

Meeting Water Infrastructure Needs in Oklahoma

Interstate Council on Water Policy
October 15-17, 2013

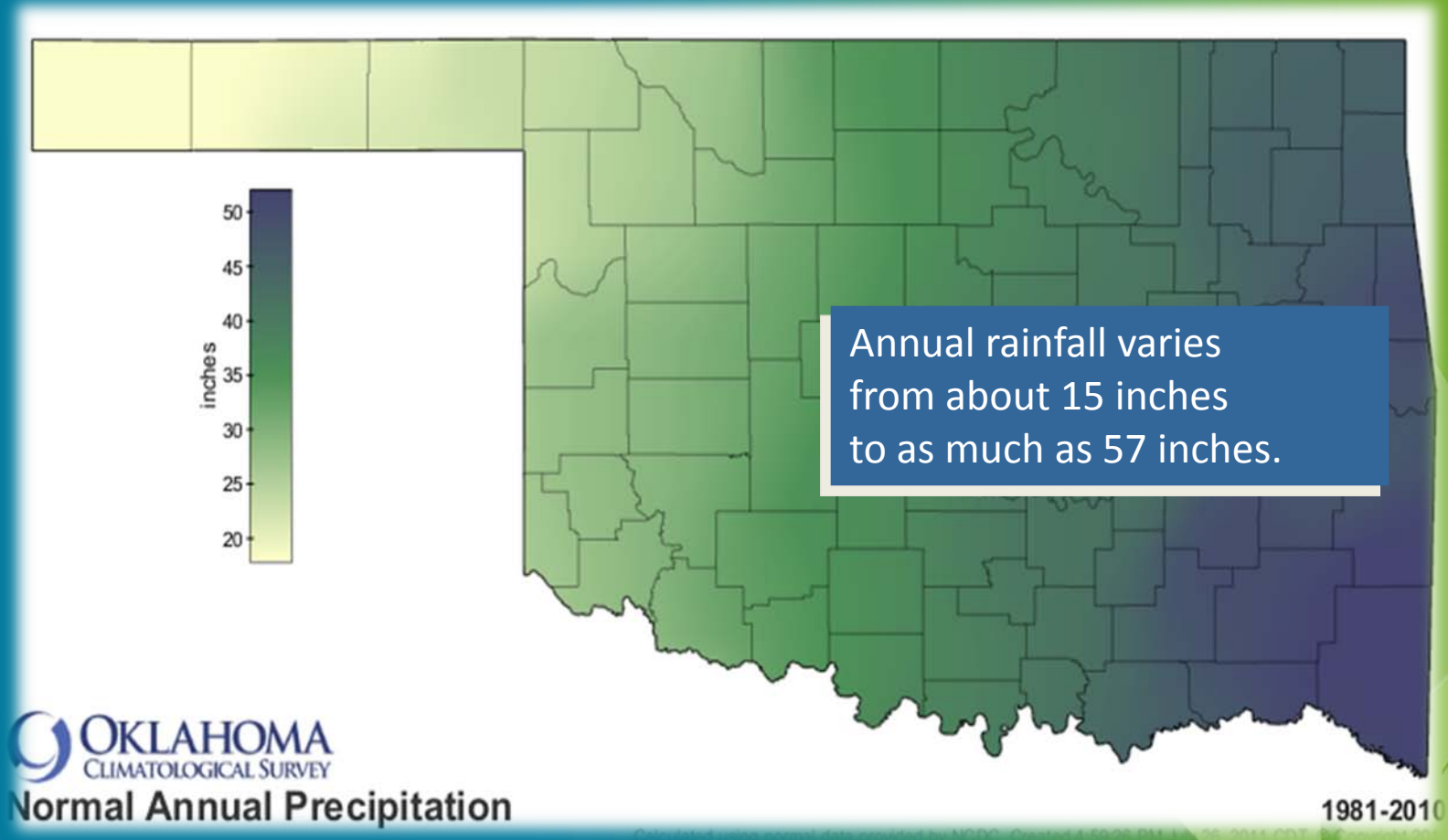
Julie Cunningham
Planning & Management Division Chief
Oklahoma Water Resources Board



