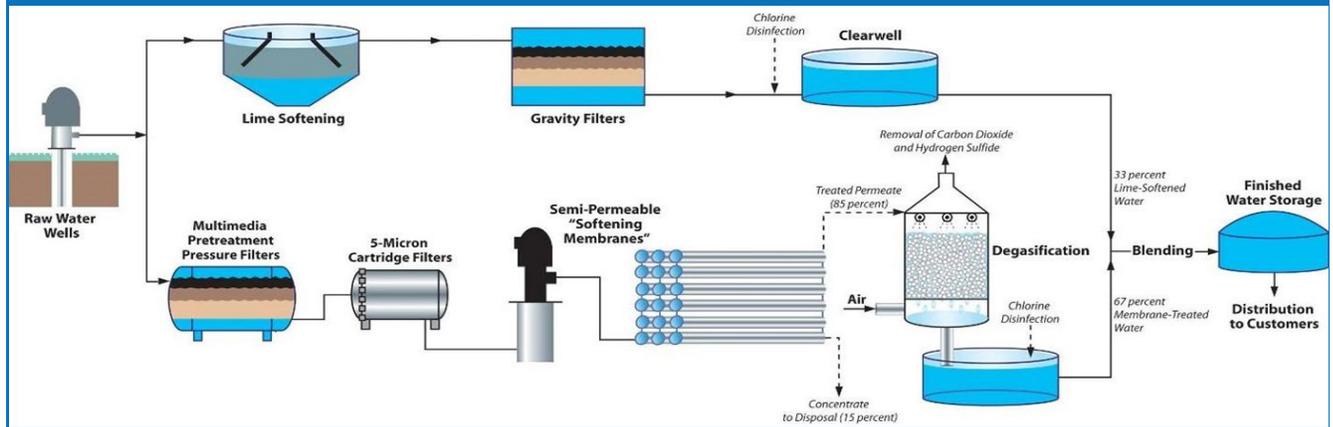


## Glades Road Water Treatment Plant Continuing Nanofiltration Process Optimization Services Boca Raton, Florida



### Client

City of Boca Raton

### Scope of Services

Resident project representation, continuous monitoring of NF process operating data and preparation of quarterly reports, including recommendations for improvements in operating practices and data collection.

### Contact

Mr. Chris Helfrich, P.E.  
Director of Utility Services  
City of Boca Raton  
1401 Glades Road  
Boca Raton, Florida 33487  
561.338.7303  
chelfrich@myboca.us

### Start Date

01/2008

### Completion Date

Ongoing

### Key MBC Staff

Frank A Brinson, P.E.  
Andrew Barba, P.E.

### Benefit to the City

Over \$30 million in operating cost savings to date through chemical and power optimization.

## Background

The City of Boca Raton owns and operates a 40 million gallon per day (mgd) membrane softening or nanofiltration (NF) plant. At the time the plant was placed into service (2005), it was the largest membrane softening plant in operation in the world. MBC's principal engineer, Frank A. Brinson, P.E., served as project manager and process designer during design and construction of the plant. Taking advantage of Mr. Brinson's intimate knowledge of the facility and process design, MBC has provided continuing process optimization consulting services for nearly 20 years. MBC's ongoing services have assisted the City in successfully operating the NF process with no chemical pretreatment (acid or antiscalant) resulting in an annual operating cost savings to the City of over \$1 million.

## The Project

The scope of MBC's services on the project included the following:

- Quarterly visits to the plant to observe process operations and treatment equipment, meet with plant operating staff to discuss general plant operation and any specific issues experienced during the quarter.
- Review and evaluation of treatment process performance data and operating records reflecting performance of the treatment process during the quarter.
- Evaluation of wellfield water production from the three different wellfields and how the flows are balanced between lime softening and membrane softening plants.
- Preparation of Quarterly Operations Evaluation Reports from data gathered during plant visit, including recommendations for adjustments to the treatment processes and/or operating protocols.