

# OKLAHOMA Water News

4th Quarter 2013

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## Annual Report of OWRB Activities for 2013

### Implementation of OCWP Priority Recommendations

Considerable progress was made during 2013 toward implementing Oklahoma Comprehensive Water Plan (OCWP) priority recommendations. The OWRB enhanced and expanded its water monitoring activities and hydrologic studies, and meetings were convened by the Water for 2060 Advisory Council and Instream Flow Advisory Group.

The Groundwater Mapping and Assessment Program (GMAP), Oklahoma's first holistic groundwater monitoring program, is fully operational; well sampling began in August. Long-term collection of data will provide invaluable information on the ambient quality and quantity of Oklahoma's groundwater resources, vastly improving the detection of impairments as well as the understanding of seasonal, climatic, and usage patterns. As many as 2,000 wells will eventually comprise the monitoring network with coverage of every major aquifer in the state.

The Beneficial Use Monitoring Program (BUMP), which provides surface water quality data crucial to the establishment of fair and defensible Water Quality Standards, now includes 130 lakes and 103 stream sites, including selected United States Geological Survey (USGS) sites and other gages located strategically to characterize each of the 82 OCWP planning basins.

Studies are ongoing in the Rush Springs Aquifer. The Study was initiated in 2011-12 in conjunction with a hydrologic investigation and stream water allocation model of the Upper Washita River Basin. The OWRB is working cooperatively on the project with the Bureau of Reclamation (USBR) and Fort Cobb and Foss Reservoir Master Conservancy Districts. The project is scheduled for completion by the end of 2015.

The OWRB is initiating 20-year updates of hydrologic studies for the Enid Isolated Terrace and Elk City Sandstone aquifers, both anticipated for completion in late 2014. Under contract with the USGS, the OWRB will conduct a 20-year update of the groundwater study for the North Canadian River Alluvium and Terrace Groundwater Basin from the Beaver-Harper County line to Lake Overholser at the Canadian-Oklahoma County line. Along with development of a new groundwater flow model, the investigation will determine if there has been any significant depletion in the basin. Work is anticipated to be completed by late 2014.

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## From the Director

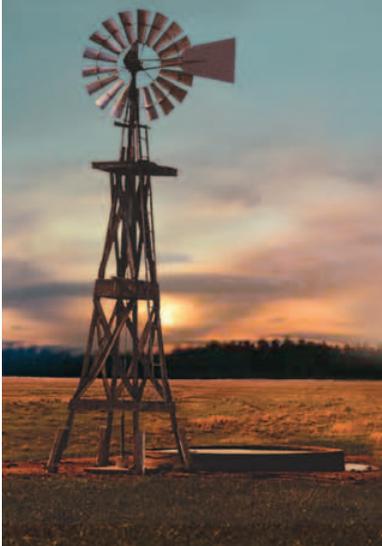
Prompted by a 2003 law change and informed by more than a decade of study, numerous public meetings with citizens and stakeholders, and a meticulous hearing process, OWRB members voted in October to approve staff's recommendation setting a new 0.2 acre-feet per acre per year (AFY) equal proportionate share (EPS) withdrawal rate for the Arbuckle-Simpson aquifer. The decision—long-awaited by many, especially those living in and around the south central Oklahoma region—was both a controversial and consequential one.

The Arbuckle-Simpson aquifer is the sole drinking water source for many cities and towns, including Ada and Sulphur, a vital component of the

*(continued on page 2)*



J. D. Strong, Executive Director  
Oklahoma Water Resources Board



## Annual Report (continued)

The USGS has also been contracted to begin a basin study of the Canadian River Alluvium and Terrace aquifer and a 20-year update of the North Fork of the Red River Alluvium and Terrace aquifer.

The nine-member OWRB Board approved the Final Order for the Arbuckle-Simpson Maximum Annual Yield in October (see From the Director and the timeline on pages 4-5 for more details about the study and events leading up to the approval of the Final Order).

The OCWP Water for 2060 Advisory Council, a 15-member group selected to develop recommendations aimed at stabilizing Oklahoma's water use through improved conservation and efficiency, held its first two meetings. Focusing on the pros and cons of incentives, the Council was afforded a unique opportunity to interact with selected public water supply representatives and learn about existing efficiency practices already in place in communities and rural water systems.

