

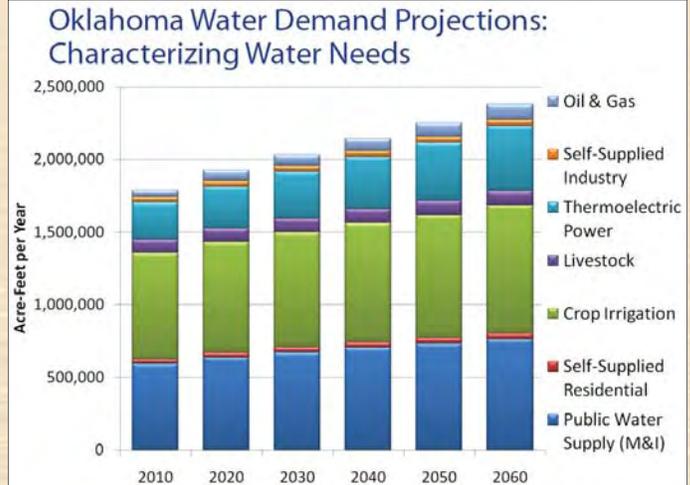
Oklahoma Water Resources Board

2009 Annual Report

Oklahoma Comprehensive Water Plan

Final water demands by water use sector and basin have been completed. Related to the supply/demand phase of the OCWP, CDM is correlating weather impacts on municipal use, downscaling demands to the water system/provider level, and assessing conservation measures. Also in 2009, CDM completed "Instream Flows in Oklahoma and the West," a report that examines the existing policy framework employed by Oklahoma and other western states related to instream flows, those non-consumptive uses of water required for recreational and environmental needs. The Oklahoma H₂O supply/demand gap tool, developed to identify areas of potential water shortages through 2060 in each of the 82 OCWP stream systems, continues to be modified to account for potential climate change impacts, legal constraints, and other nontraditional planning considerations. In 2009, a reservoir yield model was developed along with specific water allocation models for the Kiamichi and Little River watersheds. Work continued on the Water Quality Trends Analysis, and members of the OCWP Artificial Recharge and Marginal Quality Water Resources Technical Work Groups held several meetings to address those specific planning issues.

The Basic Water Science Seminar, held in May, was attended by about 200 OCWP participants who learned about technical subjects pertaining to water planning. Three Planning Workshops were held in Oklahoma City during June, August, and October. Workshop discussants formulated and refined draft water resource management strategies to address issues that were identified in previously held input meetings. Those strategies will be finalized during the May 2010 Town Hall.



2060 Water Demands

FY 2009 Expenditures & FY 2010 Budget

Activity Name	FY09 Expended	FY10 Budgeted
Administration	\$2,802,825.74	\$3,299,843.00
Water Quality	3,515,687.00	3,642,938.00
Financial Assistance	1,927,829.57	3,557,056.00
Planning & Management	3,829,695.89	5,640,748.00
Secretary of Environment	9,053,999.93	11,994,276.00
Totals	\$21,130,038.13	\$28,134,861.00
Fund Name		
General Appropriations	\$4,655,983.08	\$4,398,920.00
Drillers & Installers Indemnity Fund		50,000.00
Rural Economic Action Plan Fund	99,172.81	10,000.00
Water Resources Revolving Fund	521,137.19	527,645.00
Drillers & Installers Regulation Fund	10,493.55	45,324.00
Water Infrastructure Dev. Fund	1,538,078.89	3,131,139.00
Federal Funds--OWRB	1,837,265.39	2,817,036.00
Federal Funds--OSE	8,861,468.87	11,250,466.00
Environmental Remediation Fund	14,232.00	46,792.00
USGS Cooperative Agreement	530,234.54	455,450.00
Interagency Reimbursement Fund	1,443,442.43	1,701,818.00
ARRA Fund	0.00	1,225,115.00
DW Loan Administration Fund	505,601.71	815,194.00
CW Loan Administration Fund	977,870.07	1,258,130.00
CW Loan Fund	135,057.60	401,832.00
Totals	\$21,130,038.13	\$28,134,861.00

Southwest Water Tour

In September, the OWRB teamed up with other state and federal agencies to host a bus tour of southwest Oklahoma for legislators as part of an interim study to examine area water needs. Attending were numerous legislators, congressional delegation representatives, and staff from various state and federal agencies.



