

ATTACHMENT K
HABITAT TIME SERIES ANALYSIS

Attachment K - Results of Time Series Analysis

A time series analysis (TSA) was conducted as called in the CAWG 3 Study Plan (CAWG 3 Determine Flow-Related Habitat in Bypass Reaches, SCE 2001), and requested by the CAWG in February 2005. A protocol was developed and approved by the CAWG on May 10, 2005 (August 22, 2005 Memo to CAWG re: Habitat Time Series Analysis). The protocol called for the TSA to be run for all PHABSIM streams using the period of record (generally around 20 years) reported in the CAWG 6 Hydrology report. A TSA was not conducted for Big Creek below Dam 4 reach, as there is no flow record available for this reach.

The TSA evaluates of daily flow values over a period of record in the context of the amount of habitat (WUA) that these flows provide. Per the protocol, the daily flow values available for the period of record provided in CAWG 6 (water years 1983-2002) were used in the analysis, although a complete set of records was not available for all streams (Table Attachment A9-1). Habitat was evaluated based on the BC ALP habitat suitability criteria developed by the CAWG, which focus on summer habitat needs. The CAWG elected not to develop or apply winter habitat suitability criteria, as flow requirements during the winter would be based on other needs, such as protection of redds.

The analysis was conducted for the species present in each reach. Per the protocol, adult and juvenile habitat was evaluated based on the flows present throughout the year, spawning habitat was assessed based on flows from April through June for rainbow trout, and October through December for brown trout.

The flows used in the TSA were based upon flow records at USGS gaging stations and the MIF and CRMF requirements under the various alternatives. The flow time series was assembled using the higher of the MIF requirement, CRMF or the measured flow in each day within the period of record. Flows greater than the extrapolation range of the PHABSIM models were not included in the analysis. Because almost all of the PHABSIM streams have large reservoirs associated with them, it was assumed that water was always available to meet the MIF requirement, except in Bear Creek. In Bear Creek, there is no large impoundment upstream, so the flow below the diversion was as described above, or the unimpaired flow (from the gaging station above the diversion), if this was less than the MIF.

The South Fork San Joaquin River was treated differently, because of its many tributaries. In this stream reach, flows were accumulated from Florence Lake to below Mono Creek (the last point where SCE can affect flows through its operations). Flows were calculated at three locations for the time series analysis, above the Bear Creek confluence, above the Mono Creek Confluence, and below the Warm Creek confluence. Release flows from Florence Lake were calculated based on the recorded flow at the SF San Joaquin River below Hooper Creek gaging station, in conjunction with flow estimates for tributaries upstream of this gage. The flows in the small tributaries were derived from area-based flow estimates, the capacity of the diversions, and the MIF requirements for each alternative.

Based on these flows, the TSA generates exceedance statistics for each alternative, summarized in a tabular comparison of the different flow scenarios for each PHABSIM reach. The TSA table statistics are described below.

- Count – the number of WUA values included in the analysis. This reflects the number of flows within the period of record. This number is likely to be different for each alternative especially when CRMFs are recommended. As mentioned above, flows higher than the extrapolation range of the PHABSIM models were truncated from the analysis, which is often the case for CRMFs.
- Minimum – the lowest WUA value observed on any single day during the period of record.
- Average – the average of all the WUA values within the period of record.
- Maximum – the highest WUA value observed on any single day during the period of record.
- Median – the median (50th percentile) WUA within the period of record

- Indices A and B – average habitat values based on a trimmed range of flow values as reflected by the exceedance values within the parentheses. Index A represents the lowest of the observed flows, those exceeded 50 to 90 percent of the time. Index B represents a wider range of flows with 10 percent of the flow values trimmed off of either end of the distribution.
- Index C – a trimmed average similar to Indices A and B, but defined by the user. For these analyses, the bounds were set to 25-90% per discussion with the CAWG.
- WUA Exceedance Table – indicates the lowest amount of habitat equaled or exceeded for specific percentages of the period of record.
- Discharge Exceedance Table – indicates the lowest flow equaled or exceeded for specific percentages of the period of record.

The TSA results allow the comparison of the amount of habitat provided under each flow alternative, and identify some of the factors that could limit fish populations in the bypass reaches. However, information resulting from a PHABSIM analysis, including TSA, must be considered in context with other information and analyses, as fish populations may be limited by factors other than flow-related habitat.

Where fish populations are not limited by flow-related habitat, then neither PHABSIM nor the TSA will be predictive of how fish populations will respond to changes in flows. PHABSIM and TSA address only the amount of physical space available to the population.

The tables providing the TSA results are listed below.

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Table Attachment K-1 Summary of Flow Information used in Time Series Analysis

Stream Reach	Water Years Included	Daily Flow Records not Available	Percentage of Days with Flows above Extrapolation Range of PHABSIM Model									
			Adult/Juvenile (Entire Year)			Rainbow Trout Spawning (April-June)			Brown Trout Spawning (October-December)			
			Proposed Action	CDFG Alternative	No Action	Proposed Action	CDFG Alternative	No Action	Proposed Action	CDFG Alternative	No Action	
<u>Mammoth Reach</u>												
San Joaquin River - Mammoth Reach (Mammoth Pool Dam to Mammoth Pool Powerhouse/Dam 6)	1983-2002	-	10%	10%	10%	26%	26%	26%	0%	0%	0%	
<u>Big Creek 2A, 8 and Eastwood</u>												
SF San Joaquin River - Florence Lake to Bear Creek	1983-2002	-	4%	4%	4%	8%	7%	7%	0%	0%	0%	
SF San Joaquin River - Bear Creek to Mono Creek	1983-2002	62 days in May-Aug 1993	5%	4%	4%	13%	11%	10%	0%	0%	0%	
SF San Joaquin River - Mono Creek to Rattlesnake Creek	1983-2002	62 days in May-Aug 1993	6%	5%	5%	15%	12%	11%	0%	0%	0%	
Bear Creek	1984-2002	62 days in May-Aug 1993	4%	4%	4%	Species not present			0%	0%	0%	
Mono Creek		-	2%	1%	1%	2%	2%	2%	0%	0%	0%	
North Fork Stevenson Creek	1989-2002	-	1%	1%	1%	4%	4%	4%	0%	0%	0%	
Big Creek - Dam 5 to Powerhouse 8/SJR	1987-2002	-	5%	5%	5%	7%	7%	7%	6%	6%	6%	
Stevenson Creek	1987-2002	-	11%	11%	11%	24%	24%	24%	Species not present			
<u>Big Creek No. 3</u>												
San Joaquin River - Stevenson Reach (Dam 6 to Powerhouse 3/Redinger Lake)	1983-87, 1993, 1995-2002	1988-92, 1994	18%	18%	18%	42%	42%	42%	1%	1%	1%	

Table Attachment K-2. Habitat Time Series Analysis Results for Adult Rainbow Trout
in San Joaquin River - Mammoth Reach (Mammoth Pool Dam to Mammoth Pool Powerhouse/Dam 6)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6596	6596	6596
Minimum	44005	47292	28779
Average	48029	49952	34570
Maximum	53913	53913	53913
Median	47967	51161	32031
Index A (50%-90%)	46397	48638	30775
Index B (10%-90%)	48076	49948	33901
Index C (25%-90%)	47380	49608	32871
Approximate WUA Exceedence			
99%	44005	47292	29362
95%	44005	47292	29362
90%	44005	47292	29929
80%	44005	47292	30473
70%	47967	47967	31018
60%	47967	49923	31018
50%	47967	51161	32031
40%	47967	51161	36896
30%	49923	51161	37582
20%	51471	51161	37891
10%	51471	52541	39687
5%	51471	52541	44601
1%	52018	52541	52018
Approximate Discharge Exceedence			
99%	55.0	75.0	11.0
95%	55.0	75.0	11.0
90%	55.0	75.0	12.0
80%	55.0	75.0	13.0
70%	80.0	80.0	14.0
60%	80.0	100.0	14.0
50%	80.0	120.0	16.0
40%	80.0	120.0	28.0
30%	100.0	120.0	30.0
20%	125.0	120.0	31.0
10%	125.0	150.0	37.0
5%	125.0	150.0	58.0
1%	242.0	242.0	242.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-3. Habitat Time Series Analysis Results for Juvenile Rainbow Trout in San Joaquin River - Mammoth Reach (Mammoth Pool Dam to Mammoth Pool Powerhouse/Dam 6)

Comparative Statistics for:				
	Proposed Action	CDFG Alternative	No Action	
Count	6596	6596	6596	
Minimum	16452	16452	16452	
Average	30223	28967	32506	
Maximum	32436	30937	33772	
Median	30599	28245	32473	
Index A (50%-90%)	29340	28117	31971	
Index B (10%-90%)	30334	29100	32685	
Index C (25%-90%)	29849	28676	32436	
Approximate WUA Exceedence				
99%	22940	22940	22940	
95%	27970	26599	31205	
90%	27970	26599	31589	
80%	27970	28245	31645	
70%	29343	28245	31902	
60%	30599	28245	32214	
50%	30599	28245	32473	
40%	30599	29343	32910	
30%	30599	30599	33693	
20%	32436	30937	33766	
10%	32436	30937	33766	
5%	32436	30937	33770	
1%	32436	30937	33772	
Approximate Discharge Exceedence				
99%	55.0	75.0	11.0	
95%	55.0	75.0	11.0	
90%	55.0	75.0	12.0	
80%	55.0	75.0	13.0	
70%	80.0	80.0	14.0	
60%	80.0	100.0	14.0	
50%	80.0	120.0	16.0	
40%	80.0	120.0	28.0	
30%	100.0	120.0	30.0	
20%	125.0	120.0	31.0	
10%	125.0	150.0	37.0	
5%	125.0	150.0	58.0	
1%	242.0	242.0	242.0	

