

Water Resources Planning Department

**Projection Analysis Work Sheets
for
Bear Gulch District**

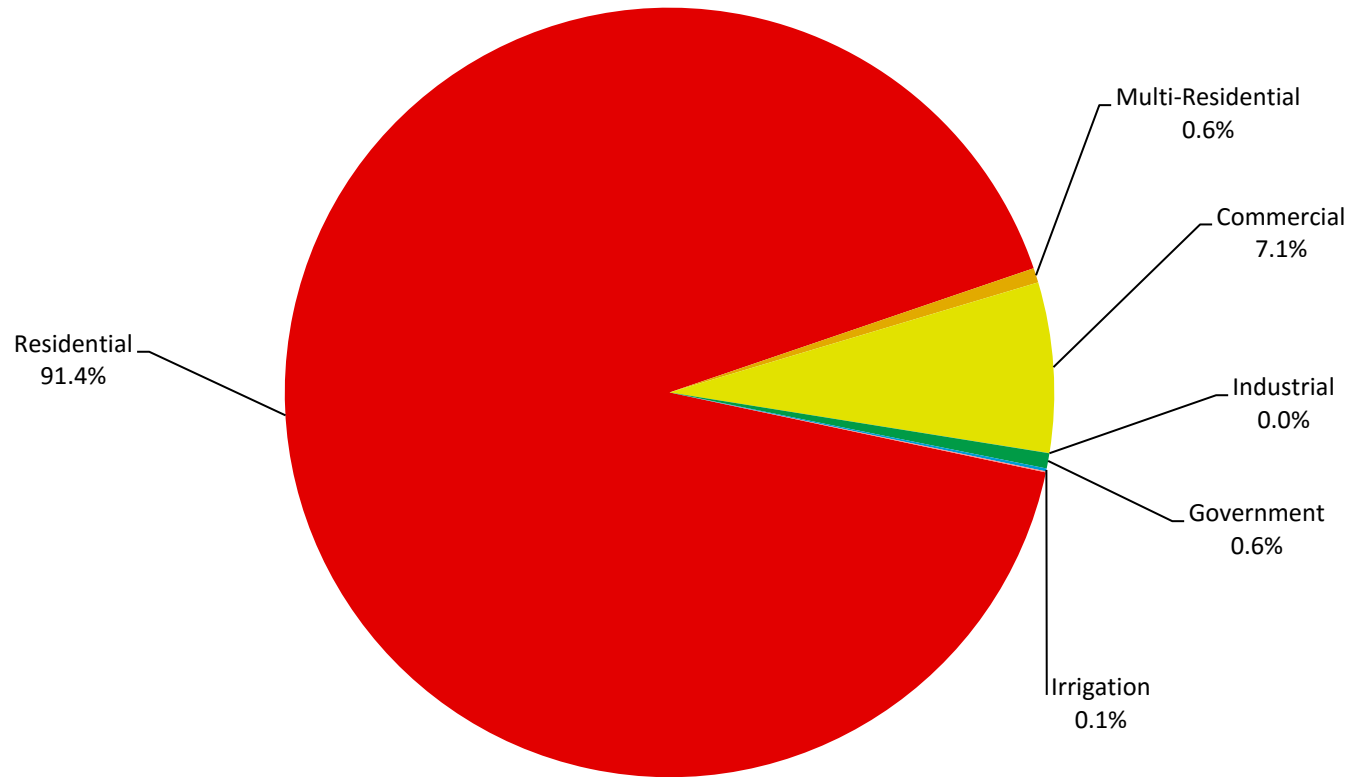
2015



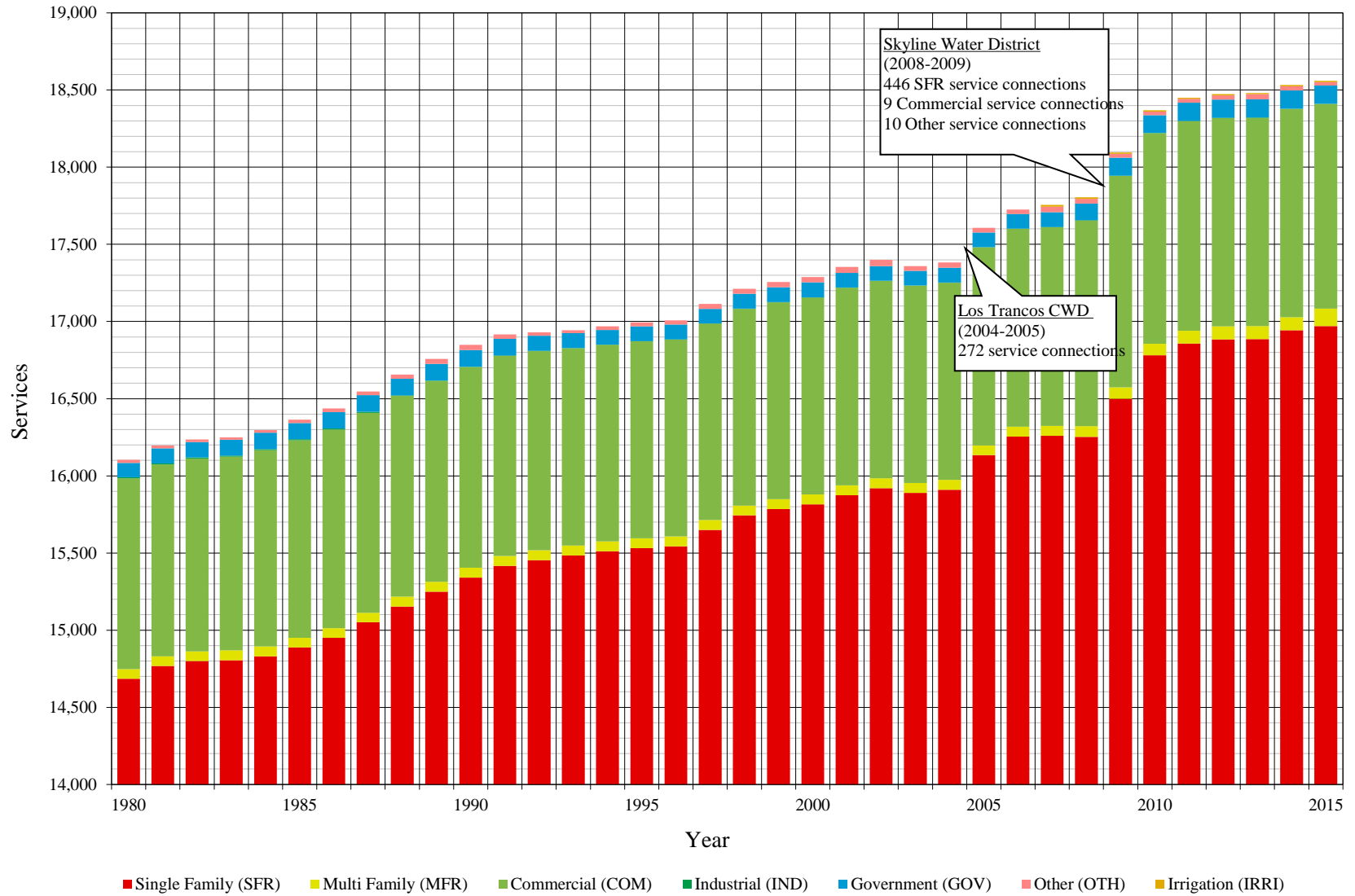
Table of Contents for Worksheets

Worksheet	Title
1	<u>Annual Services</u>
2	<u>Service Growth Percentage</u>
3	<u>District Sales (AF)</u>
4	<u>Demand per Service (Gallons per Day)</u>
5	<u>Percentage Change in Annual Demand</u>
6	<u>Percentage of Total Sales</u>
7	<u>Percentage of Total Demand</u>
8	<u>Actual & Projected Annual Average Services</u>
9	<u>Actual & Projected Demand in Acre-Feet</u>
10	<u>Projected Annual Supply by Source</u>
11	<u>Historical and Projected Average Day, Maximum Day, and Peak Demands</u>
12	<u>Population Estimate</u>
13	<u>Temperature & Rainfall History</u>
14	<u>Groundwater Facilities (if available)</u>
15	<u>Per Capita Water Demand Calculation</u>
16	<u>Indoor/Outdoor Water Usage</u>
17	<u>SB-7 Compliance Demand Worksheet</u>

Distribution of Services (2015)



Historical Services



California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections
Average Annual Services

Year	Single Family (SFR)	Multi Family (MFR)	Commercial (COM)	Industrial (IND)	Government (GOV)	Other (OTH)	Irrigation (IRRI)	Total	Annual Change
1980	14,685	62	1,236	7	94	20		16,104	
1981	14,767	63	1,243	7	99	17		16,196	92
1982	14,799	63	1,250	7	100	16		16,235	39
1983	14,806	63	1,256	7	102	16		16,249	14
1984	14,831	63	1,272	7	105	18		16,297	48
1985	14,888	62	1,280	7	105	22		16,364	68
1986	14,950	62	1,288	7	106	25		16,437	73
1987	15,051	62	1,295	7	107	25		16,547	110
1988	15,153	64	1,302	3	108	27		16,656	110
1989	15,249	64	1,303	1	109	33		16,758	102
1990	15,341	64	1,301	1	108	34		16,849	91
1991	15,417	64	1,298	1	108	29		16,917	68
1992	15,454	64	1,291	1	98	22		16,930	13
1993	15,485	64	1,278	1	96	18		16,943	13
1994	15,510	64	1,275	1	95	23		16,969	26
1995	15,532	64	1,276	1	95	25		16,994	25
1996	15,543	64	1,277	1	96	27		17,008	14
1997	15,650	64	1,273	1	95	31		17,114	106
1998	15,743	64	1,275	1	97	32		17,212	98
1999	15,785	64	1,276	1	97	33		17,256	44
2000	15,816	64	1,276	1	96	34		17,288	32
2001	15,875	64	1,280	1	95	38		17,354	66
2002	15,919	64	1,279	1	95	41		17,400	46
2003	15,890	64	1,278	1	96	31		17,359	-41
2004	15,910	64	1,277	1	97	35		17,383	25
2005	16,134	63	1,284	1	95	30		17,607	248
2006	16,255	63	1,283	1	96	27		17,725	341
2007	16,260	63	1,289	1	96	36	12	17,756	149
2008	16,252	70	1,333	1	107	32	9	17,804	80
2009	16,498	76	1,370	1	116	27	8	18,095	339
2010	16,781	75	1,365	1	116	24	7	18,369	564
2011	16,857	83	1,359	1	118	25	8	18,450	355
2012	16,884	84	1,351	1	118	27	7	18,473	105
2013	16,887	85	1,350	1	117	34	8	18,481	30
2014	16,944	85	1,349	1	119	27	8	18,532	59
2015	16,970	114	1,326	1	119	23	8	18,560	79
5 Yr Avg.	16,908	90	1,347	1	118	27	8	18,499	223
10 Yr Avg.	16,659	80	1,337	1	112	28	8	18,225	227
15 Yr Avg.	16,421	74	1,318	1	107	30	8	17,957	174
20 Yr Avg.	16,243	72	1,307	1	104	31	8	17,761	144

Note: Reclassification occurred between categories from 2007 to 2009

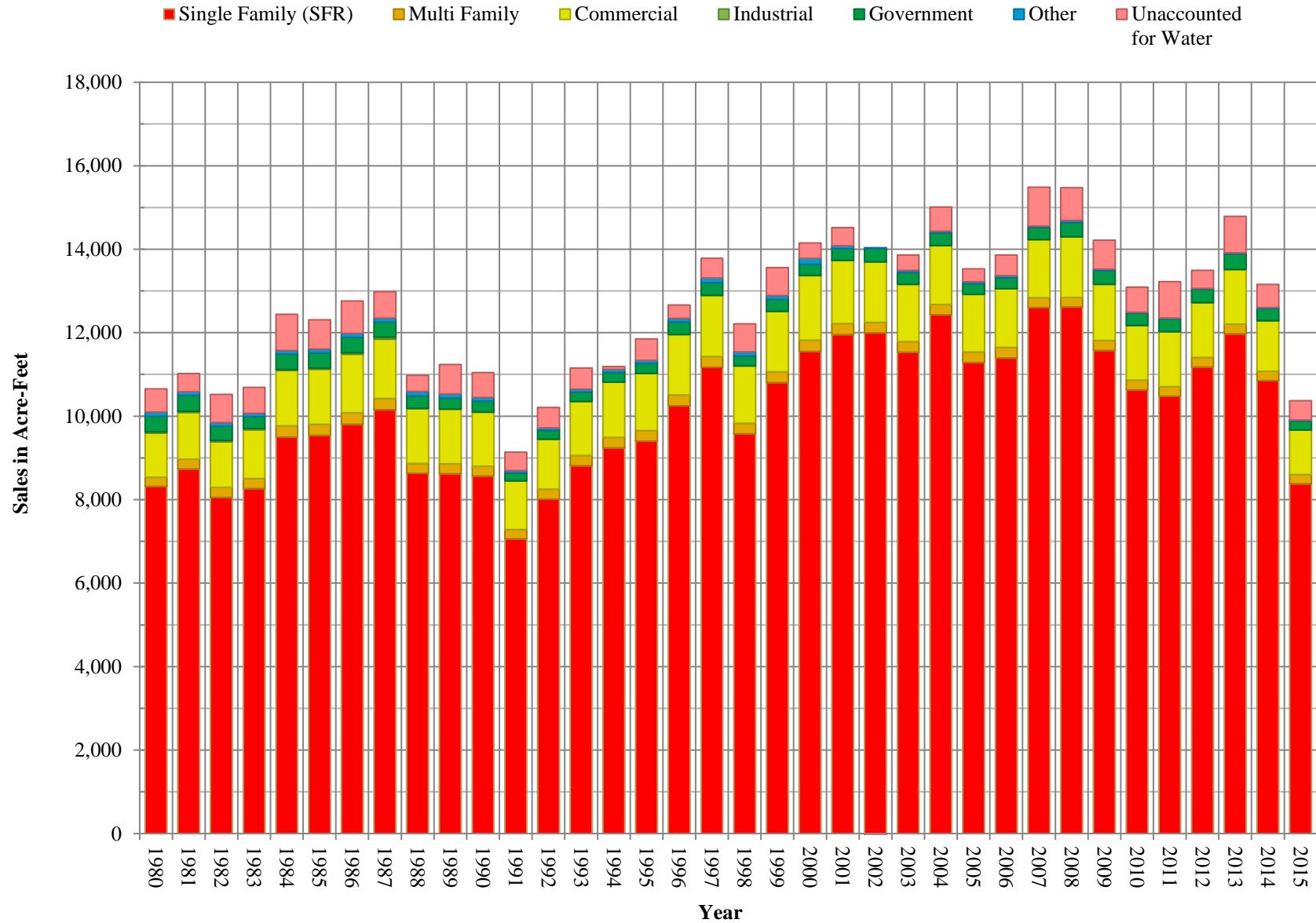
California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections
Service Growth Percentage

Year	Single Family (SFR)	Multi Family (MFR)	Commercial (COM)	Industrial (IND)	Government (GOV)	Other (OTH)	Irrigation (IRRI)	Total
1981	0.56%	1.20%	0.56%	0.00%	5.31%	-12.92%		0.57%
1982	0.22%	0.00%	0.62%	0.00%	0.84%	-10.53%		0.24%
1983	0.04%	0.00%	0.45%	0.00%	1.92%	1.07%		0.09%
1984	0.17%	0.00%	1.32%	0.00%	3.35%	12.17%		0.29%
1985	0.38%	-1.59%	0.63%	0.00%	-0.24%	24.06%		0.42%
1986	0.42%	0.00%	0.57%	0.00%	0.63%	11.79%		0.45%
1987	0.67%	0.00%	0.60%	0.00%	0.87%	0.68%		0.67%
1988	0.68%	3.09%	0.51%	-54.76%	0.86%	9.46%		0.66%
1989	0.63%	0.52%	0.10%	-68.42%	1.16%	20.68%		0.61%
1990	0.61%	-0.39%	-0.20%	0.00%	-0.77%	5.12%		0.54%
1991	0.49%	0.13%	-0.17%	-8.33%	-0.31%	-14.36%		0.40%
1992	0.24%	-0.13%	-0.58%	9.09%	-9.13%	-25.85%		0.07%
1993	0.20%	0.13%	-0.97%	0.00%	-1.87%	-16.09%		0.08%
1994	0.17%	0.00%	-0.29%	0.00%	-0.61%	26.48%		0.15%
1995	0.14%	-0.26%	0.13%	0.00%	-0.09%	9.39%		0.15%
1996	0.07%	0.13%	0.01%	0.00%	0.70%	7.59%		0.08%
1997	0.69%	0.00%	-0.27%	0.00%	-1.39%	15.64%		0.63%
1998	0.60%	0.00%	0.17%	0.00%	1.94%	0.80%		0.57%
1999	0.26%	0.00%	0.03%	0.00%	0.52%	3.95%		0.25%
2000	0.19%	0.00%	0.05%	0.00%	-0.60%	4.05%		0.19%
2001	0.37%	0.00%	0.32%	0.00%	-1.47%	12.17%		0.38%
2002	0.28%	0.00%	-0.08%	0.00%	0.00%	7.16%		0.27%
2003	-0.18%	0.00%	-0.12%	0.00%	0.70%	-25.91%		-0.23%
2004	0.13%	0.00%	-0.10%	0.00%	1.13%	13.39%		0.14%
2005	1.41%	-0.91%	0.56%	0.00%	-1.64%	-13.01%		1.29%
2006	0.75%	-0.92%	-0.08%	0.00%	0.88%	-9.70%		0.67%
2007	0.03%	0.00%	0.48%	0.00%	0.26%	31.29%		0.18%
2008	-0.05%	11.80%	3.45%	0.00%	11.17%	-11.68%	-19.34%	0.27%
2009	1.52%	7.59%	2.76%	0.00%	8.10%	-14.55%	-18.75%	1.63%
2010	1.71%	-0.22%	-0.39%	0.00%	-0.07%	-11.46%	-4.40%	1.51%
2011	0.45%	10.17%	-0.40%	0.00%	2.09%	3.85%	3.45%	0.45%
2012	0.16%	1.00%	-0.60%	0.00%	0.35%	10.10%	-2.22%	0.12%
2013	0.01%	0.89%	-0.10%	0.00%	-0.99%	24.46%	4.55%	0.04%
2014	0.34%	0.30%	-0.02%	0.00%	1.07%	-20.88%	1.09%	0.28%
2015	0.16%	34.05%	-1.77%	0.00%	0.21%	-15.22%	1.08%	0.15%
5 Yr. Avg.	0.22%	0.73%	-0.58%	0.00%	-0.14%	0.46%	1.59%	0.21%
10 Yr. Avg.	0.23%	0.18%	0.33%	0.00%	0.11%	-1.38%	1.59%	0.16%
15 Yr. Avg.	0.20%	0.01%	0.26%	0.00%	-0.18%	-1.33%	1.59%	0.17%
20 Yr. Avg.	0.25%	0.02%	0.20%	0.00%	-0.18%	0.60%	1.59%	0.19%

Note: Values in red excluded due to reclassification or acquisitions

PAGE LEFT BLANK INTENTIONALLY

Historical Sales

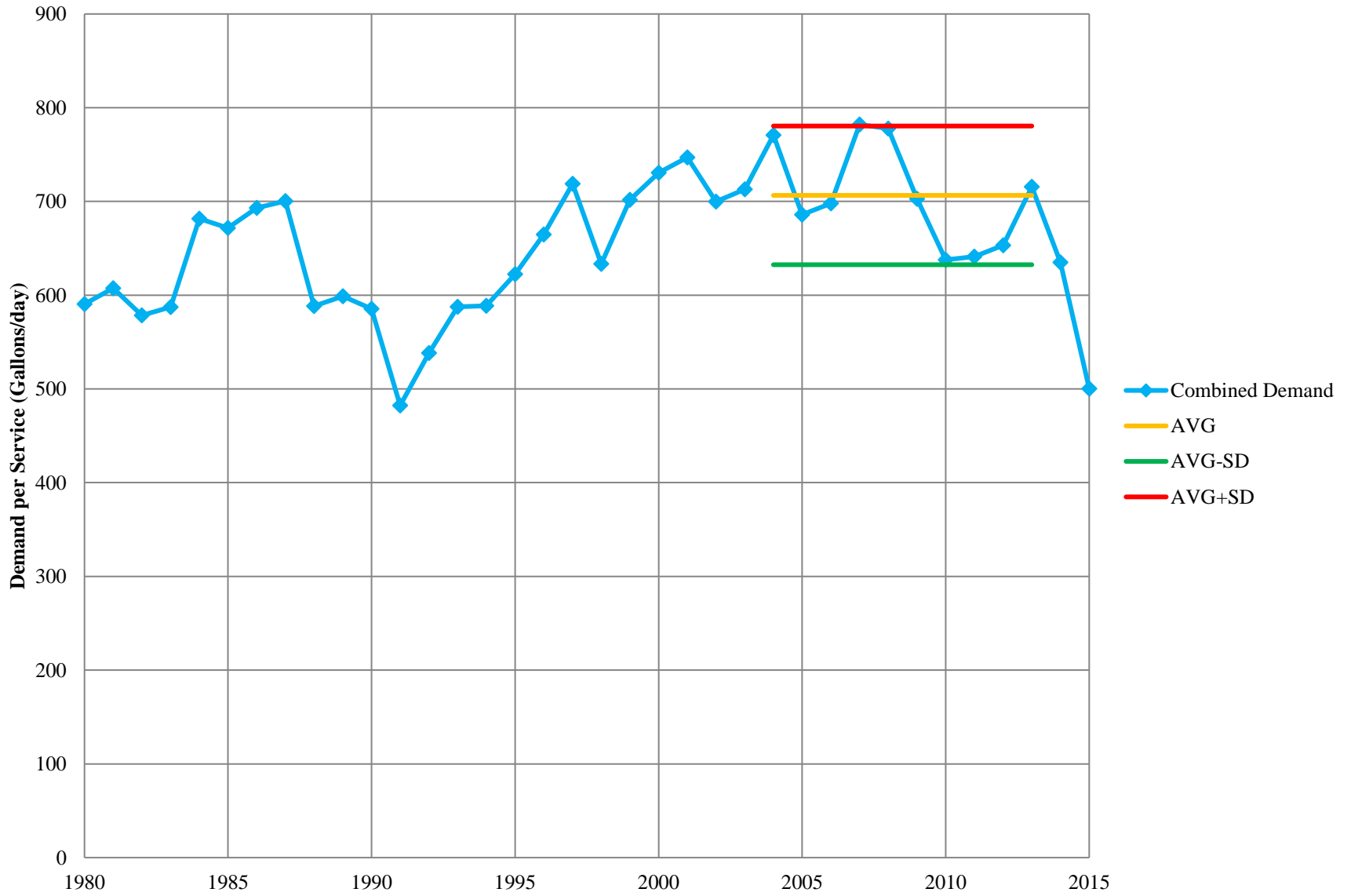


California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections
Sales (AF)

