

OKLAHOMA Water News

Bimonthly Newsletter of the Oklahoma Water Resources Board

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From the Director



*Duane A. Smith
OWRB Executive Director*

In late July, I had the opportunity to tour the Lugert-Altus Irrigation District (LAID) with OWRB Member Mark Nichols, a member of the LAID. Oklahoma Secretary of Environment, Miles Tolbert, and Oklahoma Secretary of Agriculture, Terry Peach, were also on the tour, which was hosted by Tom Buchanan, LAID Director.

We visited many of the primary irrigation facilities, which include more than 300 miles of canals and lateral water lines, and got a first-hand look at some of the 46,000 acres of southwest Oklahoma farmland, mostly cotton, under the District's purview. It is obvious that member farmers have done a tremendous job of nurturing their crops with an important assist from both Mother Nature and water supply at nearby Lugert-Altus Reservoir. The District and lake are responsible for no less than

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Governor's Water Conference Celebrates 25 Years

The 25th Annual Oklahoma Governor's Water Conference will be held Tuesday and Wednesday, October 19-20, 2004, at the Cox Business Services Convention Center in downtown Oklahoma City. The event will begin with a half-day Tribal Water Symposium on Tuesday (see page three for details and page five for an agenda) and conclude with the formal day-long Water Conference on Wednesday. Conferees will be welcomed on Wednesday by OWRB Chair Ervin Mitchell, followed by a special video presentation in celebration of the 25th year of the Oklahoma Governor's Water Conference. The video will characterize Oklahoma's diverse water resources as well as important water issues facing the state.

Wednesday's Keynote Speaker will be Lieutenant Governor Mary Fallin. Topics throughout the day will include water development infrastructure financing, planning for the future of the Grand River Basin, Oklahoma and Arkansas River development, interstate compacts, and a navigation update. The luncheon will feature state and federal legisla-

tive updates along with the presentation of Oklahoma Water Pioneer awards. Reservations for overnight accommodations at the Renaissance Hotel (10 North Broadway,

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one-half of the state's invaluable cotton crop. In a typical year, more than 100,000 bales of cotton worth \$35 million dollars are produced, generating a total economic impact of \$220 million to Jackson County alone. This year's anticipated bumper crop could easily exceed that total.

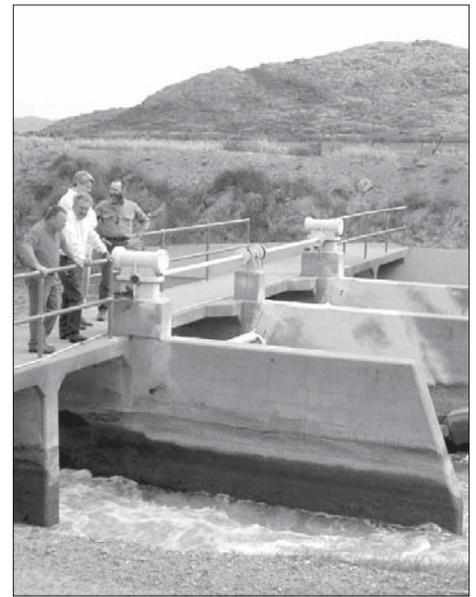
In most years, however, intense watering imposes severe stress on the lake, frequently dropping the reservoir's level to one-third of its capacity. The lake's water supply currently occupies only about 19 percent of its conservation pool. Despite implementation of conservation measures, such as water reuse and drip irrigation, farmers frequently face prospects of inadequate supplies to meet crop requirements. Low lake levels also influence recreation and other uses at the reservoir, which is home to a popular state resort and park at scenic Quartz Mountain. In addition to irrigation acreage, more than 10,000 acres of adjacent land and surface lake area is shared between local irrigators and state tourism and wildlife agencies responsible for recreation and wildlife preservation in the region. And all of these uses affect the local economy. The further lake levels drop, the greater the impacts to all stakeholders.

