

## FINAL REPORT - Indian Creek C-455

Barrier clearance was completed on Indian Creek, a tributary of the Navarro River, in December of 1984. Initial site inspections were made by Alan Grass of the California Department of Fish and Game in July of 1984. Desired modifications were decided at this time at the five upstream sites where heavy equipment and/or blasting were to be utilized. Nine sites further downstream were to be modified as possible with hand labor.

The fourteen sites were spread along four miles of the creek with the lower most being approximately 1/4 mile above St. John Canyon. Of the fourteen sites, three were complete barriers, one a partial barrier and nine debris piles that required removal or modification.

A winch on a Caterpillar tractor was used to remove the material from the barriers and debris piles to which there was road access. Blasting was utilized at two sites to remove large root balls and to modify a rock formation. A log dam was installed at the rock formation to help create adequate passage.

The remaining barriers and debris piles were either partially or totally removed with hand labor. The above mentioned work was carried out in July and August of 1984. Material removed from the creek channel and requiring burning was burned in November and December 1984.

Two sites, the largest complete barrier and the rock formation, both were heavily impounded with sediment and debris to the degree that the flushing of winter flows will be needed before it can be determined if passage has been created. A survey will be required at these two sites in the spring of 1985 to determine if further work is needed.

In the lower stretch of the creek between the west branch and the juncture with the main Indian Creek branch there exist from previous flood flows numerous massive placements of logs and debris in very unstable accumulations. These will undoubtedly move about in the future floods and could easily create new barriers. Though these lie below the lowest complete barrier we removed they also lie along the best nursery habitat in the creek. As this stretch of creek contains the highest population of juvenile fish we have seen in any drainage it would be important to check for new barriers after any future flood events.