

CLEAN WATER SERVICES

Fanno/Ball Creek Restoration

Tigard, Oregon



from top: Installing toe logs and rootwads; Immediately after construction

Fanno Creek, a heavily urbanized tributary of Oregon's Tualatin River, has been impacted by floodplain development and urban runoff. This is particularly true at the Creek's confluence with Ball Creek, where severe incision has threatened infrastructure and left vertical banks as high as 15 feet.

Urban stream restoration design and construction help a public utility regenerate stability, habitat, and ecological function to a degraded tributary in Northwest Oregon.

With a conceptual restoration design in hand, Clean Water Services (CWS) turned to Biohabitats for help with refining and executing the design, and working with land owners adjacent to the site to coordinate construction access.

With the goals of stabilizing banks, improving floodplain connectivity, and enhancing instream aquatic habitat, Biohabitats began by assisting CWS in assessing the site and adapting the conceptual design to the rapidly changing channel conditions. Biohabitats then prepared construction cost estimates. Before implementing the design, Biohabitats diverted and dewatered the stream and salvaged fish and aquatic species including rainbow trout (*Oncorhynchus mykiss*) and lamprey (*Petromyzontiformes*). Biohabitats then led excavation,

log jam installation, and bioengineered bank construction. A bioengineered bank stabilization matrix measuring over 300 linear feet was installed. This involved the strategic placement of more than 50 rootwads, 100 logs, and 300 feet of coir fabric encapsulated soil lifts with brush layering. Toe logs and rootwads were installed below the base flow discharge elevation of Fanno Creek to ensure the long term preservation of the wood.

Throughout the project, Biohabitats worked closely with the CWS watershed team and landowners to ensure the project met the landowner's expectations, achieved the design intent, and was completed on time and under budget.

SERVICES
Construction

conservation planning
ecological restoration
regenerative design



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