

# OKLAHOMA Water News

Bimonthly Newsletter of the Oklahoma Water Resources Board

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## From the Director



*Duane A. Smith  
OWRB Executive Director*

The Oklahoma State Legislature officially convened for business on February 6. In all, 2,240 bills and resolutions have been filed by both the Senate and House. Of these, 1,087 remain alive, including a few already signed and enacted by Governor Henry. All legislation must be considered by May 26. As always, the Legislature has a big job in front of them.

Of course, of primary concern to the Water Board are specific initiatives related to much-needed financial assistance for water and wastewater facility construction and water planning. The Legislature has proposed lifting the existing cap on the state's Gross Production REAP funds to replenish the heavily-utilized

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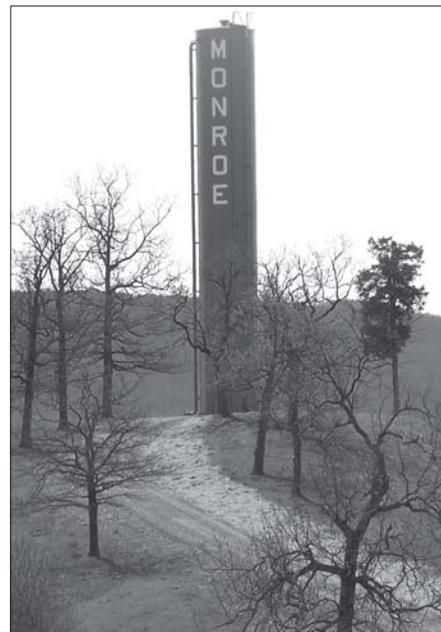
## Proposed Legislation Emphasizes Water's Importance

*Below is a list of selected bills introduced during the Second Session of the 50th State Legislature that could impact the Water Resources Board and state water users.*

**HB2618: Gross Production Tax REAP Water Projects Fund**—Takes the OWRB Rural Economic Action Plan Water Projects Fund and the County Bridge and Road Improvement Fund out from under the \$150 million annual cap. Monies over the cap go back into the General Revenue Fund. Possible vehicle for providing gross production tax funds to OWRB for water planning and financial assistance and to Oklahoma Conservation Commission for their watershed cost share programs.

**HB2804: Citizens Lake Committees and Hydro-Power Task Force**—Replaces a proposed legislative referendum on water sales outside the state with a new law that creates nine-member citizen lake committees—representing recreation, tourism, rural and municipal water supplies, agriculture, fish, wildlife, hydroelectric power generation, marinas and other crucial water-related

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*Water supply problems experienced by the community of Monroe, which is served by LeFlore County Rural Water District #9, were resolved through construction of a water storage tank and water distribution system up-grades funded through a \$60,000 OWRB REAP grant and a \$246,701 Drinking Water State Revolving Loan. Much-needed*

*additional monies would be available to those two programs, as well as the other three loan/grant programs administered by the Water Board, if the existing cap is removed from the state's REAP Water Projects and County Bridge/Road Improvement Fund, as currently proposed by the Legislature.*

**From the Director . . .** *Continued from page 1*

Statewide Water Development Revolving Fund so that it can address the estimated \$5.4 billion funding need for those projects through 2025. Those additional funds would also be used to update the Oklahoma Comprehensive Water Plan and assist the Conservation Commission with its watershed program cost-share. We remain hopeful that the groundswell of support from such organizations as the Oklahoma Municipal League, Rural Water Association, Independent Petroleum Association, Farm Bureau, Environmental Federation of Oklahoma, and others will carry this initiative to a successful conclusion.

If anything emphasizes the importance of efficient water treatment and distribution, as well as planning for Oklahoma's water future, it is the extended drought episode we are currently facing. Since last September, state averaged rainfall stands at around six inches, which is almost 8 inches below normal. Many of Oklahoma's climate regions have received less than one-half of their expected precipitation totals over that period. As a result of these widespread rainfall deficits, the entire state has been under a Burn Ban and dangerous wildfires have become a regular occurrence. Many pastures remain brown and ponds are drying up. Spring crops have been hit hard, as will our agricultural economy when harvest rolls around. And if we don't receive at least a few rounds of gentle, soaking rainfall before the typical summer dry period, water systems will experience supply shortages and

**Legislation . . .** *Continued from page 1*

economic interests—on Corps of Engineers reservoirs as well as a state task force on hydropower. Each lake committee would have oversight for monitoring acceptable lake levels, roads, and other conditions affecting the reservoir and would make recommendations to the appropriate state or federal agency on issues regarding lake management. The 13-member hydropower task force would hold public meetings and make recommendations on the overall impact of the use of water for electricity generation, required studies, and assessment of a fee for the use of water for power generation. The task force would include a member of the Senate, House of Representatives, and Corporation Commission and appointees from the OWRB, Tourism and Recreation Department, Grand River Dam Authority, and representatives of the Oklahoma Municipal League, rural electric cooperative, lake associations, OSU Water Research Institute, and permitted lake users.

**HB3020: OWRB Membership**—Committee Substitute deviates from the introduced language that would have added an additional Board member representing oil and gas production to the 9 member Board. It replaces geographical representation from the current five congressional districts to 4 county based districts (basically the four quadrants of the state). The remaining 5 board members would be appointed at large with no more than 3 members appointed from one of the districts. It also adds independent oil and gas production and thermal electrical generation to the list of water interests that

many—especially aging systems—will collapse due to sudden and significant increases in demand.

While we are truly experiencing a drought situation, the hardships we are dealing with are amplified because most Oklahomans have become used to having water supply generally whenever and wherever they need it. While much of the \$1.4 billion provided to Oklahoma communities and rural water districts through the Board's Financial Assistance Program has helped improve their resistance to drought episodes, the fact remains that we have been fortunate in experiencing a relatively wet climatic period since about 1980. In reviewing Oklahoma's long-term precipitation data recently obtained from the Okla. Climatological Survey, it becomes obvious that we've been on the peak of precipitation. And we could be headed to the valley.

Now is the time to strengthen our water systems, identify all feasible sources of water supply, and sharpen our management schemes through update of the Water Plan. But local planning will be key to the Plan's success; communities and rural systems must work together and in concert with state and federal partners in providing affordable and dependable supply to customers. And when infrastructure fails, as it occasionally will during this statewide drought, the Water Board's loan and grant programs must be well-equipped to fund needed repairs. I encourage the State Legislature to help the Water Board help Oklahomans.

must be represented on the Board. Members representing these interests must be engaged in these activities, not just well versed as currently required.

**HB3023: Gross Production Tax REAP Water Projects Fund**—Would amend current law apportioning the tax levied on gross production of ores, natural gas and oil. The bill would remove the OWRB REAP Water Projects Fund from the current \$150 million annual deposit cap. It directs the funds to be divided into 3 revolving funds as follows: Oklahoma Tourism and Recreation Department Capital Expenditure Revolving Fund to be expended by the Tourism and Recreation Department for one-time capital expenditures at state lodges and parks; Watershed Dam and Conservation Cost Share Program Revolving Fund to be expended by the Conservation Commission for rehabilitation of watershed dams, Conservation Cost Share Program and Conservation Reserve Enhancement Program; and Rural Community Water Infrastructure Development Fund Revolving Fund to be expended by the OWRB for the purpose of establishing and maintaining critical water infrastructure in rural areas of the state. Last year, due to continued rising oil prices, the cap was exceeded and the overage diverted to the General Revenue Fund. The OWRB REAP Water Projects Fund received approximately \$7 million of the cap. The Fund was originally authorized for OWRB REAP grants, but only \$2.6 million REAP project grants

*(continued on page 3)*

## Legislation . . . Continued from page 2

were approved the first year. The Legislature then began redirecting the funds to various agencies, including the OWRB for other purposes, some not related to water.

**HB3024: Drilling Rig Impoundment**—Provides for monetary fines and in some cases, impoundment of drilling rigs for water well drillers breaking the law. This is a request bill from the Oklahoma Groundwater Association and the OWRB Well Drillers Advisory Council, to boost the OWRB's regulatory authority on well drillers in limited instances of extreme violations that threaten public health.

**SB1019: Scenic Blue River**—Designation of the Blue River and its tributaries located in Pontotoc and Johnston counties as a scenic river area.

**SB1353: Lake Eufaula Basin Permit Moratorium**—Amends out-of-state water sales moratorium statutes to include a moratorium on approval of water permits authorizing the transfer of water, both groundwater and stream water, from the watershed area surrounding Lake Eufaula. This area is approximately 1/3 of the state. Pending permits are also included in the moratorium.

**SB1572: Municipal and Rural Water District Disputes**—Provides and encourages municipalities to enter into contracts or cooperative agreements with rural water districts for customer allocation, territory and revenues which relate to providing water supply to rural residents. Such agreements would not be deemed to be anticompetitive or otherwise contrary to antitrust laws.

**SB1574: Groundwater Waste Violations**—Committee Substitute amends the waste provisions of the groundwater statutes by increasing steps taken by the OWRB to assure the waste ceases. Currently the law specifies that the OWRB must gather evidence and file a complaint with the district court. This measure would require the OWRB to first pursue voluntary compliance, issue cease and desist orders by the Executive Director, pursue suspension of permits and other administrative remedies, before going to the district attorney.

**SB1677: Citizens Local Lake Committee**—This legislation directs the Secretary of Environment to create an initial five person oversight committee for each U.S. Army Corps of Engineer's lakes (27 Corps Lakes) and promulgate rules to administer the Act. The Governor has until September 1, 2006 to formally appoint these members. The Committees will have active oversight for monitoring lake levels, roads and other lake conditions.

**SB1719: Arbuckle Simpson Aquifer Mining Activities**—Prohibits the OWRB from issuing water permits relating to mining within the Arbuckle Simpson Aquifer until the OWRB has determined that the use of such water would not diminish or reduce the natural flow of water from springs or streams emanating from the aquifer or involve the use of water from an associated

mining pit. If the OWRB determines that these conditions cannot be met, then it will establish a zone of influence for the mining activity. The applicant must then submit a hydrogeological analysis and plan for OWRB approval, showing how the applicant will replace the water supply within the zone of influence affected by the permitted use. The plan must provide alternative sources of water to existing users impacted within the zone of influence at no cost to the impacted users. Guidelines are provided as to what constitutes adequate replacement of the water supply, which may include damages to real and personal property. Finally, the measure amends the Department of Mines statutes to require receipt of an OWRB water permit before a mining permit can be issued.

**SB0418: Oklahoma Environmental Protection Bond Program Act**—This new law would create a Natural Resources Protection Revolving Fund to provide state match funding for conservation and watershed protection practices. It authorizes the OWRB to be the banker for the program through its financial assistance program. It specifies that 15-year bonds generating up to \$30 million can be loaned to the Fund, with the proceeds being divided equally (\$10 million each) for Conservation Reserve Enhancement Program projects, upstream flood control structure rehabilitation projects, and invasive species eradication projects. Revenue from the Gross Production Tax REAP Water Projects Fund is intended to be used for debt retirement on the bonds. Oklahoma Supreme Court approval is also required on the issuance of the bonds.

## La Niña's Return May Spell Doom for Drought Relief

*By Gary McManus, Climatologist  
Oklahoma Climatological Survey*

The drought began in the fall and lasted through the following spring, decimating the state's winter wheat crop. The loss of forage for cattle necessitated mass sell-offs which depressed prices. Losses to the agricultural industry alone were well over \$1 billion. Farm bankruptcies soared. Wildfires ran rampant, burning more than 633,000 acres – nearly 1,000 square miles – prompting a FEMA disaster declaration. Hopes were dashed as the spring rains stayed away. Instead, the state was met with blowing dust and summer-like heat. Some meteorologists blamed the intensity of the drought that year on La Niña, the periodic cooling of the equatorial Pacific waters. The year was 1996, and the similarities to 2006 are frightening.

Previous data have shown a tendency for warmer and drier conditions in Oklahoma during La Niña events, and experts at the Climate Prediction Center (CPC) are once

*(continued on page 4)*

## La Niña . . . Continued from page 3

again predicting a visit by El Niño's less famous sister, La Niña:

*"However, current conditions (stronger-than-average easterly winds over the central equatorial Pacific) and recent cooling trends in observed oceanic conditions support continuation of La Niña conditions in the tropical Pacific during the next 3-6 months."*

It is important to note that while the La Niña of 1995-96 was considered very strong, the forecast for the 2006 La Niña is relatively much weaker. Given the existing drought conditions the state currently faces, however, any tendency towards drier weather is significant.

### 2006 vs. 1996

The 1996 La Niña event occurred in the midst of an existing drought, just as the current La Niña event. Statistically, Oklahoma is entering this spring season in worse condition than during the 1996 drought. From October 1995 through January 1996, the statewide-averaged precipitation total was 4.38 inches, more than 5 inches below normal and the 10th driest October-January on record. For the same period in 2005-06, the statewide-averaged precipitation was only 3.31 inches, the 5th driest on record at more than 6 inches below normal. Oklahoma's wheat belt, where the majority of the winter wheat crop is grown, runs from southwestern through north central Oklahoma. Within that belt, the rainfall statistics are very similar during the two time periods

with deficits of nearly 5 inches.

There was some relief for the southeast corner of the state during the 1996 event. That is encouraging news, since that area is currently in the throes of what the National Drought Mitigation Center terms an "exceptional drought," the worst designation they prescribe. The latest Seasonal Drought Outlook released by CPC predicts some improvement for southeastern Oklahoma, but also notes that "with 12-month rainfall deficits exceeding 20 inches in the northeast Texas-southeast Oklahoma region, drought-ending rains are unlikely anytime soon."

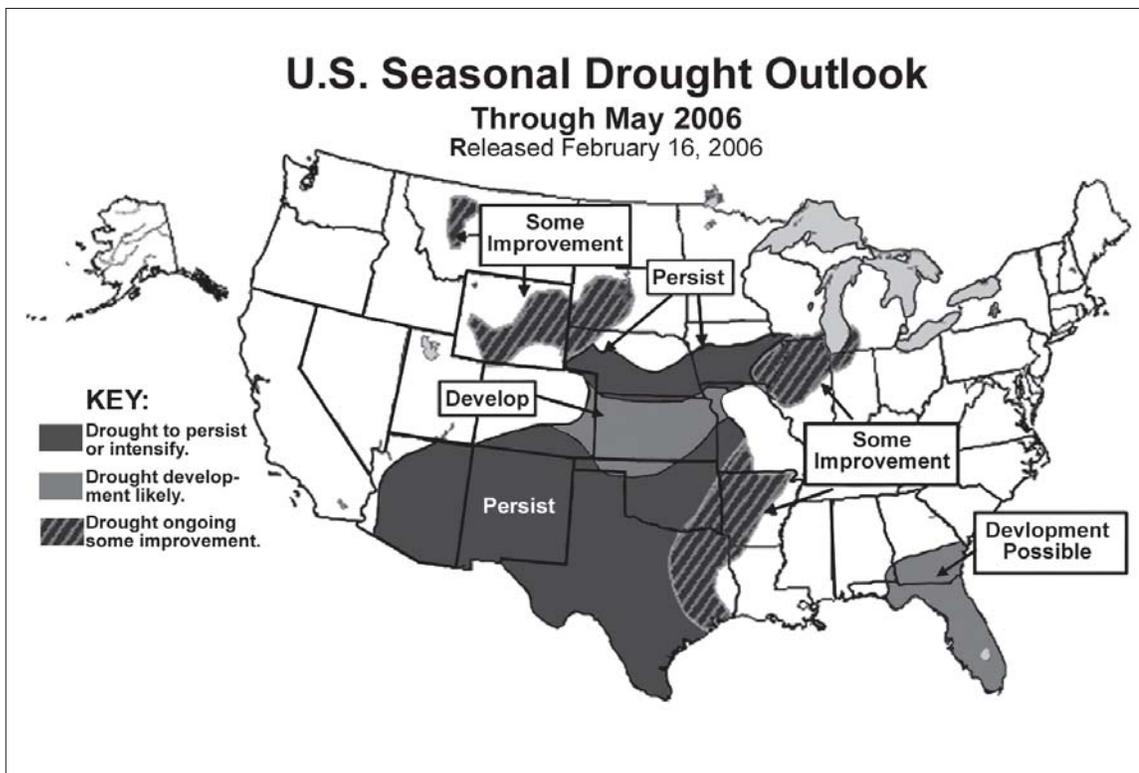
The drought outlook predicts persistence or intensification of the dry weather in most of the state, with drought development likely in the northwest. Unfortunately, the drought is expected to persist or intensify in the wheat belt region, enhancing the risk for economic damages to Oklahoma's agricultural industry.

There is some residual moisture remaining in the soil in both north central and southeastern Oklahoma. Once the weather begins to warm up, however, moisture demand by plants, especially the winter wheat crop, will increase dramatically.

### La Niña

The weather patterns associated with La Niña favor warm and dry weather for Oklahoma due to a northern shift in the jet stream, which helps to create a large blocking ridge of high pressure in the desert southwest. This diverts storm systems from the Pacific farther to the north, increasing rainfall in the Pacific Northwest and

decreasing rainfall in the southwestern U.S. The sinking air and lack of precipitation can contribute to above-normal temperatures for Oklahoma. However, it must be noted that the effects of La Niña are described in broad-based weather patterns. So while the dry and warm conditions might generally affect the southern half of the U.S., local impacts might be quite different than the large-scale patterns.



The drought outlook for Oklahoma indicates some improvement for southeastern Oklahoma, but persistence or intensification of drought throughout much of the state. Information courtesy National Weather Service Climate Prediction Center:

[http://www.cpc.noaa.gov/products/expert\\_assessment/seasonal\\_drought.html](http://www.cpc.noaa.gov/products/expert_assessment/seasonal_drought.html)

## First "Water Day" Set for April 19

The Oklahoma Water Resources Board will host the inaugural Capitol Water Day on April 19, 2006, from 9 a.m. to 4 p.m. in the Capitol's 4th floor rotunda. Water Day will present a unique opportunity for groups to demonstrate the importance of Oklahoma's water resources and provide information on their water management, conservation, and educational programs for state legislators and other government officials.

The OWRB hopes that this diverse assembly of water interests will not only attract the attention of Governor Henry and Legislative leadership, but also establish the annual Capitol Water Day as the state's premier event celebrating water and those who strive to protect Oklahoma's most precious natural resource.

Numerous agencies and organizations with water interests—including public water supply, agriculture, tourism and recreation, environmental protection, wildlife conservation, soil conservation, energy, and industry, as well as occupations such as well drillers, floodplain managers, environmental engineers and

The Oklahoma Water Resources Board cordially invites you to join us in the Capitol's 4th floor rotunda for

# WATER DAY

9:00 a.m. to 4:00 p.m.  
APRIL 19, 2006

Water Day presents a unique opportunity for over 25 state, federal, and local organizations to gather and demonstrate the importance of Oklahoma's water resources and provide information on their water management, conservation, and educational programs.

others—have been invited to showcase how they individually and collectively protect the state's surface and groundwaters.

For more information call Mike Melton at 405-530-8800 or e-mail the OWRB at [pubinfo@owrb.state.ok.us](mailto:pubinfo@owrb.state.ok.us).

