

# OKLAHOMA Water News

2nd Quarter 2017

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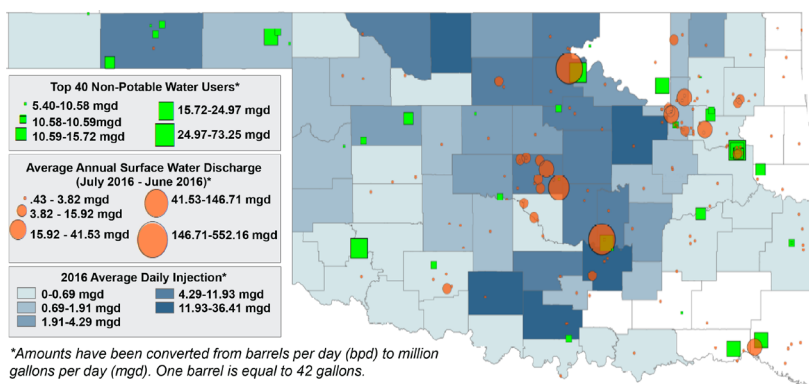
## *Produced Water Working Group (PWWG) Releases Report and Recommendations*

Oklahoma's Water for 2060 Produced Water Working Group (PWWG), developed in December 2015 by Governor Mary Fallin, released a report in late April evaluating current ways that water produced in oil and natural gas operations may be recycled or reused as part of Oklahoma's ongoing efforts to reduce saltwater injection and make produced water a benefit to the state by increasing water supply reliability and drought resiliency across multiple water user sectors.

The workgroup, led by the Oklahoma Water Resources Board (OWRB), included representatives of Oklahoma's oil and gas industry and a wide array of potential water users and stakeholders, including industry, power generation, agriculture, public water providers, state regulators, environmental organizations, and research organizations and universities.

In support of the working group's efforts, a technical study team conducted a preliminary investigation of the feasibility and cost effectiveness of multiple scenarios. This included an analysis of produced water availability in 66 Oklahoma counties. The top 40 major water users in the state (based on permits) were identified, as well as typical water treatment costs for various volumes.

### Preliminary Matches of Produced Water with Potential Users



*Preliminary matches of produced water with potential users for Oklahoma, created by the technical study team of the Produced Water Working Group (PWWG). These and other findings are available online in the PWWG report at [www.owrb.ok.gov/PWWG](http://www.owrb.ok.gov/PWWG).*

*(continued on page 2)*

## *From the Director*

Much needed rainfall on the last day of June brought relief to parts of the state that had been suffering from rainfall totals well below normal for that time of year. The return of drought last spring serves as a reminder to Oklahoma communities that now is the time to have a drought plan in place.

I attended the Western States Water Council in Nebraska City in April, where I presented details of our tribal settlement as an example of cooperation, compromise, and inclusion with a low price tag. This was a great opportunity to meet with water leaders from other states to exchange ideas about improving drought resiliency through partnerships and planning at the federal, state, and local levels.

Also in April, we commemorated the 22nd anniversary of the Murrah Building bombing with our annual ribbon tree service on the 19th, and many of our staff participated in the memorial marathon on the 30th. Congratulations to all who made the run and supported our teams!



*Julie Cunningham, Executive Director  
Oklahoma Water Resources Board*

*(continued on page 2)*



## PWWG Report (continued)

Ten representative cases were developed and further assessed by coupling a potential produced water user or alternative disposal method to an existing adjoining produced water source. The costs were estimated to range from \$0.57 per barrel of water for industry reuse to more than \$7 per barrel

Produced Water Working Group Report Recommendations	Reduce the challenges to water reuse through targeted regulations and legislation.
	Further investigate methods to facilitate the reuse of produced water in oil and gas operations.
	Study further the feasibility of the transferring Mississippi Lime produced water to the STACK play.
	Conduct a more detailed evaluation of evaporation as an alternative to injection.
	Identify research needs and potential funding partnerships to further accomplish the group's goals.
	Continue the PWWG or subgroups to identify opportunities to further cooperative planning.
	Support and build upon the Water for 2060 Advisory Council 2015 energy and industry water use sector water conservation findings and recommendations.

*Summary of recommendations of the Produced Water Working Group (PWWG) report. Visit [www.owrb.ok.gov/PWWG](http://www.owrb.ok.gov/PWWG) for the full report and links to other PWWG news and resources.*

of water for clean fresh water. The economic benefits of each case were evaluated by the PWWG to prioritize projects and develop recommendations.

