

OKLAHOMA Water News

3rd Quarter 2018

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FAP Update

OWRB Publishes Report on Rush Springs Aquifer

As part of its statutory obligation to conduct hydrologic investigations of the state's groundwater basins to determine maximum annual yield and equal-proportionate share, the OWRB has completed an investigation report of the Rush Springs Aquifer. This report provides information for constructing a groundwater-flow model to allow the

OWRB to simulate various withdrawal and management scenarios.

The Rush Springs aquifer underlies 4,692 square miles of land in west-central Oklahoma.

Predominantly used for irrigation and municipal purposes, the aquifer is one of the most utilized groundwater sources in the state.

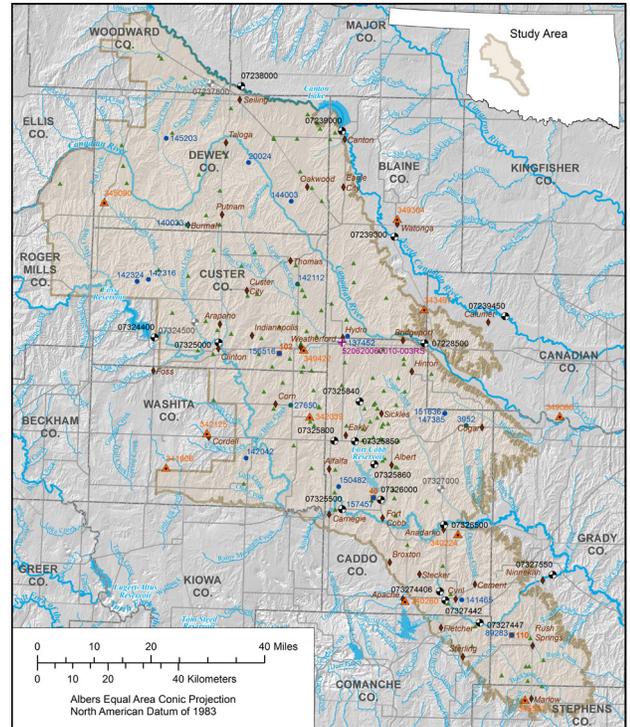
According to the Oklahoma Comprehensive Water Plan, several planning basins overlying the Rush Springs aquifer are projected to experience significant groundwater depletion by 2060 at current rates of use. One of these planning basins is located upstream from Fort Cobb Reservoir, where groundwater



OWRB to simulate various withdrawal and management scenarios.

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- Mesonet site with water level data
- ▲ Coop station
- Mass measurement well
- OWRB continuous recorder well
- +
- Realtime USGS stream gauge station
- Historic stream gauge station
- City/Town
- Extent of modified Rush Springs boundary (study area)

The Rush Springs aquifer underlies 4,692 square miles of west-central Oklahoma.

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From the Director

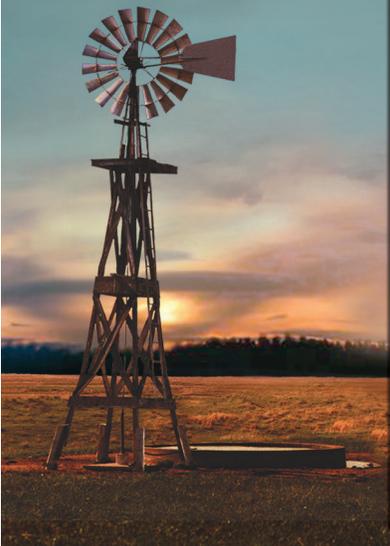
The summer of 2018 ended with enough significant rainfall to pull most of the state out of drought conditions. We closed out the period at about 130% of normal rainfall statewide. Drought coverage dropped from more than 50 percent of the state at the beginning of July to less than 10 percent by the end of September. All but the Northeast region were well above normal rainfall for the quarter, which meant welcome relief for farmers, lake managers, and many others. The Oklahoma Mesonet site at Fittstown recorded 14.2 inches of rain on Sept. 21, the highest total in the 25-year history of the Mesonet. The rain totals that day represent a greater than 1,000-year 24-hour event, according to the Oklahoma Conservation Commission and USDA-Natural Resources Conservation Service.

