



OKLAHOMA COMPREHENSIVE WATER PLAN 2025 UPDATE – TULSA SAME BRIEFING

Tony Clyde – Tulsa District

Tatiana Papakos – Michael Baker International

October 15, 2024 – Tulsa SAME Meeting



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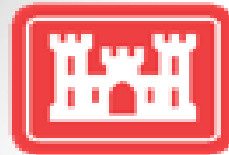


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2025 OOCWVP

Oklahoma Comprehensive Water Plan



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OKLAHOMA
Water Resources Board





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Focus Areas for OCWP 2025

Identify basins with projected water challenges or opportunities

Identify and **recommend** water management strategies

Identify **infrastructure investment needs** & financial solutions

Advance 2012 OCWP Policy Recommendations

Integrate Oklahoma's first statewide **Flood Plan**

Conduct **focused engagement** throughout the process

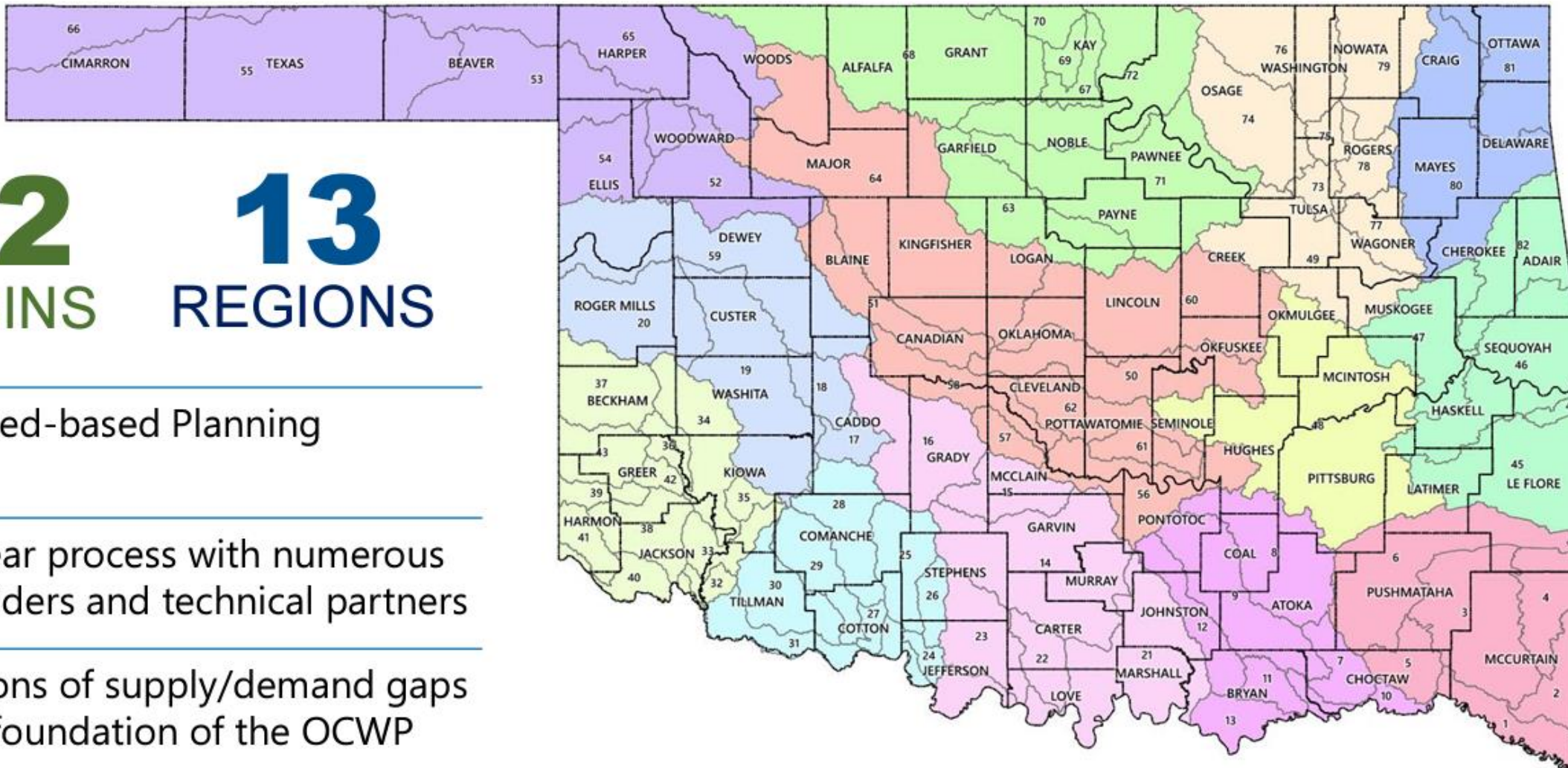
Provide **greater access** to OCWP deliverables



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82
BASINS

13
REGIONS

Watershed-based Planning

Multi-year process with numerous stakeholders and technical partners

Projections of supply/demand gaps are the foundation of the OCWP



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OCWP 2025 Timeline

5 Phases of OCWP Development



1. Plan - Programmatic Work Plan and Engagement Plan

Continuous



2. Analyze - Water supply, demand, and quality data: surveys, modeling, forecasting



3. Develop - Recommendations, water management strategies, resilience assessment, local infrastructure needs, policy assessment

In Progress!



