

Section 4A
Comparison of Supply and
Demand Projections to Determine Needs
[31 TAC §357.7(a)(5-7)]

4A.1 Water Needs Projections by Water User Group

In this section, the demand projections from Section 2 and the supply projections from Section 3 are brought together to estimate projected water needs in the South Central Texas Region through the year 2060. If projected demands exceed projected supplies for a water user group, the difference or shortage, is identified as a water need for that water user group. As a recap, Section 2 presents demand projections for six types of use: municipal, industrial, steam-electric, mining, irrigation, and livestock. The projections are for dry-year demands. Municipal water demand projections are shown for each entity that supplied more than 280 acft of water in the year 2000, and for the County-Other category in each county. Section 3 presents estimates of surface water and groundwater availability.

This section contains a summary of the water needs (shortages) for each Water User Group (WUG) located in the South Central Texas Region. For a detailed analysis of water needs in the region by river and coastal basin as well as supply sources and amount supplied from each source, see Appendix C, entitled, “Comprehensive Water Needs Assessment Data.” Table 4A-1 provides a summary of the water needs for each WUG located in the planning area by county. If a WUG is located in multiple counties, it is shown in its “primary” county in Table 4A-1. Table 4A-2 shows WUGs that are located in multiple counties and the “primary” county to which that WUG has been assigned for presentation herein. Region L has a projected annual water need of 174,234 acft in 2010, increasing to 436,750 acft by 2060 (Table 4A-1, end of table).

**Table 4A-1.
Summary of Water Needs (Shortages) by WUG**

Water User Group	Year					
	2010 (acft)	2020 (acft)	2030 (acft)	2040 (acft)	2050 (acft)	2060 (acft)
Atascosa County						
Benton City WSC	0	0	199	454	696	885
Charlotte	0	0	0	0	0	0
Jourdanton	112	172	225	267	306	338
Lytle	141	152	162	169	179	188
McCoy WSC	0	12	208	436	650	812
Pleasanton	0	0	0	0	0	0
Poteet	0	0	0	0	0	0
County-Other	0	0	0	0	0	0
Municipal Total	253	336	794	1,326	1,831	2,223
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	263	0	0	0	604	942
Mining	0	0	0	0	0	0
Irrigation	6,095	4,734	3,413	2,141	924	291
Livestock	0	0	0	0	0	0
County Total	6,611	5,070	4,207	3,467	3,359	3,456
Bexar County						
Alamo Heights	592	655	657	653	667	691
Atascosa Rural WSC	546	717	869	996	1,106	1,218
Balcones Heights	0	0	0	0	0	0
Bexar Met Water District	3,944	4,569	5,357	5,784	6,373	7,038
Castle Hills	96	83	69	56	47	47
China Grove	0	0	0	0	0	0
Converse	0	0	134	449	716	969
East Central WSC	0	0	251	495	716	942
Elmendorf	0	0	0	0	0	0
Fair Oaks Ranch	0	0	0	0	0	0
Helotes	0	0	0	0	0	0
Hill Country Village	730	727	723	720	718	718
Hollywood Park	1,969	2,044	2,113	2,166	2,220	2,271
Kirby	335	334	337	331	343	364
Lackland AFB (CDP)	0	0	0	0	0	0
Leon Valley	0	0	0	0	0	0
Leon Valley (SAWS)	0	0	0	0	0	0
Live Oak	0	0	0	0	0	0
Olmos Park	0	0	0	0	0	0
San Antonio (BMWWD)	9,023	15,840	18,526	20,556	22,519	24,476
San Antonio (SAWS)	68,476	93,385	116,922	137,353	153,358	169,336
San Antonio (Others)	284	317	348	371	394	416

Table 4A-1 (Continued)

Water User Group	Year					
	2010 (acft)	2020 (acft)	2030 (acft)	2040 (acft)	2050 (acft)	2060 (acft)
Bexar County (continued)						
Selma	0	316	762	757	748	749
Shavano Park	320	336	348	357	369	381
Somerset	0	0	0	0	0	0
St. Hedwig	0	0	0	0	0	0
Terrell Hills	0	0	0	0	0	0
Universal City	113	421	680	630	606	606
Water Ser Inc (Apex Water Ser)	911	1,148	1,384	1,599	1,801	2,018
Windcrest	235	227	219	209	206	214
County-Other	0	0	0	127	403	655
County-Other (SAWS)	0	0	0	0	0	0
Municipal Total	87,574	121,160	149,700	173,610	193,311	213,110
Manufacturing	1,340	4,886	8,240	11,537	14,438	17,588
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	921	1,020	1,122	1,216
Irrigation	0	0	0	0	0	0
Livestock	0	0	0	0	0	0
County Total	88,914	126,046	158,861	186,167	208,871	231,914
Caldwell County						
Aqua WSC	49	121	178	240	300	362
Creedmoor-Maha WSC	108	180	246	312	378	447
Lockhart	0	321	856	1,407	1,952	2,512
Luling	0	122	211	296	398	506
Martindale	0	0	0	0	0	0
Martindale WSC	42	70	95	126	151	182
Maxwell WSC	0	0	77	246	476	689
Mustang Ridge	19	62	99	137	175	213
Polonia WSC	0	0	0	0	66	265
County-Other	0	0	0	0	0	0
Municipal Total	218	876	1,762	2,764	3,896	5,176
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	0	0	0	0	0	0
Livestock	0	0	0	0	0	0
County Total	218	876	1,762	2,764	3,896	5,176

Table 4A-1 (Continued)

Water User Group	Year					
	2010 (acft)	2020 (acft)	2030 (acft)	2040 (acft)	2050 (acft)	2060 (acft)
Calhoun County						
Calhoun County WSC	0	0	0	0	0	0
Point Comfort	46	145	322	499	489	489
Port Lavaca	0	0	0	0	0	0
Seadrift	0	0	0	0	0	0
County-Other (Port O'Connor MUD)	0	0	0	0	0	0
County-Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Municipal Total	46	145	322	499	489	489
Manufacturing	0	0	0	0	0	2,021
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	0	0	0	0	0	0
Livestock	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
County Total	46	145	322	499	489	2,510
Comal County						
Bulverde	653	1,342	2,128	2,910	3,723	4,595
Canyon Lake WSC	0	0	129	2,198	4,466	6,769
Garden Ridge	257	395	552	710	873	1,052
New Braunfels	0	907	4,044	7,151	10,361	13,920
County-Other	<u>1,782</u>	<u>1,972</u>	<u>2,178</u>	<u>2,362</u>	<u>2,665</u>	<u>2,960</u>
Municipal Total	2,692	4,616	9,031	15,331	22,088	29,296
Manufacturing	5,199	6,033	6,784	7,514	8,141	9,022
Steam-Electric Power	0	0	0	0	0	0
Mining	439	635	753	870	1,068	1,173
Irrigation	0	0	0	0	0	0
Livestock	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
County Total	8,330	11,284	16,568	23,715	31,297	39,491
DeWitt County						
Cuero	0	0	0	0	0	0
Yoakum	0	0	0	0	0	0
Yorktown	0	0	0	0	0	0
County-Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Municipal Total	0	0	0	0	0	0
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	0	0	0	0	0	0
Livestock	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
County Total	0	0	0	0	0	0