The two-day event included stops at Lake Humphreys, Waurika Lake, Hackberry Flat Wildlife Management Area, Medicine Park, and Lugert-Altus Irrigation District. Along the way, experts provided demonstrations of stream gaging and water quality and biological sampling, and responded to many local water supply issues.

Arbuckle-Simpson Hydrology Study

The Arbuckle-Simpson Hydrology Study, begun in 2003 and completed in 2009, was conducted to obtain information necessary to determine how much water can be withdrawn from the Arbuckle-Simpson aquifer while protecting area springs and streams. This year the investigation was highlighted by development of a groundwater-flow model for the aquifer, which was developed using hydrogeologic information collected as part of the investigation. The model enables the OWRB to predict the consequences of groundwater withdrawal on streamflow. The results of the Arbuckle-Simpson Study provide the necessary information for decision makers and stakeholders to make informed, science-based decisions regarding management of the aquifer's water resources.

On August 18, the OWRB held an informal public meeting in Ada to present study results and solicit input on management strategies.

The five-hour meeting was attended by more than 300 citizens, including landowners, legislators, municipalities, special interest groups, and federal, state, and local agencies. Utilizing this informed input, OWRB staff will make recommendations to the Board on a proposed maximum annual yield and other management strategies. The Board will then issue a Tentative Order for the maximum annual yield followed by at least one formal public hearing to be held in the aquifer region and subsequent issuance of a Final Order determining the maximum annual yield of the basin.



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 investigation is funded through a 50/50 cost-share agreement with the Bureau of Reclamation and OWRB (through Water Plan funding) and involves comprehensive data collection and characterization of the Garber-Wellington aquifer. In addition, a groundwater-flow model will be developed to predict the impacts of long-term groundwater withdrawals on the aquifer as well as simulate water management strategies. The OWRB will use information obtained from the investigation to determine the maximum annual yield of the aquifer.

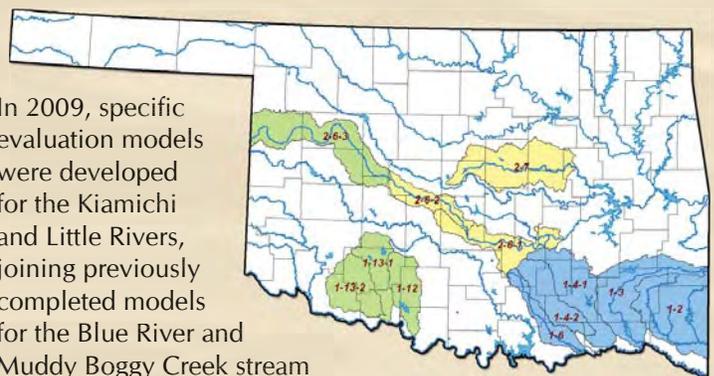
Current efforts are focused on developing the geohydrologic framework and water budget. In February and March, 2009, USGS and OWRB staff measured approximately 280 shallow water wells across the aquifer to compare with water level information collected in 1986-87. Results will determine how the aquifer's storage has changed over the past 20 years.

The study is being conducted in cooperation with the USGS, Association of Central Oklahoma Governments, Bureau of Reclamation, Oklahoma Geological Survey, and Tinker Air Force Base.