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-4. Habitat Time Series Analysis Results for Rainbow Trout Spawning in San Joaquin River - Mammoth Reach (Mammoth Pool Dam to Mammoth Pool Powerhouse/Dam 6)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	1346	1346	1346
Minimum	372	368	126
Average	374	380	213
Maximum	575	575	575
Median	372	387	178
Index A (50%-90%)	372	372	167
Index B (10%-90%)	372	380	204
Index C (25%-90%)	372	378	188
Approximate WUA Exceedence			
99%	372	368	136
95%	372	368	145
90%	372	368	161
80%	372	368	161
70%	372	368	169
60%	372	368	169
50%	372	387	178
40%	372	387	231
30%	372	387	237
20%	372	387	250
10%	372	387	318
5%	372	387	329
1%	427	427	427
Approximate Discharge Exceedence			
99%	125.0	120.0	11.0
95%	125.0	120.0	12.0
90%	125.0	120.0	14.0
80%	125.0	120.0	14.0
70%	125.0	120.0	15.0
60%	125.0	120.0	15.0
50%	125.0	150.0	16.0
40%	125.0	150.0	27.0
30%	125.0	150.0	29.0
20%	125.0	150.0	33.0
10%	125.0	150.0	57.0
5%	125.0	150.0	63.0
1%	254.0	254.0	254.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-5. Habitat Time Series Analysis Results for Adult Brown Trout in San Joaquin River - Mammoth Reach (Mammoth Pool Dam to Mammoth Pool Powerhouse/Dam 6)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6596	6596	6596
Minimum	43514	43514	35618
Average	50509	51299	40804
Maximum	51940	51936	51936
Median	50704	51839	38748
Index A (50%-90%)	49847	50885	37581
Index B (10%-90%)	50580	51364	40409
Index C (25%-90%)	50304	51252	39482
Approximate WUA Exceedence			
99%	48640	49844	36217
95%	48640	50407	36217
90%	48640	50407	36781
80%	48640	50407	37298
70%	50704	50704	37814
60%	50704	51434	37814
50%	50704	51839	38748
40%	50704	51839	43129
30%	51434	51839	43746
20%	51936	51839	44018
10%	51940	51932	45580
5%	51940	51932	48887
1%	51940	51932	49854
Approximate Discharge Exceedence			
99%	55.0	75.0	11.0
95%	55.0	75.0	11.0
90%	55.0	75.0	12.0
80%	55.0	75.0	13.0
70%	80.0	80.0	14.0
60%	80.0	100.0	14.0
50%	80.0	120.0	16.0
40%	80.0	120.0	28.0
30%	100.0	120.0	30.0
20%	125.0	120.0	31.0
10%	125.0	150.0	37.0
5%	125.0	150.0	58.0
1%	242.0	242.0	242.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-6. Habitat Time Series Analysis Results for Juvenile Brown Trout in San Joaquin River - Mammoth Reach (Mammoth Pool Dam to Mammoth Pool Powerhouse/Dam 6)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6596	6596	6596
Minimum	18956	18956	18956
Average	33443	32011	35823
Maximum	35872	34323	37350
Median	33940	31118	35658
Index A (50%-90%)	32465	30972	35140
Index B (10%-90%)	33586	32155	36001
Index C (25%-90%)	33059	31654	35694
Approximate WUA Exceedence			
99%	25369	25369	25369
95%	30764	29241	34319
90%	30764	29241	34696
80%	30764	31118	35037
70%	32534	31118	35037
60%	33940	31118	35378
50%	33940	31118	35658
40%	33940	32534	36313
30%	33940	33940	37258
20%	35872	34323	37333
10%	35872	34323	37333
5%	35872	34323	37343
1%	35872	34323	37350
Approximate Discharge Exceedence			
99%	55.0	75.0	11.0
95%	55.0	75.0	11.0
90%	55.0	75.0	12.0
80%	55.0	75.0	13.0
70%	80.0	80.0	14.0
60%	80.0	100.0	14.0
50%	80.0	120.0	16.0
40%	80.0	120.0	28.0
30%	100.0	120.0	30.0
20%	125.0	120.0	31.0
10%	125.0	150.0	37.0
5%	125.0	150.0	58.0
1%	242.0	242.0	242.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-7. Habitat Time Series Analysis Results for Brown Trout Spawning in San Joaquin River - Mammoth Reach (Mammoth Pool Dam to Mammoth Pool Powerhouse/Dam 6)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	1840	1840	1840
Minimum	407	447	176
Average	434	464	227
Maximum	471	478	471
Median	447	468	209
Index A (50%-90%)	424	455	197
Index B (10%-90%)	435	465	219
Index C (25%-90%)	433	462	206
Approximate WUA Exceedence			
99%	407	447	187
95%	407	447	187
90%	407	447	187
80%	407	447	194
70%	407	447	194
60%	447	468	202
50%	447	468	209
40%	447	468	215
30%	447	478	227
20%	447	478	273
10%	447	478	282
5%	447	478	301
1%	447	478	426
Approximate Discharge Exceedence			
99%	55.0	80.0	11.0
95%	55.0	80.0	11.0
90%	55.0	80.0	11.0
80%	55.0	80.0	12.0
70%	55.0	80.0	12.0
60%	80.0	100.0	13.0
50%	80.0	100.0	14.0
40%	80.0	100.0	15.0
30%	80.0	120.0	17.0
20%	80.0	120.0	26.0
10%	80.0	120.0	28.0
5%	80.0	120.0	32.0
1%	80.0	120.0	60.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-8. Habitat Time Series Analysis Results for Adult Sacramento Sucker
in San Joaquin River - Mammoth Reach (Mammoth Pool Dam to Mammoth Pool Powerhouse/Dam 6)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6596	6596	6596
Minimum	48118	51265	34807
Average	52309	54503	39934
Maximum	61423	61423	61423
Median	51935	55896	37634
Index A (50%-90%)	50421	52785	36551
Index B (10%-90%)	52254	54423	39275
Index C (25%-90%)	51434	53982	38376
Approximate WUA Exceedence			
99%	48118	51265	35326
95%	48118	51265	35326
90%	48118	51265	35822
80%	48118	51265	36290
70%	51935	51935	36759
60%	51935	54150	36759
50%	51935	55896	37634
40%	51935	55896	41884
30%	54150	55896	42489
20%	56332	55896	42758
10%	56332	58007	44327
5%	56332	58007	48665
1%	60821	60821	60821
Approximate Discharge Exceedence			
99%	55.0	75.0	11.0
95%	55.0	75.0	11.0
90%	55.0	75.0	12.0
80%	55.0	75.0	13.0
70%	80.0	80.0	14.0
60%	80.0	100.0	14.0
50%	80.0	120.0	16.0
40%	80.0	120.0	28.0
30%	100.0	120.0	30.0
20%	125.0	120.0	31.0
10%	125.0	150.0	37.0
5%	125.0	150.0	58.0
1%	242.0	242.0	242.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-9. Habitat Time Series Analysis Results for Juvenile Sacramento Sucker in San Joaquin River - Mammoth Reach (Mammoth Pool Dam to Mammoth Pool Powerhouse/Dam 6)

Comparative Statistics for:				
	Proposed Action	CDFG Alternative	No Action	
Count	6596	6596	6596	
Minimum	24273	24273	24273	
Average	41150	39698	45284	
Maximum	43715	42013	45988	
Median	41601	38849	45646	
Index A (50%-90%)	40144	38702	45515	
Index B (10%-90%)	41293	39859	45626	
Index C (25%-90%)	40734	39362	45586	
Approximate WUA Exceedence				
99%	32134	32134	32134	
95%	38517	36965	43446	
90%	38517	36965	45179	
80%	38517	38849	45410	
70%	40176	38849	45562	
60%	41601	38849	45646	
50%	41601	38849	45646	
40%	41601	40176	45665	
30%	41601	41601	45768	
20%	43715	42013	45768	
10%	43715	42013	45838	
5%	43715	42013	45908	
1%	43715	42013	45980	
Approximate Discharge Exceedence				
99%	55.0	75.0	11.0	
95%	55.0	75.0	11.0	
90%	55.0	75.0	12.0	
80%	55.0	75.0	13.0	
70%	80.0	80.0	14.0	
60%	80.0	100.0	14.0	
50%	80.0	120.0	16.0	
40%	80.0	120.0	28.0	
30%	100.0	120.0	30.0	
20%	125.0	120.0	31.0	
10%	125.0	150.0	37.0	
5%	125.0	150.0	58.0	
1%	242.0	242.0	242.0	

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-10. Habitat Time Series Analysis Results for Adult Rainbow Trout in South Fork San Joaquin River - Florence Lake to Bear Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6981	7005	7005
Minimum	17617	17617	12369
Average	19751	20031	15479
Maximum	21669	21669	21669
Median	19682	20078	14403
Index A (50%-90%)	18879	19527	13769
Index B (10%-90%)	19751	20107	15266
Index C (25%-90%)	19425	19893	14650
Approximate WUA Exceedence			
99%	17686	17691	12466
95%	17892	18146	12753
90%	18205	18521	13291
80%	18578	19484	13522
70%	18826	19654	13723
60%	19191	19854	14001
50%	19682	20078	14403
40%	20189	20352	16198
30%	20657	20742	16903
20%	21075	21024	17594
10%	21438	21151	18946
5%	21598	21389	19749
1%	21666	21533	20775
Approximate Discharge Exceedence			
99%	26.1	26.2	11.7
95%	27.0	28.1	12.3
90%	28.4	29.7	13.4
80%	29.9	34.8	13.9
70%	31.3	36.1	14.4
60%	33.2	37.7	15.0
50%	36.3	39.7	15.9
40%	41.0	43.5	20.8
30%	48.0	49.2	23.2
20%	57.2	54.5	25.7
10%	73.5	60.4	31.9
5%	87.2	67.6	36.9
1%	154.3	158.2	158.2

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-11. Habitat Time Series Analysis Results for Juvenile Rainbow Trout in South Fork San Joaquin River - Florence Lake to Bear Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6981	7005	7005
Minimum	12900	12900	12900
Average	18221	18166	19487
Maximum	19783	19783	19884
Median	18805	18477	19644
Index A (50%-90%)	17618	17656	19510
Index B (10%-90%)	18447	18270	19638
Index C (25%-90%)	18208	18060	19589
Approximate WUA Exceedence			
99%	13565	13819	13819
95%	15238	16236	18752
90%	15902	16681	19195
80%	16935	17150	19468
70%	17720	17612	19555
60%	18368	18138	19606
50%	18805	18477	19644
40%	19114	18671	19700
30%	19318	18827	19766
20%	19454	18950	19852
10%	19582	19474	19864
5%	19687	19601	19869
1%	19759	19758	19879
Approximate Discharge Exceedence			
99%	26.1	26.2	11.7
95%	27.0	28.1	12.3
90%	28.4	29.7	13.4
80%	29.9	34.8	13.9
70%	31.3	36.1	14.4
60%	33.2	37.7	15.0
50%	36.3	39.7	15.9
40%	41.0	43.5	20.8
30%	48.0	49.2	23.2
20%	57.2	54.5	25.7
10%	73.5	60.4	31.9
5%	87.2	67.6	36.9
1%	154.3	158.2	158.2

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-12. Habitat Time Series Analysis Results for Rainbow Trout Spawning in South Fork San Joaquin River - Florence Lake to Bear Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	1666	1690	1690
Minimum	523	523	523
Average	2860	3186	3329
Maximum	3611	3622	3708
Median	3089	3379	3578
Index A (50%-90%)	2632	3146	3227
Index B (10%-90%)	2976	3285	3439
Index C (25%-90%)	2868	3247	3382
Approximate WUA Exceedence			
99%	580	579	579
95%	1296	2692	2774
90%	1916	2962	2849
80%	2400	3025	3013
70%	2679	3102	3187
60%	2885	3268	3491
50%	3089	3379	3578
40%	3220	3409	3620
30%	3337	3417	3659
20%	3428	3439	3682
10%	3501	3479	3698
5%	3543	3511	3704
1%	3578	3572	3707
Approximate Discharge Exceedence			
99%	47.5	47.7	14.4
95%	49.3	50.6	14.8
90%	51.1	52.0	15.6
80%	54.1	53.6	16.9
70%	57.3	54.5	19.9
60%	61.1	54.8	25.8
50%	65.1	55.8	28.0
40%	71.3	59.6	30.3
30%	77.2	64.7	32.9
20%	85.2	66.9	35.8
10%	99.9	69.0	41.8
5%	122.4	76.8	53.1
1%	259.4	261.0	261.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-13. Habitat Time Series Analysis Results for Adult Brown Trout in South Fork San Joaquin River - Florence Lake to Bear Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6981	7005	7005
Minimum	17334	17334	15959
Average	19966	20124	18194
Maximum	20376	20376	20376
Median	20085	20260	17714
Index A (50%-90%)	19909	20063	17230
Index B (10%-90%)	20065	20188	18165
Index C (25%-90%)	20008	20150	17807
Approximate WUA Exceedence			
99%	17563	17633	16056
95%	18995	19700	16331
90%	19542	19767	16827
80%	19807	19989	17040
70%	19930	20083	17206
60%	20031	20159	17414
50%	20085	20260	17714
40%	20145	20283	18660
30%	20219	20311	19303
20%	20293	20343	19618
10%	20365	20369	20047
5%	20371	20373	20236
1%	20375	20376	20367
Approximate Discharge Exceedence			
99%	26.1	26.2	11.7
95%	27.0	28.1	12.3
90%	28.4	29.7	13.4
80%	29.9	34.8	13.9
70%	31.3	36.1	14.4
60%	33.2	37.7	15.0
50%	36.3	39.7	15.9
40%	41.0	43.5	20.8
30%	48.0	49.2	23.2
20%	57.2	54.5	25.7
10%	73.5	60.4	31.9
5%	87.2	67.6	36.9
1%	154.3	158.2	158.2

