METRO

River Island North Restoration

Barton, Oregon

clockwise from top: The renewed Goose Creek confluence; The team acts quickly to remove biota from work area; Vibratory pile driving in action

The restoration increases the complexity and roughness of the floodplain and enhances and creates backwater habitat for native and endangered fish, birds, amphibians, and mammals.

Located on the Clackamas River, this project was the second stage of a large-scale restoration of River Island, a 240-acre natural area that includes wetlands, oak savanna, and upland and riparian forests. Decades of gravel mining and a major flood in 1996 changed the course of the river in this area and damaged habitat for multiple species, including endangered salmon.

A major component of the project was reconnecting Goose Creek to the Clackamas River. The 1996 flood caused the river to change course, bypassing its confluence with Goose Creek. Salmon that once spawned there could no longer enter the creek as sediment filled the area. Also, just beyond the floodplain is a large wetland with several ponds left from the mining operation. The wetlands are an important habitat for turtles, salamanders, and frogs.

First, Biohabitats led the dewatering and fish rescue effort, primarily leveraging gravity flow to remove water and fish from the site. Then, to enhance and create habitat for endangered Chinook and coho salmon, winter steelhead, and western painted turtles, the construction team, including K&E Excavating, installed 1600 logs and moved 160,000 cubic yards of cobble and soil around the site. Vibratory pile drivers were used to pierce hundreds of 40-foot logs into the ground surface, and each pile was individually tested for its embedment strength. Then, logs with and without rootwads were interwoven into the driven piles and each assembly was fortified with steel hardware connections. Finally, the structures were backfilled with cobble.

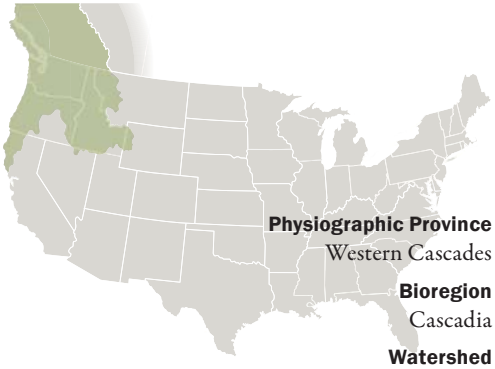
The work rebuilds the floodplain and enhances and creates backwater habitat that young salmon rely on for refuge from fast-moving waters. The logjams increase the complexity and roughness of the floodplain, allowing it to slow floodwaters and capture nutrients and sediments. The log installations also provide shelter for a long list of fish, birds, amphibians, and mammals.

Ultimately, the summer installation will be followed in the winter by planting more than 100,000 native trees and shrubs along the north bank of the Clackamas, in the floodplain, and along Goose Creek. Once established, the plants will help prevent erosion, provide food and shelter for animals and provide shade to cool waters.

SERVICES

Permitting
Construction Management

conservation planning
ecological restoration
regenerative design



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