

METRO

Spring Hill Farm Natural Area Ecological Restoration Design and Construction

Gaston, Oregon



Looking up towards the new channel with grade control structures installed.



A log jam being installed.

In 2015, Metro, the Portland area's regional government, purchased 247 acres of farmland adjacent to the Tualatin River for preservation and conservation utilizing funds from the regional voter-approved open space bond. The property included a constructed in-line pond, straightened stream channels, and a unique agricultural drainage and dewatering system of subsurface culverts made

from discarded truck tires—all remnants of the agricultural hydrologic modifications to the site that over time had begun to fail and malfunction.

Recognizing the opportunity to protect and restore more than a mile of important Tualatin River floodplain habitat and over 3,000 feet of its tributaries, Metro partnered with Clean Water Services (CWS),

Ecological restoration and enhancement reclaims floodplain, removes fish passage barriers, generates habitat, and promotes ecological function—while allowing continued agricultural use.

the region's water resources management utility, to implement riparian and in-water habitat restoration on the site. Biohabitats was hired by CWS to help with site assessment, design, and construction.

After reviewing existing data, conducting a site assessment, and performing a hydrologic and hydraulic analysis of the site and its tributaries, Biohabitats crafted a design that enhanced floodplain connectivity, removed the man-made water control structures, and improved and diversified instream and riparian habitat by restoring and daylighting existing tributaries to the Tualatin River. The design also called for the removal of invasive species and floodplain berms, the installation of wood debris habitat structures, and the inclusion of agricultural set asides to accommodate the community's desire to maintain some active

agricultural use. After facilitating review of the permit-ready designs by stakeholders and regulators, final, construction-ready plans were prepared.

Biohabitats then implemented construction of the project. After removing a small dam, the team lined the remaining pond edge with large wood jams to provide fish and wildlife habitat complexity. Biohabitats then removed over 4,000 old truck tires that the previous landowner had used to divert and dewater surface flows for farming. These flows were restored to the surface in new realigned stream channels that included wood debris and vegetated sod mat grade control structures, native riparian hydroseed installation, and native revegetation efforts.

SERVICES

Ecological Restoration Design Construction



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