Financial Drinking Water News For America's Small Communities

Water Sense

Winter 1999
Volume 5, Issue 1

Water 2000: 87 Rural Communities Receive $155.8 Million

by Mark Kemp-Rye
Water Sense *Editor*

"Safe, reliable drinking water is more than a matter of convenience, it's critical to public health and economic development." With those words, Vice President Al Gore announced, in July 1998, the latest combination of grants and loans to be distributed through the administration's Water 2000 Initiative.

In all, 87 rural communities in 38 states and Puerto Rico will receive $155.8 million in federal funds to upgrade the quality, accessibility, and dependability of their drinking water. In some cases, communities are receiving running water for the first time.

Photo by Lisa Sharp, WV Rural Development

Larry Chapman (left), Bobby Lewis (center), and William Stalnaker (right), celebrate two Water 2000 projects in Gilmer County, West Virginia. Lewis is West Virginia Rural Development director, Chapman is a Gilmer County commissioner, and Stalnaker represents the Gilmer County Public Service District.

Water 2000 Finds Critical Needs

Water 2000 was started in August 1994 when the U.S. Department of Agriculture (USDA) convened a roundtable discussion. Concerned that many Americans still lacked clean, safe drinking water in their homes, officials at USDA formulated a plan to bring water into all homes by the year 2000. The Rural Utilities Service (RUS), part of the Rural Development mission area of USDA, was charged with coordinating Water 2000.

According to the RUS document "Water 2000: A Plan for Action," the premise of this project is simple: "Safe, affordable drinking water in virtually every home—no matter how remote and distressed—is necessary to improve the health

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Energy Audits May Offer Cost Savings To Utilities, page 12

Liability Insurance: Does Your System Have Adequate Coverage?

by Margaret Caigan McKenzie
NDWC Contributing Writer

Editor's Note: This article is the first in a series on liability insurance coverage for small drinking water plants. When reading this article, keep in mind that insurance requirements and coverages vary from state to state.

If you oversee or manage a small drinking water plant, you have probably experienced the relentless telephone calls and unscheduled visits from eager insurance salesmen wanting to show you the latest coverage package. Talking insurance with a salesman may not be how you *want* to spend your time, but it just might be how you *should* spend your time.

Jack Miller of Howalt-McDowell Insurance, Inc. in Sioux Falls, South Dakota says, "Many organizations, including water companies, mistakenly believe that they are immune from lawsuits. However, the exposures that can potentially lead to a lawsuit are plentiful."

Miller goes on to list some of the most common situations in which a lawsuit might be initiated. These include employment-related situations, membership disputes, mismanagement allegations, defamation, libel, and slander, copyright and patent disputes, misleading reports or other misrepresentations, and inefficient administration or supervision.

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NATIONAL DRINKING WATER CLEARINGHOUSE

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Water Sense

Sponsored by
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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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The NDWC Wishes You a Happy New Year

On behalf of the staff of the National Drinking Water Clearinghouse (NDWC), allow me to extend best wishes for a happy and productive New Year. This issue is my third in the editor's chair and marks the one year anniversary of my first interview for a job here. I still have a lot to learn about drinking water but there's one thing of which I'm certain: Until now, I've taken the water in my home for granted. The fact that most of us are *able* to take water for granted is, in many ways, a compliment to the hard work and diligence of drinking water professionals around the country. So, give yourselves a well-deserved pat on the back.

What's in this issue?

Unfortunately, for nearly three-quarters of a million Americans, running water in the home is not a reality. Water 2000 is one attempt to improve these conditions. In the cover story, "Water 2000: 87 Rural Communities Receive $155.8 Million," I take a look at this important program and highlight several communities being helped by it.

NDWC writers Margaret Caigan McKenzie, Kathy Jesperson, Michelle Moore, and Natalie Eddy provide articles on the following topics: liability insurance, accounting methods, funding opportunities, and utility audits, respectively. Elsewhere you will find information sources, announcements, and product listings designed to make the business of supplying safe, clean, affordable water that much easier.

Life in the Mountain State Is Interesting

As many of you know, the NDWC is located at West Virginia University in Morgantown, West Virginia, a region known for its natural beauty. While the mountains provide a visually appealing place to live and work, they also make things such as water projects challenging and costly.

Photo by Mark Kemp-Rye

West Virginia's rugged terrain and low density, rural population make water projects difficult and expensive.

West Virginians, and others in Appalachia, have benefited greatly from federal water programs over the years. Indeed, many residents of the Mountain State would not have treated water without them.

It was, therefore, with great pleasure that a group of us from various water-related agencies welcomed John Romano, Rural Utility Service (RUS) deputy administrator, to our state on December 29 and 30, 1998. Mr. Romano came to celebrate several USDA-funded projects and to see, firsthand, the needs of people here. (See the photo spread on page 7 for more information.) In all, several million dollars were committed for new projects during those two days.

This commitment furthers USDA efforts in West Virginia, which in fiscal year 1997, received more than $29 million in water and wastewater loans and grants. This money is being used in 27 communities around the state and helps insure adequate water and wastewater systems for 13,164 rural residents. Ask any of them if funding for water projects is important!

Call Us, Write Us, Send Us Some E-mail

We love to hear from our readers here at the NDWC. Our mailing address and phone number are listed at the left, as is the URL of our Web site. You may reach me directly by dialing extension 5523 from the main number or via e-mail at *mkemp@wvu.edu*. I look forward to hearing from you and wish you many exciting adventures in 1999. **$**

Mark A. Kemp-Rye
Water Sense Editor

No Change in RUS Interest Rates This Quarter

Interest rates for Rural Utilities Services (RUS) water and wastewater loans issued between January 1 and March 31, 1999 are the same as the previous quarter. The rates are:

- poverty line rate: 4.5 percent;
- intermediate rate: 4.75 percent; and,
- market rate: 5.0 percent.

RUS loans are administered through local or state Rural Development offices. More detailed information is available through these offices.

For the phone number of your state Rural Development office, contact the National Drinking Water Clearinghouse at (800) 624-8301 or (304) 293-4191. **$**

Water 2000: 87 Rural Communities Receive $155.8 Million

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and productivity of our nation's rural communities, and to control long term public costs related to drinking unsafe water."

While the premise may be simple, the work needed to accomplish the goals is certainly not easy. The original (1994) estimates show that at least 2.2 million rural Americans live with critical drinking water quality and access problems, including an estimated 730,000 people who lack running water in their homes. A December 1995 estimate put the total cost of providing water to these homes at upwards of $10 billion! (See the table on page 5 for a state-by-state water needs assessment.)

Where does the funding go?

RUS selects Water 2000 projects and funds them from Congressional appropriations for water and waste disposal projects. According to Bart Handford, RUS Assistant to the Administrator, "all Water 2000 funding goes toward building new systems or improving existing systems. (See page 6 for a state-by-state breakdown of available RUS loans and grants.)

"The primary purpose," he elaborates, "is to solve the problems of rural Americans who have no drinking water in their homes at all, are drawing water from unclean or unsafe sources, or whose water supply is so inadequate that they have water service infrequently."

