

COMMISSION FILE NO: 19-023-2 **DATE INTRODUCED:** February 11, 2019

INTRODUCED BY: Executive Director (Signature on File in the Office of the Commission)

REFERRED BY COMMISSION CHAIRPERSON TO: Policy, Finance, and Personnel Committee

RELATING TO: Amend the 2019 Capital Budget and Create Project J01026, Jones Island Water Reclamation Facility Primary Clarifier Improvements

SUMMARY:

The Commission is requested to amend the 2019 Capital Budget and create Project J01026, Jones Island Water Reclamation Facility Primary Clarifier Improvements, with a total project cost of \$1,500,000 and to make a corresponding decrease to the total project cost for Project M99001, Allowance for Cost and Schedule Changes. A two-thirds affirmative vote of the Commission is required for adoption.

There are eight primary clarifiers at the Jones Island Water Reclamation Facility. The primary clarifiers are a critical asset within the water reclamation process. Each clarifier consists of a 160-foot diameter circular tank, which functions by settling primary sludge in the bottom of the tank. The tank includes a slowly rotating clarifier mechanism that pushes primary sludge to the center of the tank. The primary sludge is withdrawn from the bottom of the clarifier through sludge withdrawal piping. The partially treated wastewater then proceeds to the secondary (biological) treatment process, while the sludge is sent to biosolids processing. Seven primary clarifiers are needed to fully treat 330 million gallons per day, which is the plant's target capacity for wet weather.

The sludge withdrawal lines for Primary Clarifiers 4 and 6 failed and were replaced in 2018 under an emergency declaration. The sludge withdrawal lines for Primary Clarifiers 2 and 8 were installed nearly 20 years ago at the same time as Clarifiers 4 and 6. District staff considers the lines in Clarifiers 2 and 8 at elevated risk of failure and propose proactively replacing these lines and avoiding the potential for another emergency and plant capacity reduction.

ATTACHMENTS: **BACKGROUND** ☐ **KEY ISSUES** ☐ **RESOLUTION** ☒
FISCAL NOTE ☒ **S/W/MBE** ☐ **OTHER** ☐ _____

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SUMMARY (Cont'd)

Amend the 2019 Capital Budget and Create Project J01026, Jones Island Water Reclamation Facility Primary Clarifier Improvements

Each rotating clarifier mechanism is driven by a clarifier drive unit, which includes a motor that causes the mechanism to rotate through several gears, chains, and sprockets. Some clarifier drives have experienced premature failure. Staff has identified the need to make modifications and improvements to the clarifier drives on all clarifiers with the purpose of reducing the risk of premature drive failures.

District staff has determined that costs to replace the primary sludge withdrawal piping and clarifier drive mechanism improvements can be charged to the District's capital budget. To allow for proper cost allocation, staff requests the Commission to amend the 2019 Capital Budget and to authorize creating this project.

The total project cost of \$1,500,000 is based on \$1,200,000 for the sludge withdrawal lines and \$300,000 for the clarifier drive improvements. The sludge withdrawal line estimate is based on the construction cost of the recently completed emergency replacement project for Clarifiers 4 and 6. In addition, the \$300,000 cost for the clarifier drive improvements is an order of magnitude estimate, as the clarifier drive improvements are unknown. The budget will be adjusted as the project is further developed.

Once the project is authorized, District staff will prepare bid documents for the sludge withdrawal lines and clarifier drive improvements and will publicly advertise, bid, and award construction contracts.

RESOLUTION

Amend the 2019 Capital Budget and Create Project J01026, Jones Island Water Reclamation Facility Primary Clarifier Improvements

RESOLVED, by the Milwaukee Metropolitan Sewerage Commission, that the 2019 Capital Budget is amended; that Project J01026, Jones Island Water Reclamation Facility Primary Clarifier Improvements, is created with a total project cost of \$1,500,000; and that a corresponding decrease is made to the total project cost for Project M99001, Allowance for Cost and Schedule Changes.