## From the Director (continued)

Chickasaw National Recreation Area, and key to the overall economic prosperity of south central Oklahoma. While the OWRB is typically guided by the state's long-standing groundwater law in conducting maximum annual yield investigations of Oklahoma's major groundwater basins, heightened concern for the Arbuckle-Simpson required that its study incorporate a whole new level of complexity—a legislative mandate to establish a withdrawal rate that would not reduce the natural flows of area springs and streams. That requirement not only necessitated an unprecedented level of data collection and monitoring, as well as significant funding to accomplish that work, but also revealed from the outset that the final EPS would likely result in much tighter restrictions on future withdrawals from the aquifer.

Prior to deliberating the action that would reduce the aquifer's EPS to one-tenth of its current default withdrawal limit, OWRB Board members were required to carefully consider the rippling impacts of their decision. At the Board meeting, parties on each side of the issue—including municipal officials; representatives of the Citizens for the Protection of the Arbuckle-Simpson Aquifer (CPASA), National Park Service, and Nature Conservancy; and legal counsel for local landowners—were provided a final opportunity to express their views. Chief among their concerns was implementation, specifically the time allotted for water users to address the considerable need for additional water and property rights and related management issues. In the end, exhibiting confidence in the work of countless experts and OWRB staff, along with the promise that the agency would develop a fair and sensible implementation strategy, the Board approved the new EPS.

As evidenced by three subsequent court filings, not everyone agrees with the Board's decision, declaring that the number should be higher or lower, that it should be slightly more or less protective of the resource. But what can't be argued is

The OCWP Instream Flow Workgroup met three times during 2013. Discussion primarily centered on a potential pilot study that would incorporate a process for addressing economic and related impacts resulting from establishment of instream flow requirements.

## Governor's Water Conference

The 34th Annual Oklahoma Governor's Water Conference was held in Midwest City in October. The conference attracted more than 400 water officials and citizens interested in Oklahoma's water resources and the latest developments concerning water planning, management, quality, and infrastructure financing issues. This year's keynote speaker was Steven Solomon, author of *Water: The Epic Struggle for Wealth, Power, and Civilization*. Attendees also heard from Oklahoma Lieutenant Governor Todd Lamb, EPA Regional Administrator Ron Curry, and Oklahoma Attorney General Scott Pruitt, among other key state and regional experts

*(continued on page 3)*

that sound science and data—utilizing the unique parameters mandated under Senate Bill 288—led to a fair and logical conclusion. On both the science and legal/policy front, the process was strengthened by experienced professionals utilizing the latest technology, extensive public information, and a well-planned rule-making and hearing procedure.

From a more general viewpoint, widespread interest in the Arbuckle-Simpson issue points out an encouraging trend. As we witnessed in developing the 2012 Update of the Oklahoma Comprehensive Water Plan, citizens are now more aware of water-related issues. And they are more vocal than ever before in advocating their particular interests in Oklahoma's surface and groundwater supplies. As I've said many times before, the subject of water isn't going away anytime soon. And that's a good thing.

In late October, the OWRB and Water Resources Research Center co-hosted another great Water Conference where more than 400 conferees heard from various state and national speakers. In addition to two fascinating roundtable sessions, discussion of prospects for drought in the state and region, and exploration of various conservation successes, the concurrent Research Symposium provided a forum for researchers and academia to present the latest in water research. And it was a great pleasure to present a predecessor of mine, former OWRB Director Patty Eaton, and long-time U.S. Geological Survey hydrologist, Bob Blazs, with 2013 Oklahoma Water Pioneer Awards.

The OWRB also received incredible recognition recently when the agency was named one of The Oklahoman's Top Workplaces—the only state agency among 50 organizations. The list was compiled solely from employee surveys. It's an enormous honor that directly reflects the supreme professionalism of our employees, both past and present, and unique pride they have for the OWRB. ♦

## Annual Report (continued)

highlighting the latest developments impacting Oklahoma's water resources. This year's Oklahoma Water Pioneer Awards were presented to Bob Blazs, 43-year veteran of the USGS, and Patty Eaton, former Secretary of Environment and OWRB Executive Director. Two roundtable discussions focused on the controversial topics of Conjunctive Management and Out-of-basin Transfers.

