Pressure Zone		Storage Facility		Elev. at Base	Capacity		Construction
No.	Name	Name	No.	(ft msl)	(gal)	(AF)	Material
Highway 9 North of Boulder Creek							
24	North Boulder Creek	Echo Tanks 1 - 4	FA-206	1,060	1,000,000	3.07	wood
1	Riverside Grove	Riverside Grove Tank	?	1,017	380,000	1.17	steel
2	Mitchell	hydropneumatic tanks					
3	Blue Ridge	Blue Ridge Tank	FA-011	946	40,000	0.12	wood
4	Reader (also Bear Creek Rd)	Alder Tank	?	?	700		poly
		Reader Tank	FA-018	750	150,000	0.46	steel
Big Basin Way							
5	Lyon	Lyon Reservoir	FA-162	848	3,000,000	9.21	steel*
		Little Lyon Reservoir	FA-202	848	250,000	0.77	steel*
6	Eckley	Eckley Tank	FA-041	1,000	4,000	0.01	poly
7	Blackstone	Blackstone Tanks 1 & 2	FA-039	797	22,000	0.07	HDPE*
8	Big Steel	Big Steel Reservoir	FA-057	734	1,400,000	4.30	steel
Bear Creek Rd.							
9	Huckleberry	Huckleberry Tank	FA-022	1,021	125,000	0.38	welded steel
10	Ralston	Ralston Tank	FA-034	950	10,000	0.03	poly
11	Beak Creek	Bear Creek Tank	FA-021	760	75,000	0.23	steel
12	Bear Creek Hydro	hydropneumatic tanks					
Remainder of North System							
13	Highland	Highland Reservoir	FA-068	900	60,000	0.18	wood
14	Nina	Nina Reservoirs 1 & 2	FA-072	1,200	54,000	0.17	wood
					75,000	0.23	
15	Nina Hydro	hydropneumatic tanks					
16	Brookdale	Brookdale Reservoir	FA-088	575	721,000	2.21	steel
17	South	South Reservoir (4 tanks)	FA-099	1,185	36,000	0.11	HDPE
18	Swim	Swim Tank (lower)	FA-110	728	9,600	0.03	wood
		Swim Tank (upper)	FA-111	746	10,000	0.03	
19	Spring	Spring Tank	FA-114	990	65,000	0.20	steel
20	University	Reagan Reservoir	FA-123	?	14,500	0.04	wood
		University Reservoirs	FA-126	826	50,800	0.16	concrete
					75,000	0.23	wood
21	Quail	Quail Tanks 1 & 2	FA-187	730	211,000	0.65	steel
					240,000	0.74	
North System Total					8,078,600	24.79	
South System							
22	Probation	Probation Tank	FA-167	871	100,000	0.31	wood
23	Upper Probation	Upper Pasatiempo	FA-152	906	100,000	0.31	concrete
		Lower Pasatiempo	FA-153	822	100,000	0.31	concrete
South System Total					300,000	0.92	
Mañana Woods							
25	Mañana Woods	Mañana Woods			60,000	0.18	

* Earthquake restrained

Source: SLVWD distribution system map (December 2005) and spreadsheet.

Table 7-1
SLVWD Water Storage Facilities

Pressure Zone		Facility		Elev. at Base	No. Pumps	Capacity per pump	Capacity total
No.	Name	Name	No.	(ft msl)	(gal)	(gpm)	
Highway 9 North of Boulder Creek							
24	North Boulder Creek	Echo Pump Station	FA-210	611	2	145	290
1	Riverside Grove	Riverside Grove Pump Station	FA-002	675	2	120 / 250	370
2	Mitchel	Mitchell Hydropneumatic Tanks	FA-222	800	2	10	20
		Mitchel Booster Pump Station	?		?	?	?
3	Blue Ridge	Blue Ridge	FA-009		2	55	110
Big Basin Way							
6	Eckley	Eckley	FA-040		1	15	15
7	Blackstone	Blackstone	FA-038		2	35	70
8	Big Steel	Big Basin PRV	?		?	?	?
		Firehouse Booster Pump	FA-065		2	550	1,100
		Big Steel	FA-193		2	430	860
Bear Creek Rd.							
9	Huckleberry	Huckleberry	FA-021	600	2	50	100
10	Ralston	Ralston	FA-033		2	30	60
11	Bear Creek	Bear Creek Hydropneumatic Tank & Pump	FA-037		2	10	20
		Bear Creek Booster Pump Station	FA-025		1	120	120
Remainder of North System							
8	Big Steel	Irwin Booster Pump	FA-075	413	2	350	700
13	Highland	Fairview Booster Pump	FA-066		1	50	50
14	Nina	Nina Booster Pump	FA-070		2	80	160
15	Nina Hydro	Nina Hydropneumatic Tank	FA-169		2	15	30
17	South	High St. Booster Pump Station	FA-205		2	30	60
18	Swim	Swim Booster Pump Station	FA-109		2	40	80
		Redwood Park Booster Station	FA-107		2	90	180
21	Quail	Quail Booster Pump & PRV Station	FA-171		2	350	700
		Olympia Well	FA-143		2	120	240
20	University	University Booster Pump	FA-125		2	120	240
South System							
22	Probation	Pasatiempo Pines	FA-154		1	80	80

PRV = pressure reduction valve

Source: SLVWD distribution system map (December 2005) and spreadsheet.

