Stream[a]	Applica-tion No.	Year First Used	Filing Date	Stream Code	Point of Diversion	Tributary to:	Maximum Direct Diversion				Max. Storage
							cfs	gpm	mgd	ac-ft/yr	
SLVWD Active											
Peavine Ck	S008669	1905	1/1/76	301109040	SW 1/4 of SW 1/4 Sec 24, T9S, R3W	Boulder Ck	**0.136**	*61*	*0.09*	*98*	
Silver Ck	S008668	1905	1/1/76	301109050	SE 1/4 of SW 1/4 Sec 24, T9S, R3W	Boulder Ck	*0.11*	*48*	*0.07*	**77**	
Foreman Ck	S008670	1905	1/1/76	301109060	NW 1/4 of NE 1/4 Sec 25, T9S, R3W	Boulder Ck	**0.061**	*27*	*0.04*	*44*	
Clear Ck[b]	S008416	1905	1/1/74	301111000	NW 1/4 of SE 1/4 Sec 31, T9S, R3W	San Lorenzo R	1.2	*540*	*0.8*	*869*	
Sweetwater Ck	S008671	1905	1/1/76	301111008	SW 1/4 of SE 1/4 Sec 31, T9S, R2W	Clear Ck	**0.03**	*13*	*0.02*	*22*	
Total							*1.5*	*690*	*1.0*	*1,110*	
SLVWD Inactive											
Harmon Ck	S008758	1906	3/31/76	301100008	NE 1/4 of SW 1/4 Sec 30, T9S, R2W	San Lorenzo R	**0.267**	*120*	*0.17*	*193*	**0.2**
Malosky Ck[c]	none										
Earl Ck	S008743	1912	3/19/76	301100008	NE 1/4 of SE 1/4 Sec 8, T10S, R2W	San Lorenzo R	**0.038**	*17*	*0.02*	*28*	
Manson Ck	S008744	1912	3/19/76	301114000	SW 1/4 of NE 1/4 Sec 8, T10S, R2W	San Lorenzo R	**0.038**	*17*	*0.02*	*28*	
Total							0.3	*154*	*0.2*	*248*	
Non-SLVWD											
Clear Ck[d]	S014846			301111000	NW 1/4 of SE 1/4 Sec 31, T9S, R2W	San Lorenzo R	**0.67**	*300*	*0.43*		
(domestic)								*30*	*0.04*	**47.7**	

Source: http://www.waterrights.ca.gov/ & HEA, December 1983.

Bold values from SWRCB. Values in *italics* estimated from SWRCB values.

[a]Within groups, listed from north to south.

[b]SWRCB lists SLVWD's Clear Ck water right as "1.2 gpd"; 1.2 cfs assumed to be correct.

[c]Malosky Ck is listed as a SLVWD diversion watershed by some sources (e.g., CDM, 1996); however, there are no water-right or diversion records for this stream.

[d]Apparent discrepancy between max. direct diversion defined in terms of cfs and ac-ft/yr. SLVWD interprets as a 30 gpm right.

Table 4-1
Water Rights within SLVWD Diversion Watersheds

Watershed	Approx. Elevation		Approximate Area[a]							
							Diversion Watershed as % of:			
	At Intake or Gage[b]	Approx. Max	Above Diversion		Above Confluence with Boulder Ck or SLR		Above Confluence	Boulder Ck at SLR	SLR above Clear Ck	SLR at Big Trees
	(ft msl)		(ac)	(mi^2)	(ac)	(mi^2)				
Current Diversions										
Peavine Ck	1,264	2,610	230	0.36	285	0.45	81%	3.2%	0.7%	0.3%
Silver Ck	1,250	1,960	30	0.05	100	0.16	30%	0.4%	0.1%	0.04%
Foreman Ck	927	2,610	480	0.75	580	0.91	83%	6.6%	1.4%	0.7%
Boulder Ck watershed subtotal	-	-	740	1.16	965	1.51	77%	10%	2.1%	1.1%
Clear Ck #1	1,250-1,358	2,610	360	0.56	1,050	1.64	34%	-	1.0%	0.5%
Clear Ck #2	1,250-1,330		55	0.09			5.2%	-	0.2%	0.08%
Clear Ck #3	1,250-1,330		20	0.03			1.9%	-	0.06%	0.03%
Sweetwater Ck	1,275-1,330		225	0.35			21%	-	0.6%	0.3%
Clear Ck watershed subtotal	-	-	660	1.03			63%	-	1.9%	1.0%
Total	-	-	1,400	2.19	2,015	3.15	69%	-	4.0%	2.1%
Pre-1995 Diversions										
Peavine, Silver, & Foreman (as abov	-	-	740	1.16	965	1.51	77%	10%	2.1%	1.1%
Harmon Ck	1,100	2,240	100	0.16	165	0.26	61%	-	0.3%	0.1%
Clear Ck	860	2,610	550	0.86	1,050	1.64	52%	-	1.6%	0.8%
Sweetwater Ck	1,240		235	0.37			22%	-	0.7%	0.3%
Earl Sp	700	1,600	85	0.13	210	0.33	40%	-	0.24%	0.12%
Manson Sp	1,100	1,500	17	0.03	310	0.48	5%	-	0.05%	0.02%
Total	-	-	1,727	2.70	2,700	4.22	64%	-	4.9%	2.5%
Change in Diversion Watershed Area After 1995										
Peavine, Silver, & Foreman			0 (0%)				0%	0%	0.0%	0.0%
Harmon Ck			-100 (-100%)				-61%	-	-0.3%	-0.1%
Clear Ck			-115 (-21%)				-11%	-	-0.3%	-0.2%
Sweetwater Ck			-10 (-4%)				-1%	-	-0.03%	-0.01%
Earl Sp			-85 (-100%)				-40%		-0.2%	-0.1%
Manson Sp			-17 (-100%)				-5%	-	-0.05%	-0.02%
Total	-	-	-327 (-19%)				-12%	-	-0.9%	-0.5%
Currently Unused Watershed Above 5-Mile Pipeline										
Harmon Ck	1,200-1,330	2,240	65	0.10	165	0.26	39%	-	0.2%	0.1%
Malosky Ck[c]	1,200-1,330	2,060	25	0.04	225	0.35	11%	-	0.07%	0.04%
Other Relevant Watersheds										
Boulder Ck at Boulder Creek	430	2,650	7,300	11.4	-	-	-	-	21%	11%
San Lorenzo River above Clear Ck[d]	370	3,230	35,100	54.8	-	-	-	-	-	51%
San Lorenzo R at Big Trees	220		68,200	106.6	-	-	-	-	-	-

SLR = San Lorenzo River

[a]Uncertainties include intake location and topography (GPS coordinates unavailable). USGS gaged watershed areas from Tab

[b]Range of values cited among SLVWD sources of informaion.

[c]Malosky Ck is listed as a SLVWD diversion watershed by some sources (e.g., CDM, 1996); however, there are no water-right or diversion records for this stream.

[d]Portion of San Lorenzo River watershed upstream and including all current SLVWD diversions (no gage).

Table 4-2
SLVWD Surface Water Supply Watersheds

Year	Stream Diversions (AF/yr)								Stream Diversions (MG/yr)								% of N. Serv. Area	% of Dist. Total
	Foreman, Silver, & Peavine Cks	Peavine & Silver Cks	ForemanCk	Clear Ck	Sweetwater Ck	Harmon Ck	Earl & Manson Sps	Total	Foreman, Silver, & Peavine Cks	Peavine & Silver Cks	Foreman Ck	Clear Ck	Sweetwater Ck	Harmon Ck	Earl & Manson Sps	Total		
Calendar Years																		
1984	785	-	-	31	171	0	1	988	256	-	-	10	56	0	0	322	59%	53%
1985	652	-	-	97	112	0	5	867	212	-	-	32	37	0	2	282	55%	49%
1986	558	-	-	115	128	15	8	824	182	-	-	38	42	5	3	269	58%	50%
1987	334	-	-	103	63	25	5	531	109	-	-	34	21	8	2	173	36%	31%
1988	302	-	-	94	71	21	4	492	98	-	-	31	23	7	1	160	35%	30%
1989	531	-	-	136	94	20	7	788	173	-	-	44	31	6	2	257	58%	48%
1990	400	-	-	56	67	8	8	540	130	-	-	18	22	3	3	176	40%	34%
1991	358	-	-	71	57	17	10	513	117	-	-	23	19	6	3	167	38%	32%
1992	534	-	-	83	73	17	3	710	174	-	-	27	24	6	1	231	51%	42%
1993	669	-	-	111	120	15	2	918	218	-	-	36	39	5	1	299	65%	53%
1994	482	-	-	127	129	7	0	745	157	-	-	41	42	2	0	243	49%	40%
1995	1,035	-	-	7	33	0	0	1,075	337	-	-	2	11	0	0	350	71%	56%
1996	-	-	-	-	-	-	-	1,156	-	-	-	-	-	-	-	377	70%	57%
1997	-	-	-	-	-	-	-	994	-	-	-	-	-	-	-	324	61%	48%
1998	948	115	833	197	108	0	0	1,254	309	37	272	64	35	0	0	408	82%	67%
1999	800	149	651	179	149	0	0	1,128	261	49	212	58	49	0	0	368	71%	56%
2000	656	126	530	190	187	0	0	1,033	214	41	173	62	61	0	0	337	65%	51%
2001	583	135	447	186	122	0	0	891	190	44	146	61	40	0	0	290	54%	42%
2002	823	149	673	40	27	0	0	889	268	49	219	13	9	0	0	290	53%	42%
2003	711	153	558	134	94	0	0	939	232	50	182	44	31	0	0	306	56%	44%
2004	682	137	545	146	94	0	0	922	222	45	178	48	31	0	0	300	53%	43%
2005	799	115	684	192	128	0	0	1,119	260	38	223	62	42	0	0	364	63%	53%
2006	797	143	654	199	133	0	0	1,128	260	47	213	65	43	0	0	368	62%	51%
2007	375	70	305	190	127	0	0	692	122	23	99	62	41	0	0	226	40%	32%
2008	430	54	376	158	106	0	0	694	140	18	123	52	34	0	0	226	44%	34%
Avg	619	123	569	124	104	6	2	873	202	40	185	40	34	2	1	285	56%	46%
Min	302	54	305	7	27	0	0	492	98	18	99	2	9	0	0	160	35%	30%
Max	1,035	153	833	199	187	25	10	1,254	337	50	272	65	61	8	3	408	82%	67%
Water Years																		
1977*	-	-	-	-	-	-	-	400	-	-	-	-	-	-	-	130	36%	32%
1985	706	-	-	103	128	0	4	941	230	-	-	34	42	0	1	306	60%	53%
1986	629	-	-	109	111	8	9	865	205	-	-	35	36	3	3	282	59%	52%
1987	333	-	-	111	89	30	6	569	108	-	-	36	29	10	2	185	38%	33%
1988	305	-	-	100	72	20	4	500	99	-	-	33	23	6	1	163	35%	30%
1989	419	-	-	116	85	20	7	647	136	-	-	38	28	7	2	211	48%	40%
1990	526	-	-	73	80	10	4	693	172	-	-	24	26	3	1	226	52%	43%
1991	347	-	-	72	53	15	14	501	113	-	-	23	17	5	5	163	37%	31%
1992	501	-	-	83	66	17	4	671	163	-	-	27	22	5	1	219	48%	40%
1993	647	-	-	105	101	14	3	870	211	-	-	34	33	5	1	283	62%	51%
1994	466	-	-	117	135	11	0	729	152	-	-	38	44	4	0	238	48%	40%
1995	956	-	-	35	56	0	0	1,047	311	-	-	11	18	0	0	341	70%	56%
1996	-	-	-	-	-	-	-	1,117	-	-	-	-	-	-	-	364	68%	55%
1997	-	-	-	-	-	-	-	1,067	-	-	-	-	-	-	-	348	63%	50%
1998	883	102	781	186	94	0	0	1,169	288	33	254	61	31	0	0	381	78%	64%
1999	847	147	700	196	152	0	0	1,196	276	48	228	64	50	0	0	390	75%	60%
2000	657	133	524	188	192	0	0	1,037	214	43	171	61	63	0	0	338	64%	50%
2001	558	149	409	206	144	0	0	908	182	48	133	67	47	0	0	296	56%	44%
2002	832	144	688	62	41	0	0	935	271	47	224	20	13	0	0	305	56%	45%
2003	748	150	598	107	72	0	0	928	244	49	195	35	24	0	0	302	55%	44%
2004	663	140	523	135	91	0	0	889	216	46	170	44	30	0	0	290	51%	41%
2005	803	121	682	191	127	0	0	1,121	262	39	222	62	41	0	0	365	63%	53%
2006	815	129	686	179	119	0	0	1,114	266	42	223	58	39	0	0	363	62%	51%
2007	397	106	291	223	149	0	0	768	129	34	95	73	48	0	0	250	43%	35%
2008	451	48	403	156	104	0	0	712	147	16	131	51	34	0	0	232	45%	35%
Avg	613	124	571	130	103	7	2	875	200	41	186	42	34	2	1	285	56%	46%
Min	305	48	291	35	41	0	0	500	99	16	95	11	13	0	0	163	35%	30%
Max	956	150	781	223	192	30	14	1,196	311	49	254	73	63	10	5	390	78%	64%

- Incomplete monthly record or non-applicable.

* July 1976 through June 1977; not included in average.

Source: sums of monthly record provided in Table A-1.

Table 4-3

SLVWD Annual Stream Diversions, 1977 & 1984-2006

Diversion Watershed	Total Area	SLVWD Properties		State Park		Timber Production Parcels		Timber-Residential Parcels		Residential & Rural Residential		Camp Ben Lomond*	
	(ac)	(ac)	(%)	(ac)	(%)	(ac)	(%)	(ac)	(%)	(ac)	(%)	(ac)	(%)
Peavine Ck	230	149	**65%**	0		41	18%	26	11%	12	5%	2	1%
Silver Ck	30	30	**100%**	0		0		0		0		0	
Foreman Ck	480	281	**59%**	0		12	3%	89	19%	97	20%	0	
Subtotal	740	460	**62%**	0		53	7%	115	16%	109	15%	2	0.2%
Clear Ck	435	281	**65%**	48	11%	25	6%	1	0.2%	80	18%	0	
Sweetwater Ck	225	33	15%	77	34%	0		1	0.4%	115	**51%**	0	
Subtotal	660	314	**48%**	125	19%	25	4%	2	0.3%	195	30%	0	
Total	1,400	774	**55%**	125	9%	78	6%	117	8%	304	22%	2	0.1%
Potential Recharge Area West of Watershed													
Peavine Ck	180	0		0		164	**91%**	9	5%	0		7	4%
Silver Ck	0	0		0		0		0		0		0	
Foreman Ck	115	0		0		109	**94%**	7	6%	0		0	
Subtotal	295	0		0		273	**92%**	16	5%	0		7	2%
Clear Ck	345	0		3	1%	289	**84%**	0		53	15%	0	
Sweetwater Ck	70	0		0		0		0		70	**100%**	0	
Subtotal	415	0		3	1%	289	**70%**	0		123	30%	0	
Total	710	0		3	0.4%	562	**79%**	16	2%	123	17%	7	1%

Based on mapped areas in Figure 4-3.

*California Youth Authority

Table 4-4
SLVWD Diversion Watershed Land Use

Stream Diversion	Date	pH	Electrical Conductivity (µS/cm)	Total Dissolved Solids (TDS)	Hardness	Cations				Anions			Nitrate (NO_3)	Iron (Fe)	Manganese (Mn)	Fluoride
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)				
						(mg/L)										
Peavine Ck	9/13/84	8.0	220	145	76	18	7.5	10	3.5	92	< 10	10	< 1	< 0.05	< 0.01	0.16
	8/14/85	7.4	230	150	67	15	7	11	3.5	90	< 10	< 10	< 1	< 0.05	< 0.01	0.35
	5/14/86	7.8	200	130	58	13	6	9.3	4	63	< 10	10	< 1	< 0.05	< 0.01	0.1
	5/19/87	8.0	240	160	75	17	7.9	8	3	74	< 10	12	< 1	< 0.05	< 0.01	0.12
	4/21/88	8.1	240	150	81	19	8.1	11	3	92	3.4	10	< 0.1	< 0.05	< 0.03	0.12
	8/15/89	7.7	250	160	110	28	10	12	3.2	100	4.9	10	< 1	< 0.05	< 0.03	0.12
	8/15/89	7.7	250	160	110	28	10	12	3.2	100	4.9	10	< 0.1	< 0.05	< 0.03	0.12
	5/10/90	7.8	200	130	94	21	10	15	2.6	110	4	8	< 1	< 0.05	< 0.03	0.16
	4/18/91	7.7	215	140	67	12	9.1	11	1.2	98	6.2	5.8	< 1	< 0.05	< 0.03	< 0.1
	3/12/92	7.7	205	130	71	15	8.1	11	2.1	86	7	5.8	< 1	< 0.05	< 0.03	0.21
	8/24/93	7.6	220	145	93	23	8.5	11	3.5	100	4.9	7.4	< 1	< 0.05	< 0.03	< 0.1
	5/5/94	8.0	215	140	89	21	8.9	11	2.8	81	5.4	6.5	< 1	< 0.05	< 0.03	< 0.1
	5/11/95	7.8	170	110	75	19	6.7	9	2.4	71	2.8	6.7	< 1	< 0.05	< 0.03	< 0.1
	1/24/96	7.9	175	115	74	18	7	10	2.6	81	3.1	6.6	< 1	< 0.05	< 0.03	< 0.1
	4/15/96	7.9	170	115	66	18	5.3	9	2.4	73	3.2	6.7	< 1	< 0.05	< 0.015	0.15
	4/25/97	8.1	175	115	71	18	6	9	2.6	80	3	7.5	< 1	< 0.05	< 0.015	0.28
	4/22/99	7.8	150	100	64	16	6	8.4	2.3	67	2.3	4.8	< 1	< 0.05	< 0.015	< 0.10
	5/11/99	7.8	150	100	64	16	6	2.3	2.3	67	2.3	4.8	< 1	< 0.05	< 0.015	< 0.1
	5/3/00	8.0	160	100	63	16	5.6	8	2.2	54	2.8	5.9	< 1	< 0.05	< 0.015	< 0.10
	5/24/01	8.0	185	120	78	19	7.3	10	2.8	88	5.6	6.4	< 1	< 0.05	< 0.015	0.11
	6/5/01	8.0	185	120	78	19	7.3	10	2.8	88	5.6	6.4	< 2.0	< 0.1	< 0.03	0.11
	4/24/02	7.8	180	120	71	17	7.2	10	2.6	85	8.9	7.8	< 1	< 0.05	< 0.015	< 0.1
	4/17/03	7.7	170	110	71	17	6.9	9.7	2.3	84	4	5.8	< 1	< 0.05	< 0.01	0.1
	4/22/04	7.7	180	120	70	17	6.7	10	3.2	82	3	6.1	< 1	< 0.05	< 0.02	<0.1
	4/13/05	7.8	150	99	61	14	6.2	81	2.7	72	2.5	5.5	< 1	< 0.05	< 0.02	<0.1
	5/3/06	7.9	116	70	41	9.5	4.2	7.1	2.3	55	<0.5	4.2		nd	nd	0.05
	4/18/07	8.2	190	132	77	18	7.8	10	2.6	110	3.3	5.8		nd	nd	0.10
Foreman Ck	3/22/79	7.7	125	81	46	9.3	5.3	7.9	1.7	46	3.2	15	< 0.1	< 0.01	< 0.005	0.01
	6/12/79	8.1	185	121	60	14	6.4	8	1.5	72	4.1	6	< 0.1	0.04	< 0.01	0.21
	4/3/80	7.8	155	81	60	13.2	6.5	7.8	1.8	58	19	12	< 0.1	< 0.005	0.035	0.1
	7/23/81	8.3	210	138	69	17	6.4	12.2	3.2	115	2.2	23.2	< 0.1	< 0.05	< 0.05	0.3
	4/5/82	7.3	120	77	34	8	3.5	6	2	39	< 1	8	0.2	0.07	0.01	0.3
	6/29/82	7.5	150	97	54	12	6	9	3	62	2	10	0.2	0.07	0.03	0.2
	7/20/83	7.5	150	97	48	10	5	8	< 1	64	< 5	12	< 0.1	0.03	0.01	0.25
	9/13/84	7.8	190	125	65	14	7	11	3	76	< 10	< 10	< 1	0.22	< 0.01	0.16
	8/14/85	7.3	190	125	57	13	6	11	3	80	< 10	10	< 1	< 0.05	< 0.01	0.28
	5/14/86	7.9	170	110	46	10	5	9	3	57	< 10	12	< 1	< 0.05	< 0.01	0.11
	4/10/87	7.7	170	110	50	11	5.5	8	1.2	60	< 10	20	< 1	< 0.05	< 0.01	0.7
	4/21/88	7.9	170	110	52	11	6	9	2.1	62	5.2	10	< 0.1	< 0.05	< 0.03	0.14
	4/11/89	7.7	170	110	55	13	5.5	12	2.1	62	5.7	10	< 0.5	< 0.05	< 0.03	0.15
	8/31/89	7.8	210	130	87	22	7.7	29	2.5	78	5.9	10	< 1	< 0.05	< 0.03	0.13
	5/10/90	7.5	190	120	77	16	9.1	16	2	86	7.8	8	< 1	< 0.05	< 0.03	0.16
	4/18/91	7.4	175	115	56	11	7	11	1.2	72	7.7	5.7	< 1	< 0.05	< 0.03	< 0.1
	3/12/92	7.8	170	110	53	10	6.9	9.7	1.5	64	837	5.7	< 1	< 0.05	< 0.03	0.24
	3/25/93	7.4	145	95	60	13	6.9	9	1.6	57	5.9	6.7	< 1	< 0.05	< 0.03	0.13
	5/5/94	7.9	185	120	75	17	8	11	2.1	64	8.4	6.2	< 1	< 0.05	< 0.03	0.1
	5/11/95	7.6	150	99	62	15	6.1	8.4	1.9	59	4.9	5.8	< 1	< 0.05	< 0.03	< 0.1
	1/24/96	7.7	130	85	54	12.5	5.5	8.2	1.8	57	3.4	6.1	< 1	0.05	< 0.03	0.2
	4/15/96	7.7	140	90	51	13	4.5	8	1.8	57	4.7	5.8	< 1	< 0.05	< 0.015	0.16
	4/25/97	7.8	150	100	59	14	6	9	2	66	5	6.9	< 1	< 0.05	< 0.015	0.31
	4/30/98	7.2	130	85	51	13.5	4.4	8	1.9	55	4.2	4.9	< 1	< 0.05	< 0.015	< 0.2
	4/22/99	7.7	130	85	51	12.5	5	8	1.7	54	4.5	4.2	< 1	< 0.05	< 0.015	0.1
	5/11/99	7.7	130	85	51	12.5	5	8	1.7	54	4.5	4.2	< 1	< 50	< 0.015	0.1
	5/3/00	7.8	140	89	50	12	5.1	7.5	1.6	53	4.4	5.3	< 1	< 0.05	< 0.015	< 0.10
	5/24/01	7.8	150	98	61	14	6.3	9.3	2	67	7.4	5.7	< 1	< 0.05	< 0.015	0.13
	6/5/01	7.8	150	98	61	14	6.3	9.3	2	67	7.4	5.7	< 2.0	< 0.1	< 0.03	0.13
	4/24/02	7.4	150	100	54	12	6.2	9	1.9	64	10.5	7.2	< 1	< 0.05	< 0.015	< 0.1
	4/17/03	7.5	140	92	58	13	6.1	8.7	1.8	66	6.5	5.5	< 1	< 0.05	< 0.01	0.1
	4/22/04	7.7	150	99	55	12	6	9.1	2.4	65	4.9	5.8	< 1	< 0.05	< 0.02	0.11
	4/13/05	7.5	130	85	49	11	5.3	6.8	2	56	4.4	6	< 1	< 0.05	< 0.02	0.26
	5/3/06	7.9	134	64	45	9.9	4.9	7.8	1.7	61	3.3	4.6	nd	nd	nd	0.08
	4/18/07	8.0	160	78	60	13	6.7	9.1	1.9	85	5.1	5.3	nd	nd	nd	0.1

