## SUMMARY OF SOUTH CENTRAL (L) REGION

Reaching from the Gulf Coast to the Hill Country, the South Central Texas Regional Water Planning Area includes all or parts of 21 counties, portions of nine river and coastal basins, the Guadalupe Estuary, and San Antonio Bay (Figure L.1). Groundwater currently provides almost 70 percent of the existing water supplies in the region primarily from the Edwards and Carrizo-Wilcox aquifers. Surface water supplies are associated primarily with Canyon Reservoir and run-of-river water rights on the Guadalupe River.

**PLAN HIGHLIGHTS** 

Additional supply needed in 2060 - 436,751 acre-feet/year

## Recommended water strategy volume in 2060 - 765,738 acrefeet/year Total capital cost \$7.6 billion Conservation accounts for 11% of 2060 strategy volumes Five new, major off-channel reservoirs (GBRA Mid-Basin, Exelon, New Appropriation Project; LCRA/SAWS Project Off-Channel, Region L Major rivers Lavaca Off-Channel – see Figure 2.9) Cities Significant Carrizo-Wilcox Aquifer development Existing reservoirs Carrizo-Wilcox Aquifer (outcrop) Five unique stream segments recommended for designation Carrizo-Wilcox Aquifer (subsurface) (see Appendix A, Figure II) Edwards (Balcones Fault Zone) Aquifer (outcrop) Z Edwards (Balcones Fault Zone) Aquifer (subsurface) Limited unmet irrigation needs Edwards-Trinity (Plateau) Aguifer **Gulf Coast Aquifer** Hays Trinity Aquifer (outcrop) Trinity Aquifer (subsurface) Kendall Comal Caldwell Guadalupe River Guadalupe Queen City Aquifer (outcrop)<sup>a</sup> Queen City Aquifer (subsurface)<sup>a</sup> Bexar Gonzales Sparta Aquifer (outcrop)<sup>a</sup> Uvalde Medina Sparta Aquifer (subsurface)<sup>a</sup> Wilson Yegua-Jackson Aquifera Dewitt Ellenburger-San Saba Aquifera Hickory Aquifer<sup>a</sup> Atascosa <sup>a</sup>Minor aquifer (only shown where Karnes Zavala Victoria there is no major aquifer) Goliad San Antonio River Calhoun Dimmit Refugio LaSalle Nueces River

Figure L.1 - South Central Texas Region

Almost 10 percent of the state's 2010 total population is projected to reside in Region L, and between 2010 and 2060 its population is projected to increase by 75 percent to 4,297,786.

Table L.1 - Population, Water Supply, Demand, and Needs 2010-2060

	Year	2010	2020	2030	2040	2050	2060
	Population Projections	2,460,599	2,892,933	3,292,970	3,644,661	3,984,258	4,297,786
ьо S	Surface Water	301,491	301,475	299,956	295,938	295,922	295,913
ting	Groundwater	717,263	716,541	712,319	711,521	710,539	709,975
Existing Supplies	Reuse	16,049	16,049	16,049	16,049	16,049	16,049
S	Total Water Supply	1,034,803	1,034,065	1,028,324	1,023,508	1,022,510	1,021,937
	Municipal	369,694	422,007	471,529	512,671	555,281	597,619
	County-other	26,302	29,104	31,846	34,465	37,062	39,616
S	Manufacturing	119,310	132,836	144,801	156,692	167,182	179,715
Demands	Mining	14,524	15,704	16,454	17,212	17,977	18,644
em	Irrigation	379,026	361,187	344,777	329,395	315,143	301,679
Δ	Steam Electric	46,560	104,781	110,537	116,068	121,601	128,340
	Livestock	25,954	25,954	25,954	25,954	25,954	25,954
	Total Water Demands	981,370	1,091,573	1,145,898	1,192,457	1,240,200	1,291,567
	Municipal	94,650	134,541	173,989	212,815	249,735	288,618
	County-other	2,003	3,073	4,228	5,430	7,042	8,768
	Manufacturing	6,539	13,888	20,946	27,911	34,068	43,072
Needs	Mining	521	726	1,771	1,992	2,293	2,493
Ne	Irrigation	68,465	62,376	56,519	50,894	45,502	41,782
	Steam Electric	2,054	50,962	50,991	51,021	51,657	52,018
	Livestock	3	1	-	-	-	-
	Total Water Needs	174,235	265,567	308,444	350,063	390,297	436,751

