



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Southwest Region  
777 Sonoma Ave., Room 325  
Santa Rosa, CA 95404-4731

October 17, 2011

**Kimberly D. Bose, Secretary**  
**Federal Energy Regulatory Commission**  
**888 First Street NE**  
**Washington, D.C. 20426**

RE: FERC Jurisdictional Review - La Grange Dam and Hydroelectric Facility

Dear Secretary Bose:

This letter responds to the Federal Energy Regulatory Commission's (Commission) correspondence of July 26, 2011, regarding the Commission's review to determine whether the La Grange Hydroelectric project (FERC No. UL 11-1-000) falls under the Commission's licensing jurisdiction pursuant to Part I of the Federal Power Act (FPA). We are concerned that this facility is being operated without required oversight and necessary measures to protect public trust resources. Therefore, to assist the Commission in its review, this letter outlines our concerns and provides specific information, pertinent to an FPA jurisdictional determination.

Pursuant to Section 23(b)(1) of the FPA, 16 U.S.C. § 817(1), the unlicensed construction and operation of a non-federal hydroelectric project is prohibited if it meets at least one of the following tests:<sup>1</sup>

- (1) occupies lands or reservations of the United States;
- (2) is located on "navigable waters of the United States";
- or**
- (3) is located on a non-navigable Commerce Clause stream, has undergone project construction or modifications other than routine maintenance on or after August 26, 1935, and affects the interests of interstate or foreign commerce; or
- (4) utilizes surplus water or water power from a Government dam;.<sup>2</sup>

<sup>1</sup> unless it has a still-valid pre-1920 federal permit

<sup>2</sup> 16 U.S.C. § 817(1). The post-1935 construction requirement stems from the specific language and legislative history of Section 23(b)(1). See *Farmington River Power Co. v. Federal Power Commission*, 455 F.2d 86 (2d Cir. 1972).



Consistent with the Federal Power Act, the Commission has jurisdiction over this project because it meets 3 of the above tests, any one of which is sufficient to confer mandatory jurisdiction. Specifically: 1) the La Grange Project occupies Federal lands or reservations; 2) the La Grange Project is located on a navigable waterway; and 3) if evidence of navigability is insufficient, evidence warrants a finding that the La Grange Project affects interstate commerce and has undergone project construction or modifications other than routine maintenance on or after August 26, 1935.

### **1. The La Grange Project Occupies Federal Lands**

The geographic information system (GIS) output, satellite imagery and mapping evidence contained in **Appendix 1** demonstrates that the reservoir of La Grange Dam inundates United States Department of Interior, Bureau of Land Management, lands. This occupation of federal lands creates mandatory jurisdiction. In its order licensing the Don Pedro Project, immediately upstream on the Tuolumne River, the Federal Power Commission found that a license was required because of the project's effect on public lands (*Turlock Irrigation District and Modesto Irrigation District*, 31 F.P.C. 510, 522 ("Construction, operation, and maintenance of the proposed Project No. 2299 would affect public lands of the United States. Consequently, under the provisions of Section 23(b) of the Federal Power Act, the applicants may not construct, operate, or maintain the proposed works upon those lands of the United States until they shall have received a license under the provisions of the Federal Power Act"). Accordingly, under Section 23(b)(1) of the FPA, 16 U.S.C. § 817(1) the La Grange Project must be licensed in order to continue operations.

### **2. The La Grange Project is located on a navigable waterway of the United States**

According to the historic record, commercial ferry traffic was a primary mode of transportation prior to the construction of La Grange Dam (Hoover et al. 1932). The following excerpted text, taken from: *The Big Oak Flat Road* (1955) by Irene D. Paden and Margaret E. Schlichtmann, describes the history of one of several such commercial ferry boat operation on the Tuolumne River:

*Mr. Deering's property was acquired by one, Charles Hoswell, who decided in his own mind that, as an institution, bridges were too transitory for the Tuolumne and made arrangements to start a ferry. Joseph G. Skinner, a local mechanic, built a suitable scow to be operated by pulling on a rope. Hoswell then personally shuttled it back and forth on a patch of clear water below the bridge site but above the white-water riffle where they still forded at low water. Indians with canoes of which we have never had an adequate description ferried occasionally at their own pleasure but Hoswell's was an all day, every day service during suitable river conditions. He also allowed the school to continue in his house as it had when the building belonged to James Deering.*



*.....The late Charles Schmidt, of Second Garrote, remembered Charlie Hoswell: "When I was sixteen," he said, "I used to haul freight into Yosemite with a six-horse team. I'd often start from Oakdale and go along the old route to Charlie's ferry. I had to pay two and a half to get my team across the river. Coming back, if the water was low and my wagon empty, I'd cross the riffles and save the toll. The miners had some row boats they used when the river was just too high to ford, but the Indians had much less trouble with their canoes than the miners with their boats."*

*Old-timers report that Charlie Hoswell did a thriving business, an optimistic estimate in which he did not share; but, until 1885, he continued to run the ferry"*

As additional evidence of commercial ferry boat operations, **Appendix 2** contains historic photos of commercial ferry traffic on the Tuolumne River, including a photo described as "near La Grange".

**3. If the Commission determines that the La Grange Project is not located on a navigable waterway, it would still meet the final test of jurisdiction expressed in Federal Power Act §23(b)(1) because it both: has undergone substantial project construction and modifications after August 26, 1935; and as a separate matter, "affects the interests of interstate or foreign commerce."**

**The La Grange Project has undergone post 1935 construction:** According to the Western Area Power Administration the La Grange project has undergone substantial post-1935 construction. The following text about the La Grange Powerhouse can be found on the web site of the Western Area Power Administration:

*"This powerhouse dates back to 1924, though little of the original equipment remains. It was overhauled and modernized in 1989 and underwent another upgrade in 1996 (underlined for emphasis). While the other three plants are on the district's irrigation canal network, the LaGrange turbines are propelled by water drawn from the canal system's diversion point on the Tuolumne River. The water flows back into the river after running through the powerhouse. La Grange has a capacity of 4.5 MW."*

([http://www.wapa.gov/es/pubs/esb/1999/99Oct/at\\_turlock.htm](http://www.wapa.gov/es/pubs/esb/1999/99Oct/at_turlock.htm))

**The La Grange Project impacts a species whose harvest and sale form the basis of interstate commerce.**<sup>3</sup> Specifically, the La Grange Project significantly affects the ocean Chinook salmon fishery, and will therefore affect commerce within the meaning of Section 23(b)(1) of the [Federal Power Act].<sup>4 5 6</sup> Central Valley Chinook salmon form part of a mixed

<sup>3</sup> 16 U.S.C. § 796.