Through an ongoing cooperative study between the OWRB and Bureau of Reclamation, we are researching methods to augment the water supply of Lugert-Altus Reservoir as well as increase the efficiency of the District's delivery system. Options under consideration include increasing the lake's capacity, capturing excess waters, reducing or eliminating brush that reduces runoff into the lake, and desalinization of salty water that

enters the lake from the west. Final management options identified through this study should provide the necessary measures to protect Lugert-Altus Reservoir, the District and the many benefits they provide to both local and state economies.

I want to pass on this final reminder that the Governor's Water Conference will be held October 19-20 in Oklahoma City.

This, our 25th silver anniversary meeting, should be an extra special event. I encourage every person with an interest in Oklahoma's water future to complete and mail the registration form included in this issue of the *Water News* or call us at 405-530-8800 to make your reservation. See you there.



OWRB Member Mark Nichols; Terry Peach, Secretary of Agriculture; Miles Tolbert, Secretary of Environment; and tour guide Tom Buchanan, LAID Director; overlook one of the irrigation canals

Water Conference . . . Continued from page 1

Oklahoma City) can be made by calling 1-405-228-8000 or 1-800-468-3571. A block of rooms at a special room rate of \$89, single or double, has been reserved for conferees until September 24. After that date, the Conference rate will be offered as available.

To register for the Water Conference, call 405-530-8800 and ask for Mary Nell Brueggen, Registration

Coordinator, **or** fill out and mail the registration form below. Registration costs \$60 and includes the half-day Tribal Water Symposium and evening reception on Oct. 19, and the traditional Water Conference program and luncheon on Oct. 20.

25th Annual Governor's Water Conference Registration Form

Please mail form to

Governor's Water Conference
3800 N. Classen Boulevard
Oklahoma City, OK 73118

Please enclose \$60 check, money order, or purchase order payable to the Oklahoma Water Resources Board. No refunds after September 30.

For more information, call (405) 530-8800 or visit the OWRB Web site at www.owrb.state.ok.us

Check all that apply*:

- I will attend the symposium on October 19.
- I will attend the reception on October 19.
- I will attend the conference and luncheon on October 20.

* One price (\$60) includes any or all of the above.

Name _____

Organization _____

Address _____

City/State _____

Zip _____ Phone (____) _____

Tribal Water Symposium

The Symposium on Tribal Claims and Water will be held on day one (October 19) of the Governor's Water Conference. Speakers will address the origination and evolution of Native American water claims in Oklahoma from the Louisiana Purchase through the federal removal treaties (such as the Treaty of Dancing Rabbit Creek), Trail of Tears, and creation of Oklahoma Territory, Indian Territory and, finally, the State of Oklahoma.

Representing eight percent of the state's population, Oklahoma's American Indians have played, and continue to play, a prominent role in state society, culture, politics, sports, and other social affairs. Oklahoma's Indian heritage is honored in its official state seal and flag. At the center of the seal is a star, and within each of the five arms of the star are symbols representing



Oklahoma state flag

each of the "Five Civilized Tribes" (the Creeks, Chickasaws, Choctaws, Cherokees, and Seminoles) that were forcefully resettled into the territory of Oklahoma. The Oklahoma state flag depicts an Indian war shield, stars, eagle feathers, and an Indian peace pipe, as well as a white man's symbol for peace, an olive branch. The name "Oklahoma" comes from two Choctaw words, "ukla" meaning person and "humá" meaning red. A Native American is also represented prominently on the Oklahoma state seal.



Oklahoma state seal

Finally, as a tribute to Oklahoma's Indian heritage and to increase appreciation for the historical role Native Americans have played in the state's history, an American Indian statue ("The Guardian") was placed atop the Capitol dome upon its completion in 2002.