Table 7-2
SLVWD Booster Pump Stations

Calendar Year	WY Rainfall at Ben Lomond	Stream Diversions									Wellfields					N. Serv. Area	S. Serv. Area & Mañana Wds.	Total
		Foreman, Silver, & Peavine Cks	Peavine Ck	Foreman & Silver Cks	Clear Ck	Sweetwater Ck	Harmon Ck	Earl & Manson Cks	5-Mile Pipeline	Total	Quail Hollow	Olympia	Pasatiempo	M. Wds	Total			
	(% Avg*)	(AF/yr)																
1984	82%	785	-	-	31	171	0	1	203	988	413	261	206	-	880	1,662	206	1,868
1985	83%	652	-	-	97	112	0	5	215	867	435	268	208	-	911	1,570	208	1,778
1986	137%	558	-	-	115	128	15	8	266	824	449	149	222	-	821	1,423	222	1,645
1987	55%	334	-	-	103	63	25	5	196	531	488	463	217	-	1,168	1,482	217	1,699
1988	62%	302	-	-	94	71	21	4	190	492	507	415	238	-	1,160	1,414	238	1,652
1989	70%	531	-	-	136	94	20	7	257	788	287	274	286	-	846	1,349	286	1,635
1990	49%	400	-	-	56	67	8	8	140	540	313	496	250	-	1,059	1,349	250	1,599
1991	65%	358	-	-	71	57	17	10	155	513	305	525	280	-	1,110	1,343	280	1,623
1992	84%	534	-	-	83	73	17	3	176	710	270	413	308	-	991	1,393	308	1,701
1993	117%	669	-	-	111	120	15	2	249	918	165	337	304	-	806	1,419	304	1,724
1994	67%	482	-	-	127	129	7	0	263	745	295	493	308	-	1,095	1,533	308	1,841
1995	140%	1,035	-	-	7	33	0	0	40	1,075	156	280	392	-	829	1,511	392	1,903
1996	124%	-	-	-	-	-	-	-	-	1,156	149	344	388	-	881	1,650	388	2,037
1997	119%	-	-	-	-	-	-	-	-	994	231	416	429	-	1,075	1,640	429	2,069
1998	168%	948	115	833	197	108	0	0	305	1,254	112	164	333	-	610	1,530	333	1,863
1999	94%	800	149	651	179	149	0	0	328	1,128	124	338	417	-	878	1,589	417	2,006
2000	114%	656	126	530	190	187	0	0	377	1,033	160	402	433	-	995	1,596	433	2,028
2001	76%	583	135	447	186	122	0	0	308	891	221	550	441	-	1,212	1,662	441	2,103
2002	96%	823	149	673	40	27	0	0	67	889	344	442	444	-	1,230	1,676	444	2,119
2003	100%	711	153	558	134	94	0	0	228	939	315	435	439	-	1,189	1,689	439	2,128
2004	90%	682	137	545	146	94	0	0	240	922	393	436	406	-	1,236	1,752	406	2,158
2005	136%	799	115	684	192	128	0	0	319	1,119	320	334	349	-	1,003	1,773	349	2,122
2006	152%	797	143	654	199	133	0	0	331	1,128	362	323	368	31	1,085	1,813	400	2,213
2007	59%	375	70	305	190	127	0	0	317	692	411	610	387	51	1,459	1,713	439	2,152
2008	79%	430	54	376	158	106	0	0	264	694	361	526	395	50	1,332	1,581	446	2,026
Avg	98%	619	123	569	124	104	6	2	236	873	303	388	338	44	1,035	1,564	343	1,908
Min	50%	302	54	305	7	27	0	0	40	492	112	149	206	31	610	1,343	206	1,599
Max	166%	1,035	153	833	199	187	25	10	377	1,254	507	610	444	51	1,459	1,813	446	2,213
	(% Avg*)	(MG/yr)																
1984	82%	256	-	-	10	56	0	0	66	322	135	85	67	-	287	542	67	609
1985	83%	212	-	-	32	37	0	2	70	282	142	87	68	-	297	512	68	579
1986	137%	182	-	-	38	42	5	3	87	269	146	49	72	-	267	464	72	536
1987	55%	109	-	-	34	21	8	2	64	173	159	151	71	-	381	483	71	554
1988	62%	98	-	-	31	23	7	1	62	160	165	135	78	-	378	461	78	538
1989	70%	173	-	-	44	31	6	2	84	257	94	89	93	-	276	440	93	533
1990	49%	130	-	-	18	22	3	3	46	176	102	162	81	-	345	440	81	521
1991	65%	117	-	-	23	19	6	3	51	167	99	171	91	-	362	438	91	529
1992	84%	174	-	-	27	24	6	1	57	231	88	135	100	-	323	454	100	554
1993	117%	218	-	-	36	39	5	1	81	299	54	110	99	-	263	462	99	562
1994	67%	157	-	-	41	42	2	0	86	243	96	161	100	-	357	499	100	600
1995	140%	337	-	-	2	11	0	0	13	350	51	91	128	-	270	492	128	620
1996	124%	-	-	-	-	-	-	-	-	377	49	112	126	-	287	538	126	664
1997	119%	-	-	-	-	-	-	-	-	324	75	135	140	-	350	534	140	674
1998	168%	309	37	272	64	35	0	0	99	408	37	54	109	-	199	498	109	607
1999	94%	261	49	212	58	49	0	0	107	368	40	110	136	-	286	518	136	654
2000	114%	214	41	173	62	61	0	0	123	337	52	131	141	-	324	520	141	661
2001	76%	190	44	146	61	40	0	0	100	290	72	179	144	-	395	542	144	685
2002	96%	268	49	219	13	9	0	0	22	290	112	144	145	-	401	546	145	691
2003	100%	232	50	182	44	31	0	0	74	306	103	142	143	-	387	550	143	693
2004	90%	222	45	178	48	31	0	0	78	300	128	142	132	-	403	571	132	703
2005	136%	260	38	223	62	42	0	0	104	364	104	109	114	-	327	578	114	691
2006	152%	260	47	213	65	43	0	0	108	368	118	105	120	10	353	591	130	721
2007	59%	122	23	99	62	41	0	0	103	226	134	199	126	17	476	558	143	701
2008	79%	140	18	123	52	34	0	0	86	226	118	171	129	16	434	515	145	660
Avg	98%	202	40	185	40	34	2	1	77	285	99	126	110	14	337	510	112	622
Min	50%	98	18	99	2	9	0	0	13	160	37	49	67	10	199	438	67	521
Max	166%	337	50	272	65	61	8	3	123	408	165	199	145	17	476	591	145	721

* Based on 1973-2008 record (Table 3-3).

- Incomplete monthly record or non-applicable.

