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Environmental Federation 2021 Newsreel Conference

OWRB Update

Bill Cauthron
Water Quality Program Chief
Oklahoma Water Resources Board

State of Oklahoma
OWRB
WATER RESOURCES BOARD
the water agency

Oklahoma Comprehensive Water Plan 2012 Update

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50-year Supply Needs and Solutions

- Quantified Demand vs. Supply by Region (82 sub-basin level), identified supply gaps, Water/WW Infrastructure Needs, State Legislative policy recommendations
- Since then, significant progress made at all levels and use sectors
- Many Oklahomans and our elected officials have dedicated time and support for law changes, studies, and funding
- Water users from all sectors have embraced Oklahoma's **Water for 2060 Act** for water efficiency, conservation, and developing new technologies to put non-traditional water resources to use

Implementing 2012 OCWP

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2012:

- **Gross Production Tax Funding -** Continued extensions by Legislature
- **Beneficial Use Monitoring Network-** Legislature injected permanent funding for new SW/GW monitoring network - Legislature
- HB 3055 **Water for 2060 Act** – Sen. Fields; Reps. Steele, Lockhart, and Roan
- HJR 1085 - State Question 764 – W**ater Infrastructure Credit Enhancement Reserve Fund** – Sen. Crain, Fields; Rep. Richardson, Hickman, Roan
- SB 1043 **ODEQ Reuse Framework** – Sen. Fields Marlatt , Fields; Rep. Martin

2016:

- SB 1219 – Aquifer Storage and Recovery framework – Sen. Fields; Rep. Pfeiffer, Osborn

2017:

- HB 1485 authorizes **pilot programs for aquifer storage and recovery**; adds definitions of aquifer storage – Sen. Griffin & Rep. Watson

OCWP Legislation Since 2012

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2018:

- SB 1294 – Authorized **gradual implementation of MAY & statewide well spacing**. – Sen. Pederson, Murdock, Rosino , Griffin; Rep. Pfeiffer, Osborn
- HB 3405 – Authorized use of **marginal quality water** by allowing for responsible and safe completion of **marginal quality water wells** – Sen. Fields; Rep. Watson

2019:

- SB 539 – **Extension of Gross Production** Tax – Sen. Jech; Rep. Newton
- HB 2263 - **Creates GW Irrigation District Act** – Sen. Murdock; Rep. Patzkowsky
- SB 998 - Defines taking and **use of marginal water** to be beneficial and not waste – S. Murdock, Rep. Patzkowsky

2020:

- SB 1875- Oil & Gas Produced Water and Waste Recycling Act, ownership and disposal responsibilities
- SB 1269 - Directs OWRB to develop **statewide flood resiliency plan** and creates revolving fund

Fast forward

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- Today's trends showing more frequent weather extremes at both ends of hydrograph
- Record rainfall and flood losses becoming larger, more widespread, and costly
- Oklahoma's water infrastructure is aging and storage capacity inventory lacking
- Flood planning is woven throughout OCWP but drought resiliency typically major focus
- Time for a New Plan!


Keystone Dam


Webbers Falls

2019 Record Flooding

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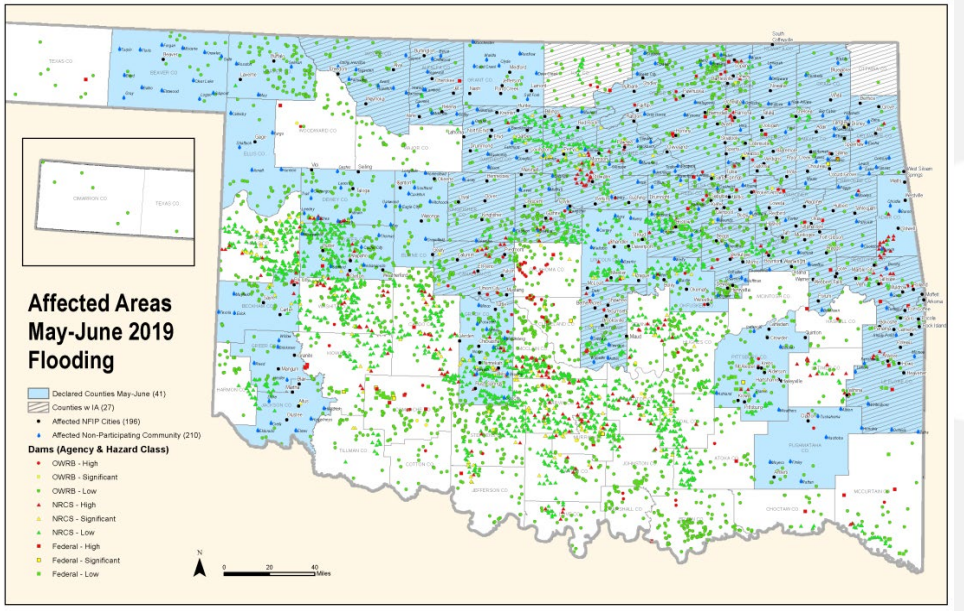
- 2019 historic flood heavily impacted Ark. R. basin, damaging homes, agri. transportation, levees; 6 deaths; $100 million estimated cost
- 416 Counties/Towns/Cities Impacted, with less than ½ participating in NFIP program
- 40 Fed. Disaster Declared Counties
- 2,375 Dams in Declared Counties (201 high hazard); 3 dams failed



