Western Native Trout Initiative

Mabel Creek (Youngs River, Oregon) resident coastal cutthroat trout passage and habitat restoration

Project Completion Report, 2-10-2014

Background

Mabel Creek is on private industrial forest lands in the headwaters of the Youngs River, Oregon. Logging has occurred on Mabel Creek since the turn of the century resulting in degraded aquatic habitats (e.g., sediment delivery from road fill failures, low abundance of instream large wood and riparian vegetation, floodplain isolation due to roads, and fish passage barriers due to culverts). Three-quarters of the Youngs River basin, including Mabel Creek, is upstream of a waterfall impassable by anadromous fish. However, resident coastal cutthroat trout are widely distributed throughout the drainage. Thus, restoring habitat in Mabel Creek will benefit resident trout in the basin, and may contribute individuals to areas downstream of the waterfall.

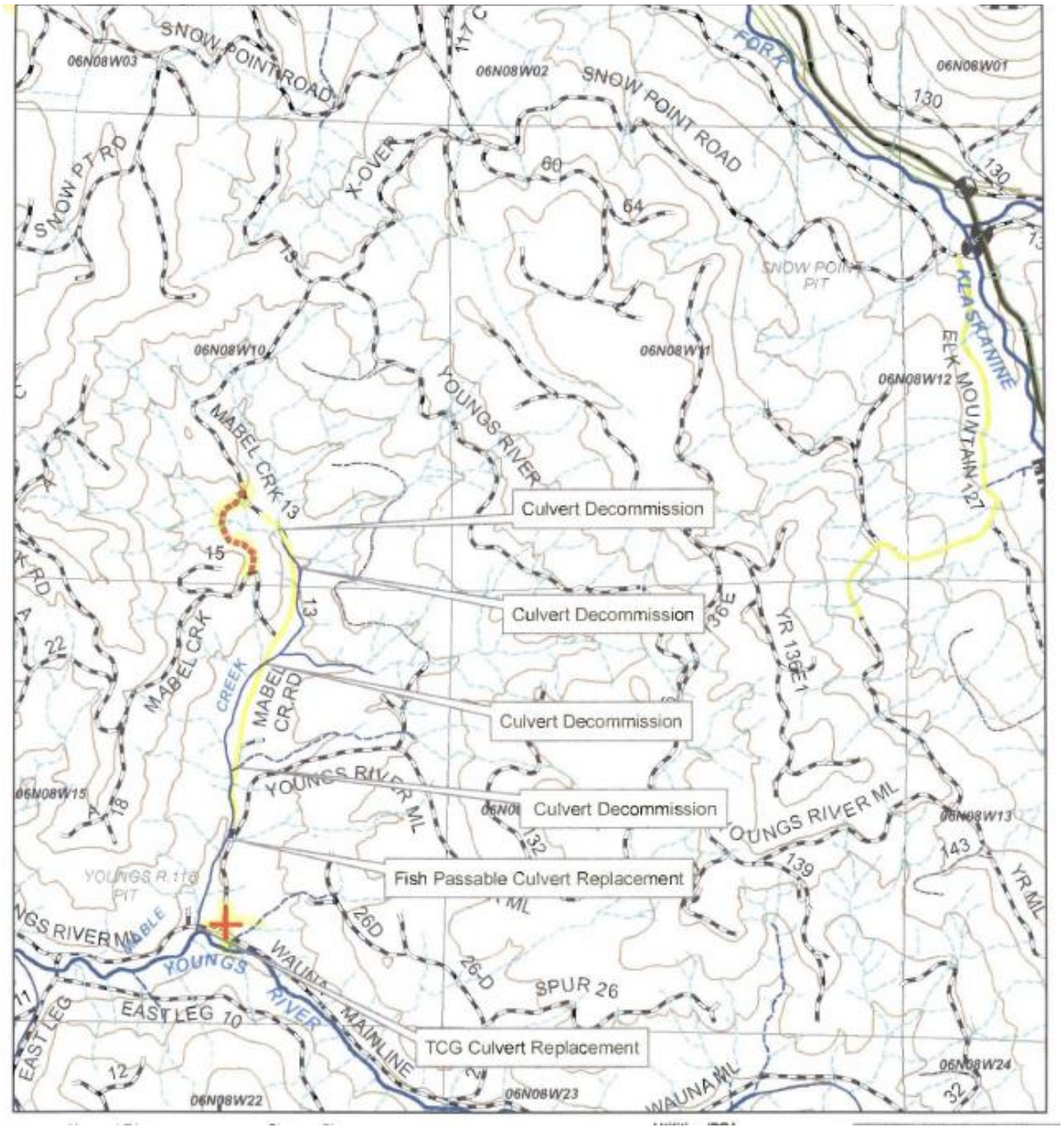
Cooperators

- Landowner—The Campbell Group
- North Coast Watershed Association
- USFWS
- OWEB
- ODFW
- Trout Unlimited
- WNTI

Project Status

The project was complete during FY2013. It had multiple components of stream and riparian restoration, as well as floodplain re-connection and fish passage. Road obliteration and floodplain re-connection occurred on three quarter miles of the Mabel Creek mainline road. Four undersized culverts were fully removed restoring floodplain function, upstream fish passage, and downstream hydraulics and bedload movement. Two additional culverts were replaced with structures providing fish passage. Addressing the six culverts restored fish passage to over one mile of stream. In addition, over 80 pieces of key large wood and 190 pieces of filler wood in Mabel Creek were installed to improve aquatic habitat complexity and floodplain connectivity in one mile of stream.

Project location map



Pre Project: Mabel Creek Site Photos: Mabel Creek is a fairly low gradient stream that has some habitat features of value (undercut banks, pools) but was impacted by a floodplain road and was deficient in large wood.

Pre Project: Mabel Creek Site Photos: Road impingement (shown by arrow) on Mabel Creek was a source of fine sediment in the Youngs River and also impacted floodplain to stream connectivity and high flow refugia habitat.

Mabel Creek Implementation Photos: *Photo 1 top left*: A total of 4 stream crossings were opened up via road decommission. The channel was opened to the full bankfull width and instream flow dispersal boulders and large wood were placed. *Photo 2, top right*, The road was removed to floodplain grade, fill was end hauled away when in areas where fill had clearly been imported or, as shown in photo 2, blended back in with the hill slope in areas where fill had been taken locally. In all cases, the bare ground was seeded with native and sterile cover seeds and mulched to protect against erosion. Additional woody plantings will occur in winter 2012-2013. *Photo 3, bottom left*: Culverts were removed as a part of road crossing decommission to open upstream passage. *Photo 4, bottom right*: Large wood was placed instream and, in a few cases, in the floodplain to provide habitat complexity, pool scouring, overhead cover, and floodplain connectivity.

Mabel Creek Post Implementation Photos: *Photo 1 top* Road decommission at stream crossing - the channel was opened to the full bankfull width and instream flow dispersal boulders and large wood were placed. Channel at lowest seasonal flow. *Photo 2, bottom*, Large wood was placed instream and, in a few cases, in the floodplain to provide habitat complexity, pool scouring, overhead cover, and floodplain connectivity. Seeding and mulching measures to hold soil and prevent turbidity were successful.