Table 4A-1 (Continued)

Water User Group	Year					
	2010 (acft)	2020 (acft)	2030 (acft)	2040 (acft)	2050 (acft)	2060 (acft)
Dimmit County						
Asherton	0	0	0	0	0	0
Big Wells	0	0	0	0	0	0
Carrizo Springs	0	0	0	0	0	0
County-Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Municipal Total	0	0	0	0	0	0
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	0	0	0	0	0	0
Livestock	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
County Total	0	0	0	0	0	0
Frio County						
Dilley	0	0	0	0	0	0
Pearsall	0	0	0	0	0	0
County-Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Municipal Total	0	0	0	0	0	0
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	0	0	0	0	0	0
Livestock	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
County Total	0	0	0	0	0	0
Goliad County						
Goliad	0	0	0	0	0	0
County-Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Municipal Total	0	0	0	0	0	0
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	0	0	0	0	0	0
Livestock	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
County Total	0	0	0	0	0	0
Gonzales County						
Gonzales	0	0	0	0	0	0
Gonzales County WSC	0	0	0	0	0	0
Nixon	0	0	0	0	0	0
Waelder	0	0	0	0	0	0
County-Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Municipal Total	0	0	0	0	0	0
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	0	0	0	0	0	0
Livestock	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
County Total	0	0	0	0	0	0

Table 4A-1 (Continued)

Water User Group	Year					
	2010 (acft)	2020 (acft)	2030 (acft)	2040 (acft)	2050 (acft)	2060 (acft)
Guadalupe County						
Cibolo	0	0	0	0	0	0
Crystal Clear WSC	0	0	509	1,138	1,926	2,716
Green Valley SUD	0	0	0	0	0	640
Marion	0	3	18	33	53	75
New Berlin	0	0	0	0	0	0
Santa Clara	76	205	348	485	642	810
Schertz	0	0	0	0	647	2,436
Seguin	0	0	0	0	0	0
Springs Hill WSC	0	0	0	0	0	0
County-Other	0	0	0	0	0	0
Municipal Total	76	208	875	1,656	3,268	6,677
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	0	0	0	0	0	0
Livestock	0	0	0	0	0	0
County Total	76	208	875	1,656	3,268	6,677
Hays County						
County Line WSC	0	1,049	1,433	1,603	1,921	2,386
Goforth WSC	0	29	433	879	1,427	1,872
Kyle	0	436	713	873	1,370	1,699
Mountain City	0	22	49	75	108	134
Niederwald	58	118	183	244	317	377
Plum Creek Water Company	0	0	0	195	454	657
San Marcos	0	0	1,319	4,772	8,507	11,387
Wimberley WSC	219	440	667	885	1,179	1,409
Woodcreek	23	92	162	229	317	387
Woodcreek Utilities Inc	455	852	1,271	1,681	2,184	2,580
County-Other	0	0	0	0	0	0
Municipal Total	755	3,038	6,230	11,436	17,784	22,888
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	82	91	97	101	102	103
Irrigation	0	0	0	0	0	0
Livestock	0	0	0	0	0	0
County Total	837	3,129	6,327	11,537	17,886	22,991

Table 4A-1 (Continued)

Water User Group	Year					
	2010 (acft)	2020 (acft)	2030 (acft)	2040 (acft)	2050 (acft)	2060 (acft)
Karnes County						
El Oso WSC	0	0	0	0	0	0
Falls City	0	0	0	0	0	0
Karnes City	182	203	224	242	253	262
Kenedy	0	0	0	37	86	118
Runge	0	0	0	0	0	0
County-Other (TDCJ)	0	0	0	0	0	0
County-Other	0	0	0	0	0	0
Municipal Total	182	203	224	279	339	380
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	0	0	0	0	0	0
Livestock	0	0	0	0	0	0
County Total	182	203	224	279	339	380
Kendall County						
Boerne	0	0	0	0	0	276
County-Other	221	865	1,522	2,073	2,726	3,514
Municipal Total	221	865	1,522	2,073	2,726	3,790
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	0	0	0	0	0	0
Livestock	0	0	0	0	0	0
County Total	221	865	1,522	2,073	2,726	3,790
LaSalle County						
Cotulla	0	0	0	0	0	0
Encinal	0	0	0	0	0	0
County-Other	0	0	0	0	0	0
Municipal Total	0	0	0	0	0	0
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	0	0	0	0	0	0
Livestock	0	0	0	0	0	0
County Total	0	0	0	0	0	0

Table 4A-1 (Continued)

Water User Group	Year					
	2010 (acft)	2020 (acft)	2030 (acft)	2040 (acft)	2050 (acft)	2060 (acft)
Medina County						
Castroville	294	357	416	468	522	575
Devine	0	0	0	0	0	0
East Medina SUD	0	104	214	303	397	491
Hondo	319	536	740	910	1,083	1,252
La Coste	92	109	126	138	152	168
Natalia	194	238	279	314	349	383
Yancey WSC	214	395	562	710	851	985
County-Other	<u>0</u>	<u>236</u>	<u>528</u>	<u>787</u>	<u>1,055</u>	<u>1,296</u>
Municipal Total	1,113	1,975	2,865	3,630	4,409	5,150
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	7,770	5,878	4,067	2,332	670	0
Livestock	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
County Total	8,883	7,853	6,932	5,962	5,079	5,150
Refugio County						
Refugio	0	0	0	0	0	0
Woodsboro	0	0	0	0	0	0
County-Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Municipal Total	0	0	0	0	0	0
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	0	0	0	0	0	0
Livestock	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
County Total	0	0	0	0	0	0
Uvalde County						
Sabinal	127	123	118	113	109	109
Uvalde	3,172	3,209	3,229	3,233	3,235	3,263
County-Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Municipal Total	3,299	3,332	3,347	3,346	3,344	3,372
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	0	0	0	0	0	0
Livestock	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
County Total	3,299	3,332	3,347	3,346	3,344	3,372

Table 4A-1 (Continued)

