

Water sense

Winter Issue 1995/96
Volume 2, Issue 1

Rate Increases: Dealing with the Public

By P.J. Cameon
NDWC Staff Writer

Editor's Note: This is the final article of a three-part series on rate-setting issues for small systems.

Any small-town official who has voted on a drinking water rate increase should know the value of public approval. Voting for an increase is a lot easier when your friends and neighbors are behind you.

Involving the public, and doing so early in the process, can mitigate negative publicity or ill feelings concerning a rate hike. But public support doesn't just happen; it takes work.

First, the system manager must identify the specific reason or reasons for an increase. Does the system need a new pump? Or is it simply a matter of keeping up with inflation?

Secondly, members of the water board, or governing board, must agree with the reason for

the increase and fully understand the specific details.

And finally, town officials must work together to involve community opinion leaders and other residents in the early stages of the rate-setting process. It might be too late if you wait until after the rates are developed and it's time for the board to vote.

Involve the Public Early

Customers should be told that a rate change is being considered, even before the new rates are calculated.

Robert Reed, a utility consultant with David M. Griffith & Associates in Sacramento, California, advises local governments about financial and rate matters. He said the public needs to be involved throughout the process.

Continued on page 5

*This issue
completes our
three-part series
on drinking
water rates.*

Where are rates heading? A Look at 'Mega-Trends' Facing Small System Finances

By P.J. Cameon
NDWC Staff Writer

Experts cite many forces that are expected to drive up rates charged by small drinking water systems.

"Drinking water rates are heading up, and at a much faster rate than the rate of inflation," said Scott J. Rubin, an attorney and public utility consultant in Selinsgrove, Pennsylvania.

He mentioned several factors that could result in higher rates, starting with treatment and monitoring requirements. As technology improves, he added, regulators may find additional contaminants of concern.

"And we're probably going to see a lot more requirements for treatment of groundwater," Rubin said. "This will have a huge impact on small systems."

Additionally, small systems may find the need to increase capacity as "urban sprawl" spreads into rural areas. And numerous systems are facing the need to replace worn out infrastructure.

Many small systems were constructed or expanded during the post-World War II building boom 50 years ago.

Now they are in need of major capital replacements, according to Rubin, who added that capital replacement could be the biggest cost pressure for small systems over the next five to 10 years.

"All of these factors will push the rates higher, and significantly higher in some areas," he said.

Continued on page 10





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Water Sense

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National Drinking Water Clearinghouse

The National Drinking Water Clearinghouse (NDWC) assists small communities by collecting, developing, and providing timely information relevant to drinking water issues. Established in 1991, the NDWC is funded by the Rural Utilities Service and is located at West Virginia University.

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Rate Series Draws to a Close

In this issue, Staff Writer P.J. Cameon concludes his three-part series on drinking water rates. You can learn some useful tips on gaining support for rate changes from the cover story on dealing with the public. Then see how your system "rates" by taking the quiz on pages 8 and 9.

The front-page article on "mega-trends" also explains why you need to be aware of outside forces and changes that may ultimately affect your system. A number of other stories expand on this big-picture thinking by discussing the Safe Drinking Water Act (pages 2 and 13), and impacts of major federal funding programs (pages 3 and 15).

Wanted: Computer Rate Programs

We received many calls from readers wanting to learn more about the three computer rate-setting programs described in the Fall issue of *Water Sense*. Clearly there's a demand for such programs, so we want to help our readers find out just what's available.

If you know of additional computer rate-setting programs that can be used by small water or wastewater systems, please tell us about them. Just call (800) 624-8301, and ask for the *Water Sense* staff. Be prepared to provide basic information about the program, including:

- name of program,
- water or wastewater (or both?),
- program cost,
- computer equipment/software needed, and
- contact name and phone number.

We can share the information in future newsletters and via our technical assistance staff. Your input will be greatly appreciated—by the *Water Sense* staff and, more importantly, by our readers.

Laurie Klappauf
Water Sense Editor

SDWA: Rewrite Could Mean Relief

By P.J. Cameon
NDWC Staff Writer

If the Safe Drinking Water Act (SDWA) is reauthorized this year (1996), it could mean more federal funding for water projects and eased monitoring requirements for small systems.

In November, the first step toward SDWA reauthorization took place when the U.S. Senate gave unanimous approval to a drinking water bill it had crafted. Action must be taken in the House of Representatives and by President Clinton before the reauthorization goes into effect.

According to Michael Keegan, a research analyst with the National Rural Water Association, the Senate vote was a sign that the concerns of small communities are being addressed in Washington.

"The priority of most of the senators voting on this was to give some help to small communities," Keegan said. "It's a tribute to small towns—they've been heard."

The Senate's version of reauthorization provides funding for drinking water state revolving funds, or SRFs. The Senate bill provides \$1 billion a year through 2003 for the SRFs.

This money would be given to the states to "capitalize" their individual SRFs. The SRFs would give communities access to funding needed for new treatment plants, water main replacements, and similar projects.

SRF funds are generally issued in the form of low-interest loans. However, the Senate version

allows for a percentage of the funds to be issued to "disadvantaged communities" in the form of grants and "loan subsidy," according to Keegan.

Another major component of the Senate version is monitoring relief for water systems, especially those with fewer than 10,000 customers. Keegan said this could provide small systems with "immediate monitoring relief and long-term relief too."

First, the Senate version provides small systems with some relief from quarterly sampling requirements. If sampling for a particular chemical contaminant turns up negative, the system does not have to conduct additional quarterly testing for that contaminant, according to Keegan.

The Senate version also allows the individual states to determine which contaminants should be monitored, based on local conditions.

"All this should make monitoring work better and cheaper," Keegan added. "EPA estimates the average cost of monitoring for Phase II/V contaminants at \$12,000 to \$15,000 per water source. Since these contaminants are rarely found, communities could see up to \$8,000 in savings per well. In a small town with three wells, this could amount to a huge savings."

The Senate version also increases the amount of funding available to provide communities with technical assistance.

Keegan said he is optimistic the House will take action on the matter this spring.

The Safe Drinking Water Act became law in 1974 and was reauthorized in 1986. \$

Report Describes USDA Water/Sewer Funding

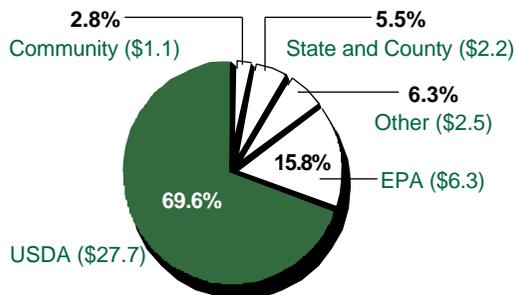
The U.S. Department of Agriculture (USDA) has helped fund almost 17,000 water and sewer projects serving more than 12,500 rural communities in the last 30 years, according to a September 1995 report from the U.S. General Accounting Office (GAO).

