

**COMMISSION FILE NO:** 26-023-2 **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:** Change Order Request, Contract J02016D01, Engineering Services – Process Air Compressor System Upgrade at Jones Island Water Reclamation Facility, and Restore the Executive Director's Original Delegated Authority

**SUMMARY:**

The Commission is requested to authorize the Executive Director to execute a change order to Contract J02016D01, Engineering Services – Process Air Compressor System Upgrade at Jones Island Water Reclamation Facility (JIWRF), with Donohue & Associates, Inc., (Donohue) in an amount not to exceed \$6,378 and to restore the Executive Director's original delegated authority.

The main biological treatment process at JIWRF takes place in large aeration basins that contain a mix of living microorganisms and wastewater. Within the aeration basins, diffused air is used to keep the microorganisms in suspension and supply them with air as an oxygen source. Oxygen allows microorganisms to consume organic materials in wastewater. The mixture within the aeration basin is commonly referred to as mixed liquor. The aeration basins are fed mixed liquor from channels through a flow control box, and the treated aerated effluent from the aeration basins is discharged to aerated effluent channels. Both types of channels use diffused air to keep the microorganisms in suspension.

At JIWRF, four process air compressor (PAC) units located in Building 225 supply the air for the aeration basins and for channel mixing. PAC number 1 is a 4,500-horsepower unit that went into service in 2015. PAC numbers 2, 3, and 4 are 5,500-horsepower units that went into service in 1972.

The PAC system is critical to achieve proper biological treatment. Failures within the PAC system could reduce treatment capacity, effluent quality, and the ability to meet the District's Wisconsin Pollutant Discharge Elimination System effluent permit limits.

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

*OP\_CO\_J02016D01\_Engineering\_Services\_PAC\_Upgrade\_Restore\_Authority\_legislative\_file.docx*  
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**COMMITTEE ACTION:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**COMMISSION ACTION:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

## **SUMMARY (Cont'd)**

Change Order Request, Contract J02016D01, Engineering Services – Process Air Compressor System Upgrade at Jones Island Water Reclamation Facility, and Restore the Executive Director's Original Delegated Authority

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Three of the existing PAC units are over 50 years old and routinely require corrective maintenance. It is generally more difficult to find replacement parts for these older PAC units. In addition, some of the ancillary support systems were installed in 1972 and are reaching the end of their useful service lives including components of the PAC cooling system, blowoff air system, electric power supply, and control system. District staff are concerned with the condition of these systems.

When four PAC units were originally installed in the 1970's, waste loading and resultant air demand were higher than current and projected air demands. Even while accounting for necessary PAC redundancy, it is possible to reduce the number of units by one, resulting in reduced operation and maintenance (O&M) costs while maintaining a reliable PAC system. The PAC system also consumes significant energy, currently about 30% of JIWRP's electricity use. Newer PAC technology provides an opportunity for significant energy savings, which will help the District to achieve its energy and greenhouse gas reduction goals.

The purpose of this project is to increase overall reliability and efficiency of the JIWRP PAC system, while reducing energy costs, O&M costs, and the District's carbon footprint.

In July 2023, the Commission authorized the Executive Director to enter into Contract J02016D01 with Donohue in an amount not to exceed \$658,039 to:

- Develop and evaluate alternatives to upgrade the PAC system.
- Identify the most cost effective and energy efficient combination of PAC unit replacement, rehabilitation, and removal to meet current and future air demands and increase system reliability.
- Assess the existing condition of ancillary systems and recommend any improvements.
- Perform lead and asbestos inspection and testing.
- Identify construction sequencing to minimize disruption of facility operations.
- Complete final design, including preparation of bid and construction documents.
- Provide engineering services during construction.
- Prepare startup plans, updates to facility O&M manuals, O&M staff training, and post-startup assistance.
- Perform applications engineering.