Nearly five million more rural residents are affected by less critical, but still significant water problems, as defined by the federal Safe Drinking Water Act (SDWA). The Centers for Disease Control and Prevention estimate that nearly one million Americans become sick each year from drinking contaminated water. These problems are both dangerous and expensive.

The most prevalent of these problems are undersized or poorly protected water sources, lack of adequate storage facilities, and antiquated distribution systems. Often, one of the problems associated with older, existing systems is excess leakage. In addition to being wasteful and expensive, this decreases water pressure throughout the system, which increases the likelihood of contamination,

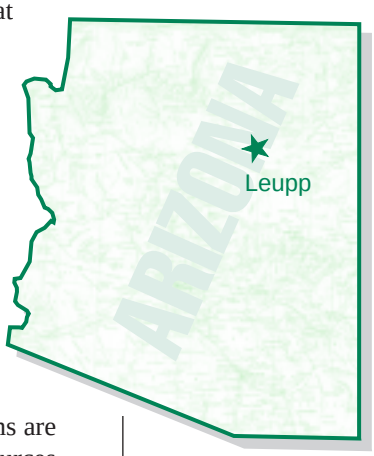
Water 2000 seeks to rectify problems such as these.

Projects Are Started

Several projects have already received funds from Water 2000, and ground has been broken around the country. As previously mentioned, these projects are found in practically every state in the U.S. The following are four examples of Water 2000 in action.

The village of Kongiganak in Bethel, Alaska, has faced hardship for years. Treated surface water is only available to residents at the local washeteria. Many residents catch rain in the summer and melt ice in the winter to meet their water needs. Homes are not plumbed. Villagers haul "honey buckets," receptacles in which waste is collected, to a pre-treatment site at a sewage lagoon.

A $300,000 USDA Rural Development Rural Alaska Villages Grant, combined with a $500,000 grant from the State of Alaska will provide for an upgrade of the water available at the washeteria and treatment for wastewater. The project will also locate and develop a potable water supply for this remote village.



In Navajo County, Arizona, a combination of RUS loans and grants totaling $126,000 will fund the Old Leupp Water Line Extension project. The sole water main currently serving this area is no longer adequate to meet the needs of the residents. Low water pressure and frequent breaks in the pipeline create both reliability and health problems for customers. Some families have been forced to retrieve water from neighbor's homes and to resort to pit privies (outhouses) for their waste disposal needs.

A new water line will be constructed to serve the homes on the current system. Additionally, four other homes will be added that were previously not connected to the system.

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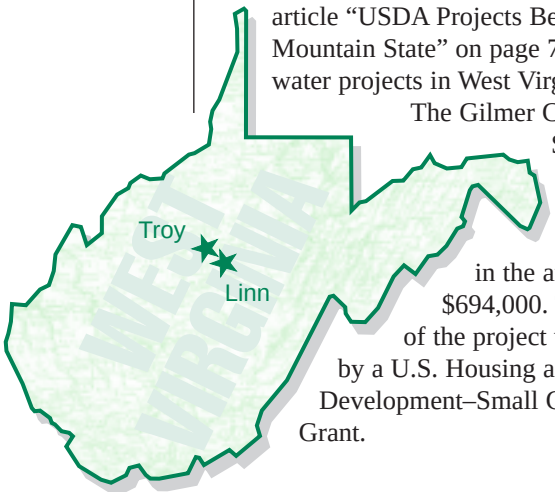
Across the country in Tilton, New Hampshire, many of the people rely on individual subsurface septic systems for waste disposal. Soil surveys have shown that natural soils in the area are not conducive for leaching beds to properly treat wastewater from septic systems. These inadequate systems pose a threat to nearby Lake Winnisquam and to wells supplying domestic water to residents.

The Water 2000 project in Tilton will replace the malfunctioning and deficient septic systems with eight-inch pipe, a six-inch force main, and two pump stations. The plant is also part of an effort to reduce, and eventually eliminate, pollution in nearby lakes.

In Gilmer County, West Virginia, the Water 2000 project will fund a water line extension to serve the communities of Troy and Linn. It will serve 116 rural residents and the Troy Elementary School.

In the past, residents of these communities have been besieged by water related problems, according to Rural Development officials. Of significant concern is the water source supplying the elementary school, which was poor in both quality and quantity. Additionally, locals are served by water wells, including several on a flood plain, and most not in compliance with current standards.

"Clean water is essential to the health and economic future of this area," said State Rural Development Director Bobby Lewis at a celebration in Troy to launch the project. "With funding provided by the Water 2000 Initiative, residents will now be able to enjoy cleaner, safer drinking water. And, we are pleased that USDA Rural Development could play a role." (See the article "USDA Projects Benefit the Mountain State" on page 7 for more on water projects in West Virginia.)



The Gilmer County Public Service District received a combination loan/grant from RUS in the amount of $694,000. The remainder of the project will be funded by a U.S. Housing and Urban Development–Small Cities Block Grant.

Much Has Been Done Already, Much Remains to be Done

As of the end of fiscal year 1998, RUS had provided approximately $1.6 billion in loans and grants for Water 2000 projects. These projects affect some 2.5 million people in more than 1,300 communities.

A quick look at Census data over the last twenty years, gives an indication that these projects are making an impact. At the time of the 1980 Census, some 2.1 million Americans were without any drinking water in their homes. By the 1990 Census, the number had dropped to 1.07 million, and by 1998, USDA estimates the number at less than 730,000.

The RUS appropriation for water and waste disposal projects in fiscal year 1999 is $645 million. Larry Bowman, RUS head of operations for water and environmental programs, says that this translates into a projected $706 million in loans and $528 million in grants (see table on page 6). "This figure is larger than the appropriation," he says, "because it costs just $16.52 for each $100 loaned by the agency." Roughly half of these funds will be targeted to Water 2000 projects, reports Bowman.

And while the current appropriation doesn't fund all the remaining projects, it does go a long way toward furthering Water 2000's ambitious goals and in making a difference in people's lives. "Those of us who have good drinking water in our homes maybe take it for granted," observes RUS's Handford. "But, perhaps we don't recognize the number of those among us who don't have it. Water 2000 is truly a lifeline for those in the most need."

