



## Memorandum

Date: November 6, 2019

From: Utility Engineering Group, PLLC  
 Garry Montgomery, P.E. *ADM*  
 191 N. Union Avenue  
 New Braunfels, Texas 78130

RE: City of Elmendorf – Water Supply Project – Project Status Update

The City of Elmendorf is developing a water supply in the Wilcox Aquifer to provide an additional source of supply to the City, increase reliability and stabilize rates for the residents of the City. The following table provides a status update on what has been completed and what is in process on the project:

Task	Original Scope	Status
Water Meter Replacement	Replace all meters in the system with radio read meters	Project was in service in July and is working well. Project was completed \$71,929.36 under the original budget
Public Water Supply Wells	Drill up to 4 wells in the Wilcox Aquifer with a 275 gpm+ production capacity and produce 753-acre feet of water per year	3 wells have been drilled, developed and cased in the Wilcox Aquifer. Well capacity is 536 gpm to 600 gpm. This provides 1290-acre feet of water per year with a 16-hour pump limit per day on only two wells in production. Project is on track to be \$120-150,000 under budget due to eliminating the fourth well.
Raw Water Collection Piping	6,505 linear feet of 8- and 12-inch piping to bring raw water to the ground tanks.	4,980 linear feet of 8- and 12-inch piping is needed since a fourth well was not needed to meet production capacity.
Finished Water Piping	19,620 linear feet of 12-inch piping to deliver finished water to the elevated tank and distribution system	14,790 linear feet of 12- and 16-inch piping will be installed due to increased capacity of the wells.



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<b>Task</b>	<b>Original Scope</b>	<b>Status</b>
Reverse Osmosis Treatment	RO system to treat 40% of the water supply and blend to desired water quality	We are evaluating options on the RO system versus blending the water to the desired water quality. We are evaluating cost, schedule, and long-term operation and maintenance.
High Service Pump Station	Pump station with 3 600 gpm pumps, valves, SCADA	Pump station is 50% designed and will have room for future pumps for increased capacity
Ground Storage Tank	Two 300,000-gallon prestressed concrete ground storage tanks. One for raw water and one for finished water	Geotechnical work will commence in the November for both tanks. Site planning and design is 80% complete on the tanks.
Elevated Storage Tank	One 500,000-gallon composite elevated tank	Tank has been designed and electrical/SCADA design will begin this month. We are proposing to bid a 500,000 gallon and 750,000-gallon tank so that we can evaluate cost and the project budget at bidding.

We are currently working with the property owner to finalize the required easements and fee simple property acquisitions that are needed to construct the elevated tank, piping and ground tanks. The City has an agreement with the property owner and staff is working to get the properties transferred to the City. We are also working with CPS for electrical service to all of the project components. CPS crews will be onsite in the coming months to begin construction.

Water quality at the wells is what we expected from the Wilcox Aquifer. The Total Dissolved Solids (TDS) range from 968-988 mg/L. The TCEQ standard for public water supplies is 1,000 mg/L. We want to reduce the TDS to 500-600 mg/L level through blending or reverse osmosis.

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