

# Special 1997 Annual Report Issue

# OKLAHOMA WATER NEWS

Bimonthly Newsletter of the Oklahoma Water Resources Board



*from  
the desk  
of the  
Director*

**Duane A. Smith**

To better communicate with our readers, we present this issue of "Oklahoma Water News" in an abbreviated Annual Report format. We want to tell you about our many programs and the services we provide every day to the citizens of Oklahoma.

We are proud to introduce the nine members of the Water Resources Board, pictured in this issue. Members are appointed by the governor to serve staggered seven-year terms. They represent all areas of the state and major categories of water use. Board members serve without compensation, receiving only travel expenses to meeting sites.

At regular monthly meetings of the Water Resources Board, staff present items of agency business for Board approval. The Board oversees myriad complex programs administered by the agency's four divisions.

We at the OWRB are extremely fortunate to have such a dedicated, knowledgeable executive board to set policy and guide the course of the agency. This past year has been a particularly challenging year, with every Board agenda demanding of members difficult decisions concerning allocations of water to supply confined animal feeding operations (CAFOs.)

I am also enormously proud of the staff of 82 committed men and women in our Oklahoma City headquarters and Field Offices in Tulsa, McAlester, Lawton and Woodward who work very hard to serve their fellow Oklahomans. We will note some of their accomplishments in this issue. □

## The Water Resources Board

**J. Ross Kirtley**, Kingfisher, chairman, is a certified public accountant, manager of a floor systems company and owner of oil drilling and livestock interests. He was graduated cum laude from Southwestern Oklahoma State University. He represents agriculture.



**Richard McDonald**, Walters, vice chairman, is a banker, farmer/cattleman and independent oilman. He is a graduate of the University of Central Oklahoma with a degree in marketing. He represents irrigation interests.



**Dick Seybolt**, Afton, secretary, owns a bus/recreational vehicle manufacturing company, serves on the Board of the Grand Lake PWA and is a former Miami city councilman. He represents recreation interests on the Board.



**Lonnie Farmer** is a bank president and former mayor of Davidson. He is a founder and Board member of the Oklahoma Rural Water Association and drove formation of the Tillman County Water Development Authority. He represents municipalities.



**Bill Secrest**, Broken Arrow, is a founder of Wagoner County RWD #5 and manager of Wagoner RWD #4. He is an OSU graduate, serves on Boards of the Oklahoma Rural Water Association and National Rural Water Association. He represents rural residential interests.



**Grady Grandstaff**, Oklahoma City, is co-owner and operator of an independent energy production company and a wholesale grocery distributing firm. He is a member of the Oklahoma County Election Board and represents industry.



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Water Board, continued from page 1

**Wendell Thomasson**, Sawyer, is a cattle rancher with a background in highway construction. He attended Mesa Junior College and Denver Community College to earn an associate degree in business management. He represents agriculture.



**Richard Sevenoaks**, Tulsa, is an auction company owner and member of the Tulsa Metropolitan Utility Authority, Tulsa Utility Board and Regional Metro Utility Board. He graduated from the University of Arizona and represents industry.



**Ervin Mitchell**, Balko, is a cattleman/farmer. He has served on the Balko School Board, Oklahoma State School Boards Association, the Beaver County Conservation District Board and is former president of the Oklahoma Association of Conservation Districts. He represents soil conservation.

## Administrative Services



**Jim Schuelein**  
Chief

The Division provides general support to the agency by coordinating services in accounting, mapping and drafting, legislative and media relations, personnel management and data processing.

The Information Services Section participates in the

state's Geographic Information System (GIS) Committee, established to support implementation of GIS programs in state agencies. Information Services, along with the Mapping and Drafting Section, prepared updated maps for the agency's newest publication, *Rural Water Systems in Oklahoma*.