Stream Water Allocation Modeling

OWRB water allocation models have become invaluable water management tools that facilitate day-to-day permitting decisions. Each stream system model involves the integration and analysis of unique water rights, water use, and streamflow data that allow the OWRB to do the following:

- Determine potential interference of proposed stream water permit applications with existing water rights;
- Assess potential conflict between existing stream water diversions and downstream water rights holders;
- Evaluate impacts of seasonal streamflow variability;
- Identify watersheds susceptible to shortages during periods of drought; and
- Assess management strategies and gap analysis of water availability for the Water Plan.



In 2009, specific evaluation models were developed for the Kiamichi and Little Rivers, joining previously completed models for the Blue River and Muddy Boggy Creek stream systems. The Upper Canadian River, Cache Creek, and Beaver Creek models are currently under development. Models are planned for the Deep Fork and remainder of the Canadian.

Water Rights Reductions and Cancellations

Nearing completion, the agency's comprehensive review of state stream water permits continued through 2009. So far, pending completion of the process in the Panhandle and northwest, approximately 400 stream water rights have been cancelled allowing for the return of almost 441,000 acre-feet of additional surface water for prospective users in the state. About 250 water rights either received water use corrections or were granted allowances for acceptable causes of non-use.

The project's final phase, beginning with the mailing of notices and subsequent hearings early in 2010, will address potential reductions in permitted surface water amounts. As with the cancellation phase, this process will begin in southeast Oklahoma.

Water Quality Programs

Again in 2009, the OWRB's Water Quality Division focused on building partnerships to address the state's water data needs, especially related to the Oklahoma Cooperative (Stream Gaging) Program between the OWRB and USGS. The program, which provides streamflow and related technical information crucial to state water quality and quantity management, is especially important now as Oklahoma updates the OCWP.



Through a successful partnership with the Grand River Dam Authority, the OWRB continued dissolved oxygen monitoring on both Grand Lake and Lake Hudson to support Federal Energy Regulatory Commission re-licensing. The OWRB's efforts to enhance habitat and water quality in Oklahoma lakes continue through projects to introduce aquatic plants in Stanley Draper Lake, Grand Lake, Hudson Lake, and a new cooperative project at Lake Atoka. The Draper project is maintained by the OWRB through funding provided by Oklahoma City.

As part of the OWRB's Beneficial Use Monitoring Program (BUMP), 36 lakes were sampled during the 2008-2009 period. The agency completed work, funded through an EPA grant, to conduct monitoring for dissolved metals on selected lakes where little or no previous toxics data existed. Also, the OWRB completed its implementation assistance to the Corps of Engineers as part of an ongoing federal chloride control project in southwest Oklahoma. Monitoring activities this year include an update to the state's Status of Water Quality Monitoring Document, further integration of probabilistic sampling into lake and stream sampling programs, and analysis of trends in water quality for Oklahoma waters as part of the OCWP update.

The triennial revision of the Water Quality Standards, initiated in 2009, proposes specific language that enables the determination of naturally occurring conditions as well as criteria at natural concentrations when they exceed promulgated criteria. New human health criteria have been proposed for phenol and acrolein and the applicability of numerical water color criteria will be modified. Informal public meetings on the proposed revisions were held in 2009 while the formal rulemaking process was initiated late in the year. Staff also initiated development of a standards component for the Water Plan.

Floodplain Management

The OWRB continues to assist communities in adopting new Flood Insurance Rate Maps through FEMA's Map Modernization program, which ended in 2009. Updated maps are still in development for the 41 targeted counties in Oklahoma.

The OWRB continues to train local Floodplain Administrators throughout the state. Annual accreditation is required of officials in Oklahoma's 381 NFIP communities. With assistance from the Oklahoma Floodplain Managers Association, the OWRB conducted 18 training sessions.



Dam Safety Program

The OWRB completed its imaging of agency dam safety files, including development of a new dam inventory database. Both projects greatly improve accessibility to information and staff efficiency.

