

APPENDIX

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APPENDIX A

Hydrology and Operational Plans

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APPENDIX A

Appendix A-1, Table 1
 2009 VAMP DAILY OPERATION PLAN — MARCH 19, 2009
 LOW UNGAGED FLOW

Target Flow Period: April 20th – May 20th * Flow Target: 3,200 cfs

Bold Numbers: observed real-time mean daily flows

Date	San Joaquin River near Vernalis					SJR above Merced R (2day lag) (cfs)	Ungaged Flow above Vernalis (cfs)	Merced River at Cressey				Tuolumne River at LaGrange				Stanislaus R blw Goodwin					Maintain Priority Flow Level M=Merced T=Tuol. S=Stan.
	Existing Flow (cfs)	VAMP Supplemental Flow (cfs)	Other Supplemental Flow (cfs)	VAMP Supplemental Flow (TAF)	Cumulative VAMP Flow (cfs)			Existing Flow (cfs)	MelD VAMP Supplemental Flow (cfs)	Exch Contr VAMP Supplemental Flow (cfs)	VAMP Flow (3day lag) (cfs)	Existing Flow - base FERC volume (cfs)	Existing Flow - Adjusted FERC Pulse (cfs)	VAMP Supplemental Flow (cfs)	VAMP Flow (2day lag) (cfs)	Existing Flow - Base (cfs)	Existing Flow - reshaped	VAMP Supplemental Flow (cfs)	Other Supplemental Flow (cfs)	VAMP Flow (2day lag) (cfs)	
3/15/09	1,360				1,360	486	225	267											207		207
3/16/09	1,350				1,350	500	234	264											204		204
3/17/09	1,330				1,330	507	203	262											204		204
3/18/09	1,260				1,260	493	121	261											205		205
3/19/09																					
3/20/09																					
3/21/09																					
3/22/09																					
3/23/09																					
3/24/09																					
3/25/09																					
3/26/09																					
3/27/09																					
3/28/09																					
3/29/09								250					250								
3/30/09						464		250				150	150		150	250	250			250	
3/31/09						460		250				150	150		150	250	250			250	
4/1/09	1,114				1,114	456	0	250				150	150		150	763	763			763	
4/2/09	1,110				1,110	452	0	250				150	150		150	763	763			763	
4/3/09	1,619				1,619	448	0	250				150	150		150	763	763			763	
4/4/09	1,615				1,615	444	0	250				150	150		150	763	763			763	
4/5/09	1,611				1,611	440	0	250				150	150		150	763	763			763	
4/6/09	1,607				1,607	436	0	250				150	150		150	763	763			763	
4/7/09	1,603				1,603	432	0	250				150	150		150	763	763			763	
4/8/09	1,599				1,599	428	0	250				150	150		150	763	763			763	
4/9/09	1,595				1,595	424	0	250				150	150		150	763	763			763	
4/10/09	1,591				1,591	420	0	250				150	150		150	763	763			763	
4/11/09	1,587				1,587	416	0	250				150	150		150	763	763			763	
4/12/09	1,583				1,583	412	0	250				150	150		150	763	763			763	
4/13/09	1,579				1,579	408	0	250				150	150		150	763	763			763	
4/14/09	1,575				1,575	404	0	250				150	150		150	763	763			763	
4/15/09	1,571				1,571	400	0	250				150	150		150	763	763			763	
4/16/09	1,567				1,567	396	0	250				150	150		150	763	763			763	
4/17/09	1,563				1,563	392	0	250	631	119	1,000	150	150		150	763	763			763	
4/18/09	1,559				1,559	388	0	250	631	119	1,000	648	648	237	885	763	763	237	0	1,000	
4/19/09	1,555				1,555	384	0	250	631	119	1,000	648	648	237	885	763	763	237	0	1,000	
4/20/09	2,049	1,224	0	2,43	3,273	380	0	250	631	119	1,000	648	648	237	885	763	763	237	0	1,000	
4/21/09	2,046	1,224	0	4.86	3,270	376	0	250	631	119	1,000	648	648	237	885	763	763	237	0	1,000	
4/22/09	2,042	1,224	0	7.28	3,266	372	0	250	631	119	1,000	648	648	237	885	763	763	237	0	1,000	
4/23/09	2,038	1,224	0	9.71	3,262	369	0	250	631	119	1,000	648	648	237	885	763	763	237	0	1,000	
4/24/09	2,034	1,224	0	12.14	3,258	365	0	250	631	119	1,000	648	648	237	885	763	763	237	0	1,000	
4/25/09	2,030	1,224	0	14.57	3,254	361	0	250	631	119	1,000	648	648	237	885	763	763	237	0	1,000	
4/26/09	2,026	1,224	0	16.99	3,250	357	0	250	631	119	1,000	648	648	237	885	763	763	237	0	1,000	
4/27/09	2,022	1,224	0	19.42	3,246	353	0	250	631	119	1,000	648	648	237	885	763	763	237	0	1,000	
4/28/09	2,018	1,224	0	21.85	3,242	349	0	250	631	119	1,000	648	648	237	885	763	763	237	0	1,000	
4/29/09	2,014	1,224	0	24.28	3,238	345	0	250	631	119	1,000	648	648	237	885	763	763	237	0	1,000	
4/30/09	2,010	1,224	0	26.71	3,234	341	0	250	631	119	1,000	648	648	237	885	763	763	237	0	1,000	
5/1/09	2,006	1,224	0	29.13	3,230	337	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/2/09	2,002	1,224	0	31.56	3,226	333	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/3/09	1,972	1,224	0	33.99	3,196	329	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/4/09	1,968	1,224	0	36.42	3,192	325	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/5/09	1,964	1,224	0	38.84	3,188	321	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/6/09	1,961	1,224	0	41.27	3,185	317	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/7/09	1,957	1,224	0	43.70	3,181	313	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/8/09	1,953	1,224	0	46.13	3,177	310	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/9/09	1,949	1,224	0	48.56	3,173	306	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/10/09	1,945	1,224	0	50.98	3,169	302	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/11/09	1,941	1,224	0	53.41	3,165	298	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/12/09	1,937	1,224	0	55.84	3,161	294	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/13/09	1,933	1,224	0	58.27	3,157	290	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/14/09	1,929	1,224	0	60.69	3,153	286	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/15/09	1,925	1,224	0	63.12	3,149	282	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/16/09	1,921	1,224	0	65.55	3,145	278	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/17/09	1,917	1,224	0	67.98	3,141	274	0	250	631	119	1,000	648	648	237	885	737	737	237	0	974	
5/18/09	1,913	1,224	0	70.41	3,137	270	0	250				648	648	237	885	737	737	237	0	974	
5/19/09	1,909	1,224	0	72.83	3,133	266	0	250				550	550		550	737	737			737	
5/20/09	1,905	1,224	0	75.26	3,129	262	0	250				450	450		450	737	737			737	
5/21/09	1,803				1,803	258	0	250				350	350		350	737	737			737	
5/22/09	1,699				1,699	254	0	250				250	250		250	737	737			737	
5/23/09	1,595				1,595	250	0	250				150	150		150	737	737			737	
5/24/09	1,491				1,491	246	0	250				150	150		150	737	737			737	
5/25/09	1,387				1,387	242	0	250				150	150		150	737	737			737	
5/26/09	1,383				1,383	238	0	250				150	150		150	737	737			737	
5/27/09	1,379				1,379	234	0	250				150	150		150	737	737			737	
5/28/09	1,375				1,375	230	0	250				150	150		150	737	737			737	
5/29/09	1,371				1,371	226	0	250				150	150		150	737	737			737	
5/30/09	1,367				1,367	222	0	250				150	150		150	737	737			737	
5/31/09	1,363				1,363																

