

**Water Resources Planning Department**

**Water Supply / Demand Analysis and Projections**  
**for the**  
**Willows District**

**2010**

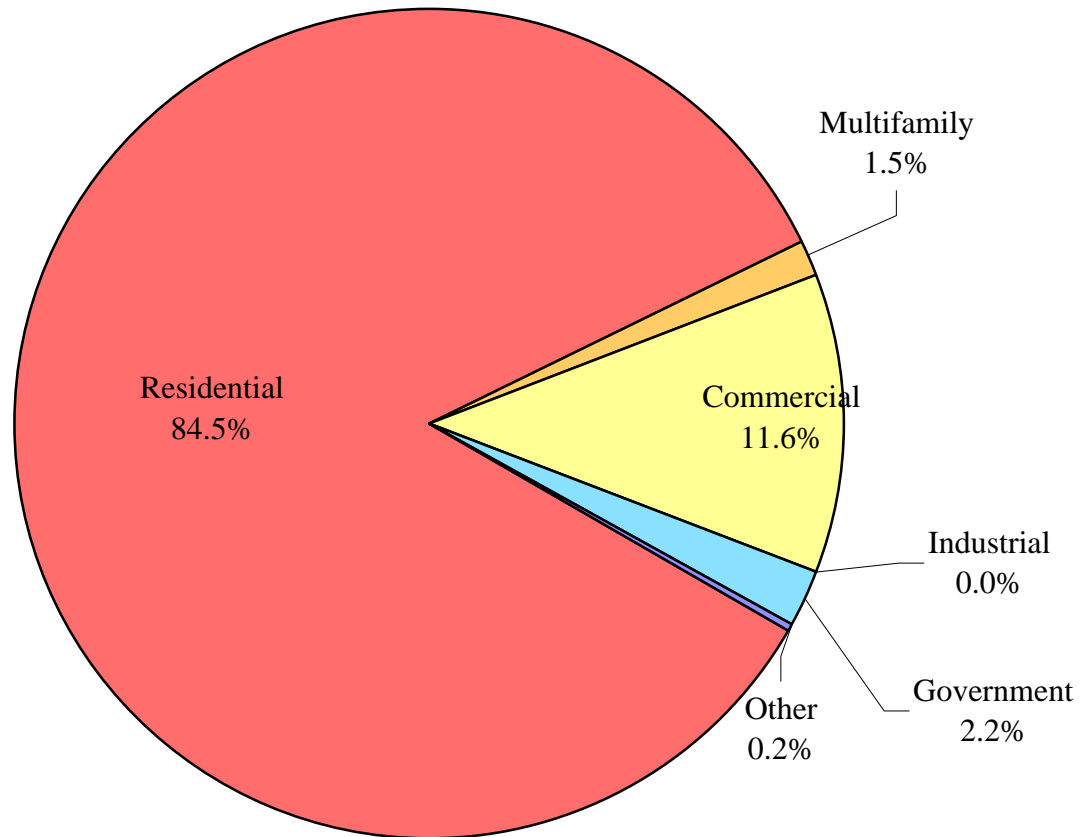


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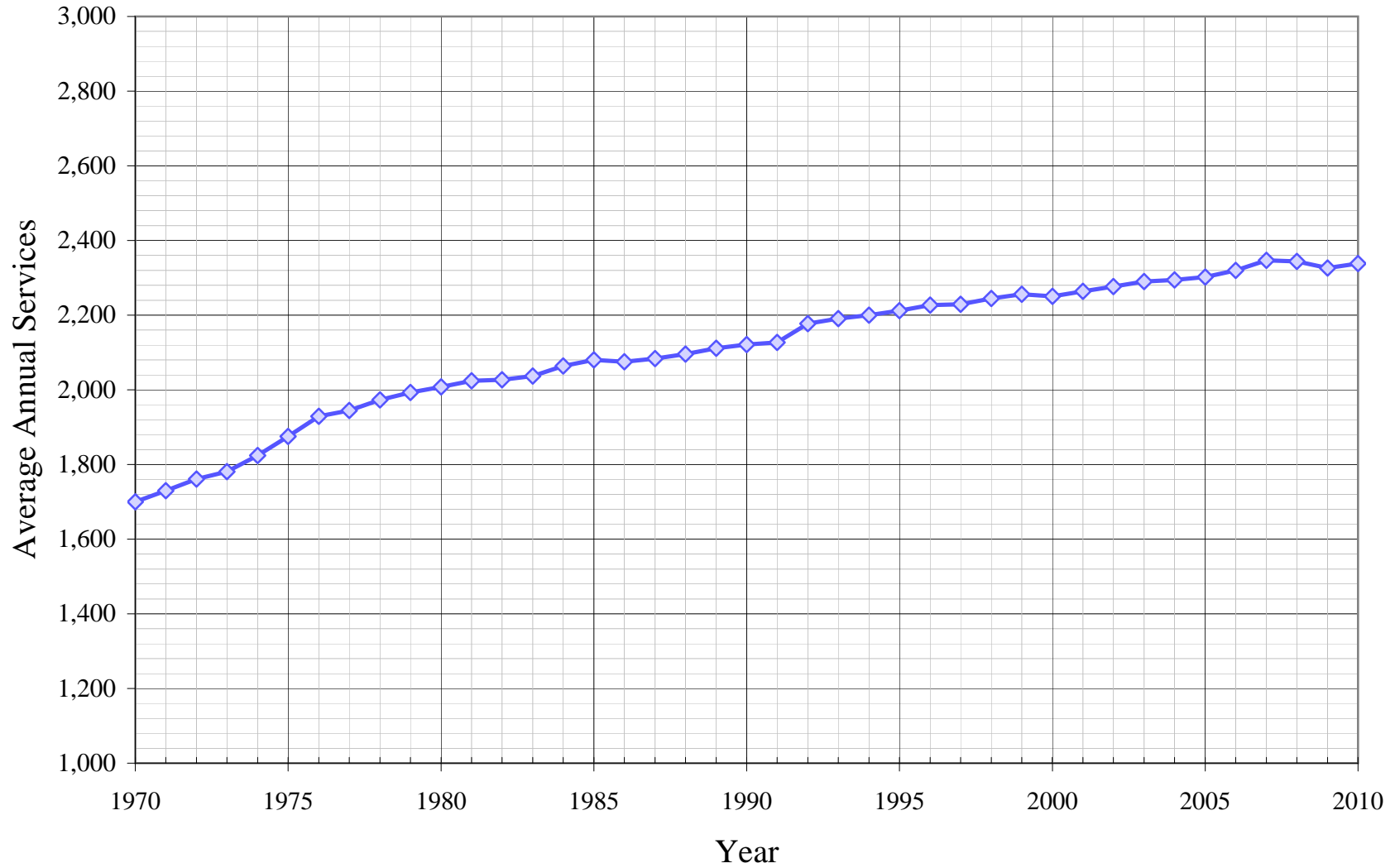
# Willows District

## Distribution of Services (2010)



# Willows District

## Historical Annual Average Services



**California Water Service Company - Willows District**  
**Water Supply and Demand Analysis and Projections**  
**Annual Services**

Worksheet 1

Year	Single Family Residential			Multi-Family Residential		Commercial	Industrial	Government	Other	Total
	Total	Metered	Flat Rate	Services	units					
1970	1,425	466	959	0	0	243	0	32	0	1,700
1971	1,457	467	990	0	0	240	0	33	0	1,730
1972	1,488	454	1,034	0	0	240	0	33	0	1,761
1973	1,508	437	1,071	0	0	241	0	32	0	1,781
1974	1,538	427	1,111	1	9	252	0	32	1	1,824
1975	1,581	418	1,163	4	58	256	0	34	0	1,875
1976	1,633	423	1,210	5	62	256	0	35	0	1,929
1977	1,649	426	1,223	6	92	256	0	34	0	1,945
1978	1,668	435	1,233	6	98	265	0	33	1	1,973
1979	1,683	430	1,253	6	98	268	0	34	2	1,993
1980	1,694	432	1,262	6	103	273	0	34	1	2,008
1981	1,705	445	1,260	12	173	272	0	35	0	2,024
1982	1,709	449	1,260	12	178	271	0	35	0	2,027
1983	1,717	497	1,220	13	190	270	0	37	0	2,037
1984	1,731	545	1,186	19	222	275	0	39	0	2,064
1985	1,742	566	1,176	20	274	279	0	39	0	2,080
1986	1,731	576	1,155	22	390	283	0	39	0	2,075
1987	1,739	604	1,135	22	406	284	0	39	0	2,084
1988	1,748	647	1,101	22	406	287	0	39	0	2,096
1989	1,757	676	1,081	22	406	293	0	39	0	2,111
1990	1,765	700	1,065	22	407	295	0	39	0	2,121
1991	1,784	729	1,055	22	408	277	0	44	0	2,127
1992	1,833	801	1,032	22	391	277	0	45	0	2,177
1993	1,848	850	998	23	447	274	0	46	0	2,191
1994	1,859	889	970	23	451	272	0	46	0	2,200
1995	1,876	925	951	23	456	266	0	47	0	2,212
1996	1,890	965	925	23	456	267	0	47	0	2,227
1997	1,893	989	904	22	410	267	0	47	0	2,229
1998	1,907	1,017	890	22	406	269	0	47	0	2,245
1999	1,916	1,037	879	22	406	271	0	47	0	2,256
2000	1,913	1,045	868	22	406	270	0	46	0	2,251
2001	1,921	1,057	864	22	406	275	0	46	0	2,264
2002	1,933	1,073	860	22	406	275	0	46	0	2,277
2003	1,943	1,090	852	22	424	279	0	46	0	2,290
2004	1,948	1,104	844	22	429	278	0	46	0	2,294
2005	1,953	1,110	843	22	431	281	0	45	1	2,302
2006	1,969	1,134	835	22	451	281	0	47	1	2,320
2007	1,994	1,169	825	22	410	283	0	47	1	2,347
2008	1,980	1,219	761	29	418	283	0	50	2	2,344
2009	1,962	1,347	615	34	418	273	0	53	4	2,326
2010	1,976	1,435	541	34	0	271	0	52	5	2,338
5 Yr Avg.	1,972	1,196	776	26	426	280	0	48	2	2,328
10 Yr Avg.	1,952	1,135	817	24	420	278	0	47	1	2,301

Five year average = 2005 through 2009.

Ten year average = 2000 through 2009.

**California Water Service Company - Willows District**  
**Water Supply and Demand Analysis and Projections**  
**Service Growth Percentage**

Worksheet 2

Year	Single Family Residential			Multi-Family Residential		Commercial	Industrial	Government	Other	Total
	Total	Metered	Flat Rate	Multifamily	units					
1981	0.65%	3.01%	-0.16%	100.00%	67.96%	-0.37%	0.00%	2.94%	-100.00%	0.80%
1982	0.23%	0.90%	0.00%	0.00%	2.89%	-0.37%	0.00%	0.00%	0.00%	0.15%
1983	0.47%	10.69%	-3.17%	8.33%	6.74%	-0.37%	0.00%	5.71%	0.00%	0.49%
1984	0.82%	9.66%	-2.79%	46.15%	16.84%	1.85%	0.00%	5.41%	0.00%	1.33%
1985	0.64%	3.85%	-0.84%	5.26%	23.42%	1.45%	0.00%	0.00%	0.00%	0.78%
1986	-0.63%	1.77%	-1.79%	10.00%	42.34%	1.43%	0.00%	0.00%	0.00%	-0.24%
1987	0.46%	4.86%	-1.73%	0.00%	4.10%	0.35%	0.00%	0.00%	0.00%	0.43%
1988	0.52%	7.12%	-3.00%	0.00%	0.00%	1.06%	0.00%	0.00%	0.00%	0.58%
1989	0.51%	4.48%	-1.82%	0.00%	0.00%	2.09%	0.00%	0.00%	0.00%	0.72%
1990	0.46%	3.55%	-1.48%	0.00%	0.25%	0.68%	0.00%	0.00%	0.00%	0.47%
1991	1.08%	4.14%	-0.94%	0.00%	0.25%	-6.10%	0.00%	12.82%	0.00%	0.28%
1992	2.75%	9.88%	-2.18%	0.00%	-4.17%	0.00%	0.00%	2.27%	0.00%	2.35%
1993	0.82%	6.12%	-3.29%	4.55%	14.32%	-1.08%	0.00%	2.22%	0.00%	0.64%
1994	0.60%	4.59%	-2.81%	0.00%	0.89%	-0.73%	0.00%	0.00%	0.00%	0.41%
1995	0.91%	4.05%	-1.96%	0.00%	1.11%	-2.21%	0.00%	2.17%	0.00%	0.55%
1996	0.75%	4.32%	-2.73%	0.00%	0.00%	0.38%	0.00%	0.00%	0.00%	0.68%
1997	0.16%	2.49%	-2.27%	-4.35%	-10.09%	0.00%	0.00%	0.00%	0.00%	0.09%
1998	0.74%	2.83%	-1.55%	0.00%	-0.98%	0.75%	0.00%	0.00%	0.00%	0.72%
1999	0.49%	1.99%	-1.24%	0.00%	0.00%	0.74%	0.00%	0.00%	0.00%	0.50%
2000	-0.19%	0.71%	-1.25%	0.00%	0.00%	-0.40%	0.00%	-2.13%	0.00%	-0.25%
2001	0.42%	1.20%	-0.52%	0.00%	0.00%	2.01%	0.00%	0.00%	0.00%	0.60%
2002	0.66%	1.52%	-0.39%	0.00%	0.00%	-0.03%	0.00%	0.00%	0.00%	0.56%
2003	0.47%	1.59%	-0.92%	0.00%	4.43%	1.45%	0.00%	0.00%	0.00%	0.58%
2004	0.28%	1.29%	-1.01%	0.00%	1.18%	-0.45%	0.00%	0.00%	0.00%	0.19%
2005	0.25%	0.51%	-0.08%	0.00%	0.47%	1.08%	0.00%	-2.17%	0.00%	0.35%
2006	0.82%	2.16%	-0.95%	0.00%	4.64%	0.00%	0.00%	4.44%	100.00%	0.78%
2007	1.27%	3.09%	-1.20%	0.00%	-9.09%	0.71%	0.00%	0.00%	0.00%	1.16%
2008	-0.70%	4.28%	-7.76%	31.82%	1.95%	0.00%	100.00%	6.38%	0.00%	-0.13%
2009	-0.91%	10.50%	-19.19%	17.24%	0.00%	-3.53%	100.00%	6.00%	0.00%	-0.77%
2010	0.71%	6.53%	-12.03%	0.00%	-100.00%	-0.73%	200.00%	-1.89%	100.00%	0.52%
5 Yr. Avg.	0.15%	4.11%	-5.84%	9.81%	-0.41%	-0.35%	40.00%	2.93%	20.00%	0.47%
10 Yr. Avg.	0.24%	2.69%	-3.33%	4.91%	0.36%	0.08%	20.00%	1.25%	10.00%	0.43%

Five year average = 2005 through 2009.

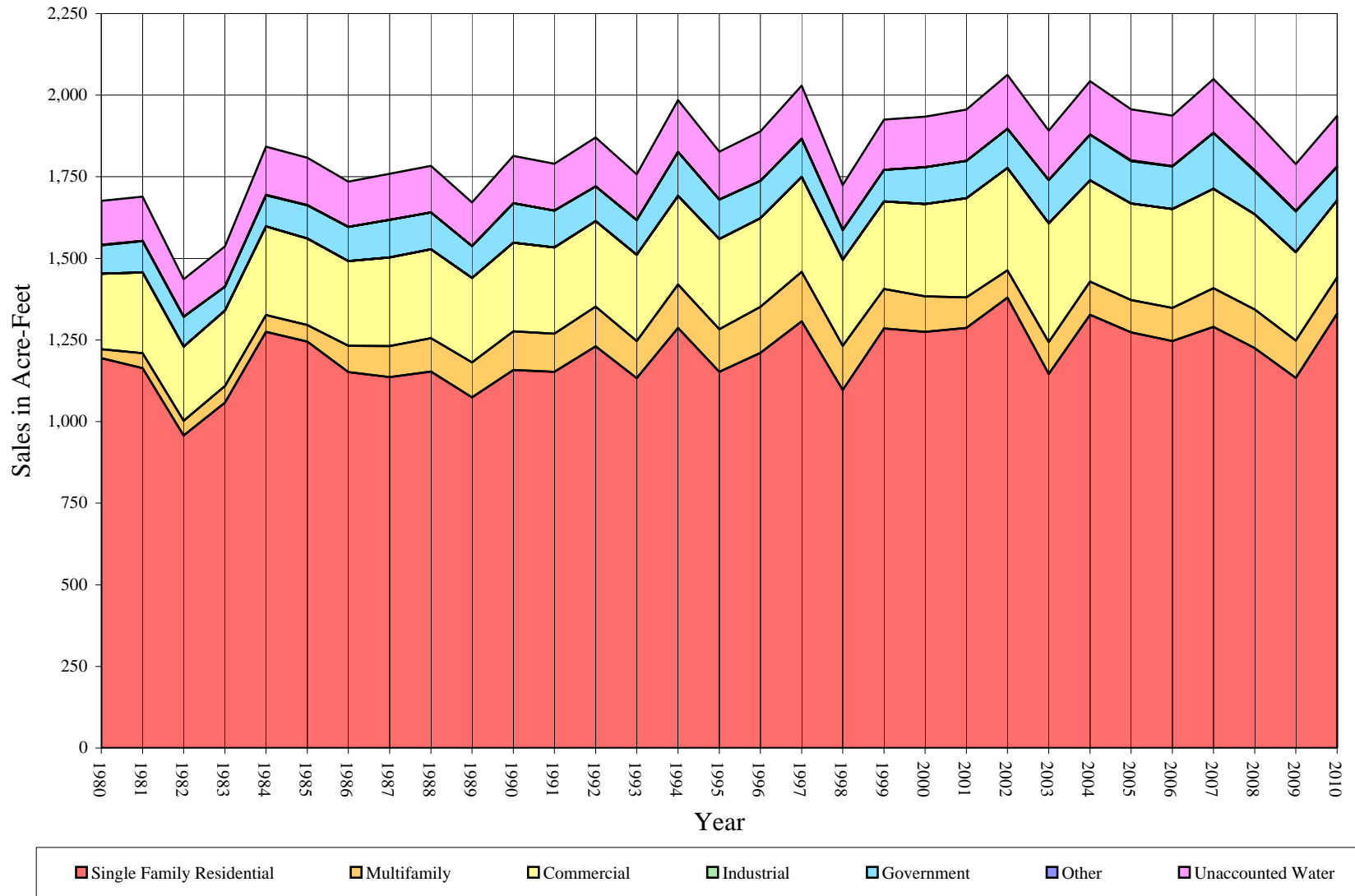
Ten year average = 2000 through 2009.

**California Water Service Company - Willows District**  
**Water Supply and Demand Analysis and Projections**  
**Sales(ccf)**

Worksheet 3

Year	Single Family Residential			Multifamily	Commercial	Industrial	Government	Other	Unaccounted Water	Total(ccf)	Total(ccf)	Total(kgal)
	Total	Metered	Flat Rate							Sales	Production	Production
1980	520,230	73,783	446,447	11,952	100,716	0	37,997	802	58,408	671,697	730,106	546,157
1981	506,780	79,702	427,078	20,268	107,513	0	41,966	270	58,852	676,797	735,649	550,304
1982	417,091	73,748	343,343	19,628	99,062	0	39,448	328	50,048	575,557	625,605	467,985
1983	460,992	78,740	382,252	21,918	100,694	0	32,175	32	53,549	615,811	669,360	500,716
1984	555,340	100,430	454,910	22,437	118,321	0	41,339	692	64,185	738,129	802,315	600,173
1985	542,265	105,140	437,125	22,176	115,586	0	44,133	397	63,005	724,557	787,562	589,137
1986	501,737	100,741	400,996	34,875	113,093	0	45,544	0	60,456	695,249	755,705	565,307
1987	494,973	111,845	383,128	41,358	118,500	0	50,118	0	61,300	704,949	766,249	573,194
1988	502,465	119,863	382,602	44,492	118,736	0	48,945	0	62,142	714,638	776,780	581,072
1989	468,095	120,699	347,396	46,463	112,717	0	42,436	0	58,236	669,711	727,947	544,542
1990	504,606	135,912	368,694	51,501	118,085	0	52,866	0	63,222	727,058	790,281	591,171
1991	502,028	137,537	364,491	50,840	115,214	0	49,078	0	62,362	717,160	779,522	583,123
1992	536,152	150,822	385,330	52,933	113,966	0	46,434	0	65,173	749,485	814,657	609,406
1993	493,651	164,551	329,100	49,263	115,291	0	46,280	0	61,260	704,485	765,745	572,817
1994	560,637	189,374	371,263	57,776	118,371	0	58,759	0	69,178	795,543	864,721	646,856
1995	501,881	182,471	319,410	57,138	120,127	0	52,891	0	63,655	732,037	795,692	595,219
1996	527,301	195,086	332,215	61,430	118,266	0	49,896	0	65,817	756,893	822,710	615,430
1997	569,420	216,457	352,963	65,807	127,031	0	50,857	0	70,706	813,115	883,821	661,144
1998	477,652	184,535	293,117	59,244	114,482	0	39,874	0	60,109	691,252	751,361	562,057
1999	559,960	219,990	339,970	52,498	117,064	0	42,076	0	67,095	771,598	838,693	627,386
2000	555,411	225,730	329,681	47,167	123,265	0	49,140	0	67,390	774,983	842,373	630,139
2001	560,516	237,633	322,883	40,803	132,425	0	49,947	0	68,147	783,691	851,838	637,219
2002	600,852	252,602	348,250	36,724	136,562	0	52,310	0	71,865	826,448	898,313	671,985
2003	499,339	223,080	276,259	42,270	158,880	0	57,547	0	65,916	758,036	823,952	616,359
2004	578,113	253,402	324,711	44,382	135,036	0	61,170	0	71,191	818,701	889,893	665,686
2005	554,486	231,581	322,905	43,282	129,001	0	56,289	1,052	68,183	784,110	852,294	637,560
2006	543,023	242,653	300,370	44,123	132,044	0	57,038	229	67,518	776,457	843,975	631,337
2007	562,106	276,747	285,359	51,515	132,830	0	74,362	413	71,411	821,226	892,637	667,739
2008	533,707	273,862	259,845	51,402	127,285	0	57,216	1,426	67,047	771,036	838,082	626,929
2009	494,069	291,696	202,373	49,571	118,081	0	54,446	657	62,333	716,824	779,157	582,850
2010	579,503	272,978	306,525	48,634	102,753		44,498	700	67,486	776,088	843,574	631,037
5 Yr. Avg.	537,478	263,308	274,170	47,979	127,848	0	59,870	755	67,298	773,931	841,229	629,283
10 Yr. Avg.	548,162	250,899	297,264	45,124	132,541	0	56,947	378	68,100	783,151	851,251	636,780

