Data Submitted (UTC 11): 7/17/2018 9:44:48 PM
First name: Bob
Last name: Pagliuco
Organization: NOAA Restoration Center
Title: Habitat Restoration Specialist
Comments: I am writing to express my support for the Kelly Bar Habitat Enhancement Project. The Salmon River is one of the most biologically intact subbasins of the Klamath River. The Klamath National Forest identifies the Salmon River as the watershed with the best anadromous fisheries habitat in the Forest. The Salmon River hosts all the native anadromous fish runs present in the Klamath River watershed, including: coho, spring and fall Chinook, summer and winter steelhead, Pacific lamprey, and green sturgeon. The large proportion of federal land and the comparatively high quality water and habitat conditions, make the Salmon River one of the best candidates for succeeding in maintaining and restoring anadromous fisheries in the Klamath. The Salmon River likely supported a population of a few thousand coho salmon in the past. That number has dropped precipitously in the last two decades, and presently annual returns of adults are likely less than 50 per year. Problems facing coho salmon and other fish on the Salmon River include invasive exotic species, barriers to fish passage, depleted large woody debris, high sediment loads from the extensive road system, large wildfires, limited riparian function, unstable spawning gravels, and temperature impairment.

Starting in the 1850s, land use changes in the Salmon River, such as large scale hydraulic mining and timber harvest, began to alter river channels and riparian areas. Between 1870-1950 it is estimated that over 15 million cubic yards of sediment was discharged into the Salmon
River as a result of gold mining. Mining activities impacted the landscape, vegetation, soil, water quality, and channel structure in many fish-bearing streams. Remnant mine tailings and riparian disturbance continue to affect coho salmon habitat in the Salmon River and mined-over floodplains and terraces have remained poorly vegetated many decades after large-scale mining has ended.

Increasing the available rearing habitat for juvenile salmonids is of great importance for the future of coho salmon in the Salmon River Watershed. Because coho salmon require slow water refugia and summer cold water temperatures for rearing habitat, increasing side channel habitat as well as riparian forest canopy are especially beneficial to the future health of these important species.

The NMFS SONCC Coho Recovery Plan states that summertime temperatures and lack of winter rearing habitat are the greatest stressors for juvenile coho in the Salmon River. Coho life histories are comprised of a chain of habitats with a favorable spatial/temporal distribution. In the Salmon River the linkages between these habitats have largely been broken. Due to a combination of factors, including simplification and fragmentation of habitat, coho populations are declining.

Studies have shown the importance of channel margins and groundwater-fed off-channel and side channel habitats for fry and rearing juvenile coho salmon, which prefer slower water velocities than steelhead or Chinook salmon. Off-channel habitats may provide both summer and winter rearing habitat. Coho salmon utilize groundwater channels more than any other salmonid species in the summer months due to their particularly low velocity and cooler water temperatures in the summer. During winter high flows, coho have been found to move into and overwinter in river margin features such as backwater alcoves and groundwater-fed off-channel habitat features, which are often warmer than the main river. Juvenile coho that over-winter in these areas commonly experience survival rates substantially greater than those that rear in main channel habitats due to less energy expenditure and warmer water temperatures. This survival difference can have a tremendous influence on whether a population, either in its entirety or some of its components, is sustainable under prevailing environmental conditions.
The SONCC Coho Recovery Plan states that the highest priority for recovery of coho on the Salmon River should be, "improving the quality and extent of rearing habitat and refugia for winter rearing, improving connectivity to existing off-channel habitat, and increasing the extent and quality of winter rearing areas". The Kelly Bar

Enhancement Project will meet NMFS' recovery objective in this section of the Salmon River.

This project will increase the abundance of complex off-channel rearing habitat with high intrinsic potential for year-round rearing of juvenile salmonids. Enhancing the river bar with self-sustaining side channels and an off channel alcove will provide winter high flow refugia. This will provide high quality winter rearing habitat by creating access to much needed winter food sources and allowing fish to grow in a slow water environment. Excavating the Willow Pond will provide high flow off-channel habitat in winter and groundwater-fed thermal refugia in summer. Large wood habitat structures and brush baffles will provide habitat complexity and bank stabilization along channels. Such complexity will provide cover from predators and high flows, and increased organic matter storage, pool-forming structures, and organic substrate for supporting macroinvertebrates. Diverse riparian shading will reduce summer water temperatures.

On Page 25, the EA tiers off of the NOAA Restoration's Center Biological Assessment and National Marine Fisheries Biological Opinion dated March 21, 2012. It is NMFS's opinion that the proposed projects occurring in the Northern California Office of NOAA's National Marine Fisheries Service is not likely to jeopardize the continued existence of SONCC coho salmon and is not likely to destroy or adversely modify designated critical habitat for SONCC coho salmon. ESA related determinations are made based on the potential for an individual of the species to be directly affected, regardless of potential benefit from project activities to the species habitat.

On page 16, the EA tiers off of the Biological Opinion (BO) from the National Marine Fisheries Service (NMFS) that was received on May 26, 2016, which concluded formal consultation for activities in the California Department of Fish and Wildlife (CDFW) Fisheries Restoration Grant Program included under the five-year Regional General Permit (NMFS 2016). The Regional General Permit authorizes minor fill discharges of earth, rock, and wood associated with the salmonid habitat restoration activities. These activities conform to the state law and are implemented consistent with the California Salmonid Stream Habitat Restoration Manual.

This project is covered under the 2016 FRGP RGP 12 consultation and all references to the 2012 NOAA Restoration Center's BO should be removed including ESA and EFH. Page 2 and 3 of the Biological Evaluation has the same issue where the Forest Service tiers off of both Programmatic BOs.

On page 25, the EA states that the determination for the ESA consultation is a Likely to Adversely Affect for coho salmon. The RGP 12 FRGP BO (2016) covers both Likely to Adversely Affect and Not Likely to Adversely Affect actions for coho salmon. Due to the low water conditions due to another drought (less than 9% of normal snowpack this year), the fact that coho have not been observed in any of the dewatering locations of the project; either the alcoves, Kelly Gulch, Willow Pond (SRRC snorkel data 2005, 2014, 2015, 2016 and 2018), and Kelly Pond (filled in with sediment and will be completely dry during the work window), I believe that this project fits under the NLAA category of projects covered under the RGP 12 consultation.