Table 7-3a
Annual Surface-Water and Groundwater Production, Calendar Years 1984-2008

Water Year	WY Rainfall at Ben Lomond (% Avg)	Stream Diversions: Foreman, Silver, & Peavine Cks	Peavine Ck	Foreman & Silver Cks	Clear Ck	Sweetwater Ck	Harmon Ck	Earl & Manson Cks	5-Mile Pipeline	Total	Wellfields: Quail Hollow	Olympia	Pasatiempo	M. Wds	Total	Loch Lomond	N. Serv. Area	S. Serv. Area & Mañana Wds.	Total
		(AF/yr)																	
1977*	42%	-	-	-	-	-	-	-	-	400	350	-	160	-	-	350	1,100	160	1,260
1985	83%	706	-	-	103	128	0	4	235	941	422	214	204	0	840	0	1,576	204	1,781
1986	137%	629	-	-	109	111	8	9	236	865	421	171	214	0	806	0	1,457	214	1,671
1987	55%	333	-	-	111	89	30	6	236	569	496	421	224	0	1,142	0	1,486	224	1,710
1988	62%	305	-	-	100	72	20	4	195	500	516	405	229	0	1,150	0	1,421	229	1,650
1989	70%	419	-	-	116	85	20	7	228	647	349	348	263	0	960	0	1,344	263	1,607
1990	49%	526	-	-	73	80	10	4	166	693	268	370	265	0	902	0	1,330	265	1,595
1991	65%	347	-	-	72	53	15	14	154	501	348	515	276	0	1,139	0	1,364	276	1,640
1992	84%	501	-	-	83	66	17	4	170	671	261	466	301	0	1,027	0	1,398	301	1,698
1993	117%	647	-	-	105	101	14	3	222	870	188	338	310	0	835	0	1,395	310	1,705
1994	67%	466	-	-	117	135	11	0	264	729	291	501	308	0	1,100	0	1,521	308	1,829
1995	140%	956	-	-	35	56	0	0	91	1,047	161	285	376	0	822	0	1,493	376	1,869
1996	124%	-	-	-	-	-	-	-	-	1,117	181	347	386	0	914	0	1,645	386	2,031
1997	119%	-	-	-	-	-	-	-	-	1,067	187	431	430	0	1,048	0	1,684	430	2,114
1998	168%	883	102	781	186	94	0	0	280	1,169	137	194	336	0	666	0	1,500	336	1,835
1999	94%	847	147	700	196	152	0	0	349	1,196	123	269	406	0	798	0	1,588	406	1,994
2000	114%	657	133	524	188	192	0	0	380	1,037	147	443	434	0	1,024	0	1,628	434	2,062
2001	76%	558	149	409	206	144	0	0	350	908	215	509	447	0	1,171	0	1,632	447	2,079
2002	96%	832	144	688	62	41	0	0	103	935	283	444	433	0	1,160	0	1,662	433	2,095
2003	100%	748	150	598	107	72	0	0	180	928	332	426	436	0	1,194	0	1,685	436	2,122
2004	90%	663	140	523	135	91	0	0	226	889	369	481	428	0	1,279	0	1,739	428	2,167
2005	136%	803	121	682	191	127	0	0	318	1,121	357	294	341	0	992	0	1,772	341	2,113
2006	152%	815	129	686	179	119	0	0	299	1,114	329	357	372	21	1,080	0	1,800	394	2,193
2007	59%	397	106	291	223	149	0	0	371	768	447	554	389	51	1,441	0	1,769	440	2,209
2008	79%	451	48	403	156	104	0	0	260	712	348	522	390	51	1,311	0	1,581	441	2,022
Avg**	98%	613	124	571	130	103	7	2	242	875	299	388	342	5	1,033		1,561	347	1,908
Min	50%	305	48	291	35	41	0	0	91	500	123	171	204	0	666		1,330	204	1,595
Max	166%	956	150	781	223	192	30	14	380	1,196	516	554	447	51	1,441		1,800	447	2,209
	(% Avg)	(MG/yr)																	
1977*	42%	-	-	-	-	-	-	-	-	130	114	-	52	-	-	114	358	52	411
1985	83%	230	-	-	34	42	0	1	76	306	137	70	67	0	274	0	514	67	580
1986	137%	205	-	-	35	36	3	3	77	282	137	56	70	0	263	0	475	70	544
1987	55%	108	-	-	36	29	10	2	77	185	162	137	73	0	372	0	484	73	557
1988	62%	99	-	-	33	23	6	1	64	163	168	132	75	0	375	0	463	75	538
1989	70%	136	-	-	38	28	7	2	74	211	114	113	86	0	313	0	438	86	524
1990	49%	172	-	-	24	26	3	1	54	226	87	120	86	0	294	0	433	86	520
1991	65%	113	-	-	23	17	5	5	50	163	113	168	90	0	371	0	445	90	534
1992	84%	163	-	-	27	22	5	1	56	219	85	152	98	0	335	0	455	98	553
1993	117%	211	-	-	34	33	5	1	72	283	61	110	101	0	272	0	455	101	556
1994	67%	152	-	-	38	44	4	0	86	238	95	163	100	0	358	0	496	100	596
1995	140%	311	-	-	11	18	0	0	30	341	53	93	123	0	268	0	487	123	609
1996	124%	-	-	-	-	-	-	-	-	364	59	113	126	0	298	0	536	126	662
1997	119%	-	-	-	-	-	-	-	-	348	61	140	140	0	341	0	549	140	689
1998	168%	288	33	254	61	31	0	0	91	381	45	63	109	0	217	0	489	109	598
1999	94%	276	48	228	64	50	0	0	114	390	40	88	132	0	260	0	517	132	650
2000	114%	214	43	171	61	63	0	0	124	338	48	144	141	0	334	0	530	141	672
2001	76%	182	48	133	67	47	0	0	114	296	70	166	146	0	382	0	532	146	677
2002	96%	271	47	224	20	13	0	0	34	305	92	145	141	0	378	0	542	141	683
2003	100%	244	49	195	35	24	0	0	59	302	108	139	142	0	389	0	549	142	691
2004	90%	216	46	170	44	30	0	0	73	290	120	157	139	0	417	0	567	139	706
2005	136%	262	39	222	62	41	0	0	104	365	116	96	111	0	323	0	577	111	689
2006	152%	266	42	223	58	39	0	0	97	363	107	116	121	7	352	0	586	128	715
2007	59%	129	34	95	73	48	0	0	121	250	146	180	127	17	469	0	576	143	720
2008	79%	147	16	131	51	34	0	0	85	232	113	170	127	17	427	0	515	144	659
Avg**	98%	200	41	186	42	34	2	1	79	285	97	126	111	2	337		509	113	622
Min	50%	99	16	95	11	13	0	0	30	163	40	56	67	0	217		433	67	520
Max	166%	311	49	254	73	63	10	5	124	390	168	180	146	17	469		586	146	720