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-14. Habitat Time Series Analysis Results for Juvenile Brown Trout in South Fork San Joaquin River - Florence Lake to Bear Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6981	7005	7005
Minimum	12980	12982	12982
Average	17265	17140	19331
Maximum	19064	19064	19901
Median	17715	17356	19792
Index A (50%-90%)	16549	16553	19252
Index B (10%-90%)	17425	17187	19556
Index C (25%-90%)	17159	16959	19479
Approximate WUA Exceedence			
99%	13358	13718	13718
95%	14562	15344	17657
90%	15068	15709	18261
80%	15913	16088	19076
70%	16587	16491	19303
60%	17238	16988	19478
50%	17715	17356	19792
40%	18086	17569	19834
30%	18346	17739	19867
20%	18521	17878	19887
10%	18732	18553	19895
5%	18906	18763	19898
1%	19025	19022	19900
Approximate Discharge Exceedence			
99%	26.1	26.2	11.7
95%	27.0	28.1	12.3
90%	28.4	29.7	13.4
80%	29.9	34.8	13.9
70%	31.3	36.1	14.4
60%	33.2	37.7	15.0
50%	36.3	39.7	15.9
40%	41.0	43.5	20.8
30%	48.0	49.2	23.2
20%	57.2	54.5	25.7
10%	73.5	60.4	31.9
5%	87.2	67.6	36.9
1%	154.3	158.2	158.2

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-15. Habitat Time Series Analysis Results for Brown Trout Spawning in South Fork San Joaquin River - Florence Lake to Bear Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	MIF
Count	1840	1840	1840
Minimum	667	667	667
Average	3522	3337	3015
Maximum	3617	3617	3553
Median	3555	3346	3010
Index A (50%-90%)	3499	3263	2934
Index B (10%-90%)	3542	3352	3027
Index C (25%-90%)	3530	3313	2988
Approximate WUA Exceedence			
99%	3120	2915	2666
95%	3397	3032	2686
90%	3434	3064	2763
80%	3472	3246	2915
70%	3499	3287	2938
60%	3533	3317	2977
50%	3555	3346	3010
40%	3579	3391	3056
30%	3586	3415	3121
20%	3593	3473	3180
10%	3604	3591	3233
5%	3612	3609	3262
1%	3614	3614	3438
Approximate Discharge Exceedence			
99%	26.1	26.1	11.7
95%	26.3	26.6	11.8
90%	27.1	28.4	12.3
80%	28.2	33.9	13.4
70%	28.8	35.9	13.6
60%	29.6	36.6	13.8
50%	30.8	37.9	14.1
40%	31.6	38.8	14.5
30%	32.9	39.7	15.1
20%	33.9	40.8	15.6
10%	35.3	45.6	16.1
5%	36.4	46.3	16.4
1%	44.2	49.0	19.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-16. Habitat Time Series Analysis Results for Adult Rainbow Trout in South Fork San Joaquin River - Bear Creek to Mono Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6537	6579	6590
Minimum	18380	18390	12880
Average	21792	22153	17496
Maximum	25527	25527	25527
Median	21336	21827	17012
Index A (50%-90%)	20352	21042	15312
Index B (10%-90%)	21701	22148	17136
Index C (25%-90%)	21074	21626	16334
Approximate WUA Exceedence			
99%	18495	18509	13097
95%	19045	19048	13598
90%	19516	19672	14046
80%	19900	20586	14700
70%	20282	21239	15164
60%	20790	21515	15858
50%	21336	21827	17012
40%	21931	22368	17691
30%	22822	23033	18599
20%	24189	24217	20134
10%	25062	25042	22345
5%	25350	25352	24545
1%	25481	25487	25439
Approximate Discharge Exceedence			
99%	31.1	31.2	14.9
95%	33.4	33.4	16.1
90%	35.4	36.2	17.3
80%	37.4	41.0	19.0
70%	39.3	44.9	20.2
60%	42.2	47.0	22.3
50%	45.6	49.3	25.8
40%	50.0	53.7	28.2
30%	58.2	59.9	31.6
20%	77.0	75.1	38.5
10%	101.8	96.6	54.0
5%	135.8	123.0	89.5
1%	227.2	200.7	181.8

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-17. Habitat Time Series Analysis Results for Juvenile Rainbow Trout in South Fork San Joaquin River - Bear Creek to Mono Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6537	6579	6590
Minimum	11301	11246	11298
Average	20462	20459	20909
Maximum	21694	21693	21704
Median	21229	21072	21179
Index A (50%-90%)	20288	20264	20808
Index B (10%-90%)	20864	20774	21153
Index C (25%-90%)	20706	20620	21043
Approximate WUA Exceedence			
99%	12769	13627	14473
95%	16652	17275	19011
90%	18401	18673	20137
80%	19626	19715	20631
70%	20593	20498	20868
60%	21038	20845	21036
50%	21229	21072	21179
40%	21351	21171	21385
30%	21455	21258	21559
20%	21530	21393	21614
10%	21606	21576	21665
5%	21650	21649	21685
1%	21686	21685	21700
Approximate Discharge Exceedence			
99%	31.1	31.2	14.9
95%	33.4	33.4	16.1
90%	35.4	36.2	17.3
80%	37.4	41.0	19.0
70%	39.3	44.9	20.2
60%	42.2	47.0	22.3
50%	45.6	49.3	25.8
40%	50.0	53.7	28.2
30%	58.2	59.9	31.6
20%	77.0	75.1	38.5
10%	101.8	96.6	54.0
5%	135.8	123.0	89.5
1%	227.2	200.7	181.8

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-18. Habitat Time Series Analysis Results for Rainbow Trout Spawning in South Fork San Joaquin River - Bear Creek to Mono Creek

Comparative Statistics for:			
	Prop Action W/ crmf	CDFG Alternative	No Action
Count	1470	1512	1519
Minimum	185	185	156
Average	225	225	191
Maximum	249	249	249
Median	227	227	179
Index A (50%-90%)	214	215	177
Index B (10%-90%)	226	226	187
Index C (25%-90%)	222	222	180
Approximate WUA Exceedence			
99%	191	190	161
95%	196	196	167
90%	201	200	171
80%	210	211	176
70%	213	215	178
60%	220	220	179
50%	227	227	179
40%	234	233	179
30%	239	238	190
20%	244	242	213
10%	246	246	235
5%	247	247	243
1%	249	249	248
Approximate Discharge Exceedence			
99%	64.3	64.0	22.0
95%	67.3	67.2	25.2
90%	70.1	69.8	29.0
80%	75.7	74.9	34.2
70%	81.7	78.4	37.7
60%	87.4	83.2	40.7
50%	94.6	88.5	45.0
40%	101.5	95.7	49.9
30%	111.8	104.9	63.7
20%	134.9	119.6	82.1
10%	183.0	144.5	114.1
5%	218.3	185.3	156.2
1%	273.7	262.7	265.8

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-19. Habitat Time Series Analysis Results for Adult Brown Trout in South Fork San Joaquin River - Bear Creek to Mono Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6537	6579	6590
Minimum	16921	16829	16657
Average	22578	22829	20070
Maximum	23730	23730	23730
Median	22689	23025	20058
Index A (50%-90%)	22174	22559	18749
Index B (10%-90%)	22674	22948	20006
Index C (25%-90%)	22493	22811	19497
Approximate WUA Exceedence			
99%	18955	19730	16862
95%	21165	21294	17320
90%	21534	21652	17707
80%	21956	22189	18277
70%	22169	22720	18665
60%	22423	22904	19176
50%	22689	23025	20058
40%	22948	23162	20512
30%	23178	23345	21117
20%	23404	23493	21996
10%	23641	23665	22928
5%	23707	23711	23419
1%	23726	23726	23714
Approximate Discharge Exceedence			
99%	31.1	31.2	14.9
95%	33.4	33.4	16.1
90%	35.4	36.2	17.3
80%	37.4	41.0	19.0
70%	39.3	44.9	20.2
60%	42.2	47.0	22.3
50%	45.6	49.3	25.8
40%	50.0	53.7	28.2
30%	58.2	59.9	31.6
20%	77.0	75.1	38.5
10%	101.8	96.6	54.0
5%	135.8	123.0	89.5
1%	227.2	200.7	181.8

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-20. Habitat Time Series Analysis Results for Juvenile Brown Trout in South Fork San Joaquin River - Bear Creek to Mono Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6537	6579	6590
Minimum	10694	10646	10691
Average	20306	20265	21312
Maximum	21879	21878	21946
Median	21127	20855	21759
Index A (50%-90%)	20011	19968	21471
Index B (10%-90%)	20730	20587	21667
Index C (25%-90%)	20528	20388	21610
Approximate WUA Exceedence			
99%	12092	12794	13663
95%	16056	16741	18645
90%	17949	18244	20532
80%	19312	19419	21343
70%	20293	20195	21528
60%	20798	20565	21666
50%	21127	20855	21759
40%	21323	21027	21826
30%	21479	21177	21866
20%	21580	21390	21911
10%	21681	21640	21931
5%	21769	21768	21938
1%	21859	21857	21944
Approximate Discharge Exceedence			
99%	31.1	31.2	14.9
95%	33.4	33.4	16.1
90%	35.4	36.2	17.3
80%	37.4	41.0	19.0
70%	39.3	44.9	20.2
60%	42.2	47.0	22.3
50%	45.6	49.3	25.8
40%	50.0	53.7	28.2
30%	58.2	59.9	31.6
20%	77.0	75.1	38.5
10%	101.8	96.6	54.0
5%	135.8	123.0	89.5
1%	227.2	200.7	181.8

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-21. Habitat Time Series Analysis Results for Brown Trout Spawning in South Fork San Joaquin River - Bear Creek to Mono Creek

Comparative Statistics for:			
	Prop Action W/ crmf	CDFG Alternative	No Action
Count	1748	1748	1748
Minimum	178	178	159
Average	180	180	172
Maximum	228	228	214
Median	179	179	173
Index A (50%-90%)	179	179	169
Index B (10%-90%)	179	179	173
Index C (25%-90%)	179	179	172
Approximate WUA Exceedence			
99%	179	178	159
95%	179	178	161
90%	179	179	164
80%	179	179	167
70%	179	179	170
60%	179	179	172
50%	179	179	173
40%	179	179	175
30%	179	179	176
20%	179	180	177
10%	180	182	179
5%	180	184	179
1%	196	203	180
Approximate Discharge Exceedence			
99%	31.8	32.0	14.6
95%	33.1	32.9	15.1
90%	34.8	34.6	16.0
80%	35.9	40.7	16.8
70%	36.9	44.4	17.8
60%	37.9	45.6	18.4
50%	38.9	46.8	19.0
40%	39.9	47.8	19.7
30%	41.9	49.2	20.4
20%	43.3	51.3	21.4
10%	45.3	54.9	23.5
5%	48.4	57.7	25.8
1%	65.9	71.4	45.2

