

OKLAHOMA Water News

1st Quarter, 2020

Oklahoma Water Resources Board

OWRB Office Closure Leads to Innovation in Delivering Services

In mid-March, as the numbers of COVID-19 cases began rising in the state, Governor Kevin Stitt declared a state of emergency, asking state agencies to move employees to telework status, cancel trainings and conferences, and begin conducting internal/external meetings via video streaming services.

To comply with state recommendations and provide maximum protection for agency staff and the public, the OWRB officially closed public access to the office building on March 16. Agency staff rallied to identify innovative ways to deliver the same level of service to customers and the public using strategies that would keep everyone at a safe distance. The OWRB's website was quickly updated with the latest information, including a [new "Contact Us" automated form](#) that allows the public to specify a topic or issue and send a targeted message to the appropriate staff member. The form has been heavily utilized as a quick and efficient way to communicate. The form's tracking features have allowed staff to customize topics and information available on the website to help answer the most frequently asked questions and get customers the information necessary to conduct business as usual.

The urgency to increase the agency's online and digital offerings has provided the OWRB with opportunities to improve services. There has been a significant increase in information sharing about resources and assistance through the state's GovDelivery services. New opportunities have been created for "face-to-face" customer service via video calls and meetings. With more flexibility in scheduling meetings and increased participation in meetings due to live streaming video capabilities, the OWRB has been able to reach out to even more individuals about important water issues, and at the same time, save money on meeting space and travel. The OWRB is now able to identify potential future savings for the agency by continuing many of these meeting protocols beyond the current closures.

OKLAHOMA
Contact the OWRB
Oklahoma Water Resources Board
3800 North Classen Boulevard
Oklahoma City, OK 73118
405.530.8800

* Required

1. Name *

Enter your answer

2. Email *

Enter your answer

3. Select an issue *

- Open Records Request
- General Comments/Questions
- Water Rights/Permitting
- Well Driller/Pump Installer Licensing/Reporting
- Water Quality Monitoring/Data
- GIS Data and Maps
- Financial Assistance
- Employment Opportunities
- Dam Safety
- Floodplain Management
- Water Quality Standards
- Oklahoma Comprehensive Water Plan/Water for 2060

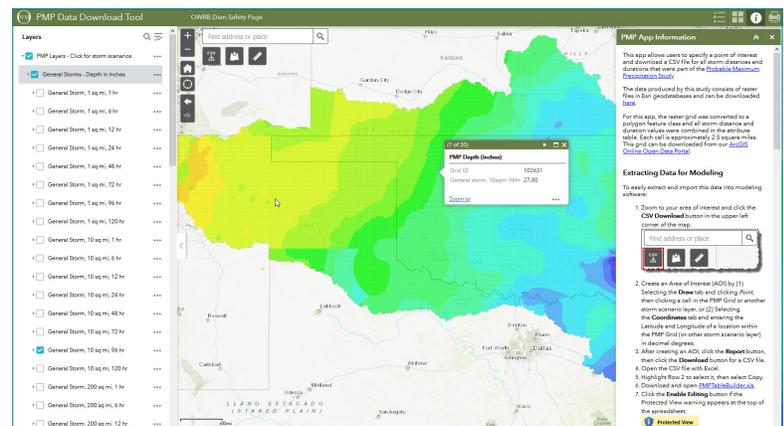
New OWRB website [Contact Us form](#), launched shortly after state offices were closed, routes questions directly to relevant staff based on selected issue.

New OWRB Mapping Tool Provides Critical Rainfall Data for Dam Engineers

The OWRB's Dam Safety program has launched a web application to make it easier to download and use probable maximum precipitation (PMP) data, a product of the August 2019 Regional Probable Maximum Precipitation Study for Oklahoma, Arkansas, Louisiana, and Mississippi. The tool gives dam engineers easy access to precipitation data for the design of dams in Oklahoma.

The PMP data resulting from this study replaces precipitation data published by the National Weather Service in 1978 in Hydrometeorological Report (HMR) No. 51, which was previously required by the Dam Safety Program to develop the design storm for dams in Oklahoma. The study was commissioned by agencies in the four states, including the OWRB, and conducted by Applied Weather Associates, LLC.

continued



The OWRB's new [probable maximum precipitation \(PMP\) data viewer](#) allows quick access to precipitation data that is critical for the design of dams in Oklahoma.

Hundreds of extreme storm events were considered in the study, and 63 events were selected to be used for final PMP estimation. Parameters to estimate PMP were developed using the storm based, deterministic approach discussed in the HMRS and subsequently refined in numerous site-specific, statewide, and regional PMP studies completed since the early 1990s. The PMP data is further refined into separate storm types, including general, local, and tropical rainfall events, to predict precipitation amounts in similar storm scenarios.

This web application allows users to select a point of interest and download a CSV file that contains the maximum precipitation amounts for that location for all storm types, areas, and durations that were part of the PMP study. The contents of the CSV file can be pasted into an Excel table linked in the application instructions. The Excel table separates and formats the data so that they may be easily copied into a hydrologic modeling program, such as the U.S. Army Corps of Engineers HEC-HMS software, for use.

The raw study data consists of raster files in Esri geodatabases and is also available for download from the [OWRB website](#).

Wilburton Receives Emergency Grant to Repair Broken Water Line

During construction of a wastewater project, an unmarked twelve inch water line in Wilburton was broken, leaving a portion of the town, including the schools, without water for two days. To pay for the cost of repairing the line, the Wilburton Public Works Authority requested approval for a \$31,875 Emergency Grant through the OWRB to install a new twelve inch water line and valves.