Representative Pope Honored

On September 3, State Representative Clay Pope was presented an "Exceptional Commitment Award" by the Oklahoma



Rep. Clay Pope

Academy of State Goals during its annual salute in Tulsa. Originally started by former Governor and U.S. Senator Henry Bellmon, the Academy is a bipartisan "think tank" consisting of public policy experts and opinion leaders from Oklahoma.

Pope was recognized for promoting public policy issues that have improved the quality of life for Oklahomans. Serving as vice chairman of the state House Committee on Agriculture and Rural Development, Pope has been instrumental in formulating legislation to protect the state's agricultural industry and environment, while ensuring excellent water and air quality for future generations.

A Kingfisher County farmer and rancher, the Loyal Democrat announced his retirement from the House of Representatives in May, completing his fifth consecutive two-year term as a state legislator.

Kennedy Foundation Honors Senator Muegge

Former Oklahoma State Senator Paul Muegge received the John F. Kennedy Profiles in Courage Award from the Kennedy Library Foundation on May 24. The award is presented annually to public servants who have withstood strong opposition to follow what they believe is the right course of action.

According to the Kennedy Foundation, Senator Muegge put his political career on the line when he authored laws that placed tough new regulations on the corporate swine and poultry industries in Oklahoma. Citing the need for clean air, clean water, and a protected environment to maintain the high quality of life Oklahomans enjoy, Muegge sponsored legislation that would regulate and impose restrictions on hog production to safeguard the environment. His bill required new hog

farms to be set back from neighboring properties and mandated water and soil testing. Additionally, the bill requires swine operations to pay a flat fee based upon the size of the operation that ranges from \$15 to \$225 per year, as well as an additional \$0.80 per animal unit based upon the licensed capacity of the hog operation, to fund the State's regulatory oversight of the industry.

Senator Muegge was reelected to a third term in 1998. However, he did not seek a fourth term, stating, "There's no better job than serving the people of northern Oklahoma, but just like every job, you eventually reach a point when you feel that you've accomplished everything you can." He continues to be an active voice in environmental and rural development issues impacting Oklahoma and the nation.

Cloud Seeding Research Project Underway

In partnership with the Texas Department of Licensing and Regulation, the OWRB has initiated its multi-year study of regional weather modification. Almost \$230,000 in federal funding will provide agency oversight and supervision of research efforts in western Oklahoma and the Texas panhandle.

The OWRB has contracted with members of the world-renowned Oklahoma Weather Center—including the National Severe Storms Laboratory (NSSL) and Oklahoma Climatological Survey (OCS)—and Weather Decision Technologies, Inc. (WDT) to answer fundamental questions related to the effectiveness of cloud seeding technology in the Oklahoma/Texas region. WDT is an Oklahoma-based private weather company.

Ongoing research includes field exercises to determine the impact of timely seeding on the behavior of growing convective clouds and their capacity to produce rainfall and hail. Weather researchers will deploy customized aircraft to assess the concentrations of cloud condensation nuclei that are responsible for the production or inhibition of rainfall.

In the laboratory, meteorologists will analyze various cloud seeding operations performed during Oklahoma's weather modification program, which was directed by the OWRB from 1996 through 2001. This aspect of the study will utilize both rain-gage and Doppler radar data observed during those seeding events. Using NEXRAD radar, the NSSL is providing a subjective evaluation of cause and effect, if any, on individual storms or clusters



A cloud seeding research aircraft with cloud physics instrumentation mounted on the wing. Inset shows cloud particle counter on board the plane.

of storms during the introduction of seeding agents in or near the storms' environment. Radar and hail data provided by WDT, supplemented by live NEXRAD radar, will be used by OCS climatologists to study cloud formation and growth in the Great Plains region of Oklahoma and Texas.

In 2002, Congress re-established federal funding for cloud seeding research through the creation of the Weather Damage Modification Program (WDMP) in the U.S. Bureau of Reclamation. The WDMP funds research initiatives from states that have an on-going cloud seeding operations or research program. The Oklahoma/Texas study should conclude next summer.