<sup>4</sup> City of Centralia, Wash. v. FERC, 661 F.2d 787, 791 (9th Cir. 1981); Alaska Power Co., 82 FERC ¶ 61,331 (1998).

<sup>5</sup> See Fairfax County Water Authority, 43 FERC ¶ 61,062 at p. 61,166 (1988), and cases there cited; Habersham Mills v. FERC, 976 F.2d 1381, 1384 (11th Cir. 1992).



stock fishery, managed annually for commercial ocean harvest by the Pacific Fishery Management Council (PFMC). The PFMC makes management recommendations to NMFS for the salmon fisheries that extend between three to two hundred miles offshore (Federal Jurisdiction) of Washington, Oregon, and California, in accordance with the Pacific Coast Salmon Fishery Management Plan ("FMP") and the Magnuson-Stevens Fishery Conservation and Management Act of 1976.<sup>7</sup> Management measures are implemented by NMFS Northwest and Southwest Regional offices and enforced by the NOAA Office of Law Enforcement, the U.S. Coast Guard 11th District, and local enforcement agencies.

It may be impossible to determine, with a high degree of certainty, how many salmon the Tuolumne River would produce but for the impacts resulting from the La Grange Project, or for that matter, the Don Pedro-La Grange Complex. We do know however, that the Tuolumne River once supported one of the largest natural populations of fall-run Chinook salmon among the Central Valley tributaries (Yoshiyama et al. 2001, p. 102-103). Further, even under decades of severe habitat impairment imposed by the La Grange Project and the Don Pedro-La Grange Complex, past fall-run spawning escapements in the Tuolumne River during some years were larger than in any other Central Valley streams except for the mainstem Sacramento River, reaching as high as 122,000 spawners in 1940 and 130,000 in 1944 (DFG 1946; Fry 1961). In fact, over the past half-century the Tuolumne River has supported one of the largest natural populations of salmon in the Central Valley tributaries (DFG unpublished data (as found in Yoshiyama et al. 2001; USFWS 1995). Even at what is undoubtedly a small fraction of pre-La Grange levels, the Tuolumne River fall-run salmon at times comprised up to 12% of the total fall-run spawning escapement for the Central Valley (Reynolds and others 1993).<sup>8 9</sup>

The La Grange Project continues to adversely impact Chinook salmon in the Tuolumne River. The viability of Chinook salmon below La Grange dam is determined in significant part by hydrologic and geomorphic conditions below the dam; such conditions are strongly affected by the presence and operations of the La Grange Project and related facilities.<sup>10</sup> The implications of this are: 1) anadromous Tuolumne River Chinook salmon can no longer reach their historically utilized habitat in the upper Tuolumne watershed (due to La Grange dam); 2) Chinook salmon are restricted to lower Tuolumne habitats that were historically used as a migratory corridor by

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<sup>6</sup> City of New Martinsville, W. Va. v. FERC, 102 F.3d 567 (D.C. Cir. 1996).

<sup>7</sup> 16 U.S.C. §§ 1801-1882. PFMC

<sup>8</sup> In 1995 the Districts and other parties entered into the "New Don Pedro Proceeding P-2299-024 Settlement Agreement" (1995 Agreement). This agreement proposes a "strategy for recovery of Tuolumne River Chinook salmon" *below La Grange Dam*. The stated purpose of the 1995 Agreement is to "(1) increase naturally occurring Chinook salmon populations, (2) protect any remaining genetic distinction, and (3) increase the salmon habitat in the Tuolumne River." The Commission published a "Final Environmental Impact Statement: Reservoir Release requirements for Fish at the New Don Pedro Project, California" (July 1996) (FEIS). It analyzed the impacts of the proposed action and alternatives on the Chinook salmon fishery *below La Grange Dam*.

<sup>9</sup> 16 U.S.C. §1801 *et seq.*: CV fall/late fall-run Chinook salmon identified "Essential Fish Habitat" (EFH), (October 15, 2008 73 FR 60987), from LaGrange Dam downstream to the confluence with the San Joaquin River

<sup>10</sup> See: information (exhibits) referenced during the Proceeding on Interim Conditions before an Administrative Law Judge (ALJ Proceeding), pursuant to the Commission's *Order On Rehearing, Amending License, Denying Late Intervention, Denying Petition, And Directing Appointment Of A Presiding Judge For A Proceeding On Interim Conditions*, issued July 16, 2009. (P-2299-000, -053, -065)

juveniles migrating to the ocean and adults moving between the ocean and stream spawning habitat; and 3) maintenance of suitable conditions for Chinook salmon in the lower Tuolumne is dependent largely upon the design and operations of the Don Pedro and La Grange dams (and related facilities, such as diversions) that greatly influence summertime base flows, stream temperatures, geomorphic conditions, and other factors for some distance downstream.

Regarding passage, none of the La Grange Complex facilities appear to have been constructed with provisions for safe and effective fish passage. Some blockage of salmon runs in the Tuolumne River by mining dams appears to have begun in the 1850's, with significant blockage in the 1870s when various dams and irrigation diversions were constructed (Yoshiyama et al. 2001, p. 101). The Wheaton Dam, built in 1871 at the site of present-day La Grange Dam, may have blocked the salmon to some degree, but total blockage of salmon runs to the upper Tuolumne River occurred with the completion of La Grange Dam (Yoshiyama et al. 2001, p. 101). Today, the La Grange Project blocks upstream passage of anadromous fishes, and prevents or seriously impedes safe and effective downstream fish passage.

