

OKLAHOMA Water News

1st Quarter 2009

Inside

Stimulus Funding Available for Water Projects

OWRB Hosts 4th Annual Water Appreciation Day

OCWP Update

Garber-Wellington Study Update

2009 OCWP Status Report Released

OWRB Initiates First Statewide Water Conservation Grant Program

Video Demonstrates Citizen Awareness

2009 Begins With Nationwide Drought

Grand Lake System Receives EPA Water Quality Award

Drought Update



Stimulus Funding Available for Water Projects

The American Recovery and Reinvestment Act (ARRA) of 2009 was passed by Congress and signed by the President in February with the objective of energizing the economy and creating jobs. This stimulus package includes \$62 million for "shovel ready" water and wastewater infrastructure projects in Oklahoma through the Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF) programs. An additional \$70 million has been set aside for USDA Rural Development's Water and Wastewater Loans and Grants.

Because the objective of the stimulus package is to energize the economy and create jobs, the OWRB, Oklahoma Department of Environmental Quality (ODEQ), and USDA Rural Development (RD) are only considering water and wastewater projects with engineering, environmental, and financial documents that have already been approved.

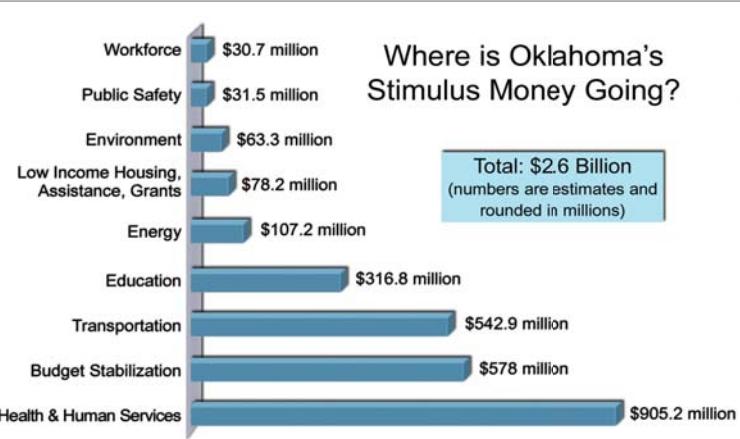
Funding through the CWSRF and DWSRF programs is only available for projects listed on the OWRB and ODEQ priority funding lists. The funds will be distributed through a grant/loan combination, with 20 percent of a project's expenditures up to \$2 million available as grants and 80 percent as loans.

Congress requires that at least 50 percent of the allotted SRF monies be used for additional subsidization, including forgiveness of principal, negative interest loans, and grants. In Oklahoma, 100 percent of the ARRA SRF monies will be utilized for additional subsidization. Twenty percent of the SRF appropriation must be for projects that address "green" infrastructure, including water-efficiency, energy-efficiency, storm water runoff mitigation, or projects that encourage environmentally sensitive project planning, design, and construction. The OWRB will consider five ARRA SRF projects at its April meeting.

From the Director

House Resolution 1105, otherwise known as the Omnibus Appropriations Act of 2009, has been passed by both chambers of Congress and signed by the President. Not to be confused with federal stimulus funding, this spending bill establishes the budgets of many federal agencies through September, the end of the federal fiscal year. Agency operations and projects were previously being funded through continuing resolutions, or temporary spending measures.

What is of particular importance to the OWRB and State of Oklahoma is this measure earmarks almost \$3 million for the Oklahoma Comprehensive Water Plan, Red River chloride control project, and associated water studies. Increasingly, the Administration and Congress are placing water at the forefront of



The Oklahoma Recovery & Reinvestment Web site (www.ok.gov/recovery/), which features this graph, enables citizens to track Oklahoma stimulus funds.

(continued on page 2)



Duane A. Smith, Executive Director
Oklahoma Water Resources Board

From the Director (continued)

the national agenda as citizens come to terms with increasing demands for finite water supplies, aging infrastructure, water quality threats, and the desire for enhanced protection for ecosystems and recreational interests.