Water User Group	Year					
	2010 (acft)	2020 (acft)	2030 (acft)	2040 (acft)	2050 (acft)	2060 (acft)
Victoria County						
Victoria	0	0	0	0	0	0
County-Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>81</u>	<u>193</u>	<u>310</u>
Municipal Total	0	0	0	81	193	310
Manufacturing	0	2,969	5,921	8,860	11,489	14,441
Steam-Electric Power	1,791	50,962	50,991	51,021	51,053	51,076
Mining	0	0	0	0	0	0
Irrigation	0	0	0	0	0	0
Livestock	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
County Total	1,791	53,931	56,912	59,962	62,735	65,827
Wilson County						
Floresville	0	0	0	0	159	433
La Vernia	0	0	0	0	0	0
Oak Hills WSC	0	0	0	0	0	298
Poth	0	0	0	0	0	0
SS WSC	223	864	1,546	2,214	2,939	3,690
Stockdale	0	0	0	0	0	0
Sunko WSC	0	0	0	0	0	70
County-Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>33</u>
Municipal Total	223	864	1,546	2,214	3,098	4,524
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	0	0	0	0	0	0
Livestock	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
County Total	223	864	1,546	2,214	3,098	4,524
Zavala County						
Crystal City	0	0	0	0	0	0
County-Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Municipal Total	0	0	0	0	0	0
Manufacturing	0	0	0	0	0	0
Steam-Electric Power	0	0	0	0	0	0
Mining	0	0	0	0	0	0
Irrigation	54,600	51,763	49,038	46,421	43,907	41,492
Livestock	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
County Total	54,600	51,763	49,038	46,421	43,907	41,492

Table 4A-1 (Concluded)

Water User Group	Year					
	2010 (acft)	2020 (acft)	2030 (acft)	2040 (acft)	2050 (acft)	2060 (acft)
Region L (All Counties)						
Municipal	96,652	137,615	178,218	218,245	256,776	297,385
Manufacturing	6,539	13,888	20,945	27,911	34,068	43,072
Steam-Electric Power	2,054	50,962	50,991	51,021	51,657	52,018
Mining	521	726	1,771	1,991	2,292	2,492
Irrigation	68,465	62,375	56,518	50,894	45,501	41,783
Livestock	0	0	0	0	0	0
Region L Total	174,234	265,567	308,443	350,062	390,294	436,750

Table 4A-2.
WUGs Located in Multiple Counties

WUG	Counties Served (Primary County Highlighted)			
Benton City WSC	Atascosa	Frio	Medina	
Bexar Met Water District	Atascosa	Bexar	Comal	Medina
County Line WSC	Caldwell	Hays		
Creedmoor-Maha WSC	Caldwell	Hays		
Crystal Clear WSC	Comal	Guadalupe	Hays	
East Central WSC	Bexar	Guadalupe	Wilson	
El Oso WSC	Karnes	Wilson		
Fairoaks Ranch	Bexar	Comal	Kendall	
Goforth WSC	Caldwell	Hays		
Gonzales County WSC	Caldwell	DeWitt	Gonzales	
Green Valley SUD	Bexar	Comal	Guadalupe	
Lyle	Atascosa	Bexar	Medina	
Martindale WSC	Caldwell	Guadalupe		
Maxwell WSC	Caldwell	Hays		
McCoy WSC	Atascosa	Wilson		
New Braunfels	Comal	Guadalupe		
Niederwald	Caldwell	Hays		
Schertz	Bexar	Comal	Guadalupe	
Selma	Bexar	Comal	Guadalupe	
Sunko WSC	Karnes	Wilson		
Water Ser Inc.	Bexar	Comal	Guadalupe	Kendall

4A.1.1 Municipal WUGs with Needs

By the year 2060, there are over 65 municipal WUGs with a projected need (shortage). The total municipal need for the region in 2030 is 178,218 acft/yr, increasing to 297,385 acft/yr in 2060 (Table 4A-1). Thirteen counties (Atascosa, Bexar, Caldwell, Calhoun, Comal, Guadalupe, Hays, Karnes, Kendall, Medina, Uvalde, Victoria, and Wilson) are projected to have at least one WUG with a municipal need (shortage) during the planning period, as shown in Figure 4A-1.

4A.1.2 Industrial WUGs with Needs

The total industrial need for the region in 2030 is 20,945 acft, increasing to 43,072 acft in 2060 (Table 4A-1). Four counties (Bexar, Calhoun, Comal, and Victoria) are projected to have an industrial need (shortage) during the planning period, as shown in Figure 4A-2.

4A.1.3 Steam-Electric WUGs with Needs

The total steam-electric need for the region in 2030 is 50,991 acft, increasing to 52,018 acft in 2060 (Table 4A-1). Two counties (Atascosa and Victoria) are projected to have a steam-electric need (shortage) during the planning period, as shown in Figure 4A-3.

4A.1.4 Mining WUGs with Needs

The total mining need for the region in 2030 is 1,771 acft, increasing to 2,492 acft in 2060 (Table 4A-1). Three counties (Bexar, Comal, and Hays) are projected to have a mining need (shortage) during the planning period, as shown in Figure 4A-4.

4A.1.5 Irrigation WUGs with Needs

The total irrigation need for the region in 2030 is 56,518 acft, decreasing to 41,783 acft in 2060 (Table 4A-1). Three counties (Atascosa, Medina, and Zavala) are projected to have an irrigation need (shortage) during the planning period, as shown in Figure 4A-5.

4A.1.6 Livestock WUGs with Needs

There are no projected livestock needs within the planning period.

