APPENDIX 15

RESTORATION IN ACTION:
REDWOOD FOREST FOUNDATION INCORPORATED'S (RFFI'S)
USAL REDWOOD FOREST
(NORTHWEST CORNER OF MENDOCINO COUNTY)

Presentation by Richard Gienger to the Pilot Project Working Group
October 5, 2017

This photo, and the next one, are from the Standley Creek watershed in 1980 (Robert Ballard collection). They were taken during a North Coast Water Quality tour RE the need for Waste Discharge Requirements. I think it may have been the 1st North Coast instance of those requirements being imposed on timber operations. I had been under the impression that G-P et al. fought them off, but Robert Ballard told me that, indeed, Waste Discharge Requirements were applied. Frank Reichmuth [sp?], Al [?] Weller, and others from the NCRWQCB were involved. The first photo shows stripped and gouged area of the Standley Creek watershed -- harsh example of tractor logging/yarding after the modern Forest Practice Act & Rules took effect, but before significant changes had taken place to prevent such "legacy" damage.

The second photo (previous page) shows a stream crossing that ignored basic engineering and treatment to prevent sedimentation and slope destabilization. These types of impacts often continue to affect slope stability and contribute to increased sedimentation -- even though the greatest impacts likely occurred in the years or decade immediately following the 1980 operation.

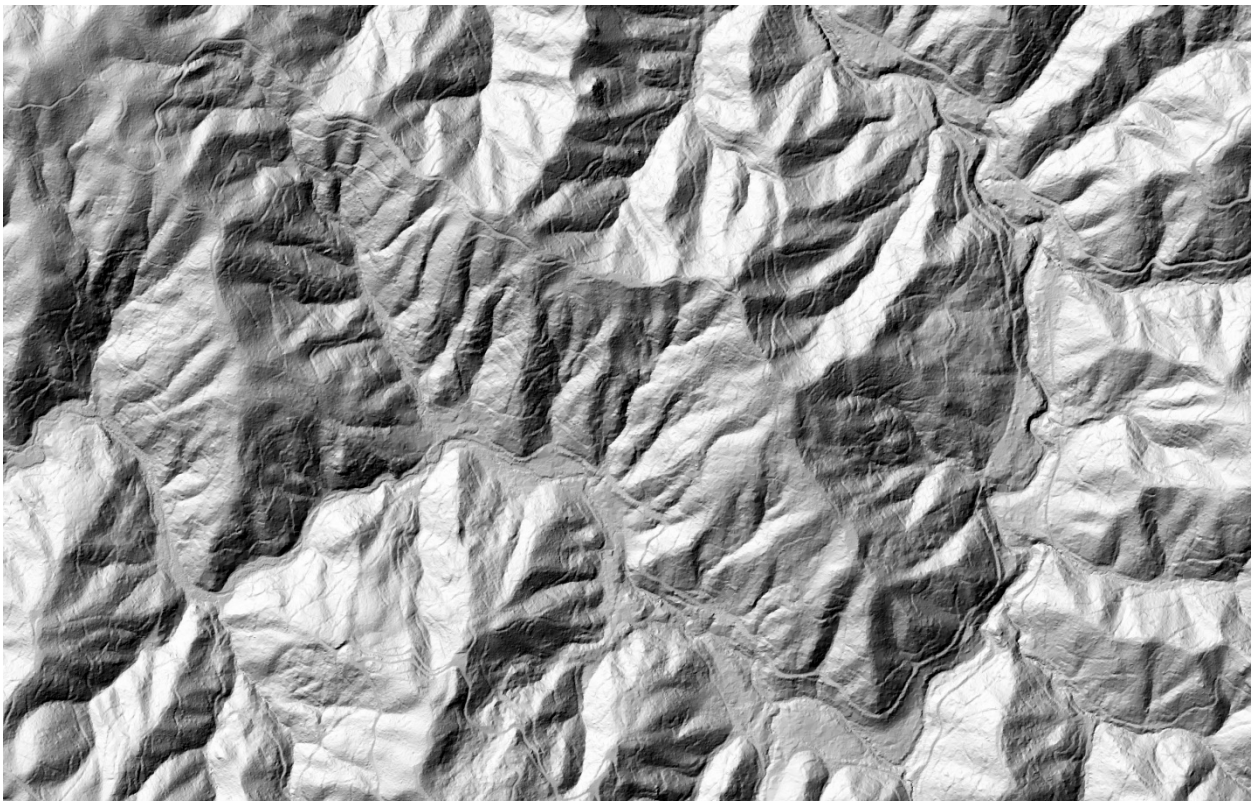
This photo shows the start of an excavation of a very large haul road crossing that buried the Clark Fork of Standley Creek. The view is looking upstream from below the huge fill. I think this was done in 2008 during one of the six phases of road decommissioning and/or upgrading in the Standley Creek watershed. The sixth phase was just completed this summer. The project was started during Campbell-Hawthorne ownership with a strong partnership of that company, the California Department of Fish & Game (now Fish & Wildlife), Pacific Watershed Associates (PWA), Trout Unlimited (TU), and others -- with RFFI/URF assuming ownership in 2007 and continuing the restoration partnership. Of special significance is the fact that the project addressed the adverse impacts and major necessary corrections for a logging road system in a whole CalWater 2.2 Planning Watershed. This is the scale that Cumulative Watershed Effects are almost always evaluated at in the THP process. Between 2 & 3 million dollars in grant funding and landowner cost share were expended to complete the six phases. This watershed and the extent of the hydrological damage are typical through most of north coastal California. Almost all these impacts resulted from the tractor logging/yarding starting with the ad valorum tax after WWII and continuing into the 1980s. It was the policy and law in California from 1946-1976 that landowners were taxed every year on their standing timber until they cut 70% of it. This was succeeded by a yield tax

