
Chapter 5

EPA'S ABILITY AND PLANS TO IMPLEMENT DECENTRALIZED TREATMENT SYSTEMS

BACKGROUND

Over the past 20 years, EPA has put considerable resources into helping small communities meet their wastewater needs. This has been accomplished in many ways -- public education, technical assistance, technology transfer, research, demonstrations, and financing. It has been accomplished directly by EPA and state staff, and indirectly through federal funding of the many associations that have come together to support small community needs. Most of the outreach, which includes technical assistance and education has been grouped under the umbrella of EPA's Small Community Outreach and Education Program (SCORE). While EPA personnel have provided some direct technical assistance to small communities, EPA has primarily leveraged state outreach programs through grants and other assistance activities. In addition, assistance to other technical service providers foster activities such as development and distribution of educational materials, telephone consultation, classroom training and field assistance and training. In recent years, EPA's outreach program has been expanded to include special populations such as Native American Tribes and low income "colonias" along the U.S. - Mexico border.

This section responds to both areas raised by the House Appropriations Committee concerning EPA's ability to implement the alternatives within the current statutory and regulatory structure, and EPA's plans for implementation using fiscal year 1997 funds. Described below are ongoing and planned activities and programs conducted by EPA or with EPA assistance, which provide a framework for implementing alternatives such as decentralized treatment systems.

FUNDING

The Construction Grants Program required all but 4 or 5 states to set aside 4 percent of their annual allotments for communities with populations of 3,500 or less to be used only for alternatives to conventional sewage treatments works (Sec.205(h)). Many of these communities have treatment facilities which serve as demonstrations of decentralized technology. Last year, EPA initiated a program to conduct assessments of many innovative technologies funded under the Construction Grants program, and any other new technologies which have been put into use more recently. These assessments will continue over the next several years. As the assessments are completed, the information will be provided to our customers in various formats from technical reports to fact sheets to pamphlets.

than for conventional systems. As a result, financially strapped small communities are not able or are reluctant to incur additional costs without financial assistance. At the same time, most small communities are not informed of how to pursue outside funding sources.

Overcoming the Financial Barriers. There are other federal sources of funding for public as well as private entities. The U.S. Department of Agriculture's Rural Utility Service provides funding through the Water and Waste Disposal loan and grant program to public entities, Indian tribes, and organizations operated on a not-for-profit basis, such as an association, cooperative, or private corporation.

Public grant and loan funds for wastewater management should be utilized to a greater extent to manage decentralized wastewater systems where eligible (i.e., the Rural Utilities Service's funding program, EPA's Hardship Grants program, the Clean Water SRF program for nonpoint source control and the CWA section 319 program). Community officials should be educated on these eligibilities.

Although there is no specific set aside for small communities or alternative systems in the Clean Water State Revolving Fund program (SRF), decentralized technologies are eligible for funding. EPA staff are aware of decentralized systems funded by the SRF around the country. In Pennsylvania, local banks process SRF loans for homeowners which fund onsite systems. Minnesota has developed the Clean Water Partnership Program that has provided funds to Brown, Nicollet and Cottonwood counties to re-loan to homeowners for conventional onsite system replacements. SRF funding has also provided assistance to the Osakis Lake Project to replace failing systems around Osakis Lake. The state of Washington provides SRF loans to local loan funds. These funds in turn provide loans to homeowners and small businesses for the rehabilitation or reconstruction of onsite systems. Ohio, Virginia and West Virginia are developing similar programs.

In an effort to expand the types of projects funded by the SRF, EPA issued the "Clean Water State Revolving Fund Funding Framework" in October 1996. This document was developed in conjunction with state SRF partners to clarify the eligible uses of SRF funds and provide tools to establish relative priorities among water quality projects. States are encouraged to assess water quality problems on a watershed basis and develop integrated priority setting processes. With the expansion of the SRF to cover activities included in EPA approved nonpoint source management plans, onsite treatment projects have a much greater potential for funding by the SRF. EPA plans to sponsor training workshops to further educate the nonpoint source community about the SRF as a potential source of funding for nonpoint source projects (including onsite systems) and facilitate coordination with the state SRF programs. Demonstration grants have also been issued to six states to develop integrated priority setting systems that can be used as models by states.