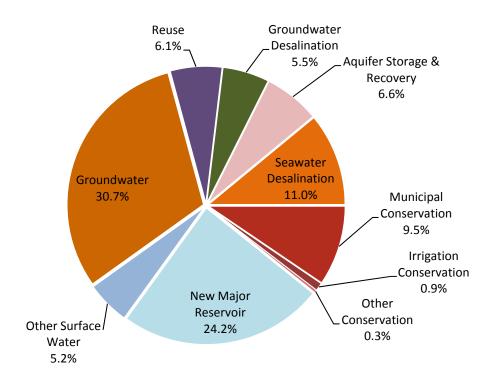


Figure L.2 - 2060 Recommended Water Management Strategies – Relative Share of Supply Water for Texas:

**Table L.2 - Recommended Water Management Strategies** 

L AQUIFER)         BRACKISH GROUNDWATER DESALINATION (WILCOX AQUIFER)         \$378,330,000         12,000         28,600         35,120         40,720         42,220           L CONSTRUCTION OF LAVACA RIVER OFF-CHANNEL RESERVOIR DIVERSION PROJECT (REGION L COMPONENT)         \$85,429,083         10,000				Water Supply Volume (acre feet/year)					
L BRACKISH GROUNDWATER DESALINATION (WILCOX AQUIFER)  S378,330,000  12,000  12,000  12,000  10	Region	Recommended Water Management Strategy		2010	2020	2030	2040	2050	2060
L AQUIFER) \$378,330,000 12,000 28,600 35,120 40,720 42,220 CONSTRUCTION OF LAVACA RIVER OFF-CHANNEL RESERVOIR DIVERSION PROJECT (REGION L COMPONENT) \$85,429,083 10,000 10	L	ASR PROJECT AND PHASED EXPANSION	\$0	3,800	16,000	16,000	16,000	16,000	16,000
L PROJECT (REGION L COMPONENT) \$88,429,083 10,000 1	L	AQUIFER)	\$378,330,000		12,000	28,600	35,120	40,720	42,220
L CRWA WELLS RANCH PROJECT PHASE I \$0 5,20	L		\$85,429,083		10,000	10,000	10,000	10,000	10,000
L CRWA WELLS RANCH PROJECT PHASE II (INCL. GONZALES CO.) \$34,910,000 5,8	L	CRWA SIESTA PROJECT	\$53,481,000			1,000	5,042	5,042	5,042
L         DROUGHT MANAGEMENT         \$0         41,240         - <td>L</td> <td>CRWA WELLS RANCH PROJECT PHASE I</td> <td>\$0 <sub>-</sub></td> <td>5,200</td> <td>5,200</td> <td>5,200</td> <td>5,200</td> <td>5,200</td> <td>5,200</td>	L	CRWA WELLS RANCH PROJECT PHASE I	\$0 <sub>-</sub>	5,200	5,200	5,200	5,200	5,200	5,200
L EDWARDS AQUIFER RECHARGE - TYPE 2 PROJECTS \$527,643,000 13,451 13,451 13,451 13,451 21,577  L EDWARDS TRANSFERS \$0 45,896 47,479 48,931 49,870 50,855 51,875  L FACILITIES EXPANSION \$142,282,000	L	CRWA WELLS RANCH PROJECT PHASE II (INCL. GONZALES CO.)	\$34,910,000	5,800	5,800	5,800	5,800	5,800	5,800
L         EDWARDS TRANSFERS         \$0         45,896         47,479         48,931         49,870         50,855         51,875           L         FACILITIES EXPANSION         \$142,282,000         -         -         -         -           L         FIRM-UP RUN-OF-RIVER WITH OFF-CHANNEL RESERVOIR - LCRA/SAWS PROJECT (REGION L COMPONENT)         \$1,986,684,000         90,000         49,126         49,126         49,126         49,126         49,126         49,126         49,126         49,126         49,126         49,126         49,126         49,126         49,126         49,126         49,126         49,126<	L	DROUGHT MANAGEMENT	\$0	41,240				-	-
