

Population

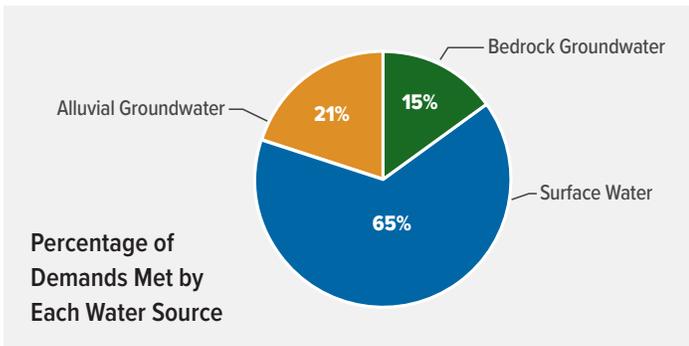
How is the population expected to change in the future?

| 2020 | 2030 | 2035 | 2045 | 2060 | 2075 |
|--------|--------|--------|--------|--------|--------|
| 53,780 | 55,690 | 54,270 | 51,679 | 48,182 | 45,264 |

Water Demand Projections

How much water is needed to meet Oklahomans' needs?

Basin 46 accounts for approximately 25% of the overall water demands of the Lower Arkansas Region.



Total Demand by Sector (AFY)

| | 2020 | 2030 | 2035 | 2045 | 2060 | 2075 |
|--------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Self-supplied Domestic | 605 | 650 | 636 | 610 | 575 | 548 |
| Self-supplied Industrial | - | - | - | - | - | - |
| Crop Irrigation | 11,621 | 14,178 | 16,905 | 18,452 | 18,452 | 18,452 |
| Livestock | 2,002 | 2,021 | 2,039 | 2,014 | 1,970 | 1,939 |
| Oil & Gas | 109 | 109 | 109 | 109 | 109 | 109 |
| Public Supply | 6,737 | 6,928 | 6,751 | 6,433 | 5,995 | 5,630 |
| Thermoelectric Power | - | - | - | - | - | - |
| Total | 21,074 | 23,886 | 26,439 | 27,617 | 27,100 | 26,677 |

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 | 1 | 37 | - | 293 | 421 | 1% |
| Alluvial Groundwater Depletion | 4 | 32 | - | 578 | 581 | 1% |
| Bedrock Groundwater Depletion | 21 | 24 | 26 | 21 | 18 | 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) |
|---|---|--|---|
| 9,248,400 | Yes | No | 3,261,080 |

- 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 46 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 | Effective at Meeting Future Demands |
| 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.