

COMMISSION FILE NO: 26-024-2 **DATE INTRODUCED:** February 9, 2026

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

REFERRED BY COMMISSION CHAIRPERSON TO: Operations Committee

RELATING TO: Restore the Executive Director's Original Delegated Authority, Contract S03005D01, Engineering Services – Disinfection Process Improvements at South Shore Water Reclamation Facility

SUMMARY:

The Commission is requested to restore the Executive Director's original delegated change order authority on Contract S03005D01, Engineering Services – Disinfection Process Improvements at South Shore Water Reclamation Facility (SSWRF), with Carollo Engineers, Inc. (Carollo).

Disinfection is the final treatment process at SSWRF. Disinfection is important, because wastewater contains pathogenic organisms, and many of these organisms are not removed in the primary or secondary treatment processes. SSWRF currently achieves effluent pathogen reduction by dosing with sodium hypochlorite; however, residual chlorine in the effluent can have a toxic effect on fish and other aquatic organisms. Residual chlorine is removed by dechlorination with sodium bisulfite.

The Wisconsin Department of Natural Resources (WDNR) issues a Wisconsin Pollutant Discharge Elimination System (WPDES) permit to the District, which allows the District to discharge treated wastewater to Lake Michigan from SSWRF. WPDES permits typically have a five-year term, and the District's next permit is anticipated to be issued in 2026. WDNR is incorporating new disinfection-related effluent standards in WPDES permits for wastewater treatment facilities throughout the State. WDNR's stated objective of the new standards is "to better protect recreational users from human health impacts related to the exposure to bacteria."

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

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SUMMARY (Cont'd)

Restore the Executive Director's Original Delegated Authority, Contract S03005D01, Engineering Services – Disinfection Process Improvements at South Shore Water Reclamation Facility

The District's existing WPDES permit uses fecal coliform as a pathogen indicator. The District's draft WPDES permit will also use *E. coli* as a pathogen indicator, and the new limits are more stringent compared to existing limits. The permit will also allow time for the District to implement any necessary improvements; staff anticipates that the District will have until April 30, 2031, to achieve compliance with the new standards.

In February 2024, the Commission authorized the Executive Director to enter into Contract S03005D01 in an amount not to exceed \$1,586,962. The contract scope includes:

- Reviewing existing reference information and site conditions.
- Conducting meetings with representatives from the District and Veolia Water Milwaukee, LLC.
- Performing preliminary design:
 - Sampling and testing to provide additional data.
 - Evaluating the final two disinfection system alternatives:
 - Chlorination/dechlorination system.
 - Hybrid disinfection system using ultraviolet (UV) light disinfection and a chlorination/dechlorination system.
 - Modeling.
 - Providing instrumentation and controls.
- Conducting a geotechnical investigation, including soil borings.
- Completing lead and asbestos inspection and testing.
- Developing a construction strategy analysis to minimize the disruption of facility operations during construction.
- Providing evaluations and recommendations summarized in technical memoranda and a design report.
- Preparing bid and construction documents.
- Providing engineering services during construction and record drawings.
- Preparing startup plans, updates to facility operation and maintenance (O&M) manuals, and conducting O&M staff training.
- Performing applications engineering.

The preliminary design evaluation of alternatives recommends the hybrid disinfection system. This solution will achieve effluent pathogen reduction using UV light disinfection for flows up to 135 million gallons per day (MGD) and using chlorination/dechlorination for flows over 135 MGD.

SUMMARY (Cont'd)

Restore the Executive Director's Original Delegated Authority, Contract S03005D01, Engineering Services – Disinfection Process Improvements at South Shore Water Reclamation Facility

As this contract progressed, change orders were previously executed under the Executive Director's authority to provide engineering services for the following activities at SSWRF:

- Disinfection system troubleshooting.
- Pilot test with the existing chlorination/dechlorination system during September 2024.
- Design of a second full scale UV disinfection pilot test, including plans and specifications, bid and award services, engineering services during construction, and sampling plan.
- Four additional soil borings for the new UV disinfection system.
- Extended services to operate and maintain UV transmittance analyzer equipment used to collect design data for the new UV disinfection system.
- Design services to replace load center until substation number 3 (LCUS-3) through the 50% bid and construction documents.
- Exploratory excavation and geotechnical investigation for new LCUS-3.
- Engineering services for new fire alarm systems for new UV Disinfection Building 341 and existing Disinfection Storage Building 357.
- Engineering services for a new sodium hypochlorite feed system for the SSWRF service water system.

Following is a summary of a previous change order authorized under Commission action:

- Supervision of the second UV pilot unit installation and startup, operating and maintaining the UV pilot unit, and collecting samples.
- Performing UV collimated beam tests and particle size distribution analysis.
- Conducting weekly progress meetings for the second UV pilot.
- Preparing technical memorandum summarizing the second UV pilot and review workshop.
- Remaining engineering services to replace LCUS-3, including final bid and construction documents, bid and award services, engineering services during construction, O&M manual updates, and applications engineering.

For engineering service contracts greater than or equal to \$500,000, the Commission has delegated to the Executive Director the authority to make changes up to \$200,000 or 10% of the original contract price, whichever is less. For this contract, a limit of \$158,696 prevails. To date, the Executive Director has utilized \$157,039 of this authority, leaving a balance of \$1,657. The request to restore the Executive Director's authority is in case any additional changes beyond the remaining Executive Director's authority are necessary. Without this restored authority, work may need to stop work while staff obtains necessary change order authority from the Commission.

RESOLUTION

Restore the Executive Director's Original Delegated Authority, Contract S03005D01,
Engineering Services – Disinfection Process Improvements at South Shore Water
Reclamation Facility

RESOLVED, by the Milwaukee Metropolitan Sewerage Commission, that the Executive Director's original delegated change order authority is restored on Contract S03005D01, Engineering Services – Disinfection Process Improvements at South Shore Water Reclamation Facility, with Carollo Engineers, Inc.