Worksheet 3

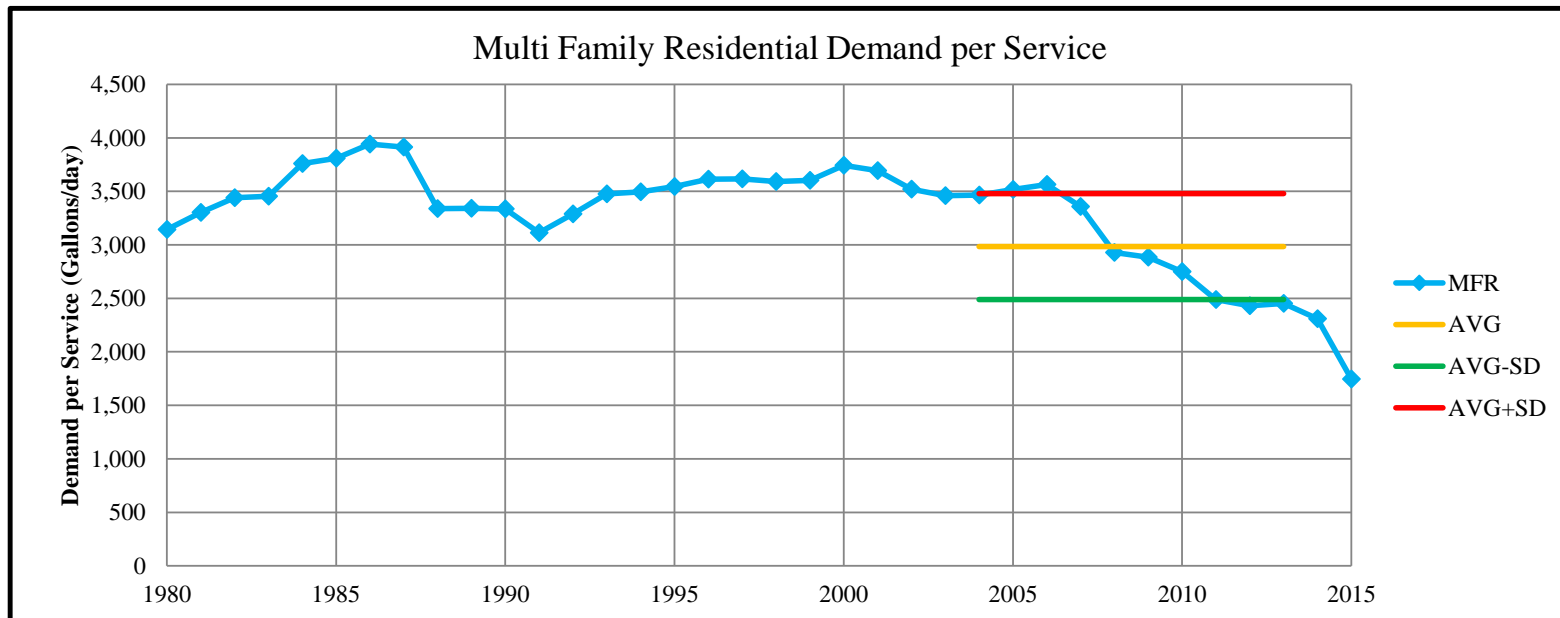
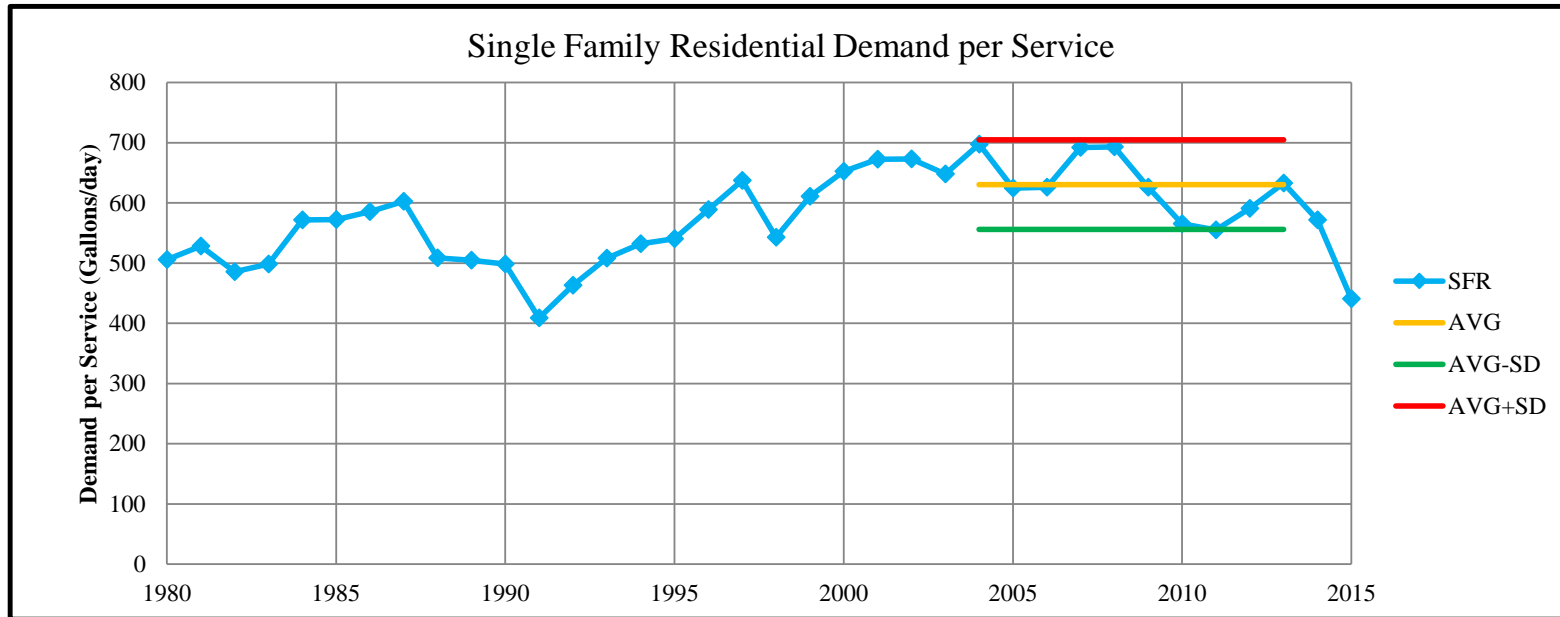
Year	Single Family (SFR)	Multi Family (MFR)	Commercial (COM)	Industrial (IND)	Government (GOV)	Other (OTH)	Irrigation (IRRI)	Unaccounted for Water (UAFW)	Total Sales (AF)	Total Demand (AF)	Total Demand (MGal)
1980	8,316	219	1,059	28	377	99		554	10,099	10,653	3,471
1981	8,737	233	1,117	33	377	91		431	10,588	11,019	3,591
1982	8,052	243	1,092	31	340	90		674	9,847	10,522	3,429
1983	8,263	244	1,166	28	287	82		620	10,070	10,690	3,483
1984	9,501	265	1,325	27	368	90		867	11,577	12,444	4,055
1985	9,541	264	1,317	30	362	95		701	11,610	12,311	4,012
1986	9,806	274	1,407	32	372	92		780	11,982	12,762	4,158
1987	10,155	272	1,417	50	361	96		631	12,350	12,981	4,230
1988	8,630	239	1,308	15	297	105		386	10,594	10,979	3,578
1989	8,619	240	1,306	5	263	98		710	10,531	11,241	3,663
1990	8,564	239	1,294	4	260	92		596	10,452	11,048	3,600
1991	7,059	223	1,168	3	182	61		443	8,697	9,141	2,978
1992	8,015	236	1,194	4	211	63		484	9,723	10,207	3,326
1993	8,811	250	1,291	4	218	74		504	10,647	11,151	3,633
1994	9,240	251	1,323	4	227	78		64	11,123	11,187	3,645
1995	9,402	254	1,365	5	238	76		508	11,341	11,849	3,861
1996	10,252	259	1,442	5	294	94		320	12,346	12,666	4,127
1997	11,174	259	1,460	5	303	114		465	13,316	13,780	4,490
1998	9,574	258	1,372	3	232	102		671	11,542	12,212	3,979
1999	10,802	258	1,448	5	285	97		668	12,895	13,563	4,419
2000	11,553	268	1,544	7	269	139		369	13,780	14,149	4,611
2001	11,953	265	1,512	5	279	71		434	14,084	14,518	4,731
2002	11,996	252	1,443	8	317	21		-397	14,036	13,639	4,444
2003	11,535	248	1,375	7	274	56		365	13,496	13,861	4,517
2004	12,430	248	1,404	6	294	52		573	14,435	15,008	4,890
2005	11,286	250	1,379	7	255	46		304	13,224	13,527	4,408
2006	11,394	251	1,407	5	260	50		492	13,366	13,858	4,516
2007	12,601	236	1,389	6	289	32	66	935	14,619	15,554	5,068
2008	12,616	231	1,449	5	339	49	38	784	14,726	15,510	5,054
2009	11,572	244	1,339	6	322	41	28	692	13,552	14,245	4,642
2010	10,629	232	1,309	4	297	20	32	598	12,523	13,121	4,275
2011	10,478	232	1,313	4	303	20	25	874	12,375	13,250	4,317
2012	11,176	228	1,314	5	321	19	28	428	13,091	13,519	4,405
2013	11,974	233	1,308	5	371	26	26	871	13,942	14,813	4,827
2014	10,854	220	1,212	3	288	28	24	553	12,628	13,181	4,295
2015	8,377	223	1,065	2	220	23	27	465	9,936	10,401	3,389

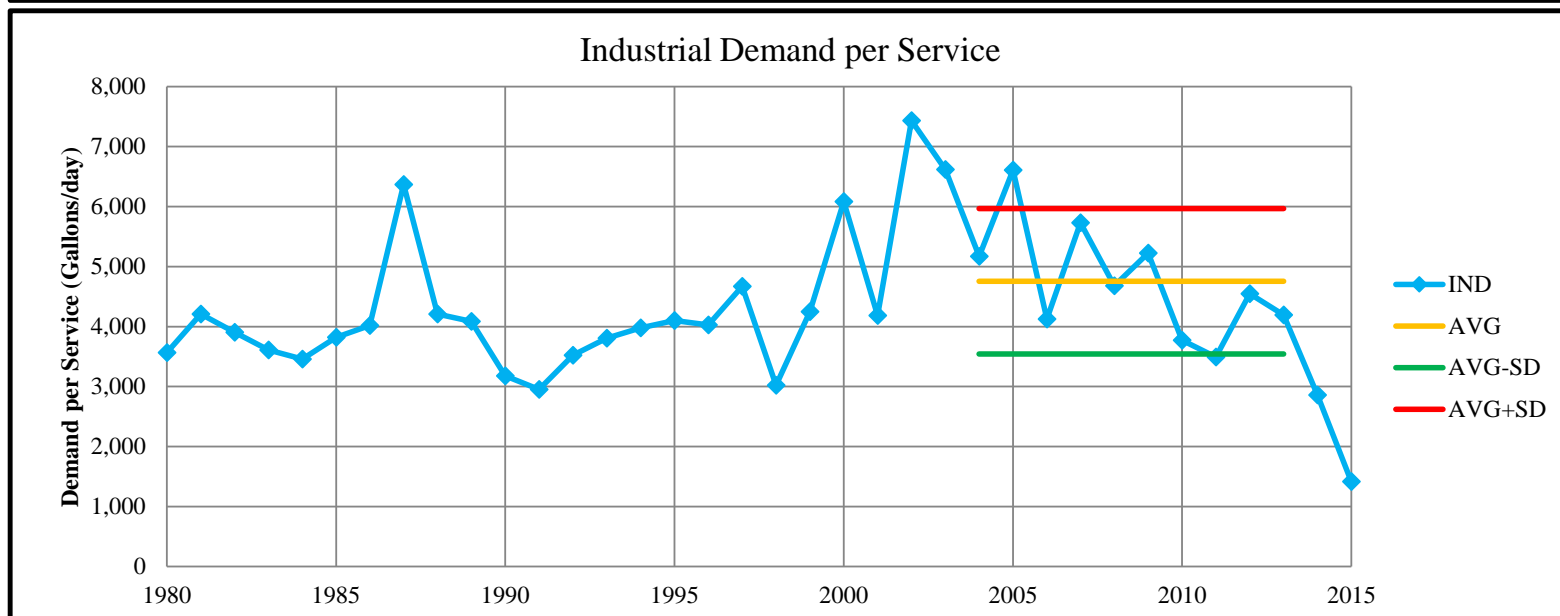
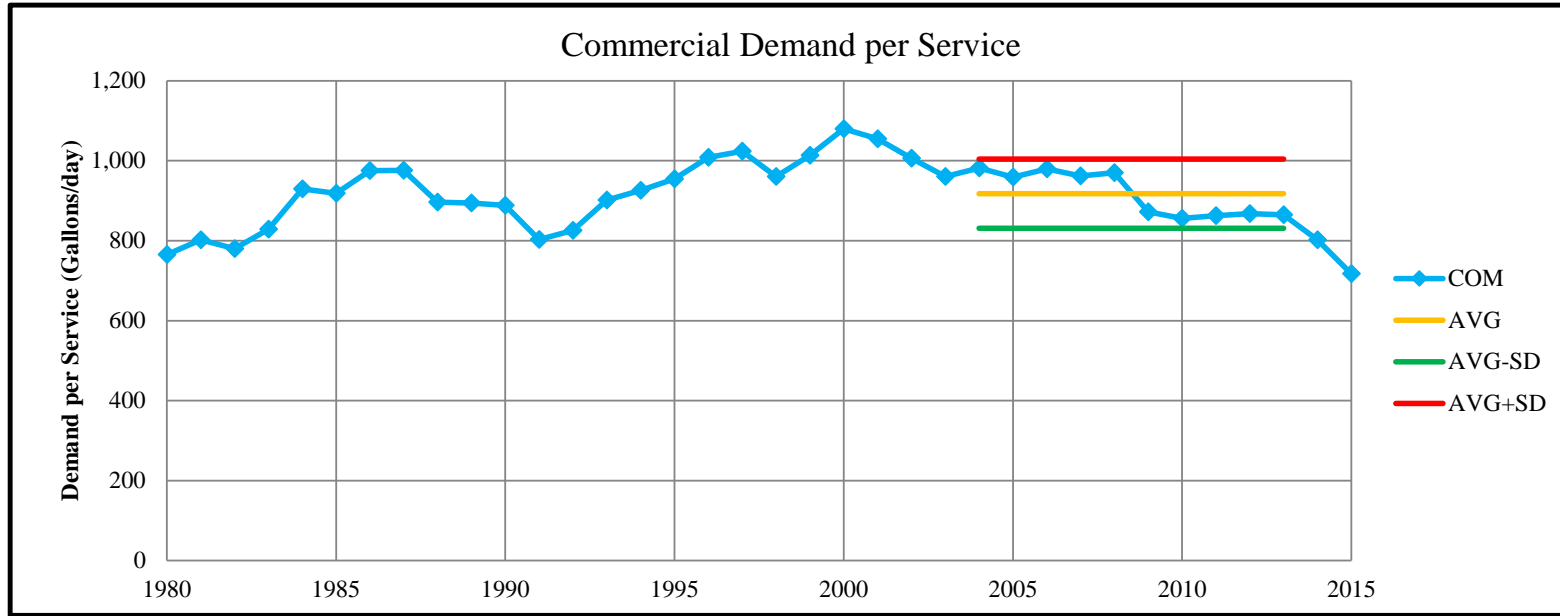
Combined Demand per Service

