

Appendix 4A-A

Comparison of Supply and Demand by Wholesale Water Provider

This appendix provides a summary of supply versus demand by WWP for the ETRWPA. The summaries include current customer demand for each WWP by decade through 2060. Demand is then subtracted from current supplies to assess water availability.

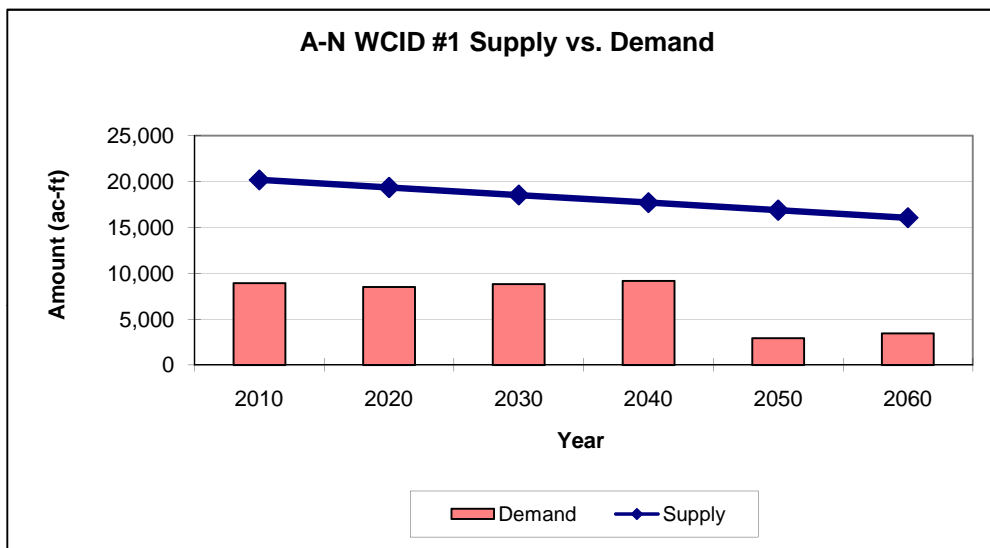
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A-N WCID #1
(Units: Acre-Feet per Year)

WUGs	Recipient	2010	2020	2030	2040	2050	2060
Steam Electric Power	Luminant	2,245	1,790	2,093	2,462	2,912	3,460
Steam Electric Power	Nacogdoches Power	2,240	6,721	6,721	6,721	0	0
Whitehouse	Whitehouse	2,186	0	0	0	0	0
Henderson	Henderson	2,242	0	0	0	0	0
Total Demand		8,913	8,511	8,814	9,183	2,912	3,460

Current Supplies	Notes	2010	2020	2030	2040	2050	2060
Lake Striker	*owned by A-N WCID, wr for 20,600 ac-ft	20,183	19,357	18,530	17,703	16,877	16,050
Total Supplies		20,183	19,357	18,530	17,703	16,877	16,050

Supplies Less Current Customer Demand		2010	2020	2030	2040	2050	2060
		11,270	10,846	9,716	8,520	13,965	12,590



ANRA (Units: Acre-Feet per Year)

