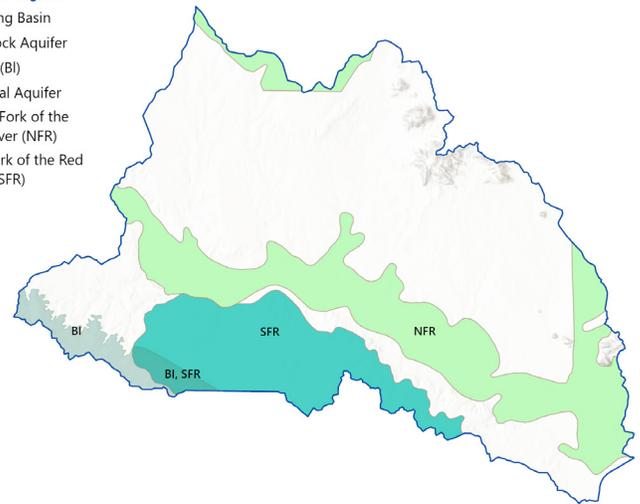


BASIN 42

Elm Fork Red River - 1 / Southwest Region



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

SUMMARY

- Basin 42 - Elm Fork Red River - 1 demands are supplied by a combination of surface water and groundwater.
- Water demand (withdrawal) is projected to increase by 88 acre-feet per year (2%) between 2020 and 2075.
- No surface water gaps are projected.
- Physical alluvial groundwater depletions are projected in Basin 42 as early as 2030 and will continue through 2075.
- Physical bedrock groundwater depletions are projected in Basin 42 as early as 2030 and will continue through 2075.
- Basin 42 is projected to have surface water available for appropriation through 2075.
- Basin 42 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**
 - 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

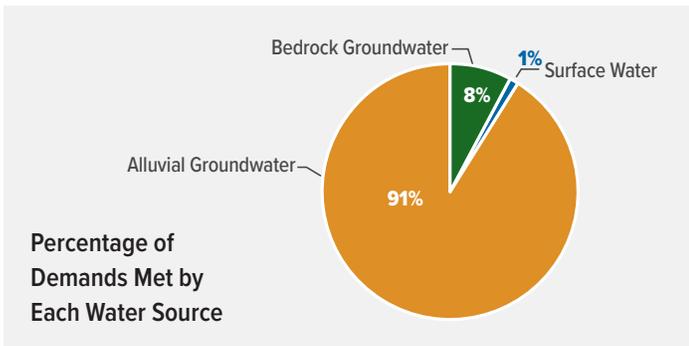
How is the population expected to change in the future?

2020	2030	2035	2045	2060	2075
941	949	928	919	894	859

Water Demand Projections

How much water is needed to meet Oklahomans' needs?

Basin 42 accounts for approximately 2% of the overall water demands of the Southwest Region.



Total Demand by Sector (AFY)

	2020	2030	2035	2045	2060	2075
Self-supplied Domestic	4	4	4	4	4	4
Self-supplied Industrial	-	-	-	-	-	-
Crop Irrigation	4,078	4,240	4,260	4,260	4,260	4,260
Livestock	71	69	69	67	65	63
Oil & Gas	-	-	-	-	-	-
Public Supply	972	980	958	949	923	887
Thermoelectric Power	-	-	-	-	-	-
Total	5,125	5,294	5,291	5,280	5,251	5,213

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	-	-	-	-	-	0%
Alluvial Groundwater Depletion	49	55	55	55	55	1%
Bedrock Groundwater Depletion	403	403	402	400	397	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)
31,100	No	No	173,560

- 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 42 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	Ineffective at Meeting Future Demands
Reuse	PS, SSI	Effective at Meeting Future Demands
Water Transfers	All sectors	Potentially Effective with Local Variability

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.