Loan Fund in Works for Water Projects

by P.J. Cameon
Water Sense Associate Editor

Editor’s note: The 1996 Amendments to the Safe Drinking Water Act have been signed into law. The following article and the article on page 6 provide some insight into the amendments’ future impact on small water systems.

Water systems should begin seeing the benefits of the new drinking water state revolving fund (DWSRF) sometime in early 1997, according to Jamie Bourne of the U.S. Environmental Protection Agency (EPA).

Bourne is overseeing the development of the new fund, which was one of the provisions of the Safe Drinking Water Act (SDWA) reauthorization passed by Congress and signed by President Clinton this summer.

In the best case scenario, according to Bourne, some states will be issuing low-interest loans as early as late winter, and many other states will be issuing loans in the middle or latter part of 1997.

The drinking water fund will operate similarly to the existing wastewater SRF.

Here’s how the new fund will operate: The federal government will provide most of the initial funding, or “capitalization,” to start each state’s SRF. Each state will provide a minimum 20 percent matching grant as its share. The state will then issue loans to local systems. As the systems repay principal and interest on their loans, that money will be available for additional loans.

A portion of the DWSRF fund will be earmarked for small communities. States can provide up to 30 percent of their federal capitalization grant in the form of “disadvantaged loan assistance” to those systems the states define as “disadvantaged.”

Funds Geared Toward Compliance

The new fund for drinking water can be used toward a range of projects, but the primary focus, Continued on page 4
**Building a Different Type of Infrastructure**

Just as with good roads and quality drinking water supplies, modern communications networks are now crucial if small communities are going to thrive in the “information age.”

Public officials are recognizing this need for communications infrastructure and are taking steps to ensure small communities are connected. One such project involves connecting 33 rural Oklahoma communities to a statewide telecommunications network.

“Developing a statewide capability in telecommunications is absolutely essential to the future of economic development and education in Oklahoma, particularly in rural areas of the state,” said Leo Presley, executive director of the state Department of Commerce. “Such a networking system will make an entire world of information, data, and communications accessible to all Oklahomans.”

The world of information Presley spoke about is expanding daily with the phenomenal growth of the Internet. A Los Angeles Times article from earlier this year gave a conservative estimate of 9.5 million computers connected to the Internet, with that figure doubling every year.

The National Drinking Water Clearinghouse (NDWC), recognizing the importance of Internet communications, has started its own World Wide Web site. (See article on page 3.)

**Drinking Water Resource Guide Available**

The National Drinking Water Clearinghouse (NDWC) has developed a drinking water resource guide that lists nearly 75 federal, national, professional, and trade organizations.

The Outreach Resource Guide: A Directory of Small Community Drinking Water Information includes each organization’s address and phone number, mission statement, and water-related activities.

The mission statements and activities are included to help identify the most appropriate organization for any given situation, says Sanjay Saxena, NDWC program coordinator.

The guide also lists any relevant publications each group offers, as well as the telephone numbers and addresses of state-level, regional, or area offices.

“Many organizations are interested in drinking water or conduct activities that have to do with drinking water,” Saxena says, adding that the guide will hopefully spur additional partnerships among these groups as they address small community issues.

To receive a copy of the resource guide, call the NDWC at (800) 624-8301 and request item #DWBKGN30. The cost for the publication is $6, plus shipping and handling charges.

The resource guide is also available for viewing in the “bulletins” section of the NDWC’s Drinking Water Information Exchange Bulletin Board System (DWIE–BBS).

To access DWIE, you need a computer with a modem and communications software. There are no toll charges to access the system, which can be reached by calling (800) 932-7459. DWIE also may be accessed through the NDWC Web site at http://www.ndwc.wvu.edu.

For more information about accessing DWIE, call the NDWC at (800) 624-8301, and ask for a free brochure about the system or for an instruction guide.
NDWC Is Now Accessible via the Internet

To be more accessible to those interested in small community drinking water issues, the National Drinking Water Clearinghouse (NDWC) has developed a World Wide Web site.

Located at http://www.ndwc.wvu.edu, this new site provides an overview of the NDWC program and its services. It includes abstracts of Water Sense and On Tap, online access to the clearinghouse’s products catalog, information about new products, and links to other relevant sites.

The Web site also includes a “Water Facts” section. These brief facts provide general information about drinking water topics, such as how drinking water is regulated, where water comes from, and how it is treated.

The Web site serves as a link to the Drinking Water Information Exchange Bulletin Board System (DWIE–BBS), a free computer service that allows users to access NDWC information and discuss drinking water issues with others around the country.

Future plans for the site include online access to NDWC’s newsletters and selected products and database information, according to Lauretta Galbraith, NDWC Web site coordinator.

“Because we’re using existing staff to develop and maintain the site, we first would like to evaluate the site’s usefulness to small communities and its impact on our program,” she says.

The NDWC’s two “sister” organizations, the National Small Flows Clearinghouse (NSFC) and the National Environmental Training Center for Small Communities (NETCSC), also have new home pages, which are linked to the NDWC’s site. Information on these sites includes a direct link to the NSFC’s bulletin board system, which provides access to the U.S. Environmental Protection Agency’s Environmental Finance Information Network (EFIN), and NETCSC’s environmental training schedule.

Mike Salkovick, information systems specialist, is serving as Web master for all three sites. He is monitoring feedback from site users, who are encouraged to tell him what they find useful by leaving a message via an online link.

“We’ll weigh the users’ comments as we update and make future improvements to the sites,” Salkovick says.

For more information about NDWC’s Web site, call Galbraith at (800) 624-8301.

