



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

Don Pedro Dam and  
Powerhouse

January 11, 2007

Mr. Dean Marston  
California Dept. of Fish and Game  
1234 E. Shaw Ave.  
Fresno, CA 93710

Ms. Deborah Giglio  
U.S. Fish and Wildlife Service  
2800 Cottage Way, W-2605  
Sacramento, CA 95825

RE: Project 2299 - Tuolumne River Fall 2006 Pulse Flow, Article 38 45-Day Period, and  
Water Year Classification Index

Dear Fishery Agency representatives:

The 1996 FERC Order, Amended Article 37, contained a Water Year Classification Index for determining the volume of scheduled stream flows for each fish flow year. The classifications were based on the San Joaquin Basin 60-20-20 Indices for water years 1906-1995. The order stated, "60-20-20 index numbers used each year shall be updated to incorporate subsequent water years pursuant to standard Water Resources Department procedures so as to maintain approximately the same frequency distribution of water year types." The index is updated to incorporate water years 1996 through 2006 (Table 1). While the frequency distribution remains the same, some index numbers may change slightly with each annual update to maintain the frequency distribution.

The 2006 fall pulse flow was from October 14-28 with a scheduled volume of 5,950 AF above the minimum flow requirement of 300 cfs. An average of 552 cfs during this period was actually released or 7,492 acre-feet above the minimum flow requirement (Table 2).

The Article 38 '45-Day Period' in fall 2005 began October 15 and ended November 30, as has been our standard practice in recent years. In accordance with Article 38, reduction in river height between the end of the 45-day period and March 31 shall not exceed four inches (0.33 feet) below the average height established during the 45-day period (measured at Old La Grange Bridge). Using provisional daily flow data from the USGS gage at La Grange, we have calculated the average flow was 409 cfs for the 45-day period, which corresponds to a river height of 170.26 feet at the Old La Grange Bridge based on the USGS 1996 rating table. The current minimum flow requirement of 300 cfs through March 31 exceeds the 273 cfs as shown on Table 3 represented by a gage elevation of 169.93 feet.



If you have any questions, please contact Wes Monier at 209-883-8321.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Nees". The signature is fluid and cursive, with a large initial "R" and "N".

Robert Nees

Assistant General Manager

Water Resources and Regulatory Affairs Administration

C: Larry Weis - TID  
Allen Short - MID  
Magalie Salas – FERC Secretary

TABLE 1  
DETERMINATION OF WATER YEAR CLASSIFICATION THRESHOLDS  
Water Year Classification

Water Year Classification	Cumulative Occurrence			602020 INDEX (x 1000)												
				Settlement Agreement	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	
Critical Water Year and Below	0.0%	-	6.4%	<	1500	1,441	1,441	1,441	1,476	1,476	1,476	1,476	1,476	1,476	1,476	1,476
Median Critical Water Year	6.4%	<	14.4%	>=	1500	1,441	1,441	1,441	1,476	1,476	1,476	1,476	1,476	1,476	1,476	1,476
Intermediate Critical Dry Water Year	14.4%	<	20.5%	>=	2000	1,964	1,964	1,964	1,964	1,964	1,964	1,964	2,002	2,002	2,002	2,002
Median Dry	20.5%	<	31.3%	>=	2200	2,159	2,159	2,183	2,183	2,183	2,183	2,183	2,187	2,187	2,187	2,187
Intermediate Dry-Below Normal	31.3%	<	40.4%	>=	2400	2,441	2,441	2,442	2,442	2,442	2,442	2,441	2,441	2,403	2,441	2,441
Median Below Normal	40.4%	<	50.7%	>=	2700	2,698	2,720	2,720	2,720	2,763	2,720	2,720	2,720	2,698	2,720	2,720
* Intermediate Below Normal-Above Normal	50.7%	<	66.2%	>=	3100	3,139	3,139	3,183	3,183	3,225	3,183	3,183	3,139	3,139	3,139	3,183
Median Above Normal	66.2%	<	71.3%	>=	3100	3,689	3,689	3,740	3,740	3,689	3,689	3,689	3,669	3,669	3,689	3,689
Intermediate Above Normal-Wet	71.3%	<	86.7%	>=	3100	3,898	3,903	4,028	4,028	3,903	3,903	3,903	3,898	3,898	3,903	4,028
Median Wet/Maximum	86.7%	<	100.0%	>=	3100	4,593	4,593	4,653	4,653	4,653	4,653	4,653	4,593	4,593	4,653	4,730

\* Maximum index value for fish flow year is not to go above value shown in this row.

\*\* The index in the Settlement Agreement was based on Water Years 1906-1995

**Table 2**  
**Tuolumne River Flow Schedule**  
**SCHEDULE FOR 2006 - 2007 Fish Flow Year**

DATE		Number of DAYS	Minimum Flow CFS
From:	To:		
14-Oct-Sat	14-Oct-Sat	1	300
15-Oct-Sun	15-Oct-Sun	1	300
16-Oct-Mon	16-Oct-Mon	1	300
17-Oct-Tue	17-Oct-Tue	1	300
18-Oct-Wed	18-Oct-Wed	1	300
19-Oct-Thu	19-Oct-Thu	1	300
20-Oct-Fri	20-Oct-Fri	1	300
21-Oct-Sat	21-Oct-Sat	1	300
22-Oct-Sun	22-Oct-Sun	1	300
23-Oct-Mon	23-Oct-Mon	1	300
24-Oct-Tue	24-Oct-Tue	1	300
25-Oct-Wed	25-Oct-Wed	1	300
26-Oct-Thu	26-Oct-Thu	1	300
27-Oct-Fri	27-Oct-Fri	1	300
28-Oct-Sat	28-Oct-Sat	1	300

USGS Daily (2006 Fall Pulse Flow)			
Actual flow	Difference from Minimum Flow		
	cfs	a.f.	accum af
597	297	589	589
597	297	589	1,178
577	277	549	1,728
554	254	504	2,231
551	251	498	2,729
552	252	500	3,229
563	263	522	3,751
564	264	524	4,274
560	260	516	4,790
551	251	498	5,288
556	256	508	5,796
551	251	498	6,294
552	252	500	6,793
489	189	375	7,168
463	163	323	7,492
552	3,777	7,492	

## TURLOCK IRRIGATION DISTRICT

October 17 - November 30, 2006 Average Flow

In Tuolumne River at La Grange

ACTUAL FLOWS (Preliminary USGS Numbers)			
DATE	FLOW CFS	DATE	FLOW CFS
17-Oct	554	08-Nov	373
18-Oct	551	09-Nov	371
19-Oct	552	10-Nov	373
20-Oct	563	11-Nov	379
21-Oct	564	12-Nov	372
22-Oct	560	13-Nov	386
23-Oct	551	14-Nov	377
24-Oct	556	15-Nov	348
25-Oct	551	16-Nov	349
26-Oct	552	17-Nov	349
27-Oct	489	18-Nov	348
28-Oct	463	19-Nov	348
29-Oct	407	20-Nov	348
30-Oct	350	21-Nov	348
31-Oct	348	22-Nov	348
01-Nov	343	23-Nov	349
02-Nov	345	24-Nov	348
03-Nov	379	25-Nov	349
04-Nov	389	26-Nov	351
05-Nov	388	27-Nov	348
06-Nov	393	28-Nov	346
07-Nov	374	29-Nov	346
		30-Nov	347
TOTAL RELEASE=			18,423

45 day average = 409.4 cfs = 170.26 ft elevation \*

Less 4 inches -0.33

Minimum Flow = 273.0 CFS = 169.93 ft elevation \*

\*

From U.S.G.S. table 22