4. Rollout - Legislative recommendations, Reports, OCWP online resources, financial assistance recommendations, implementation plans, and more

2024-2025



5. Engagement - Share interim results and solicit input: Review, Refine, Prioritize OCWP content

Continuous



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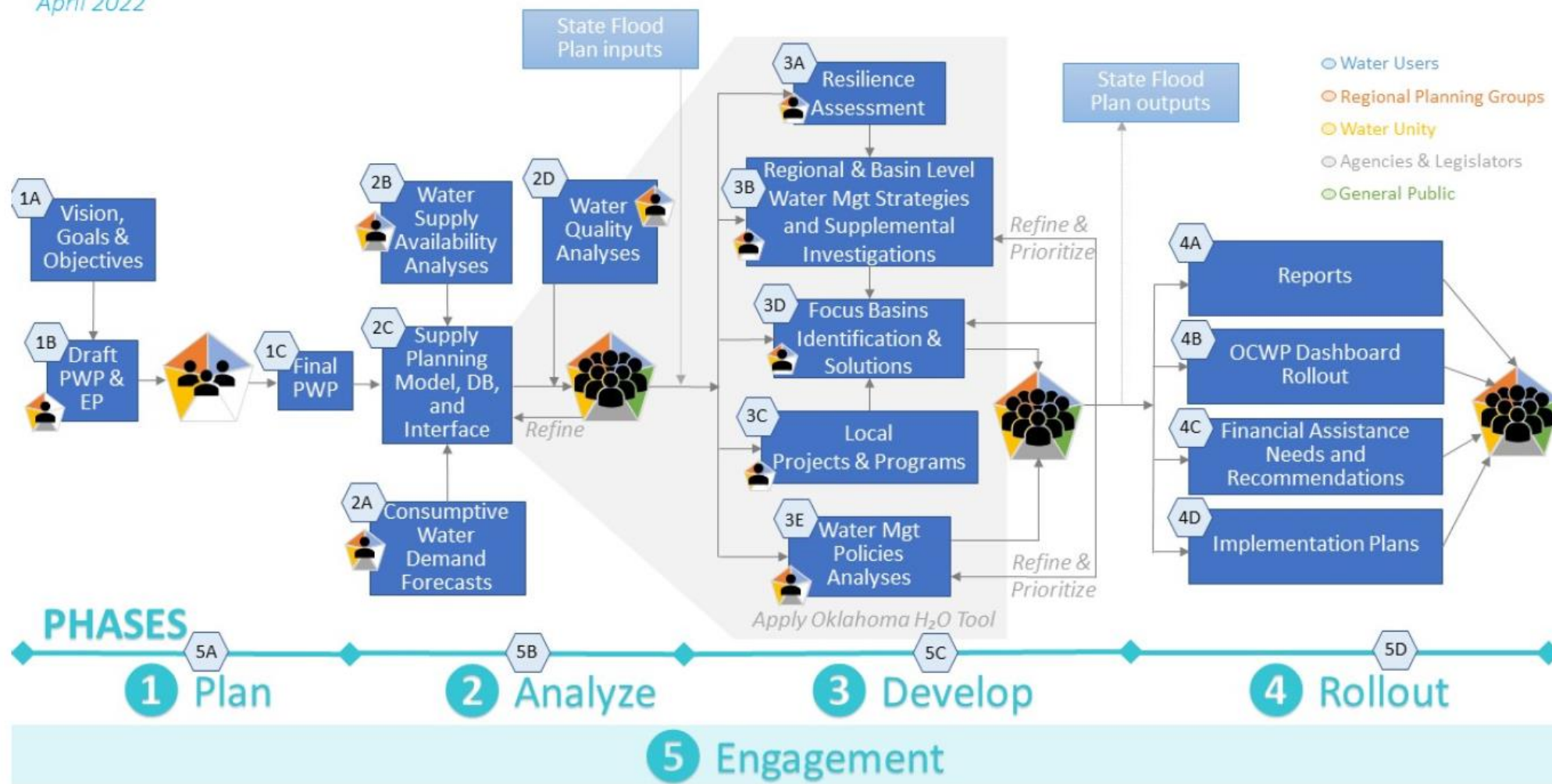


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// OCWP PWP and Engagement Framework

April 2022





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PHASE 1: PLAN



1	Phase 1: Plan	
1.A.	Vision, Goals, and Objectives	Define OCWP initial goals, objectives, and vision.
1.B.	Draft Programmatic Work Plan and Engagement Plan	Develop initial framework for the Programmatic Work Plan (PWP) and Engagement Plan (EP).
1.C.	Final Programmatic Work Plan	Refine PWP workflow and planned OCWP products based on feedback from 5A engagement meetings.
1.D.	Project Coordination and Collaboration	Project coordination and collaboration for Phase 1 work.
1.E.	Quality Management	QA/QC for Phase 1 work.