RUS Market Rate Lower; Others Unchanged

Two of the three interest rates for Rural Utilities Service (RUS) water and waste program loans remain unchanged. The market rate has decreased slightly.

RUS issues loans at one of three interest rates, according to community qualification criteria. The rates for the first quarter of fiscal year 1997 apply to all loans issued from October 1, 1996, through December 31, 1996. These rates are:

- poverty line rate: 4.500 percent (unchanged from the previous quarter);
- intermediate rate: 5.125 percent (unchanged from the previous quarter); and
- market rate: 5.750 percent (down .125 percent from the previous quarter).

RUS loans are administered through local or state Rural Development offices, formerly known as Rural Economic and Community Development offices. These offices can provide specific information concerning RUS loans and applications.

For the number of your state Rural Development office, contact the National Drinking Water Clearinghouse at (800) 624-8301.
**Loan Fund in Works for Water Projects**

Continued from page 1

according to Bourne, is projects that help systems maintain or come into SDWA compliance and projects needed to “maintain public health.”

Bourne mentioned that land purchases relating to water projects are eligible only if they are integral to projects.

There are also set-asides to help states establish source water protection and capacity development (i.e., sound management) programs and to fund projects related to these activities.

Interest on DWSRF loans can vary from 0 percent to market rates, as determined by each state, according to Bourne. Repayment periods can extend up to 30 years in some cases, and loans can cover up to 100 percent of eligible project costs.

**Helping Hand to Small Systems**

Bourne said traditional funding sources are limited for the types of large-scale capital projects needed to build and maintain drinking water systems. The higher interest rates on some of those funding sources can make a proposed project unaffordable, especially for small systems.

Bourne added that the DWSRF will provide some small systems with a less expensive source of capital financing. The fund includes several provisions to help small systems. These include:

- possibly using loan forgiveness, zero-interest loans, and other financial assistance for small communities;
- requiring that at least 15 percent of DWSRF funding be made available to small systems (serving fewer than 10,000 people) to the extent that funds can be obligated; and
- dedicating up to 2 percent of the DWSRF appropriation for technical assistance for small systems.

**Loan Funding vs. Demand**

As of this writing, there is still some uncertainty as to exactly how much federal money will be made available to capitalize state drinking water loan funds, according to James N. Smith, executive director of the Council of Infrastructure Financing Authorities (CIFA).

Approximately $725 million was expected as initial federal funding, with additional funding to

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**How the New Drinking Water State Revolving Funds Will Work**

Here is a simplified version of how the new drinking water state revolving funds (DWSRFs) will work. The funds will operate similarly to the existing wastewater SRFs. All states and Puerto Rico will have the opportunity to operate their own revolving funds. Funding for the District of Columbia and the U.S. territories will be provided as grants.

*Wastewater SRFs issue loans exclusively. The drinking water funds, however, may issue some subsidized-principal loans to systems with special financial needs.*

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**Federal Government**

Contributes “capitalization” money to start and build each state’s loan fund

**State Government**

Kicks in 20 percent match to federal grant

![DWSRF Diagram](image_url)

<table>
<thead>
<tr>
<th>Water Systems in need of funding</th>
<th>Loans repaid, making money available for more loans</th>
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<tbody>
<tr>
<td>Low-interest loans issued*</td>
<td>State revolving loan fund (and other efforts) to help water systems make needed improvements</td>
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</table>

*Federal and state governments invest money (capitalization) to start the revolving fund. States then issue low-interest loans to water systems to help them make necessary improvements. The systems repay the loans, which allows the fund to provide more loans.*
Continued from previous page
be added each fiscal year. With the fiscal year 1997 appropriation, nearly $1.3 billion will be available this fall, Smith said.

The exact amount of funding Congress appropriates for the DWSRF in future years will depend on the program’s effectiveness in meeting needs and the support given by various drinking water organizations and other interests, he said.

“If Congress senses a consensus of need, and funding is effectively being delivered through the DWSRF, we should see future federal funding close to the $1 billion a year target,” Smith said.

He said there is a tremendous need for this funding. But he drew a distinction between the need for funding and the ultimate demand for DWSRF loans.

He said the demand will depend on the communities’ willingness to improve their systems.

“Communities will have to come forward and complete a loan application, and they will also have to be ready to assume the financial responsibility of taking out a loan,” Smith said.

Other factors in determining demand, according to Smith, include how aggressively the states market their funds to the communities and what interest rates the states offer when issuing loans.

A rate of 2.5 percent, for instance, on a 30-year loan would be highly attractive for a small community, he said, especially when interest on a bond issue is currently hovering above 6 percent. (See bond article on page 1.)

Setting Up the State Funds
The process of setting up a drinking water fund begins when a state formally applies for a capitalization grant, according to Bourne. Draft guidelines on that application process are expected to be completed this fall.

State programs must also have the legislative authority to receive federal DWSRF funds, Bourne added. Thirty-one state programs already have this authority.

“We anticipate that several states may apply by late this year and many more will apply early next year,” Bourne said, stressing that “states can’t receive funds until they apply.”

Bourne said there will be a lag in each state between the time it receives federal funding and the time it actually issues loans for projects. He explained that the states will have to process individual project applications and then wait while project-related work goes out for bid.

“Optimistically, some refinancing loans may be issued as early as spring,” Bourne predicted.

Starting in fiscal year 1998, each state’s share of the federal capitalization fund will be based on a needs survey conducted by the EPA. This needs survey is still under review, according to Smith, so for the first year an existing EPA formula for distributing funding will be used.

States will be able to transfer a portion of the federal capitalization funds between their drinking water and wastewater funds, Bourne said. Transfers will be at the governors’ discretion, and the first year’s grant is not eligible for transfer.