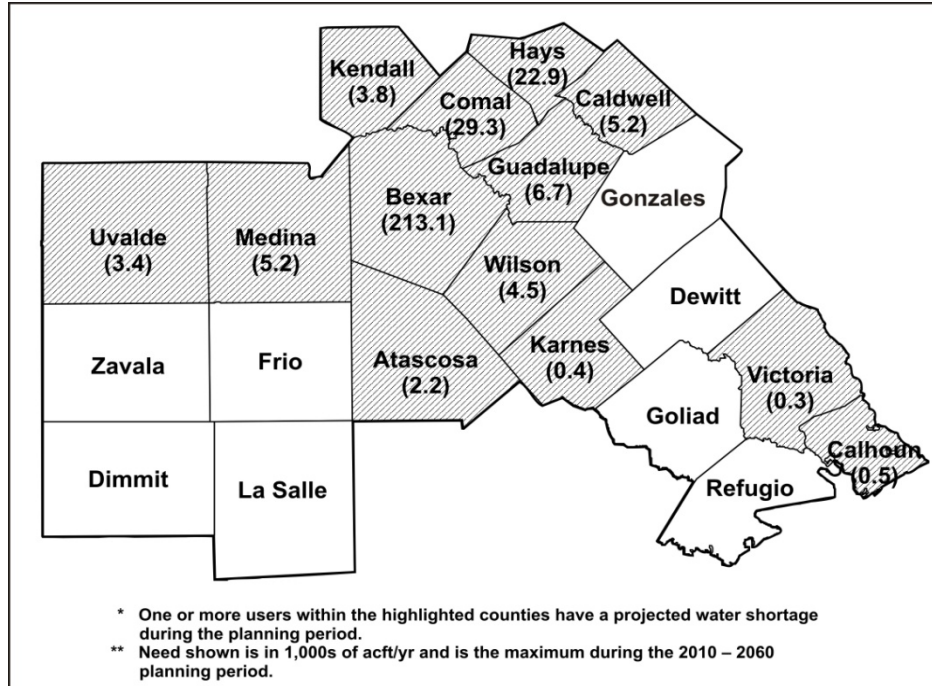


Figure 4A-1. Municipal Water Needs

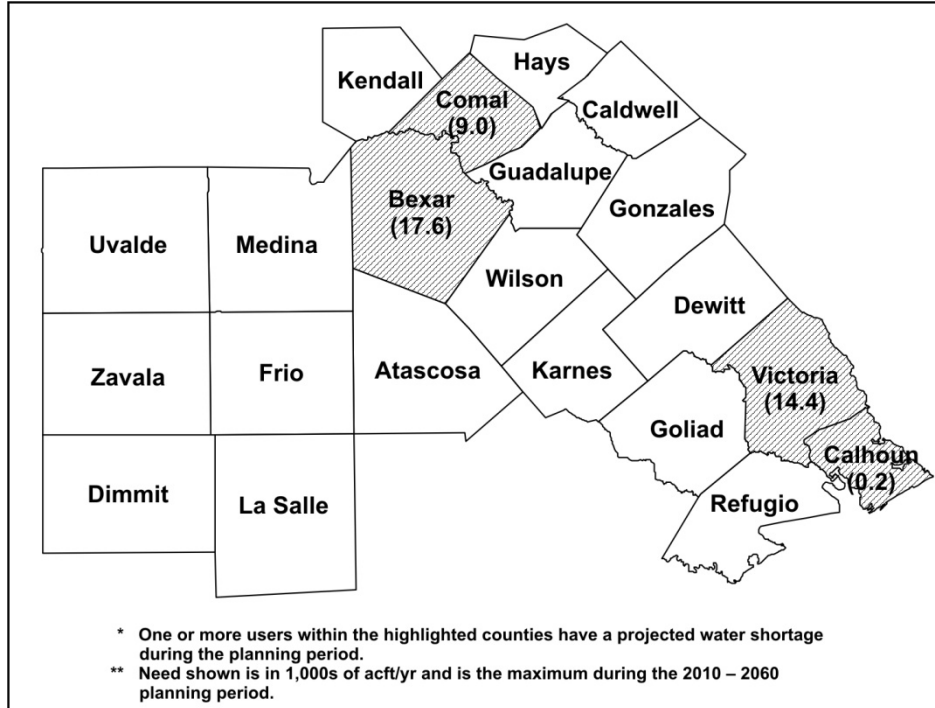


Figure 4A-2. Industrial Water Needs

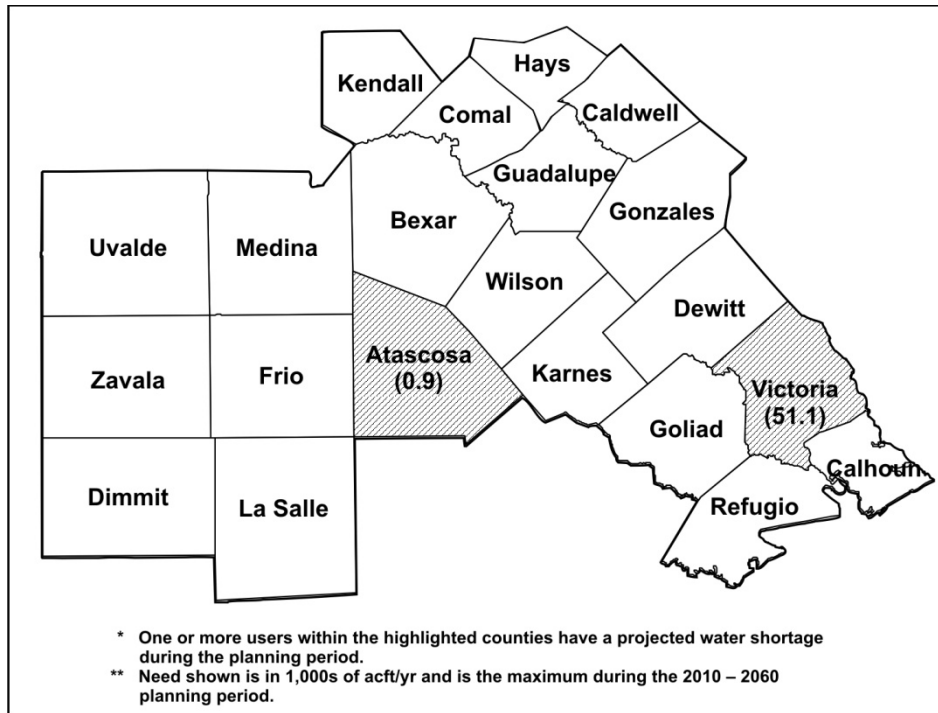


Figure 4A-3. Steam-Electric Water Needs

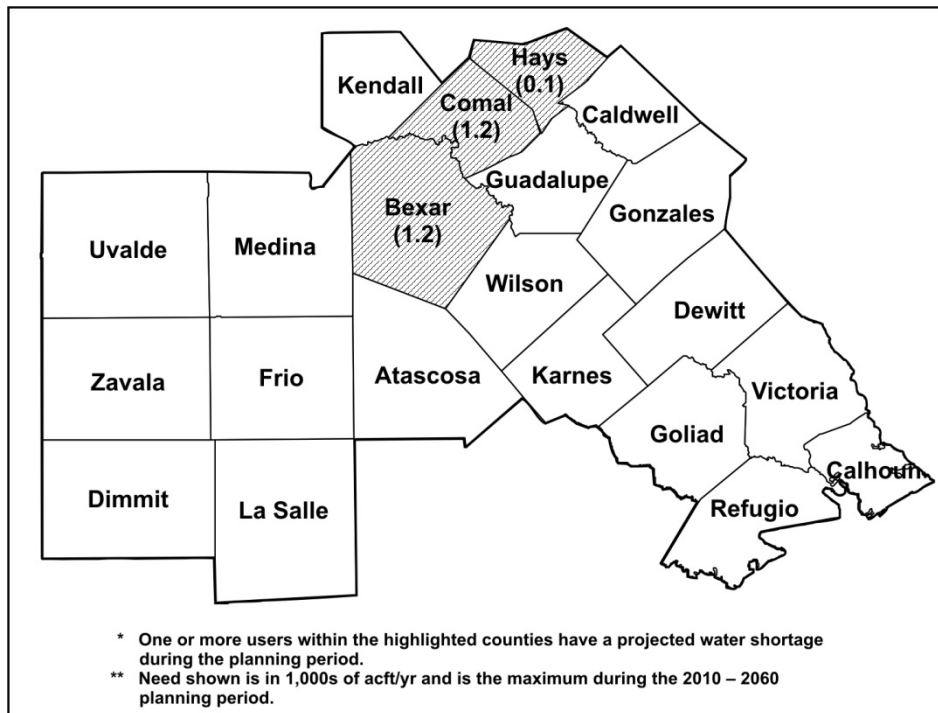


Figure 4A-4. Mining Water Needs

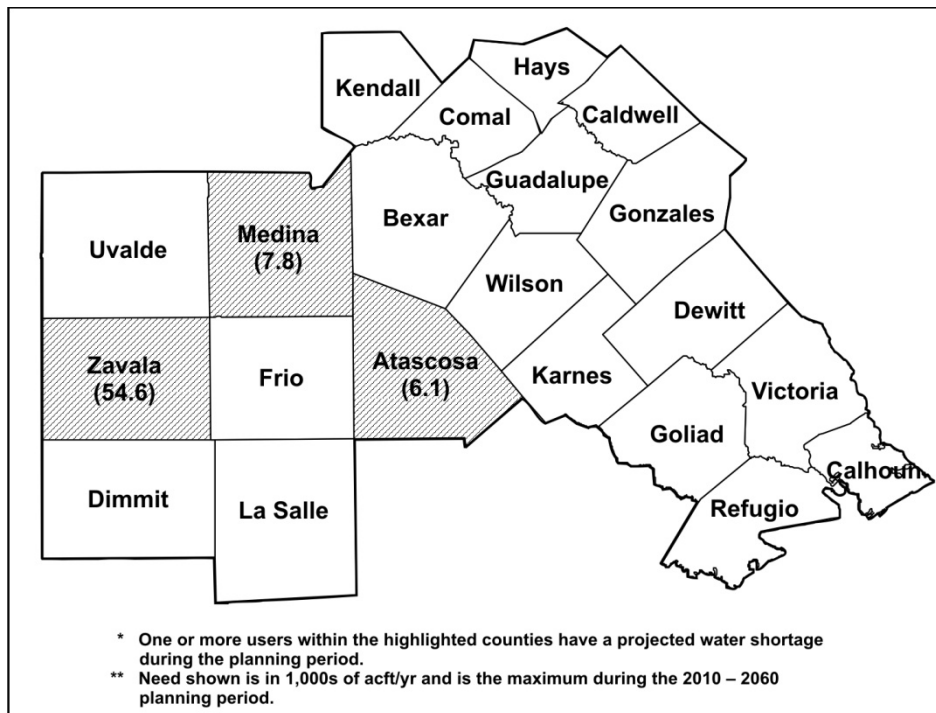


Figure 4A-5. Irrigation Water Needs

4A.2 Water Needs Projections by Wholesale Water Provider

A summary of projected water demands, existing supplies, and needs (shortages) for each Wholesale Water Provider (WWP) in the South Central Texas planning region is provided in Table 4A-3. Projected water demands for each WWP are estimated on the basis of existing and/or future contracts with water user groups (WUGs) expected to continue receiving water or acquire new water supplies from the WWP. Supplies for each WWP are determined in accordance with procedures and assumptions described in Section 3 and are identified by source in Table 4A-3. The Texas Water Alliance, San Antonio Water System (SAWS), Bexar Metropolitan Water District (BMWD), Canyon Regional Water Authority (CRWA), the Guadalupe-Blanco River Authority (GBRA), and Schertz-Seguin Local Government Corporation (SSLGC) each have projected needs for additional water supply throughout the planning period. The Springs Hill WSC (SHWSC), on the other hand, has existing supplies in excess of projected demands throughout the planning period. These existing supplies in excess of projected demand are identified in Table 4A-3 as System Management Supplies.

**Table 4A-3.
Water Demands, Supplies, and Needs (Shortages) by
Wholesale Water Providers**

Texas Water Alliance							
Projected Demands:							
Water Purchaser	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
Canyon Lake WSC	0	0	0	3,000	6,000	9,000	12,000
Water Service Inc.	0	0	1,000	1,000	1,000	1,000	1,000
Comal County Rural Areas	0	0	986	1,089	1,181	1,333	1,480
Gonzales County WSC	0	0	500	500	500	500	500
Springs Hill WSC (WWP)	0	0	1,500	3,000	3,000	3,000	3,000
Bulverde	0	0	1,342	2,128	2,910	3,723	4,595
Total Demand	0	0	5,328	10,717	14,591	18,556	22,575