The OWRB approved the grant at its February meeting. The estimated cost of the project is \$37,500, which will be funded by the \$31,875 OWRB Emergency Grant along with \$5,625 in local funds. Joe Freeman, Chief of the OWRB's Financial Assistance Division calculated that the grant will save the Authority's customers \$57,375 in principal and interest charges by not having to borrow the project funds.



OWRB Planning and Management Division Chief, Kent Wilkins (center), Sen. Larry Boggs (far left), and Rep. Jim Grego (left), present a ceremonial check to the Wilburton Public Works Authority on March 6 to fund an emergency water line project.

Financial Assistance Program Update

Loans and grants approved by the Oklahoma Water Resources Board on January 21, 2020:

- Cement Public Works Authority—\$99,999 Rural Economic Action Plan (REAP) Grant
- Goltry Public Works Authority—\$99,999 REAP Grant
- McCurtain Municipal Authority—\$99,999 REAP Grant
- Roland Utility Authority—\$2,359,000 Drinking Water State Revolving Fund (DWSRF) Loan
- Roosevelt Public Works Authority—\$79,999 REAP Grant
- Sperry Utility Service Authority—\$63,150 REAP Grant
- Texhoma Public Works Authority—\$99,999 REAP Grant
- Weleetka Public Works Authority—\$99,999 REAP Grant

Loans and grants approved by the Oklahoma Water Resources Board on February 18, 2020:

- Atoka Municipal Authority—\$4,010,000 DWSRF Loan
- Weleetka Public Works Authority—\$95,330 DWSRF Loan
- Wilburton Public Works Authority—\$31,875 Emergency Grant

Visit the [OWRB press releases web page](#) for more information.

Loans and grants approved by program as of March 31, 2020

FA Loans—393 totaling \$1,234,270,000

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—359 totaling \$1,759,285,441

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—218 totaling \$1,374,539,513

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—704 totaling \$62,663,834

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—589 totaling \$35,104,957

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.

Total Loans/Grants Approved: 2,277 totaling \$4,468,907,593

Estimated Savings: \$1,491,891,236

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 staff. Those meeting specific program requirements are recommended by staff for approval at regular meetings of the nine-member Board.

For more information, call (405) 530-8800 or visit www.owrb.ok.gov/financing.

Oklahoma Water News 1st Quarter, 2020

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Robert Stallings (Chairman), Stephen Allen (Vice Chairman), Bob Drake (Secretary), Jennifer Castillo, Charles Darby, Ford Drummond, Suzanne Landess, Robert L. Melton, Matt Muller

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.

Julie Cunningham, Executive Director

OKLAHOMA Water News

2nd Quarter, 2020

Oklahoma Water Resources Board

Governor Stitt Signs SB 1269 to Create Statewide Flood Resiliency Plan

Legislation directing the OWRB to develop a Statewide Flood Resiliency Plan (SB 1269) was signed into law by Governor Stitt on May 18. In addition to the creation of a statewide flood mitigation plan, the law creates the State Flood Resiliency Revolving Fund for the development of the Plan as well as future flood hazard mitigation projects.

Oklahoma's new flood plan will examine flood risks, and potential flood mitigation projects beyond the local level, along an entire runoff area within a larger watershed. The plan will examine the need for additional flood risk information, such as flood maps, and ultimately feature a State inventory of specific flood control infrastructure projects, including cost-benefit analyses. Flood risk needs and assessments within watersheds could also be coordinated between communities in those watersheds.

The legislation was authored by Senator Dave Rader of Tulsa and sponsored by Representative Lonnie Sims of Jenks.

"This mirrors how FEMA and other federal agencies are beginning to approach disaster response--mitigating the damage before the event occurs," commented Senator Rader. "In order to do that properly, and protect taxpayer resources as we do it, we must have a well-thought out plan that is coordinated across communities and the state. I want to thank the state and federal agencies involved in this effort and Governor Stitt for signing this legislation into law."

The OWRB and other hazard mitigation and infrastructure agencies--including the Oklahoma Floodplain Managers Association, Oklahoma Emergency Management, Federal Emergency Management Agency, Oklahoma Conservation Commission, Oklahoma Department of Commerce, Oklahoma Department of Transportation, U.S. Army Corps of Engineers, and Natural Resources Conservation Service--have already begun initial collaboration for the plan.

According to OWRB Executive Director Julie Cunningham, the OWRB sees this flood plan as a significant piece that will strengthen the state's long-term water resiliency planning. Cunningham pointed out that past updates of the Oklahoma Comprehensive Water Plan focused largely on assessing drought resiliency and water and wastewater reclamation infrastructure needs.

"Today, especially as we see more frequent extreme flooding events," said Cunningham, "it is more important than ever to understand our state's critical flood control infrastructure needs and collaborate at all levels to address these needs."

In the fall of 2019, Representative Sims conducted a Legislative interim study to review all aspects of the federal, state, and local preparation and response to the Arkansas River basin floods during the spring of 2019. Among other issues, the interim study highlighted the need to establish a coordinated plan to begin addressing Oklahoma's hazard mitigation and infrastructure needs.

During the 2020 legislative session, Senator Rader and Representative Sims led on a number of flood-related bills before the ultimate enactment of SB 1269.

"Flooding remains one of the worst types of disaster in terms of the loss of property and life," said Representative Sims. "In 2019, much of Oklahoma, especially the Arkansas River basin, experienced record flooding. Oklahoma has already experienced flooding in some areas during 2020. After reviewing the lessons learned and discussing proactive solutions, I'm honored to be a part of legislation that helps us proactively plan and mitigate for future flood events instead of only reacting and responding."



