

METRO

River Island North Restoration

Barton, Oregon



clockwise from top: The renewed Goose Creek confluence; The team quickly removes biota from work area; Log installations provide shelter for many species

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. A 1996 flood caused the river to

change course and bypass its confluence with Goose Creek. Salmon that once spawned there could no longer enter the creek as sediment filled the area. Just beyond the floodplain was a large wetland that included several ponds left from the mining operation. The wetland provided year-round habitat for turtles, salamanders, and frogs, and seasonal habitat for salmonids.

Biohabitats began by leading the dewatering and fish rescue effort, primarily leveraging gravity flow to remove water and fish from the site. Then,

Restoration rebuilds floodplain and enhances and creates backwater habitat for native and endangered fish, birds, amphibians, and mammals.

to enhance and create habitat for endangered Chinook (*Oncorhynchus tshawytscha*) and coho (*Oncorhynchus kisutch*) salmon, steelhead (*Oncorhynchus mykiss*), and western painted turtles (*Chrysemys picta bellii*), the Biohabitats construction team, including K&E Excavating of Salem, OR, installed 1,200 logs and moved 200,000 cubic yards of cobble and soil around the site. Vibratory pile drivers were used to install hundreds of 40-foot snags into the ground. Then, logs with and without rootwads were interwoven into the driven snags and each assembly was fortified with steel hardware connections. Finally, the structures were backfilled with cobble.

The restoration 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 and Goose Creek channel, allowing them 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. Overall, 40 acres of floodplain habitat and over 3,000 feet of tributary stream channel were reconstructed and restored.

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800.220.0919

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