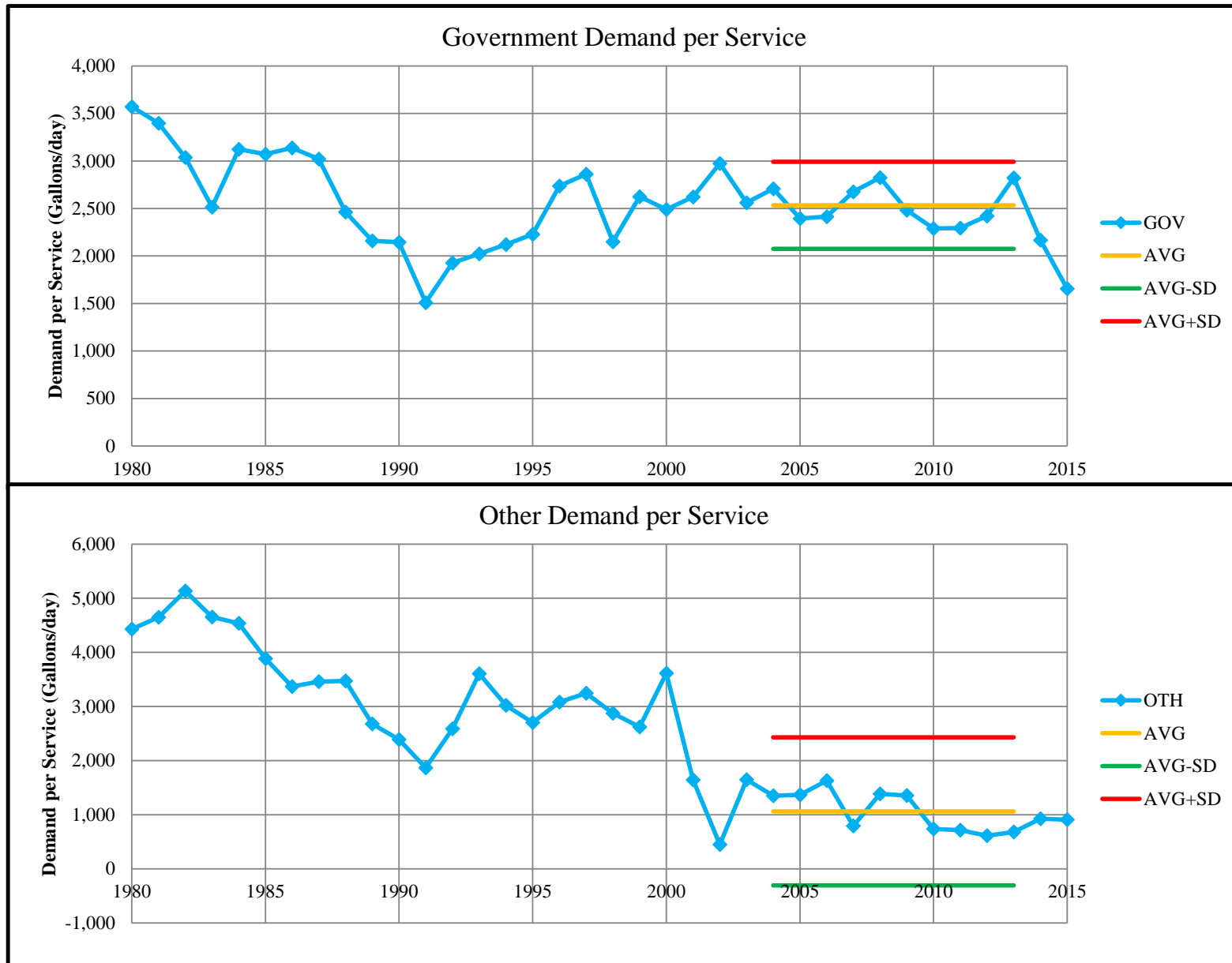


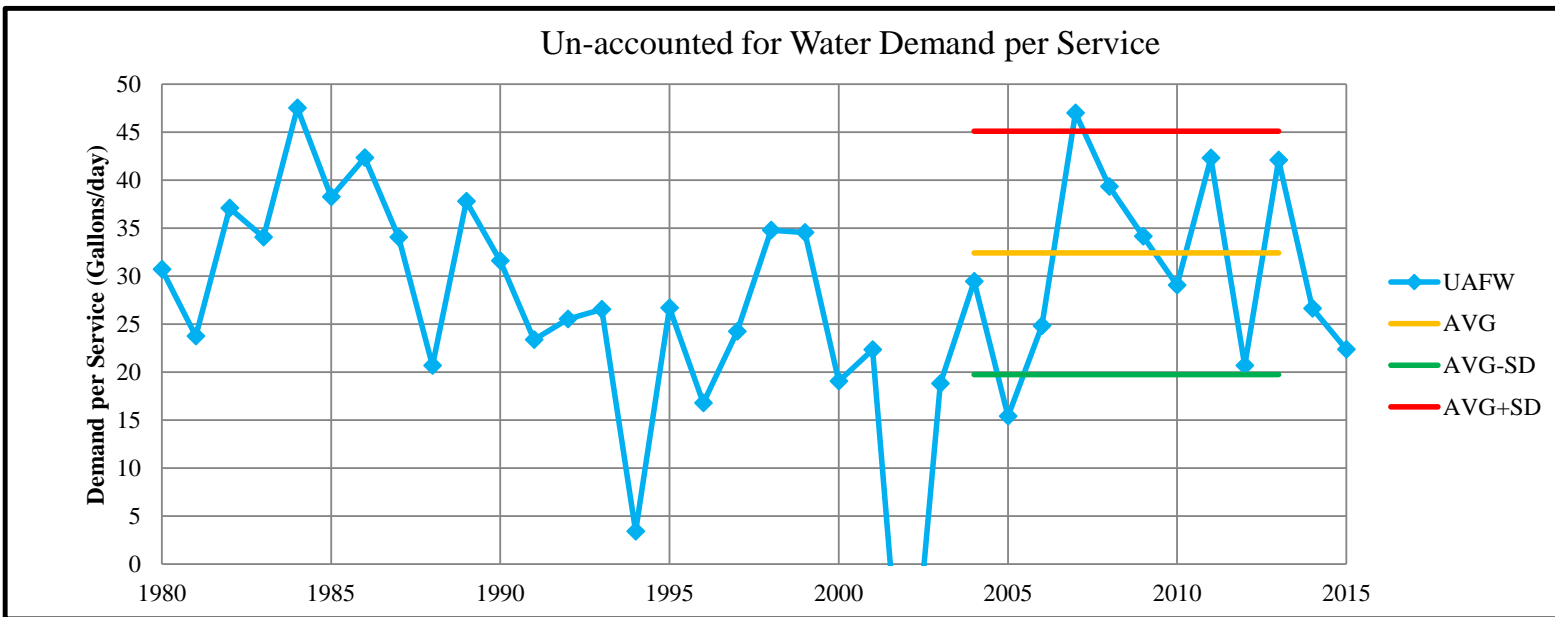
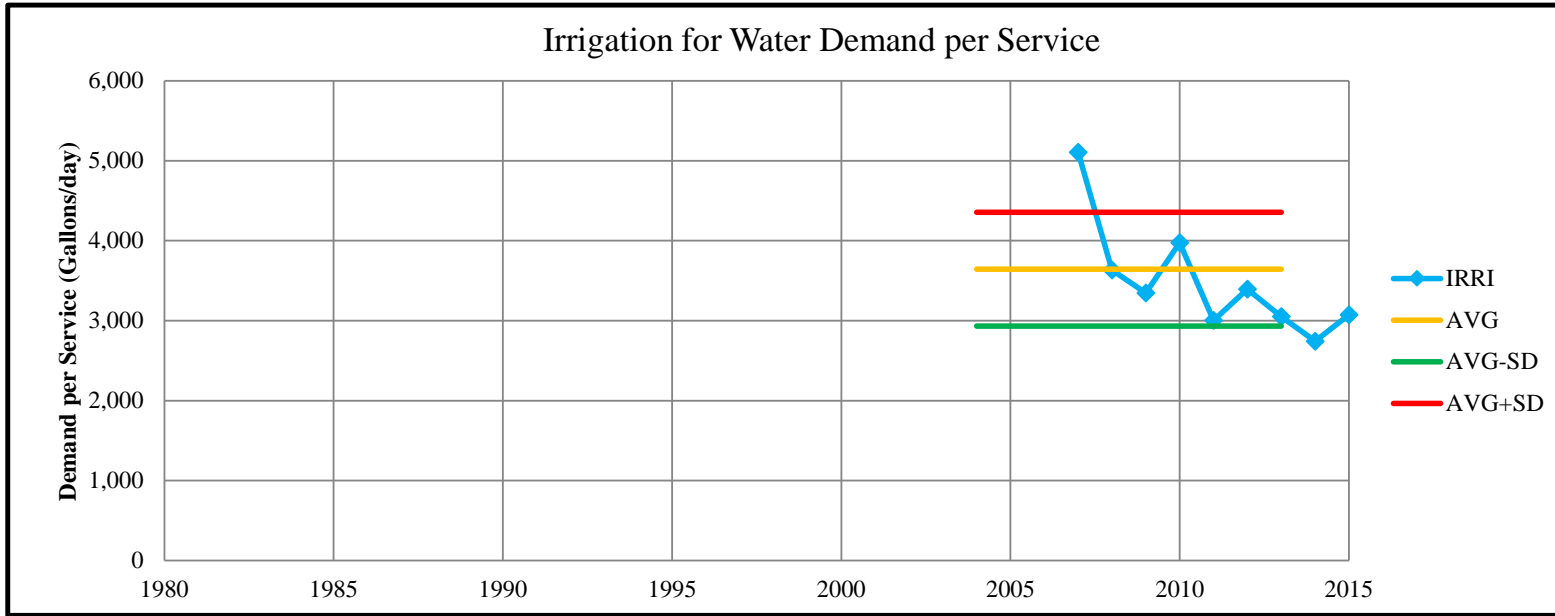
California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections
Demand per Service (Gallons per Day)

Year	SFR	MFR	COM	IND	GOV	OTH	IRRI	UAFW	Combined Demand/Serv
1980	506	3,144	765	3,567	3,572	4,430		31	591
1981	528	3,303	803	4,207	3,396	4,649		24	607
1982	486	3,440	780	3,904	3,039	5,135		37	579
1983	498	3,453	829	3,611	2,514	4,652		34	587
1984	572	3,761	929	3,457	3,123	4,538		48	682
1985	572	3,808	918	3,822	3,072	3,887		38	672
1986	586	3,942	975	4,018	3,139	3,370		42	693
1987	602	3,913	976	6,368	3,022	3,460		34	700
1988	508	3,338	897	4,207	2,464	3,475		21	588
1989	505	3,340	894	4,087	2,161	2,679		38	599
1990	498	3,336	888	3,177	2,146	2,390		32	585
1991	409	3,113	803	2,951	1,510	1,866		23	482
1992	463	3,290	826	3,523	1,927	2,589		26	538
1993	508	3,477	902	3,808	2,024	3,604		27	588
1994	532	3,497	926	3,978	2,120	3,024		3	589
1995	540	3,546	955	4,099	2,229	2,704		27	622
1996	589	3,615	1,008	4,025	2,737	3,082		17	665
1997	637	3,615	1,024	4,671	2,861	3,245		24	719
1998	543	3,593	960	3,021	2,151	2,876		35	633
1999	611	3,603	1,014	4,246	2,624	2,622		35	702
2000	652	3,744	1,080	6,083	2,490	3,614		19	731
2001	672	3,693	1,055	4,183	2,621	1,644		22	747
2002	673	3,520	1,007	7,433	2,975	449		-20	700
2003	648	3,460	960	6,620	2,561	1,646		19	713
2004	697	3,465	982	5,169	2,708	1,350		29	771
2005	624	3,518	959	6,610	2,395	1,367		15	686
2006	626	3,564	980	4,124	2,415	1,632		25	698
2007	692	3,359	962	5,730	2,677	791	5,105	47	782
2008	693	2,930	970	4,681	2,826	1,385	3,634	39	778
2009	626	2,885	872	5,226	2,482	1,357	3,345	34	703
2010	565	2,748	856	3,773	2,290	737	3,974	29	638
2011	555	2,489	862	3,492	2,295	715	3,005	42	641
2012	591	2,429	868	4,548	2,422	611	3,394	21	653
2013	633	2,454	865	4,195	2,823	680	3,052	42	716
2014	572	2,309	802	2,859	2,166	927	2,743	27	635
2015	441	1,746	717	1,414	1,655	910	3,072	22	500
10-yr AVG	630	2,984	918	4,755	2,533	1,063	3,644	32	706
SD	74	495	87	1,212	458	1,368	712	13	74









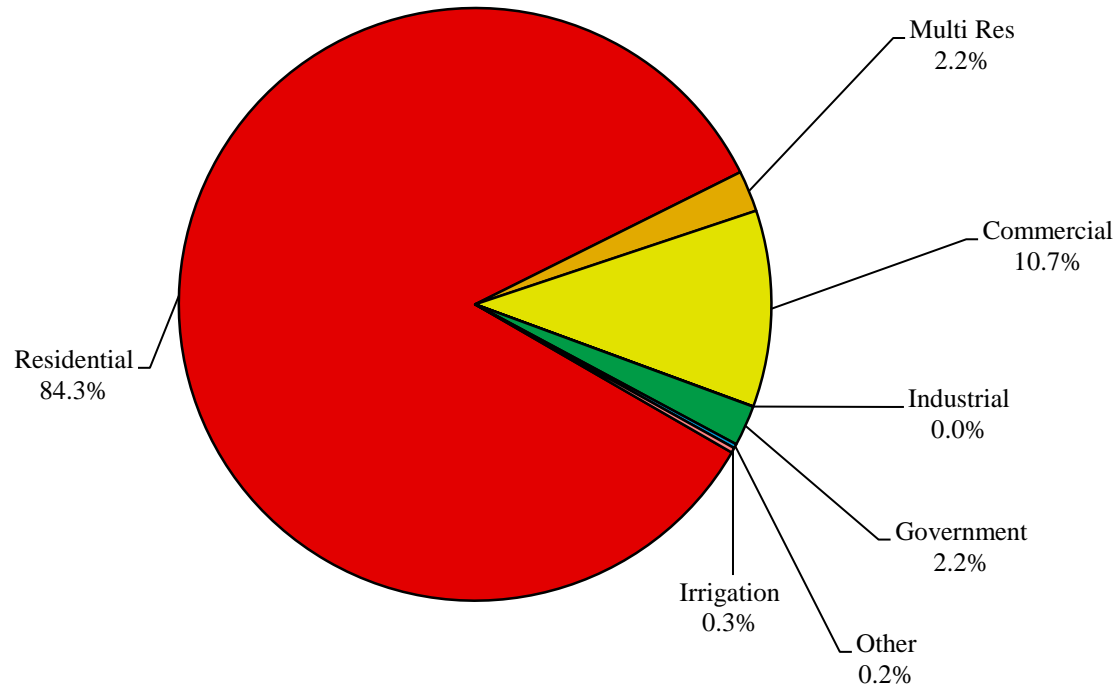
California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections
Percentage Change in Annual Demand

Worksheet 5

Year	Residential	Multi Res	Commercial	Industrial	Government	Other	Irrigation	Unaccounted	Total
1981	5.06%	6.30%	5.47%	17.95%	0.14%	-8.61%		-22.20%	4.85%
1982	-7.84%	4.14%	-2.21%	-7.20%	-9.78%	-1.17%		56.47%	-6.99%
1983	2.63%	0.39%	6.71%	-7.51%	-15.70%	-8.44%		-8.08%	2.26%
1984	14.98%	8.92%	13.63%	-4.26%	28.41%	9.43%		39.91%	14.96%
1985	0.42%	-0.36%	-0.55%	10.55%	-1.88%	6.26%		-19.14%	0.28%
1986	2.78%	3.52%	6.80%	5.12%	2.84%	-3.09%		11.15%	3.21%
1987	3.56%	-0.75%	0.69%	58.49%	-2.88%	3.38%		-19.05%	3.06%
1988	-15.02%	-12.04%	-7.67%	-70.11%	-17.78%	9.94%		-38.87%	-14.22%
1989	-0.12%	0.58%	-0.17%	-69.33%	-11.28%	-6.97%		83.93%	-0.59%
1990	-0.64%	-0.52%	-0.91%	-22.27%	-1.43%	-6.20%		-15.99%	-0.75%
1991	-17.57%	-6.57%	-9.72%	-14.84%	-29.84%	-33.14%		-25.68%	-16.78%
1992	13.53%	5.58%	2.22%	30.23%	15.96%	2.88%		9.28%	11.79%
1993	9.93%	5.81%	8.15%	8.09%	3.02%	16.80%		4.05%	9.50%
1994	4.88%	0.56%	2.42%	4.47%	4.15%	6.10%		-87.20%	4.47%
1995	1.76%	1.15%	3.22%	3.04%	5.05%	-2.17%		687.68%	1.96%
1996	9.04%	2.07%	5.62%	-1.80%	23.61%	22.61%		-37.04%	8.86%
1997	8.99%	0.02%	1.27%	16.04%	3.08%	21.77%		45.27%	7.86%
1998	-14.31%	-0.63%	-6.04%	-35.32%	-23.36%	-10.66%		44.39%	-13.32%
1999	12.82%	0.27%	5.58%	40.57%	22.62%	-5.25%		-0.47%	11.73%
2000	6.95%	3.94%	6.61%	43.24%	-5.66%	43.42%		-44.71%	6.86%
2001	3.46%	-1.38%	-2.06%	-31.23%	3.72%	-48.97%		17.60%	2.21%
2002	0.36%	-4.68%	-4.62%	77.71%	13.48%	-70.71%		-191.47%	-0.34%
2003	-3.84%	-1.70%	-4.71%	-10.95%	-13.32%	171.50%		-192.03%	-3.85%
2004	7.76%	0.14%	2.17%	-21.92%	6.97%	-7.06%		56.93%	6.96%
2005	-9.21%	0.60%	-1.79%	27.87%	-13.00%	-11.86%		-47.06%	-8.39%
2006	0.96%	0.38%	2.04%	-37.61%	1.71%	7.76%		62.22%	1.08%
2007	10.60%	-5.77%	-1.30%	38.97%	11.11%	-36.32%		89.83%	9.38%
2008	0.12%	-2.46%	4.33%	-18.31%	17.38%	54.60%	-42.59%	-16.13%	0.73%
2009	-8.27%	5.94%	-7.62%	11.65%	-5.05%	-16.29%	-25.21%	-11.71%	-7.97%
2010	-8.15%	-4.94%	-2.22%	-27.80%	-7.81%	-51.94%	13.60%	-13.67%	-7.59%
2011	-1.42%	-0.24%	0.31%	-7.44%	2.28%	0.81%	-21.78%	46.32%	-1.18%
2012	6.66%	-1.41%	0.04%	30.22%	5.94%	-5.93%	10.43%	-51.08%	5.78%
2013	7.14%	1.91%	-0.45%	-7.75%	15.37%	38.50%	-5.99%	103.65%	6.50%
2014	-9.36%	-5.65%	-7.29%	-31.85%	-22.44%	7.83%	-9.13%	-36.51%	-9.42%
2015	-22.82%	1.41%	-12.16%	-50.54%	-23.43%	-16.70%	13.19%	-15.92%	-21.32%

PAGE LEFT BLANK INTENTIONALLY

Percent of Total Sales by Type of Use (2015)



California Water Service Company - Bear Gulch District

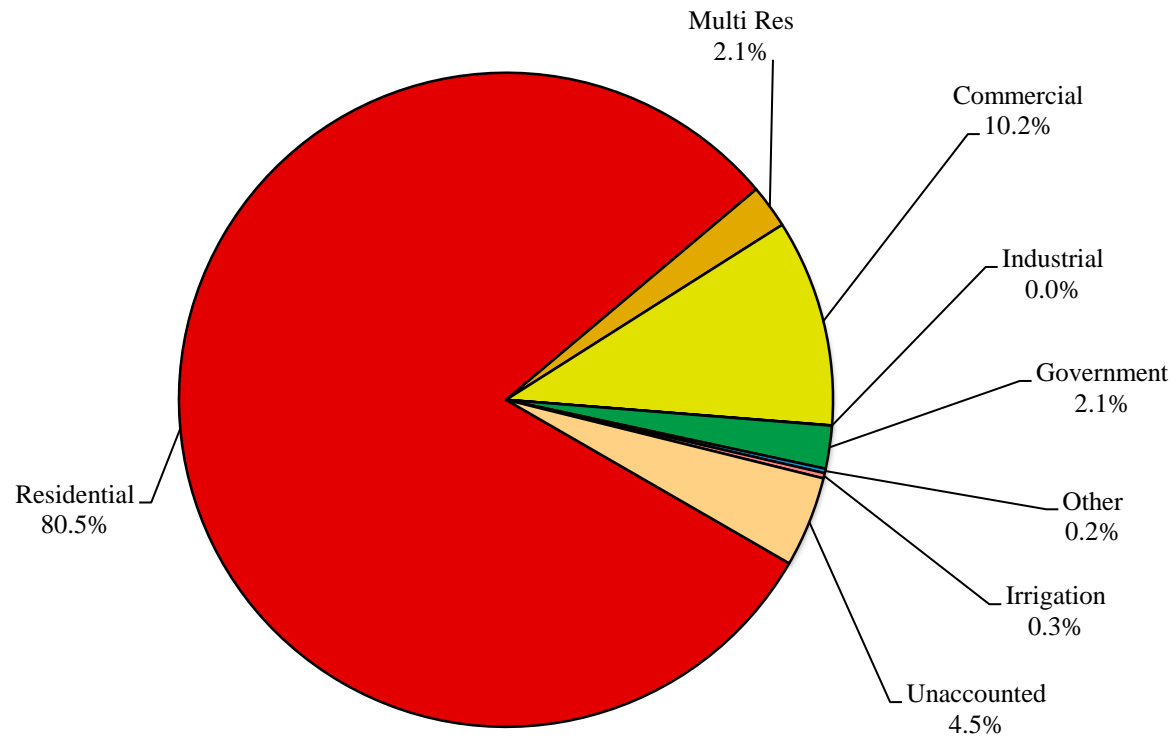
Water Supply and Demand Analysis and Projections

Worksheet 6

Percentage of Total Sales

Year	Residential	Multi Res	Commercial	Industrial	Government	Other	Irrigation	Percent Total
1980	82.35%	2.17%	10.49%	0.28%	3.73%	0.98%		100.00%
1981	82.52%	2.20%	10.55%	0.31%	3.56%	0.86%		100.00%
1982	81.76%	2.46%	11.09%	0.31%	3.46%	0.91%		100.00%
1983	82.06%	2.42%	11.58%	0.28%	2.85%	0.81%		100.00%
1984	82.07%	2.29%	11.44%	0.23%	3.18%	0.78%		100.00%
1985	82.18%	2.28%	11.35%	0.26%	3.11%	0.82%		100.00%
1986	81.84%	2.28%	11.74%	0.26%	3.10%	0.77%		100.00%
1987	82.23%	2.20%	11.47%	0.40%	2.92%	0.77%		100.00%
1988	81.46%	2.26%	12.35%	0.14%	2.80%	0.99%		100.00%
1989	81.84%	2.28%	12.40%	0.04%	2.50%	0.93%		100.00%
1990	81.94%	2.29%	12.38%	0.03%	2.48%	0.88%		100.00%
1991	81.17%	2.57%	13.43%	0.03%	2.09%	0.71%		100.00%
1992	82.43%	2.43%	12.28%	0.04%	2.17%	0.65%		100.00%
1993	82.75%	2.34%	12.13%	0.04%	2.04%	0.69%		100.00%
1994	83.07%	2.26%	11.89%	0.04%	2.04%	0.70%		100.00%
1995	82.91%	2.24%	12.04%	0.04%	2.10%	0.67%		100.00%
1996	83.04%	2.10%	11.68%	0.04%	2.38%	0.76%		100.00%
1997	83.91%	1.95%	10.96%	0.04%	2.28%	0.86%		100.00%
1998	82.96%	2.23%	11.89%	0.03%	2.01%	0.88%		100.00%
1999	83.77%	2.00%	11.23%	0.04%	2.21%	0.75%		100.00%
2000	83.84%	1.95%	11.21%	0.05%	1.95%	1.01%		100.00%
2001	84.87%	1.88%	10.74%	0.03%	1.98%	0.50%		100.00%
2002	85.46%	1.80%	10.28%	0.06%	2.26%	0.15%		100.00%
2003	85.47%	1.84%	10.19%	0.05%	2.03%	0.42%		100.00%
2004	86.11%	1.72%	9.73%	0.04%	2.03%	0.36%		100.00%
2005	85.34%	1.89%	10.43%	0.06%	1.93%	0.35%		100.00%
2006	85.24%	1.88%	10.53%	0.03%	1.94%	0.37%		100.00%
2007	86.19%	1.62%	9.50%	0.04%	1.97%	0.22%		100.00%
2008	85.67%	1.57%	9.84%	0.04%	2.30%	0.33%		100.00%
2009	85.39%	1.80%	9.88%	0.04%	2.37%	0.30%		100.00%
2010	84.88%	1.85%	10.45%	0.03%	2.37%	0.16%	0.26%	100.00%
2011	84.67%	1.87%	10.61%	0.03%	2.45%	0.16%	0.20%	100.00%
2012	85.37%	1.74%	10.03%	0.04%	2.45%	0.14%	0.21%	100.00%
2013	85.89%	1.67%	9.38%	0.03%	2.66%	0.19%	0.19%	100.00%
2014	85.95%	1.74%	9.60%	0.03%	2.28%	0.22%	0.19%	100.00%
2015	84.30%	2.24%	10.72%	0.02%	2.22%	0.23%	0.27%	100.00%