*Recent historic flooding in Oklahoma during May 2019**

demonstrates the need for SB1269, which creates a Statewide Flood Resiliency Plan, authored by Senator Dave Rader (right) of Tulsa and sponsored by Representative Lonnie Sims (far right) of Jenks.

**photo courtesy USGS*



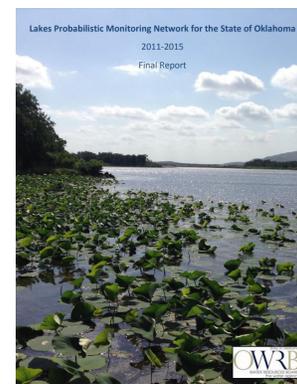
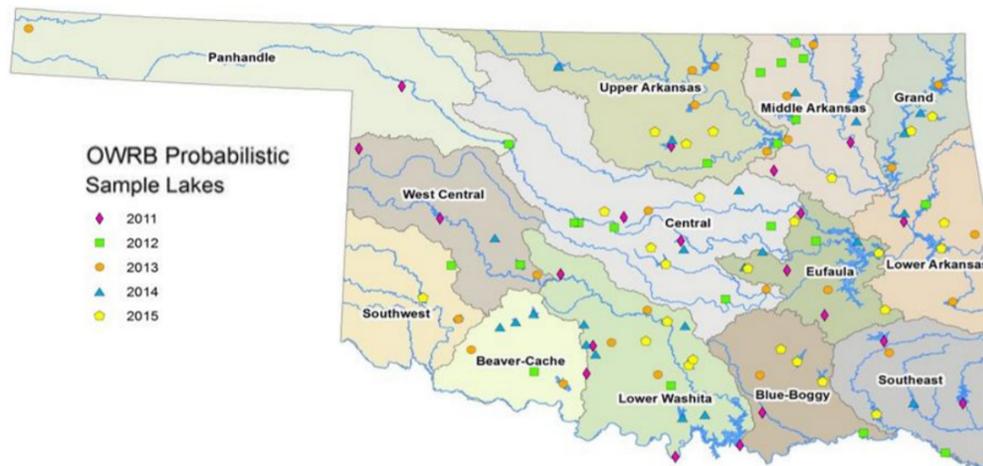
OWRB Lakes Probabilistic Monitoring Report Now Available

In April, the US Environmental Protection Agency (EPA) approved the OWRB's Lakes Probabilistic Monitoring Network Report for the State of Oklahoma, which provides a statewide perspective on the condition of Oklahoma lakes. Utilizing a statistical survey design, a subset of lakes were sampled and analyzed by the OWRB from 2011-2015.

The following key findings are highlighted in the report:

- 69% of Oklahoma's lake acres are classified as eutrophic and hypereutrophic, indicating high nutrient concentrations and productive plant growth, which can lead to excessive algae growth and depleted oxygen levels.
- 60% of Oklahoma's lake acres are classified as "most disturbed" for total nitrogen, signifying that reported values are out of balance.
- 43% of Oklahoma's lake acres are classified as "most disturbed" for total phosphorus.
- 50% of Oklahoma's lake acres were found to be classified as "moderately disturbed" to "most disturbed" for turbidity.

The study, which was funded through EPA 106 grants, provides the public, scientists, and decision makers with information for protecting valuable lake ecosystems. More information is available in the [full report](#).



Thomas Gorman Appointed to OWRB

Thomas A. Gorman of Bartlesville joined the OWRB in May to represent Region 6 and agricultural water use interests. Gorman is a real estate broker and president of Gorman Management Company. Formerly serving as Mayor of Bartlesville during construction and completion of the city's large water infrastructure projects, he continues to serve the city on the Water Resources Committee as well as the city council and numerous civic organizations. Gorman's term expires in May 2027.



Financial Assistance Program Update

Loans and grants approved by the Oklahoma Water Resources Board on April 21, 2020:

- Kingfisher Public Works Authority—\$4,328,000 Clean Water State Revolving Fund (CWSRF) Loan
- Edmond Public Works Authority—\$40,000,000 Drinking Water State Revolving Fund (DWSRF) Loan
- Allen Public Works Authority—\$110,000 Rural Economic Action Plan (REAP) Grant
- Calera Public Works Authority—\$1,555,000 DWSRF Loan
- Welch Public works authority—\$127,750 REAP Grant
- Adair Municipal authority—\$41,000 Emergency Grant
- Cheyenne Utility Authority—\$100,000 DWSRF Loan
- Locust Grove Public Works Authority—\$9,875,000 DWSRF Loan

Loans and grants approved by the Oklahoma Water Resources Board on May 19, 2020:

- Town of Meeker—\$17,198 Emergency Grant
- Oklahoma City Water Utilities Trust—\$4,650,000 CWSRF Loan
- Okmulgee Municipal Authority—\$700,000 DWSRF Loan
- Taft Public Works Authority—\$99,999 REAP Grant

Loans and grants approved by the Oklahoma Water Resources Board on June 16, 2020:

- Blackwell Municipal Authority—\$100,000 DWSRF Loan
- Crowder Public Works Authority—\$99,999 REAP Grant
- Durant City Utilities Authority—\$12,935,000 CWSRF Loan
- Inola Public works Authority—\$2,600,000 CWSRF Loan
- McIntosh County RWS & SWD No. 2—\$590,000 DWSRF Loan
- Oklahoma City Water Utilities Trust—\$74,000,000 DWSRF Loan/\$55,000,000 Financial Assistance Program (FAP) Loan
- Pawhuska Public Works Authority—\$190,050 CWSRF Loan/\$100,000 Emergency Grant
- Shidler Public Works Authority—\$89,385 CWSRF Loan

Visit the [OWRB press releases web page](#) for more information.