The key finding of the PWWG was that recycling within the oil and gas industry is the best option when possible. Obstacles to this option include the lack of infrastructure, regulations, and other technical barriers.

Evaporation is recommended by the PWWG as the second best option, although more research is needed. This option presents a lower environmental/human health risk than desalination and discharge and can potentially be accomplished near the drilling site to reduce costs of transportation.

Moving forward, the PWWG technical study team has received a \$150,000 feasibility study grant from the US Bureau of Reclamation, matched with help from the OWRB and its partners at the Groundwater Protection Council, Environmental Defense Fund, and the Bureau for Economic Geology, to study in greater detail the challenges for industry recycling in the STACK play (in west central Oklahoma) and potential technologies for evaporative solutions. ♦

## From the Director (continued)

In late April, I met with all members of our congressional delegation in Washington, D.C., to discuss our agency functions, the Oklahoma Comprehensive Water Plan (OCWP) and its priority recommendations, and other funding and appropriations priorities. Also while there, I attended the Interstate Council on Water Policy (ICWP) board meeting and met with leaders from the USGS, USACE, and NOAA to discuss their strategic priorities and budgets while emphasizing the OWRB's priorities and support.

As noted in our featured article, the Produced Water Working Group (PWWG) finalized and published its recommendations report in April. This report has been very well received and we expect work to continue on these important projects that will help the energy industry meet our Water for 2060 goals of finding ways to use no more fresh water in 2060 than was used in 2010.

We welcomed our new Board members Robert Stallings and Robert Melton at the May Board meeting. We are very excited to work with them, as they both bring a tremendous amount of knowledge and experience to our Board. We also celebrated the successes of our departing Board members, Marilyn Feaver and Ed Fite. Both of these dedicated members made numerous contributions were incredibly supportive to our Board and agency staff in meeting our mission. We are very grateful for all they have helped us accomplish, and they will be missed.

On May 12, the Bureau of Reclamation announced \$23.6 million in water reclamation and reuse projects and studies, including three in Oklahoma. The Oklahoma projects include a feasibility study of potential impacts of selected produced water management and reuse scenarios, the City of Ada reuse feasibility study, and the City of Bartlesville feasibility study to augment their water supply with reclaimed water. We look

forward to assisting with these important projects that will serve as examples for moving forward on our Water for 2060 goals.

On June 7, I spoke at the 30th Anniversary of the Sovereignty Symposium, focusing on how the settlement helps us advance in implementation of the OCWP and Water for 2060 goals. It was a great opportunity to share how this cooperation promotes conservation, efficiency, planning, and infrastructure investment while protecting recreation, fish & wildlife, and other nonconsumptive interests.

We congratulate Ford Drummond, elected for another term as Chairman in June, and look forward to working closer with him and our other officers, Jason Hitch (Vice Chairman) and Stephen Allen (Secretary), on the upcoming issues.

This year's Oklahoma Governor's Water Conference will be held at the Embassy Suites in Norman on October 31 - November 1. During the luncheon on October 31, we will be celebrating the OWRB's 60th Anniversary! All former OWRB employees are invited to join us. If you are not registering for the conference and would like to attend, please RSVP to Mary Schooley or Mary Nell Brueggan at (405) 530-8800. ♦

## OKLAHOMA WATER RESOURCES BOARD



OKLAHOMA'S WATER AGENCY SINCE 1957  
INNOVATION • COLLABORATION • SOUND SCIENCE • SERVICE

ALL former OWRB employees are invited to attend the 60th anniversary luncheon on Oct. 31 at noon! Please RSVP to Mary Schooley or Mary Nell Brueggan at (405) 530-8800.



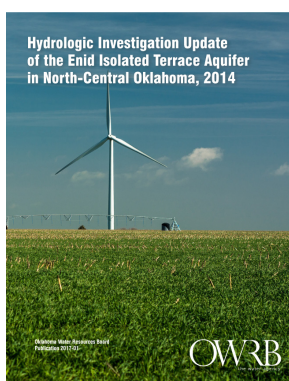
THIRTY-EIGHTH ANNUAL OKLAHOMA GOVERNOR'S  
WATER CONFERENCE AND RESEARCH SYMPOSIUMTHE VALUE  
OF WATER  
INVESTMENT  
IN OKLAHOMAOCT 31-NOV 1, 2017  
EMBASSY SUITES, NORMANLIQUID  
ASSETS*OWRB Publishes Enid Isolated  
Terrace 20-Year Update Report*

In late June, the OWRB published the 20-year update of the Enid Isolated Terrace (EIT) Aquifer Hydrologic Investigation. The EIT aquifer is located in north-central Oklahoma in the western half of Garfield County with a small portion in Alfalfa County.