States can use up to 4 percent of the drinking water capitalization funds for administrative expenses.

SRF Has Good Track Record
While Smith said he was not sure how effective the new drinking water fund would be, he suggested that if the existing wastewater SRF is any indication, it could be “a highly successful program.”

Smith mentioned that more than 4,000 loans totaling $20 billion have been issued through the wastewater SRFs since 1987.

“There has not been a single default on any of those loans,” he said.

Repayments on those existing loans are beginning to pour close to $1 billion back into the SRFs each year, allowing for new loans to be issued. Smith noted that if current trends continue, the wastewater SRF could be self-sustaining at a level of around $2 billion by about 2010.

“We’re talking about significant amounts of money here,” Smith said.

Even so, he stressed that this funding doesn’t come close to the estimated demand for wastewater financing.

He mentioned that the last EPA needs survey (for 1992) identified the need for approximately $137 billion to bring all wastewater systems into federal compliance.

“With $1 billion to $2 billion a year [in federal capitalization], we’re not coming close to meeting the need,” Smith said.

All 50 states and Puerto Rico operate wastewater SRFs.

Water systems interested in DWSRF funding should contact their state drinking water program. For the telephone number, call the NDWC at (800) 624-8301.

CIFA is sponsoring a national SRF workshop in Albuquerque, New Mexico, November 17–19, 1996. Included in the conference will be a discussion of how the drinking water funds will be coordinated with the wastewater funds. For more information, contact Tara Powers at (202) 371-9694. $
**SDWA Financial Impact Pondered**

*Editor’s note: In this article we ask three drinking water industry experts to identify one aspect of the Safe Drinking Water Act reauthorization they are interested in and discuss how that aspect might impact small water systems financially. Other financial implications will be discussed in future issues of Water Sense.*

In one way or another, the 1996 reauthorization of the Safe Drinking Water Act (SDWA) will have a financial impact on just about every small water system in the country.

The reauthorization includes new sources of funding—most notably the drinking water state revolving fund (DWSRF). (See article on page 1.) The reauthorization also includes provisions that will likely result in some added expenses for systems. Other provisions should result in cost savings.

The exact impact will vary to some degree based on each system’s size and unique conditions.

**Certification Requirements Included**

The reauthorization requires the U.S. Environmental Protection Agency (EPA) to establish certification standards for drinking water system operators.

Vanessa M. Leiby, executive director of the Association of State Drinking Water Administrators (ASDW A), stressed that 49 states already have certification programs, while the Delaware program was expected to be in place by the end of the year.

Specifically, Leiby said EPA is required to review the state certification programs and then establish minimum guidelines for operator certification and recertification. The guidelines must be published by February 1999.

The existing state certification programs are diverse. Some characteristics include:

- 11 states require that all systems have certified operators, regardless of system size, treatment needs, water source, etc.;
- all 50 states require operator experience, and 47 require certain minimal education levels; and
- 37 states require continuing education credit, while one requires passage of a written examination for license renewal.

“While programs vary from state to state, there are core elements that most states will agree form the basis of a successful certification program,” Leiby said. These elements include education, experience, varying requirements based on system size and complexity, passage of an exam, and a schedule for renewal.

The operator certification requirements will apply to all water systems, except noncommunity systems that supply campgrounds and similar facilities.

**Financial impact:** Leiby said uniform certification provisions could have a significant impact on small systems, which currently are more likely to be exempted from state requirements.

Leiby said some exemptions for small systems will likely continue, but many will face the task of either getting their operators certified or hiring already-certified operators.

According to recent ASDWA calculations, training costs to certify an operator are estimated at approximately $600. The SDWA reauthorization does, however, provide funding to offset the training costs of systems serving fewer than 3,300 people.

While training costs and the cost of employing certified operators will be an added burden for small systems, Leiby added that the federal standards “will lead to better water quality and public health protection.”

**Big Changes Coming in Standard Setting**

The reauthorization slows the implementation of new EPA regulations concerning drinking water contaminant levels.

Dan Pedersen, regulatory engineer with the American Water Works Association, said the change was prompted by the reality that the existing pace of new regulations was too ambitious.

Under the 1986 SDWA reauthorization, EPA was required to issue regulations for 83 drinking water contaminants by 1989 and then issue regulations for 25 additional contaminants every three years.

The 1996 reauthorization eliminates the three-year schedule for additional contaminants. Instead, EPA is now required to compile a list of at least five potential drinking water contaminants every five years. After consulting with the scientific community, EPA is to determine whether regulations will be issued for any or all of those five contaminants.

“What we’re going to see is a slackening in the pace of new regulations,” Pedersen said.

“EPA won’t be regulating just because they have

**Continued on next page**
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to by law. They’ll do it when sound science shows that contaminants are in the drinking water and are a threat to public health.”

Financial impact: Pedersen said changes to the standard setting process should have a positive financial benefit on drinking water systems in two ways—less monitoring for unregulated contaminants and the cost-avoidance of not having to upgrade their treatment systems.

He mentioned that even with some degree of relief, monitoring requirements have placed a disproportional burden on smaller systems because they have fewer customers among which to divide monitoring costs.

“The financial impact of these regulations is still there [for small systems], but it’s lessened substantially,” he said. “Now it looks more like a hill rather than a mountain.”

Conservation Aspect Stressed

The reauthorization also places a greater emphasis on having water systems develop conservation strategies.

The conservation provision could have both positive and negative financial impacts on small systems, according to Mohamed Lahlou, a technical assistance specialist with the National Drinking Water Clearinghouse.

Lahlou said the provision also could be a positive step toward changing public attitudes about water consumption—and not just in areas where water supplies are scarce.