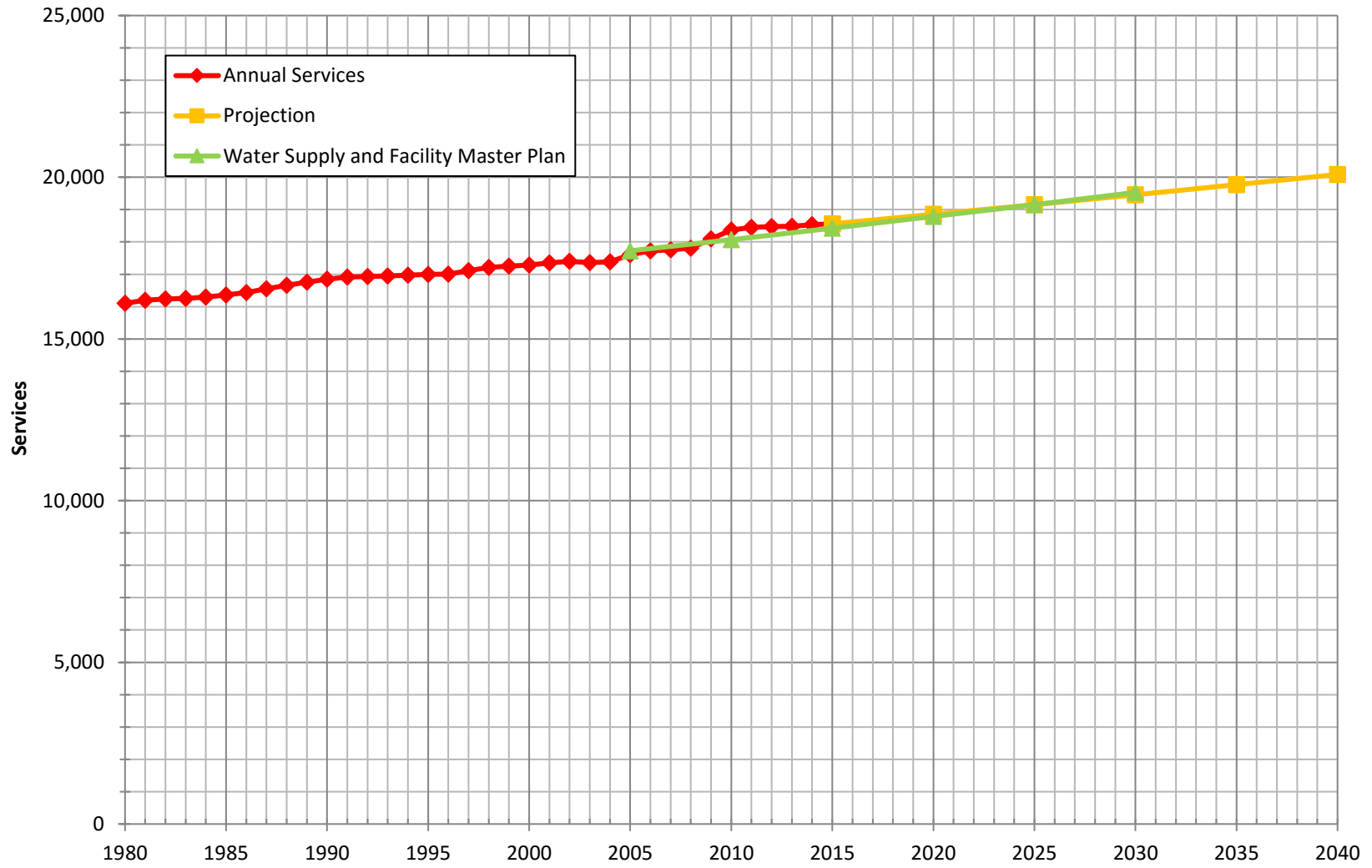
Percent of Total Demand by Type of Use (2015)



California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections
Percentage of Total Demand

Year	Residential	Multi Res	Commercial	Industrial	Government	Other	Irrigation	Unaccounted	Percent Total
1980	78.07%	2.06%	9.94%	0.26%	3.54%	0.93%		5.20%	100.00%
1981	79.29%	2.12%	10.14%	0.30%	3.42%	0.82%		3.91%	100.00%
1982	76.52%	2.31%	10.38%	0.29%	3.24%	0.85%		6.41%	100.00%
1983	77.30%	2.28%	10.90%	0.26%	2.68%	0.77%		5.80%	100.00%
1984	76.35%	2.13%	10.64%	0.22%	2.96%	0.72%		6.97%	100.00%
1985	77.50%	2.15%	10.70%	0.24%	2.94%	0.78%		5.70%	100.00%
1986	76.84%	2.15%	11.02%	0.25%	2.91%	0.72%		6.11%	100.00%
1987	78.23%	2.09%	10.91%	0.38%	2.78%	0.74%		4.86%	100.00%
1988	78.60%	2.18%	11.91%	0.14%	2.70%	0.96%		3.51%	100.00%
1989	76.68%	2.14%	11.62%	0.04%	2.34%	0.87%		6.31%	100.00%
1990	77.52%	2.16%	11.71%	0.03%	2.35%	0.83%		5.40%	100.00%
1991	77.23%	2.44%	12.78%	0.03%	1.99%	0.67%		4.85%	100.00%
1992	78.52%	2.31%	11.70%	0.04%	2.07%	0.62%		4.74%	100.00%
1993	79.01%	2.24%	11.58%	0.04%	1.95%	0.66%		4.52%	100.00%
1994	82.59%	2.24%	11.82%	0.04%	2.03%	0.70%		0.58%	100.00%
1995	79.36%	2.14%	11.52%	0.04%	2.01%	0.65%		4.29%	100.00%
1996	80.95%	2.05%	11.38%	0.04%	2.32%	0.74%		2.52%	100.00%
1997	81.08%	1.88%	10.60%	0.04%	2.20%	0.83%		3.37%	100.00%
1998	78.40%	2.11%	11.23%	0.03%	1.90%	0.84%		5.49%	100.00%
1999	79.65%	1.90%	10.68%	0.04%	2.10%	0.71%		4.92%	100.00%
2000	81.65%	1.90%	10.91%	0.05%	1.90%	0.98%		2.61%	100.00%
2001	82.33%	1.82%	10.42%	0.03%	1.92%	0.49%		2.99%	100.00%
2002	87.95%	1.85%	10.58%	0.06%	2.32%	0.15%		-2.91%	100.00%
2003	83.22%	1.79%	9.92%	0.05%	1.98%	0.41%		2.64%	100.00%
2004	82.82%	1.66%	9.36%	0.04%	1.96%	0.35%		3.82%	100.00%
2005	83.43%	1.85%	10.20%	0.05%	1.89%	0.34%		2.24%	100.00%
2006	82.21%	1.81%	10.16%	0.03%	1.87%	0.36%		3.55%	100.00%
2007	81.01%	1.52%	8.93%	0.04%	1.86%	0.20%	0.43%	6.01%	100.00%
2008	81.34%	1.49%	9.34%	0.03%	2.18%	0.32%	0.24%	5.05%	100.00%
2009	81.24%	1.71%	9.40%	0.04%	2.26%	0.29%	0.20%	4.86%	100.00%
2010	81.01%	1.77%	9.98%	0.03%	2.26%	0.15%	0.25%	4.55%	100.00%
2011	79.08%	1.75%	9.91%	0.03%	2.29%	0.15%	0.19%	6.60%	100.00%
2012	82.67%	1.69%	9.72%	0.04%	2.38%	0.14%	0.21%	3.16%	100.00%
2013	80.83%	1.57%	8.83%	0.03%	2.50%	0.17%	0.18%	5.88%	100.00%
2014	82.34%	1.67%	9.20%	0.02%	2.18%	0.21%	0.18%	4.20%	100.00%
2015	80.54%	2.14%	10.24%	0.02%	2.12%	0.22%	0.26%	4.47%	100.00%

Historical & Projected Services



California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections
Actual & Projected Annual Average Services

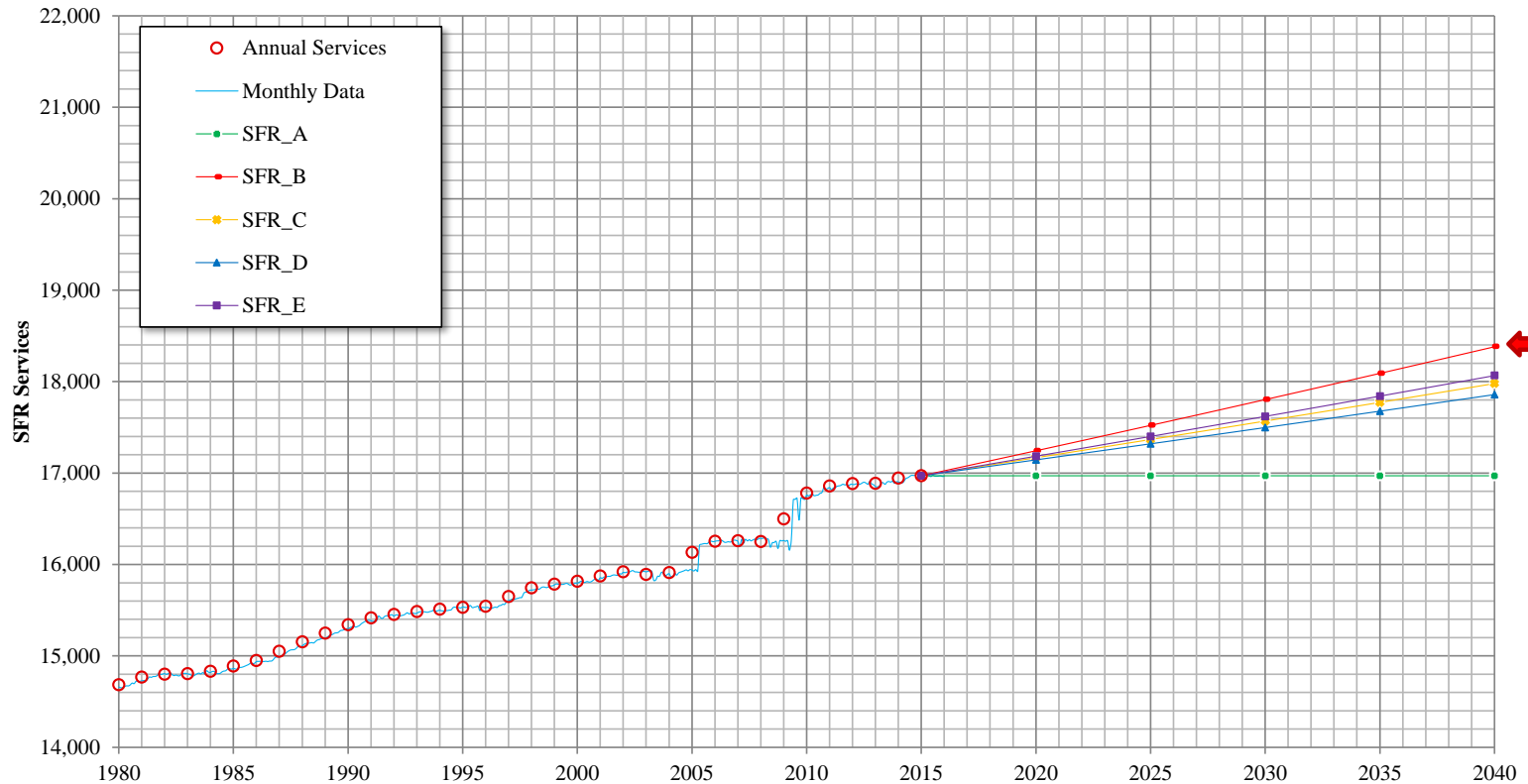
Customer Category		Selected Trend	Growth Rate	Actual Services				Projected Services					
				2000	2005	2010	2015	2015	2020	2025	2030	2035	2040
SFR	SFR_B	5 Yr. Avg.	0.32%	15,816	16,134	16,781	16,970	16,970	17,243	17,521	17,803	18,090	18,381
MFR	MFR_B	5 Yr. Avg.	0.73%	64	63	75	114	114	118	122	127	132	137
COM	COM_D	15 Yr. Avg.	0.26%	1,276	1,284	1,365	1,326	1,326	1,343	1,361	1,378	1,396	1,415
IND	IND_A	Zero Growth Rate	0.00%	1	1	1	1	1	1	1	1	1	1
GOV	GOV_C	10 Yr. Avg.	0.11%	96	95	116	119	119	119	120	121	121	122
OTH	OTH_A	Zero Growth Rate	0.00%	34	30	24	23	23	23	23	23	23	23
IRR	IRR_A	Zero Growth Rate	0.00%	0	0	7	8	8	8	8	8	8	8
TOTAL	Average growth rate 2011-2040		0.32%	17,288	17,607	18,369	18,560	18,560	18,855	19,156	19,461	19,771	20,086

Notes:

California Water Service Company - Bear Gulch District

Water Supply and Demand Analysis and Projections

SFR Historical & Projected Services

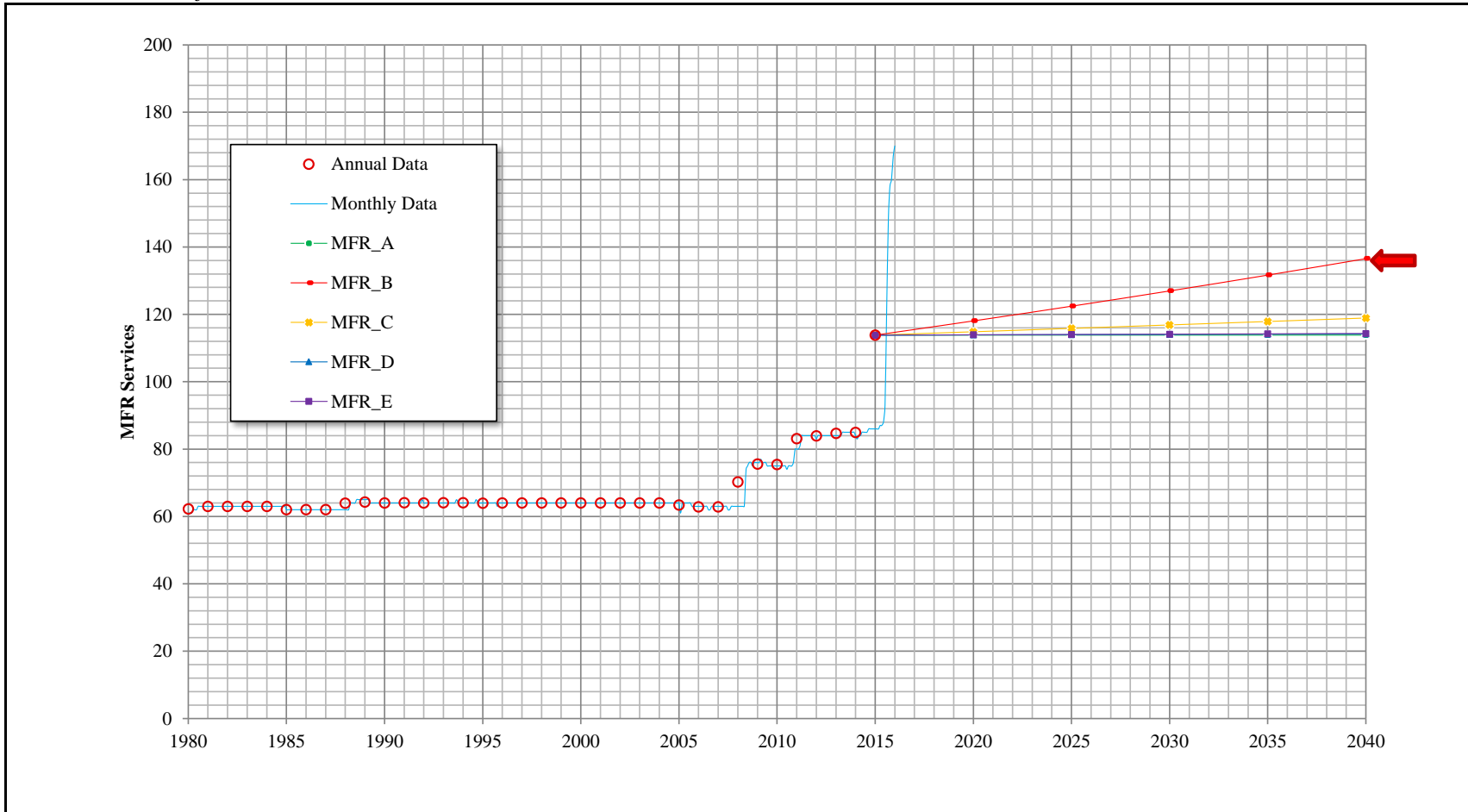


Customer Category	Trend	Growth Rate	Actual				Projected					
			2000	2005	2010	Base Year 2015	Services 2015	Services 2020	Services 2025	Services 2030	Services 2035	Services 2040
SFR	SFR_A	Zero Growth Rate	15,816	16,134	16,781	16,970	16,970	16,970	16,970	16,970	16,970	16,970
	> SFR_B	5 Yr. Avg.	Avg. Serv. per year:		56	16,970	16,970	17,243	17,521	17,803	18,090	18,381
	SFR_C	10 Yr. Avg.	Avg. Serv. per year:		40	16,970	16,970	17,167	17,367	17,568	17,772	17,979
	SFR_D	15 Yr. Avg.	Avg. Serv. per year:		36	16,970	16,970	17,144	17,320	17,497	17,677	17,858
	SFR_E	20 Yr. Avg.	Avg. Serv. per year:		44	16,970	16,970	17,184	17,400	17,619	17,841	18,066

California Water Service Company - Bear Gulch District

Water Supply and Demand Analysis and Projections

MFR Historical & Projected Services

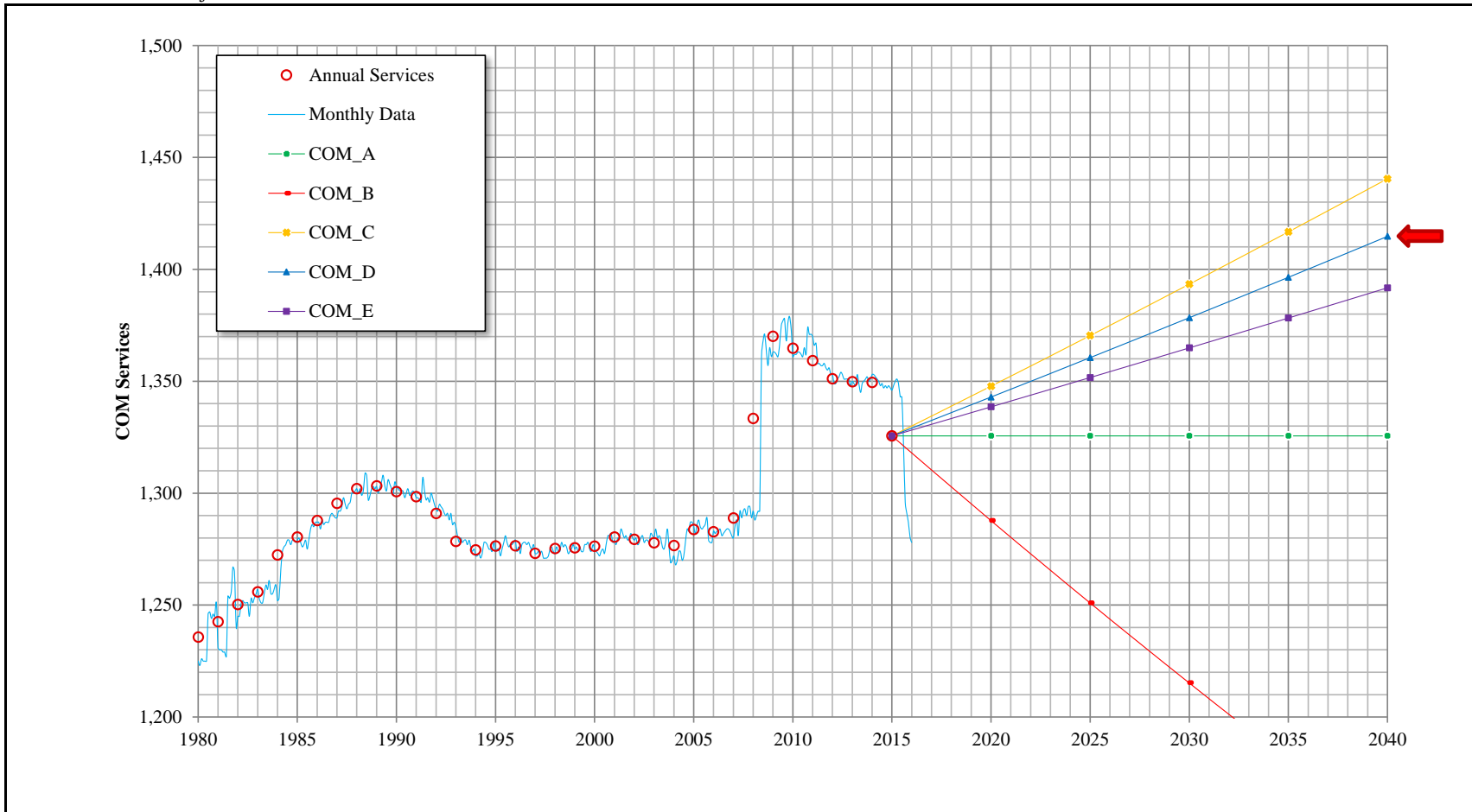


Customer Category	Trend	Growth Rate	Actual				Projected					
			2000	2005	2010	Base Year 2015	Services 2015	Services 2020	Services 2025	Services 2030	Services 2035	Services 2040
MFR	MFR_A	Zero Growth Rate	64	63	75	114	114	114	114	114	114	114
	> MFR_B	5 Yr. Avg.				114	114	118	122	127	132	137
	MFR_C	10 Yr. Avg.				114	114	115	116	117	118	119
	MFR_D	15 Yr. Avg.				114	114	114	114	114	114	114
	MFR_E	20 Yr. Avg.				114	114	114	114	114	114	114

