

**Water Resources Planning Department**

**Projection Analysis Work Sheets  
for  
South San Francisco District**

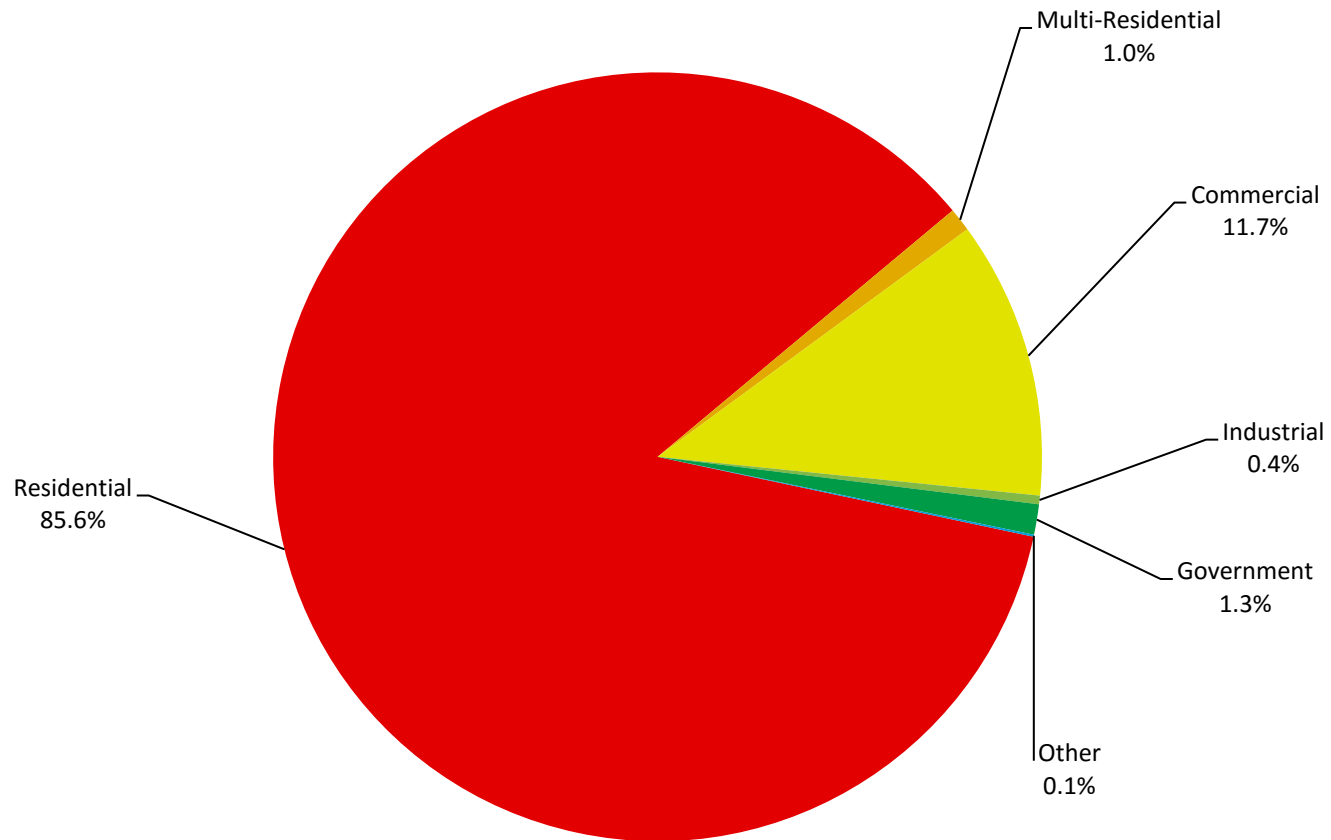
**2015**



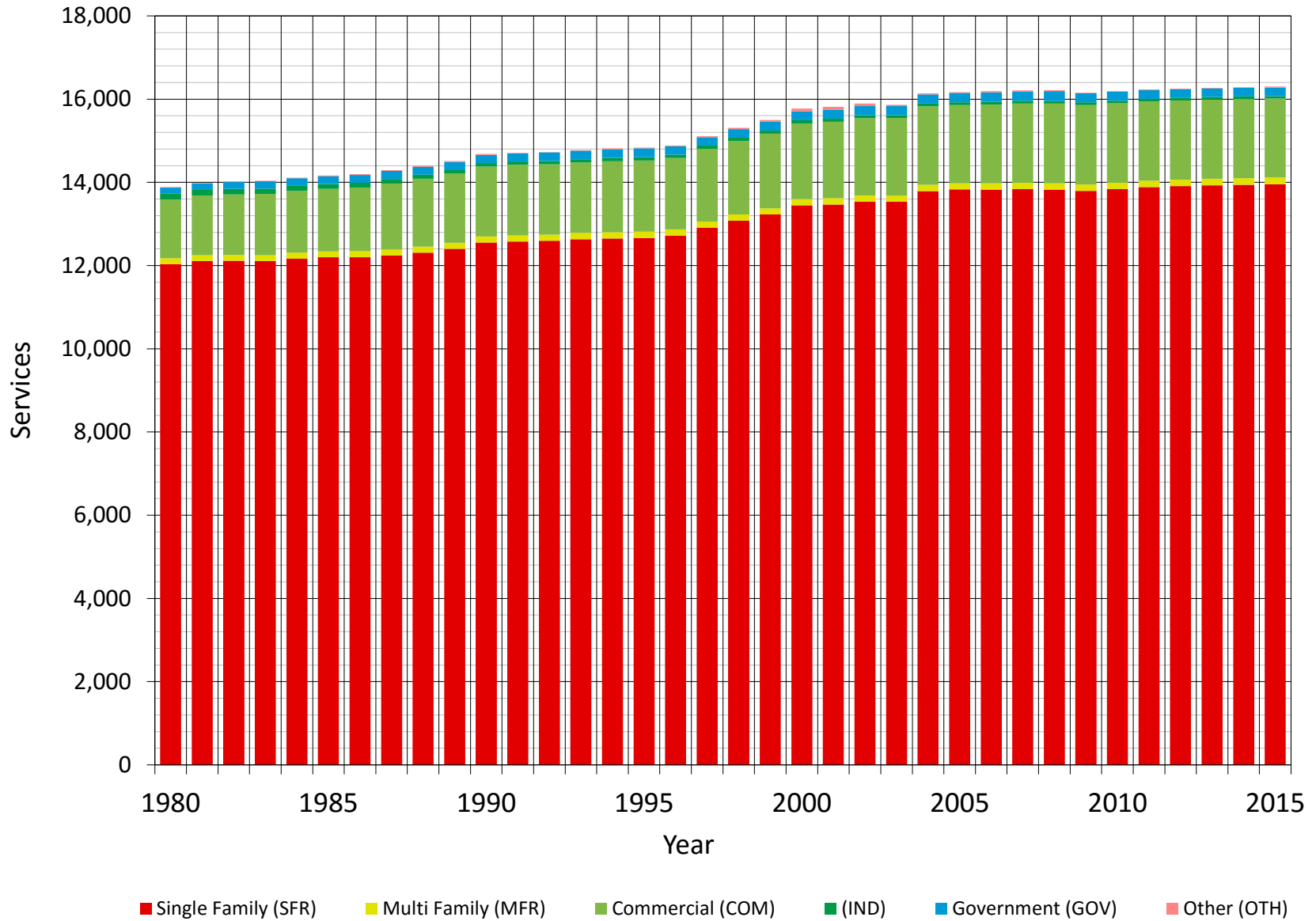
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## Distribution of Services (2015)



# Historical Services



## California Water Service Company - South San Francisco 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)	Total	Annual Change
1980	12,038	140	1,411	140	144	11	13,884	
1981	12,110	140	1,435	136	154	9	13,985	101
1982	12,114	141	1,456	131	167	10	14,018	33
1983	12,107	142	1,473	128	175	12	14,037	19
1984	12,166	143	1,485	122	181	16	14,113	76
1985	12,201	143	1,503	115	186	17	14,165	51
1986	12,202	144	1,530	113	192	18	14,199	34
1987	12,240	144	1,585	110	197	20	14,295	97
1988	12,310	146	1,634	93	192	22	14,396	100
1989	12,404	146	1,662	82	196	22	14,511	115
1990	12,556	146	1,680	81	199	20	14,682	171
1991	12,577	147	1,699	80	196	9	14,708	26
1992	12,594	149	1,693	78	204	6	14,723	15
1993	12,635	150	1,692	79	209	13	14,778	55
1994	12,650	151	1,705	80	209	20	14,815	37
1995	12,661	151	1,713	81	210	20	14,835	20
1996	12,716	151	1,718	79	201	21	14,887	51
1997	12,911	151	1,743	78	206	21	15,109	222
1998	13,078	151	1,766	76	211	25	15,308	199
1999	13,227	151	1,791	75	215	37	15,496	188
2000	13,450	151	1,815	74	218	62	15,771	275
2001	13,465	151	1,837	74	219	69	15,815	44
2002	13,534	151	1,858	72	218	59	15,893	78
2003	13,532	150	1,864	71	219	26	15,861	-31
2004	13,787	151	1,888	68	220	26	16,140	279
2005	13,829	151	1,879	68	221	24	16,171	31
2006	13,829	151	1,891	69	223	27	16,190	19
2007	13,838	151	1,905	66	226	27	16,213	23
2008	13,826	152	1,914	65	233	27	16,216	3
2009	13,795	152	1,913	63	219	16	16,158	-58
2010	13,840	152	1,911	61	218	13	16,194	36
2011	13,888	152	1,903	60	217	14	16,234	40
2012	13,910	155	1,902	60	214	13	16,255	21
2013	13,928	159	1,903	60	209	13	16,273	18
2014	13,938	161	1,904	59	208	14	16,284	12
2015	13,952	167	1,895	56	209	23	16,302	18
5 Yr Avg.	13,923	159	1,901	59	211	15	16,212	25
10 Yr Avg.	13,874	155	1,904	62	218	19	16,212	23
15 Yr Avg.	13,793	154	1,891	65	218	26	16,212	68
20 Yr Avg.	13,614	153	1,860	68	216	28	16,212	87

## California Water Service Company - South San Francisco District

### Water Supply and Demand Analysis and Projections

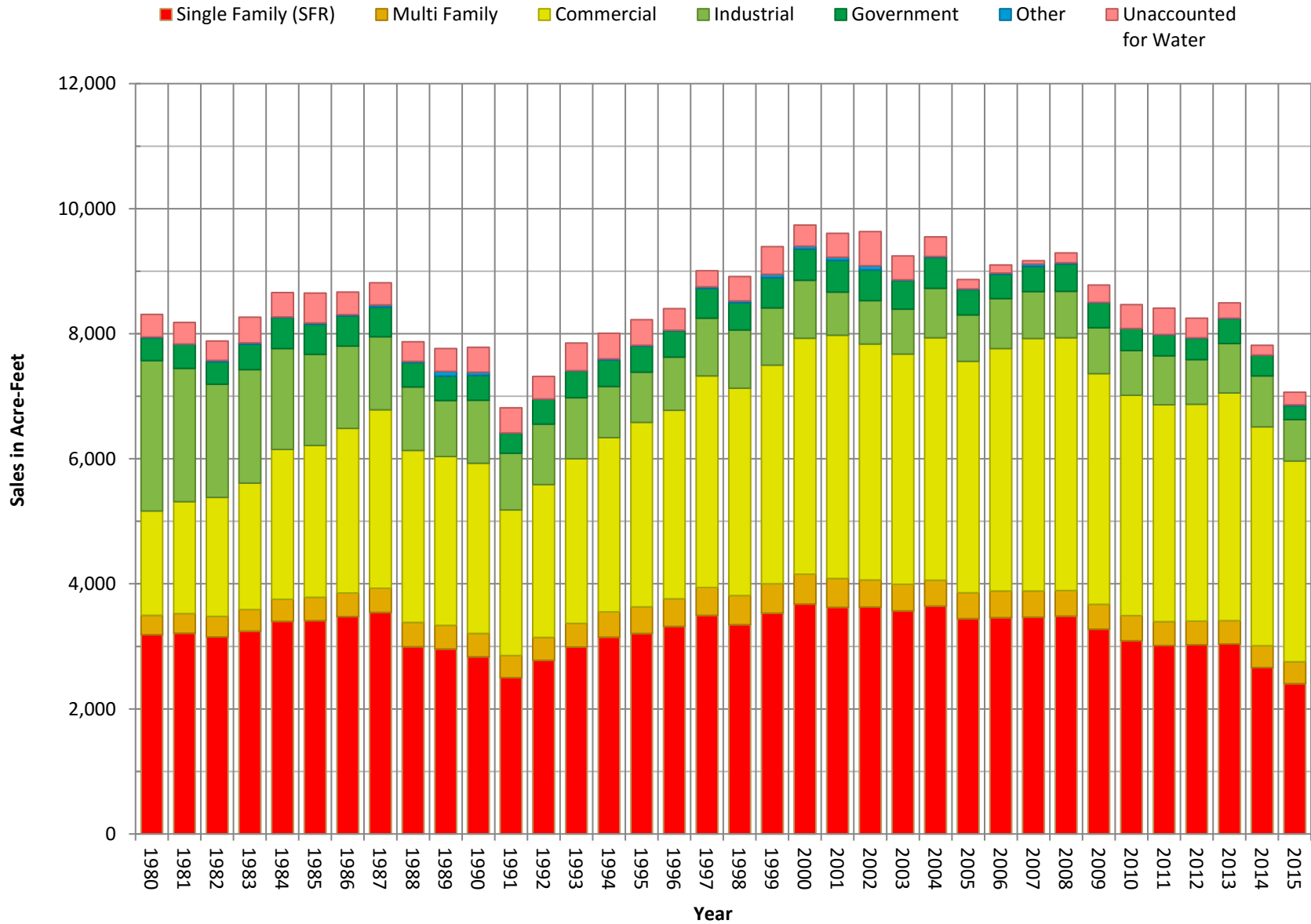
#### Service Growth Percentage

Year	Single Family (SFR)	Multi Family (MFR)	Commercial (COM)	Industrial (IND)	Government (GOV)	Other (OTH)	Total
1981	0.60%	0.36%	1.76%	-2.62%	6.35%	-19.23%	0.73%
1982	0.03%	0.65%	1.42%	-4.34%	8.74%	12.38%	0.24%
1983	-0.05%	0.53%	1.17%	-1.98%	4.74%	22.03%	0.13%
1984	0.49%	0.94%	0.83%	-4.36%	3.19%	29.17%	0.54%
1985	0.28%	-0.23%	1.22%	-6.20%	2.86%	12.37%	0.36%
1986	0.02%	0.58%	1.78%	-1.89%	3.59%	1.44%	0.24%
1987	0.31%	0.06%	3.62%	-2.74%	2.25%	10.38%	0.68%
1988	0.56%	1.10%	3.07%	-15.07%	-2.33%	10.68%	0.70%
1989	0.76%	0.29%	1.70%	-12.01%	2.04%	-0.39%	0.80%
1990	1.23%	0.00%	1.07%	-1.22%	1.53%	-5.81%	1.18%
1991	0.16%	0.80%	1.15%	-1.44%	-1.34%	-54.73%	0.18%
1992	0.14%	1.30%	-0.37%	-2.30%	3.69%	-38.18%	0.10%
1993	0.32%	0.67%	-0.02%	1.93%	2.46%	120.59%	0.37%
1994	0.12%	0.67%	0.75%	1.16%	0.12%	56.00%	0.25%
1995	0.09%	-0.06%	0.44%	0.83%	0.44%	0.43%	0.14%
1996	0.43%	0.00%	0.34%	-2.16%	-4.01%	4.68%	0.35%
1997	1.53%	0.00%	1.41%	-1.79%	2.24%	3.25%	1.49%
1998	1.29%	-0.06%	1.36%	-1.93%	2.71%	18.50%	1.32%
1999	1.14%	0.06%	1.41%	-1.09%	1.58%	46.51%	1.23%
2000	1.68%	-0.11%	1.35%	-1.33%	1.63%	69.39%	1.77%
2001	0.11%	0.11%	1.21%	-0.90%	0.23%	10.98%	0.28%
2002	0.52%	0.00%	1.13%	-2.03%	-0.15%	-15.32%	0.49%
2003	-0.02%	-0.39%	0.28%	-2.19%	0.11%	-55.27%	-0.20%
2004	1.89%	0.39%	1.31%	-4.36%	0.50%	0.96%	1.76%
2005	0.30%	0.00%	-0.49%	1.11%	0.34%	-9.15%	0.19%
2006	0.00%	0.00%	0.66%	1.34%	1.25%	12.85%	0.12%
2007	0.07%	0.00%	0.75%	-4.45%	1.08%	0.92%	0.14%
2008	-0.09%	0.44%	0.47%	-1.13%	3.10%	-1.52%	0.02%
2009	-0.22%	0.27%	-0.07%	-3.95%	-5.87%	-41.18%	-0.36%
2010	0.32%	-0.38%	-0.10%	-3.58%	-0.38%	-20.53%	0.22%
2011	0.35%	0.44%	-0.42%	-0.83%	-0.76%	11.92%	0.25%
2012	0.16%	1.86%	-0.04%	-0.14%	-0.96%	-7.10%	0.13%
2013	0.13%	2.85%	0.06%	-0.14%	-2.45%	-3.18%	0.11%
2014	0.07%	1.10%	0.05%	-1.53%	-0.76%	10.53%	0.07%
2015	0.10%	3.77%	-0.52%	-5.37%	0.84%	64.29%	0.11%
5 Yr. Avg.	0.16%	1.13%	-0.17%	-1.60%	-0.82%	15.29%	0.13%
10 Yr. Avg.	0.09%	0.47%	0.08%	-1.98%	-0.49%	2.70%	0.08%
15 Yr. Avg.	0.25%	0.30%	0.29%	-1.88%	-0.26%	-2.72%	0.22%
20 Yr. Avg.	0.49%	0.21%	0.51%	-1.82%	0.01%	5.08%	0.47%

Note: Values in red not included due to reclassification

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# Historical Sales



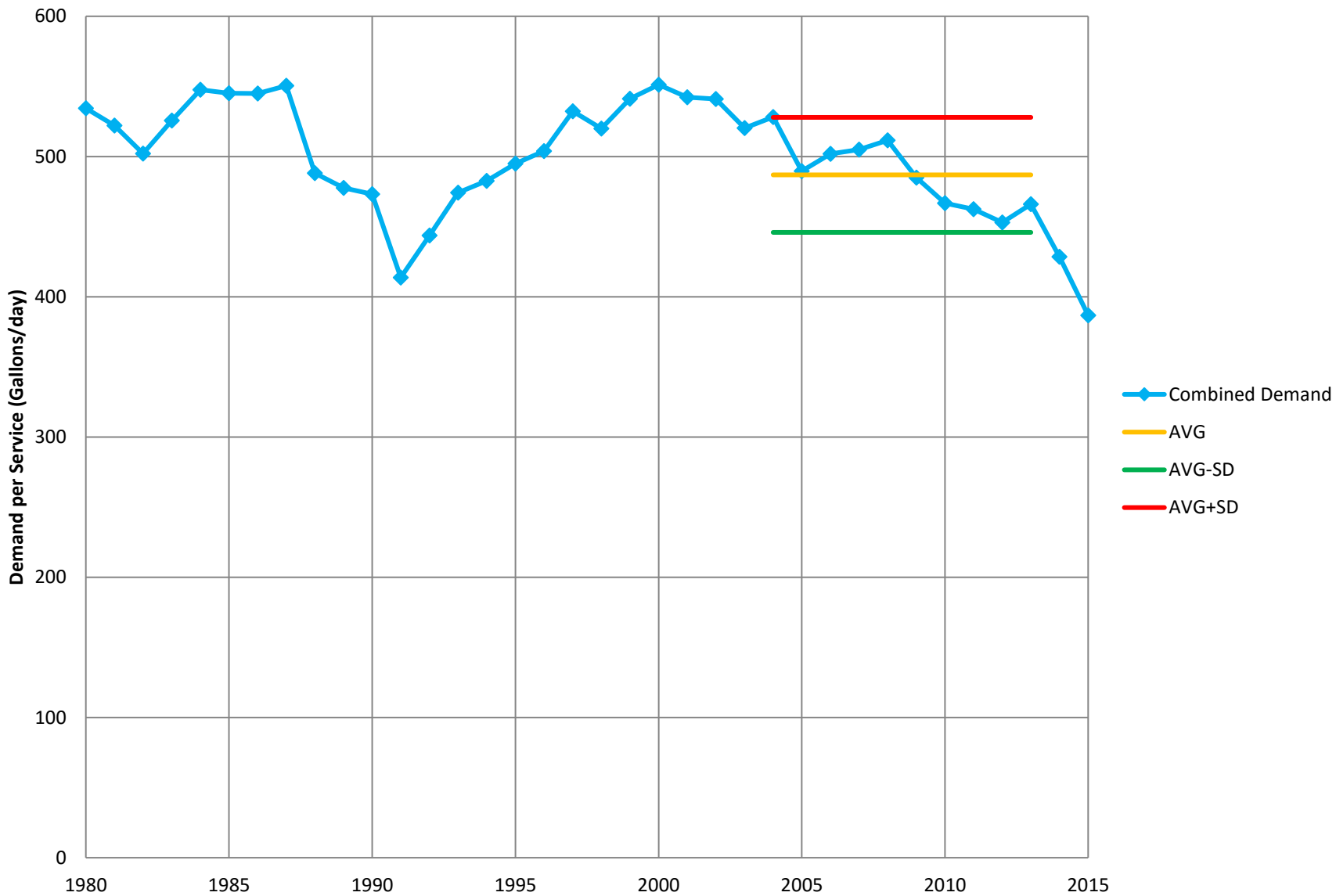


**California Water Service Company - South San Francisco District**  
**Water Supply and Demand Analysis and Projections**  
**Sales (AF)**