Table 4-5a

General Mineral Water Quality, SLVWD Stream Diversions

Stream Diversion	Date	pH	Electrical Conductivity	Total Dissolved Solids (TDS)	Hardness	Cations				Anions			Nitrate (NO_3)	Iron (Fe)	Manganese (Mn)	Fluoride
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)				
			(µS/cm)	(mg/L)												
Clear Ck	3/22/79	7.6	122	50	45	11	4.1	7.9	1.5	54	3	8	< 0.1	< 0.01	< 0.01	0.11
	6/12/79	8.2	150	129	54	14	4.8	8	1.2	65	4.1	8	0.1	0.04	< 0.01	0.11
	4/3/80	7.7	150	71	58	14.5	5.3	7.5	1.5	74	30	12	< 0.1	< 0.005	0.029	0.1
	7/23/81	8.0	167	109	50	12.2	4.7	10.7	2.4	76	3.6	23.2	0.3	< 0.05	< 0.05	0.2
	9/13/84	7.9	170	110	53	13	5	10	3	66	12	10	1.1	0.11	< 0.01	0.16
	8/14/85	7.4	160	110	53	13	5	10	2.5	28	< 10	< 10	< 1	< 0.05	< 0.01	0.22
	5/14/86	7.6	160	110	42	11	3.5	9	2	48	< 10	< 10	< 1	< 0.05	< 0.01	0.1
	4/10/87	7.8	170	110	48	12	4.5	7	1	60	< 10	24	5	< 0.05	< 0.01	0.4
	4/21/88	8.0	170	110	53	13	5	9	2	61	3.2	10	< 0.1	< 0.05	< 0.03	0.11
	4/11/89	7.7	170	110	57	15	4.7	12	1.9	62	3.8	10	1.4	< 0.05	< 0.03	0.15
	5/10/90	7.5	170	110	72	17	7.2	12	1.6	90	4.4	10	< 1	< 0.05	< 0.03	0.16
	4/18/91	7.6	175	115	52	11	6	11	1.2	71	6.4	6.8	< 1	< 0.05	< 0.03	< 0.1
	3/12/92	7.3	165	105	53	12	5.7	8.8	1.5	62	7.1	6.9	< 1	< 0.05	< 0.03	0.22
	3/25/93	7.3	135	87	56	14	5.2	8.4	1.4	54	3.9	7.5	< 1	<0.05	< 0.03	0.17
	5/5/94	7.9	175	115	79	21	6.4	14	1.9	59	5.8	7.4	< 1	< 0.05	< 0.03	< 0.1
	5/11/95	7.5	140	92	59	16	4.8	8	1.7	56	3.3	6.4	< 1	< 0.05	< 0.03	< 0.1
	4/15/96	7.8	135	95	51	15	3.5	8	1.7	55	3.5	6.4	< 1	< 0.05	< 0.015	0.15
	4/25/97	7.9	140	90	52	14	4	8	1.7	59	3.3	7.5	< 1	< 0.05	< 0.015	0.46
	4/30/98	7.6	125	82	48	14	3.2	8	1.6	53	3	5.6	< 1	< 0.05	< 0.015	< 0.2
	4/22/99	7.7	125	82	49	13	4	7.5	1.5	53	3.3	4.7	< 1	< 0.05	< 0.015	< 0.10
	5/11/99	7.7	125	82	49	13	4	7.5	1.5	53	3.3	4.7	< 1	< 0.05	< 0.015	< 0.1
	5/3/00	7.8	130	85	48	13	3.8	7.5	1.5	51	3.3	5.9	< 1	< 0.05	< 0.015	< 0.10
	6/7/01	7.6	160	110	62	16	5.3	8.1	1.7	70	5.9	6.7	< 1	< 0.05	< 0.015	< 0.1
	6/13/01	7.6	160	110	62	16	5.3	8.1	1.7	70	5.9	6.7	< 2.0	< 0.1	< 0.03	< 0.1
	4/24/02	7.6	155	100	55	14	5.2	9.9	1.8	70	9.2	8.1	< 1	< 0.05	< 0.015	< 0.1
	4/17/03	7.6	145	95	55	14	5	9.3	1.6	68	4.3	6.7	< 1	< 0.05	< 0.01	< 0.10
	4/22/04	7.5	153	99	55	14	4.9	9.2	2.2	63	3.2	6.5	< 1	< 0.05	< 0.02	<0.10
	4/13/05	7.5	120	80	48	12	4.4	8.1	2.2	52	3	6.1	< 1	< 0.05	< 0.02	<0.1
	4/19/06	8.0	106	76		9.5	3.3	6.6	1.5	43	2.2	4.4	nd	0.11	2.4	nd
	4/18/07	8.0	160	100	57	14	5.4	9.2	1.8	81	3.7	6	nd	nd	nd	0.08
Sweetwater Ck	3/22/79	7.7	148	96	55	13	5.4	9.5	1.8	65	4.7	18	< 0.1	< 0.01	< 0.005	0.01
	6/12/79	8.3	177	135	69	16	7	9	1.6	86	3.7	9.6	< 0.1	0.06	< 0.01	0.28
	4/3/80	8.0	200	115	67	17	5.9	9.4	1.9	77	30	12	0.1	< 0.005	0.012	0.1
	7/23/81	8.3	210	138	70	16.3	7.3	11.6	2.7	92	4.5	22.4	0.4	< 0.005	< 0.005	0.2
	4/5/82	7.8	115	73	35	9	3	7	1.5	43	< 1	18	1.1	0.07	< 0.05	1.9
	6/29/82	7.8	175	114	65	16	6	10	2	76	< 1	11	0.5	< 0.05	< 0.05	0.1
	3/17/83	7.6	170	110	48	12	4	10	2	54	6	6	0.4	0.06	< 0.05	< 0.1
	8/17/83	7.4	200	130	78	19	7	10	< 1	82	< 5	10	0.5	< 0.05	< 0.05	0.1
	9/13/84	7.9	220	145	78	18	8	10	3	92	< 10	10	< 1	0.5	< 0.01	0.15
	8/14/85	7.5	210	140	69	16	7	11	3	86	< 10	< 10	< 1	< 0.05	< 0.01	0.23
	5/14/86	7.7	220	154	62	15	6	10	3	67	< 10	12	< 1	< 0.05	< 0.01	0.1
	4/10/87	7.9	220	150	63	15	6.4	9	1.2	75	< 10	24	< 1	< 0.05	< 0.01	0.8
	4/21/88	7.9	220	140	73	17	7.3	10	2.2	80	3.6	12	0.46	< 0.05	< 0.03	0.11
	1/4/89	7.6	220	140	70	18	6	10	2.8	85	5.8	12	0.22	< 0.05	< 0.03	< 0.1
	4/11/89	7.6	210	130	71	18	6.3	15	2.2	72	3.2	12	< 0.5	< 0.05	< 0.03	0.15
	5/10/90	7.6	220	140	94	21	10	12	2	100	4.7	10	< 1	< 0.05	< 0.03	0.16
	4/18/91	7.7	210	135	70	13	9.1	11	1	85	8.7	7.5	< 1	< 0.05	< 0.03	< 0.1
	3/12/92	7.7	200	130	65	14	7.2	10	1.6	72	10	8.2	< 1	< 0.05	< 0.03	0.2
	3/25/93	7.6	180	120	82	19	8.4	11	1.8	71	5.9	8.6	1.6	< 0.05	< 0.03	0.14
	5/5/94	7.9	230	150	94	22	9.4	12	2.2	77	7.1	9.9	3.1	< 0.05	< 0.03	< 0.1
	5/11/95	7.7	180	120	78	20	7	10	2	71	4.4	8.6	1.9	< 0.05	< 0.03	< 0.1
	4/15/96	7.9	175	110	65	18	5	9.5	2	70	4.6	7.9	1.4	0.07	< 0.015	0.12
	4/25/97	8.1	195	130	78	19	7	10	2	86	4.4	8.8	1.1	< 0.05	< 0.015	0.4
	4/30/98	7.8	155	100	58	16	4.5	9.4	1.8	64	3.9	7	1.4	< 0.05	< 0.015	< 0.2
	4/22/99	7.7	154	95	58	15	5	9	1.7	58	4.1	6.4	1.2	0.06	< 0.015	< 0.10
	5/11/99	7.7	145	95	58	15	5	9	1.7	58	4.1	6.4	1.2	60	< 0.015	< 0.1
	5/3/00	8.0	170	115	67	18	5.5	8.6	1.7	70	3.6	6.5	< 1	< 0.05	< 0.015	< 0.10
	5/24/01	7.9	175	115	73	18	6.8	10	2	78	6.5	7.4	2.1	< 0.05	< 0.015	< 0.1
	6/5/01	7.9	175	115	73	18	6.8	10	2	78	6.5	7.4	2.1	< 0.1	< 0.03	< 0.1
	4/24/02	7.6	190	130	78	20	6.6	11	2.1	88	9.6	8.4	< 1	< 0.05	< 0.015	< 0.1
	4/17/03	7.5	190	130	79	21	6.6	11	1.9	91	5.1	6.6	< 1	< 0.05	< 0.01	< 0.10
	4/22/04	7.7	195	130	77	20	6.5	10	2.6	87	4.1	6.7	< 1	< 0.05	< 0.02	<0.10
	4/13/05	7.6	170	110	70	18	6	8.6	2.3	76	3.7	6.3	< 1	0.11	<0.02	<0.1
	4/19/06	8.0	142	94	56	14	5	8.2	1.9	63	2.8	5.1	0.86	0.44	9.8	nd
	4/18/07	8.1	200	126	84	22	7.1	10	2	120	3.6	6.4	nd	nd	nd	0.1

Table 4-5b

General Mineral Water Quality, SLVWD Stream Diversions

Stream Diversion	Date	pH	Electrical Conductivity (µS/cm)	Total Dissolved Solids (TDS)	Hardness	Cations				Anions			Nitrate (NO_3)	Iron (Fe)	Manganese (Mn)	Fluoride
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)				
						(mg/L)										
Harmon Ck	7/15/86	7.6	240	160	55	12	6	10	3	68	< 10	12	< 1	< 0.05	< 0.02	< 0.1
	4/10/87	7.6	180	120	50	12	5.1	8	1.3	63	< 10	24	< 1	< 0.05	< 0.01	< 0.1
	4/21/88	7.8	200	130	62	15	6	10	2.5	69	5.2	12	< 0.1	< 0.05	< 0.03	0.11
	4/11/89	7.6	170	110	56	14	5.1	12	2.3	58	4.4	10	0.85	< 0.05	< 0.03	0.15
	5/10/90	7.3	210	130	85	19	9.2	15	2.6	96	7.6	12	< 1	< 0.05	< 0.03	0.17
	4/18/91	7.5	175	115	54	11	6.4	8	1.6	70	7.6	6.9	< 1	< 0.05	< 0.03	< 0.1
	3/12/92	7.5	165	105	53	11	6.1	9.4	1.8	62	7.9	6.8	< 1	< 0.05	< 0.03	0.24
	3/25/93	7.5	150	99	64	15	6.5	9.6	2	60	4.4	7.9	< 1	< 0.05	< 0.03	0.18
	5/5/94	7.8	195	125	76	18	7.6	11	2.9	66	7.6	7.7	< 1	< 0.05	< 0.03	< 0.1
	5/11/95	7.6	150	99	64	16	6	8.6	2.2	61	3.6	6.6	< 1	< 0.05	< 0.03	< 0.1
	4/17/96	7.6	130	83	46	12	4	8	2	53	3.4	5.7	< 1	< 0.05	< 0.015	0.16
Molaskey Ck	4/17/96	7.3	180	130	80	21	6.7	7	2.3	80	5.7	5.1	< 1	< 0.05	< 0.015	0.15
Manson Spring	3/22/79	7.6	153	86	56	14	5.1	9.2	2	64	4.8	10	< 0.1	0.04	0.14	0.01
	6/12/79	7.5	183	160	69	18	6	9	1.4	74	10	11	< 0.1	0.44	0.04	0.15
	4/3/80	7.6	200	117	67	15	6.8	9.2	3.2	68	7.6	12	0.2	0.043	0.029	0.1
	9/13/84	8.0	260	170	90	23	8	13	2	105	< 10	15	1.1	0.06	< 0.01	0.15
	8/15/85	7.0	260	170	84	21	8	13	2	100	< 10	12	< 1	0.15	< 0.01	0.2
	6/24/86	7.7	250	165	57	13	6	12	2	78	< 10	12	< 1	< 0.05	< 0.01	< 0.1
	4/21/87	7.3	260	170	78	20	7	11	< 1	92	< 10	12	< 1	< 0.05	< 0.01	0.8
	4/11/89	7.6	250	160	91	24	7.5	17	1.4	100	< 1	14	0.7	< 0.05	< 0.03	0.12
	5/17/90	7.7	260	170	120	28	11	23	1.8	120	3.2	18	< 1	< 0.05	< 0.03	0.11
	4/18/91	7.2	250	160	86	18	9.9	13	0.9	110	5.4	8.4	< 1	< 0.05	< 0.03	< 0.1
	3/12/92	7.3	260	165	90	21	9.1	13	1.1	110	6.5	8.8	< 1	< 0.05	< 0.03	0.15
	3/25/93	7.4	230	150	110	28	9.7	13	1.2	100	4.1	9.9	< 1	< 0.05	< 0.03	< 0.1
Earl Spring	9/13/84	8.0	250	165	87	23	7	11	3.5	90	14	12	1.1	0.23	0.04	0.13

Table 4-5c
General Mineral Water Quality, SLVWD Stream Diversions

Stream Diversion		pH	Electrical Conductivity (µS/cm)	Total Dissolved Solids	Hardness	Cations				Anions				Nitrate (NO_3)	Iron (Fe)	Manganese (Mn)	Fluoride (F)	Major Cations				Major Anions			Water Type
						Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	
						(mg/L)												(% as meq/L)							
Peavine Ck	Avg	7.8	192	125	75	18	7.3	12	2.7	0	83	4.2	7.1	0.48	0.03	0.01	0.11	44%	30%	23%	3%	**83%**	5%	12%	mixed-
N= 27	Min	7.4	116	70	41	9.5	4.2	2.3	1.2	0	54	0.25	4.2	0.05	0.03	0.01	0.05	15%	11%	7%	1%	73%	1%	8%	bicarbonate
1984 -07	Max	8.2	250	160	110	28	10	81	4.0	0	110	8.9	12	1.0	0.05	0.02	0.35	55%	40%	73%	6%	89%	10%	20%	
Foreman Ck	Avg	7.7	157	100	56	13	6.0	9.7	2.0	0	65	5.9	8.2	0.20	0.07	0.02	0.18	40%	31%	26%	3%	**76%**	8%	16%	mixed-
N= 35	Min	7.2	120	64	34	8.0	3.5	6.0	0.5	0	39	2.0	4.2	0.20	0.03	0.01	0.01	33%	21%	21%	1%	56%	1%	9%	bicarbonate
1979 -07	Max	8.3	210	138	87	22	9.1	29	3.2	0	115	19	23	0.20	0.22	0.04	0.70	47%	37%	41%	6%	84%	23%	34%	
Clear Ck	Avg	7.7	150	98	54	14	4.8	8.9	1.7	0	61	5.5	8.2	1.27	0.06	0.81	0.17	45%	26%	26%	3%	**75%**	8%	17%	mixed-
N= 30	Min	7.3	106	71	42	9.5	3.2	6.6	1.0	0	28	2.2	4.4	0.10	0.03	0.01	0.05	35%	19%	21%	2%	56%	4%	11%	bicarbonate
1979 -07	Max	8.2	175	129	79	21	7.2	14	3.0	0	90	30	24	5.0	0.11	2.40	0.46	52%	32%	31%	5%	84%	29%	38%	
Sweetwater Ck	Avg	7.8	188	123	69	17	6.5	10	2.0	0.03	77	5.5	10	0.83	0.06	0.31	0.18	45%	28%	24%	3%	**76%**	7%	17%	mixed-
N= 35	Min	7.4	115	73	35	9.0	3.0	7.0	0.5	0	43	0.50	5.0	0.05	0	0.003	0.01	34%	23%	20%	1%	57%	1%	8%	bicarbonate
1979 -07	Max	8.3	230	154	94	22	10	15	3.0	1.0	120	30	24	3.1	0.50	9.80	1.9	51%	39%	31%	4%	89%	28%	42%	
Harmon Ck	Avg	7.6	179	116	60	14	6.2	10	2.2	0	66	5.7	10	0.55	0.03	0.01	0.13	41%	30%	25%	3%	**73%**	8%	19%	mixed-
N= 11	Min	7.3	130	83	46	11	4.0	8.0	1.3	0	53	3.4	5.7	0.50	0.03	0.01	0.05	36%	25%	22%	2%	57%	6%	13%	bicarbonate
1986 -96	Max	7.8	240	160	85	19	9.2	15	3.0	0	96	7.9	24	0.85	0.03	0.02	0.24	46%	36%	31%	5%	79%	12%	37%	
Molaskey Ck	Apr-96	7.3	180	130	80	21	6.7	7.0	2.3	0	80	5.7	5.1	< 1	< 0.05	< 0.015	0.15	**53%**	28%	16%	3%	**83%**	8%	9%	calcium-
																									bicarbonate
Manson Sp	Avg	7.5	235	154	83	20	7.8	13	1.6	0	93	5.2	12	0.47	0.08	0.03	0.16	45%	29%	25%	2%	**77%**	6%	17%	mixed-
N= 12	Min	7.0	153	86	56	13	5.1	9.0	0.5	0	64	0.50	8.4	0.05	0.03	0.01	0.01	38%	24%	20%	1%	**69%**	1%	11%	bicarbonate
1979 -93	Max	8.0	260	170	120	28	11	23	3.2	0	120	10	18	1.1	0.44	0.14	0.80	50%	35%	30%	5%	**84%**	12%	21%	
Earl Sp	Sep-84	8.0	250	165	87	23	7.0	11	3.5	0	90	14	12	1.1	0.23	0.04	0.13	**50%**	25%	21%	4%	**70%**	14%	16%	calcium-
																									bicarbonate
Drinking Water Standards Primary														45			2								
Secondary Recommended		6.5 -	900	500								250	250		0.3	0.05									
Upper		8.5	1,600	1,000								500	500												
Short term			2,200	1,500								600	600												

Table 4-6
Water Quality Summary,
SLVWD Stream Diversions

Statistics calculated using one-half the detection limit substituted for non-detect values.

	A				B				C			D				E				F				G				H				I				For Comparison:								
	Monthly Stream Diversions																																		Total Water Production								Rainfall at
	Peavine, Foreman, & Silver				Clear & Sweetwater[a]				Sum A+B			Peavine & Silver[b]				Foreman[b]				Clear				Sweetwater				Sum D+E+F+G				Total[c]				Northern Service Area				Northern & Southern Service Areas				Ben Lomond 4
Rank	AF	MG	gpm	mth	AF	MG	gpm	mth	AF	MG	gpm	AF	MG	gpm	mth	AF	MG	gpm	mth	AF	MG	gpm	mth	AF	MG	gpm	mth	AF	MG	gpm	mth	AF	MG	gpm	mth	AF	MG	gpm	mth	AF	MG	gpm	mth	(in/mth)
1	119	39	867	May-06	71	23	515	May-00	189	62	1,408	36	12	270	Apr-97	114	37	857	Apr-99	41	13	302	Jul-98	35	12	258	May-00	226	74	1,681	138	45	1,011	Jul-98	235	77	1,718	Jul-06	297	97	2,166	Jul-06	28 Feb-98
2	115	37	865	Apr-99	61	20	447	Jul-06	176	57	1,308	34	11	249	May-97	113	37	855	Apr-06	37	12	277	Jun-99	30	10	228	Jun-00	215	70	1,595	135	44	983	Aug-98	233	76	1,698	Jul-05	276	90	2,015	Jul-05	27 Jan-95
3	114	37	861	Apr-06	61	20	457	Jun-00	175	57	1,299	28	9	214	Jun-97	111	36	813	Jan-06	37	12	268	Jul-06	27	9	194	Jul-00	203	66	1,510	135	44	983	May-06	209	68	1,526	Jul-03	267	87	1,946	Jul-03	26 Dec-05
4	114	37	829	Mar-05	55	18	403	Aug-98	169	55	1,255	26	9	197	Jun-99	107	35	779	May-06	35	12	258	May-00	24	8	179	Jul-06	193	63	1,433	131	43	955	May-99	203	66	1,484	Jul-96	254	83	1,851	Aug-02	25 Dec-02
5	113	37	823	Jan-06	55	18	416	Jun-99	168	55	1,248	24	8	172	Jul-99	106	34	772	Mar-98	32	10	231	Aug-98	24	8	172	Aug-98	185	60	1,372	130	42	947	May-05	201	65	1,467	Jul-04	252	82	1,842	Jul-02	25 Dec-96
6	112	36	815	Jan-05	53	17	388	Jul-00	165	54	1,226	21	7	154	Jul-97	105	34	769	Mar-05	30	10	230	Jun-06	23	8	171	Aug-00	180	59	1,340	129	42	971	Apr-04	200	65	1,463	Aug-02	252	82	1,840	Jul-96	24 Feb-86
7	111	36	810	Jul-95	52	17	381	Jul-98	163	53	1,213	21	7	158	Apr-01	102	33	742	Jan-05	30	10	228	Jun-00	21	7	151	Jun-84	173	57	1,289	127	41	923	May-00	200	65	1,461	Jul-02	252	82	1,837	Aug-03	21 Jan-93
8	109	36	796	May-95	51	17	383	Jun-06	160	52	1,189	21	7	152	Aug-99	101	33	764	Apr-04	29	10	221	Jun-05	20	7	154	Sep-98	172	56	1,278	126	41	953	Jun-98	199	65	1,455	Aug-06	250	82	1,827	Aug-06	21 Feb-00
9	108	35	815	Apr-04	49	16	368	Jun-05	157	51	1,166	20	7	147	Aug-98	101	33	739	Mar-99	29	9	213	Aug-06	20	7	149	Jul-99	171	56	1,270	126	41	918	May-03	199	65	1,450	Aug-05	250	82	1,826	Jul-04	21 Mar-91
10	107	35	783	Mar-96	49	16	354	Aug-06	156	51	1,158	20	6	142	May-01	100	33	730	May-98	29	9	211	May-01	20	7	153	Jun-86	169	55	1,255	126	41	947	Jun-99	197	64	1,438	Aug-03	248	81	1,810	Jul-00	20 Dec-01
11	106	34	772	Mar-98	48	16	352	May-01	154	50	1,145	19	6	142	Jul-06	98	32	737	Apr-98	28	9	213	Jun-98	20	7	153	Jun-06	166	54	1,233	121	39	881	Mar-05	195	64	1,471	Jun-01	248	81	1,807	Jul-99	19 Dec-03
12	105	34	795	Apr-96	47	15	343	Aug-00	152	50	1,132	19	6	143	Jun-02	97	32	783	Feb-00	27	9	198	May-99	20	6	145	Aug-99	163	53	1,211	120	39	908	Jun-06	192	63	1,402	Jul-99	248	81	1,867	Jun-01	19 Jan-98
13	104	34	784	Apr-95	45	15	331	May-99	149	49	1,110	19	6	138	Aug-06	96	31	700	Mar-06	27	9	194	Jul-00	20	6	144	May-84	161	53	1,198	120	39	875	May-86	190	62	1,388	Jul-00	245	80	1,789	Aug-05	19 Jan-00
14	104	34	783	Apr-02	45	15	329	Jul-99	149	48	1,106	18	6	135	Jun-06	90	29	658	Mar-04	26	9	206	Feb-88	20	6	147	Jun-05	154	50	1,144	120	39	904	Jun-05	189	62	1,427	Jun-06	241	79	1,762	Jul-97	18 Jan-97
15	103	34	754	May-96	43	14	325	Apr-01	146	48	1,089	18	6	144	Feb-06	90	29	655	May-05	26	8	195	Apr-01	19	6	142	May-85	153	50	1,137	119	39	898	Apr-99	188	61	1,375	Jul-97	238	77	1,793	Jun-02	17 Jan-96
16	103	34	753	May-03	42	14	317	Nov-98	145	47	1,080	18	6	129	Dec-00	90	29	724	Feb-99	26	8	187	Dec-97	19	6	142	Aug-06	152	50	1,132	118	38	891	Apr-00	188	61	1,415	Jun-02	236	77	1,720	May-01	17 Feb-92
17	102	33	768	Apr-85	41	13	306	Sep-98	142	46	1,058	18	6	128	Jan-03	89	29	650	Mar-00	25	8	186	Dec-98	19	6	141	May-01	151	49	1,125	118	38	858	Mar-04	186	61	1,361	Aug-04	234	76	1,709	Aug-98	17 Mar-06
18	101	33	765	Apr-98	40	13	291	Aug-99	141	46	1,051	18	6	128	Mar-02	87	28	637	May-03	25	8	180	Jul-99	19	6	143	Nov-98	148	48	1,103	117	38	851	Jul-99	186	61	1,404	Sep-03	234	76	1,708	Aug-96	16 Feb-96
19	101	33	740	May-98	40	13	290	Jul-05	141	46	1,048	17	6	129	Apr-02	87	28	653	Apr-02	24	8	177	May-97	19	6	141	Apr-84	147	48	1,091	116	38	873	Apr-05	186	61	1,356	Aug-96	232	76	1,696	Jul-01	16 Mar-95
20	101	33	740	May-02	40	13	290	May-85	141	46	1,048	17	6	124	May-02	86	28	697	Feb-05	24	8	174	Jul-05	18	6	139	Apr-00	145	47	1,081	115	37	867	Apr-93	184	60	1,340	Aug-98	232	76	1,749	Sep-03	15 Dec-04
21	101	33	739	Mar-99	39	13	288	Dec-06	141	46	1,046	17	5	123	May-00	85	28	619	Jan-02	24	8	173	Dec-06	18	6	139	Jun-99	144	47	1,068	115	37	838	Jan-06	183	60	1,334	Jul-01	232	75	1,747	Jun-06	15 Nov-84
22	101	33	739	Mar-02	39	13	288	Aug-05	141	46	1,045	17	5	123	Jan-04	84	28	616	May-02	24	8	173	Aug-05	18	6	134	Dec-84	143	47	1,065	114	37	861	Apr-06	183	59	1,332	Jun-04	232	75	1,690	Jul-95	14 Mar-86
23	100	33	731	Jan-84	39	13	285	Dec-98	139	45	1,034	17	5	121	Jul-04	84	27	632	Jun-98	23	8	171	Aug-00	18	6	132	May-99	142	46	1,054	114	37	832	Jul-95	182	59	1,374	Sep-06	230	75	1,677	Aug-01	14 Apr-06
24	99	32	747	Apr-93	38	12	283	Apr-05	137	45	1,015	17	5	124	Jun-03	84	27	611	Mar-02	23	8	174	Nov-98	18	6	131	Jul-97	141	46	1,050	114	37	829	Jan-84	182	59	1,327	Aug-94	230	75	1,733	Sep-06	13 Dec-92
25	99	32	799	Feb-00	37	12	279	Apr-94	136	44	1,010	16	5	119	Sep-04	81	26	657	Feb-98	23	7	170	Apr-05	17	6	126	Jul-86	137	45	1,022	113	37	823	Jan-05	181	59	1,323	Aug-01	229	75	1,674	May-97	13 Nov-97
252	19	6	138	Oct-03	3	1.0	21	Aug-95	22	7	162	8	3	61	Mar-05	19	6	138	Oct-05	2	0.7	16	Nov-85	1.6	0.5	12	Jun-95	31	10	230	27	9	207	Sep-02	90	29	660	Dec-91	107	35	867	Feb-86	
253	19	6	140	Sep-89	3	0.9	21	Aug-02	21	7	160	8	3	67	Feb-02	19	6	136	Oct-04	2	0.6	15	Jul-02	1.5	0.5	11	Mar-92	30	10	226	27	9	206	Sep-92	90	29	658	Mar-92	107	35	780	Dec-87	
254	18	6	137	Nov-03	2	0.8	17	Mar-92	20	7	152	8	3	64	Feb-03	18	6	133	Aug-01	2	0.6	15	Sep-87	1.4	0.5	11	Feb-96	30	10	219	27	9	204	Sep-91	90	29	729	Feb-01	107	35	863	Feb-96	
255	18	6	136	Nov-85	2	0.8	18	Sep-95	20	7	152	7	2	53	Aug-01	18	6	134	Nov-04	2	0.6	15	Apr-02	1.3	0.4	10	Jul-02	28	9	210	27	9	202	Sep-90	90	29	654	Jan-94	107	35	832	Feb-92	
256	18	6	134	Sep-94	2	0.7	15	Jan-00	20	6	147	7	2	56	Feb-05	18	6	128	Oct-99	1.9	0.6	14	Jul-90	1.3	0.4	10	Apr-02	28	9	205	26	9	199	Sep-94	89	29	653	Mar-89	105	34	796	Nov-87	
257	17	6	131	Nov-91	2	0.7	15	May-95	19	6	144	7	2	50	Dec-02	17	6	125	Aug-00	1.8	0.6	13	Mar-02	1.2	0.4	9	Mar-02	27	9	200	26	8	189	Aug-87	89	29	698	Feb-96	105	34	769	Jan-94	
258	17	6	129	Sep-91	2	0.7	15	Jan-06	19	6	143	7	2	51	Apr-04	17	5	125	Sep-02	1.7	0.6	13	Aug-02	1.2	0.4	8	Aug-02	26	9	194	26	8	187	Oct-92	88	29	643	Jan-86	104	34	763	Dec-91	
259	17	6	125	Aug-87	1.8	0.6	14	Nov-02	19	6	141	7	2	50	Sep-01	16	5	118	Aug-04	1.5	0.5	12	Feb-95	1.1	0.4	8	May-96	25	8	188	25	8	192	Nov-85	88	29	642	Jan-90	104	34	841	Feb-03	
260	17	5	122	Dec-86	1.8	0.6	14	Apr-95	19	6	138	6	1.9	44	Nov-97	16	5	118	Nov-05	1.3	0.4	9	Nov-92	1.0	0.3	8	Jan-00	24	8	177	25	8	192	Nov-88	88	29	641	Jan-88	103	34	780	Nov-99	
261	16	5	124	Nov-92	1.8	0.6	13	Oct-95	18	6	135	6	1.9	43	Mar-04	16	5	113	Oct-01	1.2	0.4	9	Jan-06	0.9	0.3	7	Apr-96	24	8	175	25	8	185	Jul-88	87	28	633	Mar-90	103	34	755	Jan-90	
262	15	5	113	Jul-88	1.8	0.6	13	Oct-02	17	6	128	6	1.9	42	Oct-04	15	5	111	Aug-06	1.1	0.4	8	Nov-02	0.9	0.3	6	Mar-96	23	7	170	25	8	179	Jul-87	86	28	672	Feb-92	103	34	751	Mar-92	
263	15	5	112	Oct-90	1.7	0.6	13	Sep-02	17	6	127	6	1.9	42	Jan-98	15	5	106	Oct-02	1.1	0.3	8	Oct-02	0.8	0.3	6	Oct-87	22	7	165	25	8	185	Nov-91	86	28	648	Nov-92	103	33	749	Mar-90	
264	15	5	112	Dec-90	1.7	0.6	12	Jan-96	17	6	126	5	1.7	38	Dec-05	15	5	110	Nov-01	1.0	0.3	8	Sep-02	0.8	0.3	6	Jan-06	22	7	161	24	8	179	Nov-92	86	28	625	Jan-92	101	33	737	Mar-89	All zero
265	15	5	122	Feb-89	1.7	0.5	12	Dec-95	17	5	125	5	1.7	38	Oct-01	14	5	106	Sep-01	1.0	0.3	8	Jan-00	0.8	0.3	6	Jun-96	21	7	157	22	7	158	Oct-91	84	27	678	Feb-03	100	33	731	Jan-88	
266	14	5	106	Jan-91	1.7	0.5	12	Oct-87	16	5	120	4	1.3	30	Jan-99	14	4	99	Aug-97	1.0	0.3	7	Jan-88	0.8	0.3	6	Jan-98	19	6	145	21	7	156	Oct-90	84	27	611	Mar-87	99	32	723	Jan-86	
267	14	5	114	Feb-91	1.7	0.5	12	Nov-95	16	5	117	4	1.2	28	Apr-98	13	4	99	Sep-06	0.9	0.3	6	Oct-87	0.7	0.2	6	Nov-02	18	6	137	21	7	156	Dec-90	83	27	670	Feb-87	99	32	723	Dec-99	
268	14	5	102	Oct-87	1.6	0.5	12	Jun-95	16	5	116	3	0.9	22	Feb-04	13	4	97	Sep-97	0.9	0.3	6	Mar-92	0.7	0.2	5	Oct-02	17	6	129	21	7	155	Aug-88	81	27	658	Feb-90	97	32	708	Jan-92	
269	14	5	105	Sep-87	1.4	0.5	12	Feb-96	15	5	114	2	0.7	16	Feb-00	11	4	84	Nov-06	0.6	0.2	5	Jan-05	0.7	0.2	5	Sep-02	14	5	107	21	7	154	Jan-91	80	26	586	Dec-88	96	31	697	Mar-87	
270	14	5	101	Oct-91	1.1	0.4	8	May-96	15	5	111	1.7	0.6	13	Mar-06	11	4	81	Oct-97	0.4	0.1	3	Dec-02	0.7	0.2	5	Jul-87	14	5	103	20	6	148	Nov-87	80	26	648	Feb-94	95	31	769	Feb-90	
271	13	4	95	Nov-90	1.0	0.3	8	Jan-05	14	4	102	1.4	0.4	10	Jan-06	11	4	83	Sep-03	0.3	0.1	2	Mar-86	0.6	0.2	5	Sep-88	13	4	99	19	6	141	Sep-87	80	26	581	Jan-93	94	30	756	Feb-94	
272	13	4	95	Nov-97	0.9	0.3	7	Apr-96	13	4	100	1.3	0.4	9	May-98	10	3	73	Oct-03	0.3	0.1	2	Sep-94	0.6	0.2	5	Apr-98	12	4	91	19	6	151	Feb-91	78	25	632	Feb-93	94	30	683	Jan-93	
273	12	4	89	Aug-88	0.9	0.3	6	Mar-96	13	4	97	1.1	0.4	8	Apr-99	10	3	73	Nov-03	0.3	0.1	2	Feb-91	0.5	0.2	4	Dec-90	12	4	86	18	6	136	Nov-90	78	25	568	Oct-99	93	30	751	Feb-87	
274	12	4	87	Nov-87	0.8	0.3	6	Jun-96	12	4	92	0.9	0.3	7	Jun-98	9	3	65	Sep-04	0.3	0.1	2	Oct-92	0.4	0.1	3	Jan-05	10	3	76	17	6	125	Oct-88	78	25	586	Nov-99	93	30	748	Feb-93	
275	11	4	80	Oct-88	0.7	0.2	5	Dec-02	12	4	87	0.9	0.3	6	Mar-00	7	2	51	Nov-97	0.1	0.0	0.5	Oct-94	0.3	0.1	2	Apr-85	8	3	59	16	5	114	Oct-87	75	24	544	Dec-99	93	30	675	Dec-88	
276	10	3	72	Sep-88	0.6	0.2	5	Apr-98	10	3	76	0.9	0.3	6	Apr-06	6	2	45	Oct-06	0.0	0.0	0.1	Jan-91	0.3	0.1	2	Dec-02	7	2	55	13	4	101	Sep-88	67	22	539	Feb-89	78	25	631	Feb-89	