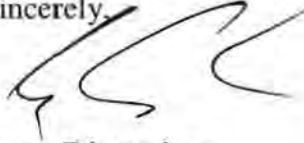
The La Grange Project (including its water diversion capability for both Turlock and Modesto Irrigation District) also exerts direct effects on lower Tuolumne flows, temperatures, sediments, large wood, and other conditions that affect anadromous fishes (including ESA-listed species). It is not possible for spawning gravels or other coarse substrates (e.g. gravel or cobble, as bedload) to pass the La Grange Dam. La Grange Dam traps all coarse sediment, and surveys of the channel downstream of La Grange Dam indicate channel downcutting, widening, armoring, and depletion of sediment storage features (e.g., lateral bars and riffles) due to sediment trapping (Don Pedro Hydroelectric Project, P-2299-075, PAD, p. 5-14). Bedload impedance reaches, defined as locations where current hydraulic conditions are insufficient to transport coarse bed material through the reach, were identified from La Grange Dam to the confluence of the San Joaquin River (Don Pedro Hydroelectric Project, P-2299-075, PAD, p. 5-14).

Further evidence of the direct impacts of the La Grange Project on Chinook salmon, is contained in **Appendix 3**, which includes correspondence between the Turlock Irrigation District and the California Department of Fish and Game documenting the adverse impacts of maintenance operations at the La Grange Project on Chinook salmon.

Thank you for the opportunity to participate in the Commission's Jurisdictional review. We look forward to working with the Commission and its applicants on this and other proceedings effecting NMFS Trust Resources.

If you have questions about NMFS' response, please contact Mr. Larry Thompson, NMFS, at 916-930-3613.

Sincerely,

A handwritten signature in black ink, appearing to read 'Steve Edmondson', with a stylized, sweeping flourish at the end.

Steve Edmondson  
Northern California Habitat Manager  
Southwest Region  
National Marine Fisheries Service

cc: Maria Rea, NMFS Sacramento, CA  
Rhonda Reed, NMFS Sacramento, CA  
Monica Gutierrez, NMFS Sacramento, CA  
Brian Ellrott, NMFS Sacramento, CA  
Rick Wantuck, NMFS Santa Rosa, CA  
Dr. Henry Ecton PhD., FERC, Washington, DC

## References

Blakeman, D. 2005. Tuolumne River Chinook Salmon Spawning Escapement Survey Federal Energy Regulatory Commission Annual Report FERC Project #2299, Report 2004-2.

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Hoover, M. B. Rensch, H.E. Rensch, E.G. Abeloe, W.E. 2002. *Historic Spots in California*. (fifth ed.). Stanford University Press, Stanford Cal.

Inland and Anadromous Sport Fish Management and Research. Project F-51-R-1. Job 2. 34pp.

Niellands, W. George, Shiba, S., Baumgartner, S., Kleinfelter, J. 1993. Annual Performance Report.

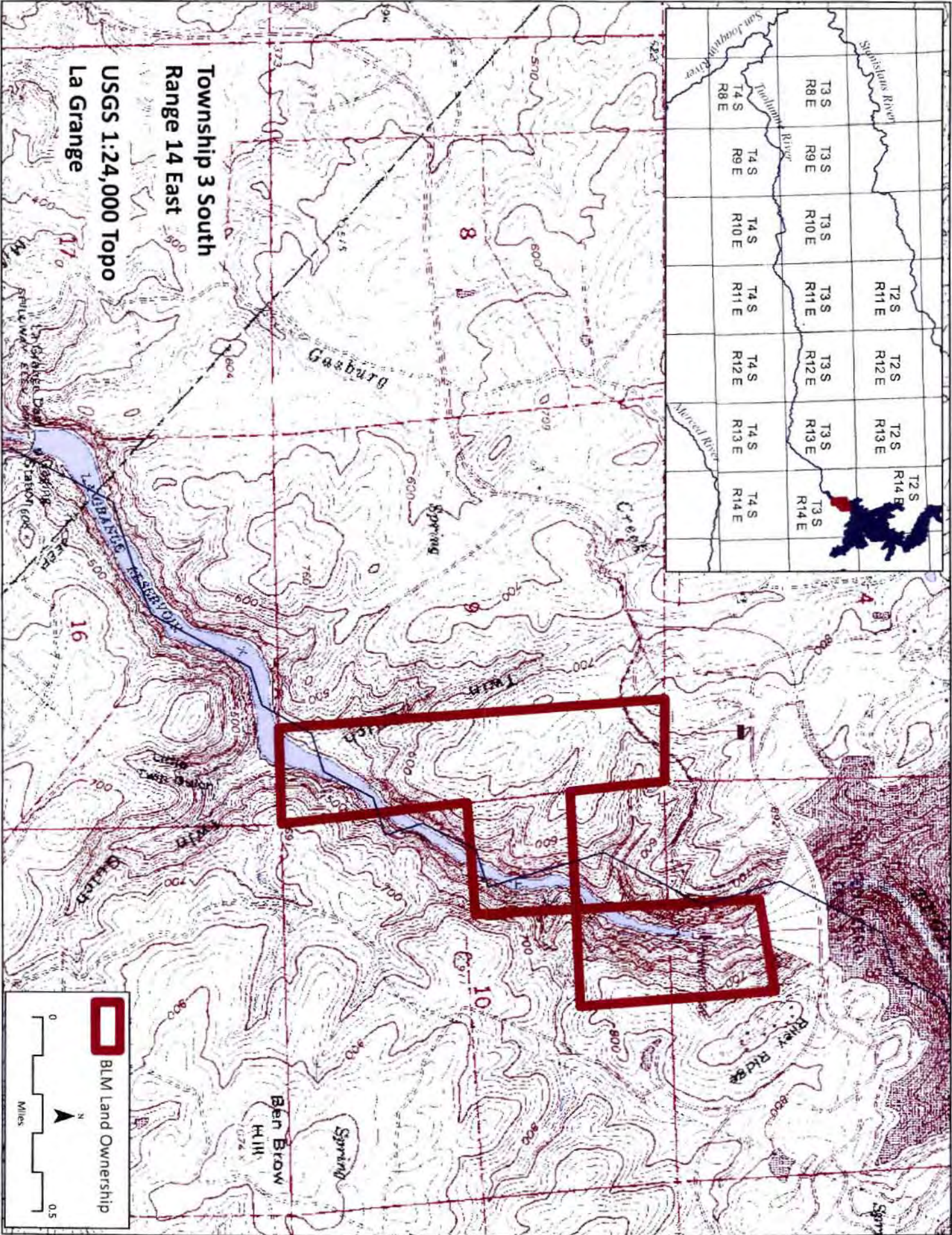
Seber, G. A. F., 1973, Estimation of animal abundance and related parameters, Griffin, London, 506pp.