California Water Service Company - Bear Gulch District

Water Supply and Demand Analysis and Projections

COM Historical & Projected Services

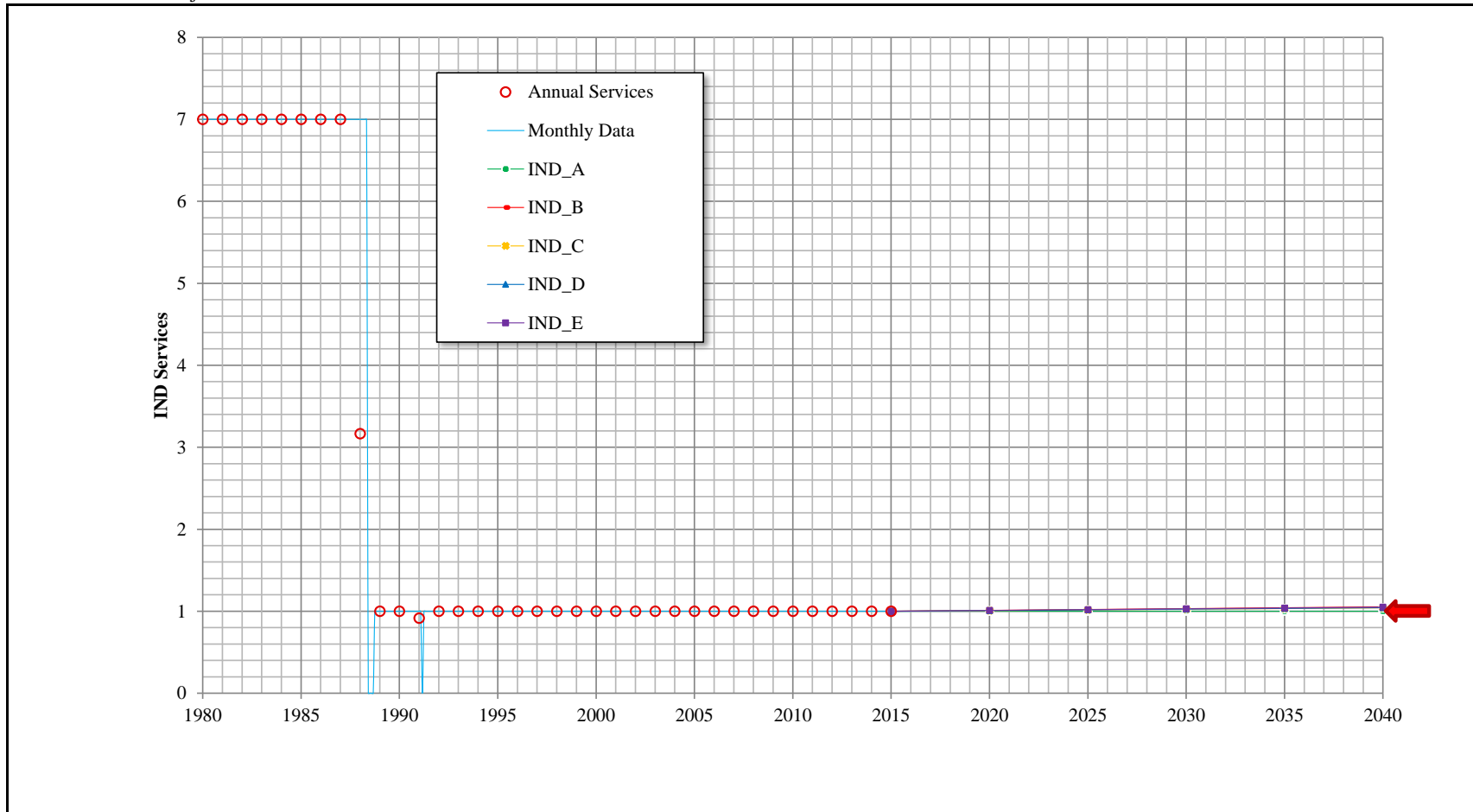


Customer Category	Trend	Growth Rate	Actual				Projected					
			2000	2005	2010	Base Year 2015	Services 2015	Services 2020	Services 2025	Services 2030	Services 2035	Services 2040
COM	COM_A	Zero Growth Rate	1,276	1,284	1,365	1,326	1,326	1,326	1,326	1,326	1,326	1,326
	COM_B	5 Yr. Avg.				1,326	1,326	1,288	1,251	1,215	1,180	1,147
	COM_C	10 Yr. Avg.				1,326	1,326	1,348	1,370	1,393	1,417	1,440
	> COM_D	15 Yr. Avg.				1,326	1,326	1,343	1,361	1,378	1,396	1,415
	COM_E	20 Yr. Avg.				1,326	1,326	1,339	1,352	1,365	1,378	1,392

California Water Service Company - Bear Gulch District

Water Supply and Demand Analysis and Projections

IND Historical & Projected Services

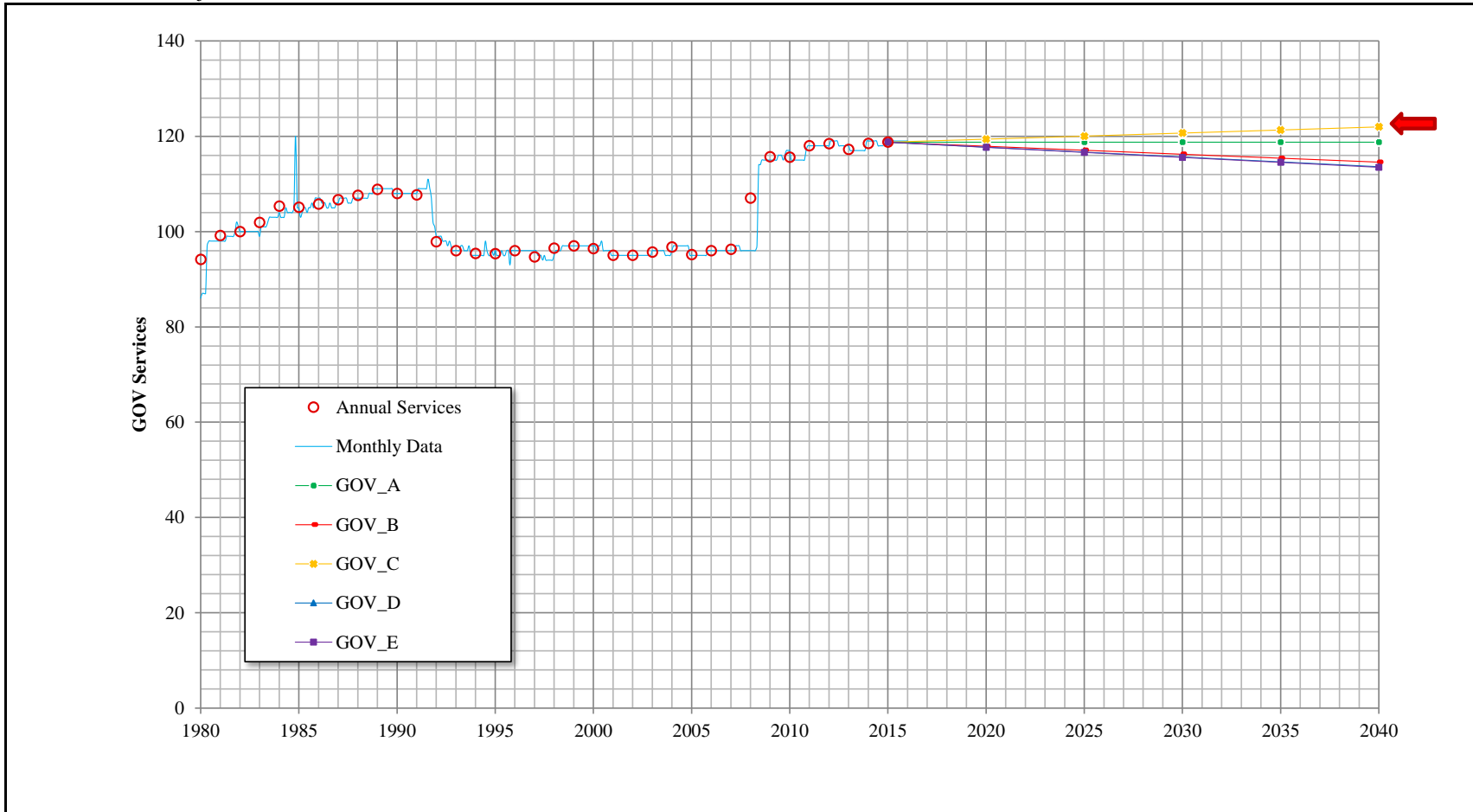


Customer Category	Trend		Growth Rate	Actual				Projected						
				2000	2005	2010	Base Year 2015	Services 2015	Services 2020	Services 2025	Services 2030	Services 2035	Services 2040	
IND	>	IND_A	Zero Growth Rate	1	1	1	1	1	1	1	1	1	1	1
		IND_B	5 Yr. Avg.				1	1	1	1	1	1	1	1
		IND_C	10 Yr. Avg.				1	1	1	1	1	1	1	1
		IND_D	15 Yr. Avg.				1	1	1	1	1	1	1	1
		IND_E	20 Yr. Avg.				1	1	1	1	1	1	1	1

California Water Service Company - Bear Gulch District

Water Supply and Demand Analysis and Projections

GOV Historical & Projected Services

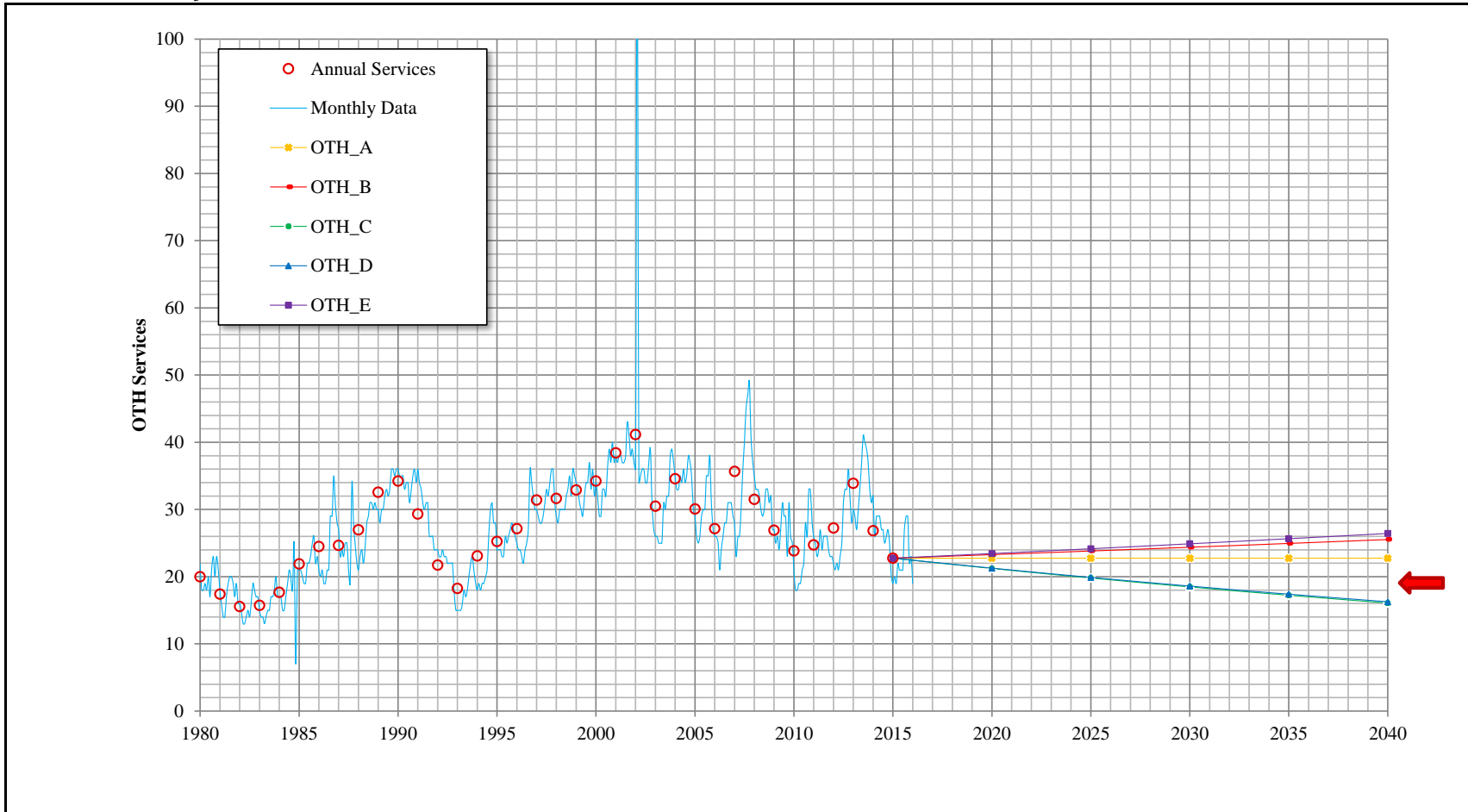


Customer Category	Trend	Growth Rate	Actual				Projected							
			2000	2005	2010	Base Year 2015	Services 2015	Services 2020	Services 2025	Services 2030	Services 2035	Services 2040		
GOV			96	95	116	119								
	GOV_A	Zero Growth Rate				119	119	119	119	119	119	119	119	119
	GOV_B	5 Yr. Avg.				119	119	118	117	116	115	115	115	115
	> GOV_C	10 Yr. Avg.				119	119	119	120	121	121	122	122	122
	GOV_D	15 Yr. Avg.				119	119	118	117	116	115	114	114	114
	GOV_E	20 Yr. Avg.				119	119	118	117	116	115	113	113	113

California Water Service Company - Bear Gulch District

Water Supply and Demand Analysis and Projections

OTH Historical & Projected Services

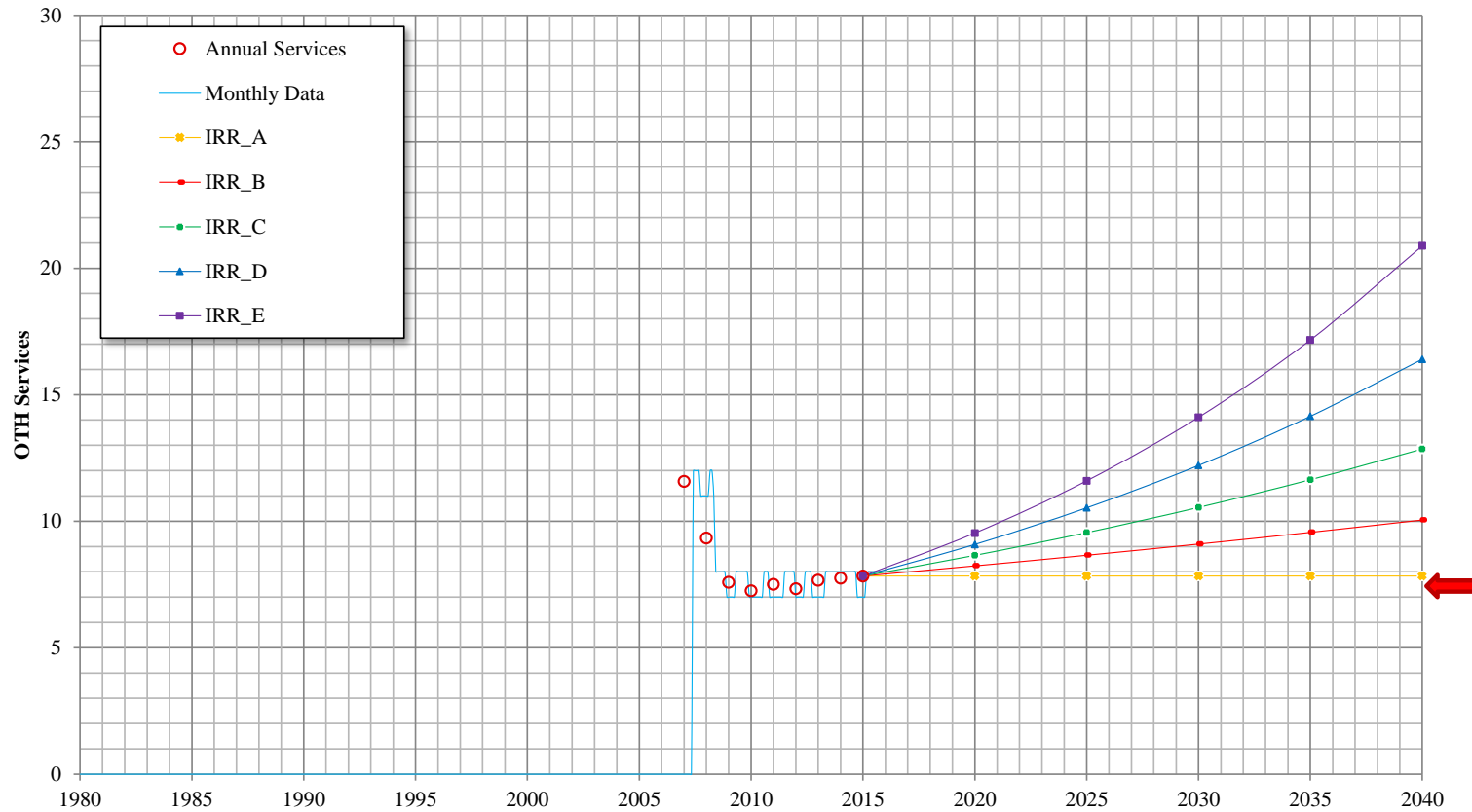


Customer Category	Trend		Growth Rate	Actual				Projected						
				2000	2005	2010	Base Year	Services 2015	Services 2020	Services 2025	Services 2030	Services 2035	Services 2040	
							2015							
OTH	>	OTH_A	Zero Growth Rate	0.00%	34	30	24	23	23	23	23	23	23	23
		OTH_B	5 Yr. Avg.	0.46%				23	23	23	24	24	25	26
		OTH_C	10 Yr. Avg.	-1.38%				23	23	21	20	18	17	16
		OTH_D	15 Yr. Avg.	-1.33%				23	23	21	20	19	17	16
		OTH_E	20 Yr. Avg.	0.60%				23	23	23	24	25	26	26

California Water Service Company - Bear Gulch District

Water Supply and Demand Analysis and Projections

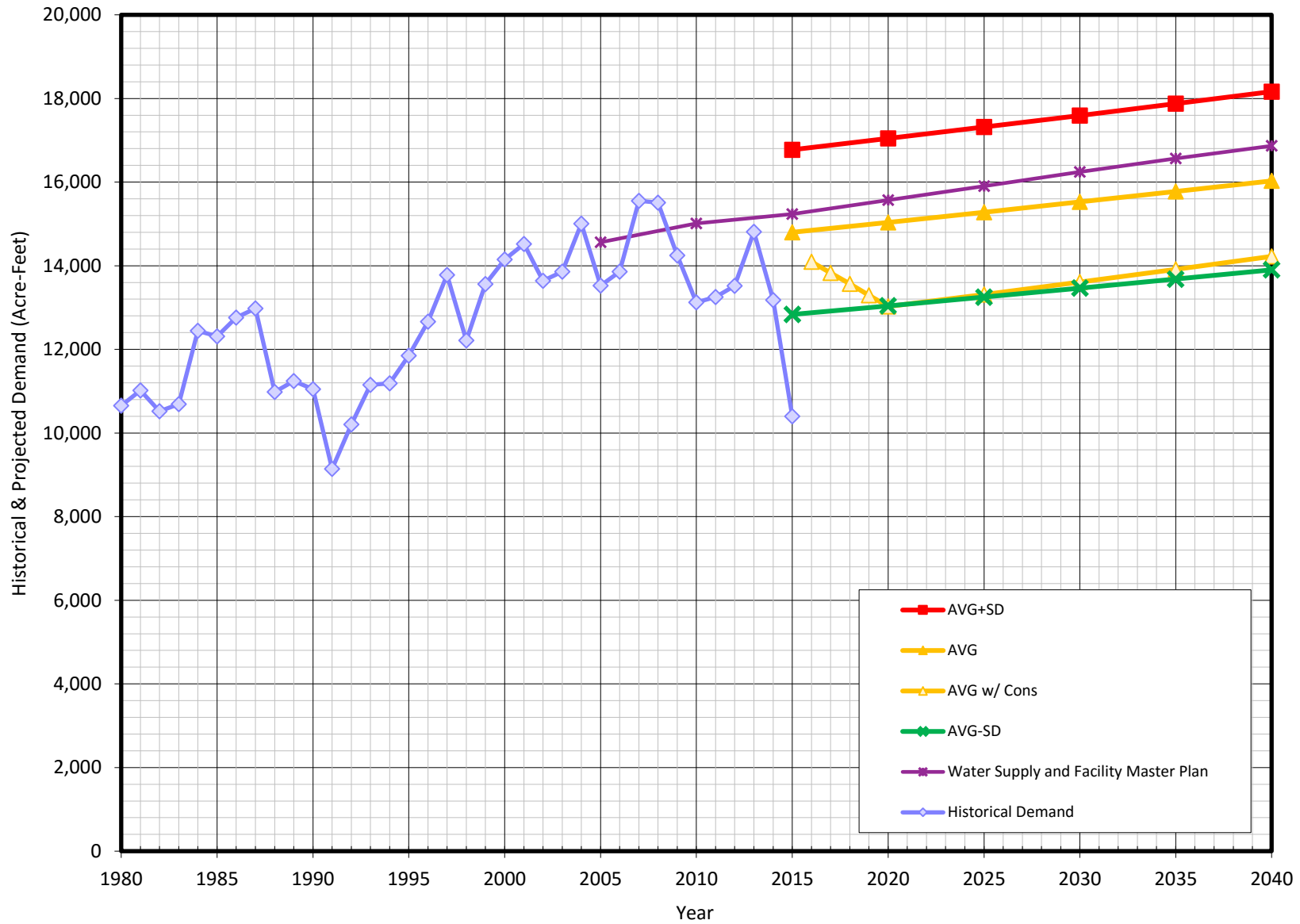
IRR Historical & Projected Services



Customer Category	Trend	Growth Rate	Actual				Projected							
			2000	2005	2010	Base Year	Services	Services	Services	Services	Services	Services		
						2015	2015	2020	2025	2030	2035	2040		
IRR	>	IRR_A	0	0	7	8	8	8	8	8	8	8	8	8
		IRR_B				8	8	8	9	9	10	10	10	10
		IRR_C				8	8	9	10	11	12	13	13	13
		IRR_D				8	8	9	11	12	14	16	16	16
		IRR_E				8	8	10	12	14	17	21	21	21