AF = acre-feet/month; MG = Mgal/month; gpm = average gpm. [a] Same as 5-Mile Pipeline since 1996. [b] Since 1997 only. [c] Al diversions except Harmon, Earl, & Manson.

Omits months of zero diversion. Lowest rank assigned to #276, although not all diversions have full 23-yr record.

Due to the variable number of days per month, values in gpm sometimes rank differently.

Table 4-7

Highest and Lowest Ranked Monthly Diversions, 1984-2006

Year Type	Months	Raw Diversion (gpm) min - max	Raw Diversion (mgd) min - max	No. Filter Units Operating	Turbidity 100% Down (hrs)	Turbidity Ramp Up/ Down (hrs)	Total Up-time (hrs)	Interval Back-wash (hrs)	Interval Flush (hrs)	Cumulative Time Back-wash (32 min) (hrs)	Cumulative Time Flush (20 min) (hrs)	Production Full (hrs)	Production Backwash & Flush Recovery (hrs)	Production Backwash & Flush Recovery Rate	Estimated Effective Yield (gpm) min - max	Estimated Effective Yield (mgd) min - max	Estimated Effective Yield (ac-ft/mth) (ac-ft/yr) min - max	Estimated Effective Yield (Mgal/mth) (Mgal/yr) min - max	Estimated Effective Yield % Effi-cient	Actual Yield (ac-ft/mth) (ac-ft/yr)	Actual Yield (Mgal/mth) (Mgal/yr)
Hyp. Max.[a] no B/W&F[b]	Jan - Dec	1,000 - 1,200	1.4 - 1.7		0	0	8,760	-	-	0	0	8,760	0	-	1,000 - 1,200	1.4 - 1.7	134 - 161 1,613 - 1,936	44 - 53 526 - 631	100%		
Hyp. Max. w/ B/W&F[c]	Jan - Dec	1,000 - 1,200	1.4 - 1.7	3	144	144	8,472	48	10	94	282	8,095	377	67%	953 - 1,143	1.4 - 1.6	128 - 154 1,537 - 1,844	42 - 50 501 - 601	95%	Averages for Years Listed[d]	
Avg																				1984-2006	
	Jan - May	1,000 - 1,200	1.4 - 1.7	3	40	40	3,544	48	10	39	118	3,386	158	67%	963 - 1,156	1.4 - 1.7	130 - 155	42 - 51	97%	91	30
	Jun - Aug	400 - 600	0.6 - 0.9	2	0	0	2,208	72	12	16	61	2,130	78	50%	393 - 589	0.6 - 0.8	53 - 79	17 - 26	98%	71	23
	Sep - Dec	250 - 400	0.4 - 0.6	2	0	0	2,928	72	12	22	81	2,825	103	50%	246 - 393	0.4 - 0.6	33 - 53	11 - 17	98%	52	17
	Year														580 - 758	0.8 - 1.1	935 - 1,223	305 - 399	98%	880	287
Dry																				1987-1992,1994	
	Jan - Mar	800 - 1,000	1.2 - 1.4	3	24	24	2,112	62	12	18	59	2,035	77	67%	773 - 966	1.1 - 1.4	104 - 130	34 - 42	98%	64	21
	Apr - Jun	500 - 800	0.7 - 1.2	3	0	0	2,184	72	12	16	61	2,107	77	67%	494 - 791	0.7 - 1.1	66 - 106	22 - 35	99%	66	22
	Jul - Sep	300 - 500	0.4 - 0.7	2	0	0	2,208	72	12	16	61	2,130	78	50%	295 - 491	0.4 - 0.7	40 - 66	13 - 22	98%	30	10
	Oct - Dec	200 - 300	0.3 - 0.4	2	0	0	2,208	72	12	16	61	2,130	78	50%	196 - 295	0.3 - 0.4	26 - 40	9 - 13	98%	38	12
	Year														438 - 633	0.6 - 0.9	706 - 1,022	230 - 333	98%	593	193
Wet																				1986, '95-'00, '05-'06	
	Jan - May	1,000 - 1,200	1.4 - 1.7	3	60	60	3,504	48	10	39	117	3,348	156	67%	953 - 1,143	1.4 - 1.6	128 - 154	42 - 50	97%	100	33
	Jun - Aug	500 - 800	0.7 - 1.2	3	0	0	2,208	62	12	19	61	2,128	80	67%	494 - 790	0.7 - 1.1	66 - 106	22 - 35	99%	97	32
	Sep - Dec	300 - 500	0.4 - 0.7	2	0	0	2,928	72	12	22	81	2,825	103	50%	295 - 491	0.4 - 0.7	40 - 66	13 - 22	98%	62	20
	Year														617 - 836	0.9 - 1.2	995 - 1,349	324 - 440	98%	1,040	339
																				Max. Mths.[e]	
																		Jan - May		122	40
																		Jun - Aug		133	43
																		Sep - Dec		95	31
																		Year		1,399	456

[a]Hyp. Max. = hypothetical full-time maximum production; top line is per month, bottom line is per year.

[b]No backwash, flushing, or downtime due to turbidity.

[c]Assumes backwash, flushing, and turbidity downtime at January-May wet-year rates.

[d]See Table 4-13 for 1984-2006 averages and maximum months.

[e]Max. Mths. = sum of maximum monthly values during 1984-2006.

Flow, turbidity, backwashing, and flushng assumptions based on input from SLVWD staff.

Table 4-8
Estimate of Water Treatment Capacity as Constrained by Backwashing, Flushing, and Storm Turbidity

	A	B	C	D	E	F	G	H	I	For Comparison:		
	Water-Year Stream Diversions									Total Water Production		Monthly Rainfall at NOAA Ben Lomond 4
	Peavine, Foreman, & Silver	Clear & Sweet-water	Sum A+B	Peavine & Silver[a]	Foreman[a]	Clear	Sweet-water	Sum D+E+F+G	Total[b]	N. Service Area	N. & S. Service Areas[c]	
Rank	AF/yr (WY)											(% of Avg)
1	956 (1995)	380 (2000)	1,336	150 (2003)	781 (1998)	223 (2007)	192 (2000)	1,345	1,196 (1999)	1,800 (2006)	2,172 (2006)	168% (1998)
2	867 (1998)	372 (2007)	1,239	149 (2001)	700 (1999)	206 (2001)	152 (1999)	1,208	1,169 (1998)	1,772 (2005)	2,167 (2004)	152% (2006)
3	847 (1999)	350 (2001)	1,198	147 (1999)	688 (2002)	196 (1999)	149 (2007)	1,180	1,121 (2005)	1,769 (2007)	2,158 (2007)	140% (1995)
4	832 (2002)	349 (1999)	1,181	144 (2002)	686 (2006)	191 (2005)	144 (2001)	1,164	1,117 (1996)	1,739 (2004)	2,122 (2003)	137% (1986)
5	815 (2006)	318 (2005)	1,133	140 (2004)	682 (2005)	188 (2000)	135 (1994)	1,145	1,114 (2006)	1,685 (2003)	2,114 (1997)	136% (2005)
6	803 (2005)	299 (2006)	1,102	133 (2000)	598 (2003)	186 (1998)	128 (1985)	1,046	1,067 (1997)	1,684 (1997)	2,113 (2005)	124% (1996)
7	748 (2003)	280 (1998)	1,028	129 (2006)	524 (2000)	179 (2006)	127 (2005)	960	1,047 (1995)	1,662 (2002)	2,095 (2002)	119% (1997)
8	706 (1985)	260 (2008)	966	121 (2005)	523 (2004)	156 (2008)	119 (2006)	920	1,037 (2000)	1,645 (1996)	2,079 (2001)	117% (1993)
9	663 (2004)	252 (1994)	915	106 (2007)	409 (2001)	135 (2004)	111 (1986)	761	937 (1985)	1,632 (2001)	2,062 (2000)	114% (2000)
10	657 (2000)	231 (1985)	888	102 (1998)	403 (2008)	117 (1994)	104 (2008)	726	935 (2002)	1,628 (2000)	2,031 (1996)	100% (2003)
11	647 (1993)	226 (2004)	873	48 (2008)	291 (2007)	116 (1989)	101 (1993)	556	928 (2003)	1,588 (1999)	1,994 (1999)	96% (2002)
12	629 (1986)	220 (1986)	849			111 (1987)	94 (1998)		908 (2001)	1,581 (2008)	1,971 (2008)	94% (1999)
13	558 (2001)	206 (1993)	764			109 (1986)	91 (2004)		889 (2004)	1,576 (1985)	1,869 (1995)	90% (2004)
14	526 (1990)	201 (1989)	728			107 (2003)	89 (1987)		853 (1993)	1,521 (1994)	1,835 (1998)	84% (1992)
15	501 (1992)	200 (1987)	701			105 (1993)	85 (1989)		849 (1986)	1,500 (1998)	1,829 (1994)	83% (1985)
16	466 (1994)	180 (2003)	645			103 (1985)	80 (1990)		768 (2007)	1,493 (1995)	1,781 (1985)	79% (2008)
17	451 (2008)	172 (1988)	623			100 (1988)	72 (2003)		718 (1994)	1,486 (1987)	1,710 (1987)	76% (2001)
18	419 (1989)	153 (1990)	571			83 (1992)	72 (1988)		712 (2008)	1,457 (1986)	1,705 (1993)	70% (1989)
19	397 (2007)	150 (1992)	547			73 (1990)	66 (1992)		679 (1990)	1,421 (1988)	1,698 (1992)	67% (1994)
20	347 (1991)	125 (1991)	471			72 (1991)	56 (1995)		651 (1992)	1,398 (1992)	1,671 (1986)	65% (1991)
21	333 (1987)	103 (2002)	436			62 (2002)	53 (1991)		620 (1989)	1,395 (1993)	1,650 (1988)	62% (1988)
22	305 (1988)	91 (1995)	396			35 (1995)	41 (2002)		533 (1987)	1,364 (1991)	1,640 (1991)	59% (2007)
23									476 (1988)	1,344 (1989)	1,607 (1989)	55% (1987)
24									471 (1991)	1,330 (1990)	1,595 (1990)	49% (1990)
25									400 (1977)			42% (1977)
Avg	612	233	845	124	571	125	103	1,001	866	1,561	1,903	
Rank	MG/yr (WY)											(% of Avg)
1	311 (1995)	124 (2000)	435	49 (2003)	254 (1998)	73 (2007)	63 (2000)	438	390 (1999)	586 (2006)	708 (2006)	168% (1998)
2	283 (1998)	121 (2007)	404	48 (2001)	228 (1999)	67 (2001)	50 (1999)	394	381 (1998)	577 (2005)	706 (2004)	152% (2006)
3	276 (1999)	114 (2001)	390	48 (1999)	224 (2002)	64 (1999)	49 (2007)	385	365 (2005)	576 (2007)	703 (2007)	140% (1995)
4	271 (2002)	114 (1999)	385	47 (2002)	223 (2006)	62 (2005)	47 (2001)	379	364 (1996)	567 (2004)	691 (2003)	137% (1986)
5	266 (2006)	104 (2005)	369	46 (2004)	222 (2005)	61 (2000)	44 (1994)	373	363 (2006)	549 (2003)	689 (1997)	136% (2005)
6	262 (2005)	97 (2006)	359	43 (2000)	195 (2003)	61 (1998)	42 (1985)	341	348 (1997)	549 (1997)	689 (2005)	124% (1996)
7	244 (2003)	91 (1998)	335	42 (2006)	171 (2000)	58 (2006)	41 (2005)	313	341 (1995)	542 (2002)	683 (2002)	119% (1997)
8	230 (1985)	85 (2008)	315	39 (2005)	170 (2004)	51 (2008)	39 (2006)	300	338 (2000)	536 (1996)	677 (2001)	117% (1993)
9	216 (2004)	82 (1994)	298	35 (2007)	133 (2001)	44 (2004)	36 (1986)	248	305 (1985)	532 (2001)	672 (2000)	114% (2000)
10	214 (2000)	75 (1985)	289	33 (1998)	131 (2008)	38 (1994)	34 (2008)	237	305 (2002)	530 (2000)	662 (1996)	100% (2003)
11	211 (1993)	73 (2004)	284	16 (2008)	95 (2007)	38 (1989)	33 (1993)	181	302 (2003)	517 (1999)	650 (1999)	96% (2002)
12	205 (1986)	72 (1986)	276			36 (1987)	31 (1998)		296 (2001)	515 (2008)	642 (2008)	94% (1999)
13	182 (2001)	67 (1993)	249			35 (1986)	30 (2004)		290 (2004)	514 (1985)	609 (1995)	90% (2004)
14	172 (1990)	66 (1989)	237			35 (2003)	29 (1987)		278 (1993)	496 (1994)	598 (1998)	84% (1992)
15	163 (1992)	65 (1987)	228			34 (1993)	28 (1989)		276 (1986)	489 (1998)	596 (1994)	83% (1985)
16	152 (1994)	59 (2003)	210			34 (1985)	26 (1990)		250 (2007)	487 (1995)	580 (1985)	79% (2008)
17	147 (2008)	56 (1988)	203			33 (1988)	24 (2003)		234 (1994)	484 (1987)	557 (1987)	76% (2001)
18	136 (1989)	50 (1990)	186			27 (1992)	23 (1988)		232 (2008)	475 (1986)	556 (1993)	70% (1989)
19	129 (2007)	49 (1992)	178			24 (1990)	22 (1992)		221 (1990)	463 (1988)	553 (1992)	67% (1994)
20	113 (1991)	41 (1991)	154			23 (1991)	18 (1995)		212 (1992)	455 (1992)	544 (1986)	65% (1991)
21	108 (1987)	34 (2002)	142			20 (2002)	17 (1991)		202 (1989)	455 (1993)	538 (1988)	62% (1988)
22	99 (1988)	30 (1995)	129			11 (1995)	13 (2002)		174 (1987)	445 (1991)	534 (1991)	59% (2007)
23									155 (1988)	438 (1989)	524 (1989)	55% (1987)
24									154 (1991)	433 (1990)	520 (1990)	49% (1990)
25									130 (1977)			42% (1977)
Avg	200	76	275	41	186	42	34	326	294	515	629	

[a] 1997-2006 only.

[b] All diversions except Harmon, Earl, & Manson.

[c] Not including Manana Woods

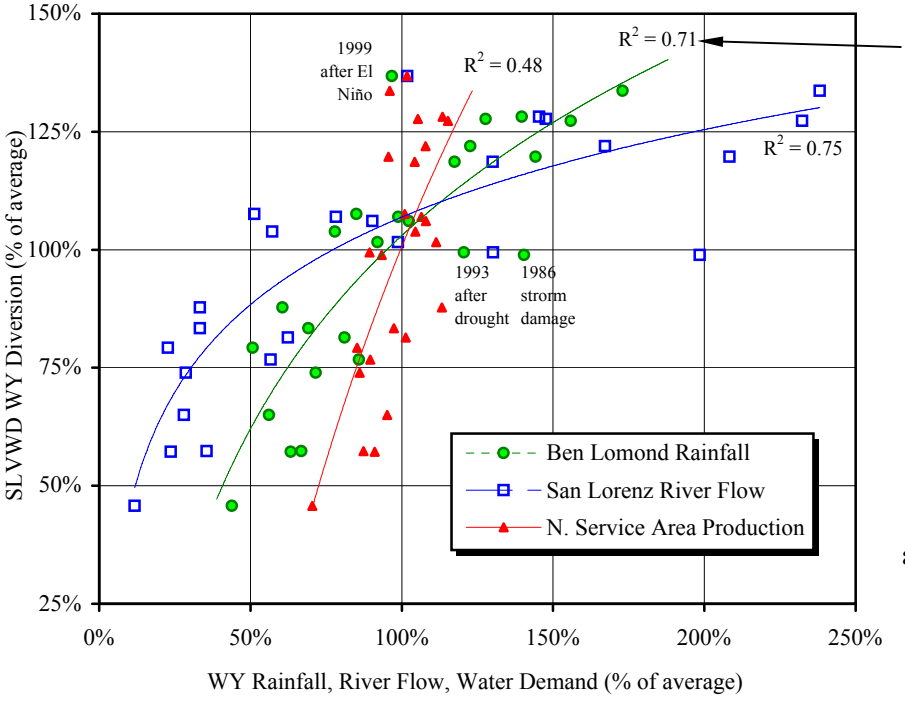
Table 4-9

Ranked Annual Diversions, WY's 1977 & 1985-2006

Water Year	Ben Lomond 4 Rainfall		San Lorenzo River at Big Trees		SLVWD Stream Diversions: Foreman, Silver, & Peavine	Peavine & Silver	Foreman Ck	Clear Ck	Sweetwater Ck	Total[a,b]		SLVWD Total Production[b]: Northern Service Area		Entire District	
	Percent of Average														
1977	44%		12%		-	-	-	-	-	46%		70%		66%	
1985	85%	113%	51%	125%	115%	No Record		79%	124%	108%	103%	101%	97%	93%	90%
1986	140%		199%		103%			84%	108%	99%		93%		88%	
1987	56%	73%	28%	45%	54%			86%	86%	65%	74%	95%	91%	90%	89%
1988	63%		24%		50%			77%	70%	57%		91%		86%	
1989	72%		29%		68%			89%	83%	74%		86%		84%	
1990	51%		23%		86%			56%	78%	79%		85%		84%	
1991	67%		35%		57%			55%	52%	57%		87%		86%	
1992	86%		57%		82%			64%	65%	77%		90%		89%	
1993	121%		130%		106%			81%	98%	99%		89%		89%	
1994	69%		33%		76%			90%	132%	83%		97%		96%	
1995	144%	130%	208%	166%	156%			27%	55%	120%	126%	96%	104%	98%	106%
1996	128%		148%		No Record					128%		105%		106%	
1997	123%		167%							122%		108%		111%	
1998	173%		238%		144%	82%	137%	144%	91%	134%		96%		96%	
1999	97%		102%		138%	118%	123%	151%	148%	137%		102%		104%	
2000	117%		130%		107%	107%	92%	145%	187%	119%		104%		108%	
2001	78%	93%	57%	81%	91%	119%	72%	159%	140%	104%	105%	105%	112%	109%	113%
2002	99%		78%		136%	116%	120%	48%	40%	107%		106%		110%	
2003	102%		90%		122%	120%	105%	83%	70%	106%		108%		111%	
2004	92%		99%		108%	113%	92%	104%	88%	102%		111%		114%	
2005	140%	148%	145%	189%	131%	97%	119%	147%	124%	128%	128%	113%		111%	
2006	156%		232%		133%	104%	120%	138%	116%	127%		115%		115%	
2007	61%	71%	33%	48%	65%	85%	51%	172%	144%	88%	85%	113%		116%	
2008	81%		62%		74%	39%	71%	120%	101%	81%		101%		106%	
Avg '98-'08	109%		115%		113%	100%	100%	128%	114%	112%		107%		109%	
Min	51%		23%		50%	39%	51%	27%	40%	57%		85%		84%	
Max	173%		238%		156%	120%	137%	172%	187%	137%		115%		116%	

[a] Includes Harmon, Earl, and Manson.

[b] Percentages skewed some by growth in demand.



Increases to 0.82 by including previous 2 yrs rainfall in a multiple regression.