More information about Water 2000 may be found at the USDA Web site at http://www.usda.gov/rus/watr2000/index.htm. *In addition to summary information and news, the site features a state-by-state breakdown of Water 2000 projects. Information is also available by writing Water 2000, 1400 Independence Avenue, SW Stop 1538, Washington DC 20250-1538.*

The National Drinking Water Clearinghouse (NDWC) offers a compilation of articles from the publications On Tap *and* Water Sense. *Titled "The Water 2000 Information Package," it is available by calling (800) 624-8301 or (304) 293-4191 or via e-mail at* ndwc_orders@ndwc.wvu.edu. *Request item #DWBLGN35; the cost for the compilation is $1.90 plus shipping and handling.* **$**

WATER 2000 RURAL SAFE DRINKING WATER NEEDS ASSESSMENT

STATE	MOST CRITICAL NEEDS HOUSEHOLDS (thousands)	MOST CRITICAL NEEDS COSTS (millions)	ADD'L SERIOUS NEEDS HOUSEHOLDS (thousands)	ADD'L SERIOUS NEEDS COSTS (millions)	TOTAL NEEDS HOUSEHOLDS (thousands)	TOTAL NEEDS COSTS (millions)
Alabama	17,633	$117.6			17,633	$117.6
Alaska	3,055	38.3	17,945	$227.0	21,000	265.3
Arizona	39,732	129.8			39,732	129.8
Arkansas	16,208	129.5	53,703	379.5	69,911	509.0
California	10,852	79.5	17,622	39.8	28,474	119.3
Colorado	8,613	64.8			8,613	64.8
Delaware	14,177	27.1			14,177	27.1
Maryland	10,868	56.7			10,868	56.7
Florida	12,380	22.4	13,410	46.0	25,790	68.4
Georgia	137,082	253.3			137,082	253.3
Hawaii	2,573	49.0			2,573	49.0
Idaho	15,956	30.0	20,780	69.6	36,736	99.6
Illinois	23,555	168.3	5,761	431.7	29,316	600.0
Indiana	6,427	16.8			6,427	16.8
Iowa	27,127	190.0	20,626	140.5	47,753	330.5
Kansas	4,687	13.6			4,687	13.6
Kentucky	17,475	148.3	159,830	914.9	177,305	1063.2
Louisiana	23,846	63.3	205,354	585.4	229,200	648.7
Maine	12,999	19.9	39,835	106.6	52,834	126.5
Massachusetts			70,150	76.6	70,150	76.6
Connecticut			17,557	45.9	17,557	45.9
Rhode Island			500	3.0	500	3.0
Michigan	36,871	139.8	77,257	153.4	114,128	293.2
Minnesota	10,524	67.5			10,524	67.5
Mississippi	49,150	250.6			49,150	250.6
Missouri	30,942	89.9	14,840	35.0	45,782	124.9
Montana	19,642	96.7			19,642	96.7
Nebraska	4,536	13.1	1,876	3.4	6,412	16.5
Nevada	19,895	31.1			19,895	31.1
New Jersey	21,507	46.9	24,954	53.2	46,461	100.1
New Mexico	31,166	140.4			31,166	140.4
New York			56,962	186.3	56,962	186.3
North Carolina			423,353	554.5	423,353	554.5
North Dakota			44,890	256.7	44,890	256.7
Ohio	62,797	130.6	84,011	195.9	146,808	326.5
Oklahoma	5,588	28.4			5,588	28.4
Oregon			39,201	80.1	39,201	80.1
Pennsylvania	11,003	39.8	50,699	883.6	61,702	923.4
South Carolina	39,174	119.5	8,340	2.3	47,514	121.8
South Dakota	16,120	21.0	19,785	32.9	35,905	53.9
Tennessee	24,702	72.0	92,987	323.5	117,689	395.5
Texas			121,193	186.5	121,193	186.5
Utah	5,020	12.5	32,505	45.4	37,525	57.9
Vermont	3,724	13.9			3,724	13.9
New Hampshire	15,200	37.4			15,200	37.4
Virginia	49,760	196.4	18,740	76.4	68,500	272.8
Washington	15,001	55.6	97,672	83.9	112,673	139.5
West Virginia	29,076	162.3	147,038	405.7	176,114	568.0
Wisconsin			105,581	80.3	105,581	80.3
Wyoming			2,061	17.4	2,061	17.4
Nationwide Totals	**906,643**	**$3,384**	**2,107,018**	**$6,723**	**3,013,661**	**$10,107**

Source: U.S. Department of Agriculture, Rural Utilities Service

State Allocations of RUS Water Program for FY 1999

FY 1999 LOAN AND GRANT ALLOCATIONS

STATE	TOTAL BUDGET AUTHORITY	GUARANTEED LOANS	DIRECT LOANS BUDGET AUTHORITY	DIRECT LOANS PROGRAM LEVEL	GRANTS
Alabama	$14,349,150	$1,541,000	$2,874,150	$17,398,000	$11,475,000
Alaska	1,394,353	830,000	279,353	1,691,000	1,115,000
Arizona	4,730,587	830,000	947,587	5,736,000	3,783,000
Arkansas	10,884,144	1,369,000	2,180,144	13,197,000	8,704,000
California	15,201,966	1,583,000	3,044,966	18,432,000	12,157,000
Colorado	4,606,807	830,000	922,807	5,586,000	3,684,000
Delaware	1,201,531	830,000	240,531	1,456,000	961,000
Maryland	5,304,566	830,000	1,062,566	6,432,000	4,242,000
Florida	13,456,403	1,497,000	2,695,403	16,316,000	10,761,000
Virgin Islands	762,116	830,000	137,116	830,000	625,000
Georgia	18,815,873	1,762,000	3,768,873	22,814,000	15,047,000
Hawaii	1,070,430	830,000	214,430	1,298,000	856,000
W.Pacific Areas	762,116	830,000	137,116	830,000	625,000
Idaho	4,159,104	830,000	833,104	5,043,000	3,326,000
Illinois	14,835,618	1,565,000	2,971,618	17,988,000	11,864,000
Indiana	13,746,554	1,511,000	2,753,554	16,668,000	10,993,000
Iowa	8,767,076	1,265,000	1,756,076	10,630,000	7,011,000
Kansas	6,082,185	830,000	1,218,185	7,374,000	4,864,000
Kentucky	17,104,083	1,678,000	3,426,083	20,739,000	13,678,000
Louisiana	11,923,296	1,421,000	2,388,296	14,457,000	9,535,000
Maine	5,286,932	830,000	1,058,932	6,410,000	4,228,000
Massachusetts	4,620,616	830,000	925,616	5,603,000	3,695,000
Connecticut	3,775,286	830,000	756,286	4,578,000	3,019,000
Rhode Island	882,929	830,000	176,929	1,071,000	706,000
Michigan	20,142,845	1,828,000	4,034,845	24,424,000	16,108,000
Minnesota	10,539,091	1,352,000	2,111,091	12,779,000	8,428,000
Mississippi	15,359,520	1,591,000	3,076,520	18,623,000	12,283,000
Missouri	13,638,912	1,506,000	2,731,912	16,537,000	10,907,000
Montana	3,803,902	830,000	761,902	4,612,000	3,042,000
Nebraska	3,715,226	830,000	744,226	4,505,000	2,971,000
Nevada	1,147,958	830,000	229,958	1,392,000	918,000
New Jersey	3,741,347	830,000	749,347	4,536,000	2,992,000
New Mexico	4,738,074	830,000	949,074	5,745,000	3,789,000
New York	17,237,845	1,684,000	3,452,845	20,901,000	13,785,000
North Carolina	23,257,475	1,983,000	4,658,475	28,199,000	18,599,000
North Dakota	2,517,190	830,000	504,190	3,052,000	2,013,000
Ohio	20,406,544	1,841,000	4,087,544	24,743,000	16,319,000
Oklahoma	9,303,456	1,291,000	1,863,456	11,280,000	7,440,000
Oregon	7,154,110	1,185,000	1,433,110	8,675,000	5,721,000
Pennsylvania	24,150,386	2,027,000	4,837,386	29,282,000	19,313,000
Puerto Rico	24,993,386	2,069,000	5,006,386	30,305,000	19,987,000
South Carolina	12,053,233	1,427,000	2,414,233	14,614,000	9,639,000
South Dakota	3,004,824	830,000	601,824	3,643,000	2,403,000
Tennessee	15,818,701	1,614,000	3,168,701	19,181,000	12,650,000
Texas	24,993,386	2,069,000	5,006,386	30,305,000	19,987,000
Utah	2,009,427	830,000	402,427	2,436,000	1,607,000
Vermont	2,859,748	830,000	572,748	3,467,000	2,287,000
New Hampshire	3,620,228	830,000	725,228	4,390,000	2,895,000
Virginia	14,144,180	1,531,000	2,833,180	17,150,000	11,311,000
Washington	8,558,280	1,254,000	1,714,280	10,377,000	6,844,000
West Virginia	11,086,784	1,379,000	2,220,784	13,434,000	8,866,000
Wisconsin	12,048,242	1,427,000	2,413,242	14,608,000	9,635,000
Wyoming	1,634,261	830,000	327,261	1,981,000	1,307,000
TOTALS	501,402,386	65,000,000	100,402,386	607,762,000	401,000,000
Reserves/ Setasides	143,604,614	10,000,000	16,241,614	98,315,482	127,363,000
GRAND TOTALS	**$645,007,000**	**$75,000,000**	**$116,644,000**	**$706,007,482**	**$528,363,000**

