



Department Source: City Utilities - Water and Light

To: City Council

From: City Manager & Staff

Council Meeting Date: December 16, 2019

Re: Engineering Services for the Water Treatment Plant Rehabilitation

Executive Summary

A Request for Proposal (RFP) to perform professional engineering services for the design and construction of the McBaine Water Treatment Plant Upgrades – Phase I is currently being drafted by Water and Light staff. Council has requested a report regarding the scope of services to be performed under this RFP.

Discussion

This Water Treatment Upgrade Project is the first phase of plant improvements identified in the 2018 Water Bond issue. The McBaine Water Treatment Plant is a 32 MGD lime softening plant that treats water from 18 alluvial wells located in the Missouri River bottoms. The plant aerates, softens, chlorinates, fluoridates and filters the raw water before pumping the water to Columbia's water distribution system. A condition assessment conducted in 2016 identified several deficiencies with the existing plant and recommended derating the firm production of the Water Treatment Plant to 24 MGD. Phase I of the Water Treatment Upgrade Project is to address the deficiencies identified in the condition assessment and return the firm capacity of the plant to 32 MGD.

Proposed improvements identified in Phase I of the Water Treatment Plant Upgrade scope of services includes:

1. Replacement of primary settling basin equipment
2. Chemical feed improvements
3. Addition of recarbonation
4. Conversion of filters to constant rate gravity flow system
5. Complete electrical rehabilitation
6. SCADA upgrades
7. Instrumentation upgrades
8. HVAC upgrades

In addition, this project will further evaluate alternative water treatment technologies identified in the Water Treatment Plant Preliminary Design Report and the 2018 Update prepared by the Drinking Water Planning Workgroup. This work will include the evaluation of source water and pilot testing of identified treatment alternatives to prepare cost estimates and recommendations for future phases of the Water Treatment Plant improvements.

An RFP for engineering services to design and construct Phase I of the McBaine Water Treatment Plant is currently being prepared by Water and Light staff. Council has requested



City of Columbia

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an opportunity to review the proposed scope of services for this project, before soliciting responses for this RFP. A draft of the proposed scope of services has been attached (Exhibit A) for Council review and discussion prior to advertisement through the Purchasing Division.

Fiscal Impact

Short-Term Impact: None

Long-Term Impact: None

Strategic & Comprehensive Plan Impact

Strategic Plan Impacts:

Primary Impact: Infrastructure, Secondary Impact: Not Applicable, Tertiary Impact: Not Applicable

Comprehensive Plan Impacts:

Primary Impact: Infrastructure, Secondary Impact: Not applicable, Tertiary Impact: Not Applicable

Legislative History

Date	Action
None	None

Suggested Council Action

Staff recommends Council accept the report and direct staff to proceed with the advertisement the RFP for the Water Treatment Plant rehabilitation Project through the Purchasing Division.