Table 4-10
SLVWD Annual Diversions versus Rainfall, River Flow, and Total Production, WY's 1977 & 1985-2008

Water Year	A	B	C	D	E	F	G	H	I	A	B	C	D	E	F	G	H	I
	Peavine, Foreman, & Silver	Clear & Sweet-water	Sum A+B	Pea-vine & Silver[b]	Fore-man[a]	Clear	Sweet-water	Sum D+E+F+G	Total[b]	Peavine, Foreman, & Silver	Clear & Sweet-water	Sum A+B	Pea-vine & Silver[b]	Fore-man[a]	Clear	Sweet-water	Sum D+E+F+G	Total[b]
	(AF)									(MG)								
1984-2008 Monthly Averages																		
Oct	***26***	***14***	***40***	9.1	17	***6.9***	7.6	***41***	***41***	***8.5***	***4.6***	***13***	3.0	5.6	***2.3***	***2.5***	***13***	***14***
Nov	28	17	45	***8.2***	***17***	9.6	***7.5***	42	46	9.2	5.4	15	***2.7***	***5.5***	3.1	2.4	14	15
Dec	49	19	68	10	38	12	8.0	68	69	16	6.2	22	3.3	12	4.0	2.6	22	23
Jan	66	15	81	9.6	70	9.3	7.2	96	82	22	5.0	27	3.1	23	3.0	2.4	31	27
Feb	65	16	81	7.5	71	9.9	7.2	95	80	21	5.3	26	2.4	23	3.2	2.3	31	26
Mar	81	16	97	8.9	**84**	10.6	7.4	**111**	96	26	5.4	32	2.9	**27**	3.4	2.4	**36**	31
Apr	**81**	20	**101**	13	75	15	8.4	**111**	**101**	**27**	6.5	**33**	4.1	24	4.9	2.7	**36**	**33**
May	72	25	97	**15**	64	**17**	10.6	107	97	23	8.3	32	**4.8**	21	**5.5**	3.5	35	32
Jun	53	**26**	80	**15**	46	**17**	**11**	89	82	17	**8.5**	26	**4.8**	15	**5.5**	**3.7**	29	27
Jul	44	24	68	14	36	14	11	75	70	14	7.7	22	4.5	12	4.5	3.6	24	23
Aug	33	21	54	12	24	10.8	10.4	57	56	11	6.7	17	3.8	8.0	3.5	3.4	19	18
Sep	26	16	42	11	17	8.0	8.2	45	44	8.6	5.1	14	3.6	5.7	2.6	2.7	15	14
Sum	625	245	870	132	559	140	105	936	863	204	80	283	43	182	46	34	305	281
1997-2008 Monthly Averages																		
Oct	26	19	***45***	9.1	17	10	9.0	***45***	***45***	8.6	6.2	15	3.0	5.6	3.3	2.9	15	15
Nov	***25***	22	47	8.2	***17***	12.8	9.3	47	47	8.1	7.2	15	2.7	5.5	4.2	3.0	15	15
Dec	48	24	72	10	38	15	9.5	72	72	16	7.9	24	3.3	12	4.8	3.1	24	24
Jan	79	15	94	9.6	70	9.4	5.8	94	94	26	4.9	31	3.1	23	3.1	1.9	31	31
Feb	77	15	92	***6.1***	71	9.1	6.1	92	92	25	4.9	30	2.0	23	3.0	2.0	30	30
Mar	**92**	***16.1***	108	7.3	**84**	***9.7***	***6.5***	108	108	**30**	5.3	35	2.4	**27**	3.2	2.1	35	35
Apr	87	21	108	11	75	12.2	8.7	106	108	28	6.8	35	3.5	24	4.0	2.9	35	35
May	79	30	**109**	13	64	18	12	**107**	**109**	26	9.8	**36**	4.3	21	5.9	3.8	**35**	**36**
Jun	61	**35**	96	14	46	**22**	**13**	94	96	20	**11.4**	31	4.4	15	**7.1**	**4.3**	31	31
Jul	50	32	83	**14**	36	19	**13**	83	83	16	10.6	27	**4.5**	12	6.3	**4.3**	27	27
Aug	36	28	64	12	24	16	13	64	64	12	9.2	21	3.8	8.0	5.1	4.1	21	21
Sep	28	21	50	11	17	11	9.8	50	50	9.3	6.9	16	3.6	5.7	3.7	3.2	16	16
Sum	689	280	968	124	559	164	115	963	968	224	91	315	40	182	53	38	314	315
1984-2008 Minimum Months																		
Oct	11	1.7	13	***0.4***	***6.2***	***0.1***	0.7	***7***	16	3.6	0.5	4	***0.1***	***2.0***	***0.0***	0.2	***2.4***	5.1
Nov	12	1.7	13	0.5	6.7	1.1	0.7	9	18	3.8	***0.5***	4	0.2	2.2	0.4	***0.2***	2.9	5.9
Dec	14	***0.7***	15	0.5	13	0.4	***0.3***	14	21	4.6	0.2	5	0.2	4.1	0.1	0.1	4.5	7.0
Jan	14	1.0	16	1.4	25	0.6	0.4	27	21	4.7	0.3	5	0.4	8	0.2	0.1	9	6.9
Feb	14	1.4	16	0.1	43	0.3	**1.4**	45	19	4.6	0.5	5	0.0	14	0.1	**0.5**	15	6.1
Mar	24	0.9	25	0.9	**53**	0.3	0.9	**55**	47	7.9	0.3	8	0.3	**17**	0.1	0.3	**18**	15
Apr	**30**	0.6	**30**	0.9	28	2.0	0.6	31	**51**	**9.7**	0.2	**10**	0.3	9	0.6	0.2	10	**17**
May	27	**1.1**	28	**6.1**	25	2.4	1.1	34	46	8.9	**0.4**	9	**2.0**	8	0.8	0.4	11	15
Jun	20	0.8	21	2.5	17	**2.6**	0.8	23	34	6.5	0.3	7	0.8	5.6	**0.8**	0.3	8	11
Jul	15	3.0	18	5.1	15	1.9	0.7	23	25	5.0	1.0	6	1.7	4.9	0.6	0.2	7	8.0
Aug	12	2.9	15	0.6	12	1.7	1.2	15	21	4.0	0.9	5	0.2	3.8	0.6	0.4	4.9	6.9
Sep	***9.6***	1.7	***11***	0.5	7.2	0.3	0.6	9	***13***	***3.1***	0.6	***4***	0.2	2.3	0.1	0.2	2.8	***4.4***
Sum	204	18	221	19	250	14	9.4	293	332	66	5.7	72	6	81	4.5	3.1	95	108
1984-2008 Maximum Months																		
Oct	75	***31***	***106***	***14***	45	***18***	***15***	93	***83***	24	***10.0***	34	***4.7***	15	***6.0***	***4.9***	30	***27***
Nov	***71***	42	113	14	***29***	23	19	***85***	90	***23***	14	37	4.6	***9.4***	7.5	6.2	***28***	29
Dec	93	39	132	18	79	26	18	140	111	30	13	43	5.8	26	8.3	6.0	46	36
Jan	113	32	145	18	111	19	14	162	115	37	10.5	47	5.7	36	6.3	4.6	53	37
Feb	99	37	135	18	97	26	14	155	110	32	12	44	5.8	32	8.6	4.7	51	36
Mar	114	54	167	18	106	32	21	177	122	37	17	54	5.7	34	10.5	7.0	58	40
Apr	115	49	164	**36**	**114**	29	20	198	129	37	16	53	**12**	**37**	9.6	6.4	65	42
May	**119**	**71**	**189**	34	107	35	**35**	**212**	135	**39**	**23**	**62**	11	35	12	**12**	**69**	44
Jun	98	61	159	28	84	37	30	179	126	32	20	52	9.2	27	12	9.9	58	41
Jul	111	61	172	24	73	**41**	27	165	**138**	36	20	56	7.7	24	**13**	8.7	54	**45**
Aug	96	55	151	21	59	32	24	135	135	31	18	49	6.8	19	10.3	7.7	44	44
Sep	83	41	123	16	40	20	20	97	95	27	13	40	5.3	13	6.6	6.6	32	31
Sum	1,185	572	1,757	258	943	340	258	1,799	1,390	386	186	573	84	307	111	84	586	453

[a] 1997-2008 only, during which rainfall was about 115% of average.

[b] All diversions except Harmon, Earl, and Manson.

Months of zero diversion omitted from minimums and averages.

Annual **maxima** and ***minima*** highlighted.

See Table A-1 for complete monthly record.

See Table 4-7 for dates of minimums & maximums.

Values plotted in Figure 4-12.

Table 4-11
Average, Minimum, and Maximum Monthly Diversions, 1984-2008

	A	B	C	D	E		F		G		H		I		J		0	L		M		N		O		P		Q		R	S
		CY 2001-06 Avg. SLVWD Water Production			Arithmetic Extrap. of Avg-Yr Total Diversion Hydrograph													Semi-Log Extrap. of Avg-Yr Total Diversion Hydrograph													
							Diversions ≤155 AF/mth Assumed System Capacity													Diversions ≤155 AF/mth Assumed System Capacity											
					Potential		Potential		Up to N.				Adj. for Diversion Limits					Potential		Potential		Up to N.				Adj. for Diversion Limits					
	Rain-fall at Ben Lomond	Total	N. Serv. Area	Diver-sions	Diversion Hydro-graph	Δ*	Diversions ≤155 AF/mth	Δ*	Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv.	Diversion Hydro-graph	Δ*	Diversions ≤155 AF/mth	Δ*	Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv.	% of Pot. Div. ≤155 AF/mth Used
Month	(in/mth)	(AF/mth)																													
Oct	2.2	186	147	41	41	0	41	0	41	0	41	0	41	0	41	0	0	41	0	41	0	41	0	41	0	41	0	41	0	0	100%
Nov	6.1	137	112	46	46	0	46	0	46	0	46	0	46	0	46	0	0	46	0	46	0	46	0	46	0	46	0	46	0	0	100%
Dec	9.3	133	112	69	69	0	69	0	69	0	69	0	69	0	69	0	0	69	0	69	0	69	0	69	0	69	0	69	0	0	100%
Jan	10.1	129	109	82	106	24	106	24	106	24	106	24	96	14	96	14	0	126	44	126	44	109	27	126	44	99	17	116	34	17	92%
Feb	9.7	114	96	80	140	60	140	60	96	16	114	34	86	6	104	24	18	214	134	155	75	96	16	114	34	86	6	104	24	18	67%
Mar	7.7	139	114	96	127	31	127	31	114	18	127	31	104	8	117	21	13	170	74	155	59	114	18	139	43	104	8	129	33	25	83%
Apr	3.1	151	123	101	113	12	113	12	113	12	113	12	103	2	103	2	0	138	37	138	37	123	22	138	37	113	12	128	27	15	93%
May	1.1	201	157	97	97	0	97	0	97	0	97	0	97	0	97	0	0	110	13	110	13	110	13	110	13	110	13	110	13	0	100%
Jun	0.2	227	181	82	82	0	82	0	82	0	82	0	82	0	82	0	0	89	7	89	7	89	7	89	7	89	7	89	7	0	100%
Jul	0.1	262	210	70	70	0	70	0	70	0	70	0	70	0	70	0	0	70	0	70	0	70	0	70	0	70	0	70	0	0	100%
Aug	0.1	243	194	56	56	0	56	0	56	0	56	0	56	0	56	0	0	56	0	56	0	56	0	56	0	56	0	56	0	0	100%
Sep	0.4	217	173	44	44	0	44	0	44	0	44	0	44	0	44	0	0	44	0	44	0	44	0	44	0	44	0	44	0	0	100%
Sum	50.1	2,141	1,727	863	990	127	990	127	933	70	964	101	893	30	924	61	31	1,173	310	1,099	236	967	104	1,042	179	927	64	1,002	139	76	91%
	(in/mth)	(MG/mth)																													
Oct	2.2	61	48	14	14	0	14	0	14	0	14	0	14	0	14	0	0	14	0	14	0	14	0	14	0	14	0	14	0	0	100%
Nov	6.1	45	37	15	15	0	15	0	15	0	15	0	15	0	15	0	0	15	0	15	0	15	0	15	0	15	0	15	0	0	100%
Dec	9.3	43	36	23	23	0	23	0	23	0	23	0	23	0	23	0	0	23	0	23	0	23	0	23	0	23	0	23	0	0	100%
Jan	10.1	42	36	27	34	8	34	8	34	8	34	8	31	4	31	4	0	41	14	41	14	36	9	41	14	32	6	38	11	6	92%
Feb	9.7	37	31	26	46	20	46	20	31	5	37	11	28	2	34	8	6	70	44	51	25	31	5	37	11	28	2	34	8	6	67%
Mar	7.7	45	37	31	41	10	41	10	37	6	41	10	34	3	38	7	4	55	24	51	19	37	6	45	14	34	3	42	11	8	83%
Apr	3.1	49	40	33	37	4	37	4	37	4	37	4	34	1	34	1	0	45	12	45	12	40	7	45	12	37	4	42	9	5	93%
May	1.1	65	51	32	32	0	32	0	32	0	32	0	32	0	32	0	0	36	4	36	4	36	4	36	4	36	4	36	4	0	100%
Jun	0.2	74	59	27	27	0	27	0	27	0	27	0	27	0	27	0	0	29	2	29	2	29	2	29	2	29	2	29	2	0	100%
Jul	0.1	85	68	23	23	0	23	0	23	0	23	0	23	0	23	0	0	23	0	23	0	23	0	23	0	23	0	23	0	0	100%
Aug	0.1	79	63	18	18	0	18	0	18	0	18	0	18	0	18	0	0	18	0	18	0	18	0	18	0	18	0	18	0	0	100%
Sep	0.4	71	56	14	14	0	14	0	14	0	14	0	14	0	14	0	0	14	0	14	0	14	0	14	0	14	0	14	0	0	100%
Sum	50.1	697	563	281	323	41	323	41	304	23	314	33	291	10	301	20	10	382	101	358	77	315	34	340	58	302	21	327	45	25	91%

*Δ Difference from actual historic average-year diversions (col. D).

Column Notes:

- A Average monthly rainfall at NOAA Ben Lomond 4 station for 1974-2006 period of record (for reference only; not used in calculations).
- B-D Average monthly water production for calendar years 2001-06.
- B Total SLVWD water production (diversions and groundwater pumping, including Manana Woods).
- C Northern service area diversions and groundwater pumping.
- D Actual total diversions (supplies northern service area only), excluding those from Harmon, Earle, and Manson creeks.
- E-K Arithmetic extrapolation of aveage-year total diversion hydrograph (Fig. 4-13a).
- L-R Semi-logarithmic extrapolation of average-year total diversion hydrograph (Fig. 4-13a).
- E,L 1984-2006 average potential diversions without regard to SLVWD demand or conveyance and treatment capacities.
- F,M Potential diversions capped at effective system capacity (assumed = 155 AF/mth [51 MG/mth]).
- G,N Potential diversion ≤155 AF/mth (50 MG/mth) system capacity (cols. F,M) and ≤ northern service area production (col. C).
- H,O Potential diversions ≤155 AF/mth (50 MG/mth) system capacity (cols. G,N) and ≤ total SLVWD production (col. B).
- I-J,P-Q Assumes diversion limitations during stormflow periods result in diverting 10 AF/month [3.3 MG/mth] less than demand; accounted for once assumed system capacity is reached.
- K,R Potential diversion available to southern service area in excess of northern service area demand (cols. J minus I or Q minus P).

Table 4-12a
Estimated Potential Diversions for Representative Average Year

	A	B	C	D	E		F		G		H		I		J		K	L		M		N		O		P		Q		R	S
	Drought Average		CY 2001-06 Avg. SLVWD		Arithmetic Extrap. of Dry-Yr Total Diversion Hydrograph													Semi-Log Extrap. of Dry-Yr Total Diversion Hydrograph														
							Diversions ≤155 AF/mth Assumed System Capacity													Diversions ≤155 AF/mth Assumed System Capacity											
					Potential		Potential		Up to N.				Adj. for Diversion Limits					Potential		Potential		Up to N.				Adj. for Diversion Limits					
	Rain-fall at Ben Lomond	SLVWD Diver-sions	Total	N. Serv. Area	Diversion Hydro-graph	Δ*	Diversions ≤155 AF/mth	Δ*	Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv.	Diversion Hydro-graph	Δ*	Diversions ≤155 AF/mth	Δ*	Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv.	% of Pot. Div. ≤155 AF/mth Used
Month	(in/mth)	(AF/mth)																													
Oct	1.5	30	186	147	30	0	30	0	30	0	30	0	30	0	30	0	0	30	0	30	0	30	0	30	0	30	0	30	0	0	100%
Nov	2.8	36	137	112	36	0	36	0	36	0	36	0	36	0	36	0	0	36	0	36	0	36	0	36	0	36	0	36	0	0	100%
Dec	5.8	46	133	112	46	0	46	0	46	0	46	0	46	0	46	0	0	46	0	46	0	46	0	46	0	46	0	46	0	0	100%
Jan	3.7	60	129	109	60	0	60	0	60	0	60	0	60	0	60	0	0	60	0	60	0	60	0	60	0	60	0	60	0	0	100%
Feb	7.4	55	114	96	79	24	79	24	79	24	79	24	69	14	69	14	0	85	30	85	30	85	30	85	30	75	20	75	20	0	88%
Mar	6.9	77	139	114	96	19	96	19	96	19	96	19	86	9	86	9	0	121	44	121	44	114	37	121	44	104	27	111	34	7	92%
Apr	1.6	80	151	123	80	0	80	0	80	0	80	0	80	0	80	0	0	91	10	91	10	91	10	91	10	91	10	91	10	0	100%
May	1.4	67	201	157	67	0	67	0	67	0	67	0	67	0	67	0	0	67	0	67	0	67	0	67	0	67	0	67	0	0	100%
Jun	0.2	50	227	181	50	0	50	0	50	0	50	0	50	0	50	0	0	50	0	50	0	50	0	50	0	50	0	50	0	0	100%
Jul	0.0	37	262	210	37	0	37	0	37	0	37	0	37	0	37	0	0	37	0	37	0	37	0	37	0	37	0	37	0	0	100%
Aug	0.1	30	243	194	30	0	30	0	30	0	30	0	30	0	30	0	0	30	0	30	0	30	0	30	0	30	0	30	0	0	100%
Sep	0.2	24	217	173	24	0	24	0	24	0	24	0	24	0	24	0	0	24	0	24	0	24	0	24	0	24	0	24	0	0	100%
Sum	31.7	593	2,141	1,727	636	44	636	44	636	44	636	44	616	24	616	24	0	678	85	678	85	671	78	678	85	651	58	658	65	7	97%
	(in/mth)	(MG/mth)																													
Oct	1.5	10	61	48	10	0	10	0	10	0	10	0	10	0	10	0	0	10	0	10	0	10	0	10	0	10	0	10	0	0	100%
Nov	2.8	12	45	37	12	0	12	0	12	0	12	0	12	0	12	0	0	12	0	12	0	12	0	12	0	12	0	12	0	0	100%
Dec	5.8	15	43	36	15	0	15	0	15	0	15	0	15	0	15	0	0	15	0	15	0	15	0	15	0	15	0	15	0	0	100%
Jan	3.7	19	42	36	19	0	19	0	19	0	19	0	19	0	19	0	0	19	0	19	0	19	0	19	0	19	0	19	0	0	100%
Feb	7.4	18	37	31	26	8	26	8	26	8	26	8	22	5	22	5	0	28	10	28	10	28	10	28	10	24	7	24	7	0	88%
Mar	6.9	25	45	37	31	6	31	6	31	6	31	6	28	3	28	3	0	39	14	39	14	37	12	39	14	34	9	36	11	2	92%
Apr	1.6	26	49	40	26	0	26	0	26	0	26	0	26	0	26	0	0	29	3	29	3	29	3	29	3	29	3	29	3	0	100%
May	1.4	22	65	51	22	0	22	0	22	0	22	0	22	0	22	0	0	22	0	22	0	22	0	22	0	22	0	22	0	0	100%
Jun	0.2	16	74	59	16	0	16	0	16	0	16	0	16	0	16	0	0	16	0	16	0	16	0	16	0	16	0	16	0	0	100%
Jul	0.0	12	85	68	12	0	12	0	12	0	12	0	12	0	12	0	0	12	0	12	0	12	0	12	0	12	0	12	0	0	100%
Aug	0.1	10	79	63	10	0	10	0	10	0	10	0	10	0	10	0	0	10	0	10	0	10	0	10	0	10	0	10	0	0	100%
Sep	0.2	8	71	56	8	0	8	0	8	0	8	0	8	0	8	0	0	8	0	8	0	8	0	8	0	8	0	8	0	0	100%
Sum	31.7	193	697	563	207	14	207	14	207	14	207	14	201	8	201	8	0	221	28	221	28	219	25	221	28	212	19	214	21	2	97%

*Δ Difference from actual historic drought year diversions (col. B).

Column Notes:

A-B Monthly averages for drought years 1987-92 & 1994.

A Rainfall at NOAA Ben Lomond 4 station (for reference only; not part of computations).

B Actual total diversions (supplied northern service area only), excluding those from Harmon, Earle, and Manson creeks.

C-D Average monthly water production for calendar years 2001-06.

C Total SLVWD diversions and groundwater pumping, including Manana Woods.

D Northern service area diversions and groundwater pumping.

E-K Semi-logarithmic extrapolation of typical drought-year total diversion hydrograph (Fig. 4-13b).

L-R Potential diversions without regard to SLVWD demand or conveyance and treatment capacities.

E,L Potential diversions capped at effective system capacity (assumed = 155 AF/mth [51 MG/mth]).

F,M Potential diversion ≤155 AF/mth (50 MG/mth) system capacity (cols. F,M) and ≤ northern service area production (col. C).

G,N Potential diversions ≤155 AF/mth (50 MG/mth) system capacity (cols. G,N) and ≤ total SLVWD production (col. B).

H,O Assumes diversion limitations during stormflow periods result in diverting 10 AF/month [3.3 MG/mth] less than demand; accounted for once assumed system capacity is reached.

I-J,P-Q Potential diversion available to southern service area in excess of northern service area demand (cols. J minus I or Q minus P).

K,R Potential diversion available to southern service area in excess of northern service area demand (cols. J,Q minus cols. I,P).

S Adjusted total production (col. Q) as a percent of potential diversion ≤155 AF/mth (51 MG/mth) (col. M).

Table 4-12b
Estimated Potential Diversions for Representative Drought Year

	A	B	C	D	E		F		G		H		I		J		K	L		M		N		O		P		Q		R	S
	Wet-Period Average		CY 2001-06 Avg. SLVWD Production		Arithmetic Extrap. of Wet-Yr Total Diversion Hydrograph													Semi-Log Extrap. of Wet-Yr Total Diversion Hydrograph														
							Diversions ≤155 AF/mth Assumed System Capacity													Diversions ≤155 AF/mth Assumed System Capacity													
													Adj. for Diversion Limits														Adj. for Diversion Limits					
	Rain-fall at Ben Lo-mond	SLVWD Diver-sions	Total	N. Serv. Area	Potential Diversion Hydro-graph	Δ*	Potential Diversions ≤155 AF/mth	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv.	Potential Diversion Hydro-graph	Δ*	Potential Diversions ≤155 AF/mth	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv.	% of Pot. Div. ≤155 AF/mth Used
Month	(in/mth)	(AF/mth)																													
Oct	1.7	50	186	147	50	0	50	0	50	0	50	0	50	0	50	0	0	50	0	50	0	50	0	50	0	50	0	50	0	0	100%
Nov	6.8	51	137	112	51	0	51	0	51	0	51	0	51	0	51	0	0	51	0	51	0	51	0	51	0	51	0	51	0	0	100%
Dec	11.8	81	133	112	81	0	81	0	81	0	81	0	81	0	81	0	0	81	0	81	0	81	0	81	0	81	0	81	0	0	100%
Jan	14.8	88	129	109	112	24	112	24	109	22	112	24	99	12	102	14	3	132	44	132	44	109	22	129	42	99	12	119	32	20	90%
Feb	12.8	88	114	96	144	56	144	56	96	8	114	26	86	-2	104	16	18	214	126	155	67	96	8	114	26	86	-2	104	16	18	67%
Mar	8.2	99	139	114	175	76	155	56	114	16	139	41	104	6	129	31	25	249	150	155	56	114	16	139	41	104	6	129	31	25	83%
Apr	4.1	111	151	123	157	46	155	44	123	12	151	41	113	2	141	31	29	199	88	155	44	123	12	151	41	113	2	141	31	29	91%
May	1.8	117	201	157	139	22	139	22	139	22	139	22	129	12	129	12	0	160	43	155	38	155	38	155	38	155	38	155	38	0	100%
Jun	0.4	108	227	181	120	12	120	12	120	12	120	12	120	12	120	12	0	128	20	128	20	128	20	128	20	128	20	128	20	0	100%
Jul	0.0	102	262	210	102	0	102	0	102	0	102	0	102	0	102	0	0	102	0	102	0	102	0	102	0	102	0	102	0	0	100%
Aug	0.1	83	243	194	83	0	83	0	83	0	83	0	83	0	83	0	0	83	0	83	0	83	0	83	0	83	0	83	0	0	100%
Sep	0.3	65	217	173	65	0	65	0	65	0	65	0	65	0	65	0	0	65	0	65	0	65	0	65	0	65	0	65	0	0	100%
Sum	62.8	1,042	2,141	1,727	1,279	237	1,257	215	1,133	91	1,208	166	1,083	41	1,158	116	75	1,514	472	1,312	270	1,157	115	1,249	207	1,117	75	1,209	167	92	92%
	(in/mth)	(MG/mth)																													
Oct	1.7	16	61	48	16	0	16	0	16	0	16	0	16	0	16	0	0	16	0	16	0	16	0	16	0	16	0	16	0	0	100%
Nov	6.8	17	45	37	17	0	17	0	17	0	17	0	17	0	17	0	0	17	0	17	0	17	0	17	0	17	0	17	0	0	100%
Dec	11.8	26	43	36	26	0	26	0	26	0	26	0	26	0	26	0	0	26	0	26	0	26	0	26	0	26	0	26	0	0	100%
Jan	14.8	29	42	36	36	8	36	8	36	7	36	8	32	4	33	5	1	43	14	43	14	36	7	42	14	32	4	39	10	7	90%
Feb	12.8	29	37	31	47	18	47	18	31	3	37	9	28	-1	34	5	6	70	41	51	22	31	3	37	9	28	-1	34	5	6	67%
Mar	8.2	32	45	37	57	25	51	18	37	5	45	13	34	2	42	10	8	81	49	51	18	37	5	45	13	34	2	42	10	8	83%
Apr	4.1	36	49	40	51	15	51	14	40	4	49	13	37	1	46	10	9	65	29	51	14	40	4	49	13	37	1	46	10	9	91%
May	1.8	38	65	51	45	7	45	7	45	7	45	7	42	4	42	4	0	52	14	51	12	51	12	51	12	51	12	51	12	0	100%
Jun	0.4	35	74	59	39	4	39	4	39	4	39	4	39	4	39	4	0	42	7	42	7	42	7	42	7	42	7	42	7	0	100%
Jul	0.0	33	85	68	33	0	33	0	33	0	33	0	33	0	33	0	0	33	0	33	0	33	0	33	0	33	0	33	0	0	100%
Aug	0.1	27	79	63	27	0	27	0	27	0	27	0	27	0	27	0	0	27	0	27	0	27	0	27	0	27	0	27	0	0	100%
Sep	0.3	21	71	56	21	0	21	0	21	0	21	0	21	0	21	0	0	21	0	21	0	21	0	21	0	21	0	21	0	0	100%
Sum	62.8	339	697	563	417	77	410	70	369	30	394	54	353	13	377	38	24	493	154	427	88	377	38	407	68	364	25	394	55	30	92%

*Δ Difference from actual historic wet-year diversions (col. B).

