

Draft

Project No. 2299

## 2006 Annual Summary Report

- Exhibits: Spawning run estimates, Ocean catch data, and Delta salmon salvage data

Attachment A: Water, Flows, Temperature, and Flow Schedule Correspondence

Attachment B: 2006 Technical Advisory Committee Materials

Report 2006-1: 2005 and 2006 Spawning Survey Reports

## Report 2006-2: Spawning Survey Summary Update

Report 2006-3: 2006 Seine/Snorkel Report and Summary Update

Report 2006-4: 2006 Rotary Screw Trap Report

## Report 2006-5: Rotary Screw Trap Summary Update

## Report 2006-6: Coded-wire Tag Summary Update

Report 2006-7: Survival to Emergence Study Report

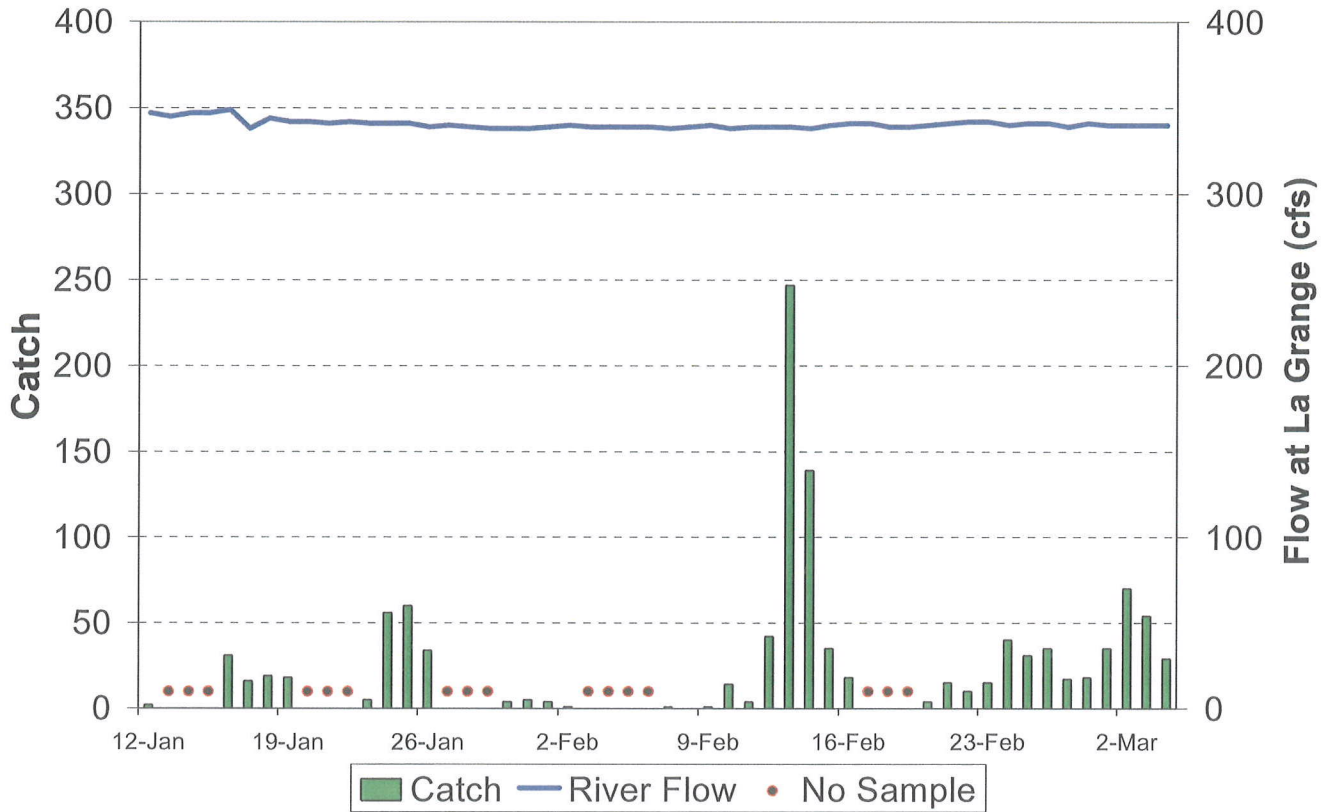
Report 2006-8: Special Run Pool 9 and 7/11 Reach: Post-Project Monitoring Synthesis Report