L         FACILITIES EXPANSION         \$142,282,000         - <t< td=""><td>L</td><td>EDWARDS AQUIFER RECHARGE - TYPE 2 PROJECTS</td><td>\$527,643,000</td><td></td><td>13,451</td><td>13,451</td><td>13,451</td><td>13,451</td><td>21,577</td></t<>	L	EDWARDS AQUIFER RECHARGE - TYPE 2 PROJECTS	\$527,643,000		13,451	13,451	13,451	13,451	21,577
L       FIRM-UP RUN-OF-RIVER WITH OFF-CHANNEL RESERVOIR - LCRA/SAWS PROJECT (REGION L COMPONENT)       \$1,986,684,000       90,000	L	EDWARDS TRANSFERS	\$0	45,896	47,479	48,931	49,870	50,855	51,875
L         PROJECT (REGION L COMPONENT)         \$1,986,684,000         90,000         49,126	L	FACILITIES EXPANSION	\$142,282,000	_	-	-		-	-
L         GBRA LOWER BASIN STORAGE         \$33,800,000 .         28,369	L	•	\$1,986,684,000			90,000	90,000	90,000	90,000
L         GBRA MID BASIN (SURFACE WATER)         \$546,941,000         25,000	L	GBRA EXELON PROJECT	\$280,598,000 -	-	49,126-	49,126-	49,126	49,126	49,126
L       GBRA NEW APPROPRIATION (LOWER BASIN)       \$246,849,000       11,3	L	GBRA LOWER BASIN STORAGE	\$33,800,000 _	_		28,369	28,369	28,369	28,369
L         GBRA SIMSBORO PROJECT (OVERDRAFT)         \$330,782,000         30,000         30,000         30,000         49,777         49,777           L         HAYS/CALDWELL PUA PROJECT (INCL. GONZALES CO.)         \$307,717,752         7,289         14,597         19,418         25,868         33,314           L         INDUSTRIAL, STEAM-ELECTRIC POWER GENERATION, AND MINING WATER CONSERVATION         \$0         521         726         1,771         1,992         2,293         2,493           L         IRRIGATION WATER CONSERVATION         \$0         20,087         17,561         14,429         11,421         8,543         7,238           L         LIVESTOCK WATER CONSERVATION         \$0         3         1         -         -         -           L         LOCAL GROUNDWATER (GULF COAST AQUIFER)         \$2,194,000         2,016         3,145         3,468         3,629         3,952         4,436	L	GBRA MID BASIN (SURFACE WATER)	\$546,941,000		25,000	25,000	25,000	25,000	25,000
L         HAYS/CALDWELL PUA PROJECT (INCL. GONZALES CO.)         \$307,717,752         7,289         14,597         19,418         25,868         33,314           L         INDUSTRIAL, STEAM-ELECTRIC POWER GENERATION, AND MINING WATER CONSERVATION         \$0 - 521         726         1,771         1,992         2,293         2,493           L         IRRIGATION WATER CONSERVATION         \$0 - 20,087         17,561         14,429         11,421         8,543         7,238           L         LIVESTOCK WATER CONSERVATION         \$0 - 3         1           -           L         LOCAL GROUNDWATER (GULF COAST AQUIFER)         \$2,194,000         161         161         161           L         LOCAL GROUNDWATER (TRINITY AQUIFER)         \$30,224,000         2,016         3,145         3,468         3,629         3,952         4,436	L	GBRA NEW APPROPRIATION (LOWER BASIN)	\$246,849,000			11,300	11,300	11,300	11,300