Vasques, J. 2001. 2000 Tuolumne River Chinook Salmon Spawning Escapement Survey. Federal Energy Regulatory Commission Annual Report FERC Project #2299, Report 2002-2.

## **Appendix 1.**

Map of BLM Lands Inundated by La Grange Reservoir and Google Earth Map – Aerial  
View of La Grange Project with Overlay of BLM Lands









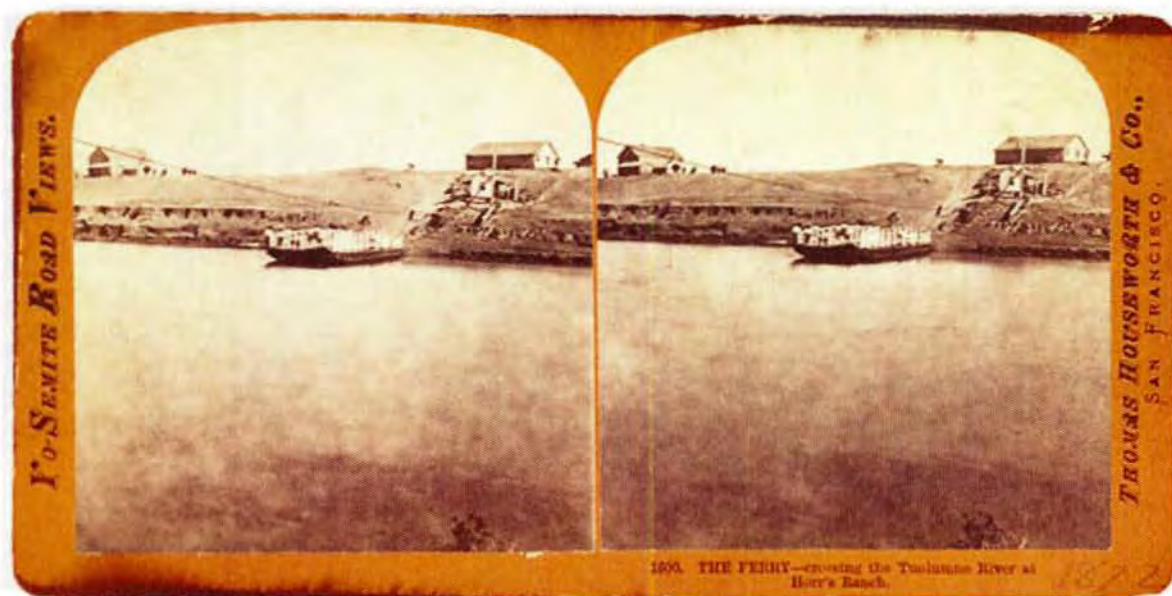
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Image © 2011 GeoEye

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## **Appendix 2.**

Historic Photographs and Lamp Slides, Documenting Commercial Ferry Traffic on the  
Tuolumne River.



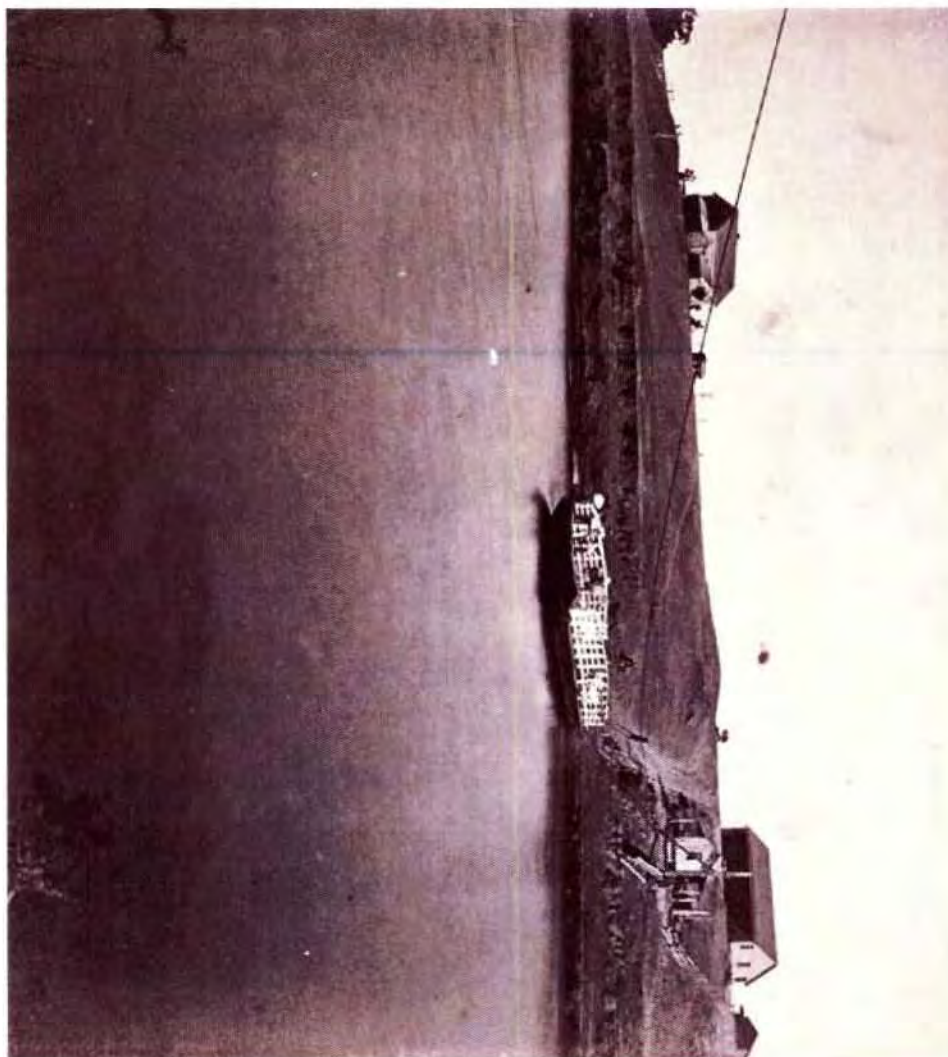


*P.O. SENITE ROAD VIEWS.*

*THOMAS HOUSEWORTH & Co.,  
SAN FRANCISCO.*

1000. THE FERRY—crossing the Tuolumne River at  
Herr's Ranch.

1600. The Ferry crossing the Tuolumne River at Hor's Ranch.



1599. The Ferry crossing the Tuolumne River at Horr's Ranch.







tuolumne ferry

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Courtesy of Bancroft Library, Bancroft Library

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**Title:** Ferry across the Tuolumne River near La Grange -Reichling, photographer

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## Magic Lantern Slides - Berkeley Geography Collection

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Tuolumne River ferry near Waterford, Stanislaus County.