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PHASE 2: ANALYZE



2	Phase 2: Analyze	
2.A.	Consumptive Water Demand Forecasts	
2A 100	Data Collection and Analysis	Aggregate and compile the available demographic information base of population (census), categorical service areas, categorical growth and use characteristics, connections, per capita use, water efficiency, reported or estimated historical water use for municipal and non-municipal uses and geographic region, along with analyses to determine historical trends.
2A 400	Weather Extremes Scenarios	Develop and apply assumed impacts of weather extremes to demand projections of water use by category, focusing upon the conservative estimation of drought effects on water demand.
2B 300	Physical Supply Availability Analysis – Traditional Sources	Analyze water supply availability from surface and groundwater sources. Evaluation will include use of existing basin studies, hydrologic data, and surface water models with sufficient period of record to include drought effects.
2B 400	Physical Supply Availability Analysis and Water Quality Characterization – Nontraditional Sources	Analyze and quantify water supply availability from sources other than surface and groundwater supplies.



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PHASE 2: ANALYZE



2A 500	Allocate Demands to Basins by Scenarios	Disaggregate projected water demands by decade and water use category to geographical basin.
510	Allocate Demands to Basins by Scenarios	Disaggregate projected water demands by decade and water use category to geographical basin.
520	Allocate Demands - revise allocations using 2020 census and/or 2020 USGS reports	Update water demand allocations using 2020 Census and/or 2020 USGS report
2A 600	Demand Trend Analysis	Quantitative evaluation of characteristics and trends by water use category and basin to determine broader statewide traits in municipal and non-municipal uses.
2C 500	Model Functionality for Nonconsumptive Demand	Evaluate and implement H2O Model functions to represent existing and potential future flow frequencies at the basin-level for potential impacts to available nonconsumptive uses.
2C 600	Run Model Supply/Demand Scenarios to Forecast Shortages in Each Basin	Apply the fundamental water equation of supply and demand at the basin level to determine surpluses and shortages for various water use categories over the planning period. The extent, magnitude, and duration of such shortages will heavily inform upon the identification of FBs.



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PHASE 3: DEVELOP



3.A.	Resilience Assessment	
3A 100	Inventory and Characterize Potential Threats to Water Supply Reliability	Identify statewide types/categories of threats to water supply reliability and characterize the potential types of implications for water supply reliability and/or water quality.
3A 200	Regional Assessment (for the 13 Watershed Planning Regions)	Develop a matrix indicating the likelihood/applicability of each threat category to each planning region, considering conditions specific to each region.
3A 300	Mitigation Strategies for Each Threat Type	Identify and characterize best practices that can be used to mitigate each category of water supply vulnerability.
3A 400	AWIA Coordination / AWIA Utility Support	Coordinate vulnerability assessments with AWIA requirements to provide supplemental guidance for communities to use in AWIA compliance documents.
3A 500	Populate Interactive Portal from 2C with Resilience Content	Populate the relative applicability/risk of each threat category for each region/basin into geospatial coverages in the interactive OCWP Portal.
3A 600	... Reserved	
3A 900	Oklahoma Water Resilience Report	Develop technical report to document all methods and findings from the preceding Task 3A subtasks. This report will include a list of potential water threats, the matrix developed for each of the 13 OCWP watershed planning regions, and mitigation strategies and supplemental guidance for communities to use in AWIA compliance documents.



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PHASE 3: DEVELOP



3C 200		Inventory Potential LPPs
210	Water Supply and Infrastructure Needs Survey (WSINS)	Solicit LPP information from water providers, possibly through use of a survey or other outreach mechanisms.
220	Wastewater collection and treatment infrastructure needs (CWNS)	Solicit LPP information from wastewater providers, possibly through use of a survey or other outreach mechanisms.
230	Coordinate survey with other OCWP elements	Coordinate with WSINS and CWNS during survey development and data collection
3.D.		Focus Basin Identification and Solutions
3D 100	Identify Focus Basins (FBs)	Develop criteria and scoring method to assess all 82 basins relative to physical water availability, legal water availability, and water quality and make determinations as to which basins will be categorized as a "Focus Basin." Of the identified FBs, select candidates for local stakeholder input meetings.
3D 200	Investigate Focus Basin Challenges through Water User Engagement	FB meetings will require targeted solicitation of key local water users in each of the FBs selected for engagement. These meetings are intended to improve local understanding of long-term water challenges, provide local networking opportunities between water users, and discuss water management strategies to meet identified challenges.
3D 300	Assess FB Mitigation Measures	Building on the list of WMS categories (see 3B 100) , assess the potential effectiveness of applicable water management strategies to mitigate or resolve projected supply challenges in each.