Appendix A-1, Table 2
 2009 VAMP DAILY OPERATION PLAN — MARCH 19, 2009
 HIGH UNGAGED FLOW

Target Flow Period: April 20th – May 20th * Flow Target: 3,200 cfs
Bold Numbers: observed real-time mean daily flows

Date	San Joaquin River near Vernalis					SJR above Merced R (2day lag) (cfs)	Ungaged Flow above Vernalis (cfs)	Merced River at Cressey				Tuolumne River at LaGrange				Stanislaus R blw Goodwin					Maintain Priority Flow Level M=Merced T=Tuol. S=Stan.
	Existing Flow (cfs)	VAMP Supplemental Flow (cfs)	Other Supplemental Flow (cfs)	Cumulative VAMP Supplemental Flow (TAF)	VAMP Flow (cfs)			Existing Flow (cfs)	MeID VAMP Supplemental Flow (cfs)	Exch Contr VAMP Supplemental Flow (cfs)	VAMP Flow (3day lag) (cfs)	Existing Flow - base FERC volume (cfs)	Existing Flow - Adjusted FERC Pulse (cfs)	VAMP Supplemental Flow (cfs)	VAMP Flow (2day lag) (cfs)	Existing Flow - Base (cfs)	Existing Flow - reshaped	VAMP Supplemental Flow (cfs)	Other Supplemental Flow (cfs)	VAMP Flow (2day lag) (cfs)	
3/15/09	1,360				1,360	486	225														207
3/16/09	1,350				1,350	500	234														204
3/17/09	1,330				1,330	507	203														204
3/18/09	1,260				1,260	493	121														205
3/19/09																					
3/20/09																					
3/21/09																					
3/22/09																					
3/23/09																					
3/24/09																					
3/25/09																					
3/26/09																					
3/27/09																					
3/28/09																					
3/29/09									250				250								
3/30/09						464			250				175	175			175	250	250		250
3/31/09						460			250				175	175			175	250	250		250
4/1/09	1,639				1,639	456	500		250				175	175			175	643	643		643
4/2/09	1,635				1,635	452	500		250				175	175			175	643	643		643
4/3/09	2,024				2,024	448	500		250				175	175			175	643	643		643
4/4/09	2,020				2,020	444	500		250				175	175			175	643	643		643
4/5/09	2,016				2,016	440	500		250				175	175			175	643	643		643
4/6/09	2,012				2,012	436	500		250				175	175			175	643	643		643
4/7/09	2,008				2,008	432	500		250				175	175			175	643	643		643
4/8/09	2,004				2,004	428	500		250				175	175			175	643	643		643
4/9/09	2,000				2,000	424	500		250				175	175			175	643	643		643
4/10/09	1,996				1,996	420	500		250				175	175			175	643	643		643
4/11/09	1,992				1,992	416	500		250				175	175			175	643	643		643
4/12/09	1,988				1,988	412	500		250				175	175			175	643	643		643
4/13/09	1,984				1,984	408	500		250				175	175			175	643	643		643
4/14/09	1,980				1,980	404	500		250				175	175			175	643	643		643
4/15/09	1,976				1,976	400	500		250				175	175			175	643	643		643
4/16/09	1,972				1,972	396	500		250				175	175			175	643	643		643
4/17/09	1,968				1,968	392	500		250	360	0	610	175	175			175	643	643		643
4/18/09	1,964				1,964	388	500		250	360	0	610	1,080	1,080	0	1,080	643	643	0	0	643
4/19/09	1,960				1,960	384	500		250	360	0	610	1,080	1,080	0	1,080	643	643	0	0	643
4/20/09	2,861	360	0	0.71	3,221	380	500		250	360	0	610	1,080	1,080	0	1,080	643	643	0	0	643
4/21/09	2,858	360	0	1.43	3,218	376	500		250	360	0	610	1,080	1,080	0	1,080	643	643	0	0	643
4/22/09	2,854	360	0	2.14	3,214	372	500		250	360	0	610	1,080	1,080	0	1,080	643	643	0	0	643
4/23/09	2,850	360	0	2.86	3,210	369	500		250	360	0	610	1,080	1,080	0	1,080	643	643	0	0	643
4/24/09	2,846	360	0	3.57	3,206	365	500		250	360	0	610	1,080	1,080	0	1,080	643	643	0	0	643
4/25/09	2,842	360	0	4.28	3,202	361	500		250	360	0	610	1,080	1,080	0	1,080	643	643	0	0	643
4/26/09	2,838	360	0	5.00	3,198	357	500		250	360	0	610	1,080	1,080	0	1,080	643	643	0	0	643
4/27/09	2,834	360	0	5.71	3,194	353	500		250	360	0	610	1,080	1,080	0	1,080	643	643	0	0	643
4/28/09	2,830	360	0	6.43	3,190	349	500		250	360	0	610	1,080	1,080	0	1,080	643	643	0	0	643
4/29/09	2,826	360	0	7.14	3,186	345	500		250	360	0	610	1,080	1,080	0	1,080	643	643	0	0	643
4/30/09	2,822	360	0	7.85	3,182	341	500		250	150	0	400	1,080	1,080	0	1,080	643	643	0	0	643
5/1/09	2,818	360	0	8.57	3,178	337	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/2/09	2,814	360	0	9.28	3,174	333	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/3/09	3,085	150	0	9.58	3,235	329	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/4/09	3,081	150	0	9.88	3,231	325	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/5/09	3,077	150	0	10.18	3,227	321	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/6/09	3,074	150	0	10.47	3,224	317	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/7/09	3,070	150	0	10.77	3,220	313	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/8/09	3,066	150	0	11.07	3,216	310	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/9/09	3,062	150	0	11.37	3,212	306	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/10/09	3,058	150	0	11.66	3,208	302	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/11/09	3,054	150	0	11.96	3,204	298	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/12/09	3,050	150	0	12.26	3,200	294	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/13/09	3,046	150	0	12.56	3,196	290	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/14/09	3,042	150	0	12.85	3,192	286	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/15/09	3,038	150	0	13.15	3,188	282	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/16/09	3,034	150	0	13.45	3,184	278	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/17/09	3,030	150	0	13.75	3,180	274	500		250	150	0	400	1,080	1,080	0	1,080	918	918	0	0	918
5/18/09	3,026	150	0	14.04	3,176	270	500		250			250	1,080	1,080	0	1,080	918	918	0	0	918
5/19/09	3,022	150	0	14.34	3,172	266	500		250			250	825	825		825	918	918			918
5/20/09	3,018	150	0	14.64	3,168	262	500		250			250	675	675		675	918	918			918
5/21/09	2,759				2,759	258	500		250				575	575		575	918	918			918
5/22/09	2,605				2,605	254	500		250				475	475		475	918	918			918
5/23/09	2,501				2,501	250	500		250				375	375		375	918	918			918
5/24/09	2,397				2,397	246	500		250				275	275		275	918	918			918
5/25/09	2,293				2,293	242	500		250				225	225		225	918	918			918
5/26/09	2,189				2,189	238	500		250				175	175		175	918	918			918
5/27/09	2,135				2,135	234	500		250				175	175		175	918	918			918
5/28/09	2,081				2,081	230	500		250				175	175		175	918	918			918
5/29/09	2,077				2,077	226	500		250				175	175		175	918	918			918
5/30/09	2,073				2,073																

