

S_____ Monitoring Report¹

Pre and post project photo point monitoring is utilized to document surface erosion and sediment transport for the S_____ Clean Up and Abatement Order and Fish and Game violations as noted in the Interim Sediment and Erosion Control Plan approved by CDFW and the Water Board.

All interim and permanent restoration work was completed between November 6th and November 15th, 2016. Post construction photo points were taken on November 18th, 22nd, December 16th, 2016, February 10th, March 13th, April, April 6th and April 13th. During the period wetter than average conditions existed allowing soils to saturate, overland flows to occur (as evidence by rill or sediment settling) and stream channels to activate surface flows. Total precipitation at the Weaverville monitoring station for the Hydrologic Year 2017 to date is 163% of average.

October was one of the wettest on record (355% of average) as the outer bands of supertyphoon Songda and Hurricane Seymour hit the region between October 15th and November 2nd. The wetter than average year has allowed for identification of sites subject to overland rill and gullying, slumping and other typical erosion sources that result from grading. Based on the current conditions and effects, no significant erosion or sedimentation sites or problems are expected for the project site.

The December 16th monitoring found stream conditions similar to those observed by the Water Board/CFDW staff during their May 2016 site visit, including surface stream flows at crossings #1,2, & 3. In addition flows were observed at Crossing #6 (which prior to the work flowed in a ditch to crossing #4). Crossing #4 was dry during the Water Board's May site visit. At crossing #3 flow extended into the road but went sub-surface below the road for ~100' downslope. The flow surfaced upstream of the point observed during the May site visit. The flow conditions observed on December 16, 2016 may suggest that conditions were somewhat wetter than those observed in May 2016. The December 16th inspection found all treatments to completely effective with no active sediment observed at crossings 1-6 or any of the other treatment sites contained in the Interim Sediment and Erosion Control Plan.

One new gully and rill were observed and mapped during the site visit. The gully is bank discharge off of Road "A" above Boyer Gulch (Figure 1 below) and was measured as an average of 6" deep x 8" wide x 60' long with a total erosion of 0.75 yd³. Approximately 50% of the eroded material is estimated to have delivered to the floodplain with less than that total actually being transported to the stream channel. The gully is located approximately 50' east of a much larger gully that appears to have been the previous road drainage discharge point. The road drainage installed under this project has substantially reduced the amount of runoff directed to this site. The rill observed was the result of runoff from Road E to Road A (photos below) and represents the effects of a new rolling dip installed on Road E. The total rill volume is <0.2 yd³ of material which has settled above Road A and will not reach waters of state.



Above Left- A small gully formed off of Road "A" and Above Right- A rill from Road "E" to Road "A"

¹ In compliance with Interim Erosion and Sediment Control Plan for "Draft Cleanup and Abatement Order for S_____ for Trinity County Assessor's Parcels _____"

Updated Photo Point Monitoring: December 16th, 2016

The following photo set updates the photo log submitted on November 30, 2016.

Updated Photo Point Monitoring: December 16th, 2016

Crossing #2- Tributary to Long Canyon



Crossing #2 Inlet (Above) before project. The 18" x 40' CMP culvert was removed and replaced and realigned with a 29" x 43" squash CMP culvert and the channel inlet and outlet rock armoured. Above Right (November 18, 2016)- The outlet was aligned with the channel. Vegetation was packed at the inlet and outlet and certified weed free straw mulch and native seed mix placed on-site. All liter was collected and disposed of at the Trinity County Solid Waste facilities. Below- Same as above with active channel flow (December 16, 2016).



Updated Photo Point Monitoring: December 16th, 2016



Above, outlet of Crossing #2 with active stream flow (December 16, 2016). Below Left Outlet pre-project. Below right, outlet with vegetation packing and critical dip (November 18, 2016).



Updated Photo Point Monitoring: December 16th, 2016

Crossing #3- Downstream- Same Tributary as Crossing #2



Above Left- Before showing 18" CMP culvert perched in fill. Above Right- Culvert excavated out and armored rolling dip installed with critical dip and large rock installed into road and on outlet end (November 18th, 2016). Below same site following return of surface flows (December 16, 2016).



Updated Photo Point Monitoring: December 16th, 2016

Below Left- Crossing #3 before project. Below Right- Digging out the crossing before installing large rock in crossing and outlet (November 11, 2016).

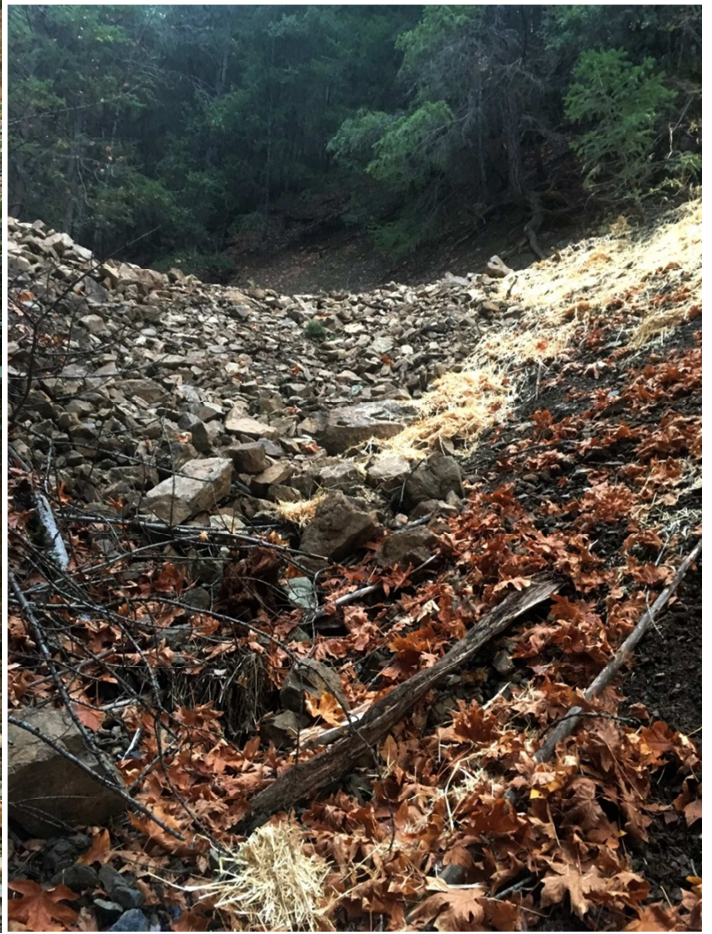


Below Left- Before at crossing site, Below Right- After rocked ford and dip are installed (November 22, 2016).



Updated Photo Point Monitoring: December 16th, 2016

Crossing #3 before with perched culvert (Left) and after (Right) on November 18, 2016



Updated Photo Point Monitoring: December 16th, 2016

Crossing #1 Tributary to Boyer Gulch



Above Left- Downstream looking upstream to crossing before work. Above Right- Downstream looking upstream after work on both crossing and banks (11/18/2016). Below- After storm flows activated the stream channel (12/16/2016) with active channel flow present. No evidence of new sediment was observed in the channel.