Report 2006-9: Lower Tuolumne River Predation Assessment Final Report

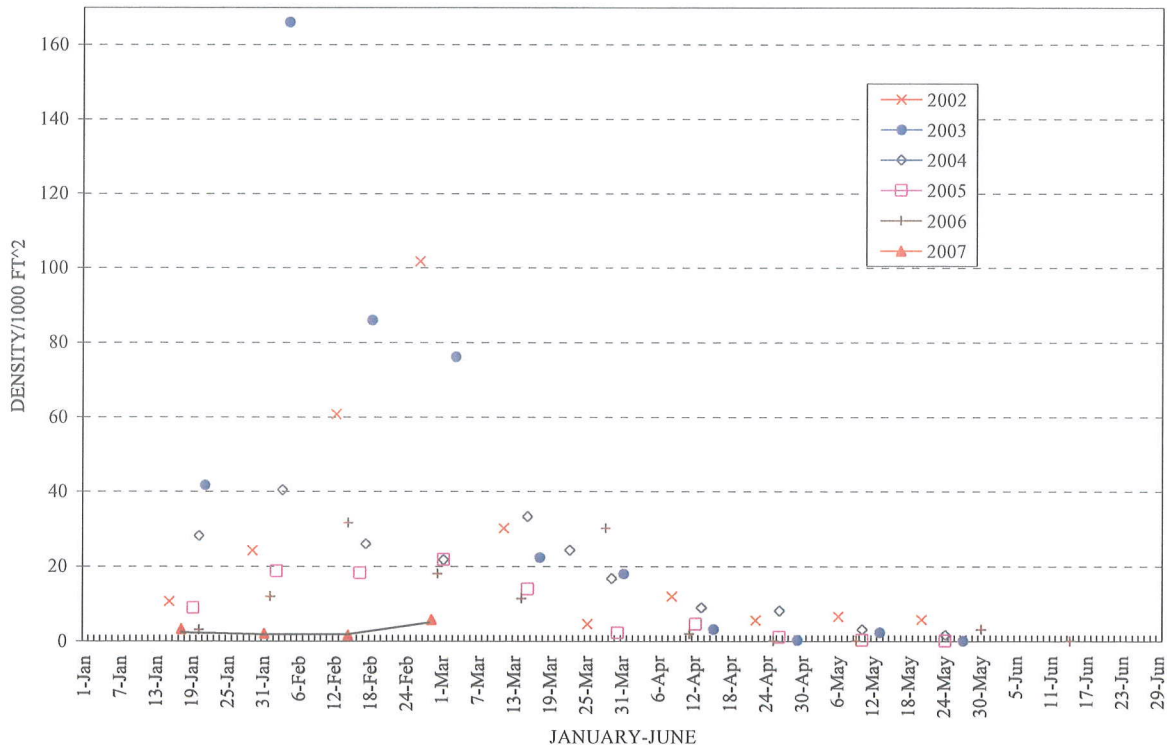
Report 2006-10: La Grange Gravel Addition Project Phase II 2000-2003 Report

Report 2006-11: La Grange Gravel Addition Project Phase II Geomorphic Monitoring Report