## Senator Kerr Remembered

Sen. Robert M. Kerr passed away on January 25. A Democrat, Sen. Kerr was first elected to the state Senate in 1986 and was assistant majority leader and vice-chairman of appropriations at the time of his death.

According to OWRB Executive Director Duane Smith, "Sen. Kerr was one of our truly great senators as well as a great Oklahoman who worked tirelessly for rural Oklahoma and the state's water interests. We will miss him tremendously."

The following is a written tribute to Sen. Kerr from Rep. Ryan McMullen:

*I join so many across our state in mourning the loss of one of Oklahoma's finest statesmen: Senator Robert M. Kerr. He embarked to go Home to our heavenly Father early on the morning of Wednesday, January 25, 2006.*

*Veteran lawmakers will tell you that from the day he stepped foot on the floor of the State Senate in 1986, he fought relentlessly for the people and interests of Western Oklahoma. His life on the farm made Senator Kerr one of our state's best agricultural policy leaders.*

*My friendship with Senator Kerr began as an agriculture student at Oklahoma State University while serving as the Agriculture Committee's legislative intern. Having similar backgrounds to many of the students,*

*Senator Kerr particularly enjoyed mentoring the young ag students as we passed through this program. Senator Kerr loved the thought of helping develop the next generation of leaders for Rural Oklahoma.*

*His mentoring quickly developed into a strong bond of friendship. Those of us who were blessed to call Bob a friend knew that this bond was far greater than politics or any issue of the day.*

*Senator Kerr continued to serve as that friend and mentor as I found my own way to the Oklahoma Legislature in a freshman class of unprecedented size. Senator Kerr found additional purpose at the Capitol; besides mentoring those young ag interns each year, Senator Kerr now had a large group of young freshmen lawmakers to guide.*

*Each of us is better for having the opportunity, even if brief, to learn from such an honorable statesman. I believe his lengthy list of legislative accomplishments will one day pale to his legacy of mentoring young leaders and providing a model for what every lawmaker should strive to become.*



*In this archived photo, Sen. Kerr (standing, right), a long-time supporter of cloud seeding, is briefed by weather modification experts hired by the state to conduct Oklahoma's weather modification program.*

# Water on the State Level

(Adapted from "Our View," *Shawnee News Star*, Feb. 5, 2006)

The governor has revealed a significant portion of his agenda and what he hopes to see achieved this legislative session. Republican and Democratic leaders have also offered what they see as among the most pressing topics. While there are a number of issues that are vitally important, there is none that is more critical than ensuring this state has an adequate water supply.

Some might say that it's not as important as education, workers' compensation or tort reform, or providing funding for corrections, roads and bridges, and other infrastructure. Other observers might be inclined to believe that the water situation this state faces today will fix itself once it begins raining and the drought goes away.

But if we don't have a sufficient water supply in Oklahoma, we will be in huge trouble. There is no immediate relief in sight, at least not according to the forecasts that have been published and televised.

Look at some of the lake levels. Broken Bow lake in far southeastern Oklahoma is more than 161 feet below normal, and Lake Eufaula is 12 feet below normal.

Without major rainfall, the conditions will only worsen. The last six months of 2005 were the driest since



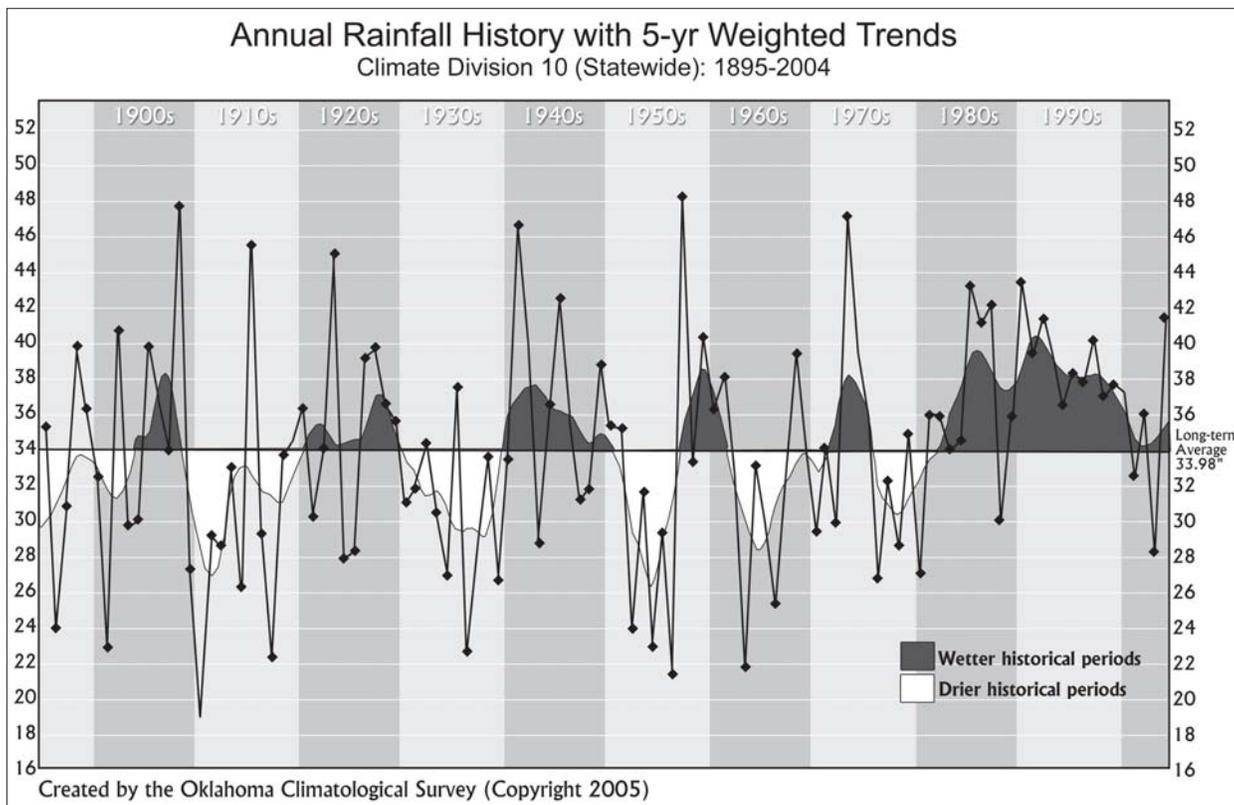
Water level at dock and boat ramp at Shawnee Twin Lakes in late February

1921. The last 90 days ranked within the top five of the driest periods in state history.

Despite the seriousness of the water woes Oklahoma faces, we haven't seen any visionary ideas laid out for addressing this critical issue by the governor or leaders of the state Democratic and Republican parties. They have been consumed with the traditional issues that are much more popular and they seem much more comfortable with talking about them.

We would highly suggest that legislators move the water concerns much higher on the political agenda

because water is critical to Oklahoma's future and it impacts each of us in our daily lives, both at business and at home. We can't exist without it.



# Oklahoma Drought Monitor

## Reservoir Storage

As of February 27, the combined normal conservation pools of 31 selected major federal reservoirs across Oklahoma (see below) are approximately 86 percent full, a 0.1 percent decrease from that recorded on February 13, according to information from the U.S. Army Corps of Engineers (Tulsa District). Twenty-one reservoirs have experienced lake level decreases since that time; 27 reservoirs are currently operating at less than full capacity. Eleven reservoirs are now below 80 percent capacity.

### Storage in Selected Oklahoma Lakes & Reservoirs

As of February 27, 2006

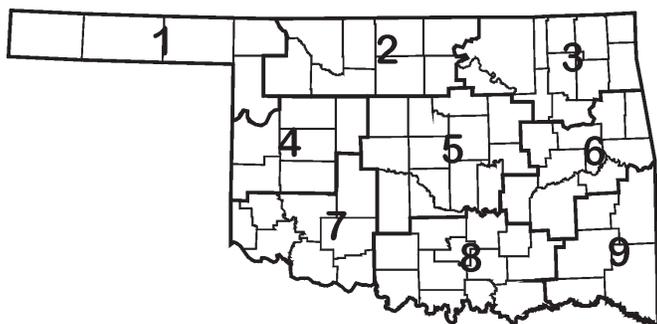
Climate Division	Conservation Storage (acre-feet)	Present Storage (acre-feet)	Percent of Conservation Storage
North Central	426,756	426,756	100.0
Northeast	3,698,902	3,306,538	89.4
West Central	276,790	253,938	91.7
Central	154,225	129,757	84.1
<b>East Central</b>	<b>2,968,683</b>	<b>2,248,749</b>	<b>75.7</b>
<b>Southwest</b>	<b>301,810</b>	<b>193,512</b>	<b>64.1</b>
South Central	2,795,156	2,683,002	96.0
<b>Southeast</b>	<b>1,464,929</b>	<b>1,158,049</b>	<b>79.1</b>
<b>State Totals</b>	<b>12,087,251</b>	<b>10,400,301</b>	<b>86.0</b>

## Drought Indices

According to the latest Palmer Drought Severity Index (February 25, below), **state drought conditions continue to worsen as all regions report various stages of drought.** Both the Southeast and East Central climate divisions are in “extreme drought” while the Northeast now reports “severe drought.” All of Oklahoma’s nine climate divisions

have undergone PDSI moisture decreases since February 11.

The latest monthly Standardized Precipitation Index (through January, below) reflects increasingly dry conditions throughout much of Oklahoma. Among the *selected* time periods (3-, 6-, 9- and 12-month SPIs), **“extremely” and/or “very” dry conditions are present in all climate divisions at various times within the past 12 months.**



### Palmer Drought Severity Index

### Standardized Precipitation Index

Through January 2006

Climate Division (#)	Current Status 2/23/2006	Value		Change In Value				
		2/25	2/11		3-Month	6-Month	9-Month	12-Month
<b>NORTHWEST (1)</b>	MILD DROUGHT	-1.10	-1.01	-0.09	VERY DRY	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
<b>NORTH CENTRAL (2)</b>	MILD DROUGHT	-1.49	-1.35	-0.14	VERY DRY	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
<b>NORTHEAST (3)</b>	SEVERE DROUGHT	-3.25	-2.99	-0.26	EXTREMELY DRY	MODERATELY DRY	MODERATELY DRY	VERY DRY
<b>WEST CENTRAL (4)</b>	MILD DROUGHT	-1.39	-1.14	-0.25	VERY DRY	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
<b>CENTRAL (5)</b>	MODERATE DROUGHT	-2.27	-2.16	-0.11	EXTREMELY DRY	NEAR NORMAL	NEAR NORMAL	MODERATELY DRY
<b>EAST CENTRAL (6)</b>	EXTREME DROUGHT	-4.00	-3.81	-0.19	EXTREMELY DRY	EXTREMELY DRY	EXTREMELY DRY	EXTREMELY DRY
<b>SOUTHWEST (7)</b>	MODERATE DROUGHT	-2.11	-1.97	-0.14	EXTREMELY DRY	NEAR NORMAL	NEAR NORMAL	MODERATELY DRY
<b>SOUTH CENTRAL (8)</b>	MODERATE DROUGHT	-2.41	-2.37	-0.04	EXTREMELY DRY	MODERATELY DRY	MODERATELY DRY	VERY DRY
<b>SOUTHEAST (9)</b>	EXTREME DROUGHT	-4.14	-4.22	0.08	VERY DRY	EXTREMELY DRY	EXTREMELY DRY	EXTREMELY DRY

# Financial Assistance Program Update

*Loans/Grants Approved as of February 14, 2006*

## **FAP Loans—317 totaling \$566,955,000**

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 interest rates, averaging approximately 4.762 percent since 1986.

## **CWSRF Loans—172 totaling \$582,619,915**

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—56 totaling \$212,898,185**

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—439 totaling \$38,358,016**

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—520 totaling \$30,538,145**

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

## **Total Loans/Grants—1,504 totaling \$1,431,369,262**

## **Estimated Savings—\$451,618,536**

*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.*

Rudy Herrmann, *Chairman*; Mark Nichols, *Vice Chairman*; Bill Secrest, *Secretary*  
Harry Currie, Lonnie L. Farmer, Ed Fite, Jack Keeley, Kenneth K. Knowles, Richard C. Sevenoaks

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

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# OKLAHOMA Water News

Bimonthly Newsletter of the Oklahoma Water Resources Board

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*Oklahomans Rely on Water Data*

*Water Appreciation Day Attracts Varied Interests*

### FLOOD CURRENT:

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*Flood Insurance Coverage in Oklahoma*

*OFMA Conference Set*

*Beagle Honored as Employee of the Quarter*

*Farmer Honored with Founders Award*

*Norton and Keys Resign*

*Oklahoma Drought Monitor*

## From the Director



Duane A. Smith  
OWRB Executive Director

Water Appreciation Day, held at the State Capitol in Oklahoma City on April 19, provided a unique opportunity for the state's water community to exchange information on their water management, conservation, and educational programs with state legislators and each other. What began as a relatively modest endeavor to highlight the importance of Oklahoma's water resources generated a lot of interesting—and at times, spirited—discussions of the many varied and complicated water issues that our legislative leaders are currently debating.

More than 30 local, state and federal agencies and organizations turned out in the Capital Rotunda to answer questions and provide information. With their help, we have already established our annual

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## Reduced Stream Monitoring Poses Many Problems

Federal budget cuts are currently threatening the nation's network of approximately 7,400 U.S. Geological Survey stream gages that measure the level and flow of water in rivers and streams, providing critically important data to water agencies and the public.

One result of the loss of gages along the network is the hampered ability to forecast flooding events. River flooding costs billions of dollars in property damage each year, and according to the National Weather Service, kills about 125 people, more deaths per year than are attributed to tornadoes or hurricanes. Additionally, stream gage data is critical for determining frequency and intensity of flooding. This information guides engineers and architects in building bridges, roads, and communities; aids in determining the 100-year flood measurement for flood insurance policies and construction regulations; and provides a record of the gradual changes in patterns of drought and high water.

According to Michael Norris, Coordinator of the National Streamflow Information Program, the national network currently takes about \$120 million each year to run about 7,400 gages, down from a peak of 8,221 in 1968. The program has always been supported by a



The USGS stream gaging network in Oklahoma currently includes 170 stations.

patchwork of money from the U.S. Geological Survey, other federal agencies, and more than 800 state and local "funding partners."

Partially in response to increased flooding events, the government expanded the network in the late 1990s by reactivating more than 500 stream gages that had been previously discontinued, adding financing for the net-

*See Reduced Monitoring, Page 2*

## **From the Director . . .** *Continued from page 1*

Water Appreciation Day as the state's premier event celebrating Oklahoma's most precious natural resource.

Particularly helpful in making the day a resounding success were OWRB Chairman Rudy Herrmann, Secretary of Environment Miles Tolbert, OML Director Danny George, and those legislators who attended the morning press conference—Rep. Don Armes, Rep. Mike Reynolds, Rep. Jerry Ellis, and Rep. Debbie Blackburn. All are supportive of the OWRB's current initiatives to update the Oklahoma Comprehensive Water Plan and recapitalize the Statewide Water Development Revolving Fund. And

thanks to the Oklahoma Rural Water Association, especially Executive Director Gene Whatley, for sponsoring the legislative breakfast reception.

A special thank you goes to Gary Jones, President of the Oklahoma Public Employees Association, who contributed remarks at our April 19 OWRB/Oklahoma City bombing remembrance ceremony on the Capitol grounds. Of course, April 19 also marked the day we remembered Bob Chipman and Trudy Rigney, the Water Board employees who perished in the Murrah Federal Building in 1995. Still, we miss them and vow never to forget their sacrifice.

## **Reduced Monitoring . . .** *Continued from page 1*

work, and putting more of the program under direct federal control to protect critical gages. But after September 11, with more resources going to national security, the budget for the stream program stayed essentially flat while inflation caused costs to rise about three percent each year. And while the pressure on the federal government to hold the line on rising budgets is fierce, at the state and local level it is even more so.

According to Glenn G. Patterson, head of the cooperative water program for the USGS, which pays for 65% of the network, quite a few funding sources have reported that things are not looking so good for continued funding. This means the network has begun to shrink again. In 2005, 50 gages were lost and currently about 200 gages are "threatened" by budget cuts at some level. Fortunately, the Bush administration has requested an additional \$2 million on top of the roughly \$14 million direct federal contribution from the USGS to the program.

Brian Mrazik, a retired Geological Survey official, says complacency often leads people to question the expense of the gage: "When floods come along, everyone's excited. They say, 'Let's fund gages.' You go 20,30 years without a flood, and people say, 'Why the hell are we paying for this thing?'"

Patterson reports that the gages most likely to be cut are those that do not have a critical role in flood alerts and safety, but loss of that data can have serious implications. "The benefit from stream gages comes from the myriad day-to-day decisions of how big to make a culvert or how big to make a bridge," he says.

That loss of data troubles Mark T. Anderson, South Dakota Water Science Center director: "If you have a discontinuity of a couple of years even, you lose part of the substantial investment that's been made in the period of record. It's like

you're squandering the investment of your predecessors."

Advocates for a more robust stream gage network argue that the system is a bit like a pointillist painting: the loss of a single dot would probably not change the overall picture. But lose enough of them over time and the image is lost.

*Excerpted from an article entitled "Experts See Peril in Reduced monitoring of Nation's Streams and Rivers," published in The New York Times, 11 April 2006.*

## **Oklahomans Rely on Water Data**

Oklahoma's streamgaging program, conducted through the USGS Cooperative Water Program in cooperation with the OWRB and other sponsors, plays a vital role in water rights administration, water planning, drought monitoring, water quality management, interstate water compacts, and related efforts. Unfortunately, the state's streamgaging activities continually face cost increases and federal budget cuts, resulting in the loss of important streamgages as well as related water resource data. Currently, non-USGS cooperators pay about two-thirds of the cost of the Coop program.

The OWRB has worked intimately with the USGS Oklahoma District and their staff in monitoring the state's water resources. Timely, dependable, and accurate streamflow and water quality data provided by the USGS is integral to the OWRB's continuing mission in managing and protecting the surface and groundwaters of Oklahoma. This information is also critical to Oklahoma's municipal, industrial, and agricultural sectors, which are dependent upon water supply.

Increasingly though, consistent funding cuts have led to sharp reductions in the number of active gages, especially in rural areas of our state, and this handicaps our ability to fully comprehend Oklahoma's water quantity and quality situation at any given time. Furthermore, the loss of the hydrologic and climatological data provided by the gages is arguably increasing the risk to human life and property from extreme weather events, such as flooding and drought.

"There are many technologically advanced tools at our disposal that could greatly improve water supply management and forecasting abilities," says OWRB Executive Director Duane Smith, "but we need to preserve the data infrastructure that facilitates our use of these tools. It is a critical component of water management."