We are particularly grateful to Senator Jim Inhofe and Representatives Tom Cole, Mary Fallin, and Frank Lucas who helped shepherd the state's omnibus water projects through many Congressional hurdles. Oklahoma is well-positioned as Rep. Fallin sits on the House Transportation and Infrastructure Committee while Sen. Inhofe is the Ranking Member on the Senate Environment and Public Works Committee. The OWRB's strong relationship with our Congressional delegation has been extremely beneficial as we seek out initiatives to implement meaningful water projects in Oklahoma and strengthen the state's ability to repel future water problems. In late February I traveled to Washington D.C. to visit with our delegation and their staff about water-related state priorities in FY-2010 Federal appropriations, including drafting of a new Water Resources Development Act. Such communication provides an effective way to keep our Congressional leaders abreast of the water situation in their home state as they are compelled to divide their attention between countless national concerns and our own State interests.

Of course, we are also very excited about passage of the American Recovery and Reinvestment Act, also referred to as the federal stimulus package, which includes \$62 million for Oklahoma water and wastewater projects through the Clean Water and Drinking Water SRF Programs as well as \$70 million in USDA Rural Development funds for similar projects in rural areas. Through these authorities, both loans and grants will be awarded for shovel-ready projects to stimulate the

FY09 Omnibus Bill Water Projects

Oklahoma water projects and funding amounts included in the final FY-2009 Omnibus bill include the following:

- Oklahoma Comprehensive Water Plan (Corps of Engineers Planning Assistance to States) = \$100,000
- Southeast Oklahoma Water Resource Study = \$311,000
- Washita River Basin Study = \$191,000
- Oklahoma Comprehensive Water Plan (Bureau of Reclamation) = \$65,000
- Red River Chloride Control = \$2.2 million
- Central Oklahoma Master Conservancy District = \$121,000
- TOTAL = \$2.988 Million

nation's economy as well as provide enhanced water and sewer service, safe drinking water, and improved water quality to Oklahomans.

In conjunction with conventional funding through the OWRB's Financial Assistance Program, stimulus dollars will help us provide the infrastructure required to deliver reliable water supply to Oklahomans. In turn, ongoing activities and initiatives related to the Water Plan update will assist in obtaining vital information to better understand Oklahoma's water and wastewater infrastructure needs. Furthermore, the OCWP will help planners and financiers prioritize critical need areas where inadequate treatment and/or delivery create a barrier between water and its users and limit local economic development. From this viewpoint, the FAP and OCWP are collectively providing economic stimulus to Oklahoma.

OWRB Hosts 4th Annual Water Appreciation Day

On March 10, the OWRB hosted the fourth annual Water Appreciation Day at the Capitol. In the fourth floor rotunda, 26 organizations gathered to set up exhibits and share their unique perspectives and contributions to the management, protection, and enhancement of Oklahoma's water resources.

Participants included the Oklahoma Geological Survey, Oklahoma Water Resources Research Institute, Camp Dresser McKee (lead OCWP engineering firm), Nature Conservancy, Oklahoma Floodplain Managers Association, Oklahoma Climatological Survey, Oklahoma Aquarium, Oklahoma Department of Environmental Quality, Oklahoma Sustainability Network, Sierra Club, US Army Corps of Engineers, Oklahoma Waterways Advisory Board, Natural Resources Conservation Service, Conservation Commission/OACD, Oklahoma Corporation Commission, Oklahoma Department of Mines, US Bureau of Reclamation, US Geological Survey, Oklahoma Rural Water Association, Oklahoma Municipal League, Oklahoma Clean Lakes & Watersheds Association, Oklahoma Ground Water Association, and USDA Rural Development.





Recent Developments

- The Regional Input Meeting Final Report is now available. Go to <http://environ.okstate.edu/owrri/waterplan/index.asp> to download a copy or contact the OWRRI at 405-744-9994. This report summarizes the public participation process, analyzes RIM recommendations, and provides the agenda for the Planning Workshops.
- The 2009 OCWP Status Report is also available. Go to www.owrb.ok.gov or contact the OWRB for a free copy.

Upcoming

- The OCWP Planning Workshops will be held on June 4, August 13, and October 22 at the Metro Technology Center's Springlake Campus in Oklahoma City. Discussion will center upon the 10 workshop themes identified through the Local and Regional Meetings. Sessions and themes are listed below.

Session One (8 am - 12 pm) -- Water Supply:

- Balancing Water Supply & Demand
- Water Conservation
- Water Availability
- Surface-Ground Water Relationship
- Land Use Practices

Session Two (2 pm - 6 pm) -- Water Management:

- Water Sales and Transfers
- Inter-Governmental Water Resource Management
- Inter-Agency Water Resource Management
- Stakeholder Involvement and Conflict Management
- Local and Regional Issues

- The Basic Water Science Seminar, previously scheduled for April, will be held on May 14-15 also at Metro Tech Springlake in Oklahoma City.