Preparations are well underway for the annual Governor's Water Conference and Research Symposium, which will be held December 5-6



Julie Cunningham, Executive Director
Oklahoma Water Resources Board

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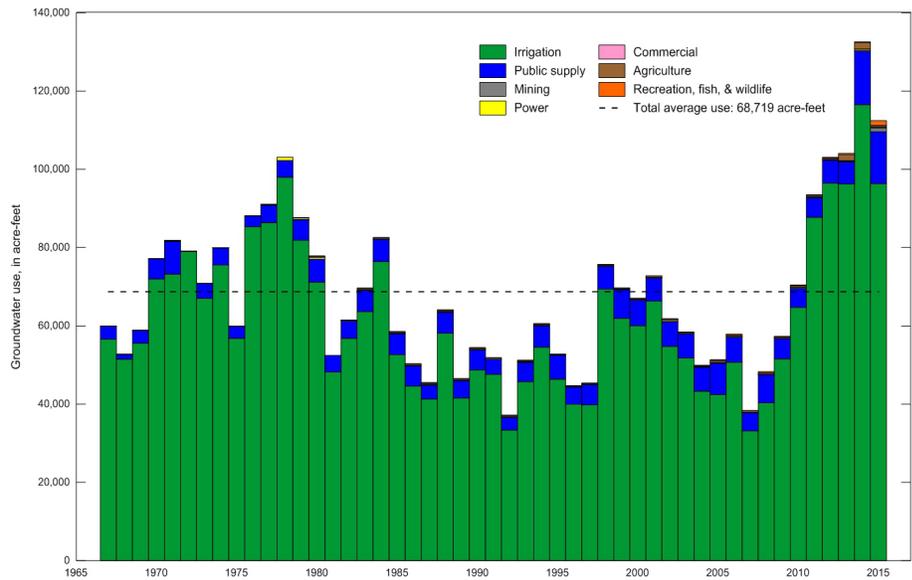


Rush Springs Report (continued)

depletions could cause a decline of base flow into the reservoir.

Reported average annual groundwater use for 1967–2015 was 68,719 acre-feet per year. Irrigation accounted for 91 percent, and public water supply accounted for 7.8 percent. Annual water-level measurements collected by the OWRB since the 1950s were analyzed for long-term trends. Water-level trends from 54 wells were determined to fluctuate primarily with climate trends, showing declining water levels during drought periods and increasing water levels during wet periods.

The full report and datasets are available for download on the OWRB website at www.owrb.ok.gov/studies/groundwater.



Reported groundwater use by type for the Rush Springs Hydrologic Study area from 1967–2015.

From the Director (continued)

at the Reed Conference Center in Midwest City. This event is co-hosted by the OWRB and OSU's Oklahoma Water Resources Center. OWRB Chairman Jason Hitch and Governor Mary Fallin will kick off the event, followed by a presentation of the second round of Water for 2060 Excellence Awards. After publication of the Oklahoma Comprehensive Water Plan (OCWP) update in 2012, the Oklahoma Legislature and Governor Fallin enacted the Water for 2060 Act, which set the stage for broad water infrastructure efficiency and development of untapped marginal water supplies to meet future population, economic, and environmental demands. Recognition for excellence in helping to meet the statewide Water for 2060 goal was a recommendation of the Water for 2060 Advisory Council Report, published in 2015.

From support for development of the OCWP, continued funding for the implementation of priority recommendations, passage of the Water for 2060 Act and other recent key pieces of legislation, and creation of the Produced Water Working Group, to support for water monitoring networks that inform policy and spending decisions, Governor Fallin and the Oklahoma Legislature have demonstrated time and again their forward-thinking commitment to the management and protection of Oklahoma's vital water resources. It will be an honor during the conference to thank them for their service.

Throughout the conference, attendees will hear from industry experts, members of Oklahoma's congressional and state legislative delegations, agency partners, and researchers. The first concurrent session of the Water Conference, "Opportunities for Marginal Quality Water Use," will highlight recent policy allowing for use of untapped sources, followed by success stories on the development of produced water, stormwater, treated effluent, and brackish groundwater from the Groundwater Protection Council, Oklahoma Water Survey, Texas Water Development Board, and Fort Sill Army Base.

The luncheon will feature a legislative update and presentation of the prestigious Oklahoma Water Pioneer awards. The

afternoon session will focus on "Innovations in Agriculture Water Use," including presentations on conservation and soil health by Oklahoma farmers, the Noble Research Institute, and Oklahoma State University. During the afternoon plenary session, Darren Thompson with the San Antonio Water System will share how the city met unprecedented population growth by diversifying its water sources.

The second day will open with a technology showcase featuring presentations by Oklahoma State University's Mechanical and Aerospace Engineering Professor Jamey Jacob and the Trinity River Authority's GIS team, Monique Nava and Chad Holton.

