

STATEMENT OF WORK (SOW) EXAMPLES

EXAMPLE 1 - Project Title: Pinewoods RO Treatment Plant and Wellfield Phase II

A. Introduction/Background

Lee County Utilities (LCU) owns and operates the Pinewoods Water Treatment Plant and related public water supply wellfield south of Corkscrew Road approximately one mile east of Interstate I-75. Currently, the wellfield consists of wells withdrawing water from traditional sources, the surficial and sandstone aquifers. Given the competition for fresh water resources and potential wetland impacts LCU decided that further development of raw water from traditional sources in this area was not feasible. Therefore, it was decided that further wellfield development would be raw water from the Lower Hawthorne aquifer, an alternative source. Lee County has initiated the construction of Pinewoods Lower Hawthorne Wells and RO Treatment Plant Phase I. In phase I the storage tank and RO building were completed. The next phase of this project will consist of completion of the 3.2 million gallons per day (MGD) Reverse Osmosis (RO) Water Treatment Plant (WTP) and the related Lower Hawthorne Wellfield.

B. Objectives

The objective of this project is to assist in the completion of the Pinewoods Reverse Osmosis Water Treatment Plant and Lower Hawthorne Wellfield Phase II to help meet the City's water supply demands.

C. Scope of Work

Fiscal Year 2007 work will complete construction of a 3.2 mgd water treatment facility and four Lower Hawthorne Floridan Aquifer Production wells. Work will include construction of RO equipment, high service pumps, mechanical equipment, yard piping, wellfield piping, electrical equipment, production wells, monitoring wells, raw water pipelines, and related appurtenances.

EXAMPLE 2 - Project Title: Floridan Aquifer Wells (2) at Dixie Wellfield

A Introduction/Background

The project titled "Dixie Brackish Water Supply / Treatment Facility" is composed of multiple phases as follows:

- Phase 1 – Construct Two Floridan Aquifer Test Wells
- Phase 2 – Conceptual Plan for Brackish Water Supply and Treatment
- Phase 3 – RO Membrane Pilot Testing
- Phase 4 – Floridan Aquifer Production Well Design & Construction
- Phase 5 – Wellfield Conveyance Facilities Design & Construction
- Phase 6 – Dixie Reverse Osmosis Facilities Design & Construction

This project includes construction work associated with Phase 1, which includes the installation and testing of two (2) 24-inch diameter by approximately 1,100-foot deep water supply wells to be completed in the Floridan Aquifer within the City of Fort Lauderdale's Dixie Wellfield. These wells will provide raw water to the Peele-Dixie Water Treatment Plant.

B Objectives

The objective of this project is to assist in the construction of a well field necessary to supply Floridan Aquifer water to help meet the City's water supply demands.

C Scope of Work

Fiscal Year 2007 work will consist of construction and testing of two 24-inch diameter water supply wells completed in the Floridan Aquifer. The wells are anticipated to be about 1,100 feet in depth and will be located at the City of Fort Lauderdale's Dixie Wellfield. These wells will provide raw water to the Peele-Dixie Water Treatment Plant.

EXAMPLE 3 - Project Title: Floridan Aquifer Wells (2) and Two (2) MGD RO Expansion

A Introduction/Background

The City of Hollywood WTP requires additional treated capacity to service its existing and developing customer base. Additional raw water supply to be able to produce additional treated capacity is required in the short term. This request includes construction of two (2) new Floridan Aquifer groundwater wells classified as proposed under existing Consumptive Use Permit (CUP). These wells have previously been identified in the Lower East Coast Water Supply Questionnaire. In addition, a new 2 MGD Reverse Osmosis (RO) train is required to be built to increase treated capacity added to the distribution system from the Floridan water supply.

Proposed Floridan Aquifer production wells requested under this application have already been characterized in the existing CUP. This project converts proposed production wells into existing test production wells, augmenting available supply from the Floridan Aquifer. Plans to revise the CUP accordingly are underway.

