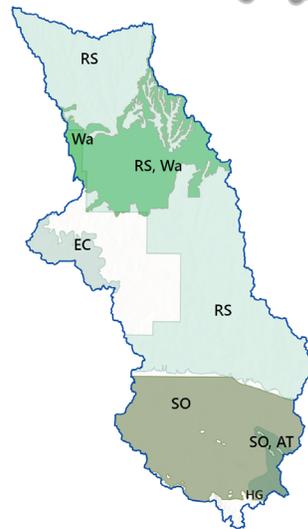


BASIN 19

Upper Washita - 3 / West Central Region



Surface Water Legend
 □ Planning Basin
 — OWRB Major Streams
 ■ OWRB Lakes



Groundwater Legend
 □ Planning Basin
 Major Bedrock Aquifer
 ■ Arbuckle-Timbered Hills (AT)
 ■ Elk City (EC)
 ■ Rush Springs (RS)
 Minor Bedrock Aquifer
 ■ Hennessey-Garber (HG)
 ■ Southwestern Oklahoma (SO)
 Major Alluvial Aquifer
 ■ Washita River (Wa)

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

SUMMARY

- Basin 19 - Upper Washita - 3 demands are supplied by a combination of surface water and groundwater supplies.
- Water demand (withdrawal) is projected to increase by 4,334 acre-feet per year (16%) between 2020 and 2075.
- Physical surface water gaps are projected in Basin 19 as early as 2030 and will continue through 2075.
- Physical alluvial groundwater depletions are projected in Basin 19 as early as 2030 and will continue through 2075.
- Physical bedrock groundwater depletions are projected in Basin 19 by 2075.
- Basin 19 is projected to have surface water available for appropriation through 2075.
- Basin 19 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 groundwater (all sectors). **WSS** **WDI**



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

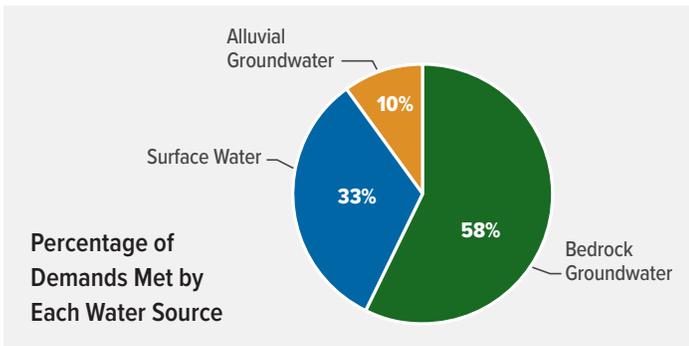
How is the population expected to change in the future?

2020	2030	2035	2045	2060	2075
26,044	26,890	27,253	27,941	29,912	31,188

Water Demand Projections

How much water is needed to meet Oklahomans' needs?

Basin 19 accounts for approximately 20% of the overall water demands of the West Central Region.



Total Demand by Sector (AFY)

	2020	2030	2035	2045	2060	2075
Self-supplied Domestic	66	68	67	66	66	66
Self-supplied Industrial	-	-	-	-	-	-
Crop Irrigation	17,600	20,624	20,670	20,714	20,745	20,776
Livestock	2,039	1,978	1,974	1,922	1,847	1,786
Oil & Gas	399	399	399	399	399	399
Public Supply	6,170	6,403	6,509	6,708	7,229	7,583
Thermoelectric Power	-	-	-	-	-	-
Total	26,274	29,471	29,619	29,809	30,286	30,608

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	405	435	470	548	601	8%
Alluvial Groundwater Depletion	238	243	249	261	270	8%
Bedrock Groundwater Depletion	-	-	-	-	125	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)
93,700	No	No	1,651,020

1. Yes – basin wholly or partially subject to the provisions of the 2016 Water Settlement Agreement.

2. 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 19 Evaluation
Demand Management	PS, SSI, OG, TE	Effective at Meeting Future Demands
Agriculture Options	CI, LS	Effective at Meeting Future Demands
Increase Reliance on In-Basin Surface Water	All sectors	May Increase Shortages - Use with Other Strategies
Increase Reliance on In-Basin Groundwater	All sectors	Effective When Paired with Demand Management/ Agriculture Options
Stormwater Capture & Use	PS, SSI	No Shortage or Needs Met by Other Strategies
Reuse	PS, SSI	No Shortage or Needs Met by Other Strategies
Water Transfers	All sectors	No Shortage or Needs Met by Other Strategies

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.