OCS Director to Lead National Project

Ken Crawford, long-time Director of the Oklahoma Climatological Survey (OCS) and current State Climatologist for Oklahoma, has accepted an appointment with the National Weather Service (NWS) to lead implementation of a national integrated weather observation network modeled after the Oklahoma Mesonet.

During Crawford's anticipated two- to four-year absence, Dr. Renee McPherson will serve as Acting Director of OCS while Derek Arndt will assume duties as Acting State Climatologist. Dr. McPherson has been at OCS since 1992, most recently completing a one-year sabbatical with the Cooperative Institute for Mesoscale Meteorological Studies. Arndt has worked for OCS's Climate Information Group since 1996.

Crawford was integral to establishment of the Oklahoma Mesonet, arguably the finest meteorological system of its kind in the world. Prior to oversight of the Climatological Survey, Crawford served 30 years with the NWS, including a stint as area manager for Oklahoma.

Unseasonably Mild Summer Continues Through August

According to the Oklahoma Climatological Survey, the summer of 2004 (June through August) was the fifth coolest on record in Oklahoma history (dating back to 1892). Statewide precipitation for this time period was 4.3 inches above normal, making summer 2004 the 13th wettest summer on record. Statewide statistics for the month of August show temperatures were on average 4.6° F below normal.

Climatologists surmise that the mild conditions were a result of unseasonably large and persistent upper level low pressure systems over central Canada. These systems were responsible for sending a series of cool fronts into Oklahoma, resulting in the numerous record lows and record low-highs experienced throughout the state. Forecasts for this fall suggest relatively normal temperature and precipitation for Oklahoma.

Oklahoma Water: A Quality of Life

25th Annual Governor's Water Conference, October 19-20, 2004

Tuesday, October 19

Symposium on Tribal Claims and Water

1:00	Registration	3:25	EPA Perspective on Tribal Water Claims Ben Grumbles, Acting Asst. Administrator, Office of Water (invited) Richard Greene, Region VI Administrator (invited) U.S. Environmental Protection Agency
1:30	Welcome & Overview Duane A. Smith OWRB Executive Director Justice Yvonne Kauger Oklahoma Supreme Court	3:45	Congressional Viewpoint Ryan Jackson, Counsel Senate Environment and Public Works Committee
1:50	Land of Many Cultures: American Indians in Oklahoma Bob Blackburn, Director Oklahoma Historical Society	4:05	Tribal Perspectives Chad Smith, Principal Chief Cherokee Nation John Berrey, Chairman Quapaw Tribe Bill Anoatubby, Governor Chickasaw Nation
2:10	Coordination of State/Tribal Water Quality Administration Miles Tolbert Oklahoma Secretary of the Environment	5:05	Resolution of Tribal Water Claims Lindsay Robertson, Associate Professor OU College of Law
2:30	Negotiating Indian Water Rights Claims Susan Cottingham, Director Montana Reserved Water Rights Compact Commission	5:25	Adjournment to Reception
2:50	Town of Taos & Abeyta Water Right Adjudication Tomas Benavidez, Town Attorney Taos, New Mexico		
3:10	Break		