Source: U.S. Department of Agriculture, Rural Utilities Service

USDA Projects Benefit the Mountain State

"The funds we invest through Water 2000 will continue to protect many parts of rural America from the kinds of difficulties that wrack much of the developing world, where the number one health problem is still the absence of clean and safe water. Water 2000 is the Clinton Administration's response to the fact that there are still rural areas in our country where people do not have access to safe drinking water and face serious public and environmental health consequences. We are determined to correct this very real problem and will keep investing in the goals of Water 2000 into the first year of the new century, and beyond."

John Romano
Deputy Administrator,
Rural Utilities Service

RUS Deputy Administrator John Romano discusses the $3.4 million Clay-Roane PSD Extension Project at a meeting in the Clay County, West Virginia, Courthouse.

West Virginia Rural Development director, Bobby Lewis (left); RUS's John Romano (second from left); Tim Butcher (second from right), former mayor and current Clay County commissioner; and Okey Burroughs (right), mayor of the town of Clay; announce USDA-funded water and wastewater projects in Clay County, West Virginia.

The Danese, West Virginia, PSD receives a combined loan and grant from USDA in the amount of $1.064 million.

West Virginia Rural Development Director Bobby Lewis speaks to public officials and interested residents in Danese, West Virginia, at a check presentation ceremony.

With nearly 64 percent of its population living in rural areas, providing clean, safe drinking water to West Virginia's citizens can be a challenge. Funding from federal sources, such as USDA, help make basic services, such as a reliable water supply, affordable in the Mountain State.

Photos by Mark Kemp-Rye

Liability Insurance: Does Your System Have Adequate Coverage?

Continued from page 1

What to Expect in a Standard Policy

The work a water utility does impacts thousands of people and that means liability insurance is a necessity. Generally, a standard liability policy includes:

- general aggregate limit (e.g., claims that fall outside products/completed operations, for example, a "slip and fall down" claim)
- products and completed operations aggregate limit (e.g., injury that results from a client's product or service);
- personal and advertising injury limit (e.g., claims for slander, liable, defamation of character, and copyright infringement);
- each occurrence limit (e.g., bodily injury, property damage, and products and completed operations claims);
- fire damage limit; and
- medical expense limit (e.g., goodwill payments that a client is not legally obligated to pay).

Under a standard policy, the payout limit for the general, products, and completed operations aggregate is based on the policy limit for the policy year. The liability limit for the remaining areas of coverage are limited to any one person or incident within any one policy year.

"Sometimes utilities don't know their policy carries a pollution exclusion clause, and they won't know until they find out the hard way."

Don Munkers, Idaho Rural Water Association

Additional Coverage You Should Consider

Although a general liability insurance policy is a good place to start, it is usually not enough protection against the possible lawsuits a water utility could face. For example, some primary exclusions to a general liability policy include:

- directors and officers liability (protects directors and officers from losses as a result of their acts or the acts of others while performing their jobs);
- pollution (sudden and accidental release of chlorine gas, for example);
- Y2K problems (disruption in operations that result from the utility not being ready for the Year 2000 computer problem);
- workers compensation and employer's liability (some states, such as West Virginia, require this coverage to be purchased from the state);
- system-owned vehicles;
- equipment breakdown (cost for repairs and replacements);
- employee dishonesty (employee theft); and
- failure to supply (for bodily injury and property damage claims that result from the utility's failure to supply adequate amounts of water).

According to Don Munkers of the Idaho Rural Water Association (IRWA), "sometimes utilities don't know their policy carries a pollution exclusion clause, and they won't know until they find out the hard way." Munkers says that IRWA is currently working with insurance companies to include pollution coverage in a general liability policy for water utilities.

Cost of Liability Insurance

As with any insurance premium, cost will depend on how much coverage is needed and the number and cost of claims that have previously been filed.

Both Miller and Alan Ice, with Hunter Agency in Shinnston, WV, agree that "The lowest price is not always the best buy and that the premium is not as important as the product."

They point out that an uncovered claim could bankrupt a small water utility.

Ice says "the costs for general liability are determined by the amount of insurance the client purchases and from an exposure base of payroll, sales, or area. Deductibles can be used to lower the costs, however, this increases the client's costs if a claim does occur."

Ice goes on to say, "there is no 'safe' amount of insurance. Claims can come from any area and in unlimited amounts. Suits are not limited by the amount of insurance that a client carries."

Miller is so adamant that the utility have the liability coverage it needs that he suggests "using your own money to insure physical damage on your pickup trucks and use that savings to buy additional liability insurance."

When pressed for his recommendation for a minimum dollar amount of coverage a water utility should have, Miller says he would not want to see a water utility go below a $1-million-dollar underlying coverage and a $1-million-dollar commercial umbrella coverage. Miller explains, "the commercial umbrella coverage takes over where your regular business insurance leaves off — providing an extra layer of business liability coverage against catastrophic loss."

Finding the Right Insurance Agent

In choosing an insurance agent, Ice says, "Generally, asking two or three agencies for competitive bids is a good way to develop an insurance package. It is most important that the

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agent make a presentation and show both his knowledge of his product and most importantly his knowledge of the client's operation."