Water Plan Objectives

- Characterize demands by water use sector.
- Identify reliable supplies to meet forecasted demands.
- Perform technical studies in support of the evaluation of emerging water management issues.
- Engage comprehensive stakeholder involvement to make recommendations regarding the management of Oklahoma's water resources.
- Make "implementable" recommendations regarding the future of water management in Oklahoma based upon technical evaluations and stakeholder input.



Goals of the OCWP Update

- To provide safe and dependable water supply for all Oklahomans while improving the economy and protecting the environment.
- To provide information so that water providers, policy-makers, and water users can make informed decisions concerning the use and management of Oklahoma's water resources.

For more information on the OCWP, visit the OWRB's website at www.owrb.ok.gov. For questions and comments concerning policy development and public meetings, contact the OWRRI at 405-744-9994, by e-mail at waterplan@okstate.edu, or go to <http://okwaterplan.info>.

Garber-Wellington Study Update

A team consisting of USGS and OWRB staff measured more than 300 wells in a four-week period in February and March. Data from the study will be used to update a potentiometric surface (water-level) map from measured water levels collected in 1986-87, and to determine how the aquifer storage has changed over the past 20 years.

As part of a cooperative effort between the OWRB and the Oklahoma Climatological Survey (OCS), the OWRB is also installing two observation wells at Oklahoma Mesonet stations in Shawnee and Spencer with assistance from local

well drillers, Loman Drilling (Shawnee) and Vannoy & Son Drilling (Nicoma Park).

Mesonet stations measure precipitation, temperature, barometric pressure,



New observation well at the Shawnee Mesonet station.

relative humidity, wind speed and direction, solar radiation, soil temperature, and soil moisture. These climatic data, when used in conjunction with water-level data, will provide researchers with information essential to understanding the aquifer and how it responds to variations in climatic factors.

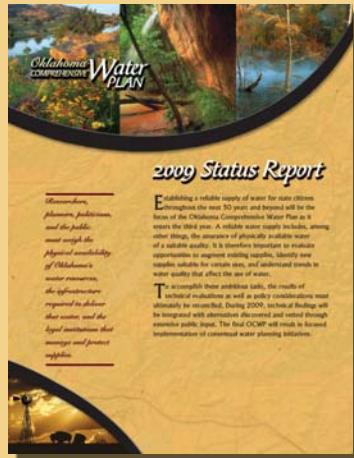
In March, Dr. Stan Paxton, Studies Chief of the USGS Oklahoma Water Science Center, led a field trip to exposures of the Garber Sandstone.

By examining several outcrops between Guthrie and Norman, study team members learned about the lithofacies, stratigraphy, and depositional setting of the Permian age sandstone. Inspecting surface exposures of the aquifer provides researchers a better understanding of the hydrologic properties and water quality of the aquifer.



Dr. Stan Paxton, USGS, discusses geological formations at Lake Arcadia with the study team.

2009 OCWP Status Report Released



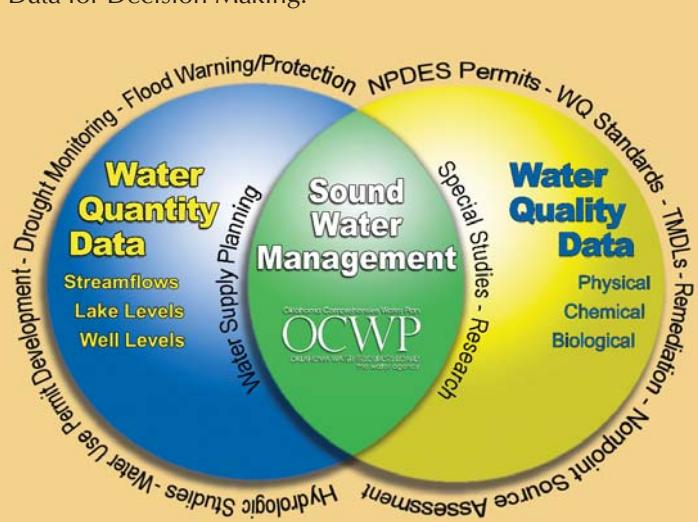
The recently released 2009 OCWP Status Report details the latest developments concerning the two primary phases of the Water Plan process: policy development (public participation) and technical studies and research. Additionally, preliminary data is included, such as information on water use and population projections, as well as updates on ongoing studies and explanations of water management processes, such as the excerpted article below titled "Data for Decision Making."