- Incomplete monthly record or non-applicable.

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

** WY's 1985-2006.

Table 7-3b
Annual Surface-Water and Groundwater Production,
Water Years 1977 & 1984-2008

Equivalent Water Year	Ben Lomond Precip. (% avg)	Climatic Cycle Factor[a]	2030 Production Demand[b]							
			Service Area				Service Area			
			North	South	Manana Woods	Total	North	South	Manana Woods	Total
			AF/yr				MG/yr			
1970	107%	0.0%	1,747	437	60	2,244	569	142	20	731
1971	**88%**	2.5%	1,791	448	62	2,300	583	146	20	749
1972	**62%**	5.0%	1,834	459	63	2,356	598	150	21	768
1973	**138%**	0.0%	1,747	437	60	2,244	569	142	20	731
1974	**116%**	2.5%	1,791	448	62	2,300	583	146	20	749
1975	**85%**	-5.0%	1,660	415	57	2,132	541	135	19	695
1976	**44%**	0.0%	1,747	437	60	2,244	569	142	20	731
1977	**40%**	-5.0%	1,660	415	57	2,132	541	135	19	695
1978	**143%**	-5.0%	1,660	415	57	2,132	541	135	19	695
1979	**86%**	-5.0%	1,660	415	57	2,132	541	135	19	695
1980	**124%**	-2.5%	1,703	426	59	2,188	555	139	19	713
1981	**67%**	-2.5%	1,703	426	59	2,188	555	139	19	713
1982	**163%**	-2.5%	1,703	426	59	2,188	555	139	19	713
1983	**193%**	-2.5%	1,703	426	59	2,188	555	139	19	713
1984	**81%**	2.5%	1,791	448	62	2,300	583	146	20	749
1985	**82%**	5.0%	1,834	459	63	2,356	598	150	21	768
1986	**136%**	5.0%	1,834	459	63	2,356	598	150	21	768
1987	**54%**	5.0%	1,834	459	63	2,356	598	150	21	768
1988	**61%**	5.0%	1,834	459	63	2,356	598	150	21	768
1989	**69%**	0.0%	1,747	437	60	2,244	569	142	20	731
1990	**49%**	-2.5%	1,703	426	59	2,188	555	139	19	713
1991	**65%**	-5.0%	1,660	415	57	2,132	541	135	19	695
1992	**83%**	-5.0%	1,660	415	57	2,132	541	135	19	695
1993	**117%**	-5.0%	1,660	415	57	2,132	541	135	19	695
1994	**67%**	-2.5%	1,703	426	59	2,188	555	139	19	713
1995	**140%**	0.0%	1,747	437	60	2,244	569	142	20	731
1996	**124%**	2.5%	1,791	448	62	2,300	583	146	20	749
1997	**119%**	5.0%	1,834	459	63	2,356	598	150	21	768
1998	**167%**	-2.5%	1,703	426	59	2,188	555	139	19	713
1999	94%	0.0%	1,747	437	60	2,244	569	142	20	731
2000	**114%**	2.5%	1,791	448	62	2,300	583	146	20	749
2001	**75%**	5.0%	1,834	459	63	2,356	598	150	21	768
2002	96%	2.5%	1,791	448	62	2,300	583	146	20	749
2003	99%	2.5%	1,791	448	62	2,300	583	146	20	749
2004	**89%**	5.0%	1,834	459	63	2,356	598	150	21	768
2005	**135%**	-2.5%	1,703	426	59	2,188	555	139	19	713
2006	**151%**	-2.5%	1,703	426	59	2,188	555	139	19	713
2007	**59%**	2.5%	1,791	448	62	2,300	583	146	20	749
2008	**79%**	-2.5%	1,703	426	59	2,188	555	139	19	713
Average:										
WY 1970-2008	99%	0%	1,747	437	60	2,244	569	142	20	731
WY 1985-2008	97%	1%	1,760	440	60	2,260	573	143	20	737
Minimum	40%	-5%	1,660	415	57	2,132	541	135	19	695
Maximum	167%	5%	1,834	459	63	2,356	598	150	21	768

Dry Year
<90%
Wet Year
>110%

Assumed 2030 average demand:		AF/yr	MG/yr
	North Service Area	1,747	569
	South Service Area	437	142
	Manana Woods	60	20

Table 7-4
Assumed 2030 Annual Demand During WY 1970-2008 Climatic Cycle
(Including System Losses)