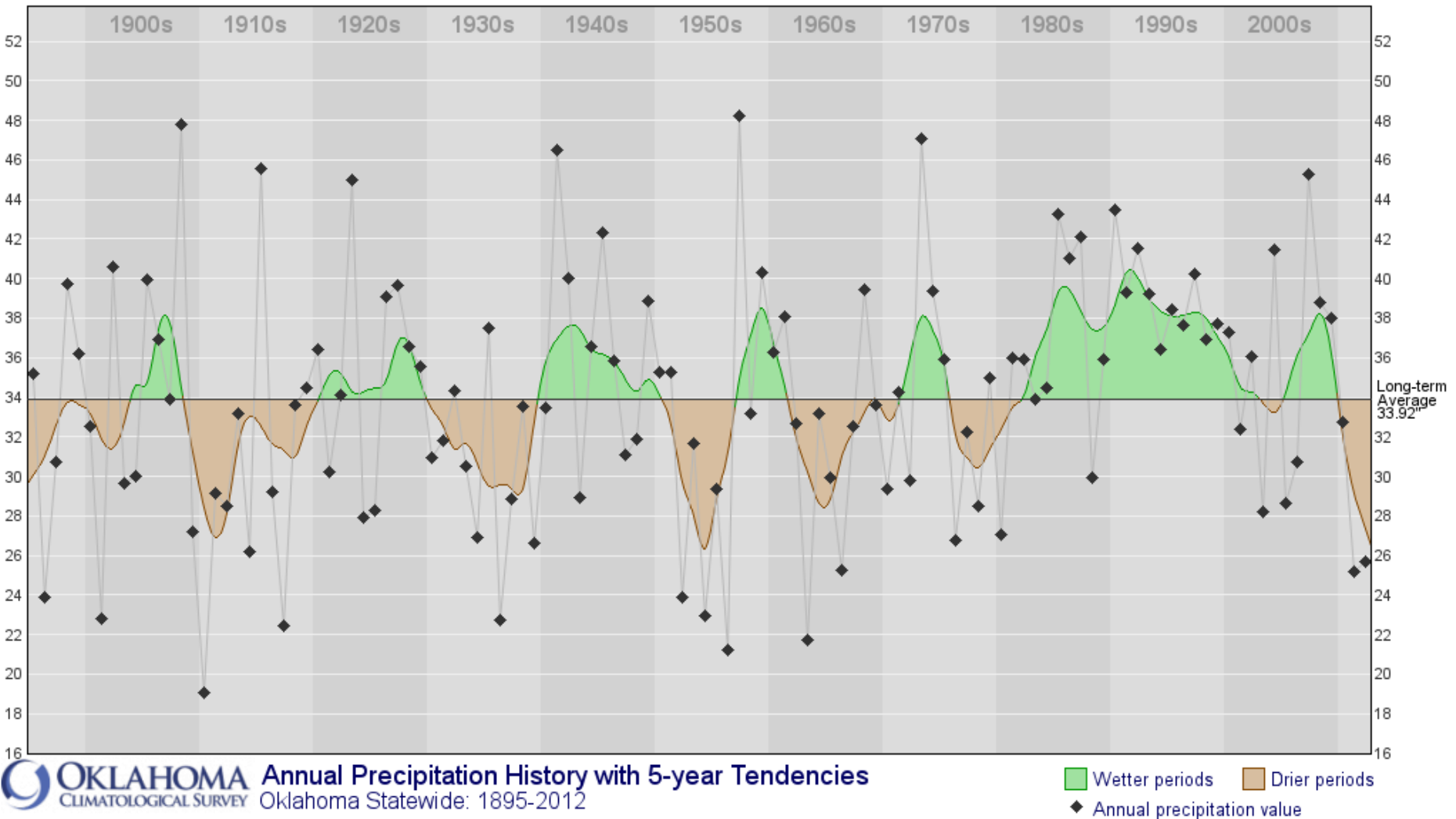
Funding Topics

- Oklahoma Comprehensive Water Plan
 - Focus on factors of Water Supply Reliability
- “Big 8” Water Plan Recommendations
- State Infrastructure Assistance Efforts
- Partnership in Priority Setting- USACE, Oklahoma FACT team

