COLUMBIA RIVER ESTUARY STUDY TASKFORCE (CREST)

West Sand Island Restoration

Mouth of the Columbia River, Oregon

from top: Initial conditions; Assessing the site

A restoration feasibility study guides the restoration of critical habitat for migrating salmonids and avian communities on a 600-acre island at the mouth of the Columbia River.

With over 600 acres of intertidal and upland habitat, Oregon's West Sand Island, located at the mouth of the Columbia River, is a crucial location for migrating salmonids and avian communities. Though geographically situated to provide habitat for 13 threatened and endangered salmon and steelhead species, its potential was not being realized because of hydrology altered to support the island's previous use as a dredge disposal site. Berms, constructed to contain dredge spoils, were preventing tidal inundation at base tide levels. Invasive species such as gorse (*Ulex europaeus*) were degrading wetland and upland habitat by threatening sensitive prairies and marsh.

Biohabitats collaborated with the Columbia River Estuary Task Force (CREST) to examine the feasibility of restoring fish and wildlife access and habitat through increasing inundation, enhancing and managing native vegetation communities, and increasing the resilience of tidal habitats to climate change.

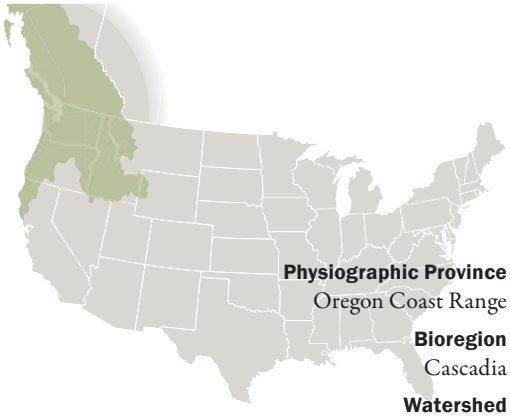
After leading a topographic survey and hydraulic analysis, Biohabitats developed four restoration alternatives to increase connectivity to the interior floodplain habitats through a combination of full and partial berm removal and interior channel creation, and provided a constructability review and cost estimate for each. Biohabitats then developed 30% design documents for the preferred alternative, which involved full berm removal, tidal channel excavation and floodplain reconnection, and invasive species management and long term revegetation design strategies. The geographic location of an island at the mouth of the mighty Columbia River forced the team to consider constructability means and methods that included using barges and boats to get equipment and staff to and from the project site.

Having determined a viable restoration option, CREST is well positioned to move forward with the restoration and continue building upon the organization's improvements to the ecology of the Columbia River Estuary. Biohabitats anticipates completing the design to 100% in 2017 and facilitating implementation of the project in 2018.

SERVICES

Inventory & Assessments
Design
Management

conservation planning
ecological restoration
regenerative design



Physiographic Province
Oregon Coast Range

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Watershed
Columbia River

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800.220.0919
www.biohabitats.com