[a]See Figure 7-3 for illustration of climatic factor. [b]Average rates from Table 2-4.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
		Estimated	Potential	Northern Service Area					Southern Service Area					Total Production Demand				Unused	Unused
		Potential	Diversions							With Intertie		Total		With Intertie		Conserv./		Divert-	Loch
	Ben	Diversion	Limited by	Stream	Quail		Conserv./	Total	Pasa-	Pasa-	Stream	Produc-	Manana	Stream	Ground-	Supple-	All	able	Lomond
	Lomond 4	Hydro-	WTP	Diver-	Hollow	Olympia	Supple-	Produc-	tiempo	tiempo	Diver-	tion	Woods	Diver-	water	mental	Sources	Stream-	Entitle-
	Precip. (%	graph	Capacity	sions	Wells	Wells	mental	tion	Wells	Wells	sions	Demand	Well	sions		Source		flows	ment
Water Year	avg)	(AF/yr)					Source	Demand											
1985	**82%**	1,351	1,196	1,001	287	393	153	1,834	459	350	109	459	63	1,109	1,093	153	2,356	86	160
1986	**136%**	1,509	1,224	1,034	276	394	131	1,834	459	337	122	459	63	1,156	1,069	131	2,356	68	182
1987	**54%**	630	630	630	377	608	219	1,834	459	459	0	459	63	630	1,507	219	2,356	0	94
1988	**61%**	577	577	565	377	628	264	1,834	459	447	12	459	63	577	1,514	264	2,356	0	49
1989	**69%**	799	799	771	336	489	152	1,747	437	409	28	437	60	799	1,293	152	2,244	0	161
1990	**49%**	569	569	569	405	568	162	1,703	426	426	0	426	59	569	1,457	162	2,188	0	151
1991	**65%**	537	537	537	369	640	114	1,660	415	415	0	415	57	537	1,481	114	2,132	0	199
1992	**83%**	770	770	730	355	508	67	1,660	415	391	24	415	57	754	1,311	67	2,132	16	246
1993	**117%**	1,096	1,071	937	305	407	11	1,660	415	353	62	415	57	999	1,122	11	2,132	72	302
1994	**67%**	853	853	791	366	445	101	1,703	426	390	37	426	59	828	1,259	101	2,188	25	212
1995	**140%**	1,722	1,492	1,282	255	206	4	1,747	437	323	114	437	60	1,396	844	4	2,244	96	309
1996	**124%**	2,031	1,588	1,384	267	140	0	1,791	448	339	109	448	62	1,492	808	0	2,300	96	313
1997	**119%**	1,675	1,472	1,256	271	283	25	1,834	459	343	116	459	63	1,371	960	25	2,356	100	288
1998	**167%**	2,486	1,615	1,366	236	102	0	1,703	426	287	139	426	59	1,505	683	0	2,188	111	313
1999	94%	1,865	1,524	1,279	234	234	0	1,747	437	319	118	437	60	1,397	847	0	2,244	127	313
2000	**114%**	1,464	1,364	1,167	278	312	34	1,791	448	343	105	448	62	1,272	994	34	2,300	92	279
2001	**75%**	1,074	1,056	983	336	416	99	1,834	459	409	50	459	63	1,033	1,224	99	2,356	23	214
2002	96%	1,326	1,263	1,051	294	376	69	1,791	448	356	92	448	62	1,143	1,089	69	2,300	120	244
2003	99%	1,401	1,276	1,047	295	354	95	1,791	448	345	103	448	62	1,151	1,055	95	2,300	126	218
2004	**89%**	1,238	1,103	925	299	465	145	1,834	459	367	92	459	63	1,017	1,194	145	2,356	86	168
2005	**135%**	2,082	1,377	1,151	262	287	3	1,703	426	311	116	426	59	1,267	918	3	2,188	110	310
2006	**151%**	2,180	1,356	1,131	278	295	0	1,703	426	311	116	426	59	1,246	942	0	2,188	110	313
2007	**59%**	860	855	784	370	494	142	1,791	448	411	37	448	62	822	1,337	142	2,300	33	171
2008	**79%**	872	827	724	351	507	122	1,703	426	380	46	426	59	770	1,296	122	2,188	57	191
Average	97%	1,290	1,100	962	312	398	88	1,760	440	367	73	440	60	1,035	1,137	88	2,260	65	225
Minimum	49%	537	537	537	234	102	0	1,660	415	287	0	415	57	537	683	0	2,132	0	49
Maximum	167%	2,486	1,615	1,384	405	640	264	1,834	459	459	139	459	63	1,505	1,514	264	2,356	127	313

Note: All estimates from monthly analyis summarized in Figure 7-4.

Column Notes:

- **A** i.e., water year (WY) 2008 was October 1, 2007 to September 30, 2008.
- **B** Source: Table 3-2.
- **C** Semilogarithmic extrapolation of actual diversion record (Table 4-15c & Figure 4-16). WY 1990 adjusted to remove effect of Loma Prieta earthquake.
- **D** Assumed capacity of Lyon Water Treatment Plant (WTP) 155 AF/month (51 MG/month).
- **E** Limited by demand during months when flows occur. Assumes 10 AF/month loss during stormflow periods.
- **F** Remaining demand up to 35 AF/month (continuous rate of 260 gpm).
- **G** Remaining demand up to 75 AF/month (continuous rate of 560 gpm).
- **H** Remaining demand requiring supplemental source (e.g., diversion from Loch Lomond, added groundwater yield) and/or further conservation.
- **I, M, R** Values from Table 7-4, *Assumed 2030 Annual Production Demand During WY 1970-2008 Climatic Cycle*.
- **J** Assumes SSA demand met entirely by Pasatiempo wells; however, existing rates of use appear unsustainable.
- **L** Limited by flows remaining after NSA diversion and by SSA demand during months when flows occur.
- **N** Assumes Manana Woods continues as a separate system.
- **S** Flows within WTP capacity but which exceeded demand during months when flows occurred.
- **T** Assumes Loch Lomond is the supplemental source to which SLVWD has maximum entitlement of 313 AF/yr (102 MG/yr).