WATER SUPPLY AND INFRASTRUCTURE NEEDS SURVEY (WSIN)



- Assess current and future local water supply and infrastructure costs across Oklahoma (Local Projects and Programs (LPPs))
- Information collected:
 - Contact information
 - General water system information
 - Population and water demand for previous 5-years (2018-2022)
 - Modified to request previous year only to decrease respondent time requirements necessary to respond
 - Priority water supply project information
 - Water system workforce information



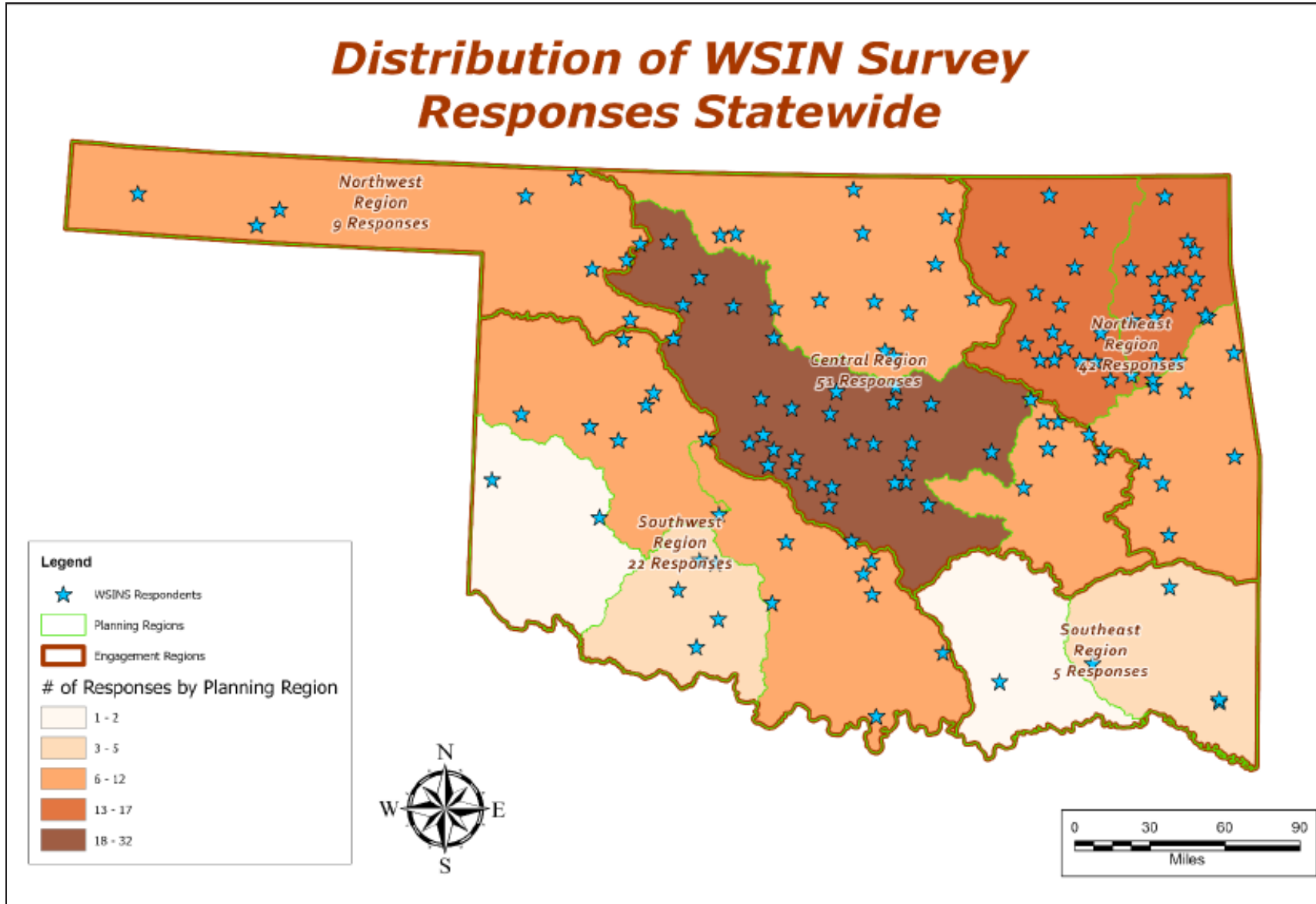
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Distribution of WSIN Survey Responses Statewide