Session three, "Maximizing Storage Capacity," will highlight aspects of maintaining Oklahoma's critical water storage reservoirs that provide flood control and drought relief, watershed dam rehabilitation, larger-scale lake dredging, and nonpoint source management, by the Natural Resources Conservation Service, Waurika Lake Master Conservancy District, and Oklahoma Conservation Commission.

Chad Pregracke, founder of the internationally renowned nonprofit river clean-up organization, Living Lands and Waters, will present the lunch address on December 6th. His story of humble beginnings on the Mississippi River, and the difference one person can make, is genuine and moving.

The final session, "Leveraging Partnerships for Water Solutions," will showcase successful partnerships to meet water challenges through cooperation presented by East Central University's Oka' Institute and Chickasaw Nation, the Walton Foundation, and the US Bureau of Reclamation.

I especially want to thank our generous sponsors and presenters without whom Governor's Water Conference and Research Symposium would not be possible. I encourage everyone to join us for this informative and engaging event and look forward to seeing you there. Go to www.owrb.ok.gov/gwc to register or to view the [draft agenda](#).

CNN Hero of the Year Chad Pregracke to Keynote Water Conference

As the founder of America's only "industrial strength" river clean-up organization, Chad Pregracke will share a compelling, uplifting, and inspiring story about growing up on the river and how his river experiences led to his unique vision to clean up the Mississippi River and start an internationally recognized not-for-profit, Living Lands & Waters.



For the last 20 years, Chad, his crew, and over 100,000 volunteers have removed almost 10 million pounds of garbage out of 23 rivers in 20 states. Chad was recognized by former President George W. Bush as a national "Point of Light" and received a standing ovation at the Kennedy Center from all four living former U.S. Presidents for his inspirational message on dreaming big, taking action, persevering, leading, and collaborating. Chad was also recognized as the 2013 CNN Hero of the Year.

Chad will speak at 11:30 a.m. on Dec. 6 during the Governor's Water Conference and Research Symposium at the Reed Conference Center in Midwest City. 💧

existing water quality when necessary, while still protecting beneficial uses and ensuring that water quality is preserved whenever possible.

The OWRB continually reviews the latest science and policy regarding WQS, engaging in a planning and technical process that includes reviewing standards, identifying and prioritizing issues to be addressed, and developing and adopting amendments. During this process, the agency works with stakeholders through workgroups and public stakeholder meetings, providing the public with fact sheets and technical reports, and instituting an open-door policy for discussion of questions and concerns.

Four foundational principles that guide the OWRB's WQS team include collaboration and cooperation, proactive implementation, an understanding of the evolving nature of science and rules, and consideration of statewide priorities, which include the protection and use of the state's water resources.

Current WQS projects include updating the selenium aquatic life criterion to protect the Fish and Wildlife Propagation beneficial use. Selenium is an essential nutrient for life but toxic in excess amounts. Because of selenium's bioaccumulative nature, one criterion is being proposed that will be expressed as both a water column and a fish tissue

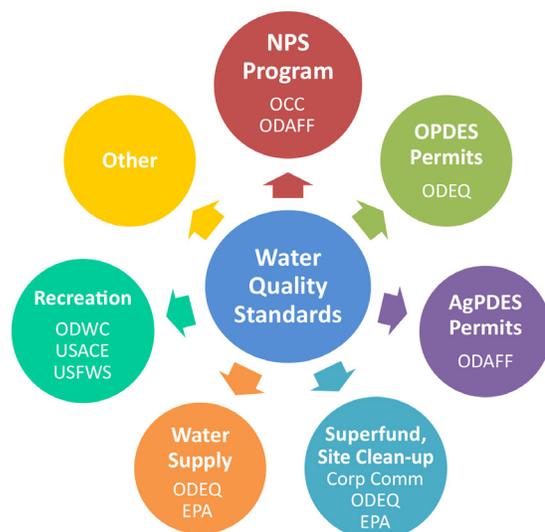
OWRB Staff Emphasize Importance of Water Quality Standards to State

At the September Board meeting, OWRB staff presented an overview of Oklahoma's Water Quality Standards (WQS) as part of an education series presented to Board members and attendees.

Oklahoma's WQS are contained in Oklahoma Administrative Code, Title 785, Chapter 45 (Oklahoma's WQS) and 46 (Implementation of Oklahoma's WQS). The WQS provide the fundamental foundation for the state's ability to protect and improve its water resources, including lakes, streams, and groundwater. Multiple state agencies utilize the WQS for a variety of purposes and WQS are necessary to implement their programs. For example, one of the many roles of WQS is to enable the Department of Environmental Quality, through wastewater permitting programs, to ensure that wastewater discharged back into a waterbody is of a quality that will protect the beneficial uses and not cause an impairment to water quality.

