



## Project Profile

### Reverse Osmosis WTP Retrofit

Town of Jupiter, Florida



**Start Date:** Oct 2005  
**Completion Date:** Jun 2006  
**Delays:** None  
**Liquidated Damages:** None  
**Change Orders:** < \$10,000  
**Contact:**  
David Brown, Utility Director  
Town of Jupiter, FL

The Water Treatment Division of Layne Christensen Company was contracted through Cardinal Construction by the Town of Jupiter, Florida to provide services to upgrade their 14 MGD reverse osmosis (RO) water treatment facility. The project included construction for a new RO process train and modifications to four (4) other process trains. Pressure vessel, inter-stage turbo-booster, membranes and other major equipment were purchased directly by the Town of Jupiter and provided to Layne Christensen to install.

The existing process trains yielded 1.5 MGD of permeate and were loaded with Hydranautics membranes. Dow BW30-LE440 membranes were placed in the first stage and Dow XLE440 membranes were installed in the second stage operating at 80- percent water recovery. An interstage turbo-booster purchased from Pump Engineering Inc. (PEI) was installed to lower operating energy costs. An automated flow control valve was installed to allow a controlled amount of concentrate to by-pass the interstage turbo-booster thereby regulating the boost and providing flow balance. A concentrate flow regulation valve was not required nor installed.

Layne's scope for the retrofitting of the four trains rated at 1.5 MGD each included removing and isolate nine (9) pressure vessels, installing an interstage turbo-booster, modify stainless and PVC pipe as required and load membranes.

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#### Layne Christensen Company

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