Loans and grants approved by program as of June 30, 2020

FA Loans—394 totaling \$1,277,835,000

CWSRF Loans—365 totaling \$1,784,077,876

DWSRF Loans—226 totaling \$1,501,459,513

REAP Grants—708 totaling \$63,101,582

Drought Response Program Grants—6 totaling \$418,848

Emergency Grants—592 totaling \$35,263,155

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

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

Total Loans/Grants Approved: 2,299 totaling \$4,664,780,974

Estimated Savings: \$1,551,547,169

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 staff. Those meeting specific program requirements are recommended by staff for approval at regular meetings of the nine-member Board.

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Oklahoma Water News 2nd Quarter, 2020

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Julie Cunningham, Executive Director

OKLAHOMA Water News

3rd Quarter, 2020

Oklahoma Water Resources Board

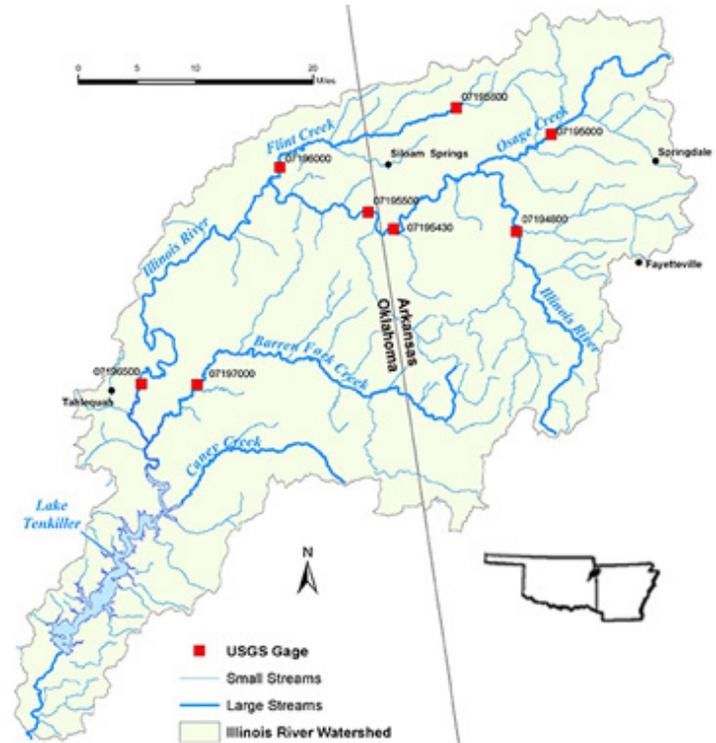
OWRB Hosts Webinars on Illinois River Total Phosphorus Criteria Revision

The OWRB conducted three public webinars beginning in September as part of the process of revising the total phosphorus criterion for the Illinois River Watershed. The webinars provided a comprehensive review of the foundational technical work supporting the criterion revision, highlighting the rulemaking process, which includes opportunities for formal public participation and feedback on draft revisions.

The Illinois River watershed is home to three of Oklahoma's Scenic Rivers: Illinois River, Flint Creek, and Barren Fork Creek. In 2002 it was recognized that these rivers were being negatively impacted by phosphorus pollution. In response, the OWRB adopted a total phosphorus criterion to protect the aesthetics beneficial use of all Oklahoma Scenic Rivers.

Since the adoption of the criterion, the Illinois River watershed has been the focus of numerous projects to improve water quality and special studies to evaluate the total phosphorus criterion.

OWRB Water Quality Standards staff value stakeholder participation and are committed to a transparent and interactive rulemaking process. Please feel free to contact staff if you have any questions or would like additional information. The webinars were recorded and are posted here.



Oklahoma Lakes Spotlighted Throughout July

Governor Stitt proclaimed July as "Oklahoma Lakes Appreciation Month" in recognition that Oklahoma's lakes are among the state's most valuable natural resources, providing our citizens with drinking water, irrigation, energy, recreation, scenic beauty, and wildlife habitat.

Throughout the month, the OWRB highlighted the vital work that goes into managing, monitoring, and improving the state's lakes and reservoirs, including the agency's [Beneficial Use Monitoring Program](#), through which staff collect data at approximately 130 lakes on a quarterly basis utilizing a five-year rotation schedule. Data collections include a broad spectrum of chemical, physical, and biological parameters and allow for long-term assessment of beneficial uses and water quality trends. These data are important indicators for determining compliance with water quality standards, tracking general water quality trends, and identifying pollution problems.

Monitoring staff also conduct lake restoration activities and bathymetric mapping to determine lake storage capacity. The OWRB has completed [75 bathymetric surveys](#) in the past 20 years, 18 of which were conducted in the past 6 years on drinking water supply lakes in partnership with the Oklahoma Department of Environmental Quality (ODEQ). The surveys provide accurate determinations of the current storage capacities for the lakes.

The OWRB also highlighted outreach by the ODEQ to educate Oklahomans about swimming in Oklahoma's lakes and protecting against potential waterborne microorganisms, such as bacteria, viruses, and protozoa. The ODEQ offers a fact sheet that lists

steps to reduce exposure to these microorganisms, a small proportion of which are associated with human illnesses.