The report, *Rural Development: USDA's Approach to Funding Water and Sewer Projects*, examines USDA's process for allocating and distributing loan and grant funds for these projects.

These funds are distributed via USDA's Water and Waste Disposal (WWD) Program, which is "now the major source of federal funds targeted to water and sewer projects in rural areas," according to the GAO.

Funding for USDA-Supported Water and Sewer Projects

FY 1965–June 1995 (in billions of dollars)



Many projects that received at least some USDA water and sewer support also obtained funding from other sources.

Source: USDA's data

Program Run at State, Local Levels

The WWD program is administered through USDA's Rural Utilities Service (RUS), better known to many as the former Farmers Home Administration. RUS reaches communities through a network of state and district Rural Economic and Community Development (RECD) offices.

The state offices are responsible for general oversight of the program. District offices administer the program at the local level and serve as the point of contact for communities.

RUS distributes funds to the state RECD offices through an allocation formula that considers rural population, poverty, and unemployment.

Prior to this state allocation, RUS reserves a small pool of funds for emergencies, cost overruns, and other unforeseen problems. Twice a year, RUS takes back to this pool a portion of unobligated funds in state accounts. State offices

also can request money from the pooled funds for specific projects.

At the state and district levels, the determination of loan and grant awarded on a project is based on median household income statistics, or more commonly, on how resulting user fees would compare to those charged by similar systems in the area.

Three Findings Cited

The GAO reported three principal findings.

- *USDA has helped to fund thousands of water and sewer projects for rural communities.* Since 1965, the WWD program has provided over \$20.4 billion in loans and about \$7.3 billion in grants for rural water and sewer projects.
- *The current allocation formula is easy to administer and may partially reflect states' needs and ability to pay.*

The report states that USDA's allocation formula is easy to understand and is based primarily on data that is readily available from the Bureau of Census and the Bureau of Labor Statistics. GAO also says that while the formula partially reflects communities' needs for services and a state's ability to pay for such services without federal aid, it does not reflect cost differences among states.

- *The award determination approach provides flexibility while resulting in differing funding decisions for similar communities.*

The report notes that "USDA state and district offices have considerable flexibility in determining the amount of grant assistance, if any, for individual projects." However, this flexibility often means that similar communities receive different mixes of RUS grant and loan funds. For instance, two communities might both qualify for partial grant funding based on median household income, but one may not receive any grant funds because its user rates—even without grants—would still be comparable to similar communities.

The report includes appendices showing state variations in funding levels, numbers of projects funded, and needs.

For a free copy of the report, call GAO at (202) 512-6000, and ask for document GAO/RCED-95-258. \$



From FY 1965 to June 1995

USDA's Water and Sewer Program:

- has provided \$28 billion in loans and grants to almost 17,000 projects in more than 12,500 communities in the U.S. and its territories in this 30-year period.
- reported a default rate for RUS loans of less than 0.1%. The delinquency rate for these loans is less than 2%.

Source: GAO Report, Rural Development: USDA's Approach to Funding Water and Sewer Projects



New Idaho EFC Addresses Mandates

A new Environmental Finance Center (EFC) being launched at Idaho's Boise State University (BSU) will help small communities identify and manage priorities among competing community needs and environmental mandates.

This is the sixth in a network of EFCs established nationwide with seed money from the U.S. Environmental Protection Agency (EPA). The Idaho EFC will serve EPA Region 10, covering Alaska, Idaho, Oregon, and Washington.

The work of this EFC is an outgrowth of ongoing activities of BSU's public affairs program, where the center will be based.

"We were finding that many communities in our area weren't able to handle many of the financial, technical, and managerial capabilities to keep up with government mandates," explains W. David Patton, director of applied research with

BSU's public affairs program. "For example, a community might need a new school and a wastewater treatment plant, but they can't do it all. They need to do one first."

So BSU's public affairs staff joined an interdisciplinary team of rural community specialists, headed by the Idaho Division of Environmental Quality. The team is conducting the Idaho Cumulative Mandates Pilot Project as a way to examine the effect of environmental regulations on local communities.

This pilot project is helping four Idaho communities, with populations of 371 to 6,910, identify community needs—such as roads, buildings, and youth programs—along with environmental requirements. The goal is to negotiate agreements between the communities and federal and state governments that allow communities to meet environmental requirements according to community priorities.

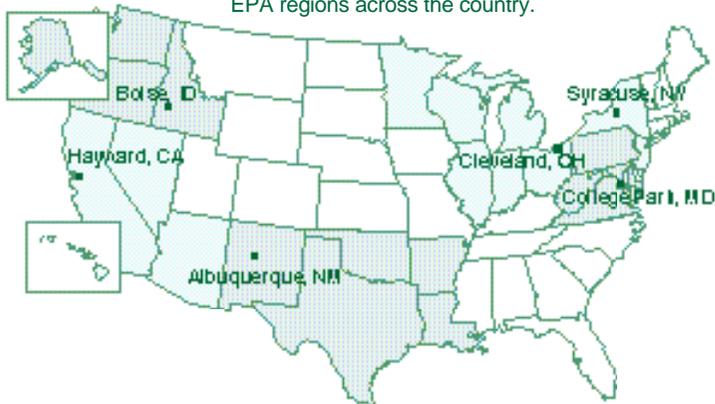
Once priorities are established, the communities can make more realistic decisions about future expenditures. Moreover, says Patton, the process of bringing together all affected parties is developing community involvement and leading to the resolution of some compliance problems without the use of more formal compliance agreements.

According to Patton, the new EFC plans to help other small communities in the region work through this process of community prioritization as one of the ways to develop improved financial, technical, and managerial capacity at the local level.

For more information about the Idaho EFC, contact Patton or James Weatherby, director of BSU's public affairs program, at (208) 385-1476. \$

Environmental Finance Centers (EFCs)

The Idaho EFC is one of six serving EPA regions across the country.



EPA plans ultimately to establish an EFC in each of the 10 EPA regions.

RUS Loan Interest Rates Decrease this Quarter

Two of the three interest rates for water and waste disposal loans offered by the Rural Utilities Service (RUS) decreased for the second quarter of Fiscal Year 1996.

These rates are set quarterly at three different levels, which have specific qualification requirements. The new rates, effective January 1 through March 31, 1996, are:

- *poverty line* rate: 4.50 percent (unchanged from last quarter);
- *intermediate* rate: 5.00 percent (down .250 from last quarter);

- *market* rate: 5.50 percent (down .500 from last quarter).

RUS loans are administered through local or state Rural Economic and Community Development (RECD) offices, formerly known as Farmers Home Administration offices. Local RECD offices can provide specific loan and application information.

For the number of your state RECD office, call the National Drinking Water Clearinghouse at (800) 624-8301. \$

Rate Increases: Dealing with the Public

Continued from page 1

"It's advantageous to have some public involvement in the issues that go into rate setting," Reed said. "Unfortunately, there's a tendency [among rate advisors] to do things in a vacuum, without having a full awareness and understanding of community concerns."

