

Client
City of Pompano Beach

Scope of Services
Design, preparation of construction drawings technical specifications, permitting, bidding services and construction administration

Contact
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Utilities Treatment Plants Superintendent
City of Pompano Beach
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Start Date
02/2018

Completion Date
09/14/2022

Construction Fee
\$ 2.024 million

Key MBC Staff
Frank A. Brinson, P.E.
Andrew Barba, P.E.
Robert Landrum, E.I.
Mathew Marsh, P.M.P.

Key Features
Design services for removal and replacement of valves, actuators, modifications to bypass piping, and additive alternates to modify filter feed and lower pressure distribution pump systems.

Reuse Water Treatment Plant Modifications Design and Construction Pompano Beach, Florida



Background

The City of Pompano Beach owns and operates a 7.5 million gallon per day (mgd) capacity reuse water treatment plant (RWTP) which treats effluent from the Broward County Water and Wastewater Services (BCWWS) North Regional Wastewater Treatment Plant (NRWWTP), withdrawing from the ocean outfall pipeline. The Pompano Beach RWTP produces reuse water suitable for public-access irrigation, and serves the City's municipal golf course, as well as residential areas within the City's service area. The plant has experienced difficulties in meeting reclaimed water demands due to elevated feedwater turbidity, stemming from construction activities at the BCWWS NRWWTP, which are beyond the City's control. To continue to meet reuse water demands and maintain the existing viable customer users, the City desired to make near-term and long-term improvements and modifications at the reuse water treatment plant.

The Project



The proposed improvements and modifications included the following:

- Installation of piping to allow the reclaimed water storage tanks to be filled with potable water to supplement the reclaimed water production during periods when the plant's production cannot meet demands. Piping will include appropriate accessories (e.g., flow metering, backflow prevention, etc.).
- Removal and replacement of existing valves and actuators.
- Modifications to existing filter bypass return piping.
- Addition of two new filter feed pumps in existing pump suction barrels.
- Removal and replacement of three existing and the addition of two new low pressure distribution pumps in existing pump suction barrels.

MBC's scope of services included design, preparation of construction drawings and technical specifications, permitting, and bidding services to implement the improvements and modifications outlined above. The design, permitting, and installation of the potable water storage tank fill piping was completed in May 2018.

The remaining improvements were included in a contract for construction that was awarded to Florida Design Drilling Corporation in December 2020. MBC provided contract administration services during construction. The project final competition date was September 14, 2022, on-time and with no change orders.