The Status Report is now available for download at www.owrb.ok.gov. To receive a free copy by mail, please contact the OWRB at 405-530-8943 or by e-mail at pubinfo@owrb.ok.gov.

Data for Decision Making

Data is a critical component of water management. It plays an integral role in water rights administration, water availability studies, planning, drought monitoring, water quality management, interstate water compacts, and countless other efforts.

The OWRB works closely with numerous state and federal agencies to gather and utilize all the data necessary for sound water resource management. Hydrologic studies enable water use permit decisions and even help protect citizens from flooding and drought. Stream and lake remediation efforts are focused through the collection of sufficient physical, chemical, and biological data, all resulting in cleaner water for drinking and the environment. Increasingly, water quantity information is utilized to make quality-related decisions and vice-versa. This data must be timely, dependable, and accurate to arm decision makers with the tools necessary for managing and protecting the surface and groundwaters of Oklahoma.

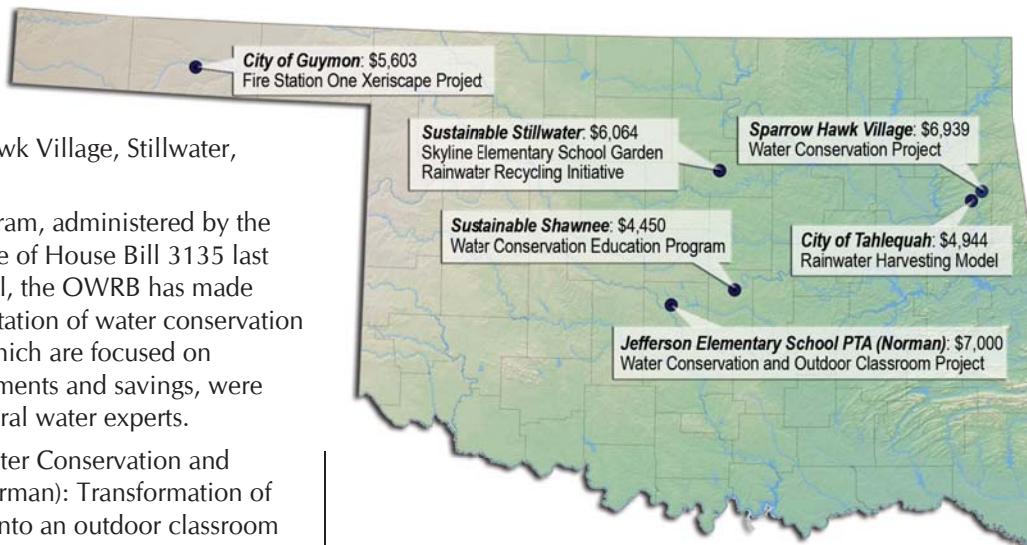


OWRB Initiates First Statewide Water Conservation Grant Program

At the OWRB's April meeting, six OCWP water conservation grants were awarded to community projects in Norman, Tahlequah, Sparrow Hawk Village, Stillwater, Shawnee, and Guymon.

The Water Conservation Grant Program, administered by the OWRB, was created through passage of House Bill 3135 last year. Under the provisions of the bill, the OWRB has made available \$35,000 for the implementation of water conservation projects. These six projects, all of which are focused on significant water efficiency improvements and savings, were selected by a panel of state and federal water experts.

- Jefferson Elementary School Water Conservation and Outdoor Classroom Project (Norman): Transformation of an under-utilized public space into an outdoor classroom featuring xeriscape and native habitat gardens, a teaching demonstration area, and a rainwater collection system. The classroom will be used for implementing water conservation techniques on school grounds and educating students, teachers, and the public about the importance of water conservation.
- City of Tahlequah Rainwater Harvesting Model: Capturing and storing rainwater in a 6,000 gallon cistern on the Tahlequah High school campus to reuse for watering vegetation, trees, grass, and other landscaped areas. An additional goal of the project is to minimize stormwater runoff at the site as well as the overloading of local tributaries that feed the Illinois River and Lake Tenkiller. Educational materials directly related to stormwater management and rain water harvesting will also be developed.
- Sparrow Hawk Village Water Conservation Project: Capturing and storing rainwater at a community building while equipping one neighborhood residence with a harvesting system to use recycled rainwater to flush toilets and for irrigation. This project will be used as a demonstration for other homeowners with the goal of widespread application throughout the community, thus helping to alleviate water demands on the rural water district that is currently providing their water supplies.

