





MEMORANDUM

TO: Mayor and Council Members

THROUGH: Robert Goode, P.E., Assistant City Manager 

FROM: Shay Ralls Roalson, P.E., Director, Austin Water 

DATE: May 23, 2024

SUBJECT: **Walnut Creek Wastewater Treatment Plant Capital Improvement Projects**

We want to provide an overview and update on proposed Capital Improvement Projects (CIP) for the Walnut Creek Wastewater Treatment Plant (WWTP). Austin Water has six Requests for Council Actions (RCAs) scheduled for consideration on the May 30, 2024, City Council agenda. These projects represent a generational investment of more than \$1 billion in Austin's wastewater infrastructure.

Austin Water provided a briefing on these projects at the [May 09, 2024 Austin Water Oversight Committee](#) (Item 3).

BACKGROUND

Walnut Creek WWTP was originally constructed in 1977 and has been expanded over time. It is permitted to treat and discharge an average daily flow of 75 million gallons per day (MGD) and a 2-hour peak flow of 165 MGD. A portion of the plant effluent is used for non-potable water at the plant site and to supply much of the City's growing reclaimed water system. The remainder of the plant's high-quality effluent is discharged into the Colorado River downstream of Austin.

The proposed capital improvement projects are planned to be delivered through the Construction Manager at Risk (CMAR) collaborative delivery model. Under this model, the City holds a contract with an engineering firm for design, bid, and construction phase services and a CMAR contract with the construction company for pre-construction and construction services. The City Council previously approved the use of CMAR contracting for these projects.

STRATEGIC REHABILITATION AND RENEWAL PROJECTS

Since the last expansion was completed in 2005, Austin Water has made significant investment in rehabilitation and renewal projects throughout the plant to provide continued reliable and enhanced wastewater treatment. The proposed CIP projects include additional projects needed for long-term performance and support of the planned capacity expansion. These projects include the following:

- The **Walnut Creek WWTP Influent Lift Station** project will replace and upsize an existing on-site plant drain and wastewater lift station. The lift station receives a portion of the plant's influent wastewater flow from the Johnny Morris Interceptor.
 - RCA [Item 78](#) – An amendment to CDM Smith consulting engineering contract

- The **Walnut Creek WWTP Headworks #1 Improvements** project will rehabilitate and make improvements to the existing Headworks #1 including screening and grit removal, as well as mechanical, electrical, HVAC, odor control, and structural improvements. This is a renewal project that will restore long-term reliability for the first step of the treatment process to the existing 75 MGD plant.
 - RCA [Item 63](#) – An amendment to Carollo consulting engineering contract
- The **Walnut Creek Primary Clarifier and Flow Equalization Basin Rehabilitation** project will rehabilitate the existing Primary Treatment Complex #1 and #2, including clarifier mechanism replacements, as well as electrical, HVAC, odor control, and structural improvements. This is a renewal project that will restore long-term reliability for the primary treatment process to the existing 75 MGD plant.
 - RCA [Item 60](#) – An amendment to MGC Contractors CMAR contract
 - RCA [Item 64](#) – An amendment to Black & Veatch consulting engineering contract

EXPANSION AND ENHANCEMENTS

Austin has experienced significant population growth since 2005. With this growth, the wastewater flows to Walnut Creek WWTP have increased and now require the plant to be expanded, in accordance with Texas Commission on Environmental Quality (TCEQ) regulations.

- The **Walnut Creek WWTP Expansion to 100 MGD and Enhancement** project will expand the capacity from 75 MGD (165 MGD peak) to 100 MGD (300 MGD peak) and will implement enhanced treatment processes for both the existing and proposed facilities with biological nutrient removal (BNR) to meet more stringent effluent quality limits issued by TCEQ once daily flow exceeds 75 MGD.

Major project components include new influent siphons, a new 25 MGD treatment train including BNR and ultraviolet (UV) disinfection, upgrade of the existing 75 MGD plant including conversion to BNR and UV, a new wet weather treatment unit, an additional effluent pipe, and a flood wall around the site. The CMAR contract will also include the construction of the Influent Lift Station and Headworks #1 projects.

- RCA [Item 61](#) – Selection of MWH Contractors to be the CMAR
- RCA [Item 65](#) – An amendment to AECOM consulting engineering contract for the 100 MGD Expansion project

If you have any questions, please contact Shay Ralls Roalson at 512-972-0108.

cc: T.C. Broadnax, City Manager
CMO Executive Team