



**Comments on YCWA Study Development  
Riparian, Geomorphology, and Instream Flow Studies  
January 5, 2011**

Objective: Improve essential fish habitat components including: cover, wood, substrate, and flow.

**Channel Morphology Study above Englebright -**

- Target species to include Chinook salmon and steelhead trout due to reasonable and foreseeable future passage at Englebright Dam.
- The goal of the study must be to evaluate project effects on channel morphology including substrate characteristics and mobility, channel configuration and interaction with riparian. As stated the goal does not meet study plan criteria.
- The stated objectives references "trout spawning gravel distribution". The methods and analytic results section should provide a description of how this will be characterized or assessed.
- Objectives should include: Study substrate for essential fish habitat for Chinook and steelhead reintroduction.
- Results for pebble count and spawning gravel distribution should differentiate between spawning gravels for Rainbow Trout, Steelhead, and Chinook salmon on the following river reaches: North Yuba upstream of New Bullards Bar Reservoir, North Yuba from New Bullards Bar Reservoir to Colgate Powerhouse, Colgate Powerhouse to Englebright Reservoir, Middle Yuba from Our House Dam to Confluence with North Yuba. Study results should include square feet area of substrate suitable for spawning for Chinook salmon, steelhead trout, and resident trout to inform license conditions regarding sediment management and flow releases.

**Instream Flow Study above Englebright -**

- Target species to include Chinook salmon and steelhead trout due to reasonable likelihood of future passage at Englebright Dam. Edit tables in 5.3.1 and 5.3.2.
- Include run Habitat Suitability Curves for spring-run Chinook and steelhead.
- Objectives should include: Study flow for essential fish habitat for Chinook and steelhead reintroduction.
- Habitat suitability for Chinook salmon and steelhead trout in the following river reaches: North Yuba upstream of New Bullards Bar Reservoir, North Yuba from New Bullards Bar Reservoir to Colgate Powerhouse, Colgate Powerhouse to Englebright Reservoir, Middle Yuba from Our House Dam to Confluence with North Yuba, South Yuba Poorman Creek to Confluence with North Yuba.
- Flow/habitat suitability studies for adult Chinook to be planted above Englebright Reservoir. Flow suitability component to include all life stages.
- Radiotagging study for planted adult Chinook above Englebright to ascertain migration patterns and flow/habitat suitability.



## FOOTHILLS WATER NETWORK

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- Study inflow to reservoirs in relation to juvenile Chinook salmon and steelhead trout outmigrating on Englebright Reservoir and New Bullards Reservoir.
- Study attraction and migration flows for Chinook salmon and steelhead trout in the following reaches: North Yuba upstream of New Bullards Bar Reservoir, North Yuba from New Bullards Bar Reservoir to Colgate Powerhouse, Colgate Powerhouse to Englebright Reservoir, Middle Yuba from Our House Dam to Confluence with North Yuba, South Yuba Poorman Creek to Confluence with North Yuba.

### **Riparian Study above Englebright -**

- Target species to include Chinook salmon and steelhead trout due to reasonable and foreseeable future passage at Englebright Dam.
- The goal of the study must be to evaluate project effects on riparian resources.
- Objectives should include: Study riparian cover and woody debris for essential fish habitat for Chinook and steelhead reintroduction.
- Methods should include evaluation of riparian species composition and distribution as potentially effected by hydrologic alteration. Specific methods involving hydrologic assessment and seed dispersal data will be presented on February 9 for application to the lower Yuba River.
- Study plan should represent more comparability with methods to be used for Riparian study below Englebright.