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-22. Habitat Time Series Analysis Results for Adult Rainbow Trout in South Fork San Joaquin River - Mono Creek to Rattlesnake Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6486	6553	6568
Minimum	26768	27112	18701
Average	29845	30173	24534
Maximum	32070	32070	32067
Median	29782	30307	24157
Index A (50%-90%)	28843	29398	22360
Index B (10%-90%)	29884	30271	24289
Index C (25%-90%)	29488	29956	23503
Approximate WUA Exceedence			
99%	26872	27206	19224
95%	27451	27649	19982
90%	27904	28055	20685
80%	28388	28710	21524
70%	28847	29723	22356
60%	29270	30032	23221
50%	29782	30307	24157
40%	30453	30800	25055
30%	30908	31156	26103
20%	31505	31553	27162
10%	31851	31864	29380
5%	31959	31952	31334
1%	32047	32042	31958
Approximate Discharge Exceedence			
99%	49.7	51.7	21.6
95%	53.2	54.4	23.5
90%	56.1	57.2	25.3
80%	59.5	61.9	27.7
70%	63.0	69.9	30.2
60%	66.8	72.8	33.2
50%	71.1	75.5	36.7
40%	78.4	83.8	40.4
30%	87.2	89.9	45.5
20%	103.2	104.9	51.5
10%	127.2	128.3	68.9
5%	160.7	155.2	104.9
1%	245.2	223.4	193.7

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-23. Habitat Time Series Analysis Results for Juvenile Rainbow Trout in South Fork San Joaquin River - Mono Creek to Rattlesnake Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6486	6553	6568
Minimum	12320	12341	12541
Average	23026	22846	25270
Maximum	25519	25394	26102
Median	23922	23589	25863
Index A (50%-90%)	22460	22281	25472
Index B (10%-90%)	23488	23227	25737
Index C (25%-90%)	23173	22890	25658
Approximate WUA Exceedence			
99%	13720	14357	15555
95%	17673	18005	21446
90%	19821	19741	24085
80%	21648	21527	25348
70%	22776	22601	25600
60%	23386	23010	25770
50%	23922	23589	25863
40%	24245	23787	25944
30%	24529	24010	26005
20%	24788	24610	26066
10%	25039	24956	26100
5%	25248	25163	26101
1%	25489	25351	26102
Approximate Discharge Exceedence			
99%	49.7	51.7	21.6
95%	53.2	54.4	23.5
90%	56.1	57.2	25.3
80%	59.5	61.9	27.7
70%	63.0	69.9	30.2
60%	66.8	72.8	33.2
50%	71.1	75.5	36.7
40%	78.4	83.8	40.4
30%	87.2	89.9	45.5
20%	103.2	104.9	51.5
10%	127.2	128.3	68.9
5%	160.7	155.2	104.9
1%	245.2	223.4	193.7

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-24. Habitat Time Series Analysis Results for Rainbow Trout Spawning in South Fork San Joaquin River - Mono Creek to Rattlesnake Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	1447	1491	1501
Minimum	262	263	204
Average	309	309	245
Maximum	326	326	326
Median	314	314	217
Index A (50%-90%)	302	302	216
Index B (10%-90%)	311	310	239
Index C (25%-90%)	308	308	225
Approximate WUA Exceedence			
99%	268	272	207
95%	287	289	211
90%	290	290	215
80%	292	293	215
70%	303	302	216
60%	310	310	217
50%	314	314	217
40%	317	317	225
30%	320	319	267
20%	322	321	295
10%	324	323	315
5%	325	324	321
1%	326	326	325
Approximate Discharge Exceedence			
99%	90.3	90.2	29.7
95%	93.3	93.5	33.0
90%	96.1	96.3	38.7
80%	101.6	104.4	44.6
70%	107.6	109.7	48.1
60%	113.1	114.0	51.6
50%	120.1	119.3	56.4
40%	126.8	127.7	62.2
30%	136.9	138.8	75.3
20%	158.9	152.8	96.3
10%	202.0	177.7	124.7
5%	235.4	210.2	157.1
1%	282.2	272.5	257.5

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-25. Habitat Time Series Analysis Results for Adult Brown Trout in South Fork San Joaquin River - Mono Creek to Rattlesnake Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6486	6553	6568
Minimum	20745	20788	21189
Average	29440	29518	27032
Maximum	30210	30210	30209
Median	29851	29929	27149
Index A (50%-90%)	29450	29488	25766
Index B (10%-90%)	29742	29797	27074
Index C (25%-90%)	29650	29711	26600
Approximate WUA Exceedence			
99%	23126	24012	23235
95%	26897	27146	23856
90%	28471	28413	24485
80%	29256	29286	25145
70%	29564	29580	25752
60%	29700	29756	26379
50%	29851	29929	27149
40%	29947	30052	27769
30%	30043	30129	28411
20%	30126	30162	28950
10%	30187	30195	29609
5%	30204	30202	29959
1%	30209	30207	30187
Approximate Discharge Exceedence			
99%	49.7	51.7	21.6
95%	53.2	54.4	23.5
90%	56.1	57.2	25.3
80%	59.5	61.9	27.7
70%	63.0	69.9	30.2
60%	66.8	72.8	33.2
50%	71.1	75.5	36.7
40%	78.4	83.8	40.4
30%	87.2	89.9	45.5
20%	103.2	104.9	51.5
10%	127.2	128.3	68.9
5%	160.7	155.2	104.9
1%	245.2	223.4	193.7

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-26. Habitat Time Series Analysis Results for Juvenile Brown Trout in South Fork San Joaquin River - Mono Creek to Rattlesnake Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6486	6553	6568
Minimum	11546	11567	11761
Average	23072	22867	26128
Maximum	26020	25824	27310
Median	24097	23742	26987
Index A (50%-90%)	22414	22212	26214
Index B (10%-90%)	23585	23295	26694
Index C (25%-90%)	23227	22914	26566
Approximate WUA Exceedence			
99%	12917	13585	14634
95%	16914	17277	21204
90%	19376	19282	24273
80%	21430	21294	25795
70%	22816	22617	26417
60%	23490	23074	26793
50%	24097	23742	26987
40%	24452	23956	27118
30%	24765	24190	27197
20%	25052	24853	27241
10%	25369	25264	27270
5%	25636	25527	27289
1%	25958	25769	27305
Approximate Discharge Exceedence			
99%	49.7	51.7	21.6
95%	53.2	54.4	23.5
90%	56.1	57.2	25.3
80%	59.5	61.9	27.7
70%	63.0	69.9	30.2
60%	66.8	72.8	33.2
50%	71.1	75.5	36.7
40%	78.4	83.8	40.4
30%	87.2	89.9	45.5
20%	103.2	104.9	51.5
10%	127.2	128.3	68.9
5%	160.7	155.2	104.9
1%	245.2	223.4	193.7

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-27. Habitat Time Series Analysis Results for Brown Trout Spawning in South Fork San Joaquin River - Mono Creek to Rattlesnake Creek

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	1748	1748	1748
Minimum	217	212	199
Average	240	255	205
Maximum	300	300	296
Median	236	258	203
Index A (50%-90%)	231	241	202
Index B (10%-90%)	238	256	203
Index C (25%-90%)	235	250	203
Approximate WUA Exceedence			
99%	219	212	199
95%	221	214	201
90%	225	216	202
80%	228	228	202
70%	230	250	202
60%	233	253	203
50%	236	258	203
40%	240	261	203
30%	246	266	203
20%	250	281	204
10%	256	289	207
5%	269	291	209
1%	293	297	265
Approximate Discharge Exceedence			
99%	57.3	52.5	20.5
95%	58.6	53.7	22.2
90%	60.6	55.6	23.3
80%	61.9	61.8	25.2
70%	62.8	69.6	26.4
60%	63.9	70.7	27.6
50%	64.8	72.5	28.6
40%	66.1	73.6	30.4
30%	68.1	75.1	31.4
20%	69.6	81.5	33.3
10%	71.7	85.7	37.2
5%	76.5	87.9	46.7
1%	103.8	109.2	75.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-28. Habitat Time Series Analysis Results for Adult Brown Trout in Bear Creek (Diversion to SF San Joaquin River)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6619	6619	6619
Minimum	5247	5247	3334
Average	7809	7821	5296
Maximum	14494	14494	14494
Median	7793	7793	4820
Index A (50%-90%)	6883	6823	4459
Index B (10%-90%)	7618	7591	4865
Index C (25%-90%)	7258	7233	4680
Approximate WUA Exceedence			
99%	5981	5981	3661
95%	5981	5981	3880
90%	5981	5981	3880
80%	5981	5981	4364
70%	7233	6636	4547
60%	7793	7793	4638
50%	7793	7793	4820
40%	7793	7793	4984
30%	7793	7793	5231
20%	9179	9179	5462
10%	9179	9861	6382
5%	9861	9861	9861
1%	14342	14342	14342
Approximate Discharge Exceedence			
99%	4.0	4.0	1.3
95%	4.0	4.0	1.5
90%	4.0	4.0	1.5
80%	4.0	4.0	2.0
70%	6.0	5.0	2.2
60%	7.0	7.0	2.3
50%	7.0	7.0	2.5
40%	7.0	7.0	2.7
30%	7.0	7.0	3.0
20%	10.0	10.0	3.3
10%	10.0	12.0	4.6
5%	12.0	12.0	12.0
1%	79.5	79.5	79.5

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-29. Habitat Time Series Analysis Results for Adult Brown Trout in Bear Creek (Diversion to SF San Joaquin River)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6619	6619	6619
Minimum	8867	8867	5818
Average	11755	11742	8656
Maximum	13787	13787	13787
Median	12109	12109	8478
Index A (50%-90%)	11033	10964	7867
Index B (10%-90%)	11772	11739	8482
Index C (25%-90%)	11447	11418	8221
Approximate WUA Exceedence			
99%	9815	9815	6429
95%	10072	10072	6836
90%	10072	10072	6836
80%	10072	10072	7718
70%	11143	10847	8022
60%	11903	11903	8174
50%	12109	12109	8478
40%	12109	12109	8719
30%	12109	12109	9082
20%	13256	13008	9401
10%	13256	13256	10464
5%	13256	13475	11535
1%	13749	13749	13749
Approximate Discharge Exceedence			
99%	4.0	4.0	1.3
95%	4.0	4.0	1.5
90%	4.0	4.0	1.5
80%	4.0	4.0	2.0
70%	6.0	5.0	2.2
60%	7.0	7.0	2.3
50%	7.0	7.0	2.5
40%	7.0	7.0	2.7
30%	7.0	7.0	3.0
20%	10.0	10.0	3.3
10%	10.0	12.0	4.6
5%	12.0	12.0	12.0
1%	79.5	79.5	79.5

WUA Exceedence for Brown Trout/Juvenile in Bear Creek

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-30. Habitat Time Series Analysis Results for Adult Brown Trout in Bear Creek (Diversion to SF San Joaquin River)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	1748	1748	1748
Minimum	13	13	10
Average	14	14	12
Maximum	19	19	19
Median	15	15	12
Index A (50%-90%)	14	14	12
Index B (10%-90%)	14	14	12
Index C (25%-90%)	14	14	12
Approximate WUA Exceedence			
99%	13	13	11
95%	14	14	11
90%	14	14	11
80%	14	14	12
70%	14	14	12
60%	14	14	12
50%	15	15	12
40%	15	15	12
30%	15	15	12
20%	15	15	12
10%	15	15	13
5%	15	15	14
1%	17	17	17
Approximate Discharge Exceedence			
99%	3.5	3.5	1.3
95%	4.9	4.9	1.4
90%	5.5	5.0	1.4
80%	6.0	5.0	1.6
70%	6.0	6.0	1.8
60%	6.0	6.0	2.0
50%	7.0	7.0	2.1
40%	7.0	7.0	2.2
30%	7.0	7.0	2.4
20%	7.0	7.0	2.5
10%	7.0	7.0	4.0
5%	7.0	7.0	5.5
1%	13.1	13.1	13.1

