



COMMISSION FILE NO: 25-009-1 **DATE INTRODUCED:** January 13, 2025

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

REFERRED BY COMMISSION CHAIRPERSON TO: Operations Committee

RELATING TO: Authorize the Executive Director to Execute a Purchase Order for Material Capital Repair or Replacement 1620, Jones Island Water Reclamation Facility Return Activated Sludge Pumps Repairs

SUMMARY:

The Commission is requested to authorize the Executive Director to execute a purchase order with Veolia Water Milwaukee, LLC, (VWM) for Material Capital Repair or Replacement 1620, Jones Island Water Reclamation Facility (JIWRF) Return Activated Sludge (RAS) Pumps Repairs, in an amount not to exceed \$604,391.

The main biological treatment process used at JIWRF takes place in large aeration basins that contain living microorganisms. The aeration basins are supplied with air as an oxygen source, allowing the microorganisms to metabolize and remove pollutants from wastewater. The population of microorganisms in the aeration tanks is commonly referred to as “activated sludge”. After the microorganisms have consumed the wastewater pollutants, the activated sludge must be separated from the treated water. The separation takes place by gravity in the facility’s secondary clarifiers. The microorganisms that settle to the bottom of the clarifiers are either pumped back to the beginning of the biological treatment process as RAS or removed from the process as waste activated sludge.

RAS is pumped from the secondary clarifiers to two RAS wet wells and then to the aeration basins, where it is combined with primary effluent to form mixed liquor. Four pumps are used to pump RAS to the East Plant aeration basins, and three pumps are used to pump RAS to the West Plant aeration basins. The RAS pumps are vertical dry pit centrifugal pumps, with each East Plant pump having a 200-horsepower (hp) motor and a pumping capacity of 25,000 gallons per minute (gpm), and each West Plant pump having a 125-hp motor and a pumping capacity of 13,500 gpm. Generally, all seven RAS pumps are required to maintain full plant capacity.

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

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COMMITTEE ACTION: _____ **DATE:** _____

COMMISSION ACTION: _____ **DATE:** _____

SUMMARY (Cont'd)

Authorize the Executive Director to Execute a Purchase Order for Material Capital Repair or Replacement 1620, Jones Island Water Reclamation Facility Return Activated Sludge Pumps Repairs

As the impeller on a RAS pump wears, clearance between the impeller and volute increases and pump performance decreases. The seven RAS pumps are eight years old, and clearance measurements indicate the impeller and volute wear rings require replacement on all seven RAS pumps in accordance with original equipment manufacturer's (OEM's) recommendations. Also, the pump internal wear parts are beyond their expected useful service life of five years; therefore, VWM and District staff recommend these parts also be replaced while the pumps are disassembled.

VWM competitively bid the work and received three bids. Wallner Industrial (Wallner) submitted the low bid, which was determined to be responsive and responsible. The purchase order will be issued to VWM, which will be responsible for managing and overseeing the contract with Wallner.

Under this contract, Wallner will perform the following onsite work for each pump with assistance from OEM technicians:

- Remove the rotating assembly from the pump.
- Disassemble the rotating assembly.
- Replace the impeller wear ring, volute wear ring, seals and gaskets.
- Reassemble the rotating assembly.
- Reinstall the rotating assembly on the pump.

The contract duration is 200 days.

RESOLUTION

Authorize the Executive Director to Execute a Purchase Order for Material Capital Repair or Replacement 1620, Jones Island Water Reclamation Facility Return Activated Sludge Pumps Repairs

RESOLVED, by the Milwaukee Metropolitan Sewerage Commission, that the Executive Director is authorized to execute a purchase order with Veolia Water Milwaukee, LLC, for Material Capital Repair or Replacement 1620, Jones Island Water Reclamation Facility Return Activated Sludge Pumps Repairs, in an amount not to exceed \$604,391.