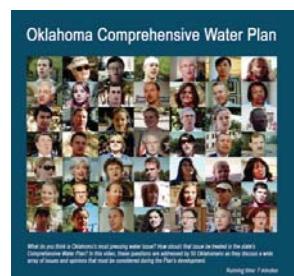


- City of Guymon Fire Station One Xeriscape: Incorporation of "green building strategies" with installation of rainwater and snowmelt collection and grey water systems for fire truck maintenance, tank filling, and watering landscaped areas. The facility will also incorporate xeriscaping and drought tolerant/native landscaping.
- Skyline Elementary School Garden Rainwater Recycling Initiative (Sustainable Stillwater*): Installation and utilization of a rain harvesting cistern by teachers and classes to water their school garden and support advancement of a water-related curriculum. This project will also address an existing erosion problem. Project team members will develop new extension fact sheets and educational presentations aimed at promoting water conservation in the community.
- Shawnee Water Conservation Education Program (Sustainable Shawnee*): Construction of a native plant and drip irrigation demonstration project in a local downtown park. The program will focus on public awareness, youth education, and low water use landscape design, incorporating various outreach initiatives to encourage water savings throughout the community.

*Sustainable Stillwater and Sustainable Shawnee are chapters of the Oklahoma Sustainability Network.

Video Demonstrates Citizen Awareness

Oklahoma citizens were captured on video candidly discussing what they believed to be the most pressing water issues facing the state. Shot in October 2008 at various locations, the short documentary video underscores the vast array of issues and opinions that must be considered during the development of the OCWP. Participants included random individuals at public locations, such as the Oklahoma City Zoo, downtown Oklahoma City Library, and Oklahoma State University Campus, as well as former and current State officials, including Governor Brad Henry.



Zoo, downtown Oklahoma City Library, and Oklahoma State University Campus, as well as former and current State officials, including Governor Brad Henry.

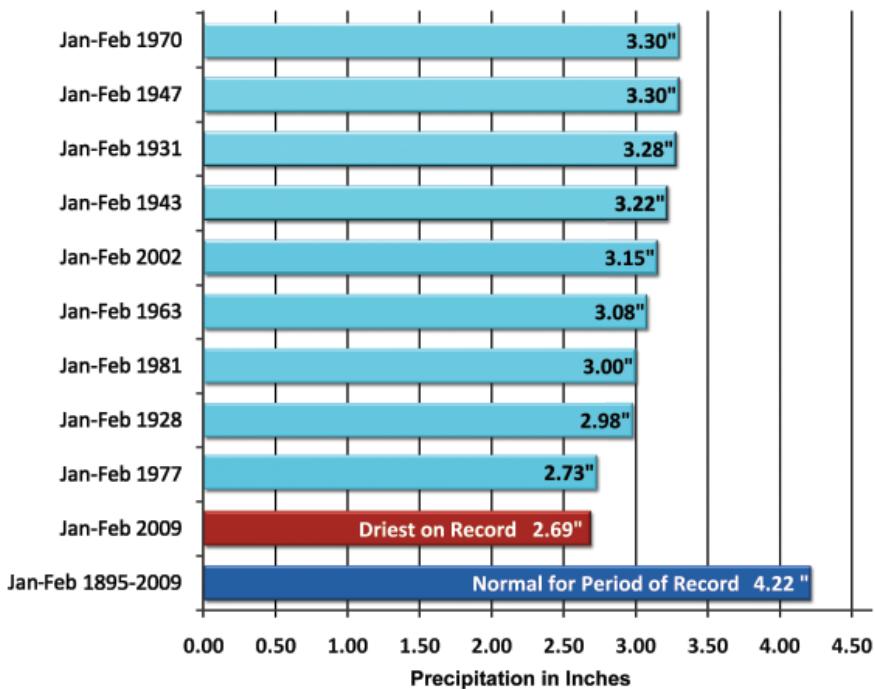
The issues raised by video participants were often identical or very similar to issues elicited through the OCWP's formal public input process, including water conservation, water quality, water rights, drought, flooding, and how water supply is directly linked with economic growth.