“This section in the Safe Drinking Water Act will help more water systems think about the benefits of water conservation and pass this knowledge on to their consumers,” he said.

Under this provision, states may require systems to submit water conservation plans when they apply for funding from the new DWSRFs.

Guidelines for the conservation plans have not been finalized, but they are expected to take into consideration such factors as local water availability and climate.

“Boosting conservation will enable the local systems to better manage water scarcity in areas where it is a concern,” Lahlou said, adding that it should be part of an overall effort to better inform customers about how their local water systems work.

Financial impact: Conservation, for some systems, could delay or cancel the need for costly water system upgrades or replacements.

Additionally, systems would see a decrease in energy costs, chemicals, and equipment replacement. There are also the financial and environmental benefits of reducing source water collection (aquifer drawdown, stream flow reduction) and reducing wastewater flows.

Lahlou warned that conservation can also have a negative financial impact on systems by reducing revenues as less water is consumed. System managers need to estimate revenues when planning a conservation program so they can adjust budgets accordingly.


EPA’s Office of Ground Water and Drinking Water has prepared a “general guide to provisions” of the 1996 amendments. A free copy of the guide can be obtained from the EPA’s Safe Drinking Water Hotline by calling (800) 426-4791. It can be viewed and downloaded from the EPA Web site: http://www.epa.gov/OW/OGWDW/SDWAsumm.html.

M O R E  T O  C O M E  O N  S D W A  A M E N D M E N T S

More information on the 1996 Amendments to the Safe Drinking Water Act (SDWA) will be provided in future issues of Water Sense.

Additional information will also be provided in the National Drinking Water Clearinghouse’s other publication, On Tap.

In fact, the Winter 1996 On Tap is dedicated to the SDWA amendments. The newsletter will include a summary of the SDWA as well as an interview with Peter Shanaghan, small systems coordinator for the U.S. Environmental Protection Agency’s Office of Ground Water and Drinking Water. Shanaghan will discuss the amendments’ impact on small systems.

To subscribe to On Tap, contact the NDWC at (800) 624-8301.

Mohamed Lahlou is a technical assistance specialist with the National Drinking Water Clearinghouse. He stressed the importance of the reauthorization’s water conservation provision.
Using Bonds To Finance Construction

Continued from page 1

Some Bond Basics

In simplest terms, a bond is a mechanism used to borrow money. The bond issuer—the town or water system—receives an amount of money in return for a promise to repay the borrowed amount, along with interest, according to a set schedule.

As with other types of long-term financing, bonds should be used for new construction or major capital replacement—not as a method for covering operating expenses.

There are many fees associated with bond issues. (See Q&A on page 11.) For bonds to be a better option than other long-term financing, the amount of interest saved must exceed these fees.

“Also, there are significant differences in state laws and significant differences between water district bond issues and municipality bond issues,” Bowman said.

Several Types of Bonds

Beyond this basic explanation, there are many types of bonds and bond structures used for drinking water construction projects.

A bond issue can be crafted to best fit the circumstances surrounding a specific water project. The three most commonly used bond types for water projects are general obligation, revenue, and special assessment. (See chart on next page.)

General obligation (GO) bonds are widely used for water-related projects. When funding water projects, general obligation bonds are often repaid from system revenues and backed by property tax assessments in case revenues somehow fall short.

Although water systems do generate income, experts say GO bonds are most appropriate for parks and other projects that do not generate revenue.

Revenue bonds are especially appropriate for projects that generate revenue. They are repaid using proceeds from the water system operation. While community water projects traditionally have been funded with general obligation bonds, in recent years there has been a strong move toward revenue bonds for water projects, said Tom Meek, financial analyst for the Oregon Economic Development Department.

Special assessment bonds are especially appropriate for water projects that benefit a specific area or neighborhood. A water line extension is a good example. These bonds are repaid through a special tax assessment on the neighborhood that benefits from the project.

Other types of bonds are used as well, although less frequently, for water projects. One such type is the moral obligation bond, which is a revenue bond backed by a promise—but not a guarantee—that town property taxes will be used to cover the debt if system revenue is not adequate to cover repayment.

These and other bond types can be used as part of initial project funding, and they can be used later as part of refinancing packages.

Bond Maturities Vary

Bond issues can have short-term maturities (one year or less) or long-term maturities (15–40 years). Also, bond repayment schedules vary.

Short-term bonds are often used as interim financing by systems awaiting delivery of promised funding from government or other sources. The short-term bonds—as well as called anticipation notes—give systems immediate access to funding capital, allowing construction to begin sooner. These bonds are paid off once the system receives the promised funding.

Some experts say bond maturities should not exceed 20 years. Others say 40 years. Robb McCracken, program manager with the Montana Department of Commerce, leans toward 40 years, but he stresses that bonds should be repaid while “some useful life” remains in the facility being funded.

“There is an ongoing debate as to whether taxpayers should still be paying debt service for something even after it becomes obsolete,” McCracken said. He said this issue gets complicated because there is also debate as to exactly how long an item, such as a new treatment plant, will remain useful. “Will the town grow? Will government regulations change? These and other factors can shorten the useful life of a water plant.”

Short-term bonds generally have a single “maturity date” on which all principal and interest is repaid to the bond investor. However, the repayment schedule for long-term bonds can vary.

With a serial maturity, the water system repays a portion of the debt at regular intervals (often every six months) until the bond is repaid. There are many possible variations to serial payments.

With a term maturity, the system repays only accrued interest until maturity, at which time it repays the principal in one lump sum.

Systems usually establish special accounts, or sinking funds, that are earmarked to pay off the bond debt.