Wednesday, October 20

Governor's Water Conference Program

8:00	Registration		Oklahoma River Development Project Jim Hasenbeck, Studio Architecture, Oklahoma City
8:30	Welcome and Introductions Ervin Mitchell, OWRB Chairman		Arkansas River Vision Plan Kevin Conner, Carter & Burgess, San Antonio, TX
8:35	Video - "Oklahoma Water: A Quality of Life"		Navigation Update Scott Robinson, Director, Port of Muskogee
9:05	Keynote Address Lt. Governor Mary Fallin		Interstate Compact News Dick Seybolt, Chairman Arkansas-Oklahoma Arkansas River Compact Commission
9:20	Infrastructure Financing Panel Moderator: Joe Freeman, OWRB Ted Lockin, Mayor of Bartlesville Dennis Krueger, Gen. Manager, Kiwash Electric Coop.	12:00	Luncheon Program Oklahoma Water Pioneer Awards Featured Luncheon Speaker Bill Richardson, Governor of New Mexico (invited)
10:10	Water Development Infrastructure Financing Scott Meacham, Director Oklahoma Office of State Finance		Water Outlook from Washington D.C. Oklahoma's Congressional Delegation (invited)
10:30	Break/Exhibits		Oklahoma State Legislative Water Perspective House Speaker-Elect Jari Askins Representative David Braddock Senator Johnnie Crutchfield Senator Jay Paul Gumm
10:45	State of the State's Water: Celebrating 25 Years of the Governor's Water Conference Duane Smith, OWRB Executive Director		Congressional Senate Candidate Forum Representative Brad Carson (invited) Dr. Tom Coburn (invited)
11:00	Planning for the Future of the Grand River Basin Kevin Easley, General Manager Grand River Dam Authority		
11:15	Water Magazine	2:30	Adjournment

Free eBulletin Aids Water Treatment Professionals

Today's water treatment professionals face important decisions each and every day that require quick action and a clear understanding of the nation's regulatory issues. The *Safe Drinking Water Trust eBulletin* was recently launched by the Rural Community Assistance Partnership (RCAP) through a federal Homeland Security Grant awarded by the U.S. Department of Health and Human Services to serve as a primary resource in water system solutions. This valuable tool is offered at no cost to the water systems.

To register, users simply go online and fill out the subscription form at www.watertrust.org. Every three weeks, subscribers will receive an interactive e-mail bulletin containing informational articles. This free resource is one of the industry's leading centralized water utility tools

created specifically to help small public water systems keep up with the flurry of regulations that impact this industry.

Recognizing that rural water systems need more than just additional reading material, the *SDWT eBulletin* offers both up-to-date financial resources and an interactive "ask-the-expert" section providing direct access to water industry experts from across the nation. Taking nearly two years to conceptualize and design, the inaugural issue of the *Safe Drinking Water Trust eBulletin* was unveiled earlier this summer by Community Resource Group Inc., which serves RCAP's southern region.

For more than 30 years, the RCAP partnership has served as a leader in rural community development through its field-based staff and delegate agencies working at the community level in all 50 states. In Oklahoma, local RCAP partnership offices are located in Tulsa, Bennington, Warner, and Pryor, or can be contacted at www.crg.org.

Grand Lake Team Installs Cages

In early September, as part of a newly initiated study at Grand Lake to introduce native aquatic plant life, staff from the Oklahoma Department of Wildlife Conservation (ODWC), Lewisville Aquatic Ecosystem Research Facility (LAERF), and OWRB installed t-posts and vinyl coated wire mesh to cage and protect the new plants from fish, turtles, and other herbivores.



Pictured left to right are Gene Gilliland, Jim Burroughs, and Keith Thomas (ODWC); Owen Mills (OWRB); and Paul Williams (LAERF).

Oklahoma's Longest Rivers

Beaver/North Canadian	765.9 miles
Red River	591.7 miles
Washita River	547.4 miles
Canadian River	460.0 miles
North Canadian River	457.1 miles
Cimarron River	420.5 miles



North Canadian River at Seiling

Boyce Named Employee of the Quarter

In July, the OWRB's Employee of the Quarter Award was presented to Monte Boyce, OWRB Comptroller, for outstanding service to the agency and State of Oklahoma. Specifically, Boyce was recognized for dedicated maintenance of agency fiscal records, exceptional efforts to satisfy state financial reporting requirements, and general competency and professionalism in the performance of his duties. Boyce's responsibilities include preparation of the budget work

program, budget request, and consolidated annual financial report, and he also acts as liaison between the OWRB and the Office of State Finance, State Treasurer's Office, and the fiscal staffs of the House and Senate. A 17-year public servant, Boyce joined the OWRB in 2001, transferring from the Oklahoma Department of Environmental Quality.