### Legal Developments

On June 13, Oklahoma won a historic legal victory in the case of Tarrant Regional Water District v. Herrmann when the U.S. Supreme Court unanimously upheld certain Oklahoma laws controlling state water against a challenge from the Tarrant Regional Water District, which serves a large area in north Texas. In 2007, Tarrant applied for a permit to take water from the Kiamichi River in southeastern Oklahoma and simultaneously filed a federal lawsuit against OWRB members. Tarrant challenged the legality of several Oklahoma statutes that place restrictions on the use of stream water out-of-state. After Oklahoma's legal team had won victories in U.S. District Court and again in the Court of Appeals, the Supreme Court definitively ruled that Tarrant has no right to cross the state border and take water from Oklahoma because (1) Oklahoma laws are within the state's authority and right to control its waters under the Red River Compact (a Congressionally-approved agreement among Oklahoma, Texas, Arkansas, and Louisiana), and (2) Oklahoma laws are not contrary to the Commerce Clause of the U.S. Constitution.

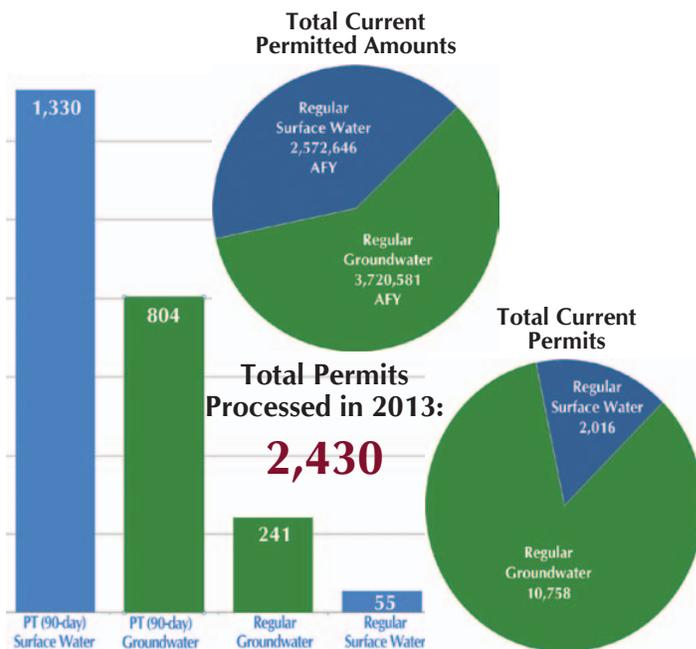
Two major cases in federal court involving claims by the Choctaw Nation of Oklahoma and the Chickasaw Nation regarding certain water sources in southeastern Oklahoma were stayed multiple times throughout 2013 to allow the parties to continue their efforts, which are currently ongoing, to reach agreed resolution of pertinent issues.

On October 23, the OWRB concluded a multi-year technical study and administrative process when it issued an order determining the maximum annual yield for the Arbuckle-Simpson Groundwater Basin in south-central Oklahoma. Among other things, the order determined that the equal proportionate share of the yield to be allocated to each acre of land overlying the basin is 0.20 acre-foot per acre per year. Appeals to the order have been filed in the District Courts of Pontotoc and Oklahoma Counties.

### Water Use Permitting

In 2013, the OWRB continued to receive a relatively high number of water use permit applications. Staff processed 2,134 Provisional Temporary (90 day) permit applications and 296 long-term stream water and groundwater applications during the year. Applications for stream water and groundwater permits were down only slightly from the last two years.

Most of the permit applications received in 2013 were for oil and gas exploration activities and agricultural operations. Applicants were most interested in groundwater, especially in western Oklahoma where stream flows were greatly reduced due to continuing drought conditions.



Suppliers of public water particularly in southwestern Oklahoma counties, including Harmon, Jackson, and Greer, experienced acute and long-term water supply concerns. A number of field investigations were conducted in response to complaints about declining stream flow, declining water levels in wells, and interference between junior and senior water right holders.

