

Southside Wastewater Treatment Plant

HIGHLIGHTS

Process control system expansion for 110-mgd Wastewater Treatment Plant.

Integrated automation of the essentially manually operated existing facility.

Interactive O&M manual and digital library system implementation.

Carollo, as a major subconsultant to an instrumentation and control engineering firm, is providing a process control system expansion design for the City of Dallas' 110-mgd Southside Wastewater Treatment Plant. The City of Dallas Water Utilities has been working for some time towards the goal of providing process automation at the Southside plant. The top-end, computer central control system replacement, along with work in progress on selected process improvements, provides the foundation for a successful automation project. The project will evaluate all plant processes to determine the feasibility of improving plant performance through the use of automation and control systems. The existing plant is essentially manually operated, with only monitoring of the processes provided from the control room.

Carollo's role is to assist in development of the process and instrumentation diagrams (P&IDs) for each existing plant process and then to evaluate process improvements/alternatives that would allow integrated control of plant processes through automation. The goal is make the plant more reliable and reduce operational labor costs. Reaching this goal may require extensive improvements in field instrumentation and physical process improvements.

In a separate project, Carollo is also currently in the implementation phase of the interactive operations and maintenance (O&M) manual and digital library system for the Southside plant. This project involves the conversion of four existing O&M hard text manuals (developed by others) into an HTML fully-searchable, interactive O&M digital system. In addition to the O&M manual conversion effort, Carollo is creating a digital fully-searchable library system for all the plant's drawings, records, specifications and manuals. This library includes 40 gigabytes of fully-searchable electronic media which represents all materials collected by the utility over the past 20 years.



Carollo is developing P&IDs for plant processes and evaluating process improvements/alternatives to allow integrated control of the Southside Wastewater Treatment Plant through automation.