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-31. Habitat Time Series Analysis Results for Adult Rainbow Trout in Mono Creek (Diversion to SF San Joaquin River)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6819	6850	6850
Minimum	9573	10112	4568
Average	10905	11227	7061
Maximum	14417	14417	14417
Median	11121	11121	6916
Index A (50%-90%)	10564	10654	6039
Index B (10%-90%)	10913	11190	6913
Index C (25%-90%)	10778	11023	6551
Approximate WUA Exceedence			
99%	9573	10112	4752
95%	9573	10112	4938
90%	9573	10112	5126
80%	9573	10112	5763
70%	11121	11121	5959
60%	11121	11121	6472
50%	11121	11121	6916
40%	11121	11913	7323
30%	11121	11913	7710
20%	11121	11913	8430
10%	11913	11913	8766
5%	11913	12516	9573
1%	13101	13021	13021
Approximate Discharge Exceedence			
99%	18.0	20.0	5.4
95%	18.0	20.0	5.8
90%	18.0	20.0	6.2
80%	18.0	20.0	7.5
70%	25.0	25.0	7.9
60%	25.0	25.0	9.0
50%	25.0	25.0	10.0
40%	25.0	30.0	11.0
30%	25.0	30.0	12.0
20%	25.0	30.0	14.0
10%	30.0	30.0	15.0
5%	30.0	35.0	18.0
1%	45.0	43.0	43.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-32. Habitat Time Series Analysis Results for Juvenile Rainbow Trout in Mono Creek (Diversion to SF San Joaquin River)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6819	6850	6850
Minimum	9376	9376	9027
Average	11133	11073	10568
Maximum	11201	11206	11206
Median	11183	11183	10703
Index A (50%-90%)	11142	11022	10316
Index B (10%-90%)	11163	11108	10623
Index C (25%-90%)	11158	11085	10516
Approximate WUA Exceedence			
99%	10355	10430	9310
95%	10972	10719	9553
90%	10972	10972	9715
80%	11177	10972	10213
70%	11177	10972	10287
60%	11177	10972	10525
50%	11183	11183	10696
40%	11183	11183	10723
30%	11183	11183	10959
20%	11183	11206	11093
10%	11183	11206	11135
5%	11183	11206	11163
1%	11183	11206	11192
Approximate Discharge Exceedence			
99%	18.0	20.0	5.4
95%	18.0	20.0	5.8
90%	18.0	20.0	6.2
80%	18.0	20.0	7.5
70%	25.0	25.0	7.9
60%	25.0	25.0	9.0
50%	25.0	25.0	10.0
40%	25.0	30.0	11.0
30%	25.0	30.0	12.0
20%	25.0	30.0	14.0
10%	30.0	30.0	15.0
5%	30.0	35.0	18.0
1%	45.0	43.0	43.0

WUA Exceedence for Rainbow Trout/Juvenile in Mono Creek

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-33. Habitat Time Series Analysis Results for Rainbow Trout Spawning in Mono Creek (Diversion to SF San Joaquin River)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	1696	1696	1696
Minimum	1011	1011	1011
Average	2787	2801	2074
Maximum	2827	2827	2827
Median	2794	2794	2074
Index A (50%-90%)	2794	2788	1885
Index B (10%-90%)	2794	2808	2096
Index C (25%-90%)	2794	2803	2028
Approximate WUA Exceedence			
99%	2794	2785	1319
95%	2794	2785	1396
90%	2794	2785	1504
80%	2794	2785	1767
70%	2794	2785	1908
60%	2794	2794	1965
50%	2794	2794	2074
40%	2794	2827	2269
30%	2794	2827	2356
20%	2794	2827	2356
10%	2794	2827	2435
5%	2794	2827	2545
1%	2794	2827	2794
Approximate Discharge Exceedence			
99%	25.0	25.0	5.4
95%	25.0	25.0	5.9
90%	25.0	25.0	6.7
80%	25.0	30.0	8.5
70%	25.0	30.0	9.6
60%	25.0	30.0	10.0
50%	25.0	30.0	11.0
40%	25.0	30.0	13.0
30%	25.0	35.0	14.0
20%	25.0	35.0	14.0
10%	25.0	35.0	16.0
5%	25.0	35.0	17.0
1%	30.0	35.0	30.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-34. Habitat Time Series Analysis Results for Adult Brown Trout in Mono Creek (Diversion to SF San Joaquin River)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6819	6850	6850
Minimum	10469	10760	6482
Average	11000	11101	8724
Maximum	12160	12160	12160
Median	11126	11126	8755
Index A (50%-90%)	10890	10957	8006
Index B (10%-90%)	11022	11103	8700
Index C (25%-90%)	10981	11060	8429
Approximate WUA Exceedence			
99%	10469	10760	6714
95%	10469	10760	6933
90%	10469	10760	7144
80%	10469	10760	7770
70%	11126	11126	7948
60%	11126	11126	8398
50%	11126	11126	8755
40%	11126	11286	9083
30%	11126	11286	9377
20%	11126	11286	9843
10%	11286	11286	10033
5%	11286	11384	10469
1%	11523	11493	11493
Approximate Discharge Exceedence			
99%	18.0	20.0	5.4
95%	18.0	20.0	5.8
90%	18.0	20.0	6.2
80%	18.0	20.0	7.5
70%	25.0	25.0	7.9
60%	25.0	25.0	9.0
50%	25.0	25.0	10.0
40%	25.0	30.0	11.0
30%	25.0	30.0	12.0
20%	25.0	30.0	14.0
10%	30.0	30.0	15.0
5%	30.0	35.0	18.0
1%	45.0	43.0	43.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-35. Habitat Time Series Analysis Results for Juvenile Brown Trout in Mono Creek (Diversion to SF San Joaquin River)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	6819	6850	6850
Minimum	9463	9463	9463
Average	10195	10134	10345
Maximum	10386	10330	10502
Median	10181	10181	10430
Index A (50%-90%)	10148	10038	10281
Index B (10%-90%)	10201	10144	10376
Index C (25%-90%)	10160	10101	10350
Approximate WUA Exceedence			
99%	9784	9801	9746
95%	9994	9869	10008
90%	9994	9994	10064
80%	10181	9994	10240
70%	10181	9994	10270
60%	10181	9994	10373
50%	10181	10181	10430
40%	10181	10181	10464
30%	10181	10181	10470
20%	10386	10330	10491
10%	10386	10330	10491
5%	10386	10330	10502
1%	10386	10330	10502
Approximate Discharge Exceedence			
99%	18.0	20.0	5.4
95%	18.0	20.0	5.8
90%	18.0	20.0	6.2
80%	18.0	20.0	7.5
70%	25.0	25.0	7.9
60%	25.0	25.0	9.0
50%	25.0	25.0	10.0
40%	25.0	30.0	11.0
30%	25.0	30.0	12.0
20%	25.0	30.0	14.0
10%	30.0	30.0	15.0
5%	30.0	35.0	18.0
1%	45.0	43.0	43.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-36. Habitat Time Series Analysis Results for Brown Trout Spawning in Mono Creek (Diversion to SF San Joaquin River)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	1748	1748	1748
Minimum	1585	1585	1585
Average	2805	2793	2142
Maximum	2813	2813	2813
Median	2813	2799	2051
Index A (50%-90%)	2813	2791	1965
Index B (10%-90%)	2813	2802	2122
Index C (25%-90%)	2813	2799	2058
Approximate WUA Exceedence			
99%	2515	2515	1652
95%	2813	2761	1772
90%	2813	2761	1787
80%	2813	2799	1902
70%	2813	2799	2012
60%	2813	2799	2012
50%	2813	2799	2051
40%	2813	2813	2192
30%	2813	2813	2289
20%	2813	2813	2370
10%	2813	2813	2508
5%	2813	2813	2711
1%	2813	2813	2805
Approximate Discharge Exceedence			
99%	25.0	20.0	5.0
95%	25.0	20.0	5.8
90%	25.0	20.0	5.9
80%	25.0	20.0	6.7
70%	25.0	20.0	7.5
60%	25.0	25.0	7.5
50%	25.0	25.0	7.8
40%	25.0	25.0	9.0
30%	25.0	25.0	10.0
20%	25.0	25.0	11.0
10%	25.0	30.0	13.0
5%	25.0	30.0	21.0
1%	38.0	38.0	38.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-37. Habitat Time Series Analysis Results for Adult Rainbow Trout in Norh Fork Stevenson Creek (Tunnel Outlet to Shaver Lake)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	4934	4934	4934
Minimum	8282	7018	4683
Average	8686	8798	7043
Maximum	12266	12266	12266
Median	8282	8282	6343
Index A (50%-90%)	8282	8058	5832
Index B (10%-90%)	8384	8676	6713
Index C (25%-90%)	8282	8357	6253
Approximate WUA Exceedence			
99%	8282	7018	5141
95%	8282	7018	5251
90%	8282	7018	5355
80%	8282	8282	5610
70%	8282	8282	5804
60%	8282	8282	6080
50%	8282	8282	6343
40%	8282	8282	6750
30%	8282	9179	7276
20%	8282	9914	8282
10%	10198	10624	10198
5%	11739	11739	11739
1%	12212	12212	12212
Approximate Discharge Exceedence			
99%	12.0	8.0	3.8
95%	12.0	8.0	4.0
90%	12.0	8.0	4.2
80%	12.0	12.0	4.7
70%	12.0	12.0	5.1
60%	12.0	12.0	5.7
50%	12.0	12.0	6.3
40%	12.0	12.0	7.3
30%	12.0	16.0	8.7
20%	12.0	20.0	12.0
10%	22.0	25.0	22.0
5%	38.0	38.0	38.0
1%	62.0	62.0	62.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-38. Habitat Time Series Analysis Results for Juvenile Rainbow Trout in Norh Fork Stevenson Creek (Tunnel Outlet to Shaver Lake)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	4934	4934	4934
Minimum	10302	10302	9618
Average	12500	12421	11429
Maximum	12788	12788	12788
Median	12566	12566	11338
Index A (50%-90%)	12566	12339	10899
Index B (10%-90%)	12566	12486	11410
Index C (25%-90%)	12566	12429	11202
Approximate WUA Exceedence			
99%	10794	10794	10208
95%	11794	11794	10338
90%	12566	11925	10448
80%	12566	11991	10712
70%	12566	12520	10861
60%	12566	12566	11137
50%	12566	12566	11338
40%	12566	12566	11617
30%	12566	12566	11900
20%	12566	12732	12231
10%	12566	12757	12566
5%	12713	12759	12713
1%	12782	12774	12782
Approximate Discharge Exceedence			
99%	12.0	8.0	3.8
95%	12.0	8.0	4.0
90%	12.0	8.0	4.2
80%	12.0	12.0	4.7
70%	12.0	12.0	5.1
60%	12.0	12.0	5.7
50%	12.0	12.0	6.3
40%	12.0	12.0	7.3
30%	12.0	16.0	8.7
20%	12.0	20.0	12.0
10%	22.0	25.0	22.0
5%	38.0	38.0	38.0
1%	62.0	62.0	62.0

