



City of Homer

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Public Works

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Memorandum 21-049

TO: Mayor Castner and Homer City Council

THROUGH: Rob Dumouchel, City Manager

FROM: Janette Keiser, PE, Director of Public Works

DATE: March 3, 2021

SUBJECT: Raw Water Transmission Line Design Project - Betterment

Issue: In the course of designing the new Raw Water Transmission line, we've come across an opportunity to improve operations and save construction costs at the Water Treatment Plant. This will require some additional design work, for which we are seeking additional funding.

Background:

The City Council adopted Ordinance 20-56, which appropriated \$215,000 for the design of a new raw water transmission line; that is, a pipeline that conveys water from the pump house, near the reservoir, to the water treatment plant. This is being done because the existing transmission line is old cast iron pipe, which has cracked numerous times. If this line were to be taken out in a serious earthquake, the City would have no water supply.

To accomplish the design work, we issued the following contracts:

a. Design	DOWL Engineers	\$164,600
b. Survey	Seabright Survey	\$ 15,000
c. Wetland Delineation	Homer Soil/Water Conservation District	<u>\$ 12,000</u>
	Total to Date	\$191,600

In the process of investigating design options, we evaluated how to best connect the new water line into the existing treatment plant. We discovered we could simplify this configuration by eliminating an existing surge tank and its related piping. This is a 500-gallon tank, which buffers the differing pressures generated within the water line by the supply pumps. It is already at the end of its useful life. Eliminating the surge tank would make the treatment plant operations more efficient and safer, by removing a source of high pressure water, in a tight, enclosed space. Eliminating the surge tank would also mean construction of the new water line would be simpler because we'll have more room to work in. Plus, we won't have to run new piping through tortuous, twisting routes to work around an obsolete surge tank.

It will cost \$33,185 more to do the extra design work. However, we believe this will be more than offset by the decrease in construction costs and increase in operational efficiency and safety.

Recommendations:

That an additional \$33,185 be appropriated from the Water CARMA Fund to the Raw Water Transmission Line Design budget for the additional design work. This would bring the new total cost for the design of this project to \$247,585.





Funding is Available:

