



Water Conveyance

Client
City of Los Angeles

Location
Los Angeles, CA, USA

Terminal Island Ocean Outfall

Project Highlights

- CH2M HILL provided an integrated approach that coordinates an existing outfall replacement project with the operating needs of a very busy pier facility
- CH2M HILL handled high seismic activity, future embankment loads, and poor soil conditions to successfully replace an existing outfall without causing disruption of services or impacting the harbor

Project Description

The modification of the Terminal Island Outfall was necessary for the construction of the Pier 300 and Pier 400 projects. This work included removing a short section of the existing outfall, installation of a temporary nozzle for discharge while the 72-inch diameter outfall extension was constructed. The 4,300-foot extension terminated with an 800-foot long multipoint diffuser. The outfall was constructed within the breakwater that forms the Port of Los Angeles. The final plans and specifications were assembled by the L.A. Harbour District, Bureau of Engineering Staff.

Besides the issues of coordinating outfall construction through the Pier 300 and 400 construction areas, the work involved detailed hydraulics analysis from the existing pump station, evaluation of the existing pipe from the Pump station to the existing diffuser. Pipeline was designed to accommodate high seismic activity, future embankment loads, and poor soil conditions. Water quality of the effluent and receiving water were evaluated and dilution analyses for various tidal conditions were studied to design the diffuser location and configuration.