Oklahoma’s Comprehensive Water Plan...
Partnerships for Water Resiliency
Oklahoma’s Comprehensive Water Plan

50-year Needs – Options – Solutions

- Quantified Water Supply Infrastructure Needs
- Quantified long-term demand vs. supply and potential shortages by region for each use sector (82 subbasin level)
- Numerous technical studies and topic-specific workgroups
- Multi-year stakeholder engagement identified policy recommendations and additional study needs
OCWP Priority Recommendations

- Infrastructure Financing
- Conservation, Efficiency, Reuse
- Water Monitoring
- Supply Reliability
- Fish & Recreation Flows
- Excess/Surplus
- State/Tribal Resolution
- Regional Planning
OCWP Priority Recommendation

Infrastructure Financing

- Address projected $82+ billion 2060 water/wastewater infrastructure need
- In 2012, SQ 764 Water Infrastructure Credit Enhancement Reserve Fund- addl. leveraging capacity to fund more investment
- AAA rating and federal ROI 30% above national avg. at over 3:1
- Since 2012 closed $1.7 billion in loans/grants
- Sampling of others:
  - USDA Rural Development $235 million
  - Communities Unlimited- Community Loan Fund $8.5 million
Oklahoma Funding Agency Coordinating Team

State, federal agencies, non-profits, tribes working to address water infrastructure challenges across Oklahoma

- Ok. Water Resources Board
- Ok. Dept. of Commerce
- Ok. Dept. of Envt Quality
- Ok. Rural Water Assn
- Ok. Council of Governments
- Community Unlimited
- Indian Health Service
- US EPA
- USDA Rural Development
- US Bureau of Reclamation
Infrastructure Resiliency Requires Investment at All Levels

OWRB Funding - Cumulative Investments by State/Federal/OWRB Bonds

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Cumulative State Appropriated Funds</th>
<th>Cumulative OWRB Funds</th>
<th>Cumulative Federal Funds</th>
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</table>

Millions
Rural Water Sustainability Alliance

Secretary of Energy and Environment-ORWA-ODEQ-OWRB small communities comprehensive system inventory and long-range planning initiative:

- Toolbox for financial capital improvements and reinvestment in infrastructure
- Water leak audits and training lead to cost savings for systems
- System mapping and long-range technical, financial, managerial planning
OCWP Priority Recommendation

Water Quality-Quantity Monitoring Network

- Collect ‘foundational’ physical, chemical, and biological water data for improved decision-making
- 2012 Legislature restored funding for statewide Beneficial Use Monitoring Program (BUMP)
- Created first-ever comprehensive groundwater monitoring program (GMAP)
- 1,300 stream, lake, and groundwater well sites
Cooperative Water Projects

- Oklahoma Water Quality Standards
- City of Norman and Edmond Lake Studies
- Grand River Dam Authority Lake Management Study- effects on downstream aquatic communities
- Bathymetric mapping surveys- municipalities and Master Conservancy Districts
- Cooperative efforts with southeastern Oklahoma Tribes – Coordinating monitoring and technical studies and training efforts to ensure data compatibility
- USGS Flow Monitoring and Technical Survey
- National Water Quality Assessment
- Development of Lake Internal Loading Methodology
- Wetland Risk-Stressor Assessment Projects
Water System and Lake Capacity Contour Mapping
OCWP Priority Recommendation

Water Supply Reliability—Availability

- Recommendation called for ensuring water availability for future growth through **fair and sustainable water allocation**
  1. Water availability and allocation studies
  2. Analysis of new water management approaches
- Water law directs OWRB to allocate water rights based on results of yield studies
- Funded through Gross Production Tax since 2012
## Groundwater Availability Studies

<table>
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<td>Garber-Wellington</td>
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<tr>
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<tr>
<td>Red River A&amp;T</td>
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<tr>
<td>Arbuckle-Timbered Hills</td>
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### Aquifer Thickness

- **Unstudied**
- **In Progress**
- **Completed**

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*OWRB the water agency*
OCWP Priority Recommendation