OWRB Hazard Mitigation Authority

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Water Resources Planning

- Oklahoma Comprehensive Water Plan and Decennial Updates
- Local water planning assistance

Floodplain Management

- FEMA NFIP and Cooperating Tech. Partnership Programs: 404 participating communities; 13,026 policies; $2.9 billion coverage; 407 NON-participating communities; 139 w/ pop> 100
- Floodplain board for State-owned property within floodplains — development permitting & construction standards
- Floodplain Accreditation Program
- Dam Safety Program— 4,700 State/NRCS dams; average age >50 years; > 360 high hazard potential dams

State Flood Resiliency Plan

What is the purpose of a state flood plan?
(SB1269)

- **EVALUATE** condition and adequacy of critical infrastructure subject to flooding on a watershed basis.
- **DEVELOP** a comprehensive list of flood mitigation projects.
- **PROVIDE** improved resource management between federal, state agencies, and local communities.
- **INCREASE** the state's community and public awareness
- **PROTECT** against the loss of life and property in Oklahoma.

Oklahoma Flood Challenges

LACK OF PUBLIC AWARENESS regarding floodplain management.

LIMITED FLOOD INSURANCE PARTICIPATION OUTSIDE FLOODPLAINS *(~25% of claims come from area outside of "1%-chance" flood areas).*

DAM SAFETY and downstream development.

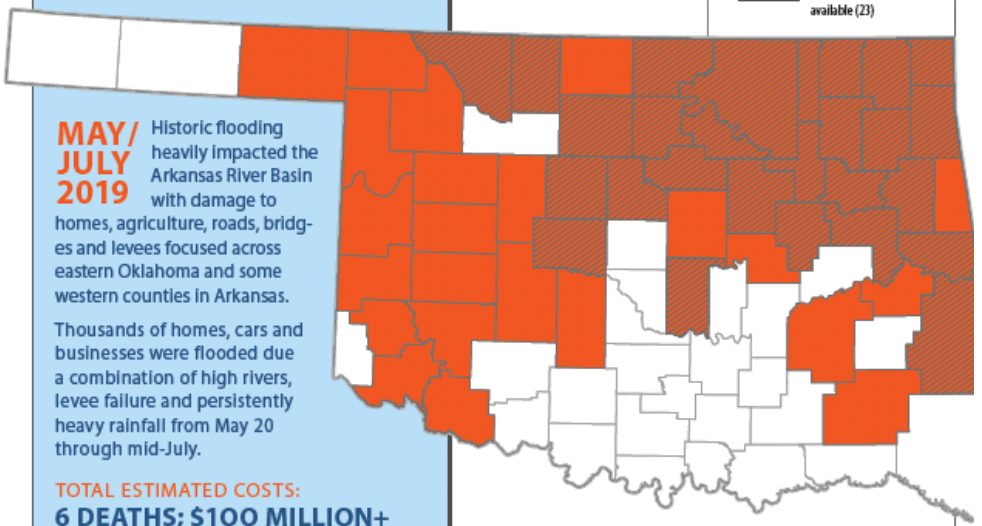
LACK OF FLOOD MAPS & RESERVOIR STORAGE CAPACITY INFORMATION 17 unmapped and 19 non-participating counties.

AGING AND DEFICIENT flood control infrastructure.

LACK OF FUNDING for rehabilitation and public outreach.

NEED FOR INCREASED AWARENESS within retail insurance market.

STATE PROGRAMS ARE HEAVILY DEPENDENT on fluctuating federal dollars and low state funding levels.



MAY/ JULY 2019 Historic flooding heavily impacted the Arkansas River Basin with damage to homes, agriculture, roads, bridges and levees focused across eastern Oklahoma and some western counties in Arkansas.

Thousands of homes, cars and businesses were flooded due a combination of high rivers, levee failure and persistently heavy rainfall from May 20 through mid-July.