Another approach to finding a reliable, knowledgeable agent is to contact professional trade organizations such as the National Rural Water Association (NRWA). NRWA is a federation of state affiliates that provide training and technical assistance to small water utility systems.

Although NRWA cannot endorse a particular insurance company, they can tell you which companies have exhibited at NRWA's annual conferences and have advertised in NRWA's publication. They can also put you in touch with other water utilities within your local area.

Qualifying for Coverage

Ice points out that agencies that underwrite water utilities are concerned with the water lines, not the water production. This is because water production is governed by federal, state, and local laws. Water lines, though, are often left unchecked. This lack of maintenance can cause water line breaks, and subsequently, property damage claims. (Water lines on a residential or business property, however, are the responsibility of the owner of the property, not the water utility.)

Keeping claims down, costs low, and clients safe are some of the reasons many insurance agencies ask a water utility to meet specific, predefined requirements before the agency will underwrite it.

Some of these requirements, Ice says, might include safety programs, driver education, equipment operation, and product operation. Ice points out that these requirements are not designed to restrict the client but rather to give the client the benefit of the insurance agency's expertise with similar water utilities, to protect both the insurance agency's and the client's bottom line, and to help the utility conform to state and federal laws for like operations.

Miller gives some examples of additional requirements a water utility might have to meet before an insurance agency would agree to underwrite it. He says, "we expect the water utility to have on staff at least one certified water operator. We also expect the water utility to make certain any subcontractors they hire have liability insurance. For example, if the water utility hires an excavation contractor, they should require the contractor to show them a certificate from his insurance company to prove he carries liability insurance. Then the water utility's insurance would be the excess insurance, picking up where the contractor's insurance left off."

Learn From the Experience of Others

Miller gives a few real examples of liability scenarios water utilities have faced. He tells of a water utility putting in a new service connection to a meter pit.

The plumber, in this case hired by the customer, was to continue to run the water line from the pit to the customer's home. In this same pit was a gas pipe line; the plumber nicked the gas line, caused the house to blow up, and did serious bodily injury to one of the homeowner's occupants.

In this particular case, Miller points out the plumber is the one at risk for a lawsuit. But, he says, the insurance company has "deeper pockets" and so is not completely insulated from being pulled into the case. The plumber, Miller says, probably does not carry enough insurance to cover such a case so it is likely the homeowner will try to also sue the water utility.

Another example Miller relates is of an incident where a chemical truck back-siphoned its contents into the potable water supply, harming all who used the water.

Ice points out that even something as simple as flushing a fire hydrant could end in a claim being filed for property damage. Ice explains that when a hydrant is flushed, the sediment in the line may flow into a customer's water line. Most customer's he says, just run the water until it clears. But, he points out, if a customer is washing white clothes, it's possible the sediment could ruin the clothes, causing property damage.

Just how worried should I be?

We often hear from stress management gurus that we should leave our work at the office. But before you close the door behind you, think about the answer to this question: Are your personal assets in jeopardy if the water utility company is sued? This will be the topic we examine in the next issue of *Water Sense*.

For more information on liability insurance for small drinking water plants, you can contact Jack Miller at Howalt-McDowell Insurance, Inc. in Sioux Falls, South Dakota. His telephone number is (605) 339-3874. Miller's fax number is: (605) 339-3620.

Alan Ice can be reached at Hunter Agency, Inc. in Shinnston, West Virginia. His telephone number is: (304) 592-5924. or call toll free (800) 214-9318. Ice's fax number is: (304) 592-6241.

NRWA's Web site address is: http://www.nrwa.org/assnlist.html. *Their telephone number is: (580) 252-0629.* **$**

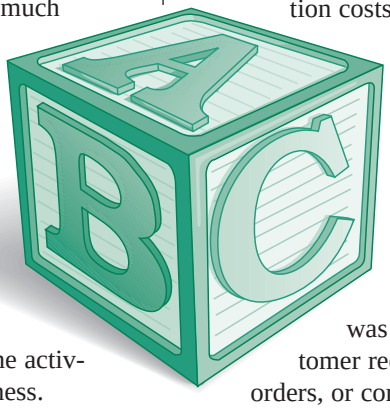
March 22, 1999

Activity-Based Costing: It's as Simple as ABC

by Kathy Jesperson
NDWC Staff Writer

Providing the highest quality product and service at the lowest possible price has always been important in the water and wastewater industries. But, in these days of budget crunching, water and wastewater utilities are finding themselves raising rates to pay for regulatory compliance, infrastructure repair, and other essentials—all much to the dismay of their customers, note John L. Eggers and Charles E. Bangert, Jr., financial consultants, in a *Journal of the American Water Works Association* article, "Activity-Based Costing."

Utility managers know that raising rates is a direct reflection of business operating costs, write Eggers and Bangert. But how much does it really cost to run one of these utilities? Calculating equipment, labor, and supply expenses doesn't always add up to the actual operational costs. Somehow, there's still money going out the window.



ABC Calculates True Costs

One way to calculate the operating costs is through Activity-Based Costing (ABC), which focuses on the activities associated with running a business. According to Becky Land, sales executive with ABC Technologies, "ABC is more than an accounting tool."

She says that this technique was originally developed in the manufacturing industry as a tool to calculate the final price of a product. "More than just materials and labor were considered," says Land. "Overhead and all the activities that went into creating the product were part of the equation."

"Just as in the water and wastewater industry, there's more to creating the final product than occupying a building, hiring some employees, and siphoning some water," says Brad Akright, president of the Akright and Company, Inc. in Olathe, Kansas. "All of the activities that go into bringing water to the system, purifying it, and getting it to its final destination are considered."

Akright says that utilities can use ABC to calculate the cost of activities, such as installing distribution lines and using treatment techniques, to determine their true cost. "When a crew goes out to install a pipeline, the use of the truck, the backhoe, materials, and labor are all calculated," he continues. "Measuring what goes into a particular activity gives everyone in the company a better understanding of what the true costs are."

Begin By Tracking

ABC begins by tracking activities. "For example, work orders usually start with a phone call to the office, and can be tracked through to when workers complete the job," notes Tony Mounts, strategic planning manager, Gresham, Oregon. Each department or division has its own financial records of the completed job. But because of the activities they performed, the true cost is shared by everyone.

"Identifying the resources that are used in each activity, such as labor cost, equipment, and materials, helps determine the cost of each activity," note Eggers and Bangert. For example, reading meters may require:

- labor, including salary and fringe benefits;
- equipment, including the lease or depreciation costs of the meter reader's transportation and any recording devices; and
- materials, including the cost of vehicle fuel and other expendable items.

"Next you look at what drives the activity," says Land. Activity drivers are simply the reason the activity was done, which includes customer requests, purchase orders, work orders, or complaints.

"Once the product costs are determined, then management can act to improve processes and attain better performance, enhanced quality, and reduced costs," write Eggers and Bangert. They also claim that ABC focuses on the actual activities on which money is spent rather than just how much money was spent, which is typical of traditional accounting methods.