The OWRB participated in a study, directed through passage of HB 1884, to review existing state and federal laws and regulations related to the classification of high-hazard dams in Oklahoma. A specific goal of the study is to develop recommendations aimed at reducing the number of low- or significant-hazard dams that are reclassified as high-hazard dams, which require heightened regulation and associated costs. The group also explored opportunities to enhance funding for maintenance and rehabilitation, expand mapping of breach inundation areas, and improve education on the safety risks associated with downstream development.

Well Driller and Pump Contractor Program

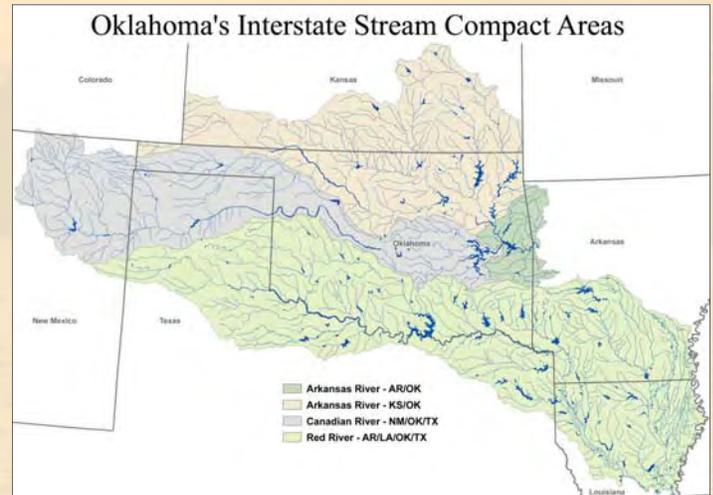
During 2009, the OWRB Well Driller and Pump Installer staff maintained licenses for 345 licensed Well Drilling and Pump Installer firms and 600 licensed operators. The OWRB licensed 36 new firms and 61 new operators during this period. The OWRB in association with the Oklahoma Ground Water Association also provided continuing education training for 322 licensed individuals.

The OWRB also received well reports for 2,754 new water wells, 3,034 new monitoring wells/geotechnical borings and 561 new heat exchange wells. Staff maintains a well log database that currently has over 120,000 well records accessible to the public.

State Water Rights Legislation

In 2009, the State Legislature passed House Bill 1483, the most consequential water legislation in years. Sponsored by Rep. Dale DeWitt with strong support from the OWRB, the bill provides additional protection for Oklahoma's water interests by declaring that no out-of-state water permit shall impair the state of Oklahoma from meeting its obligations under interstate compacts with other states. Proponents of HB 1483 cite its assurances that Oklahoma's future water supply needs will now take precedence over out-of-state water sales.

Subsequently, in late November, the federal district court ruled that the complaint by Tarrant Regional Water District (TRWD) seeking to clear the way for its application to divert more than 400,000 acre-feet of water from tributaries of the Red River in Oklahoma should be dismissed. The court determined that the plaintiffs were seeking water already apportioned by the Red River Compact between Oklahoma, Texas, Arkansas, and Louisiana.