Oklahoma's Water Resources

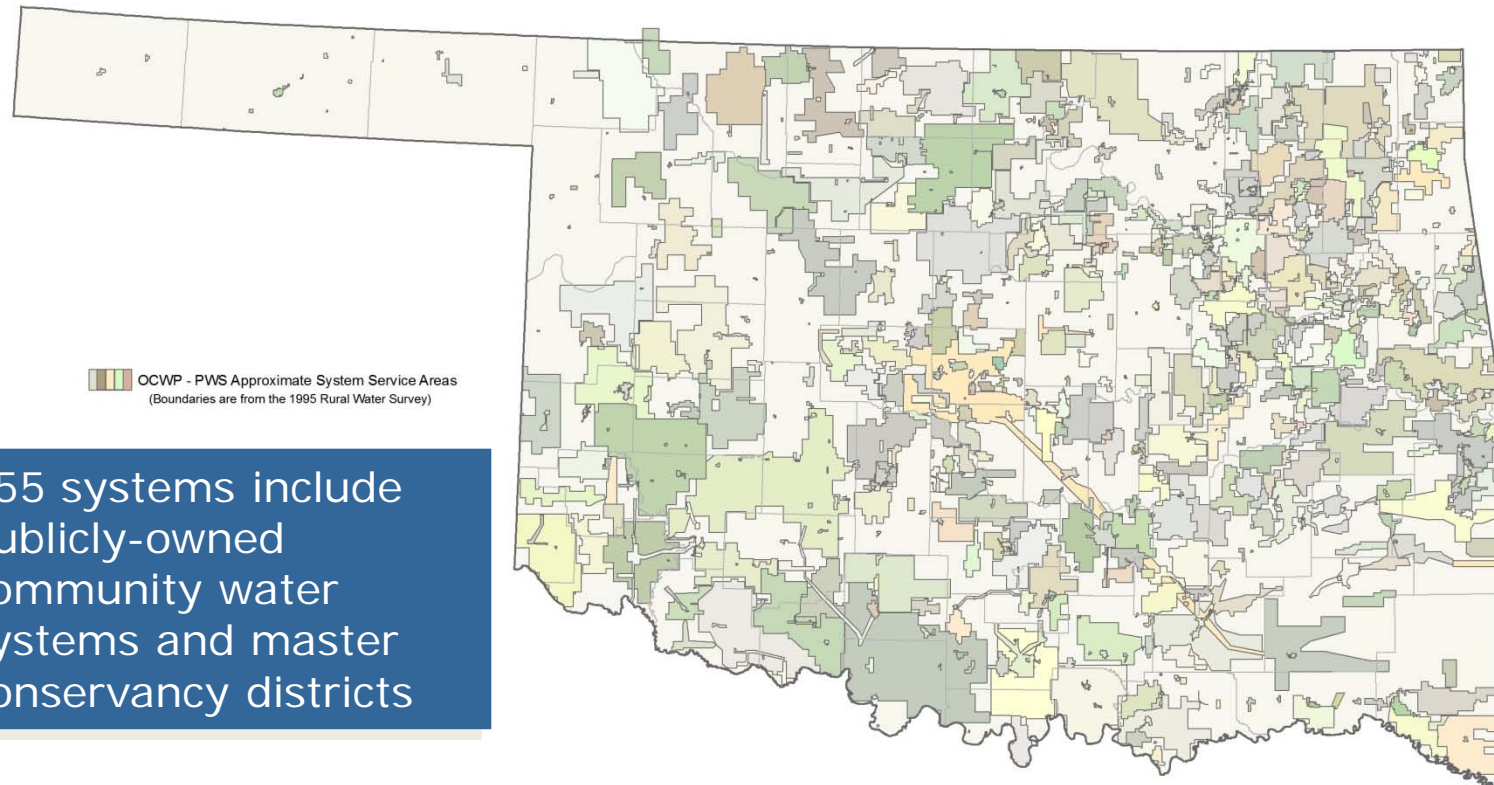


Oklahoma's Precipitation History



Oklahoma's Water Resources

Public Water Supply Systems in Oklahoma Approximate System Service Areas



755 systems include publicly-owned community water systems and master conservancy districts

This map shows the approximate service areas for public water supply systems studied as part of the 2012 Update of the Oklahoma Comprehensive Water Plan (OCWP). These 755 systems include publicly owned community water systems and master conservancy districts.
For more information visit the OWRB homepage (<http://www.owrb.ok.gov>). 10/14/2013



State of Oklahoma
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the water agency

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WATER FOR 2060
EFFICIENCY - CONSERVATION - RECYCLING - REUSE

2012 Ok. Comprehensive Water Plan



Blend extensive technical analysis and public input to formulate overarching water policy, implementation, and funding strategy to guide water management over the next 50-years.

- Create all-encompassing **water management** ‘roadmap’
- Characterize **demands** by sector and identify **reliable supplies**
- Perform **technical studies** to evaluate emerging water mgmt. issues
- Undertake comprehensive **stakeholder engagement** to develop water policy recommendations
- Provide to the legislature **“implementable” recommendations that create reliability**
- Identify long-term **funding needs**



2012 Ok. Comprehensive Water Plan Funding— 5 years, >\$13 million

Goal: Identify financing partners and obtain legis. match

Funding Sources:

- Legislative Appropriation (2006)- Dedicated Gross Production Tax: \$6.5M (\$1.3M annually)
- US Army Corp \$6.0 M WRDA Authorization
 - ✓ Emphasized our goal for concept of Water Plan as the state's clearinghouse for funding priorities
 - ✓ Worked with Tulsa District and Headquarters to ensure Water Plan sets goals for funding decisions



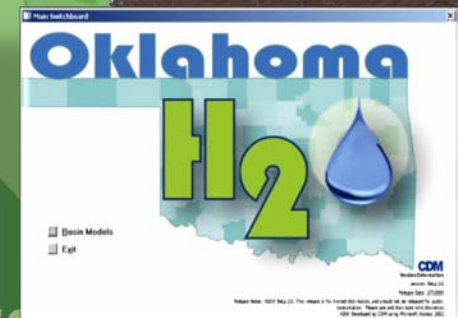
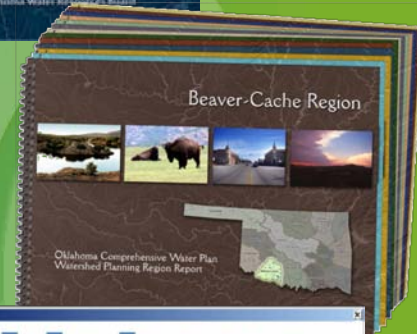
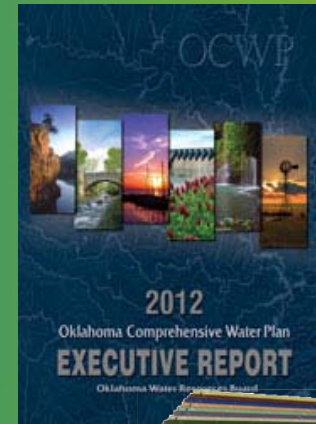
2012 Ok. Comprehensive Water Plan Funding— 5 years, \$13.5 million