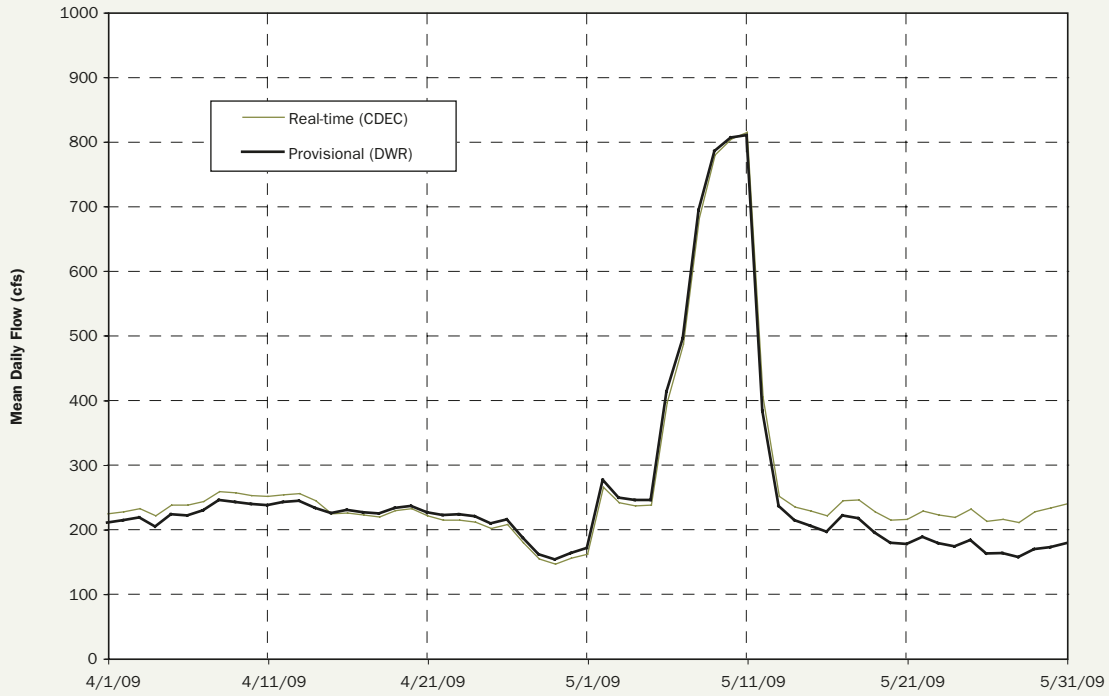
Appendix A-1, Table 3
 2009 VAMP DAILY OPERATION PLAN — APRIL 19, 2009
 Target Flow Period: April 19th – May 19th * Flow Target: N/A
Bold Numbers: observed real-time mean daily flows

