

# OKLAHOMA WATER RESOURCES BOARD

## Oklahoma Comprehensive Water Plan

As a critical component of the OCWP's policy development and public participation phase, 11 Regional Input Meetings (RIMs) were held throughout the state in 2008. At the meetings, participants selected from wide-ranging backgrounds identified Oklahoma's emerging water problems and concerns, and then narrowed those down to priority water issues for more intense discussion of solutions at smaller planning workshops, to be held in 2009. In addition, an educational water law seminar was held in July.

Technical work in support of the Water Plan included initiation of the Water Supply/Demand Study, including development of a water allocation model to assist in this analysis, completion of a statewide public water system survey to collect comprehensive water supply data from hundreds of suppliers, and the formation of water use stakeholder groups to provide input into the demand forecast methodologies. Areas of research during 2008 included the initiation of efforts to investigate marginal quality water resources and uses, groundwater recharge potential, and surface water quality trends.

## OCWP Surface Water Quality Trends Analysis

In late 2008, a workgroup consisting of local, state, federal, and academic water quality experts was formed to assist OWRB staff in determining a scope of work for the planned OCWP Surface Water Quality Trends Analysis. Specifically, all existing data sources will be inventoried and "mined" to establish ongoing trends in water quality for individual surface waters throughout the state. Waters will be assessed for multiple parameters, including nutrients, minerals, sediments, and bacteria. Results, which will provide planners with invaluable information on the viability of both current and future water supplies, will be included in the Oklahoma Comprehensive Water Plan, due for completion in 2011.

## OWRB Leverages \$36 Million for New Water Projects

In October, the OWRB and Department of Environmental Quality (ODEQ) made approximately \$2.5 million in funding available to leverage construction of water projects throughout Oklahoma. The funds accrued for the past two years from state Gross Production Tax revenues earmarked equally for both the Oklahoma Comprehensive Water Plan and OWRB State Financial Assistance Program (FAP). The released money is being used to match an EPA Drinking Water State Revolving Fund (DWSRF) program Capitalization grant of more than \$13

million. In turn, the combined funds allow the OWRB to leverage \$36 million in loans for water treatment and distribution projects.

The move should help to mitigate the potential impact of the nation's current financial crisis on the substantial infrastructure financing requirements of Oklahoma's cities, towns, and rural water systems.

Community water systems receiving funds include Ardmore, Broken Bow, Cherokee, Coweta, Duncan, Edmond, Lawton, Osage #15, Skiatook, Rogers #3, Jay, Tuttle, Wagoner #7, Rogers RWD #5, and Checotah.

### FY 2008 Expenditures & FY 2009 Budget

Activity Name	FY08 Expended	FY09 Budgeted
Administration	\$2,484,654.15	\$2,891,736.00
Water Quality	3,757,036.19	3,588,168.00
Financial Assistance	1,793,130.21	2,667,462.00
Planning & Management	3,730,185.73	5,037,813.00
Secretary of Environment	9,548,516.31	9,867,958.00
<b>Totals</b>	<b>\$21,313,522.59</b>	<b>\$24,053,137.00</b>

Fund Name	FY08 Expended	FY09 Budgeted
General Appropriations	\$4,433,183.21	\$4,601,524.00
Drillers & Installers Indemnity Fund		75,000.00
Rural Economic Action Plan (REAP) Fund	325,028.48	112,214.00
Water Resources Revolving Fund	380,571.33	527,288.00
Drillers & Installers Regulation Fund	14,216.90	11,046.00
Water Infrastructure Development Fund	1,365,893.44	2,379,272.00
Federal Funds--OWRB	2,203,240.06	2,524,700.00
Federal Funds--OSE	9,368,007.51	9,648,499.00
Environmental Remediation Fund		18,000.00
USGS Cooperative Agreement	627,747.42	308,650.00
Interagency Reimbursement Fund	1,246,729.71	1,740,676.00
DW Loan Administration Fund	446,880.83	791,696.00
CW Loan Administration Fund	870,272.44	914,572.00
CW Loan Fund	31,751.26	400,000.00
<b>Totals</b>	<b>\$21,313,522.59</b>	<b>\$24,053,137.00</b>

**Original Funds  
(Gross Production Tax):**  
\$2.6 million

**Total Funded  
(Federal plus Match):**  
\$13,072,828

**Total Savings:**  
\$3,921,848

**LEVERAGED AMOUNT:**  
> \$36 million  
> 1,400 direct jobs

# Annual Report 2008

## *Arbuckle-Simpson Hydrology Study Update*

The Arbuckle-Simpson Hydrology Study, which was initiated in October 2003, is nearing completion. The hydrologic investigation is essentially complete, with researchers writing final reports. Currently, the primary focus of the Study is conducting computer simulations with the groundwater-flow model to test different water management options for the Arbuckle-Simpson aquifer. These simulations are based on determining the effects of groundwater withdrawals on stream flows at different equal proportionate shares and different maximum annual yields.