The WQS have three components—beneficial uses, criteria to protect those uses, and the Antidegradation Policy. Designated beneficial uses include Public and Private Water Supply, Fish and Wildlife Propagation, Agriculture, Body Contact Recreation (such as swimming or boating), Navigation, and Aesthetics. Criteria protect the beneficial uses by setting numeric limits on a pollutant(s) or by describing an expected waterbody condition. The Antidegradation Policy protects existing water quality when it is better than necessary to meet beneficial uses. This policy also provides a framework to lower

Role of Oklahoma's Water Quality Standards



value. A second WQS project underway is an update to human health criteria, which protects both the Public and Private Water Supply and Fish Consumption beneficial uses. These criteria have not been comprehensively updated in 27 years in Oklahoma. An important outcome of this work will be setting limits on toxic chemicals known to have a human health risk.

Recent projects have included an update to Oklahoma's Antidegradation Policy and implementation rules, as well as actions to support water reuse in Oklahoma.

More information about Oklahoma's WQS can be found online at www.owrb.ok.gov/standards. 💧

FINANCIAL ASSISTANCE PROGRAM UPDATE

Loans & Grants Approved as of September 30, 2018

FA Loans—389 totaling \$1,147,685,000

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.

CWSRF Loans—328 totaling \$1,587,307,827

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—201 totaling \$1,276,308,800

The Drinking Water State Revolving Fund (DWSRF) loan program is an initiative of the OWRB and ODEQ 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—682 totaling \$60,462,050

The Rural Economic Action Plan (REAP) Program was created by the State Legislature in 1996. REAP grants, used for water/wastewater system improvements, primarily target rural communities with populations of 7,000 or less, but priority is afforded to those with fewer than 1,750 inhabitants.

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 proceeds to fund the Program.

Emergency Grants—578 totaling \$34,366,720

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.

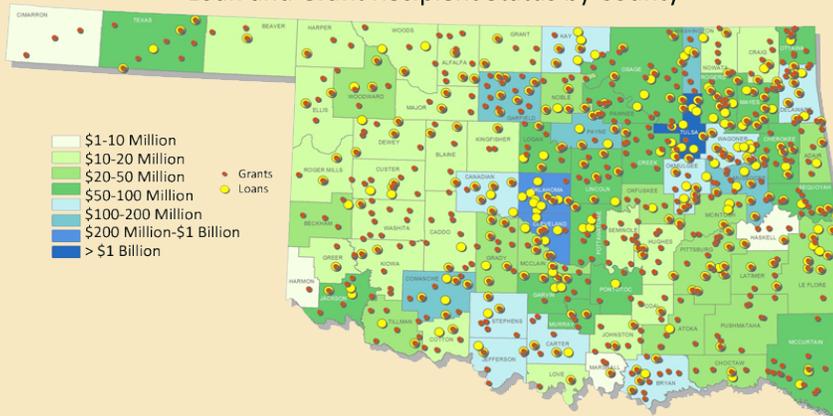
Water for 2060 Grants—4 totaling \$1,500,000

Through the Water for 2060 Grant Program, funding was available in 2015 for municipalities, counties, water/sewer districts and other public entities for projects that highlight the responsible use of water.

Emergency Drought Relief Grants—4 totaling \$1,125,000

Through the Emergency Drought Relief Grant Program, funding was provided in 2013 by the Legislature via the Emergency Drought Relief Commission to address severe drought issues in specific Oklahoma counties.

OWRB Financial Assistance Program
Loan and Grant Recipient Status by County



Total Loans/Grants Approved: 2,192 totaling \$4,109,174,244 Estimated Savings: \$1,379,561,200

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.



Oklahoma Water Resources Board

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Matt Muller

The Oklahoma Water Resources Board defines policy and conducts the state's water business through a nine-member Board appointed by the Governor. The Board meets regularly to oversee the management of the state's water resources and implementation of the Oklahoma Comprehensive Water Plan. The agency assists the Board in implementing its mission with a professional staff of 100 scientists, engineers, financial analysts, water policy experts, attorneys, and support personnel.

The mission of the OWRB is to protect and enhance 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.

OWRB meetings are open to the public. Visit www.owrb.ok.gov for meeting dates, times, locations, and agendas.

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