The US Army Corps of Engineers National Water Safety Program highlighted the importance of wearing a life jacket through a public service announcement via video and twitter campaign #LifeJacketsWornNobodyMourns, which is a reminder that even if you don't wear a life jacket for yourself, please wear it for those who love and depend on you.



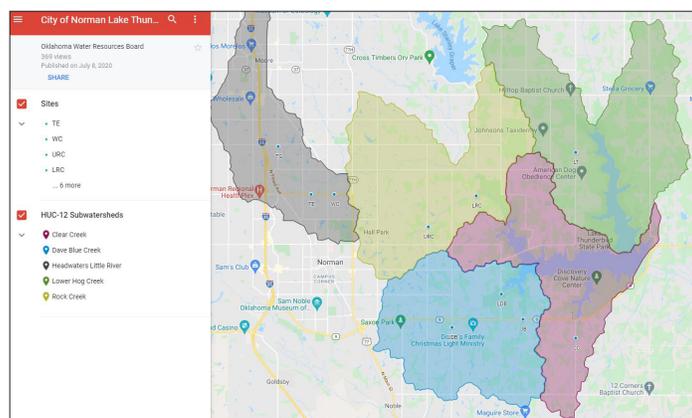
Every year in July, Oklahomans can engage in citizen science by participating in the Secchi-Dip-In, sponsored by the North American Lake Management Society (NALMS). The Secchi Dip-In is an international opportunity for volunteers and professionals to gather and submit data on water bodies to provide annual "snapshots" of water transparency and clarity and track changes in water quality.

OWRB Launches City of Norman Monitoring Data Viewer

OWRB monitoring staff have created a GIS data viewer for the City of Norman to assist with efforts to share data on stormwater monitoring in the Lake Thunderbird watershed. The OWRB began a partnership in 2016 with the City of Norman to meet the requirements of a total maximum daily load (TMDL) report issued by the Oklahoma Department of Environmental Quality (ODEQ).

The objective of the Lake Thunderbird TMDL is to reduce loads of sediments and nutrients so that the waterbody meets all applicable Water Quality Standards. Currently, Lake Thunderbird is not maintaining designated beneficial uses for Fish and Wildlife Propagation for both dissolved oxygen and turbidity, and Public and Private Water Supply for chlorophyll-a. In order to meet the requirements of the TMDL, the City of Norman developed a TMDL Compliance Plan to reduce nutrients to a level that achieves the wasteload allocation (WLA) established in the TMDL. If the TMDL is successful, Lake Thunderbird will be removed from the Oklahoma 303(d) list for impaired waterbodies.

The [new GIS data viewer](#) focuses on monitoring at ten permanent stations and fourteen rotating stations in the Norman MS4 area. Water samples for parameters of interest are collected both during base flow periods and during runoff events. The OWRB installed stream gauges at the permanent stations in order to collect real-time stage data. This real-time data, combined with discharge measurements, is used to establish a rating curve for each station. Information collected by the OWRB is used by the City of Norman to determine where to implement best management practices (BMPs) for improving water quality, as well as to track TMDL compliance.



Financial Assistance Program Update

Loans and grants approved by the Oklahoma Water Resources Board on August 18, 2020:

- Bartlesville Municipal Authority—\$8,220,000 Clean Water State Revolving Fund (CWSRF) Loan
- Broken Arrow Municipal Authority—\$56,950,000 CWSRF Loan
- Orlando Public Works Authority—\$91,000 Rural Economic Action Plan (REAP) Grant
- Stroud Utilities Authority—\$161,000 Drinking Water State Revolving Fund (DWSRF) Loan
- Quartz Mountain Regional Water Authority—\$64,415 REAP Grant
- Westville Utility Authority—\$44,000 REAP Grant and \$109,395 CWSRF Loan
- Jet Utilities Authority—\$88,923 REAP Grant
- Eufaula Public Works Authority—\$240,000 CWSRF Loan

Loans and grants approved by the Oklahoma Water Resources Board on September 15, 2020:

- Atoka Municipal Authority—\$1,261,000 DWSRF Loan

- East Central Oklahoma Water Authority—\$100,000 Emergency Grant
- Grove Municipal Services Authority—5,350,000 CWSRF Loan

Visit the [OWRB press releases web page](#) for more information.

Loans and grants approved by program as of September 30, 2020

FA Loans—396 totaling \$1,311,755,000

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—370 totaling \$1,844,275,622

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—226 totaling \$1,501,459,513

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—712 totaling \$63,389,920

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—593 totaling \$35,363,155

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.

Total Loans/Grants Approved: 2,313 totaling \$4,761,004,057

Estimated Savings: \$1,580,996,601

For more information, call (405) 530-8800 or visit www.owrb.ok.gov/financing.

Oklahoma Water News 3rd Quarter, 2020

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Julie Cunningham, Executive Director

OKLAHOMA Water News

4th Quarter, 2020

Oklahoma Water Resources Board

OWRB Focuses on Innovation and Improved Customer Service in 2020

In spite of the additional efforts involved in observing safety protocols during 2020, OWRB staff continued providing essential services to the public, utilizing and developing innovative online and digital solutions. Throughout the year, staff consistently adapted to challenging situations and frequently changing protocols to ensure that the OWRB's mission remained in focus: ...enhancing the quality of life for Oklahomans by managing, protecting, and improving the state's water resources to ensure clean, safe, and reliable water supplies, a strong economy, and a healthy environment.