OWRB staff continue to evaluate various management strategies and methods to implement Senate Bill 288 in keeping with technical, legal, and administrative constraints. The OWRB plans to hold informal public meetings in the aquifer area in 2009 to present initial results of the simulations and to solicit input on various management strategies.

## *Garber-Wellington Water Management Study*

The Garber-Wellington Water Management Study was initiated in June 2008 to address growing concerns about the future of water availability in central Oklahoma. The primary purpose of the study is to obtain the necessary hydrologic information to develop a water management plan that will ensure sufficient good quality water to support a growing population and economy.

The four-year investigation is a cooperative effort between OWRB, Association of Central Oklahoma Governments (ACOG), U.S. Geological Survey (USGS), U.S. Bureau of Reclamation, Oklahoma Geological Survey (OGS), Tinker Air Force Base, and other state and federal agencies. The USGS will be key in developing a groundwater flow model that will be used to predict the impacts of long-term groundwater withdrawals on the aquifer and to simulate water management strategies.

Current efforts include developing the geohydrologic framework and water budget. In February, USGS staff plan to measure water levels in about 300 wells across the aquifer to update the 1986-87 potentiometric surface (water level) map. Comparison of the two maps will provide information on how the aquifer storage has changed over the past 20 years.

**Garber Wellington Aquifer**



## *Water Quality Programs*

The OWRB's Water Quality Division has been working diligently in the past year to build partnerships to address the state's data needs. The Oklahoma Cooperative Program between the OWRB and the United States Geological Survey (USGS), which includes stream gaging and technical studies critical to the update of the Comprehensive Water Plan, provides much needed information to assist in State water quality and quantity management.

Through a successful partnership with the Grand River Dam Authority (GRDA), the OWRB continues bathymetric mapping on Grand Lake and the agency is conducting detailed dissolved oxygen monitoring on Grand and Lake Hudson to support FERC re-licensing. Additionally, Oklahoma Water Watch, the OWRB's volunteer monitoring program continues to educate and work with volunteer groups on both lakes.

The OWRB's efforts to enhance habitat and water quality in Oklahoma lakes continues through projects focusing on the introduction of aquatic plants in Stanley Draper Lake, Grand Lake, Hudson Lake, and its new federal/state/municipally funded project in Lake Atoka. Atoka plantings for the 2008 season did exceptionally well and OWRB staff are optimistic about the project's future. The Stanley Draper EPA funded project has ended after three seasons and will now begin a maintenance program through the OWRB's partnership with Oklahoma City.

As part of the OWRB's Beneficial Use Monitoring Program (BUMP), 47 lakes were sampled during the 2007-2008 period. Staff are considering the incorporation of probabilistic monitoring into the existing program, which would allow continued sampling of a large number of water bodies along with additional intensive monitoring. An additional EPA grant was provided to begin monitoring for dissolved metals on selected lakes where little or no previous toxics data existed.

An interim revision of the Water Quality Standards completed in 2008 resulted in the addition of 84 lakes and streams to the Oklahoma Water Quality Standards. These water bodies were all identified as public water supplies. As such, water quality criteria is specifically established to protect human health from consumption of pollutants through drinking water and eating fish. These water bodies now have the Public and Private Water Supply beneficial use designated in Appendix A of the Standards document.

## *Environmental Benefits Reporting*

Also in 2008, the OWRB began working with US EPA staff to utilize Geographic Information Systems (GIS) in prioritizing and maximizing benefits of state projects funded through the Clean Water State Revolving Fund (CWSRF) program. Through this powerful new system, GIS data (including BUMP data, Water Quality Standards regulations, and wastewater project information) is used to identify environmentally sensitive watersheds and to prioritize projects that would maximize the benefits to those watersheds.

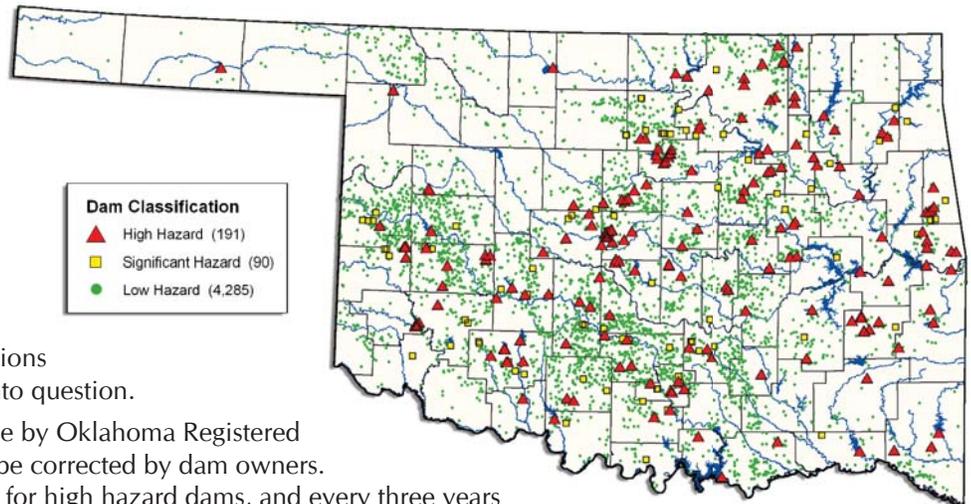
## Dam Safety Program

In addition to approving applications and reviewing plans for the construction, alteration, or repair of jurisdictional dams in Oklahoma, the OWRB maintains the state's database and records of dams, including required inspection reports. Reports finding deficiencies are addressed by owners in cooperation with the OWRB. OWRB staff conduct individual dam site inspections when the condition of a dam is called into question.