Supply:							
Source	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
Total Supply	0	0	0	0	0	0	0
Projected Needs:							
	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
System Management Supplies / (Needs)	0	0	(5,328)	(10,717)	(14,591)	(18,556)	(22,575)

San Antonio Water System (SAWS)							
Projected Demands:							
Water Purchaser	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
Balcones Heights	480	514	555	578	600	633	670
China Grove	288	376	457	531	591	645	695
Elmendorf	99	112	123	132	140	148	156
Helotes	845	1,537	2,249	2,820	3,264	3,679	4,047
Leon Valley	407	397	388	382	375	372	377
Live Oak	338	344	347	353	358	370	385
Olmos Park	381	403	424	441	452	468	484
San Antonio	166,813	192,007	213,943	234,865	250,671	265,958	281,204
Shavano Park	303	320	336	348	357	369	381
Terrell Hills	815	863	914	956	983	1,018	1,057
Windcrest	61	60	60	59	59	59	59
East Central WSC	2,240	2,240	2,240	2,240	2,240	2,240	2,240
East Central WSC (Palm Park)	1,120	1,120	1,120	0	0	0	0
Rural	5,595	5,661	5,747	5,796	5,923	6,287	6,667
Industrial (Bexar County)	7,723	12,000	16,000	18,000	22,000	30,000	30,000
Total Demand	187,508	217,954	244,903	267,501	288,013	312,246	328,422
Supply:							
Source	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
Edwards Aquifer	117,187	117,187	117,187	117,187	117,187	117,187	117,187
Carrizo Aquifer	6,400	6,400	6,400	4,925	4,846	4,770	4,704
Trinity Aquifer	0	3,500	3,500	3,500	3,500	3,500	3,500
Direct Reuse	9,767	9,767	9,767	9,767	9,767	9,767	9,767
Aquifer Storage & Recovery (ASR) Project	0	0	0	0	0	0	0
GBRA (Canyon Reservoir)	0	7,500	5,500	4,000	0	0	0
Total Supply *	133,354	144,354	142,354	139,379	135,300	135,224	135,158
Projected Needs:							
	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
System Management Supplies / (Needs) *	(54,154)	(73,600)	(102,549)	(128,122)	(152,713)	(177,022)	(193,264)

* Supplies could be up to 5,000 acft/yr greater (and needs up to 5,000 acft/yr less) as they do not include existing Trinity Aquifer supplies. As indicated in Table 3-1, the Trinity-Glen Rose GCD Management Plan was adopted after completion of the needs assessment for the 2006 regional plan.