Agency staff quickly developed products and processes to assist the public remotely, such as switching to digital forms and documents, and hosting virtual meetings, webinars, and training.

The nine-member Board met ten times in 2020, including seven remote meetings via Zoom. The remote meetings were well-attended and business was conducted as normal, utilizing multiple resources for digital document sharing and communication. Members of the public were invited to attend with a link provided on the OWRB website and could sign up in advance to address the board regarding meeting agenda items.

As of December 2020, OWRB members included Robert Stallings (Chairman), Stephen Allen (Vice Chairman), Bob Drake (Secretary), Jennifer Castillo, Charles Darby, Thomas Gorman, Suzanne Landess, Robert Melton, and Matt Muller.

Oklahoma Comprehensive Water Plan

The OWRB forecasts long-term water needs through the [Oklahoma Comprehensive Water Plan \(OCWP\)](#), providing information for water management and implementation of policy that ensures reliable supplies of water for the future. The 2025 OCWP Update, now underway, will focus on water infrastructure and emphasize the need for water investment mechanisms, including a 50-year Inventory of projects and cost estimates for expanding reclaimed water use, reservoir storage, stormwater management, and flood control projects.

Water Use Permitting

The OWRB [allocates surface water and groundwater supplies](#) for beneficial uses, including agriculture, fish and wildlife propagation, hydroelectric power generation, irrigation, municipal and industrial use, navigation, and recreation. In 2020, 72 new long term permits were issued for a total of 53,403 acre-feet of surface water and 24,433 acre-feet of groundwater. The OWRB administers more than 13,000 active permits for nearly 7 million acre-feet per year.

Requests for annual water use reporting were issued by the agency in 2020 to active permit holders and the reported amounts were logged by staff.



Even though state office buildings were closed to the public through much of the year, ten Board meetings were held in 2020 including seven meetings via zoom, and business was conducted as normal. Board members as of December are shown below.



Robert Stallings



Stephen Allen



Bob Drake



Jennifer Castillo



Charles Darby



Thomas Gorman



Suzanne Landess



Robert Melton



Matt Muller

Hundreds of provisional temporary permits were issued during the year as well for oil and gas producers and others in need of a temporary source of water.

Financing

As [the State's primary water and wastewater infrastructure financing agency](#), the OWRB has provided over \$5 billion in financing to Oklahoma communities, rural water districts, schools, and other authorities at an estimated savings of \$1.6 billion over conventional bond financing.

In 2020, the OWRB's AAA-rated programs provided 72 low interest loans and grants for public water and wastewater system improvements totaling approximately \$640,439,440.

Water Availability Analysis

To determine availability of water, [hydrologic investigations](#) and [surface water allocation modeling](#) continued during 2020 on multiple aquifers and stream systems, including the Elk City Sandstone, Cimarron River (aquifer), Blaine Gypsum, Ada-Vamoosa, Gerty Sand, Ogallala-Roger Mills, Red River (aquifer), Washita River (aquifer), Salt Fork Red River (aquifer), Boone/Roubidoux, Salt Fork Arkansas River (aquifer), North Fork Red River (basin), Upper Washita (basin), and Canadian River (basin).

Water Quality Standards

The OWRB promulgates [Oklahoma's Water Quality Standards](#) by designating beneficial uses and developing water quality criteria to protect these uses, developing antidegradation policies, and developing and implementing rules, including use support protocols.

[Three live webinars](#) were held in the fall of 2020 to provide information on intended revisions to the total phosphorus criterion for the Illinois River, Flint Creek, and Barren Fork Creek.

Data and Mapping

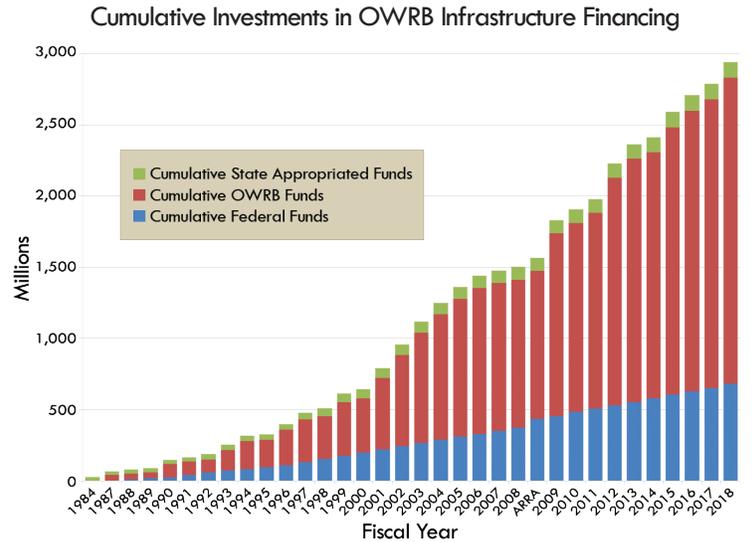
The agency's web-based GIS applications provide the public with [easy access to water data and maps](#). Online applications allowed OWRB staff to work remotely throughout the year, collecting, storing, and analyzing data. Ongoing GIS projects included data collection and mapping of several small water systems.