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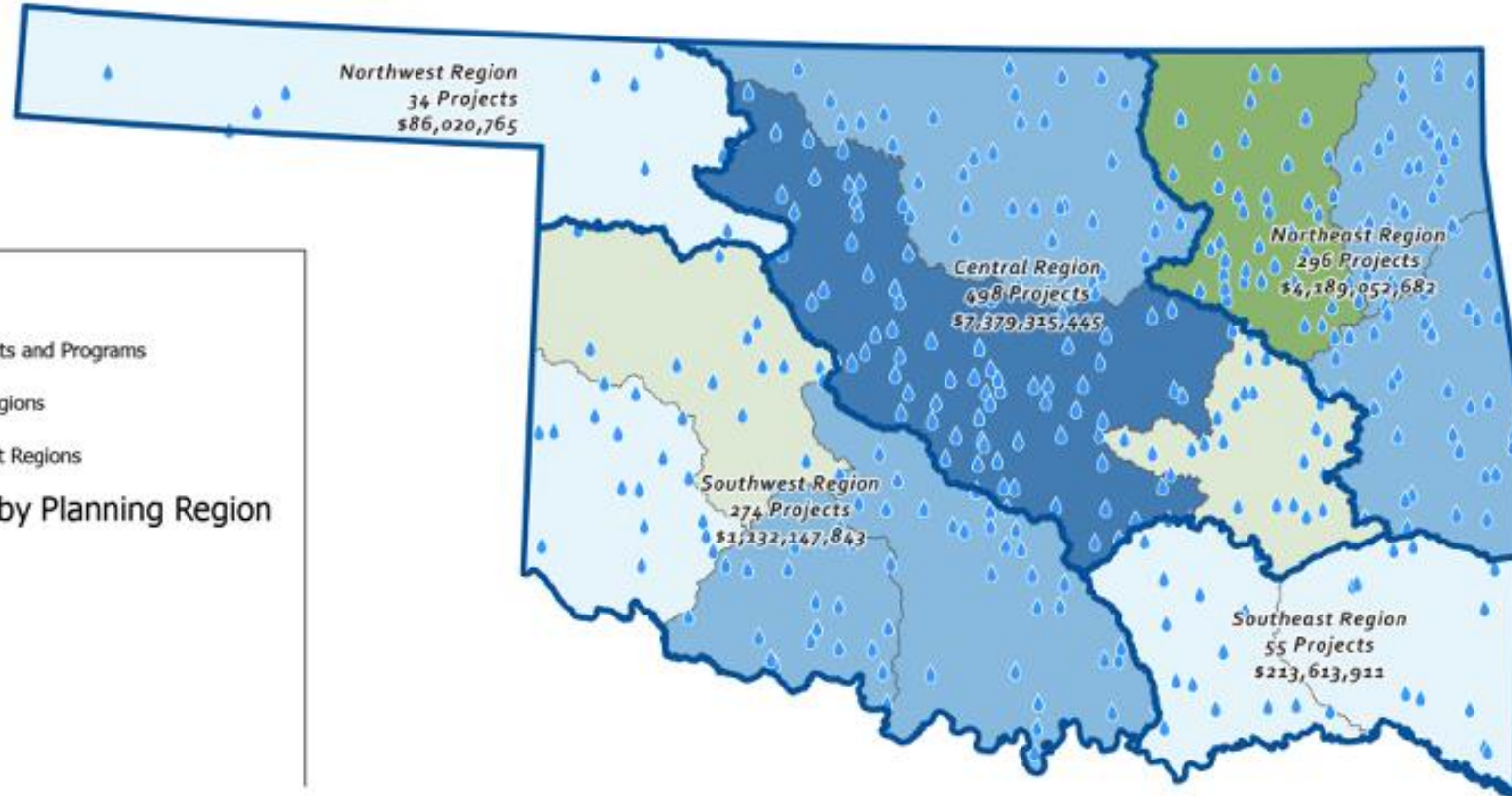
Preliminary Results – Water Infrastructure Project Locations