Funding Sources

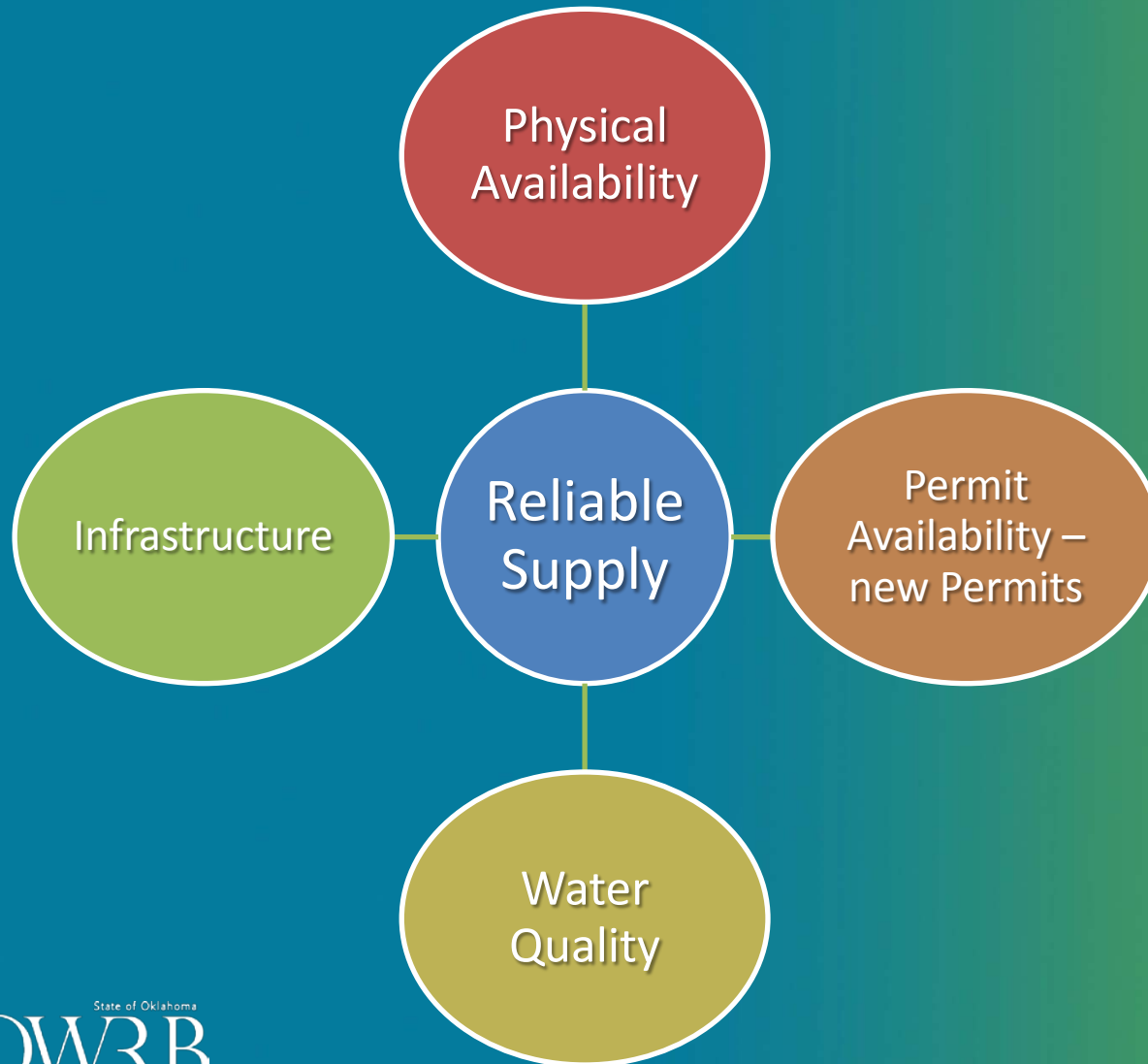
- US Bureau of Reclamation Water Smart Grant-Climate Studies
- USGS 50/50 Cooperative Program Matching Funds
 - ✓ Garber-Wellington GW availability study, historical water use, drought comparison report, Statewide StreamStats development
- Oklahoma Water Resources Research Institute- 50/50 match to State dollars, \$1.2M in-kind