Date	San Joaquin River near Vernalis					SJR above Merced R (2day lag) (cfs)	Ungaged Flow above Vernalis (cfs)	Merced River at Cressey				Tuolumne River at LaGrange				Stanislaus R blw Goodwin					Maintain Priority Flow Level M=Merced T=Tuol. S=Stan.
	Existing Flow (cfs)	VAMP Supplemental Flow (cfs)	Other Supplemental Flow (cfs)	Cumulative VAMP Supplemental Flow (TAF)	VAMP Flow (cfs)			Existing Flow (cfs)	MeID VAMP Supplemental Flow (cfs)	Exch Contr VAMP Supplemental Flow (cfs)	VAMP Flow (3day lag) (cfs)	Existing Flow - base FERC volume (cfs)	Flow - Adjusted FERC Pulse (cfs)	VAMP Supplemental Flow (cfs)	VAMP Flow (2day lag) (cfs)	Existing Flow - Base (cfs)	Existing Flow - reshaped	VAMP Supplemental Flow (cfs)	Other Supplemental Flow (cfs)	VAMP Flow (2day lag) (cfs)	
3/15/09	1,390				1,360	598	147	267			267	167	167	167	207	207			207		
3/16/09	1,380				1,350	613	157	264			264	168	168	168	204	204			204		
3/17/09	1,370				1,330	624	131	262			262	168	168	168	204	204			204		
3/18/09	1,300				1,300	609	48	261			261	168	168	168	205	205			205		
3/19/09	1,280				1,280	619	20	260			260	168	168	168	260	260			260		
3/20/09	1,230				1,230	606	-14	257			257	168	168	168	303	303			303		
3/21/09	1,240				1,240	584	-68	244			244	168	168	168	300	300			300		
3/22/09	1,260				1,260	586	-77	245			245	165	165	165	303	303			303		
3/23/09	1,260				1,260	585	-49	245			245	165	165	165	406	406			406		
3/24/09	1,190				1,190	547	-108	231			231	163	163	163	453	453			453		
3/25/09	1,140				1,140	522	-261	230			230	166	166	166	454	454			454		
3/26/09	1,110				1,110	518	-298	242			242	165	165	165	452	452			452		
3/27/09	1,100				1,100	497	-273	237			237	164	164	164	451	451			451		
3/28/09	1,100				1,100	494	-265	231			231	163	163	163	454	454			454		
3/29/09	1,090				1,090	494	-264	224			224	163	163	163	452	452			452		
3/30/09	1,130				1,130	469	-218	232			232	164	164	164	453	453			453		
3/31/09	1,120				1,120	433	-220	226			226	164	164	164	456	456			456		
4/1/09	1,060				1,060	388	-250	224			224	165	165	165	451	451			451		
4/2/09	1,050				1,050	363	-235	227			227	164	164	164	455	455			455		
4/3/09	1,070				1,070	375	-160	232			232	165	165	165	455	455			455		
4/4/09	1,060				1,060	355	-146	221			221	165	165	165	453	453			453		
4/5/09	1,080				1,080	351	-142	237			237	165	165	165	525	525			525		
4/6/09	1,070				1,070	333	-135	237			237	165	165	165	553	553			553		
4/7/09	1,060				1,060	367	-202	243			243	166	166	166	656	656			656		
4/8/09	1,100				1,100	338	-188	258			258	166	166	166	707	707			707		
4/9/09	1,180				1,180	329	-246	256			256	165	165	165	704	704			704		
4/10/09	1,250				1,250	334	-204	252			252	165	165	165	703	703			703		
4/11/09	1,280				1,280	333	-176	251			251	165	165	165	706	706			706		
4/12/09	1,370				1,370	338	-88	253			253	165	165	165	708	708			708		
4/13/09	1,370				1,370	371	-86	255			255	165	165	165	702	702			702		
4/14/09	1,320				1,320	391	-142	244			244	166	166	166	704	704			704		
4/15/09	1,391				1,391	380	-100	250			250	180	180	180	700	700			700		
4/16/09	1,416				1,416	376	-100	250	0	0	250	190	190	190	700	700			700		
4/17/09	1,404				1,404	372	-100	250	0	0	250	260	260	0	650	650	0	450	1,100		
4/18/09	1,416				1,416	368	-100	250	0	0	250	390	390	0	650	650	0	450	1,100		
4/19/09	1,432	0	450	0.00	1,882	364	-100	250	0	0	250	630	630	0	650	650	0	450	1,100		
4/20/09	1,558	0	450	0.00	2,008	360	-100	250	0	0	250	640	640	0	650	650	0	450	1,100		
4/21/09	1,794	0	450	0.00	2,244	356	-100	250	0	0	250	640	640	0	650	650	0	450	1,100		
4/22/09	1,800	0	450	0.00	2,250	352	-100	250	0	0	250	640	640	0	650	650	0	450	1,100		
4/23/09	1,796	0	450	0.00	2,246	348	-100	250	0	0	250	640	640	0	650	650	0	450	1,100		
4/24/09	1,792	0	450	0.00	2,242	344	-100	250	0	0	250	640	640	0	650	650	0	450	1,100		
4/25/09	1,788	0	450	0.00	2,238	340	-100	250	0	0	250	640	640	0	650	650	0	450	1,100		
4/26/09	1,784	0	450	0.00	2,234	336	-100	250	0	0	250	640	640	0	650	650	0	450	1,100		
4/27/09	1,780	0	450	0.00	2,230	332	-100	250	0	0	250	640	640	0	650	650	0	450	1,100		
4/28/09	1,776	0	450	0.00	2,226	328	-100	250	0	0	250	460	460	0	650	650	0	675	1,325		
4/29/09	1,772	0	450	0.00	2,222	324	-100	250	0	0	250	460	460	0	650	650	0	675	1,325		
4/30/09	1,588	0	675	0.00	2,263	320	-100	250	0	0	250	460	460	0	650	650	0	675	1,325		
5/1/09	1,584	0	675	0.00	2,259	316	-100	250	0	0	250	460	460	0	650	650	0	750	1,325		
5/2/09	1,580	0	675	0.00	2,255	312	-100	250	0	0	250	460	460	0	650	650	0	750	1,325		
5/3/09	1,501	0	750	0.00	2,251	308	-100	250	0	0	250	460	460	0	650	650	0	750	1,325		
5/4/09	1,497	0	750	0.00	2,247	304	-100	250	0	0	250	460	460	0	650	650	0	750	1,325		
5/5/09	1,493	0	750	0.00	2,243	300	-100	250	0	0	250	580	580	0	650	650	0	625	1,200		
5/6/09	1,489	0	750	0.00	2,239	296	-100	250	0	0	250	780	780	0	650	650	0	425	1,000		
5/7/09	1,605	0	625	0.00	2,230	292	-100	250	0	0	250	880	880	0	650	650	0	325	900		
5/8/09	1,801	0	425	0.00	2,226	288	-100	250	0	0	250	880	880	0	650	650	0	325	900		
5/9/09	1,897	0	325	0.00	2,222	284	-100	250	0	0	250	930	930	0	650	650	0	325	900		
5/10/09	1,893	0	325	0.00	2,218	280	-100	250	0	0	250	930	930	0	650	650	0	325	900		
5/11/09	1,939	0	325	0.00	2,264	276	-100	250	0	0	250	930	930	0	650	650	0	325	900		
5/12/09	1,935	0	325	0.00	2,260	272	-100	250	0	0	250	930	930	0	650	650	0	325	900		
5/13/09	1,931	0	325	0.00	2,256	268	-100	250	0	0	250	930	930	0	650	650	0	325	900		
5/14/09	1,927	0	325	0.00	2,252	264	-100	250	0	0	250	930	930	0	650	650	0	325	900		
5/15/09	1,923	0	325	0.00	2,248	260	-100	250	0	0	250	930	930	0	650	650	0	325	900		
5/16/09	1,919	0	325	0.00	2,244	256	-100	250	0	0	250	930	930	0	650	650	0	325	900		
5/17/09	1,915	0	325	0.00	2,240	252	-100	250			250	930	930	0	650	650	0	325	900		
5/18/09	1,911	0	325	0.00	2,236	248	-100	250			250	880	880	0	650	650	0	325	900		
5/19/09	1,907	0	325	0.00	2,232	244	-100	250			250	880	880	0	650	650	0	325	900		
5/20/09	1,853				1,853	240	-100	250			250	830	830	0	650	650	0	325	900		
5/21/09	1,849				1,849	236	-100	250			250	680	680	0	650	650	0	325	900		
5/22/09	1,795				1,795	232	-100	250			250	580	580	0	650	650	0	325	900		
5/23/09	1,641				1,641	228	-100	250			250	480	480	0	650	650	0	325	900		
5/24/09	1,537				1,537	224	-100	250			250	480	480	0	650	650	0	325	900		
5/25/09	1,433				1,433	220	-100	250			250	380	380	0	650	650	0	325	900		
5/26/09	1,429				1,429	216	-100	250			250	380	380	0	650	650	0	325	900		
5/27/09	1,325				1,325	212	-100	250			250	380	380	0	650	650	0	325	900		
5/28/09	1,321				1,321	208	-100	250			250	305	305	0	650	650	0	325			