Column Notes:

A-B Monthly averages for wet-period years 1986, 1995-2000, & 2005-06.

A Rainfall at NOAA Ben Lomond 4 station (for reference only; not part of computations).

B Actual total diversions (supplied northern service area only), excluding those from Harmon, Earle, and Manson creeks.

C-D Average monthly water production for calendar years 2001-06.

C Total SLVWD diversions and groundwater pumping, including Manana Woods.

D Northern service area diversions and groundwater pumping.

E-K Semi-logarithmic extrapolation of typical wet-year total diversion hydrograph (Fig. 4-13c).

L-R Potential diversions without regard to SLVWD demand or conveyance and treatment capacities.

E,L Potential diversions capped at effective system capacity (assumed = 155 AF/mth [51 MG/mth]).

F,M Potential diversion ≤155 AF/mth (50 MG/mth) system capacity (cols. F,M) and ≤ northern service area production (col. C).

G,N Potential diversions ≤155 AF/mth (50 MG/mth) system capacity (cols. G,N) and ≤ total SLVWD production (col. B).

H,O Assumes diversion limitations during stormflow periods result in diverting 10 AF/month [3.3 MG/mth] less than demand; accounted for once assumed system capacity is reached.

I-J,P-Q Potential diversion available to southern service area in excess of northern service area demand (cols. J minus I or Q minus P).

K,R Potential diversion available to southern service area in excess of northern service area demand (cols. J,Q minus cols. I,P).

S Adjusted total production (col. Q) as a percent of potential diversion ≤155 AF/mth (51 MG/mth) (col. M).

Table 4-12c
Estimated Potential Diversions for Representative Wet-Period Year

	A	B	C	D	E		F		G		H		I		J	K	L	M		N		O		P		Q		R	S
	Monthly Maximum 1984-2006		CY 2001-06 Avg. SLVWD Production		Semi-Log Extrap. of Max-Mth Total Diversion Hydrograph Diversions ≤155 AF/mth Assumed System Capacity 2001-06 Average Monthly Demand											CY 2001-06 Max. SLVWD Production		Semi-Log Extrap. of Max-Mth Total Diversion Hydrograph Diversions ≤155 AF/mth Assumed System Capacity 2001-06 Maximum Monthly Demand													
					Potential Diversions ≤155 AF/mth		Up to N. Serv. Area Production		Up to Total Production		Adj. for Diversion Limits Up to N. Serv. Area Production		Adj. for Diversion Limits Up to Total Production		Adj. for Diversion Limits Extra Avail. to S. Serv.			Potential Diversions ≤155 AF/mth		Up to N. Serv. Area Production		Up to Total Production		Adj. for Diversion Limits Up to N. Serv. Area Production		Adj. for Diversion Limits Up to Total Production		Adj. for Diversion Limits Extra Avail. to S. Serv.	% of Pot. Div. ≤155 AF/mth Used
	Rainfall at Ben Lomond	SLVWD Diversions	Total	N. Serv. Area		Δ*		Δ*		Δ*		Δ*		Δ*					Δ*		Δ*		Δ*		Δ*		Δ*			
Month	(in/mth)		(AF/mth)																										
Oct	8.7	83	186	147	83	0	83	0	83	0	83	0	83	0	0	198	152	83	0	83	0	83	0	83	0	83	0	0	100%
Nov	14.8	90	137	112	90	0	90	0	90	0	90	0	90	0	0	144	118	90	0	90	0	90	0	90	0	90	0	0	100%
Dec	26.0	111	133	112	111	0	111	0	111	0	111	0	111	0	0	154	131	111	0	111	0	111	0	111	0	111	0	0	100%
Jan	26.5	115	129	109	137	22	109	-6	129	14	99	-16	119	4	20	137	120	137	22	120	6	137	22	110	-4	127	12	17	93%
Feb	28.0	110	114	96	155	45	96	-14	114	4	86	-24	104	-6	18	129	114	155	45	114	4	129	19	104	-6	119	9	16	77%
Mar	20.5	122	139	114	155	33	114	-8	139	17	104	-18	129	7	25	150	124	155	33	124	1	150	28	114	-9	140	18	26	90%
Apr	13.6	129	151	123	155	26	123	-6	151	23	113	-16	141	13	29	193	153	155	26	153	24	155	26	143	14	155	26	12	100%
May	6.0	135	201	157	155	20	155	20	155	20	155	20	155	20	0	236	176	155	20	155	20	155	20	155	20	155	20	0	100%
Jun	1.3	126	227	181	155	29	155	29	155	29	155	29	155	29	0	248	195	155	29	155	29	155	29	155	29	155	29	0	100%
Jul	0.2	138	262	210	155	17	155	17	155	17	155	17	155	17	0	297	235	155	17	155	17	155	17	155	17	155	17	0	100%
Aug	0.7	135	243	194	135	0	135	0	135	0	135	0	135	0	0	254	200	135	0	135	0	135	0	135	0	135	0	0	100%
Sep	1.4	95	217	173	95	0	95	0	95	0	95	0	95	0	0	232	186	95	0	95	0	95	0	95	0	95	0	0	100%
Sum	147.6	1,390	2,141	1,727	1,581	192	1,421	31	1,513	124	1,381	-9	1,473	84	92	2,371	1,904	1,581	192	1,490	101	1,551	161	1,450	61	1,521	131	70	96%
	(in/mth)		(MG/mth)																										
Oct	8.7	27	61	48	27	0	27	0	27	0	27	0	27	0	0	65	49	27	0	27	0	27	0	27	0	27	0	0	100%
Nov	14.8	29	45	37	29	0	29	0	29	0	29	0	29	0	0	47	38	29	0	29	0	29	0	29	0	29	0	0	100%
Dec	26.0	36	43	36	36	0	36	0	36	0	36	0	36	0	0	50	43	36	0	36	0	36	0	36	0	36	0	0	100%
Jan	26.5	37	42	36	45	7	36	-2	42	5	32	-5	39	1	7	45	39	45	7	39	2	45	7	36	-1	41	4	5	93%
Feb	28.0	36	37	31	51	15	31	-5	37	1	28	-8	34	-2	6	42	37	51	15	37	1	42	6	34	-2	39	3	5	77%
Mar	20.5	40	45	37	51	11	37	-3	45	6	34	-6	42	2	8	49	40	51	11	40	0	49	9	37	-3	46	6	9	90%
Apr	13.6	42	49	40	51	9	40	-2	49	7	37	-5	46	4	9	63	50	51	9	50	8	51	9	47	5	51	9	4	100%
May	6.0	44	65	51	51	7	51	7	51	7	51	7	51	7	0	77	57	51	7	51	7	51	7	51	7	51	7	0	100%
Jun	1.3	41	74	59	51	9	51	9	51	9	51	9	51	9	0	81	64	51	9	51	9	51	9	51	9	51	9	0	100%
Jul	0.2	45	85	68	51	5	51	5	51	5	51	5	51	5	0	97	77	51	5	51	5	51	5	51	5	51	5	0	100%
Aug	0.7	44	79	63	44	0	44	0	44	0	44	0	44	0	0	83	65	44	0	44	0	44	0	44	0	44	0	0	100%
Sep	1.4	31	71	56	31	0	31	0	31	0	31	0	31	0	0	76	61	31	0	31	0	31	0	31	0	31	0	0	100%
Sum	147.6	453	697	563	515	62	463	10	493	40	450	-3	480	27	30	773	621	515	62	486	33	505	52	473	20	495	43	23	96%

*Δ Difference from actual historic maximum-month diversions (col. B).

Column Notes:

A-B Maximum monthly values for 1984-2006.

A Rainfall at NOAA Ben Lomond 4 station (for reference only; not used in calculations).

B Total diversions (supplies northern service area only), excluding those from Harmon, Earle, and Manson creeks.

C-D 2001-06 average monthly SLVWD water production.

K-L 2001-06 maximum monthly SLVWD water production.

C,K Total SLVWD diversions and groundwater pumping, including Manana Woods.

D,L Northern service area diversions and groundwater pumping.

E-J,K-R Semi-logarithmic extrapolation of maximum monthly total diversion hydrograph (Fig. 4-13d).

E-J Potential diversions assuming 2001-06 avarage monthly water demand.

M-R Potential diversions assuming 2001-06 maximum monthly water demand.

E,M Potential diversion without regard to SLVWD demand or conveyance and treatment capacities.

F,N Potential diversion hydrograph (cols. E,M) capped at effective system capacity (assumed = 155 AF/mth [51 MG/mth]).

G,O Potential diversion ≤155 AF/mth (51 MG/mth) system capacity (cols. F,N) and ≤ northern service area production (cols. D,L).

H,P Potential diversion ≤155 AF/mth (51 MG/mth) system capacity (cols. G,O) and ≤ total SLVWD production (cols. C,K).

H-I,P-Q Assumes diversion limitations during stormflow periods result in diverting 10 AF/month [3.3 MG/mth] less than demand; accounted for once assumed system capacity is reached.

K,R Potential diversion available to southern service area in excess of northern service area demand (cols. I,Q minus cols.H,P).

S Adjusted total production (col. Q) as a percent of potential diversion ≤155 AF/mth (51 MG/mth) (col. M).

Table 4-12d
Estimated Potential Diversions for Composite Year of Maximum Monthly Diversions

A	B	C	D	E	F		G		H		I		J		K		L	M		N		O		P		Q		R		S	T	U		V		W		X
					Arithmetic Extrapolation of Total Diversion Hydrograph													Semi-Log Extrapolation of Total Diversion Hydrograph															Maximum Extrapolation of Total Diversion Hydrograph						
		Actual CY SLVWD Water Production					Diversions ≤155 AF/mth Assumed System Capacity													Diversions ≤155 AF/mth Assumed System Capacity														Diversions ≤155 AF/mth Sys. Cap.						
													Adj. for Diversion Limits												Adj. for Diversion Limits												
Calen-dar Year	WY Rain-fall at Ben Lomond (% Avg)	Total	N. Serv. Area	Diver-sions	Potential Diversion Hydro-graph	Δ*	Potential Diversions ≤155 AF/mth	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv. Area	Potential Diversion Hydro-graph	Δ*	Potential Diversions ≤155 AF/mth	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv. Area	% of Pot. Div. ≤155 AF/mth Used	Potential Diver-sions ≤155 AF/mth	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv. Area
		(AF/yr)																															(AF/yr)						
1984	82%	1,868	1,662	987	1,089	102	1,089	102	1,015	28	1,054	67	955	-32	994	7	40	1,301	314	1,167	180	1,015	28	1,066	79	988	1	1,007	20	19	86%	1,218	231	1,004	17	1,062	75	58
1985	83%	1,778	1,570	861	1,053	192	1,053	192	933	71	982	120	873	11	922	60	49	1,291	429	1,136	274	949	88	1,000	138	905	43	940	79	35	83%	1,149	287	951	89	1,013	151	62
1986	137%	1,645	1,423	802	1,106	304	1,087	286	899	98	951	150	849	48	901	100	52	1,438	636	1,153	351	933	131	985	183	886	84	935	133	49	81%	1,096	294	875	73	927	125	52
1987	55%	1,699	1,482	501	610	109	610	109	571	70	590	89	521	20	540	39	19	607	106	607	106	568	67	587	86	519	18	537	36	18	88%	895	394	649	148	692	191	44
1988	62%	1,652	1,414	467	569	102	569	102	532	65	544	77	482	15	494	27	12	586	120	586	120	549	82	561	95	499	32	511	45	12	87%	853	386	624	158	678	212	54
1989	70%	1,635	1,349	761	917	156	917	156	839	78	866	105	779	18	806	45	27	926	165	926	165	839	78	875	114	787	26	815	54	28	88%	1,209	448	842	81	948	187	106
1990	49%	1,599	1,349	524	577	53	577	53	572	48	577	53	532	8	537	13	5	577	53	577	53	572	48	577	53	537	13	542	18	5	94%	888	364	642	117	710	186	68
1991	65%	1,623	1,343	486	550	63	550	63	537	51	550	63	497	11	510	23	12	562	76	562	76	537	51	562	76	497	11	522	36	25	93%	631	145	516	30	555	69	39
1992	84%	1,701	1,393	690	780	90	780	90	753	63	766	76	713	23	726	36	13	810	120	810	120	751	61	773	83	719	29	733	43	14	90%	1,012	322	770	81	841	151	70
1993	117%	1,724	1,419	901	1,107	206	1,107	206	963	62	1,015	115	903	2	955	55	53	1,153	253	1,128	227	963	62	1,015	115	925	24	955	55	31	85%	1,268	367	969	68	1,050	150	81
1994	67%	1,841	1,533	738	845	107	845	107	801	63	815	77	751	13	765	27	14	881	143	881	143	809	72	834	96	761	23	784	46	23	89%	1,057	319	819	81	888	150	69
1995	140%	1,903	1,511	1,075	1,506	431	1,478	403	1,261	186	1,393	318	1,211	136	1,343	268	132	1,799	724	1,568	494	1,276	201	1,435	360	1,243	169	1,385	310	141	88%	1,607	532	1,276	201	1,443	368	167
1996	124%	2,037	1,650	1,156	1,638	482	1,578	422	1,367	211	1,487	330	1,297	141	1,417	260	120	2,079	923	1,636	480	1,404	248	1,526	370	1,344	188	1,466	310	122	90%	1,621	465	1,376	220	1,498	342	122
1997	119%	2,069	1,640	937	1,489	552	1,417	480	1,221	284	1,325	388	1,181	244	1,285	348	104	1,640	702	1,436	499	1,234	296	1,346	409	1,209	272	1,306	369	97	91%	1,196	259	992	55	1,081	144	89
1998	168%	1,863	1,530	1,254	1,919	665	1,606	353	1,341	88	1,450	197	1,261	8	1,380	127	119	2,522	1,268	1,652	398	1,348	94	1,486	232	1,290	36	1,416	162	126	86%	1,663	410	1,348	94	1,486	232	138
1999	94%	1,887	1,470	1,128	1,365	237	1,361	233	1,166	38	1,279	151	1,106	-22	1,219	91	113	1,784	656	1,443	315	1,192	64	1,323	195	1,167	39	1,263	135	96	88%	1,443	315	1,192	64	1,323	195	131
2000	114%	2,028	1,596	1,033	1,270	237	1,257	224	1,106	72	1,179	145	1,056	22	1,129	95	73	1,419	386	1,319	286	1,140	106	1,224	190	1,098	64	1,184	150	86	90%	1,323	289	1,140	106	1,224	190	84
2001	76%	2,103	1,662	891	1,060	169	1,060	169	930	39	1,015	124	880	-11	965	74	85	1,107	216	1,086	195	929	38	1,021	130	901	10	971	80	70	89%	1,125	234	919	28	1,019	128	100
2002	96%	2,119	1,676	889	1,167	278	1,167	278	1,058	169	1,122	233	1,008	119	1,072	183	64	1,411	522	1,288	399	1,070	181	1,162	273	1,049	160	1,112	223	63	86%	1,233	344	1,009	120	1,101	212	92
2003	100%	2,128	1,689	939	1,141	202	1,139	200	973	33	1,068	129	913	-27	1,008	69	95	1,271	331	1,209	270	990	51	1,112	173	957	18	1,053	114	96	87%	1,242	303	981	42	1,103	164	122
2004	90%	2,158	1,752	922	1,077	155	1,075	153	957	35	1,015	93	897	-25	955	33	58	1,263	341	1,128	206	980	58	1,048	126	945	23	989	66	44	88%	1,156	234	970	48	1,059	136	88
2005	136%	2,122	1,773	1,119	1,361	243	1,294	176	1,165	46	1,239	121	1,105	-14	1,179	61	75	2,040	921	1,334	216	1,190	72	1,273	155	1,146	27	1,223	105	77	92%	1,367	248	1,223	104	1,306	187	83
2006	152%	2,213	1,813	1,128	1,386	257	1,306	177	1,153	25	1,226	98	1,103	-25	1,176	48	73	2,183	1,054	1,359	231	1,192	63	1,265	136	1,177	49	1,225	96	48	90%	1,359	231	1,192	63	1,265	136	73
2007	59%	2,152	1,713	692	770	78	770	78	723	30	742	50	693	0	712	20	20	784	92	779	87	724	31	744	51	703	11	723	31	20	93%	631	145	516	17	555	69	39
2008	79%	2,026	1,581	694	825	131	805	111	701	7	752	58	661	-33	712	18	51	854	160	809	115	708	14	759	65	701	7	739	45	38	91%	1,663	532	1,376	220	1,498	368	122
Avg	98%	1,903	1,560	863	1,087	224	1,060	197	941	78	1,000	137	889	26	948	85	59	1,292	428	1,103	240	954	91	1,022	159	918	55	973	110	55	89%	1,200	323	969	91	1,055	177	86
Min	50%	1,599	1,343	467	550	53	550	53	532	7	544	50	482	-33	494	7	5	562	53	562	53	537	14	561	51	497	1	511	18	5	81%	631	145	516	17	555	69	39
Max	166%	2,213	1,813	1,254	1,919	665	1,606	480	1,367	284	1,487	388	1,297	244	1,417	348	132	2,522	1,268	1,652	499	1,404	296	1,526	409	1,344	272	1,466	369	141	94%	1,663	532	1,376	220	1,498	368	167

*A Difference from actual historic diversion (col. E).

Column Notes:

A Calendar year January through December. Presented estimates derived from monthly calculations.

B Water-year rainfall at NOAA Ben Lomond 4 station, as percent of 1974-2006 average.

C Total SLVWD diversions and groundwater pumping, including Manana Woods.

D Northern service area diversions and groundwater pumping.

E Actual total diversions (supplied northern service area only), excluding those from Harmon, Earle, and Manson.

F-L Arithmetic extrapolation of total diversion hydrograph.

M-T Semi-logarithmic extrapolation of total diversion hydrograph.

T Adjusted total production (col. R) as a percent of potential diversion≤ 155 AF/mth (51 MG/mth) (col. N).

U-X Maximum extrapolation of total diversion hydrograph; assumes 155 AF/mth (51 MG/mth) diversion throughout months with storm runoff. Sets upper bound but not realistic.

F,M Potential diversion without regard to SLVWD demand or system capacity or maintenance.

G,N,U Potential diversion hydrograph (cols. F,M) capped at 155 AF/mth (51 MG/mth) assumed system effective capacity.

H,O,V Potential diversion≤ 155 AF/mth (51 MG/mth) system capacity (cols. G,N,S) and not exceeding northern service area production.

I,P,W Potential diversion≤ 155 AF/mth (51 MG/mth) system capacity (cols. G,N,S) and not exceeding total SLVWD production.

J,K,Q,S Assumes diversion limitations during stormflow periods result in diverting 10 AF/month [3.3 MG/mth] less than demand; accounted for once assumed system capacity is reached.

Table 4-13a
Potential Diversions Estimated for 1984-2008 Monthly Record (CY's, AF/yr)

A	B	C	D	E	F		G		H		I		J		K		L	M		N		O		P		Q		R		S	T	U		V		W		X
		Actual CY SLVWD Water Production			Arithmetic Extrapolation of Total Diversion Hydrograph													Semi-Log Extrapolation of Total Diversion Hydrograph														Maximum Extrapolation of Total Diversion Hydrograph						
							Diversions ≤ 51 MG/mth System Capacity						Adj. for Diversion Limits							Diversions ≤ 51 MG/mth System Capacity						Adj. for Diversion Limits						Diversions ≤51 MG/mth Sys. Cap.						
Calen-dar Year	WY Rain-fall at Ben Lomond	Total	N. Serv. Area	Diver-sions	Potential Diversion Hydro-graph	Δ*	Potential Diversions ≤51 MG/mth	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv. Area	Potential Diversion Hydro-graph	Δ*	Potential Diversions ≤51 MG/mth	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv. Area	% of Pot. Div. ≤155 AF/mth Used	Potential Diver-sions ≤51 MG/mth	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv. Area
	(% Avg)	(MG/yr)																														(MG/yr)						
1984	82%	609	542	322	355	33	355	33	331	9	344	22	311	-11	324	2	13	424	102	380	59	331	9	347	26	322	0	328	6	6	86%	397	75	327	6	346	24	19
1985	83%	579	512	281	343	62	343	62	304	23	320	39	284	4	300	20	16	421	140	370	89	309	29	326	45	295	14	306	26	12	83%	374	94	310	29	330	49	20
1986	137%	536	464	261	360	99	354	93	293	32	310	49	277	16	294	32	17	469	207	376	114	304	43	321	60	289	27	305	43	16	81%	357	96	285	24	302	41	17
1987	55%	554	483	163	199	36	199	36	186	23	192	29	170	7	176	13	6	198	35	198	35	185	22	191	28	169	6	175	12	6	88%	292	128	211	48	226	62	14
1988	62%	538	461	152	185	33	185	33	173	21	177	25	157	5	161	9	4	191	39	191	39	179	27	183	31	163	11	167	15	4	87%	278	126	203	51	221	69	18
1989	70%	533	440	248	299	51	299	51	273	25	282	34	254	6	263	15	9	302	54	302	54	273	25	285	37	256	8	266	18	9	88%	394	146	274	26	309	61	34
1990	49%	521	440	171	188	17	188	17	187	16	188	17	174	3	175	4	1	188	17	188	17	187	16	188	17	175	4	177	6	1	94%	289	118	209	38	231	60	22
1991	65%	529	438	158	179	21	179	21	175	17	179	21	162	4	166	8	4	183	25	183	25	175	17	183	25	162	4	170	12	8	93%	206	47	168	10	181	23	13
1992	84%	554	454	225	254	29	254	29	245	21	250	25	232	8	236	12	4	264	39	264	39	245	20	252	27	234	9	239	14	5	90%	330	105	251	26	274	49	23
1993	117%	562	462	293	361	67	361	67	314	20	331	37	294	1	311	18	17	376	82	368	74	314	20	331	37	301	8	311	18	10	85%	413	120	316	22	342	49	26
1994	67%	600	499	240	275	35	275	35	261	21	265	25	245	4	249	9	4	287	46	287	46	264	23	272	31	248	7	255	15	8	89%	344	104	267	26	289	49	22
1995	140%	620	492	350	491	141	482	131	411	61	454	104	395	44	438	87	43	586	236	511	161	416	65	468	117	405	55	451	101	46	88%	524	173	416	65	470	120	55
1996	124%	664	538	377	534	157	514	137	445	69	484	108	423	46	462	85	39	677	301	533	156	457	81	497	121	438	61	478	101	40	90%	528	152	448	72	488	112	40
1997	119%	674	534	305	485	180	462	156	398	92	432	126	385	79	419	113	34	534	229	468	163	402	97	439	133	394	89	426	120	32	91%	390	84	323	18	352	47	29
1998	168%	607	498	408	625	217	523	115	437	29	473	64	411	3	450	41	39	822	413	538	130	439	31	484	76	420	12	461	53	41	86%	542	134	439	31	484	76	45
1999	94%	615	479	368	445	77	444	76	380	12	417	49	360	-7	397	30	37	581	214	470	103	388	21	431	64	380	13	412	44	31	88%	470	103	388	21	431	64	43
2000	114%	661	520	337	414	77	410	73	360	24	384	47	344	7	368	31	24	462	126	430	93	371	35	399	62	358	21	386	49	28	90%	431	94	371	35	399	62	27
2001	76%	685	542	290	345	55	345	55	303	13	331	40	287	-4	314	24	28	361	70	354	63	303	12	333	42	294	3	316	26	23	89%	366	76	299	9	332	42	33
2002	96%	691	546	290	380	90	380	90	345	55	366	76	328	39	349	60	21	460	170	420	130	349	59	379	89	342	52	362	73	21	86%	402	112	329	39	359	69	30
2003	100%	693	550	306	372	66	371	65	317	11	348	42	297	-9	328	22	31	414	108	394	88	323	17	362	56	312	6	343	37	31	87%	405	99	320	14	359	53	40
2004	90%	703	571	300	351	51	350	50	312	11	331	30	292	-8	311	11	19	412	111	367	67	319	19	341	41	308	7	322	22	14	88%	377	76	316	16	345	44	29
2005	136%	691	578	364	444	79	422	57	380	15	404	39	360	-5	384	20	24	665	300	435	70	388	23	415	50	373	9	399	34	25	92%	445	81	398	34	426	61	27
2006	152%	721	591	368	452	84	425	58	376	8	400	32	359	-8	383	16	24	711	344	443	75	388	21	412	44	384	16	399	31	15	90%	443	75	388	21	412	44	24
2007	59%	701	558	226	251	25	251	25	235	10	242	16	226	0	232	7	6	256	30	254	28	236	10	242	17	229	3	236	10	6	93%	206	47	168	6	181	23	13
2008	79%	660	515	226	269	43	262	36	228	2	245	19	215	-11	232	6	17	278	52	264	37	231	4	247	21	228	2	241	15	12	91%	542	173	448	72	488	120	40
Avg	98%	620	508	281	354	73	345	64	307	26	326	45	290	8	309	28	19	421	140	359	78	311	30	333	52	299	18	317	36	18	89%	391	105	316	30	344	58	28
Min	50%	521	438	152	179	17	179	17	173	2	177	16	157	-11	161	2	1	183	17	183	17	175	4	183	17	162	0	167	6	1	81%	206	47	168	6	181	23	13
Max	166%	721	591	408	625	217	523	156	445	92	484	126	423	79	462	113	43	822	413	538	163	457	97	497	133	438	89	478	120	46	94%	542	173	448	72	488	120	55

*A Difference from actual historic diversion (col. E).