The OWRB's web-based Provisional Temporary permit program continues to provide enhanced convenience to Oklahoma water users, promoting the state's energy industry, and saving a considerable amount of staff time. Provisional temporary permits are the most common type of permit administered by the OWRB, and are primarily utilized for oil and gas exploration activities.

### Financial Assistance Program

In 2013, the OWRB approved 48 grants and loans totaling more than \$160 million to address water and wastewater infrastructure needs. Four bond issues were closed last year—two for the Drinking Water State Revolving Fund in the amounts of \$41.4 million for a new money issue and \$35.5 million for a refunding issue, and two for the State Loan Program totaling \$48.7 million.

OWRB financing in 2013 saved communities and water systems more than \$50 million over traditional financing avenues. The OWRB was able to pass along an additional gross savings of more than \$5 million to its current borrowers via the 2013 Refunding of the 2003 Drinking Water SRF Bond Issue.

The Water Infrastructure Credit Enhancement Reserve Fund (SQ764), effective November 1, is a \$300 million pledge of credit from the state, which was instrumental in Standard and Poor's subsequent rating upgrade to AAA of the State Revenue Bond Loan Program. The upgrade allows municipalities and rural water/sewer districts to receive loans from the program at lower interest rates than what they could receive through conventional financing.

(continued on page 6)



*Annual Report (continued)***Floodplain Management**

The OWRB has initiated seven FEMA RiskMAP Discovery projects throughout Oklahoma. RiskMAP is an innovative approach to fostering working partnerships between FEMA and participating NFIP communities, regional agencies, state agencies, tribes, and universities in identifying and communicating risk throughout local watersheds. The OWRB continues to train and accredit floodplain administrators in Oklahoma's 396 participating National Flood Insurance Program (NFIP) member communities. With assistance from the Oklahoma Floodplain Managers Association, the OWRB conducted 19 training opportunities in 2012-13. The OWRB and US Army Corps Engineers, along with local partners, are participating in the Silver Jackets program fostering data sharing and flood resiliency.

**Water Quality Standards**

In November 2013, the EPA sent final approval of all new and revised water quality standards made during the 2012-2013 Water Quality Standards Triennial Review. Revision topics included modification to regulatory default flows for implementing the Agricultural Beneficial Use; removal of the numeric criteria for color; clarification of the applicability of Seasonal Temperatures for calculating BOD load; restoring language determining the applicability of the Fish Consumption Beneficial Use; changes to the Beneficial Uses of certain segments of Canadian River, Rush Creek, and Wewoka Creek in Appendix A; updates to Numerical Human Health Criteria in Appendix G; and additions to Appendix H regarding Beneficial Use Designations for Certain Limited Areas of Groundwater.

The OWRB initiated participation in a joint study of phosphorus levels and Oklahoma's scenic rivers. The joint study will be managed by a six-member committee appointed by the Governors of Oklahoma and Arkansas. The committee will issue interim reports and hold at least one public meeting each year with stakeholders.

**Lake Rehabilitation**

The EPA funded project at Eucha Lake using floating wetlands for water quality benefits was completed in 2013. Results showed significant water quality benefits to fish and wildlife as well as improved water quality. Despite the extreme drought in Southwest Oklahoma, the EPA-funded aquatic plantings in Fort Cobb Lake have done well. The ODWC will continue to maintain these founder colonies of plants with hopes for their spread in the next several years. OWRB staff continued to work cooperatively with the Central Oklahoma Master Conservancy District (COMCD) to monitor and improve water quality in Lake Thunderbird, where an innovative system to oxygenate lake water has been installed. COMCD operation of the system has resulted in progressively improved quality of raw water supplied to Norman, Del City, and Midwest City over the last three years.