whereby the taxing happened when the timber was cut under a Timber Harvesting Plan. This was prompted in part by the passage into law of the 'modern' Forest Practice Act: Z-berg/Nejedly 1973.

The photo above shows the continuing large excavation, looking approximately eastwards across the Clark Fork, which runs from North to South before joining Standley Creek. Standley Creek joins the South Fork Eel River across from Piercy. Note PWA's Tom Leroy standing on an old growth Redwood stump on the left side of the photo affording some scale and perspective of the site and the work. Almost all of the excavated material was hauled by dump truck to a safe and stable location outside of inner gorges and steep slopes.

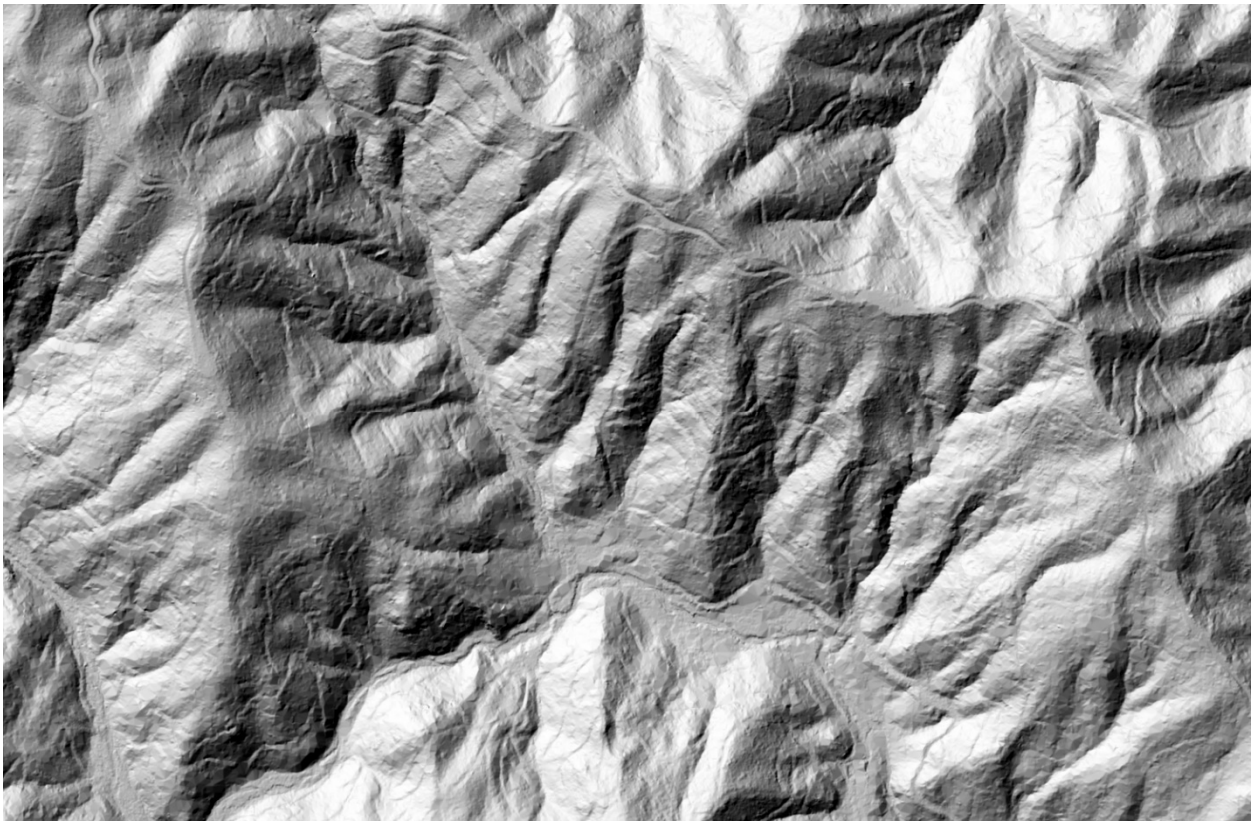
This photo shows a major section of the excavated channel with straw mulching and 'herringbone' placed large logs.