# Willows District Historical Sales





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

Worksheet 4

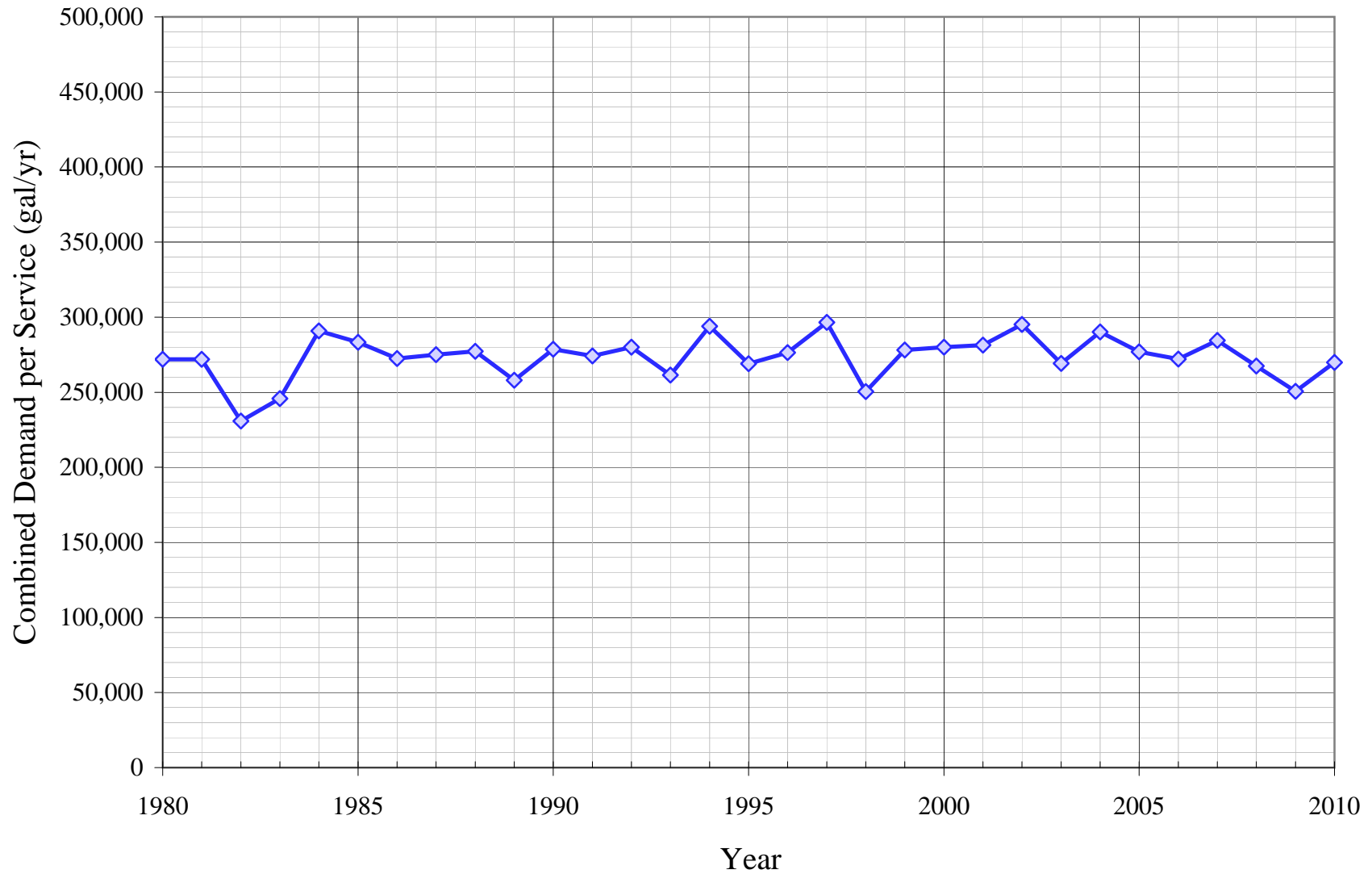
Year	Single Family Residential			Multifamily	Commercial	Industrial	Government	Other	Unaccounted Water	Total(AF) Sales	Total(AF) Production	Total(Mgal) Production
	Total	Metered	Flat Rate									
1980	1,194	169	1,025	27	231	0	87	2	134	1,542	1,676	546
1981	1,163	183	980	47	247	0	96	1	135	1,554	1,689	550
1982	958	169	788	45	227	0	91	1	115	1,321	1,436	468
1983	1,058	181	878	50	231	0	74	0	123	1,414	1,537	501
1984	1,275	231	1,044	52	272	0	95	2	147	1,695	1,842	600
1985	1,245	241	1,004	51	265	0	101	1	145	1,663	1,808	589
1986	1,152	231	921	80	260	0	105	0	139	1,596	1,735	565
1987	1,136	257	880	95	272	0	115	0	141	1,618	1,759	573
1988	1,154	275	878	102	273	0	112	0	143	1,641	1,783	581
1989	1,075	277	798	107	259	0	97	0	134	1,537	1,671	545
1990	1,158	312	846	118	271	0	121	0	145	1,669	1,814	591
1991	1,152	316	837	117	264	0	113	0	143	1,646	1,790	583
1992	1,231	346	885	122	262	0	107	0	150	1,721	1,870	609
1993	1,133	378	756	113	265	0	106	0	141	1,617	1,758	573
1994	1,287	435	852	133	272	0	135	0	159	1,826	1,985	647
1995	1,152	419	733	131	276	0	121	0	146	1,681	1,827	595
1996	1,211	448	763	141	272	0	115	0	151	1,738	1,889	615
1997	1,307	497	810	151	292	0	117	0	162	1,867	2,029	661
1998	1,097	424	673	136	263	0	92	0	138	1,587	1,725	562
1999	1,285	505	780	121	269	0	97	0	154	1,771	1,925	627
2000	1,275	518	757	108	283	0	113	0	155	1,779	1,934	630
2001	1,287	546	741	94	304	0	115	0	156	1,799	1,956	637
2002	1,379	580	799	84	314	0	120	0	165	1,897	2,062	672
2003	1,146	512	634	97	365	0	132	0	151	1,740	1,892	616
2004	1,327	582	745	102	310	0	140	0	163	1,879	2,043	666
2005	1,273	532	741	99	296	0	129	2	157	1,800	1,957	638
2006	1,247	557	690	101	303	0	131	1	155	1,782	1,937	631
2007	1,290	635	655	118	305	0	171	1	164	1,885	2,049	668
2008	1,225	629	597	118	292	0	131	3	154	1,770	1,924	627
2009	1,134	670	465	114	271	0	125	2	143	1,646	1,789	583
2010	1,330	627	704	112	236	0	102	2	155	1,782	1,937	631
5 Yr. Avg.	1,234	604	629	110	293	0	137	2	154	1,777	1,931	629
10 Yr. Avg.	1,258	576	682	104	304	0	131	1	156	1,798	1,954	637

Flat Rate Residential Sales estimated by setting "Unaccounted for Water" at 8.0% of total production.

Five year average = 2005 through 2009.

Ten year average = 2000 through 2009.

# Willows District Historical Demand per Service



**California Water Service Company - Willows District**  
**Water Supply and Demand Analysis and Projections**  
**Demand per Service (Gallons/Service/Year)**

Year	Single Family Residential			Multi-Residential		Commercial	Industrial	Government	Total Other	Unaccounted/ Total Services	Combined Demand/Service
	Total	Metered	Flat Rate	(service)	(unit)						
1980	229,728	127,763	264,632	1,490,120	86,803	275,974	0	835,992	599,938	21,759	271,991
1981	222,345	133,980	253,553	1,263,460	87,639	295,681	0	896,936		21,751	271,889
1982	182,566	122,867	203,840	1,223,564	82,487	273,445	0	843,119		18,470	230,876
1983	200,842	118,514	234,381	1,261,216	86,294	278,979	0	650,502		19,665	245,811
1984	239,990	137,847	286,928	883,371	75,604	321,855	0	792,916		23,263	290,781
1985	232,860	138,958	278,054	829,440	60,543	309,908	0	846,507		22,659	283,239
1986	216,826	130,832	259,711	1,185,832	66,893	298,938	0	873,571		21,795	272,437
1987	212,919	138,520	252,511	1,406,270	76,202	312,127	0	961,304		22,004	275,045
1988	215,028	138,584	259,951	1,512,833	81,976	309,480	0	938,805		22,178	277,229
1989	199,294	133,564	240,398	1,579,852	85,608	287,775	0	813,957		20,636	257,955
1990	213,865	145,242	258,969	1,751,156	94,657	299,436	0	1,014,013		22,298	278,723
1991	210,506	141,131	258,444	1,728,680	93,213	311,141	0	834,384		21,932	274,153
1992	218,805	140,852	279,309	1,799,847	101,270	307,771	0	771,890		22,394	279,929
1993	199,825	144,815	246,677	1,602,230	82,441	314,758	0	752,605		20,915	261,441
1994	225,597	159,349	286,313	1,879,107	95,830	325,543	0	955,539		23,522	294,025
1995	200,124	147,565	251,246	1,858,356	93,733	337,824	0	841,813		21,527	269,086
1996	208,703	151,227	268,664	1,997,949	100,774	331,345	0	794,145		22,108	276,349
1997	225,016	163,722	292,074	2,237,594	120,066	355,902	0	809,440		23,729	296,610
1998	187,367	135,734	246,367	2,014,436	109,157	318,359	0	634,635		20,029	250,359
1999	218,593	158,654	289,323	1,785,056	96,727	323,136	0	669,682		22,245	278,066
2000	217,233	161,651	284,123	1,603,789	86,905	341,619	0	799,115		22,400	280,000
2001	218,307	168,149	279,714	1,387,398	75,179	359,785	0	812,238		22,517	281,457
2002	232,474	176,063	302,859	1,248,703	67,664	371,137	0	850,665		23,613	295,162
2003	192,286	153,050	242,483	1,437,280	74,576	425,606	0	935,829		21,534	269,172
2004	221,992	171,636	287,911	1,509,093	77,389	363,360	0	994,747		23,214	290,175
2005	212,383	156,067	286,536	1,471,690	75,121	343,414	0	935,713	786,951	22,157	276,959
2006	206,302	160,068	269,092	1,500,286	73,185	351,515	0	907,817	171,304	21,770	272,128
2007	210,875	177,093	258,744	1,751,632	93,990	351,109	0	1,183,546	308,945	22,761	284,507
2008	201,636	168,058	255,423	1,325,909	91,989	336,452	0	856,011	533,361	21,397	267,461
2009	188,374	161,992	246,156	1,090,638	88,712	323,556	0	768,461	122,868	20,046	250,580
2010	219,382	142,301	423,839	1,070,022	#DIV/0!	283,633	1	640,131	104,727	21,592	269,905
5 Yr. Avg.	203,914	164,656	263,190	1,428,031	84,599	341,209	0	930,310	384,686	21,626	270,327
10 Yr. Avg.	210,186	165,383	271,304	1,432,642	80,471	356,755	0	904,414	384,686	22,141	276,760

## California Water Service Company - Willows District

### Water Supply and Demand Analysis and Projections

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

Year	Single Family Residential			Multi-Residential		Commercial	Industrial	Government	Total Other	Unaccounted/ Total Services	Combined Demand/Service
	Total	Metered	Flat Rate	(service)	(unit)						
1980	629	350	725	4,083	238	756	0	2,290	1,644	60	745
1981	609	367	695	3,462	240	810	0	2,457		60	745
1982	500	337	558	3,352	226	749	0	2,310		51	633
1983	550	325	642	3,455	236	764	0	1,782		54	673
1984	658	378	786	2,420	207	882	0	2,172		64	797
1985	638	381	762	2,272	166	849	0	2,319		62	776
1986	594	358	712	3,249	183	819	0	2,393		60	746
1987	583	380	692	3,853	209	855	0	2,634		60	754
1988	589	380	712	4,145	225	848	0	2,572		61	760
1989	546	366	659	4,328	235	788	0	2,230		57	707
1990	586	398	710	4,798	259	820	0	2,778		61	764
1991	577	387	708	4,736	255	852	0	2,286		60	751
1992	599	386	765	4,931	277	843	0	2,115		61	767
1993	547	397	676	4,390	226	862	0	2,062		57	716
1994	618	437	784	5,148	263	892	0	2,618		64	806
1995	548	404	688	5,091	257	926	0	2,306		59	737
1996	572	414	736	5,474	276	908	0	2,176		61	757
1997	616	449	800	6,130	329	975	0	2,218		65	813
1998	513	372	675	5,519	299	872	0	1,739		55	686
1999	599	435	793	4,891	265	885	0	1,835		61	762
2000	595	443	778	4,394	238	936	0	2,189		61	767
2001	598	461	766	3,801	206	986	0	2,225		62	771
2002	637	482	830	3,421	185	1,017	0	2,331		65	809
2003	527	419	664	3,938	204	1,166	0	2,564		59	737
2004	608	470	789	4,135	212	996	0	2,725		64	795
2005	582	428	785	4,032	206	941	0	2,564	2,156	61	759
2006	565	439	737	4,110	201	963	0	2,487	469	60	746
2007	578	485	709	4,799	258	962	0	3,243	846	62	779
2008	552	460	700	3,633	252	922	0	2,345	1,461	59	733
2009	516	444	674	2,988	243	886	0	2,105	337	55	687
2010	601	390	1,161	2,932	#DIV/0!	777	0	1,754	287	59	739
5 Yr. Avg.	559	451	721	3,912	232	935	0	2,549	1,054	59	741
10 Yr. Avg.	576	453	743	3,925	220	977	0	2,478	1,054	61	758

Five year average is from years 2005 through 2009.

Ten year average is from years 2000 through 2009.

**California Water Service Company - Willows District**

**Water Supply and Demand Analysis and Projections**

**Percentage Change in Annual Demand**

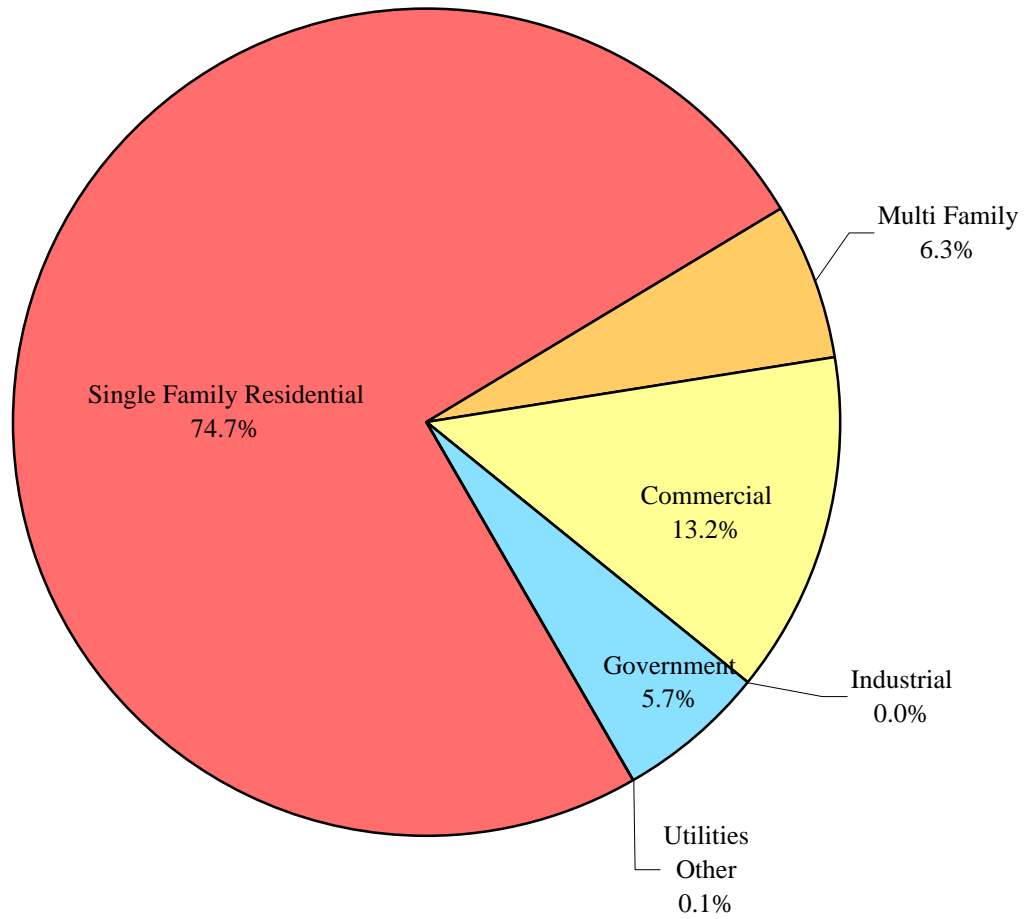
Year	Total S.F. Residential	Metered Residential	Flat Rate Residential	Multifamily	Commercial	Industrial	Government	Other	Unaccounted Water	Total
1981	-2.59%	8.02%	-4.34%	69.58%	6.75%	0.00%	10.45%	-66.33%	0.76%	0.76%
1982	-17.70%	-7.47%	-19.61%	-3.16%	-7.86%	0.00%	-6.00%	21.48%	-14.96%	-14.96%
1983	10.53%	6.77%	11.33%	11.67%	1.65%	0.00%	-18.44%	-90.24%	6.99%	6.99%
1984	20.47%	27.55%	19.01%	2.37%	17.51%	0.00%	28.48%	2062.50%	19.86%	19.86%
1985	-2.35%	4.69%	-3.91%	-1.16%	-2.31%	0.00%	6.76%	-42.63%	-1.84%	-1.84%
1986	-7.47%	-4.18%	-8.27%	57.26%	-2.16%	0.00%	3.20%	-100.00%	-4.04%	-4.04%
1987	-1.35%	11.02%	-4.46%	18.59%	4.78%	0.00%	10.04%	0.00%	1.40%	1.40%
1988	1.51%	7.17%	-0.14%	7.58%	0.20%	0.00%	-2.34%	0.00%	1.37%	1.37%
1989	-6.84%	0.70%	-9.20%	4.43%	-5.07%	0.00%	-13.30%	0.00%	-6.29%	-6.29%
1990	7.80%	12.60%	6.13%	10.84%	4.76%	0.00%	24.58%	0.00%	8.56%	8.56%
1991	-0.51%	1.20%	-1.14%	-1.28%	-2.43%	0.00%	-7.17%	0.00%	-1.36%	-1.36%
1992	6.80%	9.66%	5.72%	4.12%	-1.08%	0.00%	-5.39%	0.00%	4.51%	4.51%
1993	-7.93%	9.10%	-14.59%	-6.93%	1.16%	0.00%	-0.33%	0.00%	-6.00%	-6.00%
1994	13.57%	15.09%	12.81%	17.28%	2.67%	0.00%	26.96%	0.00%	12.93%	12.93%
1995	-10.48%	-3.65%	-13.97%	-1.10%	1.48%	0.00%	-9.99%	0.00%	-7.98%	-7.98%
1996	5.07%	6.91%	4.01%	7.51%	-1.55%	0.00%	-5.66%	0.00%	3.40%	3.40%
1997	7.99%	10.95%	6.25%	7.13%	7.41%	0.00%	1.93%	0.00%	7.43%	7.43%
1998	-16.12%	-14.75%	-16.96%	-9.97%	-9.88%	0.00%	-21.60%	0.00%	-14.99%	-14.99%
1999	17.23%	19.21%	15.98%	-11.39%	2.26%	0.00%	5.52%	0.00%	11.62%	11.62%
2000	-0.81%	2.61%	-3.03%	-10.15%	5.30%	0.00%	16.79%	0.00%	0.44%	0.44%
2001	0.92%	5.27%	-2.06%	-13.49%	7.43%	0.00%	1.64%	0.00%	1.12%	1.12%
2002	7.20%	6.30%	7.86%	-10.00%	3.12%	0.00%	4.73%	0.00%	5.46%	5.46%
2003	-16.89%	-11.69%	-20.67%	15.10%	16.34%	0.00%	10.01%	0.00%	-8.28%	-8.28%
2004	15.78%	13.59%	17.54%	5.00%	-15.01%	0.00%	6.30%	0.00%	8.00%	8.00%
2005	-4.09%	-8.61%	-0.56%	-2.48%	-4.47%	0.00%	-7.98%	0.00%	-4.23%	-4.23%
2006	-2.07%	4.78%	-6.98%	1.94%	2.36%	0.00%	1.33%	-78.23%	-0.98%	-0.98%
2007	3.51%	14.05%	-5.00%	16.75%	0.60%	0.00%	30.37%	80.35%	5.77%	5.77%
2008	-5.05%	-1.04%	-8.94%	-0.22%	-4.17%	0.00%	-23.06%	245.28%	-6.11%	-6.11%
2009	-7.43%	6.51%	-22.12%	-3.56%	-7.23%	0.00%	-4.84%	-53.93%	-7.03%	-7.03%
2010										
5 Yr. Avg.	-3.03%	3.14%	-8.72%	2.49%	-2.58%	0.00%	-0.84%	38.69%	-2.52%	-2.52%
10 Yr. Avg.	-0.89%	3.18%	-4.40%	-0.11%	0.43%	0.00%	3.53%	19.35%	-0.58%	-0.58%

Five year average is from years 2005 through 2009.

Ten year average is from years 2000 through 2009.

