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TO: John Icanberry / USFWS
Steve Felte / Tri-Dam Project
FROM: Doug Demko
DATE: January 13, 2003
SUBJECT: Weir Project Update

This letter is to update you as to the status of the weir project titled *Test and Demonstrate a Portable Alaskan Weir to Count and Characterize Runs of Anadromous Salmonids in the Stanislaus River*.

Installation of the Stanislaus River weir began the day after the last permit was received, November 26, and was completed November 30. Once the weir was installed daily operation continued through December 19.

During the three week period of operation field efforts were focused on evaluating weir performance and functionality because we were not permitted by CDFG to trap or handle fish. We determined the weir operated well at flows ranging from 285 cfs to 525 cfs, however several modifications were made to the design to enhance performance over a range of flows, to increase safety, and to optimize passage conditions for river users.

Depth and velocity data collected at the site to guide weir design and construction indicated that at low flows the margins of the channel were not suitable for resistance board weir panels, so our original plan used rigid weir panels instead. Resistance board panels are preferred over rigid weir panels because they collect less debris, are easier to maintain, scour less, and are more resistant to high flows and heavy debris loads. Upon installation we found that resistance board panels would work across the entire wetted width of the channel at low flows, so the resistance board section of the weir was expanded to span the entire low flow wetted width of the channel. This required additional labor and the purchase of additional materials to construct the components needed to replace the fixed panels with resistance panels.

Our greatest challenge during the initial evaluation period was testing several boat passage alternatives, as our initial designs did not function as hoped. Agreements with the Army Corps of Engineers (ACOE) require us to test and provide safe and easy passage for all types of river users. After several days of testing we developed a functional configuration and are in the process of drafting

a report documenting the boat passage evaluations and describing the chosen alternative for the ACOE.

As required by the provisions of our CDFG permits we conducted daily snorkel surveys above and below the weir to determine if it was delaying salmonid migration. Surveys began before installation to document pre-project fish assemblages. No salmonids were observed during any of the snorkel surveys, however we did observe a few chinook while we were on-site performing other tasks. We observed one salmon encounter the weir and quickly find the opening to the trap/counting chute, indicating the opening to the trap is easy for fish to locate. The Stanislaus weir is the only weir I know of that uses floating bulkheads and a floating passing chute entrance, features intended to make it easier for fish to locate the entrance to the passing chute and livebox, thus reducing migration delays. I observed these features on separate weirs in Alaska and was impressed enough with the reasoning behind each feature that we incorporated both features into the Stanislaus weir.

We developed and distributed a “conservative” *Operations and Fish Handling Plan* (available on the website) back in September, and during two conference calls to discuss the plan CDFG provided only limited comments. All other agencies (e.g. NMFS, USACE, DWR, USBR, USFWS) approved of the sampling plan, and NMFS even commented that our procedures for steelhead were overly conservative. Although, based on our conference call discussions, we felt we had addressed all of CDFG’s concerns, our subsequent permits prevented us from trapping or handling fish. We did not feel that enumerating fish passing through the counting chute was an efficient use of funds, given it was near the end of the salmon run. Since we were not permitted to trap fish, had completed all evaluations allowed under the provisions of our permits, the permits issued by the CDFG were to expire on December 31, and flows were not forecasted to be outside of the range already evaluated, the weir panels were removed from the river on December 19.

A permit amendment was expected before the end of the year, as verbally communicated by CDFG on December 8. The amendment was intended to allow operation of the weir to continue under the provisions of the original permit, while a less restrictive amendment was being completed which would allow us to trap fish. The permit amendment was never issued. When we contacted CDFG at the beginning of January to inquire about the status of our permit amendments, they responded as though the inquiry was the initial request for an extension and permission to monitor during the spring.

Despite the difficulties we are continuing to work with CDFG and others to resolve the permitting issues, and expect permits with more reasonable provisions, including authorization to trap steelhead, will be issued this month. On January 9 CDFG requested that we re-state our goals, objectives, and proposed sampling plan specific to winter/spring 2003 operations to facilitate

discussion and resolution of contentious issues so new permits can be issued. This document will be completed early this week, and we will meet with CDFG and other agency representatives once Region 4 staff commits to a specific date and time. It is our desire to monitor during the winter months because this is when steelhead would be expected to migrate. Further, winter/spring flows should give us the opportunity to evaluate weir performance at higher flows than those already tested.

Over the last two months we also made significant changes to the website (www.stanislausriver.com). The Justification, Design and Operation, and Safety pages were completely redesigned to better communicate project information to visitors. The website is not a priority task and should be considered a work in progress.