Legend

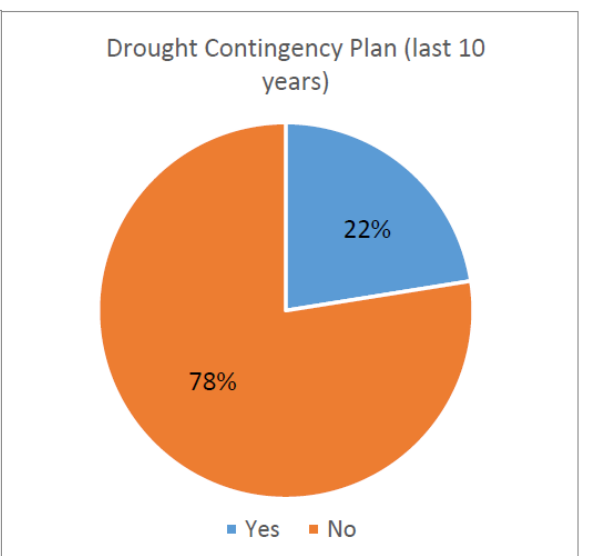
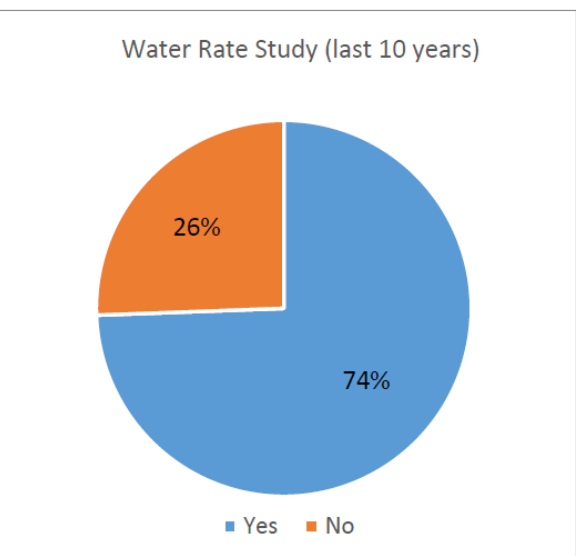
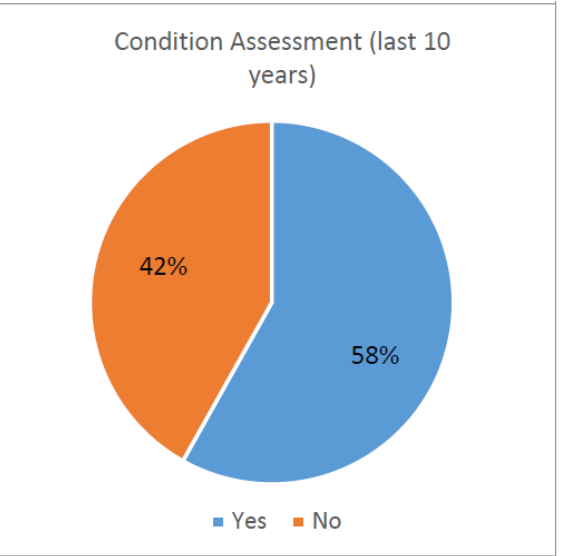
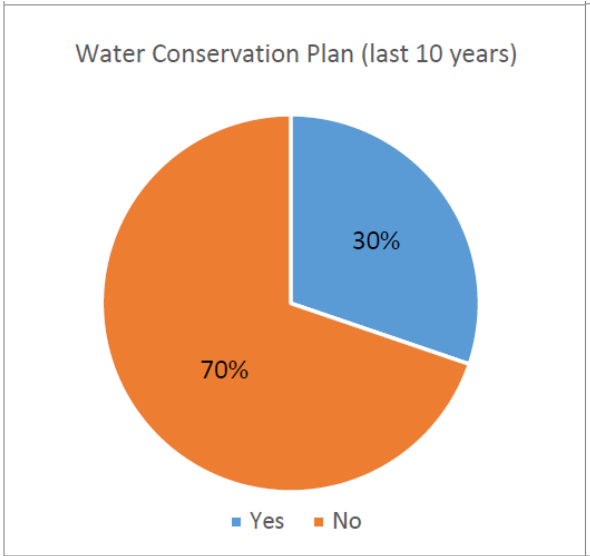
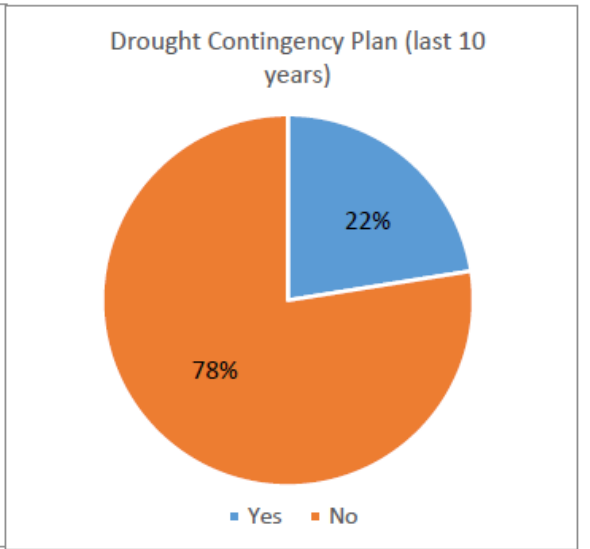