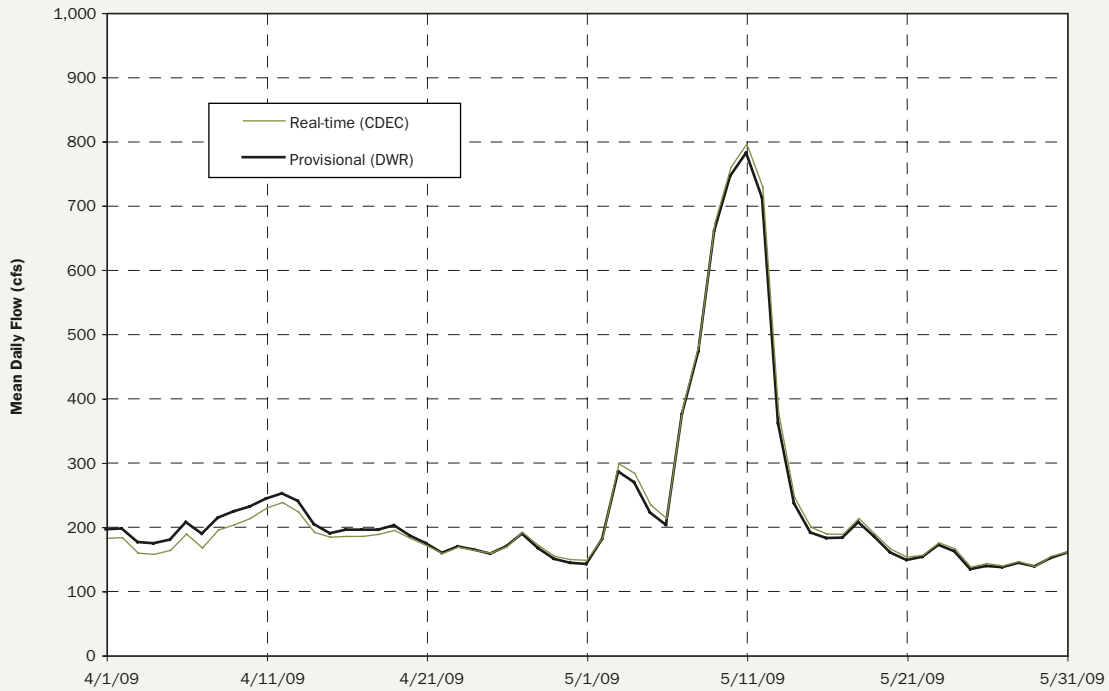
Appendix A-1, Table 4
 2009 VAMP DAILY OPERATION PLAN — MAY 13, 2009
 Target Flow Period: April 19th – May 19th * Flow Target: N/A
Bold Numbers: observed real-time mean daily flows