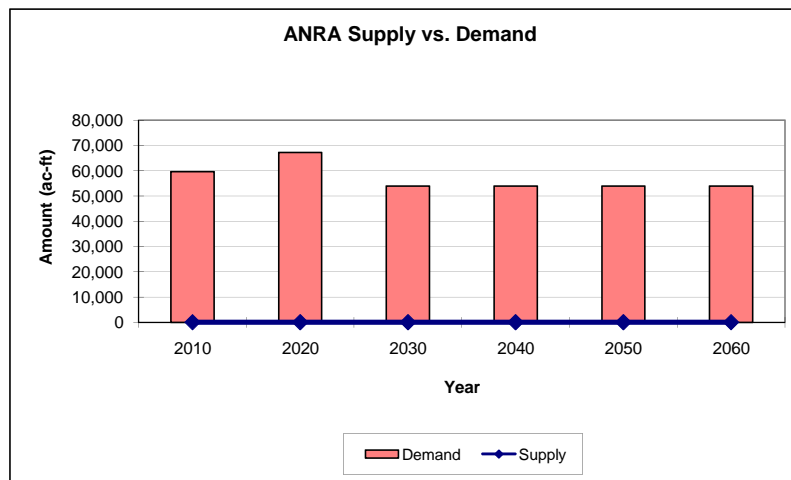
Current Customers	Recipient	% Yield	Contract Amount	2010	2020	2030	2040	2050	2060
Angelina County Manufacturing (Temple Inland)	Temple Inland	10.0%	8,551	8,551	8,551	8,551	8,551	8,551	8,551
Cherokee County-Other	Afton Grove WSC, Stryker Lake WSC, Cherokee County	4.5%	3,848	3,848	3,848	3,848	3,848	3,848	3,848
City of Jacksonville	Jacksonville	5.0%	4,275	4,275	4,275	4,275	4,275	4,275	4,275
City of New Summerfield	New Summerfield	3.0%	2,565	2,565	2,565	2,565	2,565	2,565	2,565
North Cherokee WSC	North Cherokee WSC	5.0%	4,275	4,275	4,275	4,275	4,275	4,275	4,275
City of Rusk	Rusk	5.0%	4,275	4,275	4,275	4,275	4,275	4,275	4,275
Rusk Rural WSC	Rusk Rural WSC	1.0%	855	855	855	855	855	855	855
Nacogdoches County-Other	Caro WSC	0.5%	428	428	428	428	428	428	428
City of Nacogdoches	Nacogdoches	10.0%	8,551	8,551	8,551	8,551	8,551	8,551	8,551
City of New London	New London	1.0%	855	855	855	855	855	855	855
City of Troup	Troup	5.0%	4,275	4,275	4,275	4,275	4,275	4,275	4,275
City of Arp	Arp	0.5%	428	428	428	428	428	428	428
Smith County-Other	Blackjack WSC	1.0%	855	855	855	855	855	855	855
Jackson WSC	Jackson WSC	1.0%	855	855	855	855	855	855	855
City of Whitehouse	Whitehouse	10.0%	8,551	8,551	8,551	8,551	8,551	8,551	8,551
City of Alto	City of Alto	0.5%	428	428	428	428	428	428	428
Jasper County Other	Holmwood Utility	NA	NA	60	65	70	70	70	70
Total Demand				53,930	53,935	53,940	53,940	53,940	53,940

Potential Future Customers	Recipient								
Angelina County Mining	Mining			2,000	4,000	0	0	0	0
Cherokee County Mining	Mining			500	1,500	0	0	0	0
Nacogdoches County Mining	Mining			2,500	7,000	0	0	0	0
Shelby County Mining	Mining			250	250	0	0	0	0
San Augustine County Mining	Mining			500	500	0	0	0	0
Total Potential Future Customers				5,750	13,250	0	0	0	0

Total Demand Current and Future Customers									
				59,680	67,185	53,940	53,940	53,940	53,940

Current Supplies				2010	2020	2030	2040	2050	2060
Lake Columbia				0	0	0	0	0	0
Jasper Aquifer				60	65	70	70	70	70
Total Supplies				60	65	70	70	70	70

Supplies Less Current Customer Demand									
				-53,870	-53,870	-53,870	-53,870	-53,870	-53,870
Supplies Less Current and Potential Customer Demand				-59,620	-67,120	-53,870	-53,870	-53,870	-53,870

