

Wichita Falls Supply and Demand In Acre-Feet Per Year (AFY)

Water Demand for Wichita Falls	Current	2070
Wichita Falls and Customers ¹	28,508	29,615

Actual Available Water Supply for Wichita Falls	2020	2070
Firm Yield Wichita System: Lakes Arrowhead, Kickapoo ¹	37,734	35,400
Recycling and Reuse of Treated Wastewater ²	11,200	11,200
Subtotal, Supply with Structures in Place	48,934	46,600
Lake Kemp/Diversion System ¹ (would require additional infrastructure, which would cost a fraction of the cost of Lake Ringgold)	16,600	16,600
Total	65,534	63,200

¹From Region B Water Plan

²Recently completed project by Wichita Falls, reported locally as being up to 17,600 acre-feet/year (AFY). The 11,200 AFY reported here is an earlier projection in the Water Plan

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Explanation of how the Region B Water Plan attempts to justify Lake Ringgold

1. *Firm Yield* is the maximum amount of water that can be withdrawn each year from a reservoir during a repeat of the worst drought of record, without the reservoir ever going dry. This number is the real water supply and the only method used for decades to calculate water supply. As need for new reservoir construction became more and more difficult to justify, promoters of new projects began using *Safe Yield*, the amount of water that can be withdrawn from a reservoir during a repeat of the worst drought of record, while leaving a full year's supply in the lake at all times. This arbitrary number artificially undercounts the actual amount of water available.

In determining Wichita Falls' water supply, the Region B Water Plan goes a step further, using a concept Texas Conservation Alliance and colleagues had never seen before, which the authors' call *conditional reliability assessment*. This is not an established methodology for assessing water supply and it results in an even lower alleged water supply for Wichita Falls from Lakes Arrowhead and Kickapoo than using the Safe Yield.

2. The Reuse/Recycling infrastructure was not in place when the 2016 Region B Water Plan was published, so is not counted as supply in the Plan. The Reuse/Recycling project is now complete. Representatives of Wichita Falls' water department have been quoted as saying that the project can process up to 16 million gallons per day, which equals 17,600 acre-feet/year (AFY).
3. More than 16,000 AFY of Wichita Falls' permitted water supply comes from the Lake Kemp diversion system. The infrastructure is not in place to develop this water, but it could be developed at a fraction of the cost of building Lake Ringgold.

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