Table 4-13b
Potential Diversions Estimated for
1984-2008 Monthly Record
(CY's, MG/yr)

Column Notes:

- **A** Calendar year January through December. Presented estimates derived from monthly calculations.
- **B** Water-year rainfall at NOAA Ben Lomond 4 station, as percent of 1974-2006 average.
- **C** Total SLVWD diversions and groundwater pumping, including Manana Woods.
- **D** Northern service area diversions and groundwater pumping.
- **E** Actual total diversions (supplied northern service area only), excluding those from Harmon, Earle, and Manson.
- **F-L** Arithmetic extrapolation of total diversion hydrograph.
- **M-T** Semi-logarithmic extrapolation of total diversion hydrograph.
- **T** Adjusted total production (col. R) as a percent of potential diversion≤ 155 AF/mth (51 MG/mth) (col. N).
- **U-X** Maximum extrapolation of total diversion hydrograph; assumes 155 AF/mth (51 MG/mth) diversion throughout months with storm runoff. Sets upper bound but not realistic.
- **F,M** Potential diversion without regard to SLVWD demand or system capacity or maintenance.
- **G,N,U** Potential diversion hydrograph (cols. F,M) capped at 155 AF/mth (51 MG/mth) assumed system effective capacity.
- **H,O,V** Potential diversion≤ 155 AF/mth (51 MG/mth) system capacity (cols. G,N,S) and not exceeding northern service area production.
- **I,P,W** Potential diversion≤ 155 AF/mth (51 MG/mth) system capacity (cols. G,N,S) and not exceeding total SLVWD production.
- **J,K,Q,S** Assumes diversion limitations during stormflow periods result in diverting 10 AF/month [3.3 MG/mth] less than demand; accounted for once assumed system capacity is reached.

A	B	C	D	E	F		G		H		I		J		K		L	M		N		O		P		Q		R		S	T	U		V		W		X
		Arithmetic Extrapolation of Total Diversion Hydrograph																Semi-Log Extrapolation of Total Diversion Hydrograph														Maximum Extrapolation of Total Diversion Hydrograph						
		Actual WY SLVWD Water Production					Diversions ≤155 AF/mth Assumed System Capacity						Adj. for Diversion Limits							Diversions ≤155 AF/mth Assumed System Capacity						Adj. for Diversion Limits						Diversions ≤155 AF/mth Sys. Cap.						
Water Year	Rain-fall at Ben Lomond	Total	N. Serv. Area	Diver-sions	Potential Diversion Hydro-graph	Δ*	Potential Diversions ≤155 AF/mth	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv. Area	Potential Diversion Hydro-graph	Δ*	Potential Diversions ≤155 AF/mth	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv. Area	% of Pot. Div. ≤155 AF/mth Used	Potential Diver-sions ≤155 AF/mth	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv. Area
	(% Avg)	(AF/yr)																														(AF/yr)						
1985	83%	1,781	1,576	937	1,130	193	1,130	193	1,005	68	1,058	121	945	8	998	61	53	1,351	414	1,196	259	1,005	68	1,060	123	965	28	1,000	63	35	84%	1,219	282	994	57	1,055	118	61
1986	137%	1,671	1,457	849	1,161	312	1,142	293	954	105	1,006	157	894	45	946	97	52	1,509	660	1,224	376	1,004	155	1,056	207	947	99	996	148	49	81%	1,191	343	960	111	1,023	174	63
1987	55%	1,710	1,486	533	633	101	633	101	594	61	613	80	554	21	573	40	19	630	98	630	98	591	58	610	77	552	19	570	37	18	90%	821	288	633	101	666	133	32
1988	62%	1,650	1,421	476	577	101	577	101	540	64	552	76	490	14	502	26	12	577	101	577	101	540	64	552	76	490	14	502	26	12	87%	845	369	632	156	685	208	53
1989	70%	1,607	1,344	620	772	152	772	152	695	75	721	101	635	15	661	41	26	799	179	799	179	712	93	748	128	660	40	688	68	28	86%	1,056	436	722	102	790	170	68
1990	49%	1,595	1,330	679	757	78	757	78	752	73	757	78	692	13	697	18	5	757	78	757	78	752	73	757	78	697	18	702	23	5	93%	1,178	499	824	145	942	263	118
1991	65%	1,640	1,364	471	524	53	524	53	512	41	524	53	482	11	494	23	12	537	65	537	65	512	41	537	65	482	11	507	35	25	94%	616	145	502	30	541	69	39
1992	84%	1,698	1,398	651	740	90	740	90	713	62	726	75	673	22	686	35	13	770	120	770	120	711	60	733	82	679	28	693	42	14	90%	883	232	700	49	752	102	53
1993	117%	1,705	1,395	853	1,050	196	1,050	196	905	52	958	105	855	2	908	55	53	1,096	243	1,071	217	905	52	958	105	877	24	908	55	31	85%	1,229	375	921	68	1,002	149	81
1994	67%	1,829	1,521	718	827	109	827	109	782	64	796	78	732	14	746	28	14	853	135	853	135	785	67	806	88	736	18	756	38	20	89%	1,050	332	815	97	883	165	68
1995	140%	1,869	1,493	1,047	1,437	390	1,409	362	1,193	146	1,324	277	1,133	86	1,264	217	132	1,722	675	1,492	445	1,208	161	1,358	311	1,166	119	1,298	251	133	87%	1,531	484	1,198	151	1,364	317	166
1996	124%	2,031	1,645	1,117	1,581	464	1,520	403	1,332	215	1,430	313	1,272	155	1,370	253	98	2,031	914	1,588	471	1,375	258	1,486	369	1,325	208	1,436	319	111	90%	1,627	510	1,375	258	1,495	378	120
1997	119%	2,114	1,684	1,015	1,516	501	1,443	428	1,260	245	1,366	351	1,220	205	1,326	311	106	1,675	660	1,472	456	1,273	258	1,387	371	1,245	230	1,347	331	102	92%	1,281	266	1,092	77	1,183	168	91
1998	168%	1,835	1,500	1,163	1,934	771	1,621	458	1,323	160	1,450	287	1,243	80	1,380	217	138	2,486	1,323	1,615	452	1,318	155	1,446	283	1,264	101	1,376	213	113	85%	1,551	388	1,229	66	1,357	194	128
1999	94%	1,994	1,588	1,196	1,418	222	1,414	218	1,246	50	1,337	140	1,186	-10	1,277	80	91	1,865	669	1,524	328	1,277	81	1,408	212	1,245	49	1,348	152	103	88%	1,536	340	1,277	81	1,408	212	131
2000	114%	1,942	1,508	1,037	1,302	264	1,289	251	1,108	70	1,205	168	1,048	10	1,145	108	98	1,464	427	1,364	327	1,139	102	1,255	217	1,095	58	1,205	167	110	88%	1,368	330	1,139	102	1,255	217	116
2001	76%	2,079	1,632	908	1,033	125	1,033	125	945	37	1,010	102	905	-3	970	62	65	1,074	166	1,056	148	952	44	1,023	115	929	21	983	75	54	93%	1,105	197	952	44	1,032	124	80
2002	96%	2,095	1,662	935	1,194	258	1,194	258	1,042	107	1,127	192	992	57	1,077	142	85	1,326	391	1,263	327	1,042	107	1,132	197	1,026	91	1,082	147	56	86%	1,207	272	980	45	1,070	135	90
2003	100%	2,122	1,685	928	1,188	260	1,186	258	1,019	92	1,115	187	959	32	1,055	127	95	1,401	473	1,276	349	1,032	104	1,153	225	997	70	1,093	165	95	86%	1,280	353	1,022	94	1,143	215	121
2004	90%	2,167	1,739	889	1,034	145	1,032	143	914	25	972	83	864	-25	922	33	58	1,238	350	1,103	215	931	43	1,023	134	906	18	973	85	67	88%	1,122	234	922	33	1,013	125	92
2005	136%	2,113	1,772	1,121	1,383	262	1,316	195	1,186	65	1,261	140	1,106	-15	1,181	60	75	2,082	961	1,377	256	1,233	112	1,316	195	1,169	48	1,247	126	77	91%	1,404	283	1,222	102	1,326	205	103
2006	152%	2,193	1,800	1,114	1,381	268	1,301	188	1,149	35	1,222	108	1,089	-25	1,162	48	73	2,180	1,066	1,356	243	1,189	75	1,262	148	1,164	51	1,212	98	48	89%	1,390	276	1,222	109	1,295	182	73
2007	59%	2,209	1,769	768	846	78	846	78	798	30	818	50	768	0	788	20	20	860	92	855	87	799	31	819	51	779	11	798	31	20	93%	616	145	502	30	541	69	39
2008	79%	2,022	1,581	712	843	131	823	111	718	7	770	58	678	-33	730	18	51	872	160	827	115	725	14	777	65	719	7	757	45	38	92%	1,627	510	1,375	258	1,495	378	120
Avg	98%	1,903	1,556	864	1,094	230	1,066	202	945	81	1,005	141	892	28	952	88	60	1,298	434	1,108	244	959	95	1,028	164	921	57	978	114	57	89%	1,204	329	970	94	1,058	183	88
Min	50%	1,595	1,330	471	524	53	524	53	512	7	524	50	482	-33	494	18	5	537	65	537	65	512	14	537	51	482	7	502	23	5	81%	616	145	502	30	541	69	32
Max	166%	2,209	1,800	1,196	1,934	771	1,621	458	1,332	245	1,450	351	1,272	205	1,380	311	138	2,486	1,323	1,615	471	1,375	258	1,486	371	1,325	230	1,436	331	133	94%	1,627	510	1,375	258	1,495	378	166

*Δ Difference from actual historic diversion (col. E).

Table 4-13c
Potential Diversions Estimated for
1984-2008 Monthly Record
(WY's, AF/yr)

Column Notes:

- A Water year October through Septmeber (e.g., WY 2007 is from 10/1/06 to 9/30/07). Presented estimates derived from monthly calculations.
- B Water-year rainfall at NOAA Ben Lomond 4 station, as percent of 1974-2006 average.
- C Total SLVWD diversions and groundwater pumping, including Manana Woods.
- D Northern service area diversions and groundwater pumping.
- E Actual total diversions (supplied northern service area only), excluding those from Harmon, Earle, and Manson.
- F-L Arithmetic extrapolation of total diversion hydrograph.
- M-T Semi-logarithmic extrapolation of total diversion hydrograph.
- T Adjusted total production (col. R) as a percent of potential diversion≤ 155 AF/mth (51 MG/mth) (col. N).
- U-X Maximum extrapolation of total diversion hydrograph; assumes 155 AF/mth (51 MG/mth) diversion throughout months with storm runoff. Sets upper bound but not realistic.
- F,M Potential diversion without regard to SLVWD demand or system capacity or maintenance.
- G,N,U Potential diversion hydrograph (cols. F,M) capped at 155 AF/mth (51 MG/mth) assumed system effective capacity.
- H,O,V Potential diversion≤ 155 AF/mth (51 MG/mth) system capacity (cols. G,N,S) and not exceeding northern service area production.
- I,P,W Potential diversion≤ 155 AF/mth (51 MG/mth) system capacity (cols. G,N,S) and not exceeding total SLVWD production.
- J,K,Q,S Assumes diversion limitations during stormflow periods result in diverting 10 AF/month [3.3 MG/mth] less than demand; accounted for once assumed system capacity is reached.
- L,S,X Potential diversion available to southern service area in excess of northern service area demand (cols. K,W minus cols. J,V).

A	B	C	D	E	F		G		H		I		J		K		L	M		N		O		P		Q		R		S	T	U		V		W		X
		Actual WY SLVWD Water Production			Arithmetic Extrapolation of Total Diversion Hydrograph													Semi-Log Extrapolation of Total Diversion Hydrograph														Maximum Extrapolation of Total Diversion Hydrograph						
					Diversions ≤ 51 MG/mth System Capacity								Adj. for Diversion Limits						Diversions ≤ 51 MG/mth System Capacity						Adj. for Diversion Limits						Diversions ≤51 MG/mth Sys. Cap.						
Water Year	Rain-fall at Ben Lomond	Total	N. Serv. Area	Diver-sions	Potential Diversion Hydro-graph	Δ*	Potential Diversions ≤51 MG/mth	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv. Area	Potential Diversion Hydro-graph	Δ*	Potential Diversions ≤51 MG/mth	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv. Area	% of Pot. Div. ≤155 AF/mth Used	Potential Diver-sions ≤51 MG/mth	Δ*	Up to N. Serv. Area Produc-tion	Δ*	Up to Total Produc-tion	Δ*	Extra Avail. to S. Serv. Area
	(% Avg)	(Mgal/yr)																													(MG/yr)						
1985	83%	580	514	305	368	63	368	63	327	22	345	39	308	3	325	20	17	440	135	390	84	327	22	345	40	314	9	326	21	12	84%	397	92	324	19	344	38	20
1986	137%	544	475	276	378	102	372	96	311	34	328	51	291	15	308	32	17	492	215	399	122	327	51	344	67	309	32	325	48	16	81%	388	112	313	36	333	57	21
1987	55%	557	484	174	206	33	206	33	194	20	200	26	181	7	187	13	6	205	32	205	32	193	19	199	25	180	6	186	12	6	90%	267	94	206	33	217	43	11
1988	62%	538	463	155	188	33	188	33	176	21	180	25	160	5	164	9	4	188	33	188	33	176	21	180	25	160	5	164	9	4	87%	275	120	206	51	223	68	17
1989	70%	524	438	202	252	50	252	50	226	24	235	33	207	5	215	13	9	260	58	260	58	232	30	244	42	215	13	224	22	9	86%	344	142	235	33	258	56	22
1990	49%	520	433	221	247	25	247	25	245	24	247	25	225	4	227	6	2	247	25	247	25	245	24	247	25	227	6	229	8	2	93%	384	163	269	47	307	86	38
1991	65%	534	445	154	171	17	171	17	167	13	171	17	157	3	161	7	4	175	21	175	21	167	13	175	21	157	3	165	11	8	94%	201	47	163	10	176	23	13
1992	84%	553	455	212	241	29	241	29	232	20	236	24	219	7	223	11	4	251	39	251	39	232	20	239	27	221	9	226	14	5	90%	288	76	228	16	245	33	17
1993	117%	556	455	278	342	64	342	64	295	17	312	34	279	1	296	18	17	357	79	349	71	295	17	312	34	286	8	296	18	10	85%	400	122	300	22	326	48	26
1994	67%	596	496	234	269	35	269	35	255	21	259	25	239	5	243	9	4	278	44	278	44	256	22	263	29	240	6	246	12	7	89%	342	108	266	32	288	54	22
1995	140%	609	487	341	468	127	459	118	389	47	431	90	369	28	412	71	43	561	220	486	145	393	52	443	101	380	39	423	82	43	87%	499	158	390	49	444	103	54
1996	124%	662	536	364	515	151	495	131	434	70	466	102	414	51	446	82	32	662	298	517	153	448	84	484	120	432	68	468	104	36	90%	530	166	448	84	487	123	39
1997	119%	689	549	331	494	163	470	139	411	80	445	114	398	67	432	101	35	546	215	479	149	415	84	452	121	406	75	439	108	33	92%	417	87	356	25	386	55	30
1998	168%	598	489	379	630	251	528	149	431	52	473	94	405	26	450	71	45	810	431	526	147	429	50	471	92	412	33	448	70	37	85%	505	126	401	22	442	63	42
1999	94%	650	517	390	462	72	461	71	406	16	435	46	386	-3	416	26	30	608	218	497	107	416	27	459	69	406	16	439	49	34	88%	500	111	416	27	459	69	43
2000	114%	633	491	338	424	86	420	82	361	23	393	55	341	3	373	35	32	477	139	444	106	371	33	409	71	357	19	392	55	36	88%	446	108	371	33	409	71	38
2001	76%	677	532	296	337	41	337	41	308	12	329	33	295	-1	316	20	21	350	54	344	48	310	14	333	37	303	7	320	24	18	93%	360	64	310	14	336	40	26
2002	96%	683	542	305	389	84	389	84	340	35	367	62	323	19	351	46	28	432	127	411	107	340	35	369	64	334	29	353	48	18	86%	393	89	319	15	349	44	29
2003	100%	691	549	302	387	85	387	84	332	30	363	61	313	10	344	41	31	456	154	416	114	336	34	376	73	325	23	356	54	31	86%	417	115	333	31	372	70	39
2004	90%	706	567	290	337	47	336	47	298	8	317	27	281	-8	300	11	19	403	114	359	70	303	14	333	44	295	6	317	28	22	88%	366	76	300	11	330	41	30
2005	136%	689	577	365	451	85	429	63	386	21	411	46	360	-5	385	20	24	678	313	449	83	402	36	429	64	381	16	406	41	25	91%	458	92	398	33	432	67	34
2006	152%	715	586	363	450	87	424	61	374	11	398	35	355	-8	379	16	24	710	347	442	79	387	24	411	48	379	16	395	32	15	89%	453	90	398	35	422	59	24
2007	59%	720	576	250	276	25	276	25	260	10	267	16	250	0	257	7	6	280	30	279	28	260	10	267	17	254	3	260	10	6	93%	201	47	163	10	176	23	13
2008	79%	659	515	232	275	43	268	36	234	2	251	19	221	-11	238	6	17	284	52	269	37	236	4	253	21	234	2	247	15	12	92%	530	166	448	84	487	123	39
Avg	98%	620	507	282	356	75	347	66	308	26	327	46	291	9	310	29	20	423	141	361	79	312	31	335	53	300	19	319	37	19	89%	392	107	316	31	345	60	29
Min	50%	520	433	154	171	17	171	17	167	2	171	16	157	-11	161	6	2	175	21	175	21	167	4	175	17	157	2	164	8	2	81%	201	47	163	10	176	23	11
Max	166%	720	586	390	630	251	528	149	434	80	473	114	414	67	450	101	45	810	431	526	153	448	84	484	121	432	75	468	108	43	94%	530	166	448	84	487	123	54

*Δ Difference from actual historic diversion (col. E).

Column Notes:

A Water year October through Septmeber (e.g., WY 2007 is from 10/1/06 to 9/30/07). Presented estimates derived from monthly calculations.

B Water-year rainfall at NOAA Ben Lomond 4 station, as percent of 1974-2006 average.

C Total SLVWD diversions and groundwater pumping, including Manana Woods.

D Northern service area diversions and groundwater pumping.

E Actual total diversions (supplied northern service area only), excluding those from Harmon, Earle, and Manson.

F-L Arithmetic extrapolation of total diversion hydrograph.

M-T Semi-logarithmic extrapolation of total diversion hydrograph.

T Adjusted total production (col. R) as a percent of potential diversion≤ 155 AF/mth (51 MG/mth) (col. N).

U-X Maximum extrapolation of total diversion hydrograph; assumes 155 AF/mth (51 MG/mth) diversion throughout months with storm runoff. Not realistic--for comparison purposes only.

F,M Potential diversion without regard to SLVWD demand or system capacity or maintenance.

G,N,U Potential diversion hydrograph (cols. F,M) capped at 155 AF/mth (51 MG/mth) assumed system effective capacity.

H,O,V Potential diversion ≤ 155 AF/mth (51 MG/mth) system capacity (cols. G,N,S) and not exceeding northern service area production.

I,P,W Potential diversion ≤ 155 AF/mth (51 MG/mth) system capacity (cols. G,N,S) and not exceeding total SLVWD production.

J,K,Q,S Assumes diversion limitations during stormflow periods result in diverting 10 AF/month [3.3 MG/mth] less than demand; accounted for once assumed system capacity is reached.

L,S,X Potential diversion available to southern service area in excess of northern service area demand (cols. K,W minus cols. J,V).

Table 4-13d
Potential Diversions Estimated for
1984-2008 Monthly Record
(WY's, MG/yr)

NM Johnson

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
								Semi-Log Extrapolation of Total Monthly Diversion Hydrograph								
									Diversions ≤ 155 AF/mth System Capacity							
													Adj. for Diversion Limits			
	WY Rain-	Historical SLVWD Water Production			Water Production Adjusted to 2030 Average Demand			Potential Diversion Hydro-	Potential Diversions ≤155 AF/mth	Up to Adj. N. Serv. Area Produc-	Up to Adjusted Total Produc-	Extra Avail. to S.	Up to Adj. N. Serv. Area Produc-	Up to Adjusted Total Produc-	Extra Avail. to S.	% of Pot. Div.
Calen-	fall at Ben Lo		N. Serv.	Diver-		N. Serv.	S. Serv.	graph		tion	tion	Serv.			Serv.	≤155
dar Year	mond (% Avg)	Total	Area	sions	Total	Area	Area	Δ*	Δ*	Δ*	Δ*	Area	tion Δ*	tion Δ*	Area	AF/mth Used
		(AF/yr)														
1984	82%	1,868	1,662	987	2,386	1,877	510	1,301 314	1,167 180	1,058 70	1,140 152	82	998 11	1,080 93	82	93%
1985	83%	1,778	1,570	861	2,219	1,748	471	1,291 429	1,136 274	982 120	1,080 218	98	924 63	1,040 179	116	92%
1986	137%	1,645	1,423	802	2,417	1,908	509	1,438 636	1,153 351	1,068 266	1,140 339	73	1,028 226	1,120 319	93	97%
1987	55%	1,699	1,482	501	2,452	1,958	494	607 106	607 106	603 102	607 106	4	553 52	557 56	4	92%
1988	62%	1,652	1,414	467	2,329	1,842	487	586 120	586 120	576 109	586 120	10	526 59	536 70	10	91%
1989	70%	1,635	1,349	761	2,257	1,744	513	926 165	926 165	916 155	926 165	10	856 95	866 105	10	94%
1990	49%	1,599	1,349	524	2,153	1,734	419	577 53	577 53	577 53	577 53	0	542 18	542 18	0	94%
1991	65%	1,623	1,343	486	2,141	1,670	472	562 76	562 76	562 76	562 76	0	522 36	522 36	0	93%
1992	84%	1,701	1,393	690	2,231	1,726	505	810 120	810 120	788 98	810 120	22	748 58	770 80	22	95%
1993	117%	1,724	1,419	901	2,221	1,732	489	1,153 253	1,128 227	1,049 149	1,102 201	53	989 89	1,042 141	53	92%
1994	67%	1,841	1,533	738	2,314	1,824	490	881 143	881 143	845 107	867 130	23	795 57	817 80	23	93%
1995	140%	1,903	1,511	1,075	2,348	1,782	567	1,799 724	1,568 494	1,416 341	1,552 478	136	1,366 291	1,522 448	156	97%
1996	124%	2,037	1,650	1,156	2,461	1,900	561	2,079 923	1,636 480	1,521 365	1,617 461	96	1,461 305	1,587 431	126	97%
1997	119%	2,069	1,640	937	2,461	1,870	591	1,640 702	1,436 499	1,330 393	1,417 480	87	1,290 353	1,377 440	87	96%
1998	168%	1,863	1,530	1,254	2,199	1,739	461	2,522 1,268	1,652 398	1,478 224	1,609 356	131	1,408 154	1,549 296	141	94%
1999	94%	1,887	1,470	1,128	2,200	1,661	539	1,784 656	1,443 315	1,289 161	1,407 279	117	1,229 101	1,367 239	137	95%
2000	114%	2,028	1,596	1,033	2,308	1,764	543	1,419 386	1,319 286	1,201 167	1,300 267	99	1,151 117	1,270 237	119	96%
2001	76%	2,103	1,662	891	2,349	1,808	541	1,107 216	1,086 195	985 94	1,076 185	92	935 44	1,036 145	102	95%
2002	96%	2,119	1,676	889	2,334	1,801	533	1,411 522	1,288 399	1,129 239	1,245 355	116	1,079 189	1,195 305	116	93%
2003	100%	2,128	1,689	939	2,311	1,794	518	1,271 331	1,209 270	1,043 104	1,169 229	125	984 45	1,109 170	125	92%
2004	90%	2,158	1,752	922	2,323	1,845	478	1,263 341	1,128 206	1,010 87	1,090 168	81	951 29	1,041 119	90	92%
2005	136%	2,122	1,773	1,119	2,243	1,837	406	2,040 921	1,334 216	1,217 98	1,309 191	92	1,160 41	1,269 151	110	95%
2006	152%	2,213	1,813	1,128	2,303	1,857	446	2,183 1,054	1,359 231	1,206 78	1,295 166	89	1,178 49	1,255 126	77	92%
2007	59%	2,152	1,713	692	2,210	1,736	474	784 92	779 87	726 33	748 56	23	705 13	728 35	23	93%
2008	79%	2,026	1,581	694	2,052	1,583	470	854 160	809 115	708 14	763 69	55	701 7	743 49	42	92%
Avg	98%	1,903	1,560	863	2,289	1,789	499	1,292 428	1,103 240	1,011 148	1,080 217	69	963 100	1,038 175	75	94%
Min	50%	1,599	1,343	467	2,052	1,583	406	562 53	562 53	562 14	562 53	0	522 7	522 18	0	91%
Max	166%	2,213	1,813	1,254	2,461	1,958	591	2,522 1,268	1,652 499	1,521 393	1,617 480	136	1,461 353	1,587 448	156	97%
		(MG/yr)														
1984	82%	609	542	322	778	611	166	424 102	380 59	345 23	371 50	27	325 4	352 30	27	93%
1985	83%	579	512	281	723	569	154	421 140	370 89	320 39	352 71	32	301 21	339 58	38	92%
1986	137%	536	464	261	787	622	166	469 207	376 114	348 87	372 110	24	335 74	365 104	30	97%
1987	55%	554	483	163	799	638	161	198 35	198 35	196 33	198 35	1	180 17	182 18	1	92%
1988	62%	538	461	152	759	600	159	191 39	191 39	188 36	191 39	3	171 19	175 23	3	91%
1989	70%	533	440	248	735	568	167	302 54	302 54	298 50	302 54	3	279 31	282 34	3	94%
1990	49%	521	440	171	702	565	137	188 17	188 17	188 17	188 17	0	177 6	177 6	0	94%
1991	65%	529	438	158	698	544	154	183 25	183 25	183 25	183 25	0	170 12	170 12	0	93%
1992	84%	554	454	225	727	563	164	264 39	264 39	257 32	264 39	7	244 19	251 26	7	95%
1993	117%	562	462	293	724	564	159	376 82	368 74	342 48	359 66	17	322 29	340 46	17	92%
1994	67%	600	499	240	754	594	160	287 46	287 46	275 35	283 42	7	259 19	266 26	7	93%
1995	140%	620	492	350	765	581	185	586 236	511 161	461 111	506 156	44	445 95	496 146	51	97%
1996	124%	664	538	377	802	619	183	677 301	533 156	496 119	527 150	31	476 99	517 140	41	97%
1997	119%	674	534	305	802	609	193	534 229	468 163	433 128	462 156	28	420 115	449 143	28	96%
1998	168%	607	498	408	717	566	150	822 413	538 130	482 73	524 116	43	459 50	505 96	46	94%
1999	94%	615	479	368	717	541	176	581 214	470 103	420 53	458 91	38	401 33	445 78	45	95%
2000	114%	661	520	337	752	575	177	462 126	430 93	391 54	424 87	32	375 38	414 77	39	96%
2001	76%	685	542	290	765	589	176	361 70	354 63	321 31	351 60	30	305 14	338 47	33	95%
2002	96%	691	546	290	760	587	174	460 170	420 130	368 78	406 116	38	351 62	389 99	38	93%
2003	100%	693	550	306	753	584	169	414 108	394 88	340 34	381 75	41	321 15	361 55	41	92%
2004	90%	703	571	300	757	601	156	412 111	367 67	329 28	355 55	26	310 9	339 39	29	92%
2005	136%	691	578	364	731	599	132	665 300	435 70	397 32	427 62	30	378 13	414 49	36	95%
2006	152%	721	591	368	750	605	145	711 344	443 75	393 25	422 54	29	384 16	409 41	25	92%
2007	59%	701	558	226	720	566	154	256 30	254 28	236 11	244 18	7	230 4	237 12	7	93%
2008	79%	660	515	226	669	516	153	278 52	264 37	231 5	249 23	18	228 2	242 16	14	92%
Avg	98%	620	508	281	746	583	163	421 140	359 78	329 48	352 71	22	314 33	338 57	24	94%
Min	50%	521	438	152	669	516	132	183 17	183 17	183 5	183 17	0	170 2	170 6	0	91%
Max	166%	721	591	408	802	638	193	822 413	538 163	496 128	527 156	44	476 115	517 146	51	97%

*Δ Difference from actual historic diversion (col. E).