Boyce with Duane Smith, OWRB Executive Director

Oklahoma Drought Monitor

Reservoir Storage

Lake storage in Oklahoma remains generally good, although lakes in the southwest continue to experience low levels. As of August 30, the combined normal conservation pools of 31 selected major federal reservoirs across Oklahoma (see below) are approximately 96.7 percent full, a 1.6 percent decrease from that recorded on August 3, according to information from the U.S. Army Corps of Engineers (Tulsa District). Twenty-seven reservoirs have experienced lake level decreases since that time. Nineteen reservoirs are currently operating at less than full capacity (compared to 10 last month). Two reservoirs—Lugert-Altus, only 19.1 percent full; and Tom Steed, 53.9 percent—remain below 80 percent capacity.

Storage in Selected Oklahoma Lakes & Reservoirs

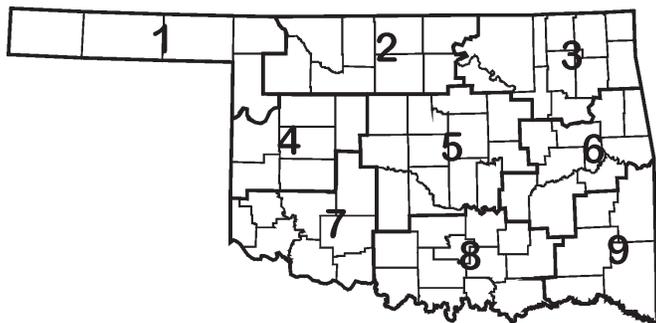
As of August 30, 2004

Climate Division	Conservation Storage (acre-feet)	Present Storage (acre-feet)	Percent of Conservation Storage
North Central	420,480	419,201	99.7
Northeast	3,710,194	3,581,438	96.5
West Central	276,790	246,915	89.2
Central	154,225	153,977	99.8
East Central	2,915,043	2,915,043	100.0
Southwest	301,810	149,979	49.7
South Central	2,940,740	2,899,721	98.6
Southeast	1,512,859	1,462,186	96.7
State Totals	12,232,141	11,828,460	96.7

Drought Indices

According to the latest Palmer Drought Severity Index (August 28, below), no regions in Oklahoma are currently experiencing drought conditions and only three of Oklahoma's nine climate divisions have undergone PDSI moisture decreases since July 31. The greatest decrease occurred in the East Central climate division.

The latest monthly Standardized Precipitation Index (through August, below) indicates only moderate long-term dryness in eastern Oklahoma. Among the *selected* time periods (3-, 6-, 9- and 12-month SPIs), no climate divisions indicate dry conditions. Considering longer periods (through six years), the Southeast and East Central climate divisions report "moderately dry" conditions over the past 18 and 24 months.



Palmer Drought Severity Index

Climate Division (#)	Current Status 8/28/2004	Value		Change In Value
		8/28	7/31	
NORTHWEST (1)	MOIST SPELL	1.96	1.59	0.37
NORTH CENTRAL (2)	MOIST SPELL	1.50	0.80	0.70
NORTHEAST (3)	MOIST SPELL	1.99	2.35	-0.36
WEST CENTRAL (4)	MOIST SPELL	1.39	-0.04	1.43
CENTRAL (5)	MOIST SPELL	1.17	0.30	0.87
EAST CENTRAL (6)	INCIPIENT MOIST SPELL	0.57	1.05	-0.48
SOUTHWEST (7)	INCIPIENT MOIST SPELL	0.84	-0.04	0.88
SOUTH CENTRAL (8)	MOIST SPELL	1.44	1.19	0.25
SOUTHEAST (9)	INCIPIENT MOIST SPELL	0.58	0.88	-0.30