The OWRB requires inspections be made by Oklahoma Registered Professional Engineers and deficiencies be corrected by dam owners. Inspections must be performed annually for high hazard dams, and every three years for significant hazard dams. Every five years, the OWRB reviews the areas below low hazard dams to determine if the hazard classification has changed.

The OWRB also works closely with the Oklahoma Conservation Commission and the NRCS to oversee 2,105 watershed flood control dams.

High and significant hazard dams are given higher priority by OWRB staff to ensure periodic inspections are performed, and most importantly, to ensure every high hazard dam has an Emergency Action Plan (EAP) in place.



## Financial Assistance Program

In 2008, the OWRB's Financial Assistance Program had another outstanding year, providing almost \$164 million in funding through loans and grants for new construction and rehabilitation of water and wastewater infrastructure. With the dual goals of maintaining sound financing and environmental protection, the OWRB takes pride in the natural AAA rating on all bond issues and the use of innovative methods to meet Oklahoma's infrastructure needs.

Most recently, the OWRB completed its first Non-Point Source project with the Tulsa Conservation Reserve Enhancement Program (CREP) loan, which will fund land conservation in Lakes Eucha and Spavinaw Watersheds. The OWRB is also revitalizing its leveraging loan program to meet market changes and match borrowers needs. In line with continued efforts to make Oklahoma community water projects successful, the OWRB has created a disadvantaged program within the DWSRF, which allows for 30 year extended term financing. Through all these efforts the OWRB has helped Oklahomans save over \$500 million in water and wastewater infrastructure projects.

### 2008 Loans and Grants

#### CWSRF Loans

Bethany PWA	\$5,140,000
Guymon UA	\$16,400,000
Pawnee PWA	\$1,575,000
Roland UA	\$3,855,000
Tulsa MUA	\$1,250,000
	<u>\$28,220,000</u>

#### DWSRF Loans

Bartlesville MA	\$40,445,000
Cache PWA	\$2,000,000
Creek Co. RWD #7	\$3,290,000
Duncan PWA	\$5,770,000
Goltry PWA	\$530,000
Guthrie PWA	\$8,000,000
Guthrie PWA	\$7,320,000
Guymon UA	\$4,175,000
Jay UA	\$2,470,000
Lawton WA	\$10,845,000
Muskogee MA	\$30,410,000
Pauls Valley MA	\$10,325,000
Rogers Co. RWD #3	\$4,500,000
Wagoner Co. RWD #5	\$1,520,000
	<u>\$131,600,000</u>

#### Emergency Grants

Canton PWA	\$49,512
Coalgate PWA	\$75,000
Healdton MA	\$100,000
Hooker MA	\$75,000
Hulbert PWA	\$75,000
Pittsburg PWA	\$80,000
South Coffeyville PWA	\$100,000
Talihina PWA	\$70,000
Valliant PWA	\$100,000
Vera	\$100,000
Vian PWA	<u>\$75,000</u>
	\$899,512

#### REAP Grants

Adair Co. RWSSWMD #2	\$99,999
Alex MA	\$99,800
Atoka Co. RWD #2	\$99,999
Barnsdall	\$89,900
Beckham Co. RWD #3	\$95,690
Beckham Co. RWSSWMD #2	\$99,850
Bluejacket PWA	\$99,864
Bromide PWA	\$99,900
Burbank PWA	\$99,980
Byars PPWA	\$79,900
Canadian PWA	\$109,990
Canute PWA	\$104,000
Cherokee Co. RWD #7 - Welling	\$39,069
Crowder PWA	\$99,999
Delaware Co. RWSSWMD #10	\$98,653
Dewey Co. RWD #1	\$89,950
Goltry PWA	\$74,000
Hydro	\$99,900
Konawa	\$98,998
Lincoln Co. RWD #1	\$99,999
Marshall	\$99,999
McIntosh Co. RWD #13	\$99,116
Millerton PWA	\$79,999
Nash	\$99,250
Oakland PWA	\$79,999
Okay PWA	\$99,000
Pawnee Co. RWD #5	\$88,965
Quinlan Community RWD #1	\$99,999
Roger Mills Co. RWSSWMD #3	\$91,975
Seminole Co. RWSWMD #1	\$119,000
Stephens Co. RWD #4	\$79,999
Vera	\$99,999
Wilson PWA	\$81,500
Woodward Co. RWD #1	<u>\$140,000</u>
	\$3,238,241

