



## Water Conveyance

**Client**  
City of Portland

**Location**  
Portland, OR, USA

## West Side Combined Sewer Overflow Separation

### Project Highlights

- Construction of 18,250 ft of 14-ft diameter tunnel
- Construction of pipeline under a river
- 10,300 ft of microtunneled pipeline

### Project Description

CH2M HILL, in association with an engineering and consulting team, completed the third of four phases of the West Side Combined Sewer Overflow Program. The West Side CSO—also known as the West Side “Big Pipe”—is part of a 20-year program to reduce combined sewer overflows to the Willamette River and its tributaries, including the Columbia Slough.

The main component of the West Side CSO project is the construction of 18,250 ft of 14-ft diameter tunnel along the western bank of the Willamette. At the northern end, the alignment crosses under the river to connect to a new pump station that is being constructed as part of the contract. Also included under the contract are the construction of five work shafts, the Swan Island pump station and 10,300 ft of microtunneled pipeline including launch pits.

There were numerous challenges during the project including unknown fill, obstructions, and debris. Installation of the 72-, 84- and 108 inch pipelines was completed using a single variable diameter micotunneling machine.