**Dam Safety Program**

Continuing last year's efforts to evaluate the hazard classification of more than 600 dams across Oklahoma,

**OWRB FY13 Expenditures and FY14 Budget**

Activity Name	FY13 Expended	FY14 Budgeted
Administration	\$2,339,603.43	\$2,382,564.00
Water Quality	3,829,174.55	4,210,386.00
Financial Assistance	2,260,172.30	5,652,073.00
Planning & Management	3,598,551.34	4,982,613.00
Information Technology	493,086.64	890,718.00
<b>Totals</b>	<b>\$12,520,588.26</b>	<b>\$18,118,354.00</b>
Fund Name		
General Appropriations	\$4,840,760.92	\$5,277,772.00
Drillers & Installers Indemnity Fund	0.00	50,000.00
OWRB Revolving Fund	1,621,014.67	1,991,926.00
Water Resources Revolving Fund	791,834.26	1,153,691.00
Drillers & Installers Regulation Fund	12,500.00	25,000.00
Water Infrastructure Development Fund	1,080,100.57	1,839,402.00
Federal Funds - OWRB	1,729,983.04	2,226,055.00
USGS Cooperative Agreement	469,422.00	286,425.00
DW Loan Administration Fund	499,697.39	2,239,548.00
CW Loan Administration Fund	1,475,275.41	2,928,535.00
CW Loan Fund	0.00	100,000.00
<b>Totals</b>	<b>\$12,520,588.26</b>	<b>\$18,118,354.00</b>

the OWRB conducted detailed reclassification analyses on 15 dams and is currently working with these owners to ensure their dams meet state requirements. A free inspection program was introduced for low hazard-potential dams. Inspection and maintenance training was conducted for private and municipal dam owners. Breach inundation maps of 15 high hazard-potential dams were developed, provided to dam owners at no cost, and integrated into site-specific Emergency Action Plans to assist emergency managers in the event of dam failure.

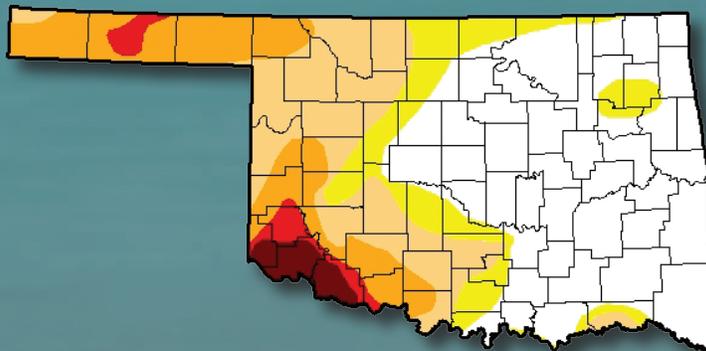
**Well Drillers & Pump Installers Program**

During 2013, OWRB staff licensed 29 new Well Drilling and Pump Installer firms and 69 new operators. Staff maintained licenses for 367 licensed firms and 667 licensed operators. The OWRB also received reports for 3,312 water wells, 1,735 monitoring wells, 2,031 geotechnical borings, and 2921 heat exchange wells completed in 2013. The OWRB maintains a well log database of more than 156,000 well completion, boring, geothermal, and plugging records that are accessible to the public via the OWRB website. ♦



# Drought Update

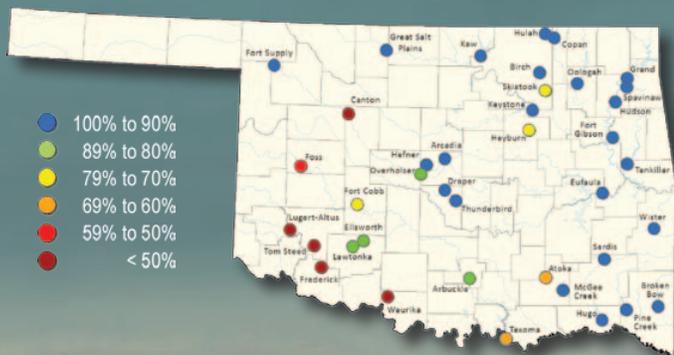
U.S. Drought Monitor  
December 17, 2013