Eggers and Bangert report in their *Journal AWWA* article that ABC can help utility managers:

- contain rate increases because all of their service activities will be far more efficient;
- stave off competitors through better in-house performance; and
- improve customer perceptions of cost, quality, and timeliness with cleaner, leaner processes that yield better results, faster and more economically.

Measuring Competitiveness

But just figuring the costs isn't the only the reason to use ABC. "A lot of water and wastewater utilities are feeling the pressure of privatization," Mounts observes. "And that sparks a competitiveness that these utilities may not have experienced before."

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Treatment Technologies Database Now Online

The National Drinking Water Clearinghouse (NDWC) recently launched an online version of its popular drinking water treatment technologies database.

Known as the Registry of Equipment Suppliers of Treatment Technologies for Small Systems, or RESULTS 3.0, the database is a handy tool for small communities to use when considering different technologies for replacement or upgrade of current treatment systems.

"The database was designed to tackle one of the biggest problems facing small drinking water systems—lack of information regarding treatment alternatives," said Sanjay Saxena, director of the NDWC. "This free reference tool helps decision makers learn about treatment methods used by other communities so they can make informed decisions about their own technologies."

Community officials, state regulators, consulting engineers, and others can log on to the database to learn about treatment technologies used by other drinking water plants.

"RESULTS offers valuable first-step information for state design review engineers, small system owners and operators, and others exploring appropriate technologies for their particular water problems," Saxena added. "Systems that have used specific treatment methods are often the best source of information for others and RESULTS provides those contacts."

More than 1,000 sites are listed from across the U.S. and Canada, so users are sure to find a site that treats for the same contaminant. Entries include general information about each small system's technology and its supplier or manufacturers, as well as system contacts.

To search the RESULTS database, log on to the NDWC Web site located at http://www.ndwc.wvu.edu. *Diskette versions are also available for those without Web access. The Mac version is*

RCAP Names New Director

The Board of Directors of the national Rural Community Assistance Program (RCAP) is proud to announce the appointment of its new executive director, Randolph A. Adams, Ph.D.

RCAP's national office is located in Leesburg, Virginia, and there are regional RCAPs with field staff in 49 states, Puerto Rico, and the Virgin Islands. The mission of the national and regional RCAPs is to improve the quality of life of rural people in the U.S. by providing and facilitating rural community development services. RCAP's services include: potable water systems, wastwater treatment systems, solid waste management, low cost housing, micro and small business development, and environmental justice with a particular emphasis on community capacity building. Work is done in communities with 10,000 or fewer with particular focus on communities with 2,000 or fewer people.

For more information about RCAP's activities, go to http://ww.rcap.org *or contact them 722 East Market St., Suite 105, Leesburg, VA 20176. You may also call RCAP at (703) 771-8736 or (888) 321-7227 or contact Adams via e-mail at* Randyadams@rcap.org. **$**

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Because of this, drinking water and wastewater systems can use ABC as a part of a cost management strategy to become more efficient. "Using ABC can help a drinking water or wastewater system reduce its costs so it can be more competitive," says Mounts.

For more information about Activity-Based Costing, the following sources are recommended:

- *The ABC Technologies Web site at:* http://www.abctech.com/ *includes an on-line newsletter, links to experts who offer advice about ABC, and a library of information about ABC. Or call ABC Technologies at (800) 882-3141 for more information.*
- *University of Pittsburgh instructor Narcyz Roztocki's homepage* http://www.pit.edu/~narst8, *includes a printable slide presentation about ABC. Or write Narcyz Roztocki, University of Pittsburgh, 1065 Benedum Hall, Pittsburgh, PA 15261.*
- http://www.dtic.mil/c3i/bprcd/mltc002.htm *Provides a bibliography of articles about ABC.*
- *The Akright and Company, Inc., Web site,* http://www.Akright.com,*offers information and references about ABC as well as links to other ABC-related sites. Or call Akright at (913) 780-9392.* **$**

Energy Audits May Offer Cost Savings To Utilities

by Natalie Eddy
NDWC Staff Writer

Large water and wastewater treatment plants can save 10 to 20 percent of their total energy costs through a conservation study. Although the cost of a professional energy audit may be prohibitive to smaller facilities, experts say smaller plants don't have to be left out in the cold.

One option may be to enlist technical assistance from your electric utility. Some electric utilities offer technical assistance to water and wastewater plant operators and will hire a professional energy auditor or share in the cost of an audit. Also, some energy auditing firms offer group rates to smaller facilities.

Failing that, however, there are steps operators can take on their own, according to Ray Ehrhard, deputy director of the Electric Power Research Institute's (EPRI) municipal water and wastewater program, a research arm of electric utilities.

"Generally, for smaller facilities, the best bang for the buck is making management controls without spending money. Things like making sure you're on the right electric rate schedule, shifting loads to off peak periods, looking for unnecessary equipment that's running, a variety of things like that."

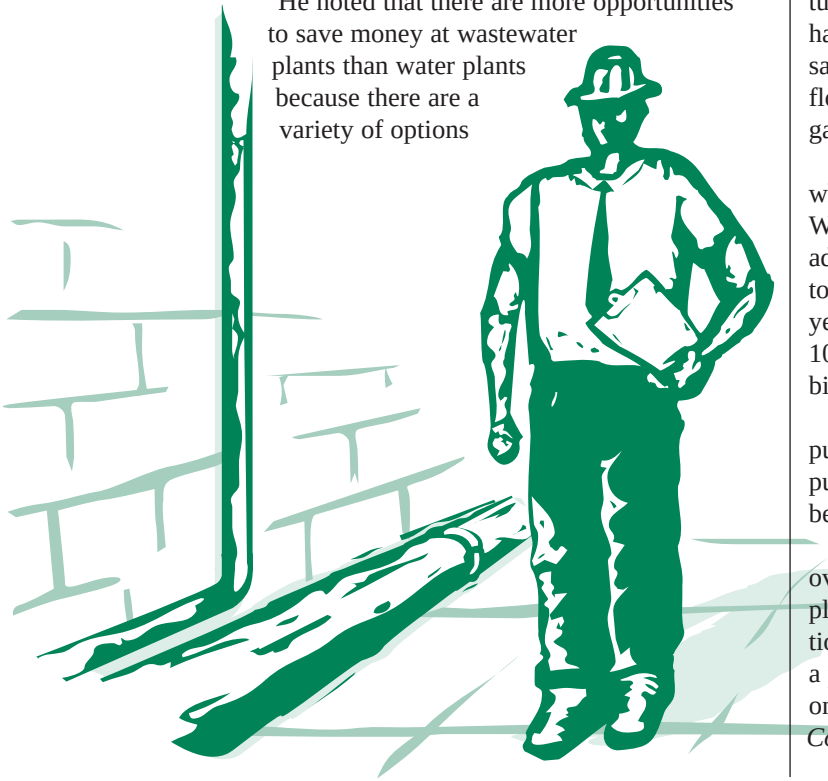
Ehrhard added that he has seen plants save as much as 50 percent by instituting these changes.

He noted that there are more opportunities to save money at wastewater plants than water plants because there are a variety of options to consider for changes with wastewater plants besides pumps.

