



Concho River Water Project

Overview

The Concho River Water Project is a move to extend San Angelo's sources beyond its lakes and the Hickory Aquifer. It will do so by adding a reliable and sustainable source that will help meet water needs for decades to come. The project adds a reliable addition to the City's water supply options. It represents a significant step forward in the City's continuing efforts to secure the water it needs to thrive for generations to come.

The project involves releasing highly treated water to federal and state standards from the City's wastewater treatment plant into the Concho River. After it has flowed down that "natural pipeline," the water will be recouped farther downstream. From there, it will be piped to the water treatment plant, where it will be treated to drinking standards.

On September 18, 2018, the City Council unanimously agreed to pursue state permits that will ensure the water is treated to adequately high standards before its release into the river.

Prior to recommending the Concho River project, engineers and City staff studied 24 possible water supplies. Those included surface water, groundwater and direct reuse. This is not a so-called "toilet-to-tap" project, which concerns some. Direct potable reuse would be more expensive and, after the treatment process, would yield less water. The experts and City officials concluded the Concho River Water Project is a reliable and cost-effective source, will produce water with an improved taste, can be developed relatively quickly, and utilizes proven science. Cities have long released their treated wastewater downstream into streams, rivers and lakes. Treated wastewater from Ballinger, Robert Lee and Winters, for instance, flows into San Angelo's primary water source, Ivie Reservoir. Abilene has an extensive indirect reuse program using Lake Fort Phantom Hill as the environmental buffer, providing an additional 7 million gallons per day of reliable supply. Wichita Falls also has a comprehensive indirect reuse program to augment its water supplies.

Compared to other options, the project will:

- Provide a reliable and secure source of water.
- Yield an economical water supply.
- Produce water with an improved taste.
- Reduce potential legal and political hurdles.
- Involve a shorter timeframe in which it can be accomplished.
- Utilize proven science in terms of water quality, hydrology and engineering.

Another exciting aspect of the Concho River Water Project is it will piggyback with existing City water infrastructure investments that need to - and likely will - occur with or without the project.

The Concho River Water Project will capture San Angelo's own water, expanding and diversifying the city's water portfolio. Because we will be retrieving the same amount of water we are releasing, the efficiency of the Concho River Water Project will be extremely high.

How much water will this project yield

Approximately 7.5 million gallons per day, even during severe droughts. San Angelo averages about 12 million gallons of daily usage over the course of a year. By comparison, the Hickory Aquifer is currently capable of producing 8 million gallons per day (although an expansion of that to 12 million gallons is underway).

Perhaps the greatest advantage of this project is that it makes greater use of San Angelo's existing water supplies. As a result, it's a guaranteed source of water - one that will expand as our community grows. That is, as San Angelo uses more water, it will be released into the Concho and then recouped for further use.

When completed, the Concho River Water Project will produce about 7.5 million gallons per day. By comparison, the Hickory Aquifer is currently capable of producing 8 million gallons per day, although that is being expanded to 12 million gallons. San Angelo averages about 12 million gallons of daily usage.

The Concho River Water Project, when combined with our reservoirs and the Hickory Aquifer, is projected to move San Angelo a long way toward addressing its water needs through 2070. It will add to and diversify the city's water portfolio. That means San Angelo won't be so reliant on any one source - such as lakes - and can better weather times of drought.

It will also put the City in a far more secure position should one of our water sources be offline. By adding more than 7 million gallons of water per day to our system, this project makes a remarkable difference in San Angelo's water security.

Moving forward

The City has the discharge permit in place and is currently waiting to see a draft of our Bed and Banks permit, which will happen hopefully in the next few months. Once the City receives the draft permit, we will begin reviewing it to make sure we are in line with the state and submit any necessary revisions. Once the City receives the final bed and banks permit, we will have to publish the permit for the public to review and give an opportunity for anyone to contest it. Once that process is completed and we get the approval from the state, then the City would begin looking at design and construction bids for the project.

The estimate for the project as of 2018 was about \$120 million but projects costs may rise due to inflation. The entire project may take up to five years to complete. Coincidentally, that is the same amount spent to develop the Hickory Aquifer. As with that project, the City would pursue low-interest financing through the Texas Water Development Board. That includes upgrades to the water and wastewater treatment plants. Those improvements would be needed regardless of which new water source was chosen.

The Concho River Water Project will include upgrades to our aged water and water reclamation plants, the former of which is approximately 100 years old. Those projects would have to be accomplished even if we chose a different water supply or strategy.

Updated plants with 21st-century technology and better treatment capabilities will also allow us to treat water from all of our surface water sources to a higher standard. That should yield a better-tasting water, which is a goal for any water supply project.

Looking beyond the CRWP

Work continues by the West Texas Water Partnership to develop a long-term source that can serve San Angelo, Abilene and Midland. The Concho River Water Project will help meet local water demands for about the next 50 years.

The project will also diversify San Angelo's portfolio of water sources. Because the City will not be dependent upon any one source of water, San Angelo will be better able to weather times of drought.