PAGE LEFT BLANK INTENTIONALLY

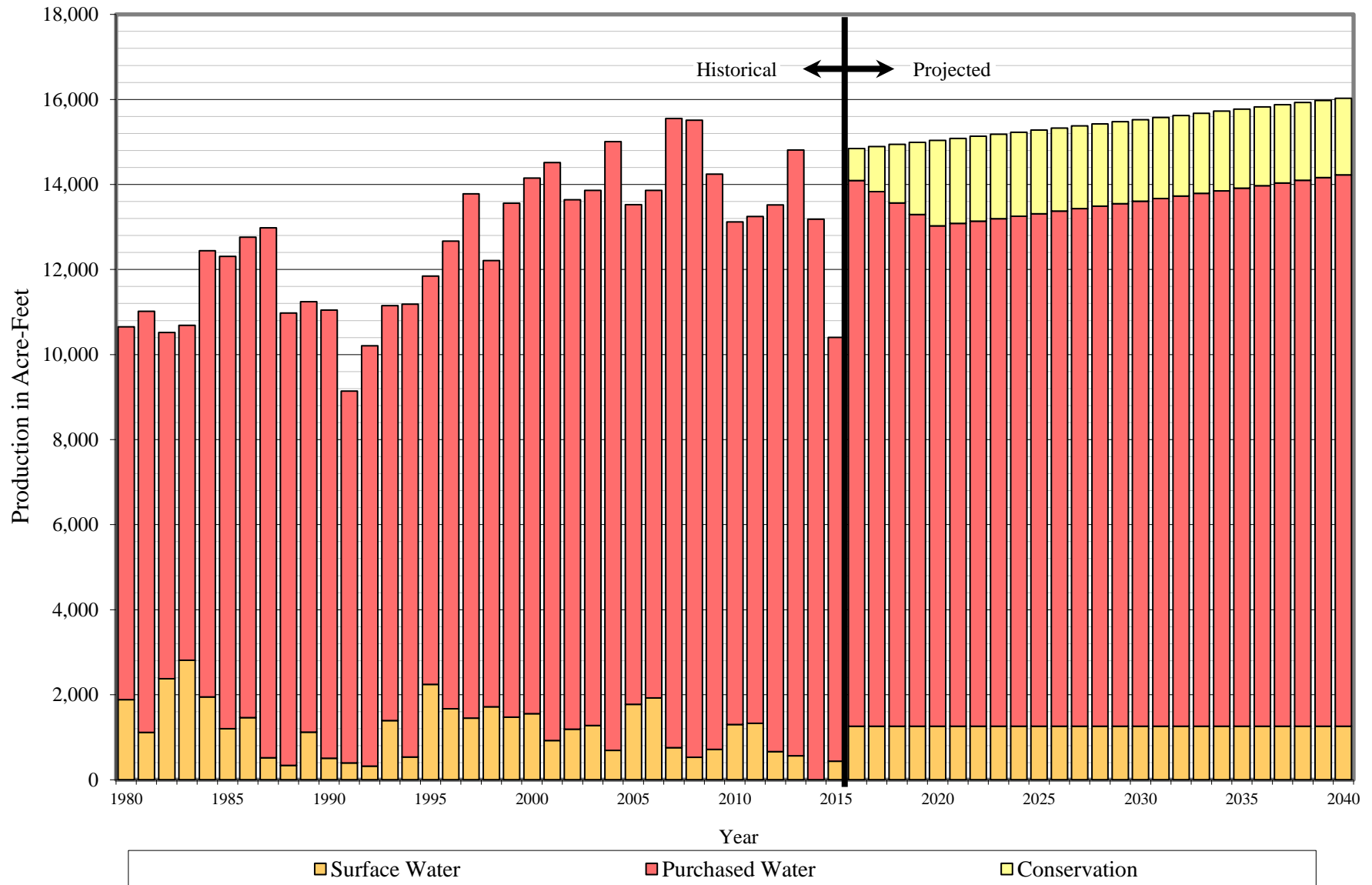
Historical & Projected Demand (BG)



California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections
Actual & Projected Demand in Acre-Feet

Customer Category	Actual Demand (AFY)								Projected Demand (AFY)					
	1980	1985	1990	1995	2000	2005	2010	2015	2015	2020	2025	2030	2035	2040
SFR	8,316	9,541	8,564	9,402	11,553	11,286	10,629	8,377	13,396	13,612	13,831	14,053	14,280	14,510
									11,982	12,175	12,371	12,570	12,772	12,978
									10,567	10,737	10,910	11,086	11,265	11,446
MFR	219	264	239	254	268	250	232	223	444	460	477	495	513	532
									381	395	409	424	440	456
									317	329	341	354	367	381
COM	1,059	1,317	1,294	1,365	1,544	1,379	1,309	1,065	1,491	1,511	1,531	1,551	1,571	1,591
									1,363	1,381	1,399	1,417	1,436	1,454
									1,234	1,250	1,267	1,283	1,300	1,317
IND	28	30	4	5	7	7	4	2	7	7	7	7	7	7
									5	5	5	5	5	5
									4	4	4	4	4	4
GOV	377	362	260	238	269	255	297	220	398	400	402	404	407	409
									337	339	341	342	344	346
									276	278	279	281	282	284
OTH	99	95	92	76	139	46	20	23	62	62	62	62	62	62
									27	27	27	27	27	27
									0	0	0	0	0	0
IRR	0	0	0	0	0	0	32	27	38	38	38	38	38	38
									32	32	32	32	32	32
									26	26	26	26	26	26
UAWF	554	701	596	508	369	304	598	465	938	953	968	983	999	1,015
									674	685	696	707	718	729
									410	417	424	430	437	444
TOTAL (AFY)	10,653	12,311	11,048	11,849	14,149	13,527	13,121	10,401	16,773	17,042	17,315	17,593	17,876	18,164
									14,800	15,038	15,279	15,525	15,774	16,028
									12,835	13,041	13,251	13,464	13,681	13,901
TOTAL (MGD)	9.510	10.991	9.863	10.578	12.632	12.076	11.714	9.286	14.974	15.214	15.458	15.706	15.959	16.215
									13.213	13.425	13.640	13.860	14.082	14.309
									11.458	11.642	11.829	12.020	12.213	12.410

Historical and Projected Distribution of Demand by Source



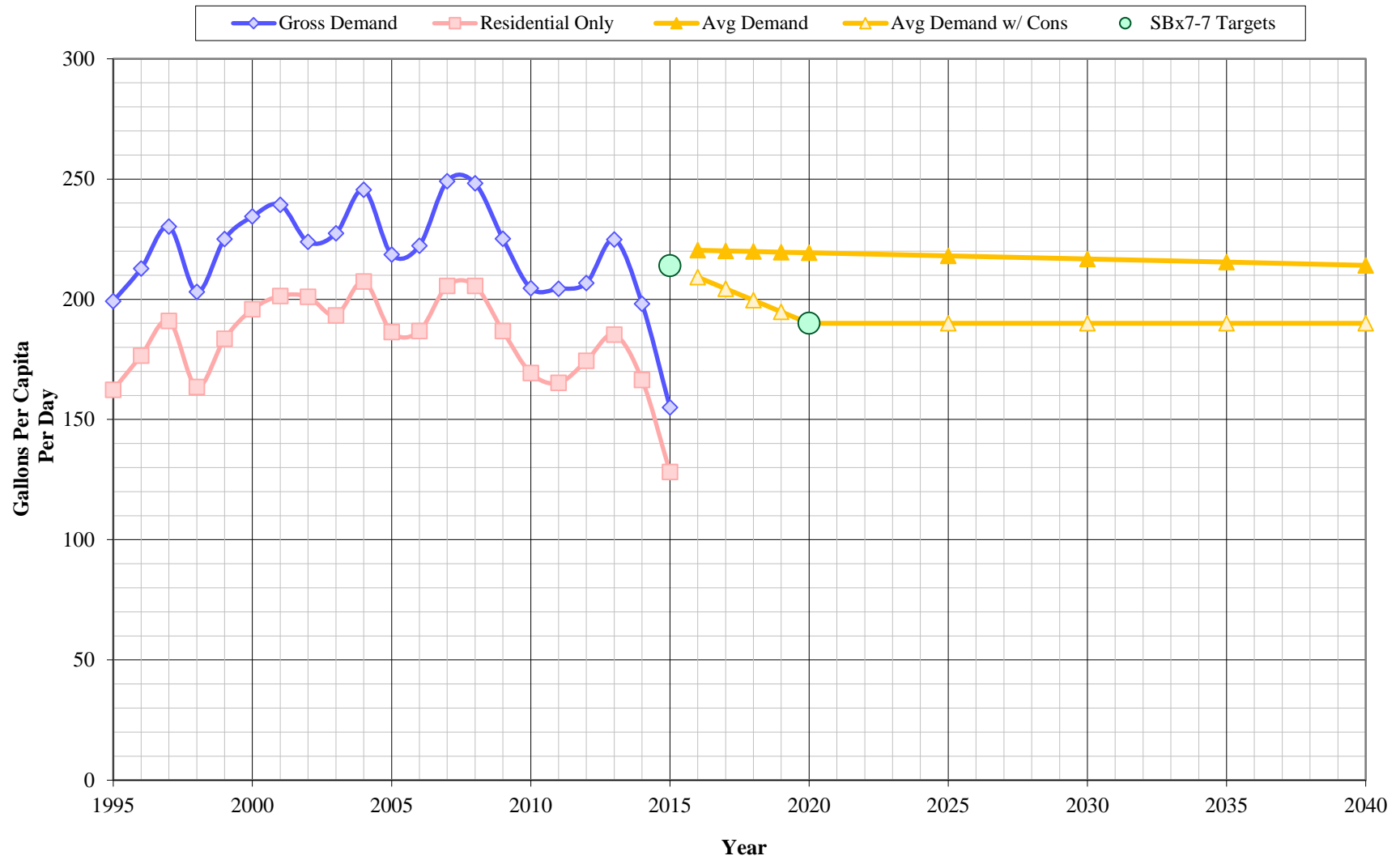
California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections
Historical and Projected Distribution of Demand by Source

Worksheet 10

Year	Purchased Water		Surface Water		Conservation		Total	
	MGD	AFY	MGD	AFY	MGD	AFY	MGD	AFY
1980	7.83	8,768	1.68	1,885			9.51	10,653
1981	8.84	9,907	0.99	1,112			9.84	11,019
1982	7.27	8,143	2.12	2,379			9.39	10,522
1983	7.03	7,878	2.51	2,812			9.54	10,690
1984	9.37	10,497	1.74	1,947			11.11	12,444
1985	9.92	11,110	1.07	1,201			10.99	12,311
1986	10.09	11,302	1.30	1,460			11.39	12,762
1987	11.13	12,466	0.46	514			11.59	12,981
1988	9.50	10,642	0.30	337			9.80	10,979
1989	9.04	10,123	1.00	1,118			10.03	11,241
1990	9.41	10,544	0.45	504			9.86	11,048
1991	7.80	8,742	0.36	398			8.16	9,141
1992	8.83	9,889	0.28	319			9.11	10,207
1993	8.71	9,761	1.24	1,390			9.95	11,151
1994	9.51	10,651	0.48	536			9.99	11,187
1995	8.57	9,605	2.00	2,244			10.58	11,849
1996	9.82	10,995	1.49	1,670			11.31	12,666
1997	11.01	12,333	1.29	1,447			12.30	13,780
1998	9.37	10,496	1.53	1,716			10.90	12,212
1999	10.79	12,087	1.32	1,475			12.11	13,563
2000	11.24	12,593	1.39	1,557			12.63	14,149
2001	12.14	13,598	0.82	920			12.96	14,518
2002	11.11	12,448	1.06	1,191			12.18	13,639
2003	11.23	12,583	1.14	1,278			12.37	13,861
2004	12.78	14,316	0.62	692			13.40	15,008
2005	10.49	11,754	1.58	1,774			12.08	13,527
2006	10.66	11,936	1.72	1,923			12.37	13,858
2007	13.21	14,800	0.67	754			13.89	15,554
2008	13.38	14,982	0.47	528			13.85	15,510
2009	12.08	13,529	0.64	716			12.72	14,245
2010	10.56	11,824	1.16	1,297			11.71	13,121

Year	Ground Water		Future Water		Conservation		Total	
	MGD	AFY	MGD	AFY	MGD	AFY	MGD	AFY
2011	10.64	11,922	1.18	1,327	0.00	0	11.83	13,250
2012	11.48	12,855	0.59	664	0.00	0	12.07	13,519
2013	12.72	14,250	0.50	564	0.00	0	13.22	14,813
2014	11.77	13,181	0.00	0	0.00	0	11.77	13,181
2015	8.90	9,964	0.39	437	0.00	0	9.29	10,401
2016	11.46	12,834	1.13	1,260	0.67	753	13.25	14,847
2017	11.22	12,570	1.13	1,260	0.95	1,064	13.30	14,895
2018	10.98	12,305	1.13	1,260	1.23	1,377	13.34	14,942
2019	10.75	12,036	1.13	1,260	1.51	1,693	13.38	14,990
2020	10.50	11,765	1.13	1,260	1.80	2,012	13.42	15,038
2021	10.55	11,822	1.13	1,260	1.79	2,003	13.47	15,086
2022	10.61	11,880	1.13	1,260	1.78	1,994	13.51	15,134
2023	10.66	11,937	1.13	1,260	1.77	1,985	13.55	15,182
2024	10.71	11,995	1.13	1,260	1.76	1,975	13.60	15,230
2025	10.76	12,053	1.13	1,260	1.75	1,966	13.64	15,279
2026	10.81	12,112	1.13	1,260	1.75	1,956	13.68	15,328
2027	10.87	12,171	1.13	1,260	1.74	1,946	13.73	15,377
2028	10.92	12,230	1.13	1,260	1.73	1,936	13.77	15,426
2029	10.97	12,289	1.13	1,260	1.72	1,926	13.82	15,475
2030	11.02	12,349	1.13	1,260	1.71	1,916	13.86	15,525
2031	11.08	12,409	1.13	1,260	1.70	1,905	13.90	15,574
2032	11.13	12,469	1.13	1,260	1.69	1,895	13.95	15,624
2033	11.19	12,530	1.13	1,260	1.68	1,884	13.99	15,674
2034	11.24	12,591	1.13	1,260	1.67	1,873	14.04	15,724
2035	11.30	12,652	1.13	1,260	1.66	1,862	14.08	15,774
2036	11.35	12,714	1.13	1,260	1.65	1,851	14.13	15,825
2037	11.41	12,776	1.13	1,260	1.64	1,840	14.17	15,876
2038	11.46	12,838	1.13	1,260	1.63	1,828	14.22	15,926
2039	11.52	12,900	1.13	1,260	1.62	1,817	14.26	15,977
2040	11.57	12,963	1.13	1,260	1.61	1,805	14.31	16,028

Per Capita Consumption (BG)



California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections
Per Capita Water Demand Calculation

Year	POP	Historical				Projected			
		Gross Demand		Residential Only		Avg Demand		Avg Demand w/ Cons	
		Usage (AFY)	Per Capita (GPCPD)	Usage (AFY)	Per Capita (GPCPD)	Demand (AFY)	Per Capita (GPCPD)	Demand (AFY)	Per Capita (GPCPD)
1995	53,104	11,849	199	9,656	162				
1996	53,149	12,666	213	10,511	177				
1997	53,437	13,780	230	11,433	191				
1998	53,690	12,212	203	9,832	163				
1999	53,802	13,563	225	11,060	184				
2000	53,885	14,149	234	11,822	196				
2001	54,162	14,518	239	12,218	201				
2002	54,392	13,639	224	12,248	201				
2003	54,421	13,861	227	11,783	193				
2004	54,574	15,008	246	12,679	207				
2005	55,252	13,527	219	11,536	186				
2006	55,651	13,858	222	11,644	187				
2007	55,741	15,554	249	12,837	206				
2008	55,791	15,510	248	12,846	206				
2009	56,484	14,245	225	11,817	187				
2010	57,254	13,121	205	10,862	169				
2011	57,876	13,250	204	10,710	165				
2012	58,376	13,519	207	11,405	174				
2013	58,812	14,813	225	12,207	185				
2014	59,387	13,181	198	11,073	166				
2015	59,883	10,401	155	8,599	128				
2016	60,144					14,847	220	14,094	209
2017	60,407					14,895	220	13,831	204
2018	60,671					14,942	220	13,565	200
2019	60,936					14,990	220	13,296	195
2020	61,202					15,038	219	13,025	190
2025	62,555					15,279	218	13,313	190
2030	63,944					15,525	217	13,609	190
2035	65,369					15,774	215	13,912	190
2040	66,831					16,028	214	14,223	190

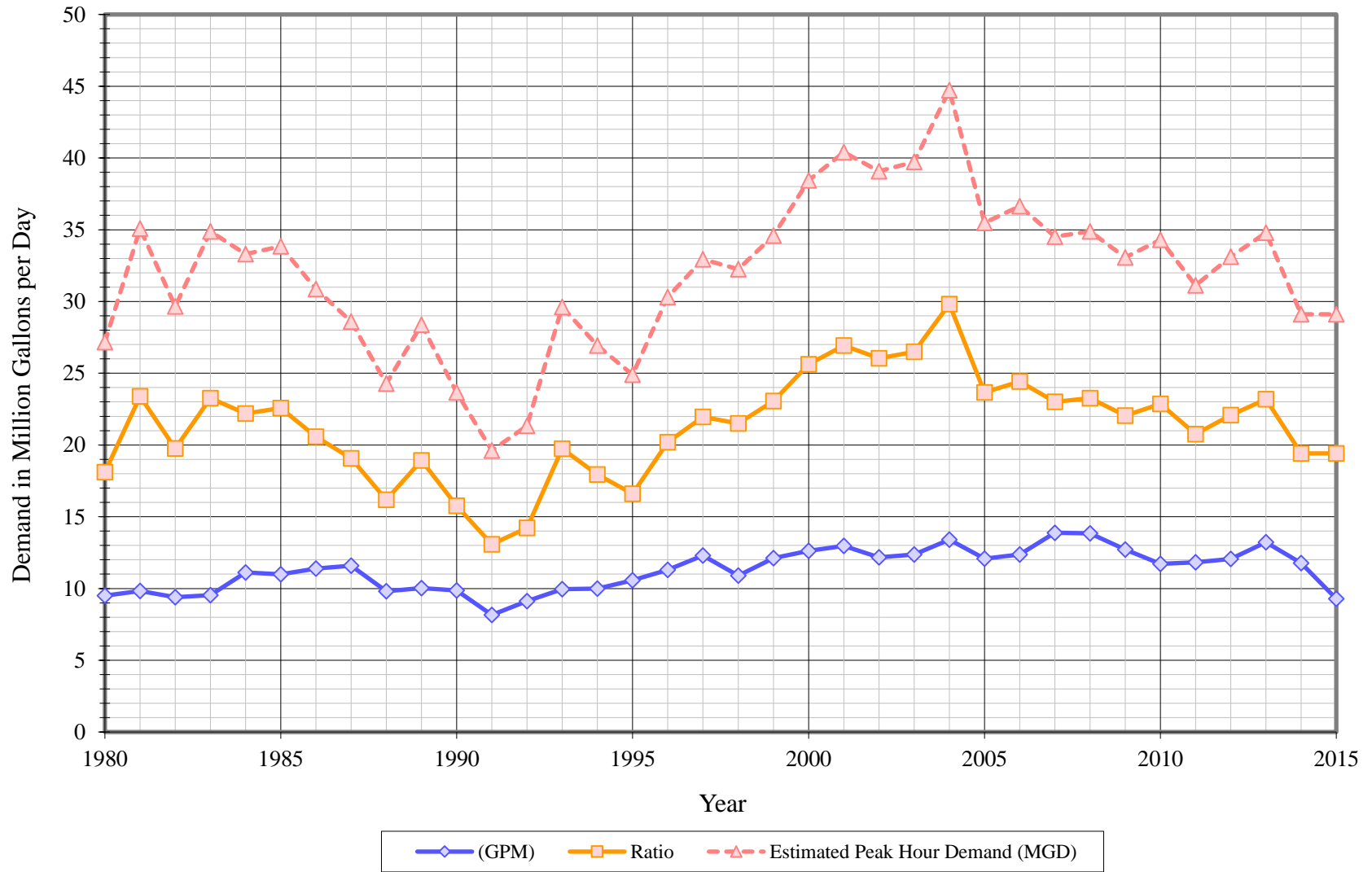
<i>SBx7-7 Targets</i>	
2015	214
2020	190

**California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections**

Groundwater Production Facilities

District has no Groundwater Production Facilities

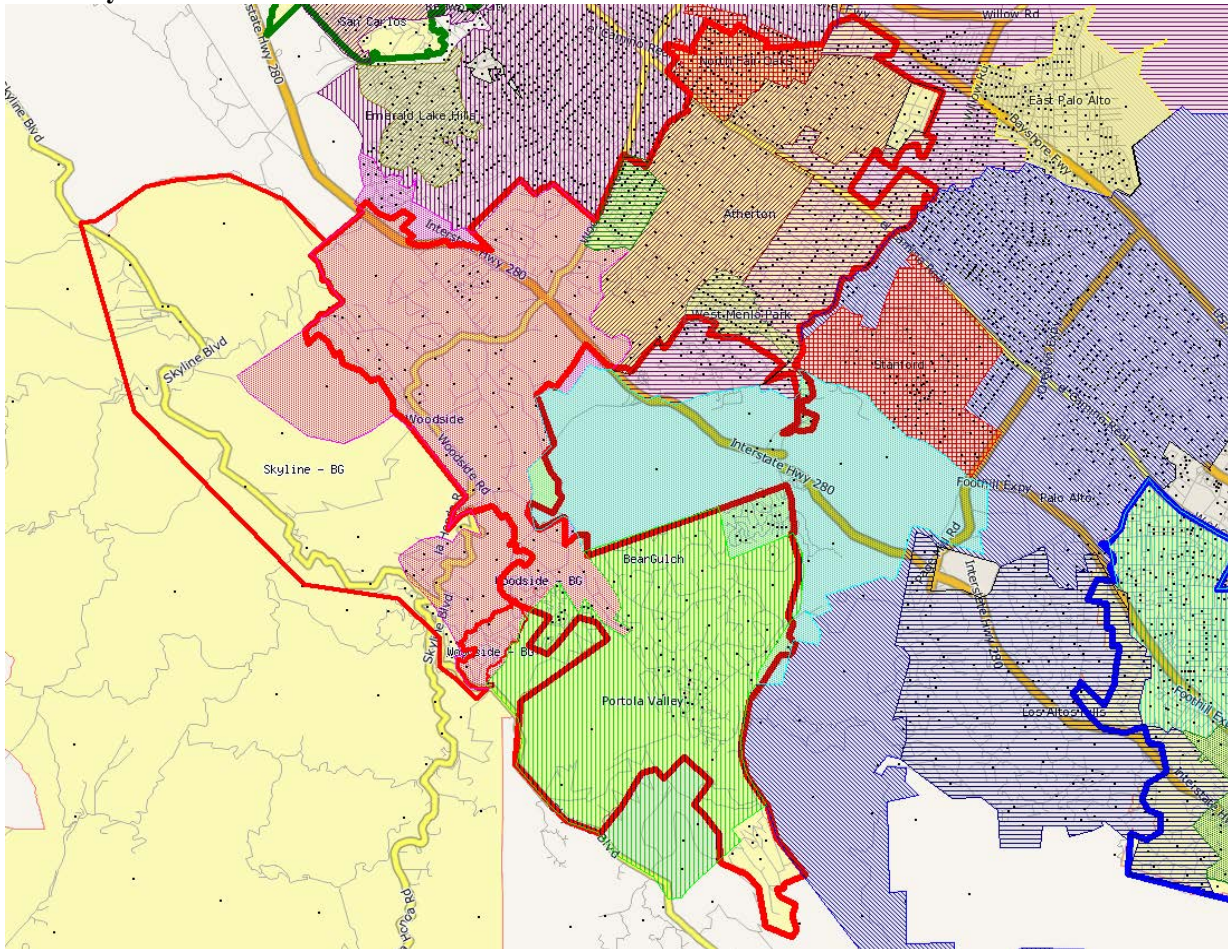
Average Day, Maximum Day, Peak Demand



California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections
Historical and Projected Average Day, Maximum Day, and Peak Demand