L         INDUSTRIAL, STEAM-ELECTRIC POWER GENERATION, AND MINING WATER CONSERVATION         \$0 - 521         726         1,771         1,992         2,293         2,493           L         IRRIGATION WATER CONSERVATION         \$0 - 20,087         17,561         14,429         11,421         8,543         7,238           L         LIVESTOCK WATER CONSERVATION         \$0         3         1         -         -         -           L         LOCAL GROUNDWATER (GULF COAST AQUIFER)         \$2,194,000         2,016         3,145         3,468         3,629         3,952         4,436           L         LOCAL GROUNDWATER (TRINITY AQUIFER)         \$30,224,000         2,016         3,145         3,468         3,629         3,952         4,436	L	GBRA SIMSBORO PROJECT (OVERDRAFT)	\$330,782,000	-	30,000	30,000	30,000	49,777	49,777
L         CONSERVATION         \$0 - 521         726         1,771         1,992         2,293         2,493           L         IRRIGATION WATER CONSERVATION         \$0 - 20,087         17,561         14,429         11,421         8,543         7,238           L         LIVESTOCK WATER CONSERVATION         \$0 - 3         1           -           L         LOCAL GROUNDWATER (GULF COAST AQUIFER)         \$2,194,000         2,016         3,145         3,468         3,629         3,952         4,436           L         LOCAL GROUNDWATER (TRINITY AQUIFER)         \$30,224,000         2,016         3,145         3,468         3,629         3,952         4,436	L	HAYS/CALDWELL PUA PROJECT (INCL. GONZALES CO.)	\$307,717,752		7,289	14,597	19,418	25,868	33,314
L         LIVESTOCK WATER CONSERVATION         \$0         3         1         -	L		\$0 <sub>-</sub>	521	726	1,771	1,992	2,293	2,493
L       LOCAL GROUNDWATER (GULF COAST AQUIFER)       \$2,194,000       161       161       161         L       LOCAL GROUNDWATER (TRINITY AQUIFER)       \$30,224,000       2,016       3,145       3,468       3,629       3,952       4,436	L	IRRIGATION WATER CONSERVATION	\$0 -	20,087	17,561	14,429	11,421	8,543	7,238
L LOCAL GROUNDWATER (TRINITY AQUIFER) \$30,224,000 2,016 3,145 3,468 3,629 3,952 4,436	L	LIVESTOCK WATER CONSERVATION	\$0	3	1			-	
	L	LOCAL GROUNDWATER (GULF COAST AQUIFER)	\$2,194,000				161	161	161
L LOCAL GROUNDWATER CARRIZO-WILCOX AQUIFER (INCLUDES \$166,718,000 6,773 11,610 15,441 17,256 23,946 33,874	L	LOCAL GROUNDWATER (TRINITY AQUIFER)	\$30,224,000	2,016	3,145	3,468	3,629	3,952	4,436
	L	LOCAL GROUNDWATER CARRIZO-WILCOX AQUIFER (INCLUDES	\$166,718,000	6,773	11,610	15,441	17,256	23,946	33,874