# Water Appreciation Day Attracts Varied Interests



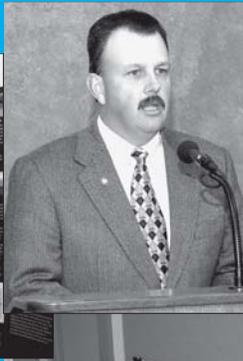
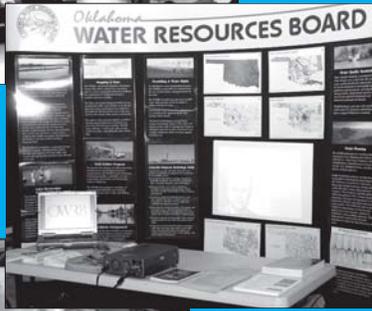
Above: Capitol rotunda with 31 exhibitors representing Oklahoma water interests

Right: The OWRB's bombing anniversary ceremony, held on the State Capitol grounds, took place in front of a Shumard oak tree planted in memory of agency employees Bob Chipman and Trudy Rigney, who lost their lives in the tragedy.



Left: Rep. Don Armes at a press conference on the state's priority water issues held in the Capitol Press Room. Other speakers included the OWRB's Rudy Herrmann and Duane Smith, Secretary of Environment Miles Tolbert, Rep. Mike Reynolds, Rep. Jerry Ellis, Rep. Debbie Blackburn, and Oklahoma Municipal League Director Danny George.

Right: OWRB Display



Left: Ed Eckenstein OWRB, demonstrates the agency's online mapping system



Above: April meeting of the nine-member Water Board in the Governor's Large Conference room. Below: From left, Rep. Percy Walker with OWRB Members Lonnie Farmer and Harry Currie

Below: Jane Weber of the Oklahoma Geological Survey, with OWRB geologist Noel Osborn



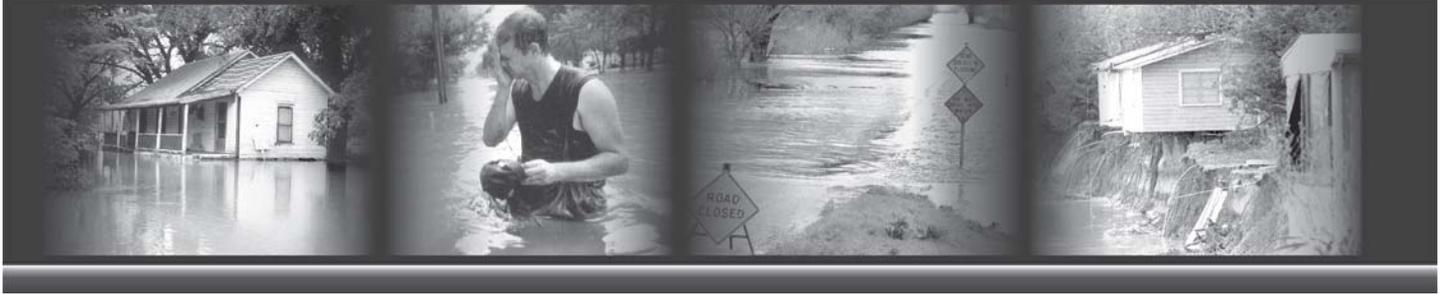
Above: Meredith Lee, Education Outreach Coordinator, at the Oklahoma Scenic Rivers Commission exhibit

Right: Grand Lake Water Watcher Larry Love with Lynda Williamson (OWRB) display water monitoring instruments



Above: Miles Tolbert, Oklahoma Secretary of Environment, with EPA Region 6 Water Quality Division staff

# FLOOD CURRENT



## From the Coordinator



Mike Mathis  
*State Floodplain Coordinator, OWRB*

I want to thank the Oklahoma Floodplain Managers Training Cadre. In particular, Bill Smith has been invaluable to the OWRB and our accreditation program. With Jack Graham, of FEMA, still on disaster duty in Texas, Bill has been helping us teach the Floodplain Management 101 workshops this past year. Bill is also developing a short two-hour special workshop that will be offered later this year through each of the five OFMA Regions. For more information about this opportunity, contact your OFMA Regional Representative.

I also want to encourage all Oklahoma communities to participate in the NFIP to become accredited prior to June 2006. The first accreditation year is quickly coming to a close, and already 153 administrators have become accredited; only 225 to go. This new accreditation law has created an opportunity for community officials to gain a clear understanding of their role and the responsibility of NFIP participation. This educational effort also allows our community leaders to learn how they play a key role in reducing future flood losses through implementation of a sound permitting system.

However, these workshops are not just for local floodplain administrators. Training staff has trained city council members, county commissioners, state legislators, insurance agents, floodplain boards, reporters, and concerned citizens. Monthly floodplain workshops in Oklahoma City have far-reaching benefits beyond just accreditation. These training workshops lead to improved local programs and they help integrate the No Adverse Impact approach into daily floodplain management.

In May, our training staff will take Floodplain Management 101 and 202 on the road--in Bartlesville on May 4, McAlester on May 16, Oklahoma City on May 18, Woodward on May 23, and Lawton on May 25. Specific workshop locations, as well as easy enrollment, are available on the OWRB's Web site. I remind you that these workshops are free. Joe Remondini of the Tulsa Corps of Engineers is facilitating each of the 202 Workshops, all featuring the Map Modernization Program. The 202 Workshops will also

provide a valuable advanced program for Certified Floodplain Managers to earn continuing education credits and will provide training in NAI, mitigation, master drainage planning, and OWRB "hot topics."

Last but not least, it is time to begin planning for the Sixteenth Annual OFMA Conference, September 17-20 in Norman. The conference planning committee, chaired by Laureen Gilroy, has some preliminary information posted on the OFMA web site, so please check out what is in store for the premier annual OFMA event and mark your calendars.



Above top, Dorothy Martinez, an official with the National Flood Insurance Program, discusses flood elevation issues at a January workshop. Above, Gavin Brady of the OWRB's Tulsa branch office assists David Wedell, Cordell Floodplain Administrator, and Jerry Turner, Okemah city manager, at an OWRB Floodplain Management workshop in March.

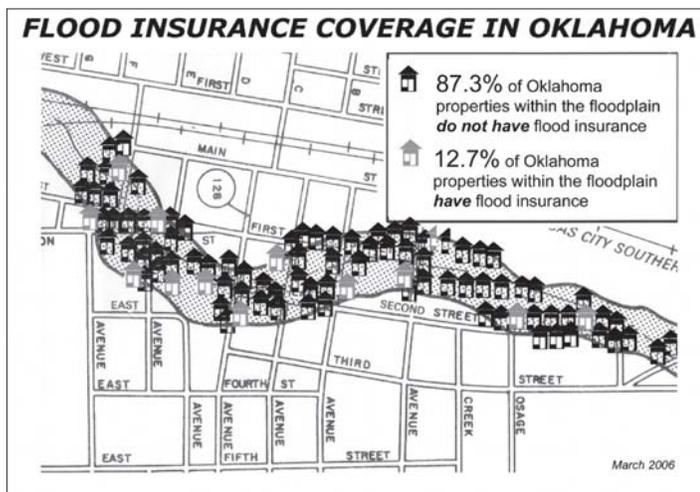
## “Grandfathering” Can Save You Money

“Grandfathering” is an important term to understand if you live in an area with potential flood hazards. It is used to define insurance rate applicability in communities where Flood Insurance Rate Maps (FIRMS) are revised due to changes to structures, such as bridges, culverts, dams, and levees, or new developments that alter the base flood elevation.

FEMA’s ongoing Map Modernization initiative will result in many such changes to Oklahoma’s flood zone boundaries and property classifications. Taking advantage of the option to “grandfather” properties added to Zone A can save money for the property owner.

**Pre-FIRM structures (constructed prior to the date of the community’s initial FIRM):** If a policy was obtained prior to the effective date of a map change, the policyholder is eligible to maintain the prior zone and base flood elevation as a basis for insurance rating. This is the case as long as continuous coverage is maintained. Such a policy can be assigned and continued to a new owner at the option of the policyholder.

If a building is Pre-FIRM, and a policy was not obtained prior to the effective date of a map change, the applicant may receive Pre-FIRM (subsidized) rates based on the new zone, rather than the actuarial (elevation based) rates.



Of the 76,701 structures residing in Oklahoma’s Special Flood Hazard Areas (SFHAs), 66,937 lack flood insurance policies and only 9,764 are insured. SFHAs, or floodplains, are land areas that are at high risk for flooding. A home located within an SFHA, as indicated on Flood Insurance Rate Maps (FIRMS), has a 26 percent chance of suffering flood damage during the term of a 30-year mortgage.

**May is Flood Awareness  
Month in Oklahoma**

**Be Flood Safe, Be Flood Smart**

**Post-FIRM structures (constructed on or after the date of the community’s initial FIRM):** If a policy was obtained prior to the effective date of a map change, the policyholder is eligible to maintain the prior zone and base flood elevation for insurance rating purposes, as long as continuous coverage is maintained. Such a policy can be assigned and continued to a new owner at the option of the policyholder.

If a building has been constructed in compliance with a specific FIRM, and that FIRM is revised, the owner is eligible to obtain a policy using the zone and base flood elevation data from the last FIRM, provided that proof is submitted to the insurance company. Acceptable documentation for proof is discussed in the NFIP Flood Insurance Manual, Rating Section. Continuous coverage is not required.

**Preferred Risk Policies:** Buildings written under the preferred risk policy program must be located in zones B, C, or X on the FIRM in effect on the dates of application and subsequent renewals. A building that becomes ineligible for a preferred risk policy due to a map change to a special flood hazard area can be rewritten on a standard rated policy using zones B, C, or X.

Again, if you are not now in Zone A and there is a chance that a future FIRM revision will show your parcel to be located in the floodplain, you can reduce your flood insurance premium by buying and maintaining a policy for the low risk flood area before the new map goes into effect.

*Article courtesy "Flood News for Michigan Floodplain Managers" (Spring/Summer '05)*

## OFMA Conference Set

The Oklahoma Floodplain Managers Association’s Sixteenth Annual Conference will be held September 17-20 at the University of Oklahoma’s Center For Continuing Education in Norman.

Due to the numerous hurricane disasters experienced in the U.S. throughout the past year, this year’s meeting will focus on potential significant changes in the nation’s floodplain management policy, even basic inland program elements, that may be implemented by the Department of Homeland Security and Federal Emergency Management Agency.

The Conference will begin with a Board of Directors meeting on September 17, followed by a golf tournament. The opening plenary session is scheduled for the following morning. Four breakout sessions are planned, including the Floodplain Management 101 basic workshop. The evening of September 19 will feature the Annual Awards Banquet, which recognizes Oklahoma’s leaders in floodplain management. Nomination forms can be downloaded from OFMA’s web site ([www.okflood.org](http://www.okflood.org)). The meeting will conclude on Wednesday, September 20, at 4 p.m.

For more information about the conference, please visit [www.outreach.ou.edu/outreach/continuing\\_education.html](http://www.outreach.ou.edu/outreach/continuing_education.html).

## Beagle honored as Employee of the Quarter

Wilma Beagle was honored as the OWRB's Employee of the Quarter during the monthly staff meeting in March. Wilma began working at the OWRB in 1998 in the Financial Assistance Division as an Accountant, and recently transferred to the Fiscal Services Department where her accounting skills will continue to benefit the agency. Appreciated by her colleagues for her efficiency and organizational skills, Wilma attends professional development seminars, keeps up with federal regulations, and explores creative ways to improve OWRB processes.



*Employee of the Quarter Wilma Beagle with Duane Smith*

## Farmer Honored with Founders Award

Oklahoma City resident and Oklahoma Water Resources Board member Lonnie Farmer was honored with the Founders Award at the Oklahoma Rural Water Association's annual meeting in Oklahoma City on April 18. The award is presented to those who demonstrate tireless work and dedication to rural water interests.



*From left, Lonnie Farmer with National Rural Water Association CEO Rob Johnson and his father, R.K. Johnson, who also received this year's Founders Award.*

## Norton and Keys Resign

The U.S. Department of the Interior, which oversees such federal agencies as the National Park Service, U.S. Fish and Wildlife Service and Bureau of Indian Affairs, will soon have two new leaders. Both Interior Secretary Gale Norton and Bureau of Reclamation Commissioner John Keys have resigned their positions.

Norton resigned March 10 after five years of service to the Bush administration. She is the first woman to serve as Interior secretary. In a publicly released letter to President Bush, Norton said she planned to return to private life. "Now I feel it is time for me to leave this mountain you gave me to climb, catch my breath, then set my sights on new goals to achieve in the private sector," she wrote in the letter. She also credited the department for "great work in the face of hurricanes, record-setting wildfires and droughts, acrimonious litigation and expanded post 9/11 security responsibilities."

Norton also served as Colorado's attorney general from 1991 to 1999 and she was one of the negotiators of a \$206 billion national tobacco settlement in a suit by Colorado and 45 other states.

John Keys resigned his position as Commissioner of the Bureau of Reclamation on April 15. "As Commissioner, John led the way in developing the Water 2025 Initiative that is helping to avoid future water crises in the West," says Norton. "He and the rest of the Interior water team were crucial in resolving a nearly 75-year dispute when California water users reached agreement with the federal government and six other states on a multi-decade agreement for sharing and using water in the Colorado River."

The accomplishments of John Keys include development of the Lower Colorado River Multi-Species Conservation Program (MSCP), a coordinated, comprehensive, long-term multi-agency effort to conserve and work toward the recovery of endangered species and protect and maintain wildlife habitat on the Lower Colorado River.

Before being appointed Commissioner in 2001, Keys spent 34 years as a career employee with the Bureau, first as a civil and hydraulic engineer and later as the Pacific Northwest Regional Director.

President George W. Bush has selected Idaho Governor Dirk Kempthorne as his choice to replace Norton as Interior secretary. Kempthorne, who was first elected governor in 1998, is also a former senator. The Interior secretary job, which oversees federal lands, requires Senate confirmation. Deputy Interior Secretary P. Lynn Scarlett is currently acting Secretary.

William Rinne, Deputy Commissioner for Operations at Reclamation, will serve as acting Commissioner of the Bureau until the President nominates and the Senate confirms a new commissioner.

# Oklahoma Drought Monitor

## Reservoir Storage

As of April 24, the combined normal conservation pools of 31 selected major federal reservoirs across Oklahoma (see below) are approximately 90.7 percent full, a 0.8 percent decrease from that recorded on April 10, according to information from the U.S. Army Corps of Engineers (Tulsa District). Twenty-six reservoirs have experienced lake level decreases since that time; 25 reservoirs are currently operating at less than full capacity. Six reservoirs are now below 80 percent capacity.

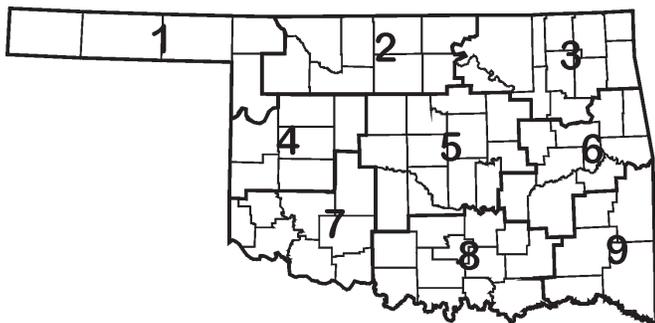
### Storage in Selected Oklahoma Lakes & Reservoirs

As of April 24, 2006

Climate Division	Conservation Storage (acre-feet)	Present Storage (acre-feet)	Percent of Conservation Storage
North Central	451,860	449,524	99.5
Northeast	3,567,922	3,364,757	94.3
West Central	276,790	263,630	95.2
Central	154,225	127,921	82.9
<b>East Central</b>	<b>2,968,683</b>	<b>2,358,622</b>	<b>79.5</b>
<b>Southwest</b>	<b>301,810</b>	<b>194,817</b>	<b>64.5</b>
South Central	2,795,156	2,735,006	97.8
Southeast	1,536,494	1,434,329	93.4
<b>State Totals</b>	<b>12,052,940</b>	<b>10,928,606</b>	<b>90.7</b>

## Drought Indices

According to the latest Palmer Drought Severity Index (April 22, below), state drought conditions continue to worsen as all regions report various stages of drought. Both the Northeast and East Central climate divisions are in "extreme drought" while the Southeast, Central, and Southwest now report "severe drought." All of Oklahoma's nine climate divisions have undergone PDSI moisture decreases since April 8.



The latest monthly Standardized Precipitation Index (through March, below) reflects increasingly dry conditions throughout much of Oklahoma. Among the *selected* time periods (3-, 6-, 9- and 12-month SPIs), "extremely" and/or "very" dry conditions are present throughout most of eastern and southern Oklahoma within the past 6- to 12-month periods. The Central climate division is also experiencing an extended dry period.

### Palmer Drought Severity Index

### Standardized Precipitation Index

Through March 2006

Climate Division (#)	Current Status 4/22/2006	Value		Change In Value	Through March 2006			
		4/22	4/8		3-Month	6-Month	9-Month	12-Month
NORTHWEST (1)	MODERATE DROUGHT	-2.22	-1.38	-0.84	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
NORTH CENTRAL (2)	MODERATE DROUGHT	-2.56	-1.80	-0.76	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
NORTHEAST (3)	EXTREME DROUGHT	-4.38	-3.67	-0.71	MODERATELY DRY	EXTREMELY DRY	VERY DRY	VERY DRY
WEST CENTRAL (4)	MODERATE DROUGHT	-2.16	-1.05	-1.11	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
CENTRAL (5)	SEVERE DROUGHT	-3.47	-2.69	-0.78	MODERATELY DRY	VERY DRY	NEAR NORMAL	MODERATELY DRY
EAST CENTRAL (6)	EXTREME DROUGHT	-4.36	-3.77	-0.59	NEAR NORMAL	EXTREMELY DRY	EXTREMELY DRY	EXTREMELY DRY
SOUTHWEST (7)	SEVERE DROUGHT	-3.04	-2.10	-0.94	NEAR NORMAL	VERY DRY	NEAR NORMAL	MODERATELY DRY
SOUTH CENTRAL (8)	MODERATE DROUGHT	-2.81	-1.82	-0.99	NEAR NORMAL	MODERATELY DRY	NEAR NORMAL	MODERATELY DRY
SOUTHEAST (9)	SEVERE DROUGHT	-3.82	-2.73	-1.09	NEAR NORMAL	VERY DRY	VERY DRY	EXTREMELY DRY

# Financial Assistance Program Update

*Loans/Grants Approved as of April 19, 2006*

## **FAP Loans—317 totaling \$566,955,000**

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 interest rates, averaging approximately 4.762 percent since 1986.

## **CWSRF Loans—173 totaling \$585,159,915**

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—57 totaling \$246,551,785**

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—440 totaling \$38,461,017**

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—523 totaling \$30,746,882**

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

## **Total Loans/Grants—1,510 totaling \$1,467,874,599**

## **Estimated Savings—\$462,874,599**

*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.*

Rudy Herrmann, *Chairman*; Mark Nichols, *Vice Chairman*; Bill Secrest, *Secretary*  
Harry Currie, Lonnie L. Farmer, Ed Fite, Jack Keeley, Kenneth K. Knowles, Richard C. Sevenoaks

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

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# OKLAHOMA Water News

Bimonthly Newsletter of the Oklahoma Water Resources Board

## In This Issue

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## From the Director



*Duane A. Smith  
OWRB Executive Director*

Another legislative session is in the books as the Legislature approved the final spending agreement for the OWRB on the last day of its special session on June 23. I am extremely pleased with the outcome as Gross Production Tax REAP Account funds have been pledged over the next five years to allow the Board to update the Comprehensive Water Plan and help recapitalize the Financial Assistance Program. We also received funds to continue the multi-year Arbuckle-Simpson Hydrology Study and other important cooperative water resource investigations.

