



July 13, 2007

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
Mail Code: DHAC, PJ-12.3
888 First Street, NE
Washington, D.C. 20426

Re: FERC No. 2299-060 – Don Pedro Project, Tuolumne River Fisheries Study Plan

Dear Secretary Bose:

The Turlock Irrigation District and Modesto Irrigation District (Districts) provide this response to the letter of June 15, 2007 from George H. Taylor of the Commission (FERC) staff transmitting the Preliminary Staff Analysis (FERC Analysis) of the Fisheries Study Plan (Study Plan) submitted by the Districts on March 20, 2007. Page 8 of the FERC Analysis identified six remaining issues to be resolved in the Study Plan. The following are the Districts' comments on those issues, presented in the order of the Study Plan, i.e., Issues 1, 2, and 4 are addressed in Section I, Instream Flows; Issue 3 in Section II, Habitat Restoration; Issue 5 in Section III, Fry Survival; and Issue 6 in Section IV, Steelhead Presence/Protection; additional comments are provided on Section V, Predator Control. Enclosure A is the Study Plan (dated July 13, 2007) showing the corresponding revisions made to the March 20, 2007 version and Enclosure B is the Study Plan with the revision marks removed.

I. INSTREAM FLOW

Response to FERC Analysis Issue No. 1

“Provide flows higher than required by the settlement agreement at least once during next four years to produce smolt production data for high flow conditions (>4,000 cfs).” The Districts recognize there has already been three years of production data obtained with such high flow conditions using rotary screw traps in 1998, 2005, and 2006 (see Report 2006-5)¹. The California Department of Fish and Game (CDFG) conducted the first nine years of downstream screw trap monitoring (used for seasonal production estimates) from 1995-2003 and the Districts have conducted that monitoring in subsequent years. The three high flow years identified above are in Table 1 (1995 also

¹ There have also been four CWT smolt survival tests conducted at 4,000 cfs or more (in 1986, 1995, 1998, and 2005 - see Report 2006-6)

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had high flows, similar to 2006, but screw trap monitoring that year did not include most of April).

Table 1 Years with average April-May flows greater than 4,000 cfs and downstream screw trap monitoring.

Year	San Joaquin Valley Water Year Index (60-20-20)*	Water Year Classification*	Total Release at La Grange during April-May	Average Flow at La Grange during April-May
1998	5,655,700 AF	Median Wet/Maximum	543,600 AF	4,493 cfs
2005	4,758,600 AF	Median Wet/Maximum	568,300 AF	4,697 cfs
2006	5,899,100 AF	Median Wet/Maximum	924,500 AF	7,645 cfs

*See Don Pedro Project Fish Flow Procedure, Appendix A, 2005 Ten Year Summary Report.

The recommended average flow of 4,000 cfs for two months greatly exceeds the maximum annual volume of water under the existing 1996 FERC Order and would require 484 thousand acre-feet (TAF) for the 61-day period of April and May. The water provided during April-May for the wetter 50% of the water years under the existing flow schedules is 126 TAF. The 4,000 cfs average flow would require an additional 358 TAF, not including other added volume during the transition period to a lower flow rate. In addition to limitations on water availability due to basin hydrology, the river flow magnitude and timing are subject to the U.S. Army Corps of Engineers' (USACE) flood control requirements for the Don Pedro Project. The basin-wide coordinated operations and criteria associated with the Vernalis Adaptive Management Plan (VAMP) are also an important factor. For example, there is a 5,000 cfs limitation on San Joaquin River flows at Vernalis² while the Head of Old River Barrier (HORB) is being installed for approximately a 2-week period (usually early April) and a 7,000 cfs limitation on Vernalis flows during the following 31-day VAMP study period so as to not endanger the structural integrity of the HORB. As shown in Table 1, the Districts can, and do provide flows of 4,000 cfs or greater when flood management releases occur.

In consideration of the above factors, the Study Plan is revised to include the following:

“The Districts are willing to provide an average flow of 4,000 cfs or more during April-May of one year during the period 2008 through 2011, so long as all of the conditions set forth below are met:

² Vernalis flow consists of the combined flows from the Stanislaus, Tuolumne, Merced, and Upper San Joaquin Rivers and other local flow sources in the San Joaquin Valley.

- a. The estimated 60-20-20 Index (using 50% exceedence) for the then current water year based upon the California Department of Water Resources within-month March runoff forecast update following March 15 is at least 4.2, provided that (1) daily computed natural flows for both the Tuolumne and San Joaquin Rivers in excess of 50,000 cfs are excluded and (2) the Tuolumne River comprises at least 31% of the index.
- b. The 60-20-20 Index for the immediately preceding water year was at least 4.2.
- c. The target flow shall be subject to any flow and/or timing limitation required by the VAMP study.
- d. The target flow shall be subject to any flow and/or timing limitation required by the Corps of Engineers.

The target flow shall be 4,000 cfs and shall not be required to be higher than 4,000 cfs during the April-May test and may be reduced by conditions c) or d) above. For example, if the VAMP study parameters or the Corps of Engineers would allow only 3,000 cfs for 14 days, the reduced release volume over these 14 days shall not be additive to the 4,000 cfs target flow for any earlier or later period during the test.”

However, the Districts will attempt to provide the desired flows under their sole discretion, as otherwise feasible, even if the above specified conditions are not met.

