

Maximizing Wastewater Project Planning Activities

by Candace Balmer

Introduction

In New York State, as in the rest of the country, there is a tremendous need for community wastewater solutions. Partly, this is because we have some of the oldest infrastructure in the country. Aging infrastructure is often too small, too inefficient, or too decrepit to meet today's needs. Watershed-specific regulations can impose stricter, and more costly, treatment requirements. Larger communities, in particular, must also keep pace with new and unfunded regulatory mandates regarding, for example, storm-water contaminant management.

There is also a large, unmet need for new systems. Many small community centers are still served by individual on-site septic systems. Usually, these systems are located on small lots, often in poor soils incapable of providing adequate treatment. For communities that also lack a municipal water system, lack of adequate separation distances between well and septic system poses an ever-present threat of drinking water contamination.

Project Planning and Development Is Challenging

Implementing a successful municipal wastewater project can be a challenge, especially for small communities. Planning and management require commitment and follow-through. Elected officials in smaller municipalities are often only part-time administrators, and they may be unprepared initially to handle the multiple tasks involved in implementing large municipal projects.

Typical project costs are much higher than they were even three years ago, mainly due to the significant increases in the price of materials, the need for compliance with new regulations, and the greater emphasis on security. If the community already has a municipal wastewater system, there may be political resistance to raising rates, even for regular maintenance. If the community has no system, it is often because residents have voted down a municipal project in the past,

often more than once, and usually for the same reason: cost.

Financial hardship is more widespread than might be imagined: in 2002, fully one-fifth of U.S. households earned less than 125 percent of the federal poverty level (that is, less than \$23,250 for a family of four). Rural areas are hit the hardest: due to the economies of scale and density of service area, rural residents generally pay a larger portion of their income for wastewater service than residents of metropolitan areas. In general, there are also fewer social services and programs for low-income folks in rural areas.

Infrastructure funding programs are only part of the solution. The primary agencies that help fund municipal wastewater infrastructure are experiencing budget restrictions of their own. There are limitations to the amount of assistance they can provide. It is not unlikely that a project will require co-funding, that is, funding from more than one agency. Also, not all projects are eligible. Project eligibility is based on priority in terms of the impact on public health and/or environmental quality, affordability and community need, and the potential for success through partnering and/or co-funding.

Infrastructure Funding Programs May Be Limited

As a technical assistance provider for small-community wastewater project planning, I am often asked, "Can you help us find grant money for our wastewater project?" If the project beneficiaries have a sufficiently low income level, and/or the project is of some priority, we can explore eligibility for federal and state loan and grant programs. However, in recent years, funds have become much scarcer, and the competition has gotten fiercer. What are some of the forces at work, and what can a community do to better their odds of implementing a needed wastewater project?

The U.S. Department of Agriculture Rural Development (RD) Water and Wastewater Loan and Grant Program has been the major municipal infrastructure lending program for the better part of a century. Loan and grant eligibility is based mainly on the median household income (MHI) of the service area (if household incomes are ranked in order, the median is the one in the middle), the financial impact of the project on users, and a comparison of costs of similar systems. While some projects may be eligible for grant monies, all RD funding packages include a mandatory loan component. Unfortunately, RD has had to scale back the size of its grant awards in the face of federal budget cuts. Maximum RD grant awards are not expected to exceed \$500,000 in the foreseeable future, regardless of need or program eligibility.

The primary purpose of the Clean Water State Revolving Loan Fund (CWSRF) is to help fund the upgrade of existing wastewater systems through subsidized interest-



Oxidation ditch paddles must be replaced, a necessary maintenance cost.

Photo credit: Sandra Lizlors

rate loans. Until recently, there was sufficient money to also fund the construction of new systems. Now projects are being ranked according to priority. If the project priority score is not high enough, the project will not be funded. The inherent project scoring bias toward the upgrade of existing systems makes it difficult for a proposed new system to score above the funding line, and thus become eligible for a low-interest loan. Existing system upgrade projects are also being forced to compete with each other for the program's dwindling dollars.