He explained, "In wastewater plants you might install new technology to reduce chemical costs. For example, utilizing UV disinfection might result in a moderate increase in energy, but save more in chemical costs."

"If there's a single thing any facility should do it is to confirm their pumps are in adjustment."

Peter Barrer, PE
Demand Management Institute



Pumps Are Paramount

Peter Barrer, PE, and Sharon Jones, project manager, both of Demand Management Institute (DMI) in Newton, Massachusetts, said one of the most important things a small facility can do to save money is to confirm that their pumps are in adjustment and working at their design efficiency level.

"If there's a single thing any facility should do it is to confirm their pumps are in adjustment," said Barrer. "It is often necessary to adjust the pump to obtain the original efficiency level. We often recommend that pumps get adjusted. It's easy for them to get out of adjustment over time, through wearing of the rings."

He suggested comparing the pump's performance to its original expectation by using a flow meter, pressure gauges, and a power measurement.

Jones suggested that pumps be tested annually to see if they are working at their targeted efficiency level. "It can be a tremendous opportunity for cost savings," she said. "Every pump has a manufacturer's performance curve that says at this pressure you should get this much flow, but be sure to use calibrated pressure gauges to get accurate readings."

"We had a case recently working with a plant where their motors were 200 to 300 horsepower. We checked the performance and just with an adjustment, which a maintenance guy was able to do in one day, we saved them $20,000 per year. That plant had been running like that for 10 years. It made it easy for them to pay our bill," she added.

Most smaller utilities will have only one pump. Barrer said if there is more than one pump, it is important to choose a pump that best matches the flow at any given time of day.

Jones noted that in many cases, pumps are oversized for a facility. "Many times when plants are built, they look at expectant population growth," she said. "Very often we will find a pumping station with two to five pumps that only runs one pump."

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She added that sometimes it is worthwhile for facilities to buy a smaller pump just to handle night flows. "Sometimes after a system is built and you see what levels you're running at you can put in a smaller pump to match the flow more efficiently," she said.

Timing Matters

Jones noted that DMI has done a large amount of work with water and wastewater plants. "For one water supply utility we saw that they were normally running their pumps 24 hours per day, making as few flow changes as possible," she recounted.

"Their electric company charged almost twice as much for electricity used during the day as for that used at night. We showed them that it would be to their advantage to fill their storage tanks at night and allow their water levels to fall to the lowest comfortable level during the day."

Barrer said some plants are installing variable speed drives in hopes of saving energy. He cautioned, however, that while they may be convenient, in many cases, will not save energy.

"They are being sold for energy efficiency, particularly on water supply plants," he said. "They're very nice for operation. They don't bang the pumps starting and stopping, but we often find that they don't save energy."

However, Jones said if you already have a speed drive, it is usually to your advantage to use it to match the flow to the demand. "You will seldom recover the cost of putting the drive in compared to running on/off; but if you already have one, you can match your flow to the demand to keep a lower level in your storage tank," she explained.

"The power that you have to put into your pump is a function of flow and pressure. That pressure is set by the level of water in your storage tank so if you can lower that level, that's less power to put into that pump. There's always an advantage in maintaining the lowest level you're comfortable with."

Other Tips To Consider

Jones said another cost-saving tip is to analyze relative efficiency of water sources. "The cost of providing water can be very different," she said. "We had a case where a water supply plant had two sources – one source was the river supply, the other was a mountain stream. You have to look at how much power has to be put into each.

"There's a huge benefit to using the water that is from the mountain stream. The river water had to be pumped and treated. The mountain water was already at a high elevation so it required very little energy. They saved a tremendous amount of money by making a simple change."

Jones said some utilities base their yearly rates on the highest demand period charges, called ratchet charges. She suggested that in water supply systems it might be cost efficient to turn off one supply pump when operating a backwash pump so you can lower the demand peak and avoid these charges.

To help operators remember what time of day pumps should be running, she said it is helpful to make a clock face. "You should read the rate schedule and associated charges to find out when electricity costs more in your area," she said.

"Then, make up a clock face with 24 hours on it. Put peak demand periods in red to remind operators. It's a simple thing, but it works."

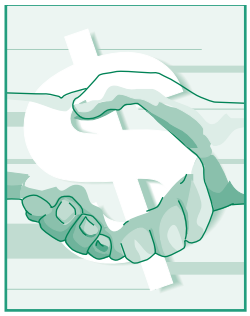
Barrer added that another cost-saving tip for smaller utilities is to use premium efficient motors when replacing a motor. "This can make a difference of 2 to 3 percent of a utility's total energy cost," he said, adding that it is only cost efficient if the motor already needs to be replaced.

Ehrhard suggested that operators "look at their equipment. Can they have more efficient equipment or operate it differently?"

He added, "The best thing to do is to appoint an energy champion in the plant. Usually things are overlooked unless someone takes that role. We have seen some real results with this method. It can be a maintenance guy, plant operator, or anybody."

"It helps to have information on energy usage that's readily available and easy to track. Many times the electric utility can help with that by putting a meter on the plant to track what their usage is. The energy champ might say, 'I'm noticing at these 2 hours during the day, we're at peak rate, we need to do these things to eliminate it.' Then, he can make the necessary changes."

For more information on cost savings, contact Barrer or Jones at (617) 527-1525 or via e-mail at: staff@dmiirc.com. *Ehrhard can be reached via e-mail at:* rehrhard@epri.com. **$**



Regulatory Agency Encourages Aid for Capital Improvements

by Michelle Moore,
NDWC Contributing Writer

Municipalities have continuous funding needs for managing cash flow, balancing the budget, purchasing equipment, and financing improvements in infrastructure. Like other community facilities, public water systems may need money occasionally for maintenance or capital improvements.

Where will the money come from? Taxes take care of part of the burden of funding. Beyond that, various government programs provide low interest loans to finance the rest. Through partnerships and cooperative programs, banks and thrifts (savings and loans and savings banks) have increased their participation in helping fund such undertakings, as the need to build and refurbish infrastructures has become more urgent.

Thrifts Have an Obligation To Benefit Communities

Congress determined that federally insured thrifts and banks have an obligation to meet the credit needs within their local communities and passed the Community Reinvestment Act (CRA) in 1977 toward that end. In drawing up regulations under the act, banking regulators have emphasized making credit available to low- and moderate-income families and to small businesses, regarded as the backbone of the local economy.

The Office of Thrift Supervision (OTS), a bureau of the U.S. Department of the Treasury, was created in 1989 to regulate the many federally- and state-chartered thrift institutions. More recently, Congress enacted legislation enhancing the thrift charter, so that they have more flexibility in serving their community's credit needs. The legislation increased the volume of consumer and small business loans that thrifts can make to meet their "qualified thrift lender" requirements.

Capital improvement financing by local thrifts is encouraged by OTS, which assists by encouraging financial institutions to join with community organizations, nonprofits and other government agencies to promote reinvestment in communities.

