

Cub Creek Restoration Phase II

Photomonitoring Points (Post-Project)

Report prepared by USDA Forest Service and Clackamas River Trout Unlimited for OWEB
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The project area for the Cub Creek Restoration Phase II project is nearly 10 acres in size, and is located along the lower stretch of Cub Creek on USDA Forest Service managed lands in the Mount Hood National Forest. The site is located nearly 50 miles south of Estacada on the west side of Forest Road 46 near the Clackamas River (Figure 1) in Clackamas County, Oregon. GPS coordinates for the project area are 44.9017, -121.8934. The project area contains designated critical habitat for ESA-listed Lower Columbia River Steelhead, Lower Columbia River Coho, and Upper Willamette Spring Chinook. Additionally, the site supports native trout including State Sensitive Coastal Cutthroat trout, and passage of a re-introduced Bull trout population.

The purposes of the Cub Creek Restoration Phase II project are to restore the lateral and vertical connectivity of the floodplain within Cub Creek, increase habitat complexity and quality for at-risk fishes through the addition of large wood, and enhance degraded riparian areas affected by a wildfire through the planting of native trees and shrubs. Specific quantifiable goals for the project area include increasing: total wetted area, total area of available habitat (including side channel availability), percentage of primary pools, frequency of pools, proportion of spawning-sized gravels, and large wood densities. Phase II builds upon work completed during Phase I by the same partners, with the goal to improve stream conditions so forest streams will be compliant with federal habitat guidelines and analytical process standards.

Construction for the Cub Creek Restoration Phase II project began July 8, 2024, when the contractor, Aquatic Contracting, began clearing trees from access routes in the upland and riparian areas in lower Cub Creek. In-water construction began on July 15, 2024, and continued until August 30, 2024. In-water work included: stockpiling trees that were within the main channel and across the floodplain from Phase I work, tipping approximately 700 fire-killed trees from cut areas, redistribution of 24,000 cubic yards of alluvium from cut to fill areas, placement and partial burying of the stockpiled and tipped trees across the floodplain, diversion of the water from the main channel to the prepped floodplain surface prior to fill, and spreading of slash and woodstraw to decommission access routes and protect disturbed soil from invasive species.

Post-project photos presented below were taken at the eight established photopoints (Figure 1) on September 11, 2024. Photopoints were selected based on stretches where removal (cut)/fill work or large wood placement was expected to occur and where discernible features could be referenced in future photos to track visual changes resulting from the restoration project. At each reference point, GPS coordinates were recorded, and photos were taken upstream/south and downstream/north with a Samsung Galaxy S23 cellphone so the same sites and perspectives could be replicated. GPS coordinates (Table 1) were taken in the field using Avenza and are reported in this document with ArcGIS Pro (project files available upon request). Photos are planned to be taken again at the eight established photopoints one year following implementation, three years following implementation, and five years following implementation of all phases of the project.

Disturbed areas including cut areas outside of the floodplain and access routes will be planted with site appropriate native trees and shrubs at the end of October 2024 and in spring of 2025. Blue wildrye, Idaho fescue, and mycelium amendment seed will also be spread across areas with bare soil in late October of 2024 when the rainy season begins. A redd survey is expected to occur at the project site in late October of 2024 to determine if adult salmonids are utilizing the site. Juvenile Coho salmon and native adult Rainbow trout were observed within the project area on September 11, 2024, and October 01, 2024.