Table 7-5a
SLVWD Annual Production Assuming 2030 Demand, WY 1985-2008 Climatic Cycle, and Conjunctive Use Scenario A

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
		Estimated	Potential	Northern Service Area					Southern Service Area					Total Production Demand				Unused	Unused
		Potential	Diversions							With Intertie		Total		With Intertie		Conserv./		Divert-	Loch
	Ben	Diversion	Limited by	Stream	Quail		Conserv./	Total					Manana	Stream		Supple-		able	Lomond
	Lomond 4	Hydro-	WTP	Diver-	Hollow	Olympia	Supple-	Produc-	Pasa-	Pasa-	Stream	Produc-	Woods	Diver-	Ground-	mental	All	Stream-	Entitle-
	Precip. (%	graph	Capacity	sions	Wells	Wells	mental Source	tion Demand	tiempo Wells	tiempo Wells	Diver-sions	tion Demand	Well	sions	water	Source	Sources	flows	ment
Water Year	avg)	(MG/yr)																	
1985	**82%**	440	390	326	94	128	50	598	150	114	35	150	21	362	356	50	768	28	52
1986	**82%**	492	399	337	90	128	43	598	150	110	40	150	21	377	348	43	768	22	59
1987	**82%**	205	205	205	123	198	71	598	150	150	0	150	21	205	491	71	768	0	31
1988	**82%**	188	188	184	123	205	86	598	150	146	4	150	21	188	493	86	768	0	16
1989	**82%**	260	260	251	110	159	49	569	142	133	9	142	20	260	421	49	731	0	53
1990	**82%**	185	185	185	132	185	53	555	139	139	0	139	19	185	475	53	713	0	49
1991	**82%**	175	175	175	120	208	37	541	135	135	0	135	19	175	483	37	695	0	65
1992	**82%**	251	251	238	116	166	22	541	135	127	8	135	19	246	427	22	695	5	80
1993	**82%**	357	349	305	99	133	3	541	135	115	20	135	19	326	366	3	695	23	99
1994	**82%**	278	278	258	119	145	33	555	139	127	12	139	19	270	410	33	713	8	69
1995	**82%**	561	486	418	83	67	1	569	142	105	37	142	20	455	275	1	731	31	101
1996	**82%**	662	517	451	87	46	0	583	146	111	35	146	20	486	263	0	749	31	102
1997	**82%**	546	480	409	88	92	8	598	150	112	38	150	21	447	313	8	768	33	94
1998	**82%**	810	526	445	77	33	0	555	139	94	45	139	19	490	223	0	713	36	102
1999	82%	608	497	417	76	76	0	569	142	104	38	142	20	455	276	0	731	42	102
2000	**82%**	477	444	380	91	102	11	583	146	112	34	146	20	414	324	11	749	30	91
2001	**82%**	350	344	320	110	135	32	598	150	133	16	150	21	337	399	32	768	8	70
2002	82%	432	411	343	96	123	22	583	146	116	30	146	20	372	355	22	749	39	80
2003	82%	456	416	341	96	115	31	583	146	112	34	146	20	375	344	31	749	41	71
2004	**82%**	403	359	301	98	151	47	598	150	119	30	150	21	331	389	47	768	28	55
2005	**82%**	678	449	375	85	93	1	555	139	101	38	139	19	413	299	1	713	36	101
2006	**82%**	710	442	368	91	96	0	555	139	101	38	139	19	406	307	0	713	36	102
2007	**82%**	280	279	256	121	161	46	583	146	134	12	146	20	268	436	46	749	11	56
2008	**82%**	284	269	236	114	165	40	555	139	124	15	139	19	251	422	40	713	18	62
Average	82%	420	358	314	102	130	29	573	143	120	24	143	20	337	371	29	737	21	73
Minimum	82%	175	175	175	76	33	0	541	135	94	0	135	19	175	223	0	695	0	16
Maximum	82%	810	526	451	132	208	86	598	150	150	45	150	21	490	493	86	768	42	102

Note: All estimates from monthly analyis summarized in Figure 7-4.

Column Notes:

- **A** i.e., water year (WY) 2008 was October 1, 2007 to September 30, 2008.
- **B** Source: Table 3-2.
- **C** Semilogarithmic extrapolation of actual diversion record (Table 4-15c & Figure 4-16). WY 1990 adjusted to remove effect of Loma Prieta earthquake.
- **D** Assumed capacity of Lyon Water Treatment Plant (WTP) 155 AF/month (51 MG/month).
- **E** Limited by demand during months when flows occur. Assumes 10 AF/month loss during stormflow periods.
- **F** Remaining demand up to 35 AF/month (continuous rate of 260 gpm).
- **G** Remaining demand up to 75 AF/month (continuous rate of 560 gpm).
- **H** Remaining demand requiring supplemental source (e.g., diversion from Loch Lomond, added groundwater yield) and/or further conservation.
- **I, M, R** Values from Table 7-4, *Assumed 2030 Annual Production Demand During WY 1970-2008 Climatic Cycle*.
- **J** Assumes SSA demand met entirely by Pasatiempo wells; however, existing rates of use appear unsustainable.
- **L** Limited by flows remaining after NSA diversion and by SSA demand during months when flows occur.
- **N** Assumes Manana Woods continues as a separate system.
- **S** Flows within WTP capacity but which exceeded demand during months when flows occurred.
- **T** Assumes Loch Lomond is the supplemental source to which SLVWD has maximum entitlement of 313 AF/yr (102 MG/yr).

Table 7-5b

SLVWD Annual Production Assuming 2030 Demand, WY 1985-2008 Climatic Cycle, and Conjunctive Use Scenario A