# Willows District

## Percent of Total Sales by Type of Use (2010)

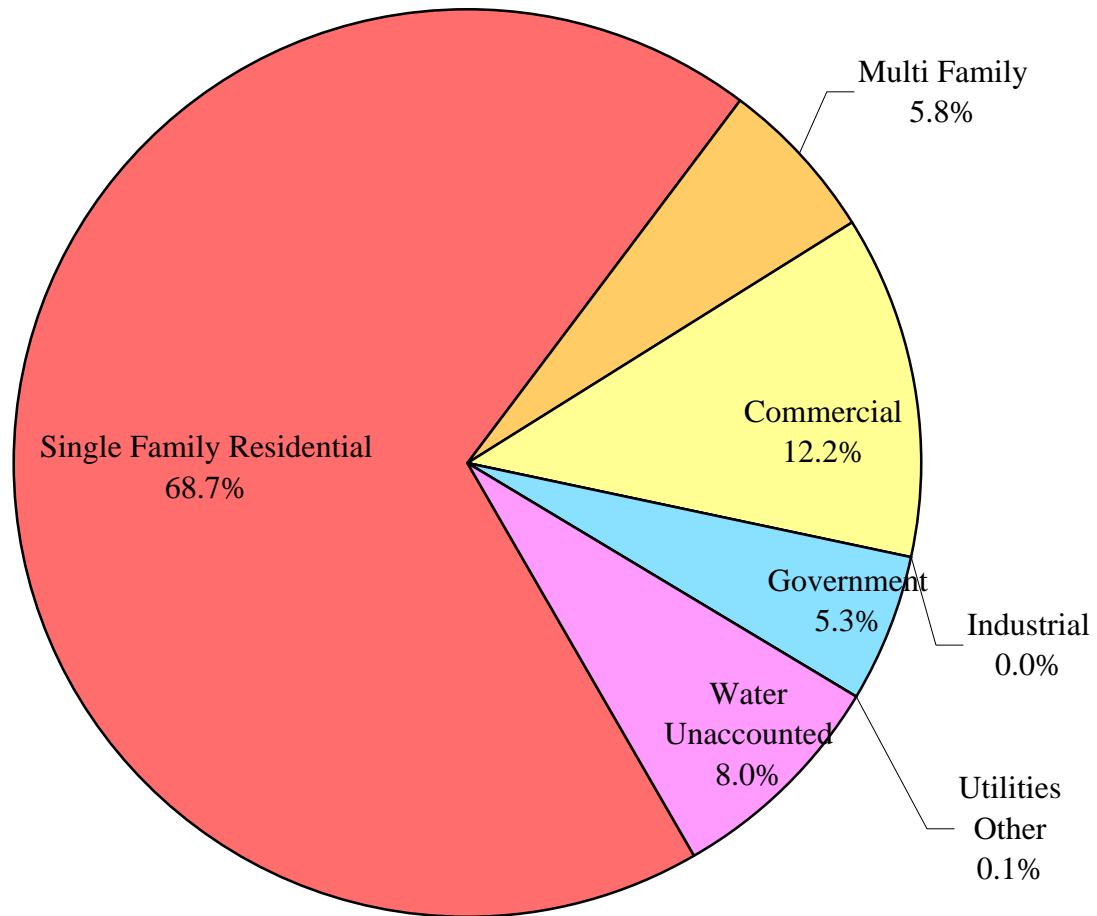


**California Water Service Company - Willows District**  
**Water Supply and Demand Analysis and Projections**  
**Percentage of Total Sales**

Year	Single Family Residential	Multi Family	Commercial	Industrial	Government	Other Utilities	Percent Total
1980	77.5%	1.8%	15.0%	0.0%	5.7%	0.1%	100.0%
1981	74.9%	3.0%	15.9%	0.0%	6.2%	0.0%	100.0%
1982	72.5%	3.4%	17.2%	0.0%	6.9%	0.1%	100.0%
1983	74.9%	3.6%	16.4%	0.0%	5.2%	0.0%	100.0%
1984	75.2%	3.0%	16.0%	0.0%	5.6%	0.1%	100.0%
1985	74.8%	3.1%	16.0%	0.0%	6.1%	0.1%	100.0%
1986	72.2%	5.0%	16.3%	0.0%	6.6%	0.0%	100.0%
1987	70.2%	5.9%	16.8%	0.0%	7.1%	0.0%	100.0%
1988	70.3%	6.2%	16.6%	0.0%	6.8%	0.0%	100.0%
1989	69.9%	6.9%	16.8%	0.0%	6.3%	0.0%	100.0%
1990	69.4%	7.1%	16.2%	0.0%	7.3%	0.0%	100.0%
1991	70.0%	7.1%	16.1%	0.0%	6.8%	0.0%	100.0%
1992	71.5%	7.1%	15.2%	0.0%	6.2%	0.0%	100.0%
1993	70.1%	7.0%	16.4%	0.0%	6.6%	0.0%	100.0%
1994	70.5%	7.3%	14.9%	0.0%	7.4%	0.0%	100.0%
1995	68.6%	7.8%	16.4%	0.0%	7.2%	0.0%	100.0%
1996	69.7%	8.1%	15.6%	0.0%	6.6%	0.0%	100.0%
1997	70.0%	8.1%	15.6%	0.0%	6.3%	0.0%	100.0%
1998	69.1%	8.6%	16.6%	0.0%	5.8%	0.0%	100.0%
1999	72.6%	6.8%	15.2%	0.0%	5.5%	0.0%	100.0%
2000	71.7%	6.1%	15.9%	0.0%	6.3%	0.0%	100.0%
2001	71.5%	5.2%	16.9%	0.0%	6.4%	0.0%	100.0%
2002	72.7%	4.4%	16.5%	0.0%	6.3%	0.0%	100.0%
2003	65.9%	5.6%	21.0%	0.0%	7.6%	0.0%	100.0%
2004	70.6%	5.4%	16.5%	0.0%	7.5%	0.0%	100.0%
2005	70.7%	5.5%	16.5%	0.0%	7.2%	0.1%	100.0%
2006	69.9%	5.7%	17.0%	0.0%	7.3%	0.0%	100.0%
2007	68.4%	6.3%	16.2%	0.0%	9.1%	0.1%	100.0%
2008	69.2%	6.7%	16.5%	0.0%	7.4%	0.2%	100.0%
2009	68.9%	6.9%	16.5%	0.0%	7.6%	0.1%	100.0%
2010	74.7%	6.3%	13.2%	0.0%	5.7%	0.1%	100.0%
5 Yr. Avg.	69.4%	6.2%	16.5%	0.0%	7.7%	0.1%	100.0%
10 Yr. Avg.	70.0%	5.8%	16.9%	0.0%	7.3%	0.0%	100.0%

# Willows District

## Percent of Total Demand by Type of Use (2010)





**California Water Service Company - Willows District**  
**Water Supply and Demand Analysis and Projections**  
**Percentage of Total Demand**

Worksheet 9

Year	Single Family		Commercial	Industrial	Government	Other Utilities	Unaccounted Water	Percent Total
	Residential	Multi Family						
1980	71.3%	1.6%	13.8%	0.0%	5.2%	0.1%	8.0%	100.0%
1981	68.9%	2.8%	14.6%	0.0%	5.7%	0.0%	8.0%	100.0%
1982	66.7%	3.1%	15.8%	0.0%	6.3%	0.1%	8.0%	100.0%
1983	68.9%	3.3%	15.0%	0.0%	4.8%	0.0%	8.0%	100.0%
1984	69.2%	2.8%	14.7%	0.0%	5.2%	0.1%	8.0%	100.0%
1985	68.9%	2.8%	14.7%	0.0%	5.6%	0.1%	8.0%	100.0%
1986	66.4%	4.6%	15.0%	0.0%	6.0%	0.0%	8.0%	100.0%
1987	64.6%	5.4%	15.5%	0.0%	6.5%	0.0%	8.0%	100.0%
1988	64.7%	5.7%	15.3%	0.0%	6.3%	0.0%	8.0%	100.0%
1989	64.3%	6.4%	15.5%	0.0%	5.8%	0.0%	8.0%	100.0%
1990	63.9%	6.5%	14.9%	0.0%	6.7%	0.0%	8.0%	100.0%
1991	64.4%	6.5%	14.8%	0.0%	6.3%	0.0%	8.0%	100.0%
1992	65.8%	6.5%	14.0%	0.0%	5.7%	0.0%	8.0%	100.0%
1993	64.5%	6.4%	15.1%	0.0%	6.0%	0.0%	8.0%	100.0%
1994	64.8%	6.7%	13.7%	0.0%	6.8%	0.0%	8.0%	100.0%
1995	63.1%	7.2%	15.1%	0.0%	6.6%	0.0%	8.0%	100.0%
1996	64.1%	7.5%	14.4%	0.0%	6.1%	0.0%	8.0%	100.0%
1997	64.4%	7.4%	14.4%	0.0%	5.8%	0.0%	8.0%	100.0%
1998	63.6%	7.9%	15.2%	0.0%	5.3%	0.0%	8.0%	100.0%
1999	66.8%	6.3%	14.0%	0.0%	5.0%	0.0%	8.0%	100.0%
2000	65.9%	5.6%	14.6%	0.0%	5.8%	0.0%	8.0%	100.0%
2001	65.8%	4.8%	15.5%	0.0%	5.9%	0.0%	8.0%	100.0%
2002	66.9%	4.1%	15.2%	0.0%	5.8%	0.0%	8.0%	100.0%
2003	60.6%	5.1%	19.3%	0.0%	7.0%	0.0%	8.0%	100.0%
2004	65.0%	5.0%	15.2%	0.0%	6.9%	0.0%	8.0%	100.0%
2005	65.1%	5.1%	15.1%	0.0%	6.6%	0.1%	8.0%	100.0%
2006	64.3%	5.2%	15.6%	0.0%	6.8%	0.0%	8.0%	100.0%
2007	63.0%	5.8%	14.9%	0.0%	8.3%	0.0%	8.0%	100.0%
2008	63.7%	6.1%	15.2%	0.0%	6.8%	0.2%	8.0%	100.0%
2009	63.4%	6.4%	15.2%	0.0%	7.0%	0.1%	8.0%	100.0%
2010	68.7%	5.8%	12.2%	0.0%	5.3%	0.1%	8.0%	100.0%
5 Yr. Avg.	63.9%	5.7%	15.2%	0.0%	7.1%	0.1%	8.0%	100.0%
10 Yr. Avg.	64.4%	5.3%	15.6%	0.0%	6.7%	0.0%	8.0%	100.0%

Five year average is from years 2005 through 2009.

Ten year average is from years 2000 through 2009.

## California Water Service Company - Willows District

### Water Supply and Demand Analysis and Projections

Worksheet 10

Scenario #1: Based on Maintaining Growth at the  10-Year Average Annual Growth and  Low Demand per Service for each Customer Class.  
 5-Year  Average  High

Summary of Historical Growth Rate from Worksheet 2			
Customer Type	5 Yr. Avg. Historical Growth Rate	Individual Growth Rate Selected	Notes
Single Family Residential	0.146%	0.146%	Historical growth rate used
Multi Family Residential	9.812%	0.470%	Overall growth rate used
Commercial	-0.348%	0.470%	Overall growth rate used
Industrial	40.000%	0.470%	Overall growth rate used
Government	2.930%	0.470%	Overall growth rate used
Other	20.000%	0.470%	Overall growth rate used
Overall	0.470%	0.197%	

Summary of Lowest Demand per Service from Worksheets 5 and 6									
Demand/Serv. Units	Multi-Residential						Total Other	Unaccounted Total Serv.	Combined Demand/Serv.
	Residential	(service)	(unit)	Commercial	Industrial	Government			
Gal/Service/Yr	182,566	829,440	82,487	273,445	0	843,119	104,727	18,470	230,876
AF/Service/Yr	0.560	2.545	0.253	0.839	0.000	2.587	0.321	0.057	0.709
Gal/Service/Day	500	2,272	226	749	0	2,310	287	51	633

## California Water Service Company - Willows District

### Water Supply and Demand Analysis and Projections

Worksheet 10

#### 30-year projection Summary

Scenario #1: Based on Maintaining Growth at the  10-Year  5-Year Average Annual Growth and  Low  Average  High Demand per Service for each Customer Class.

Customer Type	Projected Services 2010	Projected Services 2015	Projected Services 2020	Projected Services 2025	Projected Services 2030	Projected Services 2035	Projected Services 2040	Services projected to be added from 2010 - 2040
Single Family Residential	1,965	1,979	1,994	2,008	2,023	2,038	2,053	88
Multi Family Residential	34	35	36	37	38	38	39	5
Commercial	274	281	287	294	301	308	316	41
Industrial	0	0	0	0	0	0	0	0
Government	53	55	56	57	58	60	61	8
Other	4	4	4	4	4	5	5	1
<b>Total</b>	<b>2,331</b>	<b>2,354</b>	<b>2,377</b>	<b>2,401</b>	<b>2,425</b>	<b>2,449</b>	<b>2,474</b>	<b>143</b>

Customer Type	Projected Demand 2010 (ccf)	Projected Demand 2015 (ccf)	Projected Demand 2020 (ccf)	Projected Demand 2025 (ccf)	Projected Demand 2030 (ccf)	Projected Demand 2035 (ccf)	Projected Demand 2040 (ccf)	Projected demand to be added from 2010 - 2040 (ccf)
Single Family Residential	479,534	483,044	486,581	490,143	493,732	497,347	500,988	21,454
Multi Family Residential	37,876	38,775	39,695	40,636	41,600	42,587	43,597	5,721
Commercial	100,262	102,640	105,075	107,568	110,119	112,731	115,406	15,144
Industrial	0	0	0	0	0	0	0	0
Government	60,016	61,440	62,897	64,389	65,917	67,480	69,081	9,065
Other	563	576	590	604	618	633	648	85
Unaccounted	57,544	58,113	58,690	59,275	59,868	60,469	61,078	3,534
<b>Total</b>	<b>735,794</b>	<b>744,588</b>	<b>753,527</b>	<b>762,615</b>	<b>771,854</b>	<b>781,247</b>	<b>790,798</b>	<b>55,004</b>

Customer Type	Projected Demand 2010 (AF)	Projected Demand 2015 (AF)	Projected Demand 2020 (AF)	Projected Demand 2025 (AF)	Projected Demand 2030 (AF)	Projected Demand 2035 (AF)	Projected Demand 2040 (AF)	Projected demand to be added from 2010 - 2040 (AF)
Single Family Residential	1,101	1,109	1,117	1,125	1,133	1,142	1,150	49
Multi Family Residential	87	89	91	93	96	98	100	13
Commercial	230	236	241	247	253	259	265	35
Industrial	0	0	0	0	0	0	0	0
Government	138	141	144	148	151	155	159	21
Other	1	1	1	1	1	1	1	0
Unaccounted	132	133	135	136	137	139	140	8
<b>Total</b>	<b>1,689</b>	<b>1,709</b>	<b>1,730</b>	<b>1,751</b>	<b>1,772</b>	<b>1,794</b>	<b>1,815</b>	<b>126</b>

## California Water Service Company - Willows District

### Water Supply and Demand Analysis and Projections

Worksheet 10

## 2000's Projections

Scenario #1: Based on Maintaining Growth at the

- 10-Year  
 5-Year

Average Annual Growth and

 Low Average High

Demand per Service for each Customer Class.

Customer Type	Actual Services 2001	Actual Services 2002	Actual Services 2003	Actual Services 2004	Actual Services 2005	Actual Services 2006	Actual Services 2007	Actual Services 2008	Actual Services 2009	Projected Services 2010
Residential	1,921	1,933	1,943	1,948	1,953	1,969	1,994	1,980	1,962	1,965
Multi-Residential	22	22	22	22	22	22	22	29	34	34
Commercial	275	275	279	278	281	281	283	283	273	274
Industrial	0	0	0	0	0	0	0	0	0	0
Government	46	46	46	46	45	47	47	50	53	53
Other	0	0	0	0	1	1	1	2	4	4
<b>Total</b>	<b>2,264</b>	<b>2,277</b>	<b>2,290</b>	<b>2,294</b>	<b>2,302</b>	<b>2,320</b>	<b>2,347</b>	<b>2,344</b>	<b>2,326</b>	<b>2,331</b>

Customer Type	Demand 2001(ccf)	Demand 2002(ccf)	Demand 2003(ccf)	Demand 2004(ccf)	Demand 2005(ccf)	Demand 2006(ccf)	Demand 2007(ccf)	Demand 2008(ccf)	Demand 2009(ccf)	Demand 2010(ccf)
Residential	468,747	471,859	474,096	475,438	476,638	480,543	486,644	483,228	478,835	479,534
Multi-Residential	24,394	24,394	24,394	24,394	24,394	24,394	24,394	32,155	37,699	37,876
Commercial	100,646	100,615	102,077	101,620	102,717	102,717	103,448	103,448	99,793	100,262
Industrial	0	0	0	0	0	0	0	0	0	0
Government	51,846	51,846	51,846	51,846	50,719	52,973	52,973	56,354	59,735	60,016
Other	0	0	0	0	140	140	140	280	560	563
Unaccounted	55,900	56,213	56,538	56,643	56,838	57,283	57,949	57,875	57,431	57,544
<b>Total</b>	<b>701,532</b>	<b>704,926</b>	<b>708,950</b>	<b>709,940</b>	<b>711,445</b>	<b>718,049</b>	<b>725,548</b>	<b>733,340</b>	<b>734,052</b>	<b>735,794</b>

Customer Type	Demand 2001(AF)	Demand 2002(AF)	Demand 2003(AF)	Demand 2004(AF)	Demand 2005(AF)	Demand 2006(AF)	Demand 2007(AF)	Demand 2008(AF)	Demand 2009(AF)	Demand 2010(AF)
Residential	1,076	1,083	1,088	1,091	1,094	1,103	1,117	1,109	1,099	1,101
Multi-Residential	56	56	56	56	56	56	56	74	87	87
Commercial	231	231	234	233	236	236	237	237	229	230
Industrial	0	0	0	0	0	0	0	0	0	0
Government	119	119	119	119	116	122	122	129	137	138
Other	0	0	0	0	0	0	0	1	1	1
Unaccounted	128	129	130	130	130	132	133	133	132	132
<b>Total</b>	<b>1,611</b>	<b>1,618</b>	<b>1,628</b>	<b>1,630</b>	<b>1,633</b>	<b>1,648</b>	<b>1,666</b>	<b>1,684</b>	<b>1,685</b>	<b>1,689</b>

## California Water Service Company - Willows District Water Supply and Demand Analysis and Projections

Worksheet 10

## 2010's Projections

Scenario #1: Based on Maintaining Growth at the

- 10-Year  
 5-Year

Average Annual Growth and

 Low Average High

Demand per Service for each Customer Class.

Customer Type	Projected Services 2011	Projected Services 2012	Projected Services 2013	Projected Services 2014	Projected Services 2015	Projected Services 2016	Projected Services 2017	Projected Services 2018	Projected Services 2019	Projected Services 2020
Residential	1,968	1,971	1,973	1,976	1,979	1,982	1,985	1,988	1,991	1,994
Multi-Residential	34	34	35	35	35	35	35	35	36	36
Commercial	276	277	278	279	281	282	283	285	286	287
Industrial	0	0	0	0	0	0	0	0	0	0
Government	53	54	54	54	55	55	55	55	56	56
Other	4	4	4	4	4	4	4	4	4	4
<b>Total</b>	<b>2,335</b>	<b>2,340</b>	<b>2,344</b>	<b>2,349</b>	<b>2,354</b>	<b>2,358</b>	<b>2,363</b>	<b>2,368</b>	<b>2,372</b>	<b>2,377</b>

Customer Type	Demand 2011(ccf)	Demand 2012(ccf)	Demand 2013(ccf)	Demand 2014(ccf)	Demand 2015(ccf)	Demand 2016(ccf)	Demand 2017(ccf)	Demand 2018(ccf)	Demand 2019(ccf)	Demand 2020(ccf)
Residential	480,234	480,935	481,637	482,340	483,044	483,750	484,456	485,163	485,872	486,581
Multi-Residential	38,054	38,233	38,413	38,593	38,775	38,957	39,140	39,324	39,509	39,695
Commercial	100,733	101,206	101,682	102,160	102,640	103,123	103,607	104,094	104,583	105,075
Industrial	0	0	0	0	0	0	0	0	0	0
Government	60,298	60,582	60,866	61,152	61,440	61,729	62,019	62,310	62,603	62,897
Other	565	568	571	573	576	579	581	584	587	590
Unaccounted	57,657	57,771	57,884	57,999	58,113	58,228	58,343	58,458	58,574	58,690
<b>Total</b>	<b>737,541</b>	<b>739,294</b>	<b>741,053</b>	<b>742,818</b>	<b>744,588</b>	<b>746,364</b>	<b>748,146</b>	<b>749,934</b>	<b>751,728</b>	<b>753,527</b>

Customer Type	Demand 2011(AF)	Demand 2012(AF)	Demand 2013(AF)	Demand 2014(AF)	Demand 2015(AF)	Demand 2016(AF)	Demand 2017(AF)	Demand 2018(AF)	Demand 2019(AF)	Demand 2020(AF)
Residential	1,102	1,104	1,106	1,107	1,109	1,111	1,112	1,114	1,115	1,117
Multi-Residential	87	88	88	89	89	89	90	90	91	91
Commercial	231	232	233	235	236	237	238	239	240	241
Industrial	0	0	0	0	0	0	0	0	0	0
Government	138	139	140	140	141	142	142	143	144	144
Other	1	1	1	1	1	1	1	1	1	1
Unaccounted	132	133	133	133	133	134	134	134	134	135
<b>Total</b>	<b>1,693</b>	<b>1,697</b>	<b>1,701</b>	<b>1,705</b>	<b>1,709</b>	<b>1,713</b>	<b>1,718</b>	<b>1,722</b>	<b>1,726</b>	<b>1,730</b>

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

**2020's Projections**

Scenario #1: Based on Maintaining Growth at the

- 10-Year
- 5-Year

Average Annual Growth and

- Low
- Average
- High

Demand per Service for each Customer Class.

Customer Type	Projected Services 2021	Projected Services 2022	Projected Services 2023	Projected Services 2024	Projected Services 2025	Projected Services 2026	Projected Services 2027	Projected Services 2028	Projected Services 2029	Projected Services 2030
Residential	1,997	2,000	2,002	2,005	2,008	2,011	2,014	2,017	2,020	2,023
Multi-Residential	36	36	36	36	37	37	37	37	37	38
Commercial	289	290	292	293	294	296	297	298	300	301
Industrial	0	0	0	0	0	0	0	0	0	0
Government	56	56	57	57	57	57	58	58	58	58
Other	4	4	4	4	4	4	4	4	4	4
<b>Total</b>	<b>2,382</b>	<b>2,386</b>	<b>2,391</b>	<b>2,396</b>	<b>2,401</b>	<b>2,405</b>	<b>2,410</b>	<b>2,415</b>	<b>2,420</b>	<b>2,425</b>

Customer Type	Demand 2021(ccf)	Demand 2022(ccf)	Demand 2023(ccf)	Demand 2024(ccf)	Demand 2025(ccf)	Demand 2026(ccf)	Demand 2027(ccf)	Demand 2028(ccf)	Demand 2029(ccf)	Demand 2030(ccf)
Residential	487,291	488,003	488,715	489,429	490,143	490,859	491,576	492,293	493,012	493,732
Multi-Residential	39,881	40,069	40,257	40,446	40,636	40,827	41,019	41,212	41,406	41,600
Commercial	105,569	106,065	106,563	107,064	107,568	108,073	108,581	109,091	109,604	110,119
Industrial	0	0	0	0	0	0	0	0	0	0
Government	63,193	63,490	63,788	64,088	64,389	64,692	64,996	65,301	65,608	65,917
Other	592	595	598	601	604	606	609	612	615	618
Unaccounted	58,807	58,923	59,040	59,157	59,275	59,393	59,511	59,630	59,749	59,868
<b>Total</b>	<b>755,333</b>	<b>757,145</b>	<b>758,962</b>	<b>760,786</b>	<b>762,615</b>	<b>764,451</b>	<b>766,292</b>	<b>768,140</b>	<b>769,994</b>	<b>771,854</b>

Customer Type	Demand 2021(AF)	Demand 2022(AF)	Demand 2023(AF)	Demand 2024(AF)	Demand 2025(AF)	Demand 2026(AF)	Demand 2027(AF)	Demand 2028(AF)	Demand 2029(AF)	Demand 2030(AF)
Residential	1,119	1,120	1,122	1,124	1,125	1,127	1,129	1,130	1,132	1,133
Multi-Residential	92	92	92	93	93	94	94	95	95	96
Commercial	242	243	245	246	247	248	249	250	252	253
Industrial	0	0	0	0	0	0	0	0	0	0
Government	145	146	146	147	148	149	149	150	151	151
Other	1	1	1	1	1	1	1	1	1	1
Unaccounted	135	135	136	136	136	136	137	137	137	137
<b>Total</b>	<b>1,734</b>	<b>1,738</b>	<b>1,742</b>	<b>1,747</b>	<b>1,751</b>	<b>1,755</b>	<b>1,759</b>	<b>1,763</b>	<b>1,768</b>	<b>1,772</b>

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

**2030's Projections**

Scenario #1: Based on Maintaining Growth at the  10-Year Average Annual Growth and  Low Demand per Service for each Customer Class.  
 5-Year Average Annual Growth and  Average Demand per Service for each Customer Class.  
 High Demand per Service for each Customer Class.

