



Naples Wastewater Treatment Facility

City of Naples (Collier County), Florida

The City of Naples faced several problems concerning its wastewater treatment plant's capacity and effluent disposal compliance. Its primary concern was the excess effluent being disposed into the Gordon River. Initially the State of Florida had ordered a discontinuance of any discharge of effluent to the Gordon River. The City retained Hole Montes to assist in negotiation of a Consent Order and to develop a program to meet the requirements of the Consent Order. As conversion of this facility to a zero discharge facility was not economically feasible,

Hole Montes assisted the City in development of a program that included minimizing discharge to the river along with upgrading the level of treatment. As part of the preliminary design study, Hole Montes, Inc. evaluated the existing facility and considered alternative treatment upgrade options. The result was a decision to convert the conventional activated sludge system to the Bardenpho process to provide nitrogen and phosphorus removal. It was also determined that the project should include increasing the treatment capacity from 8 to 10 MGD to accommodate what was determined to be the build-out needs for the City's service area. Since there was limited space to enlarge the existing facility, Hole Montes developed a plan to renovate and modernize many of the tanks and buildings at the facility to increase their capacity and to work seamlessly in conjunction with new process tanks and units. Due to the age and condition of the existing equipment, the City elected to install new process equipment in existing process tanks (such as clarifiers) to match the new equipment that was being installed into the new tanks. In addition to providing increased wastewater



treatment capacity, a sludge stabilization system was designed to produce a Class A sludge product suitable for distribution as a fertilizer and organic soil conditioner.

Hole Montes also designed upgrades to the plant's effluent reuse storage and pumping facilities. This increased capability allows the City of Naples to promote increased reuse of its reclaimed water as the water leaving the facility is provided to the reuse system's customers at both a pressure sufficient for direct use for irrigation.

and at a flow rate high enough to meet peak flow demands. In addition to improvements to the treatment process, improvements were made to enclose the chlorine and sulfur dioxide storage and feed facilities to provide containment of gas in the event of a release from storage cylinders. In addition to ventilation system improvements, a chemical scrubber was provided to treat the air within the building in the event of a gas release.

During construction, Hole Montes provided contract administration, full-time inspection, start up assistance, preparation of O&M Manual, and staff training.