Worksheet 3

Year	Single Family (SFR)	Multi Family (MFR)	Commercial (COM)	Industrial (IND)	Government (GOV)	Other (OTH)	Unaccounted for Water (UAFW)	Total Sales (AF)	Total Demand (AF)	Total Demand (MGal)
1980	3,186	309	1,672	2,404	367	11	363	7,948	8,311	2,708
1981	3,212	313	1,791	2,131	385	4	343	7,836	8,179	2,665
1982	3,149	329	1,904	1,811	356	25	309	7,574	7,883	2,569
1983	3,245	345	2,022	1,813	407	24	408	7,856	8,264	2,693
1984	3,399	355	2,394	1,616	492	13	390	8,268	8,658	2,821
1985	3,410	374	2,431	1,455	481	21	476	8,172	8,649	2,818
1986	3,477	375	2,635	1,315	484	19	362	8,305	8,666	2,824
1987	3,543	388	2,852	1,169	472	39	353	8,462	8,815	2,873
1988	2,995	387	2,750	1,015	391	22	313	7,560	7,873	2,565
1989	2,959	378	2,699	895	391	76	366	7,397	7,763	2,530
1990	2,835	373	2,720	1,008	397	53	397	7,385	7,782	2,536
1991	2,500	352	2,328	909	321	5	400	6,416	6,816	2,221
1992	2,777	365	2,445	969	398	1	362	6,955	7,317	2,384
1993	2,990	378	2,634	973	426	7	442	7,408	7,851	2,558
1994	3,146	405	2,786	819	425	16	412	7,597	8,008	2,610
1995	3,206	428	2,949	803	418	12	410	7,816	8,226	2,680
1996	3,320	441	3,014	850	424	9	345	8,058	8,403	2,738
1997	3,496	445	3,387	922	471	29	258	8,750	9,008	2,935
1998	3,347	465	3,318	931	431	34	391	8,526	8,917	2,906
1999	3,534	467	3,496	915	482	59	441	8,953	9,394	3,061
2000	3,678	475	3,774	930	496	48	337	9,400	9,738	3,173
2001	3,626	462	3,886	692	505	51	383	9,223	9,606	3,130
2002	3,627	433	3,773	695	490	71	544	9,089	9,633	3,139
2003	3,568	427	3,678	721	458	11	382	8,863	9,245	3,012
2004	3,644	413	3,878	790	495	18	312	9,237	9,549	3,112
2005	3,444	411	3,704	741	405	15	149	8,720	8,869	2,890
2006	3,458	425	3,880	799	389	20	129	8,973	9,101	2,966
2007	3,468	416	4,039	753	399	40	54	9,115	9,169	2,988
2008	3,486	409	4,042	744	435	22	155	9,137	9,292	3,028
2009	3,275	397	3,691	735	399	4	275	8,502	8,777	2,860
2010	3,092	399	3,525	716	350	2	381	8,084	8,465	2,758
2011	3,014	383	3,469	780	338	7	418	7,990	8,408	2,740
2012	3,027	376	3,471	711	342	8	314	7,935	8,249	2,688
2013	3,038	376	3,637	792	397	10	245	8,250	8,495	2,768
2014	2,661	348	3,502	813	332	4	155	7,660	7,816	2,547
2015	2,404	348	3,212	662.6	219	16	201	6,863	7,064	2,302

### Combined Demand per Service



## California Water Service Company - South San Francisco District

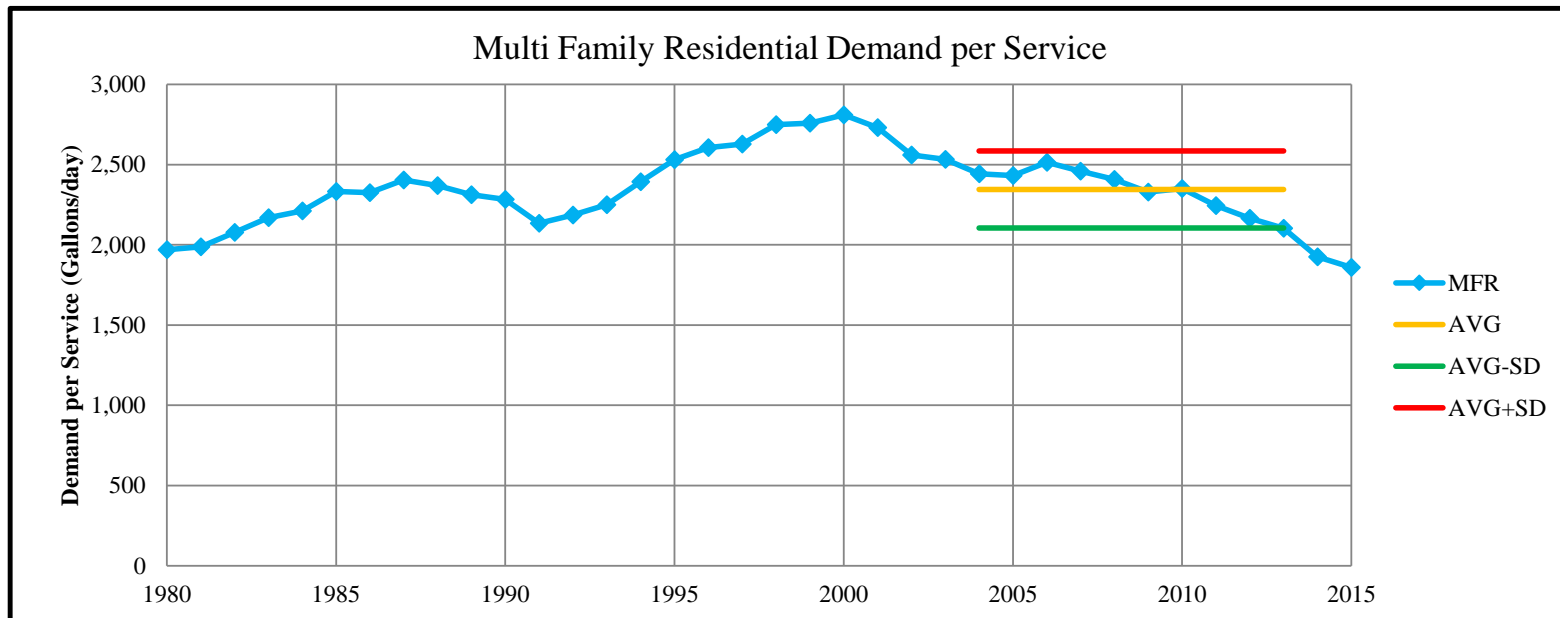
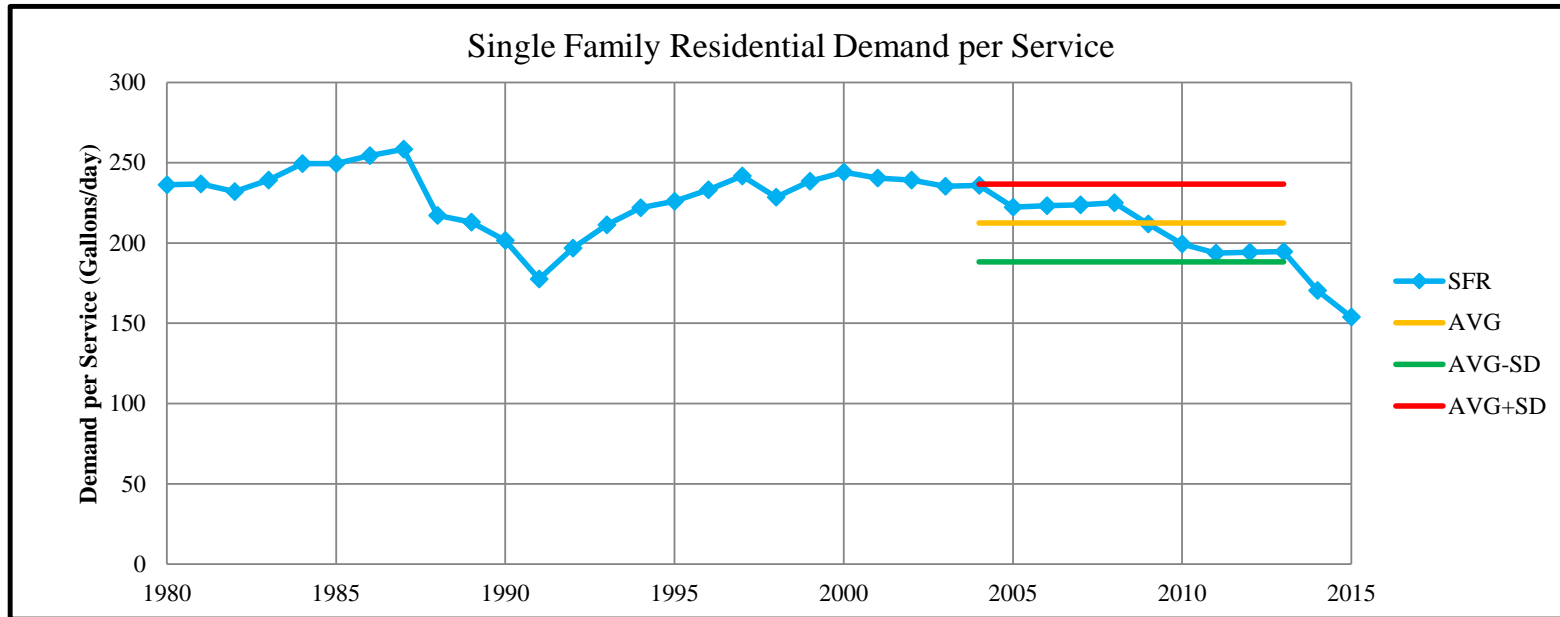
### Water Supply and Demand Analysis and Projections

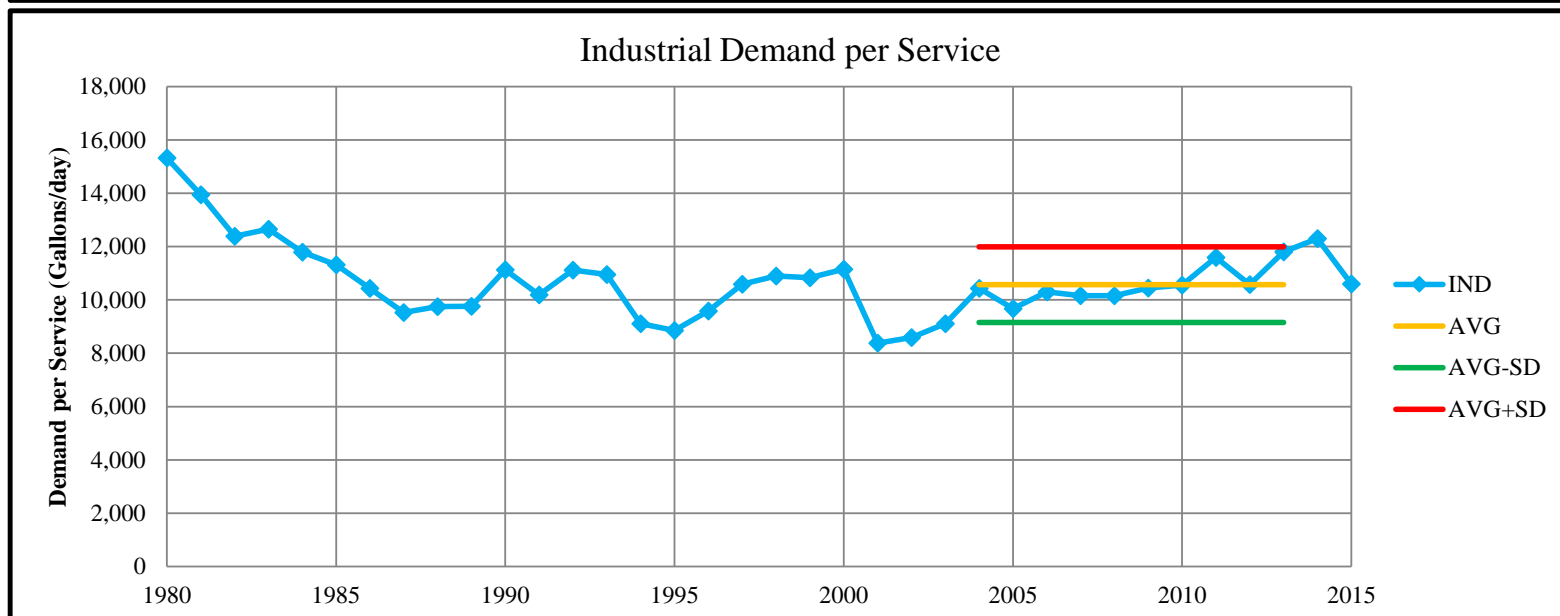
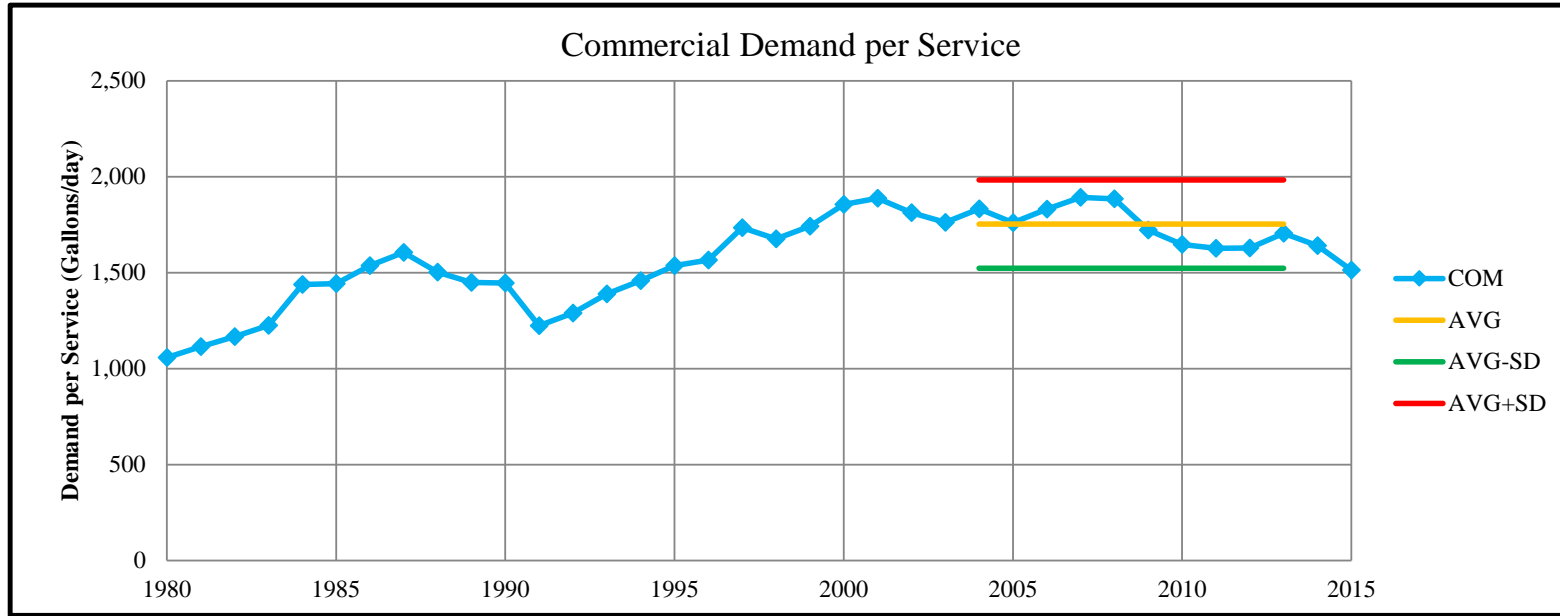
#### Demand per Service (Gallons per Day)

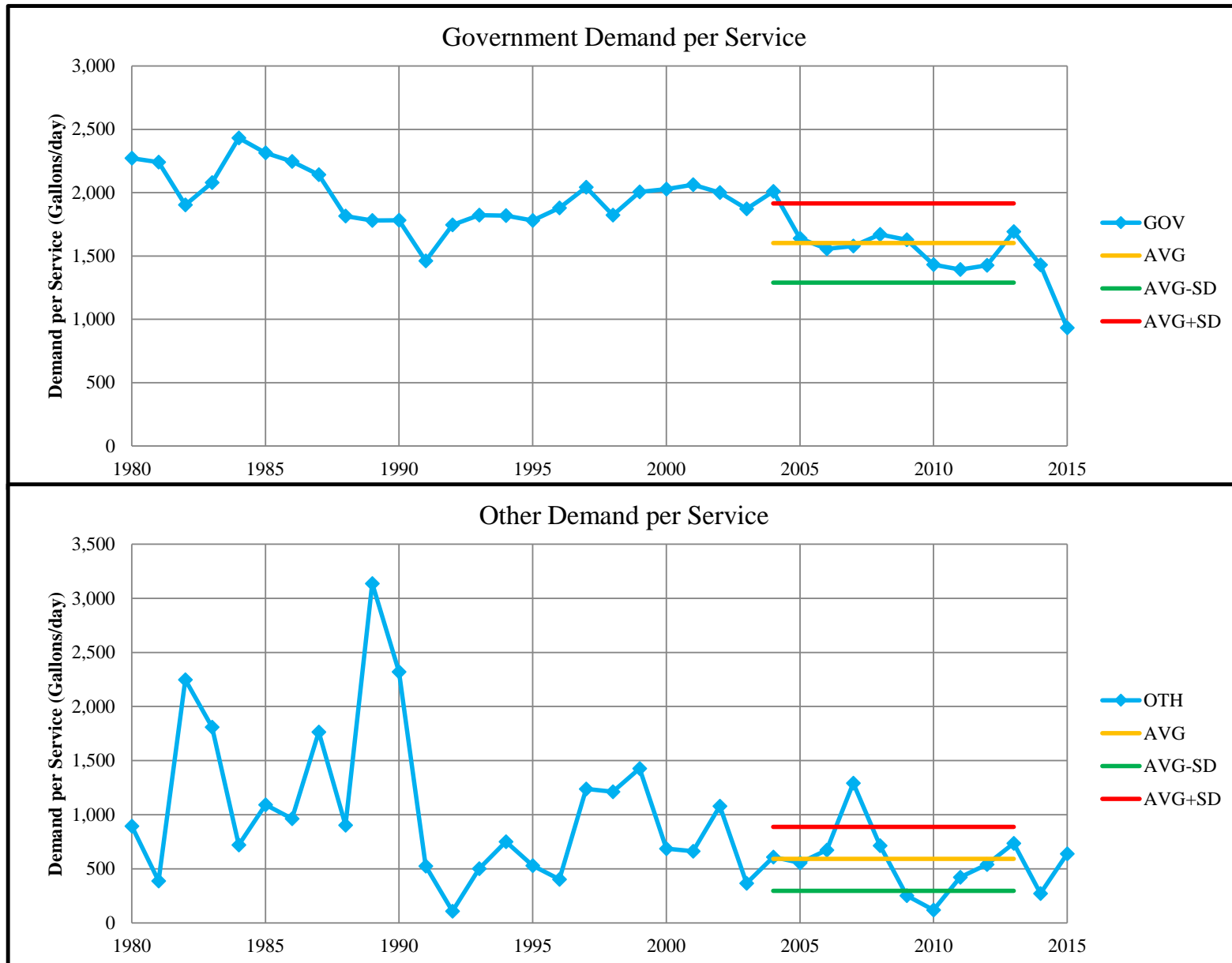
Year	SFR	MFR	COM	IND	GOV	OTH	UAFW	Combined Demand/Serv
1980	236	1,969	1,058	15,320	2,271	896	23	534
1981	237	1,989	1,114	13,946	2,241	388	22	522
1982	232	2,079	1,167	12,392	1,903	2,248	20	502
1983	239	2,170	1,226	12,650	2,079	1,809	26	526
1984	249	2,212	1,439	11,794	2,432	722	25	548
1985	250	2,332	1,444	11,319	2,314	1,093	30	545
1986	254	2,325	1,537	10,430	2,246	963	23	545
1987	258	2,404	1,606	9,533	2,141	1,764	22	551
1988	217	2,370	1,503	9,747	1,815	904	19	488
1989	213	2,313	1,450	9,765	1,780	3,138	22	478
1990	202	2,282	1,446	11,127	1,782	2,320	24	473
1991	177	2,134	1,223	10,186	1,460	526	24	414
1992	197	2,186	1,290	11,115	1,746	109	22	444
1993	211	2,250	1,389	10,954	1,821	502	27	474
1994	222	2,393	1,459	9,106	1,818	751	25	483
1995	226	2,531	1,537	8,857	1,780	530	25	495
1996	233	2,606	1,566	9,588	1,878	403	21	504
1997	242	2,628	1,735	10,591	2,043	1,238	15	532
1998	228	2,750	1,677	10,901	1,821	1,214	23	520
1999	239	2,758	1,742	10,832	2,006	1,429	25	541
2000	244	2,810	1,856	11,153	2,028	688	19	551
2001	240	2,731	1,888	8,377	2,062	664	22	542
2002	239	2,560	1,813	8,585	2,001	1,079	31	541
2003	235	2,534	1,762	9,104	1,871	367	21	520
2004	236	2,443	1,834	10,431	2,009	610	17	528
2005	222	2,432	1,760	9,677	1,638	557	8	490
2006	223	2,514	1,832	10,305	1,556	674	7	502
2007	224	2,459	1,893	10,160	1,579	1,293	3	505
2008	225	2,408	1,885	10,153	1,669	715	9	512
2009	212	2,330	1,722	10,449	1,628	254	15	485
2010	199	2,350	1,647	10,557	1,432	120	21	467
2011	194	2,245	1,627	11,593	1,393	424	23	462
2012	194	2,167	1,629	10,581	1,425	540	17	453
2013	195	2,104	1,706	11,806	1,693	737	13	466
2014	170	1,926	1,642	12,302	1,429	272	9	428
2015	154	1,859	1,514	10,595	933	639	11	387
10-yr AVG	212	2,345	1,753	10,571	1,602	592	13	487
SD	24	240	230	1,419	313	295	7	41