Click the image to see a larger version.

Caption/comments

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### **Attachment 3**

**Correspondence between Dr. Jeffrey Single of the California Department of Fish and Game and Mr. Larry Weis of the Turlock Irrigation District**



**TURLOCK IRRIGATION DISTRICT**  
 333 EAST CANAL DRIVE  
 POST OFFICE BOX 949  
 TURLOCK, CALIFORNIA 95381  
 (209) 883-8300



November 12, 2009

Dr. Jeffrey Single  
 California Dept. of Fish and Game  
 1234 E. Shaw Ave.  
 Fresno, CA 93710

RE: August 19, 2009 DFG Correspondence: Tuolumne River Water Diversion at La Grange Powerhouse (copy attached)

Dear Dr. Single:

The Turlock Irrigation District received your letter on August 27, 2009 concerning a salmon issue near La Grange Powerhouse described by CDFG biologists that occurred in early November 2008. We appreciate you bringing this matter to our attention as we were unaware in 2008 of the issues that your letter described and assure you that both Districts take the fishery issues and river operations seriously. Please be advised that we have adjusted our practices as a precautionary measure and are contemplating further steps (as referenced later in this letter) in an attempt to guard against a future reoccurrence.

The operation occurring last November was a temporary transfer of the river flow source due to the need for dewatering of the La Grange Forebay to allow inspection and repair of the TID tunnel, main canal gates, and other associated facilities. That is normally done on an annual basis unless otherwise required by emergencies.

We were indirectly made aware of the concerns identified in your August 2009 letter with a filing made to FERC in June 2009 by the Conservation Groups that contained the CDFG Draft 2008 Escapement Survey Report. It is not clear to us why CDFG had not also provided that report to the Districts, particularly in light of our prior request for the report in March.

More troubling, however, is why DFG chose not to bring its concern to our attention when it was first discovered. According to your letter, CDFG biologists made repeated visits to the site during the first week of November but failed to bring the matter to the attention of any of our on-site personnel (a District residence is located near the powerhouse) or contact our staff biologist. Consequently, there was no opportunity to determine if any immediate or near-term adjustments on our part were feasible. It strikes us that if our operations were jeopardizing any adult salmon or the welfare of their redds that CDFG would want to notify us immediately to see if the situation could be rectified. Despite the many statements of concern regarding the health of the fishery issued by CDFG over the years, it almost appears in this instance that instead of working cooperatively with the Districts to immediately address a potential problem CDFG was more interested in pursuing collection of information for the purpose of later criticizing the Districts' operations.

Dr. Jeffrey Single  
November 12, 2009  
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There is also considerable confusion about past CDFG references to the subject site, variously described in your letter as the "east channel", "powerhouse channel", or "Riffle A1", based on review of CDFG spawning survey information over the last ten years. That channel, also known by us as the tailrace, had long been designated Riffle A1A in the Districts' River GIS mapping. That location was not reported by CDFG as being surveyed for salmon usage in 1999 and 2000 spawning reports. In 2001, CDFG changed their naming conventions for the riffles throughout the river and the CDFG Tuolumne River Riffle Atlas provided to the Districts depicts Riffle A1 as being at a different location about 0.3-miles further downstream (site of Riffles A3/A4 in Districts River GIS), with no designation for the tailrace. Subsequent CDFG spawning reports had various names and changes identified, using A1A, A1, 1A, 1a, A1n, A1s, and in any event having no redd counts listed in some cases. Consequently, it had been our biological staff and consultants understanding that the "tailrace" location was either not being surveyed by CDFG due to lack of salmon spawning or that any spawning in that area was none or minimal.

Based on the information reported in 2009 by CDFG, our engineering staff is making an initial review of potential options to avoid this fishery issue in the future. For now, we do not plan to repeat the November 2008 operation this year and are considering other potential time periods. However we will continue to need to conduct facility inspections or other maintenance activities that will necessitate the temporary transfer of river flow source from the La Grange Forebay. Our recent field survey data indicates we may wish to explore a physical solution with you that might involve a Section 1600 Agreement with your Department. We will contact your office to further discuss operational and physical options to avoid any potential adverse fishery impacts when additional information is available.

If you have any questions, please contact me at 209-883-8255.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Barton", is written over a horizontal line.

Jeff Barton  
Assistant General Manager  
Civil Engineering and Water Operations

Dr. Jeffrey Single  
November 12, 2009  
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C: Larry Weis - TID  
Roger Masuda – Griffith & Masuda  
Allen Short – MID  
Greg Dias – MID  
Walter Ward – MID  
Tim O’Laughlin – O’Laughlin & Paris  
Dean Marston – CDFG  
Tim Heyne – CDFG  
Philip Scordelis – FERC, San Francisco  
Donn Furman – CCSF  
Zachary Jackson – USFWS/AFRP  
Deborah Giglio – USFWS  
Erin Strange – NMFS  
Dave and Allison Boucher – FOT  
Cindy Charles – GWWF  
Senator Jeff Denham  
Senator Dave Cogdill  
Assembly Member Cathleen Galgiani  
Assembly Member Bill Berryhill  
Assembly Member Tom Berryhill





California Natural Resources Agency  
 DEPARTMENT OF FISH AND GAME  
 Central Region  
 1234 East Shaw Avenue  
 Fresno, California 93710  
<http://www.dfg.ca.gov>

ARNOLD SCHWARZENEGGER, Governor

DONALD KOCH, Director



August 19, 2009

Larry Weis  
 General Manager  
 Turlock Irrigation District  
 Post Office Box 949  
 Turlock, California 95381-0949

Subject: Tuolumne River Water Diversion at La Grange Powerhouse

Dear Mr. Weis:

During the 2008 annual Chinook salmon escapement survey, Department of Fish and Game biologists observed an alteration of river flow resulting from the rerouting of water at the La Grange powerhouse.