The report includes an updated description of the area geology and climate, plus detailed hydrogeological information, including an analysis of water use over time, recharge rates, water quality analysis, water level changes over time, and estimated effects of pumping. The objectives of the update were to (1) summarize hydrologic information about the study area from existing reports; (2) evaluate data and information collected between 1982 and 2014; and (3) determine which, if any, changes impacted the aquifer between 1982 and 2014. It should be noted that the study area now includes terrace deposits to the east and west that were identified in recent geologic maps and were not included in the original study area and boundary.

The aquifer is used mainly for public water supply and irrigation with total use averaging 3,243 acre-feet per year from 1967 to 2013. Water quality in the EIT is good with varying water types, although localized high concentrations of nitrates (as nitrogen) and arsenic do occur.

There were approximately 1,600 groundwater wells and 64 groundwater permits located within the study area in 2013. Depth to water was measured in 72 groundwater wells in March 2014 to produce a potentiometric surface map, which indicated that groundwater generally flows to the east-southeast where at least two streams receive discharge from the aquifer. Data from six monitoring wells were analyzed to determine long-term water-level changes in the aquifer. Three wells were equipped with water-level recorders to characterize monthly trends and responses to precipitation.



20-Year Update of the Enid Isolated Terrace Aquifer Hydrologic Investigation

**Board Welcomes Robert Stallings and Robert Melton**

Two new members joined the OWRB in May: Robert Stallings (Enid) and Robert Melton (Claremore).

Robert Stallings will represent oil and gas production interests. He is the founding partner, chairman, and principal engineer for Envirotech Engineering & Consulting. He has worked in the oil and gas industry since 1980. He also has strong background in water issues having worked on multiple water infrastructure projects throughout western Oklahoma, and is a licensed water well driller. Stallings represents the OWRB's Region 2, and his term expires in May 2024.



Robert Stallings

Robert Melton will represent municipal water use interests. He is the chief executive officer of Melton Dodge (Chrysler Jeep) and president of Melton Land Co. He has served on a number of municipal, industrial, and retail development boards, and has been actively involved in community and education philanthropy. Melton represents the OWRB's Region 8, and his term expires in May 2022. 💧

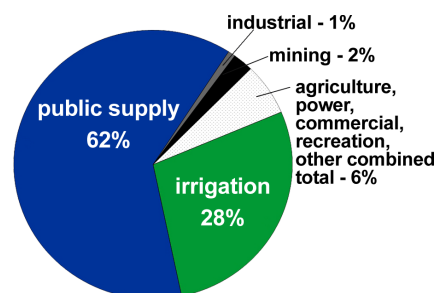


Robert Melton

Changes in the City of Enid have also affected water use numbers. The population of Enid increased from about 45,000 in 1982 to about 50,000 in 2010. Beginning in 1995, the City of Enid also began utilizing the Cimarron Terrace aquifer for municipal supply, which decreased the percentage of municipal groundwater use from the EIT.

	Annual Reported Water Use*		
	1967-2013	1967-1997	1998-2013
Average	3,243	3,095	3,520
Median	3,301	3,284	3,402
Minimum	1,434	1,434	2,106
Maximum	4,882	4,246	4,882

\*Shown in acre-feet. Excludes the year 1992.

**Annual Reported Water Use by Sector**

*Average use per year for three time periods (table) and average annual groundwater use by type from the study area, 1967–2013 (pie chart). These figures illustrate the comprehensive overview provided by the study report. Area stakeholders can utilize the updated information for water planning and economic development.*

The information provided by the EIT 20-Year Update Report will be utilized by the OWRB and other local and regional stakeholders to ensure the appropriate management and protection of this vital water resource.