Water for Texas:

			Water Supply Volume (acre feet/year)					
Region	Recommended Water Management Strategy	Total Capital Costs	2010	2020	2030	2040	2050	2060
	OVERDRAFTS)						'	
L	MEDINA LAKE FIRM-UP (ASR)	\$146,237,000	9,933	9,933	9,933	9,933	9,933	9,933
L	MUNICIPAL WATER CONSERVATION	\$0	13,232	22,744	31,618	40,531	53,925	72,566
L	PURCHASE FROM NBU/REDISTRIBUTION OF SUPPLIES	\$0	1,443	552	552	552	552	552
L	PURCHASE FROM WWP (GUADALUPE-BLANCO RIVER AUTHORITY)	\$0	8,940	4,805	-	-	-	-
L	PURCHASE FROM WWP (LNRA)/REDISTRIBUTION OF SUPPLIES	\$0	46	145	322	499	489	489
L	PURCHASE FROM WWP(SSLGC)/REDISTRIBUTION OF SUPPLIES	\$0	581	719	876	1,034	1,197	1,376
L	RECYCLED WATER PROGRAMS	\$465,339,000	21,666	26,046	30,151	34,178	37,706	41,737
L	REGIONAL CARRIZO FOR SAWS (INCL. GONZALES CO.)	\$136,550,000	-	11,687	11,687	11,687	11,687	11,687
L	REGIONAL CARRIZO FOR SSLGC PROJECT EXPANSION (INCL. GONZALES CO.)	\$28,189,000	-	10,364	10,364	10,364	10,364	10,364
L	SEAWATER DESALINATION	\$1,293,827,000	-	-	-	-	-	84,012
L	STORAGE ABOVE CANYON RESERVOIR (ASR)	\$37,326,000	-	3,140	3,140	3,140	3,140	3,140
L	TWA REGIONAL CARRIZO (INCL. GONZALES CO.)	\$313,060,000	-	27,000	27,000	27,000	27,000	27,000
L	WESTERN CANYON WTP EXPANSION	\$11,727,436	-	-	-	-	5,600	5,600
L	WIMBERLEY AND WOODCREEK WATER SUPPLY PROJECT	\$33,771,000	1,120	4,480	4,480	4,480	4,480	4,480
L	BRACKISH GROUNDWATER DESALINATION (WILCOX AQUIFER)*	\$0	-	-	3,596	3,596	9,196	9,196
L	CRWA SIESTA PROJECT*	\$0	-	-	1,000	5,042	3,711	4,211
L	CRWA WELLS RANCH PROJECT PHASE I*	\$0	5,200	5,200	5,200	5,200	5,200	5,200
L	CRWA WELLS RANCH PROJECT PHASE II (INCL. GONZALES CO.)*	\$0	1,296	4,626	5,800	5,800	5,800	5,800
L	EDWARDS TRANSFERS*	\$0	5,259	6,220	8,297	12,483	20,823	21,138
L	FACILITIES EXPANSION*	\$2,277,000	-	-	-	-	-	-
L	GBRA LOWER BASIN STORAGE*	\$0	-	-	7,786	10,755	13,416	16,391
L	GBRA MID BASIN (SURFACE WATER)*	\$0	-	12,855	13,554	13,988	14,424	14,794
L	GBRA NEW APPROPRIATION (LOWER BASIN)*	\$0	-	-	-	81	193	310
L	GBRA SIMSBORO PROJECT (OVERDRAFT)*	\$0	-	9,268	14,174	20,954	28,024	35,786
L	HAYS/CALDWELL PUA PROJECT (INCL. GONZALES CO.)*	\$0	-	1,370	7,521	5,344	5,986	7,502
L	LOCAL GROUNDWATER (TRINITY AQUIFER)*	\$0	296	283	403	705	963	1,216

			Water Supply Volume (acre feet/year)					
Region	Recommended Water Management Strategy	Total Capital Costs	2010	2020	2030	2040	2050	2060
L	LOCAL GROUNDWATER CARRIZO-WILCOX AQUIFER (INCLUDES OVERDRAFTS)*	\$0	120	120	120	120	120	120
L	MEDINA LAKE FIRM-UP (ASR)*	\$0	500	500	500	500	500	500
L	RECYCLED WATER PROGRAMS*	\$0	4,240	7,367	15,127	15,127	15,127	15,127
L	REGIONAL CARRIZO FOR SSLGC PROJECT EXPANSION (INCL. GONZALES CO.)*	\$0		616	2,302	4,082	5,764	7,573
L	STORAGE ABOVE CANYON RESERVOIR (ASR)*	\$0		3,140	3,140	3,140	3,140	3,140
L	TWA REGIONAL CARRIZO (INCL. GONZALES CO.)*	\$0_		6,828	13,717	17,591	21,556	25,575
L	WESTERN CANYON WTP EXPANSION*	\$0					-	650
L	WIMBERLEY AND WOODCREEK WATER SUPPLY PROJECT*	\$0	1,120	4,480	4,480	4,480	4,480	4,480
	Total	\$7,622,886,271	188,297	376,003	542,606	571,553	631,476	765,738

<sup>\*</sup> DENOTES STRATEGIES WITH SUPPLY VOLUMES INCLUDED IN OTHER STRATEGIES