Membrane Element Replacement

Pompano Beach, Florida

Client
City of Pompano Beach

Scope of Services
Design, preparation of technical specifications, permitting pilot-scale proof testing, bidding services and engineering services during replacement

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Start Date
04/2016

Completion Date
Ongoing

Construction Cost
$1.1 million (Est.)

Key MBC Staff
Frank A. Brinson, P.E.

Key Features
Replacement of membranes, Pilot testing of membranes

Background

On April 5, 2016, the City of Pompano Beach authorized MBC under Work Authorization No. 1 to provide engineering services for the replacement of the 1,820 nanofiltration (NF) membrane elements in the 10 million gallon per day capacity NF process at the City's water treatment plant. NF elements typically have a useful service life of 5 to 7 years. The existing NF membrane elements have performed satisfactorily since they were installed in 2008, and the City's Capital Improvement Plan (CIP) has funds budgeted for replacement of the NF elements.

MCCAFFERTY BRINSON
consulting

The Project

The scope of the project included the following:

- Preparation and submittal of an application for a public water system construction permit for the pilot test unit.

- Testing of each membrane element selection. Including 90 days of prequalification testing under current typical full-scale plant operating conditions.

- Assistance with loading of membrane elements and start-up of the pilot unit for each test run.

- Monitoring of operation of the pilot test unit during pilot testing.

- Analysis of performance and water quality during and at the conclusion of each test run. Preparation and submittal of a brief letter report summarizing the data and conclusions for each of the two test runs.

The design phase, tech spec prep, and pilot plant permitting have been completed. The biding process is currently underway. Estimated construction completion is late 2017.