Recognizing that several federal agencies provide funds for wastewater collection and treatment, EPA is participating in an effort with USDA's Rural Utility Service and HUD to provide funding to communities in a more efficient and less burdensome manner. Improved coordination and cooperation between the Agencies will include:

- o Coordinating funding cycles and selection systems on a State-by-State basis,
- o Promoting the use of a lead agency for jointly financed projects, where suitable, to receive and review environmental review documents and ensure compliance with Federal cross-cutting legislation, and
- o Encouraging the use of a single application on a State-by-State basis to address similar data requirements.

A memorandum outlining this effort, to be signed by the three Agencies, is being prepared. Follow-up actions to implement these improvements will be undertaken in fiscal years 1997 and 1998.

Most recently, EPA issued guidelines for a new \$50 million Hardship Grants Program for Rural Communities. To qualify for hardship assistance a grantee must be a rural community with a population of 3,000 or fewer; lack centralized wastewater collection or treatment; have a per capita income less than 80% of the national average; and have an unemployment rate of one percent or more above the national rate. This program is designed to be managed in conjunction with the SRF program to make wastewater treatment more affordable to rural, economically disadvantaged communities. The Hardship Grant funds can be used to plan, design and construct publicly-owned wastewater treatment works and/or provide training programs for sanitarians related to the operation and maintenance of such systems. Although no grants have yet been made to communities, it is expected that many communities receiving hardship grants will have failing septic tanks. Decentralized systems may be viewed as the most economical treatment option for dispersed, rural communities. Examples of technical assistance that may be provided to communities are over-the-shoulder training, educational seminars, and assistance with development of local management districts. States that take advantage of this program can make strides toward eliminating the barriers identified earlier in this response. Financial assistance under this program will be provided to qualifying communities during fiscal years 1997 and 1998.

CWA Section 319 program grants are also available to assist States in implementing approved nonpoint source management programs. Section 319 grants have been used to support numerous projects that relate to decentralized system program implementation and technology demonstrations. Examples of projects that have been funded through Section 319 include: Demonstration of Alternative Onsite Systems; Maintenance of Onsite Constructed Wetlands; Analysis of Onsite Sewage System Impacts on Groundwater Quality; Onsite Septic System Demonstration and Training; Septic System Survey; Septic System Inventory and Inspection Education Program; and Evaluation and Upgrades of Onsite Systems.

OUTREACH, TRAINING AND EDUCATION

In addition to the ongoing outreach efforts conducted by EPA staff, several significant efforts, described below, are underway and will continue, which provide technical assistance to small communities.

Since 1979, EPA has funded the National Small Flows Clearinghouse, at West Virginia University in Morgantown. The Clearinghouse is the national repository and referral service for the transfer of information on decentralized, onsite, alternative collection and small treatment technologies and serves as a model for several other countries which are interested in establishing similar programs. The Clearinghouse services include: (1) a toll-free technical assistance hot line which answers over 3,000 assistance calls per month, (2) product distribution, which involves filling over 1,000 orders monthly for 10,000 publications, articles, reports, and videotapes, (3) publication of two newsletters and a professional journal reaching over 7,000 subscribers, (4) several national computer data bases on small community wastewater technology

and regulations, and (5) a site on the World Wide Web. The Clearinghouse has a wealth of information available that can provide state and local regulators with the means to change laws and make technical decisions. Examples include: (a) maintaining a database and summary of all state regulations relating to onsite systems; (b) a recent survey of all health departments in the nation, identifying such information as the number of households served by conventional onsite systems, how many are failing, and what local regulations apply; (c) establishing a database on the testing of various onsite technologies conducted by six states in New England, and will also facilitating communication among the states regarding the testing results. The Clearinghouse services are being used more and more each year.

The Small Towns Environment Program (STEP) was funded several years ago through a grant to Rensselaerville Institute as a grass-roots, self-help program. STEP encourages the use of small alternative wastewater systems and calls for citizens to perform many functions the community would otherwise pay outsiders to do.

EPA also funds an organization based at West Virginia University, the National Environmental Training Center for Small Communities (NETCSC). This center supports environmental trainers nationwide through development and delivery of training curricula and training of trainers. Services also include a toll-free telephone line, quarterly news letter, and a training resource center with computer databases. Several courses have been developed on wastewater topics, including onsite and decentralized treatment. Examples include: "Assessing Wastewater Options for Small Communities", "Basics of Environmental Systems Management", "Onsite Wastewater System Operation and Maintenance", and "Operation of Sand Filters".

