











Keller has decades of experience in the ports and harbors market, offering the best geotechnical solutions for your project.

Working on, or near, the water presents its own set of challenges. Generally, ports, waterways, and docks lie in areas with difficult subsurface conditions. The very nature of these facilities results in high demands for loading and duty cycles. These issues combine and result in many challenges for port and waterway owners and operators. We have worked in these facilities on the three coasts of North America, as well as the navigational rivers and locks of the interior United States. We have solutions for these challenges, from remediation of failed bulkheads, to consolidating dredge spoils, to construction of new port facilities.

Our remediation techniques for bulkheads, docks, and other coastal struc d their service life. As seismic and other design standards change, our techniques can allow your structure to meet current standards.

From our extensive experience in port facilities we understand the importance of scheduling work to minimize disruption to ongoing port operations. Keller can manage schedule, budget, and safety with the needs of the port.







IF YOU HAVE A GEOTECHNICAL CHALLENGE, YOU HAVE A READY PARTNER. **KELLER IS READY TO RESPOND.** 



### **BOLLINGER SHIPYARD**

Earth retention & ground improvement

Keller provided a cost-effective, design-build solution to improve the soft soils behind a new bulkhead. The ground improvement solution drastically reduced the schedule and cost of deadmen and sheetpile. The scope of work included soil mixing, sheet pile, deadmen and bearing piles.

**CLIENT: Bollinger Shipyards** 

**ENGINEER: Keller** 

PRIME CONTRACTOR: Keller

## **FEATURED PROJECT**

### ATLANTIC WOOD SUPERFUND SITE

Soil consolidation and environmental remediation

Creosote contaminated dredged material and underlying sediment was consolidated with wick drains at this Superfund site. The discharged effluent was collected and pumped for treatment. This method proved very economical versus complete removal or in-situ stabilization methods. After treatment the property was returned to industrial use.

**CLIENT: U.S. Army Corps of Engineers** 

**ENGINEER: EA Engineering** 

PRIME CONTRACTOR: Sevenson Environmental Services, Inc.

# **FEATURED PROJECT**

### **ELLIOTT BAY SEAWALL REPLACEMENT**

#### **Liquefaction Mitigation**

The seawall and adjacent supporting structures protecting downtown Seattle were in poor condition and vulnerable to a major earthquake. Keller constructed the world's largest jet grouting solution to support the waterfront structures and mitigate the seismic risk.

**CLIENT: City of Seattle DOT ENGINEER: Shannon & Wilson** 

PRIME CONTRACTOR: Mortenson / Manson, A Joint Venture