Customer Type	Projected Services 2031	Projected Services 2032	Projected Services 2033	Projected Services 2034	Projected Services 2035	Projected Services 2036	Projected Services 2037	Projected Services 2038	Projected Services 2039	Projected Services 2040
Residential	2,026	2,029	2,032	2,035	2,038	2,041	2,044	2,047	2,050	2,053
Multi-Residential	38	38	38	38	38	39	39	39	39	39
Commercial	303	304	306	307	308	310	311	313	314	316
Industrial	0	0	0	0	0	0	0	0	0	0
Government	59	59	59	60	60	60	60	61	61	61
Other	4	4	4	4	5	5	5	5	5	5
<b>Total</b>	<b>2,430</b>	<b>2,434</b>	<b>2,439</b>	<b>2,444</b>	<b>2,449</b>	<b>2,454</b>	<b>2,459</b>	<b>2,464</b>	<b>2,469</b>	<b>2,474</b>

Customer Type	Demand 2031(ccf)	Demand 2032(ccf)	Demand 2033(ccf)	Demand 2034(ccf)	Demand 2035(ccf)	Demand 2036(ccf)	Demand 2037(ccf)	Demand 2038(ccf)	Demand 2039(ccf)	Demand 2040(ccf)
Residential	494,453	495,175	495,898	496,622	497,347	498,073	498,800	499,528	500,258	500,988
Multi-Residential	41,796	41,992	42,189	42,388	42,587	42,787	42,988	43,190	43,393	43,597
Commercial	110,637	111,157	111,679	112,204	112,731	113,261	113,794	114,328	114,866	115,406
Industrial	0	0	0	0	0	0	0	0	0	0
Government	66,227	66,538	66,851	67,165	67,480	67,798	68,116	68,436	68,758	69,081
Other	621	624	627	630	633	636	639	642	645	648
Unaccounted	59,987	60,107	60,228	60,348	60,469	60,590	60,712	60,833	60,956	61,078
<b>Total</b>	<b>773,720</b>	<b>775,592</b>	<b>777,471</b>	<b>779,356</b>	<b>781,247</b>	<b>783,144</b>	<b>785,048</b>	<b>786,958</b>	<b>788,875</b>	<b>790,798</b>

Customer Type	Demand 2031(AF)	Demand 2032(AF)	Demand 2033(AF)	Demand 2034(AF)	Demand 2035(AF)	Demand 2036(AF)	Demand 2037(AF)	Demand 2038(AF)	Demand 2039(AF)	Demand 2040(AF)
Residential	1,135	1,137	1,138	1,140	1,142	1,143	1,145	1,147	1,148	1,150
Multi-Residential	96	96	97	97	98	98	99	99	100	100
Commercial	254	255	256	258	259	260	261	262	264	265
Industrial	0	0	0	0	0	0	0	0	0	0
Government	152	153	153	154	155	156	156	157	158	159
Other	1	1	1	1	1	1	1	1	1	1
Unaccounted	138	138	138	139	139	139	139	140	140	140
<b>Total</b>	<b>1,776</b>	<b>1,781</b>	<b>1,785</b>	<b>1,789</b>	<b>1,794</b>	<b>1,798</b>	<b>1,802</b>	<b>1,807</b>	<b>1,811</b>	<b>1,815</b>

## California Water Service Company - Willows District

### Water Supply and Demand Analysis and Projections

Worksheet 11

Scenario #2: Based on Maintaining Growth at the  10-Year Average Annual Growth and  Low Demand per Service for each Customer Class.  
 5-Year  Average  High

Summary of Historical Growth Rate from Worksheet 2			
Customer Type	5 Yr. Avg. Historical Growth Rate	Individual Growth Rate Selected	Notes
Single Family Residential	0.146%	0.146%	Historical growth rate used
Multi Family Residential	9.812%	0.470%	Overall growth rate used
Commercial	-0.348%	0.470%	Overall growth rate used
Industrial	40.000%	0.470%	Overall growth rate used
Government	2.930%	0.470%	Overall growth rate used
Other	20.000%	0.470%	Overall growth rate used
Overall	0.470%	0.197%	

Summary of Average Demand per Service from Worksheets 5 and 6									
Demand/Serv. Units	Multi-Residential			Commercial	Industrial	Government	Total Other	Unaccounted Total Serv.	Combined Demand/Serv.
	Residential	(service)	(unit)						
Gal/Service/Yr	210,506	1,728,680	93,213	311,141	0	834,384	375,442	21,932	274,153
AF/Service/Yr	0.646	5.305	0.286	0.955	0.000	2.561	1.152	0.067	0.841
Gal/Service/Day	577	4,736	255	852	0	2,286	1,029	60	751



## California Water Service Company - Willows District

### Water Supply and Demand Analysis and Projections

Worksheet 11

#### 30-year projection Summary

Scenario #2: Based on Maintaining Growth at the  10-Year  5-Year Average Annual Growth and  Low  Average  High Demand per Service for each Customer Class.

Customer Type	Projected Services 2010	Projected Services 2015	Projected Services 2020	Projected Services 2025	Projected Services 2030	Projected Services 2035	Projected Services 2040	Services projected to be added from 2010 - 2040
Single Family Residential	1,965	1,979	1,994	2,008	2,023	2,038	2,053	88
Multi Family Residential	34	35	36	37	38	38	39	5
Commercial	274	281	287	294	301	308	316	41
Industrial	0	0	0	0	0	0	0	0
Government	53	55	56	57	58	60	61	8
Other	4	4	4	4	4	5	5	1
<b>Total</b>	<b>2,331</b>	<b>2,354</b>	<b>2,377</b>	<b>2,401</b>	<b>2,425</b>	<b>2,449</b>	<b>2,474</b>	<b>143</b>

Customer Type	Projected Demand 2010 (ccf)	Projected Demand 2015 (ccf)	Projected Demand 2020 (ccf)	Projected Demand 2025 (ccf)	Projected Demand 2030 (ccf)	Projected Demand 2035 (ccf)	Projected Demand 2040 (ccf)	Projected demand to be added from 2010 - 2040 (ccf)
Single Family Residential	552,922	556,970	561,048	565,156	569,294	573,462	577,660	24,738
Multi Family Residential	78,940	80,812	82,730	84,692	86,701	88,758	90,863	11,923
Commercial	114,083	116,790	119,560	122,396	125,300	128,272	131,315	17,232
Industrial	0	0	0	0	0	0	0	0
Government	59,394	60,803	62,246	63,722	65,234	66,781	68,365	8,971
Other	2,017	2,065	2,114	2,164	2,215	2,268	2,322	305
Unaccounted	68,330	69,006	69,691	70,386	71,090	71,804	72,527	4,197
<b>Total</b>	<b>875,687</b>	<b>886,447</b>	<b>897,389</b>	<b>908,517</b>	<b>919,834</b>	<b>931,344</b>	<b>943,053</b>	<b>67,366</b>

Customer Type	Projected Demand 2010 (AF)	Projected Demand 2015 (AF)	Projected Demand 2020 (AF)	Projected Demand 2025 (AF)	Projected Demand 2030 (AF)	Projected Demand 2035 (AF)	Projected Demand 2040 (AF)	Projected demand to be added from 2010 - 2040 (AF)
Single Family Residential	1,269	1,279	1,288	1,297	1,307	1,316	1,326	57
Multi Family Residential	181	186	190	194	199	204	209	27
Commercial	262	268	274	281	288	294	301	40
Industrial	0	0	0	0	0	0	0	0
Government	136	140	143	146	150	153	157	21
Other	5	5	5	5	5	5	5	1
Unaccounted	157	158	160	162	163	165	167	10
<b>Total</b>	<b>2,010</b>	<b>2,035</b>	<b>2,060</b>	<b>2,086</b>	<b>2,112</b>	<b>2,138</b>	<b>2,165</b>	<b>155</b>

## California Water Service Company - Willows District

### Water Supply and Demand Analysis and Projections

Worksheet 11

Scenario #2: Based on Maintaining Growth at the

 10-Year  
 5-Year

Average Annual Growth and

## 2000's Projections

 Low  
 Average  
 High

Demand per Service for each Customer Class.

Customer Type	Actual Services 2001	Actual Services 2002	Actual Services 2003	Actual Services 2004	Actual Services 2005	Actual Services 2006	Actual Services 2007	Actual Services 2008	Actual Services 2009	Projected Services 2010
Residential	1,921	1,933	1,943	1,948	1,953	1,969	1,994	1,980	1,962	1,965
Multi-Residential	22	22	22	22	22	22	22	29	34	34
Commercial	275	275	279	278	281	281	283	283	273	274
Industrial	0	0	0	0	0	0	0	0	0	0
Government	46	46	46	46	45	47	47	50	53	53
Other	0	0	0	0	1	1	1	2	4	4
<b>Total</b>	<b>2,264</b>	<b>2,277</b>	<b>2,290</b>	<b>2,294</b>	<b>2,302</b>	<b>2,320</b>	<b>2,347</b>	<b>2,344</b>	<b>2,326</b>	<b>2,331</b>

Customer Type	Demand 2001(ccf)	Demand 2002(ccf)	Demand 2003(ccf)	Demand 2004(ccf)	Demand 2005(ccf)	Demand 2006(ccf)	Demand 2007(ccf)	Demand 2008(ccf)	Demand 2009(ccf)	Demand 2010(ccf)
Residential	540,485	544,073	546,652	548,200	549,584	554,086	561,121	557,182	552,116	552,922
Multi-Residential	50,840	50,840	50,840	50,840	50,840	50,840	50,840	67,016	78,571	78,940
Commercial	114,520	114,486	116,149	115,629	116,877	116,877	117,709	117,709	113,550	114,083
Industrial	0	0	0	0	0	0	0	0	0	0
Government	51,309	51,309	51,309	51,309	50,193	52,424	52,424	55,770	59,116	59,394
Other	0	0	0	0	502	502	502	1,004	2,008	2,017
Unaccounted	66,378	66,750	67,136	67,260	67,492	68,020	68,812	68,724	68,196	68,330
<b>Total</b>	<b>823,532</b>	<b>827,456</b>	<b>832,086</b>	<b>833,238</b>	<b>835,488</b>	<b>842,749</b>	<b>851,408</b>	<b>867,404</b>	<b>873,557</b>	<b>875,687</b>

Customer Type	Demand 2001(AF)	Demand 2002(AF)	Demand 2003(AF)	Demand 2004(AF)	Demand 2005(AF)	Demand 2006(AF)	Demand 2007(AF)	Demand 2008(AF)	Demand 2009(AF)	Demand 2010(AF)
Residential	1,241	1,249	1,255	1,259	1,262	1,272	1,288	1,279	1,267	1,269
Multi-Residential	117	117	117	117	117	117	117	154	180	181
Commercial	263	263	267	265	268	268	270	270	261	262
Industrial	0	0	0	0	0	0	0	0	0	0
Government	118	118	118	118	115	120	120	128	136	136
Other	0	0	0	0	1	1	1	2	5	5
Unaccounted	152	153	154	154	155	156	158	158	157	157
<b>Total</b>	<b>1,891</b>	<b>1,900</b>	<b>1,910</b>	<b>1,913</b>	<b>1,918</b>	<b>1,935</b>	<b>1,955</b>	<b>1,991</b>	<b>2,005</b>	<b>2,010</b>

## California Water Service Company - Willows District

### Water Supply and Demand Analysis and Projections

Worksheet 11

Scenario #2: Based on Maintaining Growth at the  10-Year  5-Year Average Annual Growth and  Low  Average  High Demand per Service for each Customer Class.

Customer Type	Projected Services 2011	Projected Services 2012	Projected Services 2013	Projected Services 2014	Projected Services 2015	Projected Services 2016	Projected Services 2017	Projected Services 2018	Projected Services 2019	Projected Services 2020
Residential	1,968	1,971	1,973	1,976	1,979	1,982	1,985	1,988	1,991	1,994
Multi-Residential	34	34	35	35	35	35	35	35	36	36
Commercial	276	277	278	279	281	282	283	285	286	287
Industrial	0	0	0	0	0	0	0	0	0	0
Government	53	54	54	54	55	55	55	55	56	56
Other	4	4	4	4	4	4	4	4	4	4
<b>Total</b>	<b>2,335</b>	<b>2,340</b>	<b>2,344</b>	<b>2,349</b>	<b>2,354</b>	<b>2,358</b>	<b>2,363</b>	<b>2,368</b>	<b>2,372</b>	<b>2,377</b>

Customer Type	Demand 2011(ccf)	Demand 2012(ccf)	Demand 2013(ccf)	Demand 2014(ccf)	Demand 2015(ccf)	Demand 2016(ccf)	Demand 2017(ccf)	Demand 2018(ccf)	Demand 2019(ccf)	Demand 2020(ccf)
Residential	553,730	554,538	555,348	556,158	556,970	557,784	558,598	559,414	560,230	561,048
Multi-Residential	79,311	79,684	80,058	80,434	80,812	81,192	81,574	81,957	82,342	82,730
Commercial	114,620	115,158	115,700	116,243	116,790	117,339	117,890	118,444	119,001	119,560
Industrial	0	0	0	0	0	0	0	0	0	0
Government	59,673	59,954	60,236	60,519	60,803	61,089	61,376	61,665	61,954	62,246
Other	2,026	2,036	2,046	2,055	2,065	2,075	2,084	2,094	2,104	2,114
Unaccounted	68,465	68,599	68,735	68,870	69,006	69,143	69,279	69,416	69,554	69,691
<b>Total</b>	<b>877,825</b>	<b>879,969</b>	<b>882,121</b>	<b>884,281</b>	<b>886,447</b>	<b>888,621</b>	<b>890,802</b>	<b>892,990</b>	<b>895,186</b>	<b>897,389</b>

Customer Type	Demand 2011(AF)	Demand 2012(AF)	Demand 2013(AF)	Demand 2014(AF)	Demand 2015(AF)	Demand 2016(AF)	Demand 2017(AF)	Demand 2018(AF)	Demand 2019(AF)	Demand 2020(AF)
Residential	1,271	1,273	1,275	1,277	1,279	1,281	1,282	1,284	1,286	1,288
Multi-Residential	182	183	184	185	186	186	187	188	189	190
Commercial	263	264	266	267	268	269	271	272	273	274
Industrial	0	0	0	0	0	0	0	0	0	0
Government	137	138	138	139	140	140	141	142	142	143
Other	5	5	5	5	5	5	5	5	5	5
Unaccounted	157	157	158	158	158	159	159	159	160	160
<b>Total</b>	<b>2,015</b>	<b>2,020</b>	<b>2,025</b>	<b>2,030</b>	<b>2,035</b>	<b>2,040</b>	<b>2,045</b>	<b>2,050</b>	<b>2,055</b>	<b>2,060</b>

## California Water Service Company - Willows District

### Water Supply and Demand Analysis and Projections

Worksheet 11

## 2020's Projections

Scenario #2: Based on Maintaining Growth at the  10-Year Average Annual Growth and  Low Demand per Service for each Customer Class.  
 5-Year  Average  High

Customer Type	Projected Services 2021	Projected Services 2022	Projected Services 2023	Projected Services 2024	Projected Services 2025	Projected Services 2026	Projected Services 2027	Projected Services 2028	Projected Services 2029	Projected Services 2030
Residential	1,997	2,000	2,002	2,005	2,008	2,011	2,014	2,017	2,020	2,023
Multi-Residential	36	36	36	36	37	37	37	37	37	38
Commercial	289	290	292	293	294	296	297	298	300	301
Industrial	0	0	0	0	0	0	0	0	0	0
Government	56	56	57	57	57	57	58	58	58	58
Other	4	4	4	4	4	4	4	4	4	4
<b>Total</b>	<b>2,382</b>	<b>2,386</b>	<b>2,391</b>	<b>2,396</b>	<b>2,401</b>	<b>2,405</b>	<b>2,410</b>	<b>2,415</b>	<b>2,420</b>	<b>2,425</b>

Customer Type	Demand 2021(ccf)	Demand 2022(ccf)	Demand 2023(ccf)	Demand 2024(ccf)	Demand 2025(ccf)	Demand 2026(ccf)	Demand 2027(ccf)	Demand 2028(ccf)	Demand 2029(ccf)	Demand 2030(ccf)
Residential	561,867	562,688	563,509	564,332	565,156	565,981	566,807	567,635	568,464	569,294
Multi-Residential	83,118	83,509	83,901	84,296	84,692	85,090	85,490	85,892	86,295	86,701
Commercial	120,122	120,687	121,254	121,824	122,396	122,972	123,550	124,130	124,714	125,300
Industrial	0	0	0	0	0	0	0	0	0	0
Government	62,538	62,832	63,127	63,424	63,722	64,022	64,323	64,625	64,929	65,234
Other	2,124	2,134	2,144	2,154	2,164	2,174	2,184	2,195	2,205	2,215
Unaccounted	69,830	69,968	70,107	70,246	70,386	70,526	70,666	70,807	70,948	71,090
<b>Total</b>	<b>899,599</b>	<b>901,817</b>	<b>904,043</b>	<b>906,276</b>	<b>908,517</b>	<b>910,765</b>	<b>913,020</b>	<b>915,284</b>	<b>917,555</b>	<b>919,834</b>

Customer Type	Demand 2021(AF)	Demand 2022(AF)	Demand 2023(AF)	Demand 2024(AF)	Demand 2025(AF)	Demand 2026(AF)	Demand 2027(AF)	Demand 2028(AF)	Demand 2029(AF)	Demand 2030(AF)
Residential	1,290	1,292	1,294	1,296	1,297	1,299	1,301	1,303	1,305	1,307
Multi-Residential	191	192	193	194	194	195	196	197	198	199
Commercial	276	277	278	280	281	282	284	285	286	288
Industrial	0	0	0	0	0	0	0	0	0	0
Government	144	144	145	146	146	147	148	148	149	150
Other	5	5	5	5	5	5	5	5	5	5
Unaccounted	160	161	161	161	162	162	162	163	163	163
<b>Total</b>	<b>2,065</b>	<b>2,070</b>	<b>2,075</b>	<b>2,081</b>	<b>2,086</b>	<b>2,091</b>	<b>2,096</b>	<b>2,101</b>	<b>2,106</b>	<b>2,112</b>

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

**2030's Projections**

Scenario #2: Based on Maintaining Growth at the  10-Year  5-Year Average Annual Growth and  Low  Average  High Demand per Service for each Customer Class.

Customer Type	Projected Services 2031	Projected Services 2032	Projected Services 2033	Projected Services 2034	Projected Services 2035	Projected Services 2036	Projected Services 2037	Projected Services 2038	Projected Services 2039	Projected Services 2040
Residential	2,026	2,029	2,032	2,035	2,038	2,041	2,044	2,047	2,050	2,053
Multi-Residential	38	38	38	38	38	39	39	39	39	39
Commercial	303	304	306	307	308	310	311	313	314	316
Industrial	0	0	0	0	0	0	0	0	0	0
Government	59	59	59	60	60	60	60	61	61	61
Other	4	4	4	4	5	5	5	5	5	5
<b>Total</b>	<b>2,430</b>	<b>2,434</b>	<b>2,439</b>	<b>2,444</b>	<b>2,449</b>	<b>2,454</b>	<b>2,459</b>	<b>2,464</b>	<b>2,469</b>	<b>2,474</b>

Customer Type	Demand 2031(ccf)	Demand 2032(ccf)	Demand 2033(ccf)	Demand 2034(ccf)	Demand 2035(ccf)	Demand 2036(ccf)	Demand 2037(ccf)	Demand 2038(ccf)	Demand 2039(ccf)	Demand 2040(ccf)
Residential	570,125	570,957	571,791	572,626	573,462	574,299	575,137	575,977	576,818	577,660
Multi-Residential	87,109	87,518	87,929	88,343	88,758	89,175	89,594	90,015	90,438	90,863
Commercial	125,889	126,481	127,075	127,672	128,272	128,875	129,481	130,089	130,701	131,315
Industrial	0	0	0	0	0	0	0	0	0	0
Government	65,540	65,848	66,158	66,469	66,781	67,095	67,410	67,727	68,046	68,365
Other	2,226	2,236	2,247	2,257	2,268	2,279	2,289	2,300	2,311	2,322
Unaccounted	71,232	71,374	71,517	71,660	71,804	71,948	72,092	72,236	72,382	72,527
<b>Total</b>	<b>922,120</b>	<b>924,415</b>	<b>926,717</b>	<b>929,027</b>	<b>931,344</b>	<b>933,670</b>	<b>936,004</b>	<b>938,345</b>	<b>940,695</b>	<b>943,053</b>

Customer Type	Demand 2031(AF)	Demand 2032(AF)	Demand 2033(AF)	Demand 2034(AF)	Demand 2035(AF)	Demand 2036(AF)	Demand 2037(AF)	Demand 2038(AF)	Demand 2039(AF)	Demand 2040(AF)
Residential	1,309	1,311	1,313	1,315	1,316	1,318	1,320	1,322	1,324	1,326
Multi-Residential	200	201	202	203	204	205	206	207	208	209
Commercial	289	290	292	293	294	296	297	299	300	301
Industrial	0	0	0	0	0	0	0	0	0	0
Government	150	151	152	153	153	154	155	155	156	157
Other	5	5	5	5	5	5	5	5	5	5
Unaccounted	164	164	164	165	165	165	166	166	166	167
<b>Total</b>	<b>2,117</b>	<b>2,122</b>	<b>2,127</b>	<b>2,133</b>	<b>2,138</b>	<b>2,143</b>	<b>2,149</b>	<b>2,154</b>	<b>2,160</b>	<b>2,165</b>

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

Scenario #3: Based on Maintaining Growth at the  10-Year Average Annual Growth and  Low Demand per Service for each Customer Class.  
 5-Year  Average  High

Summary of Historical Growth Rate from Worksheet 2			
Customer Type	5 Yr. Avg. Historical Growth Rate	Individual Growth Rate Selected	Notes
Single Family Residential	0.146%	0.146%	Historical growth rate used
Multi Family Residential	9.812%	0.470%	Overall growth rate used
Commercial	-0.348%	0.470%	Overall growth rate used
Industrial	40.000%	0.470%	Overall growth rate used
Government	2.930%	0.470%	Overall growth rate used
Other	20.000%	0.470%	Overall growth rate used
Overall	0.470%	0.197%	

Summary of Average Demand per Service from Worksheets 5 and 6									
Demand/Serv. Units	Multi-Residential					Total Other	Unaccounted Total Serv.	Combined Demand/Serv.	
	Residential	(service)	(unit)	Commercial	Industrial				
Gal/Service/Yr	225,016	2,237,594	120,066	295,681	0	1,183,546	786,951	23,729	296,610
AF/Service/Yr	0.691	6.867	0.368	0.907	0.000	3.632	2.415	0.073	0.910
Gal/Service/Day	616	6,130	329	810	0	3,243	2,156	65	813

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

**30-year projection Summary**

Scenario #3: Based on Maintaining Growth at the

- 10-Year  
 5-Year

Average Annual Growth and

- Low  
 Average  
 High

Demand per Service for each Customer Class.

Customer Type	Projected Services 2010	Projected Services 2015	Projected Services 2020	Projected Services 2025	Projected Services 2030	Projected Services 2035	Projected Services 2040	Services projected to be added from 2010 - 2040
Single Family Residential	1,965	1,979	1,994	2,008	2,023	2,038	2,053	88
Multi Family Residential	34	35	36	37	38	38	39	5
Commercial	274	281	287	294	301	308	316	41
Industrial	0	0	0	0	0	0	0	0
Government	53	55	56	57	58	60	61	8
Other	4	4	4	4	4	5	5	1
<b>Total</b>	<b>2,331</b>	<b>2,354</b>	<b>2,377</b>	<b>2,401</b>	<b>2,425</b>	<b>2,449</b>	<b>2,474</b>	<b>143</b>

Customer Type	Projected Demand 2010 (ccf)	Projected Demand 2015 (ccf)	Projected Demand 2020 (ccf)	Projected Demand 2025 (ccf)	Projected Demand 2030 (ccf)	Projected Demand 2035 (ccf)	Projected Demand 2040 (ccf)	Projected demand to be added from 2010 - 2040 (ccf)
Single Family Residential	591,035	595,362	599,721	604,112	608,535	612,990	617,478	26,443
Multi Family Residential	102,179	104,603	107,085	109,625	112,225	114,888	117,613	15,434
Commercial	108,415	110,987	113,620	116,315	119,074	121,899	124,790	16,375
Industrial	0	0	0	0	0	0	0	0
Government	84,249	86,247	88,293	90,388	92,532	94,727	96,974	12,725
Other	4,228	4,328	4,431	4,536	4,643	4,754	4,866	639
Unaccounted	73,927	74,659	75,400	76,152	76,913	77,685	78,468	4,541
<b>Total</b>	<b>964,033</b>	<b>976,186</b>	<b>988,549</b>	<b>1,001,127</b>	<b>1,013,923</b>	<b>1,026,942</b>	<b>1,040,190</b>	<b>76,157</b>

Customer Type	Projected Demand 2010 (AF)	Projected Demand 2015 (AF)	Projected Demand 2020 (AF)	Projected Demand 2025 (AF)	Projected Demand 2030 (AF)	Projected Demand 2035 (AF)	Projected Demand 2040 (AF)	Projected demand to be added from 2010 - 2040 (AF)
Single Family Residential	1,357	1,367	1,377	1,387	1,397	1,407	1,418	61
Multi Family Residential	235	240	246	252	258	264	270	35
Commercial	249	255	261	267	273	280	286	38
Industrial	0	0	0	0	0	0	0	0
Government	193	198	203	208	212	217	223	29
Other	10	10	10	10	11	11	11	1
Unaccounted	170	171	173	175	177	178	180	10
<b>Total</b>	<b>2,213</b>	<b>2,241</b>	<b>2,269</b>	<b>2,298</b>	<b>2,328</b>	<b>2,358</b>	<b>2,388</b>	<b>175</b>

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

**2000's Projections**

Scenario #3: Based on Maintaining Growth at the

- 10-Year
- 5-Year

Average Annual Growth and

- Low
- Average
- High

Demand per Service for each Customer Class.