Mapping and Drafting and Legislative and Media Relations Sections answer information requests, prepare maps and graphics and the OWRB bi-monthly newsletter, *Oklahoma Water News*. □

## Planning and Management



**Mike Mathis**  
Chief

### Water Use Permitting

This division allocates stream water and groundwater supplies to all prospective users who pledged to put the water to beneficial use without waste. (No permit

is required of those who use small amounts of water for domestic purposes.)

### Stream Water Rights

Stream water is considered public water, subject to appropriation, (except the surface waters in the Grand River Basin.)

The Board usually will issue a permit to use stream water if:

1. unappropriated water is available;
2. there is a present or future need for the water;
3. the intended use is beneficial;
4. the use of water will not interfere with domestic or existing appropriative uses;
5. the use of water outside the stream system of origin will not interfere with existing or proposed beneficial uses within the stream system.

In 1997, the Permitting Section of the Planning and Management Division issued 21 regular permits allocating 7,966 acre-feet of stream water and 931 provisional temporary permits allocating 23,624 acre-feet.

### Groundwater Rights

Oklahoma's major groundwater aquifers hold in storage approximately 320 million acre-feet of water, half of which is recoverable. Minor basins provide additional quantities of fresh groundwater.

Groundwater is considered private property that belongs to the overlying surface owner, although it is subject to reasonable regulation by the OWRB. Applicants are allowed two acre-feet



The OWRB offices at 3800 N. Classen in Oklahoma City

per year, per acre of land in basins where maximum annual yield has not been determined; slightly more or less in basins where studies have quantified available water.

Ordinarily, the Board will approve applications for groundwater use if:

1. the applicant owns or leases the land;
2. the land overlies a fresh groundwater basin;
3. the proposed use is beneficial;
4. waste by pollution or depletion will not occur.

In 1997, the Board approved 50 regular permits allocating 25,391 acre-feet of groundwater; 118 temporary permits allocating 22,917 acre-feet of water; and 382 provisional temporary permits allocating 4,980 acre-feet.

## Technical Studies and Programs

Studies and hydrologic investigations to accurately determine available water are critical to responsible water planning. Hydrologic studies have been completed on all of the state's 49 stream systems and updates are underway.

Groundwater basin studies estimate the maximum annual yield that can be withdrawn from an aquifer without depleting the supply throughout its 20-year life. Hydrologic investigations have been completed on 15 major aquifers, and seven studies are underway. Seventeen minor basin studies have been completed, or are near completion.

In 1997, members of the Technical Section finalized the report on the Blaine Gypsum Recharge Demonstration Project in southwest Oklahoma. The recharge effort was successful in making 1,056 acre-feet of additional irrigation water available in the arid region and was proven to be an economically feasible technology.

## Water Resources Monitoring

The OWRB cooperates with the U.S. Geological Survey to maintain a network of 41 strategic stream gages to collect quality and quantity information on surface waters.

Staff collect groundwater level data in a network of 750 wells between January 1 and March 31, when water levels are static. Data are used to generate maps which depict saturated thickness, depth to water and change in water level.

## Licensing of Water Well Drillers and Pump Contractors

To ensure that water wells are properly constructed to prevent pollution, the Water Board administers a licensing program for pump installers and drillers of water, geothermal, observation and monitoring wells.

The program has licensed 377 drillers/pump contractors and 711 operators. In 1997, the Board issued licenses to 33 new well drilling firms and 95 operators.

## Planning Responsibilities

### Oklahoma Comprehensive Water Plan

As the state's authorized water planning agency, the OWRB sets priority on updating the *Oklahoma Comprehensive Water Plan*, a long-range strategy to manage, develop and protect the state's surface and groundwaters. The 1997 update detailed inventories and projected water supplies and demands to 2050.

### Statewide Weather Modification

The division also directs the Oklahoma Weather Modification Program, funded by successive \$1 million legislative appropriations in 1996 and 1997. The primary goal of the statewide effort is to utilize state-of-the-art cloud seeding technology to augment water supplies and prevent future drought and hail damage.