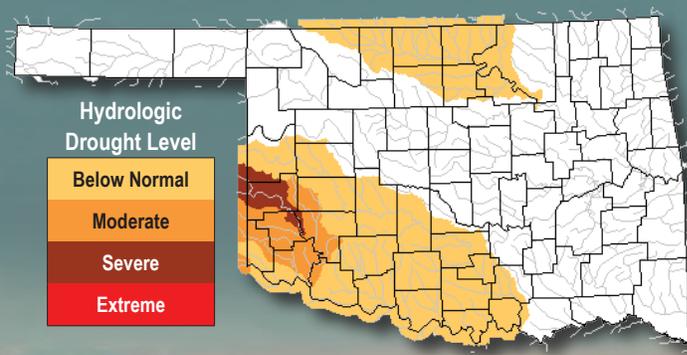
Drought Intensity & Percent of State in Drought Category

Abnormally Dry	50.78
Moderate Drought	38.65
Severe Drought	18.99
Extreme Drought	4.92
Exceptional Drought	2.40

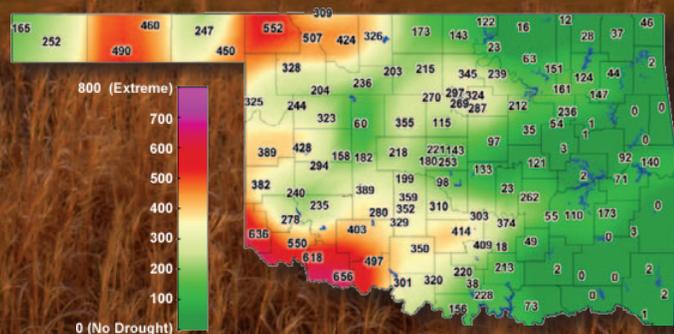
Reservoir Storage  
December 16, 2013



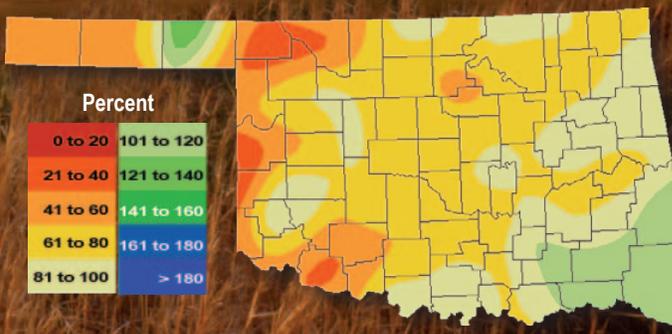
Streamflow (7-Day Average)  
December 15, 2013



Keetch-Byram Drought Index  
December 16, 2013



Percent of Normal Precipitation  
Last 90 Days (September 20 through December 18)



Data obtained from the National Drought Mitigation Center, U.S. Geological Survey, U.S. Army Corps of Engineers and Oklahoma Climatological Survey. For more drought information, and to obtain updated information on Oklahoma's drought and moisture conditions, go to [www.owrb.ok.gov/drought](http://www.owrb.ok.gov/drought).

[www.owrb.ok.gov](http://www.owrb.ok.gov)

*Rudy Herrmann, Chairman • Tom Buchanan, Vice Chairman • Linda Lambert, Secretary  
Bob Drake • Ford Drummond • Marilyn Feaver • Ed Fite • Jason Hitch • Richard Sevenoaks*

*Protecting and enhancing the quality of life for Oklahomans by managing and improving the state's water resources to ensure clean and reliable water supplies, a strong economy, and a safe and healthy environment.*



**4th Quarter 2013**

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## FINANCIAL ASSISTANCE PROGRAM UPDATE

*Loans & Grants Approved as of December 9, 2013*

### **FAP Loans—360 for \$890,865,000**

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 very competitive interest rates, averaging approximately 4.762 percent since 1986.

### **CWSRF Loans—274 for \$1,200,670,974**

The Clean Water State Revolving Fund (CWSRF) loan program was created in 1988 to provide a renewable financing source for communities to use 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—163 for \$867,703,300**

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—598 for \$51,969,016**

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—566 for \$33,776,351**

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—6 totaling \$418,848**

Through the OWRB's Drought Response Program, 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 Approved: 1,967 for \$3,045,403,489 Estimated Savings: \$1,042,867,369**

*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.ok.gov/financing](http://www.owrb.ok.gov/financing).**