WUA Exceedence for Rainbow Trout/Juvenile in Mono Creek

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-39. Habitat Time Series Analysis Results for Rainbow Trout Spawning in Norh Fork Stevenson Creek (Tunnel Outlet to Shaver Lake)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	1228	1228	1228
Minimum	85	85	85
Average	184	175	179
Maximum	201	187	202
Median	201	187	188
Index A (50%-90%)	180	173	170
Index B (10%-90%)	191	180	184
Index C (25%-90%)	188	178	180
Approximate WUA Exceedence			
99%	94	94	94
95%	121	121	121
90%	136	136	136
80%	167	167	162
70%	185	178	173
60%	198	180	182
50%	201	187	188
40%	201	187	195
30%	201	187	198
20%	201	187	200
10%	201	187	201
5%	201	187	202
1%	201	187	202
Approximate Discharge Exceedence			
99%	12.0	20.0	4.4
95%	12.0	20.0	5.0
90%	12.0	20.0	5.5
80%	12.0	20.0	6.6
70%	12.0	20.0	8.2
60%	12.0	20.0	9.7
50%	12.0	20.0	12.0
40%	15.0	24.0	15.0
30%	21.0	25.0	21.0
20%	30.0	30.0	30.0
10%	45.0	45.0	45.0
5%	54.0	54.0	54.0
1%	71.0	71.0	71.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-40. Habitat Time Series Analysis Results for Adult Brown Trout in Norh Fork Stevenson Creek (Tunnel Outlet to Shaver Lake)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	4934	4934	4934
Minimum	10216	9146	6657
Average	10438	10487	8926
Maximum	12059	12059	12059
Median	10216	10216	8490
Index A (50%-90%)	10216	10027	7939
Index B (10%-90%)	10290	10478	8768
Index C (25%-90%)	10216	10258	8366
Approximate WUA Exceedence			
99%	10216	9146	7175
95%	10216	9146	7298
90%	10216	9146	7414
80%	10216	10216	7695
70%	10216	10216	7909
60%	10216	10216	8213
50%	10216	10216	8490
40%	10216	10216	8892
30%	10216	10891	9374
20%	10216	11373	10216
10%	11451	11762	11451
5%	11900	11900	11900
1%	12056	12056	12056
Approximate Discharge Exceedence			
99%	12.0	8.0	3.8
95%	12.0	8.0	4.0
90%	12.0	8.0	4.2
80%	12.0	12.0	4.7
70%	12.0	12.0	5.1
60%	12.0	12.0	5.7
50%	12.0	12.0	6.3
40%	12.0	12.0	7.3
30%	12.0	16.0	8.7
20%	12.0	20.0	12.0
10%	22.0	25.0	22.0
5%	38.0	38.0	38.0
1%	62.0	62.0	62.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-41. Habitat Time Series Analysis Results for Juvenile Brown Trout in Norh Fork Stevenson Creek (Tunnel Outlet to Shaver Lake)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	4934	4934	4934
Minimum	10158	10158	10158
Average	12830	12726	12001
Maximum	13053	13053	13053
Median	12970	12970	11996
Index A (50%-90%)	12962	12695	11586
Index B (10%-90%)	12966	12833	12007
Index C (25%-90%)	12965	12801	11843
Approximate WUA Exceedence			
99%	10594	10594	10478
95%	11524	11524	11096
90%	12678	12422	11204
80%	12970	12531	11401
70%	12970	12740	11576
60%	12970	12848	11768
50%	12970	12970	11996
40%	12970	12970	12205
30%	12970	12970	12425
20%	12970	12970	12664
10%	12970	13003	12892
5%	12998	13053	12998
1%	13027	13053	13027
Approximate Discharge Exceedence			
99%	12.0	8.0	3.8
95%	12.0	8.0	4.0
90%	12.0	8.0	4.2
80%	12.0	12.0	4.7
70%	12.0	12.0	5.1
60%	12.0	12.0	5.7
50%	12.0	12.0	6.3
40%	12.0	12.0	7.3
30%	12.0	16.0	8.7
20%	12.0	20.0	12.0
10%	22.0	25.0	22.0
5%	38.0	38.0	38.0
1%	62.0	62.0	62.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-42. Habitat Time Series Analysis Results for Brown Trout Spawning in Norh Fork Stevenson Creek (Tunnel Outlet to Shaver Lake)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	1194	1194	1194
Minimum	75	75	75
Average	167	167	166
Maximum	169	169	177
Median	169	169	168
Index A (50%-90%)	169	169	163
Index B (10%-90%)	169	169	168
Index C (25%-90%)	169	169	166
Approximate WUA Exceedence			
99%	111	111	111
95%	169	169	155
90%	169	169	159
80%	169	169	160
70%	169	169	163
60%	169	169	166
50%	169	169	168
40%	169	169	169
30%	169	169	172
20%	169	169	175
10%	169	169	177
5%	169	169	177
1%	169	169	177
Approximate Discharge Exceedence			
99%	12.0	12.0	3.2
95%	12.0	12.0	3.9
90%	12.0	12.0	4.0
80%	12.0	12.0	4.2
70%	12.0	12.0	4.4
60%	12.0	12.0	4.7
50%	12.0	12.0	4.8
40%	12.0	12.0	5.3
30%	12.0	12.0	5.8
20%	12.0	12.0	6.8
10%	12.0	12.0	8.2
5%	12.0	12.0	12.0
1%	37.0	37.0	37.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-43. Habitat Time Series Analysis Results for Adult Rainbow Trout in Big Creek, Dam 5 to Powerhouse 8/SJR

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	5536	5536	5536
Minimum	10052	10435	6913
Average	11093	11400	8766
Maximum	16089	16089	16089
Median	11700	11124	8379
Index A (50%-90%)	10258	10547	7896
Index B (10%-90%)	10979	11215	8486
Index C (25%-90%)	10812	10932	8227
Approximate WUA Exceedence			
99%	10052	10435	7078
95%	10052	10435	7228
90%	10052	10435	7454
80%	10052	10435	7720
70%	10052	10435	7848
60%	10435	10435	8093
50%	11700	11124	8379
40%	11700	11124	8652
30%	11700	12350	8959
20%	11700	12350	9488
10%	11700	13200	10010
5%	12350	13200	12350
1%	15803	15803	15803
Approximate Discharge Exceedence			
99%	7.0	8.0	1.5
95%	7.0	8.0	1.7
90%	7.0	8.0	2.0
80%	7.0	8.0	2.4
70%	7.0	8.0	2.6
60%	8.0	8.0	3.0
50%	12.0	10.0	3.5
40%	12.0	10.0	4.0
30%	12.0	15.0	4.6
20%	12.0	15.0	5.7
10%	12.0	20.0	6.9
5%	15.0	20.0	15.0
1%	59.0	59.0	59.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-44. Habitat Time Series Analysis Results for Juvenile Rainbow Trout in Big Creek, Dam 5 to Powerhouse 8/SJR

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	5536	5536	5536
Minimum	8078	8078	7797
Average	10807	10853	9539
Maximum	11042	11042	11042
Median	10824	10973	9552
Index A (50%-90%)	10650	10787	9050
Index B (10%-90%)	10843	10889	9550
Index C (25%-90%)	10798	10860	9365
Approximate WUA Exceedence			
99%	9065	9065	8056
95%	10612	10771	8255
90%	10612	10771	8455
80%	10612	10771	8879
70%	10612	10771	9030
60%	10612	10771	9242
50%	10824	10973	9552
40%	11042	10973	9804
30%	11042	10990	10000
20%	11042	11024	10300
10%	11042	11024	10494
5%	11042	11024	10755
1%	11042	11024	11024
Approximate Discharge Exceedence			
99%	7.0	8.0	1.5
95%	7.0	8.0	1.7
90%	7.0	8.0	2.0
80%	7.0	8.0	2.4
70%	7.0	8.0	2.6
60%	8.0	8.0	3.0
50%	12.0	10.0	3.5
40%	12.0	10.0	4.0
30%	12.0	15.0	4.6
20%	12.0	15.0	5.7
10%	12.0	20.0	6.9
5%	15.0	20.0	15.0
1%	59.0	59.0	59.0

WUA Exceedence for Rainbow Trout/Juvenile in Mono Creek

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-45. Habitat Time Series Analysis Results for Rainbow Trout Spawning in Big Creek, Dam 5 to Powerhouse 8/SJR

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	1354	1354	1354
Minimum	634	634	228
Average	841	906	457
Maximum	938	919	938
Median	843	919	395
Index A (50%-90%)	843	916	319
Index B (10%-90%)	843	918	433
Index C (25%-90%)	843	917	384
Approximate WUA Exceedence			
99%	685	685	237
95%	793	793	247
90%	843	914	266
80%	843	914	294
70%	843	914	311
60%	843	914	337
50%	843	919	395
40%	843	919	487
30%	843	919	535
20%	843	919	606
10%	843	919	761
5%	872	919	872
1%	934	919	934
Approximate Discharge Exceedence			
99%	12.0	15.0	2.1
95%	12.0	15.0	2.2
90%	12.0	15.0	2.4
80%	12.0	15.0	2.7
70%	12.0	15.0	2.9
60%	12.0	15.0	3.2
50%	12.0	15.0	3.9
40%	12.0	20.0	5.0
30%	12.0	20.0	5.8
20%	12.0	20.0	7.0
10%	16.0	20.0	16.0
5%	36.0	36.0	36.0
1%	78.0	78.0	78.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-46. Habitat Time Series Analysis Results for Adult Brown Trout in Big Creek, Dam 5 to Powerhouse 8/SJR

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	5536	5536	5536
Minimum	12218	12542	8963
Average	12995	13252	10836
Maximum	15246	15246	15246
Median	13519	13085	10567
Index A (50%-90%)	12386	12631	10050
Index B (10%-90%)	12953	13152	10665
Index C (25%-90%)	12822	12934	10400
Approximate WUA Exceedence			
99%	12218	12542	9163
95%	12218	12542	9328
90%	12218	12542	9576
80%	12218	12542	9861
70%	12218	12542	9998
60%	12542	12542	10262
50%	13519	13085	10567
40%	13519	13085	10851
30%	13519	14060	11174
20%	13519	14060	11698
10%	13519	14651	12180
5%	13897	14651	13897
1%	15192	15192	15192
Approximate Discharge Exceedence			
99%	7.0	8.0	1.5
95%	7.0	8.0	1.7
90%	7.0	8.0	2.0
80%	7.0	8.0	2.4
70%	7.0	8.0	2.6
60%	8.0	8.0	3.0
50%	12.0	10.0	3.5
40%	12.0	10.0	4.0
30%	12.0	15.0	4.6
20%	12.0	15.0	5.7
10%	12.0	20.0	6.9
5%	15.0	20.0	15.0
1%	59.0	59.0	59.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-47. Habitat Time Series Analysis Results for Juvenile Brown Trout in Big Creek, Dam 5 to Powerhouse 8/SJR

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	5536	5536	5536
Minimum	8267	8267	8267
Average	11521	11559	10411
Maximum	11741	11741	11741
Median	11575	11575	10491
Index A (50%-90%)	11451	11571	9973
Index B (10%-90%)	11583	11624	10443
Index C (25%-90%)	11551	11600	10274
Approximate WUA Exceedence			
99%	8871	8871	8735
95%	11417	11461	9094
90%	11417	11461	9293
80%	11417	11575	9743
70%	11417	11575	9982
60%	11417	11575	10198
50%	11575	11575	10491
40%	11720	11662	10723
30%	11720	11662	10864
20%	11720	11741	11141
10%	11720	11741	11291
5%	11720	11741	11496
1%	11720	11741	11720
Approximate Discharge Exceedence			
99%	7.0	8.0	1.5
95%	7.0	8.0	1.7
90%	7.0	8.0	2.0
80%	7.0	8.0	2.4
70%	7.0	8.0	2.6
60%	8.0	8.0	3.0
50%	12.0	10.0	3.5
40%	12.0	10.0	4.0
30%	12.0	15.0	4.6
20%	12.0	15.0	5.7
10%	12.0	20.0	6.9
5%	15.0	20.0	15.0
1%	59.0	59.0	59.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-48. Habitat Time Series Analysis Results for Brown Trout Spawning in Big Creek, Dam 5 to Powerhouse 8/SJR