## Rural Water Systems in Oklahoma

Another remarkable publication of the year was the *Rural Water Systems in Oklahoma*, an update of the popular 1980 publication. This survey maps 726 rural water systems and provides current information on water lines, treatment and distribution facilities and water quality.

## Other Planning Initiatives

Among other important programs of the Planning and Management division is an initiative to educate the public and local floodplain managers on land use strategies to mitigate losses to flooding. The OWRB also administers the National Flood Insurance Program in cooperation with the federal government.

The OWRB coordinates a Dam Safety Program that requires regular inspection of 4,400 nonfederal dams, with priority placed on the protection of downstream life and property.

The Planning and Management Division administers the Oklahoma Leak Detection Program to identify energy and water losses that diminish the profits and efficiency of rural water systems. The cooperative program with the Oklahoma Rural Water Association also makes interest-free loans and grants for water audits, leak detection surveys and repairs.

The OWRB coordinates the state's participation in four Interstate Stream Compacts, agreements to apportion interstate waters and cooperate in solving pollution problems. □



# Financial Assistance

## Bond Loan Program

The Board's successful bond loan program, fully established in 1984, is a primary state provider for water and wastewater projects. The loan program is enabled through the State-wide Water Development Revolving Fund which provides a vital portion of the reserves for the bond issues. Loan terms may be as long as 30 years with optional fixed or variable interest rates. The 6-month variable interest rate has averaged 4.945 percent since 1978.



Joe Freeman  
Chief

Standard & Poor's consistently awards Board bond issues AA ratings, citing the program's maturity, good repayment history, strong management and sound underwriting standards

The bond program has made loans to eligible water and wastewater facilities since 1985 without any defaults by borrowers. The loans are funded from a blind pool in which the loans are not committed until after the bond issuance. Money from the lending pool is used to make low-interest loans to eligible entities. A portion of the bond proceeds can be loaned to small communities and rural water districts which could not qualify for loans from

conventional sources, but benefit from the strong OWRB bond rating.

Since its beginning, 195 FAP loans totaling \$250.6 million have been approved by the Board.

## Emergency Grants

Interest accumulated from investment of the \$25 million Statewide Water Development Revolving Fund is the source of emergency grants. The Board approves grants up to \$100,000 for communities who meet emergency criteria as "threatening to life, health or property." The Board has awarded 414 emergency grants totaling over \$23.3 million.

## CWSRF Loan Program

In mid-year, the Board closed a \$2.275 million 2-year note that furnished a portion of the state match for the EPA Wastewater Facility Construction Revolving Loan Fund, or Clean Water SRF program administered by the FA Division.

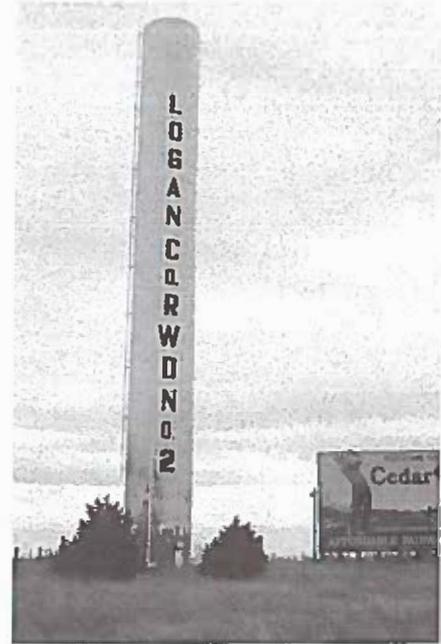
The Clean Water SRF program is one of the state's strongest and most successful strategies. SRF funds are loaned for major wastewater construction projects. As loans are repaid, proceeds are made available to smaller communities in "second round" long-term loans. Large communities are provided long-term, low-interest financing by the Board

through blending CWSRF funds with locally issued notes or bond issue loans from the OWRB.

The Board has approved 66 CWSRF loans totaling \$240.5 million.

