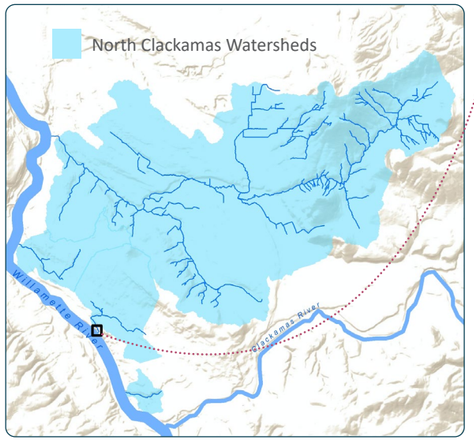
Lower Boardman Creek



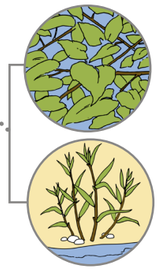
Project Description

Large wood structures at the confluence of Boardman Creek and the Willamette River are proposed. These are intended to provide cover and high-flow refugia for 9 different populations of juvenile salmon or trout during migration and rearing in the Willamette. In select locations, this will also be paired with enhancement and creation of additional pool habitat to increase channel complexity. Large wood placements would be focused in geomorphically appropriate locations. Large wood near the mouth will be activated at fall through spring flows (coinciding with the primary juvenile fish migration period in the lower Willamette), while large wood upstream of the mouth would interact with streamflows year-round.

Target Performance Measures

Large Wood (LW)

Placement of approximately 14 rootwad "tip in" structures (2 pieces each) and two larger confluence cover habitat structures (5 to 10 pieces each) along 500 linear feet of channel to provide cover and high-flow refugia while creating and maintaining scour pools for rearing and migrating juvenile salmonids. Large wood volume is estimated at approximately 125 cubic yards (not including confluence structure wood volume) per 1000 feet of channel. These structures would be placed strategically to avoid impact to existing mature vegetation and are to be buried or pinned between two anchor points, such as stable trees, boulders or the hillslope. Ballast requirements and final location of habitat structures to be determined in subsequent design phases. Additional placements upstream may also be warranted pending an assessment of juvenile accessibility to these areas.

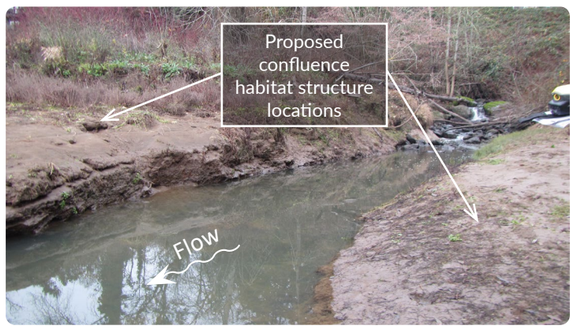


Invasive Species Removal & Riparian Revegetation

Work is anticipated to include 0.67 acres and 530 linear feet of invasive species removal and revegetation with native species along both banks of lower Boardman Creek. Invasive species removal, particularly of Himalayan blackberry, will promote the recolonization of the riparian zone by native species

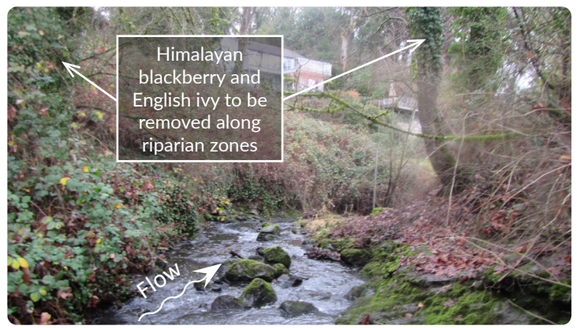
Limiting Factors Addressed

- Hydrograph/water quality (altered hydrology)
- Degraded riparian areas and large wood recruitment
- Degraded channel structure and complexity
- Invasive species
- Water quality (temperature, toxins)



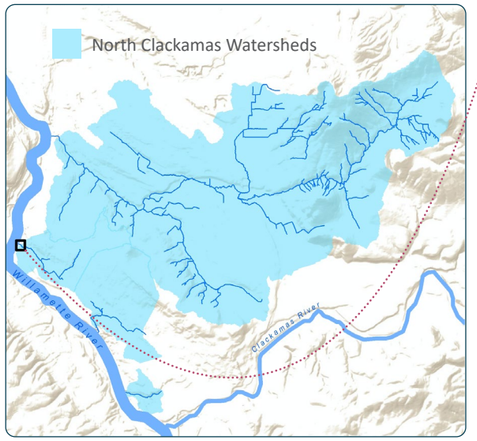
The existing confluence lacks cover habitat and stream shading; large wood placements are proposed on both right and left banks.

Existing small pool in the upstream project area to be enhanced and large wood added for complexity.



Existing invasive riparian vegetation is present along both banks of Boardman Creek; removal of these invasive species and revegetation with native species along both banks is proposed.