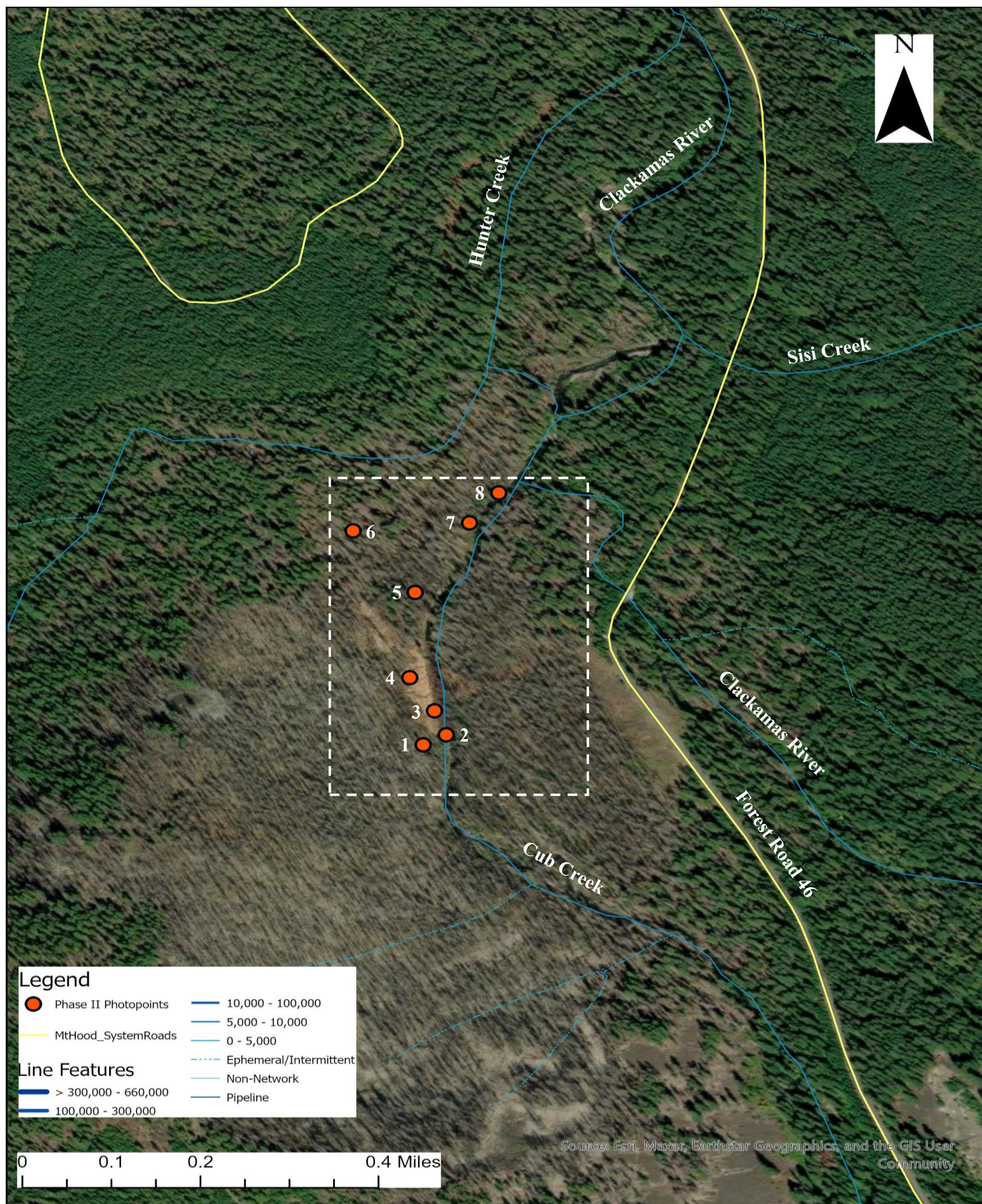


Figure 1. Map showing the eight established photopoints in Cub Creek within the Project Boundary (dotted line) along Forest Road 46 for pre- and post-project monitoring.



Cub Creek Phase II Pre-Project Photo Point 1 (looking north): alluvium (cut) and large wood will be redistributed from this site during Phase II.



Cub Creek Phase II Post-Project Photo Point 1 (looking north): large wood and alluvium were redistributed from this site during Phase II.



Cub Creek Phase II Pre-Project Photo Point 1 (looking south): alluvium (cut) and large wood will be redistributed from this site during Phase II.



Cub Creek Phase II Post-Project Photo Point 1 (looking south): some large wood was redistributed from this site during Phase II.



Cub Creek Phase II Pre-Project Photo Point 2 (looking downstream): alluvium (fill) and large wood will be added to the channel during Phase II.



Cub Creek Phase II Post-Project Photo Point 2 (looking downstream): alluvium (fill) and large wood was added to the channel during Phase II.



Cub Creek Phase II Pre-Project Photo Point 2 (looking upstream): alluvium (fill) and large wood will be added to the channel during Phase II.



Cub Creek Phase II Post-Project Photo Point 2 (looking upstream): alluvium (fill) and large wood was added to the channel during Phase II.



Cub Creek Phase II Pre-Project Photo Point 3 (looking downstream): large wood was added to the channel during Phase I. This same photopoint was utilized for pre- and post-monitoring of Phase I of the Cub Creek Restoration project.



Cub Creek Phase II Post-Project Photo Point 3 (looking downstream): alluvium (fill) and large wood was added to the channel during Phase II.



Cub Creek Phase II Pre-Project Photo Point 3 (looking upstream): large wood was added to the channel during Phase I. This same photopoint was utilized for pre- and post-monitoring of Phase I of the Cub Creek Restoration project.



Cub Creek Phase II Post-Project Photo Point 3 (looking upstream): alluvium (fill) and large wood was added to the channel during Phase II.



