

Project Report for Marsh Creek and Albion River Instream Fish Barrier Removal Flynn Creek Road, CR 135, M.P. 8.1 and 8.3

Project Title: Marsh Creek and Albion River Instream Fish Barrier Removal, Flynn Creek Road, CR 135, MP 8.10 and 8.3

Project Location: Marsh Creek is located on Flynn Creek Road, CR 135 at MP 8.10, Albion River is located on Flynn Creek Road at MP 8.13. More generally, the project is about 86 minutes west of Ukiah off Comptche-Ukiah Road near Comptche. See Township 16 North, Range 15 West, Section 13; or Latitude 39°152' 07.23" North and Longitude 123° 35' 22.65" West on the USGS 7.5" Comptche and Navarro Quadrangles.

Background: From 1998 to 2000, The Five Counties Salmon Restoration effort, funded through a grant from the California Department of Fish and Game, employed Ross Taylor, a fisheries biologist, to evaluate and rank Mendocino County road stream crossings for fish passage ability (*FINAL REPORT: COASTAL MENDOCINO COUNTY CULVERT INVENTORY AND FISH PASSAGE EVALUATION*, 2001). Taylor used inventory methods and protocols consistent with CDFG standards and protocols.

The tasks for that project were to conduct an inventory of stream crossings on Mendocino County roads, evaluate juvenile and adult fish passage, and develop a project-scheduling document that prioritizes corrective treatments to provide unimpeded fish passage. The inventory was limited to the anadromous reaches of streams known historically and/or currently to support runs of coho salmon, chinook salmon, and steelhead.

Marsh Creek and Albion River were ranked 4 and 1 respectively out of 26 sites identified in the Coastal Mendocino County Culvert Inventory and Fish Passage Evaluation.

Project Implementation: The work plan was to replace the existing circular culverts with open bottom, pre-manufactured concrete arch structures of adequate size that will allow anadromous fish passage at all life stages, and designed to be 1.5 x the active channel width according to the National Marine Fisheries Service (NMFS) and California Department of Fish and Game (DFG) Guidelines. The construction of these structures will help with the recovery of depleted salmonid populations and demonstrate the County's actions that can be accomplished in conjunction with the Five-County salmonid restoration effort.

Marsh Creek: A 7.8 foot diameter culvert, 81 feet in length with a slope of 1.9% and concrete lined bottom was replaced with an 82 foot long pre manufactured bottomless concrete arch structure with a span of 20 feet and rise 9 feet.

Albion River: An 13.6 foot diameter culvert, 60 feet in length with a slope of 2.5% and concrete lined bottom was replaced with a 66 foot long pre manufactured bottomless concrete arch structure with a span of 20 feet and rise 9 feet.

Project Funding: Project implementation was made possible by the following funding sources: California Department of Fish and Game Fisheries Restoration Grant Program, California Coastal Conservancy, American Rivers/NOAA Community Based Habitat Restoration Program Partnership Grant and County Matching Funds.



Tearing out the pavement on Marsh Creek.



Pulling stumps on Marsh Creek.



Removing the old culvert on Marsh Creek.



Digging the footings on Marsh Creek.



Baily Bridge detour on the Albion River.



Excavation underway on the Albion.



Forms on Marsh Creek.



Finished strip footing on Marsh Creek.



Environmentally friendly non-petroleum based lubricants so arch elements could be pushed in place under the Albion River detour.



Lowering arch elements in place on the Albion.



Structure water proofing on Marsh Creek.



Bringing up structural backfill on Marsh Creek.



Marsh Creek inlet after completion.



Looking upstream from the Marsh Creek inlet. Channel is responding by head cutting upstream and banks collapsing in resulting in a wider channel to accommodate the new structure (no more restrictions).



Marsh Creek Inlet before new structure



Marsh Creek Inlet new structure



Marsh Creek before new structure



Marsh Creek new structure



Marsh Creek outlet before new structure



New Marsh Creek outlet

Current Project Status: The Albion River and Marsh Creek In-stream Fish Barrier Removal is anticipated to start up again during mid to late July of 2007. The project should then be completed within two weeks.

Marsh Creek- The Marsh Creek side is almost completed. The concrete bottomless arch structure was installed and the road brought up to grade this past construction season. The only work remaining is completion of the road drainage infrastructure, asphalt pavement, metal beam guard rail, minor clean up around the edges and revegetation. The road department has just recently removed the Baily Bridge detour and is in the process of hauling off the bridge parts and other associated remedial work due to the detours.

Albion River- The structure was not completed this past construction season in consideration of the nature of work remaining and high potential for more inclement weather and increased stream flows. Work remaining is; removal of the Baily Bridge detour before construction may proceed, installation of the downstream wingwalls, downstream wingwall rip rap, bring road up to final grade, road drainage infrastructure, asphalt pavement, metal beam guard rail, clean up around the edges and revegetation.

In general, both sides are responding well to the new structures. New streambeds within the structures were armored with light facing rock 8 to 12 inches in diameter. Stream beds appear to be stable with the lack of severe winter flows this past season. Finer materials from upstream head cutting and resultant stream widening are being retained within the structures and starting to fill the downstream plunge pools.