Boards that set rates without public involvement may later be "blind-sided" by opposition to their plans, Reed said. "Involve the public *during* the process instead of reacting after the fact."

Reed said this is especially important in situations where one customer group will see a larger rate increase than other groups, or where one customer category will see an increase and another will see a decrease. Such might be the case when the system is trying to encourage water conservation or correct past rate inequities.

Although experts stress the importance of public involvement in rate matters, they maintain that the actual calculations should be made by system officials or outside rate advisors.

"Actual calculations should be left to the experts. It's beyond the public," said Tom High, supervisor of the wastewater treatment plant in Kokomo, Indiana. Kokomo officials have often been cited for successfully involving the public in rate issues.

High spoke of a past rate increase as an example. Officials were developing a rate that would fund operations for five years, plus fund some capital improvements. He said it was important to involve the public in the rate-setting process, but involving them in the specific calculations would have made the process impossible.

The key is to understand the community's demands and wishes and to keep them in mind when calculating new rates.

Stress Why the Increase Is Needed

The decision to increase rates should follow a detailed study of the system's financial situation.

The review should examine system expenses and income as well as the need for any future capital improvements. It also should identify specific areas where costs have increased or additional expenditures are needed. (*The rate review process was discussed in the Fall 1995 issue of Water Sense.*)

A rate increase is likely the result of many factors, but it is easier to explain the need for an increase by stressing the two or three most "tangible" concerns.

James Leserman, an engineer with the Southern California Water Replenishment District, said the public is often supportive of a rate increase if

it addresses issues such as water supply or aesthetic concerns with water discoloration or odor.

"By mentioning that a rate increase will help address a water quality concern the public is aware of, you can gain support for the increase," Leserman said.

Get All Officials on the 'Same Page'

To receive customer support for a proposed rate increase, board members must be supportive and understand exactly why the increase is necessary.

A good way for a manager to help board members understand the need for system improvements is to let them see the problems firsthand, according to High.

"Show the public officials the local plant to let them see what needs to be replaced or repaired," High said. "We've found that actually showing the problem to them [officials] has a far greater impact than sitting in a room telling them we have a busted pump or something that needs to be repaired."

After seeing the problems in person, officials are better able to speak with the public about the need for a rate increase. Public officials must anticipate customer reaction and be prepared to respond with specific justification.

Spread the Word

Once all relevant officials understand the need for a rate increase, the issue should be taken to the public for feedback.

A good start would be to speak with any large-volume water consumers in the community. Speak with any factory operators and other large employers in the community to make sure they understand the reasons behind the rate hike proposal.

Leserman stressed that these customers are important to the community, so "take their well-being into account."

After meeting with large-volume customers, the push for support should next be taken to the rest of the community.

Expert advice concerning customer relations often stresses the benefits of holding an open house at your system's plant. This way the public, as well as town officials, can see firsthand the needed improvements.

High, however, says such events are often unproductive.

"There's nothing wrong with inviting the public to an open house, but we don't get a good response. Just a few people show up," High said.

Continued on page 6

"By mentioning that a rate increase will help address a water quality concern the public is aware of, you can gain support for the increase."

*—James Leserman,
Southern
California Water
Replenishment
District engineer*

Rate Increases: Dealing with the Public

Continued from page 5

Instead of inviting residents to the water plant to see the problems, High and his coworkers take the water plant to the residents.

In conjunction with a previous rate hike proposal, Kokomo officials conducted a speaking tour, addressing as many civic groups as possible. High and other officials prepared a brief, seven-minute slide show that discussed how the plant works and problems that needed attention.

He said the presentations reached many community residents, especially the “opinion leaders” who tend to influence others.

With a population of 45,000, Kokomo officials have more resources at their disposal than smaller towns. If a slide show is too complicated, a smaller system could try making a poster for public display. Attach several good quality photographs to a poster board along with a brief description of the problem that needs to be addressed.

The poster can be shown to civic or church groups or other local organizations.

Any time a water or sewage rate increase is proposed, affected customers are going to talk about it, according to *The Water Board Bible* (see back page). It’s best to give them accurate information to talk about.

“If you don’t provide information, the grapevine will take over,” the book states.

Media: Reach Many Customers at Once

A quick way to reach customers with information about a rate increase is through the local media. A civic group address might give you an audience of 10 to 30 customers, while a newspaper or radio interview can reach hundreds of customers at once.

Unfortunately, reporters don’t always have a full understanding of the issue.

“They may inadvertently misrepresent the facts and make things worse for the water utility,” Leserman said.

He advises that system officials take extra time with reporters to give them a full picture of the rate issue. He added that a well-briefed reporter is more likely to present the issue fairly.

It may help to give the reporter a fact sheet about the need for a rate increase. The fact sheet could be included in a press packet containing other information about the system, possibly even photographs the reporter could use.

Some larger cities hire public relations firms to provide reporters and the public with high quality, professional materials explaining the need for a rate hike.

“We feel strongly that it may well be a cost of doing business,” High said of professional public relations help. “If you’re poorly prepared, you may not accomplish the end goal.”

Small system officials may not be able to justify the expense of a full-blown professional public relations campaign, but they could consider the smaller cost of paying a professional writer to prepare one or two press releases. The articles could then be submitted to local newspapers or television stations, or they could be used as “bill stuffers” and mailed to customers along with their water bills. (See example on page 7.)

High said a system that can’t afford a public relations firm may have talented people on their staff. He also suggested drawing on the talents of employees in other town departments.

“If you look, you might be surprised with the quality of people in-house,” he said.

Customers Appreciate Involvement

Are customers really more likely to accept rate hikes if they are informed about the process?

“I’ve yet to see it fail,” High said. He stressed that system officials have to explain to customers exactly what the service is they are providing. “If you say what the service is, they’re willing to pay a fair price for that service. In wastewater, a lot of times people don’t know what the service is.”

“You should solicit input from the public at the beginning of the process, even if it is just to find out what their concerns are,” Reed said. “Are they legitimate concerns? Can they be addressed? So when you get to the end, you can recommend rates that were based on public concerns from the beginning.”

Otherwise, Reed warned, a system is paying lip service to what will possibly become a very dissatisfied constituency.

“If there are tangible benefits, yes, they will support it,” Reed said.

He said if residents are involved and understand the need for a rate hike, they will voice their support for higher bills. This, in turn, gives elected officials the courage to vote for a needed increase.

For more information about involving the public, refer to the products on the back page. If you have additional questions, contact the Water Sense staff at the National Drinking Water Clearinghouse at (800) 624-8301. \$

To see how well your system handles rate reviews and rate increases, try taking the Water Sense quiz on pages 8 and 9.

Rate Setting: The Public Can Help Identify Resources

Water and wastewater system officials frequently try to set rates with as little public involvement as possible. Then they hope public response won't be too harsh when the new rates are set.

But by keeping the public out of the process, officials make their work harder, not easier. If the public is involved from the beginning, they may be more likely to accept a rate increase.

