Attachment B

Summary Comparison of the Difference between the Five Dam and Eight Dam Removal Alternatives with the Comments of the California Hydropower Reform Coalition

Summary Comparison of the Difference between the Five Dam and Eight Dam Removal Alternatives with the Comments of the California Hydropower Reform Coalition[1]

Topic	Five Dam Removal Alternative	Eight Dam Removal Alternative
Power generation	The Five Dam Removal Alternative would result in the generation of 30% less power for the Hydroelectric Project.	The Eight Dam Removal Alternative would result in the generation of 50% less power for the Hydroelectric Project. There would also be no backup system if an emergency resulted in a system shutdown.
Sediment transport	There is little difference between the two alternatives with respect to sediment bedload transport. Differences between the two alternatives with respect to fine sediment transport are unknown but expected to be minimal.	There is little difference between the two alternatives with respect to sediment bedload transport. Differences between the two alternatives with respect to fine sediment transport are unknown but expected to be minimal.
Habitat—*spawning/rearing*	Water temperature is higher in the mainstem and lower run reaches, but this area is not used for winter-run Chinook salmon spawning habitat.	Water temperature is colder on the mainstem and lower run reaches, but still not cold enough to be beneficial for winter-run Chinook salmon spawning habitat.
	The colder upper reaches are only slightly warmer, and for the farthest reaches, there is no difference compared with the Eight Dam Removal Alternative.	The upper reaches are only slightly cooler, and for the farthest reaches, there is no difference from the Five Dam Removal Alternative.
Habitat—*temperature*	The Five Dam Removal Alternative provides more adaptive management opportunity for creating coldwater refugia below Eagle Canyon Diversion Dam.	Removal of all dams would result in less adaptability to manage coldwater refugia created by springs.
Habitat—*hydrology*	The Five Dam Removal Alternative uses the prescription flow set by the Battle Creek Team and described in the 1999 Memorandum of Understanding (1999) as the target flows. These flows more closely approximate the predicted optimal flows for the various lifestages of Chinook salmon and steelhead than the Eight Dam Removal Alternative. ~~However, given the natural variability of the system, the difference between the two alternatives is small.~~	The Eight Dam Removal Alternative ~~appears to~~ would ~~result~~ provide substantially higher and ~~in~~ more variable flows that more closely approximate natural flows, but may or may not be optimal for all lifestages of Chinook salmon and steelhead. ~~However, given the natural variability of the Battle Creek system, the difference between the two alternatives is small.~~

[1] While the comments of the California Hydropower Reform Coalition are appreciated, the resource agencies do not agree with the majority of these changes. For example, the comments made with respect to flow comparisons are based on two different sets of flow data, that from the Interim Flow Agreement and the flows associated with the MOU. Only the MOU flow data should be considered for the purpose of comparison between the Five Dam Removal Alternative and the Eight Dam Removal Alternative. Flow conditions under the Interim Agreement are temporary in nature and are not part of the baseline evaluation for the Restoration Project. For these reasons, these changes are being disclosed for the public, but are not being incorporated into the summary table.

Topic	Five Dam Removal Alternative	Eight Dam Removal Alternative
Hydrology	The main difference between the two alternatives is flow level. The Five Dam Removal Alternative would have lower flows than the Eight Dam Removal Alternative.	The Eight Dam Removal Alternative would have higher flows than the Five Dam Removal Alternative and would more closely approximate natural conditions. It is possible that there are additional ecosystem benefits from more closely approximating natural flow conditions.
Passage—*fish ladders*	Under the Five Dam Removal Alternative, there would be more maintenance work required of fish screens and fish ladders.	Under the Eight Dam Removal Alternative, there would be less maintenance required because no fish screens and fish ladders would be constructed at the project sites.
Passage—*natural barriers*	Because of all the uncertainty associated with fish passage of natural barriers, it is difficult to determine if one alternative is better than the other. A natural barrier on the North Fork has been identified at interim flows that are similar to MOU flows. Different areas may act as barriers at higher flows rather than lower flows.	Because of all the uncertainty associated with fish passage of natural barriers, it is difficult to determine whether one alternative is better than the other, although the existing record (TRPA 1998b) and professional judgement suggests additional flow helps passage at naturally occurring low flow barriers. Different areas may act as barriers at higher flows rather than lower flows.
Uncertainties—*project long-term success*	There is greater uncertainty associated with the continued successful operation of the fish proposed passage facilities.	Because there would be fewer human-made facilities, there would be more certainty associated with this alternative.
Uncertainties—*MOU*	The MOU is complete and was signed in 1999 by the five signatories (U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, NOAA Fisheries, California Department of Fish and Game, Pacific Gas & Electric Company)	There is some uncertainty associated with whether a new MOU could be negotiated in a timely manner.
Schedule	The Restoration Project would be completed in August 2008.	The Restoration Project would be completed in July 2011.
Power	The forgone power costs have already been addressed in the draft EIS/EIR.	The forgone power costs would need to be accurately quantified, and the power would need to be appropriately replaced.
Project cost—*construction cost plus forgone power*	$~~213~~ 113 million	$~~211~~ 111 million