

Northeast Tulare County Regional Water Supply Feasibility Study

Summary of Technical Alternatives

Alternative	Description	Advantages	Disadvantages	Capital Cost Estimate	Annual O&M Estimate	Average Monthly Cost per Connection
Alternative 1: Individual System Improvements and Physical Consolidation Loop	Alternative 1 utilizes existing groundwater wells only. All existing water systems will be physically connected, and improvements will be made to existing wells and tanks. This is the most affordable option both short term and long term. The connection of the systems into one operational water system is considered a base alternative on which the remaining alternatives can build.	The construction of connections between the systems forming a looped system would provide each community with additional reliability and redundancy in supply. The total number of wells and tanks that would need to remain to serve the population would be reduced, leading to significant O&M savings. Combining the region into a single special district would provide additional savings to the administrative costs of running separate systems.	Should the existing PUD and CSD structures remain in place there would be little reduction in cost to administer the 7 water systems operating under 5 special districts. There would potentially be increased costs and TMF burden through participation in a JPA, tracking production and usage to allocate costs between districts, and potential for uneven allocation of costs.	\$38,359,000	\$644,800	\$57 (Preliminary Feasibility Level Estimate)
Alternative 2: Regional Surface Water Treatment Plant Partial Supply	Alternative 2 involves using both existing groundwater wells and surface water from the Friant-Kern Canal. All water systems will be physically connected, the same as Alternative 1. Existing groundwater wells would be supplemented by a regional surface water treatment plant reducing reliance on groundwater pumping, while retaining	The addition of a surface water supply will reduce the total amount of groundwater pumped and lower the impacts of pumping in the region. Continued operation of the wells identified in Alternative 1 will ensure demands can be met even when the surface water supply is reduced during drought years or FKC maintenance. Retaining	Surface water will need to be procured and delivered via the FKC, which will be an added cost to the communities. Surface water treatment adds operational complexity and TMF requirements resulting in increased operational costs above those of Alternative 1. The reliability of surface	\$81,133,000	\$2,894,340	\$113 (Preliminary Feasibility Level Estimate)

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	the capacity to serve the communities.	groundwater capacity and adding surface water provides redundancy and operational flexibility.	water supplies in drought years can be uncertain.			
Alternative 3: Regional Surface Water Treatment Plant Full Supply	Alternative 3 proposes the same regional surface water treatment plant as Alternative 2 but relies primarily on blending treated surface water (67%) to groundwater (33%) due to water quality concerns. Most groundwater wells would be removed. This is the most expensive option both in the short and long term and most reliant on surface water supply.	Alternative 3 expands the capacity of the SWTP enabling a greater reduction of groundwater pumping in favor of utilizing a larger treated surface water supply. Further reduction of the number of operating wells will reduce the associated operational costs.	A full supply of surface water will need to be procured, which will be an added cost to the communities. The SWTP would be a significant upfront investment for the region. Surface water treatment operational complexity and TMF requirements and the need to continuously operate the plant will impact costs. The reliability of surface water supplies in drought years remains uncertain, and further reducing the number of wells will limit the supply of groundwater if surface water supply is reduced or during FKC maintenance.	\$83,076,000	\$4,111,910	\$143 (Preliminary Feasibility Level Estimate)

For more information on the Northeast Tulare County Regionalization effort, please visit the project website at https://www.waterboards.ca.gov/drinking_water/programs/districts/north_tulare.html