Standardized Precipitation Index

Through August 2004

	3-Month	6-Month	9-Month	12-Month
NORTHWEST (1)	VERY WET	MODERATELY WET	MODERATELY WET	MODERATELY WET
NORTH CENTRAL (2)	MODERATELY WET	MODERATELY WET	MODERATELY WET	NEAR NORMAL
NORTHEAST (3)	MODERATELY WET	MODERATELY WET	MODERATELY WET	NEAR NORMAL
WEST CENTRAL (4)	MODERATELY WET	NEAR NORMAL	MODERATELY WET	NEAR NORMAL
CENTRAL (5)	VERY WET	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
EAST CENTRAL (6)	MODERATELY WET	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
SOUTHWEST (7)	MODERATELY WET	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
SOUTH CENTRAL (8)	VERY WET	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
SOUTHEAST (9)	MODERATELY WET	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL

Financial Assistance Program Update

Loans/Grants Approved as of August 10, 2004

FAP Loans—307 totaling \$536,255,000

The OWRB's Financial Assistance Program (FAP), created by the State Legislature in 1979, provides loans for water and wastewater system improvements in Oklahoma. The tremendous popularity of the bond loan program is due, in part, to extended payoff periods of up to 30 years at extremely competitive low-interest rates, averaging approximately 4.762 percent since 1986.

CWSRF Loans—157 totaling \$523,011,472

The Clean Water State Revolving Fund (CWSRF) loan program was created in 1988 to provide a renewable financing source for communities to draw upon for their wastewater infrastructure needs. The CWSRF program is Oklahoma's largest self-supporting wastewater financing effort, providing low-interest loans to communities in need.

DWSRF Loans—41 totaling \$162,351,407

The Drinking Water State Revolving Fund (DWSRF) loan program is an initiative of the OWRB and Oklahoma Department of Environmental Quality to assist municipalities and rural water districts in the construction and improvement of drinking water systems. These projects are often mandated for communities to obtain compliance with increasingly stringent federal standards related to the treatment of drinking water.

REAP Grants—405 totaling \$35,227,613

The Rural Economic Action Plan (REAP) Program was created by the State Legislature in 1996. REAP grants, used for water/wastewater system improvements, target primarily rural communities with populations of 7,000 or less, but priority is afforded to those with fewer than 1,750 inhabitants.

Emergency Grants—508 totaling \$29,820,332

OWRB emergency grants, limited to \$100,000, are awarded to correct situations constituting a threat to life, health, and/or property and are an indispensable component of the agency's financial assistance strategy.

Total Loans/Grants—1,418 totaling \$1,286,665,823

Applicants eligible for water/wastewater project financial assistance vary according to the specific program's purpose and requirements, but include towns and other municipalities with proper legal authority, various districts established under Title 82 of Oklahoma Statutes (rural water, master/water conservancy, rural sewage, and irrigation districts), counties, public works authorities, and/or school districts. Applications for agency financial assistance programs are evaluated individually by agency staff. Those meeting specific program requirements are recommended by staff for approval at monthly meetings of the nine-member Water Board.

More information about the OWRB's Financial Assistance Program can be obtained by calling the OWRB at (405) 530-8800.

Ervin Mitchell, *Chairman*; Lonnie L. Farmer, *Vice Chairman*; Bill Secrest, *Secretary*
Harry Currie, Rudy Herrmann, Jack Keeley, Mark Nichols, Richard C. Sevenoaks

Brian Vance, *Writer/Editor* • Darla Whitley, *Writer/Layout* • Barry Fogerty, *Photography*

This bimonthly newsletter, printed by Oklahoma University Printing Services, Norman, Oklahoma, is published by the Oklahoma Water Resources Board as authorized by Duane A. Smith, Executive Director. Eighty-eight hundred copies have been printed and mailed bimonthly at an approximate cost of 29 cents each. Copies have been deposited at the Publications Clearinghouse of the Oklahoma Department of Libraries.

OKLAHOMA WATER RESOURCES BOARD
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Oklahoma City, OK 73118
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Bimonthly Newsletter of the
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