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
				Northern Service Area						Southern Service Area							Total Production Demand					
							Supplemental Source				With Intertie						With Intertie					
Water Year	Ben Lomond 4 Precip. (% avg)	Estimated Potential Diversion Hydro-graph	Potential Diversions Limited by WTP Capacity	Stream Diver-sions	Quail Hollow Wells	Olympia Wells	In-Lieu Recharge	Conserv./ Deficit Makeup	Total Produc-tion Demand	Pasa-tiempo Wells	Pasa-tiempo Wells	Stream Diver-sions	Conserv. /Supple-mental Source	Total Inter-tie	Total Produc-tion Demand	Manana Woods Well	Stream Diver-sions	Ground-water	Conserv./ Supple-mental Source	All Sources	Unused Divert-able Stream-flows	Unused Loch Lomond Entitle-ment
		(AF/yr)																				
1985	**82%**	1,351	1,196	1,001	359	376	0	98	1,834	459	350	109	0	109	459	63	1,109	1,149	98	2,356	86	215
1986	**136%**	1,509	1,224	1,034	170	324	136	171	1,834	459	332	122	5	127	459	63	1,156	889	311	2,356	68	2
1987	**54%**	630	630	630	497	563	0	144	1,834	459	459	0	0	0	459	63	630	1,582	144	2,356	0	169
1988	**61%**	577	577	565	497	607	0	166	1,834	459	447	12	0	12	459	63	577	1,613	166	2,356	0	147
1989	**69%**	799	799	771	432	475	0	69	1,747	437	409	28	0	28	437	60	799	1,376	69	2,244	0	244
1990	**49%**	569	569	569	515	537	0	82	1,703	426	426	0	0	0	426	59	569	1,537	82	2,188	0	231
1991	**65%**	537	537	537	489	587	0	47	1,660	415	415	0	0	0	415	57	537	1,548	47	2,132	0	266
1992	**83%**	770	770	730	461	452	0	17	1,660	415	391	24	0	24	415	57	754	1,361	17	2,132	16	296
1993	**117%**	1,096	1,071	937	180	332	160	51	1,660	415	275	62	77	140	415	57	999	845	288	2,132	72	25
1994	**67%**	853	853	791	459	413	0	39	1,703	426	390	37	0	37	426	59	828	1,320	39	2,188	25	274
1995	**140%**	1,722	1,492	1,282	150	171	130	14	1,747	437	210	114	113	227	437	60	1,396	591	257	2,244	96	56
1996	**124%**	2,031	1,588	1,384	155	120	132	0	1,791	448	215	109	124	233	448	62	1,492	553	255	2,300	96	58
1997	**119%**	1,675	1,472	1,256	162	232	134	51	1,834	459	257	116	86	201	459	63	1,371	715	270	2,356	100	43
1998	**167%**	2,486	1,615	1,366	144	82	112	0	1,703	426	170	139	117	256	426	59	1,505	454	229	2,188	111	84
1999	94%	1,865	1,524	1,279	159	242	0	67	1,747	437	319	118	0	118	437	60	1,397	780	67	2,244	127	246
2000	**114%**	1,464	1,364	1,167	163	257	140	64	1,791	448	261	105	82	187	448	62	1,272	743	286	2,300	92	27
2001	**75%**	1,074	1,056	983	432	372	0	47	1,834	459	409	50	0	50	459	63	1,033	1,277	47	2,356	23	266
2002	96%	1,326	1,263	1,051	189	361	0	189	1,791	448	356	92	0	92	448	62	1,143	969	189	2,300	120	124
2003	99%	1,401	1,276	1,047	190	346	0	207	1,791	448	345	103	0	103	448	62	1,151	942	207	2,300	126	106
2004	**89%**	1,238	1,103	925	194	520	0	195	1,834	459	367	92	0	92	459	63	1,017	1,144	195	2,356	86	118
2005	**135%**	2,082	1,377	1,151	167	242	120	22	1,703	426	197	116	114	229	426	59	1,267	665	256	2,188	110	57
2006	**151%**	2,180	1,356	1,131	170	253	138	12	1,703	426	202	116	109	224	426	59	1,246	683	259	2,188	110	54
2007	**59%**	860	855	784	480	453	0	74	1,791	448	411	37	0	37	448	62	822	1,405	74	2,300	33	239
2008	**79%**	872	827	724	447	474	0	59	1,703	426	380	46	0	46	426	59	770	1,359	59	2,188	57	254
Average	97%	1,290	1,100	962	303	366	50	78	1,760	440	333	73	34	107	440	60	1,035	1,062	163	2,260	65	150
Minimum	49%	537	537	537	144	82	0	0	1,660	415	170	0	0	0	415	57	537	454	17	2,132	0	2
Maximum	167%	2,486	1,615	1,384	515	607	160	207	1,834	459	459	139	124	256	459	63	1,505	1,613	311	2,356	127	296

Note: All estimates from monthly analyis summarized in Figure 7-5.

Column Notes:

A i.e., water year (WY) 2008 was October 1, 2007 to September 30, 2008.

B Source: Table 3-2.

C Semilogarithmic extrapolation of actual diversion record (Table 4-15c & Figure 4-16). WY 1990 adjusted to remove effect of Loma Prieta earthquake.

D Assumed capacity of Lyon Water Treatment Plant (WTP) 155 AF/month (51 MG/month).

E Limited by demand during months when flows occur. Assumes 10 AF/month loss during stormflow periods.

F Remaining demand up to 47 AF/month (continuous rate of 350 gpm) during years with <85% avg rainfall, otherwise up to 20 AF/month (150 gpm) .

G Remaining demand up to 80 AF/month (continuous rate of 600 gpm) during years with <90% avg rainfall, otherwise up to 60 AF/month (445 gpm) .

H Supplemental source of up to 20 AF/month during non-stormflow months of years with above average rainfall; allows recovery of Quail Hollow & Olympia wells.

I Remaining demand requiring supplemental source (e.g., diversion from Loch Lomond, added groundwater yield) and/or further conservation.

J, P, U Values from Table 7-4, *Assumed 2030 Annual Production Demand During WY 1970-2008 Climatic Cycle* .

K Assumes SSA demand met entirely by Pasatiempo wells; however, existing rates of use appear unsustainable.

M Limited by flows remaining after NSA diversion and by SSA demand during months when flows occur.

N Supplemental source of up to 20 AF/month during non-stormflow months of years with above average rainfall; amount limited by remaining annual entitlement to Loch Lomond.

Q Assumes Manana Woods continues as a separate system.

V Flows within WTP capacity but which exceeded demand during months when flows occurred.

W Assumes Loch Lomond is the supplemental source to which SLVWD has maximum entitlement of 313 AF/yr (102 MG/yr).

