



International

Asia

Client

Public Utilities Board

Location

Republic of Singapore

Start Date:

1997

End Date:

2008

Deep Tunnel Sewerage System (DTSS)/Changi Water Reclamation Plant (CWRP)

Project Highlights

- Programme Management Detailed Design and Construction Management services for one of the world's largest wastewater collection and treatment projects
- Innovative design and IT technologies during construction
- Successful partnering relationships between the design firms
- Complicated project controls
- CM in a tight site environment on a tight schedule

Project Description

CH2M HILL, in cooperation with local partners, managed and integrated the planning, design, and construction of the Deep Tunnel Sewerage System (DTSS), which features large conveyance tunnels installed under the island nation. The DTSS collects wastewater from link sewers in many Singapore catchments and conveys it to a state-of-the-art treatment plant. Treated effluent is then available for reclamation and reuse through a membrane/RO NewWater facility or discharged through deep sea outfalls into the Straits of Singapore. The system will ultimately collect, treat, and discharge all sewage from the island nation, replacing more than 134 existing pump stations and six secondary treatment plants with individual outfall systems.

The Changi Water Reclamation Plant was commissioned in 2008 and has an initial capacity of 800,000 cubic meters per day (CMD). This plant can be enlarged in subsequent phases to provide a final capacity of 2.4 million CMD. The Jurong Island Water Reclamation Plant, the second treatment plant, is scheduled for commissioning in 2015 and will also have an initial capacity of 800,000 CMD. This plant will have a final capacity of 1.8 million CMD.

The deep tunnel system comprises 90 kilometers of deep tunnels constructed under design-build contracts; only 48 kilometres are being built in Phase 1.