memo

Project Name |	Oak Glen Golf Course Stormwater Reuse	**Date** |	12/5/2023
To / Contact info |	BCWD Board of Managers		
Cc / Contact info |	Karen Kill, District Administrator		
From / Contact info |	Ryan Fleming, PE; Kyle Crawford, PE		
Regarding |	2024 CIP Seasonal Operation and Maintenance		

Background

In 2024, the Oak Glen Golf Course Stormwater Reuse system is entering its fourth season of operation. The irrigation reuse system is activated in the spring and operated through the season until the golf course ceases irrigating in the fall. The on-going operation and maintenance of the project is anticipated to include guidance and support for the spring start-up operations, winterization of the system in the fall, visual monitoring of the pump settings based on wetland stage, weather conditions and coordination with the Oak Glen Golf Course, site visits to monitor operation, vegetation, sediment accumulation, erosion, and overall system condition. EOR will coordinate with golf course staff to maintain the wetland outlet and pump system inlet and outlet. It is assumed the WCD will record the monthly total gallons pumped as well as monitoring of the flow leaving the golf course's irrigation pond as they have previously.

An end of season performance evaluation from the monitoring results will be provided to assist the golf course in their annual reporting. EOR will also update the project operation and maintenance manual based on the activities throughout the year (pump on/off or other setting alterations, additional maintenance performed outside of the norm, etc.).

In addition to the reuse pump that draws water from the large wetland north of Lake McKusick, there are also two groundwater wells that supply water to the irrigation system. BCWD is only able to monitor pumped volume at the reuse pump (total gallons pumped since installation), and at the south well pump (gallons per pumping event with time recorded). The Administrator has requested that EOR vet options of installing a flow meter with logged timing at the north pump and other technological improvement options, e.g. telemetry and cloud reporting, that will make the data more accessible and accurate to assist us in understanding the flow timing from each water source. An outcome of Task 4 in Table 1 below may be drafting of construction plans and specifications for which a separate scope of work will be brought to the Board for approval.

Scope

Table 1. Task cost and hours anticipated for the 2024 season.

Task	Description	Hours	Cost
Task 1: Start-up and Winterization	Coordinate spring start-up, pump/float adjustments, mileage	9	$1,730
Task 2: System Check-in, Maintenance	Site inspections and check-in, system maintenance, adjustment, and coordination with Oak Glen Golf Course & WCD, mileage	15	$2,620
Task 3. Pumping Volume Summary, O&M Manual Update	Review of 2023 & 2024 monitoring data, system performance evaluation, and reporting. Update project Operation & Maintenance Manual	16	$2,425
Task 4. Flow recording & reporting improvement options	Discussing recording and reporting goals with Oak Glen, researching flow meter and data logging options, site visit with pump and controls specialist to review retrofit options	26	$4,620
Total		**66**	**$11,395**

*Given the weather-dependent nature of the work, the costs are estimates only. Additional project needs will be brought to the attention of the District Administrator and outlined in a separate scope of work.

Requested Action

Consider approval of this scope of services for an estimated cost of $11,395 from account 948-0000.