The federal Community Development Block Grant (CDBG) program, administered by the New York State Governor's Office for Small Cities, can provide grants in project service areas with 51 percent or less low-to-moderate income individuals (that is, earning 80 percent or less of the HUD-adjusted median family income). Practically speaking, these are very low-income communities. The maximum single-purpose grant award is \$400,000, so it is most useful for smaller projects and for gap funding.

Tips for Maximizing the Project Planning Process

There are steps a community can take to make sure their proposed project is as competitive as possible. Successful project development depends on early and thorough planning and a commitment from the community to see the project through.

Begin planning now.

Communities need to be aware of their current and future wastewater treatment needs and what their options are. This topic should be high on the radar screen of master planning committees. County planning agencies and other professional planners can help evaluate demographic trends and community development options. Regular stakeholder meetings contribute to the exchange of ideas and to the sense of community ownership of plans. During this exploratory phase, the community can invite different engineering firms to discuss in general some of the more practical aspects of the community's needs and how these needs might be addressed.

Exercise administrative will.

It is not uncommon for a community wastewater project to take several years from planning to implementation. There are numerous managerial, financial, and technical tasks to be accomplished. Community

leaders need to recognize the demands that will be imposed. There can be turnover of administration. There may be project opposition. It is therefore helpful to establish an ad hoc wastewater committee that can both represent and advise the town board over the long term. Identify individual community members or elected officials to sit on the committee who can serve as "spark plugs" to help move the project along.

Take advantage of technical assistance.

A variety of no-cost technical assistance is offered through the funding agencies, regulators, county agencies, and private organizations such as RCAP Solutions. Other technical assistance, planning, and grant-writing services can be contracted. Technical assistance providers are familiar with the process of project development, funding eligibility criteria and applications, special district formation, procuring professional services, and other project tasks, and they can help guide the community throughout the life of the project. These services are for project planning and coordination. They do not substitute for professional engineering services but are recognized to be of vital importance for small communities.

Think critically.

Once it becomes obvious that the town needs to move forward with a feasibility analysis, the first concrete step toward moving from planning to implementation is completion of a preliminary engineering report (PER), which describes the service area and needs, planning and design options, and associated cost estimates. Even in this early phase, it is important to be discriminatory. Consider procuring professional services using a request for proposal or request for qualifications process. It not only gives municipal officials an opportunity for an exchange of ideas and a comparison of approaches, but it is also required if federal funds will be used to pay for professional services. Select a consultant based on successful experience with similar projects in similar communities. Pay close attention to projected operations and maintenance (O&M) costs, particularly with respect to energy efficiency. These expenses are not eligible for reimbursement under infrastructure funding programs.

Evaluate funding eligibility.

In today's economic climate, it is possible

that a successful project will require financing from more than one source. It is important to involve representatives from all potential funding agencies early in the planning process for valuable input on design and funding strategies and how to maximize the project priority. Funders and technical assistance providers can assist with the completion of preliminary funding eligibility applications. Supporting documentation usually includes a PER, and it may also involve an income survey to document financial need. An income survey is important if the community has reason to believe that the MHI of the proposed project area is measurably less than that recorded by the 2000 census. Usually this is because the service area represents a smaller, and lower-income, portion of the community than the area encompassed by the census.

Involve regulators.

Meet early with representatives from the New York State Department of Environmental Conservation and other regulating agencies. They can help guide the project, educate project beneficiaries, and ensure that the project design meets agency approval criteria.

Explore design and management options.

Communities that are planning a system for the first time will want to explore system design options to minimize both capital and O&M costs. Consulting firms and other community advisors are not necessarily aware of, or do not have experience with, lower-cost options for small community wastewater systems, so community leaders may need to take the time to educate themselves. Smaller communities may benefit from exploring options such as small-diameter collection pipes, cluster systems, or more energy-efficient treatment technologies. It is important to keep in mind, though, that regulators may resist proposals for alternative or emerging technologies if they believe they do not have a proven track record. For very small communities, municipal management of individual on-site systems and/or clusters may also be a viable or even the only affordable alternative to community-wide collection and treatment.

Make O&M a priority.