Monitoring

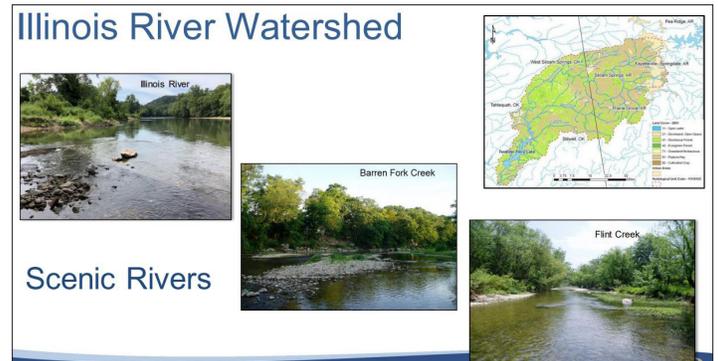
The OWRB conducts statewide surface water and groundwater quality and quantity monitoring to determine the availability of water supplies and assess how well waters are meeting the quality criteria for their designated beneficial uses. During the year, monitoring was conducted on 35 Oklahoma lakes, 67 stream sites, and more than 1,000 groundwater wells.

Data for the Beneficial Use Monitoring Program (BUMP) are compiled in annual reports and available on the OWRB website at www.owrb.ok.gov/BUMP. Staff are also engaged in providing information and recommendations to improve lake water quality conditions. Special projects are focused on issues such as sediment removal, oxygenation, shoreline revegetation, and erosion control.

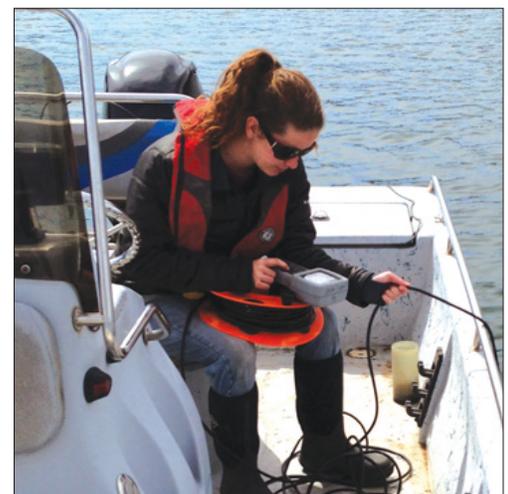
The OWRB's [bathymetric mapping program](#) utilizes GIS and related technology to provide accurate determinations of current storage capacities in the state's reservoirs. Contour maps are then derived from collected data points and digital lake bottom



Cumulative investments in OWRB infrastructure financing. Since 1984, the OWRB has leveraged \$114 million in state funds and \$640 million in federal funds with \$2.15 billion in bonds to expand available financing for infrastructure projects in Oklahoma communities.



Three live webinars were held in the fall of 2020 to provide information on intended revisions to the total phosphorus criterion in Oklahoma's Water Quality Standards for the Illinois River, Flint Creek, and Barren Fork Creek. Recorded webinars and presentations are [available for download on the OWRB website](#).



OWRB Environmental Specialist Jet Stine takes a vertical profile of the water column at a site on Lake Thunderbird to collect data on temperature, salinity, and other chemical parameters.

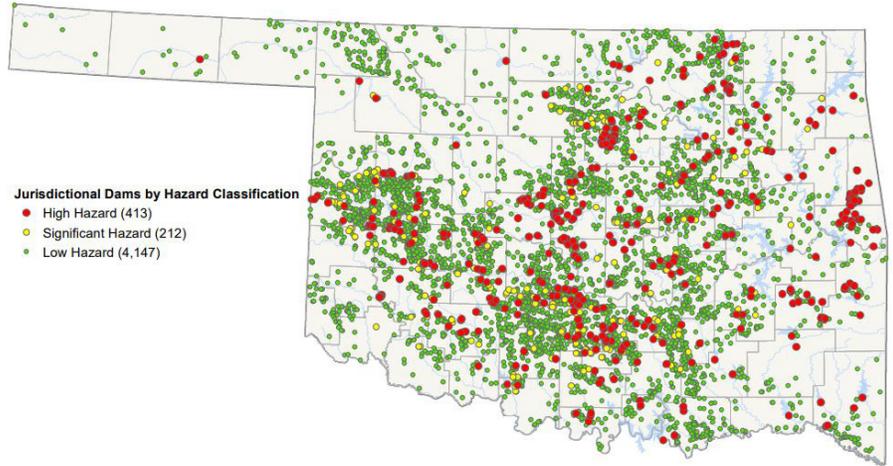
surface models. Projects completed during 2020 included Cleveland City and Holdenville lakes and studies at multiple other state lakes are underway.

The OWRB is a partner agency of the Oklahoma Wetlands Technical Workgroup (OWTWG), which is led by the Oklahoma Conservation Commission (OCC). OWRB staff develop and work on projects that further the goals of Oklahoma’s Wetland Program Plan (WPP) as well as agency goals for surface water programs. Projects to date involve both water quality monitoring as well as updating the U.S. Fish and Wildlife Services, National Wetlands Inventory (NWI) maps to better understand the benefits and extent of these natural resources.

Dam Safety

As the coordinating state agency for Oklahoma’s dam safety program, the OWRB ensures the safety of more than 4,700 state dams, requiring inspections for all jurisdictional size dams based on downstream development.

In addition, owners of high hazard dams are required to have an emergency action plan (EAP) in place. Copies of the EAP must be submitted to local law enforcement agencies and emergency management officials. OWRB staff require submittal and subsequent approval of plans and specifications prior to all new dam construction and modifications to existing dams.



Dam inventory of Oklahoma, including more than 4,700 dams across the state shown in three hazard-potential classifications that denote risk involved with dam failure.