Date	San Joaquin River near Vernalis					SJR above Merced R		Merced River at Cressey				Tuolumne River at LaGrange				Stanislaus R blw Goodwin					Maintain Priority Flow Level M=Merced S=Stan.
	Existing Flow (cfs)	VAMP Supplemental Flow (cfs)	Other Supplemental Flow (cfs)	Cumulative VAMP Supplemental Flow (TAF)	VAMP Flow (cfs)	(2day lag) (cfs)	Ungaged Flow above Vernalis (cfs)	Existing Flow (cfs)	MeID VAMP Supplemental Flow (cfs)	Exch Contr VAMP Supplemental Flow (cfs)	VAMP Flow (3day lag) (cfs)	Existing Flow - base FERC volume (cfs)	Existing Flow - Adjusted FERC Pulse (cfs)	VAMP Supplemental Flow (cfs)	VAMP Flow (2day lag) (cfs)	Existing Flow - Base (cfs)	Existing Flow - Reshaped (cfs)	VAMP Supplemental Flow (cfs)	Other Supplemental Flow (cfs)	VAMP Flow (2day lag) (cfs)	
3/15/09	1,390				1,390	579	163	267			267	167	167		169	207	207			207	
3/16/09	1,380				1,380	594	173	264			264	168	168		170	204	204			204	
3/17/09	1,370				1,370	605	148	262			262	168	168		170	204	204			204	
3/18/09	1,300				1,300	590	65	261			261	168	168		170	205	205			205	
3/19/09	1,280				1,280	601	37	260			260	168	168		170	260	260			260	
3/20/09	1,230				1,230	587	3	257			257	168	168		170	303	303			303	
3/21/09	1,240				1,240	566	-52	244			244	168	168		170	300	300			300	
3/22/09	1,260				1,260	567	-60	245			245	165	165		167	303	303			303	
3/23/09	1,260				1,260	567	-33	245			245	165	165		167	406	406			406	
3/24/09	1,190				1,190	530	-91	231			231	163	163		165	453	453			453	
3/25/09	1,140				1,140	505	-245	230			230	166	166		168	454	454			454	
3/26/09	1,110				1,110	501	-283	242			242	165	165		167	452	452			452	
3/27/09	1,100				1,100	480	-258	237			237	164	164		166	451	451			451	
3/28/09	1,100				1,100	478	-250	231			231	163	163		165	454	454			454	
3/29/09	1,090				1,090	477	-249	224			224	163	163		165	452	452			452	
3/30/09	1,130				1,130	453	-204	232			232	164	164		173	453	453			453	
3/31/09	1,120				1,120	418	-205	226			226	164	164		167	456	456			456	
4/1/09	1,060				1,060	373	-243	224			224	165	165		165	451	451			451	
4/2/09	1,050				1,050	348	-223	227			227	164	164		164	455	455			455	
4/3/09	1,070				1,070	360	-145	232			232	165	165		165	455	455			455	
4/4/09	1,060				1,060	341	-131	221			221	165	165		165	453	453			453	
4/5/09	1,080				1,080	337	-127	237			237	165	165		165	525	525			525	
4/6/09	1,070				1,070	319	-121	237			237	165	165		165	553	553			553	
4/7/09	1,060				1,060	352	-188	243			243	166	166		166	656	656			656	
4/8/09	1,100				1,100	323	-174	258			258	166	166		166	707	707			707	
4/9/09	1,180				1,180	314	-231	256			256	165	165		165	704	704			704	
4/10/09	1,250				1,250	320	-189	252			252	165	165		165	703	703			703	
4/11/09	1,280				1,280	318	-161	251			251	165	165		165	706	706			706	
4/12/09	1,370				1,370	323	-74	253			253	165	165		165	708	708			708	
4/13/09	1,370				1,370	355	-71	255			255	165	165		165	702	702			702	
4/14/09	1,320				1,320	376	-127	244			244	166	166		166	704	704			704	
4/15/09	1,300				1,300	370	-175	224			224	186	186		186	702	702			702	
4/16/09	1,300				1,300	372	-201	225	0	0	225	234	234		234	703	703			703	
4/17/09	1,310				1,310	373	-192	222	0	0	222	260	340	0	340	650	650	0	350	1,000	
4/18/09	1,320				1,320	335	-213	219	0	0	219	390	524	0	524	650	650	0	550	1,200	
4/19/09	1,210	0	350	0.00	1,560	304	-378	229	0	0	229	630	674	0	674	650	650	0	558	1,208	
4/20/09	1,260	0	550	0.00	1,810	303	-471	232	0	0	232	640	681	0	681	650	650	0	490	1,140	
4/21/09	1,362	0	558	0.00	1,920	286	-485	221	0	0	221	640	680	0	680	650	650	0	454	1,104	
4/22/09	1,440	0	490	0.00	1,930	271	-423	214	0	0	214	640	680	0	680	650	650	0	458	1,108	
4/23/09	1,406	0	454	0.00	1,860	263	-442	214	0	0	214	640	679	0	679	650	650	0	450	1,100	
4/24/09	1,462	0	458	0.00	1,920	260	-360	211	0	0	211	640	675	0	675	650	650	0	452	1,102	
4/25/09	1,480	0	450	0.00	1,930	252	-326	201	0	0	201	640	670	0	670	650	650	0	456	1,106	
4/26/09	1,568	0	452	0.00	2,020	241	-231	207	0	0	207	640	671	0	671	650	650	0	449	1,099	
4/27/09	1,594	0	456	0.00	2,050	240	-189	179	0	0	179	640	630	0	630	650	650	0	461	1,111	
4/28/09	1,591	0	449	0.00	2,040	237	-172	154	0	0	154	460	510	0	510	650	650	0	589	1,239	
4/29/09	1,559	0	461	0.00	2,020	242	-168	146	0	0	146	460	482	0	482	650	650	0	652	1,302	
4/30/09	1,381	0	589	0.00	1,970	254	-195	155	0	0	155	460	483	0	483	650	650	0	653	1,303	
5/1/09	1,388	0	652	0.00	2,040	261	-140	161	0	0	161	460	484	0	484	575	575	0	733	1,308	
5/2/09	1,527	0	653	0.00	2,180	257	-6	265	0	0	265	460	483	0	483	575	575	0	735	1,310	
5/3/09	1,547	0	733	0.00	2,280	230	72	241	0	0	241	460	482	0	482	575	575	0	730	1,305	
5/4/09	1,545	0	735	0.00	2,280	291	69	236	0	0	236	460	526	0	526	575	575	0	737	1,312	
5/5/09	1,520	0	730	0.00	2,250	324	-32	237	0	0	237	580	679	0	679	575	575	0	668	1,243	
5/6/09	1,493	0	737	0.00	2,230	329	-140	396	0	0	396	780	838	0	838	575	575	0	498	1,073	
5/7/09	1,542	0	668	0.00	2,210	233	-272	486	0	0	486	880	900	0	900	575	575	0	369	944	
5/8/09	1,702	0	498	0.00	2,200	204	-277	681	0	0	681	880	918	0	918	575	575	0	329	904	
5/9/09	1,901	0	369	0.00	2,270	126	-203	779	0	0	779	930	955	0	955	575	575	0	334	909	
5/10/09	1,991	0	329	0.00	2,320	108	-192	804	0	0	804	930	951	0	951	575	575	0	330	905	
5/11/09	2,046	0	334	0.00	2,380	109	-291	814	0	0	814	930	951	0	951	575	575	0	327	902	
5/12/09	2,070	0	330	0.00	2,400	168	-343	404	0	0	404	930	951	0	951	575	575	0	325	900	
5/13/09	2,089	0	327	0.00	2,416	164	-350	250	0	0	250	930	930	0	930	575	575	0	325	900	
5/14/09	2,158	0	325	0.00	2,483	160	-350	250	0	0	250	930	930	0	930	575	575	0	325	900	
5/15/09	1,723	0	325	0.00	2,048	156	-350	250	0	0	250	930	930	0	930	575	575	0	325	900	
5/16/09	1,565	0	325	0.00	1,890	152	-350	250	0	0	250	930	930	0	930	575	575	0	325	900	
5/17/09	1,561	0	325	0.00	1,886	148	-350	250	0	0	250	930	930	0	930	575	575	0	325	900	
5/18/09	1,557	0	325	0.00	1,882	144	-350	250	0	0	250	880	880	0	880	575	575	0		575	
5/19/09	1,553	0	325	0.00	1,878	140	-350	250	0	0	250	880	880	0	880	575	575	0		575	
5/20/09	1,649				1,649	136	-200	250			250	830	830		830	575	575			575	
5/21/09	1,745				1,745	132	-100	250			250	680	680		680	575	575			575	
5/22/09	1,691				1,691	128	-100	250			250	580	580		580	575	575			575	
5/23/09	1,537				1,537	124	-100	250			250	480	480		480	575	575			575	
5/24/09	1,433				1,433	120	-100	250			250	480	480		480	575	575			575	
5/25/09	1,329				1,329	116	-100	250			250	380	380		380	575	575			575	
5/26/09	1,325				1,325																

