Legislation Details (With Text)

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Title:	Creation of a new Capital Improvement Project titled Water Reclamation Facility No. 1 Tertiary Screen Replacement and issuance of a Purchase Order to The Coombs-Hopkins Company to purchase parts and equipment for the Project.				
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Attachments:	1. Staff Report, 2. Exhibit 1 - Quotations, 3. Exhibit 2 - GHD Assessment				

Date	Ver.	Action By	Action	Result
9/15/2021	1	City Council	approved	

REQUEST FOR CITY COUNCIL AND CORONA UTILITY AUTHORITY ACTION

DATE: 09/15/2021

TO: Honorable Mayor and City Council Members
Honorable President and Board Members

FROM: Utilities Department

SUBJECT:
Creation of a new Capital Improvement Project titled Water Reclamation Facility No. 1 Tertiary Screen Replacement and issuance of a Purchase Order to The Coombs-Hopkins Company to purchase parts and equipment for the Project.

EXECUTIVE SUMMARY:

Water Reclamation Facility No. 1 is located at 2205 Railroad Street and treats up to 11.5 million gallons per day of raw sewage. The Utilities Department maintenance staff identified the existing tertiary filter screen and screw press as having reached the end of their useful life. Additionally, the tertiary filter screen is no longer supported by the manufacturer. Staff reached out to a third-party engineering firm to evaluate the cost effectiveness of repair versus replacement. The assessment determined replacement as the best option. Creating a new capital improvement project will allow staff to obtain the necessary equipment to address this operational need.

RECOMMENDED ACTION:
That the:

a. City Council authorize the creation of a new capital improvement project titled Water Reclamation Facility No. 1 Tertiary Screen Replacement.

b. City Council authorize an appropriation from the Water Reclamation Utility Fund (572) to the new capital improvement project titled Water Reclamation Facility No. 1 Tertiary Screen Replacement for $415,000.

c. City Council authorize an Exception to Competitive Bidding pursuant to Corona Municipal Code Section 3.08.140(E) for purchase of the Parkson Aqua Guard Ultra Clean Model AGUC-MN-A tertiary water filter screen and Vulcan screw press Model ESP 250/1200 at Water Reclamation Facility No. 1 for $359,790.

d. City Council authorize the Purchasing Manager to issue a purchase order to The Coombs-Hopkins Company for $359,790.

e. City Council authorize the General Manager and City Attorney, or their designees, to negotiate and execute non-substantive extensions, change orders, and amendments up to 10% of the total contract cost as authorized in Corona Municipal Code Section 3.08.080(I).

f. Corona Utility Authority review, ratify, and to the extent necessary, direct the City Council to take the above actions.

BACKGROUND & HISTORY:
The Water Reclamation Facility #1 (WRF1) treatment system includes the headworks, two secondary treatment plants (Plant 1A and Plant 1B), tertiary filters, and a chlorine contact basin. A flow splitter separates up to 5.5 million gallons per day (MGD) of the effluent from the headworks to Plant 1A, while the remainder of the flow is sent to Plant 1B. Secondary treated water from Plant 1A and 1B come together for further tertiary treatment. Water from Plant 1A and 1B goes through the multi-disc perforated screen, followed by sand media filters before being treated at the chlorine contact basin, which provides disinfection. After disinfection, the water is pumped to the recycled water reservoir and distributed as recycled water.

Tertiary filtration through a filter screen is necessary to remove suspended solids that would otherwise make their way through the treatment process and clog the sand filters and other parts of the system. Tertiary-treated water is either discharged to the Butterfield Drain within the Prado Basin Management Zone (per California Regional Water Quality Control Board Santa Ana Region Order No. R8-2020-0021 and NPDES Permit No. CA8000383) or sent to percolation ponds (Lincoln and Cota Ponds) located at the City's Corporation Yard to recharge the basin. Any remaining recycled water is distributed through the recycled water distribution system for irrigation purposes.