Floodplain Management

As the coordinating state agency for the National Flood Insurance Program (NFIP), the [OWRB provides education and certification](#), promoting sensible floodplain development. The State Flood Plan (SB1269), authored by Senator Dave Rader and Representative Lonnie Sims, received overwhelming support by the 2020 Legislature. The legislation directs the OWRB to develop the first ever statewide flood resiliency plan, which will integrate into the OCWP for a more holistic approach to water resources management.

Well Driller Licensing

Oklahoma statutes direct the OWRB to protect Oklahoma’s groundwater from contamination by ensuring the integrity of water well construction through the [licensing of well drillers and pump installers](#). During 2020, OWRB staff developed online training opportunities to assist drillers in meeting their continuing education requirements. Assistance with required well log reporting was also provided to drillers. More than 200,000 well logs are available to the public on the OWRB’s website.

Hazard-Potential Classification	Risk Involved with Dam Failure	Inspection Frequency
High	probable loss of human life	annually, by a registered professional engineer
Significant	no probable loss of human life but can cause economic loss or disruption of lifeline facilities	every three years by a registered professional engineer
Low	no probable loss of human life and low economic loss	every five years

Interstate Stream Compact Commissions

The OWRB represents Oklahoma’s interests on four separate [interstate stream compact commissions](#) regarding all the surface waters that flow into or out of the state. The compacts are written agreements among or between Oklahoma’s neighboring states that have been approved by the US Congress, enacted in Federal statutes, and enacted in the statutes of each state. The compacts also establish agencies known as Compact Commissions, consisting of one or more commissioners from each State plus one or more non-voting federal commissioners. The Compact Commissions meet annually (at rotating locations in the member States) to receive reports regarding stream flows, amount of water stored in reservoirs, and water quality, and to conduct other business to administer the compact provisions.

WELL DRILLING & PUMP INSTALLATION LICENSE CATEGORIES		
WATER WELLS Drilling and plugging of groundwater wells and test wells	WATER WELL PUMPS Installation or repair of water well pumps and pumping equipment, including windmills and solar installations	MARGINAL WATER WELLS Drilling and plugging of marginal groundwater wells
CATHODIC PROTECTION Drilling and plugging of deep anode groundbeds for corrosion protection	GEOTHERMAL WELLS Drilling and plugging of geothermal or heat exchange wells utilized for heat pumps	GEOTECHNICAL DRILLING Drilling and plugging of monitoring wells and geotechnical borings

Financial Assistance Program Update

Loans and grants approved by the Oklahoma Water Resources Board on October 20, 2020:

- Boynton Public Works Authority—\$85,000 Emergency Grant
- Bristow Municipal Authority—\$9,100,000 Clean Water State Revolving Fund (CWSRF) Loan
- Oklahoma City Water Utilities Trust—\$60,000,000 Financial Assistance Program (FAP) Loan

Loans and grants approved by the Oklahoma Water Resources Board on November 10, 2020:

- Atoka Municipal Authority—\$3,355,000 FAP Loan
- Carney Public Utilities Authority—\$99,999 Rural Economic Action Plan (REAP) Grant
- Choctaw Utilities Authority—\$5,700,000 FAP Loan
- Edmond Public Works Authority—\$13,500,000 CWSRF Loan
- Harrah Public Works Authority—\$10,860,000 FAP Loan
- Heavener Utilities authority—\$8,165,000 FAP Loan
- Hinton Public Works authority—\$3,139,000 CWSRF Loan
- Prue Public Works Authority—\$60,000 REAP Grant
- Stonewall Public Works Authority—\$100,000 Emergency Grant and \$99,999 REAP Grant

Loans and grants approved by the Oklahoma Water Resources Board on December 15, 2020:

- Atoka County RW & SWMD No. 4—\$180,230 Drinking Water State Revolving Fund (DWSRF) Loan
- Boise City Public Works Authority—\$130,000 REAP Grant
- Copan Public Works Authority—\$99,500 REAP Grant
- Enid Municipal Authority—\$205,000,000 DWSRF Loan
- Grady County RWS & SWMD #6—\$11,240,000 DWSRF Loan
- Guthrie Public Works Authority—\$16,000,000 CWSRF Loan
- Jet Utilities Authority—\$861,500 DWSRF Loan
- Porter Public Works Authority—\$206,750 CWSRF Loan
- Ryan Utilities Authority—\$99,999 REAP Grant
- Shawnee Municipal Authority—\$12,000,000 CWSRF Loan

Visit the [OWRB press releases web page](#) for more information.

Loans and grants approved by program as of December 31, 2020

FA Loans—401 totaling \$1,390,205,000

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—377 totaling \$1,899,721,372

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—232 totaling \$1,720,458,243

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—718 totaling \$63,979,417

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—595 totaling \$35,548,155

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.

Total Loans/Grants Approved: 2,337 totaling \$5,112,956,034

Estimated Savings: \$1,280,291,406

For more information, call (405) 530-8800 or visit www.owrb.ok.gov/financing.

Oklahoma Water News 4th Quarter, 2020

Published by the Oklahoma Water Resources Board. For questions or comments, please contact Darla Whitley, Editor, at pubinfo@owrb.ok.gov or (405) 530-8800.



The OWRB defines policy and conducts the state's water business through a nine-member Board appointed by the Governor.

Robert Stallings (Chairman), Stephen Allen (Vice Chairman), Bob Drake (Secretary), Jennifer Castillo, Charles Darby, Thomas A. Gorman, Suzanne Landess, Robert L. Melton, Matt Muller

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.

Julie Cunningham, Executive Director