Customer Type	Actual Services 2001	Actual Services 2002	Actual Services 2003	Actual Services 2004	Actual Services 2005	Actual Services 2006	Actual Services 2007	Actual Services 2008	Actual Services 2009	Projected Services 2010
Residential	1,921	1,933	1,943	1,948	1,953	1,969	1,994	1,980	1,962	1,965
Multi-Residential	22	22	22	22	22	22	22	29	34	34
Commercial	275	275	279	278	281	281	283	283	273	274
Industrial	0	0	0	0	0	0	0	0	0	0
Government	46	46	46	46	45	47	47	50	53	53
Other	0	0	0	0	1	1	1	2	4	4
<b>Total</b>	<b>2,264</b>	<b>2,277</b>	<b>2,290</b>	<b>2,294</b>	<b>2,302</b>	<b>2,320</b>	<b>2,347</b>	<b>2,344</b>	<b>2,326</b>	<b>2,331</b>

Customer Type	Demand 2001(ccf)	Demand 2002(ccf)	Demand 2003(ccf)	Demand 2004(ccf)	Demand 2005(ccf)	Demand 2006(ccf)	Demand 2007(ccf)	Demand 2008(ccf)	Demand 2009(ccf)	Demand 2010(ccf)
Residential	577,740	581,575	584,333	585,987	587,466	592,279	599,799	595,588	590,173	591,035
Multi-Residential	65,807	65,807	65,807	65,807	65,807	65,807	65,807	86,745	101,701	102,179
Commercial	108,830	108,797	110,378	109,884	111,070	111,070	111,860	111,860	107,908	108,415
Industrial	0	0	0	0	0	0	0	0	0	0
Government	72,780	72,780	72,780	72,780	71,197	74,362	74,362	79,108	83,855	84,249
Other	0	0	0	0	1,052	1,052	1,052	2,104	4,208	4,228
Unaccounted	71,816	72,217	72,635	72,770	73,021	73,592	74,448	74,353	73,782	73,927
<b>Total</b>	<b>896,972</b>	<b>901,176</b>	<b>905,932</b>	<b>907,227</b>	<b>909,613</b>	<b>918,161</b>	<b>927,328</b>	<b>949,759</b>	<b>961,627</b>	<b>964,033</b>

Customer Type	Demand 2001(AF)	Demand 2002(AF)	Demand 2003(AF)	Demand 2004(AF)	Demand 2005(AF)	Demand 2006(AF)	Demand 2007(AF)	Demand 2008(AF)	Demand 2009(AF)	Demand 2010(AF)
Residential	1,326	1,335	1,341	1,345	1,349	1,360	1,377	1,367	1,355	1,357
Multi-Residential	151	151	151	151	151	151	151	199	233	235
Commercial	250	250	253	252	255	255	257	257	248	249
Industrial	0	0	0	0	0	0	0	0	0	0
Government	167	167	167	167	163	171	171	182	193	193
Other	0	0	0	0	2	2	2	5	10	10
Unaccounted	165	166	167	167	168	169	171	171	169	170
<b>Total</b>	<b>2,059</b>	<b>2,069</b>	<b>2,080</b>	<b>2,083</b>	<b>2,088</b>	<b>2,108</b>	<b>2,129</b>	<b>2,180</b>	<b>2,208</b>	<b>2,213</b>



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

**2010's Projections**

Scenario #3: Based on Maintaining Growth at the

- 10-Year  
 5-Year

Average Annual Growth and

- Low  
 Average  
 High

Demand per Service for each Customer Class.

Customer Type	Projected Services 2011	Projected Services 2012	Projected Services 2013	Projected Services 2014	Projected Services 2015	Projected Services 2016	Projected Services 2017	Projected Services 2018	Projected Services 2019	Projected Services 2020
Residential	1,968	1,971	1,973	1,976	1,979	1,982	1,985	1,988	1,991	1,994
Multi-Residential	34	34	35	35	35	35	35	35	36	36
Commercial	276	277	278	279	281	282	283	285	286	287
Industrial	0	0	0	0	0	0	0	0	0	0
Government	53	54	54	54	55	55	55	55	56	56
Other	4	4	4	4	4	4	4	4	4	4
<b>Total</b>	<b>2,335</b>	<b>2,340</b>	<b>2,344</b>	<b>2,349</b>	<b>2,354</b>	<b>2,358</b>	<b>2,363</b>	<b>2,368</b>	<b>2,372</b>	<b>2,377</b>

Customer Type	Demand 2011(ccf)	Demand 2012(ccf)	Demand 2013(ccf)	Demand 2014(ccf)	Demand 2015(ccf)	Demand 2016(ccf)	Demand 2017(ccf)	Demand 2018(ccf)	Demand 2019(ccf)	Demand 2020(ccf)
Residential	591,898	592,762	593,627	594,494	595,362	596,231	597,102	597,974	598,847	599,721
Multi-Residential	102,660	103,142	103,627	104,114	104,603	105,095	105,589	106,085	106,584	107,085
Commercial	108,925	109,436	109,951	110,468	110,987	111,508	112,033	112,559	113,088	113,620
Industrial	0	0	0	0	0	0	0	0	0	0
Government	84,645	85,043	85,442	85,844	86,247	86,653	87,060	87,469	87,880	88,293
Other	4,248	4,268	4,288	4,308	4,328	4,348	4,369	4,389	4,410	4,431
Unaccounted	74,073	74,219	74,365	74,512	74,659	74,806	74,954	75,103	75,251	75,400
<b>Total</b>	<b>966,447</b>	<b>968,870</b>	<b>971,300</b>	<b>973,739</b>	<b>976,186</b>	<b>978,642</b>	<b>981,106</b>	<b>983,579</b>	<b>986,060</b>	<b>988,549</b>

Customer Type	Demand 2011(AF)	Demand 2012(AF)	Demand 2013(AF)	Demand 2014(AF)	Demand 2015(AF)	Demand 2016(AF)	Demand 2017(AF)	Demand 2018(AF)	Demand 2019(AF)	Demand 2020(AF)
Residential	1,359	1,361	1,363	1,365	1,367	1,369	1,371	1,373	1,375	1,377
Multi-Residential	236	237	238	239	240	241	242	244	245	246
Commercial	250	251	252	254	255	256	257	258	260	261
Industrial	0	0	0	0	0	0	0	0	0	0
Government	194	195	196	197	198	199	200	201	202	203
Other	10	10	10	10	10	10	10	10	10	10
Unaccounted	170	170	171	171	171	172	172	172	173	173
<b>Total</b>	<b>2,219</b>	<b>2,224</b>	<b>2,230</b>	<b>2,235</b>	<b>2,241</b>	<b>2,247</b>	<b>2,252</b>	<b>2,258</b>	<b>2,264</b>	<b>2,269</b>

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

**2020's Projections**

Scenario #3: Based on Maintaining Growth at the

10-Year  
 5-Year  
 Average Annual Growth and

Low  
 Average  
 High  
 Demand per Service for each Customer Class.

Customer Type	Projected Services 2021	Projected Services 2022	Projected Services 2023	Projected Services 2024	Projected Services 2025	Projected Services 2026	Projected Services 2027	Projected Services 2028	Projected Services 2029	Projected Services 2030
Residential	1,997	2,000	2,002	2,005	2,008	2,011	2,014	2,017	2,020	2,023
Multi-Residential	36	36	36	36	37	37	37	37	37	38
Commercial	289	290	292	293	294	296	297	298	300	301
Industrial	0	0	0	0	0	0	0	0	0	0
Government	56	56	57	57	57	57	58	58	58	58
Other	4	4	4	4	4	4	4	4	4	4
<b>Total</b>	<b>2,382</b>	<b>2,386</b>	<b>2,391</b>	<b>2,396</b>	<b>2,401</b>	<b>2,405</b>	<b>2,410</b>	<b>2,415</b>	<b>2,420</b>	<b>2,425</b>

Customer Type	Demand 2021(ccf)	Demand 2022(ccf)	Demand 2023(ccf)	Demand 2024(ccf)	Demand 2025(ccf)	Demand 2026(ccf)	Demand 2027(ccf)	Demand 2028(ccf)	Demand 2029(ccf)	Demand 2030(ccf)
Residential	600,597	601,473	602,352	603,231	604,112	604,994	605,877	606,762	607,647	608,535
Multi-Residential	107,588	108,094	108,602	109,112	109,625	110,140	110,658	111,178	111,700	112,225
Commercial	114,154	114,690	115,229	115,771	116,315	116,862	117,411	117,963	118,517	119,074
Industrial	0	0	0	0	0	0	0	0	0	0
Government	88,708	89,125	89,544	89,965	90,388	90,813	91,239	91,668	92,099	92,532
Other	4,452	4,472	4,493	4,515	4,536	4,557	4,579	4,600	4,622	4,643
Unaccounted	75,550	75,700	75,850	76,001	76,152	76,303	76,455	76,607	76,760	76,913
<b>Total</b>	<b>991,048</b>	<b>993,554</b>	<b>996,070</b>	<b>998,594</b>	<b>1,001,127</b>	<b>1,003,668</b>	<b>1,006,219</b>	<b>1,008,778</b>	<b>1,011,346</b>	<b>1,013,923</b>

Customer Type	Demand 2021(AF)	Demand 2022(AF)	Demand 2023(AF)	Demand 2024(AF)	Demand 2025(AF)	Demand 2026(AF)	Demand 2027(AF)	Demand 2028(AF)	Demand 2029(AF)	Demand 2030(AF)
Residential	1,379	1,381	1,383	1,385	1,387	1,389	1,391	1,393	1,395	1,397
Multi-Residential	247	248	249	250	252	253	254	255	256	258
Commercial	262	263	265	266	267	268	270	271	272	273
Industrial	0	0	0	0	0	0	0	0	0	0
Government	204	205	206	207	208	208	209	210	211	212
Other	10	10	10	10	10	10	11	11	11	11
Unaccounted	173	174	174	174	175	175	176	176	176	177
<b>Total</b>	<b>2,275</b>	<b>2,281</b>	<b>2,287</b>	<b>2,292</b>	<b>2,298</b>	<b>2,304</b>	<b>2,310</b>	<b>2,316</b>	<b>2,322</b>	<b>2,328</b>

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

**2030's Projections**

Scenario #3: Based on Maintaining Growth at the

10-Year  
 5-Year Average Annual Growth and

Low  
 Average Demand per Service for each Customer Class.  
 High

Customer Type	Projected Services 2031	Projected Services 2032	Projected Services 2033	Projected Services 2034	Projected Services 2035	Projected Services 2036	Projected Services 2037	Projected Services 2038	Projected Services 2039	Projected Services 2040
Residential	2,026	2,029	2,032	2,035	2,038	2,041	2,044	2,047	2,050	2,053
Multi-Residential	38	38	38	38	38	39	39	39	39	39
Commercial	303	304	306	307	308	310	311	313	314	316
Industrial	0	0	0	0	0	0	0	0	0	0
Government	59	59	59	60	60	60	60	61	61	61
Other	4	4	4	4	5	5	5	5	5	5
<b>Total</b>	<b>2,430</b>	<b>2,434</b>	<b>2,439</b>	<b>2,444</b>	<b>2,449</b>	<b>2,454</b>	<b>2,459</b>	<b>2,464</b>	<b>2,469</b>	<b>2,474</b>

Customer Type	Demand 2031(ccf)	Demand 2032(ccf)	Demand 2033(ccf)	Demand 2034(ccf)	Demand 2035(ccf)	Demand 2036(ccf)	Demand 2037(ccf)	Demand 2038(ccf)	Demand 2039(ccf)	Demand 2040(ccf)
Residential	609,423	610,313	611,204	612,096	612,990	613,885	614,781	615,679	616,578	617,478
Multi-Residential	112,753	113,283	113,815	114,350	114,888	115,428	115,970	116,515	117,063	117,613
Commercial	119,634	120,196	120,761	121,329	121,899	122,472	123,047	123,626	124,207	124,790
Industrial	0	0	0	0	0	0	0	0	0	0
Government	92,967	93,404	93,843	94,284	94,727	95,172	95,620	96,069	96,520	96,974
Other	4,665	4,687	4,709	4,731	4,754	4,776	4,798	4,821	4,844	4,866
Unaccounted	77,067	77,221	77,375	77,530	77,685	77,841	77,997	78,154	78,311	78,468
<b>Total</b>	<b>1,016,509</b>	<b>1,019,104</b>	<b>1,021,707</b>	<b>1,024,320</b>	<b>1,026,942</b>	<b>1,029,573</b>	<b>1,032,214</b>	<b>1,034,863</b>	<b>1,037,522</b>	<b>1,040,190</b>

Customer Type	Demand 2031(AF)	Demand 2032(AF)	Demand 2033(AF)	Demand 2034(AF)	Demand 2035(AF)	Demand 2036(AF)	Demand 2037(AF)	Demand 2038(AF)	Demand 2039(AF)	Demand 2040(AF)
Residential	1,399	1,401	1,403	1,405	1,407	1,409	1,411	1,413	1,415	1,418
Multi-Residential	259	260	261	263	264	265	266	267	269	270
Commercial	275	276	277	279	280	281	282	284	285	286
Industrial	0	0	0	0	0	0	0	0	0	0
Government	213	214	215	216	217	218	220	221	222	223
Other	11	11	11	11	11	11	11	11	11	11
Unaccounted	177	177	178	178	178	179	179	179	180	180
<b>Total</b>	<b>2,334</b>	<b>2,340</b>	<b>2,346</b>	<b>2,352</b>	<b>2,358</b>	<b>2,364</b>	<b>2,370</b>	<b>2,376</b>	<b>2,382</b>	<b>2,388</b>

## California Water Service Company - Willows District

### Water Supply and Demand Analysis and Projections

Scenario #4: Based on Maintaining Growth at the  10-Year  5-Year Average Annual Growth

Summary of Historical Growth Rate from Worksheet 2			
Customer Type	10 Yr. Avg. Historical Growth Rate	Individual Growth Rate Selected	Notes
Single Family Residential	0.237%	0.237%	Historical growth rate used
Multi Family Residential	4.906%	0.434%	Overall growth rate used
Commercial	0.084%	0.084%	Historical growth rate used
Industrial	20.000%	0.434%	Overall growth rate used
Government	1.252%	1.252%	Historical growth rate used
Other	10.000%	0.434%	Overall growth rate used
Overall	0.434%	0.245%	

## California Water Service Company - Willows District

### Water Supply and Demand Analysis and Projections

Scenario #4: Based on Maintaining Growth at the  10-Year Average Annual Growth  
 5-Year

#### 30-year projection Summary

Customer Type	Projected Services 2010	Projected Services 2015	Projected Services 2020	Projected Services 2025	Projected Services 2030	Projected Services 2035	Projected Services 2040	Services projected to be added from 2010 - 2040
Single Family Residential	1,967	1,990	2,014	2,038	2,062	2,087	2,111	145
Multi Family Residential	34	35	36	36	37	38	39	5
Commercial	273	274	276	277	278	279	280	7
Industrial	0	0	0	0	0	0	0	0
Government	54	57	61	65	69	73	78	24
Other	4	4	4	4	4	4	5	1
<b>Total</b>	<b>2,332</b>	<b>2,361</b>	<b>2,390</b>	<b>2,420</b>	<b>2,450</b>	<b>2,481</b>	<b>2,513</b>	<b>181</b>

# California Water Service Company - Willows District

## Water Supply and Demand Analysis and Projections

Worksheet 13

### 2000's Projections

Scenario #4: Based on Maintaining Growth at the  10-Year  5-Year Average Annual Growth

Customer Type	Actual Services 2001	Actual Services 2002	Actual Services 2003	Actual Services 2004	Actual Services 2005	Actual Services 2006	Actual Services 2007	Actual Services 2008	Actual Services 2009	Projected Services 2010
Residential	1,921	1,933	1,943	1,948	1,953	1,969	1,994	1,980	1,962	1,967
Multi-Residential	22	22	22	22	22	22	22	29	34	34
Commercial	275	275	279	278	281	281	283	283	273	273
Industrial	0	0	0	0	0	0	0	0	0	0
Government	46	46	46	46	45	47	47	50	53	54
Other	0	0	0	0	1	1	1	2	4	4
<b>Total</b>	<b>2,264</b>	<b>2,277</b>	<b>2,290</b>	<b>2,294</b>	<b>2,302</b>	<b>2,320</b>	<b>2,347</b>	<b>2,344</b>	<b>2,326</b>	<b>2,332</b>

### 2010's Projections

Customer Type	Projected Services 2011	Projected Services 2012	Projected Services 2013	Projected Services 2014	Projected Services 2015	Projected Services 2016	Projected Services 2017	Projected Services 2018	Projected Services 2019	Projected Services 2020
Residential	1,971	1,976	1,981	1,985	1,990	1,995	2,000	2,004	2,009	2,014
Multi-Residential	34	34	35	35	35	35	35	35	36	36
Commercial	273	274	274	274	274	275	275	275	275	276
Industrial	0	0	0	0	0	0	0	0	0	0
Government	54	55	56	56	57	58	59	59	60	61
Other	4	4	4	4	4	4	4	4	4	4
<b>Total</b>	<b>2,337</b>	<b>2,343</b>	<b>2,349</b>	<b>2,355</b>	<b>2,361</b>	<b>2,366</b>	<b>2,372</b>	<b>2,378</b>	<b>2,384</b>	<b>2,390</b>

## California Water Service Company - Willows District

### Water Supply and Demand Analysis and Projections

Worksheet 13

#### 2020's Projections

Scenario #4: Based on Maintaining Growth at the  10-Year Average Annual Growth  
 5-Year

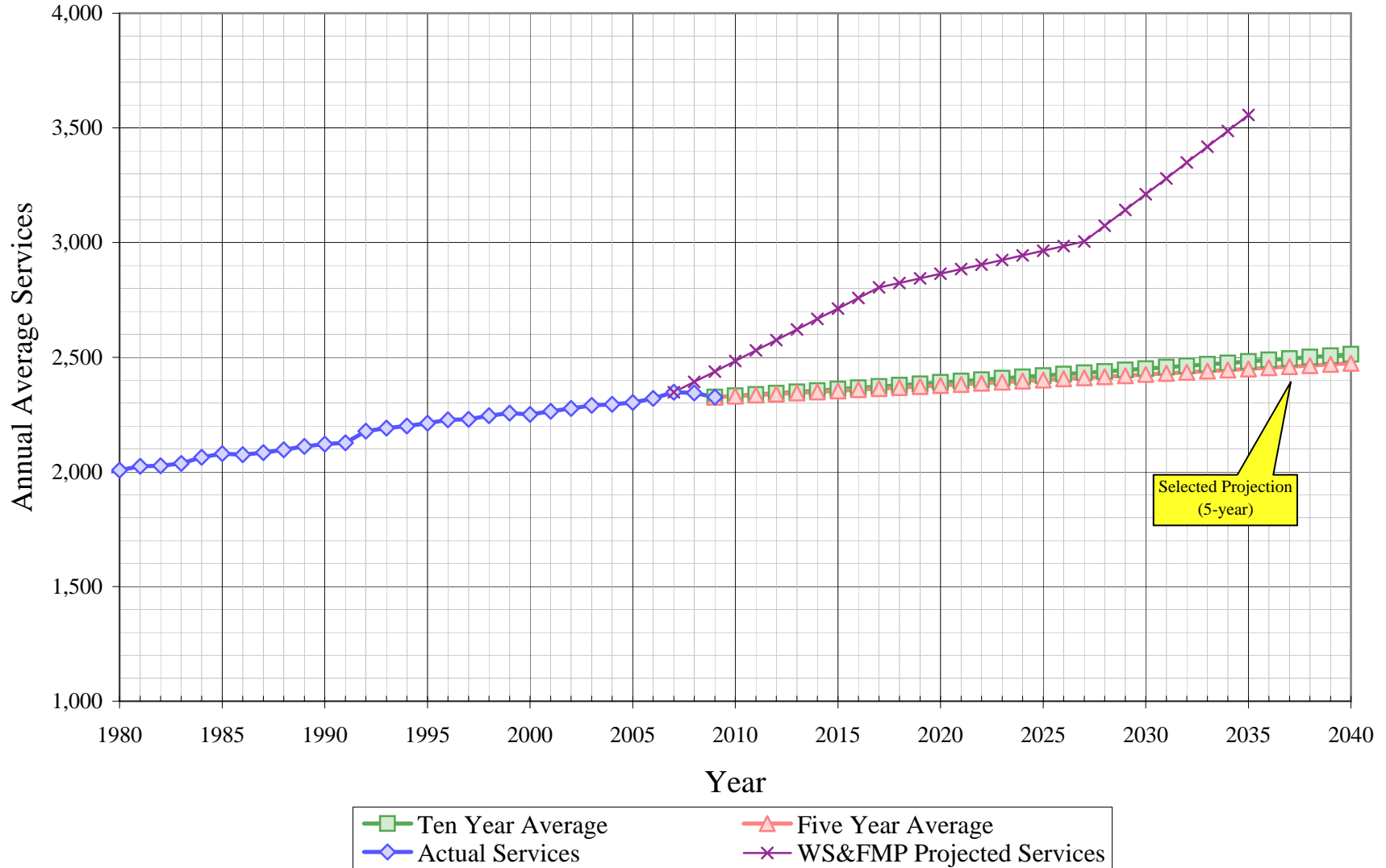
Customer Type	Projected Services 2021	Projected Services 2022	Projected Services 2023	Projected Services 2024	Projected Services 2025	Projected Services 2026	Projected Services 2027	Projected Services 2028	Projected Services 2029	Projected Services 2030
Residential	2,019	2,023	2,028	2,033	2,038	2,043	2,047	2,052	2,057	2,062
Multi-Residential	36	36	36	36	36	37	37	37	37	37
Commercial	276	276	276	276	277	277	277	277	278	278
Industrial	0	0	0	0	0	0	0	0	0	0
Government	62	62	63	64	65	65	66	67	68	69
Other	4	4	4	4	4	4	4	4	4	4
<b>Total</b>	<b>2,396</b>	<b>2,402</b>	<b>2,408</b>	<b>2,414</b>	<b>2,420</b>	<b>2,426</b>	<b>2,432</b>	<b>2,438</b>	<b>2,444</b>	<b>2,450</b>