Table 7-6a
SLVWD Annual Production Assuming 2030 Demand, WY 1985-2008 Climatic Cycle, and Conjunctive Use Scenario B

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
				Northern Service Area						Southern Service Area							Total Production Demand					
							Supplemental Source				With Intertie						With Intertie					
Water Year	Ben Lomond 4 Precip. (% avg)	Estimated Potential Diversion Hydro-graph	Potential Diversions Limited by WTP Capacity	Stream Diver-sions	Quail Hollow Wells	Olympia Wells	In-Lieu Recharge	Conserv./ Deficit Makeup	Total Produc-tion Demand	Pasa-tiempo Wells	Pasa-tiempo Wells	Stream Diver-sions	Conserv. /Supple-mental Source	Total Inter-tie	Total Produc-tion Demand	Manana Woods Well	Stream Diver-sions	Ground-water	Conserv./ Supple-mental Source	All Sources	Unused Divert-able Stream-flows	Unused Loch Lomond Entitle-ment
		(MG/yr)																				
1985	**82%**	440	390	326	117	123	0	32	598	150	114	35	0	35	150	21	362	374	32	768	28	70
1986	**136%**	492	399	337	55	106	44	56	598	150	108	40	1	41	150	21	377	290	101	768	22	1
1987	**54%**	205	205	205	162	183	0	47	598	150	150	0	0	0	150	21	205	515	47	768	0	55
1988	**61%**	188	188	184	162	198	0	54	598	150	146	4	0	4	150	21	188	526	54	768	0	48
1989	**69%**	260	260	251	141	155	0	23	569	142	133	9	0	9	142	20	260	448	23	731	0	79
1990	**49%**	185	185	185	168	175	0	27	555	139	139	0	0	0	139	19	185	501	27	713	0	75
1991	**65%**	175	175	175	159	191	0	15	541	135	135	0	0	0	135	19	175	504	15	695	0	87
1992	**83%**	251	251	238	150	147	0	5	541	135	127	8	0	8	135	19	246	444	5	695	5	97
1993	**117%**	357	349	305	59	108	52	17	541	135	90	20	25	46	135	19	326	275	94	695	23	8
1994	**67%**	278	278	258	150	135	0	13	555	139	127	12	0	12	139	19	270	430	13	713	8	89
1995	**140%**	561	486	418	49	56	42	5	569	142	68	37	37	74	142	20	455	193	84	731	31	18
1996	**124%**	662	517	451	51	39	43	0	583	146	70	35	40	76	146	20	486	180	83	749	31	19
1997	**119%**	546	480	409	53	76	44	16	598	150	84	38	28	66	150	21	447	233	88	768	33	14
1998	**167%**	810	526	445	47	27	36	0	555	139	55	45	38	83	139	19	490	148	75	713	36	27
1999	94%	608	497	417	52	79	0	22	569	142	104	38	0	38	142	20	455	254	22	731	42	80
2000	**114%**	477	444	380	53	84	46	21	583	146	85	34	27	61	146	20	414	242	93	749	30	9
2001	**75%**	350	344	320	141	121	0	15	598	150	133	16	0	16	150	21	337	416	15	768	8	87
2002	96%	432	411	343	62	118	0	61	583	146	116	30	0	30	146	20	372	316	61	749	39	41
2003	99%	456	416	341	62	113	0	68	583	146	112	34	0	34	146	20	375	307	68	749	41	34
2004	**89%**	403	359	301	63	169	0	64	598	150	119	30	0	30	150	21	331	373	64	768	28	38
2005	**135%**	678	449	375	55	79	39	7	555	139	64	38	37	75	139	19	413	217	83	713	36	19
2006	**151%**	710	442	368	55	82	45	4	555	139	66	38	35	73	139	19	406	223	84	713	36	18
2007	**59%**	280	279	256	156	147	0	24	583	146	134	12	0	12	146	20	268	458	24	749	11	78
2008	**79%**	284	269	236	146	154	0	19	555	139	124	15	0	15	139	19	251	443	19	713	18	83
Average	97%	420	358	314	99	119	16	26	573	143	109	24	11	35	143	20	337	346	53	737	21	49
Minimum	49%	175	175	175	47	27	0	0	541	135	55	0	0	0	135	19	175	148	5	695	0	1
Maximum	167%	810	526	451	168	198	52	68	598	150	150	45	40	83	150	21	490	526	101	768	42	97

Note: All estimates from monthly analyis summarized in Figure 7-5.

Column Notes:

- **A** i.e., water year (WY) 2008 was October 1, 2007 to September 30, 2008.
- **B** Source: Table 3-2.
- **C** Semilogarithmic extrapolation of actual diversion record (Table 4-15c & Figure 4-16). WY 1990 adjusted to remove effect of Loma Prieta earthquake.
- **D** Assumed capacity of Lyon Water Treatment Plant (WTP) 155 AF/month (51 MG/month).
- **E** Limited by demand during months when flows occur. Assumes 10 AF/month loss during stormflow periods.
- **F** Remaining demand up to 47 AF/month (continuous rate of 350 gpm) during years with <85% avg rainfall, otherwise up to 20 AF/month (150 gpm) .
- **G** Remaining demand up to 80 AF/month (continuous rate of 600 gpm) during years with <90% avg rainfall, otherwise up to 60 AF/month (445 gpm) .
- **H** Supplemental source of up to 20 AF/month during non-stormflow months of years with above average rainfall; allows recovery of Quail Hollow & Olympia wells.
- **I** Remaining demand requiring supplemental source (e.g., diversion from Loch Lomond, added groundwater yield) and/or further conservation.
- **J, P, U** Values from Table 7-4, *Assumed 2030 Annual Production Demand During WY 1970-2008 Climatic Cycle* .
- **K** Assumes SSA demand met entirely by Pasatiempo wells; however, existing rates of use appear unsustainable.
- **M** Limited by flows remaining after NSA diversion and by SSA demand during months when flows occur.
- **N** Supplemental source of up to 20 AF/month during non-stormflow months of years with above average rainfall; amount limited by remaining annual entitlement to Loch Lomond.
- **Q** Assumes Manana Woods continues as a separate system.
- **V** Flows within WTP capacity but which exceeded demand during months when flows occurred.
- **W** Assumes Loch Lomond is the supplemental source to which SLVWD has maximum entitlement of 313 AF/yr (102 MG/yr).

Table 7-6b
SLVWD Annual Production Assuming 2030 Demand, WY 1985-2008 Climatic Cycle, and Conjunctive Use Scenario B