ANALYSIS:
The current Infilco Degremont screen system has many moving parts which over its lifetime has led to a number of repairs. The original unit went into operation in 2007/2008 and had over 110,000 hours of operation prior to removal. During the last failure, staff determined the unit was in need of

a complete rebuild in order to keep it operating reliably. Staff created a parts list and reached out to the vendor for pricing. The price for the anticipated rebuild came back significantly higher than expected for two primary reasons. First, the unit was no longer supported by the manufacturer. Second, the parts would need to be sent out to a fabrication shop to be custom made. Based on the lack of support from the manufacturer and the higher than anticipated cost, UD staff employed the engineering services of GHD, Inc. (GHD) to perform a repair versus replacement cost-benefit assessment.

Removal of the existing perforated screen filter equipment was required due to an unplanned failure and a lack of replacement parts to keep it in service. Infilco Degremont is now part of Suez Treatment Solution (Suez); Suez no longer manufactures or supports the multi-disc screen. With spare parts no longer provided by the manufacturer, replacement parts must be custom-made by fabrication shops which can come at a high cost, long lead times, and limited to no warranties.

Currently, there are five Parkson's Aqua Guard Ultra Clean screens in use at the City's water reclamation facilities. In an effort to provide standardization throughout the City's systems, staff provided GHD with the Parkson Aqua Guard Ultra Clean Model AGUC-MN-A tertiary water filter screen system for comparison. The current Parkson screens are performing well and within the range of their intended use and design capacities.

Additionally, the existing screw press at WRF1's tertiary water filtration system is also being requested for replacement due to its age and performance. This piece of equipment works in conjunction with the screen system by further dewatering any materials captured. The plant currently has Vulcan screw presses at WRF1's headworks. In an effort to continue standardizing equipment, the Department requests to replace the existing equipment with a Vulcan screw press at the tertiary filter.

GHD further discussed the option of removal of the screen system rather than replacement. Staff disagrees with Section 3.3 of the GHD report as staff is and has been experiencing debris pass through that is affecting the water reclamation facilities. Removal of the screen system would exacerbate the problem.

Staff is requesting that the City Council authorize the purchase of the requested equipment under Corona Municipal Code 3.08.140 (E) "Purpose of bidding is otherwise accomplished" when the purchasing agent and the authorized contracting party, with the approval of the City Manager, determine that it is in the best interest of the City and its administrative operations to dispense with public bidding for non-public projects under this chapter. The Parkson Aqua Guard Ultra Clean filter screen and the Vulcan screw press are only supplied by their authorized local dealer, The Coombs-Hopkins Company. Parkson equipment has been in business since 1960. Parkson has been progressively adding products and product lines through the years to strengthen their presence in the marketplace for various applications in the wastewater and water industry. For these reasons, staff recommends proceeding with these purchases.

Removal of the existing equipment and installation of new equipment will be performed by staff. The new screen and screw press will be integrated into the existing Supervisory Control and Data Acquisition system for 24-hour monitoring.

FINANCIAL IMPACT:

Approval of the recommended actions will result in the creation of a new capital improvement project titled Water Reclamation Facility No. 1 Tertiary Screen Replacement and an appropriation from the Water Reclamation Utility Fund (572) in the amount of $415,000 to the new project.

Project Budget

Parkson Aqua Guard Ultra Clean Filter Screen	$293,995
Vulcan Screw press	$65,795
Contingency	$35,979
Estimated Staff Time and Equipment Rental	$19,231
Total	**$415,000**

Fund	07/01/21 Est. Working Capital	Budgeted Revenues/ Sources	Budgeted Expenditures/ Uses	Working Capital Impacts	06/30/22 Est. Working Capital
Water Reclamation Utility Fund 572	$38,460,751	$32,893,509	($39,081,327)	Appropriation ($415,000)	$31,857,933

ENVIRONMENTAL ANALYSIS:

This action is categorically exempt pursuant to Section 15301 of the Guidelines for the California Environmental Quality Act (CEQA), which states that operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the CEQA determination is exempt from CEQA. Therefore, no environmental analysis is required.

PREPARED BY: AFTAB HUSSAIN, MAINTENANCE MANAGER

REVIEWED BY: TOM MOODY, GENERAL MANAGER

Attachments:

1. Exhibit 1 - Quotations
2. Exhibit 2 - GHD, Inc. assessment