Table 4-14a

Potential Diversions Estimated for 1984-2008 Monthly Record Adjusted to Projected 2030 Demand, (CY's)

Column Notes:

A Calendar year January through December. Presented estimates derived from monthly calculations.

B Water-year total rainfall at NOAA Ben Lomond 4 station, as percent of 1974-2006 average.

C Historical record of northern and southern service area diversions and groundwater pumping (i.e., total SLVWD demand, including Manana Woods).

D Historical record of northern service area diversions and groundwater pumping (i.e., total northern service area demand).

E Historical record of actual total diversions (supplied northern service area only), excluding those from Harmon, Earle, and Manson creeks.

F Record adjusted to reflect 32 AF/yr (10.5 MG/yr) total SLVWD demand increase since 1986 and current range of seasonal fluctuation (Fig. 4-18).

G Record adjusted to reflect 21 AF/yr (7.0 MG/yr) northern service area demand increase since 1986 and current range of seasonal fluctuation (Fig. 4-19).

F-G Adjusted to reflect 2030 average demand.

H Col. F minus col. G.

I Semi-logarithmic extrapolation of combined monthly diversion hydrograph without regard to SLVWD demand or system capacity or maintenance.

J Potential diversion hydrograph (col. H) capped at 155 AF/mth (51 MG/mth) assumed effective system capacity.

K,N Potential diversion ≤ 155 AF/mth (51 MG/mth) system capacity (col. I) and not exceeding adjusted northern service area production.

L,O Potential diversion ≤ 155 AF/mth (51 MG/mth) system capacity (col. I) and not exceeding adjusted total SLVWD production.

M,P Diversion available to southern service area (cols. L,O minus cols. K,N).

N-Q Assumes diversion limitations during stormflow periods result in diverting 10 AF/month [3.3 MG/mth] less than demand.

Q Adjusted total production (col. O) as a percent of potential diversion ≤ 155 AF/mth (51 MG/mth) (col. J).

A	B	C	D	E	F	G	H	I		J		K		L		M	N		O		P	Q
								Semi-Log Extrapolation of Total Monthly Diversion Hydrograph														
										Diversions ≤ 155 AF/mth System Capacity												
																	Adj. for Diversion Limits					
	WY	Historical SLVWD			Water Production			Potential		Potential		Up to Adj.		Up to		Extra	Up to Adj.		Up to		Extra	% of
	Rain-	Water Production			Adjusted to 2030			Diversion		Diversions		N. Serv.		Adjusted		Avail.	N. Serv.		Adjusted		Avail.	Pot.
	fall at		N.		Average Demand			Hydro-		≤155		Area		Total		to S.	Area		Total		to S.	Div.
	Ben Lo		Serv.	Diver-		N. Serv.	S. Serv.	graph		AF/mth		Produc-		Produc-		Serv.	Produc-		Produc-		Serv.	≤155
Water	mond	Total	Area	sions	Total	Area	Area		Δ*		Δ*	tion	Δ*	tion	Δ*	Area	tion	Δ*	tion	Δ*	Area	AF/mth
Year	(% Avg)	(AF/yr)																				Used
1985	83%	1,781	1,576	937	2,230	1,758	471	1,351	414	1,196	259	1,041	105	1,139	202	98	984	47	1,100	163	116	92%
1986	137%	1,671	1,457	849	2,356	1,865	491	1,509	660	1,224	376	1,139	290	1,211	363	73	1,089	241	1,182	333	93	97%
1987	55%	1,710	1,486	533	2,481	1,971	510	630	98	630	98	626	93	630	98	4	586	53	590	58	4	94%
1988	62%	1,650	1,421	476	2,339	1,858	480	577	101	577	101	567	91	577	101	10	517	41	527	51	10	91%
1989	70%	1,607	1,344	620	2,219	1,733	486	799	179	799	179	789	169	799	179	10	729	109	739	119	10	92%
1990	49%	1,595	1,330	679	2,164	1,727	437	757	78	757	78	757	78	757	78	0	702	23	702	23	0	93%
1991	65%	1,640	1,364	471	2,179	1,704	475	537	65	537	65	537	65	537	65	0	507	35	507	35	0	94%
1992	84%	1,698	1,398	651	2,213	1,721	492	770	120	770	120	748	97	770	120	22	708	57	730	80	22	95%
1993	117%	1,705	1,395	853	2,209	1,713	496	1,096	243	1,071	217	992	139	1,045	191	53	942	89	995	141	53	93%
1994	67%	1,829	1,521	718	2,311	1,818	493	853	135	853	135	817	99	840	122	23	767	49	790	72	23	93%
1995	140%	1,869	1,493	1,047	2,320	1,769	550	1,722	675	1,492	445	1,339	293	1,476	429	136	1,279	233	1,436	389	156	96%
1996	124%	2,031	1,645	1,117	2,463	1,900	563	2,031	914	1,588	471	1,483	366	1,569	452	86	1,433	316	1,549	432	116	98%
1997	119%	2,114	1,684	1,015	2,519	1,919	600	1,675	660	1,472	456	1,370	355	1,453	438	82	1,330	315	1,413	398	82	96%
1998	168%	1,835	1,500	1,163	2,177	1,714	464	2,486	1,323	1,615	452	1,441	278	1,573	410	132	1,371	208	1,513	350	142	94%
1999	94%	1,994	1,588	1,196	2,317	1,781	535	1,865	669	1,524	328	1,376	180	1,488	292	112	1,316	120	1,448	252	132	95%
2000	114%	1,942	1,508	1,037	2,217	1,680	537	1,464	427	1,364	327	1,226	188	1,345	308	119	1,166	128	1,305	268	139	96%
2001	76%	2,079	1,632	908	2,333	1,784	549	1,074	166	1,056	148	994	86	1,056	148	62	954	46	1,026	118	72	97%
2002	96%	2,095	1,662	935	2,319	1,793	526	1,326	391	1,263	327	1,102	167	1,217	282	115	1,052	117	1,167	232	115	92%
2003	100%	2,122	1,685	928	2,313	1,795	518	1,401	473	1,276	349	1,086	159	1,229	301	143	1,026	99	1,169	241	143	92%
2004	90%	2,167	1,739	889	2,344	1,840	503	1,238	350	1,103	215	972	83	1,066	177	94	923	34	1,026	137	103	93%
2005	136%	2,113	1,772	1,121	2,243	1,841	402	2,082	961	1,377	256	1,259	139	1,352	231	92	1,183	62	1,292	172	110	94%
2006	152%	2,193	1,800	1,114	2,291	1,848	443	2,180	1,066	1,356	243	1,203	89	1,292	178	89	1,164	51	1,242	128	77	92%
2007	59%	2,209	1,769	768	2,274	1,796	478	860	92	855	87	801	33	824	56	23	780	13	803	35	23	94%
2008	79%	2,022	1,581	712	2,056	1,588	468	872	160	827	115	726	14	781	69	55	719	7	761	49	42	92%
Avg	98%	1,903	1,556	864	2,300	1,800	499	1,298	434	1,108	244	1,016	152	1,084	220	68	968	104	1,042	178	74	94%
Min	50%	1,595	1,330	471	2,056	1,588	402	537	65	537	65	537	14	537	56	0	507	7	507	23	0	91%
Max	166%	2,209	1,800	1,196	2,519	1,971	600	2,486	1,323	1,615	471	1,483	366	1,573	452	143	1,433	316	1,549	432	156	98%
		(MG/yr)																				
1985	83%	580	514	305	727	573	156	440	135	390	84	339	34	371	66	32	321	15	358	53	38	92%
1986	137%	544	475	276	768	608	158	492	215	399	122	371	95	395	118	24	355	78	385	109	30	97%
1987	55%	557	484	174	808	642	143	205	32	205	32	204	30	205	32	1	191	17	192	19	1	94%
1988	62%	538	463	155	762	606	155	188	33	188	33	185	30	188	33	3	168	13	172	17	3	91%
1989	70%	524	438	202	723	565	160	260	58	260	58	257	55	260	58	3	237	35	241	39	3	92%
1990	49%	520	433	221	705	563	162	247	25	247	25	247	25	247	25	0	229	8	229	8	0	93%
1991	65%	534	445	154	710	555	161	175	21	175	21	175	21	175	21	0	165	11	165	11	0	94%
1992	84%	553	455	212	721	561	179	251	39	251	39	244	32	251	39	7	231	19	238	26	7	95%
1993	117%	556	455	278	720	558	183	357	79	349	71	323	45	340	62	17	307	29	324	46	17	93%
1994	67%	596	496	234	753	592	196	278	44	278	44	266	32	274	40	7	250	16	257	23	7	93%
1995	140%	609	487	341	756	576	151	561	220	486	145	436	95	481	140	44	417	76	468	127	51	96%
1996	124%	662	536	364	802	619	174	662	298	517	153	483	119	511	147	28	467	103	505	141	38	98%
1997	119%	689	549	331	821	625	175	546	215	479	149	447	116	473	143	27	434	103	460	130	27	96%
1998	168%	598	489	379	709	558	179	810	431	526	147	469	90	512	134	43	447	68	493	114	46	94%
1999	94%	650	517	390	755	580	171	608	218	497	107	448	59	485	95	36	429	39	472	82	43	95%
2000	114%	633	491	338	722	547	169	477	139	444	106	399	61	438	100	39	380	42	425	87	45	96%
2001	76%	677	532	296	760	581	164	350	54	344	48	324	28	344	48	20	311	15	334	38	24	97%
2002	96%	683	542	305	755	584	131	432	127	411	107	359	54	397	92	37	343	38	380	76	37	92%
2003	100%	691	549	302	754	585	144	456	154	416	114	354	52	400	98	46	334	32	381	79	46	92%
2004	90%	706	567	290	764	600	131	403	114	359	70	317	27	347	58	31	301	11	334	45	34	93%
2005	136%	689	577	365	731	600	196	678	313	449	83	410	45	440	75	30	385	20	421	56	36	94%
2006	152%	715	586	363	746	602	162	710	347	442	79	392	29	421	58	29	379	17	405	42	25	92%
2007	59%	720	576	250	741	585	131	280	30	279	28	261	11	268	18	7	254	4	262	12	7	94%
2008	79%	659	515	232	670	518	196	284	52	269	37	236	5	254	23	18	234	2	248	16	14	92%
Avg	98%	620	507	282	749	586	162	423	141	361	79	331	50	353	72	22	315	34	340	58	24	94%
Min	50%	520	433	154	670	518	131	175	21	175	21	175	5	175	18	0	165	2	165	8	0	91%
Max	166%	720	586	390	821	642	196	810	431	526	153	483	119	512	147	46	467	103	505	141	51	98%

*Δ Difference from actual historic diversion (col. E).

Table 4-14b

Potential Diversions Estimated for 1984-2008 Monthly Record Adjusted to Projected 2030 Demand, (WY's)

Column Notes:

A Water year October through Septmeber. Presented estimates derived from monthly calculations.

B Water-year total rainfall at NOAA Ben Lomond 4 station, as percent of 1974-2006 average.

C Historical record of northern and southern service area diversions and groundwater pumping (i.e., total SLVWD demand, including Manana Woods).

D Historical record of northern service area diversions and groundwater pumping (i.e., total northern service area demand).

E Historical record of actual total diversions (supplied northern service area only), excluding those from Harmon, Earle, and Manson creeks.

F Record adjusted to reflect 32 AF/yr (10.5 MG/yr) total SLVWD demand increase since 1986 and current range of seasonal fluctuation (Fig. 4-18).

G Record adjusted to reflect 21 AF/yr (7.0 MG/yr) northern service area demand increase since 1986 and current range of seasonal fluctuation (Fig. 4-19).

F-G Adjusted to reflect 2030 average demand.

H Col. F minus col. G.

I Semi-logarithmic extrapolation of combined monthly diversion hydrograph without regard to SLVWD demand or system capacity or maintenance.

J Potential diversion hydrograph (col. H) capped at 155 AF/mth (51 MG/mth) assumed effective system capacity.

K,N Potential diversion ≤ 155 AF/mth (51 MG/mth) system capacity (col. I) and not exceeding adjusted northern service area production.

L,O Potential diversion ≤ 155 AF/mth (51 MG/mth) system capacity (col. I) and not exceeding adjusted total SLVWD production.

M,P Diversion available to southern service area (cols. L,O minus cols. K,N).

N-Q Assumes diversion limitations during stormflow periods result in diverting 10 AF/month [3.3 MG/mth] less than demand.

	A	B	C	D		E	F	G	H		I		J		K	L	M			N		O	P	Q
									Estimated Diversions in Response to Northern Service Area Demand															
	Water Production								Calculated on Average Monthly Basis								Statistics of 1984-2006 Monthly Calculations							
	Total Northern Service Area			Actual 1984-2006 Diversions					2001-06 Average Demand							Max. De-	1984-2006 Actual Demand			Projected 2030 Demand				
									Average		Dry Year		Wet Year				Average							
	1984-2006	2001-06	Pro-jected 2030	Average (% of '01-'06 N. Prod.)		Dry Yrs	Wet Yrs	Max. Mths	arith.	semi-log	arith.	semi-log	arith.	semi-log	Maximum Months	mand	arith.	semi-log	max.	Average (% of N. Prod.)		Dry Yrs	Wet Yrs	Max. Mths
Water Year																				semi-log extrapolation				
	(AF/month)																							
Oct	127	147	146	41	28%	30	50	83	41	41	30	30	50	50	83	83	45	45	44	45	31%	30	62	91
Nov	105	112	122	46	41%	36	51	90	46	46	36	36	51	51	90	90	50	51	50	52	43%	37	70	100
Dec	104	112	122	69	62%	46	81	111	69	69	46	46	81	81	111	111	71	75	88	80	66%	50	102	123
Jan	102	109	120	82	75%	60	88	115	96	99	60	60	99	99	99	110	84	86	96	95	79%	68	112	124
Feb	93	96	110	80	83%	55	88	110	86	86	69	75	86	86	86	104	80	84	89	93	84%	74	105	121
Mar	104	114	122	96	84%	77	99	122	104	104	86	104	104	104	104	114	92	97	102	107	88%	90	117	139
Apr	120	123	138	101	82%	80	111	129	103	113	80	91	113	113	113	143	101	104	111	112	81%	87	130	155
May	143	157	163	97	62%	67	117	135	97	110	67	67	129	155	155	155	101	104	105	107	66%	68	144	155
Jun	160	181	181	82	45%	50	108	126	82	89	50	50	120	128	155	155	87	91	88	93	51%	50	137	155
Jul	179	210	201	70	33%	37	102	138	70	70	37	37	102	102	155	155	73	74	72	74	37%	37	114	155
Aug	173	194	194	56	29%	30	83	135	56	56	30	30	83	83	135	135	59	59	57	59	30%	30	92	135
Sep	150	173	170	44	25%	24	65	95	44	44	24	24	65	65	95	95	46	47	46	47	27%	24	73	106
Sum	1,560	1,727	1,789	863	50%	593	1,042	1,390	893	927	616	651	1,083	1,117	1,381	1,450	889	918	949	963	54%	645	1,259	1,558
	(MG/month)																							
Oct	41	48	47	14	28%	10	16	27	14	14	10	10	16	16	27	27	15	15	14	15	31%	10	20	30
Nov	34	37	40	15	41%	12	17	29	15	15	12	12	17	17	29	29	16	17	16	17	43%	12	23	33
Dec	34	36	40	23	62%	15	26	36	23	23	15	15	26	26	36	36	23	25	29	26	66%	16	33	40
Jan	33	36	39	27	75%	19	29	37	31	32	19	19	32	32	32	36	27	28	31	31	79%	22	37	40
Feb	30	31	36	26	83%	18	29	36	28	28	22	24	28	28	28	34	26	27	29	30	84%	24	34	39
Mar	34	37	40	31	84%	25	32	40	34	34	28	34	34	34	34	37	30	32	33	35	88%	29	38	45
Apr	39	40	45	33	82%	26	36	42	34	37	26	29	37	37	37	47	33	34	36	37	81%	28	42	51
May	47	51	53	32	62%	22	38	44	32	36	22	22	42	51	51	51	33	34	34	35	66%	22	47	51
Jun	52	59	59	27	45%	16	35	41	27	29	16	16	39	42	51	51	28	30	29	30	51%	16	45	51
Jul	58	68	65	23	33%	12	33	45	23	23	12	12	33	33	51	51	24	24	24	24	37%	12	37	51
Aug	56	63	63	18	29%	10	27	44	18	18	10	10	27	27	44	44	19	19	19	19	30%	10	30	44
Sep	49	56	55	14	25%	8	21	31	14	14	8	8	21	21	31	31	15	15	15	15	27%	8	24	34
Sum	508	563	583	281	50%	193	339	453	291	302	201	212	353	364	450	473	290	299	309	314	54%	210	410	508

Column Notes:

A-C Northern service area diversions and groundwater pumping.

C From Figure 4-19.

D-G Excludes diversions from Harmon, Earle, and Manson creeks.

E,I,O Averages for WY's 1987-92 & 1994.

F,J,P Averags for WY's 1986, 1995-2000, & 2005-06.

G,K,L,Q Maximums set upper bound but may not be realistic.

H-Q Adjusted for system limitations (assums diversions are 10 AF/month [3.3 MG/mth] less than demand during stormflow periods.

H-L From Table 4-12 and Figure 4-16.

K-L Diversion hydrograph constructed from 1984-2006 maximum monthly diversions.

L Maximum monthly demand for 2001-06.

M From Table 4-13 and Figure 4-17.

N-Q From Table 4-14 and Figure 4-20.

Table 4-15a

Summary of Actual and Estimated Potential Monthly Diversions in Response to Northern Service Area Demand

	A	B	C	D	E	F	G	H		I		J		K	M			N		O	P
								Estimated Diversions Available for Southern Service Area													
	Water Production							Calculated on Average Monthly Basis							Statistics of 1984-2006 Monthly Calculations						
	Total Southern Service Area			Actual 1984-2006 Diversions				2001-06 Average Demand							1984-2006 Actual Demand			Projected 2030 Demand			
								Average		Dry Year		Wet Year		Maxi	Average			Average		Dry	Wet
	1984-	2001-	Pro-jected		Dry	Wet	Max.		semi-		semi-		semi-	mum		semi-		(% of S. Prod.)		Yrs	Yrs
Water	2006	06	2030	Avg	Yrs	Yrs	Mths	arith.	log	arith.	log	arith.	log	Mths	arith.	log	max.	semi-log			
Year	(AF/month)																				
Oct	32	39	45	41	30	50	83	0	0	0	0	0	0	0	0	0	0	0	0%	0	0
Nov	20	25	32	46	36	51	90	0	0	0	0	0	0	0	0	1	2	0	0%	0	0
Dec	19	22	29	69	46	81	111	0	0	0	0	0	0	0	4	6	13	5	18%	0	6
Jan	16	20	26	82	60	88	115	0	17	0	0	3	20	20	11	9	14	16	63%	1	28
Feb	15	18	24	80	55	88	110	18	18	0	0	18	18	18	13	9	15	19	79%	5	25
Mar	19	25	30	96	77	99	122	13	25	0	7	25	25	25	16	12	20	21	71%	4	29
Apr	24	29	38	101	80	111	129	0	15	0	0	29	29	29	11	12	17	11	28%	0	21
May	30	44	48	97	67	117	135	0	0	0	0	0	0	0	2	4	4	2	5%	0	6
Jun	35	46	55	82	50	108	126	0	0	0	0	0	0	0	1	2	1	0	0%	0	0
Jul	41	52	61	70	37	102	138	0	0	0	0	0	0	0	0	0	0	0	0%	0	0
Aug	41	49	60	56	30	83	135	0	0	0	0	0	0	0	0	0	0	0	0%	0	0
Sep	35	44	52	44	24	65	95	0	0	0	0	0	0	0	0	0	0	0	0%	0	0
Sum	327	413	499	863	593	1,042	1,390	31	76	0	7	75	92	92	59	55	85	75	15%	10	116
	(MG/month)																				
Oct	10	13	15	14	10	16	27	0	0	0	0	0	0	0	0	0	0	0	0%	0	0
Nov	7	8	10	15	12	17	29	0	0	0	0	0	0	0	0	0	1	0	0%	0	0
Dec	6	7	9	23	15	26	36	0	0	0	0	0	0	0	1	2	4	2	18%	0	2
Jan	5	7	8	27	19	29	37	0	6	0	0	1	7	7	4	3	5	5	63%	0	9
Feb	5	6	8	26	18	29	36	6	6	0	0	6	6	6	4	3	5	6	79%	2	8
Mar	6	8	10	31	25	32	40	4	8	0	2	8	8	8	5	4	6	7	71%	1	10
Apr	8	9	12	33	26	36	42	0	5	0	0	9	9	9	4	4	5	4	28%	0	7
May	10	14	16	32	22	38	44	0	0	0	0	0	0	0	1	1	1	1	5%	0	2
Jun	11	15	18	27	16	35	41	0	0	0	0	0	0	0	0	1	0	0	0%	0	0
Jul	13	17	20	23	12	33	45	0	0	0	0	0	0	0	0	0	0	0	0%	0	0
Aug	13	16	20	18	10	27	44	0	0	0	0	0	0	0	0	0	0	0	0%	0	0
Sep	11	14	17	14	8	21	31	0	0	0	0	0	0	0	0	0	0	0	0%	0	0
Sum	107	135	163	281	193	339	453	10	25	0	2	24	30	30	19	18	28	24	15%	3	38

Column Notes:

A-B Southern service area groundwater pumping.
C Difference between Figs. 4-18 & -19.
D-G Excludes diversions from Harmon, Earle, and Manson creeks.
E,I,O Averages for WY's 1987-92 & 1994.
F,J,P Averags for WY's 1986, 1995-2000, & 2005-06.
G,K,L,Q Maximums set upper bound but may not be realistic.
H-Q Values obtained by subtracting Table 4-16a from Table 4-16c.
L Maximum monthly demand for 2001-06.