The report is available online at [www.owrb.ok.gov/gwstudies](http://www.owrb.ok.gov/gwstudies). 💧

## *OWRB Partners with Conservation Commission for Three Green Infrastructure Projects*

The OWRB has partnered with the Oklahoma Conservation Commission to fund three green infrastructure projects through the Clean Water State Revolving Fund (CWSRF) program. The projects are focused on McMurtry, Grand, and Eufaula lakes, where several water quality impairments have been identified, such as low dissolved oxygen, nutrients, and turbidity.

The Lake McMurtry project focuses on creation of a pervious parking lot, a low impact development (LID) practice that will increase infiltration and reduce runoff with the goal of improving downstream water quality.

At Lake Eufaula, a wetland along the shore will be constructed. The new area will capture and treat stormwater runoff from a portion of the City of Eufaula and sequester nutrients and other pollutants from entering the lake. Additionally, the wetland will help mitigate the losses of naturally occurring wetlands and create educational and recreational opportunities.

At Grand Lake, a bioretention structure and rain garden will be installed at the Ecosystems and Education Center in Langley. The new areas will capture and treat stormwater runoff from the parking lot, helping to address the lake's water quality issues.

For more information on these projects, contact Lori Johnson at (405) 530-8800. For more information on water quality at McMurtry, Grand, and Eufaula lakes, visit [www.owrb.ok.gov/bump](http://www.owrb.ok.gov/bump). ♦



### **Eligible Green Infrastructure/Low Impact Development (LID) Practices**

- **Permeable/porous pavements**
- **Green roofs**
- **Street trees/urban forestry**
- **Expansion of tree boxes**
- **Vegetated swales**
- **Vegetated median strips**
- **Cistern and rain barrels**
- **Land conservation and reforestation**
- **Elimination of curbs/gutters**
- **Rain gardens**
- **And many more!**

## **Soak Up the Rain!**

Natural hydrologic processes have always cleansed water as it flows through rivers, lakes, streams, aquifers, and wetlands. In the last several decades, artificial systems have been constructed that emulate these processes to promote water quality improvements.

**Constructed wetlands** can provide an enormous number of ecological functions, including water purification, flood protection, shoreline stabilization, groundwater recharge, and wildlife habitat. Constructed wetlands can mitigate pollution from both point and nonpoint sources. The slow velocity of water in wetlands allows sediments and nutrients to be trapped and held by plants.

**Permeable pavement** can help reduce runoff by allowing infiltration of precipitation and water flows. Alternative materials, including pervious asphalt and concrete, interlocking pavers, and plastic grid pavers, allow water to seep through the surface down to underlying layers of soil and gravel. In addition to reducing runoff from rain, permeable pavement can help filter out pollutants and reduce the need for costly conventional drainage features.

**Rain gardens** can be created in depressed areas in the landscape that collect rain water from a roof, driveway, or street and allow it to soak into the ground. Planted with grasses and flowering perennials, rain gardens can be a cost effective and beautiful way to reduce runoff. Rain gardens can also help filter out pollutants in runoff and provide food and shelter for butterflies, song birds, and other wildlife.

**Bioretention** is a process in which contaminants and sedimentation are removed from stormwater runoff, often incorporating drainage systems and amended soils. Stormwater is collected into the treatment area, which consists of a grass buffer strip, sand bed, ponding area, organic layer or mulch layer, planting soil, and plants. This practice mimics natural hydrology through infiltration as well as evaporation and transpiration of stormwater runoff.

**Green roofs** partially or completely cover rooftops with vegetation and a growing medium planted over a waterproof membrane. Green roofs absorb rainwater while providing insulation and wildlife habitat.

**Infiltration basins** are shallow impoundments that are designed to infiltrate stormwater into the soil. These systems are highly efficient at pollution removal and can help recharge groundwater.

# rainfall as a resource



**The next time it rains, watch where the rain goes. Does it soak into the ground? Does it flow across a lawn? Does a downspout send it down a driveway or parking lot to the street and into a storm drain?**

**By collecting and storing rainwater from rooftops for lawn and garden use, rain barrels stop stormwater runoff from flowing to the nearest storm drain.**

## Why use rain barrels?

Rain barrels help to conserve water and reduce stormwater runoff. In the summer, outdoor tasks such as watering lawns and gardens typically make up about 40% of household water use. Considering seasonal droughts, restrictions on lawn watering, and the increasing cost of water, it makes sense to use rainwater instead of municipal water outdoors. Unless it is collected, rainwater runs off impervious surfaces, such as roofs and pavement, gathering pollutants that often end up in local streams, rivers, pond, lakes, and marine waters.