To view the video, go to www.owrb.ok.gov and click on "OCWP Video" under "featured" or e-mail the OWRB at pubinfo@owrb.ok.gov.

2009 Begins With Nationwide Drought

According to the National Climatic Data Center, the first two months of 2009 were the driest start of any year in the U.S. since record keeping began in 1895. Nationwide, 2.69 inches of rain fell during January and February. Oklahoma only experienced 1.24 inches of rain during that period, making it the 11th driest year for the state. (However, rainfall during early March tempered dry conditions somewhat.)

Ten Driest Years on Record in US for January and February



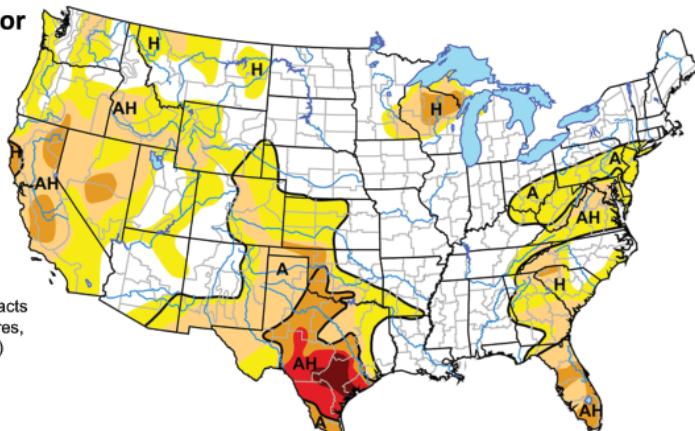
In terms of precipitation, this chart indicates the 10 driest January-February periods on record in U.S. history. The nation's normal rainfall during the year's first two months is 4.22 inches. Data courtesy National Climatic Data Center.

U.S. Drought Monitor

March 31, 2009

Intensity:
 D0 Abnormally Dry
 D1 Drought - Moderate
 D2 Drought - Severe
 D3 Drought - Extreme
 D4 Drought - Exceptional

Drought Impact Types:
 ↗ Delineates dominant impacts
 A = Agricultural (crops, pastures, grasslands)
 H = Hydrological (water)



While conditions are certainly bad in Oklahoma, Texas is experiencing the brunt of extended drought impacts. Portions of south central Texas are exceptionally dry, as indicated by the March 31, 2009, issue of the U.S. Drought Monitor, a weekly publication that reports the degree and extent of the nation's dry conditions, available online at <http://www.drought.unl.edu/dm/monitor>.

Grand Lake System Receives EPA Water Quality Award

The Grand Lake Public Works Authority, which has been responsible for considerable wastewater handling improvements in northeast Oklahoma, has been recognized by the U.S. Environmental Protection Agency for its efforts to fund and implement wastewater treatment system improvements.

At its monthly meeting on February 10, the members of the OWRB officially recognized the Authority's recent receipt of the 2008 Performance and Innovation in the SRF (State Revolving Fund) Creating Environmental Success, or "PISCES," Award.

The EPA award specifically recognizes states and communities that have exhibited innovation and exemplary financial performance in advancing EPA's Clean Water Act goals.

"The OWRB joins the EPA in recognizing the Grand Lake Public Works Authority for their innovation and foresight of action in helping to resolve the water quality problems of one of Oklahoma's most treasured resources," says Duane Smith, OWRB Executive Director.

Combining \$335,000 in OWRB State Revenue Bond Loan Program funds with \$3,500,000 from the Clean Water SRF Loan Program through the OWRB, Grand Lake Public Works Authority constructed a centralized wastewater collection and treatment project to serve Monkey Island residents in Delaware County.

The new system consolidates eight separate regional septic systems into one multiple cell lagoon treatment facility. For years, an overabundance of lakeside septic tanks have been the cause of water quality problems in Grand Lake, one of the nation's premier retirement and recreation areas.

Drought Update

Reservoir Storage

As of March 31, six reservoirs (of 31 selected major federal reservoirs across Oklahoma, see right) are operating at less than full capacity, according to information from the U.S. Army Corps of Engineers (Tulsa District); two reservoirs have experienced lake level decreases since March 3.