The public should be encouraged to attend all meetings, especially those where potential rate increases may be discussed.

Even if residents don't attend your meetings, they will appreciate the opportunity to participate, according to Karen Mancl, associate professor with The Ohio State University Extension.

Here are some specific steps your system can take to increase public involvement in the rate-setting process:

- **Make your case ahead of time.** Use the media to let the public know about the system's status "before you even talk about a rate increase," Mancl said.

There may be, for example, a need for expanded capacity to accommodate a new school or business. Tell your local newspaper about the situation so the public can become informed.

"Then have a public meeting—not to discuss whether or not we will have a rate hike, but how we as a community can address this need," Mancl said. "This moves the process away from being adversarial and makes it a much more pleasant undertaking."

- **Use free public service announcements (PSAs).** An easy and inexpensive way to reach customers is through PSAs in your local newspaper or on area radio stations. These are very brief announcements mentioning the time and location of meetings. The announcement could also include the main items to be discussed and possibly a phone number to call for more information.

You may be required to print a meeting notice in the local newspaper's legal section, but these legal notices often aren't well read. PSAs are more likely to reach a larger number of residents.

Most newspapers and radio stations run free PSAs as a community service. Remember to keep your message brief and submit it several days in advance.

- **Include rate-setting information with bills.** Every customer may not see a PSA in the paper, but they all should see "bill stuffers" included with their water or sewage bill.

These bill stuffers, or flyers, can include a list of upcoming meeting dates or a brief presentation on the need to increase rates or some other issues the system is facing. (See example below.)

- **Encourage constructive participation during meetings.** If you invite the public to attend meetings, you should give them plenty of opportunity to express opinions when they arrive.

A detailed meeting agenda must be published identifying time for public participation.

The public comments expressed during meetings are helpful, but probably do not mirror the views of the whole community, Mancl warned.

She noted that people generally fear public speaking and do so only when they are strongly concerned about an issue. So comments are usually offered only by those with strong feelings.

To keep the dialog productive, Mancl said the meetings should include controlled exercises such as brainstorming sessions in which the public is asked to come up with solutions to the problems being discussed. \$

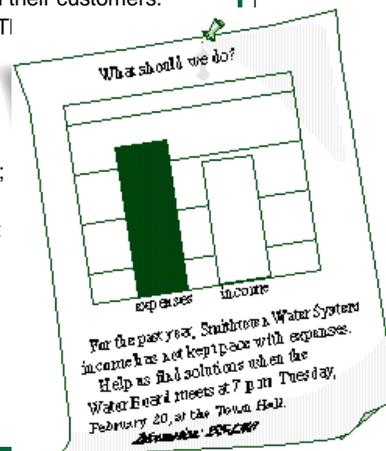
Karen Mancl, associate professor with The Ohio State University Extension, offers tips to increase public involvement in the rate-setting process.

Keep It Simple

A bill stuffer is a good way for officials of a drinking water or wastewater system to share information with their customers.

Karen Mancl with The Ohio State University Extension offers these tips for a successful product:

- keep the information simple;
- each bill stuffer should convey just one point;
- use pictures or graphics; and
- the fewer words, the better.



A Water Sense Quiz

How does your system 'rate'?

Over the last three issues of *Water Sense*, we've provided a series of articles concerning drinking water rates. Now let's see how your system stacks up.

Read each of these questions and circle the answer that best fits your situation. The explanation that follows each question might help you with your answer. A ranking at the end of the quiz will give you some idea of how your system rates.

Does your system's revenue, or income, cover all of its expenses?

YES / NO / USUALLY

A manager's main goal is to make sure the system's water rates and other income generate enough money to cover all expenses—including operations, debt service, reserves, and capital improvements. If rates are reasonably adequate, then revenues should equal or slightly exceed expenses. If not, the system's entire financial structure should be reviewed.



Is there sufficient cash on hand for accounts payable?

YES / NO / USUALLY

Every system should have adequate "cash flow." In other words, the system has enough cash on hand to cover day-to-day expenses as well as any emergencies. These funds should be kept in an easily accessible checking account or savings account. It is advisable to have an ordinance ensuring that funds in all water accounts are used solely for their intended purposes.

Are revenues based on metered water use?

YES / NO / MOSTLY

Every customer's water connection should be metered, if possible. This ensures that customers pay their fair share for the amount of water they consume. If connections are not metered, you should estimate consumption levels for different types of customers. For unmetered residential customers, charges could be based on the number of people in the household or the number of bathrooms or bedrooms in a residence. Also, consider starting a program to install meters on unmetered connections.

Has there been a rate increase in the past 24 months?

YES / NO

They certainly aren't fun to enact, but a rate increase should be considered at least every year

or two. In the typical two-year period, the costs associated with a water system can increase enough to outstrip revenues.

Are actual expenses compared to budget estimates at least quarterly?

YES / NO / USUALLY

Comparing actual expenses to projected expenses helps ensure that your budget stays on track. This should be performed on a quarterly or even a monthly basis. If customer usage is higher than expected, system expenses can exceed budgeted amounts. If rates are adequately set, income should increase with the extra demand.

Are rates set according to customer categories (i.e., industrial, commercial, and residential)?

YES / NO

Commercial, and especially industrial, customers often place extra demands on water systems—sometimes to the extent that additional equipment must be purchased to meet their needs. These extra expenses should be identified and then reflected in those customers' bills. Very small systems may have less need for numerous customer categories, but they should at least consider dividing customers into two categories—residential and commercial.

Is there an equipment (or minor capital) replacement fund?

YES / NO

Enough money should be kept in reserve to replace or repair equipment as it fails. To estimate how much money needs to be kept in reserve, try to identify which pumps, motors, vehicles and other equipment will need to be replaced in the next five years. For instance, if a pump will likely need to be replaced in four years, add one-fourth of the pump's replacement cost to the fund each of the next four years and increase rates accordingly.

Does your system have a long-term capital budget?

YES / NO

Just as a replacement fund anticipates minor capital expenses, a long-term capital budget anticipates major capital expenses. These major capital expenses include new water storage tanks, water main replacements, and other such "big ticket" expenses. A long-term capital budget
Continued on next page

Continued from previous page
requires a vision 10 to even 20 years into the system's future.

Does the water board or governing body hold a special meeting once a year devoted solely to the budget?

YES / NO

The water board should not simply “rubber stamp” a proposed budget. Members should take time to carefully study the document. Holding a special meeting for budgeting will eliminate distractions.

Is a water-loss audit conducted at least every two years?

YES / NO

Identifying and stopping leakage is one way for systems to save a lot of money, especially if you are purchasing water from a neighboring system. An audit might detect theft of water, malfunctioning check valves, leaking lines, and even abandoned lines that aren't on system maps. If audits are conducted in sections or by neighborhoods, each section of the system should be covered in any two-year period. A budget line item to conduct water-loss audits should be part of the operating expenses.

Is the public involved when new rates are being considered?