Keeping and using rainwater on your property helps reduce pollution and erosion while improving local watershed health.

## How do I install a rain barrel?

1. Purchase or make a rain barrel.
2. Select a location under a downspout.
3. Determine the height of the barrel.
4. Build a platform. Elevating a rain barrel a foot or so above the ground increases water pressure, which comes solely from gravity. Full rain barrels typically weigh more than 400 lbs., so the platform must be made of sturdy materials such as cinder blocks or bricks. The platform must be flat, level, and large enough to support the entire base of the barrel.
5. Place the rain barrel on the platform.
6. Cut the house downspout to fit the barrel's opening. You may connect the downspout directly to the lid opening, connect them via a flexible pipe, or simply direct the downspout to the opening in your barrel. You may also wish to install a downspout diverter, which allows you to divert water back into your downspout during winter or when you do not wish to collect rainwater.
7. Attach a hose to the overflow fitting. Use a length of hose sufficient to drain excess rainfall away from your foundation into a garden area or into another rain barrel. Keep the overflow valve open at all times.

## What are rain barrels?

Rain barrels are containers used to collect rain from the roof of a building via the gutter and downspout. The barrel should have a spigot to which a hose may be attached, and an overflow hose to direct water away from the foundation if rain continues to fall after the barrel is full. Rain barrels are often made from 55-gallon food-grade plastic barrels, although they can also be made of other materials.

**The USEPA estimates that a rain barrel will save most homeowners about 1,300 gallons of water during peak summer months.**

## Rainwater Quality

**Rainwater is "soft," or free from minerals and chemicals such as chlorine, fluoride, and calcium that are often present in municipal water.**

**Rainwater is considered ideal for watering plants, filling swimming pools, or washing cars and windows.**

## Rainwater Quantity

**Just 1/4 inch of rainfall on a typical roof will fill a rain barrel, and a full rain barrel will water a 200 square foot garden. A good rule of thumb is that 1 inch of rain on a 1000 square foot roof yields 623 gallons of water. You can calculate the yield of your roof by multiplying the square footage of your roof by 623 and dividing by 1000.**

**Visit your local home improvement store or shop online for rain barrels. Commercially available 55-gallon rain barrels start at around \$60.**

**For more tips, visit Oklahoma City's "squeeze every drop" web page at [www.okc.gov/departments/utilities/squeeze-every-drop](http://www.okc.gov/departments/utilities/squeeze-every-drop).**

## Winterize your barrel.

1. Disconnect the diverter.
2. Completely drain the barrel. Direct the water away from the house foundation.
3. Replace the diverter with a cover or invert the diverter and reinstall.





## OWRB Hires New Division Chiefs



Bill Cauthron has been named Chief of the OWRB's Water Quality Programs Division. Bill began his career at the OWRB as an intern conducting Clean Lakes Phase I and Phase II studies, and was hired full time in 1989. He later assumed the duties of lead investigator for the National Lakes Assessment and was instrumental in establishing Oklahoma Water Watch, the agency's volunteer lake monitoring program. From 1998-2015, Bill oversaw the Beneficial Use Monitoring Program (BUMP), funded by the Oklahoma legislature in 1998 to assess lakes and streams and expanded in 2013 to include the Groundwater Monitoring and Assessment Program (GMAP). In 2015, Bill assumed the role of Assistant Chief of the Division. He has represented the OWRB in partnership programs such as the USGS Cooperative Stream Gaging Program and the NRCS National Water Quality Initiatives.

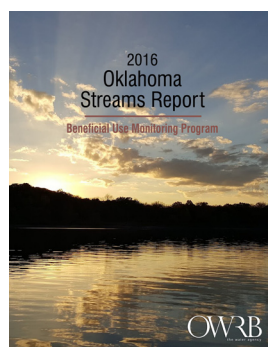
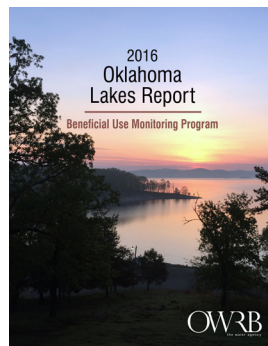
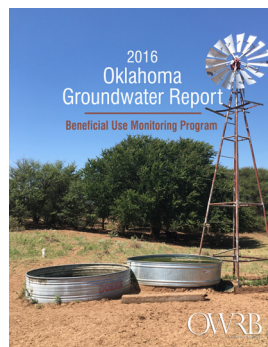