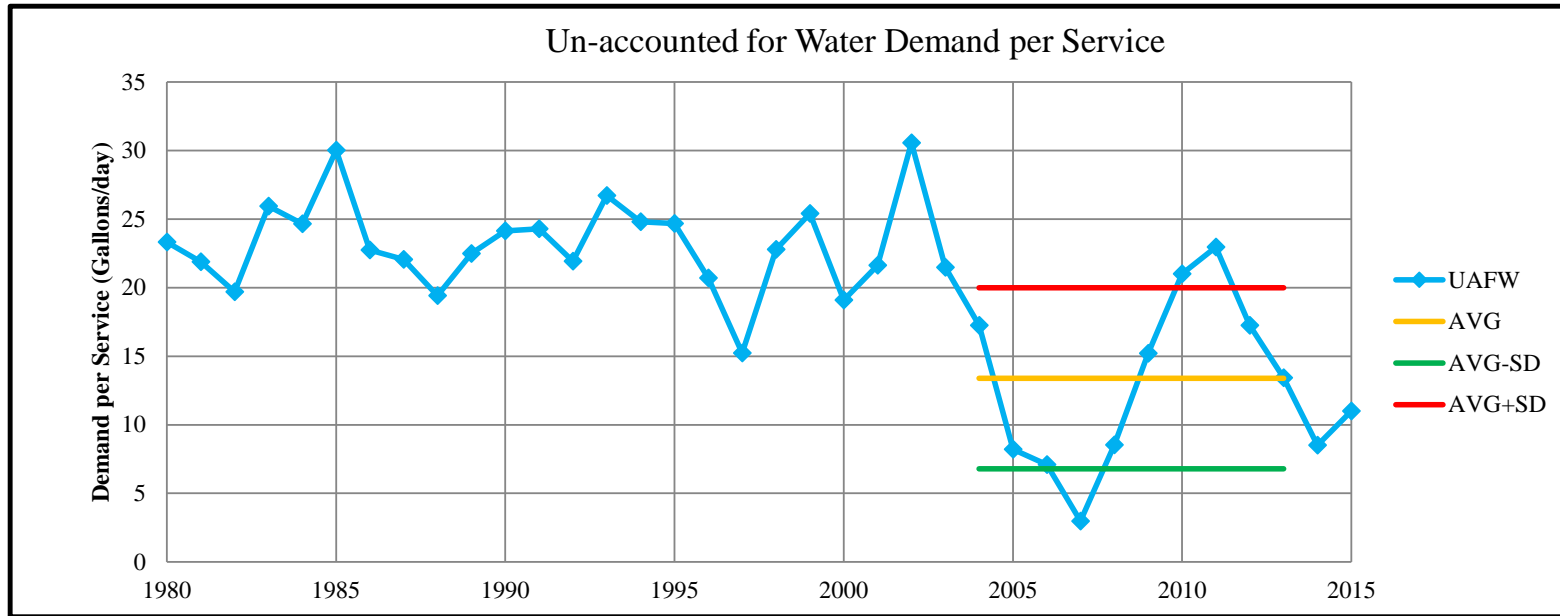
Average is based on 10-years from 2006 to 2015.

SD is based on 1980 to 2015, except for OTH which is 2000 to 2015









**California Water Service Company - South San Francisco District**  
**Water Supply and Demand Analysis and Projections**  
**Percentage Change in Annual Demand**

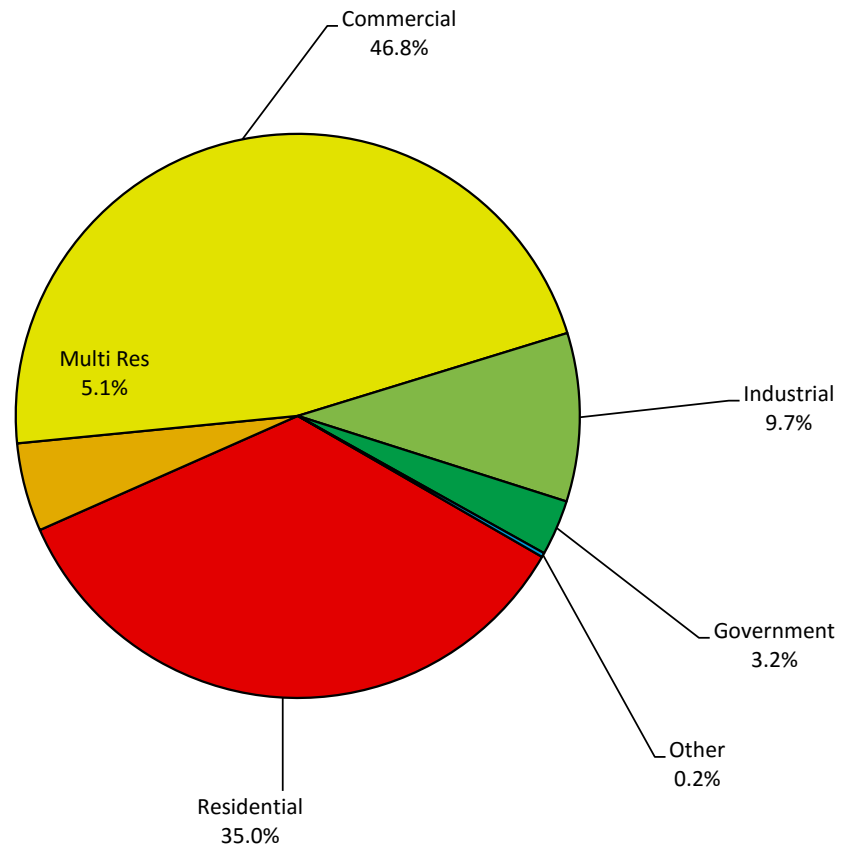
Worksheet 5

Year	Residential	Multi Res	Commercial	Industrial	Government	Other	Unaccounted	Total
1981	0.83%	1.34%	7.17%	-11.35%	4.93%	-64.99%	-5.48%	-1.40%
1982	-1.95%	5.20%	6.27%	-14.99%	-7.67%	550.48%	-9.81%	-3.35%
1983	3.03%	4.97%	6.20%	0.06%	14.45%	-1.77%	31.90%	3.72%
1984	4.74%	2.86%	18.39%	-10.84%	20.70%	-48.44%	-4.48%	5.24%
1985	0.34%	5.20%	1.55%	-9.98%	-2.13%	70.12%	22.26%	-1.16%
1986	1.96%	0.30%	8.38%	-9.59%	0.55%	-10.64%	-24.10%	1.62%
1987	1.90%	3.45%	8.26%	-11.10%	-2.52%	102.16%	-2.35%	1.90%
1988	-15.45%	-0.33%	-3.57%	-13.16%	-17.20%	-43.25%	-11.38%	-10.66%
1989	-1.23%	-2.13%	-1.86%	-11.84%	0.05%	245.59%	16.80%	-2.15%
1990	-4.18%	-1.32%	0.76%	12.56%	1.65%	-30.36%	8.66%	-0.17%
1991	-11.80%	-5.76%	-14.40%	-9.78%	-19.14%	-89.74%	0.75%	-13.13%
1992	11.06%	3.75%	5.05%	6.60%	23.96%	-87.21%	-9.59%	8.41%
1993	7.68%	3.64%	7.70%	0.45%	6.89%	916.61%	22.27%	6.51%
1994	5.20%	7.04%	5.78%	-15.91%	-0.08%	133.37%	-6.94%	2.54%
1995	1.93%	5.71%	5.84%	-1.92%	-1.68%	-29.04%	-0.40%	2.88%
1996	3.54%	2.96%	2.22%	5.91%	1.31%	-20.49%	-15.83%	3.10%
1997	5.31%	0.88%	12.36%	8.48%	11.22%	217.30%	-25.28%	8.59%
1998	-4.27%	4.56%	-2.04%	0.95%	-8.43%	16.21%	51.52%	-2.56%
1999	5.60%	0.36%	5.37%	-1.72%	11.85%	72.44%	12.86%	5.01%
2000	4.07%	1.76%	7.95%	1.60%	2.77%	-18.47%	-23.47%	5.00%
2001	-1.41%	-2.69%	2.97%	-25.56%	1.89%	7.16%	13.59%	-1.89%
2002	0.03%	-6.27%	-2.91%	0.40%	-3.11%	37.63%	41.96%	-1.46%
2003	-1.63%	-1.42%	-2.52%	3.72%	-6.36%	-84.78%	-29.85%	-2.48%
2004	2.13%	-3.18%	5.43%	9.58%	7.88%	67.72%	-18.27%	4.23%
2005	-5.48%	-0.48%	-4.47%	-6.20%	-18.16%	-17.10%	-52.36%	-5.60%
2006	0.41%	3.39%	4.75%	7.92%	-3.85%	36.59%	-13.53%	2.90%
2007	0.29%	-2.22%	4.09%	-5.80%	2.55%	93.59%	-57.90%	1.58%
2008	0.50%	-1.62%	0.07%	-1.20%	9.04%	-45.58%	186.47%	0.24%
2009	-6.05%	-3.00%	-8.68%	-1.14%	-8.19%	-79.12%	77.55%	-6.95%
2010	-5.57%	0.50%	-4.49%	-2.59%	-12.43%	-62.28%	38.42%	-4.91%
2011	-2.54%	-4.05%	-1.59%	8.90%	-3.42%	293.91%	9.65%	-1.16%
2012	0.44%	-1.70%	0.06%	-8.86%	1.33%	18.52%	-24.79%	-0.68%
2013	0.36%	-0.11%	4.79%	11.43%	15.84%	32.09%	-22.08%	3.97%
2014	-12.41%	-7.49%	-3.71%	2.61%	-16.20%	-59.29%	-36.55%	-7.15%
2015	-9.63%	0.21%	-8.28%	-18.50%	-34.21%	286.47%	29.35%	-10.41%



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## Percent of Total Sales by Type of Use (2015)



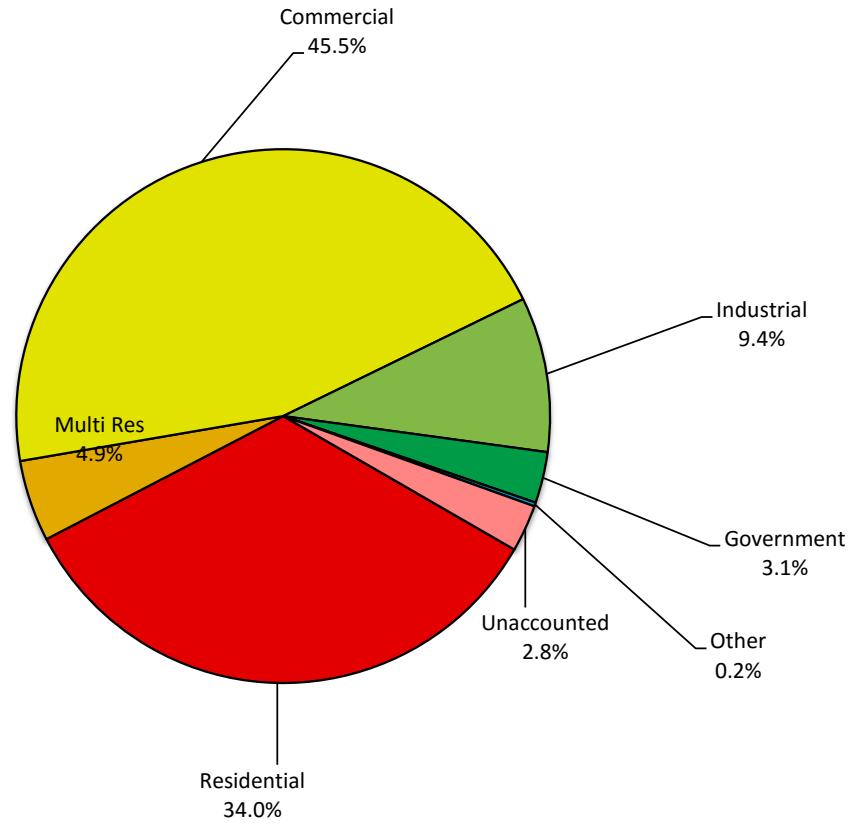
**California Water Service Company - South San Francisco District**

**Water Supply and Demand Analysis and Projections**

**Percentage of Total Sales**

Year	Residential	Multi Res	Commercial	Industrial	Government	Other	Percent Total
1980	40.08%	3.88%	21.03%	30.25%	4.62%	0.14%	100.00%
1981	40.99%	3.99%	22.86%	27.19%	4.92%	0.05%	100.00%
1982	41.58%	4.34%	25.13%	23.92%	4.70%	0.33%	100.00%
1983	41.30%	4.40%	25.74%	23.07%	5.19%	0.31%	100.00%
1984	41.11%	4.30%	28.95%	19.55%	5.95%	0.15%	100.00%
1985	41.73%	4.57%	29.75%	17.80%	5.89%	0.26%	100.00%
1986	41.87%	4.51%	31.72%	15.84%	5.83%	0.23%	100.00%
1987	41.87%	4.58%	33.70%	13.82%	5.57%	0.46%	100.00%
1988	39.62%	5.11%	36.38%	13.43%	5.17%	0.29%	100.00%
1989	39.99%	5.11%	36.49%	12.10%	5.28%	1.02%	100.00%
1990	38.39%	5.05%	36.83%	13.64%	5.38%	0.71%	100.00%
1991	38.97%	5.48%	36.29%	14.17%	5.01%	0.08%	100.00%
1992	39.93%	5.25%	35.16%	13.93%	5.72%	0.01%	100.00%
1993	40.36%	5.11%	35.55%	13.14%	5.74%	0.09%	100.00%
1994	41.41%	5.33%	36.68%	10.78%	5.60%	0.22%	100.00%
1995	41.02%	5.48%	37.73%	10.27%	5.35%	0.15%	100.00%
1996	41.20%	5.47%	37.41%	10.55%	5.26%	0.11%	100.00%
1997	39.95%	5.08%	38.71%	10.54%	5.38%	0.34%	100.00%
1998	39.25%	5.45%	38.91%	10.92%	5.06%	0.40%	100.00%
1999	39.47%	5.21%	39.05%	10.22%	5.39%	0.66%	100.00%
2000	39.13%	5.05%	40.15%	9.89%	5.27%	0.51%	100.00%
2001	39.32%	5.01%	42.14%	7.50%	5.48%	0.56%	100.00%
2002	39.91%	4.76%	41.52%	7.64%	5.39%	0.78%	100.00%
2003	40.26%	4.82%	41.50%	8.13%	5.17%	0.12%	100.00%
2004	39.45%	4.47%	41.98%	8.55%	5.35%	0.20%	100.00%
2005	39.50%	4.72%	42.48%	8.49%	4.64%	0.17%	100.00%
2006	38.54%	4.74%	43.24%	8.91%	4.34%	0.23%	100.00%
2007	38.05%	4.56%	44.31%	8.26%	4.38%	0.43%	100.00%
2008	38.15%	4.48%	44.23%	8.14%	4.76%	0.24%	100.00%
2009	38.52%	4.67%	43.41%	8.65%	4.70%	0.05%	100.00%
2010	38.25%	4.93%	43.60%	8.86%	4.33%	0.02%	100.00%
2011	37.72%	4.79%	43.41%	9.76%	4.23%	0.08%	100.00%
2012	38.14%	4.74%	43.74%	8.96%	4.31%	0.10%	100.00%
2013	36.82%	4.55%	44.09%	9.60%	4.81%	0.13%	100.00%
2014	34.73%	4.54%	45.72%	10.61%	4.34%	0.06%	100.00%
2015	35.04%	5.08%	46.81%	9.66%	3.19%	0.24%	100.00%