The OWRB's legislative achievements are not only attributable to the hard work of our staff and Board, but also due to the commitment of many

**See From the Director, Page 2**

## Oklahoma Drought Likely Far From Over

Despite recent precipitation in some parts of the state, only long-term and widespread rainfall can remediate the impacts of the ongoing yearlong drought in Oklahoma.

The Oklahoma Climatological Survey reports that while many areas of the state have benefited greatly from heavy rains in late April and early May, the drought of 2005-06 will not end until the state experiences a prolonged period of above-normal rainfall.

"The rain will delay the fire threat in some areas, pastures and lawns may benefit, and farm ponds may have a bit more water in them, but unless widespread heavy rains continue week after week, the drought will continue to worsen," says Derek Arndt, Acting State Climatologist with the Oklahoma Climatological Survey.

"The important thing to remember is that the building blocks of drought are often separated by rainy days or even rainy periods," Arndt points out. "One rainfall event may close a chapter of a drought, but it won't end the whole drought. Prolonged droughts end only with prolonged above-normal rainfall."

Data from the Oklahoma Mesonet and OCS archives indicate that the state is undergoing drought on multiple timescales: a short-term event, with a timescale of months,

that is worst in the western half of the state; and a historically-severe long-term drought (timescale of seasons to years) in the east. Central and southwest Oklahoma lie in the intersection of both timescales.

**See Oklahoma Drought, Page 2**



*Aerial photo of Lake Carl Etling in far Western Oklahoma in mid June courtesy Oklahoma Department of Wildlife Conservation. Water levels are only a few inches across the lake. Low water levels are the direct result of no appreciable rainfall in the watershed in the past 10 years. In Cimarron County, the annual precipitation is 22 inches while the evaporation rate is around 62 inches per year.*

**From the Director . . . Continued from page 1**

influential support groups, such as the Oklahoma Rural Water Association and Municipal League, who championed our water initiatives with their constituents and at the Capitol. Strengthening our alliances with these organizations and communicating the state’s needs related to water planning, water/wastewater infrastructure, and hydrologic studies really made the difference.

The Water Board’s efficiency in implementing and extending key programs began last summer with identification of key agency initiatives during the agency’s Strategic Planning session. The three High Priority Opportunities (HPOs) conceived last year—Revolving

**Oklahoma Drought . . . Continued from page 1**

The southeast has experienced drought or near-drought conditions since 2002, with a distinct intensification in spring 2005. Summer and fall 2005 brought a northward expansion of drought to fill the state’s eastern third (which has experienced some relief in recent months). Severe drought impacts then advanced westward during the subsequent winter. Precipitation in April eased immediate problems, but a warm, dry May exacerbated long-term drought conditions in much of Oklahoma. The current U.S. Drought Monitor classifies a large portion of southwest Oklahoma as in extreme drought while much of the northwest and far west is in severe drought; the drought’s intensity generally diminishes from central to eastern areas.

The drought has already taken its toll on Oklahoma’s agricultural industry as the summer wheat harvest is expected to be its smallest since the 1950s. Fires remain a continuing threat, especially as conditions deteriorate.

June 2006 Statewide Statistics			
<b>Temperature</b>			
	<u>Average</u>	<u>Depart.</u>	<u>Rank (1892-2006)</u>
Month (June)	77.8°F	1.3°F	34th Warmest
Year-to-Date	59.2°F	3.9°F	1st Warmest
<b>Precipitation</b>			
	<u>Total</u>	<u>Depart.</u>	<u>Rank (1892-2006)</u>
Month (June)	2.36 in.	1.90 in.	25th Driest
Year-to-Date	12.77 in.	-6.38 in.	16th Driest
Depart.= Departure from 30-year normal			

Information courtesy Oklahoma Climatological Survey [http://climate.ocs.ou.edu/monthly\\_summary.html](http://climate.ocs.ou.edu/monthly_summary.html)

From a water supply perspective, Oklahoma’s larger reservoirs remain generally below normal for this time of year but have yet to reach critically low levels. Streamflows and conditions in smaller municipal lakes and stock ponds are of greater concern, especially in relatively drier areas. While levels are dropping in water supply and irrigation wells in some areas of the state, the true groundwater impacts of the current drought will likely not be realized for months or years. Deep aquifers, in particular, typically respond very slowly to either dry or wet periods.

Some Oklahoma communities are beginning to report localized water supply problems and dozens of cities and

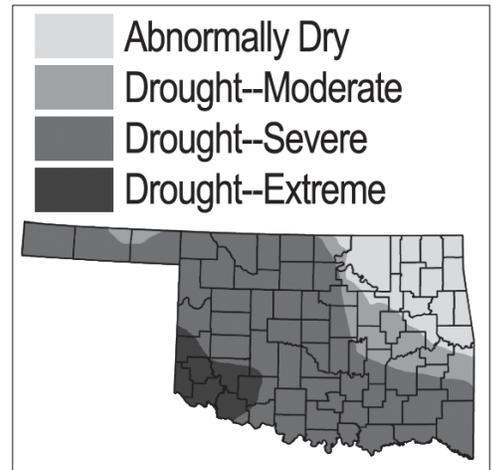
Fund (FAP) Recapitalization, Update of the Water Plan, and Special Studies—all received considerable attention from legislative members during 2006. Specific tasks and goals were outlined for each HPO and key support groups and individuals were identified to increase chances for success.

The upcoming fiscal year holds even greater promise for the OWRB as we strive to keep pace with ever evolving state and federal water policies while demonstrating responsibility, commitment, and efficiency in utilizing state appropriations. To the public and State Legislature, we want to demonstrate that when you invest in this agency and its staff, you get more bang for your buck than with any other agency of government.

towns have implemented various levels of water rationing. Wells supplying the Town of Colbert, in southern Oklahoma, recently started running dry, prompting the town to ban outdoor watering and implement other water restrictions. Water Board staff are assisting city

officials in their search for additional long-term water supply.

Because large-scale weather patterns typically move northward during the summer months, Oklahoma’s weather is more strongly influenced by local conditions. “Summer in Oklahoma is much more sensitive than other seasons to recent rainfall patterns. When late spring is dry in Oklahoma, the subsequent summers show a tendency toward warmer and drier conditions,” says Arndt, adding that NOAA’s Climate Prediction Center calls for drought to persist across western Oklahoma through August 2006.



Statewide drought conditions in mid-July. Source: U.S. Drought Monitor, [www.drought.unl.edu/dm/monitor.html](http://www.drought.unl.edu/dm/monitor.html)



Boathouse on Wewoka Lake (Seminole County) in early July. Lake levels are more than 50 inches below normal.

## 2006 OWRB Priority Legislation

The Oklahoma State Legislature adjourned its special session on June 23. The following three bills represent those having the greatest impact on state water management and future OWRB activities.

**SB 1574:** The legislation amends the waste provisions of the groundwater statutes by increasing steps taken by the OWRB to assure waste violations cease. Currently, the law specifies that the OWRB must gather evidence and file a complaint with the district court. The measure requires the OWRB first to pursue voluntary compliance, issue cease and desist orders by the Executive Director, and pursue suspension of permits and other administrative remedies before proceeding to the district attorney.

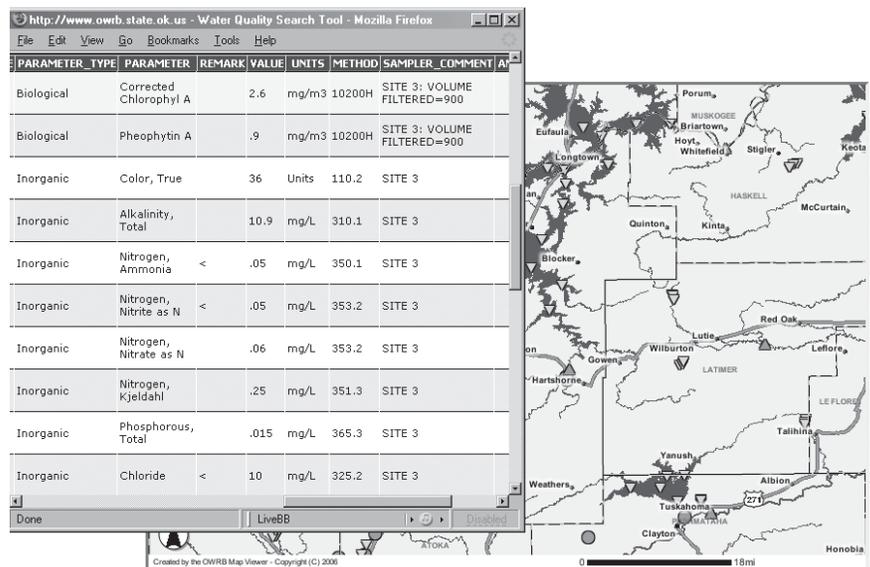
**HB 1121:** The OWRB appropriation bill provides last year's base appropriation plus some common adjustments for the 5% employee pay raise and overhead. It provides \$2.2 million in General Revenues Funds for the OWRB REAP Grant Program. It provides \$301,000 for contractual services with the Oklahoma Rural Water Association for technical assistance and training to rural water and wastewater system operators or board members. It also authorizes the expenditure of \$1,012,332 of carryover revenues from the Gross Production Tax REAP Water Projects Fund for continuation of the Arbuckle Simpson Study, Chloride Control Study activities, and additional Oklahoma Rural Water Association contractual services for training and other water projects.

**HB 1173:** The legislation dedicates one-third of the proceeds from the Gross Production Tax REAP Water Projects Fund to the OWRB for the update of the Oklahoma Comprehensive Water Plan and OWRB Financial Assistance Programs. The remaining two-thirds is evenly split between the Oklahoma Conservation Commission for Conservation Cost Share Program, Conservation Reserve Enhancement Program, and rehabilitation of watershed dams; and the Oklahoma Tourism and Recreation Commission for onetime capital expenditures. The measure provides for the deposit of Gross Production Tax REAP Water Project Fund revenues annually into a newly created Community Water Infrastructure Development Revolving Fund at the OWRB for a period of five years. It is estimated that \$2.14 million will be deposited annually into the revolving fund for comprehensive water planning and water infrastructure financing. The deposits to the revolving fund will cease effective July 1, 2011, and future deposits will go back to the original OWRB Reap Water Projects Fund.

## Online Water Quality Data Viewer Wizard Launched

In early July, the OWRB launched a new addition to its online mapping application, WIMS (Water Information Mapping System). WIMS visitors are now able to use a water quality data viewer wizard to access data collected by OWRB staff for various water quality programs. First, the wizard prompts the viewer to select a county or statewide map and zoom into the particular area of interest, to display monitoring stations, and to click a site. A pop-up window will then display all water quality data for that site on a table that can be copied to a spreadsheet or other document.

Originally launched in January, WIMS has been very popular with Web site visitors, who use it to build and view custom-made maps containing water resource and related information. Approximately 44 layers are currently available, including surface and groundwater resources, permit locations (including areas of use and dedicated lands), political boundaries, rural water system lines, roads and highways, geology, and topography.



Other wizards available on the main WIMS page are the Wetlands Map viewer and the Reported Well Locator (also recently launched), which guides the visitor through steps necessary to create a map of a specific area and click on reported wells to obtain well data.

Visit WIMS at [www.owrb.state.ok.us/maps/server/wims.php](http://www.owrb.state.ok.us/maps/server/wims.php) and launch the custom map viewer or try one of the three custom map wizards.

## Guthrie Project Improves Drainage

Guthrie citizens and officials are fed up with dirty creeks, streams, and floodways. Concerns about one particular creek surfaced last summer when brush, garbage, and other large debris created a major impediment to the flood-carrying capacity of both the stream channel of Snake Creek, an important drainage outlet for area homeowners and businesses, and the surrounding floodplain.

In some locations, Snake Creek was found to be almost totally blocked, causing its waters to occasionally spill over into adjacent areas. Alerted to the problem, city leaders have commissioned a large-scale channel restoration project, which is about halfway complete.

“When we entered the stream channel, we not only found a good deal of both dead and live vegetation, we discovered a virtual junkyard containing hot water tanks, tires, refrigerators, bathtubs, grocery carts, and a host of other discarded items,” says Darryl Hughes, Director of Municipal Services.

“Snake Creek is somewhat isolated,” he adds, “making it easy for illegal dumping to occur. But in the future, the city’s commitment to increased monitoring and enforcement will all but eliminate this unsightly and potentially hazardous problem.”

Hughes and his staff have also rediscovered “lost” sanitary sewer manholes and have since inspected the area’s sewer system to identify much-needed improvements in how Guthrie, a participant in the National Flood Insurance Program, handles runoff from storm events.

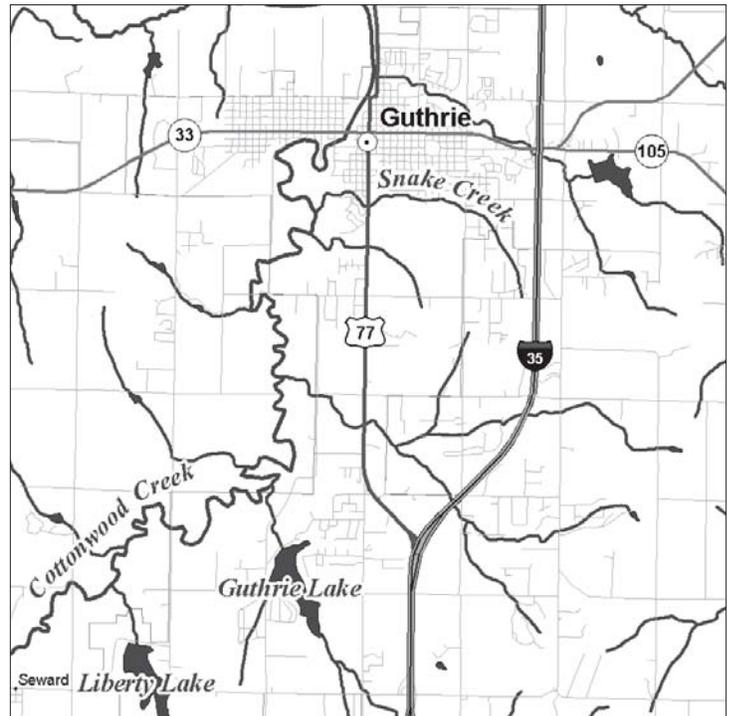
Historically, the community has experienced frequent flooding problems.

Local officials have received valuable assistance from the OWRB in establishing a channel maintenance program.

“We strongly encourage other Oklahoma communities to follow Guthrie’s example and provide required attention to maintaining the natural



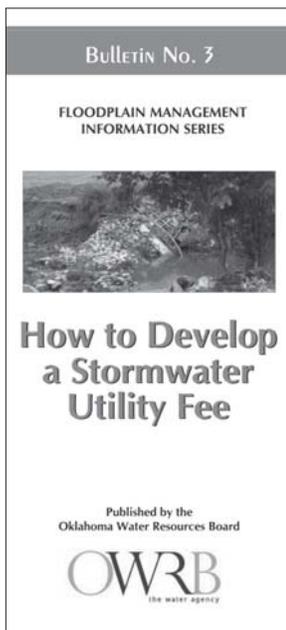
A large tin horn drainage pipe discovered during the project. The abandoned tin horn was later removed.



The cleanup of Snake Creek has been focused on restoring the ability of Snake Creek to safely accommodate potentially damaging floodwaters, but an additional benefit has been the beautification of a large portion of the historic area.

benefits of creeks, streams and channels,” says the OWRB’s Planning and Management Division Chief, Mike Mathis, who also serves as State NFIP Coordinator.

He reminds local floodplain administrators that a stormwater utility fee can provide invaluable financial assistance to communities in offsetting costs associated with annual channel maintenance. Contact the OWRB at (405) 530-8800 for a free copy of the informational bulletin, “How to Develop a Stormwater Utility Fee.”



“How to Develop a Stormwater Utility Fee” bulletin, published by the OWRB and available by request at (405) 530-8800



To register, go to [www.owrb.state.ok.us](http://www.owrb.state.ok.us) or call (405) 530-8800. Reservations for overnight accommodations at the Renaissance Hotel (10 North Broadway, Oklahoma City) can be made by calling 1-405-228-8000 or 1-800-627-7468. A block of rooms and special Water Conference room rate of \$89 per night (single or double) has been reserved for conferees until October 10th.

## Drummond Joins Board

In May, F. Ford

Drummond was appointed to the Oklahoma Water Resources Board by Gov. Henry to replace Harry Currie, whose term expired. Representing agriculture, Drummond is an at-large member and will serve a full, seven-year term. A resident of Bartlesville and a fourth-generation Oklahoman, Drummond earned his bachelor's degree in Economics from Stanford University and law degree from the University of Virginia School of Law in 1989. He is currently the owner and operator of Drummond Ranch in Pawhuska, a large family ranch consisting of a cow/calf operation and yearling/stocker program.



Drummond also serves as General Counsel for a regional company providing health claims administration services for self-funded health plans representing employers and employees in a four-state region and providing legal guidance on all aspects of federal health care regulations. He formerly worked in Washington D.C., serving first as a legislative assistant for the House Ways and Means Committee on federal health and welfare issues, and later as Legislative Counsel to the American Medical Association.

Drummond's civic and professional leadership experience includes the following: the Oklahoma Academy for State Goals (Executive Committee), Leadership Oklahoma (Board of Directors), Governor Brad Henry's EDGE Program (Agriculture Expert Panel), Governor Frank Keating's Tax Reform Task Force, National Cattlemen's Beef Association (Vice Chairman of the Tax Committee), and Oklahoma Cattlemen's Association (Director).

## Kempthorne Confirmed as Interior Secretary

Idaho Gov. Dirk Kempthorne has been confirmed as United States Interior secretary, ending delays caused by the concerns of Gulf Coast lawmakers about offshore drilling.

Sen. Mary L. Landrieu (Louisiana) had put a hold on the nomination in order to press her case that Louisiana and other Gulf Coast states should be earning a greater share of royalties from offshore energy production.

Sen. Bill Nelson (Florida) had a different concern. His hold was designed to win assurances that his state's beaches would be protected from drilling in the Gulf of Mexico.

"As a part of my promise to Florida, I have said I could not support an Interior secretary who would advance this administration's willingness to acquiesce to the oil lobby and its ever-increasing desire for greater profits beyond even the recent, record levels," Nelson said.

Landrieu said "significant progress" had been made in her quest for a greater state share of royalty payments, and she praised Kempthorne on the floor. "He has shown a great deal of ability in mediating very difficult issues," she said. "He showed that skill as a member of the Senate, and I am sure he will do so as secretary of Interior."

Kempthorne, a Republican, served one term in the Senate before his initial 1998 election as governor. He succeeds Gale A. Norton—a Coloradan and the first woman to hold the position—in overseeing the nation's mineral resources, wildlife programs and millions of acres of public lands.