Kent Wilkins has been named Chief of the OWRB's Planning and Management Division. Kent has been involved in environmental hydrogeology and geology for more than 30 years. Prior to joining the OWRB in 1990, he worked as a well-site geologist at oil and gas drill sites and a consultant for investigating leaking underground fuel storage tank sites. Kent began his career at the OWRB assisting the Well Drillers and Water Quality programs from the McAlester field office. He later moved to the Oklahoma City office and worked directly for the Well Drillers Program. In 2012, Kent became Assistant Chief of the Planning & Management Division. Kent is a Certified Remediation Consultant, Certified Floodplain Manager, and a Registered Professional Environmental Specialist. He is a member of the Oklahoma Ground Water Association, National Ground Water Association, and Oklahoma Floodplain Managers Association. 💧

## Oklahoma Water Monitoring Reports Available

The Oklahoma Water Resources Board's Beneficial Use Monitoring Program (BUMP) annual reports of statewide water quality data for lakes, streams, and groundwater are now available online at [www.owrb.ok.gov/BUMP](http://www.owrb.ok.gov/BUMP).

The BUMP Lakes and Streams reports feature summaries of physical, chemical, and biological data obtained through sampling at approximately 130 lakes and 100 stream sites throughout the state, and include an assessment of beneficial use impairments or threats for each site. The online version contains summary pages listed by stream site or lake site with links to downloadable data. Agency monitoring staff sample streams in the network annually and lakes on a three-year rotation. Oklahoma's major aquifers are sampled through the Groundwater Monitoring and Assessment Program in approximately 750 wells across the state. The GMAP online report also includes summaries for each aquifer that show nutrient, mineral, and metal statistics as well as general parameters, such as depth to water, alkalinity, hardness, and total dissolved solids (TDS). 💧



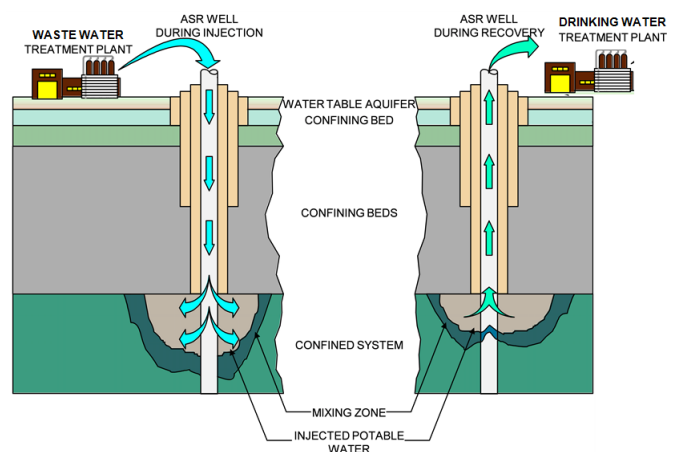
## Rules Approved to Facilitate ASR Project Implementation

On June 13, Governor Mary Fallin approved proposed permanent rule changes to Oklahoma's Water Quality Standards, including language that will allow functionality and flexibility in the use and protection of Oklahoma's groundwater, particularly regarding Aquifer Storage and Recovery (ASR) projects.

While the protection of existing water quality remains at the foundation of the groundwater standards, the new language will allow flexibility of their application with the most sensitive beneficial use setting the baseline of protection.

Prior to these changes, the standards required existing water quality to be maintained with no introduction of non-natural substances and lacked clear targets to protect beneficial uses. These measures essentially prevented the development of ASR projects.