Construction of new 2 MGD RO train has limited permitting requirements which will be obtained during the Bid Preparation stage indicated on the attached schedule. Hollywood RO system has been designed and built for modular expansion. RO train to be constructed will be replication of existing 2 MGD train and will be fabricated by skid supplier according to pre-established design specifications.

B Objectives

The objective of this project is to help meet the additional treated capacity required to service the City's existing developing customer base by increasing the Floridan Aquifer raw water supply and the Reverse Osmosis water treatment plant capacity.

C Scope of Work

This project entails the construction of two (2) Floridan Aquifer test production wells (16" diameter, cased to 950') and installation of an additional 2 MGD skid-mounted RO train starting from the pump discharge and terminating at the concentrate and permeate headers within the skid.

The two (2) Floridan Alternative Water Supply wells (estimated at \$920,000 per well, 16" diameter, cased to 950') are contained in the existing Consumptive Use Permit. These wells previously have been identified in the Lower East Coast Water Supply Questionnaire. Wells will be constructed as "test" production wells in this phase to enable water quality analysis, confirmation of hydro-geologic conditions, pump selection, and raw water pipeline design to be performed for construction in subsequent phase.

The new two (2) MGD RO membrane train (approximately \$619,600 cost) will be constructed from existing design information to increase the proportion of Plant treated water originating from the Floridan Aquifer Alternative Water Supply and allow utilization of new production wells also contained in this request.

EXAMPLE 4 – Project Title: Reclaimed Water Booster Pump Station (North-South Interconnect Pipes under Livingston Road)

A Introduction/Background

Collier County reused approximately 5 billion gallons of treated wastewater in 2004. The majority of the water is used by commercial and residential users for irrigation. Collier County also uses reclaimed water for irrigation at various parks and roadway medians. A small portion of the reclaimed water is used for environmental mitigation. The reclaimed water system is made up of over 50 miles of distribution piping, 130 million gallons of wet weather storage, two deep injection wells, and six large pumping stations.

The County serves two reclaimed water service areas referred to as the South and North service areas. The South service area is primarily served by treated effluent from the South County Water Reclamation Facility (WRF) and the North service area is served by the North County WRF. The main issue Collier County's reclaimed water program faces is wet weather storage.

The County has identified a need to construct an in-line booster pump station to add flexibility and increase efficiency to their reclaimed water system. The reclaimed water pump station will enhance the interconnections of the North and South reclaimed water service areas, allowing the County to serve as many customers as possible and also maximizing the use of their reclaimed water storage facilities, including the reclaimed water ASR system, located in the North service area.

B Objectives

This project will allow storage of reclaimed water during the wet season, providing additional reclaimed water during the peak demand. The project will consist of two phases: Phase 1 is to connect the North and South reclaimed water service areas by microtunneling under the Livingston Road; Phase 2 is to build a reclaimed water booster pumping station.

C Scope of Work

FY2007 work activities include Phase 1: the microtunneling of two 16-inch reclaimed water mains across Livingston Road.

EXAMPLE 5 - Project Title: JEA 16.5 MGD Floridan Wellfield and RO Expansion Ph II

A Introduction/Background

The City of Port St. Lucie's has a water and waste water master plan. Sources of water for the City in the near future are anticipated to be from the Floridan Aquifer. Major impediments to increasing the use of alternative water supplies includes competition with are communities for allocations from the same aquifer water source. This project will provide substantial environmental benefits by replacing water typically supplied from the Surficial Aquifer sources with brackish water from the Floridan Aquifer. It will also reduce competition for water supplies by reducing the quantity of Surficial Aquifer source water needed by the City of Port St. Lucie.

B Objectives

To expand the JEA Reverse Osmosis Water Treatment Plant capacity from 6.0 MGD to 22.5 MGD by increasing the numbers of Floridan wells and the number of reverse osmosis membrane trains.

C Scope of Work

Project work includes construction of water mains for raw water wells to supply water from the Floridan aquifer and expansion of the JEA Reverse Osmosis Water Treatment Plant from 6.0 MGD to 22.5 MGD Phase II of this work is for the water mains for raw water wells F-13, F-14, and F-15.