MERIDIAN IDAHO

**Public Works Department**



**TO:** Mayor Robert Simison
Members of the City Council

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

**DATE:** July 22, 2021

**SUBJECT:** **APPROVAL OF THE PURCHASE AGREEMENT FOR THE SUPPLY OF SIDESTREAM PHOSPHORUS RECOVERY EQUIPMENT FOR THE WASTEWATER RESOURCE RECOVERY FACILITY – SIDESTREAM PHOSPHORUS RECOVERY PROJECT WITH CENTRISYS/CNP FOR A NOT TO EXCEED AMOUNT OF $2,139,000.00**

## I. RECOMMENDED ACTION

A. Move to:

1. Approve the Purchase Agreement for the Supply of Sidestream Phosphorus Recovery Equipment with Centrisys/CNP for the Wastewater Resource Recovery Facility – Sidestream Phosphorus Recovery, for a not-to-exceed cost of $2,139,000.00.

2. Authorize the Procurement Manager to sign the purchase agreement.

## II. DEPARTMENT CONTACT PERSONS

| | |
|---|---|
| Clint Dolsby PE, Assistant City Engineer | 489-0341 |
| Warren Stewart PE, City Engineer | 489-0350 |
| Dale Bolthouse, Director of Public Works | 985-1257 |

## 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

Centrisys/CNP will provide the sidestream phosphorus recovery equipment for this project. This agreement will allow Centrisys/CNP the ability to prepare submittals and manufacture and deliver the equipment to the wastewater resource recovery facility.

## 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 | $545,210.00 |
| WRRF Sidestream Phosphorus Recovery Geotech Investigation | $11,819.62 |
| WRRF Sidestream Phosphorus Recovery Survey | $10,000.00 |
| **WRRF Sidestream Phosphorus Recovery Equipment** | **$2,139,000.00** |
| Total Cost | $2,829,077.62 |

| Project Funding | |
|---|---|
| FY 2020 Sidestream Phosphorus Recovery (3590-96182) | $550,000.00 |
| FY 2021 Sidestream Phosphorus Recovery (3590-96182) | $5,450,000.00 |
| Total Funding | $6,000,000.00 |

## VI. TIME CONSTRAINTS

Council's approval will allow this project to proceed and the outcome will lower the plant effluent phosphorus concentration, help protect the dewatering equipment from struvite formation and lower the secondary treatment costs.

## VII. LIST OF ATTACHMENTS

A. Agreement for the supply of Sidestream Phosphorus Recovery Equipment Project 10036.e

Department Approval: _____ 7/22/21
Date