Table 4A-3 (Continued)

Bexar Metropolitan Water District (BMWD)

Projected Demands:

Water Purchaser	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
Atascosa Rural WSC	389	120	120	120	120	120	120
Bexar Met Water District (Atascosa County)	8,794	505	621	715	780	843	895
Bexar Met Water District (Bexar County)	230	8,897	9,032	9,109	9,110	9,248	9,449
Bexar Met Water District (Comal County)	15	462	748	1,059	1,344	1,654	2,001
Bexar Met Water District (Medina County)	838	24	33	41	47	54	60
Castle Hills	842	820	807	793	780	771	771
Cibolo	2,229	500	500	500	500	500	500
Hill Country Village	21,419	838	835	831	828	826	826
Hollywood Park	321	2,314	2,389	2,458	2,511	2,565	2,616
San Antonio	1,400	24,654	27,471	30,157	32,187	34,150	36,107
Somerset	0	405	484	552	609	660	709
East Central WSC	0	1,400	1,400	1,400	1,400	1,400	1,400
Converse		1,500	1,500	1,634	1,949	2,216	2,469
Live Oak		1,000	1,000	1,000	1,000	1,000	1,000
Total Demand	36,477	43,439	46,940	50,369	53,165	56,007	58,923

Supply:

Source	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
Run-of-River (Medina River)	4,531	3,797	3,797	3,797	3,797	3,797	3,797
CRWA (Canyon Reservoir)	4,000	4,000	4,000	0	0	0	0
Trinity Aquifer (Bexar & Comal Counties)	158	5,224	5,224	5,224	5,224	5,224	5,224
Carrizo Aquifer (Bexar County)	1,000	1,000	1,000	770	757	745	735
Medina Lake System	0	0	0	0	0	0	0
Edwards Aquifer	12,887	12,781	12,781	12,781	12,781	12,781	12,781
Total Supply	22,576	26,802	26,802	22,572	22,559	22,547	22,537

Projected Needs:

Needs	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
	(13,901)	(16,638)	(20,139)	(27,798)	(30,607)	(33,461)	(36,387)

Guadalupe-Blanco River Authority (GBRA)

Projected Demands (acft/yr):

Water Purchaser	Basin Location	Year (acft)						
		2000	2010	2020	2030	2040	2050	2060
Municipal (Canyon Reservoir)								
Upper Basin - At or above Canyon Reservoir								
Canyon Lake WSC	U	4,000	6,000	6,000	6,129	8,198	10,466	12,769
City of Blanco	U	600	600	600	600	600	600	600
HH Ranch Properties	U	0	250	250	250	250	250	250
Domestic Contracts	U	25	17	17	17	17	17	17
Rebecca Creek MUD	U	130	130	130	130	130	130	130
Kendall County Rural	U	0	221	865	1,522	2,073	2,726	3,514
Kerr County MOU	U	0	0	0	2,000	2,000	2,000	2,000
WW Sports	U	1	1	1	1	1	1	1
Yacht Club	U	4	4	4	4	4	4	4
SJWTX – Bulverde (Western Canyon)	U	0	400	400	400	400	400	400
SJWTX – Park Village (Western Canyon)	U	0	322	322	322	322	322	322
Bulverde (Western Canyon)	U	0	653	1,342	2,128	2,910	3,723	4,595
City of Boerne (Western Canyon)	U	0	1,176	1,794	2,449	2,976	3,436	3,887
City of Fair Oaks Ranch (Western Canyon)	U	0	1,850	1,850	1,850	1,850	1,850	1,850
Cordillera Ranch (Western Canyon)	U	0	1,000	1,000	1,000	1,000	1,000	1,000
DH Invest.-Johnson Ranch (Western Canyon)	U	0	400	400	400	400	400	400
Kendall & Tapatío (Western Canyon)	U	0	750	750	750	750	750	750
Comal Trace (Western Canyon)	U	0	100	100	100	100	100	100

Table 4A-3 (Continued)

Guadalupe-Blanco River Authority (GBRA) (Continued)								
Kendall County Rural	U	0	0	0	0	0	0	374
SAWS (Western Canyon)	U	0	4,550	3,243	1,802	0	0	0
<i>Western Canyon Sub-Total</i>		0	11,201	11,201	11,201	10,708	11,981	13,678
Total Upper Basin Municipal (Canyon Reservoir)		4,760	18,424	19,068	21,854	23,981	28,175	32,963
Mid Basin								
CRWA – BMWD	M		3,500	0	0	0	0	0
CRWA – Cibolo	M		1,350	1,350	1,350	1,350	1,350	1,350
CRWA – BMWD / Cibolo	M		500	0	0	0	0	0
CRWA – East Central WSC	M		1,100	0	0	0	0	0
CRWA – East Central WSC / Green Valley SUD	M		300	300	300	300	300	300
CRWA – Green Valley SUD	M		1,800	1,700	1,700	1,700	1,700	1,700
CRWA – Marion	M		100	100	100	100	100	100
CRWA – Springs Hill WSC	M		1,425	1,425	1,425	1,425	1,425	1,425
CRWA – Springs Hill WSC / Green Valley SUD	M		500	500	500	500	500	500
CRWA Dunlap In District Balance	M			0	5,200	5,200	5,200	5,200
<i>CRWA Dunlap Current Contract Subtotal</i>	M	10,025	10,575	10,575	10,575	10,575	10,575	10,575
CRWA Dunlap Future Contract	M			5,000	5,000	5,000	5,000	5,000
50% of Comal County Other	M	0	891	986	1,089	1,181	1,333	1,480
New Braunfels Utilities ¹	M	6,720	6,720	7,627	10,764	13,871	17,081	20,640
Comal County Manufacturing	M		5,199	6,033	6,784	7,514	8,141	9,022
City of Seguin	M	3,000	1,000	1,000	1,000	1,000	1,000	1,000
Dittmar, Gary	M	5	5	5	5	5	5	5
Dittmar, Ray	M	5	5	5	5	5	5	5
Gonzales County WSC	M	700	700	700	700	700	700	700
Green Valley SUD	M	200	1,000	1,000	1,000	1,000	1,000	1,000
Springs Hill WSC	M	2,500	2,500	4,000	4,000	4,000	4,000	4,000
Canyon Regional Water Authority (H/C WTP)	M	2,038	2,038	2,038	2,038	2,038	2,038	2,038
City of Buda (San Marcos WTP)	M	1,120	1,120	1,120	1,120	1,120	1,120	1,120
City of Kyle (San Marcos WTP)	M	589	2,957	2,957	2,957	2,957	2,957	2,957
City of Mustang Ridge (San Marcos WTP)	M	0	19	62	99	137	175	213
City of Niederwald (San Marcos WTP)	M	0	58	118	183	244	317	377
2428 Partners (San Marcos WTP)	M	0	3,136	3,136	3,136	3,136	3,136	3,136
Plum Creek WC/Monarch (San Marcos WTP)	M	0	560	560	560	755	1,014	1,217
City of San Marcos (San Marcos WTP)	M	5,000	10,000	10,000	10,000	10,000	10,000	10,000
Wimberley WSC (San Marcos WTP)	M	0	219	440	667	885	1,179	1,409
Woodcreek & Woodcreek Utilities (San Marcos WTP)	M	0	478	944	1,433	1,910	2,501	2,967
County Line WSC (San Marcos WTP)	M	0	0	0	0	0	0	0
Creedmoor-Maha WSC (San Marcos WTP)	M	0	108	180	246	312	378	447
Crystal Clear WSC (San Marcos WTP)	M	800	800	800	800	800	800	800
Maxwell WSC (San Marcos WTP)	M	0	0	0	0	0	0	0
Martindale WSC (San Marcos WTP)	M	0	0	0	0	0	0	0
Goforth WSC (San Marcos WTP)	M	250	1,050	1,050	1,350	1,350	1,350	1,350
Hays County-Other (San Marcos WTP)	M	0	1,344	1,344	1,344	1,344	1,344	1,344
<i>San Marcos WTP Sub-Total</i>		7,759	21,849	22,711	23,895	24,950	26,271	27,337
Total Mid Basin Municipal (Canyon Reservoir)		32,952	52,482	61,680	66,855	71,839	77,149	82,802
Lower Basin								
City of Victoria (pursuant to Canyon Amendment)	L	1,240	1,240	1,240	1,240	1,240	1,240	1,240
Calhoun County Rural WSC	L	500	0	0	0	0	0	0
City of Port Lavaca	L	1,500	0	0	0	0	0	0
Port O'Conner MUD	L	60	0	0	0	0	0	0
Total Lower Basin Municipal (Canyon Reservoir)		3,300	1,240	1,240	1,240	1,240	1,240	1,240