2012 Ok. Comprehensive Water Plan

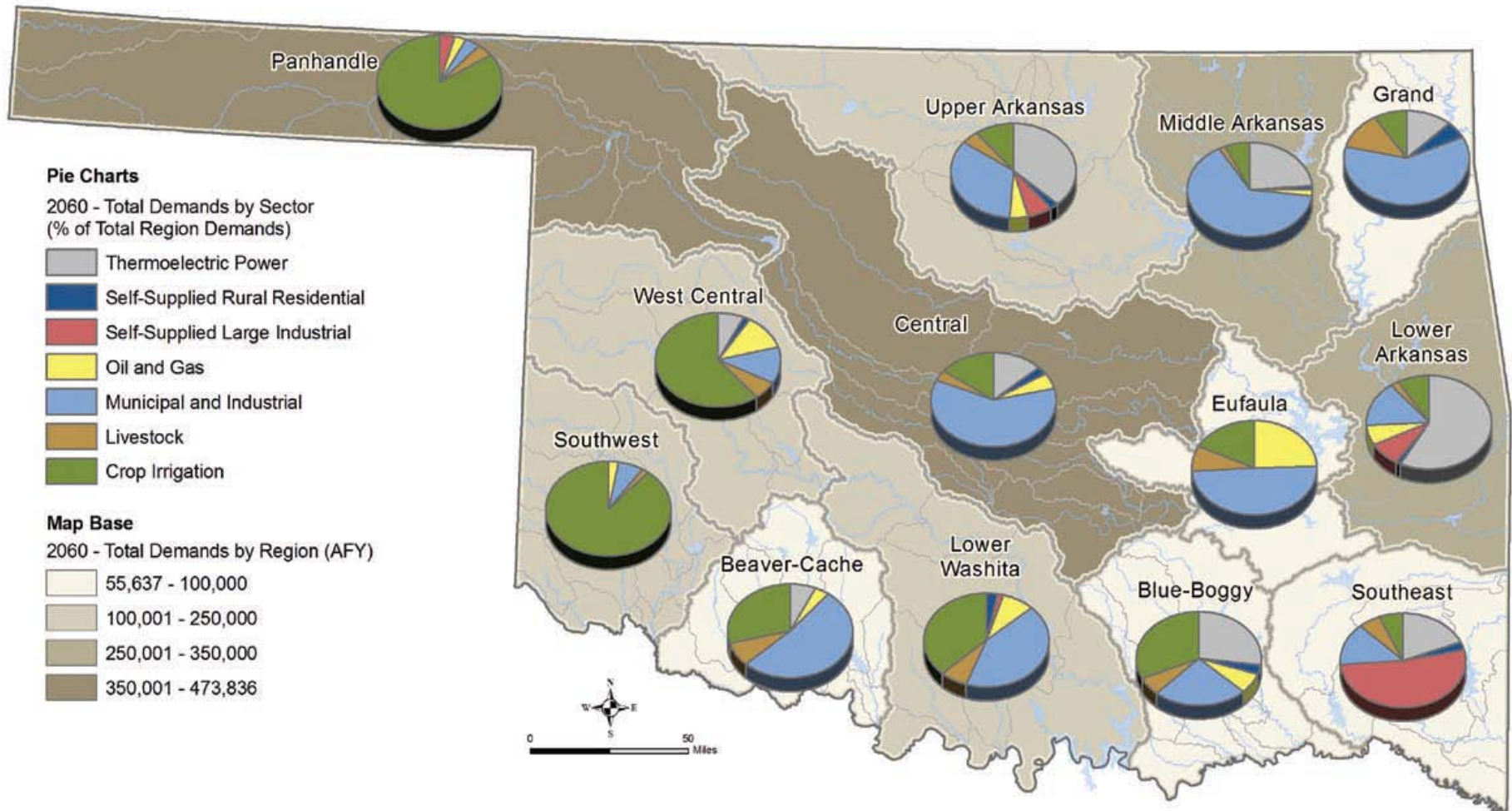
- **Unprecedented technical study effort**
 - ✓ 13 regional reports, 82 basin demand analysis
 - ✓ 10 tech wrkgroups, over 100 experts, numerous special studies reports
- **Unprecedented public involvement in policy development (OWRRI)**
 - ✓ 53 local/regional mtgs, 2,300 citizens, 30 wrkshops, Oklahoma Academy town hall
- **8 Priority Policy Recommendations**
- **Joint Legislative Committee, over 80 bills introduced**
- **Legislature passed several significant funding bills!**



