



Program Management

Client

Puerto Rico Infrastructure Financing Authority

Location

San Juan, Puerto Rico

In describing the extraordinary efforts underway as part of this program, and the rationale for selecting a 'public private partnership approach' that included the CH2M HILL/CSA joint venture, Dr. Carlos I. Pesquera, former AFI Executive Director and current gubernatorial candidate for Puerto Rico indicated:

"Success is achieved through a team of [government] employees and the use of outside consultants. If you don't hire the best, you limit yourself dramatically."

Canóvanas Water Filtration Plant Rehabilitation, Startup, and Operation

Project Description

For years, certain areas of the San Juan metropolitan area, including the town of Canóvanas, have suffered a potable water shortage. Although a contractor began constructing the Canóvanas Water Filtration Plant in the late 1990s, the project was never completed. An attempt to start up the plant was made by another contractor in 2003, with no success.

The Puerto Rico Infrastructure Financing Authority (AFI) then retained CH2M HILL to rehabilitate, start up, and operate the 10-million-gallon-per-day plant. We used a team effort, drawing expertise from our construction, operations, and water services groups. We effectively leveraged our full spectrum of services, seamlessly providing support across disciplines, functions, and geographical units.

First, we quickly stepped in and evaluated the condition of the existing facilities. Due to deterioration and damage caused previously by improper installation, lack of maintenance, and weathering of the equipment, most of the process units required major maintenance or replacement. In addition, several process conditions would have prevented adequate water treatment, even if the equipment conditions had been optimum.

We designed several changes to the process that included new chemical feed systems, new chemical application points, and modifications to the input mixing energy at the first- and second-stage rapid mixing. We teamed with local suppliers and subcontractors to rehabilitate the sedimentation basin equipment, improve the electrical system of the raw water pump stations and filtration plant, maintain several pumping systems, and improve the instrumentation and control systems.

After several months of rehabilitation and construction activities, CH2M HILL started production of the plant, producing high-quality potable water more than 1 month ahead of the project schedule, and in spite of the deteriorated quality of the raw water obtained from the two surface water supplies. Today, we continue to maintain a high-quality water supply, bringing a vital resource to the residents of San Juan and the surrounding region.

Along the way, we used a real team effort to complete the construction of the plant, drawing expertise from our construction, operations, and water services groups. In this way, we effectively leveraged our full spectrum of services, seamlessly providing support across disciplines, functions, and geographical units.