Landrieu said she expected Kempthorne to lead the Interior Department in a "partnership" with Gulf Coast states "as the nation struggles to find new ways to produce oil and gas." She has long advocated a greater share for states of royalty revenue to help them pursue hurricane protection, flood control and wetlands restoration.

Senate Energy and Natural Resources Committee Chairman Pete V. Domenici (New Mexico) has sponsored a bill (S 2253) to open a portion of the Gulf of Mexico to oil and gas drilling. Landrieu is seeking changes that would give coastal states some of the revenue from leases and royalties, while Florida senators want to push drilling farther off Florida's shores.

Bush nominated Kempthorne, who was in his second term as Idaho governor, after Norton announced her resignation March 10. Kempthorne has been chairman of the National Governors Association. During his Senate tenure from 1993 to 1999, he was chairman of the Environment and Public Works Subcommittee on Drinking Water, Fisheries and Wildlife.

## Westville Uses Funds to Meet Tough Treatment Standards

Wastewater project funding from the Oklahoma Water Resources Board and other state and federal agencies will not only result in a cleaner Barren Fork River, but also help the small community of Westville cope with tough new discharge requirements.

On July 12, Westville leaders formally broke ground on a new state-of-the-art facility that will replace the community's antiquated treatment plant, which is currently under a consent order from the Oklahoma Dept. of Environmental Quality to remove excess phosphorus in its wastewater discharge. At elevated levels, phosphorus and other nutrients in rivers and lakes can result in excess algae growth that limits oxygen, frequently causing adverse impacts to aquatic life. Because the river is a state-protected Scenic River, additional treatment is required to remove nutrients and other potentially harmful pollutants.

Westville will now begin construction of a Sequential Batch Reactor (SBR) treatment plant that features physical, chemical, and biological treatment methodologies, including an ultraviolet disinfection system. To finance the \$3,522,321 project, expected for completion next summer, Westville Municipal Authority will use an OWRB emergency grant of \$100,000 and an OWRB Rural Economic Action Plan (REAP) grant of \$99,969 (both approved last October) in combination with a \$680,450 loan from the U.S. Dept. of Agriculture's Rural Development and \$2,641,902 in local funds and grants from the USDA and Oklahoma Dept. of Commerce. The town has increased monthly household sewer rates to repay the USDA loan.

According to OWRB Executive Director Duane Smith, Westville is a classic example of a small community that must use limited fiscal resources to comply with increasingly stringent state and federal standards: "Here is a case where you have 827 customers who must somehow pool their resources to finance a 3.5 million dollar project. They are assuming a tremendous burden for the sake of clean water," Smith says. "Because of their commitment to improving Barren Fork Creek and the surrounding environment, Westville officials and citizens have focused their efforts on finding solutions to the problem and making this important project happen."

To combat increasingly high levels of nutrients in state-designated Scenic Rivers, including Barren Fork Creek, the OWRB imposed a first-time numeric limitation on phosphorus discharges and loadings in 2002. State legislation was also passed that required Oklahoma agencies to identify the sources and amount of phosphorus contributions and to implement a Scenic River watershed restoration and protection strategy.

Because many of those protected rivers, such as the Illinois River, share watersheds with Arkansas, environmental officials from both states have entered into an agreement that establishes a 10-year implementation

schedule for compliance with new phosphorus limits. In the meantime, Oklahoma and Arkansas will coordinate monitoring and develop joint watershed plans, including both voluntary and mandatory measures, to reduce phosphorus and achieve other water quality goals in shared watersheds.

"We can't ask cities in Arkansas to do anything cities in Oklahoma are not doing. Communities and industries in both states are responsible for the nutrient problem and are similarly responsible for correcting the problem," Smith says.



*Brian Sitsler, Westville Municipal Authority Chairman (center) receives grant checks from Joe Freeman and Shelly Bacon of the OWRB.*

## Lucas Helps Fund Repairs to Aging Dam

Oklahoma has received \$70,000 to repair an aging flood-control structure in Kingfisher County. The funding, received from the U.S. Department of Agriculture's Watershed Protection and Flood Prevention Program, will be used by the Natural Resources Conservation Service to rehabilitate a 39-year-old flood-control structure in the Cottonwood Creek Watershed in Kingfisher County.

"A large portion of the nation's problem watersheds are in Oklahoma, and they've been protecting lives and property for generations," says Oklahoma Congressman Frank Lucas, who has worked to provide funding for the USDA's program for more than eight years. "But we have to ensure they continue to keep Mother Nature in check."

Lucas authored the Small Watershed Rehabilitation Act, which was signed into law in 2000. The legislation helps finance and provide engineering assistance in rehabilitating the nation's aging watershed dams.

NRCS and its sponsors will now begin the design to bring Cottonwood Creek Site 15 up to current dam design and safety standards. This site, one of 16 single-purpose flood water retarding structures in the watershed, was completed in 1967 as a low hazard site, but is today classified as high hazard due to development in its watershed. If left uncorrected, the lives of approximately 44 residents could be at risk while another 107 individuals could be adversely affected by flood water damages.

Oklahoma, the first state to build a flood control structure, leads the nation in the number of flood control dams with more than 2,100 structures.

# Oklahoma Drought Monitor

## Reservoir Storage

As of June 26, the combined normal conservation pools of 31 selected major federal reservoirs across Oklahoma (see below) are approximately 93 percent full, a 0.9 percent decrease from that recorded on June 5, according to information from the U.S. Army Corps of Engineers (Tulsa District). Twenty-three reservoirs have experienced lake level decreases since that time; 17 reservoirs are currently operating at less than full capacity. Three reservoirs are now below 80 percent capacity.

## Storage in Selected Oklahoma Lakes & Reservoirs

As of June 26, 2006

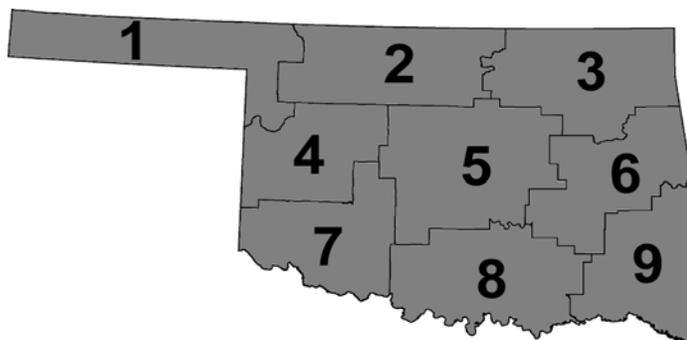
CLIMATE DIVISION	Conservation Storage (acre-feet)	Present Storage (acre-feet)	Percent of Storage (acre-feet)
North Central (2)	505,170	504,164	99.8
Northeast (3)	3,766,342	3,668,667	97.4
West Central (4)	276,790	258,036	93.2
Central (5)	154,225	127,123	82.4
East Central (6)	3,183,243	2,801,666	88.0
Southwest (7)	301,810	191,343	63.4
South Central (8)	3,118,676	2,911,402	93.4
Southeast (9)	1,561,859	1,510,304	96.7
<b>State Totals</b>	<b>12,868,115</b>	<b>11,972,705</b>	<b>93.0</b>

## Drought Indices

According to the latest Palmer Drought Severity Index (June 24, below), state drought conditions continue to worsen as all regions report various stages of drought. In particular, the East Central, Southwest, Central, Southeast, Northwest, and South Central climate divisions are in "severe drought." All of Oklahoma's nine climate divisions have undergone PDSI moisture decreases since June 3.

The latest monthly Standardized Precipitation Index (through May, below) reflects increasingly dry conditions throughout Oklahoma. Among the selected time periods (3-, 6-, 9- and 12-month SPIs), "extremely" dry conditions are present in East Central and Southeast Oklahoma during the past 9 to 12 months. Seven climate divisions are experiencing at least "very" dry conditions during the last 6-, 9-, and/or 12-month periods.

Oklahoma Climate Divisions



## Palmer Drought Severity Index

CLIMATE DIVISION	Current Status 6/24/2006
Northwest (1)	Severe Drought
North Central (2)	Moderate Drought
Northeast (3)	Moderate Drought
West Central (4)	Moderate Drought
Central (5)	Severe Drought
East Central (6)	Severe Drought
Southwest (7)	Severe Drought
South Central (8)	Severe Drought
Southeast (9)	Severe Drought

## Standardized Precipitation Index

Through May 2006

CLIMATE DIVISION	3-month	6-month	9-month	12-month
Northwest (1)	Moderately Dry	Very Dry	Very Dry	Near Normal
North Central (2)	Near Normal	Moderately Dry	Very Dry	Near Normal
Northeast (3)	Near Normal	Near Normal	Very Dry	Moderately Dry
West Central (4)	Near Normal	Moderately Dry	Moderately Dry	Near Normal
Central (5)	Near Normal	Very Dry	Very Dry	Near Normal
East Central (6)	Near Normal	Moderately Dry	Extremely Dry	Extremely Dry
Southwest (7)	Near Normal	Very Dry	Very Dry	Near Normal
South Central (8)	Near Normal	Near Normal	Moderately Dry	Near Normal
Southeast (9)	Near Normal	Moderately Dry	Very Dry	Extremely Dry

# Financial Assistance Program Update

*Loans/Grants Approved as of June 20, 2006*

## **FAP Loans—318 totaling \$620,765,000**

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 interest rates, averaging approximately 4.762 percent since 1986.

## **CWSRF Loans—174 totaling \$600,159,915**

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—61 totaling \$287,406,785**

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—451 totaling \$39,445,213**

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—523 totaling \$30,692,882**

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

## **Total Loans/Grants—1,527 totaling \$1,578,469,795**

## **Estimated Savings—\$492,082,399**

*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.*

Rudy Herrmann, *Chairman*; Mark Nichols, *Vice Chairman*; Bill Secrest, *Secretary*

F. Ford Drummond, Lonnie L. Farmer, Ed Fite, Jack Keeley, Kenneth K. Knowles, Richard C. Sevenoaks

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

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# OKLAHOMA Water News

Bimonthly Newsletter of the Oklahoma Water Resources Board

## In This Issue

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## From the Director



Duane A. Smith  
OWRB Executive Director

In addition to providing assistance to the many Oklahomans who continue to suffer from this prolonged drought episode, Water Board staff are consumed with work related to updating the Oklahoma Comprehensive Water Plan. As many of you know, during the past legislative session, funding was appropriated to take state water planning to another level, from assessment of our current water resources to implementation of the projects and policies that are necessary to a secure a bright water future for Oklahoma.

While the current Water Plan, published in 1997, provides a useful inventory of the state's water supplies, projects future needs, and offers recommendations to deal with impending water

**See From the Director, Page 2**

## Water Board Responds to Drought

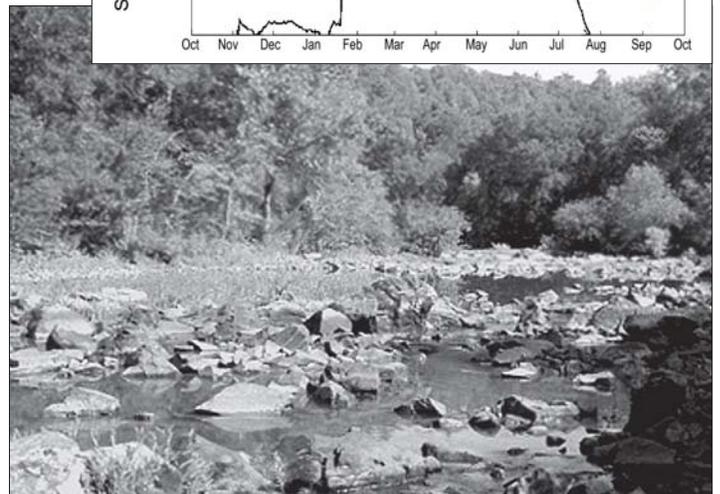
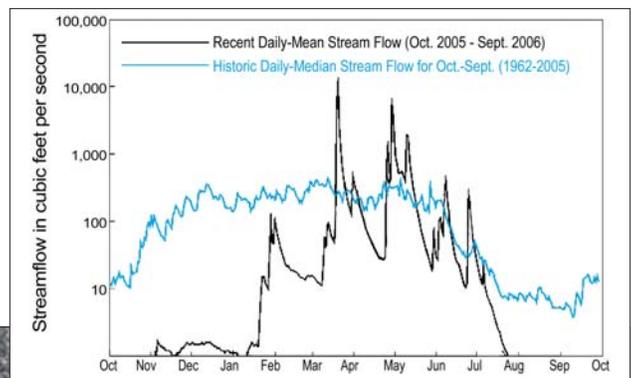
In response to the ongoing drought impacting virtually every region in the state, the OWRB is working with citizens and the state's water use community to alleviate water supply problems.

According to Executive Director Duane Smith, the Water Board was receiving up to 50 inquiries each day during the height of the hot and dry weather either reporting drought-related water problems or requesting some type of technical or financial assistance. "We've been somewhat inundated with calls and requests for help," Smith points out. "From that aspect, I'd say this is definitely the worst drought we've experienced since at least 1980."

The statewide drought has drastically reduced river flows and lake and aquifer levels, causing severe impacts to domestic and municipal water supplies and significantly reducing the amount of water available for other purposes. Ten to 20

**See OWRB Responds to Drought , Page 2**

*At right, the Glover River near Glover in Southeast Oklahoma (late August). Data from the USGS stream measurement gage on the Glover shows flow less than 1 cubic foot per second. The graph compares stream flow from 1962-2005 and stream flow during the 2006 Water Year (Oct-Sep).*



**From the Director . . . Continued from page 1**

policy questions, Oklahoma requires a more detailed strategy to meet new and varied water supply challenges. Of course, we must address population growth and the impacts it will have on our supplies, but we must also discover strategies that satisfy the many competing interests for our finite water supplies. We must balance economic development and environmental needs. Our water and wastewater systems face a multi-billion dollar hurdle just to maintain existing services and keep up with growing demand for water. We must continue to improve the drought resistance capabilities of our water systems. Furthermore, in rural areas, it is simply unthinkable that as Oklahoma approaches its centennial anniversary we have citizens that can afford water supply but lack a nearby water source or system to provide them service.

It is a goal of our new Water Plan to identify strategies that will rectify this situation. Already, we've completed initial work with the U.S. Army Corps of Engineers and Bureau of Reclamation to inventory Oklahoma's water supplies and update water demand projections for all major uses through forecast year 2060. But the core of this water planning effort will involve a statewide appraisal of public water supply systems, including their facilities and management procedures. Working with Oklahoma's substate planning districts (i.e., Councils of Governments), the Department of Environmental Quality, universities, government agencies, engineering consultants, and others, we intend to collect existing data, survey and map all of the state's 1,240 community water systems and appurtenant facilities, inventory sources of supply, and even review individual water rate structures. Armed with this system-level information, water providers, policy-makers, and citizens can better develop plans to meet future water supply needs, especially for those systems facing monumental growth or in most dire need of infrastructure improvements. Every system in Oklahoma

should have confidence in their existing water supply for at least the next 50 years or have a viable plan to obtain that supply for their customers.

Even the best plans fail without support from the people. To obtain a truly effective plan that best utilizes the substantial resources of the state that will be committed over the next five years, public input is crucial. OWRB staff are currently working to develop a strategy that not only makes the water planning process as transparent and open as possible, but one that truly reflects the views and opinions of Oklahoma citizens.

We already know that Oklahoma is anticipating \$5.4 billion in water and wastewater infrastructure needs, and that's just through 2025. Certainly, even more will be required to implement required projects recommended in the final updated Water Plan, anticipated for completion in 2011. Bolstered by the estimated \$2 million recently dedicated by the Legislature each year over the next five years for the Revolving Fund and OCWP update, the OWRB's loan and grant programs will provide a much-needed springboard for widespread project construction. In the meantime, the OWRB and our planning partners will work to assemble the information necessary for water providers, policy-makers, and citizens to make informed decisions concerning the use of Oklahoma's water resources.

As the official commencement of this historic effort, this year's Oklahoma Governor's Water Conference will focus on water planning and the many issues involved in forecasting and preparing for the state's future water use and needs. Speakers will address past, present and future water planning initiatives in Oklahoma. The Conference will be held on November 13-14 at the Cox Business Services Convention Center in Oklahoma City. To register for the Water Conference, visit the OWRB's Web site ([www.owrb.state.ok.us](http://www.owrb.state.ok.us)) or call us at 405-530-8800. I hope to see you there.

**OWRB Responds to Drought . . . Continued from page 1**

inches of rain is required to bring most regions up to normal precipitation for the past year.

Smith says that the phone calls, e-mails, and personal visits by impacted citizens have generally involved dwindling groundwater levels and reduced yields from domestic wells. "Those individuals who don't have access to a municipal or rural water system are particularly vulnerable to drought and dry periods."

Declines in groundwater levels are common during times of drought. "These declines often impact domestic well users first, because their wells are typically not drilled to the total saturated thickness depth of the aquifer. As the density of domestic wells increases in a particular area, and those wells become stressed trying to meet peak demands, declining aquifer levels become more prevalent," says Smith. Rectifying those situations often requires deepening the well or constructing an entirely

new well, although the Water Board encourages individuals to tie onto public water supply systems wherever available.

Under Oklahoma Law, the OWRB administers water rights for all purposes other than domestic. While the OWRB routinely assists both domestic water users and permit holders in locating sources of available water supply, during times of water use emergencies the OWRB can expedite the process normally required to put water to use. The agency may grant short-term (90-day) permits to use water as long as the proposed use will not interfere with existing permitted or domestic users.

Often, the OWRB can help water users, including those who manage water systems, find alternative sources, locate a licensed water well driller, or secure emergency water from a stream, lake, or aquifer. "If we

*(continued on page 3)*

*(OWRB Responds to Drought, continued from page 2)*

can't provide direct assistance," says Smith, "we can put them in touch with someone who may be able to help with their problem, such as the Oklahoma Department of Emergency Management, Corps of Engineers, Bureau of Reclamation, Grand River Dam Authority, Rural Development, Rural Water Association, Municipal League, or others."

While the OWRB grants permits for the use of water from federal reservoirs, the Corps of Engineers also requires that individual users obtain water storage contracts. In drought situations, the Corps can issue emergency water withdrawal permits from Corps-managed lakes for use of less than one acre-foot (325,850 gallons) for domestic or industrial use.

During drought, many water systems fall apart under the strain of greatly increased customer demand for water. Older facilities are especially vulnerable. However, in recent years, funding programs have been revitalized, thereby increasing the drought resistance of water treatment and distribution systems. In Oklahoma, the OWRB's Financial Assistance Program (FAP) has provided \$1.6 billion for improvements to community water and wastewater facilities.

Since its creation in 1983, the program has served as an especially effective tool in fighting Oklahoma's recurring drought episodes. The FAP funding process can be accelerated for eligible systems experiencing drought-related problems. Statewide drought episodes also trigger an agency rule that allows the use of \$300,000 in FAP funds to provide drought-related aid for rural and municipal water systems.

"Where during the early 1980s we saw hundreds of communities and rural water districts rationing water or experiencing system failure due to old age and record water demands, today only about 30 water systems statewide have instituted mandatory water rationing. That is largely attributable to the FAP and the help it has provided to struggling water and sewer facilities," Smith says.