The revisions were developed through the ASR workgroup, which convened in 2016 with members from multiple organizations and agencies, holding informal stakeholder meetings and a formal comment period in December. 💧



*Aquifer Storage and Recovery (ASR) project diagram*

# Drought Update

## RAINFALL

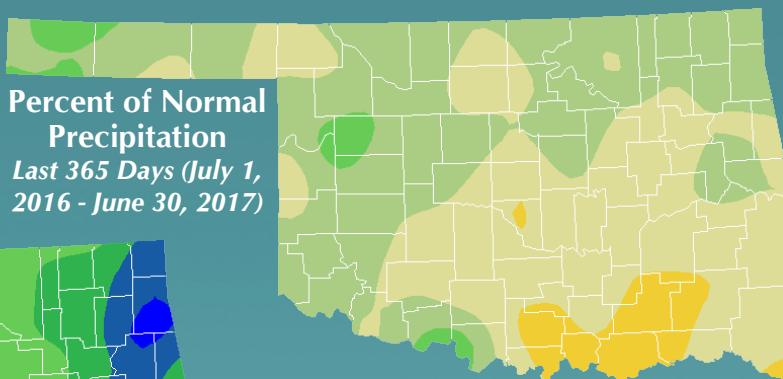
**Last 90 Days**  
April 2, 2017 – June 30, 2017

**Last 365 Days**  
July 1, 2016 – June 30, 2017

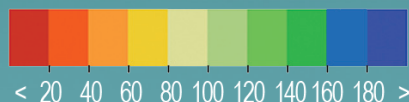
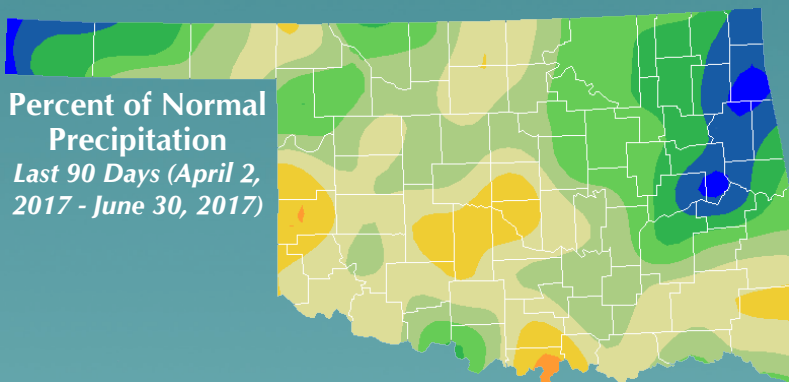
Climate Division	Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	Rank Since 1921	Total Rainfall (inches)	Departure From Normal (inches)	Percent of Normal	RANK SINCE 1921
PANHANDLE	9.47"	+2.07"	128%	23rd wettest	22.26"	+1.68"	108%	25th wettest
NORTH CENTRAL	12.56"	+0.92"	108%	29th wettest	33.05"	+1.63"	105%	28th wettest
NORTHEAST	21.46"	+6.69"	145%	9th wettest	45.59"	+2.92"	107%	23rd wettest
WEST CENTRAL	9.88"	-0.61"	94%	48th wettest	32.36"	+3.96"	114%	14th wettest
CENTRAL	13.25"	-0.01"	100%	46th wettest	35.49"	-2.14"	94%	40th wettest
EAST CENTRAL	22.30"	+7.64"	152%	7th wettest	43.92"	-2.22"	95%	43rd wettest
SOUTHWEST	10.35"	-0.58"	95%	47th driest	32.04"	+1.77"	106%	24th wettest
SOUTH CENTRAL	13.16"	-0.63"	95%	49th wettest	33.65"	-7.06"	83%	32nd driest
SOUTHEAST	15.45"	+0.23"	101%	47th driest	42.54"	-8.05"	84%	24th driest
STATEWIDE	14.27"	+1.77"	114%	22nd wettest	35.58"	-0.89"	98%	43rd wettest