### Percent of Total Demand by Type of Use (2015)



## California Water Service Company - South San Francisco District

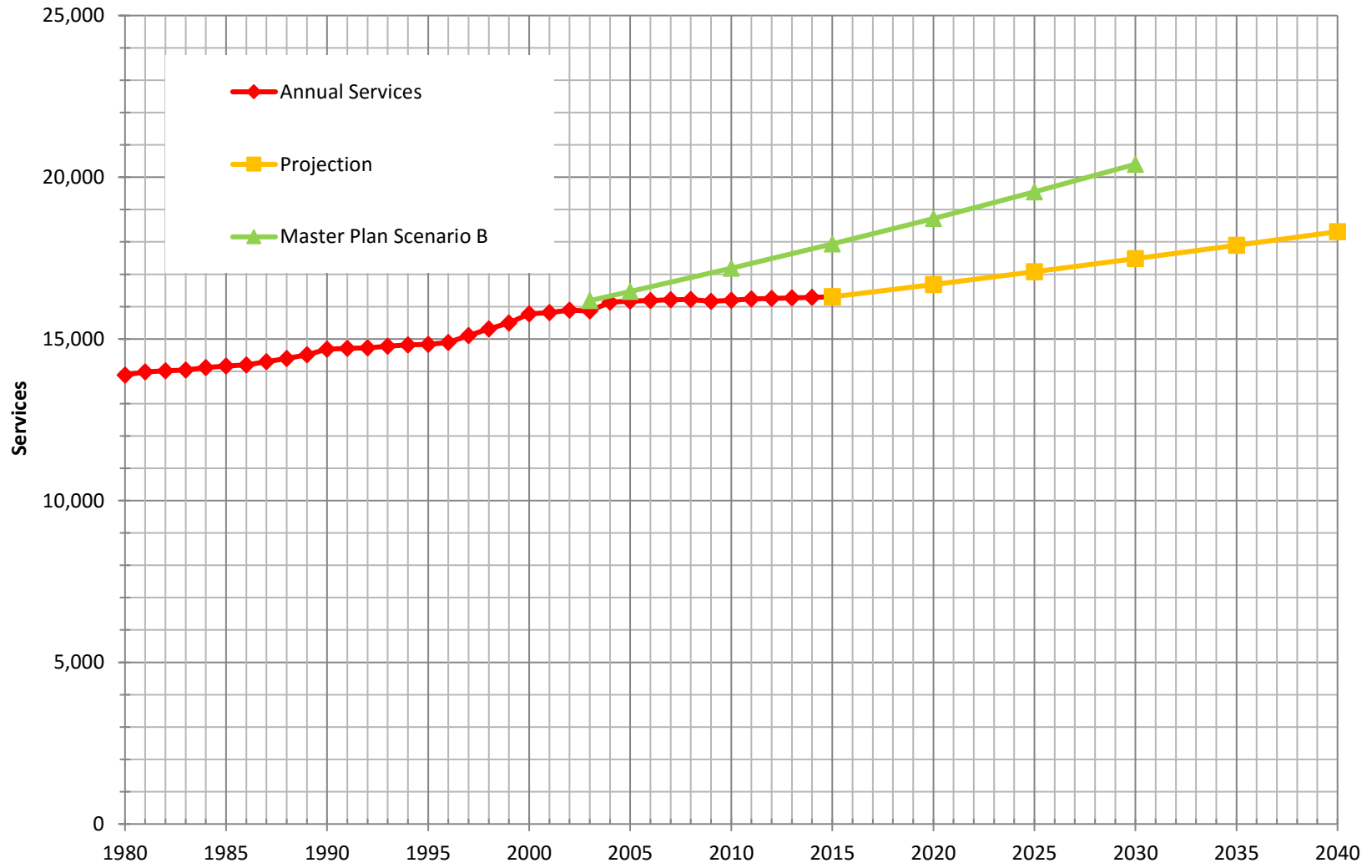
Worksheet 7

### Water Supply and Demand Analysis and Projections

#### Percentage of Total Demand

Year	Residential	Multi Res	Commercial	Industrial	Government	Other	Unaccounted	Percent Total
1980	38.33%	3.71%	20.11%	28.93%	4.42%	0.13%	4.37%	100.00%
1981	39.27%	3.82%	21.90%	26.05%	4.71%	0.05%	4.19%	100.00%
1982	39.95%	4.17%	24.15%	22.98%	4.51%	0.31%	3.92%	100.00%
1983	39.26%	4.18%	24.47%	21.93%	4.93%	0.29%	4.94%	100.00%
1984	39.26%	4.10%	27.65%	18.67%	5.68%	0.14%	4.50%	100.00%
1985	39.43%	4.32%	28.11%	16.82%	5.56%	0.25%	5.51%	100.00%
1986	40.12%	4.33%	30.40%	15.18%	5.58%	0.22%	4.17%	100.00%
1987	40.19%	4.40%	32.35%	13.26%	5.35%	0.44%	4.01%	100.00%
1988	38.05%	4.91%	34.93%	12.90%	4.96%	0.28%	3.97%	100.00%
1989	38.11%	4.87%	34.77%	11.53%	5.03%	0.97%	4.71%	100.00%
1990	36.43%	4.80%	34.95%	12.95%	5.10%	0.68%	5.10%	100.00%
1991	36.68%	5.16%	34.16%	13.34%	4.71%	0.08%	5.87%	100.00%
1992	37.95%	4.99%	33.42%	13.24%	5.44%	0.01%	4.94%	100.00%
1993	38.09%	4.82%	33.55%	12.40%	5.42%	0.09%	5.63%	100.00%
1994	39.28%	5.06%	34.79%	10.22%	5.31%	0.20%	5.14%	100.00%
1995	38.98%	5.20%	35.85%	9.76%	5.08%	0.14%	4.98%	100.00%
1996	39.51%	5.24%	35.87%	10.12%	5.04%	0.11%	4.11%	100.00%
1997	38.81%	4.94%	37.60%	10.24%	5.23%	0.33%	2.86%	100.00%
1998	37.53%	5.21%	37.21%	10.44%	4.84%	0.38%	4.38%	100.00%
1999	37.62%	4.97%	37.22%	9.74%	5.14%	0.63%	4.69%	100.00%
2000	37.77%	4.88%	38.76%	9.55%	5.09%	0.49%	3.47%	100.00%
2001	37.75%	4.81%	40.46%	7.20%	5.26%	0.53%	3.99%	100.00%
2002	37.66%	4.50%	39.17%	7.21%	5.08%	0.73%	5.65%	100.00%
2003	38.60%	4.62%	39.79%	7.80%	4.96%	0.12%	4.13%	100.00%
2004	38.16%	4.33%	40.61%	8.27%	5.18%	0.19%	3.27%	100.00%
2005	38.83%	4.64%	41.77%	8.35%	4.56%	0.17%	1.68%	100.00%
2006	38.00%	4.67%	42.63%	8.78%	4.28%	0.22%	1.41%	100.00%
2007	37.83%	4.54%	44.05%	8.21%	4.35%	0.43%	0.59%	100.00%
2008	37.51%	4.40%	43.50%	8.01%	4.68%	0.23%	1.67%	100.00%
2009	37.31%	4.52%	42.05%	8.38%	4.55%	0.05%	3.14%	100.00%
2010	36.53%	4.71%	41.64%	8.46%	4.13%	0.02%	4.50%	100.00%
2011	35.85%	4.55%	41.26%	9.28%	4.02%	0.08%	4.97%	100.00%
2012	36.69%	4.56%	42.07%	8.62%	4.15%	0.10%	3.81%	100.00%
2013	35.76%	4.42%	42.82%	9.33%	4.67%	0.12%	2.88%	100.00%
2014	34.04%	4.45%	44.81%	10.40%	4.25%	0.05%	1.99%	100.00%
2015	34.04%	4.93%	45.48%	9.38%	3.10%	0.23%	2.84%	100.00%

### Historical & Projected Services



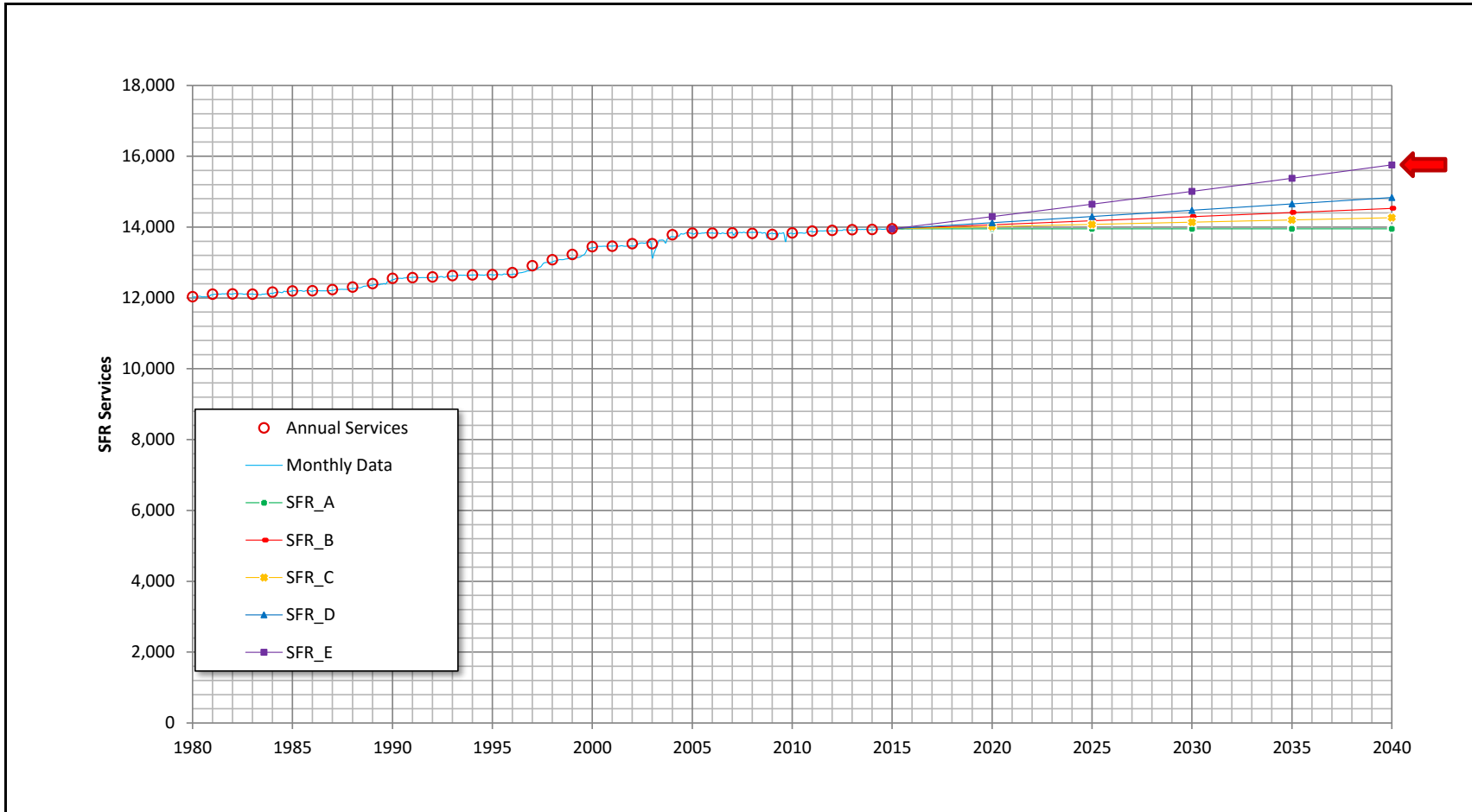
**California Water Service Company - South San Francisco District**  
**Water Supply and Demand Analysis and Projections**  
**Actual & Projected Annual Average Services**

Customer Category		Selected Trend	Growth Rate	Actual Services				Projected Services					
				2000	2005	2010	Base Year 2015	2015	2020	2025	2030	2035	2040
SFR	SFR_E	20 Yr. Avg.	0.49%	13,450	13,829	13,840	13,952	13,952	14,296	14,648	15,009	15,379	15,758
MFR	MFR_B	5 Yr. Avg.	1.13%	151	151	152	167	167	177	187	198	210	222
COM	COM_D	15 Yr. Avg.	0.29%	1,815	1,879	1,911	1,895	1,895	1,922	1,949	1,977	2,006	2,034
IND	IND_E	20 Yr. Avg.	1.00%	74	68	61	56	56	59	62	65	68	72
GOV	GOV_A	Zero Growth Rate	0.00%	218	221	218	209	209	209	209	209	209	209
OTH	OTH_A	Zero Growth Rate	0.00%	62	24	13	23	23	23	23	23	23	23
TOTAL	Average growth rate 2012-2040		0.47%	15,771	16,171	16,194	16,302	16,302	16,686	17,079	17,482	17,895	18,318

Notes:

### California Water Service Company - South San Francisco District Water Supply and Demand Analysis and Projections

SFR Historical & Projected Services

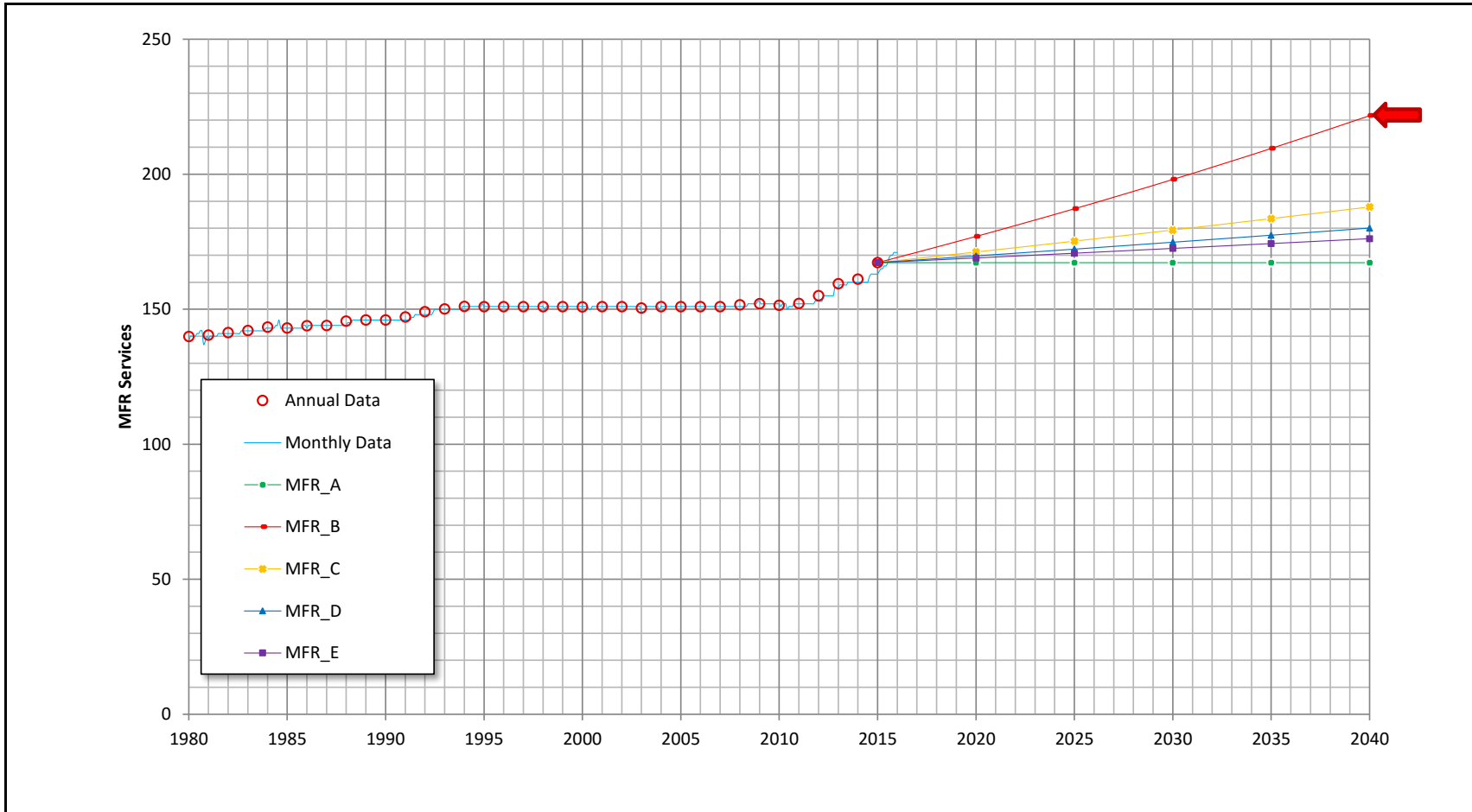


Customer Category	Trend	Growth Rate	Actual				Projected							
			2000	2005	2010	Base Year 2015	Services 2015	Services 2020	Services 2025	Services 2030	Services 2035	Services 2040		
SFR			13,450	13,829	13,840	13,952								
	SFR_A	Zero Growth Rate				13,952	13,952	13,952	13,952	13,952	13,952	13,952	13,952	13,952
	SFR_B	5 Yr. Avg.				13,952	13,952	14,066	14,180	14,295	14,411	14,528	14,645	
	SFR_C	10 Yr. Avg.				13,952	13,952	14,014	14,077	14,140	14,203	14,266	14,329	
	SFR_D	15 Yr. Avg.				13,952	13,952	14,125	14,299	14,476	14,655	14,836	15,015	
	> SFR_E	20 Yr. Avg.				13,952	13,952	14,296	14,648	15,009	15,379	15,758	16,128	



### California Water Service Company - South San Francisco District Water Supply and Demand Analysis and Projections

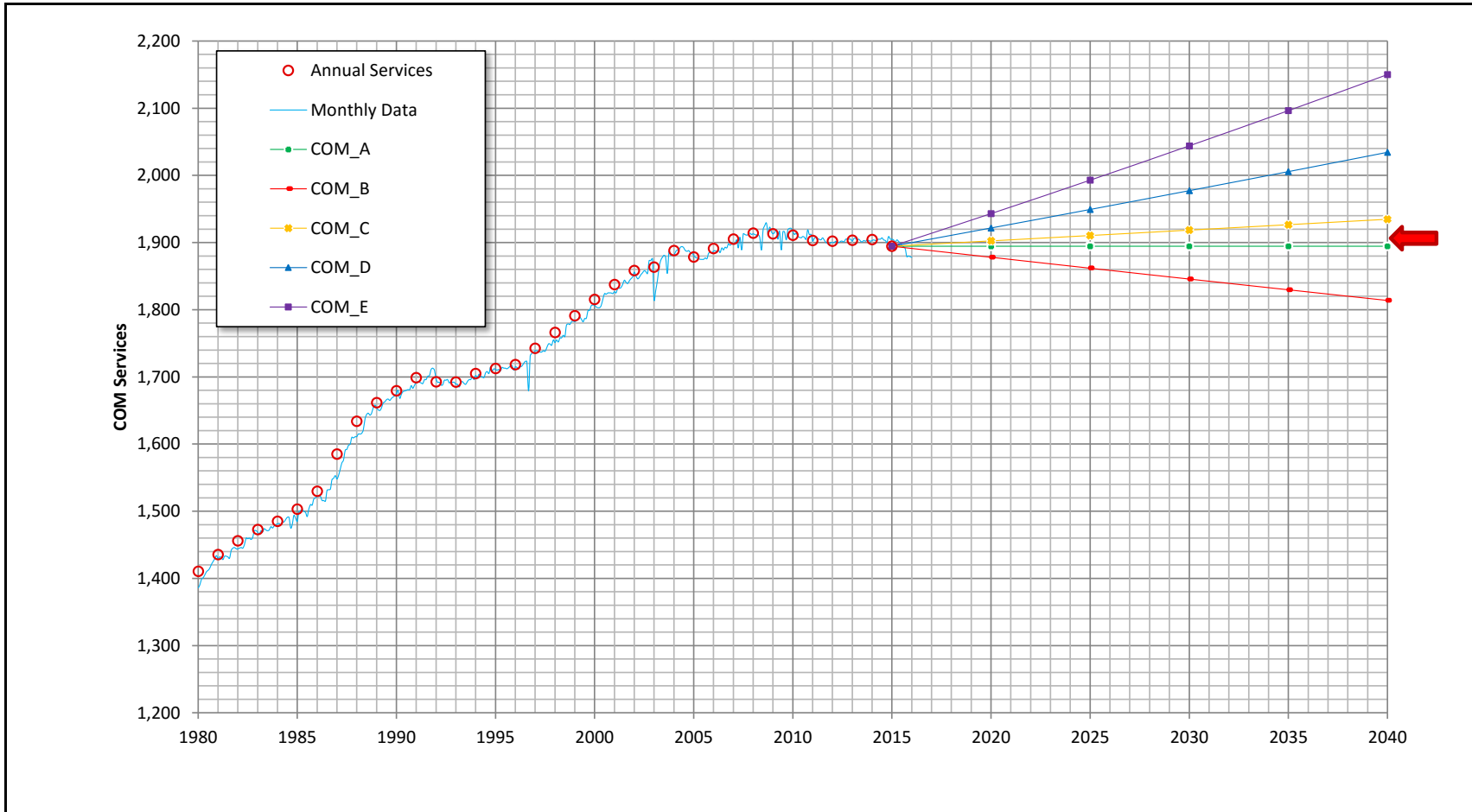
MFR Historical & Projected Services



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			151	151	152	167	167	167	167	167	167	167
	MFR_A	Zero Growth Rate				167	167	167	167	167	167	167
	> MFR_B	5 Yr. Avg.				167	167	177	187	198	210	222
	MFR_C	10 Yr. Avg.				167	167	171	175	179	184	188
	MFR_D	15 Yr. Avg.				167	167	170	172	175	177	180
	MFR_E	20 Yr. Avg.				167	167	169	171	173	174	176

### California Water Service Company - South San Francisco District Water Supply and Demand Analysis and Projections

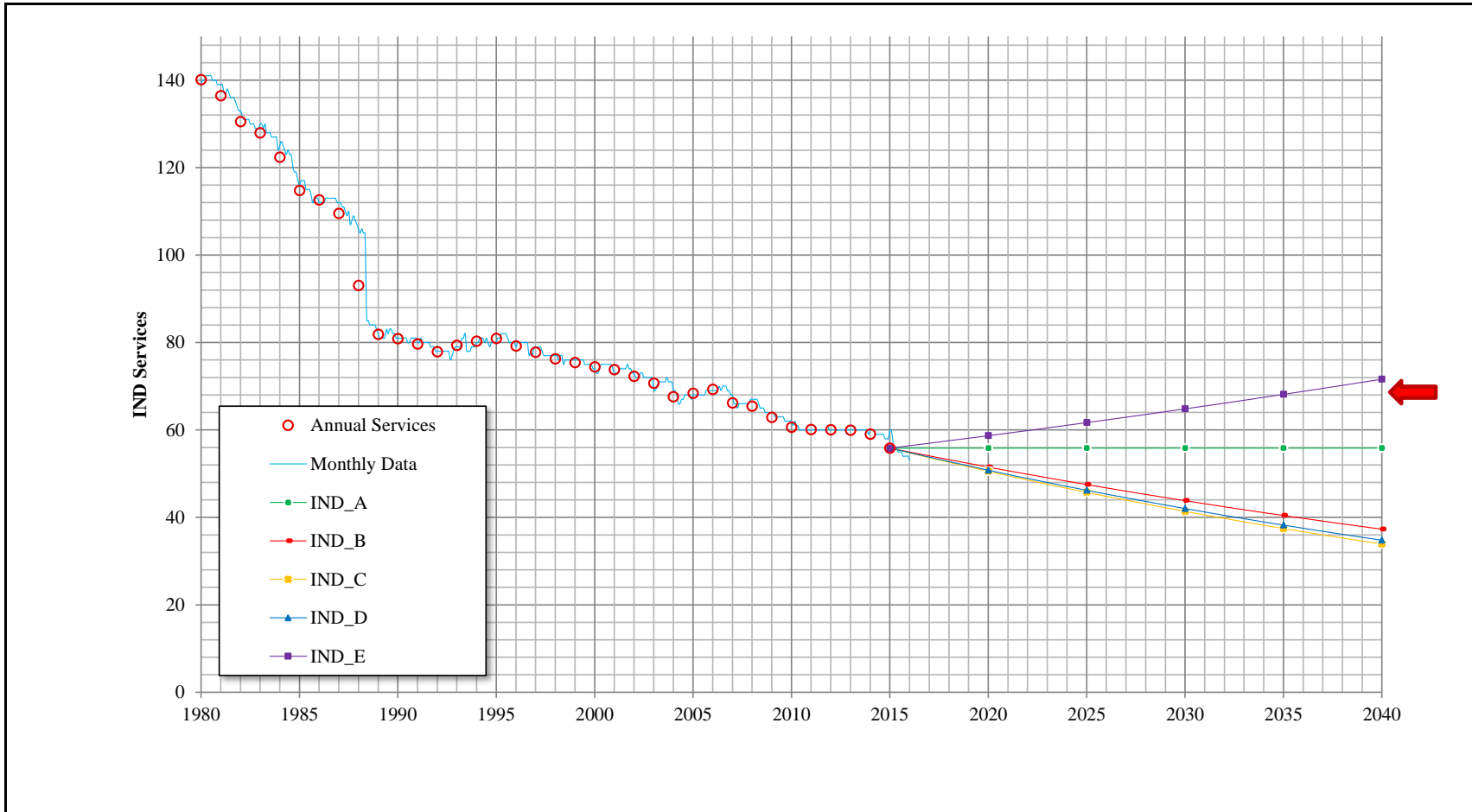
COM Historical & Projected Services



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			1,815	1,879	1,911	1,895							
	COM_A	Zero Growth Rate				1,895	1,895	1,895	1,895	1,895	1,895	1,895	1,895
	COM_B	5 Yr. Avg.				1,895	1,895	1,878	1,862	1,846	1,830	1,814	
	COM_C	10 Yr. Avg.				1,895	1,895	1,902	1,910	1,919	1,927	1,935	
	> COM_D	15 Yr. Avg.				1,895	1,895	1,922	1,949	1,977	2,006	2,034	
	COM_E	20 Yr. Avg.				1,895	1,895	1,943	1,993	2,044	2,096	2,150	

