



CITY OF FERNLEY

CITY COUNCIL AGENDA REPORT

Meeting Date: January 6, 2021

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| REPORT TO: | Mayor and City Council |
| REPORT THRU: | Daphne Hooper, City Manager |
| REPORT FROM: | Dave Whalen, Public Works Director |
| REVIEWED BY: | Brent Kolvet, Deputy City Attorney |
| REVIEWED BY: | Denise Lewis, City Treasurer |

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| FINANCIAL IMPACT: Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/> | CURRENTLY BUDGETED: Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/> | FUND/ACCOUNT: 510-166100 |
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ACTION REQUESTED: Consent Ordinance Resolution Motion Receive/File

AGENDA ITEM: Possible Action to award a contract for the City of Fernley Surface Water Treatability Study to CDM Smith in the not to exceed amount of \$112,500.

Agenda Item Brief: The study will analyze the surface water from the canal to evaluate chlorine demand, disinfection by-product formation potential, and coagulant effectiveness at different doses and under varying conditions. Additionally, the project will satisfy regulatory requirement to evaluate impact of new surface water supply on corrosion potential in the distribution system. The results of this Surface Water Treatability Study will allow CDM to design the needed components within the Water Treatment Plant to effectively treat surface water with NDEP BSDW oversight and approval.

Recommended Motion:
"I move to award a contract for the City of Fernley Surface Water Treatability Study to CDM Smith in the not to exceed amount of \$112,500."

Business Impact (per NRS Chapter 237):

A Business Impact Statement is Attached.

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached reports for background, analysis, alternatives.

ALTERNATIVES:

City Council may vote to deny the contract and give direction to the city manager for an alternative.

BACKGROUND:

City Council has set water management as a top priority in the Water Enterprise Fund for the last five years. Responsible planning and preparation to have water available for future development, but not over-allocate the City's available water resources are critical to the City of Fernley's future. Optimizing the City's ability to serve both ground and surface water to its customers is a vital component of providing a sustainable water supply. Currently the City is only able to treat and serve groundwater to its customers. The City has approximately 9,000-acre feet of ground water and 10,000-acre feet of surface water rights (currently underutilized).

Discussions and analysis of the Water Treatment Plant (WTP) operation have brought forward more accurate information as the City's needs have evolved in the last several years. In 2016, CDM Smith prepared a report that analyzed the alternatives for treatment of surface water (within the WTP ONLY). That report was presented to City Council and was approved. The report revealed that modification of the WTP to accept and treat surface water was reasonable and less expensive than expected.

In 2017, AECOM performed an analysis of alternative routes to transport surface water to the WTP from the Truckee canal. City Council approved the recommended route and directed staff to move forward with a contract for incremental and full design plans for a new take out in the Truckee Canal, a pipeline to the WTP, pump station, assistance in putting together the authorization request to BOR to use the federal facilities to transport municipal water and a notice to proceed for construction. Fernley City Council awarded AECOM a contract for the surface water conveyance project on March 21, 2018 to provide 50% and 90% design documents, efficiency study, assistance with submittal of an Authorization Request to BOR, 100% design documents, advertising/bidding for construction and construction notice to proceed.

A second contract with AECOM was initiated and 90% design plans for a pump station, surface water pipeline from the canal to the WTP and a takeout structure at the canal have been completed. The City staff, with AECOM and outside legal counsel, completed and submitted an SF-299 Request for Authorization to the US Bureau of Reclamation for use of the city's water rights in accordance with the terms of the 2009 settlement agreement. Source water testing continues to be conducted and data is being collected by WTP staff to further develop the plans for treatment plant modifications. CDM Smith's expertise and collaboration are required, not only to complete the final design plans for conveyance of surface water to the WTP, but also with regulators (Nevada Division of Environmental Protection, Bureau of Safe Drinking Water) and planning to operate the WTP with surface water.

Currently, the United States Bureau of Reclamation has asked for Supplemental work consisting of performing hydraulic modeling and developing a coffer dam design as requested by the United States Department of the Interior, Bureau of Reclamation ("BOR") during a project review meeting held October 21, 2020. Per the request of BOR, AECOM will create a new proposed geometry with a temporary coffer dam represented that minimizes the impact to proposed water surface elevations (WSE) and create 2 new proposed plans (unvegetated and vegetated) that reference the new geometry. Following the hydraulic analysis and design, AECOM will submit a copy of the findings and design documents to the City and BOR for review and/or approval.

The design of the coffer dam will allow the city to construct the project while the TCID continues to flow the canal water to Lake Lahontan over the non-irrigation season. In normal conditions the canal would be "taken down" and dewatered for maintenance over the non-irrigation season. BOR predicts that this year there will be no opportunity to take the canal down due to the drought like conditions of the past year. The water will be required to flow at a slow rate to the lake. Therefore, there is a need for a cofferdam to hold back the canal water during the construction of the new surface water take out structure. The modeling will have to be vetted and approved by the BOR prior to incorporation into construction. Construction of the takeout using a cofferdam will not take place until the non-irrigation season of 2021-22 based on this recently requested change in project scope.

Again, surface water makes up more than 50% of the City's permitted water rights and is a key component of diversifying the City's water supply. The surface water conveyance project is necessary for sustainable growth in the community as outlined in the 2019 *Water Resource Plan* accepted by council.

CDM Smith prepared and submitted to the City a technical memorandum for the modifications to the plant for surface water treatment. The report is attached to this staff report. The City of Fernley Surface Water treatment Planning Report (Report) presents the proposed major facilities and activities for the City of Fernley (City) to modify the City's existing drinking water treatment plant (WTP) to treat a new surface water source and the existing groundwater supply. The report was prepared to advance the City's understanding of the proposed facilities, anticipated activities, and associated costs to upgrade the existing WTP to treat surface water from the Truckee Canal. The surface water project will be critical to meet the City's long-term goals to diversify its drinking water supply and meet future demands that could exceed available groundwater supplies. A planning level engineer's estimate of probable construction cost (OPCC) is provided for the capital improvements for the proposed improvements. The report also presents the estimated annual operations and maintenance (O&M) costs to treat surface water and groundwater as compared to current costs to treat only groundwater.

In Summary, the Surface Water Treatability Study will analyze the surface water from the canal to evaluate chlorine demand, disinfection by-product formation potential, and coagulant effectiveness at different doses and under varying conditions. Additionally, the project will satisfy regulatory requirement to evaluate impact of new surface water supply on corrosion potential in the distribution system. The results of this Surface Water Treatability Study will allow CDM to design the needed components within the Water Treatment Plant to effectively treat surface water with NDEP BSDW (Nevada Division of Environmental Protection, Bureau of Safe Drinking Water) oversight and approval.

LEGAL IMPLICATIONS:

Nevada Statutes: NRS 445A

Other:

FINANCIAL IMPLICATIONS:

Surface Water Treatability Study work was budgeted for in the 2020-2021 Budget, page 245 *Improvements to Deliver and Treat Surface Water to the Water Treatment Plant*

ATTACHMENTS:

- 1.) CDM Smith *The City of Fernley Surface Water Treatment Planning Report*- dated June 19, 2020
- 2.) Standard Contract for Professional Services
- 3.) CDM Smith Proposal for the City of Fernley Surface Water Treatability Study
 - a. Attachment A – Scope of Work
 - b. Attachment B – Schedule
 - c. Attachment C – Billing Rate Schedule
 - d. Attachment D – Budget Spreadsheet