Cub Creek Phase II Pre-Project Photo Point 4 (looking north): alluvium was removed (cut) from this area and large wood was placed during Phase I. This same photopoint was utilized for pre- and post-monitoring of Phase I of the Cub Creek Restoration project.



Cub Creek Phase II Post-Project Photo Point 4 (looking north): alluvium was removed (cut) from this area, redistributed to the main channel to match elevations, and large wood was added during Phase II.



Cub Creek Phase II Pre-Project Photo Point 4 (looking south): alluvium was removed (cut) from this area and large wood was placed during Phase I. This same photopoint was utilized for pre- and post-monitoring of Phase I of the Cub Creek Restoration project.



Cub Creek Phase II Post-Project Photo Point 4 (looking south): alluvium was removed (cut) from this area, redistributed to the main channel to match elevations, and large wood was added during Phase II.



Cub Creek Phase II Pre-Project Photo Point 5 (looking north): alluvium (cut) and large wood will be redistributed from this site during Phase II.



Cub Creek Phase II Post-Project Photo Point 5 (looking north): alluvium was removed (cut) from this area, redistributed to the main channel to match elevations, and large wood was added during Phase II.



Cub Creek Phase II Pre-Project Photo Point 5 (looking south): alluvium (cut) and large wood will be redistributed from this site during Phase II.



Cub Creek Phase II Post-Project Photo Point 5 (looking south): alluvium was removed (cut) from this area, redistributed to the main channel to match elevations, and large wood was added during Phase II.



Cub Creek Phase II Pre-Project Photo Point 6 (looking north): alluvium was planned to be removed (cut) from this area, but no work was completed at this site during Phase I. This same photopoint was utilized for pre- and post-monitoring of Phase I of the Cub Creek Restoration project.



Cub Creek Phase II Post-Project Photo Point 6 (looking north): alluvium was removed (cut) from this area, redistributed to the main channel to match elevations, and large wood was added during Phase II.



Cub Creek Phase II Pre-Project Photo Point 6 (looking south): alluvium was planned to be removed (cut) from this area, but no work was completed at this site during Phase I. This same photopoint was utilized for pre- and post-monitoring of Phase I of the Cub Creek Restoration project.



Cub Creek Phase II Post-Project Photo Point 6 (looking south): alluvium was removed (cut) from this area, redistributed to the main channel to match elevations, and large wood was added during Phase II.



Cub Creek Phase II Pre-Project Photo Point 7 (looking downstream): large wood was not added to this channel during Phase I, but will be added during Phase II. This same photopoint was utilized for pre- and post-monitoring of Phase I of the Cub Creek Restoration project.



Cub Creek Phase II Post-Project Photo Point 7 (looking downstream): alluvium (fill) and large wood was added to the channel during Phase II. The floodplain was dry when photopoints were taken, but was wet on October 01, 2024.



Cub Creek Phase II Pre-Project Photo Point 7 (looking upstream): large wood was not added to this channel during Phase I, but will be added during Phase II. This same photopoint was utilized for pre- and post-monitoring of Phase I of the Cub Creek Restoration project.



Cub Creek Phase II Post-Project Photo Point 7 (looking upstream): alluvium (fill) and large wood was added to the channel during Phase II.



Cub Creek Phase II Pre-Project Photo Point 8 (looking downstream): large wood was not added to this channel during Phase I, but will be added during Phase II. This same photopoint was utilized for pre- and post-monitoring of Phase I of the Cub Creek Restoration project.



Cub Creek Phase II Post-Project Photo Point 8 (looking downstream): alluvium (fill) and large wood was added to the channel during Phase II.



Cub Creek Phase II Pre-Project Photo Point 8 (looking upstream): large wood was not added to this channel during Phase I, but will be added during Phase II. This same photopoint was utilized for pre- and post-monitoring of Phase I of the Cub Creek Restoration project.



Cub Creek Phase II Post-Project Photo Point 8 (looking upstream): alluvium (fill) and large wood was added to the channel during Phase II.

Table 1. GPS Coordinates of the eight established photopoints mapped on Figure 1.

Creek Name	Photopoint Number	Latitude	Longitude
Cub Creek	1	44.90160 N	121.89411 W
Cub Creek	2	44.90176 N	121.89377 W
Cub Creek	3	44.90221 N	121.89397 W
Cub Creek	4	44.90281 N	121.89437 W
Cub Creek	5	44.90437 N	121.89428 W
Cub Creek	6	44.90549 N	121.89529 W
Cub Creek	7	44.90563 N	121.89341 W
Cub Creek	8	44.90618 N	121.89292 W