**Percent of Normal Precipitation**  
Last 365 Days (July 1, 2016 - June 30, 2017)

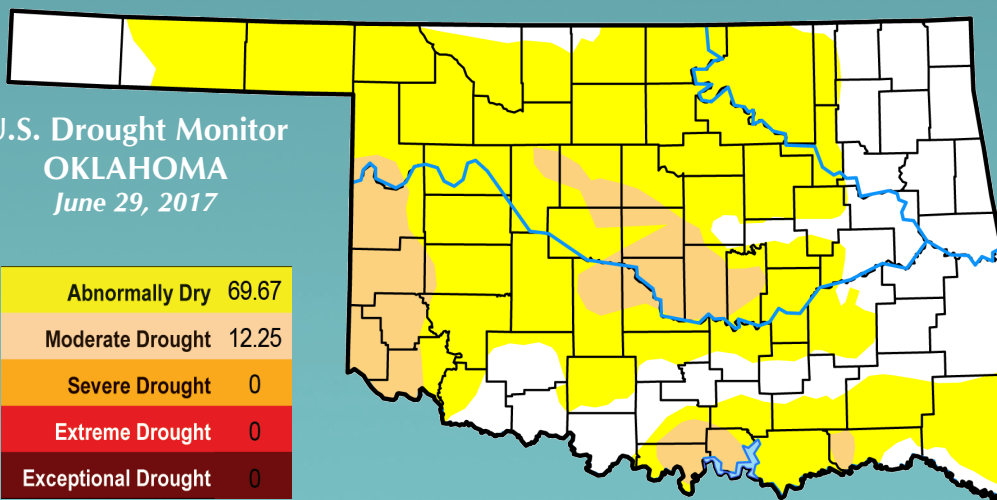


**Percent of Normal Precipitation**  
Last 90 Days (April 2, 2017 - June 30, 2017)



**U.S. Drought Monitor**  
**OKLAHOMA**  
June 29, 2017

Abnormally Dry	69.67
Moderate Drought	12.25
Severe Drought	0
Extreme Drought	0
Exceptional Drought	0



Data obtained from the National Drought Mitigation Center, USDA, NOAA and Oklahoma Climatological Survey. For more drought information, and to obtain updated information on Oklahoma's drought and moisture conditions, visit [www.drought.ok.gov](http://www.drought.ok.gov).

# FINANCIAL ASSISTANCE PROGRAM UPDATE

*Loans & Grants Approved as of July 1, 2017*

## **FA Loans—379 totaling \$1,016,565,000**

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—306 totaling \$1,439,902,200**

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—189 totaling \$1,154,148,300**

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—669 totaling \$59,349,341**

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.

## **Emergency Grants—573 totaling \$34,007,132**

Emergency grants, limited to \$100,000, are awarded to correct situations constituting a threat to life, health, or property and are an indispensable component of the agency's financial assistance strategy.

## **Drought Response Program Grants—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.

## **Water for 2060 Grants—8 totaling \$2,625,000**

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

## **Total Loans/Grants Approved: 2,130 totaling \$3,707,015,820**

## **Estimated Savings: \$1,256,705,226**

*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](http://www.owrb.ok.gov/financing).*

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## Nominations Open for the Oklahoma Water for 2060 Excellence Award

In support of the Oklahoma Water for 2060 Act and recommendations by a special advisory council to the Governor and Legislature, the Water for 2060 Excellence Award program was developed to recognize individuals and entities in three categories—Public Water Supply, Energy/Industry, and Crop Irrigation/Agriculture Production—that serve as outstanding examples of water use efficiency and conservation of fresh water resources. Award winners will be acknowledged at the annual Governor's Water Conference luncheon on October 31.

Eligible public water supply entities include cities, towns, rural water districts, wholesale water providers, or water corporations that provide water to the public for human consumption and/or other purposes. Example projects include (but are not limited to) water conservation planning and implementation, leak detection, water loss audits, conservation pricing, regionalization, outdoor watering restriction ordinances, conservation education programs, and water reuse systems.

The Energy/Industry award will recognize entities that use water for mining, extraction, fabricating, washing, diluting, cooling, sanitation, or other relevant uses for the production and/or transport of goods or commodities in Oklahoma. Example projects include (but are not limited to) reuse/recycling, grey water systems, rainwater/capture systems, water efficient practices in landscaping or other outdoor uses, and employee education programs.

The Crop Irrigation/Agriculture Production category is open to entities primarily engaged in the practice of cultivating the soil, producing crops, and/or raising livestock. Example projects include (but are not limited to) water conservation planning and implementation, replacing systems with water-efficient technologies such as low pressure systems, irrigation scheduling based on soil water content or soil water tension, replacing fresh water use with recycled or marginal waters (including tailwater reuse), conversion to less water-demanding crop varieties, and conservation tillage/soil health practices that conserve water, improve infiltration rates, and reduce runoff.

Projects implemented within the last five years are eligible. Any individual, group, agency, association, council or organization may nominate an entity or may self-nominate.

Nomination forms are available online at [www.owrb.ok.gov/2060/award.php](http://www.owrb.ok.gov/2060/award.php).

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The Oklahoma Water Resources Board meets monthly. Meetings are open to the public. Visit [www.owrb.ok.gov](http://www.owrb.ok.gov) for meeting dates/times, locations, and agendas.