## Drinking Water SRF Loan Program

The Drinking Water State Revolving Fund (DWSRF) Loan Program is a recent initiative developed by the OWRB



and ODEQ. Its aim is to assist municipalities and rural water districts construct or improve treatment and distribution systems to bring them into compliance with the federal Safe Drinking Water Act. Similar to the Clean Water program, the DWSRF will provide low-interest loans for eligible projects. Now, \$12,117,711 is available for loans.

## REAP Grants

The Division administers the water/wastewater portion of the Rural Economic Action Plan created by the Legislature in 1996. REAP was reauthorized in 1997, making an additional \$4.5 million in grant funds available to small communities and rural areas for water and wastewater improvements. REAP grants target communities with populations of 7,000 or less, but award extra priority points to entities with populations smaller than 1,500.

Ninety two REAP grants approved since 1996 total over \$7.1 million. □

### FINANCIAL ASSISTANCE PROGRAM UPDATE

Approved at February and March 1998  
Board Meetings

#### Bond Loans

4.22% 1997 Bonds: 29-year maximum term

McCurtain County RWD #8 .....	\$	750,000.00
Lone Chimney Water Association .....	\$	600,000.00

#### CWSRF Loans

None

#### Emergency Grants

Bryan County RWD #3 .....	\$	74,636.00
Morrison PWA .....	\$	100,000.00

#### TOTALS

	<b>Bond Loans</b>	<b>CWSRF Loans</b>
<b>APPROVED</b>	197	66
<b>Amount</b>	\$251,940,000.00	\$240,487,865.94
	<b>Emergency Grants</b>	<b>REAP Grants</b>
<b>APPROVED</b>	414	92
<b>Amount</b>	\$23,374,555.32	\$7,118,469.34

# Water Quality Programs

## Oklahoma Water Quality Standards

The Standards serve to enhance the quality of state waters, protect their beneficial uses and aid in the preven-

tion, control and abatement of water pollution. Water Quality Standards establish water quality targets for specific waters and assist in development of water quality-based discharge permits which specify treat-

ment levels required of municipal and industrial wastewaters. WQS are updated at least every three years, the most recent revision submitted to the Board for approval in March 1998.

The 1998 revision of Standards (and Implementation documents) concerned criteria for mercury concentration, flexibility in determining seasonal low flows, beneficial uses for some waters, requirements for background monitoring, and agricultural criteria implementation.

Water Quality staff collect physical, chemical and biological data to determine appropriate present and future beneficial uses and set realistic standards to protect them. Science-based narrative and numerical criteria afford further protection. In exceptional waters -- such as scenic rivers, municipal water supply lakes and waters supporting endangered species -- the anti-degradation policy provides still more stringent protection.

Although all surface waters receive broad protection, explicit protection

is afforded to 27,000 stream and river miles and 5,000 lakes.

Implementation documents assure that Standards are translated into permits in a clear, consistent and scientifically sound manner.

## Lakes Water Quality Assessment

Sampling conducted in 1992-1995 assessed trophic status of 116 lakes covering 630,121 surface acres. Seventy-five percent of the surface acres



sampled had nonpoint pollution concerns, 74 percent were hyper-eutrophic/eutrophic, 41 percent had toxicity concerns and 31 percent had recreational concerns. Staff revisit periodically to evaluate water quality.

## Oklahoma Water Watch

Oklahoma Water Watch is the state's volunteer monitoring program involving citizens in the protection and management of the water resources.

Water Quality Programs staff provide OWW volunteers rigorous training in sampling, data management and quality assurance. Today, 350 active, trained volunteer monitors collect water quality data at 35 lake and stream sites. In 1997, the 40 chapters of OWW contributed

approximately 200 monitoring hours per month, working some 2,500 hours during the year.

## Clean Lakes Initiatives

Clean Lakes specialists work under two cooperative agreements with the Tulsa District Corps of Engineers and other agencies to reduce sediment suspension in the Fourche Maline arm of Lake Wister in southeast Oklahoma. Staff are investigating aquatic plantings and construction of barriers to decelerate waves in shallow areas which will reduce sediment resuspension and shoreline erosion.