Factors Influence Interest

Bond interest rates fluctuate according to market forces. As Water Sense goes to press, the typical interest rate on a fixed-rate, long-term bond is around 6 percent, according to Aaron McCracken, program manager with the Montana Department of Commerce, leans toward 40 years, but he stresses that bonds should be repaid while “some useful life” remains in the facility being funded.

Continued on next page
Most bonds for water-related projects are “tax-exempt,” meaning investors generally are not required to pay federal taxes on interest earned from these bonds. State and local taxes are exempt in some cases, too. Because investors are attracted by the tax advantages of these bonds, they can be offered at slightly lower interest rates than other investments.

**Outside Help Needed**

Small communities should seek outside assistance with any bond issue. The type of assistance needed depends on the complexities involved with the bond issue, as well as the project being funded.

“Small communities should look for beginning advice from state agencies or bonding companies that might be knowledgeable,” said Jim E. Richard, a financial consultant and author in White Sulphur Springs, Montana. “These sources of information

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**Typical Bonds Used for Water Projects**

There are many types of bonds, but the first three described below are most likely to be used to finance drinking water–related construction projects. Any of these three can serve as refunding bonds, described at the bottom of the chart.

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<thead>
<tr>
<th>TYPE OF BOND</th>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
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<tbody>
<tr>
<td>General Obligation (GO) Bonds</td>
<td>• because of low risk, these bonds have lower interest rates than other types of bonds</td>
<td>• expense and time associated with holding a bond election</td>
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<td></td>
<td></td>
<td>• state and local laws may limit amount town can borrow through a bond issue</td>
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<tr>
<td></td>
<td></td>
<td>• slightly higher interest rates than general obligation bonds</td>
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<td></td>
<td></td>
<td>• stricter legal requirements for issuing this type of bond</td>
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<td></td>
<td></td>
<td>• higher interest rates than general obligation bonds</td>
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<td></td>
<td></td>
<td>• property owners could protest new tax assessment, delaying project</td>
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<tr>
<td>Revenue Bonds</td>
<td>• bond election usually not required</td>
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<tr>
<td></td>
<td>• unlike GO bonds, these bonds are not restricted by town’s debt limit</td>
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<tr>
<td></td>
<td>• debt burden directly on people who benefit from project</td>
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<td>• bond election may not be required</td>
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<td></td>
<td>• not restricted by town’s debt limit</td>
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<tr>
<td>Special Assessment Bonds</td>
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<tr>
<td>Refunding Bonds</td>
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<tr>
<td></td>
<td>• bond election may not be required</td>
<td>• cost of additional bond issue</td>
</tr>
<tr>
<td></td>
<td>• probably will save system money by reducing interest</td>
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Using Bonds To Finance Construction

Continued from page 9

will be free and will help local officials have a better understanding of the process and requirements before hiring bond counsel or bond investment consultants.”

State officials should be contacted to see if any grant or low-interest loan options are available to fund a portion or all of the project. Some states also operate bond banks, which can free the system of some of the expense associated with an independent bond issue. (Bond banks will be discussed in detail in a future Water Sense article.)

If a bond bank is not available and other funding is not adequate, state officials can offer advice before the water system begins the bond issuing process, Richard said.

Some bond advice also could come from the engineer the system hires to plan the construction project. Richard said the engineer, in addition to estimating project costs, may be able to answer some preliminary questions about issuing bonds.

“Rarely does a small community have the knowledge to issue bonds on its own,” Richard said.

In most cases, the community would hire professional bond counsel to help with the issue. The bond counsel will advise the system of all legal and tax aspects of the bond sale.

The investment consultant can review any outstanding system debt, determine how much revenue will be needed to pay off the proposed bonds, and recommend maturity structures and other bond specifics, according to Richard.

Other outside professionals may be needed as well for more complicated bond issues, though Bowman stressed that such additional help may not be needed for simpler issues. $

Bond Glossary

The following definitions are provided to help explain the various aspects of how bond financing works.

**Bank-qualified bond**—A public infrastructure bond issued without a rating. (See “rating” definition below.) A commercial bank may agree to purchase an entire bond issue for a smaller water project. In this situation, a bond rating is usually not required.

**Bond bank** or **Bond pool**—An instrument to help systems gain access to bond funding. A state or other body issues bonds and uses the income to fund several small projects. The small systems are able to gain access to bond capital at a better interest rate and less cost than if they independently issued bonds.

**Coupon**—In past years, coupons were attached to bonds. Investors could present these coupons periodically to receive partial repayment. Such periodic (or “serial”) payments are still made today, but without the physical exchange of coupons.

**Rating**—An indication as to whether a community is likely to repay the debt. The rating is based on the system’s financial and governmental situation as well as the condition of the local economy. A high credit rating reflects a good credit risk; therefore, the interest paid on the debt is lower. With poorer bond ratings, investors are taking a greater risk and therefore demand higher interest rates.

**Sinking fund**—A fund dedicated to repaying a bond issue. The water system or local government makes regular payments into the sinking fund over the course of the bond issue. Money to pay the bond investors is withdrawn from the sinking fund either in regular installments or in one lump sum.

**Tax-exempt**—Most bonds issued by local governments to fund water projects are tax-exempt, meaning investors generally do not have to pay federal tax on the interest they earn on these bonds. This interest may also be free of state and local tax as well. A local government can issue a limited amount of tax-exempt bond debt in any given year.

**Term**—The length of time for which a bond is issued. A bond term can be anywhere from a few months up to 40 years or more.

**Zero-coupon bond**—A bond structure in which one lump-sum payment is made to the investor at the end of the bond’s term. No periodic coupon payments are involved.