YES / NO / SOMEWHAT

Customer input should be welcomed, not discouraged, when new water rates are being set. Customers are more likely to accept a rate

increase if they have been involved in the process and understand why a rate increase is necessary.

Do delinquencies account for less than 3 percent of your total accounts?

YES / NO / USUALLY

Experience has shown that an account delinquency rate of about 3 percent or higher can affect the overall revenue-expense balance. This imbalance can reduce the system's cash flow.

Do you have a long-term plan for maintaining the technical, managerial, and financial capacity needed for successful operation?

YES / NO / SOMEWHAT

A successful system is self-sustaining, and is able to supply water to its customers while meeting all federal and state requirements. It should have the management capability to plan for and meet current and future financial and technical needs (including those addressed in this quiz).

The system should also strive to lower costs or increase efficiency to provide the “least cost” service to its customers. This may involve changes in the way the system operates. For instance, neighboring systems could agree to share operator duties or chemical purchases. System officials may want to consider contracting out management or other system tasks. They may also consider buying water from a neighboring system or forming wholesale districts with neighboring systems. Such moves—if they mean the continuation of a safe, reliable drinking water supply—might be in the best interest of the community. \$

Many of these questions were drawn from the products listed on page 16.

SCORE

Give your system 3 points for each “YES” answer, 0 points for each “NO” answer, and 1 point for each “USUALLY” or “SOMEWHAT” answer.

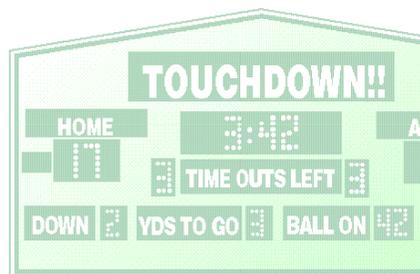
Your score _____

RANKING

28 and up — Touchdown!
You're a champion. Keep up the good work.

19–27 — Field goal.
Continue efforts that are successful, but focus on areas that may need improvement.

18 and under — Third down and long.
You might want to reconsider some practices. Maybe some outside assistance is in order.



A Look at 'Mega-Trends' Facing Small System Finances

Continued from page 1

On the following pages, a number of experts offer additional insights on some of the forces that could impact water rates over the next decade or so.

□ **The Safe Drinking Water Act**

The Safe Drinking Water Act (SDWA), initially passed in 1974, has meant more and stricter standards and more monitoring for drinking water systems. It has also meant higher costs for monitoring and testing and increased capital investments to meet those standards.

"The impact of the SDWA on small systems is generally magnified several times compared with the impact on large systems," said Daniel J. Kucera, a partner specializing in public utilities law with the Chapman and Cutler law firm in Chicago. He is a member of the National Association of Water Companies' Regulatory Law Committee.

"The costs to improve systems are great and, for small systems, must be borne by so few customers," Kucera said.

Small systems may find it difficult to secure funding for a major capital project, he said. The end result likely will be higher water rates for smaller systems and continued consolidation and regionalization of both public and private systems.

The 1986 reauthorization of the SDWA contained new requirements that greatly increased systems' costs for contaminant monitoring. Some experts are predicting that a 1996 SDWA reauthorization, if passed, should offer some relief from those

monitoring requirements, especially for small communities. (*See related article on page 2.*)

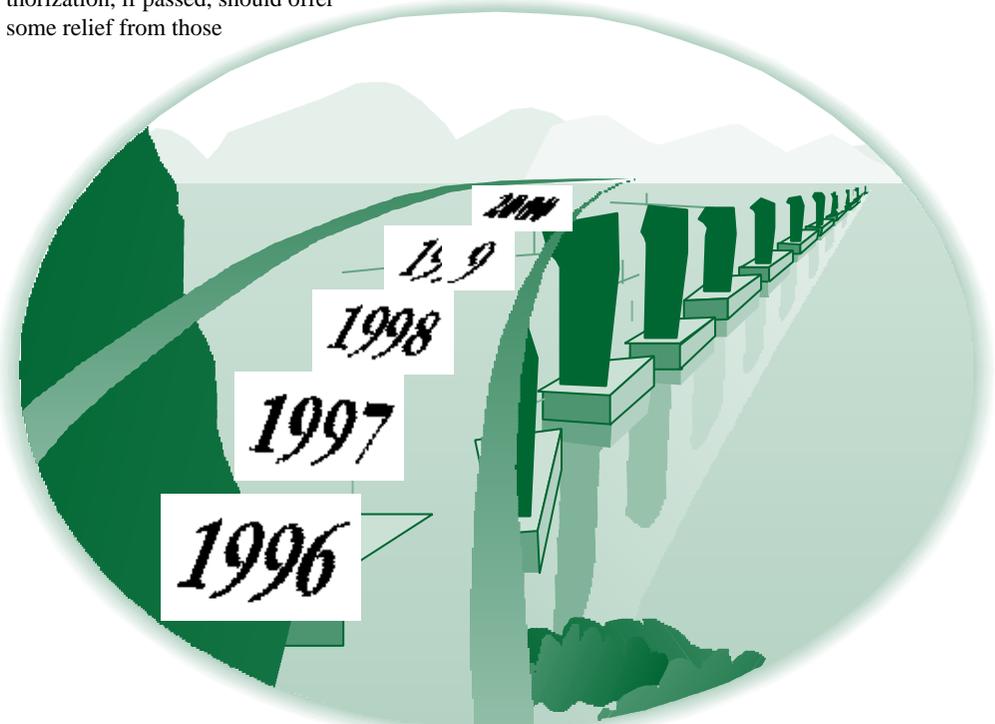
The proposed reauthorization also would eliminate the SDWA's controversial provision requiring the U.S. Environmental Protection Agency to set standards for 25 new contaminants every three years.

Michael Keegan, a research analyst with the National Rural Water Association (NRWA), sees the likely result of a new SDWA as providing more flexibility and reduced monitoring costs for small systems. However, Keegan said systems will need to have more knowledge about new monitoring requirements to be able to take full advantage of the relief provided. He said small systems will also have to be involved in state monitoring regulations that could replace federal requirements.

Kucera added that even if a reauthorized SDWA provides some relief, he sees the current trends of higher rates and system consolidation continuing. The basic requirements of the SDWA still will drive the need for higher levels of treatment, development of alternative water resources, and more intense monitoring, he said.

"However, compared to other forms of liquids we ingest, the per-gallon cost of water is still incredibly cheap," he said. "With new standards, rates will go up. But what customers are getting is a more assuredly safe water supply, and they're still paying a nominal price."

Continued on next page



Continued from previous page

❑ **Crumbling Infrastructure**

Many small systems are facing the need to replace infrastructure or expand their operations, according to John Trax, NRWA senior environmental engineer. This is especially true of transmission infrastructure (pipes, pumps, water tanks).

"It's hard to characterize the condition of rural drinking water infrastructure in a sentence or two, but my experience is that where the FmHA [Farmers Home Administration, now Rural Utilities Service] grants and loans were used, these systems are in good shape," he said. "However, systems put in by local developers are the ones that are in poor to fair shape."