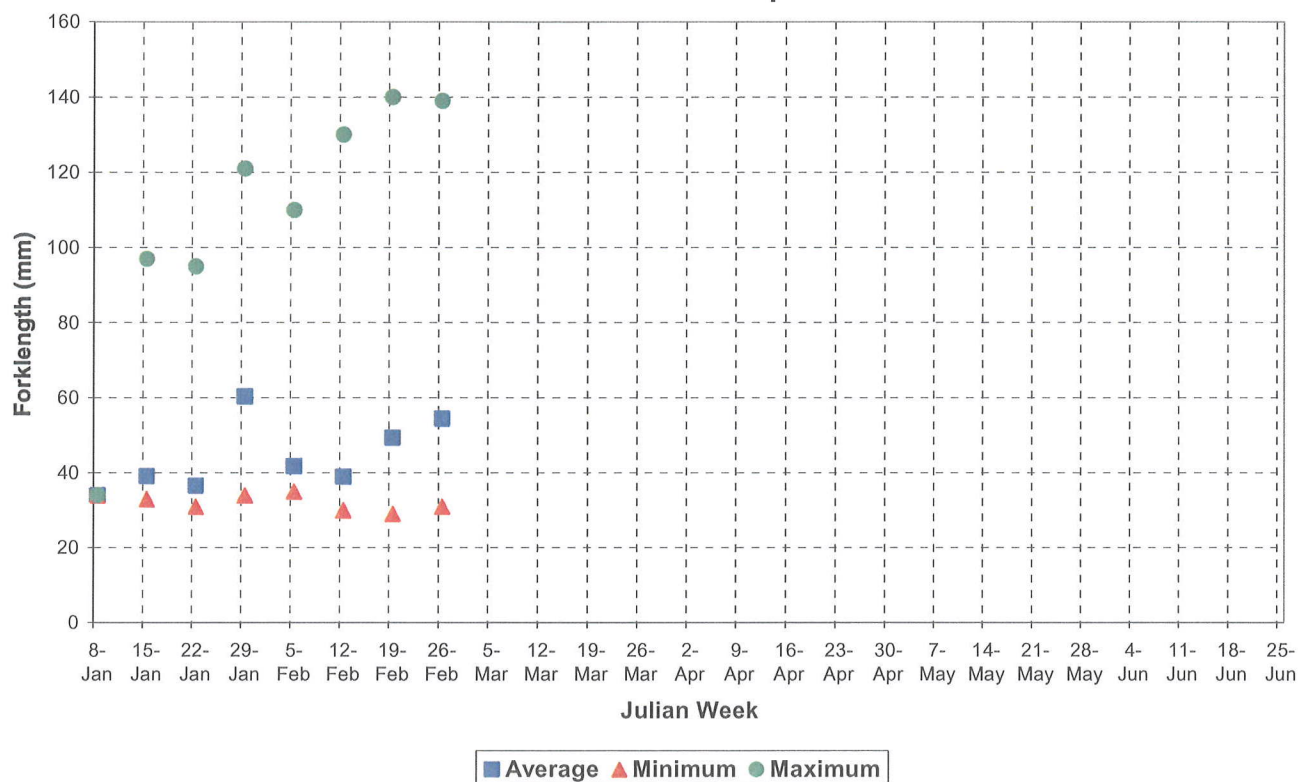
# 2007 Chinook Catch at Waterford and River Flow at La Grange



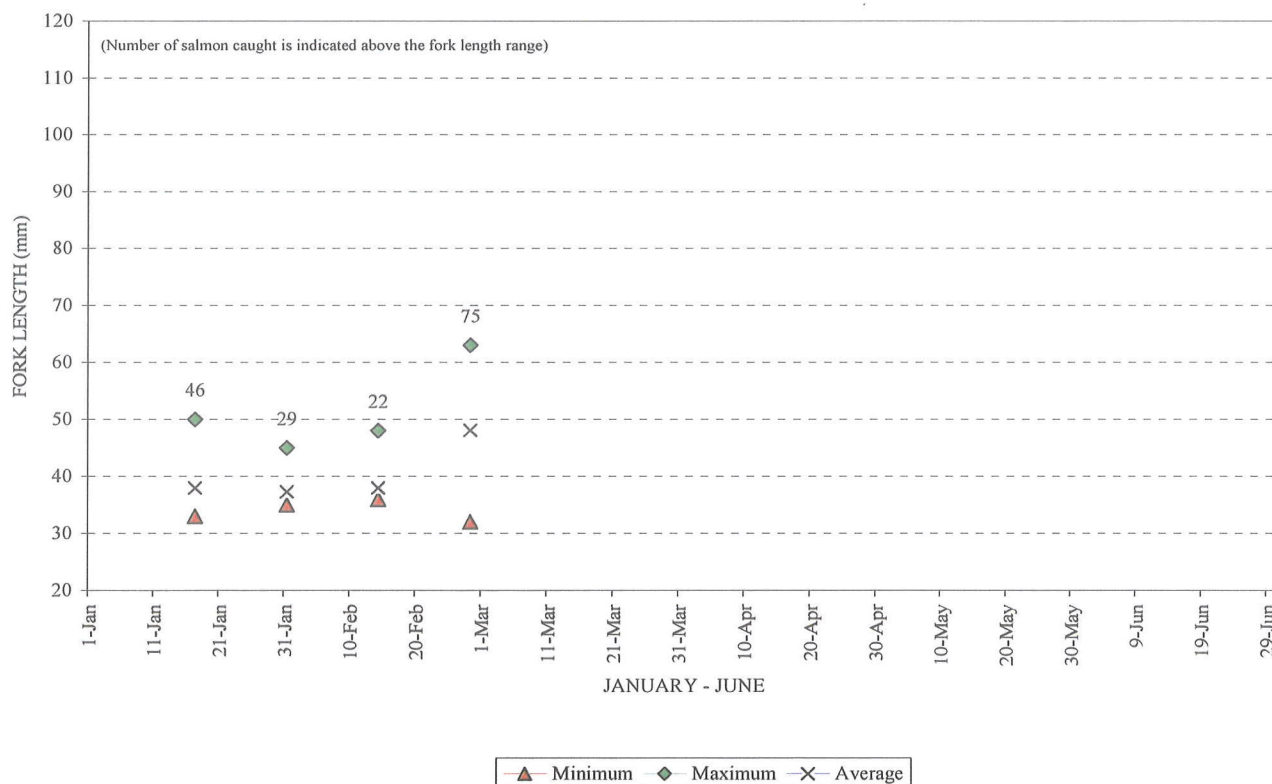
## 2002-2007 TUOLUMNE RIVER SEINING COMBINED FRY AND JUVENILE SALMON DENSITY INDEX