### California Water Service Company - South San Francisco District Water Supply and Demand Analysis and Projections

IND Historical & Projected Services

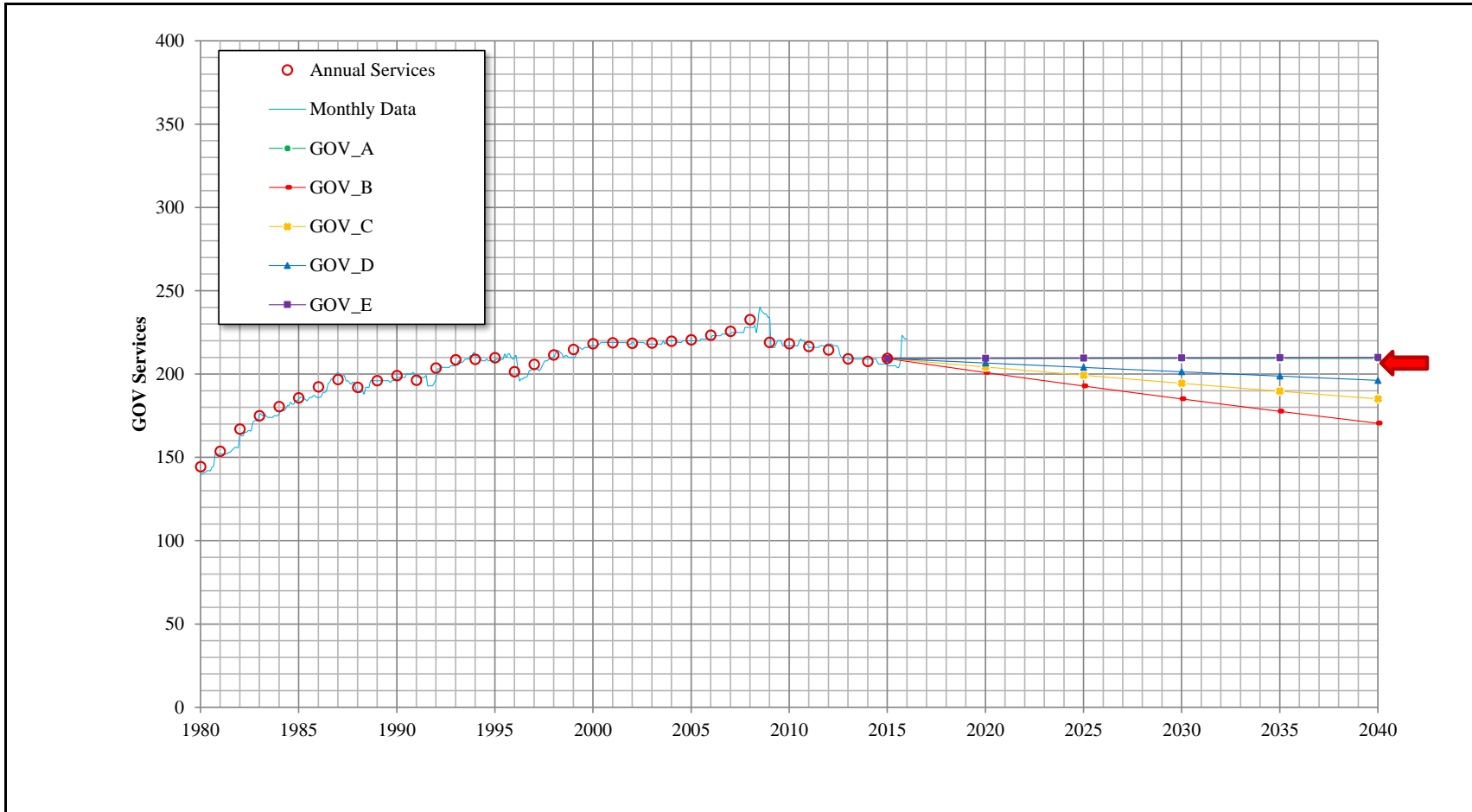


Customer Category	Trend	Growth Rate	Actual				Projected					
			2000	2005	2010	Base Year 2015	Services 2015	Services 2020	Services 2025	Services 2030	Services 2035	Services 2040
IND			74	68	61	56	56	56	56	56	56	56
	IND_A	Zero Growth Rate				56	56	56	56	56	56	56
	IND_B	5 Yr. Avg.				56	56	52	48	44	40	37
	IND_C	10 Yr. Avg.				56	56	51	46	41	37	34
	IND_D	15 Yr. Avg.				56	56	51	46	42	38	35
	> IND_E	20 Yr. Avg.				56	56	59	62	65	68	72

### California Water Service Company - South San Francisco District

#### Water Supply and Demand Analysis and Projections

##### GOV Historical & Projected Services

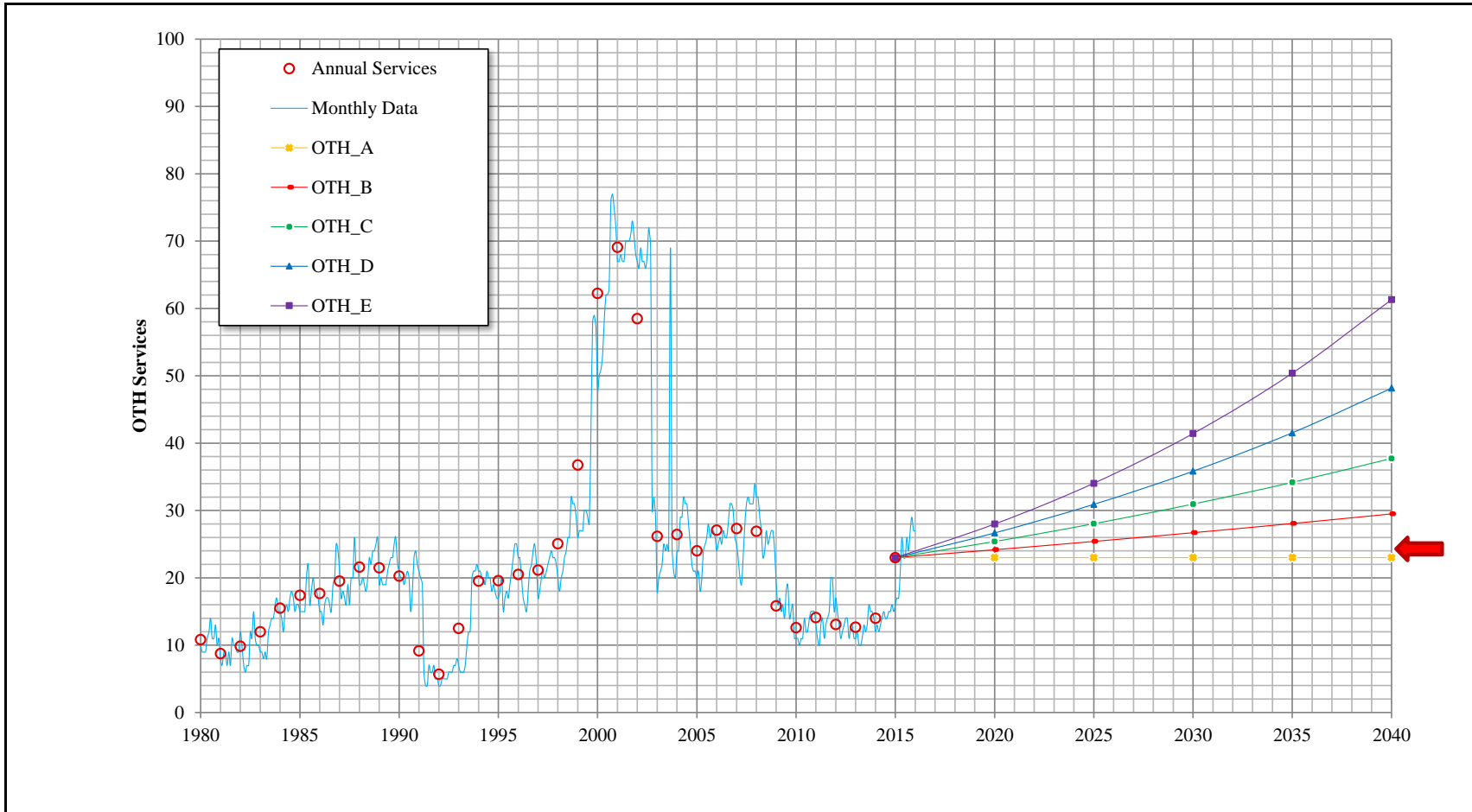


Customer Category	Trend	Growth Rate	Actual				Projected					
			2000	2005	2010	Base Year 2015	Services 2015	Services 2020	Services 2025	Services 2030	Services 2035	Services 2040
GOV	>	GOV_A Zero Growth Rate	218	221	218	209	209	209	209	209	209	209
		GOV_B 5 Yr. Avg.				209	209	201	193	185	178	209
		GOV_C 10 Yr. Avg.				209	209	204	199	194	190	185
		GOV_D 15 Yr. Avg.				209	209	207	204	201	199	196
		GOV_E 20 Yr. Avg.				209	209	209	210	210	210	210

### California Water Service Company - South San Francisco District

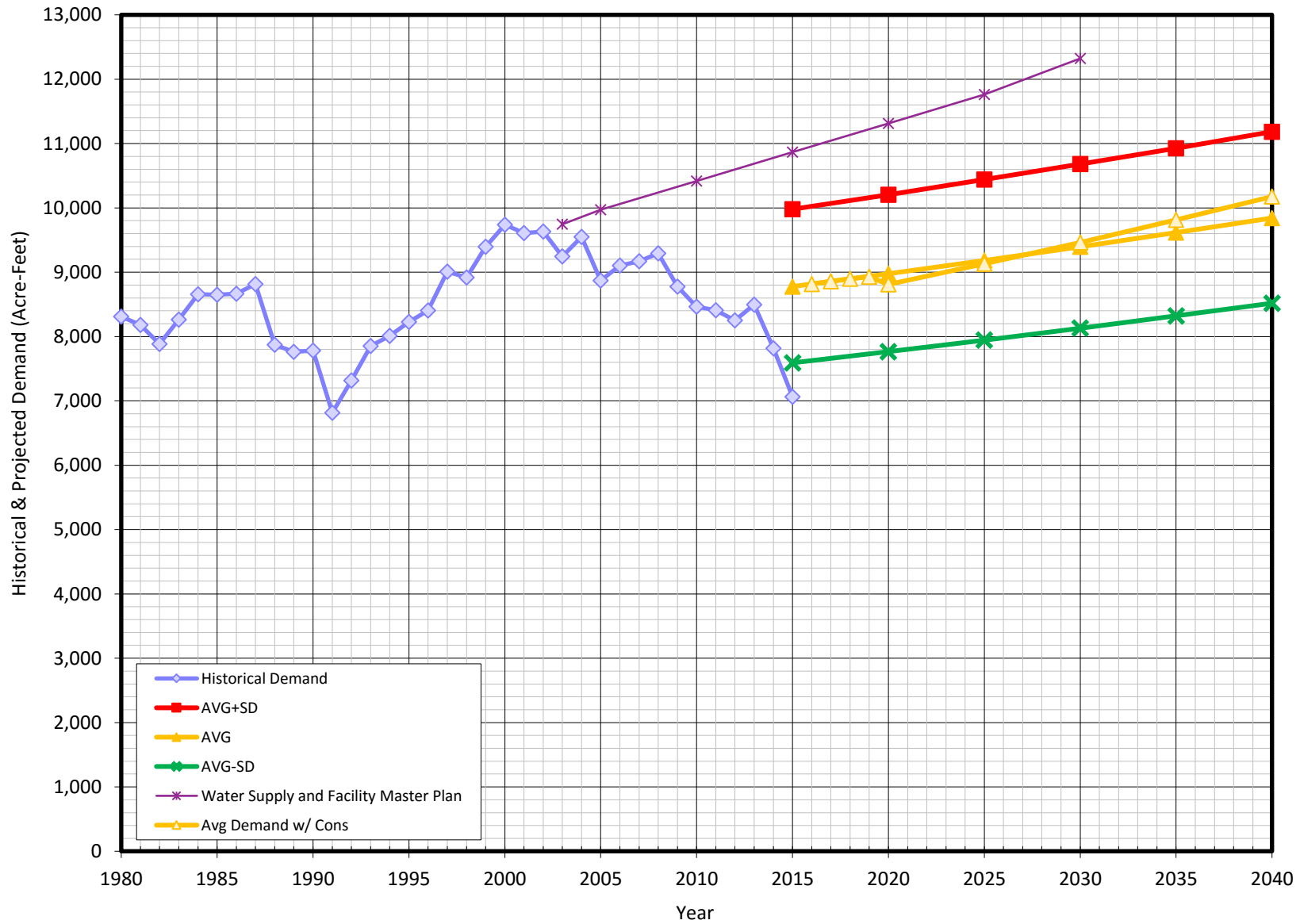
#### Water Supply and Demand Analysis and Projections

#### OTH Historical & Projected Services



Customer Category	Trend			Growth Rate	Actual				Projected						
					2000	2005	2010	Base Year	Services	Services	Services	Services	Services	Services	
								2015	2015	2020	2025	2030	2035	2040	
OTH	>	OTH_A	Zero Growth Rate	0.00%	62	24	13	23	23	23	23	23	23	23	23
		OTH_B	Assumed 1%	1.00%				23	23	24	25	27	28	29	
		OTH_C	Assumed 2%	2.00%				23	23	25	28	31	34	38	
		OTH_D	Assumed 3%	3.00%				23	23	27	31	36	42	48	
		OTH_E	Assumed 4%	4.00%				23	23	28	34	41	50	61	

### Historical & Projected Demand (SSF)

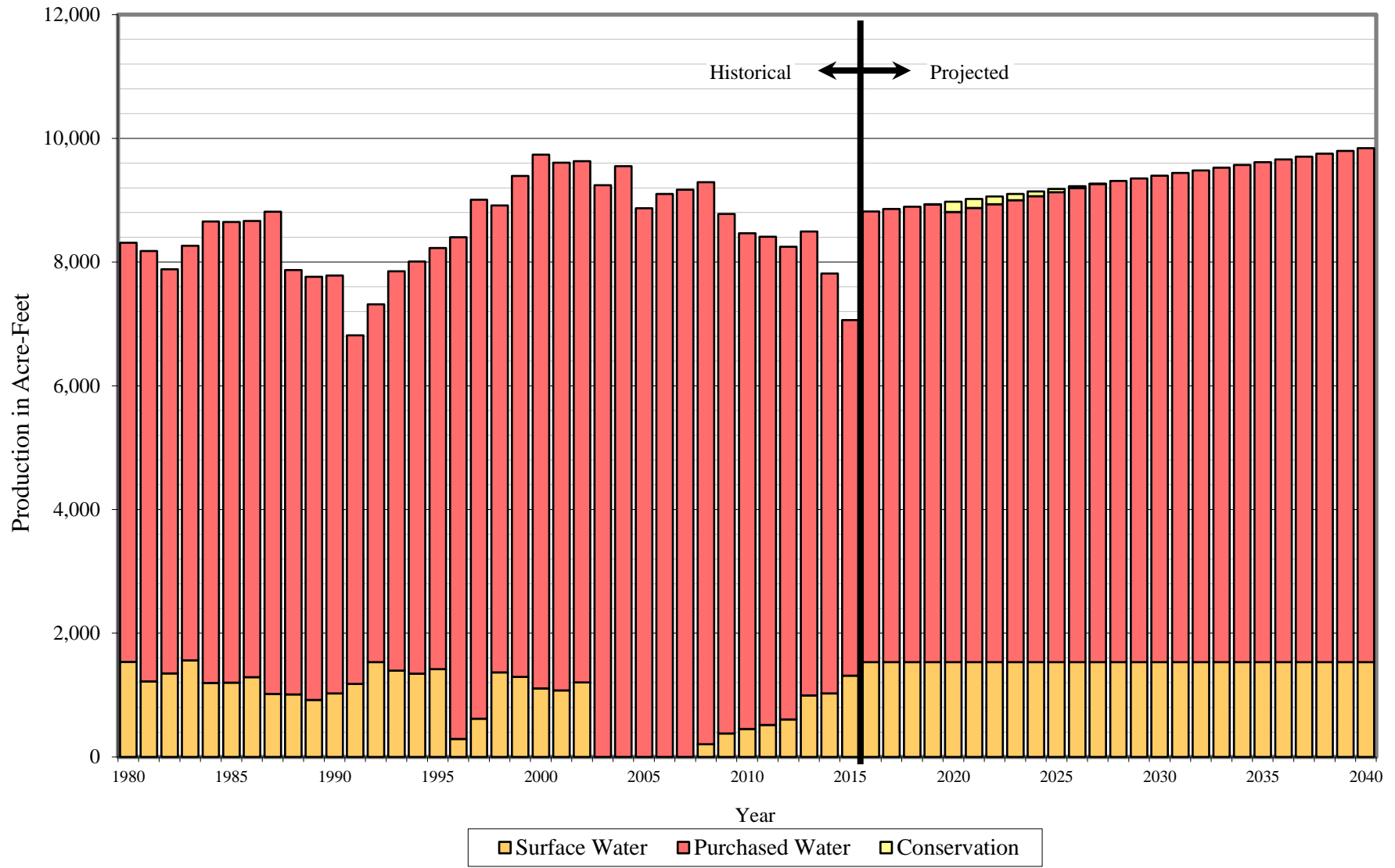


**California Water Service Company - South San Francisco District**  
**Water Supply and Demand Analysis and Projections**  
**Actual & Projected Demand in Acre-Feet**

Worksheet 9

Customer Category	Actual Demand (AFY)								Projected Demand (AFY)					
	1980	1985	1990	1995	2000	2005	2010	2015	2015	2020	2025	2030	2035	2040
SFR	3,186	3,410	2,835	3,206	3,678	3,444	3,092	2,404	3,699	3,790	3,883	3,979	4,077	4,177
									3,320	3,402	3,486	3,572	3,660	3,750
									2,958	3,030	3,105	3,182	3,260	3,340
MFR	309	374	373	428	475	411	399	348	484	512	542	574	607	642
									439	465	492	520	550	582
									394	417	441	467	494	523
COM	1,672	2,431	2,720	2,949	3,774	3,704	3,525	3,212	4,209	4,270	4,331	4,393	4,456	4,520
									3,721	3,774	3,829	3,884	3,939	3,996
									3,233	3,279	3,326	3,374	3,422	3,471
IND	2,404	1,455	1,008	803	930	741	716	663	750	788	828	871	915	962
									661	695	730	768	807	848
									572	602	632	665	698	734
GOV	367	481	397	418	496	405	350	219	449	449	449	449	449	449
									376	376	376	376	376	376
									302	302	302	302	302	302
OTH	11	21	53	12	48	15	2	16	23	23	23	23	23	23
									15	15	15	15	15	15
									8	8	8	8	8	8
UAWF	363	476	397	410	337	149	381	201	365	374	382	391	401	410
									245	250	256	262	268	275
									124	127	130	133	136	139
TOTAL (AFY)	8,311	8,649	7,782	8,226	9,738	8,869	8,465	7,064	9,979	10,206	10,439	10,680	10,927	11,183
									8,777	8,977	9,184	9,396	9,616	9,842
									7,591	7,765	7,945	8,130	8,321	8,518
TOTAL (MGD)	7.419	7.721	6.948	7.343	8.693	7.918	7.557	6.306	8.909	9.111	9.319	9.534	9.755	9.984
									7.836	8.015	8.199	8.389	8.584	8.786
									6.777	6.932	7.093	7.258	7.429	7.604

