



Mayor Robert E. Simison

City Council Members

Joe Borton

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Luke Cavener

Brad Hoaglund

Jessica Perreault

Liz Strader

TO: Keith Watts, Purchasing Manager

FROM: Clint Dolsby, P.E.
Assistant City Engineer

DATE: May 10, 2022

**SUBJECT: WRRF SIDE STREAM PHOSPHORUS TREATMENT – CONSTRUCTION
CONTRACT WITH JC CONSTRUCTORS, INC FOR A NOT TO EXCEED AMOUNT
OF \$3,131,546.00**

I. RECOMMENDED ACTION

A. Move to:

1. Approve the WRRF Side Stream Phosphorus Treatment – Construction Contract with JC Constructors, Inc for a not-to-exceed cost of \$3,131,546.00.
2. Authorize the Mayor to sign the contract.

II. DEPARTMENT CONTACT PERSONS

Clint Dolsby PE, Assistant City Engineer	208-489-0341
Warren Stewart PE, City Engineer	208-489-0350
Laurelei McVey, Director of Public Works	208-985-1259

III. DESCRIPTION

A. Background

This project is the next step in initiating sidestream nutrient recovery at the Wastewater Resource Recovery Facility (WRRF). This is a follow up to the phosphorus recovery pilot project that was completed in the fall of 2009 and was included in the WRRF facility plan in 2012. To control the formation of struvite in the solids stream at the WRRF, Public Works is considering several steps. This project will provide a struvite production facility as an additional step for struvite control and has the added benefit of phosphorus and nitrogen removal from the centrate flow stream.

Fluid from dewatering operations contributes a substantial nutrient load to the treatment process. This load increases the secondary treatment costs and reduces the plant effluent quality. The City has experienced nuisance struvite issues in solid and sidestream processes that have caused significant pipe clogging and pump issues, and continue to limit the potential for liquid stream phosphorus removal until effective sidestream treatment is implemented. Sidestream phosphorus recovery will help meet future effluent phosphorus limits by eliminating the majority of the recycle loadings.

B. Proposed Project

This construction contract consists of constructing a new Side Stream Treatment Building at the City of Meridian's Wastewater Resource Recovery Facility and installing, testing and starting up the pre-purchased Phosphorus Precipitation System that is being furnished by Centrisys/CNP.

IV. **IMPACT**

A. Strategic Impact:

This project meets our mission requirements to identify and prioritize work to anticipate, plan and provide public services and facilities that support the needs of our growing community, ensure modern, reliable facilities while maintaining financial stewardship and maintaining the ability to meet the changing permit limit requirements.

B. Service/Delivery Impact:

Increased nutrient recovery at the WRRF will support departmental objectives to develop and employ strategies that comply with current and pending National Pollutant Discharge Elimination System Permit (NPDES).

C. Fiscal Impact:

Project Costs:

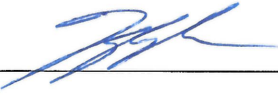
WRRF Sidestream Phosphorus Recovery Preliminary Design	\$123,048.00
WRRF Sidestream Phosphorus Recovery Final Design	\$545,205.25
WRRF Sidestream Phosphorus Recovery SDC	\$455,240.00
Geotechnical Investigation	\$11,217.12
Survey	\$10,602.50
CNP Magprex Equipment	\$2,139,000.00
FY22 Construction Funding	\$2,000,000.00
FY23 Construction Funding	<u>\$1,131,546.00</u>
Total Cost	\$6,415,858.87

Project Funding

FY 2020 Sidestream Phosphorus Recovery (3590-96182)	\$550,000.00
FY2021 Sidestream Phosphorus Recovery (3590-96182)	\$5,450,000.00
Proposed FY23 Sidestream Phosphorus Recovery (3590-96182)	<u>\$1,250,000.00</u>
Total Funding	\$7,250,000.00

VI. **TIME CONSTRAINTS**

Council's approval will allow this project to increase the nutrient recovery from the dewatering recycle increasing the protection to dewatering equipment, lowering the secondary treatment costs, and increasing plant effluent quality

Department Approval:  5/14/22
Date