



City of Columbia

701 East Broadway, Columbia, Missouri 65201

Department Source: City Utilities - Water and Light

To: City Council

From: City Manager & Staff

Council Meeting Date: August 15, 2022

Re: Public Hearing: Proposed Construction of Upgrades to the McBaine Water Treatment Plant Upgrade – Phase 1 project.

Executive Summary

This is a public hearing for the construction of the McBaine Water Treatment Plant Upgrade-Phase 1 Project. An interested parties meeting for this project was held on February 22, 2022. Major components of the proposed construction are anticipated to include replacement of aeration and softening basin equipment, electrical upgrades, filter and high service pump modifications and chemical feed improvements. Project budget is \$21,529,000 with funding of \$1,529,000 currently appropriated in Capital Project W0236. It is anticipated an additional \$20,000,000 will be appropriated for this project following a future sale of bonds and additional funding may be necessary depending on final scope and alternatives authorized by Council.

Discussion

Columbia Water & Light is requesting a public hearing for the Phase I of the McBaine Water Treatment Plant (WTP) Improvement Project. These improvements will restore the plant's capacity to treat 32 million gallons of water per day and include rehabilitation and replacement projects that will enhance the performance and extend the life of this critical facility. Improvements will meet near-term water-quality goals and capacity needs in addition to establishing long-range water-quality goals informed by treatment costs and benefits and are anticipated to include the following:

- Restoration of original plant capacity by rehabilitating several treatment processes.
- Replacement of plant equipment that has reached the end of its useful life, such as aerators, softening basin mechanisms and process instrumentation.
- Modification of filters to improve filtration performance to meet Groundwater Under the Influence turbidity goals.
- Addition of recarbonation to the softening process to provide greater control and enhance finished water quality.
- Automation and controls of the WTP and distribution operations.
- Rehabilitation of the building to maintain previous investments and provide more efficient operations.

In 2016, Black and Veatch provided the City a Condition Assessment for the McBaine Water Treatment Plant. The assessment identified the need for phased improvements at treatment plant as many components of the plant were nearing or beyond the end of their useful life. HDR, Inc. was selected for the design of these improvements through an RFP process with an engineering agreement approved by Council on August 3, 2020. Design of the improvements is 90% complete at this time. Major components of the proposed construction are anticipated to include replacement of aeration and softening basin equipment,



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electrical upgrades, filter and high service pump modifications and chemical feed improvements. The scope of services from HDR, Inc.'s contract is attached and provides further detail of the planned upgrades included in the McBaine Water Treatment Plant Upgrade-Phase I Project.

An interested parties meeting for this project was held on February 22, 2022 and the project was posted on the BeHeardCoMo website. Attached are details in the form of "Questions and Answers" as well as links to videos of the proposed project.

Funding of \$1,529,000 is currently appropriated in Capital Project W0236. It is anticipated an additional \$20,000,000 will be appropriated for this project following a future sale of bonds to provide a total \$21,529,000 for construction.

Should Council direct staff to proceed with the project following the public hearing, staff will direct HDR, Inc. to finalize the plans and specifications and prepare a construction permit application to Missouri Department of Natural Resources (MDNR). Finalizing the plans and specifications will take approximately 2 months and the permitting process is expected to take 3 to 6 months to complete. Following issuance of the construction permit from MDNR and the anticipated appropriation of additional bond funding from a future bond sale, staff will prepare an ordinance authorizing the construction of the project. Should Council authorize the construction of the improvements, staff will then bid the project. Construction of the project is estimated to take 24 months given the complex phasing of the project.

Fiscal Impact

Short-Term Impact: \$ 21,529,000 is anticipated to be available for this project. Funding of \$1,529,000 is currently appropriated in Capital Project W0236. It is anticipated an additional \$20,000,000 will be appropriated for this project following a future sale of bonds to provide a total \$21,529,000 for construction.

Long-Term Impact: This project is not anticipated to have an impact to the annual budget for operations and maintenance.

Strategic & Comprehensive Plan Impact

[Strategic Plan Impacts:](#)

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

[Comprehensive Plan Impacts:](#)

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



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Legislative History

Date	Action
08/01/2022	(R108-22) Setting a public hearing: proposed construction of the McBaine Water Treatment Plant Upgrade - Phase 1 project.
08/03/2020	(B184-20) Authorizing a professional engineering services agreement with HDR, Inc.
07/01/2019	(B172-19) Amending the FY 2019 Annual Budget by appropriating funds from the sale of Water and Electric System Revenue Bonds to various F& 2019 water capital improvement projects.
05/06/2019	(Ord23850) Authorizing the issuance of Water and Electric System Revenue Bonds, Series 2019A.
04/15/2019	(R61-19) Authorizing the notice of sale of Water and Electric System Revenue Bonds, Series 2019A.
09/04/2018	(R133-18) Declaring results of the special election held on August 7, 2018.
05/21/2018	(Ord23535) Calling a special election on Tuesday, August 7, 2018 for the issuance of Water and Electric System Revenue Bonds.

Suggested Council Action

Authorize staff to proceed with the project.