Appendix A-2, Figure 1
 Mean Daily Flow in the Merced River at Cressey in Cubic Feet per Second (cfs)
 from April 1st to May 31st

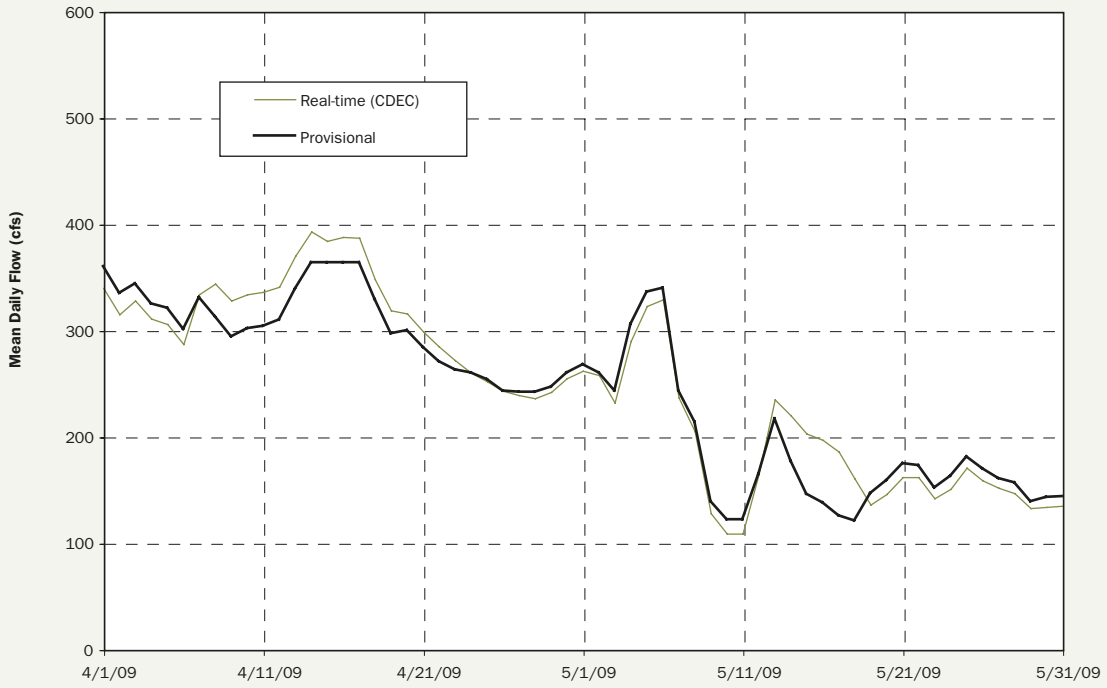


Appendix A-2, Figure 2
 Mean Daily Flow in the Merced River at Stevenson in Cubic Feet per Second (cfs)
 from April 1st to May 31st



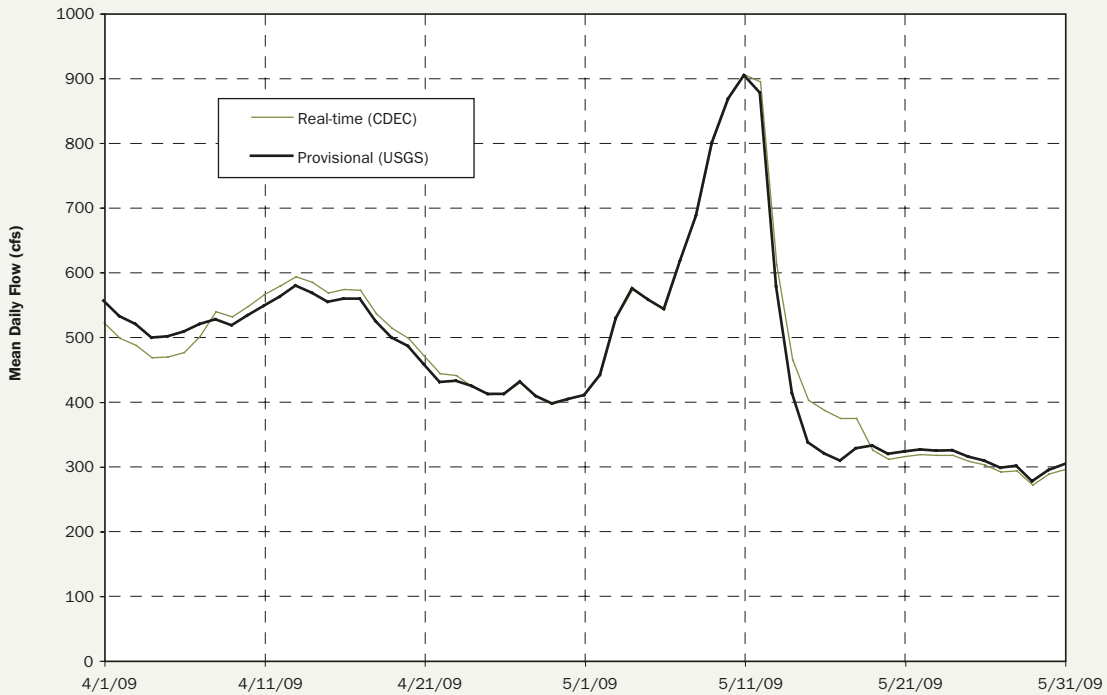
Appendix A-2, Figure 3

Mean Daily Flow in the San Joaquin River above the Merced River Inflow in Cubic Feet per Second (cfs) from April 1st to May 31st