"Oklahomans are tremendously resilient people. There are many who still remember the Dust Bowl days and suffered tremendous hardships during that awful period. Since then, Oklahoma has experienced tremendous water resource development, implementing pivotal conservation measures as well as infrastructure improvements. We turned liability to asset in just a few decades."

The OWRB continues to look to the future in making Oklahoma truly a drought-resistant state. "Through the update of the state's comprehensive water plan, which the OWRB has just begun, we will not only help Oklahomans cope with drought episodes, but we will find long-term solutions to the state's water supply problems, whether it be system upgrades or construction of new reservoirs," Smith adds.

A wealth of drought, climate and water information is available on the agency's Drought and Water Resources Monitoring Web page. (Go to [www.owrb.state.ok.us](http://www.owrb.state.ok.us) and click on "Drought Conditions.")

## Water Symposium to Be Held at History Center

The Oklahoma Water Symposium, an annual event hosted by the Oklahoma Water Resources Research Institute and Biosystems and Agricultural Engineering, Oklahoma State University, will be held on October 5-6, 2006, at the Oklahoma History Center. The event will bring together professionals involved in Oklahoma water resources to present research and discuss current activities and future needs. The intended audience includes academic, federal, state, and private professionals interested in recent technical developments and research. Two days of meetings have been organized into six oral sessions.

Register online at <http://environ.okstate.edu/okwater>. For hotel reservations, please contact Whitten Inn, 5405 N. Lincoln Blvd., Oklahoma City, OK 73105, (405)528-7563. Mention that you are with *Oklahoma Water 2006* for the group rate of \$62/night on Oct. 4th or 5th.

## Applicants Sought for \$19 Million in Grants

The U.S. Environmental Protection Agency (EPA) plans to award up to \$19 million in grants to help clean up and restore the nation's waterways. Proposals must reach EPA by Oct. 16, 2006, for capacity-building grants and Nov. 15, 2006, for project-implementation grants. Capacity-building grants provide for education and training, whereas implementation grants involve actions such as protection and preservation.

President Bush understands that citizen-centered programs foster innovation while accelerating restoration of watersheds through Cooperative Conservation and grass-roots partnerships," says Assistant Administrator for Water Benjamin H. Grumbles.

State governors and tribal leaders nominate potential recipients for implementation grants. EPA will evaluate and rank submissions based on criteria outlined in each notice. Watershed organizations receive the awards based on how likely they are to achieve environmental results in a relatively short time. Selection of the grantees will be announced in the fall.

Under the Targeted Watersheds Grant Program, EPA has awarded nearly \$40 million to 46 watershed organizations since 2003. In excess of \$2 million has gone to five watershed capacity-building organizations to further the activities of more than 3,000 local watershed groups. For this grant cycle, the focus will be on supporting community-based approaches and strengthening local capacity to protect and clean up water resources.

Watersheds currently in the program cover more than 142,000 square miles of the nation's landscape draining into lakes, rivers, and streams.

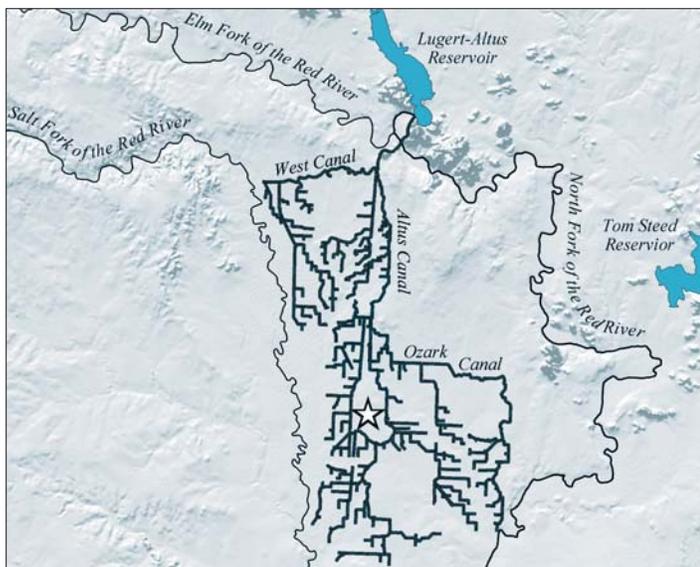
For more information on Targeted Watershed Grants, go to [www.epa.gov/twg](http://www.epa.gov/twg). For information on the government grant process, go to [www.grants.gov](http://www.grants.gov).

## Water Supply Woes at Lugert-Altus

The Lugert-Altus Irrigation District usually supplies water to cotton growers from July 4 to about September 15, but not this year. According to Tom Buchanan, District Manager, water was shut off on August 25, with farmers receiving only 8.5 inches per acre (about half of the supplemental water recommended during the growing season for maximum yield). Rainfall in August was simply not sufficient to make up for extremely low lake levels at the beginning of the growing season. While last year was an exceptionally good year for the district, which produced about 120,000 bales of cotton, worth about \$48 million, this year's crop will likely yield about 60 percent of that total, a sharp decline yet still respectable amount. Buchanan estimates that growers will still get an average size crop of about 2.5 bales per acre, which may well be attributed to improved farming methods that emphasize more efficient use of water, primarily by recirculating run-off and using drip irrigation to eliminate evaporation.

Lugert-Altus Reservoir and its accompanying irrigation district have provided water for cotton growers every year since 1946. The lake is owned by the Bureau of Reclamation, but operation and maintenance of the lake is paid for by the irrigation district. The lake was specifically designed for irrigation, municipal use, and flood control uses. However, the lake has also become a popular spot for recreation and tourism, and it is especially important to the adjacent Quartz Mountain Resort.

The reservoir's capacity is 135,000 acre-feet, but it contained less than half this amount early this summer when it came time to begin releasing water to growers for irrigation. This meant that allocations for each of the 46,000 acres in the district were decreased significantly. In late August, when the lake level dipped to 10,000 acre



*The Lugert-Altus Irrigation District, south of Lugert-Altus Reservoir, includes 46,000 irrigated acres.*

feet, the district gave up its remaining allotment of 8,000 acre feet of additional water in order to avoid a major fish kill.

The Oklahoma Department of Wildlife Conservation and concerned area residents hope to negotiate with the irrigation district before the situation gets any worse, but with the cotton crop and their livelihoods at stake, district members are quick to remind everyone of the reservoir's original intended purpose.

At \$12.8 million, construction of the lake was primarily financed through federal tax dollars, but irrigation farmers made a huge contribution at the time, \$2 million, and continue to finance its upkeep through irrigation district fees.

**27th ANNUAL  
Oklahoma Governor's Water Conference**

*Oklahoma's  
Water Plan*

**Charting the Course for  
Sustainable Growth**

**November 13-14, 2006  
Cox Convention Center  
Oklahoma City, OK**

Mark your calendars! The 27th Annual Governor's Water Conference will be held on November 13-14, 2006. To register, go to [www.owrb.state.ok.us](http://www.owrb.state.ok.us) or call (405) 530-8800. Reservations for overnight accommodations at the Renaissance Hotel (10 North Broadway, Oklahoma City) can be made by calling 1-405-228-8000 or 1-800-627-7468. A block of rooms and special Water Conference room rate of \$89 per night (single or double) has been reserved for conferees until October 10th.

## Drought Means Business for State's Well Drillers

By Kent Wilkins

Oklahoma Well Drillers Program Coordinator

The lives and livelihoods of many Oklahomans have been impacted by the drought of 2006, and Oklahoma's water well drillers have seen an unprecedented surge in activity. Groundwater supplies from water wells across the state have been severely depleted, which means drillers have been extraordinarily busy replacing wells and establishing new and more dependable sources of supply.

Oklahoma's Drillers take great pride in completing safe, productive water wells. Many of these professionals operate second or even third generation family businesses. Whether drilling a well for domestic, municipal, irrigation, commercial, or livestock watering purposes, drillers are dedicated to finding the best source of supply to meet their customers' needs.

Because of the drought, many drillers are working 12 hours or more each day, often in extreme weather condi-

*I fully expect that the number of wells drilled in 2006 will increase by more than 30 percent from the number drilled in 2004 or 2005.*

tions. Drilling wells under these conditions and at this pace is a demanding task. Several firms must place new customers on a waiting list, which ranges anywhere from six weeks to three months. The drillers work all day and come home at night to an answering machine full of new requests or a page-long list of new prospective clients.

With this flurry of activity, I fully expect that the number of wells drilled in 2006 will increase by more than 30 percent from the number drilled in 2004 or 2005. I recently visited with Clark Giles, owner and primary driller for Giles Environmental Services in Inola. Clark told me that he has never been busier. His clients from all over Oklahoma range from individuals to businesses to municipalities. He takes great pride in his work and gets tremendous personal satisfaction from drilling and completing wells for his fellow Oklahomans, many of whom are in desperate need of water. As is typical of most Oklahoma water well drillers, in spite of the demand, he has not raised his drilling prices and he vows to continue responsible well construction at a reasonable cost.

Providing water for Oklahoman's in need, especially during a drought, is a gratifying career for Oklahoma drillers like Mr. Giles, and we are grateful to have such dedicated professionals in our program.

For more information on Oklahoma's water well drilling industry, visit the Oklahoma Ground Water Association (OGWA) Web site at [www.ogwa.biz](http://www.ogwa.biz).

## Volunteers Needed for Lake Eufaula Monitoring

Oklahoma Water Watch (OWW), a community-based statewide volunteer water quality monitoring program at the OWRB, and Save Our Water, Inc., (SOW) are actively recruiting citizens to collect and analyze water quality samples from sites extending from Lake Eufaula dam to the upper end of the reservoir.

Although all the sites are regularly sampled by the OWRB's water quality monitoring staff, additional sampling is required to satisfy objectives of a detailed, upcoming cooperative study of the lake by the OWRB and U.S. Environmental Protection Agency (EPA).

The mission of SOW is to preserve and protect Lake Eufaula and all Oklahoma's water resources. Karen Weldin, President of SOW, says the organization is excited to become a part of the OWRB's Water Watch Program. "Water is our most precious natural resource. Certifying volunteer monitors will launch the water quality segment of our organization, which we value greatly. We encourage all interested persons to be trained and certified."

Those interested in volunteering should contact Karen Weldin at (918) 452-3184 or e-mail [kweldin@crosstel.net](mailto:kweldin@crosstel.net). At the minimum, participants in the study will measure water clarity, dissolved oxygen, temperature, and pH and ammonia nitrogen, nitrate nitrogen, and orthophosphate levels. Samples should be collected each month. All sampling equipment will be provided by the OWRB. It is preferred, but not necessary, that all volunteers have access to a boat or similar watercraft.

The OWRB's Oklahoma Water Watch program, created in 1992, is a statewide volunteer water quality monitoring program that encourages local involvement in protecting and maintaining the quality of Oklahoma's water resources. The program serves as a valuable educational tool by providing participants with first-hand involvement in water quality monitoring and protection.

For more information on the Water Watch Program, please call (405) 530-8800 or visit the OWRB's Web site at [www.owrb.state.ok.us](http://www.owrb.state.ok.us).



Lake Eufaula Water Watch volunteers at an initial training session on September 14. Sarah Davis (OWRB) explains how to operate a Hydrolab multiprobe water sampling unit.

# Reflections

By J. Leland Gourley, Editor  
Oklahoma City FRIDAY

## What do you think your water is worth?

What do you think your water is worth? If you bought enough bottled water to use for watering your lawn, that amount of water would cost you \$35,000 a month. That's what Duane Smith, Executive Director of the Oklahoma Water Resources Board, told us in his speech at our Rotary club recently.

The average cost for water supplied to a home in the U.S. is \$2 per 1,000 gallons. Comparable cost for that much bottled water is \$6,400. Your water bill too high? Think what your water COULD cost.

Smith told us that years ago when Oklahoma City's Council voted for the project to bring water to the City from Southeastern Oklahoma, it caused every one of those Councilmen to be defeated at their next election. "They should be our heroes," the state's top water Czar exclaimed. "Oklahoma City could not exist without that water today."

Smith is opposed to the grant program that gives aid to communities to maintain their water system. He thinks they ought to price their water a little higher and build up a kitty to keep their water system infrastructure up to date, safe and dependable.

Oklahoma can thank its lucky stars that our former U.S. Senator, the late Robert S. Kerr, had the vision and the stroke and the tenacity to get our state's system of dams and lakes to make water adequate for our growth. But city and town water infrastructures are failing all the time because cities are not pricing their water high enough for sustained maintenance. Too many municipal candidates are running on the platform of: "I won't raise your water rates."

Because of Bob Kerr, Oklahoma has more miles of lake shoreline than the combined U.S. Atlantic and Gulf Coast shorelines. An Oklahoma tourist was in Minnesota. He kept driving around and around a lake. He pulled into a filling station and asked, "Where's the dam?" The attendant said, "Our lakes in Minnesota are built by God." The Oklahoma tourist replied, "Our lakes in Oklahoma are built by Kerr, by God."

I am the proud owner of two autographed copies of *Land, Wood and Water* by Bob Kerr.

## Reasons to Test Your Well Water

Conditions or Nearby Activities:	Test for:
Recurring gastrointestinal illness	Coliform bacteria
Household plumbing contains lead	pH, lead, copper
Corrosion of pipes, plumbing	Corrosion, pH, lead
Nearby areas of intensive agriculture	Nitrate, pesticides, coliform bacteria
Coal or other mining operations nearby	Metals, pH, corrosion
Gas drilling operations nearby	Chloride, sodium, barium, strontium
Dump, junk yard, landfill, factory, gas station, or dry cleaning operation nearby	Volatile organic compounds, total dissolved solids, pH, sulfate, chloride, metals
Objectionable taste or smell	Hydrogen sulfide, corrosion, metals
Stained plumbing fixtures, laundry	Iron, copper, manganese
Salty taste or a heavily salted roadway nearby	Chloride, total dissolved solids, sodium
Scaly residues, soaps don't lather	Hardness
Rapid wear of water treatment equipment	pH, corrosion
Water softener needed to treat hardness	Manganese, iron
Water appears cloudy, frothy, or colored	Color, detergents

Adapted from Drinking Water From Household Wells, USEPA publication EPA 816-K-02-003. For a full copy of this 19-page brochure, go to [www.epa.gov/safewater/privatewells/booklet/index.html](http://www.epa.gov/safewater/privatewells/booklet/index.html).

## How to Test Your Well Water

The State Environmental Laboratory, operated by the Oklahoma Department of Environmental Quality (ODEQ), will test your well water for most of the substances listed on the table at the left. Below are some testing prices. For a complete list of prices, see *Laboratory Services Rules (Chapter 305)* at [www.deq.state.ok.us/rules/305.pdf](http://www.deq.state.ok.us/rules/305.pdf).

Routine Chemical Analysis	\$137
--includes alkalinity, chloride, nitrate/nitrite, specific conductance, pH, sulfate, total dissolved solids, & total hardness	
Coliform bacteria (total and e. coli)	\$20
pH	\$10
Lead	\$20
Copper	\$20
Nitrate/Nitrite	\$23
Chloride	\$20
Sodium	\$20
Barium	\$20
Strontium (Gross Alpha/Beta)	\$60
Volatile Organic Compounds	\$150
Total Dissolved Solids	\$29
Sulfate	\$15
Iron	\$20
Manganese	\$20
Hardness (total)	\$15
Color (apparent)	\$10

For more information about testing your water or interpreting test results, contact the State Environmental Laboratory at (405) 702-1000 or go to [www.deq.state.ok.us/CSDnew/sel.htm](http://www.deq.state.ok.us/CSDnew/sel.htm).

# Oklahoma Drought Monitor

## Reservoir Storage

As of September 5, the combined normal conservation pools of 31 selected major federal reservoirs across Oklahoma (see below) are approximately 87.8 percent full, according to information from the U.S. Army Corps of Engineers (Tulsa District). Twenty-six reservoirs are currently operating at less than full capacity. Seven reservoirs are now below 80 percent capacity.

## Storage in Selected Oklahoma Lakes & Reservoirs

As of September 5, 2006

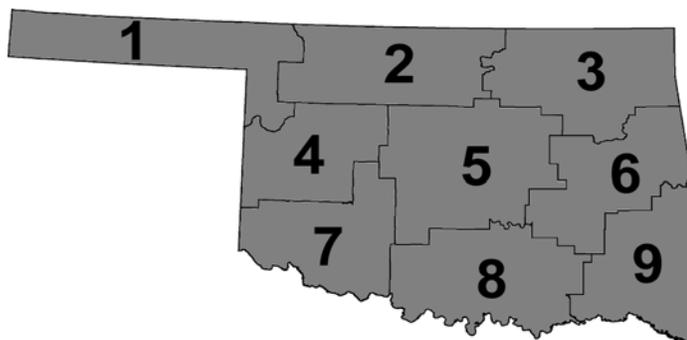
CLIMATE DIVISION	Conservation Storage (acre-feet)	Present Storage (acre-feet)	Percent of Storage (acre-feet)
North Central (2)	420,480	416,497	99.1
Northeast (3)	3,701,150	3,401,327	91.9
West Central (4)	276,790	218,052	78.8
Central (5)	154,225	114,867	74.5
East Central (6)	2,968,683	2,574,096	86.7
Southwest (7)	301,810	127,819	42.4
South Central (8)	2,924,564	2,556,286	87.4
Southeast (9)	1,512,859	1,355,619	89.6
<b>State Totals</b>	<b>12,260,561</b>	<b>10,764,563</b>	<b>87.8</b>

## Drought Indices

According to the latest Palmer Drought Severity Index (September 2, below), state drought conditions continue to worsen as eight regions report various stages of drought. In particular, the East Central, South Central, Central, Northeast, and Southeast climate divisions are in "extreme drought." However, all of Oklahoma's nine climate divisions have undergone PDSI moisture increases since August 19.

The latest monthly Standardized Precipitation Index (through July, below) reflects increasingly dry conditions throughout Oklahoma. Among the selected time periods (3-, 6-, 9- and 12-month SPIs), "extremely" dry conditions are present in South Central and Southwest Oklahoma during the past 3 to 9 months, respectively. Eight climate divisions are experiencing at least "very" dry conditions during the last 3-, 6-, 9-, and/or 12-month periods.

Oklahoma Climate Divisions



## Palmer Drought Severity Index

CLIMATE DIVISION	Current Status 9/2/2006
Northwest (1)	Near Normal
North Central (2)	Severe Drought
Northeast (3)	Extreme Drought
West Central (4)	Moderate Drought
Central (5)	Extreme Drought
East Central (6)	Extreme Drought
Southwest (7)	Severe Drought
South Central (8)	Extreme Drought
Southeast (9)	Extreme Drought

## Standardized Precipitation Index

Through July 2006

CLIMATE DIVISION	3-month	6-month	9-month	12-month
Northwest (1)	Moderately Dry	Very Dry	Very Dry	Moderately Dry
North Central (2)	Moderately Dry	Moderately Dry	Very Dry	Near Normal
Northeast (3)	Near Normal	Near Normal	Moderately Dry	Moderately Dry
West Central (4)	Near Normal	Near Normal	Very Dry	Near Normal
Central (5)	Moderately Dry	Moderately Dry	Very Dry	Moderately Dry
East Central (6)	Moderately Dry	Moderately Dry	Very Dry	Very Dry
Southwest (7)	Moderately Dry	Very Dry	Extremely Dry	Moderately Dry
South Central (8)	Extremely Dry	Moderately Dry	Very Dry	Very Dry
Southeast (9)	Very Dry	Moderately Dry	Very Dry	Very Dry

# Financial Assistance Program Update

*Loans/Grants Approved as of August 8, 2006*

## **FAP Loans—318 totaling \$620,765,000**

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 interest rates, averaging approximately 4.762 percent since 1986.