Water Availability Projections

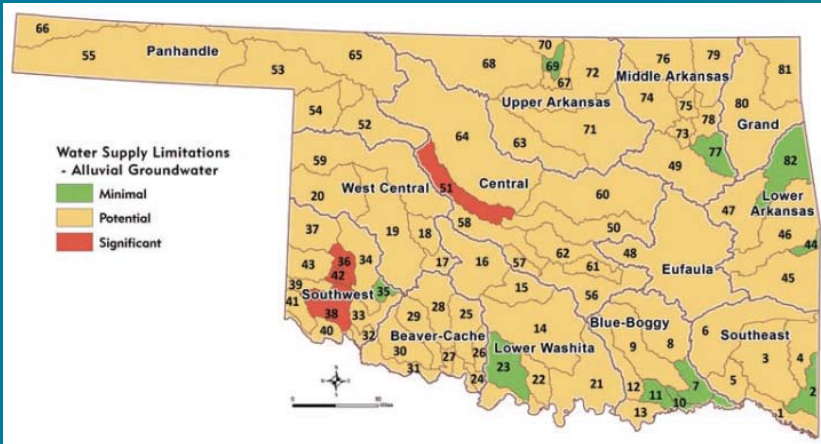


Demand Projections

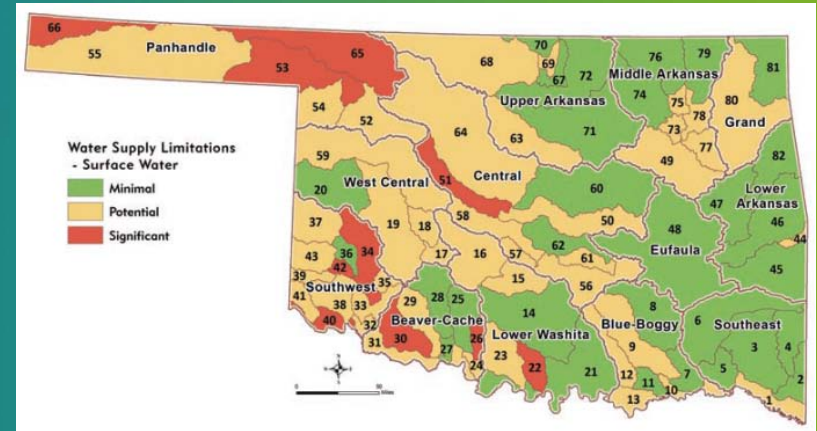


All Supply Limitations

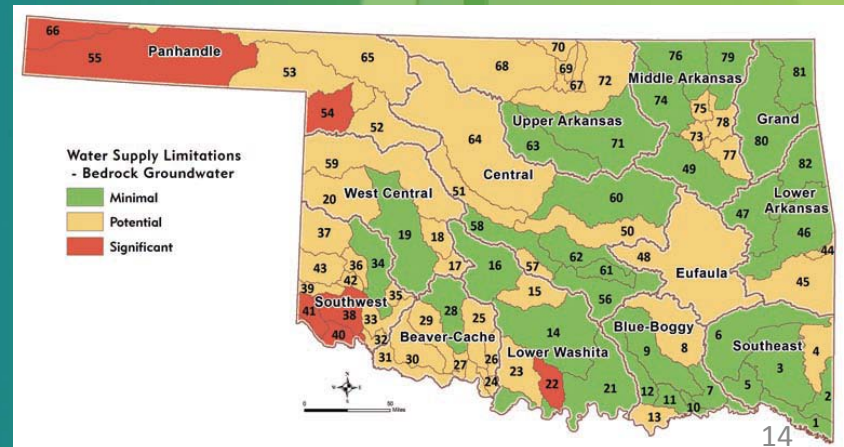
Alluvial Groundwater



Surface Water



Bedrock Groundwater



Water Supply Options to Offset Potential Shortages

SUPPLY OPTION CATEGORIES
DEMAND MANAGEMENT
OUT OF BASIN SUPPLIES
ADDITIONAL RESERVOIR STORAGE
INCREASE SUPPLY FROM SURFACE WATER
INCREASE SUPPLY FROM GROUNDWATER

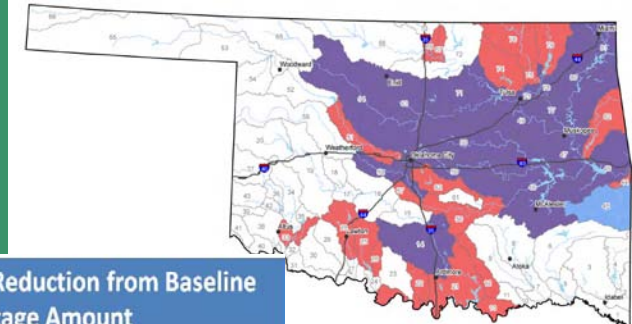
An analysis of potential options and their associated effectiveness was performed in all 82 basins

Expanded Options & Opportunities Analysis Reports

Generally more statewide in perspective

1. Municipal & Agri. Conservation- Efficiency and Reuse, % demand /cost reduction
2. Marginal Quality Water
3. Artificial Recharge
4. Reservoir Viability

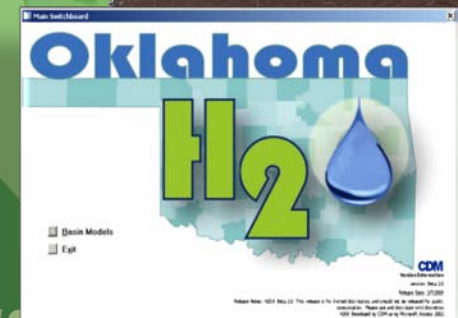
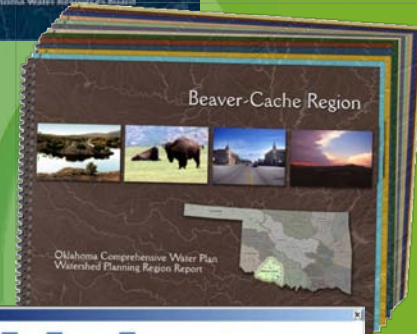
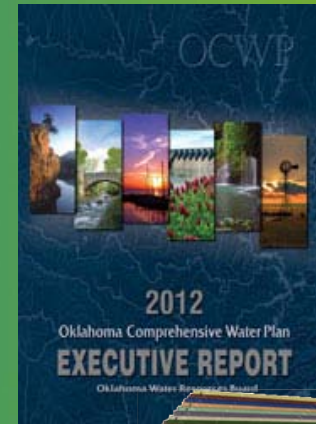
Figure 5-1 - Treated Wastewater for Municipal and Industrial Use (2060)



Source	Baseline Shortage Amount	Total & Percent Reduction from Baseline Shortage Amount			
		Moderate Level		Substantial Level	
SW	14,590 AFY	7,440 AFY	51%	8676 AFY	60%
AGW	12,070 AFY	6,036 AFY	50%	9036 AFY	75%
BGW	69,000 AFY	24,080 AFY	35%	61,320 AFY	89%

2012 Ok. Comprehensive Water Plan

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OCWP Implementation

Priority Recommendations

**Water Project & Infrastructure
Funding**

Regional Planning Groups

Excess & Surplus Water

Instream/Environmental Flows

**State/Tribal Water Consultation &
Resolution**

**Water Conservation, Efficiency,
Recycling & Reuse**

Water Supply Reliability

Water Quality & Quantity Monitoring

- Much interest from legislature and Governor
- Joint Committee held several sessions to hear recommendations in detail during summer 2012
- Over 80 water bills proposed

OWRB Financial Assistance Prog.