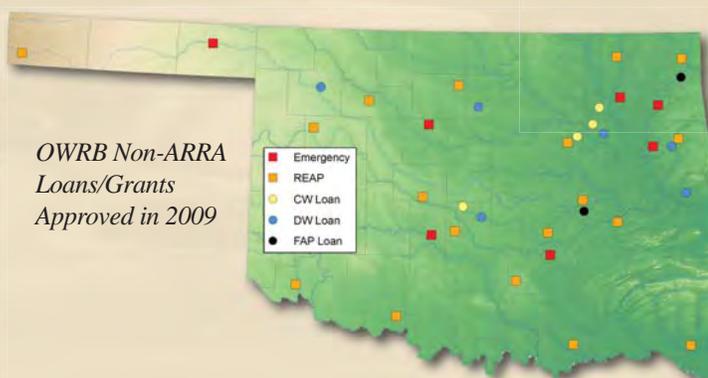
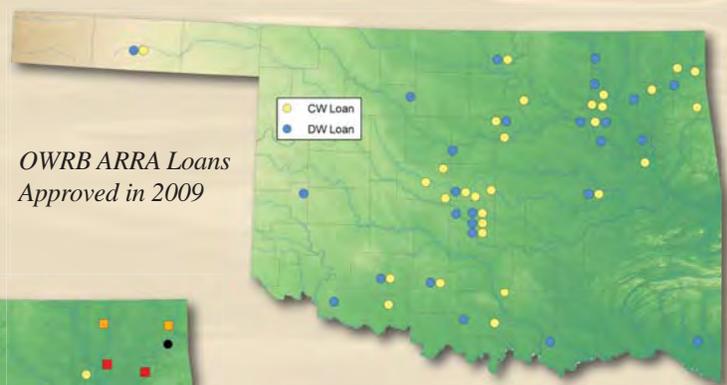
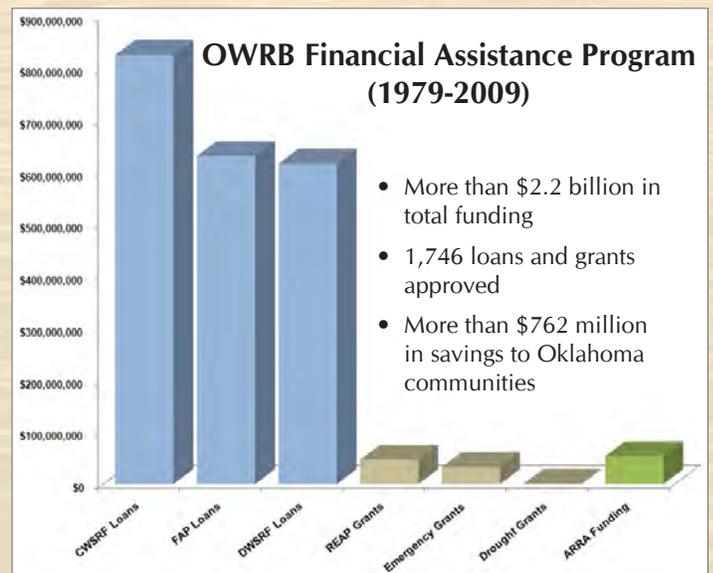


Financial Assistance Program

The OWRB's FAP surpassed the \$2 billion funding level in 2009. In addition, an agency bond issue of \$2.8 million, which provided financing and substantial savings for two Oklahoma communities, brings the total bond amount to more than \$782 million since inception of the Board's Financial Assistance Program in 1985.

The OWRB expanded its general water and wastewater infrastructure financing duties through administration of \$62 million in federal American Recovery and Reinvestment Act (ARRA) funds. Through aggressive financing measures, the agency was able to leverage these funds with approximately \$175 million in standard OWRB loans to underwrite construction of 55 water and wastewater projects—all well in advance of Congress's deadline. The OWRB's ARRA program resulted in more than \$158 million in interest rate savings to Oklahoma communities and water/wastewater systems.

Also last year, the OWRB initiated a project with EPA and the University of Oklahoma to identify the often overlooked social, environmental and public health benefits of water and sewer projects. Investment in environmental infrastructure yields significant direct and indirect economic, social, and "quality of life" benefits that contribute to job creation, aesthetics, recreation, industry, and other facets of life. Results of the study will be used to help communities justify and implement future projects.



In 2009, through Oklahoma's Clean Water and Drinking Water State Revolving Fund programs, the Board committed approximately \$62 million in ARRA funds and approximately \$175 million in loans for 55 water and wastewater projects listed on the OWRB's and DEQ's Priority Funding Lists.

Through the OWRB's conventional (non-ARRA) financing programs, the agency approved 12 loans and 25 grants for \$85.4 million.