## **CWSRF Loans—174 totaling \$600,159,915**

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—61 totaling \$287,406,785**

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—451 totaling \$39,445,213**

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—523 totaling \$30,692,882**

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

## **Total Loans/Grants—1,527 totaling \$1,578,469,795**

## **Estimated Savings—\$492,082,399**

*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.*

Rudy Herrmann, *Chairman*; Mark Nichols, *Vice Chairman*; Bill Secrest, *Secretary*

F. Ford Drummond, Lonnie L. Farmer, Ed Fite, Jack Keeley, Kenneth K. Knowles, Richard C. Sevenoaks

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

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# OKLAHOMA WATER NEWS

Bimonthly Newsletter of the Oklahoma Water Resources Board



September-October 2006

## Don't Miss the Kick Off!

*This special edition of the Oklahoma Water News serves to get the word out about this year's Governor's Water Conference, which will officially "kick off" the Water Plan study recently funded by the State Legislature.*

*At the Conference, an impressive line-up of expert speakers will provide candid insight on many water planning issues. Most importantly, we've assembled a strong cast of key players to assist us in laying the foundation for much-needed system-level infrastructure improvements to ensure Oklahoma's future prosperity.*

*Please join us in downtown Oklahoma City on November 13-14 for a lively discussion of how Oklahoma plans to meet its future water needs.*



Duane Smith  
Executive Director  
OWRB

## Annual Water Conference To Focus on Water Plan

The 27th Annual Oklahoma Governor's Water Conference, "Oklahoma's Water Plan: Charting a Course for Sustainable Growth," will be held at the Cox Convention Center in downtown Oklahoma City on November 13-14, 2006. Registration will begin at 1:00 p.m. on November 13 (Monday) and 8:00 a.m. on November 14 (Tuesday).

Duane Smith, OWRB Executive Director, and Oklahoma State Representative Guy Liebmann will welcome guests and speakers to a symposium on Water Planning on Monday afternoon, which will begin with a look at the successes of comprehensive water planning in Texas, featuring Bill Mullican, Deputy Executive Administrator of the Office of Planning at the Texas Water Development Board. Two panels will then offer insights: the first on Oklahoma's water planning process, including organization and management of the study, and the second on water user concerns, including municipal, agricultural, industrial, and soil conservation interests. Other state and national experts will also discuss Oklahoma's water planning process and success stories.

On November 14, with OWRB Chairman Rudy Herrmann as host, a full complement of state, federal, and local experts will address water planning as well as other current water issues of importance to the state and nation, such as drought, water quality, and water policy. The morning session will culminate with an update by Oklahoma Attorney General Drew Edmonson on Oklahoma's current legal issues concerning water.

The Conference luncheon will feature presentation of Oklahoma Water Pioneer Awards for 2006. This year's recipients will include the late W. C. Austin and former Water Board Chairman Ervin Mitchell. A state and federal legislative update will follow, and the Conference will adjourn at 2:30.

To register for the Conference, call 405-530-8800 or fill out and mail the registration form on page two. Registration costs \$75 and includes the half-day Planning Symposium and evening reception on November 13, and the traditional Water Conference program and luncheon on November 14.

## A New Water Plan for Oklahoma

*Oklahoma's new water plan represents a crucial shift in the state's historical approach to water planning. For the first time, planners will focus on development of system-level projects to provide the most water to the most Oklahomans. Updated assessments of current water supply and long-term water needs will be used to identify those water management strategies--including development of additional water supplies, regionalization of facilities, infrastructure upgrades, and water management options--to meet the future needs of Oklahoma citizens, even during drought conditions. In addition, Oklahoma citizens will team with the state's foremost water experts to develop forward-thinking policy recommendations for consideration by the State Legislature.*

Water Planning Symposium--November 13, 2006

- 1:00 Registration
- 1:30 Welcome and Overview  
*Duane A. Smith, Executive Director, OWRB*  
*Rep. Guy Liebmann, Oklahoma State Legislature*
- 1:50 Comprehensive Water Planning in Texas  
*Bill Mullican, Deputy Executive Administrator*  
*Office of Planning, Texas Water Dev. Board*
- 2:10 Panel--Oklahoma's Water Planning Process  
*OCWP Study Organization and Management*  
*Duane Smith, OWRB*  
*Stakeholder Involvement and Participation*  
*Dr. Will Focht, Director*  
*Oklahoma Water Resources Research Institute*  
*Planning for Environmental Protection*  
*Steve Thompson, Executive Director*  
*Oklahoma Department of Environmental Quality*  
*Water Infrastructure Inventory*  
*Trish Weedn, Executive Director*  
*Oklahoma Association of Regional Councils*  
*Federal Planning Assistance*  
*Sue Haslett, Planning & Environmental Div. Chief*  
*U.S. Army Corps of Engineers, Tulsa District*
- 3:25 Break
- 3:40 Partnerships in Regional Water Planning  
*Mike Irlbeck, Supervisory Program Coordinator*  
*U.S. Bureau of Reclamation, OK-TX Area Office*
- 3:55 Future Water Policy Considerations  
*Rudy Herrmann, OWRB Chairman*
- 4:10 Banking on Bristow's Water Future  
*Kell Kelly, President, SpiritBank*
- 4:25 Panel--Incorporating Water User Concerns  
*Municipal Interests*  
*Danny George, Executive Director*  
*Oklahoma Municipal League*  
*Agricultural Interests*  
*Terry Peach, Oklahoma Secretary of Agriculture*  
*Industrial/Navigation Interests*  
*Ronn Cupp, Senior Vice President*  
*Government Affairs, The State Chamber*  
*Soil & Watershed Conservation Interests*  
*Clay Pope, Executive Director*  
*Oklahoma Association of Conservation Districts*
- 5:25 Summary & Adjournment to Reception

November 14, 2006

- 8:00 Registration
- 8:30 Welcome and Introductions  
*Rudy Herrmann, OWRB Chairman*
- 8:45 Water Needs & Strategies for a Sustainable Future  
*Shaun McGrath, Water Policy Program Manager*  
*Western Governors' Association*
- 9:15 The Oklahoma Drought  
*Ken Crawford, Director*  
*Oklahoma Climatological Survey*
- 9:35 Coffee Break/Exhibits
- 10:00 Update of the Oklahoma Comprehensive Water Plan  
*Duane Smith, OWRB*
- 10:20 State of the State's Environment  
*Miles Tolbert, Oklahoma Secretary of Environment*
- 10:40 Legal Considerations in Oklahoma Water Planning  
*Gary D. Allison, Professor of Law*  
*University of Tulsa*
- 11:00 Oklahoma's Future: Strategies for Our 2nd Century  
*Larry Rice, Executive Assistant to the President*  
*University of Tulsa*
- 11:20 Oklahoma Legal Briefs  
*Attorney General Drew Edmondson*
- Noon Luncheon Program  
*Oklahoma Water Pioneer Awards*  
*Water Outlook from Washington D.C.*  
*Michele Nellenbach*  
*Senior Professional Staff Member, U.S. Senate*  
*Committee on Environment and Public Works*  
*State Legislative Water Perspective*  
*Rep. Lance Cargill, House Speaker Designate*  
*Rep. Don Armes*  
*Sen. Charlie Laster*
- 2:30 Adjournment

27th Annual Governor's Water Conference

REGISTRATION FORM

Please mail form to

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

Please enclose \$75 check, money order, or purchase order payable to the Oklahoma Water Resources Board. No refunds after November 1.

For more information, contact the OWRB at (405) 530-8800 or go to [www.owrb.state.ok.us](http://www.owrb.state.ok.us).

Check all that apply\*:

- I will attend the symposium on Nov. 13, 2006.
- I will attend the reception on Nov. 13, 2006
- I will attend the conference & luncheon on Nov. 14, 2006.

\*One price (\$75) includes any or all of the above.

Name: \_\_\_\_\_

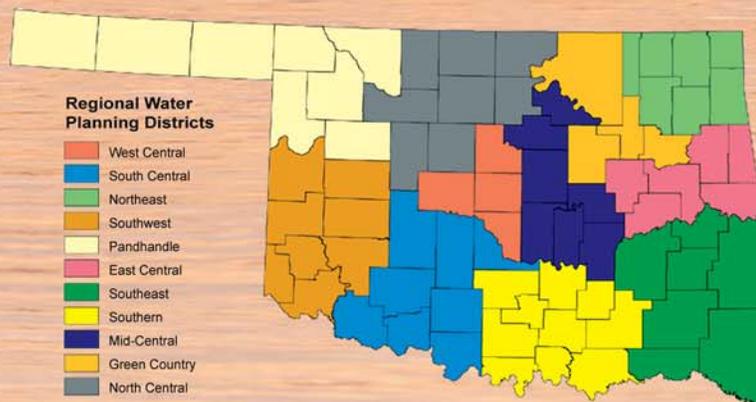
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Address: \_\_\_\_\_

City/State: \_\_\_\_\_

Zip: \_\_\_\_\_ Phone (\_\_\_\_) \_\_\_\_\_

# QUESTIONS & ANSWERS ABOUT Oklahoma's WATER PLAN



**Q:** How will the new water plan differ from previous plans?

**A:** *The new Oklahoma water plan represents a crucial shift in the state's traditional approach to water planning and policy development. This more ambitious water planning initiative will also center on grass-roots implementation of water projects, including a detailed appraisal of virtually every public water supply system in the state. With this information, planners can develop regional and system-level plans that provide economical, long-term water service to the largest customer base possible. The initial phase of the water plan is anticipated for completion in 2011.*

**Q:** Will the plan advocate construction of large reservoir projects?

**A:** *While the overriding goal of the water plan will be to assess Oklahoma's overall water and related infrastructure needs, the primary focus will be on gauging the ability of existing water supply systems to serve their current and future customers. In this regard, development of potential water supply projects, including reservoir construction, will be weighed first against local needs, water management options (including regionalization of facilities and infrastructure upgrades), economic feasibility, local support and financing ability, and impacts to the environment and recreation interests.*

**Q:** Will the public have an opportunity to provide input into the planning process?

**A:** *Input from the public and various stakeholders who comprise Oklahoma's water user community will be crucial to successful implementation of the state's new water plan and the shaping of feasible water policy for consideration by the State Legislature and Governor. Throughout the five-year planning period, an extensive public participation program will be implemented to make the planning process as transparent and open as possible, thus leading to a final product that truly reflects the views and opinions of Oklahoma citizens.*

**Q:** How do planners project future water use?

**A:** *Estimating future water requirements, while necessary in planning for future water needs, is an inexact and difficult procedure. To minimize uncertainty and maximize accuracy, planners and their forecasting models typically utilize a 50-year planning horizon—the maximum reliable timeframe—that takes into account current trends of population growth and water use as well as factors such as income, housing and employment.*

*To assess the ultimate water requirements of each county and region, estimates of available water supply will be compared to projections of future use. Planners will use methodologies that assume somewhat liberal, yet realistic, scenarios of projected water use to identify areas of the state that will likely have either a surplus or deficit of supply.*

**Q:** Why does Oklahoma need an updated water plan?

**A:** *The existing Oklahoma Comprehensive Water Plan, while a valuable planning and policy tool, does not address the many new water challenges facing the state. Increases in population and water usage, more competition for finite water supplies, changing values related to recreational and environmental water needs, aging water and sewer system infrastructure, and continued threats from drought and flood events require Oklahoma to revisit its long-range water strategy. While the OWRB prepares to fulfill its statutory mandate to update the 1997 OCWP, the agency is also embarking upon a more challenging strategy to ensure that all Oklahomans have access to a safe and secure source of water.*

**Pandhandle Regional Water Planning District:** Beaver, Cimarron, Dewey, Ellis, Harper, Texas, Woods, and Woodward counties.

**Southwest Regional Water Planning District:** Beckham, Custer, Greer, Harmon, Jackson, Kiowa, Roger Mills, and Washita counties.

**North Central Regional Water Planning District:** Alfalfa, Blaine, Garfield, Grant, Kay, Kingfisher, Major, and Noble counties.

**West Central Regional Water Planning District:** Canadian, Cleveland, Logan, and Oklahoma counties.

**South Central Regional Water Planning District:** Caddo, Comanche, Cotton, Grady, Jefferson, McClain, Stephens, and Tillman counties.

**Green Country Regional Water Planning District:** Creek, Osage, Tulsa, and Wagoner counties.

**Mid-Central Regional Water Planning District:** Hughes, Lincoln, Okfuskee, Pawnee, Payne, Pottawatomie, and Seminole counties.

**Southern Regional Water Planning District:** Atoka, Bryan, Carter, Coal, Garvin, Johnston, Love, Marshall, Murray, and Pontotoc counties.

**Northeast Regional Water Planning District:** Craig, Delaware, Mayes, Nowata, Ottawa, Rogers, and Washington counties.

**East Central Regional Water Planning District:** Adair, Cherokee, McIntosh, Muskogee, Okmulgee, and Sequoyah counties.

**Southeast Regional Water Planning District:** Choctaw, Haskell, Latimer, LeFlore, McCurtain, Pittsburg, and Pushmataha counties.

# Financial Assistance Program Update

Loans/Grants Approved as of October 10, 2006

## **FAP Loans—318 totaling \$619,350,000**

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 interest rates, averaging approximately 4.762 percent since 1986.

## **CWSRF Loans—177 totaling \$624,916,622**

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—65 totaling \$299,406,372**

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—455 totaling \$39,823,839**

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—528 totaling \$30,964,692**

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

## **Total Loans/Grants—1,543 totaling \$1,614,461,525**

## **Estimated Savings—\$503,993,753**

*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.*

Rudy Herrmann, *Chairman*; Mark Nichols, *Vice Chairman*; Bill Secret, *Secretary*

F. Ford Drummond, Lonnie L. Farmer, Ed Fite, Jack Keeley, Kenneth K. Knowles, Richard C. Sevenoaks

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

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[www.owrb.state.ok.us](http://www.owrb.state.ok.us)

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3800 N. Classen Boulevard

OKLAHOMA WATER RESOURCES BOARD

*Bimonthly Newsletter of the*

**OKLAHOMA WATER NEWS**

Oklahoma City, OK  
Permit No. 310

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U.S. POSTAGE

STANDARD PRESORTED

# OKLAHOMA Water News



November  
December 2006

## Inside

Water Plan Endorsed  
at Annual Conference

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Highlights

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2007 Oklahoma  
Water Pioneers

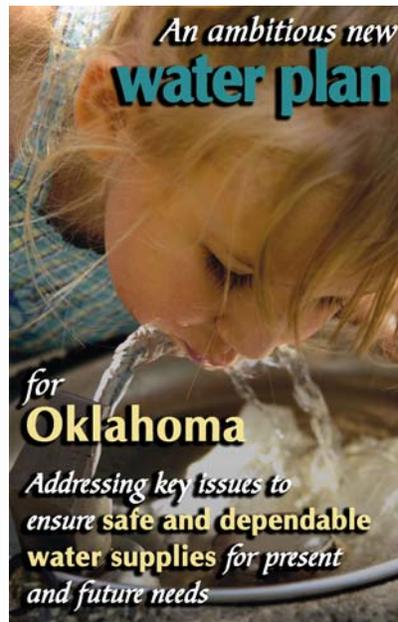
Study Models  
Ecological Impacts  
in Arbuckle-Simpson  
Streams

Oklahoma Drought  
Update

## Water Plan Endorsed at Annual Conference

The 27th Annual Governor's Water Conference, held in Oklahoma City on November 13-14, attracted hundreds of citizens and water officials who demonstrated bipartisan, widespread support for updating the Oklahoma Comprehensive Water Plan. The Conference was titled "Oklahoma's Water Plan: Charting the Course for Sustainable Growth" and served as the "kick off" event for the Water Plan study.

The first day of the conference featured a Water Planning Symposium with exhibits, presentations, and remarks by key players involved in the Oklahoma Comprehensive Water Plan update. OWRB Chairman Rudy Herrmann opened the second day with a presentation outlining critical water planning issues, followed by presentations and remarks by the state's



foremost water experts. The morning session culminated with comments by Oklahoma Attorney General Drew Edmonson on current legal issues concerning water.

Special guest speaker Lieutenant Governor Jari Askins made remarks at the Conference luncheon, followed by presentation of Water Pioneer Awards. This year's recipients included the late W. C. Austin and former longtime Water Board member Ervin Mitchell (see page 6). The State legislative update followed featuring Senators Jeff Rabon and Charlie Laster and Representatives Lance Cargill (House Speaker) and Don Armes.

Highlights of the Water Conference are on pages 2-3 of this issue.

*"What do we want Oklahoma to look like in 50 years when it comes to our water resources? Let's try this on for size: aquifer levels that are stable, rivers and lakes that are swimmable and fishable, access for everyone to quality drinking water that meets or exceed [EPA] requirements, compliance at all Oklahoma water and wastewater treatment facilities, sustainable management of water resources by Oklahoma's agricultural industry, a sufficient stability of water resources and infrastructure to support future population growth and broad-based economic development. If we work smart we can get there."*

*Rudy Herrmann,  
OWRB Chairman*

## From the Director

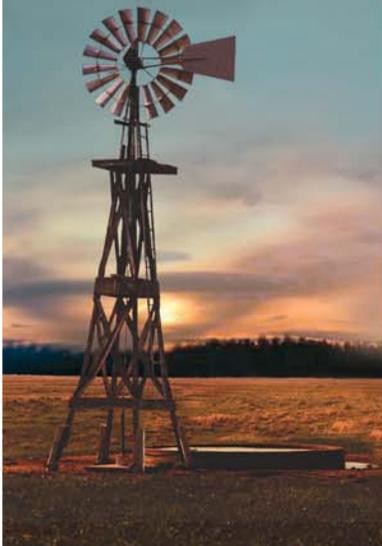
At its December meeting, the Water Resources Board took an important first step that set the state on a course to prepare for Oklahoma's water future. With formal approval of an agreement between the OWRB and Oklahoma Water Resources Research Institute (OWRRI), the state will now officially begin soliciting public input and investigating pertinent water issues for a new and unprecedented statewide water plan.

On behalf of the OWRB, over the next few years the OWRRI will lead and facilitate crucial stakeholder participation in the water policy analysis phase of the State Water Plan update project, scheduled for completion by 2011. The Research Institute, which is housed at Oklahoma State University, lends credibility to our planning process as it leads the public input and policy

*(continued on page 3)*



Duane A. Smith, Executive Director  
Oklahoma Water Resources Board



# 2006 Oklahoma Governor's Water Conference



The OWRB and 35 other sponsoring organizations would like to thank all the speakers at the 27th Annual Oklahoma Governor's Water Conference on November 13-14, 2006. Together, your remarks and presentations opened a dialogue on water planning in Oklahoma that will serve as a springboard for the development of Oklahoma's Comprehensive Water Plan over the next several years.