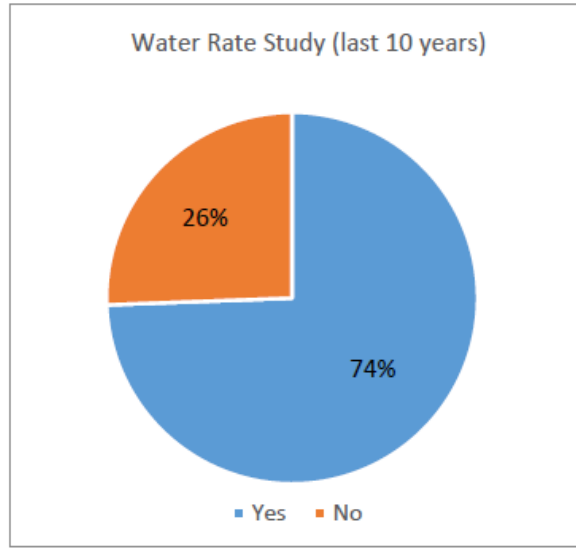
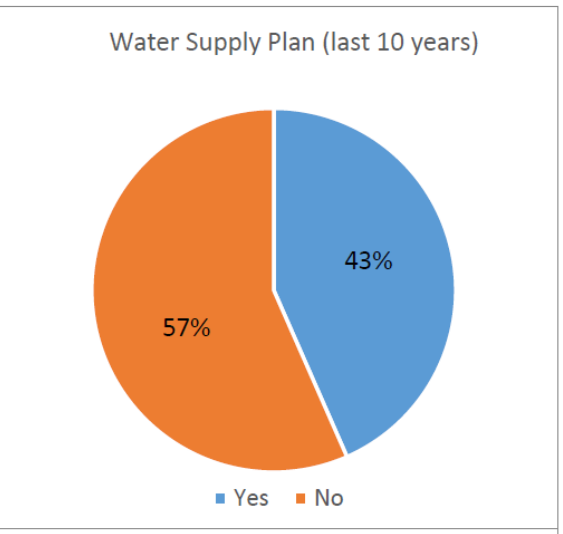
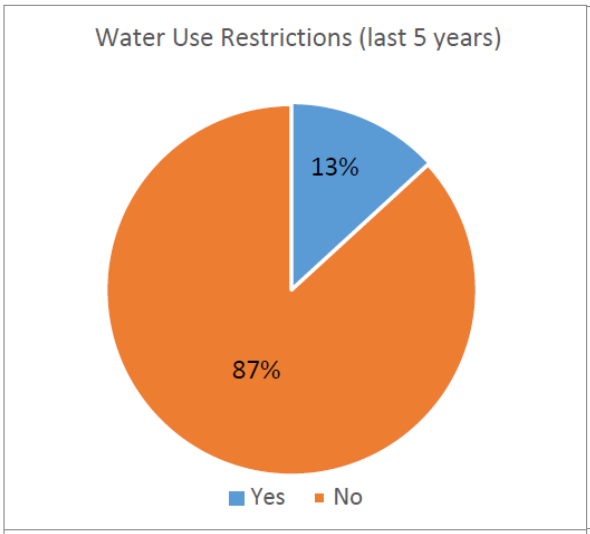
- Local Projects and Programs
- Planning Regions
- Engagement Regions