Typically in dry years, water released from the La Grange reservoir travels via a Turlock Irrigation District (TID) canal until it reaches the La Grange powerhouse. A portion of that water is then run through the powerhouse and continues downstream in the Tuolumne River along the "powerhouse" channel. Water flowing into the powerhouse channel is supplied entirely from the TID canal during dry water years. (Figures 1 and 2). The powerhouse channel converges with the "west" channel approximately a quarter of a mile downstream of the La Grange Dam. The west channel originates directly below the La Grange Dam, and had minimal flow supplied predominately from water seepage through the dam prior to the alteration of river flow (Figures 1 and 2).

During the November 4, 2008 escapement survey, Department biologists observed that the TID powerhouse was shut down. As a result, flows in the powerhouse channel were significantly reduced. Water entering the Tuolumne River below the La Grange Dam was being rerouted through the Modesto Irrigation District (MID) canal and released down the hillside into the west channel. The rerouting of water isolated the powerhouse channel from the flow, potentially de-watering redds that had been observed during the previous weeks' surveys (Figure 3).

*Conserving California's Wildlife Since 1870*

Larry Weis  
August 19, 2009  
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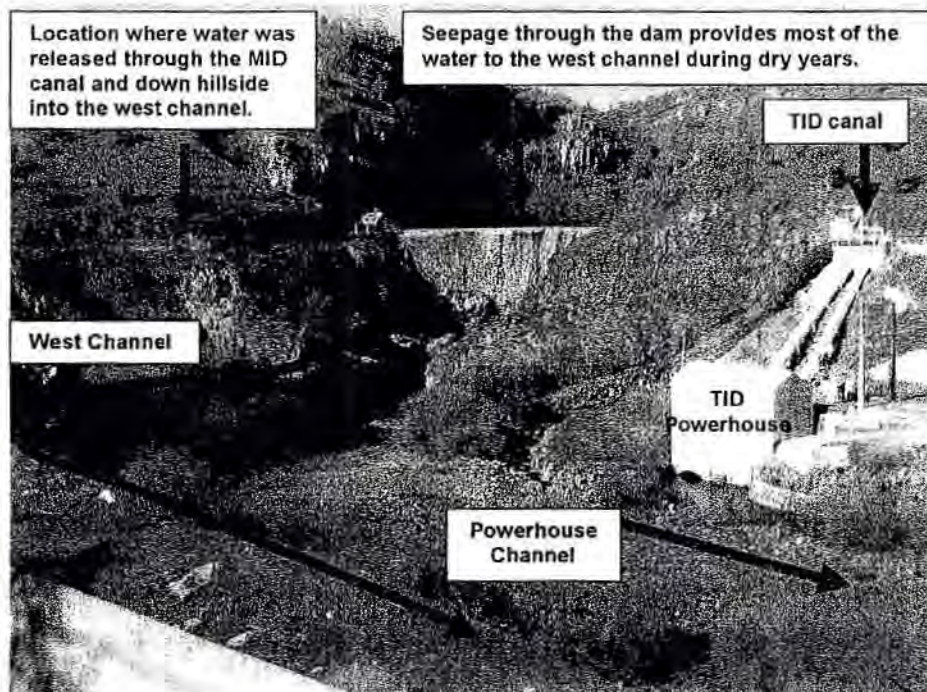


Figure 1. Upstream view of MID and TID canals showing the direction of water flow into the west channel and powerhouse channel during dry water years. March 12, 2009.

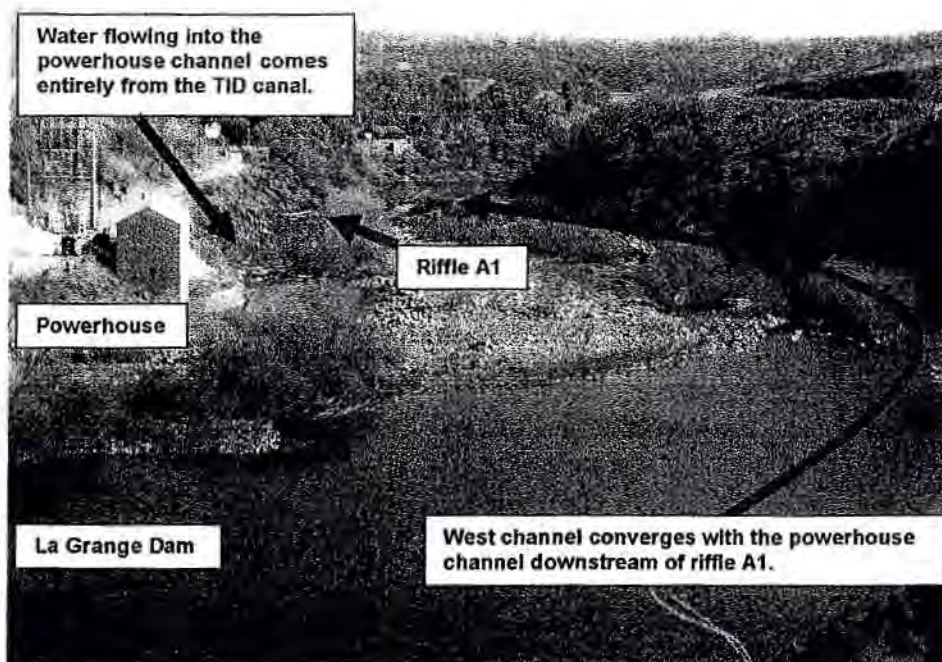


Figure 2. Downstream view taken during spawning flows showing the junction of the Powerhouse channel and west channel near riffle A1. March 12, 2009.