#### 2030's Projections

Customer Type	Projected Services 2031	Projected Services 2032	Projected Services 2033	Projected Services 2034	Projected Services 2035	Projected Services 2036	Projected Services 2037	Projected Services 2038	Projected Services 2039	Projected Services 2040
Residential	2,067	2,072	2,077	2,082	2,087	2,091	2,096	2,101	2,106	2,111
Multi-Residential	37	38	38	38	38	38	38	39	39	39
Commercial	278	278	279	279	279	279	279	280	280	280
Industrial	0	0	0	0	0	0	0	0	0	0
Government	70	71	71	72	73	74	75	76	77	78
Other	4	4	4	4	4	4	5	5	5	5
<b>Total</b>	<b>2,456</b>	<b>2,463</b>	<b>2,469</b>	<b>2,475</b>	<b>2,481</b>	<b>2,488</b>	<b>2,494</b>	<b>2,500</b>	<b>2,507</b>	<b>2,513</b>

# Willows District

## Historical & Projected Annual Average Services





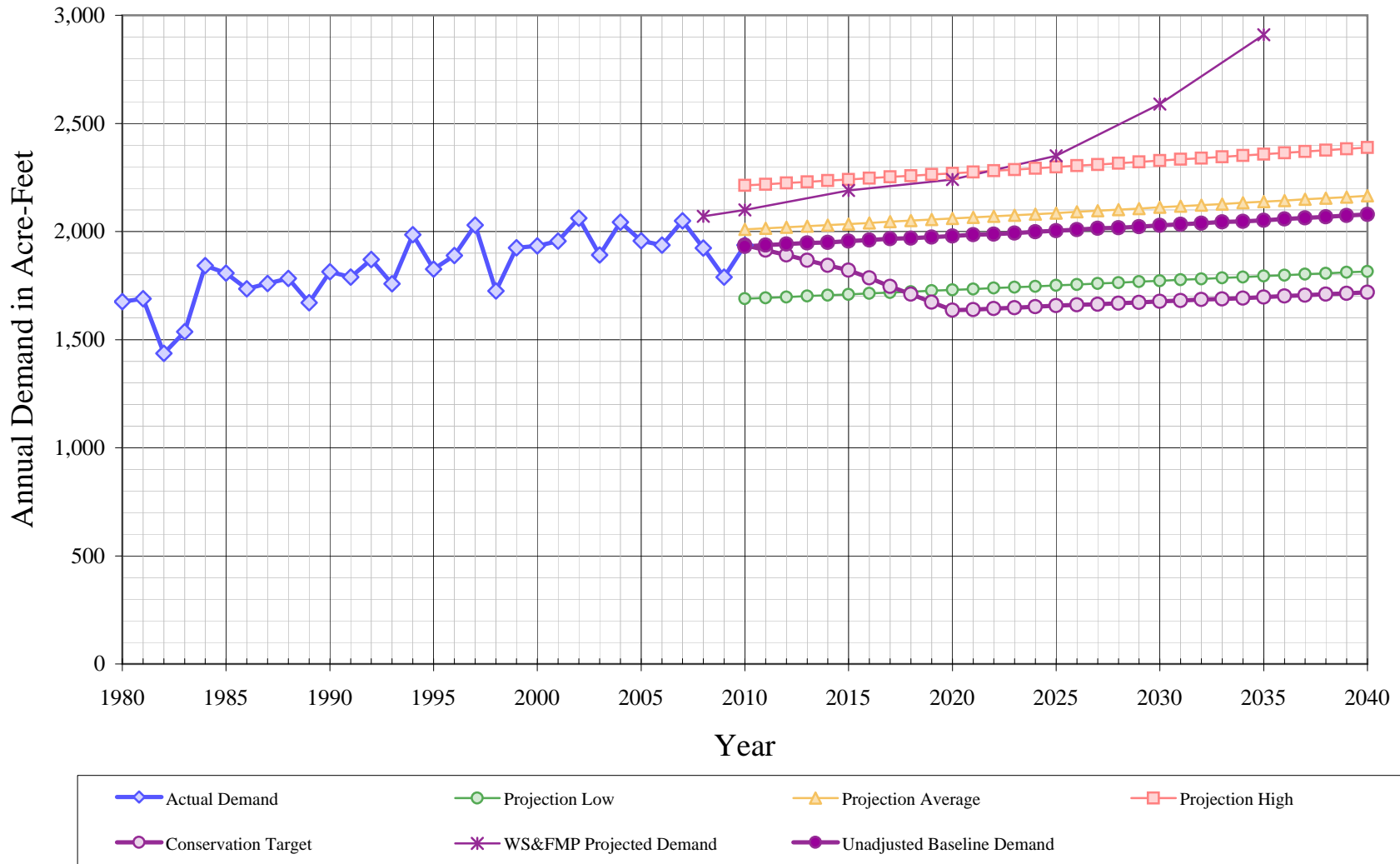
**California Water Service Company - Willows District**  
**Water Supply and Demand Analysis and Projections**  
**Actual & Projected Annual Average Services**

Year	Actual Services	Projected Services	
		Ten Year Average	Five Year Average
1970	1,700		
1971	1,730		
1972	1,761		
1973	1,781		
1974	1,824		
1975	1,875		
1976	1,929		
1977	1,945		
1978	1,973		
1979	1,993		
1980	2,008		
1981	2,024		
1982	2,027		
1983	2,037		
1984	2,064		
1985	2,080		
1986	2,075		
1987	2,084		
1988	2,096		
1989	2,111		
1990	2,121		
1991	2,127		
1992	2,177		
1993	2,191		
1994	2,200		
1995	2,212		
1996	2,227		
1997	2,229		
1998	2,245		
1999	2,256		
2000	2,251		
2001	2,264		
2002	2,277		
2003	2,290		
2004	2,294		
2005	2,302		

Year	Actual Services	Projected Services	
		Ten Year Average	Five Year Average
2006	2,320		
2007	2,347		
2008	2,344		
2009	2,326	2,326	2,326
2010		2,332	2,331
2011		2,337	2,335
2012		2,343	2,340
2013		2,349	2,344
2014		2,355	2,349
2015		2,361	2,354
2016		2,366	2,358
2017		2,372	2,363
2018		2,378	2,368
2019		2,384	2,372
2020		2,390	2,377
2021		2,396	2,382
2022		2,402	2,386
2023		2,408	2,391
2024		2,414	2,396
2025		2,420	2,401
2026		2,426	2,405
2027		2,432	2,410
2028		2,438	2,415
2029		2,444	2,420
2030		2,450	2,425
2031		2,456	2,430
2032		2,463	2,434
2033		2,469	2,439
2034		2,475	2,444
2035		2,481	2,449
2036		2,488	2,454
2037		2,494	2,459
2038		2,500	2,464
2039		2,507	2,469
2040		2,513	2,474

# Willows District

## Historical & Projected Annual Demand



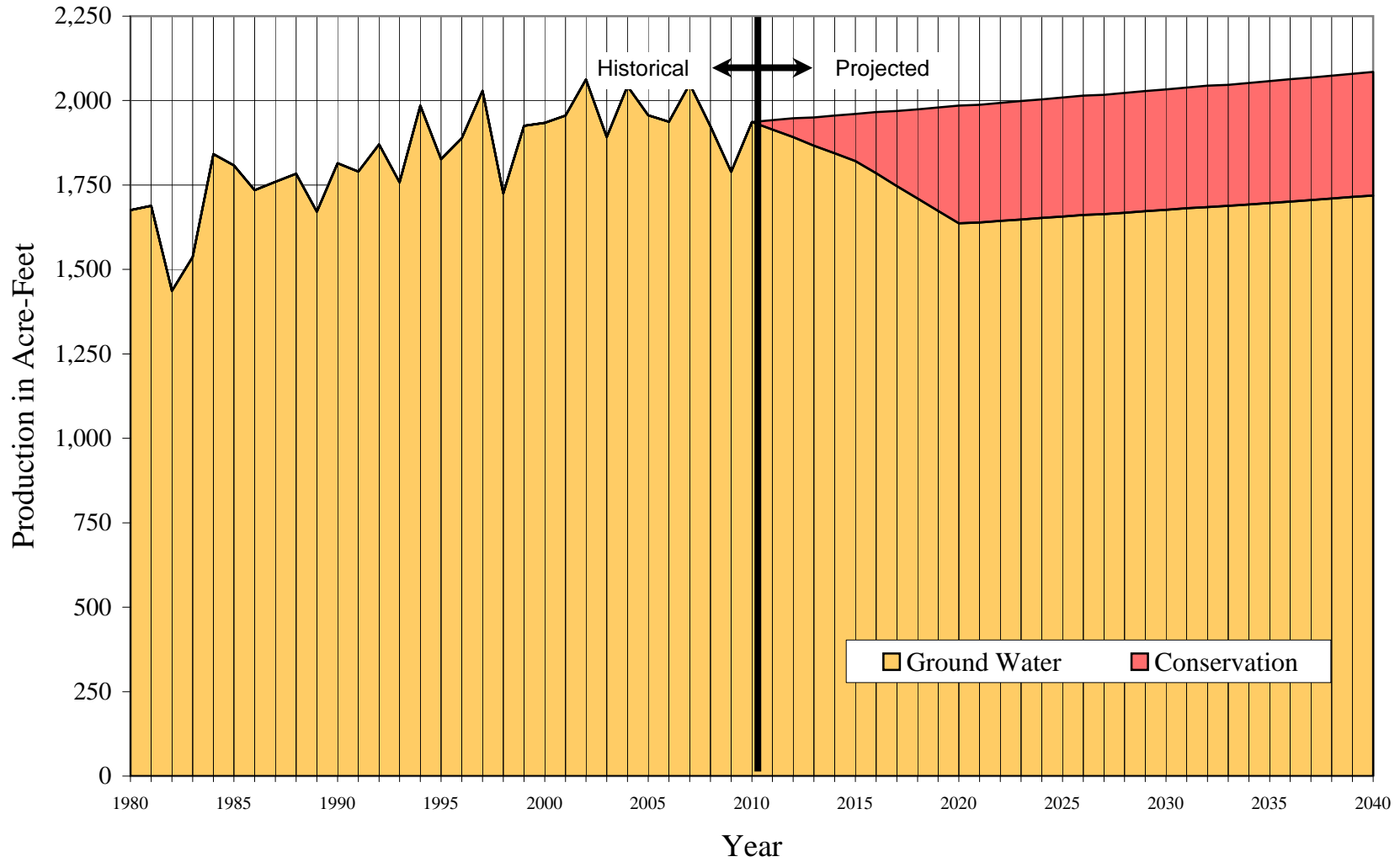
**California Water Service Company - Willows District**  
**Water Supply and Demand Analysis and Projections**  
**Actual & Projected Demand in Acre-Feet**

Year	Actual Demand	Projection			Unadjusted Baseline Demand	Target Demand
		Low	Average	High		
1980	1,676					
1981	1,689					
1982	1,436					
1983	1,537					
1984	1,842					
1985	1,808					
1986	1,735					
1987	1,759					
1988	1,783					
1989	1,671					
1990	1,814					
1991	1,790					
1992	1,870					
1993	1,758					
1994	1,985					
1995	1,827					
1996	1,889					
1997	2,029					
1998	1,725					
1999	1,925					
2000	1,934					
2001	1,956					
2002	2,062					
2003	1,892					
2004	2,043					
2005	1,957					
2006	1,938					
2007	2,049					
2008	1,924					
2009	1,789					
2010	1,937	1,689	2,010	2,213	1,931	1,937

Year	Actual Demand	Projection			Unadjusted Baseline Demand	Target Demand
		Low	Average	High		
2011		1,693	2,015	2,219	1,937	1,914
2012		1,697	2,020	2,224	1,942	1,892
2013		1,701	2,025	2,230	1,947	1,867
2014		1,705	2,030	2,235	1,950	1,844
2015		1,709	2,035	2,241	1,955	1,821
2016		1,713	2,040	2,247	1,961	1,785
2017		1,718	2,045	2,252	1,966	1,746
2018		1,722	2,050	2,258	1,969	1,710
2019		1,726	2,055	2,264	1,974	1,674
2020		1,730	2,060	2,269	1,980	1,637
2021		1,734	2,065	2,275	1,985	1,639
2022		1,738	2,070	2,281	1,988	1,643
2023		1,742	2,075	2,287	1,993	1,648
2024		1,747	2,081	2,292	1,998	1,652
2025		1,751	2,086	2,298	2,004	1,657
2026		1,755	2,091	2,304	2,009	1,661
2027		1,759	2,096	2,310	2,015	1,663
2028		1,763	2,101	2,316	2,017	1,668
2029		1,768	2,106	2,322	2,023	1,672
2030		1,772	2,112	2,328	2,028	1,677
2031		1,776	2,117	2,334	2,033	1,681
2032		1,781	2,122	2,340	2,039	1,686
2033		1,785	2,127	2,346	2,044	1,688
2034		1,789	2,133	2,352	2,047	1,692
2035		1,794	2,138	2,358	2,052	1,697
2036		1,798	2,143	2,364	2,058	1,701
2037		1,802	2,149	2,370	2,063	1,706
2038		1,807	2,154	2,376	2,068	1,710
2039		1,811	2,160	2,382	2,074	1,714
2040		1,815	2,165	2,388	2,079	1,719

# Willows District

## Historical and Projected Distribution of Demand by Source



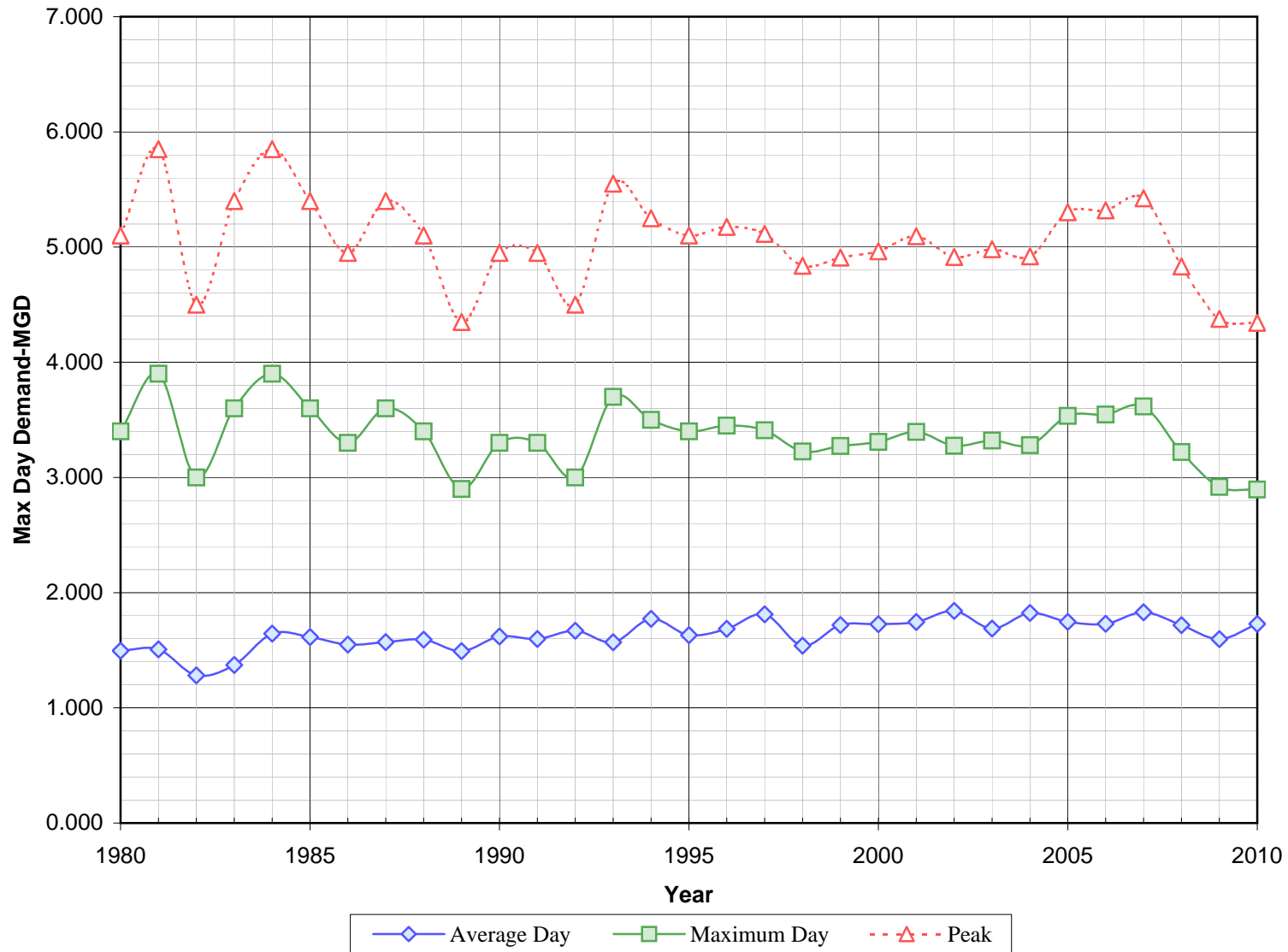
**California Water Service Company - Willows District**  
**Water Supply and Demand Analysis and Projections**  
**Historical and Projected Distribution of Demand by Source**

Worksheet 17

Year	Purchased Water		Ground Water		Conservation		Total		Year	Purchased Water		Ground Water		Conservation		Total	
	kGal	AFY	kGal	AFY	kGal	AFY	kGal	AFY		kGal	AFY	kGal	AFY	kGal	AFY	kGal	AFY
1980	0	0	546,156	1,676			546,156	1,676									
1981	0	0	550,303	1,689			550,303	1,689	2011	0	0	632,790	1,914	9,023	28	632,790	1,942
1982	0	0	467,984	1,436			467,984	1,436	2012	0	0	634,543	1,892	18,097	56	634,543	1,947
1983	0	0	500,715	1,537			500,715	1,537	2013	0	0	635,419	1,867	27,183	83	635,419	1,950
1984	0	0	600,172	1,842			600,172	1,842	2014	0	0	637,172	1,844	36,344	112	637,172	1,955
1985	0	0	589,136	1,808			589,136	1,808	2015	0	0	638,925	1,821	45,555	140	638,925	1,961
1986	0	0	565,306	1,735			565,306	1,735	2016	0	0	640,678	1,785	59,021	181	640,678	1,966
1987	0	0	573,193	1,759			573,193	1,759	2017	0	0	641,555	1,746	72,460	222	641,555	1,969
1988	0	0	581,071	1,783			581,071	1,783	2018	0	0	643,307	1,710	86,054	264	643,307	1,974
1989	0	0	544,541	1,671			544,541	1,671	2019	0	0	645,060	1,674	99,720	306	645,060	1,980
1990	0	0	591,170	1,814			591,170	1,814	2020	0	0	646,813	1,637	113,460	348	646,813	1,985
1991	0	0	583,122	1,790			583,122	1,790	2021	0	0	647,690	1,639	113,614	349	647,690	1,988
1992	0	0	609,405	1,870			609,405	1,870	2022	0	0	649,442	1,643	113,921	350	649,442	1,993
1993	0	0	572,816	1,758			572,816	1,758	2023	0	0	651,195	1,648	114,228	351	651,195	1,998
1994	0	0	646,855	1,985			646,855	1,985	2024	0	0	652,948	1,652	114,536	351	652,948	2,004
1995	0	0	595,218	1,827			595,218	1,827	2025	0	0	654,701	1,657	114,843	352	654,701	2,009
1996	0	0	615,429	1,889			615,429	1,889	2026	0	0	656,454	1,661	115,151	353	656,454	2,015
1997	0	0	661,143	2,029			661,143	2,029	2027	0	0	657,330	1,663	115,305	354	657,330	2,017
1998	0	0	562,056	1,725			562,056	1,725	2028	0	0	659,083	1,668	115,612	355	659,083	2,023
1999	0	0	627,385	1,925			627,385	1,925	2029	0	0	660,836	1,672	115,920	356	660,836	2,028
2000	0	0	630,138	1,934			630,138	1,934	2030	0	0	662,589	1,677	116,227	357	662,589	2,033
2001	0	0	637,218	1,956			637,218	1,956	2031	0	0	664,342	1,681	116,535	358	664,342	2,039
2002	0	0	671,984	2,062			671,984	2,062	2032	0	0	666,095	1,686	116,842	359	666,095	2,044
2003	0	0	616,358	1,892			616,358	1,892	2033	0	0	666,971	1,688	116,996	359	666,971	2,047
2004	0	0	665,685	2,043			665,685	2,043	2034	0	0	668,724	1,692	117,303	360	668,724	2,052
2005	0	0	637,559	1,957			637,559	1,957	2035	0	0	670,477	1,697	117,611	361	670,477	2,058
2006	0	0	631,336	1,938			631,336	1,938	2036	0	0	672,230	1,701	117,918	362	672,230	2,063
2007	0	0	667,739	2,049			667,739	2,049	2037	0	0	673,983	1,706	118,226	363	673,983	2,068
2008	0	0	626,929	1,924			626,929	1,924	2038	0	0	675,736	1,710	118,533	364	675,736	2,074
2009	0	0	582,850	1,789			582,850	1,789	2039	0	0	677,489	1,714	118,841	365	677,489	2,079
2010	0	0	631,037	1,937	0	0	631,037	1,937	2040	0	0	679,241	1,719	119,148	366	679,241	2,085

