PORTLAND WATER BUREAU

Sandy River Engineered Log Jams

Multnomah County

Putting the final touches on an engineered log jam.

More than 1350 carefully placed logs create and enhance much-needed habitat for endangered salmon and steelhead in a major tributary to the Columbia River.

SERVICES
Construction

From its origin as snowmelt from the slopes of Mount Hood, the Sandy River flows 56 miles before emptying into the Columbia River. The river and its tributaries support several anadromous species, including threatened salmon and steelhead. Over the last several decades, human impacts have contributed to a significant decline in salmon and steelhead runs. Working with the Portland Water Bureau, Metro, and the Oregon Parks and Recreation Department, Biohabitats restored key salmon and steelhead habitat at two sites along the Sandy River: Oxbow Regional Park and Dabney State Recreation Area.

At Oxbow Regional Park, Biohabitats excavated and reactivated an historic, 2,200-foot long side channel by installing large, engineered log jams designed to push flow into the channel and provide habitat. With the assistance of a heavy lift helicopter, the team also placed large wood in an existing side channel to enhance habitat.

A second engineered log jam was installed at Dabney State Recreation Area. Prior to construction, Biohabitats engineered a system to divert the flow from the side channel with a hand-placed weir. The engineered log jam (ELJ) required excavating 20 feet below the river bed. The ELJ pit was dewatered by pumping water to the adjacent upland forest for filtration.

More than 1,350 pieces of locally sourced large wood, 1,800 tons of boulders, and 1,500 cubic yards of slash were used to create salmonid habitat for this ecological restoration project. The project was recognized by the American Council of Engineering Companies of Oregon as the winner of the 2019 Engineering Excellence Award for Small Projects.