# Historical and Projected Distribution of Demand by Source





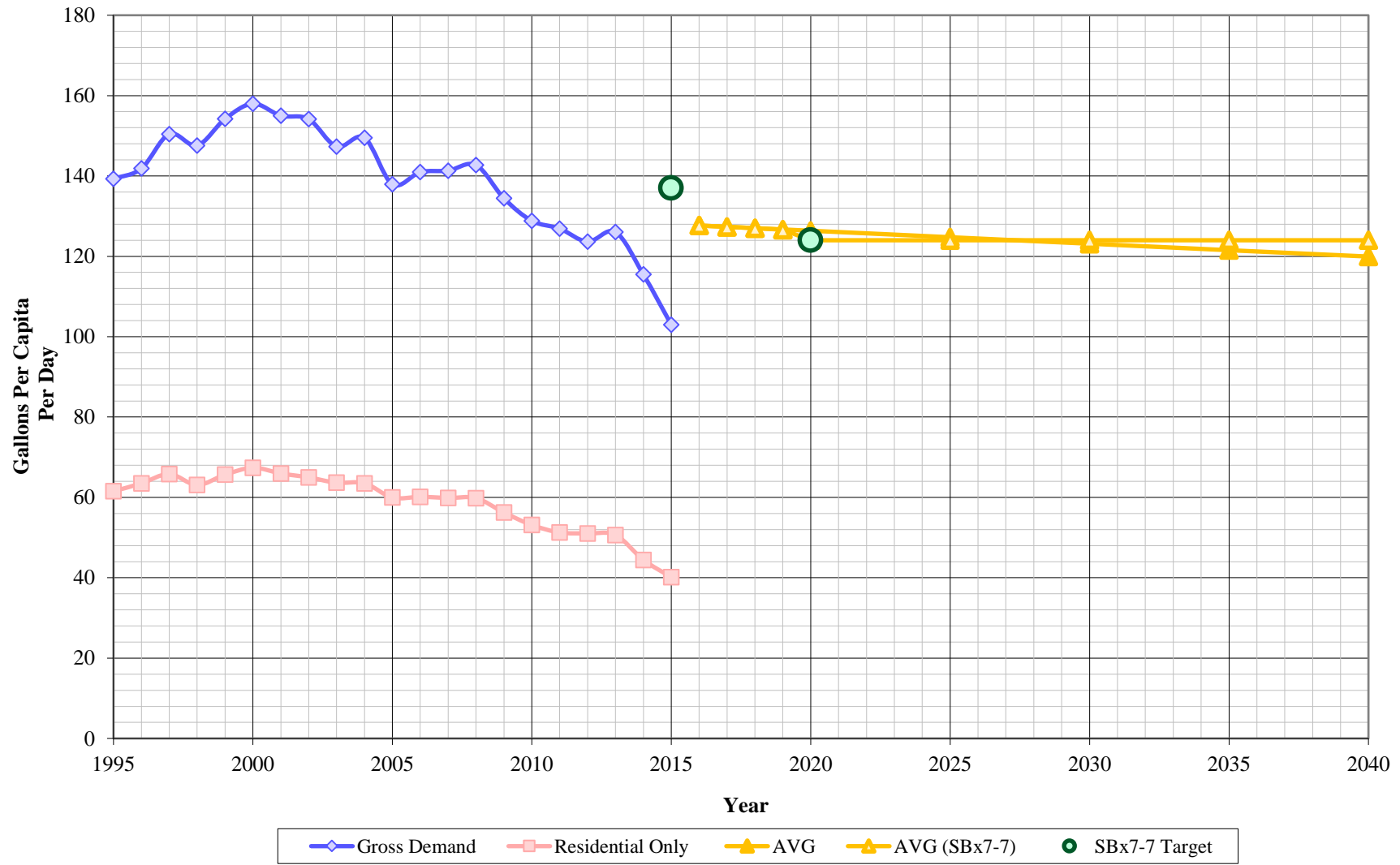
**California Water Service Company - South San Francisco District**  
**Water Supply and Demand Analysis and Projections**  
**Historical and Projected Distribution of Demand by Source**

Worksheet 10

Year	Purchased Water		Ground Water		Conservation		Total	
	MGD	AFY	MGD	AFY	MGD	AFY	MGD	AFY
1980	6.05	6,773	1.37	1,538			7.42	8,311
1981	6.21	6,957	1.09	1,222			7.30	8,179
1982	5.83	6,532	1.21	1,351			7.04	7,883
1983	5.98	6,704	1.39	1,560			7.38	8,264
1984	6.66	7,460	1.07	1,198			7.73	8,658
1985	6.65	7,448	1.07	1,201			7.72	8,649
1986	6.58	7,375	1.15	1,291			7.74	8,666
1987	6.96	7,798	0.91	1,017			7.87	8,815
1988	6.13	6,862	0.90	1,012			7.03	7,873
1989	6.11	6,843	0.82	920			6.93	7,763
1990	6.03	6,754	0.92	1,028			6.95	7,782
1991	5.03	5,637	1.05	1,179			6.08	6,816
1992	5.16	5,785	1.37	1,532			6.53	7,317
1993	5.76	6,455	1.25	1,395			7.01	7,851
1994	5.95	6,661	1.20	1,348			7.15	8,008
1995	6.08	6,805	1.27	1,420			7.34	8,226
1996	7.24	8,111	0.26	292			7.50	8,403
1997	7.49	8,389	0.55	619			8.04	9,008
1998	6.74	7,548	1.22	1,369			7.96	8,917
1999	7.23	8,101	1.15	1,293			8.39	9,394
2000	7.71	8,632	0.99	1,106			8.69	9,738
2001	7.62	8,531	0.96	1,076			8.58	9,606
2002	7.52	8,426	1.08	1,207			8.60	9,633
2003	8.25	9,245	0.00	0			8.25	9,245
2004	8.53	9,549	0.00	0			8.53	9,549
2005	7.92	8,869	0.00	0			7.92	8,869
2006	8.13	9,101	0.00	0			8.13	9,101
2007	8.19	9,169	0.00	0			8.19	9,169
2008	8.11	9,086	0.18	206			8.30	9,292
2009	7.50	8,397	0.34	380			7.84	8,777
2010	7.15	8,013	0.40	452			7.56	8,465

Year	Purchased Water		Ground Water		Conservation		Total	
	MGD	AFY	MGD	AFY	MGD	AFY	MGD	AFY
2011	7.05	7,892	0.46	515	0.00	0	7.51	8,408
2012	6.82	7,644	0.54	606	0.00	0	7.36	8,249
2013	6.70	7,500	0.89	995	0.00	0	7.58	8,495
2014	6.06	6,787	0.92	1,028	0.00	0	6.98	7,816
2015	5.13	5,751	1.17	1,312	0.00	0	6.31	7,064
2016	6.50	7,285	1.37	1,532	0.00	0	7.87	8,817
2017	6.54	7,325	1.37	1,532	0.00	0	7.91	8,857
2018	6.57	7,365	1.37	1,532	0.00	0	7.94	8,897
2019	6.61	7,399	1.37	1,532	0.01	6	7.98	8,937
2020	6.50	7,278	1.37	1,532	0.15	167	8.01	8,977
2021	6.55	7,341	1.37	1,532	0.13	145	8.05	9,018
2022	6.61	7,405	1.37	1,532	0.11	123	8.09	9,059
2023	6.67	7,468	1.37	1,532	0.09	100	8.12	9,101
2024	6.73	7,533	1.37	1,532	0.07	77	8.16	9,142
2025	6.78	7,598	1.37	1,532	0.05	54	8.20	9,184
2026	6.84	7,664	1.37	1,532	0.03	30	8.24	9,226
2027	6.90	7,730	1.37	1,532	0.01	6	8.27	9,268
2028	6.94	7,779	1.37	1,532	0.00	0	8.31	9,311
2029	6.98	7,821	1.37	1,532	0.00	0	8.35	9,353
2030	7.02	7,864	1.37	1,532	0.00	0	8.39	9,396
2031	7.06	7,908	1.37	1,532	0.00	0	8.43	9,440
2032	7.10	7,951	1.37	1,532	0.00	0	8.47	9,483
2033	7.14	7,995	1.37	1,532	0.00	0	8.51	9,527
2034	7.18	8,039	1.37	1,532	0.00	0	8.54	9,571
2035	7.22	8,084	1.37	1,532	0.00	0	8.58	9,616
2036	7.26	8,128	1.37	1,532	0.00	0	8.62	9,660
2037	7.30	8,173	1.37	1,532	0.00	0	8.66	9,705
2038	7.34	8,218	1.37	1,532	0.00	0	8.70	9,750
2039	7.38	8,264	1.37	1,532	0.00	0	8.75	9,796
2040	7.42	8,310	1.37	1,532	0.00	0	8.79	9,842

# Per Capita Consumption (SSF)



**California Water Service Company - South San Francisco District**  
**Water Supply and Demand Analysis and Projections**

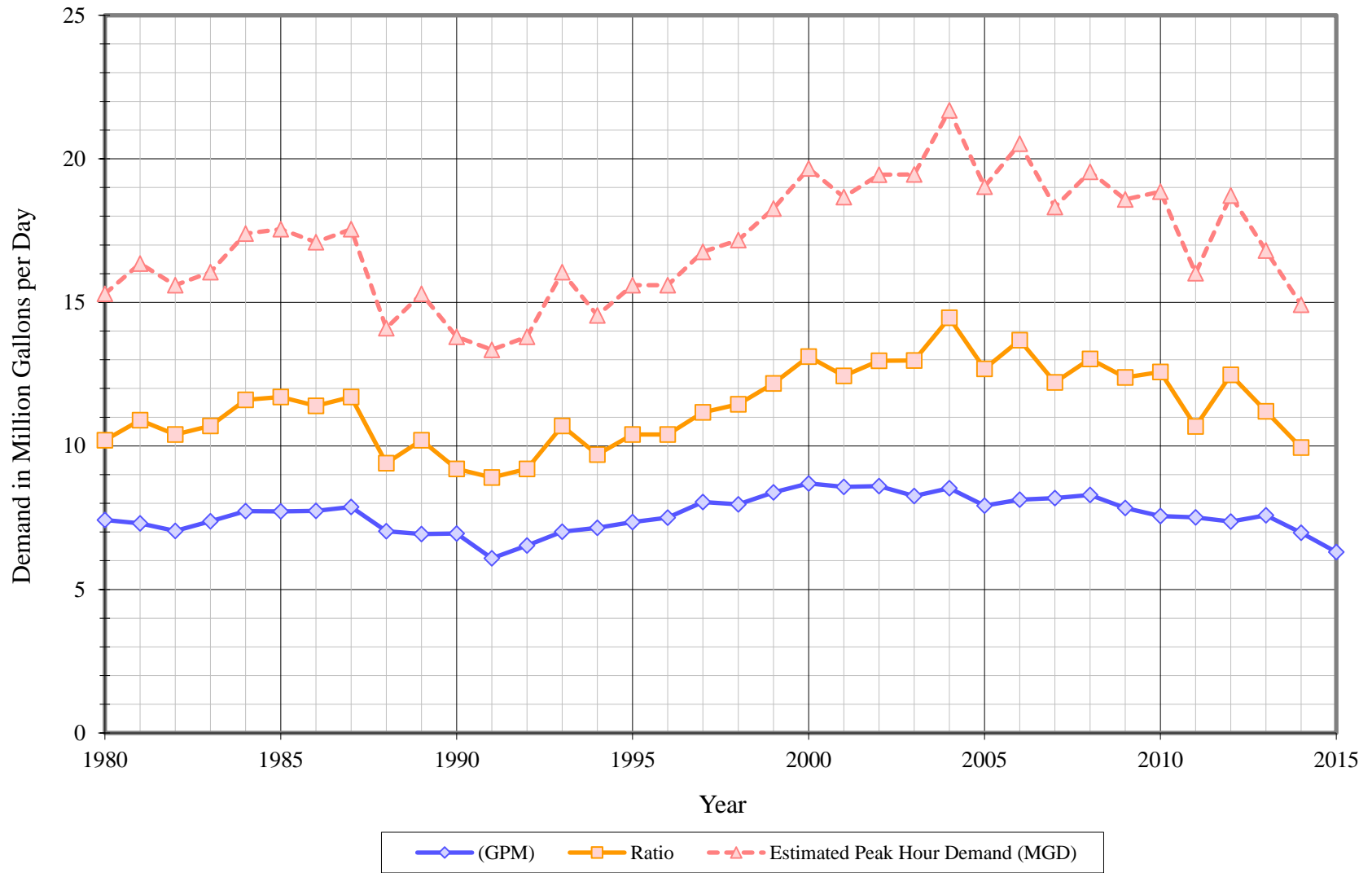
**Per Capita Water Demand Calculation**

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	52,724	8,226	139	3,634	62				
1996	52,885	8,403	142	3,760	63				
1997	53,456	9,008	150	3,941	66				
1998	53,939	8,917	148	3,812	63				
1999	54,386	9,394	154	4,001	66				
2000	55,024	9,738	158	4,153	67				
2001	55,326	9,606	155	4,088	66				
2002	55,784	9,633	154	4,060	65				
2003	56,031	9,245	147	3,995	64				
2004	57,028	9,549	149	4,057	64				
2005	57,398	8,869	138	3,856	60				
2006	57,646	9,101	141	3,884	60				
2007	57,920	9,169	141	3,884	60				
2008	58,130	9,292	143	3,895	60				
2009	58,286	8,777	134	3,672	56				
2010	58,658	8,465	129	3,491	53				
2011	59,147	8,408	127	3,396	51				
2012	59,567	8,249	124	3,403	51				
2013	60,172	8,495	126	3,414	51				
2014	60,421	7,816	115	3,008	44				
2015	61,223	7,064	103	2,753	40				
2016	61,657					8,817	128	8,817	128
2017	62,095					8,857	127	8,857	127
2018	62,536					8,897	127	8,897	127
2019	62,981					8,937	127	8,931	127
2020	63,430					8,977	126	8,810	124
2025	65,732					9,184	125	9,130	124
2030	68,133					9,396	123	9,464	124
2035	70,639					9,616	122	9,812	124
2040	73,254					9,842	120	10,175	124

*SBx7-7 Targets*

2015	137
2020	124

# Average Day, Maximum Day, Peak Demand

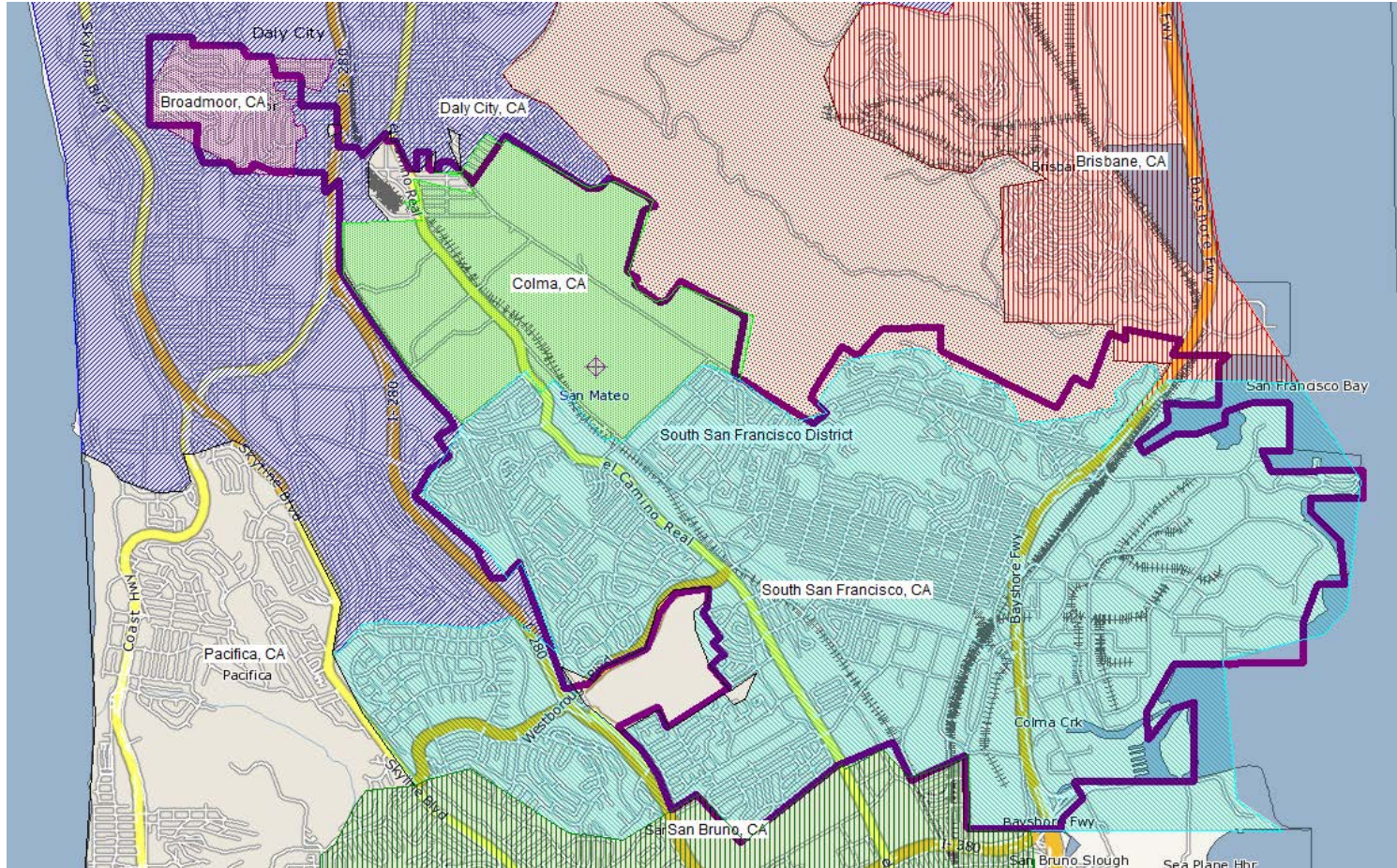


**California Water Service Company - South San Francisco District**  
**Water Supply and Demand Analysis and Projections**  
**Historical and Projected Average Day, Maximum Day, and Peak Demand**

Worksheet 11

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	8,311	2,708	7.42	534	10.20	735	1.37	15.30	10,625	1.50	2.06			
1981	8,179	2,665	7.30	522	10.90	779	1.49	16.35	11,354	1.50	2.24			
1982	7,883	2,569	7.04	502	10.40	742	1.48	15.60	10,833	1.50	2.22			
1983	8,264	2,693	7.38	526	10.70	762	1.45	16.05	11,146	1.50	2.18			
1984	8,658	2,821	7.73	548	11.60	822	1.50	17.40	12,083	1.50	2.25			
1985	8,649	2,818	7.72	545	11.70	826	1.52	17.55	12,188	1.50	2.27			
1986	8,666	2,824	7.74	545	11.40	803	1.47	17.10	11,875	1.50	2.21			
1987	8,815	2,873	7.87	551	11.70	818	1.49	17.55	12,188	1.50	2.23			
1988	7,873	2,565	7.03	488	9.40	653	1.34	14.10	9,792	1.50	2.01			
1989	7,763	2,530	6.93	478	10.20	703	1.47	15.30	10,625	1.50	2.21			
1990	7,782	2,536	6.95	473	9.20	627	1.32	13.80	9,583	1.50	1.99			
1991	6,816	2,221	6.08	414	8.90	605	1.46	13.35	9,271	1.50	2.19			
1992	7,317	2,384	6.53	444	9.20	625	1.41	13.80	9,583	1.50	2.11			
1993	7,851	2,558	7.01	474	10.70	724	1.53	16.05	11,146	1.50	2.29			
1994	8,008	2,610	7.15	483	9.70	655	1.36	14.55	10,104	1.50	2.04			
1995	8,226	2,680	7.34	495	10.40	701	1.42	15.60	10,833	1.50	2.12			
1996	8,403	2,738	7.50	504	10.40	699	1.39	15.60	10,833	1.50	2.08			
1997	9,008	2,935	8.04	532	11.17	739	1.39	16.76	11,636	1.50	2.08			
1998	8,917	2,906	7.96	520	11.45	748	1.44	17.17	11,925	1.50	2.16			
1999	9,394	3,061	8.39	541	12.18	786	1.45	18.27	12,688	1.50	2.18			
2000	9,738	3,173	8.69	551	13.11	831	1.51	19.66	13,655	1.50	2.26			
2001	9,606	3,130	8.58	542	12.44	787	1.45	18.67	12,963	1.50	2.18			
2002	9,633	3,139	8.60	541	12.97	816	1.51	19.45	13,505	1.50	2.26			
2003	9,245	3,012	8.25	520	12.97	818	1.57	19.46	13,514	1.50	2.36			
2004	9,549	3,112	8.53	528	14.46	896	1.70	21.69	15,063	1.50	2.54			
2005	8,869	2,890	7.92	490	12.69	784	1.60	19.03	13,215	1.50	2.40			
2006	9,101	2,966	8.13	502	13.69	845	1.68	20.53	14,256	1.50	2.53			
2007	9,169	2,988	8.19	505	12.21	753	1.49	18.32	12,721	1.50	2.24			
2008	9,292	3,028	8.30	512	13.03	804	1.57	19.55	13,574	1.50	2.36			
2009	8,777	2,860	7.84	485	12.39	767	1.58	18.58	12,905	1.50	2.37			
2010	8,465	2,758	7.56	467	12.57	776	1.66	18.86	13,098	1.50	2.50			
2011	8,408	2,740	7.51	462	10.68	658	1.42	16.02	11,125	1.50	2.13			
2012	8,249	2,688	7.36	453	12.48	768	1.69	18.72	12,998	1.50	2.54			
2013	8,495	2,768	7.58	466	11.21	689	1.48	16.81	11,673	1.50	2.22			
2014	7,816	2,547	6.98	428	9.95	611	1.43	14.92	10,360	1.50	2.14			
2015	7,064	2,302	6.31	387										
10 year Average (2006-2015)			7.57	467	12.02	741	1.56	18.03	12,523	1.50	2.34			
5 year Average (2011-2015)			7.15	439	11.08	681	1.51	16.62	11,539	1.50	2.26			