Table 4A-3 (Continued)

Guadalupe-Blanco River Authority (GBRA) (Continued)								
Industrial/Steam-Electric (Canyon Reservoir)								
<u>Mid Basin- Below Canyon Dam to Above Victoria</u>								
Acme	M	25	25	25	25	25	25	25
CMC Steel	M	700	700	700	700	700	700	700
Comal Fair	M	1	1	1	1	1	1	1
Comal Road Department	M	3	3	3	3	3	3	3
GPP (Panda Energy)	M	6,840	6,840	6,840	6,840	6,840	6,840	6,840
Guadalupe County	M	1	1	1	1	1	1	1
Hays Energy LP	M	2,464	2,464	2,464	2,464	2,464	2,464	2,464
Henk Paving	M	0	1	1	1	1	1	1
Std. Gypsum	M	258	258	258	258	258	258	258
Total Mid Basin Industrial/SE (Canyon Reservoir)		10,292	10,293	10,293	10,293	10,293	10,293	10,293
<u>Lower Basin- At or Below Victoria</u>								
Coletto Creek	L	4,000	4,000	6,000	6,000	6,000	6,000	6,000
Ineous (BP)	L	1,100	0	0	0	0	0	0
Seadrift Coke	L	334	0	0	0	0	0	0
Dow/UCC	L	100	0	0	0	0	0	0
Total Lower Basin Industrial/SE (Canyon Reservoir)		5,534	4,000	6,000	6,000	6,000	6,000	6,000
Irrigation (Canyon Reservoir)								
Irrigation Contracts (Upper Basin)	U	173	188	188	188	188	188	188
Irrigation Contracts (Mid-Basin)	M	736	608	608	608	608	608	608
Canyon Reservoir Total		57,747	87,235	99,077	107,038	114,149	123,653	134,094
<u>Mid-Basin Municipal (Run-of-River)</u>								
Lockhart	M	1,120	1,120	1,120	1,120	1,120	1,120	1,120
Luling	M	1,680	1,680	1,680	1,680	1,680	1,680	1,680
Mid-Basin Municipal (Run-of-River) Total		2,800	2,800	2,800	2,800	2,800	2,800	2,800
<u>Lower Basin Municipal (Run-of-River)</u>								
Calhoun County Rural WSC	L	356	436	516	572	609	618	632
Victoria County Rural	L	0	0	0	0	81	193	310
Port Lavaca	L	1,658	1,769	1,877	1,981	2,079	2,209	2,345
Port O'Conner MUD	L	186	198	210	222	234	248	264
Total Lower Basin Municipal (Run-of-River, Firm)		2,200	2,403	2,603	2,775	3,003	3,268	3,551
<u>Lower Basin Industrial/SE (Run-of-River)</u>								
Ineous (BP)	L	2,200	3,300	3,300	3,300	3,300	3,300	3,300
Seadrift Coke	L	666	1,000	1,000	1,000	1,000	1,000	1,000
Victoria County Industry	L	0	0	2,969	5,921	8,860	11,489	14,441
Victoria County Steam Electric			1,791	1,836	1,865	1,895	1,927	1,950
Dow/UCC	L	15,000	15,100	15,100	15,100	15,100	15,100	15,100
Dow/UCC and Other Existing & New Industry	L	5,356	7,868	10,647	13,045	15,422	17,520	20,167
Total Lower Basin Industrial/SE (Run-of-River, Firm)		23,222	29,059	34,852	40,231	45,577	50,336	55,958
<u>Lower Basin Industrial/SE (Run-of-River, Interruptible)</u>								
Exelon		0	0	75,000	75,000	75,000	75,000	75,000
Total Lower Basin Industrial/SE (Run-of-River, Interruptible)		0	0	75,000	75,000	75,000	75,000	75,000
<u>Lower Basin Irrigation (Run-of-River, Interruptible)</u>								
Irrigation Agreements	L	8,077	15,568	13,654	12,096	11,041	10,285	9,581
Lower Basin (Run-of-River, Firm) Total		25,422	31,462	37,455	43,006	48,580	53,604	59,509
Lower Basin (Run-of-River, Interruptible) Total		8,077	15,568	88,654	87,096	86,041	85,285	84,581
Total Demand		94,046	137,065	227,986	239,940	251,570	265,342	280,984

Table 4A-3 (Continued)

Guadalupe-Blanco River Authority (GBRA) (Continued)								
Total Upper Basin Demand	U	4,933	18,612	19,256	22,042	24,169	28,363	33,151
Total Mid Basin Demand	M	46,780	66,183	75,381	80,556	85,540	90,850	96,503
Total Lower Basin Demand	L	42,333	52,270	133,349	137,342	141,861	146,129	151,330
Total Demand		94,046	137,065	227,986	239,940	251,570	265,342	280,984

Supply (acft/yr):