He said many privately owned small systems, or systems operated by homeowners' associations, have poor infrastructure, while some community rural water districts have been able to maintain their infrastructure by increasing rates and having access to grants.

But Trax said most small systems are finding trouble financing infrastructure projects. He noted an annual backlog in requests for grants through the U.S. Department of Agriculture's (USDA) loan and grant program, administered by the Rural Utilities Service.

Several states have their own authorities with low-interest loans, and sometimes grants, he said. But there is not enough of this funding available.

"On a year-to-year basis, that financing need is not being met," Trax said. "A lot of systems aren't able to put in new infrastructure or replacement infrastructure without a grant."

Because of this lack of funding—especially grant funding—small systems are deferring infrastructure replacement projects, according to Trax. This, in turn, leads to increased operation and management costs to keep up with malfunctioning equipment and leaking pipes.

So what are systems doing when they face infrastructure needs they can't afford?

Privatization is one result.

"Some small privately owned systems are hoping someone will buy them," Trax said. "In some areas, investor-owned water companies have been aggressive in purchasing small water systems."

When grants or low-interest loans aren't available, some systems are financing projects through commercial banks.

"If they have a big infrastructure need, about the only thing small systems can do is raise rates and look at some commercial banks," Trax said. "But often those rates are so high the consumer can't afford it. So they keep deferring projects until they get on the Farmers Home list for grant funding."

Trax also said the proposed SDWA reauthorization may provide funding for drinking water state revolving funds (SRFs). These funds may provide grants for "a lot of disadvantaged communities that can't afford to borrow money, even at low-interest rates."

❑ **Economic Development**

A drinking water plant has an obvious task of supplying safe water to the community, but it also plays a role in the community's economic development efforts.

"Good access to water and sewer can be used as a resource to attract industry," said Michael Sowell, a development specialist with the National Rural Development Partnership.

Competition to attract and maintain business projects is fierce, and that can lead communities to offer all kinds of breaks and incentives, according to Sowell.

Those incentives to businesses can include inexpensive and even subsidized drinking water and wastewater service, Sowell said. He warns, however, that communities—when dealing with businesses—need to "stay in the driver's seat."

For example, Sowell spoke of communities that expand their drinking water systems in the hopes of attracting business. "Industry may come or not come, but the residents pay for the expansion regardless."

A wiser option may be to help the potential new industry set up a "sole-source" water system—exclusively for that industry—once it agrees to locate in the community.

Sowell said communities should be aggressive in attracting new industry, but they should also be careful not to set up an arrangement that could be potentially damaging to the residents and existing industry. "It's a tough call sometimes," he added.

Rick Wetherill, deputy director of Empowerment Zones and Enterprise Communities within USDA's Rural Business Cooperative Service, voiced another caution. He said communities often make the mistake of going after the economic development "big score"—a single new factory or business that employs hundreds of people.

"A big score is something a local official can point to and say, 'Look there. I brought that to our town,'" Wetherill said.

Unfortunately, those big economic development hits can also be big hits on the local infrastructure. Roads, water, and sewer may need to be upgraded at once, resulting in a drain on tax funds and possibly increases in user fees for water and wastewater.

Continued on page 12

Did You Know?

You can drink more than 4,000 eight-ounce glasses of tap water for the same cost as a six-pack of soda pop.



Source: American Water Works Association

A Look at 'Mega-Trends' Facing Small System Finances

Continued from page 11

"Another big problem with bringing in a large employer is it tends to put all of a community's eggs in one basket," Wetherill said.

Communities, he said, could instead consider what steps they can take to help existing business and industry expand. That help might even include a break on water or sewage charges during poor economic times.

"That issue comes up all the time," Sowell said.

The decision depends on the answers to two questions. Can the rest of the community absorb the lack of revenue? And, how important is that industry to the community?

He said any such decision should be accompanied by a promise by the industry to somehow reimburse the community once it gets back on its feet.

"It's a matter of being a little more careful about having a resource and protecting it," Sowell said.

□ **Changing Demographics**

Population shifts and demographic changes can also affect small water systems.

Calvin Beale, senior demographer with the USDA's Economic Research Service, said shifts and changes are occurring, but with some widely varying results.

Some communities could see dramatic growth in the next decade or so, according to Beale. Some of these growth communities will be absorbed as suburbs of large cities. Others will see growth as retirement communities or tourism areas.

Systems in these communities will be faced with expanding lines and capacity to meet new demand.

"Obviously, where there is growth, there is a need for more water, wastewater service, and school capacity," Beale said, but he added that his organization has not conducted any studies to project specific impacts.

At the same time, many communities will see a decrease in population, Beale said. Typically, these communities are more rural—farther away from urban centers. They also are typically more dependent on one economic activity, such as farming or mining.

These communities will be faced with maintaining water systems with fewer customers to pay for maintenance and renovations.

Many factors are influencing these population shifts. But in general, according to Beale, rural communities in the western and southeastern U.S. should continue to see population growth while

rural communities in the "farm belt" should see continued decreases.

Additionally, some communities will have much older populations as younger residents move to find job opportunities or as retirees move in, according to Beale. Thus, these systems will likely see larger percentages of residents on fixed incomes.

Rubin noted the expected continuation of another trend—smaller household sizes—that could add additional pressure on small system finances.

He said water use will decline in these smaller homes, meaning less system income with no decrease in the system's distribution costs to supply water to those homes.

Keep Informed

So what can managers and operators do to prepare for changes that can impact their systems?

Stay attuned to governmental changes that can affect your system and the social changes that can impact your local community. Keep in contact with your state representatives and other government officials concerning regulatory developments that might affect your system.

Also keep abreast of national developments through industry newsletters such as those published by various national associations (the NRWA and the American Water Works Association, for instance).

Be aware of local events. Are town officials trying to attract new industry to your community? If so, make sure local leaders are aware of improvements your system would need to be able to meet an increased demand. If possible, you may want to join a local or regional planning council to learn more about the various interests driving economic development and perhaps have a say in some of the local decisions.

Finally, have a thorough understanding of your own system. Does income meet expenses? Do you know the condition of all your equipment and plan ahead for needed improvements? Do you conduct regular rate reviews, leak detection audits, and the like? By knowing the strengths and weaknesses of your own system, you can better understand—and prepare for—effects of future changes.

The National Drinking Water Clearinghouse offers many free publications and other services to help small communities understand federal regulations, technology, financing, and other issues. To order a free information packet or products catalog, call (800) 624-8301. \$

CBO Says SDWA Costs Are Modest for Most Households

Most households pay less than \$20 a year to treat their drinking water to meet existing standards under the Safe Drinking Water Act (SDWA), according to a September 1995 study by the Congressional Budget Office (CBO).

“Although the SDWA has been cited as a particularly burdensome mandate, available data do not indicate that it has imposed high costs on most households,” states CBO’s report, *The Safe Drinking Water Act: A Case Study of an Unfunded Federal Mandate*. However, the report notes that households served by small water systems are more likely to face high costs, sometimes over \$100 per year.