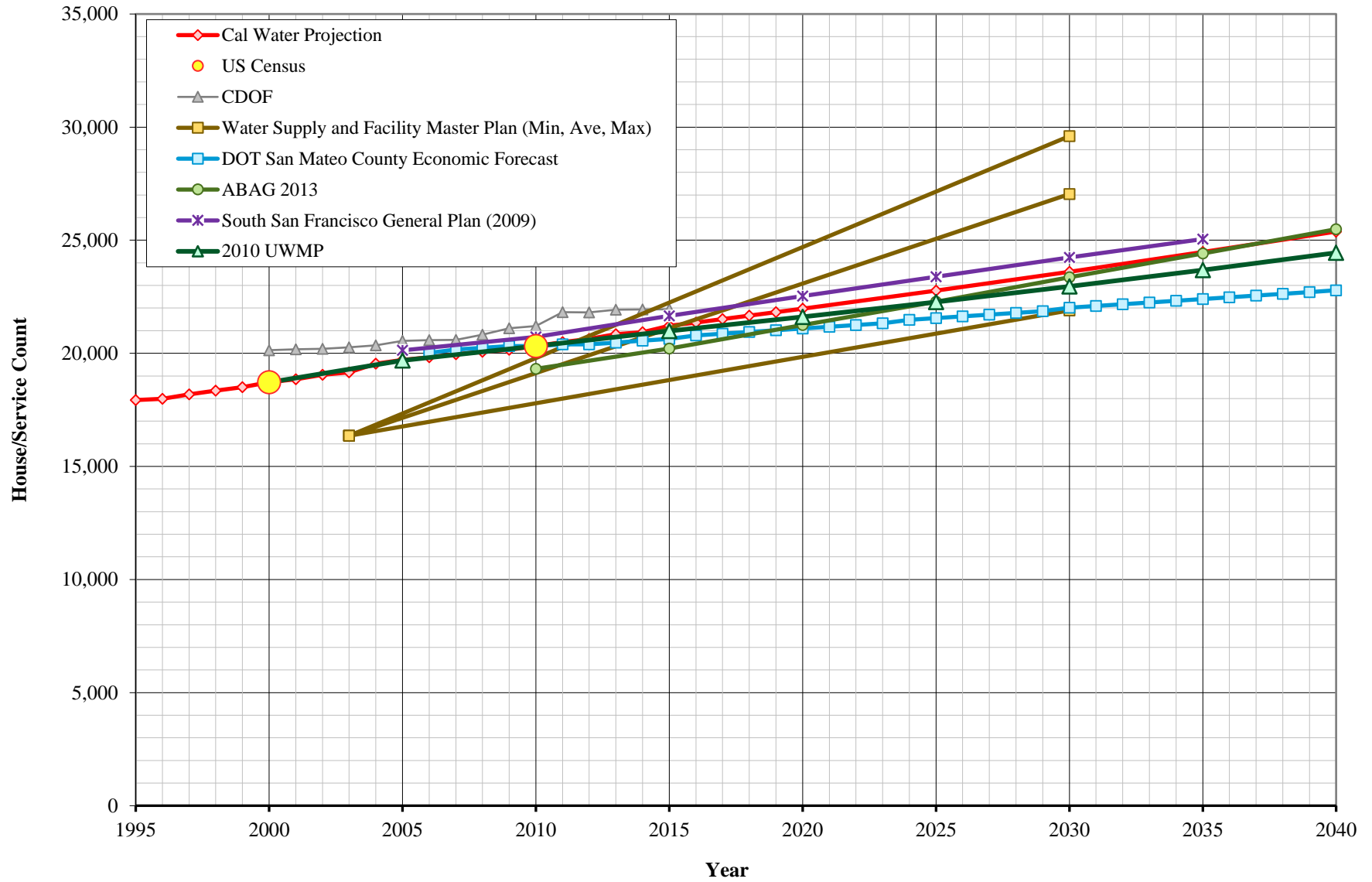
**California Water Service Company - South San Francisco District**  
**Water Supply and Demand Analysis and Projections**  
**Marplot Summary**



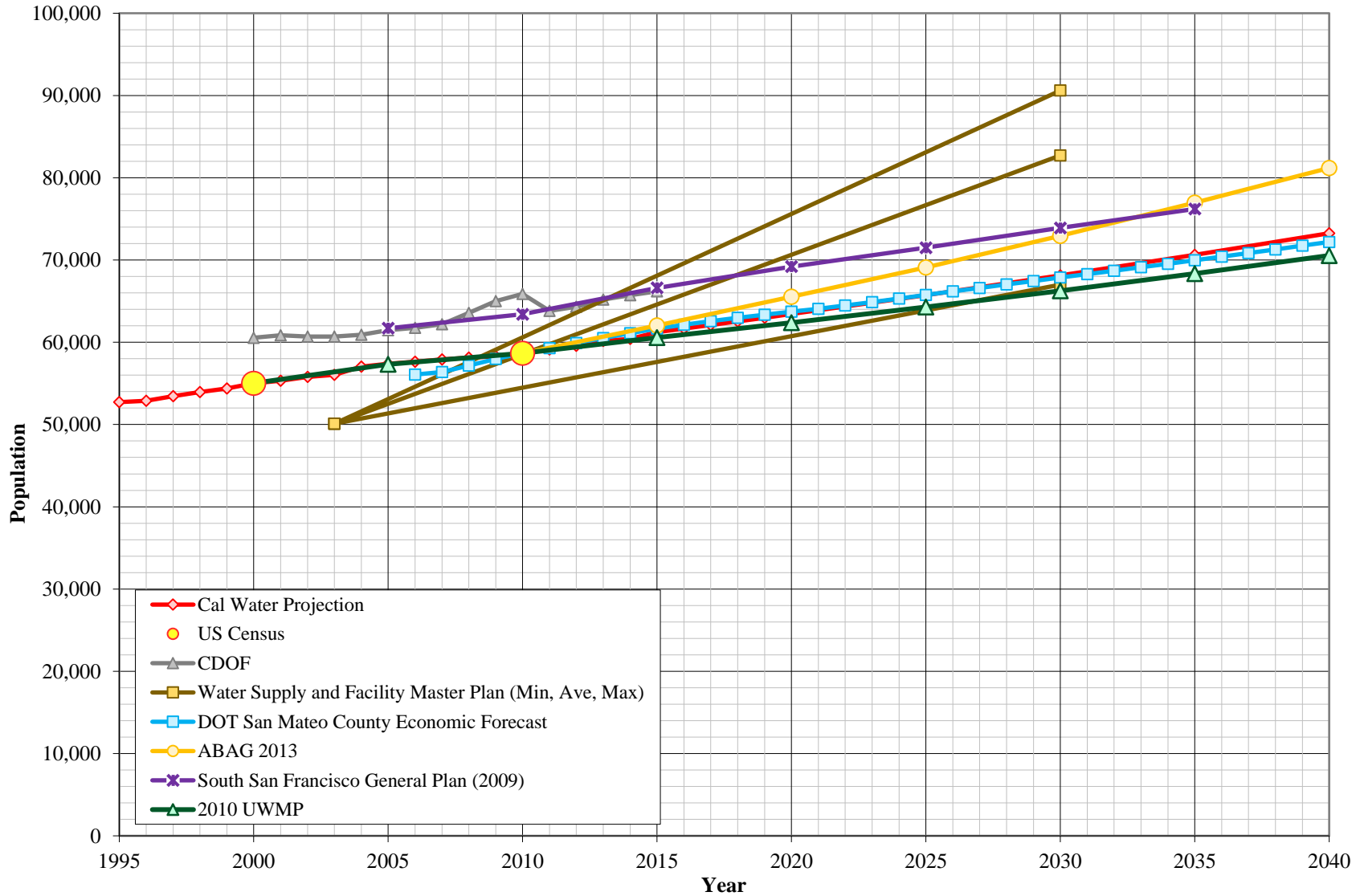
System	US Census 2000 Summary				US Census 2010 Summary				2000-2010 Change		
	Census Blocks	Population	Housing Units (HU)	Density	Census Blocks	Population	Housing Units (HU)	Density	Percentage Population Change	Percentage HU Change	Density Change
South San Francisco	458	55,024	18,716	2.94	510	58,658	20,324	2.89	6.6%	8.6%	-1.8%
	458	55,024	18,716	2.94	510	58,658	20,324	2.89	6.6%	8.6%	-1.8%

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 - South San Francisco 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	55,024	18,716	2.940	13,450	151	5,266	34.9	0
2010	58,658	20,324	2.886	13,840	152	6,484	42.8	0
	6.6%	8.6%	-1.8%	2.9%	0.4%	23.1%	22.6%	0.0%

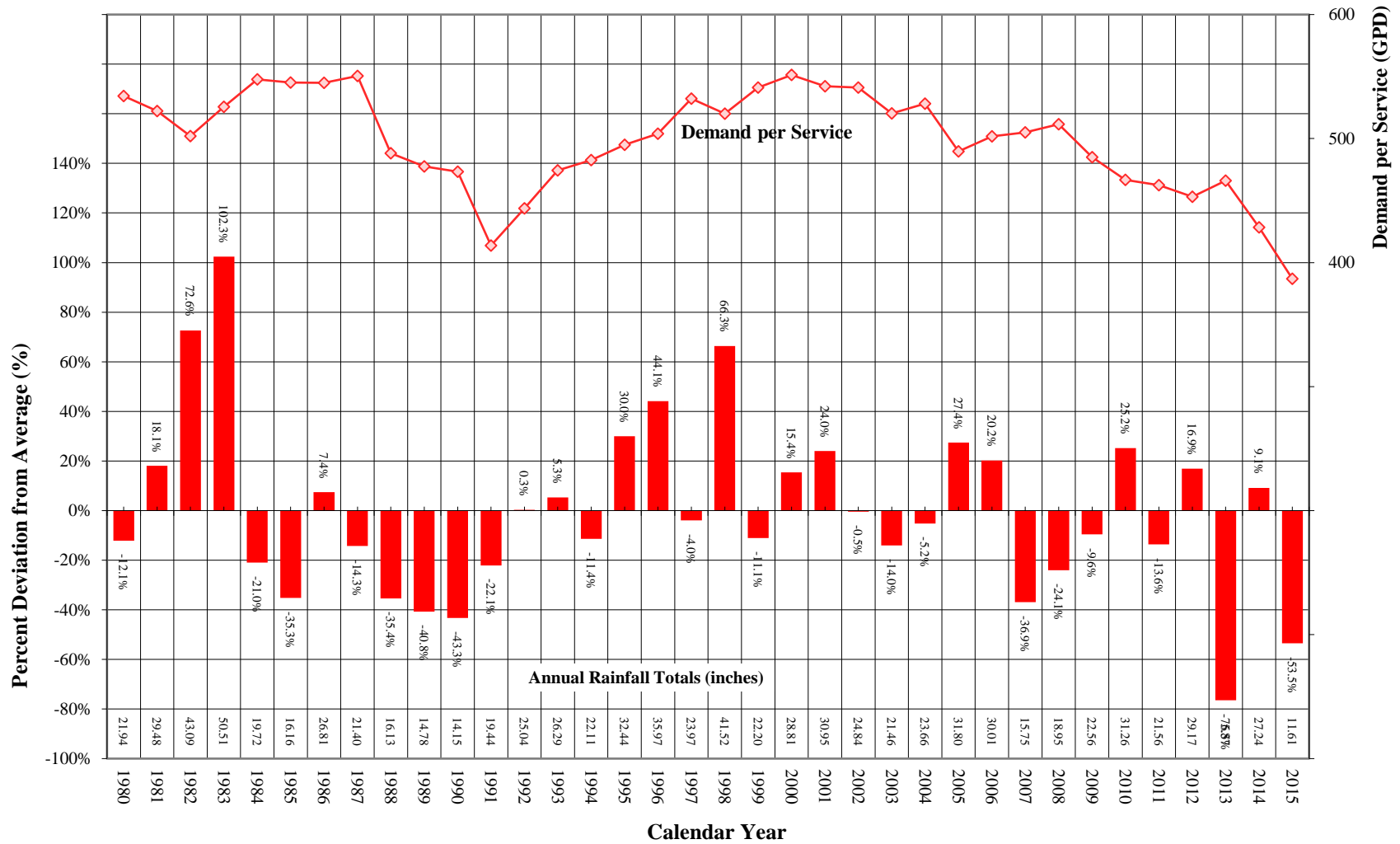
Year	Single Family Residential Services (DU)	Multi Family Residential			Flat Rate Residential Services (DU)	Total Residential Dwelling Units	Persons per Housing Unit	Estimated District Population
		Services	Residential Units (DU)	Unit Density				
1995	12,661	151	5,272	34.9	0	17,934	2.940	52,724
1996	12,716	151	5,272	34.9	0	17,989	2.940	52,885
1997	12,911	151	5,272	34.9	0	18,183	2.940	53,456
1998	13,078	151	5,269	34.9	0	18,347	2.940	53,939
1999	13,227	151	5,272	34.9	0	18,499	2.940	54,386
2000	13,450	151	5,266	34.9	0	18,716	2.940	55,024
2001	13,465	151	5,388	35.7	0	18,853	2.935	55,326
2002	13,534	151	5,510	36.5	0	19,044	2.929	55,784
2003	13,532	150	5,632	37.4	0	19,164	2.924	56,031
2004	13,787	151	5,753	38.1	0	19,541	2.918	57,028
2005	13,829	151	5,875	38.9	0	19,704	2.913	57,398
2006	13,829	151	5,997	39.7	0	19,826	2.908	57,646
2007	13,838	151	6,119	40.5	0	19,957	2.902	57,920
2008	13,826	152	6,241	41.1	0	20,066	2.897	58,130
2009	13,795	152	6,362	41.8	0	20,158	2.892	58,286
2010	13,840	152	6,484	42.8	0	20,324	2.886	58,658
2011	13,888	152	6,606	43.4	0	20,494	2.886	59,147
2012	13,910	155	6,729	43.4	0	20,639	2.886	59,567
2013	13,928	159	6,921	43.4	0	20,849	2.886	60,172
2014	13,938	161	6,997	43.4	0	20,935	2.886	60,421
2015	13,952	167	7,261	43.4	0	21,213	2.886	61,223
2016	14,020	169	7,343	43.4	0	21,363	2.886	61,657
2017	14,089	171	7,426	43.4	0	21,515	2.886	62,095
2018	14,157	173	7,510	43.4	0	21,668	2.886	62,536
2019	14,227	175	7,595	43.4	0	21,822	2.886	62,981
2020	14,296	177	7,682	43.4	0	21,977	2.886	63,430
2025	14,648	187	8,127	43.4	0	22,775	2.886	65,732
2030	15,009	198	8,598	43.4	0	23,607	2.886	68,133
2035	15,379	210	9,096	43.4	0	24,475	2.886	70,639
2040	15,758	222	9,624	43.4	0	25,381	2.886	73,254

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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 - South San Francisco District**  
**Water Supply and Demand Analysis and Projections**

Temperature & Rainfall History

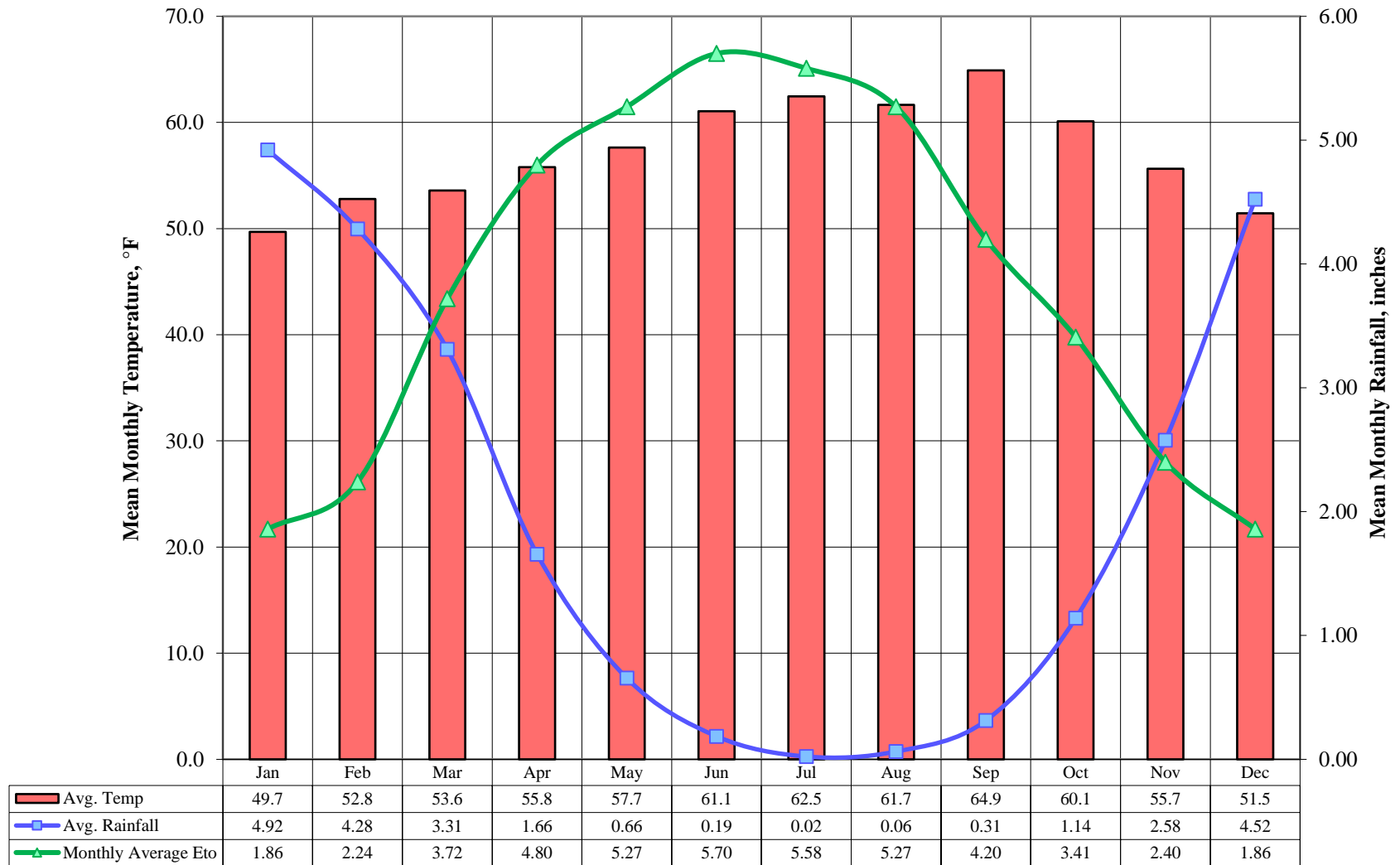
Year	Precipitation		Temperature			Demand per Service (gpd)	Percent of Average Demand
	Annual (in)	Percent Variation	Tmax (°F)	Tmin (°F)	Mean (°F)		
1980	21.9	-12.1%	71.4	44.2	57.8	534	7.1%
1981	29.5	18.1%	74.6	45.2	59.9	522	4.7%
1982	43.1	72.6%	72.9	39.6	56.3	502	0.6%
1983	50.5	102.3%	77.8	42.0	59.9	526	5.4%
1984	19.7	-21.0%	81.3	42.6	62.0	548	9.8%
1985	16.2	-35.3%	73.7	41.1	57.4	545	9.3%
1986	26.8	7.4%	71.7	43.7	57.7	545	9.2%
1987	21.4	-14.3%	72.3	42.8	57.6	551	10.4%
1988	16.1	-35.4%	74.7	43.6	59.2	488	-2.1%
1989	14.8	-40.8%	71.7	40.7	56.2	478	-4.3%
1990	14.2	-43.3%	74.3	39.3	56.8	473	-5.1%
1991	19.4	-22.1%	71.8	42.9	57.4	414	-17.1%
1992	25.0	0.3%	73.5	41.9	57.7	444	-11.1%
1993	26.3	5.3%	74.5	42.6	58.6	474	-4.9%
1994	22.1	-11.4%	72.1	42.5	57.3	483	-3.3%
1995	32.4	30.0%	73.0	47.1	60.1	495	-0.8%
1996	36.0	44.1%	72.5	46.4	59.5	504	1.0%
1997	24.0	-4.0%	76.1	44.9	60.5	532	6.7%
1998	41.5	66.3%	71.3	41.3	56.3	520	4.3%
1999	22.2	-11.1%	71.6	43.3	57.5	541	8.5%
2000	28.8	15.4%	73.6	45.6	59.6	551	10.5%
2001	31.0	24.0%	70.8	43.2	57.0	542	8.7%
2002	24.8	-0.5%	73.2	42.6	57.9	541	8.5%
2003	21.5	-14.0%	75.1	45.9	60.5	520	4.3%
2004	23.7	-5.2%	75.3	45.0	60.2	528	5.9%
2005	31.8	27.4%	70.7	44.2	57.5	490	-1.8%
2006	30.0	20.2%	73.0	43.9	58.5	502	0.6%
2007	15.8	-36.9%	70.6	42.1	56.4	505	1.2%
2008	19.0	-24.1%	72.7	43.1	57.9	512	2.6%
2009	22.6	-9.6%	73.5	43.3	58.4	485	-2.8%
2010	31.3	25.2%	73.7	45.9	59.8	467	-6.4%
2011	21.6	-13.6%	71.4	42.8	57.1	462	-7.3%
2012	29.2	16.9%	70.0	42.9	56.5	453	-9.2%
2013	5.9	-76.5%	71.4	41.5	56.5	466	-6.6%
2014	27.2	9.1%	74.2	46.1	60.2	428	-14.1%
2015	11.6	-53.5%	75.3	44.0	59.7	387	-22.5%
2016							
2017							
2018							
2019							
2020							