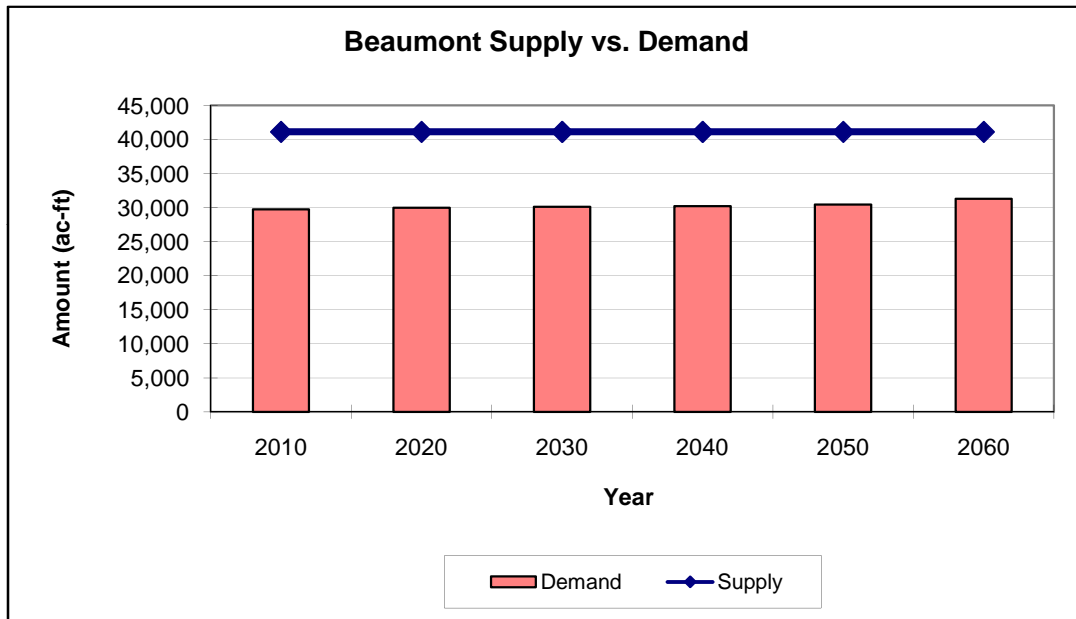


Beaumont
(Units: Acre-Feet per Year)

WUGs	Recipient	2010	2020	2030	2040	2050	2060
City of Beaumont	Beaumont	27,040	26,657	26,275	25,892	25,636	25,636
Jefferson County-Other	County-Other	1,692	2,194	2,615	2,945	3,311	4,004
Jefferson County Manufacturing	Manufacturing	1,000	1,105	1,221	1,349	1,490	1,646
Meeker MUD	Meeker MUD	3	4	4	5	5	8
Total Demand		29,735	29,960	30,116	30,190	30,442	31,294

Current Supplies	Recipient	2010	2020	2030	2040	2050	2060
Municipal Run-of-River	Municipal	29,305	29,305	29,305	29,305	29,305	29,305
Industrial Run-of-River	Industrial	2,806	2,806	2,806	2,806	2,806	2,806
Gulf Coast Aquifer		9,000	9,000	9,000	9,000	9,000	9,000
Total Supplies		41,111	41,111	41,111	41,111	41,111	41,111

Treated Supplies Less Current Customer Demand	2010	2020	2030	2040	2050	2060
	11,376	11,151	10,995	10,921	10,669	9,817



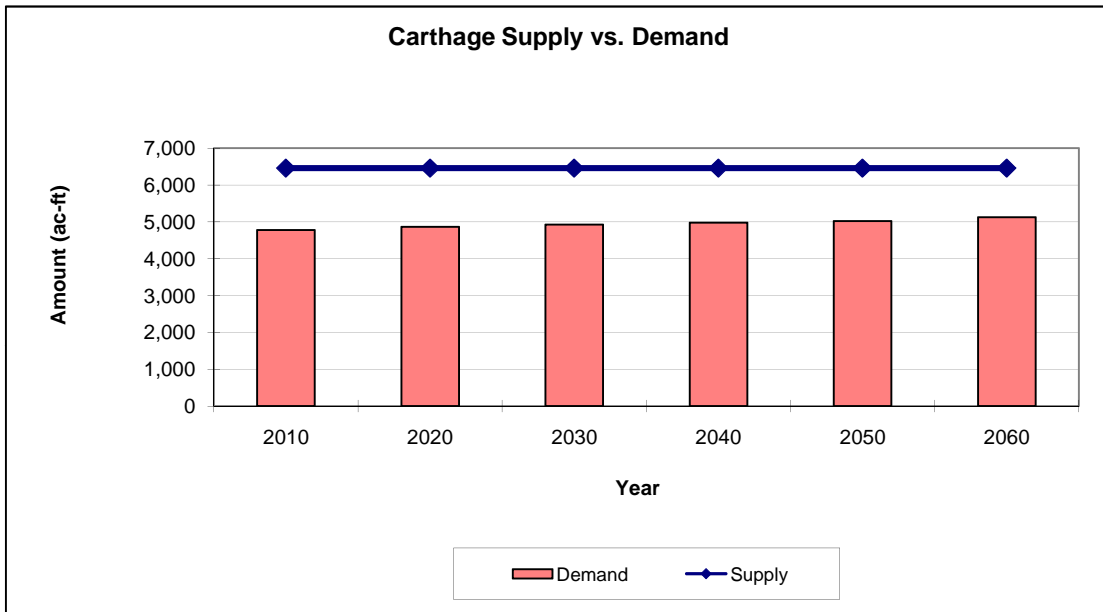
Carthage (Units: Acre-Feet per Year)

