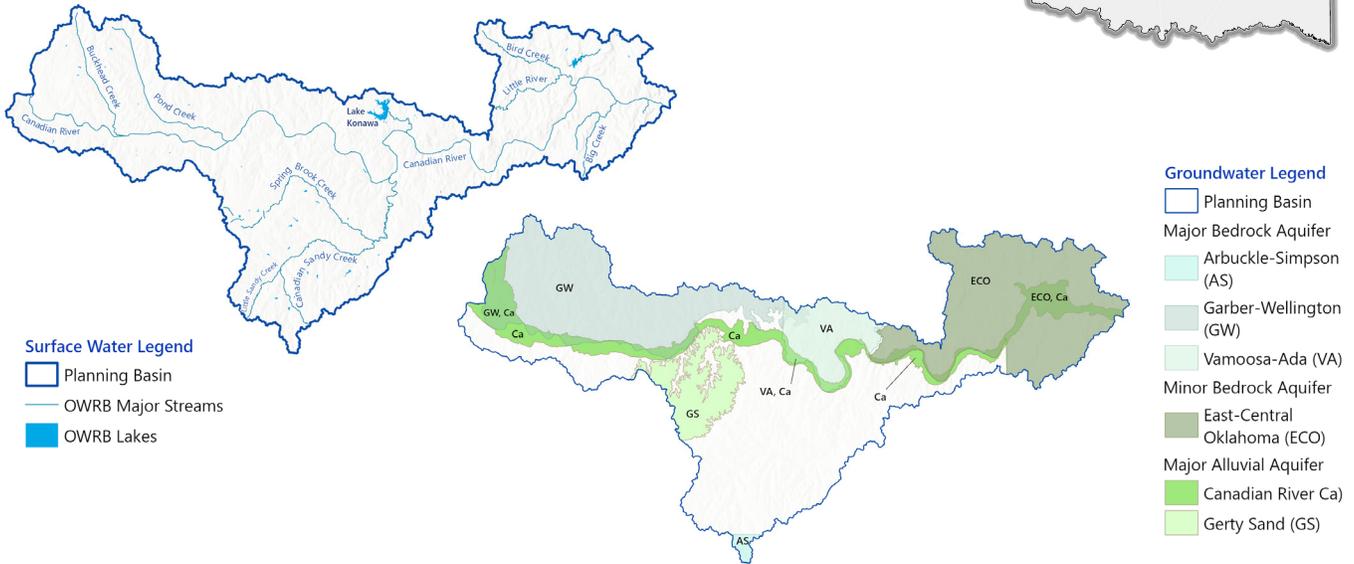


BASIN 56

Lower Canadian River - 1 / Central Region



Interactive maps can be viewed through the OCWP dashboards, accessible at oklahoma.gov/owrb/water-planning

SUMMARY

- Basin 56 - Lower Canadian River - 1 demands are supplied by a combination of surface water, groundwater, and out-of-basin supplies.
- Water demand (withdrawal) is projected to increase by 2,493 acre-feet per year (28%) between 2020 and 2075.
- Physical surface water gaps are projected in Basin 56 as early as 2030 and will continue through 2075.
- Physical alluvial groundwater depletions are projected in Basin 56 as early as 2030 and will continue through 2075.
- Physical bedrock groundwater depletions are projected in Basin 56 as early as 2030 and will continue through 2075.
- Basin 56 is projected to have surface water available for appropriation through 2075, but its permitting may be subject to provisions of the 2016 Water Settlement Agreement.
- Basin 56 is projected to have groundwater available for appropriation through 2075.
- To mitigate projected water supply shortages in this basin, the following strategies will typically be most effective:
 - Reduce water demand through conservation, water loss reduction, and other activities (PS, SSI, OG, TE). WSS
 - Reduce water demands through agricultural water saving options (CI, LS). WSS
 - Continue/increase reliance on in-basin surface water (all sectors). WSS WDI
 - Stormwater capture and use (PS, SSI). WM WSS
 - Water reuse (PS, SSI). WM WSS
 - Water transfers (all sectors). WM WSS



OWRB Water Planning Page
oklahoma.gov/owrb/water-planning

Refer to the **“Guide to Region and Basin Fact Sheets”** for a description of the types of information detailed in this fact sheet.