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	1380	1380	1380
Minimum	636	636	262
Average	653	688	441
Maximum	772	772	772
Median	637	677	435
Index A (50%-90%)	637	677	385
Index B (10%-90%)	651	682	435
Index C (25%-90%)	644	677	416
Approximate WUA Exceedence			
99%	637	677	292
95%	637	677	303
90%	637	677	313
80%	637	677	361
70%	637	677	385
60%	637	677	414
50%	637	677	435
40%	637	677	455
30%	677	677	482
20%	677	677	503
10%	677	745	569
5%	677	745	598
1%	755	755	755
Approximate Discharge Exceedence			
99%	7.0	8.0	1.5
95%	7.0	8.0	1.6
90%	7.0	8.0	1.7
80%	7.0	8.0	2.2
70%	7.0	8.0	2.5
60%	7.0	8.0	2.9
50%	7.0	8.0	3.2
40%	7.0	8.0	3.5
30%	8.0	8.0	3.9
20%	8.0	8.0	4.2
10%	8.0	10.0	5.4
5%	8.0	10.0	6.1
1%	15.0	15.0	15.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-49. Habitat Time Series Analysis Results for Adult Rainbow Trout in Stevenson Creek (Shaver Lake Dam to San Joaquin River)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	5222	5222	5222
Minimum	7169	7169	4874
Average	8187	8301	6014
Maximum	13835	13835	13835
Median	7169	8862	6055
Index A (50%-90%)	7169	7232	5730
Index B (10%-90%)	8098	8150	5966
Index C (25%-90%)	7760	7859	5883
Approximate WUA Exceedence			
99%	7169	7169	4965
95%	7169	7169	5145
90%	7169	7169	5325
80%	7169	7169	5493
70%	7169	7169	5823
60%	7169	7169	5900
50%	7169	8862	6055
40%	8862	8862	6132
30%	8862	8862	6205
20%	9776	9334	6278
10%	9776	9776	6567
5%	9776	9776	6843
1%	9776	11384	8179
Approximate Discharge Exceedence			
99%	5.0	5.0	2.1
95%	5.0	5.0	2.3
90%	5.0	5.0	2.5
80%	5.0	5.0	2.7
70%	5.0	5.0	3.1
60%	5.0	5.0	3.2
50%	5.0	8.0	3.4
40%	8.0	8.0	3.5
30%	8.0	8.0	3.6
20%	10.0	9.0	3.7
10%	10.0	10.0	4.1
5%	10.0	10.0	4.5
1%	10.0	15.0	6.7

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-50. Habitat Time Series Analysis Results for Juvenile Rainbow Trout in Stevenson Creek (Shaver Lake Dam to San Joaquin River)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	5222	5222	5222
Minimum	6514	6514	6514
Average	11525	11512	10511
Maximum	11739	11739	11739
Median	11417	11417	10641
Index A (50%-90%)	11417	11417	10300
Index B (10%-90%)	11533	11543	10536
Index C (25%-90%)	11486	11498	10457
Approximate WUA Exceedence			
99%	11417	10956	9466
95%	11417	11417	9676
90%	11417	11417	9886
80%	11417	11417	10062
70%	11417	11417	10327
60%	11417	11417	10484
50%	11417	11417	10641
40%	11611	11611	10719
30%	11611	11697	10781
20%	11739	11739	10842
10%	11739	11739	11026
5%	11739	11739	11255
1%	11739	11739	11619
Approximate Discharge Exceedence			
99%	5.0	5.0	2.1
95%	5.0	5.0	2.3
90%	5.0	5.0	2.5
80%	5.0	5.0	2.7
70%	5.0	5.0	3.1
60%	5.0	5.0	3.2
50%	5.0	8.0	3.4
40%	8.0	8.0	3.5
30%	8.0	8.0	3.6
20%	10.0	9.0	3.7
10%	10.0	10.0	4.1
5%	10.0	10.0	4.5
1%	10.0	15.0	6.7

WUA Exceedence for Rainbow Trout/Juvenile in Mono Creek

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-51. Habitat Time Series Analysis Results for Rainbow Trout Spawning in Stevenson Creek (Shaver Lake Dam to San Joaquin River)

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	1107	1107	1107
Minimum	53	53	31
Average	147	148	44
Maximum	157	167	157
Median	148	148	40
Index A (50%-90%)	148	143	38
Index B (10%-90%)	148	148	41
Index C (25%-90%)	148	145	40
Approximate WUA Exceedence			
99%	148	135	33
95%	148	135	35
90%	148	135	35
80%	148	135	38
70%	148	148	38
60%	148	148	40
50%	148	148	40
40%	148	148	41
30%	148	148	43
20%	148	167	46
10%	148	167	56
5%	148	167	58
1%	148	167	127
Approximate Discharge Exceedence			
99%	10.0	9.0	3.1
95%	10.0	9.0	3.2
90%	10.0	9.0	3.2
80%	10.0	9.0	3.4
70%	10.0	10.0	3.4
60%	10.0	10.0	3.5
50%	10.0	10.0	3.5
40%	10.0	10.0	3.6
30%	10.0	10.0	3.7
20%	10.0	15.0	3.9
10%	10.0	15.0	4.5
5%	10.0	15.0	4.6
1%	10.0	15.0	8.6

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-52. Habitat Time Series Analysis Results for Adult Rainbow Trout in San Joaquin River, Dam 6 to Powerhouse 3/Redinger Lake

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	4189	4189	4189
Minimum	33223	33223	24109
Average	39915	41385	26285
Maximum	54956	54956	54956
Median	41214	43094	24532
Index A (50%-90%)	36373	37136	24434
Index B (10%-90%)	39584	41272	24645
Index C (25%-90%)	38308	40181	24536
Approximate WUA Exceedence			
99%	33223	33223	24278
95%	33223	33223	24278
90%	33223	33223	24363
80%	33223	34865	24363
70%	34865	34865	24447
60%	41214	41214	24447
50%	41214	43094	24532
40%	41214	45519	24532
30%	41214	45519	24852
20%	43094	45519	25006
10%	46285	46285	25520
5%	46285	48788	43094
1%	54699	54699	54699
Approximate Discharge Exceedence			
99%	20.0	20.0	3.2
95%	20.0	20.0	3.2
90%	20.0	20.0	3.3
80%	20.0	25.0	3.3
70%	25.0	25.0	3.4
60%	50.0	50.0	3.4
50%	50.0	60.0	3.5
40%	50.0	75.0	3.5
30%	50.0	75.0	3.9
20%	60.0	75.0	4.1
10%	80.0	80.0	4.8
5%	80.0	100.0	60.0
1%	277.0	277.0	277.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-53. Habitat Time Series Analysis Results for Juvenile Rainbow Trout in San Joaquin River, Dam 6 to Powerhouse 3/Redinger Lake

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	4189	4189	4189
Minimum	19516	19516	19516
Average	27645	27698	22045
Maximum	28512	28512	28512
Median	28298	28298	21674
Index A (50%-90%)	27215	27342	21600
Index B (10%-90%)	27798	27864	21750
Index C (25%-90%)	27660	27739	21672
Approximate WUA Exceedence			
99%	22167	22167	21425
95%	26705	26705	21488
90%	26705	26705	21550
80%	26705	27169	21550
70%	27169	27169	21612
60%	27468	27468	21612
50%	28298	28298	21674
40%	28394	28394	21674
30%	28394	28405	21910
20%	28394	28405	22026
10%	28394	28405	22313
5%	28468	28468	24130
1%	28468	28468	28402
Approximate Discharge Exceedence			
99%	20.0	20.0	3.2
95%	20.0	20.0	3.2
90%	20.0	20.0	3.3
80%	20.0	25.0	3.3
70%	25.0	25.0	3.4
60%	50.0	50.0	3.4
50%	50.0	60.0	3.5
40%	50.0	75.0	3.5
30%	50.0	75.0	3.9
20%	60.0	75.0	4.1
10%	80.0	80.0	4.8
5%	80.0	100.0	60.0
1%	277.0	277.0	277.0

WUA Exceedence for Rainbow Trout/Juvenile in SFSJR Bear to Florence

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-54. Habitat Time Series Analysis Results for Rainbow Trout Spawning in San Joaquin River, Dam 6 to Powerhouse 3/Redinger Lake

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	736	736	736
Minimum	279	279	57
Average	317	314	103
Maximum	322	322	322
Median	322	322	58
Index A (50%-90%)	319	311	58
Index B (10%-90%)	320	316	85
Index C (25%-90%)	320	315	58
Approximate WUA Exceedence			
99%	282	282	58
95%	291	291	58
90%	296	296	58
80%	322	310	58
70%	322	310	58
60%	322	310	58
50%	322	322	58
40%	322	322	59
30%	322	322	59
20%	322	322	86
10%	322	322	293
5%	322	322	297
1%	322	322	307
Approximate Discharge Exceedence			
99%	80.0	80.0	3.2
95%	80.0	80.0	3.3
90%	80.0	80.0	3.3
80%	80.0	80.0	3.4
70%	80.0	80.0	3.4
60%	80.0	80.0	3.4
50%	80.0	80.0	3.5
40%	80.0	100.0	3.9
30%	80.0	100.0	4.1
20%	80.0	100.0	9.5
10%	183.0	183.0	183.0
5%	258.0	258.0	258.0
1%	320.0	320.0	320.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-55. Habitat Time Series Analysis Results for Adult Brown Trout in San Joaquin River, Dam 6 to Powerhouse 3/Redinger Lake

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	4189	4189	4189
Minimum	38957	38957	29685
Average	44532	45647	31644
Maximum	53477	53477	53477
Median	45958	47488	30167
Index A (50%-90%)	41710	42360	30055
Index B (10%-90%)	44431	45734	30294
Index C (25%-90%)	43403	44862	30171
Approximate WUA Exceedence			
99%	38957	38957	29878
95%	38957	38957	29878
90%	38957	38957	29974
80%	38957	40369	29974
70%	40369	40369	30071
60%	45958	45958	30071
50%	45958	47488	30167
40%	45958	49194	30167
30%	45958	49194	30527
20%	47488	49194	30702
10%	49696	49696	31288
5%	49696	51220	47488
1%	53125	53125	53125
Approximate Discharge Exceedence			
99%	20.0	20.0	3.2
95%	20.0	20.0	3.2
90%	20.0	20.0	3.3
80%	20.0	25.0	3.3
70%	25.0	25.0	3.4
60%	50.0	50.0	3.4
50%	50.0	60.0	3.5
40%	50.0	75.0	3.5
30%	50.0	75.0	3.9
20%	60.0	75.0	4.1
10%	80.0	80.0	4.8
5%	80.0	100.0	60.0
1%	277.0	277.0	277.0

WUA Exceedence for Brown Trout/Adult in SFSJR Bear to Florence

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-56. Habitat Time Series Analysis Results for Juvenile Brown Trout in San Joaquin River, Dam 6 to Powerhouse 3/Redinger Lake

