LEE COUNTY UTILITIES, FORT MEYERS, FLORIDA

Pinewoods Nanofiltration WTP Rehabilitation and Brackish Reverse Osmosis Expansion

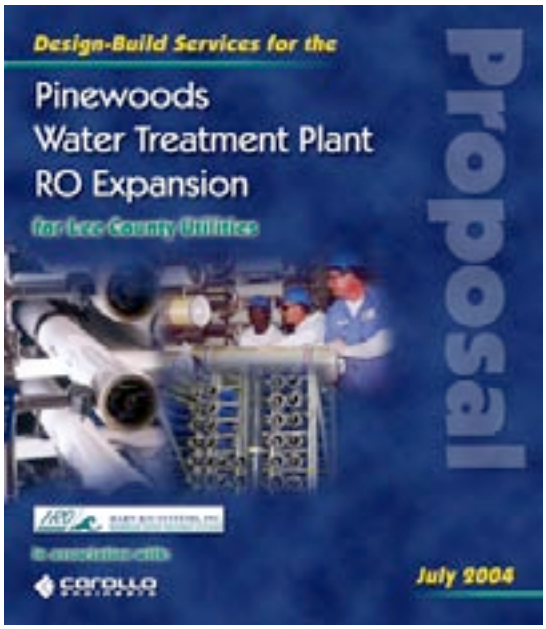
HIGHLIGHTS

- Rehabilitation of NF WTP and expansion with RO to 5.6-mgd.
- Design/build project delivery.
- Engineering design services schedule of 4 months.
- 6 mg/L of iron in raw water with no iron removal process before the NF membranes.

Due to increases in potable water demands in the Pinewoods service area and limited fresh water resources, Lee County Utilities (County) wishes to rehabilitate and expand their existing NF membrane water treatment plant that has been operating since 1990. The Pinewoods WTP was originally designed and built by a developer to treat water from the Surficial and Sandstone Aquifers. Lee County Utilities purchased the Pinewoods WTP in July 1998 and took over plant operation in July 2003. Carollo was hired to provide design/build engineering services for:

- The rehabilitation of the NF WTP, expanding it from 2.1 to 2.3-mgd.
- Expansion by adding 3-mgd of RO from the brackish Hawthorne Aquifer.

Lee County Utilities elected to rehabilitate and expand the Pinewoods WTP with a design/build delivery method to select the design/build contractor and engineering team based upon qualifications. Carollo Engineers, in association with Harn R/O Systems, was determined to be the most qualified design/build team based upon the high quality and high praise of their previous work together.



Carollo provided engineering services for the design/build RO expansion and rehabilitation of the Pinewoods Water Treatment Plant.

Engineering services for this challenging 18-month project schedule were to be completed in only 4 months. Carollo was responsible for the design and permitting of all facilities, which included rehabilitated NF equipment, a new RO process building, a new degasifier and odor scrubber system, a new 1-MG ground storage tank, standby power, and complete rehabilitation of the high service pump station, which is required to remain operable while construction improvements are being made.