Lower River Forest Creek



Project Description

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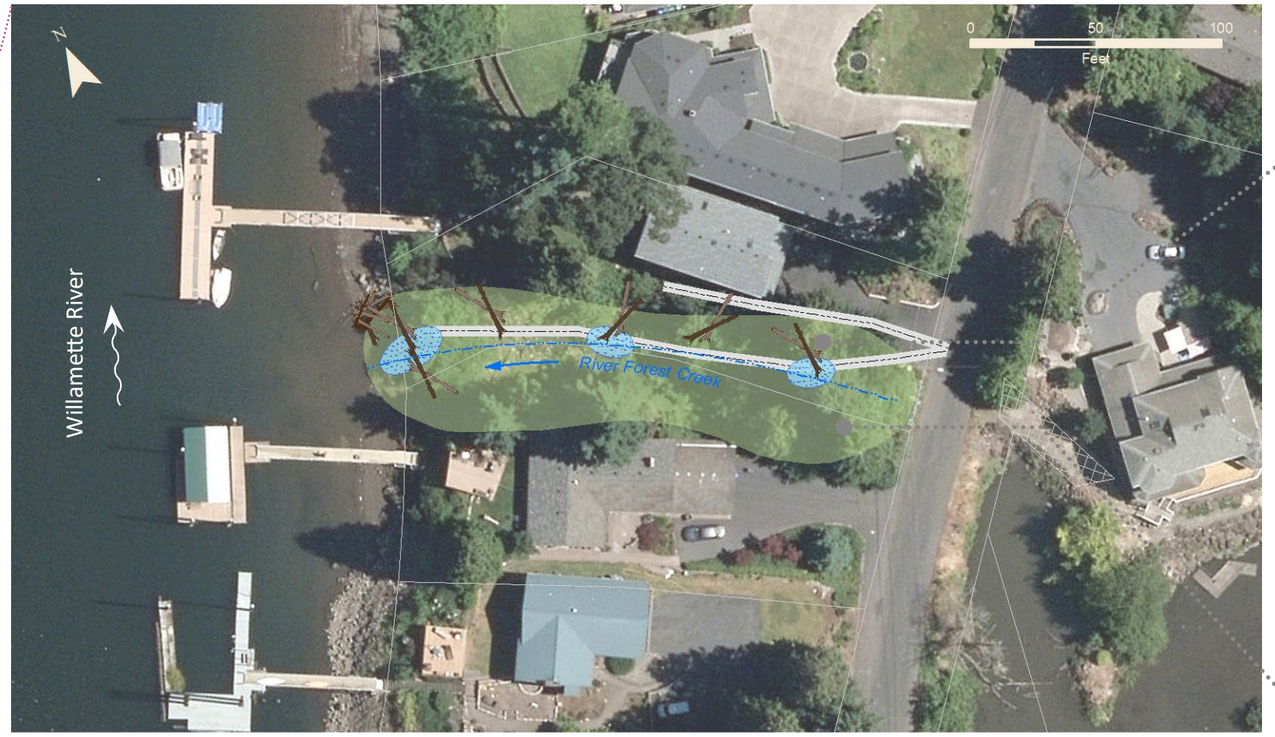
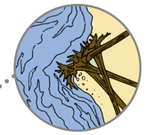
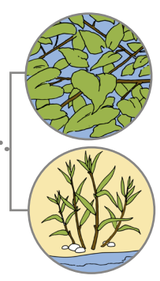


Target Performance Measures



Large Wood (LW)

Placement of approximately six rootwad "tip in" structures (2 pieces each) and two larger confluence cover habitat structures (15 to 20 pieces each) along 230 linear feet of channel to provide cover and high-flow refugia while creating and maintaining scour pools for rearing and migrating juvenile salmonids. Large wood volume is estimated at approximately 550 cubic yards per 1000 feet of channel. These structures would be placed strategically to avoid impact to existing mature vegetation and are to be buried or pinned between two anchor points, such as stable trees, boulders or the hillslope. Ballast requirements and final location of habitat structures to be determined in later design phases. Access to the confluence cover habitat structures is anticipated down the existing channel using a spider hoe to minimize aquatic habitat damage.



Invasive Species Removal & Riparian Revegetation

Work is anticipated to include 0.24 acres and 230 linear feet of invasive species removal along both banks of Lower River Forest Creek, focusing particularly on the south bank where English ivy is widespread but also includes targeted efforts along the north bank, where native species have already been planted under the Streamside Stewards program. Following invasive species removal, revegetation of 0.14 acres with native species on the south bank is anticipated.

Limiting Factors Addressed

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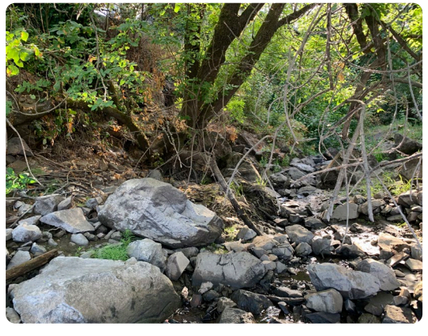
- Degraded riparian areas and large wood recruitment
- Degraded channel structure and complexity
- Invasive species
- Water quality (temperature, toxins)



The existing confluence lacks cover habitat and includes large, angular substrate; large wood placements are proposed on both right and left banks.

Existing invasive riparian vegetation is present along River Forest Creek, especially on the left bank; removal of these invasive species and revegetation with native species along both banks is proposed.

Rootwad "tip in" wood placements, emulating natural large wood recruitment to a channel, are proposed along the north bank and could incorporate existing trees where feasible.

Existing culverts upstream of project area at the River Forest Drive crossing, currently acting as a full barrier to fish passage.