Source	Year (acft)							
	2000	2010	2020	2030	2040	2050	2060	
Canyon Reservoir	87,700	87,629	87,558	87,488	87,417	87,346	87,275	
Mid-basin Rights	0	0	0	0	0	0	0	
Lower Basin Rights (Interruptible, Daily Basis)	133,953	133,953	133,953	133,953	133,953	133,953	133,953	
Lower Basin Rights (Firm, Daily Basis)	41,548	41,548	41,548	41,548	41,548	41,548	41,548	
Total Supply	263,201	263,130	263,059	262,989	262,918	262,847	262,776	

Projected Management Supplies (Needs) (acft/yr):

	Year (acft)							
	2000	2010	2020	2030	2040	2050	2060	
Canyon Management Supplies/(Needs) ¹	29,953	394	(11,519)	(19,550)	(26,732)	(36,307)	(46,819)	
Mid Basin Run-of-River Management Supplies/(Needs) ²	(2,800)	(2,800)	(2,800)	(2,800)	(2,800)	(2,800)	(2,800)	
Lower Basin Run-of-River Firm Mgmt. Supplies / (Needs) ³	16,126	10,086	4,093	(1,458)	(7,032)	(12,056)	(17,961)	
Lower Basin Run-of-River Interruptible Mgmt. Supplies / (Needs)	125,876	118,385	45,299	46,857	47,912	48,668	49,372	
Total System Needs⁴	0	0	10,226	23,808	36,564	51,163	67,580	

U = Upper = At or above Canyon Dam; M = Mid = Below Canyon Dam to Above Victoria; and L = Lower = At or below Victoria.

1 Projected needs for GBRA's customers presently associated with Canyon Reservoir are calculated by subtraction of the Canyon Reservoir Total demands near the middle of page 4A-19 from the Canyon Reservoir supplies on page 4A-20.2 Mid-basin run-of-river customer needs are calculated by subtraction of the Mid-Basin Municipal Run-of-River Total demands near the middle of page 4A-19 from the Mid-Basin Rights supply on page 4A-20.

3 Lower basin firm customer needs are calculated by subtraction of Lower Basin (Run-of-River, Firm) Total demands near the bottom of page 4A-19 from Lower Basin Rights (Firm, Daily Basis) supplies on page 4A-20.

4 Total System Needs are based on firm supplies and demands and are calculated as the sum of Canyon Management Supplies/(Needs), Mid-Basin Run-of-River Management Supplies/(Needs), and Lower Basin Run-of-River Firm Management Supplies/(Needs).

Canyon Regional Water Authority (CRWA)

Projected Demands:

Water Purchaser	Year (acft)							
	2000	2010	2020	2030	2040	2050	2060	
Bexar Met Water District	4,000	6,800	8,800	12,800	13,800	14,505	14,505	
City of Cibola	800	2,050	3,030	8,230	8,730	9,230	9,230	
County Line WSC	1,267	1,308	1,878	1,878	1,878	1,878	1,878	
East Central WSC	1,400	2,585	2,885	2,635	2,635	2,635	2,635	
Green Valley SUD	1,800	2,500	3,600	9,300	9,800	10,800	11,300	
City of La Vernia	0	400	400	400	400	400	400	
City of Marion	100	200	300	500	500	500	500	
Martindale	158	190	190	190	190	190	190	
Martindale WSC	288	396	396	696	896	896	896	
Springs Hill WSC	1,925	2,025	2,025	2,025	2,025	2,025	2,025	
SS WSC	0	0	0	0	0	0	690	
City of Santa Clara	0	100	250	350	500	650	900	
Maxwell WSC	867	900	1,300	1,700	2,100	2,500	2,900	
Crystal Clear WSC	382	1,600	2,895	2,895	2,895	5,485	5,485	
Total Demand	12,987	21,054	27,949	43,599	46,349	51,694	53,534	

Supply:

Source	Year (acft)							
	2000	2010	2020	2030	2040	2050	2060	
GBRA - Lake Dunlap	10,025	10,575	10,575	10,575	10,575	10,575	10,575	
GBRA - Hays/Caldwell	2,038	2,038	2,038	2,038	2,038	2,038	2,038	
Water Right Leases	521	521	521	521	521	521	521	
Total Supply	12,584	13,134	13,134	13,134	13,134	13,134	13,134	

Table 4A-3 (Continued)

Canyon Regional Water Authority (CRWA) (cont.)

Projected Needs:

	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
System Management Supplies / (Needs)	(403)	(7,920)	(14,815)	(30,465)	(33,215)	(38,560)	(40,400)

Schertz-Seguin Local Government Corporation (SSLGC)

Projected Demands:

Water Purchaser	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
Schertz	5,143	5,143	5,143	6,082	7,567	9,258	11,066
Seguin	5,144	5,144	5,144	5,144	5,144	5,144	5,144
Selma	800	800	1,086	1,559	1,557	1,548	1,549
Springs Hill WSC	560	560	560	560	560	560	560
Universal City	800	800	800	800	800	800	800
Crystal Clear WSC	0	0	300	600	900	900	900
Garden Ridge	0	257	395	552	710	873	1,052
Total Demand	12,447	12,704	13,428	15,297	17,238	19,083	21,071

Supply:

Source	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
Carrizo Aquifer (Gonzales County) ¹	12,910	12,910	12,910	12,910	12,910	12,910	12,910
Carrizo Aquifer Guadalupe County) ¹		3,226	3,226	3,226	3,226	3,226	3,226
Total Supply	12,910	16,136	16,136	16,136	16,136	16,136	16,136

¹ Permitted production as of August 2004.

Schertz-Seguin Local Government Corporation (SSLGC) (Continued)

Projected Needs:

	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
System Management Supplies / (Needs)	463	3,432	2,708	839	(1,102)	(2,947)	(4,935)

Springs Hill Water Supply Corporation (SHWSC)

Projected Demands:

Water Purchaser	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
Springs Hill WSC	2,076	2,349	2,679	3,056	3,424	3,849	4,330
La Vernia (via CRWA)	400	400	400	400	400	400	400
Crystal Clear WSC	250	250	250	250	250	250	250
East Central WSC (via CRWA)	385	385	385	385	385	385	385
Total Demand	3,111	3,384	3,714	4,091	4,459	4,884	5,365

Table 4A-3 (Concluded)

Springs Hill Water Supply Corporation (SHWSC) (cont.)

Supply:

Source	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
GBRA (Canyon Reservoir)	2,500	2,500	2,500	2,500	2,500	2,500	2,500
CRWA (Canyon Reservoir)	1,925	2,025	2,025	2,025	2,025	2,025	2,025
Carrizo Aquifer (Guadalupe County)	1,050	1,050	1,050	1,050	1,050	1,050	1,050
Carrizo Aquifer (Gonzales County) (SSLGC)	560	560	560	560	560	560	560
Total Supply	6,035	6,135	6,135	6,135	6,135	6,135	6,135

Projected Management Supplies / (Needs):

	Year (acft)						
	2000	2010	2020	2030	2040	2050	2060
System Management Supplies / (Needs)	2,924	2,751	2,421	2,044	1,676	1,251	770

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