Palmer Drought Severity Index

According to the latest Palmer Drought Severity Index (March 28, bottom), state moisture conditions have improved slightly due to recent rainfall. The South Central and Southwest climate divisions are in the "mild drought" category.

Standardized Precipitation Index

The latest monthly Standardized Precipitation Index (through February, bottom) indicates near long-term dryness in all climate divisions except the Northeast.



Storage in Selected Oklahoma Lakes & Reservoirs (March 31, 2009)

LAKE	Change in Elevation (feet) 3/3/09-3/31/09	Current Flood Control Storage (acre-feet)
North Central (2)		
Fort Supply	0.05	845
Great Salt Plains	0.69	8,224
Kaw	5.54	77,702
Northeast (3)		
Birch	5.59	7,153
Copan	4.24	25,165
Fort Gibson	4.23	101,064
Grand	1.95	88,099
Hudson	2.74	35,887
Hulah	9.53	52,575
Keystone	2.23	86,923
Oologah	3.00	121,565
Skiatook	3.64	37,523
West Central (4)		
Canton	0.57	4,763
Foss	0.02	276
Central (5)		
Arcadia	0.74	1,581
Heyburn	2.32	2,182
Thunderbird	0.17	-360
East Central (6)		
Eufaula	0.99	127,776
Tenkkiller	2.10	36,942
Southwest (7)		
Fort Cobb	0.01	1,051
Lugert-Altus	0.89	-41,136
Tom Steed	-0.17	-25,601
South Central (8)		
Arbuckle	-0.27	-10,584
McGee Creek	0.02	-4,122
Texoma	0.17	13,523
Waurika	0.03	-8,904
Southeast (9)		
Broken Bow	2.60	36,183
Hugo	3.30	27,821
Pine Creek	4.94	13,713
Sardis	0.32	5,549
Wister	3.40	25,483

Standardized Precipitation Index (through February 2009)					Palmer Drought Severity Index
CLIMATE DIVISION	3-month	6-month	9-month	12-month	March 28, 2009
Northwest (1)	Very Dry	Near Normal	Moderately Wet	Near Normal	Near Normal
North Central (2)	Moderately Dry	Near Normal	Moderately Wet	Moderately Wet	Very Moist Spell
Northeast (3)	Near Normal	Near Normal	Moderately Wet	Very Wet	Very Moist Spell
West Central (4)	Extremely Dry	Near Normal	Near Normal	Near Normal	Incipient Moist Spell
Central (5)	Very Dry	Very Dry	Near Normal	Near Normal	Near Normal
East Central (6)	Very Dry	Very Dry	Near Normal	Near Normal	Near Normal
Southwest (7)	Very Dry	Very Dry	Near Normal	Near Normal	Mild Drought
South Central (8)	Very Dry	Extremely Dry	Very Dry	Near Normal	Mild Drought
Southeast (9)	Extremely Dry	Very Dry	Moderately Dry	Near Normal	Incipient Moist Spell

For more drought information, and to obtain updated information on Oklahoma's drought and moisture conditions, go to www.owrb.ok.gov/supply/drought/drought_index.php.

www.owrb.ok.gov

*Mark Nichols, Chairman • Rudy Herrmann, Vice Chairman • Linda Lambert, 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.



1st Quarter 2009

Darla Whitley, Editor

Staff Writers:
Brian Vance & Darla Whitley

Graphics & Layout:
Darla Whitley & James Leewright

Photography:
Barry Fogerty

E-mail comments, questions,
or article submissions to
pubinfo@owrb.ok.gov
or call us at (405) 530-8800

The Oklahoma Water News is published by the Oklahoma Water Resources Board as authorized by Duane A. Smith, Executive Director. Eighty-eight hundred copies have been printed by University Printing Services at an approximate cost of 38 cents each. Copies have been deposited at the Publications Clearinghouse of the Oklahoma Department of Libraries.

FINANCIAL ASSISTANCE PROGRAM UPDATE

Loans & Grants Approved as of March 10, 2009

FAP Loans—321 totaling \$629,750,000

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—189 totaling \$695,985,352

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—86 totaling \$449,200,042

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—515 totaling \$45,487,528

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—545 totaling \$32,238,529

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—2 totaling \$200,000

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: 1,658 totaling \$1,852,861,451

Estimated Savings: \$584,508,580

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.