Assist communities and rural water districts in financing water and wastewater infrastructure improvements

- \$3.2 billion in loans and grants to date

Funding Sources—

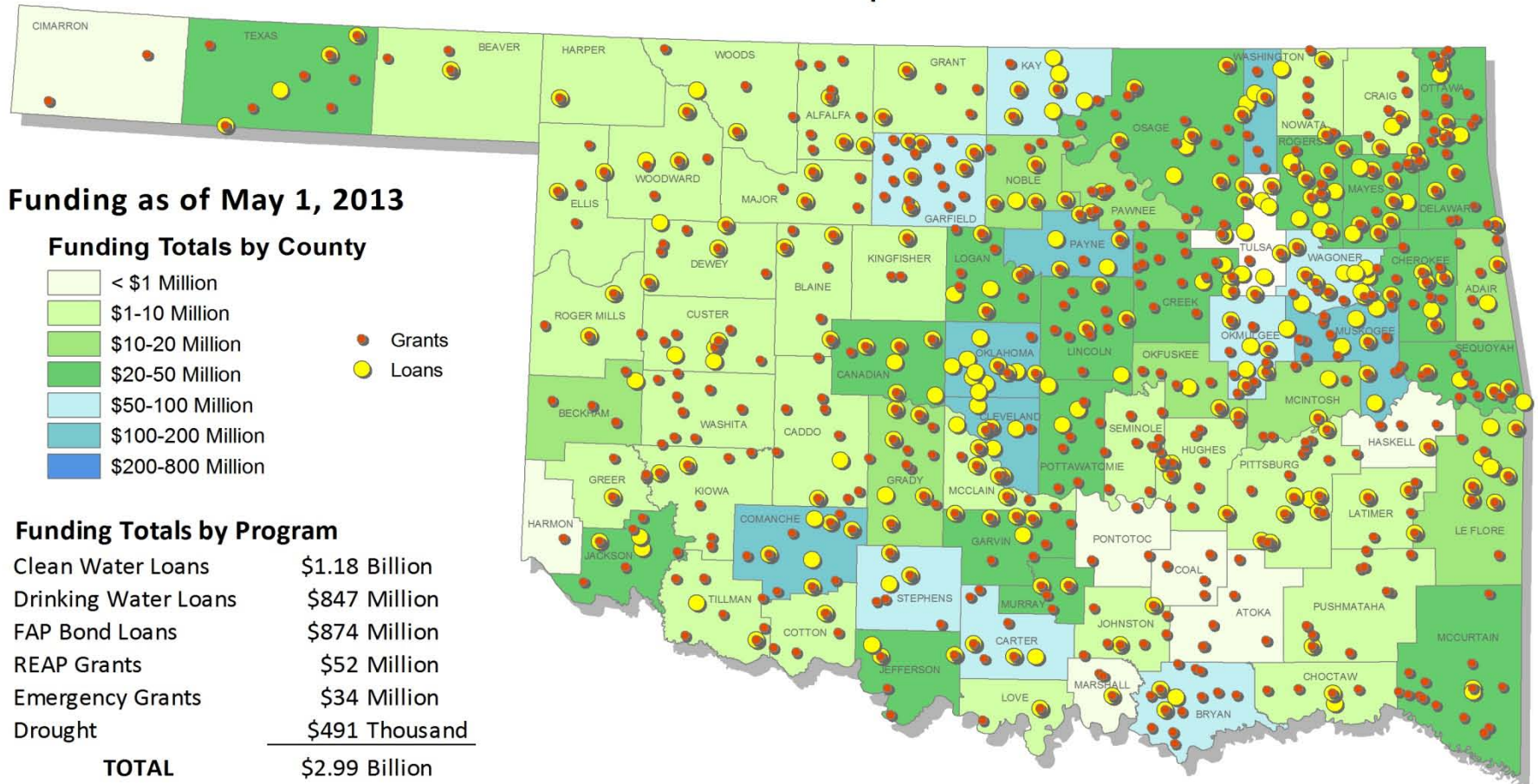
- General appropriations
- Special Appropriations
- Federal dollars
- Debt Issuance
- Loan Repayments
- Interest on Bond Loan Program Reserve

OWRB
Loan and
Grant
Programs

- Clean Water State Revolving Fund Loans
- DW State Revolving Fund Loans
- State Revenue Bond Loan Program Loans
- Emergency Grants
- Rural Econ. Action Plan Grants

Financial Assistance Program

Loan and Grant Recipient Status



TOTAL SAVINGS \$1 Billion

How Do OWRB Programs Work?

- OWRB programs allow communities access to more aggressive interest rates
 - This rate is often better than the rate most systems can get in the open market
 - SRF 30%-40% below AAA market rate
 - DW SRF- % principal forgiveness : small community, regionalization
 - Financial Assistance Bond Program: AA+ market rate
- Access to these rates saves systems and their customers \$\$\$ over traditional financing options

Water Infrastructure Financing

- Regional Needs Assessments (CDM) identified \$82B + water and wastewater infrastructure need by 2060.
- Financial Assessment of the OCWP (FirstSouthwest)
 - Current grant & loan programs can only satisfy 4-9% of need
 - Develop Comprehensive Model, Financing Scenarios, and Economic Impacts
 - Develop Small Issuer Strategies to specifically address financing for small communities