While the CBO examined the total cost of the SDWA, it found it nearly impossible to identify only the *incremental* costs of SDWA mandates—that is, expenditures above what state and local governments would have made to provide safe drinking water in the absence of SDWA requirements.

“Because many federal mandates are designed to achieve a goal that state and local governments share, many state and local governments would take certain actions toward achieving that goal even without a federal mandate,” says the CBO.

The costs identified in the report reflect *only* monitoring and treatment costs, which make up a relatively small portion of the total drinking water expenses for systems and households. Census data indicate that the average household spent \$352 for drinking water in 1991.

“Treatment is only one of the multiple costs that water systems bear,” says the CBO. It points out that the primary factors increasing the cost of water will continue to be the needs to upgrade aging water delivery systems and to meet increased demand from population growth and economic development.

According to government and industry estimates in the report, water systems will spend \$1.4 to \$2.3 billion annually to comply with existing SDWA requirements. This represents five to eight percent of the total 1991 expenditures of \$28.6 billion (in 1992 dollars) for drinking water.

Small Systems Face Higher Costs

Not surprisingly, the report says that “households with the highest compliance costs tend to be those served by small water systems that need one or more types of treatment.” Costs also tend to be higher for surface water systems, which

generally need more treatment than groundwater systems.

Furthermore, the CBO says that compliance costs could more than triple if some of the proposed regulations (Disinfectants/Disinfection By-Product Rule, Enhanced Surface Water Treatment Rule, and Radon Rule) go into effect. And again, average per household costs of these rules would tend to be higher for small communities.

The CBO observed that this tendency is not surprising given the way standards have traditionally been set. While the SDWA requires costs to be taken into consideration when establishing standards, historically this process has considered what is affordable to *large* systems, notes the CBO. “Given that large systems generally have lower unit treatment costs than small systems, that process will inevitably result in smaller systems

having higher costs per health effect avoided than larger systems do.”

In fact, the CBO found a wide variation in costs relative to health benefits among different sized systems and contaminants. For instance, the budget office estimated the average cost per cancer case avoided by the proposed regulation for adjusted gross alpha emitters (which reduces exposure to the radionuclide polonium) to be \$600,000 for the largest water systems, compared to more than \$1 billion for the smallest systems.

Flexibility Provisions Little Used

The CBO also found that flexibility provisions in the law are not being widely used. The SDWA provides tools designed to give states and localities flexibility in addressing actions that don’t make sense in their area, such as testing for chemicals not used there or undertaking costly treatment methods that far outweigh benefits.

For instance, variances and exemptions are meant to help troubled systems that can’t meet maximum contaminant levels. But the CBO found that out of 200,000 public water systems nationwide, no variances and only 15 exemptions were issued between January 1990 and March 1994. A number of states have, or are developing, waiver programs to reduce testing for certain contaminants. But limited resources and other barriers are hindering such efforts.

To order a free copy of this study, call the CBO Publications Office at (202) 226-2809. For questions about the study, call Terry Dinan of CBO’s Natural Resources and Commerce Division at (202) 226-2940. \$





Loans Help Homeowners Fix Onsite Systems

Homeowners in a number of states can now get low-interest loans to prevent their failing onsite wastewater systems from polluting ground-water, lakes, and other waterways.

Typically, residents of rural or outlying areas have no access to central sewage systems and must rely on septic or other onsite systems to dispose of household wastewater. But many of these people cannot afford to repair or replace old, failing systems, which can pollute the water they and others use for drinking and recreation.

In states like Delaware, Pennsylvania, and Washington, however, funding programs have been established to help these residents. Most of this onsite funding comes from a portion of state revolving loan funds targeted for control of nonpoint source pollution, such as runoff from agricultural lands or other diffuse sources.

In general, these loans are limited to low- to moderate-income homeowners—criteria vary by state and region—and can be used only to fix problems with *existing* onsite systems. However, the funding programs may allow alternative technologies to be used in place of conventional septic systems, where appropriate. Some program features are outlined here.

Minnesota Targets Tourism Industry

In this “land of 10,000 lakes,” waterfront cottages, inns, and resorts fuel much of the state’s expanding tourism industry. Failing septic systems at these sites, however, can quickly pollute the very waterways used for recreation and drinking water.

To help alleviate this problem, the state’s Department of Trade and Economic Development (DTED) offers financial help. Its Tourism Loan Program for Septic Systems provides low-interest loans to upgrade failing septic systems at tourism-related businesses that provide overnight lodging.

“The purpose, of course, is to make sure that our waters stay clean,” says Bob Ahlin, loan portfolio manager at DTED. But there’s an economic aspect as well, he adds.

“Almost all of the people who apply are small operators who can’t afford to pump a lot of money into the ground,” explains Ahlin, “so we’re also trying to keep our resort industry from going broke.”

Potential applicants first secure half of their needed funding from a bank, usually at market interest rates. DTED then supplies the other half at 2 percent interest, and provides part of the repaid interest to the bank to service the entire loan. DTED can provide up to \$65,000 per applicant, enabling a borrower to obtain as much as \$130,000 to repair or replace a failing onsite system.

For more information, contact Bob Ahlin at DTED, at (612) 296-6858.

Delaware

The Septic Rehabilitation Loan Program is run by the Delaware Department of Natural Resources and Environmental Control (DNREC). In the two-and-a-half years the program has been running, 71 loans have funded more than \$440,000 in improvements. Features include:

- Loans range from \$1,000 to \$10,000.
- The interest rate is 3% or 5%, based on income/ family size, with up to 20 years to repay.
- Separate income limits exist for owner/occupants and for investors with tenant occupants—limits vary by county and family size.
- Loans are not available in areas where sewer districts are planned within the next three years.

Contact: Charles Kashner, DNREC housing mortgage loan officer, at (302) 739-5081.

Pennsylvania

The On-Lot Funding Program is jointly run by Pennsylvania Infrastructure Investment Authority (PENNVEST), the state Department of Environmental Protection (DEP), and the Pennsylvania Housing Finance Agency (PHFA). Since the program started in mid-1994, 63 loans have financed over \$750,000 in improvements. Features include:

- Loans range up to \$15,000.
- Interest rate is 1%, with up to 15 years to repay.
- The program is currently open to homeowners making \$49,944 per year or less.
- Loans are not available in areas served by public sewers, or where wastewater systems are to be constructed within the next five years.
- Most funded projects have been conventional septic systems, but a few repairs have involved sand mound systems, individual lagoons, or other alternatives.

Contact: PENNVEST at (717) 787-8137; PHFA at (800) 822-1174 (in state) or (717) 780-3800; or DEP at (717) 787-3481.