Precipitation (1895 - present)						Monthly Average Eto
	Mean	High	Year	Low	Year	
	in.	in.	-	in.	-	
Jan	4.92	15.19	1909	0.00	2015	1.86
Feb	4.28	15.48	1998	0.00	1953	2.24
Mar	3.31	11.97	1983	0.09	1923	3.72
Apr	1.66	6.70	1958	0.00	1909	4.80
May	0.66	4.28	1915	0.00	1903	5.27
Jun	0.19	2.24	2011	0.00	1911	5.70
Jul	0.02	0.65	1974	0.00	1957	5.58
Aug	0.06	1.05	1976	0.00	1958	5.27
Sep	0.31	4.58	1918	0.00	1902	4.20
Oct	1.14	8.87	1962	0.00	1905	3.41
Nov	2.58	8.51	1983	0.00	1929	2.40
Dec	4.52	15.73	1955	0.01	1989	1.86
Annual	23.65	50.51	1983	5.87	2013	46.31

Temperature (1895 - present)			
	Tmax	Tmin	Mean
	°F	°F	°F
Jan	64.7	34.7	49.7
Feb	66.5	39.1	52.8
Mar	68.2	39.0	53.6
Apr	68.9	42.7	55.8
May	70.7	44.6	57.7
Jun	74.6	47.5	61.1
Jul	75.0	49.9	62.5
Aug	74.5	48.8	61.7
Sep	81.3	48.5	64.9
Oct	74.2	46.0	60.1
Nov	69.3	42.0	55.7
Dec	64.0	38.9	51.5
Annual	81.3	34.7	58.0

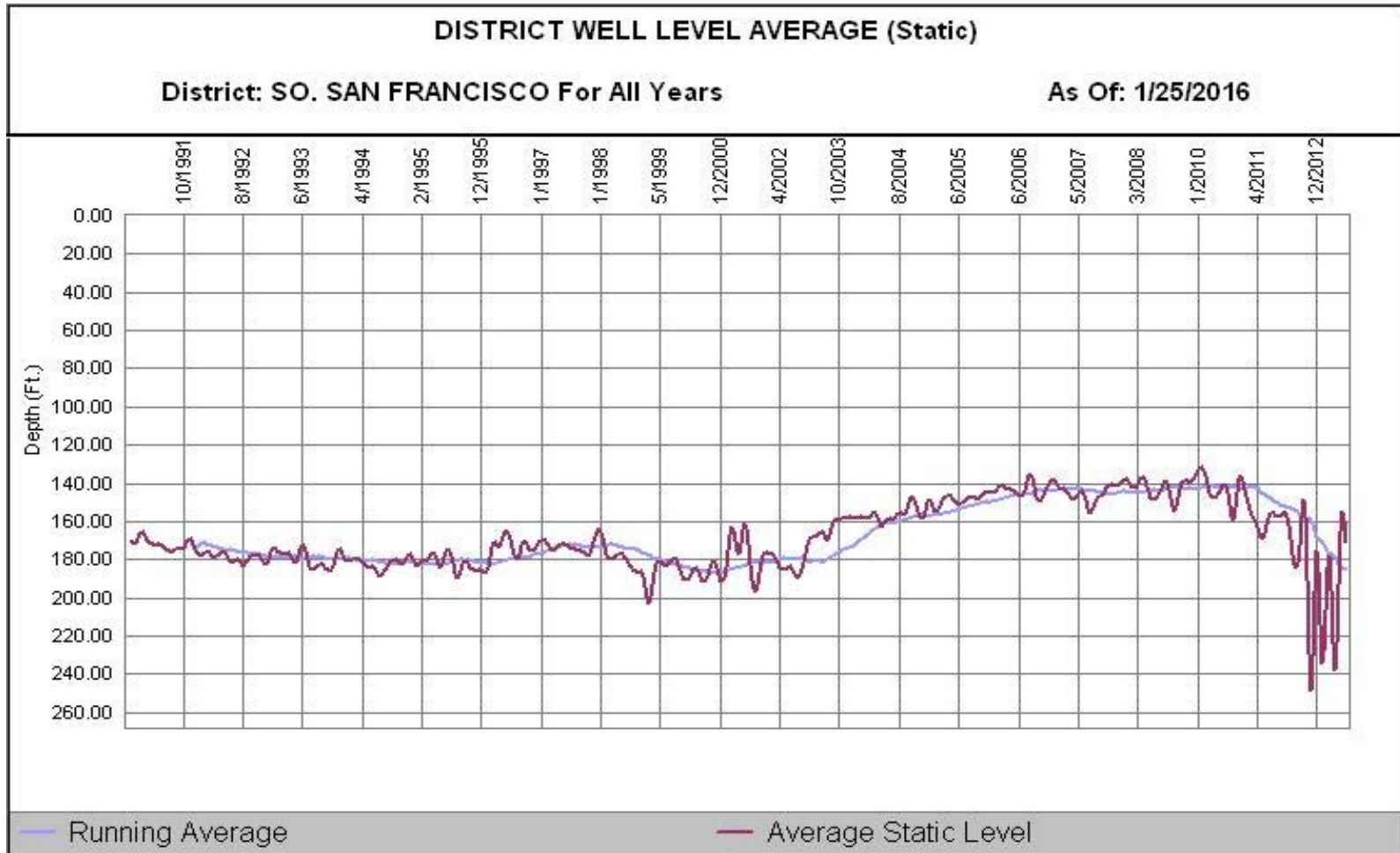
- 1) Eto values based on California Irrigation Management Information System (CIMIS), <http://www.cimis.water.ca.gov/cimis/welcome.jsp>, EvapoTranspiration (Eto) Zones Map, Zone 12
- 2) PPT, Tmax, Tmin obtained from PRISM where, PPT is total monthly rainfall, Tmax is average of maximum temperatures for given month, and Tmin is average of minimum temperatures for given month
- 3) Percent variation based on average of 1980 to present values

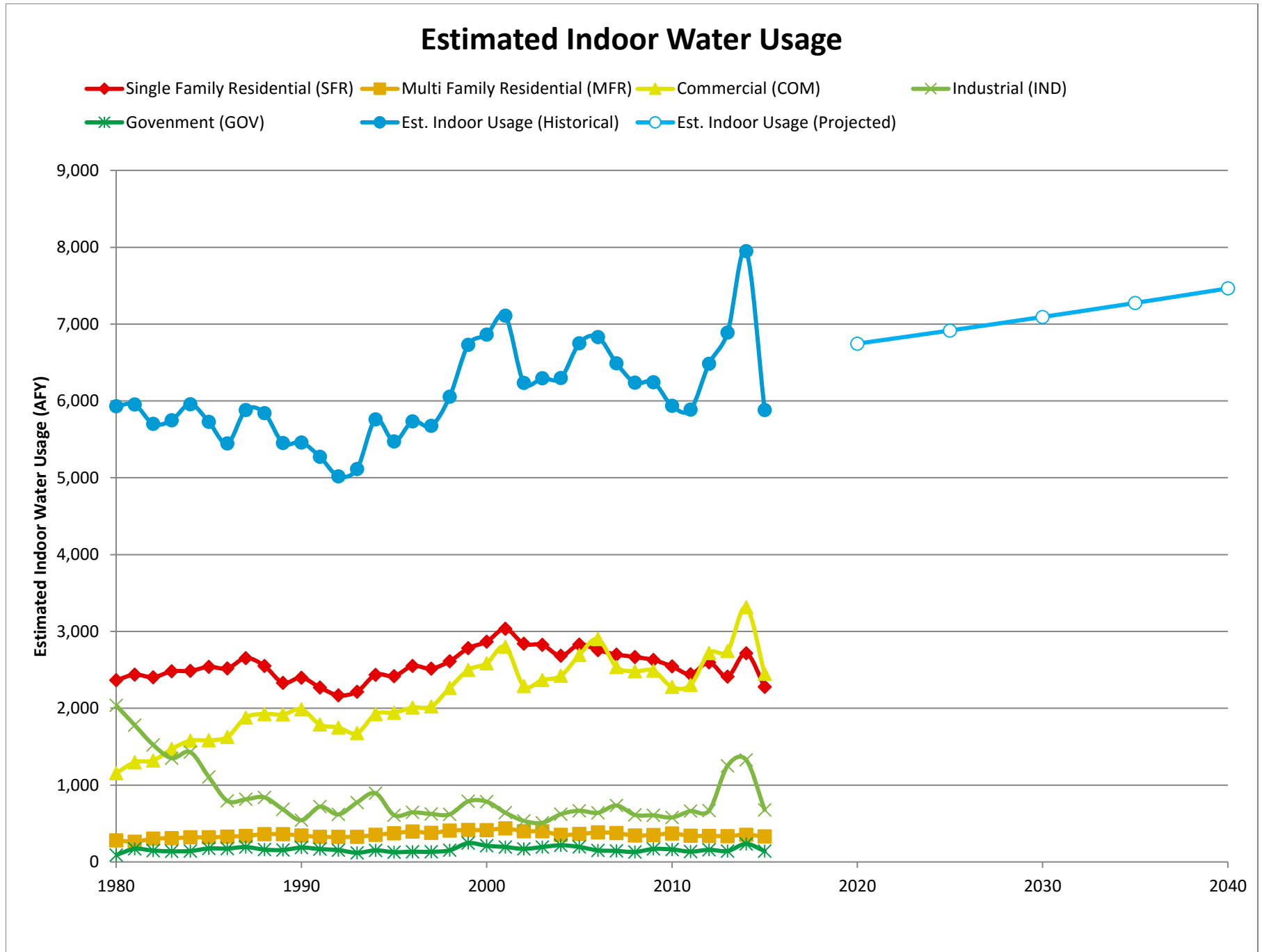
## Average Monthly Temperature, Rainfall, and Monthly Eto



# California Water Service Company - South San Francisco District Water Supply and Demand Analysis and Projections

## Groundwater Production Facilities





**California Water Service Company - South San Francisco 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		AF/Serv	AFY	GPD/Serv		%	(CCF)	AFY		GPD/Serv	%	(CCF)
1980	95,391	2,365	0.196	2,365	175	74%	11,350	281	1,796	91%	46,591	1,155	731	69%	
1981	98,348	2,438	0.201	2,438	180	76%	10,671	265	1,682	85%	52,352	1,298	807	72%	
1982	96,989	2,405	0.199	2,405	177	76%	12,230	303	1,915	92%	53,275	1,321	810	69%	
1983	100,050	2,481	0.205	2,481	183	76%	12,449	309	1,939	89%	59,333	1,471	892	73%	
1984	100,283	2,486	0.204	2,486	182	73%	12,928	321	1,995	90%	63,660	1,578	949	66%	
1985	102,456	2,540	0.208	2,540	186	74%	12,940	321	2,002	86%	63,877	1,584	941	65%	
1986	101,617	2,519	0.206	2,519	184	72%	13,316	330	2,048	88%	65,625	1,627	949	62%	
1987	107,038	2,654	0.217	2,654	194	75%	13,699	340	2,106	88%	75,846	1,880	1,059	66%	
1988	102,947	2,552	0.207	2,552	185	85%	14,579	361	2,217	94%	77,718	1,927	1,053	70%	
1989	94,064	2,332	0.188	2,332	168	79%	14,562	361	2,208	95%	77,389	1,919	1,031	71%	
1990	96,759	2,399	0.191	2,399	171	85%	13,863	344	2,102	92%	80,134	1,987	1,056	73%	
1991	91,549	2,270	0.180	2,270	161	91%	13,195	327	1,985	93%	72,120	1,788	940	77%	
1992	87,531	2,170	0.172	2,170	154	78%	13,148	326	1,952	89%	70,575	1,750	923	72%	
1993	89,381	2,216	0.175	2,216	157	74%	13,240	328	1,953	87%	67,619	1,677	884	64%	
1994	98,271	2,436	0.193	2,436	172	77%	14,196	352	2,080	87%	77,672	1,926	1,008	69%	
1995	97,559	2,419	0.191	2,419	171	75%	15,106	375	2,214	87%	78,382	1,943	1,013	66%	
1996	102,869	2,550	0.201	2,550	179	77%	15,977	396	2,342	90%	81,052	2,010	1,044	67%	
1997	101,509	2,517	0.195	2,517	174	72%	15,241	378	2,234	85%	81,618	2,024	1,037	60%	
1998	105,357	2,612	0.200	2,612	178	78%	16,434	407	2,410	88%	91,348	2,265	1,145	68%	
1999	112,212	2,782	0.210	2,782	188	79%	16,792	416	2,461	89%	100,766	2,498	1,245	71%	
2000	115,622	2,867	0.213	2,867	190	78%	16,721	415	2,454	87%	104,274	2,585	1,271	69%	
2001	122,400	3,035	0.225	3,035	201	84%	17,618	437	2,583	95%	112,962	2,801	1,361	72%	
2002	114,547	2,840	0.210	2,840	187	78%	16,103	399	2,360	92%	92,403	2,291	1,101	61%	
2003	113,968	2,826	0.209	2,826	186	79%	16,049	398	2,362	93%	95,545	2,369	1,135	64%	
2004	108,234	2,683	0.195	2,683	174	74%	14,198	352	2,081	85%	97,706	2,422	1,145	62%	
2005	114,154	2,830	0.205	2,830	183	82%	14,673	364	2,151	88%	108,677	2,694	1,280	73%	
2006	111,205	2,757	0.199	2,757	178	80%	15,473	384	2,268	90%	116,985	2,900	1,369	75%	
2007	108,876	2,699	0.195	2,699	174	78%	15,154	376	2,221	90%	102,358	2,538	1,189	63%	
2008	107,613	2,668	0.193	2,668	172	77%	13,859	344	2,023	84%	100,146	2,483	1,158	61%	
2009	106,001	2,628	0.191	2,628	170	80%	14,148	351	2,059	88%	100,406	2,489	1,162	67%	
2010	102,701	2,546	0.184	2,546	164	82%	14,954	371	2,185	93%	91,863	2,278	1,064	65%	
2011	98,606	2,445	0.176	2,445	157	81%	13,759	341	2,001	89%	92,927	2,304	1,081	66%	
2012	104,807	2,599	0.187	2,599	167	86%	13,704	340	1,957	90%	109,686	2,719	1,276	78%	
2013	97,345	2,414	0.173	2,414	155	79%	13,585	337	1,886	90%	110,726	2,745	1,288	75%	
2014	109,554	2,716	0.195	2,716	174	102%	14,278	354	1,961	102%	133,702	3,315	1,554	95%	
2015	91,952	2,280	1.203	2,280	146	95%	13,386	332	1,772	95%	98,840	2,451	1,155	76%	
2016				2,508	160			363	1,915			2,704	1,271		
2017				2,520	160			367	1,915			2,712	1,271		
2018				2,533	160			371	1,915			2,720	1,271		
2019				2,545	160			375	1,915			2,728	1,271		
2020				2,557	160			380	1,915			2,735	1,271		
2025				2,620	160			402	1,915			2,775	1,271		
2030				2,685	160			425	1,915			2,814	1,271		
2035				2,751	160			450	1,915			2,855	1,271		
2040				2,819	160			476	1,915			2,896	1,271		

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

**California Water Service Company - South San Francisco 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	82,202	2,038	12,988	85%	3,657	91	560	25%
1981	71,846	1,781	11,657	84%	6,875	170	991	44%
1982	61,477	1,524	10,427	84%	5,978	148	792	42%
1983	54,454	1,350	9,422	74%	5,604	139	709	34%
1984	57,653	1,429	10,431	88%	5,755	143	706	29%
1985	44,639	1,107	8,610	76%	7,104	176	847	37%
1986	32,093	796	6,310	60%	7,042	175	810	36%
1987	32,874	815	6,645	70%	7,826	194	881	41%
1988	33,900	840	8,068	83%	6,486	161	747	41%
1989	27,617	685	7,470	76%	6,285	156	710	40%
1990	21,911	543	6,000	54%	7,561	187	841	47%
1991	29,046	720	8,070	79%	6,774	168	764	52%
1992	24,967	619	7,100	64%	6,229	154	677	39%
1993	31,219	774	8,710	80%	4,824	120	512	28%
1994	36,082	895	9,952	109%	6,094	151	646	36%
1995	24,563	609	6,719	76%	5,151	128	544	31%
1996	26,025	645	7,276	76%	5,384	133	592	32%
1997	25,198	625	7,173	68%	5,322	132	572	28%
1998	24,979	619	7,251	67%	6,120	152	641	35%
1999	31,818	789	9,338	86%	9,885	245	1,019	51%
2000	31,655	785	9,415	84%	8,516	211	864	43%
2001	25,896	642	7,772	93%	7,853	195	795	39%
2002	21,570	535	6,608	77%	6,877	171	697	35%
2003	20,556	510	6,439	71%	7,842	194	794	42%
2004	25,092	622	8,218	79%	8,771	217	883	44%
2005	26,903	667	8,714	90%	7,883	195	791	48%
2006	25,804	640	8,248	80%	6,086	151	603	39%
2007	29,621	734	9,909	98%	5,795	144	568	36%
2008	24,710	613	8,361	82%	5,251	130	500	30%
2009	24,478	607	8,623	83%	6,839	170	691	42%
2010	23,380	580	8,542	81%	6,569	163	666	47%
2011	26,714	662	9,841	85%	5,432	135	555	40%
2012	26,961	668	9,946	94%	6,401	159	661	46%
2013	50,490	1,252	18,652	158%	5,768	143	610	36%
2014	53,588	1,329	20,104	163%	9,493	235	1,012	71%
2015	27,338	678	10,838	102%	5,709	142	604	65%
2016		877	13,876			161	688	
2017		885	13,876			161	688	
2018		894	13,876			161	688	
2019		903	13,876			161	688	
2020		912	13,876			161	688	
2025		959	13,876			161	688	
2030		1,008	13,876			161	688	
2035		1,059	13,876			161	688	
2040		1,113	13,876			161	688	

Estimated Indoor/Outdoor Usage			
Est. Indoor Usage	Est. Outdoor Usage	Est. Indoor Usage	Est. Outdoor Usage
AFY	AFY	%	%
5,930	2,380	71%	29%
5,953	2,227	73%	27%
5,701	2,182	72%	28%
5,749	2,515	70%	30%
5,957	2,700	69%	31%
5,728	2,921	66%	34%
5,447	3,219	63%	37%
5,883	2,932	67%	33%
5,842	2,031	74%	26%
5,452	2,311	70%	30%
5,460	2,322	70%	30%
5,273	1,543	77%	23%
5,019	2,298	69%	31%
5,114	2,736	65%	35%
5,760	2,249	72%	28%
5,473	2,752	67%	33%
5,735	2,668	68%	32%
5,675	3,333	63%	37%
6,055	2,861	68%	32%
6,731	2,663	72%	28%
6,863	2,875	70%	30%
7,109	2,497	74%	26%
6,236	3,397	65%	35%
6,297	2,948	68%	32%
6,298	3,252	66%	34%
6,751	2,118	76%	24%
6,832	2,269	75%	25%
6,491	2,678	71%	29%
6,237	3,055	67%	33%
6,245	2,532	71%	29%
5,937	2,528	70%	30%
5,887	2,521	70%	30%
6,485	1,765	79%	21%
6,890	1,605	81%	19%
7,949	-134	102%	-2%
5,882	1,182	83%	17%
6,613	2,204	75%	25%
6,646	2,211	75%	25%
6,679	2,218	75%	25%
6,712	2,225	75%	25%
6,746	2,232	75%	25%
6,917	2,267	75%	25%
7,093	2,303	75%	25%
7,276	2,340	76%	24%
7,464	2,377	76%	24%



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