# Willows District

## Average Day, Maximum Day, and Peak Demands



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

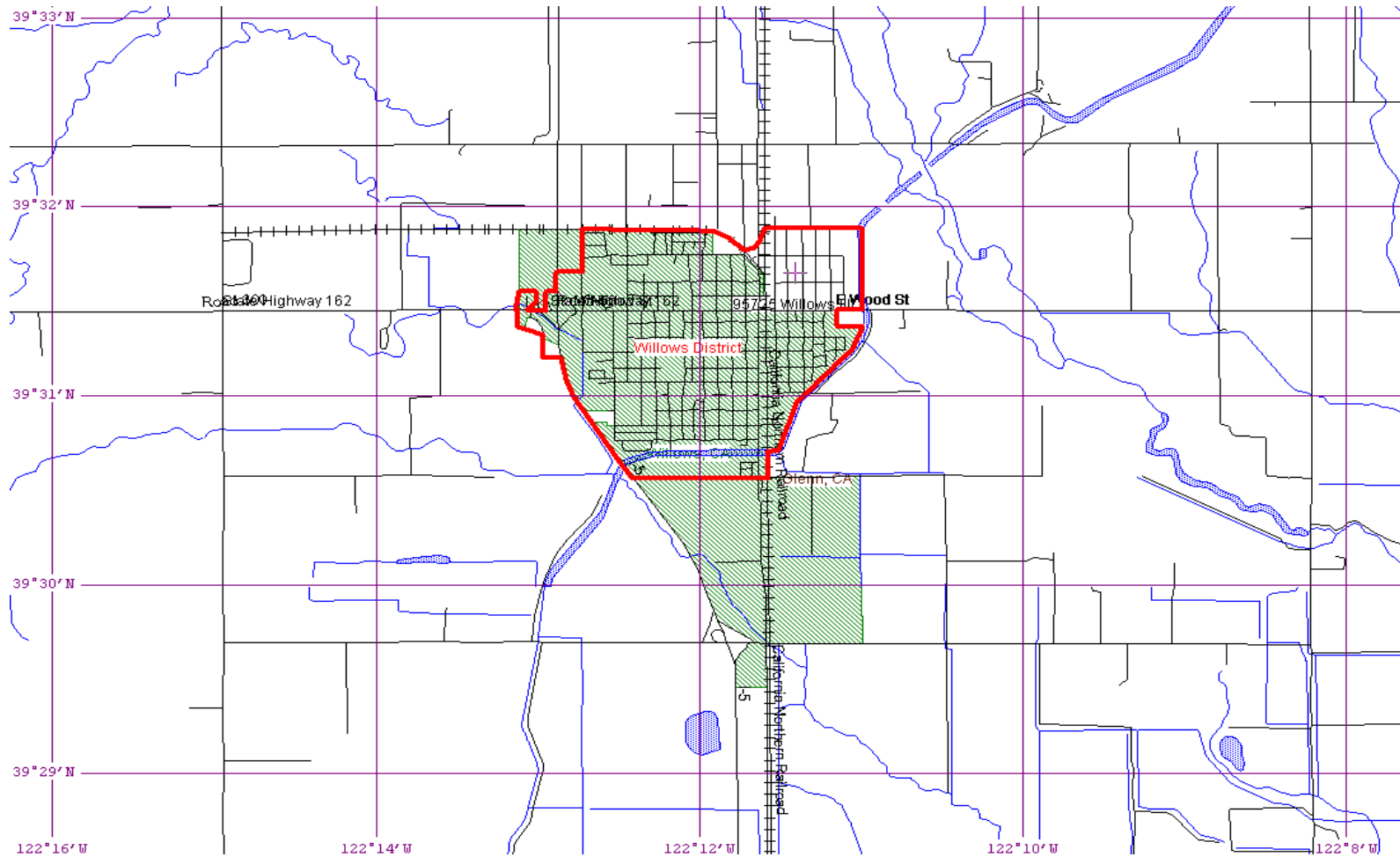
Worksheet 18

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	1,676	546	1,496	745	3,400	1,693	2.27	5,100	3,542	1.50	3.41			
1981	1,689	550	1,508	745	3,900	1,927	2.59	5,850	4,063	1.50	3.88			
1982	1,436	468	1,282	633	3,000	1,480	2.34	4,500	3,125	1.50	3.51			
1983	1,537	501	1,372	673	3,600	1,767	2.62	5,400	3,750	1.50	3.94			
1984	1,842	600	1,644	797	3,900	1,890	2.37	5,850	4,063	1.50	3.56			
1985	1,808	589	1,614	776	3,600	1,731	2.23	5,400	3,750	1.50	3.35			
1986	1,735	565	1,549	746	3,300	1,590	2.13	4,950	3,438	1.50	3.20			
1987	1,759	573	1,570	754	3,600	1,727	2.29	5,400	3,750	1.50	3.44			
1988	1,783	581	1,592	760	3,400	1,622	2.14	5,100	3,542	1.50	3.20			
1989	1,671	545	1,492	707	2,900	1,374	1.94	4,350	3,021	1.50	2.92			
1990	1,814	591	1,620	764	3,300	1,556	2.04	4,950	3,438	1.50	3.06			
1991	1,790	583	1,598	751	3,300	1,551	2.07	4,950	3,438	1.50	3.10			
1992	1,870	609	1,670	767	3,000	1,378	1.80	4,500	3,125	1.50	2.70			
1993	1,758	573	1,569	716	3,700	1,689	2.36	5,550	3,854	1.50	3.54			
1994	1,985	647	1,772	806	3,500	1,591	1.97	5,250	3,646	1.50	2.96			
1995	1,827	595	1,631	737	3,400	1,537	2.08	5,100	3,542	1.50	3.13			
1996	1,889	615	1,686	757	3,450	1,549	2.05	5,175	3,594	1.50	3.07			
1997	2,029	661	1,811	813	3,410	1,530	1.88	5,115	3,552	1.50	2.82			
1998	1,725	562	1,540	686	3,225	1,437	2.09	4,838	3,359	1.50	3.14			
1999	1,925	627	1,719	762	3,273	1,451	1.90	4,910	3,409	1.50	2.86			
2000	1,934	630	1,726	767	3,309	1,470	1.92	4,964	3,447	1.50	2.88			
2001	1,956	637	1,746	771	3,396	1,500	1.95	5,094	3,538	1.50	2.92			
2002	2,062	672	1,841	809	3,276	1,439	1.78	4,914	3,413	1.50	2.67			
2003	1,892	616	1,689	737	3,321	1,450	1.97	4,982	3,459	1.50	2.95			
2004	2,043	666	1,824	795	3,280	1,430	1.80	4,920	3,417	1.50	2.70			
2005	1,957	638	1,747	759	3,535	1,536	2.02	5,303	3,682	1.50	3.04			
2006	1,938	631	1,730	746	3,546	1,528	2.05	5,319	3,694	1.50	3.08			
2007	2,049	668	1,829	779	3,616	1,541	1.98	5,424	3,767	1.50	2.96			
2008	1,924	627	1,718	733	3,221	1,374	1.88	4,832	3,355	1.50	2.81			
2009	1,789	583	1,597	687	2,918	1,255	1.83	4,377	3,040	1.50	2.74			
2010	1,937	631	1,729	739	2,895	1,238	1.67	4,343	3,016	1.50	2.51			
5 year Average (2006-2010)			1,720	737	3,239	1,387	1.88	4,859	3,374	1.50	2.82			
10 year Average (2001-2010)			1,745	755	3,300	1,429	1.89	4,951	3,438	1.50	2.84			

\*\*\* Note: PHD estimated as 1.5 times MDD

# California Water Service Company - Willows District Water Supply and Demand Analysis and Projections

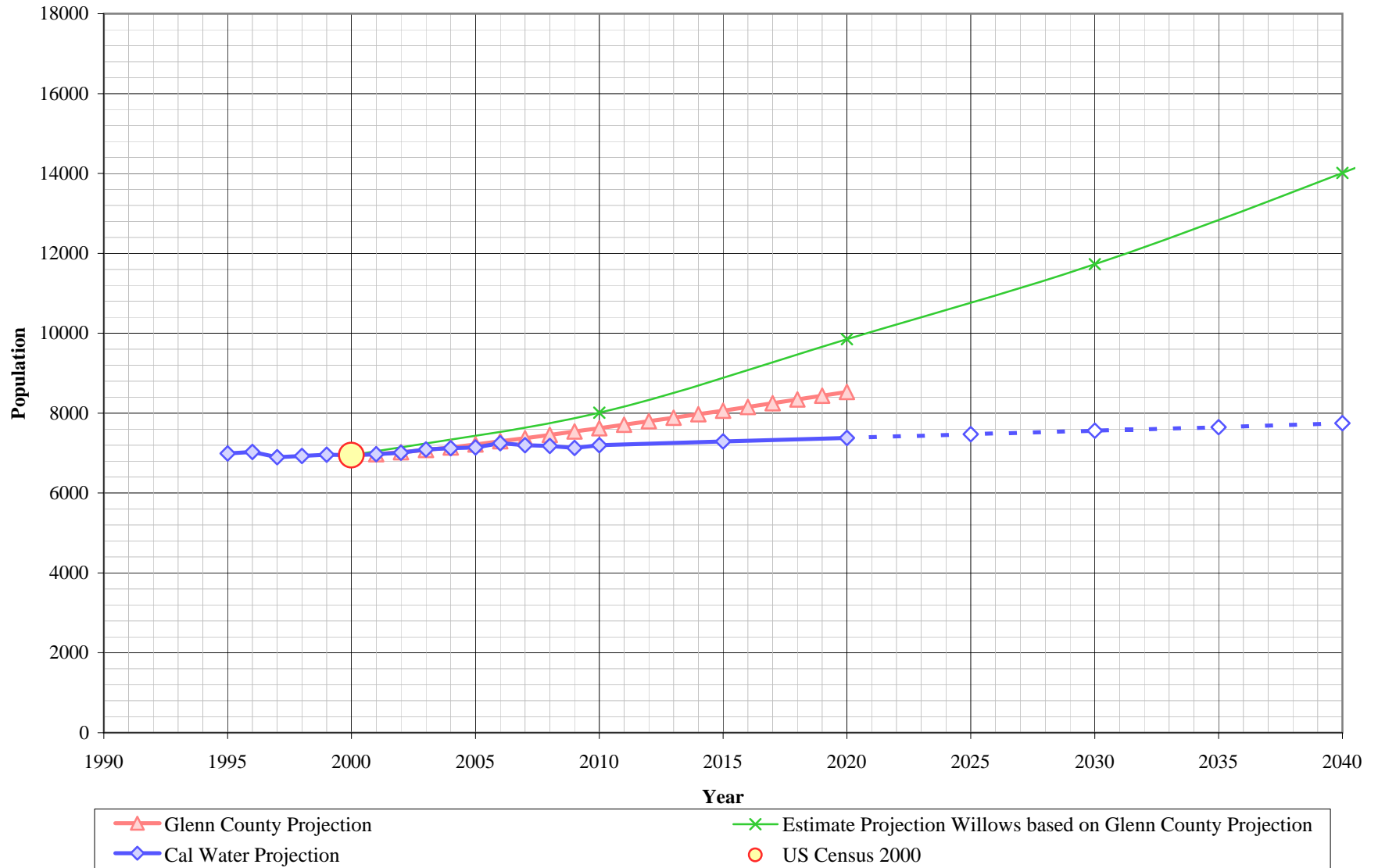
## US Census 2000 Tract Map Summary



US Census 2000 Summary			
Area	Census Tract Blocks	Population	Housing Units
District	164	6,946	2,625
Unincorporated	15	743	266
City of Willows	150	6,220	2,368
Percent District of the City		99.8%	99.7%



# Willows District Population Estimate



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

Population as of the 2000 Average Annual Services  
 Estimated District Population based on 2000 U.S. Census Data & Annual Service Count

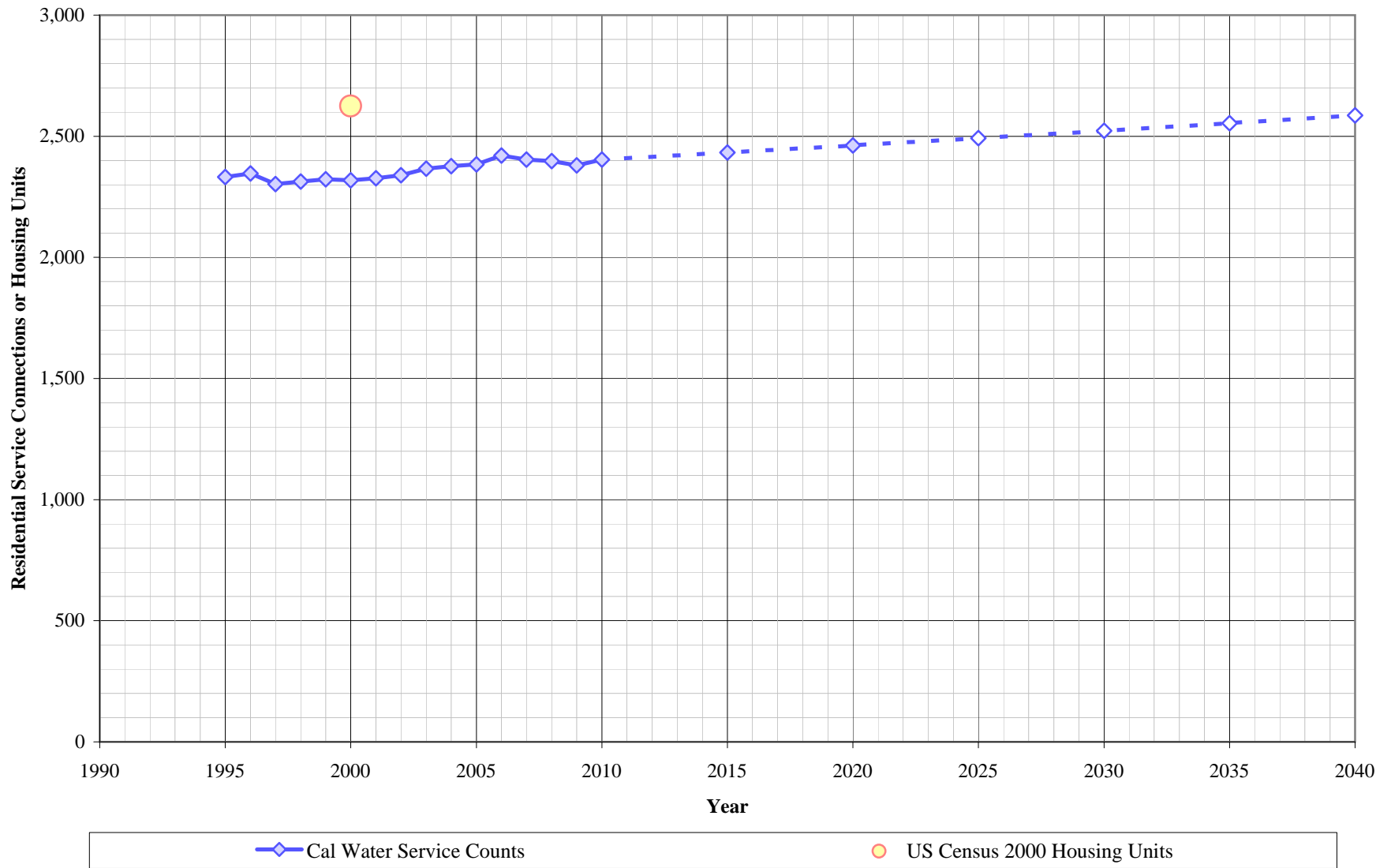
District Communities Served: City of Willows

Year	Single Family Residential Services (DU)	Multi Family Residential			Flat Rate Residential Services (DU)	Total Residential Dwelling Units	Estimated District Population
		Services	Residential Units (DU)	Unit Density			
1995	925	23	456	19.8	951	2,332	6,990
1996	965	23	456	19.8	925	2,346	7,030
1997	989	22	410	18.6	904	2,303	6,900
1998	1,017	22	406	18.5	890	2,313	6,930
1999	1,037	22	406	18.5	879	2,322	6,960
2000	1,045	22	406	18.5	868	2,319	6,946
2001	1,057	22	406	18.5	864	2,327	6,970
2002	1,073	22	406	18.5	860	2,339	7,010
2003	1,090	22	424	19.3	852	2,367	7,090
2004	1,104	22	429	19.5	844	2,377	7,120
2005	1,110	22	431	19.6	843	2,384	7,140
2006	1,134	22	451	20.5	835	2,420	7,250
2007	1,169	22	410	18.6	825	2,404	7,200
2008	1,219	29	418	14.4	761	2,398	7,180
2009	1,347	34	418	12.3	615	2,380	7,130
2010	1,965	34	439	12.9	0	2,404	7,200
2015	1,979	35	454	13.0	0	2,433	7,290
2020	1,994	36	469	13.1	0	2,462	7,380
2025	2,008	37	484	13.2	0	2,492	7,470
2030	2,023	38	500	13.3	0	2,523	7,560
2035	2,038	38	516	13.4	0	2,554	7,650
2040	2,053	39	533	13.6	0	2,586	7,750

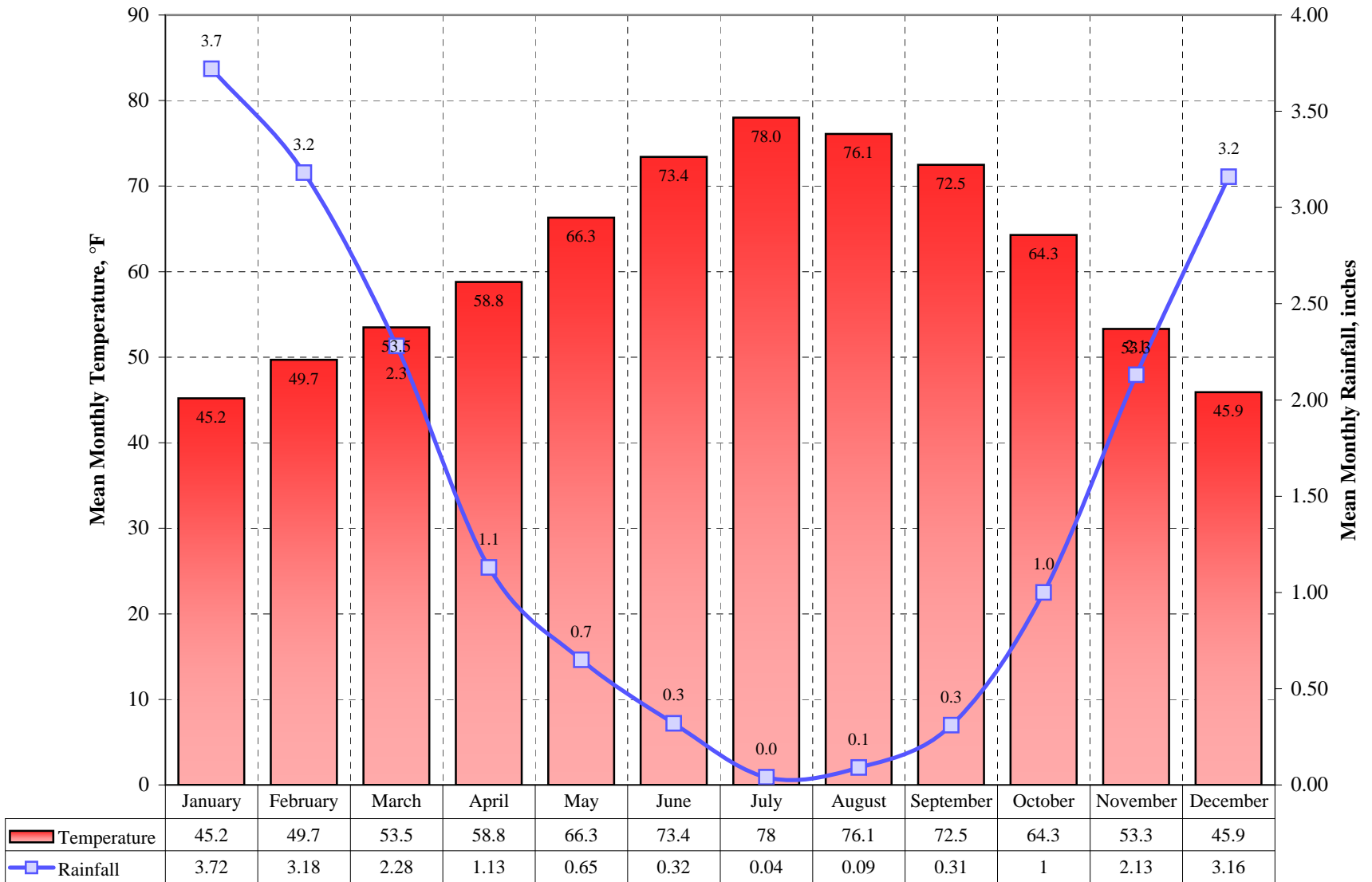
US Census 2000		Calculated Persons per CWS DU	Calculated Persons per US Census Housing Unit
Population	Housing Units		

6,946	2,625	2,996	2,646
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# Willows District Housing Estimate

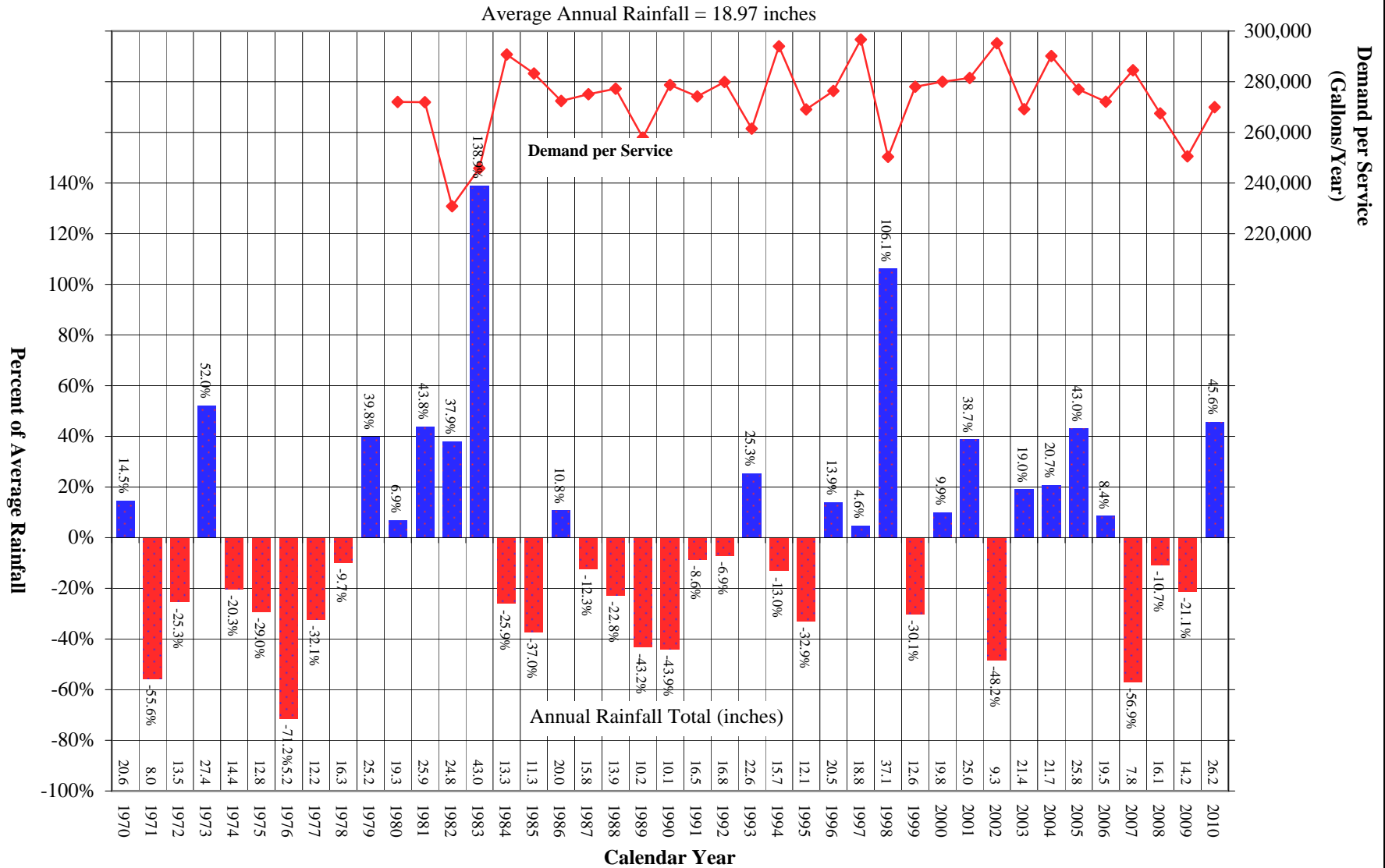


## Willows District Average Monthly Temperature and Rainfall



# Willows District

## Comparison of Annual Rainfall to Historical Average



## California Water Service Company - Willows District

### Water Supply and Demand Analysis and Projections

#### Temperature & Rainfall History (Fahrenheit, Inches)

Year	Annual Average Temp.	Annual Average Rainfall	Rainfall Percent Variation	Demand per Service (Gal / Yr)	Percent of Average Demand	Year	Annual Average Temp.	Annual Average Rainfall	Rainfall Percent Variation	Demand per Service (Gal / Yr)	Percent of Average Demand
1970	61.4	20.63	14.5%			1995	65.3	12.09	-32.9%	269,086	98.4%
1971	60.0	7.99	-55.6%			1996	70.9	20.51	13.9%	276,349	101.1%
1972	60.4	13.45	-25.3%			1997	63.6	18.84	4.6%	296,610	108.5%
1973	60.6	27.37	52.0%			1998	60.6	37.12	106.1%	250,359	91.6%
1974	61.4	14.35	-20.3%			1999	62.5	12.58	-30.1%	278,066	101.7%
1975	59.8	12.78	-29.0%			2000	61.1	19.80	9.9%	280,000	102.4%
1976	62.0	5.18	-71.2%			2001	66.2	24.98	38.7%	281,457	103.0%
1977	61.9	12.22	-32.1%			2002	61.7	9.33	-48.2%	295,162	108.0%
1978	61.5	16.26	-9.7%			2003	61.7	21.44	19.0%	269,172	98.5%
1979	61.5	25.18	39.8%			2004	63.7	21.73	20.7%	290,175	106.2%
1980	60.3	19.26	6.9%	271,991	99.5%	2005	62.5	25.75	43.0%	276,959	101.3%
1981	61.9	25.90	43.8%	271,889	99.5%	2006	62.4	19.53	8.4%	272,128	99.6%
1982	59.5	24.84	37.9%	230,876	84.5%	2007	63.4	7.77	-56.9%	284,507	104.1%
1983	61.0	43.02	138.9%	245,811	89.9%	2008	62.8	16.08	-10.7%	267,461	97.8%
1984	62.4	13.34	-25.9%	290,781	106.4%	2009	61.5	14.21	-21.1%	250,580	91.7%
1985	60.6	11.34	-37.0%	283,239	103.6%	2010	63.8	26.23	45.6%	269,905	98.7%
1986	62.1	19.95	10.8%	272,437	99.7%	2011					
1987	62.2	15.80	-12.3%	275,045	100.6%	2012					
1988	62.1	13.91	-22.8%	277,229	101.4%	2013					
1989	62.5	10.23	-43.2%	257,955	94.4%	2014					
1990	61.2	10.10	-43.9%	278,723	102.0%	2015					
1991	61.4	16.46	-8.6%	274,153	100.3%	2016					
1992	64.1	16.77	-6.9%	279,929	102.4%	2017					
1993	62.9	22.57	25.3%	261,441	95.6%	2018					
1994	65.2	15.66	-13.0%	294,025	107.6%	2019					