Year	Historical Annual Demand		Average Day Demand		Maximum Day Demand		MDD ADD Ratio	Estimated Peak Hour Demand		PHD MDD Ratio	PHD ADD Ratio	Measured Peak Hour Demand		PHD MDD Ratio
	(AFY)	(MGY)	(MGD)	(GPD)	(MGD)	(GPD)		(MGD)	(GPM)			(MGD)	(GPM)	
1980	10,653	3,471	9.51	591	18.11	1,125	1.90	27.17	18,869	1.50	2.86			
1981	11,019	3,591	9.84	607	23.39	1,444	2.38	35.08	24,364	1.50	3.57			
1982	10,522	3,429	9.39	579	19.76	1,217	2.10	29.65	20,588	1.50	3.16			
1983	10,690	3,483	9.54	587	23.26	1,431	2.44	34.89	24,227	1.50	3.66			
1984	12,444	4,055	11.11	682	22.20	1,362	2.00	33.30	23,123	1.50	3.00			
1985	12,311	4,012	10.99	672	22.57	1,379	2.05	33.85	23,505	1.50	3.08			
1986	12,762	4,158	11.39	693	20.58	1,252	1.81	30.87	21,438	1.50	2.71			
1987	12,981	4,230	11.59	700	19.06	1,152	1.64	28.59	19,856	1.50	2.47			
1988	10,979	3,578	9.80	588	16.19	972	1.65	24.28	16,863	1.50	2.48			
1989	11,241	3,663	10.03	599	18.92	1,129	1.89	28.38	19,706	1.50	2.83			
1990	11,048	3,600	9.86	585	15.77	936	1.60	23.66	16,429	1.50	2.40			
1991	9,141	2,978	8.16	482	13.08	773	1.60	19.62	13,625	1.50	2.40			
1992	10,207	3,326	9.11	538	14.23	841	1.56	21.35	14,823	1.50	2.34			
1993	11,151	3,633	9.95	588	19.74	1,165	1.98	29.61	20,563	1.50	2.97			
1994	11,187	3,645	9.99	589	17.95	1,058	1.80	26.93	18,698	1.50	2.70			
1995	11,849	3,861	10.58	622	16.60	977	1.57	24.90	17,292	1.50	2.35			
1996	12,666	4,127	11.31	665	20.20	1,188	1.79	30.30	21,042	1.50	2.68			
1997	13,780	4,490	12.30	719	21.96	1,283	1.79	32.94	22,876	1.50	2.68			
1998	12,212	3,979	10.90	633	21.50	1,249	1.97	32.25	22,397	1.50	2.96			
1999	13,563	4,419	12.11	702	23.07	1,337	1.91	34.60	24,028	1.50	2.86			
2000	14,149	4,611	12.63	731	25.63	1,483	2.03	38.45	26,699	1.50	3.04			
2001	14,518	4,731	12.96	747	26.93	1,552	2.08	40.40	28,055	1.50	3.12			
2002	13,639	4,444	12.18	700	26.05	1,497	2.14	39.07	27,132	1.50	3.21			
2003	13,861	4,517	12.37	713	26.49	1,526	2.14	39.73	27,592	1.50	3.21			
2004	15,008	4,890	13.40	771	29.82	1,715	2.23	44.73	31,063	1.50	3.34			
2005	13,527	4,408	12.08	686	23.66	1,344	1.96	35.49	24,645	1.50	2.94			
2006	13,858	4,516	12.37	698	24.43	1,378	1.97	36.65	25,448	1.50	2.96			
2007	15,554	5,068	13.89	782	23.01	1,296	1.66	34.52	23,973	1.50	2.49			
2008	15,510	5,054	13.85	778	23.26	1,306	1.68	34.89	24,230	1.50	2.52			
2009	14,245	4,642	12.72	703	22.04	1,218	1.73	33.06	22,961	1.50	2.60			
2010	13,121	4,275	11.71	638	22.87	1,245	1.95	34.31	23,823	1.50	2.93			
2011	13,250	4,317	11.83	641	20.76	1,125	1.75	31.13	21,620	1.50	2.63			
2012	13,519	4,405	12.07	653	22.08	1,195	1.83	33.12	22,999	1.50	2.74			
2013	14,813	4,827	13.22	716	23.19	1,255	1.75	34.79	24,159	1.50	2.63			
2014	13,181	4,295	11.77	635	19.41	1,047	1.65	29.12	20,220	1.50	2.47			
2015	10,401	3,389	9.29	500	19.41	1,046	2.09	29.12	20,220	1.50	3.14			
10 year Average			12.27	674	22.05	1,211	1.81	33.07	22,965	1.50	2.71			
5 year Average			11.63	629	20.97	1,134	1.82	31.45	21,844	1.50	2.72			

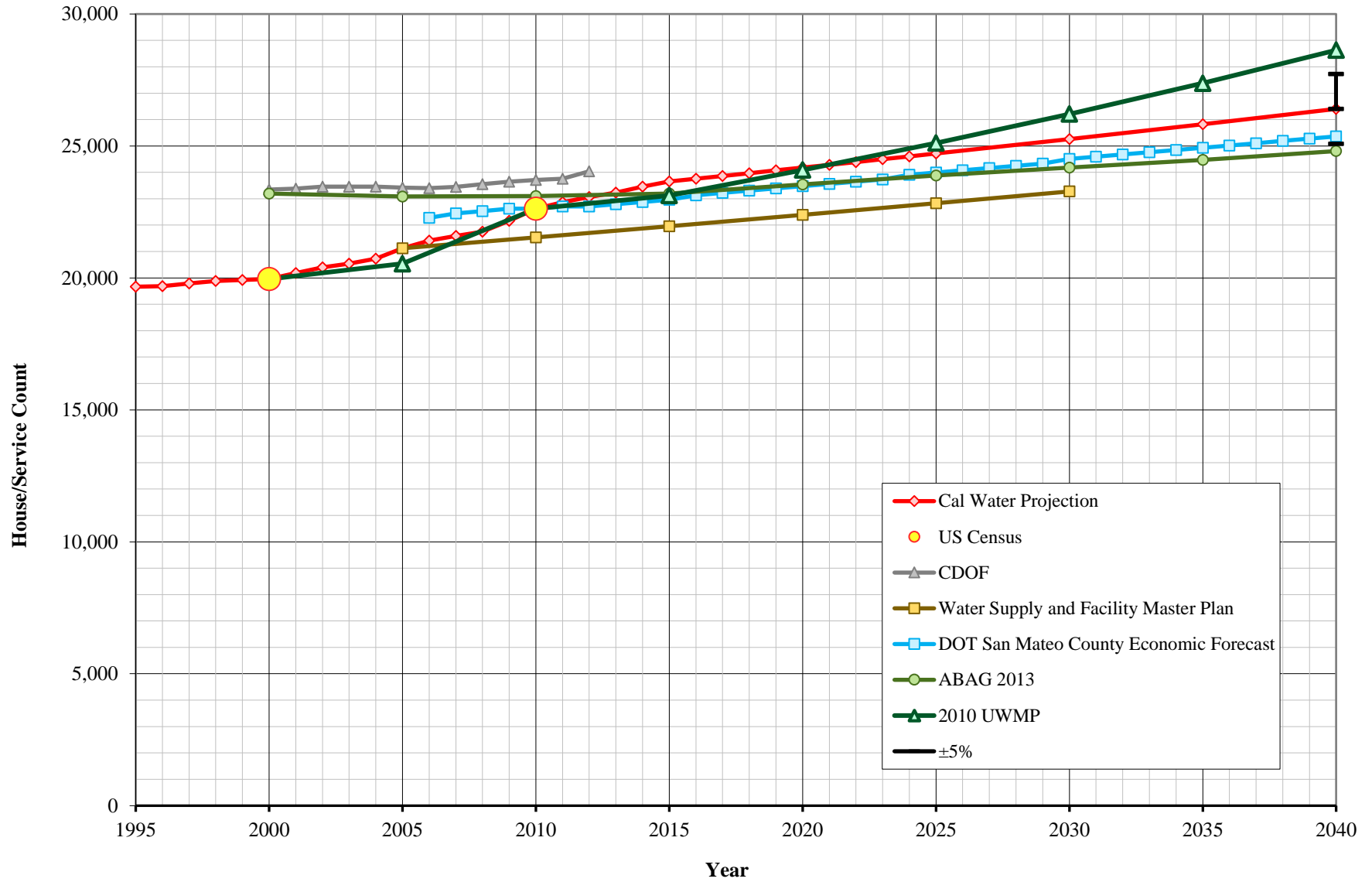
California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections
Marplot Summary



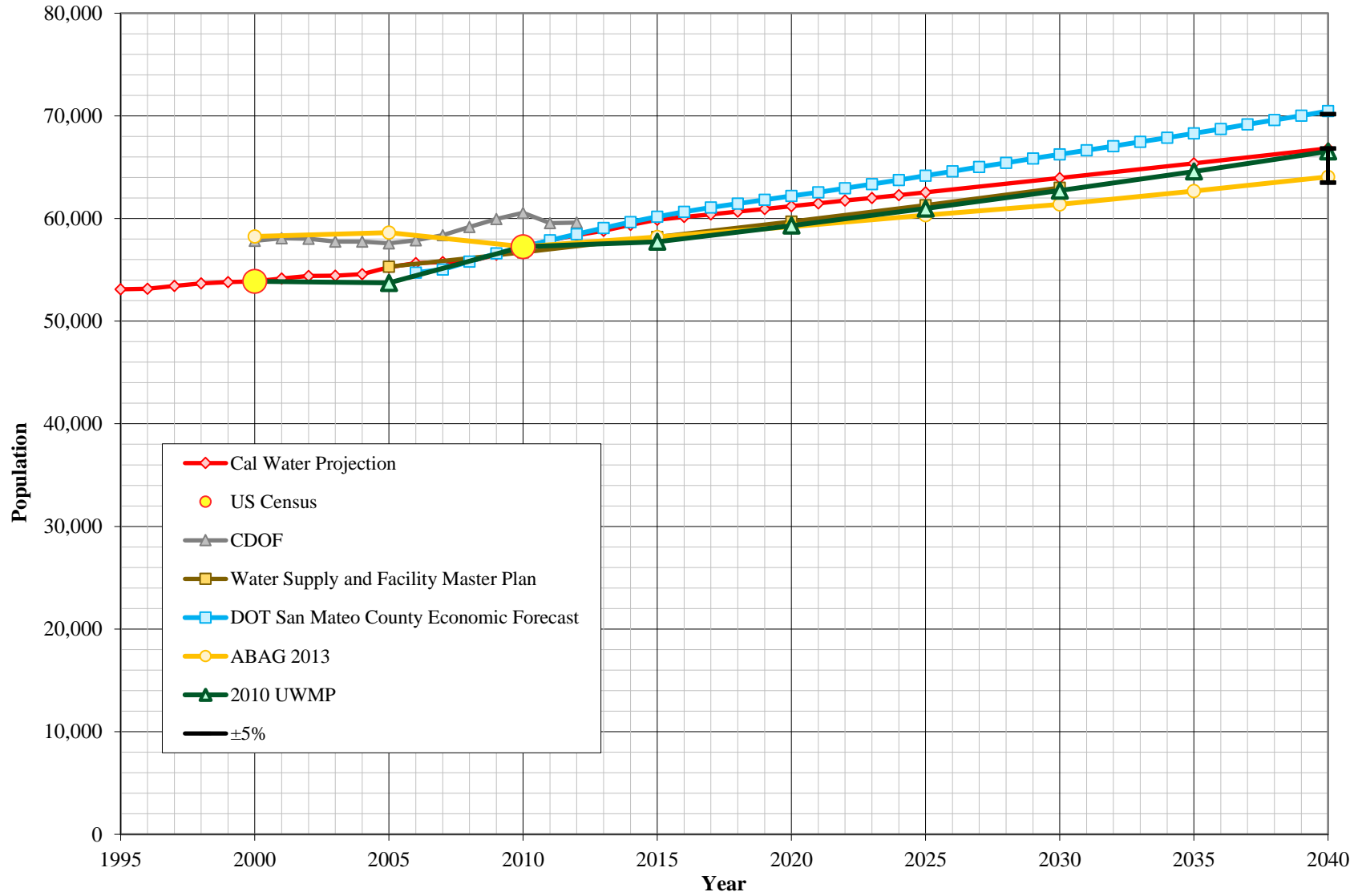
System	US Census 2000 Summary				US Census 2010 Summary				2000-2010 Change		
	Census Blocks	Population	Housing Units (HU)	Density	Census Blocks	Population	Housing Units (HU)	Density	Percentage Population Change	Percentage HU Change	Density Change
Bear Gulch					698	55,736	21,956	2.54			
Woodside					3	183	85	2.15			
Skyline					45	1,335	579	2.31			
Bear Gulch	1,130	53,885	19,956	2.70	746	57,254	22,620	2.53	6.3%	13.3%	93.7%

MARPLOT disclaimer: The population and housing number given above are only rough estimates. They are based on the US Census Blocks. Although Census Blocks are polygons, MARPLOT uses the centroid, or center point, rather than the entire polygon. If a Census Block centroid is within any of the MARPLOT selected objects, the population and housing numbers for that block are tallied, even if only part of the block is within the selected object. It is possible for a block not be counted if its centroid is not within selected objects, even though part of the block is within the selected objects.

Housing Projections



Population Projections



California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections
Population Estimate

Year	US Census		Persons per Housing Unit	Single Family Residential	Multi Family Residential			Flat Rate Residential
	Population	Housing Units		Services (DU)	Services	Units (DU)	Unit Density	Services (DU)
2000	53,885	19,956	2.700	15,816	64	4,140	64.7	0
2010	57,254	22,620	2.531	16,781	75	5,839	77.4	0
	6.3%	13.3%	-6.3%	6.1%	17.8%	41.0%	19.7%	0.0%

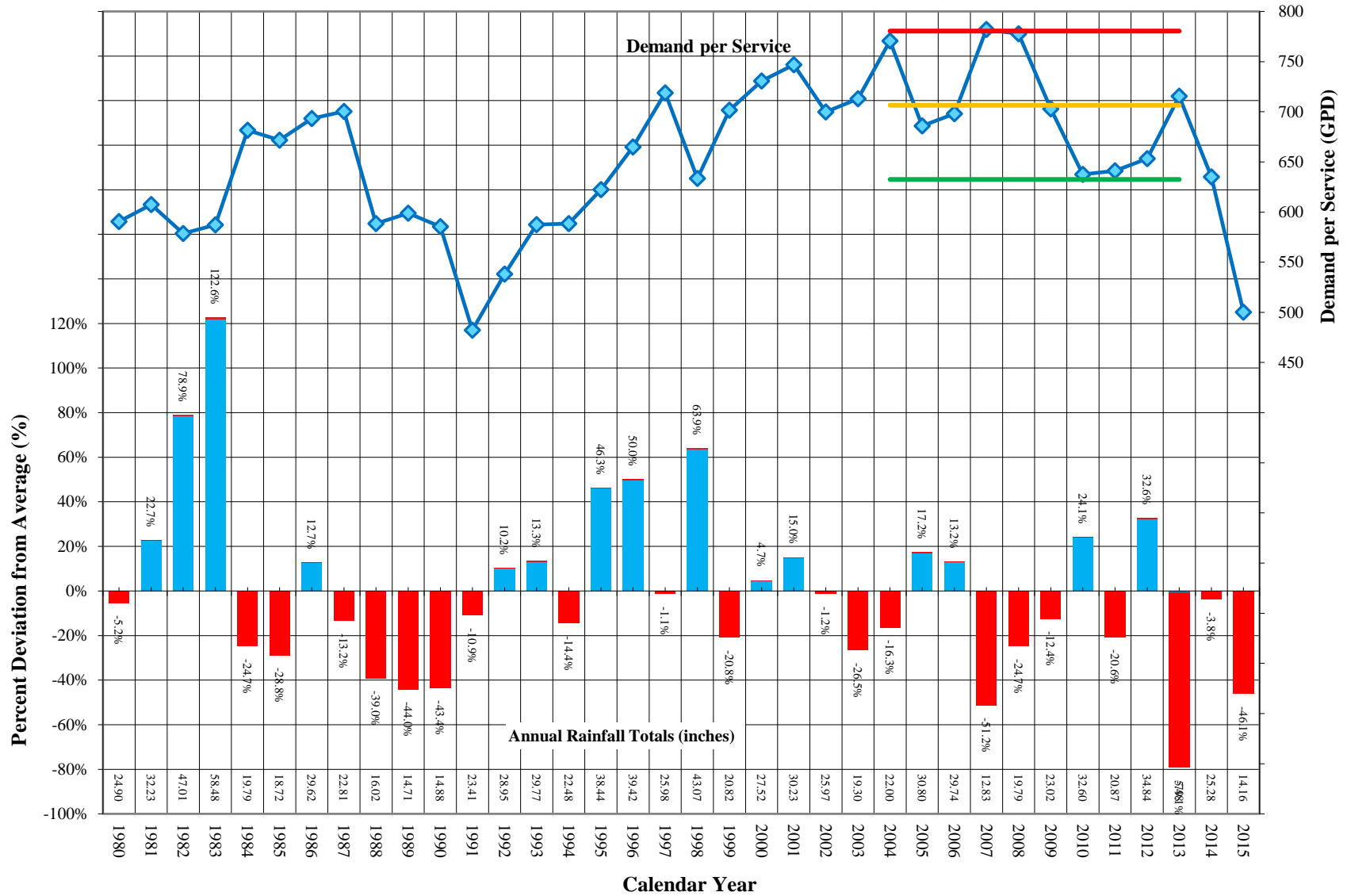
Year	Single Family Residential Services (DU)	Multi Family Residential			Flat Rate Residential Services (DU)	Total Residential Dwelling Units	Persons per Housing Unit	Estimated District Population
		Services	Residential Units (DU)	Unit Density				
1995	15,532	64	4,135	64.7	0	19,667	2.700	53,104
1996	15,543	64	4,140	64.7	0	19,683	2.700	53,149
1997	15,650	64	4,140	64.7	0	19,790	2.700	53,437
1998	15,743	64	4,140	64.7	0	19,884	2.700	53,690
1999	15,785	64	4,140	64.7	0	19,925	2.700	53,802
2000	15,816	64	4,140	64.7	0	19,956	2.700	53,885
2001	15,875	64	4,310	67.3	0	20,185	2.683	54,162
2002	15,919	64	4,480	70.0	0	20,399	2.666	54,392
2003	15,890	64	4,650	72.7	0	20,540	2.649	54,421
2004	15,910	64	4,820	75.3	0	20,730	2.633	54,574
2005	16,134	63	4,990	78.7	0	21,124	2.616	55,252
2006	16,255	63	5,160	82.1	0	21,415	2.599	55,651
2007	16,260	63	5,330	84.8	0	21,590	2.582	55,741
2008	16,252	70	5,499	78.3	0	21,751	2.565	55,791
2009	16,498	76	5,669	75.0	0	22,168	2.548	56,484
2010	16,781	75	5,839	77.4	0	22,620	2.531	57,254
2011	16,857	83	6,009	72.3	0	22,866	2.531	57,876
2012	16,884	84	6,179	73.6	0	23,063	2.531	58,376
2013	16,887	85	6,349	75.0	0	23,235	2.531	58,812
2014	16,944	85	6,519	76.8	0	23,463	2.531	59,387
2015	16,970	114	6,689	58.8	0	23,659	2.531	59,883
2016	17,024	115	6,738	58.8	0	23,762	2.531	60,144
2017	17,079	116	6,787	58.8	0	23,866	2.531	60,407
2018	17,134	116	6,836	58.8	0	23,970	2.531	60,671
2019	17,188	117	6,886	58.8	0	24,075	2.531	60,936
2020	17,243	118	6,936	58.8	0	24,180	2.531	61,202
2021	17,299	119	6,987	58.8	0	24,286	2.531	61,470
2022	17,354	120	7,038	58.8	0	24,392	2.531	61,739
2023	17,409	121	7,090	58.8	0	24,499	2.531	62,010
2024	17,465	122	7,141	58.8	0	24,606	2.531	62,282
2025	17,521	122	7,193	58.8	0	24,714	2.531	62,555
2030	17,803	127	7,460	58.8	0	25,263	2.531	63,944
2035	18,090	132	7,736	58.8	0	25,826	2.531	65,369
2040	18,381	137	8,023	58.8	0	26,404	2.531	66,831

Λ
|
ACTUAL
PROJECTED
|
V

Λ
|
ACTUAL
PROJECTED
|
V

Notes: linear extrapolation used to estimated MFR-DU from 2000. Estimate extend until 2011 due to reclassification, afterwards a constant MFR Unit Density is used.