# Weekly Average, Minimum and Maximum Lengths of Juvenile Chinook at Waterford Screw Trap - 2007



## TUOLUMNE RIVER JUVENILE SALMON STUDY 2007 SEINING



TUOLUMNE FERC SETTLEMENT AGREEMENT FLOW SCHEDULE

Schedule	Days	Critical & Below	Median Critical	Intermediate C-D	Median Dry	Intermediate D-BN	Median Below Normal	Intermediate BN-AN
<b>Occurrence</b>		<b>6.4%</b>	<b>8.0%</b>	<b>6.1%</b>	<b>10.8%</b>	<b>9.1%</b>	<b>10.3%</b>	<b>15.5%</b>
Oct 1 - 15	15	100 cfs 2,975 ac-ft	100 cfs 2,975 ac-ft	150 cfs 4,463 ac-ft	150 cfs 4,463 ac-ft	180 cfs 5,355 ac-ft	200 cfs 5,950 ac-ft	300 cfs 8,926 ac-ft
Attraction Pulse Flow		none	none	none	none	1,676 ac-ft	1,736 ac-ft	5,950 ac-ft
Oct 16 - May 31	228	150 cfs 67,835 ac-ft	150 cfs 67,835 ac-ft	150 cfs 67,835 ac-ft	150 cfs 67,835 ac-ft	180 cfs 81,402 ac-ft	175 cfs 79,140 ac-ft	300 cfs 135,669 ac-ft
Outmigration Pulse Flow		11,091 ac-ft	20,091 ac-ft	32,619 ac-ft	37,060 ac-ft	35,920 ac-ft	60,027 ac-ft	89,882 ac-ft
June 1 - Sept 30	122	50 cfs 12,099 ac-ft	50 cfs 12,099 ac-ft	50 cfs 12,099 ac-ft	75 cfs 18,149 ac-ft	75 cfs 18,149 ac-ft	75 cfs 18,149 ac-ft	250 cfs 60,496 ac-ft
Volume (ac-ft)	365	94,000	103,000	117,016	127,507	142,502	165,002	300,923

Basin Index Threshold  
(calc. through WY2006)

1.476      2.002      2.187      2.441      2.720      3.183



# TURLOCK IRRIGATION DISTRICT

## CIVIL ENGINEERING DEPARTMENT MEMORANDUM

TO: TRTAC  
FROM: Wilton Fryer  
DATE: 8 March 2007  
RE: Restoration Projects - Status Update

<u>Project</u>	<u>Funding</u>	<u>Status</u>
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Active Projects:

