Item 7

COMMISSION FILE NO: 24-100-7 **DATE INTRODUCED:** July 8, 2024

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

REFERRED BY COMMISSION CHAIRPERSON TO: Operations Committee

RELATING TO: Contract S04041P01, Planning Services – High Strength Waste System Improvements

SUMMARY:

The Commission is requested to authorize the Executive Director to execute on behalf of the District Contract S04041P01, Planning Services – High Strength Waste System Improvements, with Greeley and Hansen, LLC, (G&H) in an amount not to exceed $386,782. G&H was the highest scoring proposer among three proposals received based on a qualifications-based selection method.

In March 2024, the Commission adopted an Energy Plan (Plan), which provides a framework and pathway to meet District energy and greenhouse gas emission goals as laid out in the 2035 Vision. These goals are as follows:

- Meet a net 100% of MMSD's energy needs with renewable energy sources.
- Meet 80% of MMSD's energy needs with internal, renewable sources.
- Reduce MMSD's carbon footprint by 90% from its 2005 baseline.

The Plan's framework recommends multiple elements at both the Jones Island and South Shore Water Reclamation Facilities (JIWRF and SSWRF respectively). One of the recommended elements specific to SSWRF is for the District to significantly increase the volume of digester gas (DG) generated in anaerobic digesters by receiving additional quantities of high strength wastes (HSW's).

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

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HSW's are externally generated wastes that contain high concentrations of organic matter, which can be used to increase DG production. HSW are typically trucked to a water reclamation facility (WRF), discharged into a HSW receiving station, temporarily stored, then discharged into a digester. HSW is combined with the WRF's biosolids in digesters, and the resultant mixture then produces DG. The added HSW produces an increased quantity of DG, which can then be used to produce additional electricity and heat. HSW that can significantly increase gas production include certain types of food, beverage, and industrial wastes and used airport deicing fluids. It is also possible to obtain revenue in the form of tipping fees from the HSW dischargers.

For the District to receive the increased benefits, these HSW's should be new sources; they should not already be treated at the District's WRF's or would not normally be discharged into the District's collection system. While HSW can increase DG production, the increased waste must be processed; this results in additional energy and chemical costs. Further, as some types of HSW can create operational issues, each HSW must be evaluated to ensure it does not result in negative impacts.

At SSWRF, the District currently receives some HSW's and co-digests them with biosolids to increase DG production. The current HSW receiving station has a finite capacity, as do the existing digesters, gas storage spheres, and engine generator capacity. Increasing HSW streams will at some point encounter limitations with these existing systems.

Expanding the HSW program and related SSWRF infrastructure to accept larger quantities of HSW and resultant DG production and use is consistent with the adopted Plan and advances the District toward achieving the 2035 Vision goals. Such an expansion will increase the District's source of internal, renewable energy at SSWRF and help lower its overall carbon footprint by reducing the need to purchase electricity from the grid.

This proposed contract is the first step toward implementing this recommendation of the Plan. The project will help identify sources and quantities of HSW that might be available to be delivered to SSWRF and recommend SSWRF improvements necessary to support an increased supply of HSW. Under this contract, G&H will perform the following services:

- Project management.
- Determine the capacity of the existing HSW system to receive additional HSW.
- Develop and conduct a HSW survey to identify possible suppliers.
- Perform market research to understand suppliers' alternatives for disposing HSW.
- Forecast HSW quantities based on the survey results and market research.
- Interview other utilities with successful HSW programs.
- Identify, evaluate, and recommend SSWRF improvements necessary to accommodate potential increases in HSW.
- Prepare a final report.

The contract duration is approximately 15 months.

RESOLUTION

Contract S04041P01, Planning Services – High Strength Waste System Improvements

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RESOLVED, by the Milwaukee Metropolitan Sewerage Commission, that the Executive Director is authorized to execute Contract S04041P01, Planning Services – High Strength Waste System Improvements, with Greeley and Hansen, LLC, in an amount not to exceed $386,782.