Response to FERC Analysis Issue No. 2

“Continue discussions with TRTAC regarding cost and benefits of future coded-wire tag studies.” The Study Plan includes additional analysis of the most recent high flow smolt survival data collected in 2005 as well as further analysis of all CWT data collected to date at other recovery locations. The Study Plan also includes smolt and predator tracking studies that should provide insights to complement the CWT studies conducted to date. The Study Plan revision states: “The Districts will discuss the resulting survival vs. flow relationship at TRTAC meetings, as well as continue discussions regarding costs and benefits of future coded-wire tag studies.”³

Response to FERC Analysis Issue No. 4

“Provide assurance that proposed RST studies will address deficiencies in past studies.” The Study Plan revision states “Current RST protocols may be modified following TRTAC review and discussion of Agency concerns regarding efficiency tests and availability of test fish” and the same statement is added to the RST elements of Sections III and V of the Study Plan. However, the concerns expressed regarding past deficiencies are not entirely evident to us. CDFG conducted the screw trap monitoring in most of the years at the downstream location as part of the federal Comprehensive Assessment and Monitoring Program which had established RST protocols (CVPIA 1997). The Districts’ RST monitoring has continued to employ appropriate measures and has supplemented natural salmon efficiency releases with juvenile salmon from CDFG’s Merced River Hatchery depending upon their availability. As identified in Report 2006-4, some 66

³ As noted in previous filings to FERC, the Districts believe additional CWT smolt survival studies are not likely to provide further meaningful management information regarding mechanisms or particular flow thresholds.

efficiency releases had been conducted at the lower trap site near River Mile 5 during 1999–2006. The Districts are continuing to assess life stage production estimates during the RST monitoring periods of 1995–2007 and that information will be available for TRTAC review when completed.

II. HABITAT RESTORATION

As stated in prior filings with the Commission, the completion of additional projects of the magnitude selected by the TRTAC will require state and federal funds. The Districts will continue to make their best effort to complete the currently funded TRTAC restoration projects as feasible. The Study Plan revision states: “The Districts will continue to work collaboratively with the TRTAC to secure additional funding for remaining TRTAC-selected projects or to reprioritize or substitute projects based upon TRTAC determination.”

Response to FERC Analysis Issue No. 3

“Provide better justification for the short duration (1 to 2 years) of some habitat restoration studies or provide decision points that would be used to determine whether to terminate or continue a study.” Three years of spawning habitat utilization, two years of egg survival studies, and one year of emergence trapping are included in the Study Plan. It is recognized that project delays may compromise the planned studies. Decision points have been added to the Study Plan to delay the planned studies for a period of time if deemed necessary by the TRTAC. Decision points have also been added to the egg survival and emergence trapping studies to extend or terminate each of these studies based on determination by the TRTAC.

III. FRY SURVIVAL

The use of RSTs in tandem with beach seining provides temporal data (changes in daily RST recoveries) and spatial data (changes in the locations of peak seining densities) useful for examining fry production, distribution, and transport relative to flow.

Response to FERC Analysis Issue No. 5

“Come to agreement with the agencies as to how to assess the relationship between smolt movement and winter flow to minimize disagreement as to data interpretation after the data are collected.” Because the stated hypotheses regarding winter pulse flows were related to fry movement out of the gravel bedded reach, we interpret this comment to pertain to the relationship of “fry” movement and winter flow. Fry movement will be assessed by daily trap counts at both RST sites as well as biweekly seining surveys. The analysis of otoliths may provide information regarding periods of freshwater and estuarine residency as well as the contribution of fry production to subsequent adult returns. The Study Plan revision states: “The use and scheduling of winter pulse flows and additional study details, including data interpretation, will be discussed at the TRTAC meetings as needed.”

IV. STEELHEAD PRESENCE/PROTECTION

Additional analyses will be discussed as needed by the TRTAC as they might relate to potential protective measures.

Response to FERC Analysis Issue No. 6

"Include in the steelhead status studies a comparison of results (e.g., return rates and population status) from nearby rivers." The March 20, 2007 Study Plan under Item 4 on this issue stated: "To the extent feasible, pertinent steelhead data from nearby rivers will be used as a means of informing the development of potential restoration and management actions in the future." To the extent available and pertinent, the Districts will include comparisons of results from nearby rivers in its steelhead status studies.

V. PREDATOR CONTROL

The FERC Analysis identified a concern about the ability to discern swimming patterns of telemetered predator fish and smolts as part of the planned tracking studies. Ongoing tracking studies in the San Joaquin basin and Delta have shown movement patterns differ for predator fish, usually remaining in a home range or moving both upstream and downstream, whereas smolts tend to move downstream. The acoustic tags in these studies also provide a unique identification for each tagged smolt or predator fish.

In closing, we believe that the Study Plan as revised is responsive to the issues identified in the FERC Analysis and agree to address any remaining concerns and additional study details through the ongoing TRTAC process. We respectfully request that the Commission approve the Study Plan so that such work may proceed as identified in the plan.

Respectfully submitted,

MODESTO IRRIGATION DISTRICT



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TURLOCK IRRIGATION DISTRICT



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Enclosures:

- A –Tuolumne River Fisheries Study Plan (July 13, 2007) with revision marks
- B –Tuolumne River Fisheries Study Plan (July 13, 2007) complete with no revision marks.