Some state organizations have already taken responsibility for onsite training. Presently at least six states have an organization with a center for training personnel associated with installing and regulating onsite wastewater systems (Arizona, Missouri, North Carolina, Rhode Island, Texas and Washington). EPA recently awarded a grant to the NSFC for establishment of a new onsite training center in Vermont.

TECHNOLOGY AND DEMONSTRATIONS

EPA's technology and demonstration programs have fostered and collaborated with others over the past 25 years to provide many of the technical guidance materials available today. Listed below is a summary of work that is currently underway.

- o The National Onsite Demonstration Project is a three-phased, \$3.5 million program to demonstrate alternative onsite wastewater systems. Funded by EPA through the NSFC, this program includes construction and monitoring of demonstration facilities, community education programs, technology transfer and building the capacity of states to implement appropriate systems. This project started in 1993 and is expected to be

completed in the year 2000. Demonstration projects have been started in 12 communities in 10 states.

- o EPA is in the process of updating two of its design manuals: "Design Manual for Onsite Systems" and "Design Manual for Constructed Wetlands Wastewater Treatment Systems". The Design Manual for Onsite Wastewater Systems is currently under development and is expected to be published in 1998. The manual on constructed wetlands will be completed within the next year. A manual on Small Community Technologies was recently updated.
- o Several grants have been awarded, in the past two years, under the Environmental Technology Initiative, to design and demonstrate onsite technologies. These projects will be getting underway this year and the results will be made available within a couple of years, when demonstrations are completed.
- o A grant to develop a research agenda for the field of onsite wastewater treatment and to begin some targeted research efforts is currently being prepared for award sometime later this year. This grant should help to coordinate research and uncover significant needs that are currently being missed.
- o Within EPA, discussions are being held to establish a small community wastewater technology testing and verification program under the Environmental Technology Verification (ETV) program. ETV is a new program to verify the performance of innovative technical solutions to problems that threaten human health or the environment. This would allow manufacturers of onsite system technologies to obtain independent testing of their technologies. It would also allow state and local authorities to know that the technologies will meet acceptable standards.
- o EPA's ground water program in cooperation with the wastewater program is currently developing a guidance manual for large septic systems; a type of decentralized treatment. This guidance is also under final quality review at this time and will be published by the end of the year.
- o Outside EPA, and without EPA funds several demonstrations of technologies are also being conducted. Five onsite demonstration projects are being initiated this year by the Pennsylvania State Rural Electric Cooperative Association. The State of North Carolina has numerous demonstration activities focused on decentralized and onsite treatment. EPA will utilize these demonstrations in assessing new technologies. Also the NSFC is establishing a database which will serve as a repository of information on all projects demonstrating onsite wastewater technology.

PROGRAM DEVELOPMENT

EPA plans to collaborate with other federal agencies to develop guidance to assist communities to implement management systems. One such guidance document has been developed titled, "On-site Wastewater Management and Protection of Sensitive Receiving Water Systems: Planning for Opportunities." EPA also plans to promote the development of decentralized management programs which are based on performance goals. Under this effort, EPA plans to provide analytical tools and guidance to assist state and local governments in revising and updating decentralized system programs.

The Office of Water has promoted the watershed concept over the past several years to move toward the place-driven approach which will give holistic attention to ecosystems. This approach places the focus of watershed pollution abatement needs on the clean-up activities which will allow watersheds to meet their designated uses. Some watershed analyses have identified onsite systems as sources of pollution.

EPA is collaborating with other federal, state and local agencies as well as private partners, to achieve the ultimate goal of a healthy ecosystem in these watersheds. Many of the tools needed to accomplish this work already exist, although additional tools will be developed. They will have to be applied by the state and local authorities to solve the pollution problems that remain.

Once completed, the Office of Water will transmit this response to EPA Regional offices, State agencies, the National Rural Electric Cooperative Association, and other stakeholders and encourage them to take follow-up actions, as appropriate, to promote improved management and operation of decentralized wastewater treatment systems.