Clean Lakes specialists completed two years of monitoring and storm water sampling at Lake Arcadia, east of Edmond. The OWRB cooperated with the City of Edmond and the Oklahoma Conservation Commission in educating residents in pollution abatement in the watershed.

The OWRB has completed data collection in a Lake Hefner Diagnostic-Feasibility study and made recommendations for solving sediment and nutrient problems.

In a cooperative study with the City of Tulsa, staff will address algae growth that impairs the city's drinking water supply from the Spavinaw-Eucha Lake System.

HB 1522 of the 1997 Legislature directed the OWRB to study the impact of concentrated animal feeding operations (CAFOs) on Oklahoma City's water supply reservoirs (Canton, Hefner, Overholser, Stanley Draper, Atoka and McGee Creek) and the North Canadian River. The 3-year project will collect historical data, establish baseline monitoring for the river and reservoirs and report to the Oklahoma Legislature.

Water quality monitoring on the upper reaches of Lake Tenkiller (where it meets the Illinois River) will measure the effectiveness of non point source pollution controls in place in Oklahoma and Arkansas. The study aims to reduce by 40 percent phosphorus loading.

Clean Lakes staff are working with other state and federal agencies in the restoration and possible conversion of Carmen Lake (in Alfalfa County) to a wetland wildlife habitat.

The OWRB cooperates with the City of Enid and the Corps of Engineers at Meadowlake to restore degraded aquatic habitat by dredging. □



Derek Smithee  
Chief



# Oklahoma Water Resources Board Budget

## EXPENDITURES BY FUND

Type of Fund:	FY-96 Actual	FY-97 Actual	FY-98 Budgeted
<b>State Appropriated Funds</b>	\$3,136,194	\$3,733,631	\$3,662,627
<b>State Continuing/Revolving Funds:</b>			
205 Weather Modification	\$0	\$654,292	\$1,111,087
210 Well Drillers & Pump Installers Indemnity	1,153	591	34,500
230 Water Development Revolving Fund	0	508,030	0
240 Water Quality Revolving	342,935	298,106	521,531
420 USGS Cooperative Program	109,129	95,190	200,000
426 Stripper Well Oil Overcharge	5,761	0	0
443 Reimbursement Fund	698,367	303,888	1,633,832
472 Water Resources Fund - Construction Loan	366,354	361,650	308,538
<b>Total Revolving Funds</b>	<b>\$1,523,699</b>	<b>\$2,221,747</b>	<b>\$3,809,488</b>
<b>Federal Funds:</b>			
400 Federal Funds	\$805,474	\$645,707	\$1,174,680
410 Federal Water Quality Management	2,700,692	3,343,145	5,000,000
<b>Total Federal Funds</b>	<b>\$3,506,166</b>	<b>\$9,988,852</b>	<b>\$6,174,680</b>
<b>Total Expenditures by Fund</b>	<b>\$8,166,059</b>	<b>\$9,944,230</b>	<b>\$13,646,795</b>

## EXPENDITURES BY BUDGET ACTIVITY/SUB-ACTIVITY

Activity Number and Name	FY-96 Actual	FY-97 Actual	FY-98 Budgeted
01 Administration	\$2,371,243	\$1,808,818	\$2,799,410
02 Water Quality Programs	557,252	644,782	935,828
03 Planning	943,293	269,460	0
04 Financial Assistance Programs	600,867	634,759	1,042,666
05 Water Management	832,158	5,698	0
07 Planning & Management	0	3,063,988	3,602,919
15 Office of the Secretary of Environment	2,861,246	3,516,725	5,265,972
<b>Total Expenditures by Activity</b>	<b>\$8,166,059</b>	<b>\$9,944,230</b>	<b>\$13,646,795</b>

Mary E. Whitlow, Editor

Barry Fogerty, Writer, Photographer

James Leewright, Typography and Layout

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