Washington

The Washington Department of Ecology (DOE) provides Local Loan Funds to cities and counties for water quality improvement projects, including septic tank rehabilitation. Localities then make loans to private individuals and small businesses to fix onsite problems. Since 1990, the program has provided more than 225 loans to individuals or small businesses, financing \$5 million in septic and agricultural best management practice improvements. Features include:

- The size of loans to localities vary, but most range between \$100,000 and \$300,000; so far, 15 Washington counties or cities have established a Local Loan Program.

Continued on next page

Report Tracks Progress of Clean Water SRF

Since 1988, more than \$16 billion in low-cost loans have been made available for wastewater projects through the state revolving fund (SRF) program, according to a January 1995 report from the U.S. Environmental Protection Agency (EPA). *The Clean Water State Revolving Fund—A Report of Progress* outlines key features and benefits of the SRF program.

Run by states, SRF loan funds are established, or “capitalized,” by federal grants from EPA, with states required to provide a 20 percent match. States lend the SRF money, at below-market rates, to fund wastewater and other water quality projects. Repayments of these loans are “recycled” back into the SRF to be loaned again for other projects.

In the report, EPA Administrator Carol Browner notes, “because of the revolving nature of the SRF program, an initial investment by the federal and state governments can result in the construction of up to four times as many pollution control projects over a 20-year period as could be constructed with traditional federal grants. Simply stated, that’s four times the ‘bang-for-the-buck.’”

State Programs Are Flexible, Diverse

A number of states “leverage” their SRF by using the capitalization funds as security to issue bonds, enabling those states to lend more money than provided by EPA and the state matching funds. In fact, the report indicates that the \$16 billion available in SRF funds as of Fiscal Year 1995 comes from a total of \$11.1 billion in federal funds and \$2 billion in state matching funds, with the rest from proceeds of leveraging.

According to the progress report, some states are using SRF loans to address a variety of environmental problems, including agricultural, rural, and urban runoff, stormwater, combined sewer overflows, and estuary management projects.

Small communities also benefit from the SRF. The report states that about 650 SRF loans have been made to communities with populations of 3,000 or less, representing more than 25 percent of the total number of SRF loans nationwide.

The report notes that SRF loans can be—and often are—combined with other federal or state funding programs, such as the U.S. Department of Agriculture grant and loan programs (*highlighted on page 3 of this issue*).

There is no federally funded SRF for drinking water yet, but proposed legislation that would authorize one is discussed on page 2 of this newsletter.

To order a free copy of the report, call the EPA Water Resources Center at (202) 260-7786 and ask for publication EPA 832-R-95-001. \$

SRF Loan Program Features:

- Interest Rate: 0% to Market rate
- Repayment Period: Up to 20 years
- Adjustable-rate loans, stepped payments, balloon payments allowed at state discretion
- Loans cover 100% of eligible costs
- Repayment begins one year after project start-up
- Loans available for all treatment alternatives
- Loans can cover excess capacity, collection systems, advanced treatment solutions



Survey of State Drinking Water SRFs Is Available

A survey of state efforts to establish revolving fund programs for drinking water is available from the National Conference of State Legislatures (NCSL). The August 1995 report, *Drinking Water State Revolving Funds (SRF) and Related Loan/Grant Programs*, identifies 38 states that have established—or have statutory authority to establish—state-funded SRFs or related loan or grant programs for drinking water. Contacts are listed for each of these states.

The survey also identifies states that have authority to receive federal capitalization grants—money that would be allocated to the states if Congress passes legislation to provide SRF funds for drinking water. Currently, federally funded SRFs are only available for wastewater and related projects (see article above). For an update on the proposed drinking water SRF, see the article about the Safe Drinking Water Act on page 2.

To obtain a free copy of the NCSL report, contact Larry Morandi at (303) 830-2200. \$

Loans Help Homeowners Fix Onsite Systems

Continued from previous page

- Most septic repair loans to individuals are less than \$12,000.
- Each locality establishes interest rates, income limits, and repayment terms for individual borrowers.

Contact: Local governments wanting to learn more about the program can contact Brian

Howard, DOE, at (360) 407-6510; Individuals wanting to find out about septic system rehabilitation funding available in their area should call their local health departments.

If your state or region offers a low-interest onsite funding program for homeowners, please tell us about it. Call the Water Sense editor at (800) 624-8301. \$

Rates:

Rate Increases:
Dealing with the
Public, page 1

Where are rates
heading? A Look at
'Mega-Trends'
Facing Small System
Finances, page 1

A *Water Sense*
Quiz—How does
your system rate?
page 8

Features:

SDWA: Rewrite
Could Mean Relief,
page 2

Report Describes
USDA Water/Sewer
Funding, page 3

New Idaho EFC
Addresses
Mandates, page 4

CBO Says SDWA
Costs Are Modest for
Most Households,
page 13

Departments:

From the Editor,
page 2

RUS Rates, page 4

Wastewater Funding,
pages 14–15

Products To Help Evaluate Your Finances

Some of the questions for the rate quiz on pages 8 and 9 were developed from the following documents.

Note: Free items are limited to one of each per order. Actual shipping and handling charges will apply to all orders unless otherwise noted. Call (800) 624-8301 to place an order. Please allow four to six weeks for delivery.

■ **Financial Management Evaluation: Handbook for Wastewater Utility**
Item #: *FDPCFN11*

Developed by the U.S. Environmental Protection Agency, this handbook and the companion appendices (*described below*), are designed to help evaluate the financial management capacity of wastewater systems. Much of the information is also applicable to drinking water systems. (1989, 40 pages)

Cost: \$5.65

■ **Financial Management Evaluation (Appendices)**
Item #: *FDPCFN07*

A companion to the booklet above, these appendices contain an outline for making an

intensive financial management evaluation of a wastewater utility. (1989, 176 pages)

Cost: \$17.50

■ **The Water Board Bible: The handbook of modern water utility management**
Item #: *DWBKMG05*

The handbook provides information and guidance on the regulatory and financial aspects of managing a water utility. It also includes sample board problems and solutions, informational quizzes, and a reading list. (1994, 96 pages)

Cost: \$13.80

■ **A Utility Manager's Guide to Water and Wastewater Budgeting**
Item #: *FDBLFN13*

This booklet presents financial concepts that are helpful to water or wastewater utility managers when developing annual budgets. Topics include possible revenue sources, expenses to consider, suggestions for gaining public support, and advice on monitoring revenues and expenses. (1994, 21 pages)

Cost: Free

NDWC's New Products Catalog Is Available

The National Drinking Water Clearinghouse (NDWC) is now offering its new products catalog, which contains information about free and low-cost products related to drinking water.

Available by request only, the *1995–96 Guide to Products and Services* describes more than 150 products that address various small community drinking water issues.

According to Vernon Deal, Resource Center manager, the catalog includes a new, standardized

pricing structure for NDWC products.

NDWC's sister organizations—the National Small Flows Clearinghouse and the National Environmental Training Center for Small Communities—offer similar guides related to wastewater and training, respectively.

To order any of these free catalogs, call (800) 624-8301. \$

National Drinking Water Clearinghouse

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Morgantown, WV 26506-6064

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