Water Demand Sectors: PS = Public Supply, SSI = Self-supplied Industrial, OG = Oil & Gas, TE = Thermoelectric Power, CI = Crop Irrigation, LS = Livestock, SSD = Self-supplied Domestic

OCWP Statewide Recommendations are designed to address current and anticipated water supply challenges and are noted throughout this fact sheet with the following icons: WIW Water Infrastructure & Workforce, WM Water Management,

WSS Water Supplies & Storage, and WDI Water Data & Information



Population

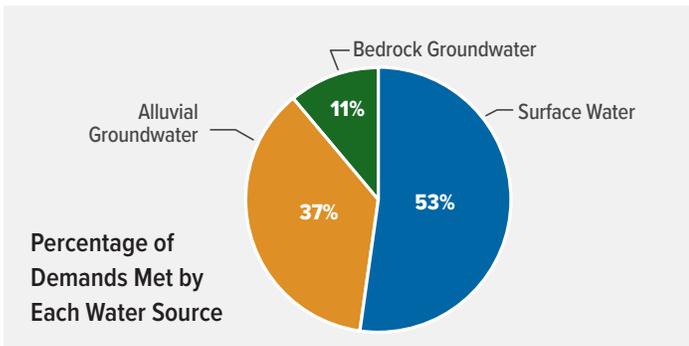
How is the population expected to change in the future?

2020	2030	2035	2045	2060	2075
101,956	104,293	105,788	109,316	115,951	121,450

Water Demand Projections

How much water is needed to meet Oklahomans' needs?

Basin 56 accounts for approximately 3% of the overall water demands of the Central Region.



Total Demand by Sector (AFY)

	2020	2030	2035	2045	2060	2075
Self-supplied Domestic	1,293	1,325	1,336	1,369	1,428	1,482
Self-supplied Industrial	270	263	264	267	274	280
Crop Irrigation	1,404	2,437	2,712	3,298	3,298	3,298
Livestock	1,257	1,246	1,252	1,244	1,237	1,237
Oil & Gas	808	808	808	808	808	808
Public Supply	3,223	3,273	3,291	3,355	3,493	3,588
Thermoelectric Power	621	422	401	516	602	677
Total	8,878	9,775	10,065	10,858	11,141	11,371

AFY = acre-feet per year; Small differences may result due to rounding.

Physical Water Shortages

Will there be enough "wet water" physically available to meet anticipated needs?

WIW WM WSS

	Magnitude (AFY)					Frequency ¹
	2030	2035	2045	2060	2075	2075
Surface Water Gap	134	175	306	272	270	25%
Alluvial Groundwater Depletion	369	495	799	827	852	23%
Bedrock Groundwater Depletion	3	3	4	4	4	N/A

1. Probability of a water shortage occurring in at least one month of the year.

Legal Water Availability

Will there be water available for permitting after meeting 2075 demands?

WM WSS

Estimated Surface Water available for appropriation in 2075 (AFY)	Inside 2016 Water Settlement Area? ¹	Is there a downstream mainstem restriction? ²	Estimated Groundwater available for appropriation in 2075 (AFY)
630,200	Yes	No	735,790

- If, yes – basin wholly or partially subject to the provisions of the 2016 Water Settlement Agreement.
- If, yes – mainstem restriction may impact water available for appropriation within the basin.

Water Management Strategies

What approaches are most viable for meeting future needs and mitigating shortages?

WSS WDI WIW WM

Water Management Category	Demand Sector	Basin 56 Evaluation
Demand Management	PS, SSI, OG, TE	Partially Effective - Shortages Remain
Agriculture Options	CI, LS	Partially Effective - Shortages Remain
Increase Reliance on In-Basin Surface Water	All sectors	Effective at Meeting Future Demands
Increase Reliance on In-Basin Groundwater	All sectors	May Increase Shortages - Use with Other Strategies
Stormwater Capture & Use	PS, SSI	Potentially Effective with Local Variability
Reuse	PS, SSI	Effective at Meeting Future Demands
Water Transfers	All sectors	Effective at Meeting Future Demands

In addition to the water management strategies, water users need:

- Options to address water quality concerns, which could include expanding source water protection programs and expanding water quality studies.
- Ways to address infrastructure limitations, which could include additional water funding from the State, Federal, and/or public-private partnerships, and by providers setting water rates that fully fund system operation and maintenance.