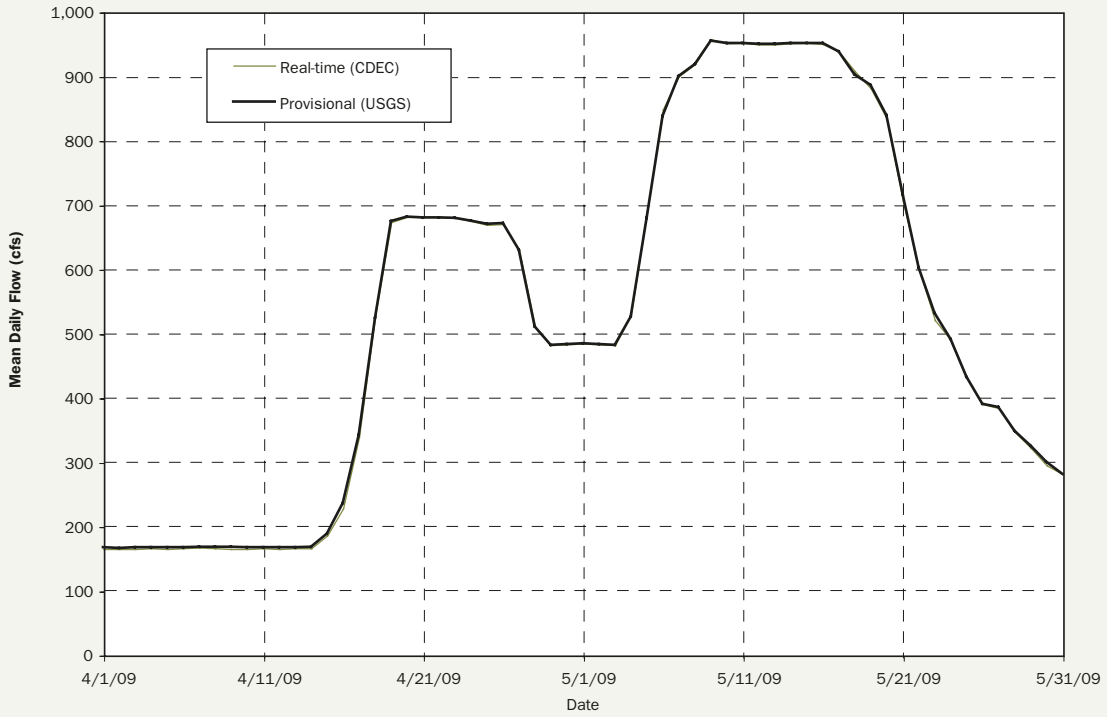


Appendix A-2, Figure 4

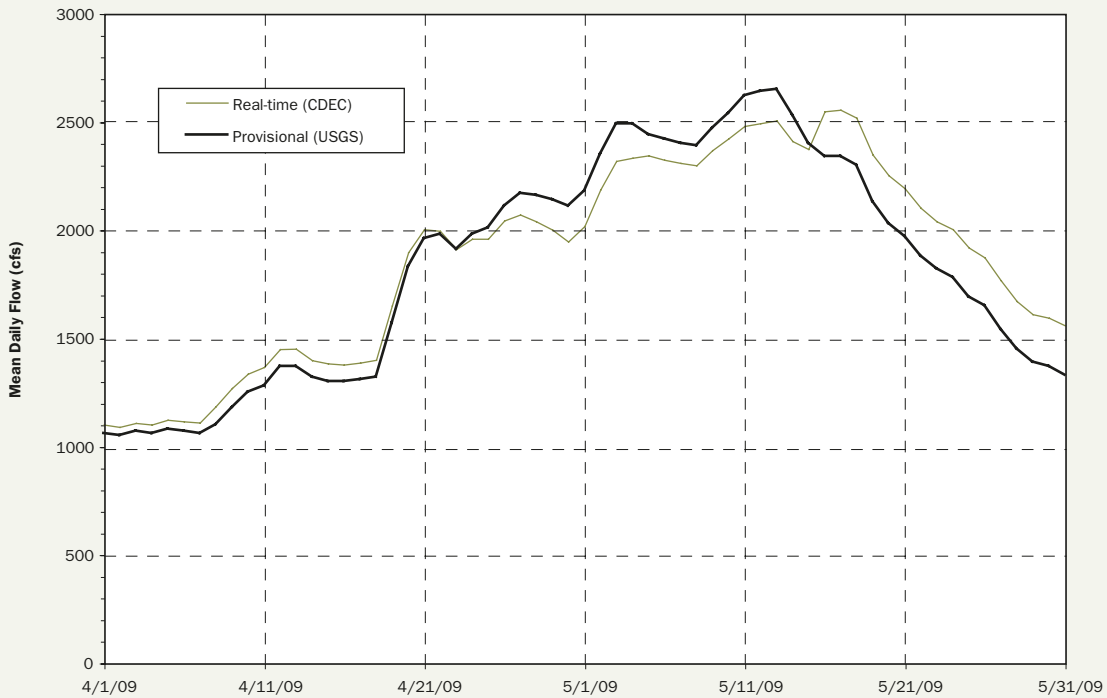
Mean Daily Flow in the San Joaquin River below the Merced River Inflow near Newman in Cubic Feet per Second (cfs) from April 1st to May 31st



Appendix A-2, Figure 5
 Mean Daily Flow in the Tuolumne River below La Grange Dam in Cubic Feet per Second (cfs) from April 1st to May 31st



Appendix A-2, Figure 6
 Mean Daily Flow in the San Joaquin River near Vernalis (VNS) in Cubic Feet per Second (cfs) from April 1st to May 31st



Appendix A-2, Figure 7

Mean Daily Ungaged Flow in the San Joaquin River near Vernalis (VNS) in Cubic Feet per Second (cfs) from April 1st to May 31st