Much of the information for this glossary was provided by Robert Anderson, director of the Community Resource Group’s loan fund division.
**Construction Bond Q&A**

**Q. How can local officials determine if bonds may be right for their project?**

**A.** There is no simple formula for determining whether a small system should use bonds or some other form of long-term financing when putting together a project funding package. Many factors should be weighed, including:

- **funding alternatives.** A bond issue should not be planned until other potential funding sources have been explored.
- **community size.** A system with fewer than 1,500 people would have a difficult time issuing bonds on its own, according to Tom Meek, financial analyst for the Oregon Economic Development Department. Even his state’s bond bank, which helps small systems obtain access to bond funding, has never financed a system with fewer than 374 connections. Systems this small probably should be looking to other sources for funding.
- **debt limitation.** Most states limit the amount of long-term debt a community can carry. This restriction may prevent the use of general obligations for water projects. Instead, revenue bonds or some other sources of funding, which have fewer state government restrictions, may be needed.
- **how quickly funding is needed.** A public vote is often required before local officials can issue bonds. A project can be delayed several months before a vote is held. This delay, however, may be short in comparison to the time involved in submitting funding applications to several organizations.
- **amount of money needed.** There are many costs involved in a bond issue. (See question below.) These costs can make bonds a less attractive funding source, especially for smaller issues. Meek said “as a very rough rule of thumb” it rarely makes financial sense to have a bond issue of less than $500,000. Other experts gave similar minimum amounts.

**Q. How much does it cost to issue bonds?**

**A.** According to Aaron Rudio, associate vice president for public finance with D.A. Davidson & Co., these costs vary by region. They also vary according to the type and size of bond issue and the method in which they are sold.

With these caveats in mind, Rudio provided the following “lower end” estimates of some bond-related fees:

- Underwriter’s discount—1–2 percent of the bond principal (this would be in the neighborhood of $30,000 on a $2 million bond issue);
- Bond counsel—$5,000;
- Printing (disclosure documents and other materials)—$2,000;
- Miscellaneous (travel, extraordinary mailing costs)—$500.

“These figures are the lower end of the fee scale,” Rudio stressed. Even if a system cuts corners, “it would be difficult to get the bonds issued for less than $10,000 (not counting an underwriter’s discount).”

He added that these and other bond-related costs aren’t necessarily less for smaller bond issues.

**Q. How can local officials be sure they’re hiring competent professionals to help with their bond issue?**

**A.** Rudio said checking references provides a good indication as to whether a prospective candidate for bond counsel or underwriter will do a good job for a community’s water system. He also suggested contacting other local governments who have recently issued bonds to ask about the professionals they employed.

There are no certification requirements for bond counsels, Rudio said, but many are members of the National Association of Bond Lawyers. As for financial advisors and bond underwriters, they should have Series 7 registration with the National Association of Securities Dealers (NASD). Also, they, or their supervisors, should be “municipals principals,” having passed the related NASD examination.

The municipal bond market is regulated by the Municipal Securities Rulemaking Board, while the Securities and Exchange Commission and the NASD have some oversight.

**Q. How should local officials go about explaining a proposed bond issue to the public?**

**A.** The public needs to be involved if a proposed bond issue is going to be successful, according to Robb McCracken, program manager with the Montana Department of Commerce.

“It is crucial that the public be involved from the beginning,” he stressed.

If you wait until a bond vote is scheduled, it may be too late to win public support, McCracken said, adding that the system’s problem should be spelled out for the customers along with a proposed plan of action.

Even if a public vote is not required, the system’s customers need to be behind any major project—they will be the source of repayment revenues.
EDA Funds Projects in Distressed Areas

by Kathy Jesperson
NDWC Staff Writer

Overwhelmed by unemployment and declining industry, some towns may not believe they have the ability to fund their water or wastewater projects.

However, the Economic Development Administration (EDA) offers states and communities suffering from this kind of economic distress an opportunity to pursue these projects and become self-reliant again. And EDA's new streamlined application makes the process simpler.

“Last year we funded 182 projects,” says Queen White, EDA public works program specialist. “Most of them were water and wastewater projects. And all projects that we fund have to be tied to job creation and economic development.”

EDA, part of the U.S. Department of Commerce, was authorized under the Public Works and Economic Development Act of 1965. EDA’s main goal is to provide grant money to economically distressed areas for public works projects so they may:

• improve the opportunities for the successful establishment or expansion of industrial or commercial facilities;
• assist in the creation of additional long-term employment opportunities; and
• benefit the area’s low-income families and long-term unemployed.

In the 1996/97 fiscal year, just over $165 million is available for public works projects, according to White.

Development Tied to Infrastructure

Economic development is often closely related to a community’s ability to provide needed water and sewage services, says White. When a business plans an expansion or relocation, the site-selection process is often driven by whether prospective sites have access to adequate utilities.

“Our hope is that by making these project grants, industry and commercial businesses will be attracted to distressed areas and help build up the local economy,” White says.

EDA has recently approved grants to partially finance several water and wastewater projects, including a sewer collection system for Flemington, West Virginia.

Flemington is a good example of a community feeling the economic impact of a failing sewer system.

The town had lost most of its industry and its high school. And—partly because of the poor sewer system—the town was about to lose the local elementary school.

“The sewer system we had was outdated and falling apart. There was just no way it could take care of everything,” says Judy Stewart, Flemington town recorder.

Besides needing the new system for the elementary school, the town was also going to lose a greenhouse business and the jobs it supplied.

“That’s what really helped us get the EDA grant,” Stewart says.

The town received a $765,000 EDA grant. The remaining $250,000 needed to complete the project will come from a state revolving fund loan, she says.