2012 State Question 764

OWRB Credit Enhancement Reserve Fund

- Authorized by 2012 State Legislature and Governor Fallin
- Pledge of credit, not a bond issue or tax increase
- Voters pre-approve issuance of general obligation bonds to fund addl. bond reserve (if needed)
- Bonds only be issued in the event of a future payment default
- Based upon OWRB lending history, the bonds would likely never be issued



OWRB Credit Enhancement Reserve Fund

- Allows OWRB to leverage funds in bond market as projects are ready to begin construction (IUP/PPL)
- Enables OWRB to perpetually fund approx. \$3B in addl. projects above OK's leveraged programs
- Far better option than asking for State appropriations
- Will allow OWRB to continue to provide "below-market" loans
- Will result in lower utility bills for all Oklahoman's
- Will likely cost the State of Oklahoma NOTHING

Other Financing Initiatives

- Rules Changes to include reuse as eligible category for funding under CWSRF
- Greater effort in solicitation for reuse and conservation projects –CWSRF
- Additional project ranking points (small communities <3,300) for proposed “green” improvements (CWSRF)
- System regionalization/consolidation focus (DWSRF)
- Higher project ranking points for increasing block rate structure (OWRB grant programs)

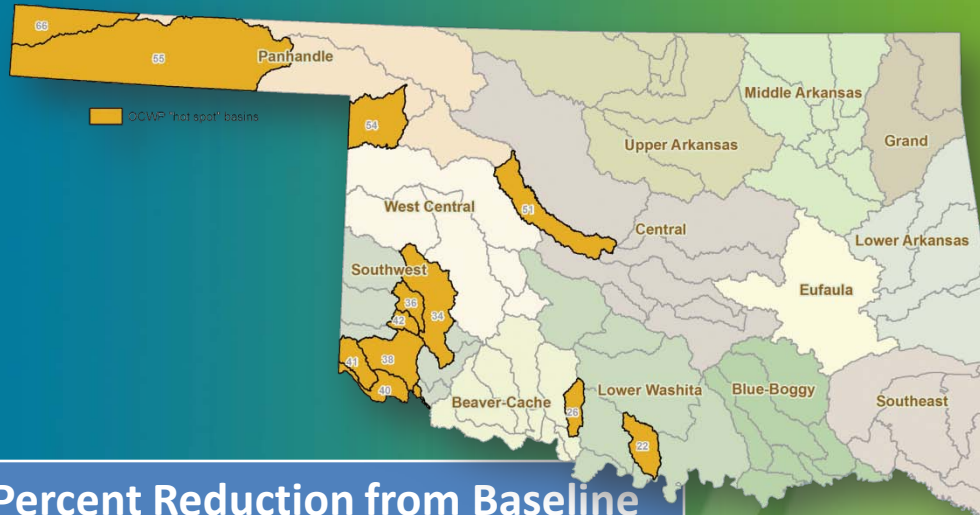
OCWP Priority Recommendation

Conservation, Recycling & Reuse:

- Postpone need for addl. infrastructure capacity
- Identify opportunities for agricultural water efficiencies and identifying innovative water shortage forecasting
- Voluntary programs and policies, financial incentives, research, and education
- Water for 2060 Act sets statewide GOAL of consuming no more fresh water in 2060 than consumed today; advisory council established to make recommendations

OCWP Conservation Analysis

What is the Impact on Hot Spots?



Source	Baseline Shortage Amount	Total & Percent Reduction from Baseline Shortage Amount			
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OCWP Priority Recommendation

Regional Planning Groups:

- Create **non-regulatory** groups to assist in planning and implementing OCWP initiatives at region level.
- Consist of local stakeholders representing unique interests of each region.
- 2012 bill failed; however, 2013 HB 965 restructured OWRB from Congressional Districts to regional scheme. Passed by 1 vote



Planning Tools for Systems

- Several tools were developed and/or identified to assist communities in planning for infrastructure needs
 - Strategic planning- Regional technical reports, H2O Tool, on-line map server, supply options, water rights
 - Conservation, reuse, marginal water options
 - www.owrb.ok.gov

PWS Planning Guide

- Allows systems to prepare to respond to changing circumstances while helping achieve and maintain system sustainability
- Contains 10 sections from **System Inventory** to **Rules and Regulations** and **Water Rights** to **Conservation Planning** to **Preparing engineering/envirom/financial report** and **Financing**
- Planning decisions are local decisions and vary greatly system to system
- Provides examples using the process for any water system



Oklahoma Funding Agency Coordinating Team



- Fed. and state water financing agencies—drinking water, WW, and “green” projects for Oklahoma public entities
- Meet quarterly to identify best funding source, cross-train funding agencies, adopt streamline application/guidance

Members	
Oklahoma Water Resources Board	USDA Rural Development
Oklahoma Department of Commerce	Oklahoma Council of Governments
Indian Health Service	Community Resource Group
Oklahoma Department of Environmental Quality	

Questions?

State of Oklahoma

OWRB
WATER RESOURCES BOARD
the water agency

Oklahoma COMPREHENSIVE
Water
PLAN

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Oklahoma Water Resources Board

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www.owrb.ok.gov

Water Emergency/Drought Planning

- Update Oklahoma Drought Management Plan
- New training on emergency planning for municipal water system operator training program
- Water provider incentives and technical assistance for planning and swift response
- **HB 1923—New \$3 M Emergency Drought Relief Fund—upon Gov. declaration, new Emer. Drought Commission.**
- **Bureau of Reclamation: \$50,000 Emergency Drought Information tool**