OTS is also involved with the Neighborhood Reinvestment Corporation (NRC). The director of OTS sits on the NRC's board of directors. This national nonprofit entity was created by Congress in 1978 to help revitalize older, distressed communities by establishing and supporting a network of local nonprofit organizations. Their community-building strategies include restoring investors' confidence and developing solutions to local issues through national and regional training centers and educational publications.

"Community outreach has been one of the key activities of OTS since Ellen Seidman became director a little more than one year ago," said spokesman William Fulwider from OTS' Washington headquarters. "The agency had, by that time, already established a corps of Community Affairs Liaisons (CALs), but Ms. Seidman identified extending outreach as a major objective during her tenure."

To promote this community outreach, OTS sponsored a conference in September, 1998, on economic development in rural America. Fulwider said the purpose of the conference was to get potential lenders "actually talking with people who know how to get things done.

"In other words, the latter are people familiar with government funding programs such as those available under the aegis of the U.S. Departments of Agriculture and Housing and Urban Development, community groups dedicated to assisting lenders in channeling their funding to the right recipients, those knowledgeable about the housing and small business needs in communities across the nation, and those who can direct lenders to cooperative and partnership programs dedicated to increasing the access to credit."

The conference on rural development was one of three OTS sponsored during the year.

OTS Expands Community Affairs Staff

OTS operates their CAL offices to help thrifts learn about community needs and to bring groups together to fulfill those needs. Regional offices are located in Jersey City, Atlanta, Chicago, Dallas, and San Francisco. The agency plans to continue to carry on their active outreach program in 1999 by facilitating smaller, more frequent educational conferences within the agency's five regions. Through these conferences, groups can come together to learn cooperative measures that keep small communities viable.

"We encourage thrifts to join in partnerships and coalitions as a group, so they can accomplish more than they could by themselves," Fulwider said. "Thrifts in most communities have limited assets. Three-quarters of them have $250 million or less in assets. They are very community oriented, and lending to low- and moderate-income borrowers and to small businesses fits nicely with that community focus."

Fulwider suggested that town leaders may want to include their local thrifts in discussions

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EDA and ARC are Reauthorized

In November 1998, President Clinton signed a bill continuing two agencies that help distressed communities. The bill reauthorizes the Economic Development Administration (EDA) for five years and the Appalachian Regional Commission (ARC) for three years, providing "stability, predictability, and flexibility" to programs that previously depended on annual appropriations from Congress. The EDA and ARC will remain essentially the same, with changes in some regulations and programs.

"People will know that EDA is going to be around and that the agency is well-positioned to continue to receive increased appropriations," said Phillip Singerman, assistant secretary of commerce, in an interview with *Economic Development Digest*, a publication of the National Association of Development Organizations (NADO).

How EDA Will Change

Changes to EDA through the reauthorization include:

- Consolidates criteria for public works grants into three distress factors—high unemployment, low income, and special need;
- The term "comprehensive development strategy" will replace "overall economic development program" and/or "economic adjustment plan" in language concerning requirements for project approval under the Public Works and Economic Development Act. Comprehensive plans from another federally supported program may be accepted.
- The 10 percent district bonus will continue with the added requirement of agency review of the current incentive system for economic development districts (EDDs).
- Regular evaluations of university centers (to determine performance) and EDDs (for management standards, financial accountability, and program performance) will be conducted.
- Finally, the bill authorizes appropriations for defense conversion and disaster economic recovery projects.

More Work Needs to be Done in Appalachia

The new legislation affecting ARC recognizes that much progress has been made in the 13 states that comprise Appalachia, but that many problems continue. The new ARC bill requires the agency to designate as "distressed counties" those counties that are "the most severely and persistently distressed." Economically strong counties are to be divided into two categories: competitive counties, those that are "approaching economic parity with the rest of the country," and attainment counties, those that have "attained or exceeded economic parity with the rest of the country." All other counties have the designation of "transitional counties." The commission must review the designations annually.

ARC assistance is restricted in economically strong counties. The matching funds for most area development programs is 50 percent, except in distressed counties where the matching rate can be up to 80 percent. Cash or in-kind contributions may be used to meet matching requirements for the local development district program.

Some obsolete authorizations were repealed in the new bill. Land stabilization, conservation and erosion control, timber development, mining area restoration, a water resource survey, airport safety projects, and sewage treatment works are no longer provided for under ARC.

For more information, call NADO at (202) 624-7806 or visit their Web site at: http://www.nado.org. **$**

Regulatory Agency Encourages Aid for Capital Improvements

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on how to finance water system development or improvement. OTS liaison staff would also be available to discuss the regulatory implications of the decided plan. Most municipal loans are considered to be low risk, so funding infrastructure improvements would be beneficial to both the thrift and to the community.

"We encourage institutions to determine the credit needs of their communities and to develop products and programs that are responsive to those needs," Fulwider said. "There is definitely a role in infrastructure development and improvement for thrift institutions, and I hope more cooperation will come to pass."

For more information about OTS, check their Web site at http://www.ots.treas.gov/default.htm *or call (202) 906-6913.* **$**

Products Available From the NDWC

Note: The free items listed below are limited to one of each per order. Call (800) 624-8301 or (304) 293-4191 to order products. Please allow three to four weeks for delivery. Actual shipping charges are added to each order. National Drinking Water Clearinghouse (NDWC) products also may be ordered via e-mail at ndwc_orders@ndwc.wvu.edu. *Products are subject to availability. Please verify price when ordering.*

- *PAWATER Users manual: Financial Planning Model for New, Small Community Water Systems (program Version 2.2)*
  Item # DWSWFN01/software, 3.5 disk, booklet
  This 1992 collection of software enables water officials to enter data about new, small community water systems, including potential water consumption and water treatment requirements, and to obtain a cost estimate of the detailed program.
  Cost: $17.50

- *Financial Capability Guidebook*
  Item # FDBKFN09
  This 1984 guidebook was originally the basis for the U.S. Environmental Protection Agency's (EPA) policy on financial management capability as it applied to the Construction Grants Program. It can be used by local governments to help demonstrate financial capability. It addresses such management options as facility costs, annual household costs, the facilities plan, and the roles and responsibilities of local government.
  Cost: $13.25

- *Water Audits: An Introduction*
  Item # DWBLMG16
  This 1989 guide provides information about how to conduct a water audit and specifies how to review and assess records, check meters, and analyze and estimate water loss throughout a system.
  Cost: $2.75

- *Financing Models for Environmental Protection: Helping Small Communities Meet Their Environmental Goals*
  Item # DWBKFN05
  This 1992 casebook provides real-life models that have been implemented through the EPA's Public-Private Partnerships Demonstration Program for financing environmental projects.
  Cost: $0.00

- *Road to Financing: Assessing and Improving Your Community's Credit-worthiness*
  Item # FDBLFN15
  Designed to help water and wastewater utility managers and local officials assess their community's credit worthiness, this 1992 booklet explains what bankers look at when deciding to lend money. It also explains how a community can evaluate and strengthen its financial health.
  Cost: $0.00

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