of Projects by Planning Region

- 23 - 41
- 42 - 64
- 65 - 95
- 96 - 137
- 138 - 340



DRAFT WSINS SURVEY RESULTS



* August 2023 results

DRAFT WSINS LPP PROJECTS & ESTIMATED COSTS

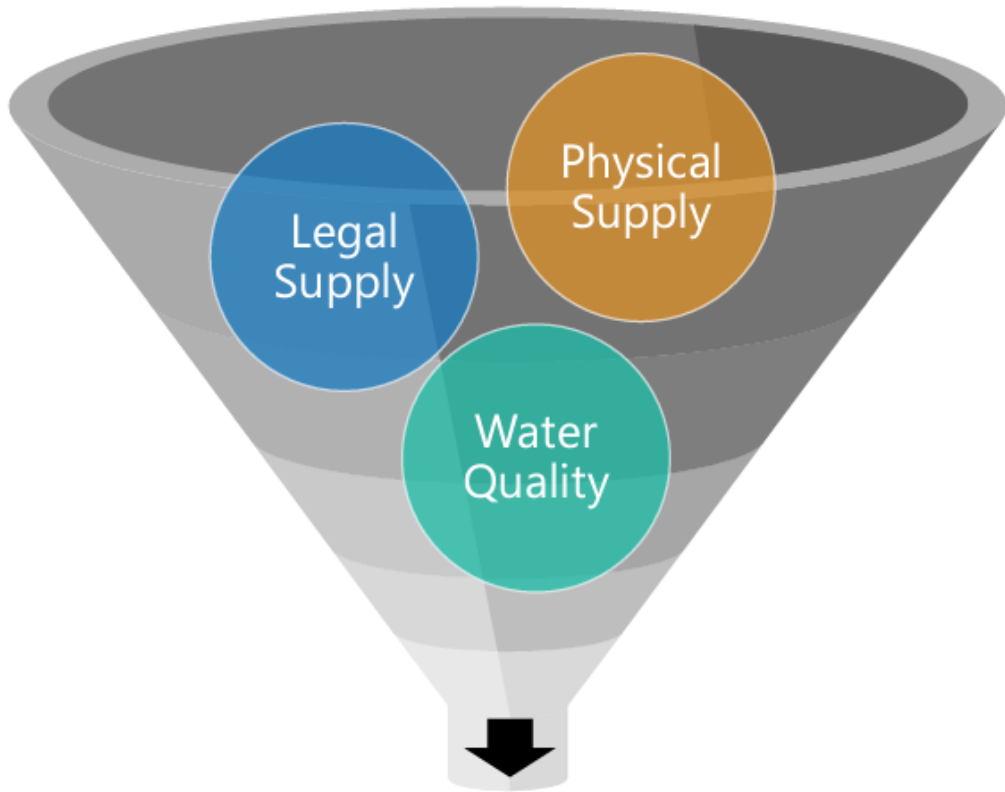
- Survey results as of August 2023
- Survey results continue to be submitted
- Project needs and costs continue to increase

Project Type	Count	% of Projects	Total Cost by Project Type	% of Costs	Average Project Cost
Transmission/Distribution	769	66%	\$6,068,479,000	46%	\$7,891,000
Treatment	135	12%	\$2,530,251,000	19%	\$18,743,000
Other	87	7.5%	\$1,255,395,000	10%	\$14,430,000
Well(s)	63	5.4%	\$631,334,000	4.8%	\$10,021,000
Raw Water Conveyance	60	5.2%	\$2,118,500,000	16%	\$35,308,000
Raw Water Storage	40	3.4%	\$425,863,000	3.3%	\$10,647,000
Surface Water Diversion	7	0.6%	\$16,010,000	0.12%	\$2,287,000
Wholesale Agreement	1	0.1%	\$150,000	<0.01%	\$150,000
Reuse	1	0.1%	\$20,000,000	0.15%	\$20,000,000
TOTAL	1163	100%	\$13,065,982,000	100%	\$11,235,000

FOCUS BASIN ANALYSIS

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Identification of Focus Basins



FOCUS BASINS

Example from OCWP 2012

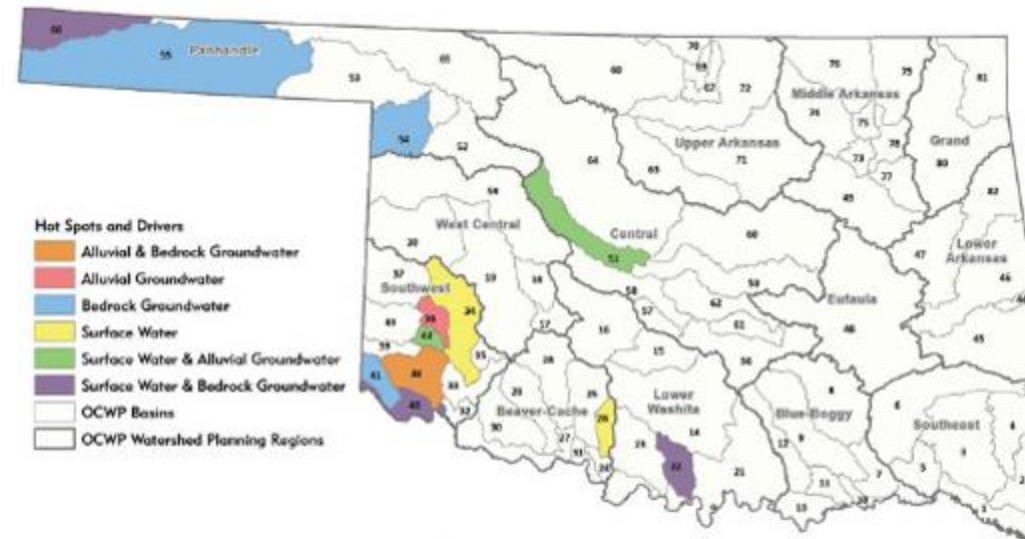


Figure 1.1 Hot Spot Basins



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2024 FOCUS BASINS



Legend

- OCWP Watershed Planning Regions
- OCWP Water Plan Basins
- Selected Eight Focus Basins

QUESTIONS?



**OKLAHOMA WATER RESOURCES BOARD
OCWP UPDATE POINT OF CONTACT:**

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