WUGs	Recipient	2010	2020	2030	2040	2050	2060
City of Carthage	City of Carthage	2,274	2,297	2,311	2,317	2,326	2,343
Panola County-Other	County-Other	1,487	1,487	1,487	1,487	1,487	1,487
Panola County Manufacturing	Manufacturing	1,018	1,078	1,125	1,171	1,211	1,290
Total Demand		4,779	4,862	4,923	4,975	5,024	5,120

Current Supplies		2010	2020	2030	2040	2050	2060
Groundwater	Carrizo-Wilcox (Sabine Basin)	1,530	1,530	1,530	1,530	1,530	1,530
Lake Murvaul (PCFWD)		13,090	12,737	12,384	12,031	11,678	11,323
Total Supplies		14,620	14,267	13,914	13,561	13,208	12,853

Water Treatment Capacity		6,461	6,461	6,461	6,461	6,461	6,461

Supplies Less Current Customer Demand		9,841	9,405	8,991	8,586	8,185	7,733

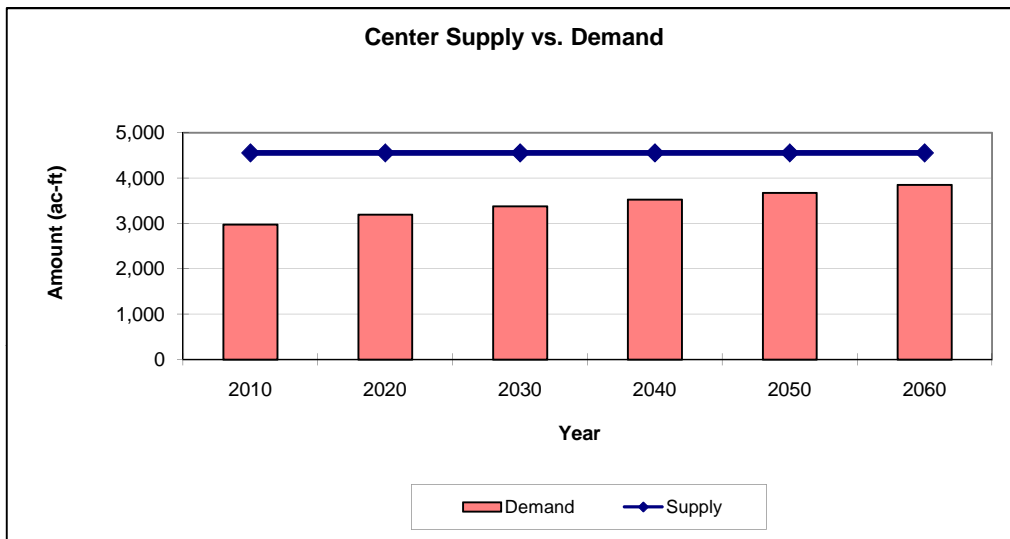


Center (Units: Acre-Feet per Year)

Customers	Recipient	2010	2020	2030	2040	2050	2060
Shelby County-Other	Sand Hills WSC	167	174	179	180	184	190
Shelby County-Other	Shelbyville WSC	21	22	22	23	23	24
Manufacturing	Manufacturing	1,156	1,282	1,391	1,501	1,598	1,716
City of Center	Center	1,633	1,718	1,785	1,823	1,867	1,923
Total Demand		2,977	3,195	3,378	3,527	3,672	3,853

