



CITY OF FERNLEY

CITY COUNCIL AGENDA REPORT

Meeting Date: June 17, 2020

REPORT TO: Mayor and City Council
REPORT THRU: Daphne Hooper, City Manager
REPORT FROM: David Whalen, Public Works Director
REVIEWED BY: Brandi Jensen, City Attorney
REVIEWED BY: Denise Lewis, City Treasurer

FINANCIAL IMPACT:

Yes: No:

CURRENTLY BUDGETED:

Yes: No:

FUND/ACCOUNT:

520-166100

ACTION REQUESTED: Consent Ordinance Resolution Motion Receive/File

AGENDA ITEM: (Possible action) Approve the amendment A (addendum No. 1) for the Consultant Agreement to authorize additional professional services to be billed by Lumos & Associates for increasing the scope of services in an amount not to exceed \$9,480.

Agenda Item Brief: Add one (1) new monitoring well to the original scope for a total of three (3) new monitoring wells. Added scope includes additional well drilling oversight, conducting test pumping on each new well, and additional analysis/reporting. Test pumping will be used to collect data to determine hydraulic conductivities and the direction and migration of groundwater under the WWTP to support requests for AOC Amendments. Contract will continue into new fiscal year.

Recommended Motion: "I move to approve the amendment A (addendum No. 1) for the Consultant Agreement to authorize additional professional services to be billed by Lumos & Associates for increasing the scope of services in an amount not to exceed \$9,480."

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 report for background, analysis, alternatives.

ALTERNATIVES:

BACKGROUND:

The City of Fernley (City) Public Works Department operates three primary (A) & secondary (B) cell pairs (Pond #1, 3, 4) and a sludge holding basin (Pond #2). The cells are rotated in parallel with one A / B pair being dosed with influent at any one time. The secondary ponds then outfall and converge at the effluent splitter vault located central to the wastewater treatment facility. The outflow of the secondary treated water is then “flash mixed” with a metered sodium chloride drip (via feed tank) prior to discharge into the wildlife management area (WMA) to the south of the plant. To raise the oxygen levels to wildlife standards (5mg/l of D.O.), a step cascade aerator is located at the plant’s outfall prior to the effluent’s discharge into the overland flow channel. The outfall water is permitted through the Nevada Department of Wildlife (NDOW) permit separate from Fernley’s permit, which allows the treated wastewater to be discharged to groundwater in the WMA.

Fernley’s ponds were constructed in the following time periods: #2 (1986-29 years old), #3-A and #3-B (1996-19 year’s old, #4-A and #4-B (2006-9 years old) and #1-A and #1-B (2009-6 years old.) Pond 2 was relined in 2018.

On July 17th, 2015 the City received a compliance inspection report for the NDEP through the Bureau of Water Pollution Control (BWPC) regarding high nitrate levels above Maximum Contamination Level (MCL) of 10 mg/l (ppm) found in Monitoring Well 9 at the East Wastewater Treatment Plant. As a result, the City of Fernley received an “Administrative Order of Consent” (AOC) from the Nevada Division of Environmental Protection (NDEP) Bureau of Water Pollution Control on September 15th, 2015. The AOC directs the City to resolve the issue of high nitrate levels. The AOC was subsequently amended and required, at a minimum, the dewatering and removal/disposal of sludge from Pond 2 by December 31, 2016. For continued use of Pond 2 following sludge removal, the amended AOC required plans and specifications for the Pond 2 re-lining be submitted to NDEP for review and approval.

Fernley City Council approved a contract with Lumos and Associates on January 6, 2016 for Preliminary Engineering Report (PER) services. Lumos and Associates completed an engineering analysis (PER) of the elevated nitrogen to help identify future planning to address the nitrogen issue. Lumos has continued to address the high nitrogen level issue as mandated by the State of Nevada Division of Environmental Protection-Bureau of Water Pollution Control.

A Preliminary Engineering Report (PER) was prepared to define the need for the project, evaluate alternatives, and recommend a preferred alternative in support of an application for funding through the State Revolving Fund (SRF). Proposed improvements in the PER included: 1) removal and dewatering of sludge from Pond No. 2 with the construction of a filter bed system; 2) hauling and disposing of dewatered sludge at a landfill; 3) relining Pond 2 with a HDPE liner; 4) constructing a pump station and force main to recirculate water from Pond 2 to the influent splitter box; and 5) installing a secondary chlorine pump with the addition of controls/alarms. The PER was reviewed and approved by NDEP in May 2016.

The relining project was constructed in two phases. Phase 1 included Pond 2 sludge removal and disposal with the construction of the filter bed system. Phase 2 included Pond 2 re-lining, pump station, and chlorination system improvements. Public Works Department and Finance Department staff secured a State Revolving Fund (SRF) Loan to help fund this project with \$500K of principal forgiveness.

As required by the AOC, the City completed a sludge removal and relining project for Pond 2 in 2017 and 2018 and has continued to monitor monthly trends in the WWTP monitoring wells (MW-7, 8, 9, and 10). Because nitrate readings have not decreased in the time period outlined in the AOC, the City and Lumos met with NDEP on May 2, 2019 to discuss alternative options for moving forward in closing or amending the AOC. NDEP has agreed to consider the addition of new monitoring well(s) at the WWTP site to help identify the source of

nitrates in the area.

Previous groundwater studies and review of available static water data suggests that the existing monitoring wells were not adequately developed during construction and have some degree of plugging. In addition, past data collection methods for static water level readings were less accurate than current methods, which makes historical data less reliable to draw conclusions (i.e., water levels measured to nearest foot). As a result, the direction of the groundwater gradient and hydraulic conductivities in the area cannot be determined and/or confirmed with the existing monitoring wells.

Additional monitoring wells with proper design, a more precise drilling method, and full development during construction are needed to help create a database of reliable information. This information can then be used to help identify the source of nitrogen in the groundwater and gain a better understanding of the direction, gradient, and rate of groundwater migration in the area.

For this increased scope of professional services, we are adding one (1) new monitoring well to the original scope for a total of three (3) new monitoring wells. Added scope includes additional well drilling oversight, conducting test pumping on each new well, and additional analysis/reporting. Test pumping will be used to collect data to determine hydraulic conductivities and the direction and migration of groundwater under the WWTP to support requests for AOC Amendments. Additionally, the Contract for Professional Services will continue into new fiscal year 2020/21.

PRIOR COUNCIL ACTION

August 7, 2019 Approval of the Contract for Engineering Services to Lumos and Associates in an amount not to exceed \$41,000 for the East Wastewater Treatment Monitoring Well project

LEGAL IMPLICATIONS:

“Second Amendment to the Administrative Order of Consent” (AOC) for the East Wastewater Treatment Plant – Discharge Permit #NS0080011 from the Nevada Division of Environmental Protection (NDEP) Bureau of Water Pollution Control

FINANCIAL IMPLICATIONS:

The project has been budgeted for under the current and future fiscal budget.

ATTACHMENTS:

- 1.) Executed Contract for Professional Services
- 2.) Proposal for Engineering Services – Lumos & Associates
- 3.) Amendment A to the Contract for Professional Services