Larry Weis  
August 19, 2009  
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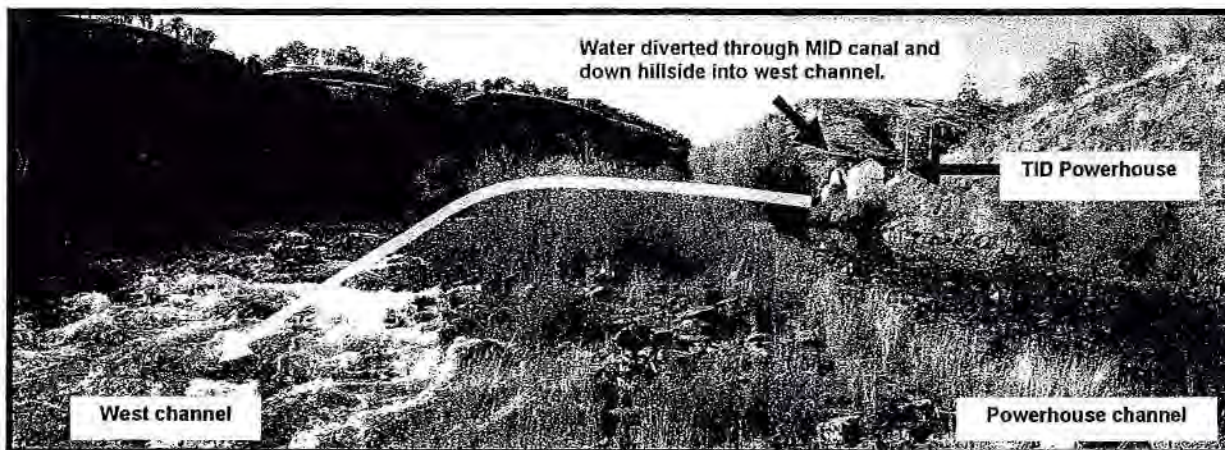


Figure 3. November 6, 2008. Water diverted through MID canal and down hillside into the west channel. The shutdown of the powerhouse resulted in the alteration of river flow to the powerhouse channel. The yellow arrow indicates the direction of water flowing from the MID canal and down the hillside into the west channel.

Surveys conducted on riffle A1, which is located in the powerhouse channel immediately downstream of the La Grange powerhouse (Figure 4), documented redds and spawning activity beginning on October 22 for the 2008 escapement survey season. Prior to the rerouting of water, ten live fish and three visible redds were observed in riffle A1 (October 22) while the number of redds increased to seven the following week when the section was surveyed on October 28. Following the rerouting of water during the November 4 survey, the number of redds decreased to five, and three live fish were observed in the powerhouse channel with minimal flow. A female carcass that appeared to have spawned was recovered, tagged, and released back into the river (Figures 5 and 6).

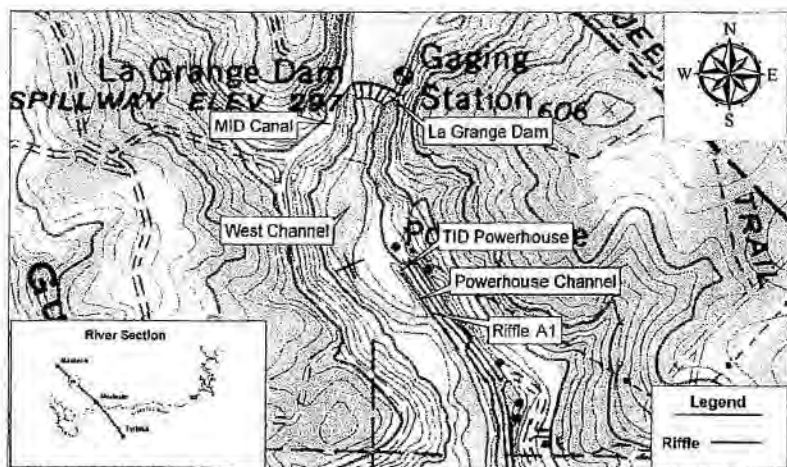


Figure 4. Location of riffle A1 within the Powerhouse channel.



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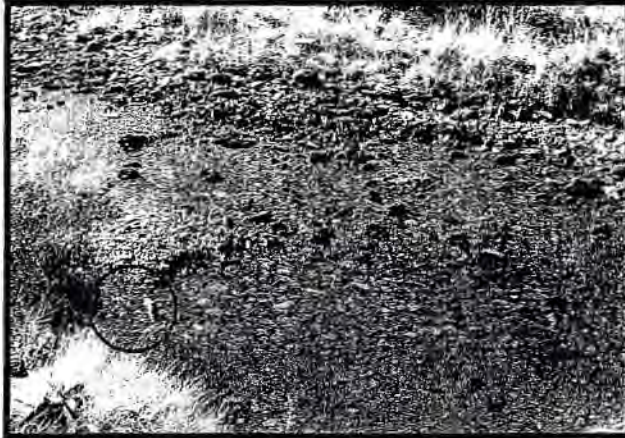


Figure 5. Redd location and a female carcass in the powerhouse channel with minimal flow following the re-routing of water during the November 4, 2008 survey.

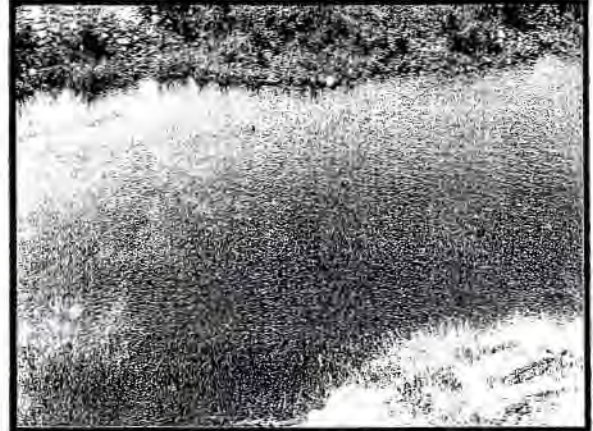


Figure 6. Comparison of redd location in the powerhouse channel while the powerhouse is operational and water enters the channel via the TID canal. (169 cfs based on USGS La Grange flow gage data). December 12, 2008.

On November 6, 2008 Department biologists returned to the site to assess potential impacts on Chinook salmon and the previously identified redds. After TID rerouted the water, the flow was predominately in the west channel. The powerhouse channel had little flow and was mostly stagnant consisting of intermittent pools separated by dry sections (Figures 7 and 8). One redd was easily distinguishable; however, it was difficult to clearly identify any additional redds due to overgrown algae and exposed gravel. It is unclear whether some of the previously identified redds had been left dry and exposed to air when the flow was rerouted. Measurements were taken to compare variations in temperature between the powerhouse channel and the west channel. Powerhouse channel temperatures were taken in the general location where redds had been observed, approximately 75 feet upstream of where it converges with the west channel. The powerhouse channel temperature was recorded at 15°C, as compared to the west channel temperature of 11.5°C. (The thermal limit for successful egg incubation is 13.3°C.) A flowmeter was used to measure the flow rate of water passing through the powerhouse channel. Measurements were taken in one foot increments across the width of the powerhouse channel in the location where redds had been documented. The flow rate averaged 0.35 cubic feet per second (cfs) in the powerhouse channel. Obtaining precise measurements from flows of such low velocity is difficult; therefore, it was estimated that the flow rate in the powerhouse channel was less than 1 cfs. The USGS La Grange flow gage is located downstream of where the powerhouse and west channels converge. The November 6, 2008 flow rate recorded at the La Grange flow gage was 163 cfs. No live fish were observed utilizing the powerhouse channel on November 6.



