

## Construction Method: **Sliplining**

**Project:** Francis Street CSO  
Diversion Project

**Location:** Port Angeles, Washington

### Project Description:

Staheli Trenchless Consultants provided design and construction management services for the conversion of an existing 48-inch industrial water line into three force mains to deliver effluent to the water treatment plant. Approximately 4,550 feet of force main was installed by sliplining the existing 48-inch concrete pipe with one 30-inch OD and two 14-inch OD HDPE pipes that were bundled together.

The slipline design had to account for the alignment of the three pipes within the 48-inch host, connecting the pipes at the insertion shaft locations, three wide-angle bends along the shoreline, and maneuvering the bundle in an efficient manner with minimal disruption to the surroundings. STC also designed a specialty pull head to pull the pipes within the 48-inch host pipe.



### Job Scope:

- ❖ Rehabilitation Evaluation
- ❖ Slipline Design
- ❖ Determination Impacts to Adjacent Utilities
- ❖ Plans and Specification Preparation
- ❖ Construction Inspection



**Staheli Trenchless  
Consultants**

ph: 425-205-4930

[www.stahelitrenchless.com](http://www.stahelitrenchless.com)