Table 4-15b
Summary of Actual and Estimated Potential Monthly Diversions Available to Southern Service Area

	A	B	C	D		E	F	G	H		I		J		K	L	M			N		O	P	Q
	Water Production								Estimated Diversions in Response to Total District Demand															
									Calculated on Average Monthly Basis								Statistics of 1984-2006 Monthly Calculations							
	Total District			Actual 1984-2006 Diversions					2001-06 Average Demand							Max. De-	1984-2006 Actual Demand			Projected 2030 Demand				
									Average		Dry Year		Wet Year				Average			Average (% of Total Prod.)		Dry	Wet	Max.
Water Year	1984-2006	2001-06	Pro-jected 2030	Average (% of '01-'06 Total Prod.)		Dry Yrs	Wet Yrs	Max. Mths	arith.	semi-log	arith.	semi-log	arith.	semi-log	Maximum Months	mand	arith.	semi-log	max.	semi-log		Yrs	Yrs	Mths
	(AF/month)																							
Oct	159	186	190	41	22%	30	50	83	41	41	30	30	50	50	83	83	45	45	44	45	24%	30	62	91
Nov	125	137	154	46	34%	36	51	90	46	46	36	36	51	51	90	90	50	52	52	52	34%	37	70	100
Dec	123	133	151	69	52%	46	81	111	69	69	46	46	81	81	111	111	75	82	101	85	56%	50	108	138
Jan	118	129	146	82	63%	60	88	115	96	116	60	60	102	119	119	127	95	96	110	111	76%	69	140	155
Feb	108	114	135	80	70%	55	88	110	104	104	69	75	104	104	104	119	93	93	105	112	83%	78	131	155
Mar	123	139	151	96	69%	77	99	122	117	129	86	111	129	129	129	140	108	110	122	128	85%	94	146	155
Apr	143	151	176	101	66%	80	111	129	103	128	80	91	141	141	141	155	113	116	127	123	70%	87	151	155
May	174	201	211	97	48%	67	117	135	97	110	67	67	129	155	155	155	103	108	109	109	52%	68	150	155
Jun	195	227	236	82	36%	50	108	126	82	89	50	50	120	128	155	155	88	93	90	93	39%	50	137	155
Jul	221	262	262	70	26%	37	102	138	70	70	37	37	102	102	155	155	73	74	72	74	28%	37	114	155
Aug	213	243	255	56	23%	30	83	135	56	56	30	30	83	83	135	135	59	59	57	59	23%	30	92	135
Sep	185	217	222	44	20%	24	65	95	44	44	24	24	65	65	95	95	46	47	46	47	21%	24	73	106
Sum	1,887	2,141	2,289	863	40%	593	1,042	1,390	924	1,002	616	658	1,158	1,209	1,473	1,521	948	973	1,034	1,038	45%	655	1,375	1,655
	(MG/month)																							
Oct	52	61	62	14	22%	10	16	27	14	14	10	10	16	16	27	27	15	15	14	15	24%	10	20	30
Nov	41	45	50	15	34%	12	17	29	15	15	12	12	17	17	29	29	16	17	17	17	34%	12	23	33
Dec	40	43	49	23	52%	15	26	36	23	23	15	15	26	26	36	36	24	27	33	28	56%	16	35	45
Jan	38	42	47	27	63%	19	29	37	31	38	19	19	33	39	39	41	31	31	36	36	76%	23	46	51
Feb	35	37	44	26	70%	18	29	36	34	34	22	24	34	34	34	39	30	30	34	36	83%	26	43	51
Mar	40	45	49	31	69%	25	32	40	38	42	28	36	42	42	42	46	35	36	40	42	85%	31	48	51
Apr	47	49	57	33	66%	26	36	42	34	42	26	29	46	46	46	51	37	38	42	40	70%	28	49	51
May	57	65	69	32	48%	22	38	44	32	36	22	22	42	51	51	51	34	35	36	36	52%	22	49	51
Jun	64	74	77	27	36%	16	35	41	27	29	16	16	39	42	51	51	29	30	29	30	39%	16	45	51
Jul	72	85	85	23	26%	12	33	45	23	23	12	12	33	33	51	51	24	24	24	24	28%	12	37	51
Aug	69	79	83	18	23%	10	27	44	18	18	10	10	27	27	44	44	19	19	19	19	23%	10	30	44
Sep	60	71	72	14	20%	8	21	31	14	14	8	8	21	21	31	31	15	15	15	15	21%	8	24	34
Sum	615	697	746	281	40%	193	339	453	301	327	201	214	377	394	480	495	309	317	337	338	45%	213	448	539

Column Notes:

A-C Northern service area diversions and groundwater pumping.

C From Figure 4-19.

D-G Excludes diversions from Harmon, Earle, and Manson creeks.

E,I,O Averages for WY's 1987-92 & 1994.

F,J,P Averags for WY's 1986, 1995-2000, & 2005-06.

G,K,L,Q Maximums set upper bound but may not be realistic.

H-Q Adjusted for system limitations (assums diversions are 10 AF/month [3.3 MG/mth] less than demand during stormflow periods.

H-L From Table 4-12 and Figure 4-16.

K-L Diversion hydrograph constructed from 1984-2006 maximum monthly diversions.

L Maximum monthly demand for 2001-06.

M From Table 4-13 and Figure 4-17.

N-Q From Table 4-14 and Figure 4-20.

Table 4-15c

Summary of Actual and Estimated Potential Monthly Diversions in Response to Total District Demand

Calendar Year	A			B			C			D			E		F			G		H			I	
	Historical Water Production						Projected 2030 Water Production			Estimated Annual Diversions (calculated monthly)														
										Northern Service Area					Available to South Service Area					Total				
	N. Serv. Area	S. Serv. Area	Total	Diversions (% of Production)			N. Serv. Area	S. Serv. Area	Total	Historical Demand			2030 Demand		Historical Demand			2030 Demand		Historical Demand			2030 Demand	
					Total	North				arith.	semi-log	max.	semi-log	% of N.	arith.	semi-log	max.	semi-log	% of S.	arith.	semi-log	max.	semi-log	% of N.&S.
	(AF/yr)																							
1984	1,662	206	1,868	987	53%	59%	1,877	510	2,386	955	988	1,004	998	53%	40	19	58	82	16%	994	1,007	1,062	1,080	45%
1985	1,570	208	1,778	861	48%	55%	1,748	471	2,219	873	905	951	924	53%	49	35	62	116	25%	922	940	1,013	1,040	47%
1986	1,423	222	1,645	802	49%	56%	1,908	509	2,417	849	886	875	1,028	54%	52	49	52	93	18%	901	935	927	1,120	46%
1987	1,482	217	1,699	501	29%	34%	1,958	494	2,452	521	519	649	553	28%	19	18	44	4	1%	540	537	692	557	23%
1988	1,414	238	1,652	467	28%	33%	1,842	487	2,329	482	499	624	526	29%	12	12	54	10	2%	494	511	678	536	23%
1989	1,349	286	1,635	761	47%	56%	1,744	513	2,257	779	787	842	856	49%	27	28	106	10	2%	806	815	948	866	38%
1990	1,349	250	1,599	524	33%	39%	1,734	419	2,153	532	537	642	542	31%	5	5	68	0	0%	537	542	710	542	25%
1991	1,343	280	1,623	486	30%	36%	1,670	472	2,141	497	497	516	522	31%	12	25	39	0	0%	510	522	555	522	24%
1992	1,393	308	1,701	690	41%	50%	1,726	505	2,231	713	719	770	748	43%	13	14	70	22	4%	726	733	841	770	35%
1993	1,419	304	1,724	901	52%	63%	1,732	489	2,221	903	925	969	989	57%	53	31	81	53	11%	955	955	1,050	1,042	47%
1994	1,533	308	1,841	738	40%	48%	1,824	490	2,314	751	761	819	795	44%	14	23	69	23	5%	765	784	888	817	35%
1995	1,511	392	1,903	1,075	56%	71%	1,782	567	2,348	1,211	1,243	1,276	1,366	77%	132	141	167	156	28%	1,343	1,385	1,443	1,522	65%
1996	1,650	388	2,037	1,156	57%	70%	1,900	561	2,461	1,297	1,344	1,376	1,461	77%	120	122	122	126	22%	1,417	1,466	1,498	1,587	64%
1997	1,640	429	2,069	994	48%	61%	1,870	591	2,461	1,181	1,209	992	1,290	69%	104	97	89	87	15%	1,285	1,306	1,081	1,377	56%
1998	1,530	333	1,863	1,254	67%	82%	1,739	461	2,199	1,261	1,290	1,348	1,408	81%	119	126	138	141	31%	1,380	1,416	1,486	1,549	70%
1999	1,589	417	2,006	1,128	56%	71%	1,661	539	2,200	1,106	1,167	1,192	1,229	74%	113	96	131	137	25%	1,219	1,263	1,323	1,367	62%
2000	1,596	433	2,028	1,033	51%	65%	1,764	543	2,308	1,056	1,098	1,140	1,151	65%	73	86	84	119	22%	1,129	1,184	1,224	1,270	55%
2001	1,662	441	2,103	891	42%	54%	1,808	541	2,349	880	901	919	935	52%	85	70	100	102	19%	965	971	1,019	1,036	44%
2002	1,676	444	2,119	889	42%	53%	1,801	533	2,334	1,008	1,049	1,009	1,079	60%	64	63	92	116	22%	1,072	1,112	1,101	1,195	51%
2003	1,689	439	2,128	939	44%	56%	1,794	518	2,311	913	957	981	984	55%	95	96	122	125	24%	1,008	1,053	1,103	1,109	48%
2004	1,752	406	2,158	922	43%	53%	1,845	478	2,323	897	945	970	951	52%	58	44	88	90	19%	955	989	1,059	1,041	45%
2005	1,773	349	2,122	1,119	53%	63%	1,837	406	2,243	1,105	1,146	1,223	1,160	63%	75	77	83	110	27%	1,179	1,223	1,306	1,269	57%
2006	1,813	400	2,213	1,128	51%	62%	1,857	446	2,303	1,103	1,177	1,192	1,178	63%	73	48	73	77	17%	1,176	1,225	1,265	1,255	54%
2007	1,713	439	2,152	692	32%	40%	1,736	474	2,210	693	703	516	705	41%	20	20	39	23	5%	712	723	555	728	33%
2008	1,581	446	2,026	694	34%	44%	1,583	470	2,052	661	701	1,376	701	44%	51	38	122	42	9%	712	739	1,498	743	36%
Avg	1,564	343	1,908	865	45%	55%	1,789	499	2,289	889	918	969	963	54%	59	55	86	75	15%	948	973	1,055	1,038	45%
Min	1,343	256	1,599	467	28%	33%	1,583	406	2,052	482	497	516	522	28%	5	5	39	0	0%	494	511	555	522	23%
Max	1,813	400	2,213	1,254	67%	82%	1,958	591	2,461	1,297	1,344	1,376	1,461	81%	132	141	167	156	31%	1,417	1,466	1,498	1,587	70%

Table 4-16a

Summary of Actual and Estimated Potential Annual Diversions, CY's 1984-2008 (AF/yr)

Column Notes:

- A From Table 2-4; does not include Manana Woods.
- B Excludes Harmon, Earl, & Manson creek diversions.
- C Record adjusted to reflect demand increases since 1986, current range of seasonal fluctuation, and projected 2030 demand (see Figs. 4-18 & -19).
- D-I Adjusted for system limitations (assums diversions are 10 AF/month [3.3 MG/mth] less than demand during stormflow periods.
- D,H See Table 4-13 and Figure 4-17. Refers to arithmetic, semi-log, and maximum extrapolations of total diversion hydrograph for each year; maximum exptrapolation sets upper bound but may not be realistic.
- E,I See Table 4-14 and Figure 4-20. Semi-log extrapolation of total diversion hydrograph.
- F Col. H minus col. D
- G Col. I minus E.

Calendar Year	A			B			C			D			E		F			G		H			I	
	Historical Water Production						Projected 2030 Water Production			Estimated Annual Diversions (calculated monthly)														
										Northern Service Area					Available to South Service Area					Total				
	N. Serv. Area	S. Serv. Area	Total	Diversions (% of Production)			N. Serv. Area	S. Serv. Area	Total	Historical Demand			2030 Demand		Historical Demand			2030 Demand		Historical Demand			2030 Demand	
					Total	North				arith.	semi-log	max.	semi-log	% of N.	arith.	semi-log	max.	semi-log	% of S.	arith.	semi-log	max.	semi-log	% of N.&S.
	(MG/yr)																							
1984	542	67	609	322	53%	59%	611	166	778	311	322	327	325	53%	13	6	19	27	16%	324	328	346	352	45%
1985	512	68	579	281	48%	55%	569	154	723	284	295	310	301	53%	16	12	20	38	25%	300	306	330	339	47%
1986	464	72	536	261	49%	56%	622	166	787	277	289	285	335	54%	17	16	17	30	18%	294	305	302	365	46%
1987	483	71	554	163	29%	34%	638	161	799	170	169	211	180	28%	6	6	14	1	1%	176	175	226	182	23%
1988	461	78	538	152	28%	33%	600	159	759	157	163	203	171	29%	4	4	18	3	2%	161	167	221	175	23%
1989	440	93	533	248	47%	56%	568	167	735	254	256	274	279	49%	9	9	34	3	2%	263	266	309	282	38%
1990	440	81	521	171	33%	39%	565	137	702	174	175	209	177	31%	1	1	22	0	0%	175	177	231	177	25%
1991	438	91	529	158	30%	36%	544	154	698	162	162	168	170	31%	4	8	13	0	0%	166	170	181	170	24%
1992	454	100	554	225	41%	50%	563	164	727	232	234	251	244	43%	4	5	23	7	4%	236	239	274	251	35%
1993	462	99	562	293	52%	63%	564	159	724	294	301	316	322	57%	17	10	26	17	11%	311	311	342	340	47%
1994	499	100	600	240	40%	48%	594	160	754	245	248	267	259	44%	4	8	22	7	5%	249	255	289	266	35%
1995	492	128	620	350	56%	71%	581	185	765	395	405	416	445	77%	43	46	55	51	28%	438	451	470	496	65%
1996	538	126	664	377	57%	70%	619	183	802	423	438	448	476	77%	39	40	40	41	22%	462	478	488	517	64%
1997	534	140	674	324	48%	61%	609	193	802	385	394	323	420	69%	34	32	29	28	15%	419	426	352	449	56%
1998	498	109	607	408	67%	82%	566	150	717	411	420	439	459	81%	39	41	45	46	31%	450	461	484	505	70%
1999	518	136	654	368	56%	71%	541	176	717	360	380	388	401	74%	37	31	43	45	25%	397	412	431	445	62%
2000	520	141	661	337	51%	65%	575	177	752	344	358	371	375	65%	24	28	27	39	22%	368	386	399	414	55%
2001	542	144	685	290	42%	54%	589	176	765	287	294	299	305	52%	28	23	33	33	19%	314	316	332	338	44%
2002	546	145	691	290	42%	53%	587	174	760	328	342	329	351	60%	21	21	30	38	22%	349	362	359	389	51%
2003	550	143	693	306	44%	56%	584	169	753	297	312	320	321	55%	31	31	40	41	24%	328	343	359	361	48%
2004	571	132	703	300	43%	53%	601	156	757	292	308	316	310	52%	19	14	29	29	19%	311	322	345	339	45%
2005	578	114	691	364	53%	63%	599	132	731	360	373	398	378	63%	24	25	27	36	27%	384	399	426	414	57%
2006	591	130	721	368	51%	62%	605	145	750	359	384	388	384	63%	24	15	24	25	17%	383	399	412	409	54%
2007	558	143	701	226	32%	40%	566	154	720	226	229	168	230	41%	6	6	13	7	5%	232	236	181	237	33%
2008	515	145	660	226	34%	44%	516	153	669	215	228	448	228	44%	17	12	40	14	9%	232	241	488	242	36%
Avg	510	112	622	282	45%	55%	583	163	746	290	299	316	314	54%	19	18	28	24	15%	309	317	344	338	45%
Min	438	84	521	152	28%	33%	516	132	669	157	162	168	170	28%	1	1	13	0	0%	161	167	181	170	23%
Max	591	130	721	408	67%	82%	638	193	802	423	438	448	476	81%	43	46	55	51	31%	462	478	488	517	70%

Table 4-16b

Summary of Actual and Estimated Annual Diversions, CY's 1984-2008 (MG/yr)

Column Notes:

A From Table 2-4; does not include Manana Woods.

B Excludes Harmon, Earl, & Manson creek diversions.

C Record adjusted to reflect demand increases since 1986, current range of seasonal fluctuation, and projected 2030 demand (see Figs. 4-18 & -19).

D-I Adjusted for system limitations (assums diversions are 10 AF/month [3.3 MG/mth] less than demand during stormflow periods.

D,H See Table 4-13 and Figure 4-17. Refers to arithmetic, semi-log, and maximum extrapolations of total diversion hydrograph for each year; maximum exptrapolation sets upper bound but may not be realistic.

E,I See Table 4-14 and Figure 4-20. Semi-log extrapolation of total diversion hydrograph.

F Col. H minus col. D

G Col. I minus E.

Calendar Year	A			B			C			D			E		F			G		H				I	
	Historical Water Production						Projected 2030 Water Production			Estimated Annual Diversions (calculated monthly)															
										Northern Service Area					Available to South Service Area					Total				
	N. Serv. Area	S. Serv. Area	Total	Diversions (% of Production) Total		North	N. Serv. Area	S. Serv. Area	Total	Historical Demand			2030 Demand		Historical Demand			2030 Demand		Historical Demand			2030 Demand	
										arith.	semi-log	max.	semi-log	% of N.	arith.	semi-log	max.	semi-log	% of S.	arith.	semi-log	max.	semi-log	% of N.&S.
	(AF/yr)																							
1985	1,576	204	1,781	937	53%	59%	1,758	471	2,230	945	965	994	984	56%	53	35	61	116	25%	998	1,000	1,055	1,100	49%
1986	1,457	214	1,671	849	51%	58%	1,865	491	2,356	894	947	960	1,089	58%	52	49	63	93	19%	946	996	1,023	1,182	50%
1987	1,486	224	1,710	533	31%	36%	1,971	510	2,481	554	552	633	586	30%	19	18	32	4	1%	573	570	666	590	24%
1988	1,421	229	1,650	476	29%	34%	1,858	480	2,339	490	490	632	517	28%	12	12	53	10	2%	502	502	685	527	23%
1989	1,344	263	1,607	620	39%	46%	1,733	486	2,219	635	660	722	729	42%	26	28	68	10	2%	661	688	790	739	33%
1990	1,330	265	1,595	679	43%	51%	1,727	437	2,164	692	697	824	702	41%	5	5	118	0	0%	697	702	942	702	32%
1991	1,364	276	1,640	471	29%	35%	1,704	475	2,179	482	482	502	507	30%	12	25	39	0	0%	494	507	541	507	23%
1992	1,398	301	1,698	651	38%	47%	1,721	492	2,213	673	679	700	708	41%	13	14	53	22	5%	686	693	752	730	33%
1993	1,395	310	1,705	853	50%	61%	1,713	496	2,209	855	877	921	942	55%	53	31	81	53	11%	908	908	1,002	995	45%
1994	1,521	308	1,829	718	39%	47%	1,818	493	2,311	732	736	815	767	42%	14	20	68	23	5%	746	756	883	790	34%
1995	1,493	376	1,869	1,047	56%	70%	1,769	550	2,320	1,133	1,166	1,198	1,279	72%	132	133	166	156	28%	1,264	1,298	1,364	1,436	62%
1996	1,645	386	2,031	1,117	55%	68%	1,900	563	2,463	1,272	1,325	1,375	1,433	75%	98	111	120	116	21%	1,370	1,436	1,495	1,549	63%
1997	1,684	430	2,114	1,067	50%	63%	1,919	600	2,519	1,220	1,245	1,092	1,330	69%	106	102	91	82	14%	1,326	1,347	1,183	1,413	56%
1998	1,500	336	1,835	1,163	63%	78%	1,714	464	2,177	1,243	1,264	1,229	1,371	80%	138	113	128	142	31%	1,380	1,376	1,357	1,513	69%
1999	1,588	406	1,994	1,196	60%	75%	1,781	535	2,317	1,186	1,245	1,277	1,316	74%	91	103	131	132	25%	1,277	1,348	1,408	1,448	63%
2000	1,628	434	2,062	1,037	50%	64%	1,680	537	2,217	1,048	1,095	1,139	1,166	69%	98	110	116	139	26%	1,145	1,205	1,255	1,305	59%
2001	1,632	447	2,079	908	44%	56%	1,784	549	2,333	905	929	952	954	53%	65	54	80	72	13%	970	983	1,032	1,026	44%
2002	1,662	433	2,095	935	45%	56%	1,793	526	2,319	992	1,026	980	1,052	59%	85	56	90	115	22%	1,077	1,082	1,070	1,167	50%
2003	1,685	436	2,122	928	44%	55%	1,795	518	2,313	959	997	1,022	1,026	57%	95	95	121	143	28%	1,055	1,093	1,143	1,169	51%
2004	1,739	428	2,167	889	41%	51%	1,840	503	2,344	864	906	922	923	50%	58	67	92	103	21%	922	973	1,013	1,026	44%
2005	1,772	341	2,113	1,121	53%	63%	1,841	402	2,243	1,106	1,169	1,222	1,183	64%	75	77	103	110	27%	1,181	1,247	1,326	1,292	58%
2006	1,800	394	2,193	1,114	51%	62%	1,848	443	2,291	1,089	1,164	1,222	1,164	63%	73	48	73	77	17%	1,162	1,212	1,295	1,242	54%
2007	1,769	440	2,209	768	35%	43%	1,796	478	2,274	768	779	502	780	43%	20	20	39	23	5%	788	798	541	803	35%
2008	1,581	441	2,022	712	35%	45%	1,588	468	2,056	678	719	1,375	719	45%	51	38	120	42	9%	730	757	1,495	761	37%
Avg	1,561	347	1,908	866	45%	55%	1,800	499	2,300	892	921	970	968	54%	60	57	88	74	15%	952	978	1,058	1,042	45%
Min	1,330	265	1,595	471	29%	34%	1,588	402	2,056	482	482	502	507	28%	5	5	32	0	0%	494	502	541	507	23%
Max	1,800	409	2,209	1,196	63%	78%	1,971	600	2,519	1,272	1,325	1,375	1,433	80%	138	133	166	156	31%	1,380	1,436	1,495	1,549	69%

Table 4-16c

Summary of Actual and Estimated Potenital Annual Diversions, WY's 1985-2008 (AF/yr)

Column Notes:

- A From Table 2-4; does not include Manana Woods.
- B Excludes Harmon, Earl, & Manson creek diversions.
- C Record adjusted to reflect demand increases since 1986, current range of seasonal fluctuation, and projected 2030 demand (see Figs. 4-18 & -19).
- D-I Adjusted for system limitations (assums diversions are 10 AF/month [3.3 MG/mth] less than demand during stormflow periods.
- D,H See Table 4-13 and Figure 4-17. Refers to arithmetic, semi-log, and maximum extrapolations of total diversion hydrograph for each year; maximum exptrapolation sets upper bound but may not be realistic.
- E,I See Table 4-14 and Figure 4-20. Semi-log extrapolation of total diversion hydrograph.
- F Col. H minus col. D
- G Col. I minus E.

Calendar Year	A			B			C			D			E		F			G		H				I	
	Historical Water Production						Projected 2030 Water Production			Estimated Annual Diversions (calculated monthly)															
										Northern Service Area					Available to South Service Area					Total				
	N. Serv. Area	S. Serv. Area	Total	Diversions (% of Production)	Total	North	N. Serv. Area	S. Serv. Area	Total	Historical Demand			2030 Demand		Historical Demand			2030 Demand		Historical Demand			2030 Demand	
										arith.	semi-log	max.	semi-log	% of N.	arith.	semi-log	max.	semi-log	% of S.	arith.	semi-log	max.	semi-log	% of N.&S.
	(MG/yr)																							
1985	514	67	580	305	53%	59%	573	154	727	308	314	324	321	56%	17	12	20	38	25%	325	326	344	358	49%
1986	475	70	544	276	51%	58%	608	160	768	291	309	313	355	58%	17	16	21	30	19%	308	325	333	385	50%
1987	484	73	557	174	31%	36%	642	166	808	181	180	206	191	30%	6	6	11	1	1%	187	186	217	192	24%
1988	463	75	538	155	29%	34%	606	156	762	160	160	206	168	28%	4	4	17	3	2%	164	164	223	172	23%
1989	438	86	524	202	39%	46%	565	158	723	207	215	235	237	42%	9	9	22	3	2%	215	224	258	241	33%
1990	433	86	520	221	43%	51%	563	143	705	225	227	269	229	41%	2	2	38	0	0%	227	229	307	229	32%
1991	445	90	534	154	29%	35%	555	155	710	157	157	163	165	30%	4	8	13	0	0%	161	165	176	165	23%
1992	455	98	553	212	38%	47%	561	160	721	219	221	228	231	41%	4	5	17	7	5%	223	226	245	238	33%
1993	455	101	556	278	50%	61%	558	162	720	279	286	300	307	55%	17	10	26	17	11%	296	296	326	324	45%
1994	496	100	596	234	39%	47%	592	161	753	239	240	266	250	42%	4	7	22	7	5%	243	246	288	257	34%
1995	487	123	609	341	56%	70%	576	179	756	369	380	390	417	72%	43	43	54	51	28%	412	423	444	468	62%
1996	536	126	662	364	55%	68%	619	183	802	414	432	448	467	75%	32	36	39	38	21%	446	468	487	505	63%
1997	549	140	689	348	50%	63%	625	196	821	398	406	356	434	69%	35	33	30	27	14%	432	439	386	460	56%
1998	489	109	598	379	63%	78%	558	151	709	405	412	401	447	80%	45	37	42	46	31%	450	448	442	493	69%
1999	517	132	650	390	60%	75%	580	174	755	386	406	416	429	74%	30	34	43	43	25%	416	439	459	472	63%
2000	530	141	672	338	50%	64%	547	175	722	341	357	371	380	69%	32	36	38	45	26%	373	392	409	425	59%
2001	532	146	677	296	44%	56%	581	179	760	295	303	310	311	53%	21	18	26	24	13%	316	320	336	334	44%
2002	542	141	683	305	45%	56%	584	171	755	323	334	319	343	59%	28	18	29	37	22%	351	353	349	380	50%
2003	549	142	691	302	44%	55%	585	169	754	313	325	333	334	57%	31	31	39	46	28%	344	356	372	381	51%
2004	567	139	706	290	41%	51%	600	164	764	281	295	300	301	50%	19	22	30	34	21%	300	317	330	334	44%
2005	577	111	689	365	53%	63%	600	131	731	360	381	398	385	64%	24	25	34	36	27%	385	406	432	421	58%
2006	586	128	715	363	51%	62%	602	144	746	355	379	398	379	63%	24	15	24	25	17%	379	395	422	405	54%
2007	576	143	720	250	35%	43%	585	156	741	250	254	163	254	43%	6	6	13	7	5%	257	260	176	262	35%
2008	515	144	659	232	35%	45%	518	152	670	221	234	448	234	45%	17	12	39	14	9%	238	247	487	248	37%
Avg	509	113	622	282	45%	55%	586	162	749	291	300	316	315	54%	20	19	29	24	15%	310	319	345	340	45%
Min	433	86	520	154	29%	34%	518	131	670	157	157	163	165	28%	2	2	11	0	0%	161	164	176	165	23%
Max	586	133	720	390	63%	78%	642	196	821	414	432	448	467	80%	45	43	54	51	31%	450	468	487	505	69%

Table 4-16d

Summary of Actual and Estimated Annual Diversions, WY's 1985-2008 (MG/yr)

Column Notes:

A From Table 2-4; does not include Manana Woods.

B Excludes Harmon, Earl, & Manson creek diversions.

C Record adjusted to reflect demand increases since 1986, current range of seasonal fluctuation, and projected 2030 demand (see Figs. 4-18 & -19).

D-I Adjusted for system limitations (assums diversions are 10 AF/month [3.3 MG/mth] less than demand during stormflow periods.

D,H See Table 4-13 and Figure 4-17. Refers to arithmetic, semi-log, and maximum extrapolations of total diversion hydrograph for each year; maximum exptrapolation sets upper bound but may not be realistic.

E,I See Table 4-14 and Figure 4-20. Semi-log extrapolation of total diversion hydrograph.

F Col. H minus col. D

G Col. I minus E.