TOTAL ESTIMATED COSTS:
6 DEATHS; $100 MILLION+

Why we need a Flood Resiliency Revolving Fund (SB1269):

- *Leverage federal funding.*
- *Improve federal, state, and local partnership to reduce flood risk.*
- *Increased opportunity for local flood mitigation efforts.*
- *The program is able to be self-sustained in the future.*

Plan Implementation:

- FEMA provides Base Level Engineering (BLE) and Flood Insurance Rate Maps (FIRM) to identify structures in the Special Flood Hazard Area (SFHA) in communities.
- OWRB in partnership with federal, state, local, and non-profit partners conducts public outreach to inform communities regarding flood hazard.
- Through NFIP programs participation, local communities are able to manage the flood risk.
- Using FIRM and BLE data, local communities are able to mitigate flood risk through various projects such as:
  1. *Elevating existing structures in the SFHA.*
  2. *Improved drainage.*
  3. *Build/maintain water storage areas.*
  4. *Restore/protect wetlands.*

There is no request for appropriation associated with SB1269.

NFIP in OKLA:

- **404** Participating communities
- **13,026** Policies
- **$2.9 Billion** in coverage
- **12,555** Claims totaling more than **$232 million** since 1978.
- **407** Non-participating communities; **139** with population greater than 1,000.

Facts about Flooding:

1 in 4

Over the life of a 30-year mortgage, there's a 26% chance your home in the floodplain will be flooded.

25%

About 25% of all NFIP claims come from areas lying outside of the 100-year, or 1% chance, flood boundary.

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SB-1269 State Flood Plan/Fund

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Author: Sen. Radar/Rep. Sims, Sponsor: Allison Ikley-Freeman overwhelmingly support by 2020 Legislature

- SB1269- Directs OWRB to develop 1st-ever statewide flood resiliency plan
- Will allow OWRB to integrate Ok. Flood Plan into OCWP and manage water resources more holistically
- Potential to leverage state/local dollars to gain access to additional Federal hazard mitigation funds
- Currently scoping work, data gaps, and identifying funding opportunities

Oklahoma Comprehensive Water Plan 2025

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Vision and Objectives

- Focus on water infrastructure and emphasize need for water investment mechanism
- 50-yr. Inventory of projects/cost estimates: water, reclaimed water, reservoir storage, storm water
- For 1st time ever, fold in stormwater and flood control needs, structural and non-structural, on a watershed basis
- Improve online tools, dashboards, models, integration for long-term planning and resource management

Oklahoma Comprehensive Water Plan 2025

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Stakeholder Engagement:

- Employ focus groups and statewide online surveys to inform workplan, projections by sector, studies, policy recommendations
- Water Provider surveys enhanced from lessons of 2012

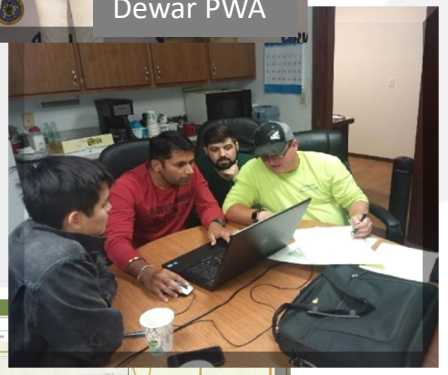
Preliminary Timeline

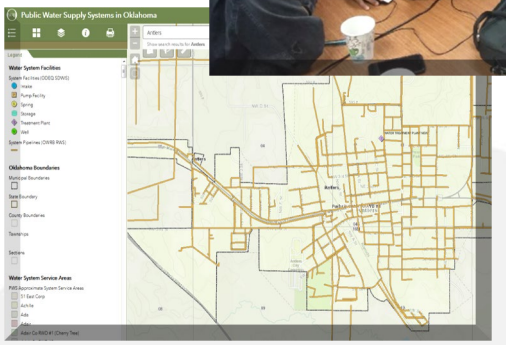
- 2020/2021: work plan; broad engagement process; identified projects, technical studies, online tool development begin
- 2022: supply/demand projections begin w/ U.S. Census publication
- 2022-2025: technical studies, policy, online tools and data developed and launched, final OCWP recommendations and reports

Oklahoma Strategic Alliance

- Signed Sept. 2019 to assist in improving sustainability of Oklahoma's water systems
- GOVERNOR/OSEE/OWRA/ODEQ/OWRB partnership works with systems on planning, technical assistance, operator/member training
- OWRB offers assistance to borrowers on loan condition compliance, funding opportunities, and **small system mapping**

Dewar PWA





2021 Legislation

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2021:

- SB 913 – Changes rule making requirements and timelines
- HB 2296 – Re-creates the Red River Boundary Commission to coordinate with Texas to make certain boundary determinations
- HB 1093 – Directs the Water Resources Board to update the Oklahoma Water Quality Standards to facilitate nutrient trading.
- SB 1022 – Allows the Executive Director of the Water Resources Board to issue certain permits which aren't protested.