“We’re hoping that the system will be self-supporting,” she says. “Once it’s in place, the whole town will hook up to it. Hook-up fees should stay close to $50 per household.”

Stewart stresses that town officials want to keep the hook-up fee as low as possible because so many of Flemington’s residents are senior citizens with incomes below the poverty level.

“We had to complete a survey before we got the grant, and one of the eligibility requirements was that the community had to be in extreme economic need. Well, we have about a 65 percent unemployment rate,” Stewart says.

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New Plant Renew growth

Clarksville, in northwestern Arkansas, is another example of a community feeling the economic impact of inadequate utility infrastructure.

The local drinking water system serves an area where source water can be scarce. In the 1980s, the existing system had a maximum yield of 4 million gallons per day (mgd), but demand would sometimes exceed 5 mgd.

Water shortages and rationing were common, slowing work at local industries and placing a drag on the economy. By 1988, the area’s unemployment rate was around 11 percent.

Hugh Harrison, Clarksville Light and Water Company general manager, says a state-mandated curtailment of growth could have been in the area’s future because of the limited water supply.

The West Central Arkansas Planning and Development District helped Clarksville plan a new $11.5 million water treatment system. Clarksville residents agreed to a $10 million bond issue to finance most of the project, while the EDA kicked in a $1.5 million grant.

The new plant, with a capacity of 8 mgd, was completed in 1993.

“With the new plant, we’ve been able to allow industries to expand,” Harrison says. “If we didn’t have the plant, today we wouldn’t have the new jobs or growth we’re experiencing.”

EDA Preapplication Simplified

The application process begins when a preapplication proposal is completed and discussed with an EDA economic development representative, who in turn determines the community’s eligibility.

Recently revamped, the preapplication procedure is now much simpler. According to a June 1996 Economic Development Digest article, changes in EDA’s preapplication schedule have reduced processing time from several months to two or three weeks—which is good news for EDA applicants.

At the time of the preapplication, EDA requires the applicant to have details of the project ready. These details include:
• the type of facility proposed,
• the estimated cost, and
• the estimated time to complete the project.

Most importantly, says White, preapplication documentation must show how the project will have a positive impact on the community’s economic development and fulfill a pressing need for the area.

Application Simplified, Too

Once the preapplication process has been completed, EDA determines if the project is viable. If so, EDA invites the community to submit a formal application.

“The application process has also been revised,” says White. “We’ve shortened the review time to 60 days. We’ve also reduced our regulations and the layers of review.”

EDA once required up to 117 documents be submitted with the application. They have reduced that number to approximately 40.

“And we now require self-certification for many of the regulations, which means that applicants sign an assurance form stating that they will comply with the regulations,” she says.

To be eligible for funding, applicants still must satisfy a number of requirements. These include civil rights criteria and not relocating of jobs from one labor market area to another. EDA requires applicants to certify that these conditions will be met.

EDA also usually requires that applicants provide matching funds for projects. “In most cases we fund 50 percent of the project,” says White. “We expect the applicant to fund the remaining 50 percent through local matching funds or loan money.”

EDA does, however, fund a higher percentage of the project cost if the area is extremely distressed, as is Flemington.

“We have funded up to 100 percent of project costs in areas where there is extreme unemployment distress, such as some Indian reservations,” White says.

Funding Can Take Time

Once the application has been received, EDA reviews it, determines whether it can fund the project, and processes it as funds become available. Project applications that meet EDA requirements but that are not funded in a particular fiscal year remain eligible for funding consideration in the next fiscal year.

Processing time depends on the completeness of information and supporting materials provided, says White.

“We had to wait three years after our application was authorized to get our money,” says Stewart. “But it was worth the wait. We’re not going to quibble over it.”

For the EDA telephone number in your region, call the National Drinking Water Clearinghouse at (800) 624-8301. $
Utility Privatization

Report Sees Benefits, Barriers

by Laurie Klappauf
Water Sense Editor

Privatization of water and wastewater utility services is receiving a lot of attention these days. The primary concern seems to be: Which is better, public or private?

“It depends,” is the answer according to Regulatory Implications of Water and Wastewater Utility Privatization, a July 1995 report prepared for the National Regulatory Research Institute (NRRI).

The report draws on various empirical studies as well as 30 case studies of water and wastewater privatization to compare advantages and disadvantages of private sector involvement in utility operations.

“Privatization advocates believe that government is best at ensuring the provision of essential goods and services, but that the private sector is best (especially more efficient) at actually providing goods and services,” the report states.

Janice A. Beecher, who authored the book along with G. Richard Dreese and John D. Stanford, said the report concludes that well-planned and well-structured privatization can be very beneficial.

“And the competition between the public and private sectors in the water industry is good for everyone—especially customers,” Beecher added.

What is privatization?

For the NRRI report, the authors define water and wastewater privatization as “shifting all or some ownership or operational responsibilities from the public to the private sector. In reality, privatization is not a dichotomy of public versus private, but rather a matter of degree of private involvement in economic activities.”

Privatization examples cited in the report include sales of assets; contracts of operation, maintenance, and administrative services; financing arrangements that make use of private capital; and various forms of public-private partnerships for the construction and/or completion of all or part of a system.

The report’s case studies, including 11 systems serving fewer than 10,000 people, help illustrate why local governments privatize. The leading reasons cited are the need to find funding for capital improvements and the need to comply with environmental standards. Other frequently cited reasons were source of water supply or capacity limitations, the opportunity to tap into specialized management expertise, and the potential operating and construction costs.

In some cases, privatization was seen as preferable because municipal funding would limit the community’s ability to fund other needed projects.

