CWSRF has issued nearly $69 billion in loans since 1988. In recent years, the CWSRF has funded over $5 billion worth of water quality projects annually. Clearly, the CWSRF can be a powerful financial resource for funding decentralized systems projects.

WHO MAY QUALIFY?

The Clean Water Act (CWA) of 1987 authorized the CWSRF to fund point source (§212), nonpoint source (NPS) (§319), and estuary (§320) projects. Decentralized system projects that are solutions to nonpoint source problems may be eligible as §319 or §320 projects. Included in a long list of eligible CWSRF loan recipients for NPS and estuary projects are community groups, farmers, homeowners, small businesses, conservation districts, and nonprofit organizations. Since the program is managed by the states, project funding varies according to the priorities, policies, and laws within each state. Eligibility requirements also vary by state.

GETTING A PROJECT FUNDED

Given that each state administers its own CWSRF program differently, your first step in seeking a CWSRF loan is to contact your state CWSRF representative. The list of CWSRF state representatives can be found on our website at: **www.epa.gov/owm/cwfinance/cwsrf/index.htm**.

Here are some suggested questions to ask your representative:

- Does the state have the legal authority to use its CWSRF for decentralized systems?
- Does the state SRF agency have a "Green Reserve Projects' list?
- Does the state CWSRF enabling legislation provide the legal authority to provide loans to an individual or private entity?
- Has the state committed to funding decentralized systems in its CWSRF Intended Use Plan (IUP)?
- If not, what can I do to help get these systems listed on the IUP?
- Can an individual or private entity receive a CWSRF loan for a decentralized system?
- If not, can I receive a CWSRF loan through my county?

Your CWSRF state representative will be able to guide you through the proper channels. In addition, you can refer to the case studies under the "Clean Water Success Stories" section of this fact sheet for further details on a popular approach to implementing a CWSRF/ decentralized systems state program.

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 level of creativity in developing sources of repayment. 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
- Donations or dues made to nonprofit groups
- Stormwater management fees
- Wastewater user charges

Funding Assistance

FOR DECENTRALIZED WASTEWATER SYSTEMS

OTHER FEDERAL SOURCES

EPA 319 GRANTS

Section 319 of the Clean Water Act provides the statutory authority for EPA's Nonpoint Source Program. This program provides funds to states to restore waters adversely affected by nonpoint source pollution, and to protect waters endangered by such pollution. Most states have nonpoint source management plans that allow for the use of Section 319 funds for decentralized wastewater system projects.

The program has provided money to small communities and state agencies to construct decentralized wastewater systems in areas where these systems are more cost-effective than centralized systems. Nonpoint Source Program funds have also been used to repair decentralized systems where such systems are common. Finally, these funds have been and will continue to be used for decentralized system technology demonstration projects.
For more information, visit their website at: **www.epa.gov/owow/nps/cwact.html**.

USDA RURAL UTILITIES SERVICE (RUS)

Water and Waste Disposal Loans and Grants are available to develop water and waste disposal (including solid waste disposal and storm drainage) systems in rural areas and towns with a population not in excess of 10,000. The funds are available to public entities such as:

- Municipalities
- Counties
- Special purpose districts
- Indian tribes
- Nonprofit organizations

Grant funds are available to reduce water and waste disposal costs to a reasonable level for rural users. Grants may be made for up to 75% of eligible project costs in some cases. RUS also guarantees water and waste disposal loans made by banks and other eligible lenders. The facilities financed must be owned and controlled by the borrower/grantee. Financed decentralized systems would have to be owned and managed by the RUS borrower/grantee.

The programs are administered by USDA Rural Development offices located throughout the country. Additional information including local contacts may be found by visiting their web page at: **www.usda.gov/rus/water**.

HUD COMMUNITY DEVELOPMENT BLOCK GRANT

The state-administered Community Development Block Grant program (State CDBG) provides annual grants to 48 states and Puerto Rico. The states and Puerto Rico, use the funds to award grants for community development purposes to smaller cities and counties. The states of Hawaii and New York have not chosen to administer the program.

As a result, in those two states, HUD directly administers the awarding of CDBG grants to smaller cities and counties.

CDBG grants can be used for numerous activities, including rehabilitation of residential and nonresidential structures, construction of public facilities, and improvements to water and sewer facilities. For more information, visit their website at: **www.hud.gov/cpd/cdbg.html**.

NON-FEDERAL ASSISTANCE

In addition to funding available from the federal government, several states have created infrastructure funds which can fund the development of local onsite infrastructure. State-funded programs supporting decentralized systems are ongoing in several states including Massachusetts, North Carolina, Pennsylvania, and Virginia.

Clean Water Success Stories

RHODE ISLAND

The Rhode Island Clean Water Finance Agency (CWFA) has successfully developed innovative partnership programs and lending practices. One such program is the Community Septic System Loan Program (CSSLP). To expand its borrower base, the Rhode Island CWFA crafted CSSLP in cooperation with the Rhode Island Department of Environmental Management and Rhode Island Housing. The CSSLP puts low interest SRF funds within the reach of all communities.

The CSSLP allows communities to access SRF funds to repair or replace failed, failing, or substandard septic systems.

Thus far, the Rhode Island Clean Water Finance Agency has made CSSLP loans totaling $2.95 million. Approximately 400 septic systems have been repaired or replaced to date, resulting in significantly improved water quality in many of Rhode Island's small communities.

TOWN OF COLCHESTER, VERMONT

Colchester received $450,000 in CWSRF funds to capitalize a homeowner septic system revolving loan fund. The Town's location on the shore of Lake Champlain makes water quality a priority, but plans to extend existing sewer lines were unpopular with residents due to affordability concerns.

The revolving fund allows Colchester to assist local property owners in repairing and replacing septic tanks without adding a significant financial burden to the community at large. This project demonstrates that a municipality can develop and effectively run a complete financing and regulatory program for individual septic systems.

ALABAMA

The Alabama Department of Environmental Management has made $15 million in financial assistance available to the South Alabama Utilities using funds from the FY 2008 Clean Water State Revolving Fund (CWSRF) loan program.

The proposed work will consist of the construction of decentralized wastewater treatment systems in three subdivisions: Colleton, Labrador Run, and Johnson Road, located in West Mobile County. West Mobile County is a rapidly developing area with no public sewer service available.

The proposed use of decentralized treatment and disposal is a cost-effective, environmentally sound option for meeting public demand for sewer service and avoiding potential health concerns related to the use of septic tanks. The expected cost of the projects is approximately $1.25 million. The remaining funds will be used for paving, topsoil, seeding, and other miscellaneous improvements to the Citronelle Lagoon.

For more information about the Clean Water Revolving Fund, or for a program representative in your state, please contact:

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