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Figure 7. Powerhouse channel after the re-routing of water. Partially dry with intermittent pools. November 4, 2008.

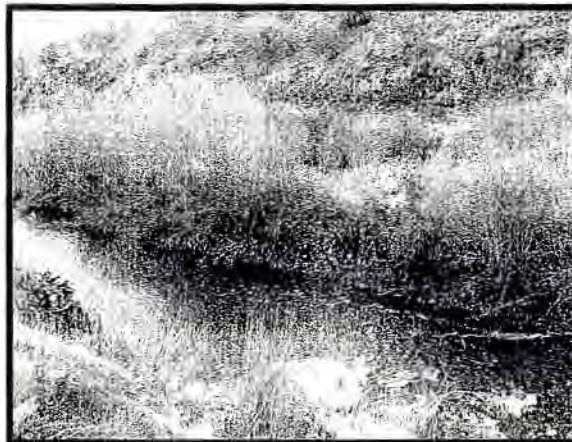


Figure 8. Comparison of powerhouse channel during normal flow. (169 cfs based on USGS La Grange flow gage data). January 15, 2009.

When Department biologists returned to the site on November 7, it appeared that work on the powerhouse had been completed. Water that had been rerouted through the MID canal was once again traveling downstream along the pathway through the TID canal into the powerhouse channel. Salmon were observed spawning again in riffle A1 after the flows were returned to the powerhouse channel. The November 12 carcass survey documented the presence of six live fish and seven redds in riffle A1. The number of live fish increased to nine the following week when the section was surveyed on November 17. Figures 9 and 10 show a comparison of typical and altered flows in the west and powerhouse channels.

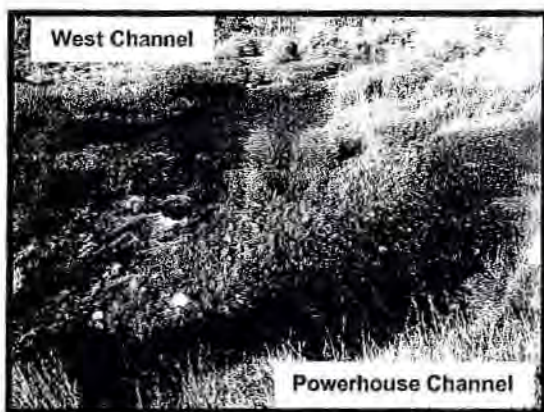


Figure 9. Comparison between the west and powerhouse channels during the re-routing of river flow. November 6, 2008.

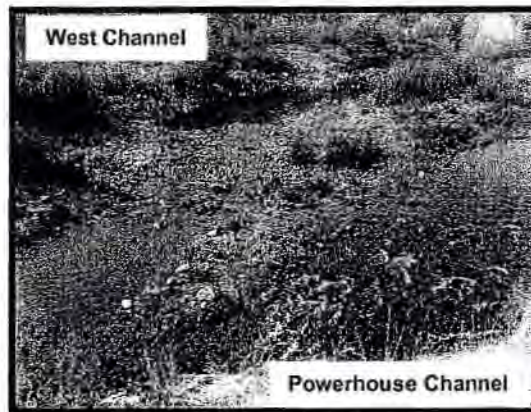


Figure 10. Comparison of flow between the west and powerhouse channels during normal flow. December 12, 2008.

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Annual carcass surveys document that Chinook routinely utilize riffle A1 in the powerhouse channel for spawning year after year. Fish and Game has observed the irrigation districts performing maintenance near the powerhouse during past years' spawning seasons, resulting in the alteration of channel flow and occasionally stranding Chinook. Department personnel have conducted fish rescues in the past when Chinook have become stranded in the bypass channel during powerhouse maintenance activities.

Changes to spawning habitat within riffle A1 potentially impact the survivability of eggs. With the current trend of severely declining population numbers, any impact to redds could have a significant effect on the overall number of juveniles outmigrating in the spring and thereby reducing future adult escapements. Partial or total dewatering of the wetted channel could constitute a violation of the State of California Fish and Game Code (e.g., Sections 1600 and 5937). To avoid future occurrences of this dewatering issue, and to avoid adverse impacts to sensitive fish species, the Department would appreciate prior notification well in advance of the need to conduct maintenance activities. The Department can provide recommendations to the Districts concerning the scheduling of maintenance activities so that work is conducted at times of the year that prevent, or preclude, substantive biological impacts from occurring.

The Department appreciates TID efforts to review our concerns. If you have any questions or need additional information regarding this issue please contact Ms. Jennifer O'Brien, Fisheries Biologist or Mr. Tim Heyne, Senior Biologist Supervisor, at Post Office Box 10, La Grange, California 95329 or at (209) 853-2533.

Sincerely,



Jeffrey R. Single, Ph.D.  
Regional Manager

cc: See Page Seven



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Central Region

Enclosure A

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Turlock and Modesto Irrigation Districts	)	
LaGrange Dam and Hydroelectric Project	)	Project No. UL 11-1-000
New Don Pedro Hydroelectric Project	)	Project No. 2299-075
<u>Tuolumne River</u>	)	

CERTIFICATE OF SERVICE

I hereby certify that I have this day served, by first class mail or electronic mail, a letter to Secretary Bose of the Federal Energy Regulatory Commission from the U.S. Department of Commerce's, National Oceanic and Atmospheric Administration's, National Marine Fisheries Service containing our concerns and provides specific information, pertinent to a Federal Power Act jurisdictional determination regarding the LaGrange Dam and Hydroelectric Project, and this Certificate of Service upon each person designated on the official service list compiled by the Commission in the above-captioned proceeding as well as the Service list for the New Don Pedro Hydroelectric Project, FERC No. 2299-075.

Dated this 18th day of October 2011



William E. Foster, M.S.  
National Marine Fisheries Service



Document Content(s)

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