It is usually less expensive and easier to maintain and upgrade a system periodically than to indulge in crisis management. Rates

should be evaluated annually to keep pace with expenses and also to avoid periodic hefty rate increases. Even small communities should have a capital reserve account to handle intermittent expenditures. Small systems can also minimize O&M by sharing a wastewater operator with a neighboring system.

Assist low-income homeowners.

Housing rehabilitation programs may be able to help with the cost of individual service laterals for low-income homeowners and residential facilities. Federal programs include the CDBG Housing Rehabilitation program, whereby a community can collectively apply for housing rehabilitation money for individual low-income homeowners, and RD's Section 504 Home Repair Loan and Grant program for individual elderly and/or low-income homeowners.

Keep customers informed.

Community leaders need to appreciate that they are managing a commodity that people want. People are more likely to value the public health, environmental, and economic benefits they receive if they understand what they are. Education is the key to fostering an appreciation of the value of wastewater treatment and a willingness to

pay for services and necessary rate increases. Some techniques for facilitating community involvement and education include public information meetings, periodic press releases, community newsletters, coalition building with local and regional environmental entities, and fostering school programs that promote environmental stewardship.

Educate legislators.

Local, state, and federal legislative representatives can be important allies when building community support and pursuing project financing.

Conclusion

Ultimately, the success of a wastewater infrastructure project depends on many factors, not the least of which is timing. Community support, funding availability, administrative will, and project advisors all change over time. To best be able to take advantage of opportunity, community officials need to stay informed about changing community needs, infrastructure and management options, and estimated project costs. They also need to stay in touch with their community, and with funders, regulators, technical assistance providers, consultants, and legislators. Even with funding

opportunities on the decline, there are actions the community can take to be competitive for those monies that are available. Early and ongoing planning activities prepare the community to make essential decisions critical to protecting public health and water quality.

Candace Balmer has an M.S. in environmental engineering, a B.A. in anthropology, and an A.A.S. in water quality monitoring. She has more than seven years of experience as a water resource specialist with RCAP Solutions Inc., assisting rural communities in taking practical steps towards solving water and/or wastewater problems. She also has more than 15 years of experience in the areas of project management, corporate relations, community relations, business and product development, and higher education. She is vice chair of the New York Onsite Wastewater Treatment Training Network and chair of the Curriculum Development Committee.

RCAP Solutions: Resources for Communities and People

RCAP Solutions (formerly RCAP, the Northeast Rural Community Assistance Program) is a comprehensive nonprofit community development organization providing direct services and community consultations to rural communities throughout the Northeast U.S., Puerto Rico, and the U.S. Virgin Islands. For over 30 years, RCAP Solutions and its partners have worked together to foster self-sufficiency and an improved quality of life for underserved individuals, families, and small communities.

The New York State program provides direct technical assistance to rural communities in gaining access to adequate and affordable drinking water supplies and wastewater treatment systems. RCAP Solutions also provides training and support activities for community development initiatives. These services are typically provided free of charge.

RCAP Solutions' field specialists have a breadth of technical expertise, including environmental resource management, community development, engineering, hydrogeology, water and wastewater systems operations, solid waste, grant writing, and training. The organization actively participates in a national network of federal, state, local, and regional agencies to share information regarding specific problems rural communities face with their community project and infrastructure improvement projects.

The RCAP Solutions Program Benefit

In today's environment, there are a myriad of issues rural communities and their leaders face as they develop community infrastructure and preserve and maintain water resources. It is no surprise to small, rural communities that resolving water and wastewater needs is perhaps one of the most significant and time consuming efforts and investments they will undertake. RCAP Solutions can help communities throughout project implementation, from public participation and coalition building, to planning and development, funding acquisition, project construction, and system management. RCAP Solutions is a valuable resource to consider in your future community development efforts. Major areas of community assistance include

- Resource Protection
- Community Development
- Project Planning and Funding Acquisition
- Management and Finance
- Operation and Maintenance
- Community Development

Technical assistance is just a phone call away. For more information regarding specific program opportunities and assistance, please contact Scott Mueller, New York regional manager at 315-482-2756.