Comparison of Annual Rainfall to Historical Average



**California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections**

Temperature & Rainfall History

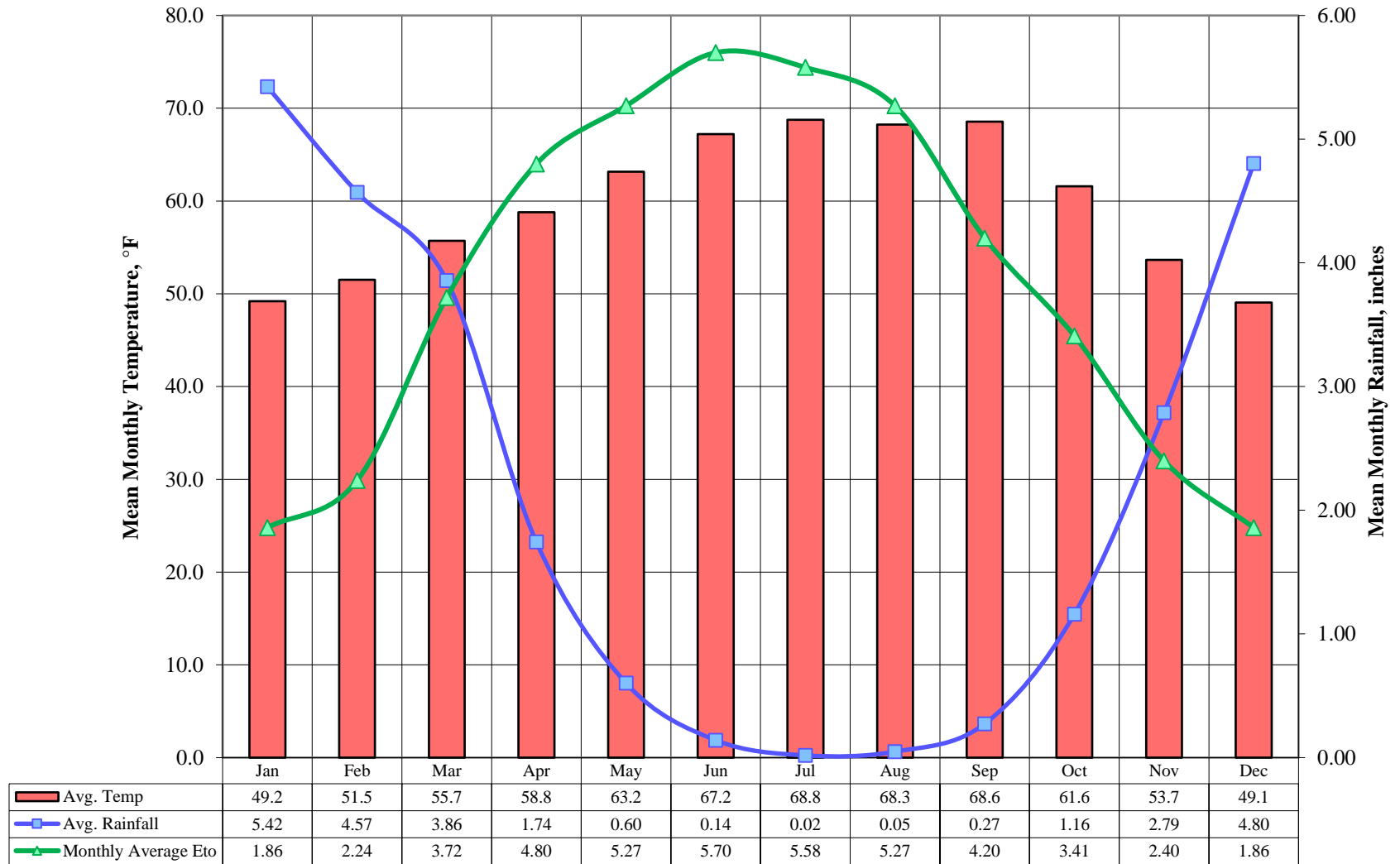
Year	Precipitation		Temperature			Demand per Service (gpd)	Percent of Average Demand
	Annual (in)	Percent Variation	Tmax (°F)	Tmin (°F)	Mean (°F)		
1980	24.90	-5.2%	83.80	39.70	61.8	591	-9.6%
1981	32.23	22.7%	90.00	40.40	65.2	607	-7.0%
1982	47.01	78.9%	85.10	34.60	59.9	579	-11.4%
1983	58.48	122.6%	87.30	37.20	62.3	587	-10.1%
1984	19.79	-24.7%	91.10	36.50	63.8	682	4.4%
1985	18.72	-28.8%	87.40	35.00	61.2	672	2.8%
1986	29.62	12.7%	85.50	36.50	61.0	693	6.1%
1987	22.81	-13.2%	84.40	36.90	60.7	700	7.2%
1988	16.02	-39.0%	88.00	38.40	63.2	588	-9.9%
1989	14.71	-44.0%	88.60	34.90	61.8	599	-8.3%
1990	14.88	-43.4%	85.00	32.80	58.9	585	-10.4%
1991	23.41	-10.9%	83.90	36.20	60.1	482	-26.1%
1992	28.95	10.2%	88.60	35.30	62.0	538	-17.6%
1993	29.77	13.3%	89.80	36.30	63.1	588	-10.0%
1994	22.48	-14.4%	89.20	37.30	63.3	589	-9.9%
1995	38.44	46.3%	89.70	43.00	66.4	622	-4.7%
1996	39.42	50.0%	90.30	40.90	65.6	665	1.8%
1997	25.98	-1.1%	86.70	38.90	62.8	719	10.1%
1998	43.07	63.9%	87.20	37.50	62.4	633	-3.0%
1999	20.82	-20.8%	82.70	39.50	61.1	702	7.4%
2000	27.52	4.7%	84.30	39.50	61.9	731	11.9%
2001	30.23	15.0%	87.10	38.80	63.0	747	14.4%
2002	25.97	-1.2%	87.30	38.10	62.7	700	7.1%
2003	19.30	-26.5%	88.50	40.20	64.4	713	9.1%
2004	22.00	-16.3%	85.80	39.80	62.8	771	18.0%
2005	30.80	17.2%	87.70	39.00	63.4	686	5.0%
2006	29.74	13.2%	88.10	39.60	63.9	698	6.9%
2007	12.83	-51.2%	84.30	36.20	60.3	782	19.7%
2008	19.79	-24.7%	84.20	39.30	61.8	778	19.1%
2009	23.02	-12.4%	85.80	39.70	62.8	703	7.6%
2010	32.60	24.1%	83.80	41.80	62.8	638	-2.4%
2011	20.87	-20.6%	84.20	36.70	60.5	641	-1.8%
2012	34.84	32.6%	84.60	37.90	61.3	653	0.0%
2013	5.48	-79.1%	85.50	37.00	61.3	716	9.6%
2014	25.28	-3.8%	87.10	42.50	64.8	635	-2.8%
2015	14.16	-46.1%	86.00	40.90	63.5	500	-23.4%
2016							
2017							
2018							
2019							
2020							

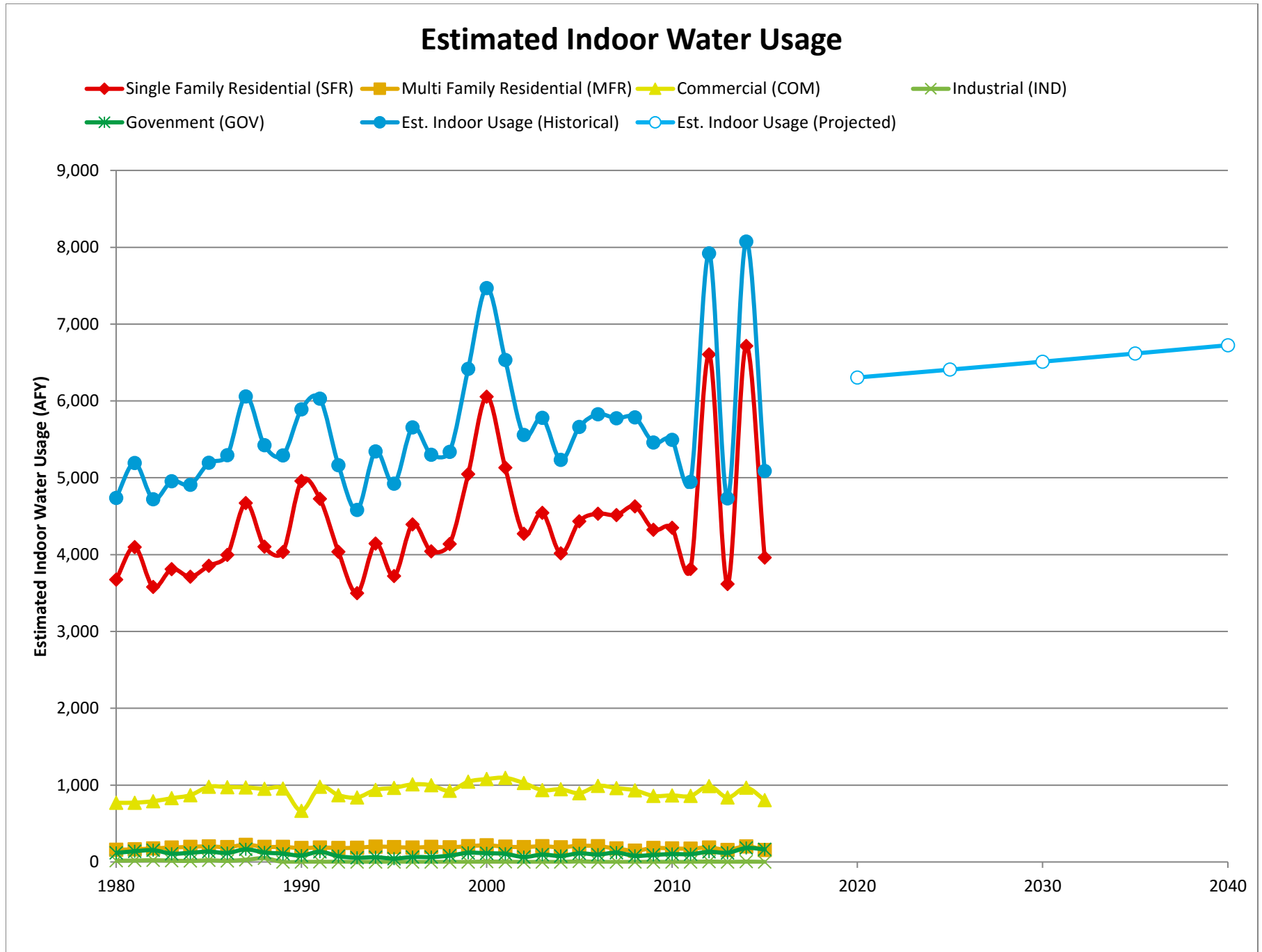
Precipitation (1895 - present)						Monthly Average Eto
	Mean	High	Year	Low	Year	
	in.	in.	-	in.	-	
Jan	5.42	17.66	1909	0.00	2015	1.86
Feb	4.57	16.55	1998	0.02	1953	2.24
Mar	3.86	12.85	1983	0.00	1934	3.72
Apr	1.74	7.11	1958	0.00	1909	4.80
May	0.60	3.93	1957	0.00	1903	5.27
Jun	0.14	1.42	2011	0.00	1905	5.70
Jul	0.02	0.55	1974	0.00	1965	5.58
Aug	0.05	1.42	1976	0.00	1958	5.27
Sep	0.27	4.85	1918	0.00	1902	4.20
Oct	1.16	8.64	1962	0.00	1905	3.41
Nov	2.79	9.80	1983	0.00	1929	2.40
Dec	4.80	18.34	1955	0.00	1989	1.86
Annual	25.43	58.48	1983	5.48	2013	46.31

Temperature (1895 - present)			
	Tmax	Tmin	Mean
	°F	°F	°F
Jan	68.0	30.4	49.2
Feb	68.4	34.6	51.5
Mar	75.5	35.9	55.7
Apr	78.6	39.0	58.8
May	84.8	41.5	63.2
Jun	90.0	44.4	67.2
Jul	90.3	47.2	68.8
Aug	89.8	46.7	68.3
Sep	91.1	46.0	68.6
Oct	83.9	39.3	61.6
Nov	72.0	35.3	53.7
Dec	66.1	32.0	49.1
Annual	91.1	30.4	60.8

- 1) Eto values based on California Irrigation Management Information System (CIMIS), <http://www.cimis.water.ca.gov/cimis/welcome.jsp>, EvapoTranspiration (Eto) Zones Map, Zone 3
- 2) PPT, Tmax, Tmin obtained from PRISM where, PPT is total monthly rainfall, Tmax is average of maximum temperatures for given month, and Tmin is average of minimum temperatures for given month
- 3) Percent variation based on average of 1980 to present values

Average Monthly Temperature, Rainfall, and Monthly Eto





**California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections**

Estimated Indoor/Outdoor Water Usage

Year	Single Family Residential (SFR)								Multi Family Residential (MFR)				Commercial (COM)			
	SFR Jan Usage	Metered SFR Indoor Use (Annualized 90% of January Total)			Indoor Flat Rate Usage (AFY)	Total SFR Indoor Usage			MFR Jan Usage	MFR Indoor Use (Annualized 90% of January Total)			COM Jan Usage	COM Indoor Use (Annualized 90% of January Total)		
	JAN (CCF)	AFY	GPD/Serv	AFY		GPD/Serv	%	(CCF)	AFY	GPD/Serv	%	(CCF)	AFY	GPD/Serv	%	
1980	148,266	3,676	0.250	0	3,676	223	44%	6,405	159	2,277	72%	31,057	770	556	73%	
1981	165,298	4,098	0.278	0	4,098	248	47%	6,625	164	2,328	70%	31,114	771	554	69%	
1982	144,371	3,579	0.242	0	3,579	216	44%	7,106	176	2,497	73%	31,874	790	564	72%	
1983	153,747	3,812	0.257	0	3,812	230	46%	7,559	187	2,656	77%	33,486	830	590	71%	
1984	149,730	3,712	0.250	0	3,712	223	39%	7,903	196	2,777	74%	35,039	869	610	66%	
1985	155,480	3,855	0.259	0	3,855	231	40%	8,208	204	2,930	77%	39,504	979	683	74%	
1986	161,138	3,995	0.267	0	3,995	239	41%	7,770	193	2,774	70%	39,279	974	675	69%	
1987	188,364	4,670	0.310	0	4,670	277	46%	9,021	224	3,221	82%	39,142	970	669	69%	
1988	165,552	4,105	0.271	0	4,105	242	48%	7,915	196	2,741	82%	38,394	952	653	73%	
1989	162,675	4,033	0.265	0	4,033	236	47%	7,878	195	2,714	81%	38,482	954	654	73%	
1990	199,962	4,958	0.323	0	4,958	289	58%	7,295	181	2,523	76%	26,892	667	458	52%	
1991	190,605	4,726	0.307	0	4,726	274	67%	7,622	189	2,633	85%	39,454	978	673	84%	
1992	162,797	4,036	0.261	0	4,036	233	50%	7,343	182	2,540	77%	35,054	869	601	73%	
1993	141,124	3,499	0.226	0	3,499	202	40%	7,492	186	2,588	74%	33,856	839	586	65%	
1994	167,085	4,143	0.267	0	4,143	238	45%	8,076	200	2,789	80%	37,838	938	657	71%	
1995	150,028	3,720	0.239	0	3,720	214	40%	7,815	194	2,706	76%	38,922	965	675	71%	
1996	177,203	4,393	0.283	0	4,393	252	43%	7,553	187	2,612	72%	40,719	1,010	706	70%	
1997	163,073	4,043	0.258	0	4,043	231	36%	7,875	195	2,724	75%	40,282	999	700	68%	
1998	166,923	4,139	0.263	0	4,139	235	43%	7,701	191	2,663	74%	37,349	926	648	68%	
1999	203,642	5,049	0.320	0	5,049	286	47%	8,264	205	2,858	79%	42,120	1,044	731	72%	
2000	244,191	6,054	0.383	0	6,054	342	52%	8,750	217	3,026	81%	43,520	1,079	755	70%	
2001	206,975	5,132	0.323	0	5,132	289	43%	8,024	199	2,775	75%	44,159	1,095	763	72%	
2002	172,301	4,272	0.268	0	4,272	240	36%	7,809	194	2,701	77%	41,421	1,027	717	71%	
2003	183,280	4,544	0.286	0	4,544	255	39%	8,241	204	2,850	82%	37,698	935	653	68%	
2004	162,023	4,017	0.252	0	4,017	225	32%	7,721	191	2,670	77%	38,145	946	661	67%	
2005	178,842	4,434	0.275	0	4,434	245	39%	8,501	211	2,967	84%	36,130	896	623	65%	
2006	182,847	4,533	0.279	0	4,533	249	40%	8,284	205	2,918	82%	39,943	990	689	70%	
2007	182,125	4,515	0.278	0	4,515	248	36%	7,057	175	2,486	74%	38,800	962	666	69%	
2008	186,639	4,627	0.285	0	4,627	254	37%	5,924	147	1,867	64%	37,585	932	624	64%	
2009	174,429	4,325	0.262	0	4,325	234	37%	7,324	182	2,145	74%	34,673	860	560	64%	
2010	175,409	4,349	0.259	0	4,349	231	41%	7,125	177	2,091	76%	34,941	866	567	66%	
2011	153,810	3,813	0.226	0	3,813	202	36%	6,969	173	1,857	75%	34,641	859	564	65%	
2012	266,403	6,605	0.391	0	6,605	349	59%	7,607	189	2,006	83%	39,858	988	653	75%	
2013	145,910	3,618	0.214	0	3,618	191	30%	6,345	157	1,659	68%	33,833	839	555	64%	
2014	270,900	6,717	0.396	0	6,717	354	62%	8,205	203	2,139	93%	39,001	967	640	80%	
2015	159,758	3,961	2.988	0	3,961	208	47%	6,325	157	1,230	70%	32,505	806	543	76%	
2020					5,040	261			235	1,778			889	591		
2025					5,121	261			244	1,778			900	591		
2030					5,204	261			253	1,778			912	591		
2035					5,288	261			262	1,778			924	591		
2040					5,373	261			272	1,778			936	591		

Note: GPD/Service is estimated as the average of the last 5 years for given customer class.

California Water Service Company - Bear Gulch District
Water Supply and Demand Analysis and Projections

Estimated Indoor/Outdoor Water Usage

Year	Industrial (IND)				Government (GOV)			
	IND Jan Usage	IND Indoor Use (Annualized 90% of January Total)			GOV Jan Usage	GOV Indoor Use (Annualized 90% of January Total)		
	(CCF)	AFY	GPD/Serv	%	(CCF)	AFY	GPD/Serv	%
1980	639	16	2,021	57%	4,763	118	1,120	31%
1981	752	19	2,378	57%	5,622	139	1,255	37%
1982	892	22	2,821	72%	6,179	153	1,368	45%
1983	690	17	2,182	60%	4,367	108	948	38%
1984	538	13	1,701	49%	4,813	119	1,011	32%
1985	881	22	2,786	73%	5,449	135	1,148	37%
1986	587	15	1,856	46%	4,705	117	985	31%
1987	1,163	29	3,677	58%	6,640	165	1,378	46%
1988	1,938	48	13,546	322%	4,979	123	1,024	42%
1989	17	0	376	9%	4,365	108	888	41%
1990	1	0	22	1%	3,397	84	696	32%
1991	90	2	2,173	74%	5,367	133	1,103	73%
1992	28	1	620	18%	3,006	75	680	35%
1993	25	1	553	15%	2,231	55	514	25%
1994	3	0	66	2%	2,476	61	574	27%
1995	0	0	0	0%	1,782	44	414	19%
1996	0	0	0	0%	2,592	64	598	22%
1997	0	0	0	0%	2,553	63	597	21%
1998	0	0	0	0%	3,335	83	765	36%
1999	0	0	0	0%	4,799	119	1,095	42%
2000	219	5	4,847	80%	4,581	114	1,052	42%
2001	64	2	1,417	34%	4,264	106	993	38%
2002	0	0	0	0%	2,615	65	609	20%
2003	0	0	0	0%	3,862	96	894	35%
2004	0	0	0	0%	3,140	78	718	27%
2005	339	8	7,503	114%	4,549	113	1,058	44%
2006	0	0	0	0%	3,896	97	898	37%
2007	0	0	0	0%	4,890	121	1,125	42%
2008	0	0	0	0%	3,228	80	668	24%
2009	41	1	0	0%	3,683	91	705	28%
2010	0	0	0	0%	4,145	103	794	35%
2011	0	0	0	0%	4,081	101	766	33%
2012	234	6	0	0%	5,327	132	996	41%
2013	10	0	0	0%	4,812	119	908	32%
2014	166	4	0	0%	7,320	181	1,367	63%
2015	0	0	0	0%	6,616	164	1,233	75%
2020		0	0			141	1,054	
2025		0	0			142	1,054	
2030		0	0			142	1,054	
2035		0	0			143	1,054	
2040		0	0			144	1,054	

Estimated Indoor/Outdoor Usage			
Est. Indoor Usage	Est. Outdoor Usage	Est. Indoor Usage	Est. Outdoor Usage
AFY	AFY	%	%
4,739	5,914	44%	56%
5,192	5,827	47%	53%
4,721	5,801	45%	55%
4,955	5,735	46%	54%
4,910	7,534	39%	61%
5,195	7,116	42%	58%
5,293	7,469	41%	59%
6,058	6,923	47%	53%
5,424	5,555	49%	51%
5,291	5,949	47%	53%
5,890	5,158	53%	47%
6,028	3,112	66%	34%
5,163	5,044	51%	49%
4,580	6,571	41%	59%
5,342	5,845	48%	52%
4,923	6,926	42%	58%
5,655	7,011	45%	55%
5,300	8,480	38%	62%
5,338	6,874	44%	56%
6,417	7,146	47%	53%
7,469	6,680	53%	47%
6,533	7,986	45%	55%
5,557	8,082	41%	59%
5,779	8,082	42%	58%
5,232	9,776	35%	65%
5,662	7,865	42%	58%
5,826	8,033	42%	58%
5,774	9,780	37%	63%
5,786	9,724	37%	63%
5,458	8,786	38%	62%
5,495	7,626	42%	58%
4,946	8,303	37%	63%
7,920	5,599	59%	41%
4,733	10,080	32%	68%
8,073	5,109	61%	39%
5,088	5,313	49%	51%
6,305	8,733	42%	58%
6,407	8,872	42%	58%
6,511	9,013	42%	58%
6,617	9,157	42%	58%
6,725	9,304	42%	58%

PAGE LEFT BLANK INTENTIONALLY