In one case, a New Jersey community could not afford improvements needed to correct its wastewater system’s environmental compliance problems. An arrangement with a private company allowed for a new sewage plant to be constructed “faster and at lower cost than through traditional means.”

Several Barriers Exist

The report also identifies a number of “formidable” barriers to privatization.

For instance, the privatization process itself can be complex and intimidating. Financial barriers, such as valuation of assets for sale or transfer can be difficult. Political barriers include opposition by labor unions and voters, as well as utility managers’ aversion to giving up control over utility operations.

In addition, federal and state policies relating to grants, taxation, and procurement are often perceived as barriers, as is regulation by state public utility commissions.

One of the main themes of the report concerns regulatory issues, Beecher said, adding that utility regulations may need to be adapted as private-sector involvement increases.

“Regulations can be reformed to provide incentives for competition and efficiency, so long as captive ratepayers are protected,” Beecher added.

Local Impact Most Important

While there are many issues involved, a primary consideration for local officials considering privatization is whether community interests will be protected.

The report provides useful insight about pros and cons of various privatization options, while it stresses that local officials must evaluate what’s best for their own situations.

The report cautions, “broad generalizations about the benefits of privatization cannot be made because each water and wastewater facility, and the environment in which it operates, is unique in many ways.”

To obtain a copy of the 271-page report, call the NRRI at (614) 292-9404. The cost is $49.20.
Water 2000 Communities Receive Funding

The U.S. Department of Agriculture (USDA) has announced that $70 million in loans and grants will be provided to fund 54 drinking water projects in 35 states. The money will be used to build, improve, or expand public drinking water systems as part of USDA’s Water 2000 initiative to provide safe, affordable drinking water to every home in the U.S. by the end of the century.

The projects were selected based on the results of a state-by-state needs assessment conducted in 1995 by the USDA. The assessment determined that nearly 2.5 million Americans have the “most critical” drinking water needs, including 1 million who do not have indoor plumbing.

Another 5.6 million were identified as having additional “serious needs,” including water pressure problems and a lack of adequate water storage facilities. Many are connected to outdated distribution systems.

The $70 million for the Water 2000 projects is a one-time appropriation carried over from another USDA program, according to Bart Handford, assistant to John Romano, Rural Utilities Service (RUS) deputy administrator. If more funding is appropriated, he added, it will be directed toward the communities with the highest priority needs.

Meanwhile, RUS’ water and waste loan and grant programs provide financial assistance to communities with populations of 10,000 or less for the construction, replacement, expansion, or other improvements of water and wastewater facilities. In 1995 and 1996, the USDA distributed $1.3 billion for such projects.

However, the need for federal loans and grants that improve rural water systems far exceeds the available funding, says Handford. For example, for fiscal year 1996, the program had a backlog of nearly 1,000 applications for water loans and grants totaling approximately $2.7 billion.

The USDA encourages communities with drinking water needs to contact state Rural Development offices (formerly Rural Economic Development offices, administered by the former Community Development Administration) and state Rural Water Association (RWA) offices.

“We work closely with state Rural Development and RWA offices,” Handford says. “They know where the need is.”

For the number of your state Rural Development or RWA office, call the National Drinking Water Clearinghouse at (800) 624-8301.

For additional information about Water 2000 or the needs assessment, call Handford at (202) 720-1261. Also see the Water 2000 products listed on page 16. $
NDWC Offers Water 2000, Other Products

The National Drinking Water Clearinghouse (NDWC) offers the following products. To order, call (800) 624-8301.

Please allow two to three weeks for delivery.

- Water 2000 Rural Safe Drinking Water Needs Assessment
  Item #DWPCRE09
  Developed by the NDWC, this chart provides a state-by-state listing of the U.S. Department of Agriculture’s (USDA) 1995 Water 2000 needs assessment. The chart gives the estimated financial cost of each state to supply adequate drinking water service to all residents. The number of households in need is listed for each state. (1996, chart)
  Cost: free

- Water 2000: A Plan for Action
  Item #DWPCRE02
  This document provides an outline of the USDA’s Water 2000 plan. It addresses the reasons behind the lack of water access and identifies federal and technical assistance resources and long-term solutions to community water problems. (1995, 18 pages)
  Cost: free

- Practical Personnel Management for Small Systems
  Item #DWBKMG15
  This handbook discusses legal aspects of dealing with water system employees and customers, personnel administration, and the future of customer relations. Written by Ellen Miller, the handbook is the second volume in The Water Board Bible series. (1995, 106 pages)
  Cost: $9, plus shipping/handling

- RESULTS 2.0
  Item #DWSWGN25–DOS
  Item #DWSWGN31–Mac
  A new version of the NDWC’s technologies database, RESULTS 2.0 includes information about alternative treatment technologies in use by more than 200 small drinking water systems around the country. The computer disk, available in both DOS and Macintosh versions, offers system and manufacturer contacts, as well as treatment specifics. (RESULTS is also accessible via the NDWC’s Drinking Water Information Exchange Bulletin Board System, which can be accessed at 1-800-932-7459.) (1996, computer disk)
  Cost: $5, plus shipping/handling

- Water Sense Index
  Item #DWPCIN05
  The index list abstracts of Water Sense articles published in 1995, the newsletter’s first year. Articles cover funding sources and financial advice for small drinking water systems. (The 1996 index will be available in early 1997.)
  Cost: free

- On Tap Indexes
  Item #DWPCIN01–04
  These indexes list abstracts of four years’ worth of articles from the NDWC’s On Tap newsletter. On Tap articles address issues such as the health effects of contaminated water; small system regulations, technologies, and operation and maintenance; and information on new technical and education resources.
  Cost: free