Oklahoma Alliance Long Range Sustainability Partners

Atoka County RWD #3	Marietta PWA
Boynton PWA	McClain County RWD #8
Caddo PWA	Morrison PWA
Cherokee County RWD #1	New Cordell
Cherokee County RWD #7	Okmulgee County RWD #1
Cherry Tree RWD	Okmulgee County RWD #20
Cleo Springs	Porter PWA
Colgate PWA	Pottawatomie County District Authority
Delaware County RWD #10	Roger Mills County #2 / Red Star
Dewar PWA	Southern Oklahoma Water Corporation
Harper County RWD #1	Tishomingo Municipal Authority
Haskell PWA	Town of Glencoe
Hughes County RWD #6	Town of Jet
Inola PWA	Wagoner County RWD #5
Lincoln County RWD #4	Wellston PWA

OKLAHOMA STRATEGIC ALLIANCE 2020 RURAL WATER IMPACT

OKLAHOMA'S RURAL AND SMALL COMMUNITY WATER SYSTEMS

Oklahoma's 704 rural and small community water systems are a primary driving force supporting public health and economic development. To preserve and enhance the quality of life that these systems support, it is critical that they operate sustainably. However, achieving sustainability is not easy; these small water systems face numerous significant challenges, including dilapidated and aged infrastructure, high levels of water loss, inadequate rates, and a need for updated business practices. To ensure that rural Oklahoma's water systems are around for future generations, the Oklahoma Strategic Alliance partners are working together to protect rural Oklahoma by offering free sustainability assistance to rural and small community water systems. Since July 1st, 2019, we've achieved the following results:

WATER STATS – 7/1/2019 TO PRESENT

Water Loss Auditing and Control

- 14 water loss audits were completed at rural Oklahoma water systems, identifying 742.4 million gallons per year of water loss valued at $546,413.
- Leak detection was completed at 4 rural Oklahoma water systems, identifying 36 leaks. These leaks were costing the systems 277 million gallons per year, valued at $646,133.
- Based on this work, Oklahoma water systems used the training and knowledge provided to repair leaks saving 188 million gallons of water. valued at $319,616 with more savings on the way as systems repair additional leaks.

Rate Analysis

- 9 rate studies completed, with a 0.33 average increase in operating ratio and a cost savings and increased revenue total of $2,063,543 for the participating systems.

Capacity Development and Long Range Sustainability

Alliance partners work with both rural and small community water systems to improve their business management practices, which is crucial for promoting efficient operations. So far in FY2020, we helped systems develop:

- 3 Operations and Maintenance Plans, at a savings of **$26,550**
- 10 Emergency Response Plans, at a savings of **$36,000**
- 3 Personnel Policies, at a savings of **$14,000**
- 7 Financial Management Policies, at a savings of **$61,950**
- 1 Board Management Policy, at a savings of **$8,850**
- 9 Asset Management Plans, at a savings of **$70,200**
- 1 System Map, at a savings of **$30,000**
- 5 Standard Operating Procedures, at a savings of **$44,250**
- 6 Source Water Protection Plans, at a savings of **$78,000**
- 7 Safety Plans, at a savings of **$6,300**
- 4 Sanitary Sewer Surveys, at a savings of **$136,000**
- 7 Hydraulic Analyses, at a savings of **$70,000**

RETURN ON INVESTMENT

From July 1st to present, the strategic alliance has generated **$6.04** per dollar invested of direct economic benefit, bolstering this important lifeline for rural Oklahoma communities and ensuring they are equipped to be successful in the coming decades.

Online Products & Services

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Expanding mobile operations, online service to increase accessibility/lower costs

- **New Virtual public/stakeholder meetings**: Board Meetings, Water Quality Standards rulemaking on Illinois R. Criteria, Produced Water Working Group
- **New OWRB Help Desk** and **Complaints Reporting Portal**
- **New Licensing, Exams, and Continuing Education—** well drillers, floodplain management, dam safety
- **New Dashboards with mapping**: Financial Assistance, Pending Water Permit Applications, developing new River Trends
- **New Grant Application Forms**

Collaborative Studies

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SB 568 Phase II Arbuckle Simpson study (McCall/McCortney 2019)– inform water permitting: USGS; yr. 2 of 5 year data collection; Oka' Institute, Nations, OWRB; seeking funding

Water Bank Development Strategy— Chickasaw Nation, BoR grant; water banking for water rights overlying ABS basin

Canadian River Modeling Project— OU, Chickasaw and Choctaw Nations; water needs and identify vulnerable communities in Canadian and Ark. Basins

Water Settlement Planning— Chickasaw, Choctaw, OWRB— Collaborate on comprehensive water planning activities on an annual basis

Upper Red and Upper Washita studies— Ft. Cobb, Tom Steed, Lugert Altus, Foss Reservoir Districts, Bor, USGS

Thank You!

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