## 2006 CONFERENCE SPEAKERS

*Representative Guy Liebmann*

*Bill Mullican*

*Texas Water Development Board*

*Dr. Will Focht*

*Oklahoma Water Resources Research Institute*

*Steve Thompson, Executive Director*

*Oklahoma Dept. of Environmental Quality*

*Trish Weedn, Executive Director*

*Oklahoma Association of Regional Councils*

*Ed Rossman*

*U.S. Army Corps of Engineers*

*Mike Irlbeck*

*U.S. Bureau of Reclamation*

*Kell Kelly, President*

*SpiritBank of Bristow*

*Danny George*

*Oklahoma Municipal League*

*Terry Peach*

*Oklahoma Secretary of Agriculture*

*Ronn Cupp*

*The State Chamber*

*Clay Pope, Executive Director*

*Oklahoma Association of Conservation Districts*

*Shaun McGrath*

*Western Governors' Association*

*Dr. Ken Crawford, Director*

*Oklahoma Climatological Survey*

*Miles Tolbert*

*Oklahoma Secretary of the Environment*

*Gary Allison*

*University of Tulsa*

*Larry Rice*

*University of Tulsa*

*Attorney General Drew Edmondson*

*Lieutenant Governor Jari Askins*

*Michele Nellenbach*

*Senate Committee on Environment/Public Works*

*Representative Lance Cargill (House Speaker)*

*Representative Don Armes*

*Senator Charlie Laster*

*Senator Jeff Rabon*

## *From the Director (continued from page 1)*

development component of the planning process. The OWRRRI will host approximately 100 open meetings with the specific objective of engaging citizens and water specialists in open and innovative discussion of water issues, including problems and solutions, to clear the way for a safe and secure water future for Oklahoma.

Concurrent to this activity, the OWRB and the Research Institute will sponsor numerous research projects to answer the state's priority water questions that arise throughout the project. The OWRB will match federal water resources research funds allocated to the OWRRRI each year to support independent research of specific issues that arise throughout Water Plan policy development. Since its establishment in 1965, the OWRRRI has awarded more than \$3 million in research grants to water researchers at universities across Oklahoma and they've trained scores of students in water resources management.

Having the Research Institute lead this challenging and exciting public participation and research effort will result in a Water Plan that is feasible, scientifically sound, and acceptable to Oklahomans from a socio-political standpoint. Stay tuned for notice of meeting dates for the 40 listening sessions that will be held throughout the state beginning this spring.

During the past session, the State Legislature established a funding source for the Water Board to complete the initial phase of Water Plan development and help recapitalize the dwindling Statewide Water Development Fund. One-third of the Gross Production Tax REAP Water Projects Fund, supplemented through a tax levied on both oil and gas production in Oklahoma, is now dedicated to the OWRB for these purposes.

While subject to the uncertainties of future oil/gas production, we've estimated that the tax will generate more than \$2 million annually to support state water planning and financing. That's a nice sum, but it is simply insufficient to cover Oklahoma's projected \$5.4 billion water and wastewater project need, and that's just over the next 20 years. While many projects included in the final Water Plan will reflect those currently identified, there will be additional, currently unforeseen, water and sewer infrastructure projects that will be targeted for implementation within the next 20 to 50 years.

Unfortunately, the amount of money that can be held in the gross production tax account is limited, or capped, and funds generated in excess of that amount are returned to the state's general revenue. During next year's legislative session, the Water Board and other agencies will be promoting the removal of that cap so that more money will be available for Oklahoma's considerable water/sewer infrastructure needs, and especially projects that will be required to provide water service to future generations of Oklahomans.

As always, the Governor's Water Conference in November was a great opportunity to renew friendships and make new acquaintances. Many excellent speakers updated conferees on state and national water issues. Once again, the Conference provided an ideal forum for Oklahoma's water people to discuss, one-on-one, how this state will address future water needs, infrastructure requirements, and rapidly evolving policy and law.

Next year's Water Conference promises to be especially memorable as we will present a special program to observe our state's centennial as well as celebrate the OWRB's 50th year of service to Oklahomans. We'll provide more information about this important event within the next few months.

This is an exciting time for the state and at the OWRB. I hope each of you will participate in the planning effort when the OWRRRI team comes to a town near you!



# Flood Current

What did that  
A car sits flooded out on  
Just west of Broken Arrow

## *It will flood again. Are you ready?*



Gavin Brady, OWRB  
State Floodplain Coordinator

As you probably know, past NFIP State Coordinator, Mike Mathis, retired from the OWRB in November. Preceding Mike in that position was Ken Morris, who retired in 2003. As Mike's replacement, I am fortunate to have learned much from two of the most influential and experienced leaders of Oklahoma's floodplain management program. Their past accomplishments make my current job easier. As the new State Floodplain Coordinator, I

obviously have very big shoes to fill. Fortunately, I can draw upon the expertise of OWRB staff and utilize the exemplary leadership of the Oklahoma Floodplain Manager's Association (OFMA) to accomplish the organization's goals and objectives. I began my employment with the OWRB in Oklahoma City in 1982. I transferred to the Tulsa field office soon after the 1984 Memorial Day floods that devastated Tulsa. Since that time, I have worked closely with the NFIP and have coordinated floodplain management-related efforts in the state's northeast region. I look forward to working with you as the new State Coordinator.

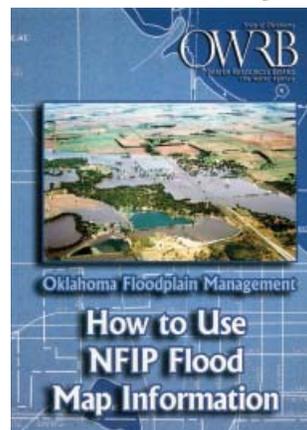
During a recent two-day retreat at the University of Oklahoma, the OFMA Board of Directors and several Committee Chairs met to review our 2006 Strategic Plan and update OFMA's Bylaws and Constitution. OFMA Chairman Lauren Gilroy facilitated the retreat and completed our objectives, even as a snowstorm blanketed the facility and closed the OU campus. You can view the results of the retreat at [www.okflood.org](http://www.okflood.org) and/or read the next BFE Newsletter in February.

As we look to the new year, please mark your calendars for a few important dates. The Floodplain Administrators 101 Workshop dates are February 15, March 14, April 19 and May 15 at the Center for Continuing Education at OU. With Governor Henry's Declaration of March 2007 as Flood Insurance Month, our training staff will take the show on the road and hold workshops in McAlester on March 6, Lawton on March 20, Bartlesville on March 22, and Woodward on March 29. Thanks to our partnership with Joe Remondini and the Corps of Engineers, 202 Workshops will also be held in March at these same locations. Also, a 202 Workshop will be held on March 27 in Oklahoma City at the OWRB office. Plenty

of opportunities to expand your floodplain management knowledge and you can register online at [www.owrb.state.ok.us](http://www.owrb.state.ok.us) or call Rhonda Bowers at 405-530-8800.

With the exception of some flooding in Broken Arrow and Wagoner County, 2006 has been a year when floodplain administrators could take a relatively relaxed approach to floodplain management. This has been a year where your thoughts and activities were more focused on a lack of rainfall rather than too much. I have visited areas in Oklahoma where lake levels are approaching critical stages and I realize floodplain management may not be at the forefront of the minds of city, county, or tribal officials. But as floodplain administrators, we can't forget the value of this program. We are in a position to make a difference. The primary emphasis in establishing the NFIP back in 1968 was to provide flood insurance to flood-prone communities. We need to remember we are also protecting the lives and property of Oklahoma citizens. It will flood again...are you ready?

## *New Training Video Available*



The OWRB is pleased to present "How to Use NFIP Flood Map Information," a video containing recommendations on the use of flood map information, other detailed forms of various flood studies, soil surveys, and historical flood records. The video also presents detailed instructions, primarily geared to floodplain administrators, on determining the base flood elevation (BFE) using a flood profile found in a Flood

Insurance Study, as well as methods for determining an approximate BFE.

The video is available to floodplain administrators free of charge during Floodplain Management classes in 2007. Go to [www.owrb.state.ok.us/hazard/fp/fp\\_workshops.php](http://www.owrb.state.ok.us/hazard/fp/fp_workshops.php) to register.



As the NFIP State Coordinator, the OWRB partners with other state and federal agencies and local governments to prevent and mitigate the catastrophic effects of flooding disasters in Oklahoma. For more information, go to [www.owrb.state.ok.us.hazard/fp/floodplain.php](http://www.owrb.state.ok.us.hazard/fp/floodplain.php) or call (405) 530-8800.

## Sand Springs Receives CRS Award

On December 8, the City of Sand Springs received an award from the Federal Emergency Management Agency commemorating the city's move to Class 6 status under the National Flood Insurance Program Community Rating System (CRS). The higher rating (the city was formerly Class 9) results in a 20% reduction in flood insurance premiums to Sand Springs citizens who reside in a floodplain (designated "special flood hazard area"). T. J. Davis, Sand Springs Project Administrator, is largely responsible for

implementing community floodplain management activities that exceed federal requirements. Davis previously served as chairman of the Oklahoma Floodplain Managers Association and also chaired the organization's Professional Development Certification Committee. Nationwide, only 37 communities have received a higher CRS rating than Sand Springs. The City of Tulsa, a Class 2 community, maintains the nation's second highest ranking in the NFIP's point ranking scheme.



Left to right: Mayor Robert L. Walker; Carl Watts, Federal Emergency Management Agency Region VI representative; and T. J. Davis, Project Administrator

### National Flood Insurance Program Community Rating System

Class	Premium Reduction in SFHA	#U.S. Communities
1	45%	1
2	40%	1
3	35%	1
4	30%	1
5	25%	33
6	20%	80
7	15%	207
8	10%	422
9	5%	303
10	0%	--

\*Special Flood Hazard Area

## PLEASE JOIN US! Oklahoma Floodplain Managers Association Spring Technical Workshop

**Thursday March 1, 2007  
Moore-Norman Technology Center  
4701 12th Ave NW, Moore**

The Oklahoma Floodplain Managers Association Spring Workshop offers a unique chance to learn about and view a major river development on the Oklahoma River in Oklahoma City.

The workshop features a bus-and-walking tour of the river development and lock facilities. This tour will provide you with first-hand knowledge of what these developments look like. You also will learn details about the process of evaluating and permitting an urban river development.

The morning training sessions on Community Development processes, Basic Training for Floodplain Administrators, and GIS training, and the afternoon river tour provide a varied and timely array of subjects.

The highlight of the Spring Conference will be the Keynote Address by Governor Brad Henry (schedule permitting).

This workshop is designed for anyone involved with floodplain issues: Floodplain Administrators; planners; engineers; insurance agents; lenders; real estate professionals; elected and appointed officials; local, state, and federal government employees; interested citizens; dam owners; developers; emergency; responders; teachers; and students. Workshop provides 6 CECs.

For registration information, visit the OFMA Web site at [www.okflood.org](http://www.okflood.org).

**"A River Runs Through It:  
Build Up or Build Out"**

## 2006 Oklahoma Water Pioneers



OWRB member Mark Nichols, Bill Cunningham (grandson of the late W. C. Austin), and OWRB Executive Director Duane Smith

**W. C. Austin** was an early state lawyer and public servant whom many consider the father of Oklahoma water resources and reclamation. He served two years in the Oklahoma Senate, authoring several important pieces of legislation. Mr. Austin spearheaded a local effort to develop the Altus-Lugert Irrigation Project, which benefited 52,000 acres of dry farm land in Jackson, Greer, and Kiowa Counties. He was appointed chairman of the State Water Resources Committee in 1943 and he led Oklahoma delegations to annual meetings of the National Reclamation Association in order to promote public awareness and interest in water resources management. In 1947, just after his death, Lake Altus-Lugert dam was dedicated and the undertaking was formally renamed the "W. C. Austin Project" in his memory by the 80th U.S. Congress.

**Ervin Mitchell** served on the Oklahoma Water Resources Board for 21 years, under five governors, holding the positions of both Chairman and Secretary. During this time, Ervin earned great respect for his intense interest in and passion for Oklahoma's vital surface and groundwater resources, both as a member of the Board and as a model farmer and rancher. As a member of the Board's Finance Committee, Ervin played an instrumental role in providing financing to hundreds of Oklahoma communities, both rural and urban, to fund vital water and sewer infrastructure through the agency's Financial Assistance Program.



Emma and Ervin Mitchell with Duane Smith

## Study Models Ecological Impacts in Arbuckle-Simpson Streams

A study is now underway to correlate instream flow and ecological impacts in springs, creeks, and rivers that originate in the Arbuckle-Simpson Hydrology Study area. Under a cooperative agreement with OSU, Drs. Bill Fisher and Titus Seilheimer will initially survey field sites to identify specific springs and stream reaches to be studied. Fish and habitat data will then be collected at these sites over the next year to obtain a seasonal picture of changes in stream flow, habitat, and fish populations over multiple life stages (such as larval, juvenile, and adult). This information will be used to model the effects of different steam flows on the amount and quality of available aquatic habitat for a few selected species under different scenarios of water withdrawals.

The least darter (*Etheostoma microperca*) and redspot chub (*Nocomis asper*) have been identified as suitable species for habitat modeling at sites on the Blue River. Suitable species for other sites are currently being determined by studying species collected while surveying sampling sites.

This project was spearheaded by the Arbuckle-Simpson Surface Water Committee, created in 2006 to evaluate surface water needs and impacts to flows. For more information on the Arbuckle-simpson Hydrology Study, go to [www.owrb.state.ok.us](http://www.owrb.state.ok.us) and click on "Arbuckle-Simpson Hydrology Study 2006 Annual Report" under "Featured Links."



At top, redspot chub (*Nocomis asper*), which can grow up to 10 inches, and the least darter (*Etheostoma microperca*), usually smaller than 1.5 inches.

# Drought Update

## Reservoir Storage

As of January 4, the combined normal conservation pools of 31 selected major federal reservoirs across Oklahoma (see below) are approximately 93.3 percent full, a 4.0 percent decrease from that recorded on December 12, according to information from the U.S. Army Corps of Engineers (Tulsa District). Three reservoirs have experienced lake level decreases since that time; 19 reservoirs are currently operating at less than full capacity. Eight reservoirs are now below 80 percent capacity.

## Palmer Drought Severity Index

According to the latest Palmer Drought Severity Index (December 30, below), state drought conditions have improved significantly. However, the North Central and Northeast climate divisions remain in "mild drought." None of Oklahoma's nine climate divisions have undergone PDSI moisture decreases since December 9.

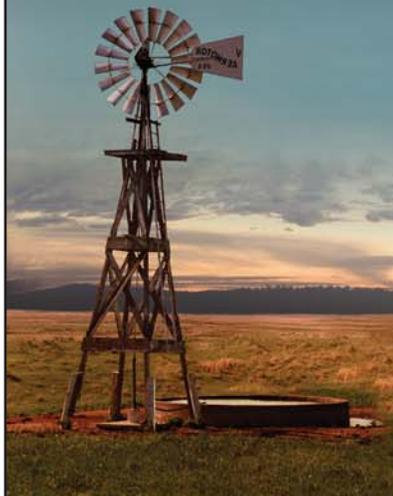
## Standardized Precipitation Index

The latest monthly Standardized Precipitation Index (through December, below) reflects improving moisture conditions throughout Oklahoma. Among the selected time periods (3-, 6-, 9- and 12-month SPIs), "very" dry conditions are present only in North Central Oklahoma during the past 9 to 12 months. The Northeast region is the only other climate division currently experiencing dry ("moderately") conditions.

Storage in Selected Oklahoma Lakes & Reservoirs As of January 4, 2007			
CLIMATE DIVISION	Conservation Storage (acre-feet)	Present Storage (acre-feet)	Percent of Storage (acre-feet)
North Central (2)	494,140	481,848	97.5
Northeast (3)	3,698,902	3,378,398	91.3
West Central (4)	276,790	206,550	74.6
Central (5)	154,225	111,391	72.2
East Central (6)	2,968,683	2,968,683	100.0
Southwest (7)	301,810	130,614	43.3
South Central (8)	2,948,828	2,741,224	93.0
Southeast (9)	1,464,929	1,464,929	100.0
<b>State Totals</b>	<b>12,308,307</b>	<b>11,483,637</b>	<b>93.3</b>

Palmer Drought Severity Index	
CLIMATE DIVISION	Current Status 12/30/2006
Northwest (1)	Unusual Moist Spell
<b>North Central (2)</b>	<b>Mild Drought</b>
<b>Northeast (3)</b>	<b>Mild Drought</b>
West Central (4)	Moist Spell
Central (5)	Incipient Drought
East Central (6)	Moist Spell
Southwest (7)	Moist Spell
South Central (8)	Incipient Moist Spell
Southeast (9)	Unusual Moist Spell

Standardized Precipitation Index Through December 2006				
CLIMATE DIVISION	3-month	6-month	9-month	12-month
Northwest (1)	Very Wet	Moderately Wet	Near Normal	Near Normal
<b>North Central (2)</b>	Near Normal	<b>Moderately Dry</b>	<b>Very Dry</b>	<b>Very Dry</b>
<b>Northeast (3)</b>	Near Normal	Near Normal	Near Normal	<b>Moderately Dry</b>
West Central (4)	Moderately Wet	Near Normal	Near Normal	Near Normal
Central (5)	Near Normal	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)	Moderately Wet	Near Normal	Near Normal	Near Normal
Southeast (9)	Moderately Wet	Near Normal	Near Normal	Near Normal



*Rudy Herrmann, Chairman • Mark Nichols, Vice Chairman • Bill Secrest, Secretary  
Ford Drummond • Lonnie Farmer • Ed Fite • Jack W. Keeley • Kenneth K. Knowles • Richard Sevenoaks*

*The mission of the Oklahoma Water Resources Board is to manage and protect the water resources of the state and plan for Oklahoma's long-range water needs in a responsive, innovative, and professional manner to ensure that all Oklahomans have adequate quantities of good water.*



**November-December 2006**

**Brian Vance, Editor**

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[pubinfo@owrb.state.ok.us](mailto:pubinfo@owrb.state.ok.us)  
or call us at (405) 530-8800*

## **FINANCIAL ASSISTANCE PROGRAM UPDATE**

*Loans & Grants Approved as of December 12, 2006*

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**DWSRF Loans—65 totaling \$299,406,372**

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—462 totaling \$40,389,038**

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—529 totaling \$31,019,692**

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

**Drought Response Program Grants—3 totaling \$300,000**

Through the OWRB's Drought Response Program, limited funding is available for communities in most dire need during state drought emergencies declared by the Governor. A maximum of \$300,000 is diverted from existing OWRB Emergency Grant funds to establish the Program.

**Total Loans/Grants: 1,553 totaling \$1,613,396,024**

**Estimated Savings: \$505,087,593**

*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.*

*For more information, call 405-530-8800 or go to [www.owrb.state.ok.us/financing](http://www.owrb.state.ok.us/financing).*