MJ Ruddy	none	All the project (Federal) funds were withdrawn by AFRP and CBDA effective 30 June 06 and 31 March 06 respectively. The landowner has been informed that the project was de-funded, but he still has desire to see the project built. There is a slim potential for a portion of the Warner-Deardorff Phase II Prop 204 funds being made available for reconstruction of a redesigned Ruddy reach project. See next.
Warner-Deardorff	Uncertain	The status of the \$10.8M in CBDA Prop 204 funds, originally for Phase II work, remain uncertain. The project completed a Directed Action process, without CBDA issuing a contract, while under the directions from the CBDA ERPIAM. In May 2006 the DFG representative on the ERPIAM directed that completion of the contract be stopped pending transfer of the project administration from CBDA to CDFG. It is not clear if the funds were transferred to DFG in July 06, as none of the Prop 204 funding from CBDA has been transferred to DFG administration as of 1 March 2007. The original project funds may still be available for work on the Mining Reach, if a revised directed action proposal is approved and contract is in place by May 2007. AFRP modified their Phase I funding agreement with TID to allow a revision of the designs that would allow a modification of both the MJ Ruddy Segment and Warner-Deardorff Segments to fit the available Phase II funds. The designs are scheduled for completion by 12 Mar 07 and a proposal will be prepared for submittal to CBDA-DFG.
La Grange Gravel	Full	The Infusion Project, with all the amendment changes in place, went before the CBDA-ERPIAM in November and December

2006. These current members and CBDA staff did not realize that the amendment had gone through the required public review process back in March and April 2004 and the current submittal was the culmination of all the previous CBDA staff requests since 2004. It appears the ERPIAM will allow the contract amendment to proceed before the next amendments hearing in mid May, but confirmation was not received by the time of this report. In December 06, M&T was given approval to try and complete the design, review, and permitting tasks to be in a position to bid for 2007 inchannel work. At this time, it will still be very lucky to get all permits, design review, and contracts let in time for work in July 2007. Expect the project to run in 2008 and 2009, assuming a time extension is granted.

Discussions this week with DFG indicate 4-Pumps will be proceeding with a gravel addition at riffle 3A in 2007. This is one of the sites identified for the LG Infusion Project. While following the Course Sediment Management Plan for conceptual design, the design review procedures required of 4-Pumps projects does not include the processes in the CSMP that were approved by the CalFed. While it may be possible to piggy back off the DFG – 4-Pumps permits for the TID infusion project, there needs to be much closer coordination between these two projects.

Fine Sediment	Full	The Gasburg Creek restoration construction went out for bid in August 2006 with bids received on 1 September. The bids exceeded available funding. A design & project element review has been completed and the project will again go out for bids in March 2007 with the construction to start in June 2007.
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Completed Projects: (No Changes)

SRP 10	Partial	This project was split into two phases by CBDA and only design and modeling funded under Phase I. No Phase II funding for acquisition and construction has ever been identified. The Phase I work was completed in June 2006 and the project funding closed for Phase I. The landowner has been informed there is no foreseeable Phase II funding.
SRP 9	Full	Construction completed, revegetation planted and maintained for two years, and final replacement planting completed in December 2003. NOC filed March 2003.
SRP 10 Dike	Full	Construction complete. NOC filed March 2003.

7\11 Segment	Full	Construction complete with remaining revegetation planted in December 2003. 7\11 Materials NOC filed March 2003. HART NOC filed May 2004. A separate limited irrigation & maintenance agreement is in place for 2004, funded by MWD.
Design Manual	Full	Completed with Final Report submitted 26 February 2004.
Course Sediment	Full	Report was completed with modifications on methods and techniques to protect existing salmonid habitats during implementation. The CBDA Science Panel has accepted the CSMP as part of their acceptance of the LG Sediment Infusion Project.
RM 43	Full	The Project was completed in September 2005 and post project monitoring was started in time for this year's salmon run.