The photo on the previous page was taken from the old growth stump that Tom Leroy was on -- looking upstream during the first winter following excavation. The excavation was carefully done to get to the original channel-bed as close as possible and to reduce excessive "adjustments" causing streamside and riparian erosion -- and promote natural recovery.



Above is a lidar 'hillshade' image of Anderson Creek. Anderson Creek is the most salmonid productive tributary of Indian Creek. Anderson Creek, with its headwaters adjacent to the Usal Road Ridge above Bear Harbor and Needle Rock, joins Indian Creek upstream of the other key tributaries of Coulburn, Sebbas, and Moody Creeks. Indian Creek's two CalWater Planning Watersheds are classified by NOAA Fisheries and California DF&W as the #3 most important tributary for restoration out of the 19 tributary areas that were evaluated for the South Fork Eel River. [This is just behind Elder Creek (SF Eel River headwater creeks area) and Hollow Tree Creek watershed -- Standley Creek (along with McCoy Creek) was listed as #7).]

This image gives a detailed look at the actual landscape impacts of skid trails and skid/haul roads -- hydrological disruption, slope destabilization, and actual/potential sediment sources. This shows a major aspect of what forest and watershed restoration is about, and needs to cope with -- in the context of the Forest Practices Act (FPA) & Rules, California Environmental Quality Act (CEQA), and other basic environmental standards. One aspect in the examination in the field as guided by these lidar images is the extent of impact in the smaller and often steeper tributaries on accessibility and habitat quality for Steelhead. This is in addition to impacts on the lower gradient watercourses used by Coho and Chinook Salmon.



Here is a closer look at part of the area shown in the first lidar image. Landslides/missing sections of roads, and the extent of the impacts are more obvious.

The last four photos are of some aspects of Anderson Creek itself -- historical and recent past.

The previous page shows a 1979 photo of a log jam that was about 100 yards long - backed up about 15 feet high at an old-growth Douglas fir log stringer bridge that was used to strip most of the forest after WWII. Ironically, most of the material in the jam was from the trestles and railroad that was completed in 1904 from Bear Harbor to Andersonia on the South Fork Eel River, across from old Piercy. It's a long story that I won't go into here, but the original state-of-the-art bandsaw mill never operated, the old growth logs behind a dam washed to the ocean in a flood in 1928, before the post WWII boom depleted the entire Indian Creek watershed.

After the jam was modified/removed there were large runs of Chinook Salmon in Indian Creek extending way upstream in Anderson Creek. This photo of a Chinook jumping over a downed Redwood falls, upstream of the jam, was taken in 1980 -- either during the 1979-80 run or the 1980-81 run. Pretty exciting times -- the whole valley stank of salmon carcasses, many piled by bears upslope of the riparian areas, and bald eagles were common with other animals drawn to the run.

This photo shows renowned restorationists Bill Eastwood and Harry Vaughn during Anderson Creek spawning surveys in 2008 --upstream of a huge Chinook redd (nest) that is in the right of the photo.

Bill and Harry notating and flagging more Chinook redds. Hope for the restorable future.