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	4189	4189	4189
Minimum	22280	22280	22280
Average	31733	31728	25363
Maximum	32728	32728	32728
Median	32398	32398	24945
Index A (50%-90%)	31168	31312	24851
Index B (10%-90%)	31916	31910	25035
Index C (25%-90%)	31729	31755	24940
Approximate WUA Exceedence			
99%	25010	25010	24632
95%	30597	30597	24710
90%	30597	30597	24789
80%	30597	31103	24789
70%	31103	31103	24867
60%	31396	31396	24867
50%	32398	32398	24945
40%	32649	32484	24945
30%	32728	32484	25232
20%	32728	32484	25379
10%	32728	32728	25750
5%	32728	32728	27517
1%	32728	32728	32585
Approximate Discharge Exceedence			
99%	20.0	20.0	3.2
95%	20.0	20.0	3.2
90%	20.0	20.0	3.3
80%	20.0	25.0	3.3
70%	25.0	25.0	3.4
60%	50.0	50.0	3.4
50%	50.0	60.0	3.5
40%	50.0	75.0	3.5
30%	50.0	75.0	3.9
20%	60.0	75.0	4.1
10%	80.0	80.0	4.8
5%	80.0	100.0	60.0
1%	277.0	277.0	277.0

WUA Exceedence for Brown Trout/Juvenile in SFSJR Bear to Florence

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-57. Habitat Time Series Analysis Results for Brown Trout Spawning in San Joaquin River, Dam 6 to Powerhouse 3/Redinger Lake

Comparative Statistics for:			
	Proposed Action	CDFG Alternative	No Action
Count	1275	1275	1275
Minimum	251	251	53
Average	286	298	63
Maximum	347	347	347
Median	284	284	54
Index A (50%-90%)	265	282	54
Index B (10%-90%)	285	298	55
Index C (25%-90%)	278	288	54
Approximate WUA Exceedence			
99%	251	251	53
95%	251	251	53
90%	251	251	54
80%	251	284	54
70%	251	284	54
60%	284	284	54
50%	284	284	54
40%	284	284	54
30%	319	319	56
20%	319	346	57
10%	319	346	58
5%	319	346	90
1%	328	346	328
Approximate Discharge Exceedence			
99%	20.0	20.0	3.1
95%	20.0	20.0	3.2
90%	20.0	20.0	3.3
80%	20.0	25.0	3.3
70%	20.0	25.0	3.4
60%	25.0	25.0	3.4
50%	25.0	25.0	3.5
40%	25.0	25.0	3.5
30%	50.0	50.0	3.9
20%	50.0	75.0	4.1
10%	50.0	75.0	4.3
5%	50.0	75.0	7.3
1%	60.0	75.0	60.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-58. Habitat Time Series Analysis Results for Adult Hardhead in San Joaquin River, Dam 6 to Powerhouse 3/Redinger Lake

Comparative Statistics for:			
	Proposed Action	DFG Alternative	No Action
Count	4189	4189	4189
Minimum	35381	35381	28997
Average	39830	40743	30548
Maximum	50280	50280	50280
Median	40780	41979	29354
Index A (50%-90%)	37495	37984	29272
Index B (10%-90%)	39626	40681	29444
Index C (25%-90%)	38804	39978	29356
Approximate WUA Exceedence			
99%	35381	35381	29140
95%	35381	35381	29140
90%	35381	35381	29211
80%	35381	36434	29211
70%	36434	36434	29283
60%	40780	40780	29283
50%	40780	41979	29354
40%	40780	43452	29354
30%	40780	43452	29615
20%	41979	43452	29739
10%	43884	43884	30143
5%	43884	45341	41979
1%	49997	49997	49997
Approximate Discharge Exceedence			
99%	20.0	20.0	3.2
95%	20.0	20.0	3.2
90%	20.0	20.0	3.3
80%	20.0	25.0	3.3
70%	25.0	25.0	3.4
60%	50.0	50.0	3.4
50%	50.0	60.0	3.5
40%	50.0	75.0	3.5
30%	50.0	75.0	3.9
20%	60.0	75.0	4.1
10%	80.0	80.0	4.8
5%	80.0	100.0	60.0
1%	277.0	277.0	277.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-59. Habitat Time Series Analysis Results for Juvenile Hardhead in San Joaquin River, Dam 6 to Powerhouse 3/Redinger Lake

Comparative Statistics for:			
	Proposed Action	DFG Alternative	No Action
Count	4189	4189	4189
Minimum	54783	54783	47686
Average	58319	58850	48933
Maximum	61350	61350	61350
Median	59394	60126	48073
Index A (50%-90%)	56819	57165	47984
Index B (10%-90%)	58336	58992	48173
Index C (25%-90%)	57813	58520	48076
Approximate WUA Exceedence			
99%	55302	55302	47841
95%	55302	55302	47841
90%	55302	55302	47919
80%	55302	56172	47919
70%	56172	56172	47996
60%	59394	59394	47996
50%	59394	60126	48073
40%	59394	60925	48073
30%	59394	60925	48360
20%	60126	60925	48498
10%	61185	61185	48952
5%	61185	61311	57419
1%	61270	61311	61270
Approximate Discharge Exceedence			
99%	20.0	20.0	3.2
95%	20.0	20.0	3.2
90%	20.0	20.0	3.3
80%	20.0	25.0	3.3
70%	25.0	25.0	3.4
60%	50.0	50.0	3.4
50%	50.0	60.0	3.5
40%	50.0	75.0	3.5
30%	50.0	75.0	3.9
20%	60.0	75.0	4.1
10%	80.0	80.0	4.8
5%	80.0	100.0	60.0
1%	277.0	277.0	277.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-60. Habitat Time Series Analysis Results for Adult Pikeminnow in San Joaquin River, Dam 6 to Powerhouse 3/Redinger Lake

Comparative Statistics for:			
	Proposed Action	DFG Alternative	No Action
Count	4189	4189	4189
Minimum	37303	37303	32467
Average	40921	41263	33624
Maximum	42954	42964	42954
Median	41854	42214	32948
Index A (50%-90%)	39812	40091	32837
Index B (10%-90%)	40968	41386	33068
Index C (25%-90%)	40597	41067	32950
Approximate WUA Exceedence			
99%	38689	38689	32659
95%	38689	38689	32659
90%	38689	38689	32755
80%	38689	39405	32755
70%	39405	39405	32852
60%	41854	41854	32852
50%	41854	42214	32948
40%	41854	42736	32948
30%	41854	42736	33298
20%	42390	42736	33465
10%	42817	42817	34004
5%	42817	42929	39309
1%	42826	42964	42826
Approximate Discharge Exceedence			
99%	20.0	20.0	3.2
95%	20.0	20.0	3.2
90%	20.0	20.0	3.3
80%	20.0	25.0	3.3
70%	25.0	25.0	3.4
60%	50.0	50.0	3.4
50%	50.0	60.0	3.5
40%	50.0	75.0	3.5
30%	50.0	75.0	3.9
20%	60.0	75.0	4.1
10%	80.0	80.0	4.8
5%	80.0	100.0	60.0
1%	277.0	277.0	277.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-61. Habitat Time Series Analysis Results for Juvenile Pikeminnow in San Joaquin River, Dam 6 to Powerhouse 3/Redinger Lake

Comparative Statistics for:			
	Proposed Action	DFG Alternative	No Action
Count	4189	4189	4189
Minimum	24257	24257	24257
Average	38050	37657	35359
Maximum	39147	39147	39166
Median	38525	37956	35422
Index A (50%-90%)	38023	37189	35345
Index B (10%-90%)	38421	38004	35464
Index C (25%-90%)	38293	37758	35400
Approximate WUA Exceedence			
99%	27107	27107	27107
95%	36888	35645	35251
90%	36888	36888	35251
80%	37956	37157	35309
70%	38525	37157	35366
60%	38525	37157	35366
50%	38525	37956	35422
40%	38525	38525	35424
30%	38971	38971	35634
20%	38971	39069	35687
10%	39069	39069	35836
5%	39069	39069	36237
1%	39069	39069	38567
Approximate Discharge Exceedence			
99%	20.0	20.0	3.2
95%	20.0	20.0	3.2
90%	20.0	20.0	3.3
80%	20.0	25.0	3.3
70%	25.0	25.0	3.4
60%	50.0	50.0	3.4
50%	50.0	60.0	3.5
40%	50.0	75.0	3.5
30%	50.0	75.0	3.9
20%	60.0	75.0	4.1
10%	80.0	80.0	4.8
5%	80.0	100.0	60.0
1%	277.0	277.0	277.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-62. Habitat Time Series Analysis Results for Adult Sacramento Sucker in San Joaquin River, Dam 6 to Powerhouse 3/Redinger Lake

Comparative Statistics for:			
	Proposed Action	DFG Alternative	No Action
Count	4189	4189	4189
Minimum	37820	37820	29684
Average	44024	45355	31754
Maximum	61711	61711	61711
Median	45164	46871	30091
Index A (50%-90%)	40713	41409	29997
Index B (10%-90%)	43654	45187	30198
Index C (25%-90%)	42491	44193	30095
Approximate WUA Exceedence			
99%	37820	37820	29847
95%	37820	37820	29847
90%	37820	37820	29929
80%	37820	39320	29929
70%	39320	39320	30010
60%	45164	45164	30010
50%	45164	46871	30091
40%	45164	49069	30091
30%	45164	49069	30396
20%	46871	49069	30543
10%	49749	49749	31022
5%	49749	51908	46871
1%	60856	60856	60856
Approximate Discharge Exceedence			
99%	20.0	20.0	3.2
95%	20.0	20.0	3.2
90%	20.0	20.0	3.3
80%	20.0	25.0	3.3
70%	25.0	25.0	3.4
60%	50.0	50.0	3.4
50%	50.0	60.0	3.5
40%	50.0	75.0	3.5
30%	50.0	75.0	3.9
20%	60.0	75.0	4.1
10%	80.0	80.0	4.8
5%	80.0	100.0	60.0
1%	277.0	277.0	277.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.

Table Attachment K-63. Habitat Time Series Analysis Results for Juvenile Sacramento Sucker in San Joaquin River, Dam 6 to Powerhouse 3/Redinger Lake

Comparative Statistics for:			
	Proposed Action	DFG Alternative	No Action
Count	4189	4189	4189
Minimum	27233	27233	27233
Average	41610	41159	38438
Maximum	42629	42629	42644
Median	42279	41673	38488
Index A (50%-90%)	41709	40744	38406
Index B (10%-90%)	42025	41534	38526
Index C (25%-90%)	41950	41322	38463
Approximate WUA Exceedence			
99%	30175	30175	30175
95%	40389	39182	38305
90%	40389	40389	38305
80%	41673	40701	38366
70%	42279	40701	38427
60%	42279	40701	38427
50%	42279	41673	38488
40%	42348	42279	38488
30%	42348	42348	38693
20%	42348	42451	38744
10%	42451	42451	38888
5%	42451	42451	39331
1%	42451	42451	42059
Approximate Discharge Exceedence			
99%	20.0	20.0	3.2
95%	20.0	20.0	3.2
90%	20.0	20.0	3.3
80%	20.0	25.0	3.3
70%	25.0	25.0	3.4
60%	50.0	50.0	3.4
50%	50.0	60.0	3.5
40%	50.0	75.0	3.5
30%	50.0	75.0	3.9
20%	60.0	75.0	4.1
10%	80.0	80.0	4.8
5%	80.0	100.0	60.0
1%	277.0	277.0	277.0

Note: Flows greater than model extrapolation range have been eliminated from the analysis.