Fish & Recreation Flows

- Recognized environmental flows help support recreation/local economies
- Called on diverse Advisory Group to assess suitability and structure of an in-stream flow program
- Ultimate goal—better understand benefits/implications of an ISF program, consistent with goal of managing water resources for multiple uses
- No agreement by Advisory Group, but general discussion themes:
  - One-size approach wouldn’t work
  - Protect existing water rights
  - Quantify water needed to support particular instream values AND economic impact of any approach
  - Common sense, timely, cost-effective
  - Voluntary mechanisms worth a look (water lease/banking/storage/conservation grants/outreach)
OCWP Priority Recommendation
Tribal-State Resolution

Goal of improving collaboration and reduce uncertainty in solving our collective water supply challenges

- USGS stream gauge network, technical studies and training efforts to ensure data compatibility
- Water planning, watershed restoration, regional drought contingency planning, water banking, etc.
- Coordinated infrastructure financing
- Interstate issues- e.g. Oklahoma-Arkansas agreement on Illinois River phosphorus control
- Information sharing workshops and conservation outreach
OCWP Priority Recommendation

Regional Water Planning

- Called for establishing 13 non-regulatory, regional planning districts charged with developing plans consistent with OCWP
- Proposed 2012 legislation did not pass—concerns re: prescribed boundary lines and potential for dispersed water authority conflicting with role of state
- Today, several regional water and drought planning efforts
- 2018 HB 2263 - Creates Groundwater Irrigation District Act—(Murdock/Patzkowsky)
- Remains a priority for future water resiliency—OCWP 2025
OCWP Priority Recommendation

Conservation/Reuse/Efficiency

– OCWP showed drastic water savings through various levels of conservation
– Recommended voluntary policies, incentives, and public education
– Spurred 2012 Water for 2060 Act-aggressive water-neutral use goal through conservation, efficiency, and developing new sources
– Challenged Oklahoma to become the nation’s most water-efficient state
OCWP Priority Recommendation

Conservation/Reuse/Efficiency

Collaboration with Legislature, communities, consultants, O&G industry, ORWA, OML, ODEQ, OCC(s), ODAFF, academia

• Marginal Water Sources Development
  - Water Reuse
  - Oil and Gas Produced Water Working Group (2016)
  - Brackish Water Development (2018 HB 3405)

• Maximizing Water Storage
  - Aquifer Storage/Recovery (2016 SB 1219)
  - Recharge through Soil Health
  - Reservoir Storage Capacity Studies
OCWP Priority Recommendation

Conservation/Reuse/Efficiency

Efficient Irrigation – Master Irrigators Program
• Committing funds to assist OSU develop outreach materials, moisture probes, and certification for Master irrigators

Soil Health promotion and research

Source Water Protection Workgroup & Collaboration
• Additional funding from NRCS is now available to landowners/farmers for BMPs on SWP. Mapping of current SWP areas and finding great new candidate areas.
• Partners: OCC, ORWA, NRCS, ODAFF, DEQ, GWPC,
OCWP Legislation Since 2012

2012
- Gross Production Tax Revenue Extended through 2016 - Legislature
- $1.5 million in appropriations for SW/GW monitoring network - Legislature

2016

2017
OCWP Legislation Since 2012

2018
- SB 1294 – Authorized gradual implementation of MAY and statewide well spacing – Sen. Pederson, Murdock, Rosino and Griffin & Rep. Pfeiffer and Osborn

2019
- SB 998 - Defines taking and use of marginal water to be beneficial and not waste – Murdock/Patzkowsky
OCWP 2025 Approaches and Investigations

- **Drill-down on Planning:** Elevate flood resiliency planning, real costs of drought and flooding regional and small system solutions, regional economic development,
- **Update Water Supply and Demand projections and maps**
  Tapping into experts from all water use sectors
- **Develop Policy Recommendations, Studies** facilitating partner and stakeholder dialogue
- **Pursue Water for 2060 Act Advisory Group Recommendations**
  Agriculture/Energy/M&I water sector efficiency & outreach
- **Develop Mobile Planning & Conservation Tools**
OCWP 2025 Approaches and Investigations

Some Potential Studies:

- **Infrastructure Needs Survey/Study Policy: Time for BOLD Solutions:** expanded to include flood control; ID potential solutions to big problems in small communities;
- **Quantify Water Storage:** statewide reservoir capacity and condition of aging infrastructure
- **Instream flow:** voluntary and incentives policies, regional economic impact analyses, timely information, infrastructure solutions
- **Marginal water sources Inventory**
- **Soil Health Economic Benefit**
Thank You

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