## **SUMMARY (Cont'd)**

Change Order Request, Contract J02016D01, Engineering Services – Process Air Compressor System Upgrade at Jones Island Water Reclamation Facility, and Restore the Executive Director's Original Delegated Authority

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The preliminary design under Contract J02016D01 considered several alternatives to replace the PAC units. District staff selected an alternative with new PAC technology that maximizes energy savings and reduces energy use by an estimated 26% when compared to the existing system. The selected alternative requires a new 1,800-square-foot building adjacent to Building 225 to house electrical equipment associated with the new PAC technology. The District's Risk Management group recommends a fire alarm system in electrical buildings to reduce potential loss from a fire. Additionally, the fire alarm system in the existing PAC building is out of date and needs to be replaced.

The scope of the requested change order includes construction phase engineering services associated with previously authorized design services for the new PAC electrical building fire alarm system and replacement of the existing PAC building fire alarm system. This change order supports implementation of the fire alarm systems and consists of the following services:

- Engineering services during construction.
- Updates to facility operations and maintenance manuals.

The cumulative value of previously authorized design change orders approached the Executive Director's delegated change order authority limit. As a result, staff deferred change order authorization of these construction phase engineering services for the fire alarm systems and now request Commission authorization.

## **SUMMARY (Cont'd)**

Change Order Request, Contract J02016D01, Engineering Services – Process Air Compressor System Upgrade at Jones Island Water Reclamation Facility, and Restore the Executive Director's Original Delegated Authority

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As this contract progressed, the District executed multiple change orders under the Executive Director's authority to advance and complete the engineering design work necessary for the project, including:

- Final process air demand calculations and preparation of a technical memorandum by District staff.
- Preliminary design evaluations for PAC intake air and PAC building heating, ventilation, and air conditioning (HVAC) system.
- Evaluation of preliminary design alternatives.
- Engineering design services for the new PAC electrical building, replacement of the existing PAC building HVAC system, and modifications to existing PAC air intake hoods and inlet ducts.
- Additional geotechnical services to design the foundation for the new PAC electrical building following the discovery of buried timber piling from a previous project.
- Exploratory services to locate an abandoned 54-inch diameter return activated sludge pipeline beneath the new PAC electrical building.
- Engineering design services for the new PAC electrical building fire alarm system and replacement of the fire alarm system in the existing PAC building.

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

- Project management.
- Performing geotechnical borings and evaluations for the building addition.
- Performing final engineering design.
- Developing final plans, specifications, and bid documents.
- Providing bid and construction contract award services.
- Performing engineering services during construction.

### SUMMARY (Cont'd)

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	AMOUNT	PERCENTAGE INCREASE OVER ORIGINAL CONTRACT	AUTHORIZED BY	SWMBE
Original Contract	\$658,039		Commission	24.5%
Previous Change Orders	\$462,574	70.3%	Executive Director	31.7%
Requested Change Order	\$6,378	1.0%	Request of Commission	0%
Total Change Orders	\$468,952	71.3%		31.3%
<b>TOTAL</b>	<b>\$1,126,991</b>			<b>27.3%</b>

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 \$65,804 prevails. The Executive Director has utilized \$64,854 of this authority, leaving a balance of \$950. The request to restore the Executive Director's authority is in case any additional engineering services changes are required beyond the remaining Executive Director's authority. Without this restored authority, work may need to stop while staff obtains necessary change order authority from the Commission.

The existing total project cost (TPC) for Project J02016 does not include the additional cost for the fire alarm system scope. The total cost estimate for the new and replaced fire alarm systems is \$180,000. Staff will adjust the TPC to account for the additional cost as part of the 2027 Capital Budget process. Because the construction contract will not be awarded until a later date, the District will not incur these additional costs until a future budget year.

## RESOLUTION

Change Order Request, Contract J02016D01, Engineering Services – Process Air Compressor System Upgrade at Jones Island Water Reclamation Facility, and Restore the Executive Director's Original Delegated Authority

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**RESOLVED**, by the Milwaukee Metropolitan Sewerage Commission, that the Executive Director is authorized to execute a change order to Contract J02016D01, Engineering Services – Process Air Compressor System Upgrade at Jones Island Water Reclamation Facility, with Donohue & Associates, Inc., in an amount not to exceed \$6,378, and that the Executive Director's original delegated authority is restored.