Source: Western Regional Climate Center:

<http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca9699>

Calendar Year	Average Water Year	Normal Water Year	Single-Dry Water Year	Multiple-Dry Water Years			
				1	2	3	4
	-	1997	2002	1988	1989	1990	1991
Demand per Service (gal/yr)	273,339	296,610	295,162	277,229	257,955	278,723	274,153
Difference from Average	100.0%	100.0%	99.5%	93.5%	87.0%	94.0%	92.4%

# California Water Service Company - Willows District Water Supply and Demand Analysis and Projections

## Temperature Data

Station:(049699) WILLOWS 6 W															
From Year=1906 To Year=2010															
	Monthly Averages			Daily Extremes				Monthly Extremes				Max. Temp.		Min. Temp.	
	Max.	Min.	Mean	High	Date	Low	Date	Highest Mean	Year	Lowest Mean	Year	>= 90 F	<= 32 F	<= 32 F	<= 0 F
	F	F	F	F	dd/yyyy or yyyymmdd	F	dd/yyyy or yyyymmdd	F	-	F	-	# Days	# Days	# Days	# Days
January	54.5	35.9	45.2	80	15/2009	15	9/1937	51.7	2009	36.4	1937	0	0	10.4	0
February	60.3	39	49.7	81	27/1932	21	14/1984	55.8	1963	44.5	1969	0	0	4.6	0
March	65.7	41.3	53.5	88	17/1972	21	13/1918	60.9	1934	47.5	1991	0	0	2.1	0
April	72.9	44.8	58.8	101	16/1947	23	16/1995	66	1939	48.5	1967	0.8	0	0.5	0
May	81.3	51.3	66.3	108	19/1920	31	3/1950	73.3	2001	58.3	1998	6.4	0	0	0
June	89.3	57.6	73.4	113	25/1925	38	16/1939	79.7	1960	66.3	1980	14.7	0	0	0
July	95.2	60.9	78	117	15/1972	44	3/1913	83.1	1933	72.2	2000	25.2	0	0	0
August	93.6	58.7	76.1	115	9/1990	42	23/1938	82.4	1913	71.7	1954	23.3	0	0	0
September	89	55.9	72.5	115	2/1950	37	30/1971	77.1	1991	66.1	1925	15.1	0	0	0
October	79.2	49.4	64.3	105	2/2001	30	26/1919	70.3	1991	58.7	1920	4.1	0	0	0
November	65.5	41.1	53.3	92	2/1967	22	21/1985	58.6	1926	48.4	1972	0	0	2.6	0
December	55.4	36.3	45.9	81	15/1980	11	22/1990	52	1958	39.2	1972	0	0	9.3	0
Annual	75.2	47.7	61.4	117	19720715	11	19901222	63.8	1934	59	1918	89.6	0.1	29.6	0

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Monthly Average ETo Report	1.24	1.96	3.41	5.10	6.82	7.80	8.06	7.13	5.40	3.72	1.80	0.93	53.37

1) California Irrigation Management Information System (CIMIS): <http://www.cimis.water.ca.gov/cimis/welcome.jsp> EvapoTranspiration (Eto) Zones Map, Zone 12

## California Water Service Company - Willows District Water Supply and Demand Analysis and Projections

### Precipitaion Data

Station:(049699) WILLOWS 6 W														
From Year=1906 To Year=2010														
	Precipitation											Total Snowfall		
	Mean	High	Year	Low	Year	1 Day Max.		>=	>=	>=	>=	Mean	High	Year
	in.	in.	-	in.	-	in.	dd/yyyy or yyyymmdd	# Days	# Days	# Days	# Days	in.	in.	-
January	3.72	9.61	2008	0.03	2007	2.86	31/1926	10	7	3	1	0.9	16.5	1937
February	3.18	15.72	1998	0	1913	3.8	11/1925	9	5	2	1	0	2	1932
March	2.28	8.63	1995	0	1956	3.58	9/1995	7	5	2	0	0	2.5	1942
April	1.13	5.69	1948	0	1909	2.1	5/1926	5	3	1	0	0	0	1910
May	0.65	4.35	1998	0	1928	1.55	16/1996	4	2	0	0	0	0	1911
June	0.32	1.81	1982	0	1908	1.23	29/1982	2	1	0	0	0	0	1910
July	0.04	1	1974	0	1907	0.99	2/1924	0	0	0	0	0	0	1910
August	0.09	0.99	1924	0	1908	0.99	1/1924	0	0	0	0	0	0	1924
September	0.31	3.37	1912	0	1913	2.6	6/1912	1	1	0	0	0	0	1911
October	1	11.38	1924	0	1913	2.33	12/1962	4	2	1	0	0	0	1924
November	2.13	7.31	1983	0	1929	3.2	9/1964	7	4	1	0	0	0	1911
December	3.16	10.44	1952	0	1956	3.29	29/1933	9	6	2	1	0.4	7	1931
Annual	18.01	43.02	1983	5.18	1976	3.8	19250211	58	35	12	4	1.3	6	1973



## California Water Service Company -Willows District Water Supply and Demand Analysis and Projections

### Groundwater Facilities

Unit No.	Design Capacity		Status
	Active	Inactive	
2-01		350	Standby
4-01	800		
5-01	650		
6-01	650		
7-01	600		
8-01	750		
9-01	700		
10-01	440		

Total units:	8	7	1
Design Capacity (GPM)	4,940	4,590	350
Design Capacity (MGD)	7.1	6.6	0.5
Design Capacity (AFY)	7,968	7,404	565

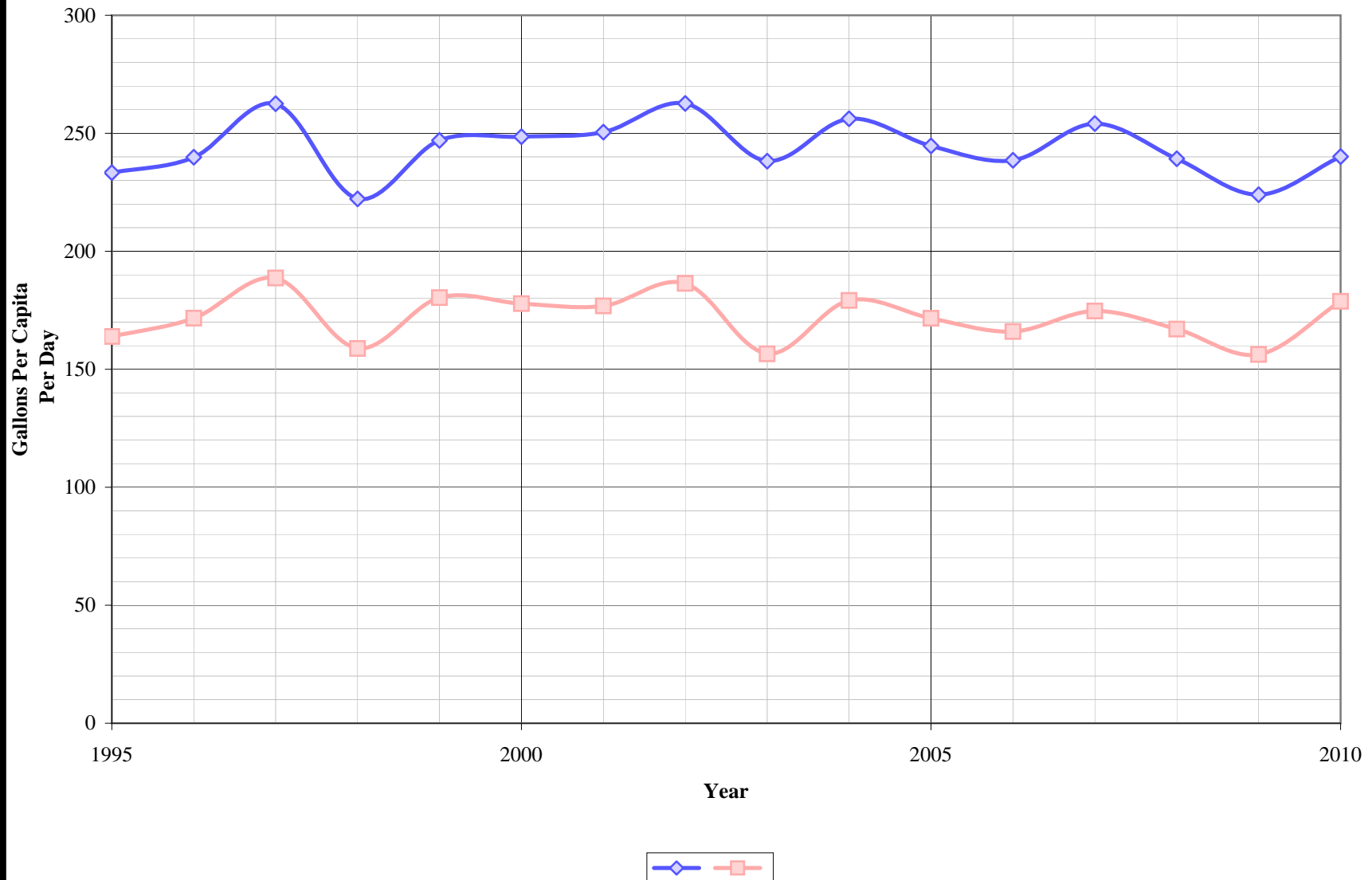
Notes:

1) Listed pump capacities on this worksheet represent design flowrates, actual flowrates are highly dependent on local system pressures, well characteristics, and other design criteria

2) Values in bold are estimated

Updated 1/1/2011

# Willows District Per Capita Consumption



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

**Per Capita Water Demand Calculation**

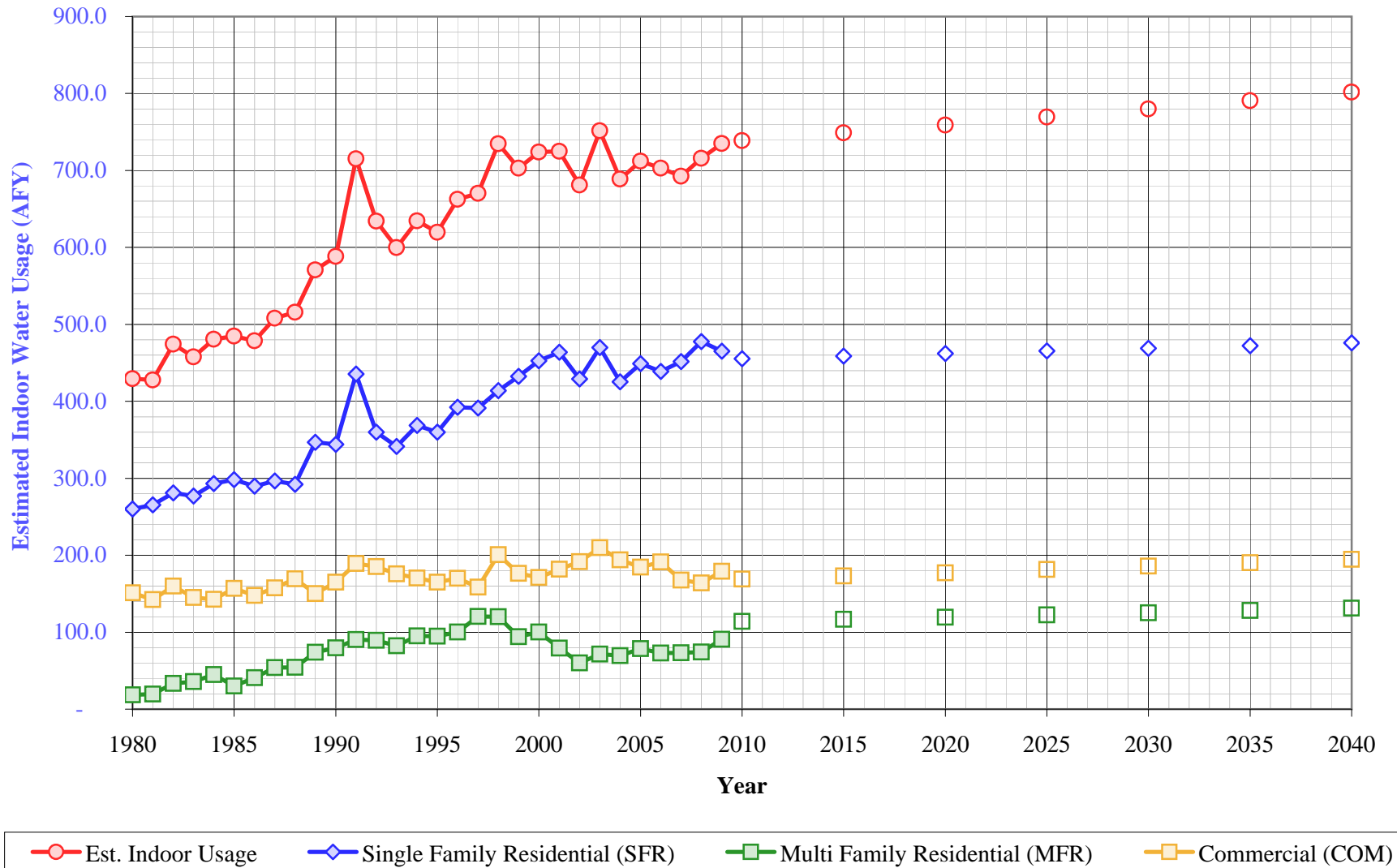
Year	All Users			Residential Only		
	Usage (AFY)	Usage (MGY)	Gallons Per Capita Per Day	Usage (AFY)	Usage (MGY)	Gallons Per Capita Per Day
1995	1,827	595	233	1,283	418	164
1996	1,889	615	240	1,352	440	172
1997	2,029	661	263	1,458	475	189
1998	1,725	562	222	1,233	402	159
1999	1,925	627	247	1,406	458	180
2000	1,934	630	249	1,383	451	178
2001	1,956	637	250	1,380	450	177
2002	2,062	672	263	1,464	477	186
2003	1,892	616	238	1,243	405	157
2004	2,043	666	256	1,429	466	179
2005	1,957	638	245	1,372	447	172
2006	1,937	631	239	1,348	439	166
2007	2,049	668	254	1,409	459	175
2008	1,924	627	239	1,343	438	167
2009	1,789	583	224	1,248	407	156
2010	1,937	631	240	1,442	470	179
5 Yr. Avg.	1,927	628	239	1,358	442	169
10 Yr. Avg.	1,954	637	245	1,368	446	171

Five year average is from years 2006 through 2010.

Ten year average is from years 2001 through 2010.

# Willows Suburban District

## Estimated Indoor Water Usage



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

**Estimated Indoor/Outdoor Water Usage - Single Family Residential (SFR)**

Year	Single Family Residential (SFR)						Multi Family Residential (MFR)				Commercial (COM)				Est. Indoor Usage AFY	
	Metered Single Family Residential Indoor Use (Annualized 90% of January Total)			Indoor Flat Rate Usage (AFY)	Total SFR Indoor Usage			Multi Family Residential January Usage (CCF)	Multi Family Residential Indoor Use (Annualized 90% of January)			Commercial (CCF)	Commercial Indoor Use (Annualized 90% of January Total)			
	JAN (CCF)	AFY	AFY/Service		AFY	GPD/Service	%		AFY	GPD/Service	%		AFY	GPD/Service		%
1980	2,675	66	0.15	194	260	137	22%	748	19	2,759	68%	6,089	151	494	65%	430
1981	2,795	69	0.16	196	266	139	23%	792	20	1,461	42%	5,747	142	468	58%	428
1982	2,977	74	0.16	207	281	147	29%	1,344	33	2,479	74%	6,448	160	527	70%	474
1983	3,233	80	0.16	197	277	144	26%	1,446	36	2,462	71%	5,844	145	479	63%	458
1984	3,721	92	0.17	201	293	151	23%	1,810	45	2,109	87%	5,760	143	464	53%	481
1985	3,906	97	0.17	201	298	153	24%	1,205	30	1,334	59%	6,329	157	502	59%	485
1986	3,888	96	0.17	193	290	149	25%	1,652	41	1,662	51%	5,966	148	467	57%	479
1987	4,152	103	0.17	193	296	152	26%	2,180	54	2,193	57%	6,355	158	495	58%	508
1988	4,362	108	0.17	184	292	149	25%	2,194	54	2,207	53%	6,828	169	527	62%	516
1989	5,380	133	0.20	213	347	176	32%	2,978	74	2,996	69%	6,059	150	458	58%	571
1990	5,502	136	0.19	208	344	174	30%	3,212	80	3,232	67%	6,647	165	499	61%	588
1991	7,178	178	0.24	258	436	218	38%	3,647	90	3,669	77%	7,637	189	610	72%	715
1992	6,341	157	0.20	203	360	175	29%	3,600	89	3,622	73%	7,464	185	596	71%	634
1993	6,336	157	0.18	184	342	165	30%	3,325	82	3,200	73%	7,095	176	573	66%	600
1994	7,114	176	0.20	192	369	177	29%	3,839	95	3,694	72%	6,872	170	559	63%	634
1995	7,158	177	0.19	182	360	171	31%	3,823	95	3,679	72%	6,649	165	553	60%	620
1996	8,081	200	0.21	192	392	185	32%	4,036	100	3,884	71%	6,864	170	569	63%	663
1997	8,247	204	0.21	187	391	185	30%	4,861	121	4,891	80%	6,391	158	530	54%	670
1998	8,905	221	0.22	193	414	194	38%	4,850	120	4,880	88%	8,090	201	666	76%	735
1999	9,441	234	0.23	198	432	201	34%	3,796	94	3,819	78%	7,112	176	581	66%	703
2000	9,973	247	0.24	205	453	211	36%	4,043	100	4,068	93%	6,901	171	566	60%	724
2001	10,296	255	0.24	209	464	216	36%	3,192	79	3,211	84%	7,336	182	590	60%	725
2002	9,607	238	0.22	191	429	198	31%	2,424	60	2,439	71%	7,733	192	622	61%	681
2003	10,641	264	0.24	206	470	216	41%	2,889	72	2,907	74%	8,468	210	671	58%	752
2004	9,723	241	0.22	184	425	195	32%	2,799	69	2,816	68%	7,828	194	623	63%	689
2005	10,295	255	0.23	194	449	205	35%	3,167	79	3,186	79%	7,447	185	587	62%	712
2006	10,192	253	0.22	186	439	199	35%	2,935	73	2,953	72%	7,718	191	608	63%	703
2007	10,683	265	0.23	187	452	202	35%	2,951	73	2,969	62%	6,761	168	529	55%	693
2008	11,861	294	0.24	184	478	215	39%	2,994	74	2,285	63%	6,615	164	517	56%	716
2009	12,883	319	0.24	146	465	212	41%	3,665	91	2,386	80%	7,219	179	585	66%	735
2010	---	---	---	---	455	207	36%	---	114	2,982	75%	---	169	550	65%	739
2015	---	---	---	---	459	207	36%	---	117	2,982	75%	---	173	550	65%	749
2020	---	---	---	---	462	207	36%	---	120	2,982	75%	---	177	550	65%	759
2025	---	---	---	---	466	207	36%	---	122	2,982	75%	---	181	550	65%	769
2030	---	---	---	---	469	207	36%	---	125	2,982	75%	---	186	550	65%	780
2035	---	---	---	---	472	207	36%	---	128	2,982	75%	---	190	550	65%	791
2040	---	---	---	---	476	207	36%	---	131	2,982	75%	---	195	550	65%	802

**California Water Service Company - Willows District**

**Water Supply and Demand Analysis and Projections**

**Comparison of Projected Demand and Conservation Savings Between SBx7-7 Compliance Targets and Actual Proposed Programs**

Year	SBx7-7 Compliance Target (gpcd)	Anticipated GPCD with Proposed Programs*	Estimated Population	Undadjusted Baseline Demand (AFY)	SBx7-7 Compliance Target Demand (AFY)	Anticipated Demand with Proposed Programs (AFY)	Compliance Target Savings Requirement (AFY)	Savings Due to Proposed Programs (AFY)
2005-2009 Average	240	240	7,180	1,931	1,931	1,931	0	0
2010	240	240	7,200	1,937	1,937	1,937	0	0
2011	237	235	7,220	1,942	1,914	1,901	28	41
2012	233	232	7,240	1,947	1,892	1,881	56	66
2013	230	227	7,250	1,950	1,867	1,843	83	107
2014	226	224	7,270	1,955	1,844	1,824	112	131
2015	223	221	7,290	1,961	1,821	1,805	140	156
2016	218	216	7,310	1,966	1,785	1,772	181	194
2017	213	212	7,320	1,969	1,746	1,737	222	232
2018	208	207	7,340	1,974	1,710	1,704	264	271
2019	203	203	7,360	1,980	1,674	1,670	306	309
2020	198	198	7,380	1,985	1,637	1,637	348	348
2021	198	198	7,390	1,988	1,639	1,639	349	349
2022	198	198	7,410	1,993	1,643	1,643	350	350
2023	198	198	7,430	1,998	1,648	1,648	351	351
2024	198	198	7,450	2,004	1,652	1,652	351	351
2025	198	198	7,470	2,009	1,657	1,657	352	352
2026	198	198	7,490	2,015	1,661	1,661	353	353
2027	198	198	7,500	2,017	1,663	1,663	354	354
2028	198	198	7,520	2,023	1,668	1,668	355	355
2029	198	198	7,540	2,028	1,672	1,672	356	356
2030	198	198	7,560	2,033	1,677	1,677	357	357
2031	198	198	7,580	2,039	1,681	1,681	358	358
2032	198	198	7,600	2,044	1,686	1,686	359	359
2033	198	198	7,610	2,047	1,688	1,688	359	359
2034	198	198	7,630	2,052	1,692	1,692	360	360
2035	198	198	7,650	2,058	1,697	1,697	361	361
2036	198	198	7,670	2,063	1,701	1,701	362	362
2037	198	198	7,690	2,068	1,706	1,706	363	363
2038	198	198	7,710	2,074	1,710	1,710	364	364
2039	198	198	7,730	2,079	1,714	1,714	365	365
2040	198	198	7,750	2,085	1,719	1,719	366	366

\*Note: The district is projected to achieve its district-specific 2015 SBx7-7 compliance target through a combination of passive and active savings. For the purpose of this analysis it is assumed that there will be a linear reduction in GPCD from 2015-2020 to achieve the district-specific 2020 SBx7-7 compliance target. GPCD will remain flat from 2020 through 2040.