## TUOLUMNE RIVER FISHERIES STUDY PLAN

Agency LFA No.	Corresp. Dist No.	Corresp. Agency LFA No.
<b>Chinook Salmon Studies</b>		
1.1 Chinook Salmon escapement and redd surveys		
1.2 Otolith and/or Scale Age analysis		
1.3 Rotary Screw Trap Jan-Jun Upper and Lower Sites		
1.4 CWT smolt survival studies during non-low flows	1.3	
1.5 Smolt Tagging – Predation & other mortality factors	1.1	
1.6 Juvenile Fish Histology, Physiology, and Disease Study	5.1	
1.7 Predator ID study Feb-Mar (fry)		
1.8 Fall Pulse Flow on Egg Viability	5.2	
1.9 Pre-Spawn Mortality Study		
1.10 Intensive Redd Use Surveys	2.4	
1.11 Pilot Delta Fry Contribution Study using Microchemical and Microstructural Methods		
1.12 Water Temperature Monitoring	6.1	
1.13 Early vs. Late Smolt Survival: Reanalysis of existing CWT data	1.1	
1.14 Model relationship between flow and floodplain area inundated.		
1.15 Fall Pulse Flow Straying Study AFRP Stillwater Ongoing Juvenile Use at Restoration Sites		
1.16 Egg survival to emergence studies in restoration gravels	2.3, 2.4	
1.17 Water Temperature Modeling-Thermal Response (e.g. HEC5Q)	6.2	
1.18 Water Temperature Modeling-Juvenile Production (e.g. SALMOD or ORCM)	6.2	
1.19 Predation stomach contents Apr-Jun—(Electrofishing, Angling, Gill Net Study)	5.2	
1.20 Water Quality Contaminant Bioassay Lab Study		
1.21 Juvenile food source study		
1.22 Entrainment studies at unscreened diversions		
1.23 Flow Ramping Rates and Riparian Vegetation Recruitment Surveys		
1.24 Phase III Quantify Fry and Smolt Losses from Predation	5.2	
<b>Steelhead Studies</b>		
2.1 Otolith and Scale Study		
2.2 Restored Site Snorkel of Videography Surveys		
2.3 Electro-fishing Adult Mark-Capture Study		
2.4 Adult Abundance—Snorkeling Survey		
2.5 Juvenile Abundance Snorkel Surveys		
2.6 Rotary Screw Trap Sampling		
2.7 Juvenile Gill- ATPase Study	1.3	
2.8 IFIM Study		
2.9 Radio Telemetry/Sonic Tag Study		
2.1 Creel/Poaching Survey		
2.11 Water Temperature Monitoring	6.1	
2.12 Water Temperature Modeling-Thermal Response (e.g. HEC5Q)	6.2	
2.13 Water Temperature Modeling-Juvenile Production (e.g. SALMOD or ORCM)	6.2	
2.14 Adult Redd Survey		
2.15 Limiting Factors Analysis	4.3	
<b>I. Instream Flow</b>		
1.1 Expanded analysis of existing CWT data at other recovery locations	1.1	
1.2 Experimental winter pulse flow schedule	1.2	
1.3 Paired Rotary Screw Trap (RST) Monitoring	1.3	
<b>II. Habitat Restoration</b>		
2.1 Implement Coarse Sediment Augmentation	2.1	
2.2 Spawning habitat utilization	2.2	
2.3 Egg survival studies	2.3	
2.4 Redd monitoring and emergence trapping	2.4	
2.5 Assessment of the 1995 FSA Section 12 Program	2.5	
<b>III. Fry Survival</b>		
3.1 Paired Rotary Screw Trap (RST) Monitoring	3.1	
3.2 River-wide Seining Surveys	3.2	
3.3 Synthesis of ongoing and planned spawning and emergence studies with RST data	3.3	
<b>IV. Steelhead Presence/Protection</b>		
4.1 Summer population estimate	4.1	
4.2 Sampling of O. mykiss for Anadromy	4.2	
4.3 Synthesize results of past and ongoing studies by 2011	4.3	
<b>V. Predator Control</b>		
5.1 Monitoring of Completed Predator Isolation Projects	5.1	
5.2 Direct Predator Sampling	5.2	
5.3 Predator Removal	5.3	
5.4 Paired Rotary Screw Trap (RST) Monitoring	5.4	
<b>VI. River Temperature</b>		
6.1 Continue Temperature Monitoring	6.1	
6.2 Synthesize results of existing and ongoing studies by 2011	6.2	
6.3 Delta temperature evaluation	6.3	