Current Supplies	Notes	2010	2020	2030	2040	2050	2060
Pinkston Reservoir	*wr to use 3,800 ac-ft/yr (COA #4404)	3,800	3,800	3,800	3,800	3,800	3,800
Lake Center		754	754	754	754	754	754
Total Supplies		4,554	4,554	4,554	4,554	4,554	4,554

Supplies Less Current Customer Demand	2010	2020	2030	2040	2050	2060
	1,577	1,359	1,176	1,027	882	701

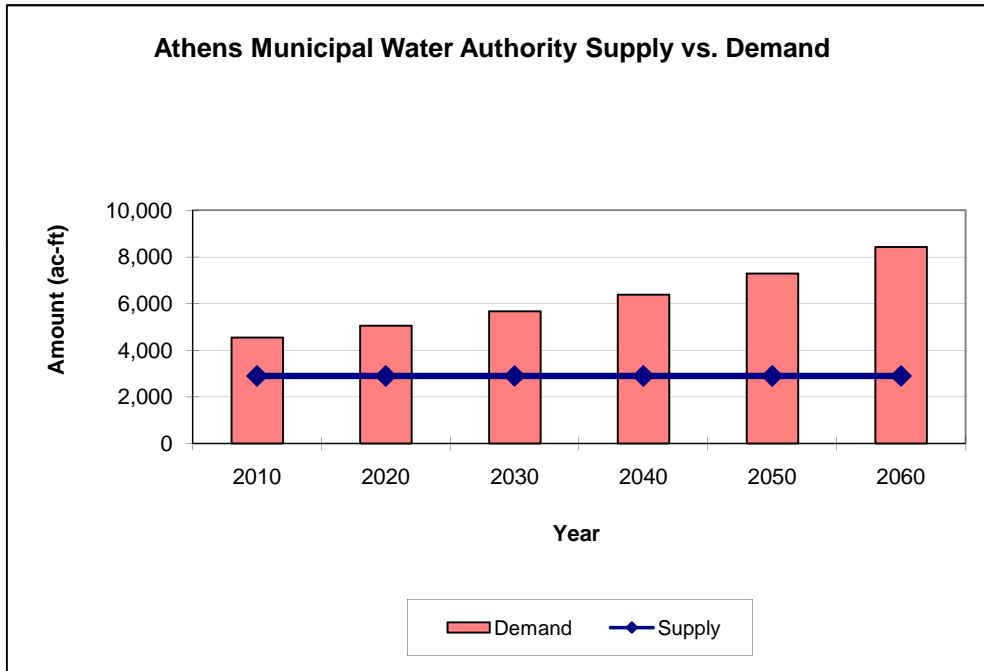


Athens Municipal Water Authority (Units: Acre-Feet per Year)

WUGs	Recipient	2010	2020	2030	2040	2050	2060
City of Athens (less groundwater supplies)	City of Athens	1,255	1,761	2,360	3,040	3,932	5,037
Henderson Co. Irrigation	Lakeside irrigation	159	164	169	174	179	185
Henderson County Livestock	TPWD Fish Hatchery	3,023	3,023	3,023	3,023	3,023	3,023
Henderson County Manufacturing (90% - Reg C)	City of Athens	99	106	120	136	155	176
Total Demand		4,536	5,054	5,672	6,373	7,289	8,421

Current Supplies	2010	2020	2030	2040	2050	2060
Lake Athens (firm yield)	6,064	5,983	5,903	5,822	5,741	5,660
Lake Athens (safe yield)	5,172	5,084	4,996	4,908	4,820	4,730
Lake Athens (operational yield)	2,900	2,900	2,900	2,900	2,900	2,900
Reuse (limit- 2,677)	0	0	0	0	0	0
Total Supplies	2,900	2,900	2,900	2,900	2,900	2,900

Supplies Less Current Customer Demand	2010	2020	2030	2040	2050	2060
	-1,636	-2,154	-2,772	-3,473	-4,389	-5,521



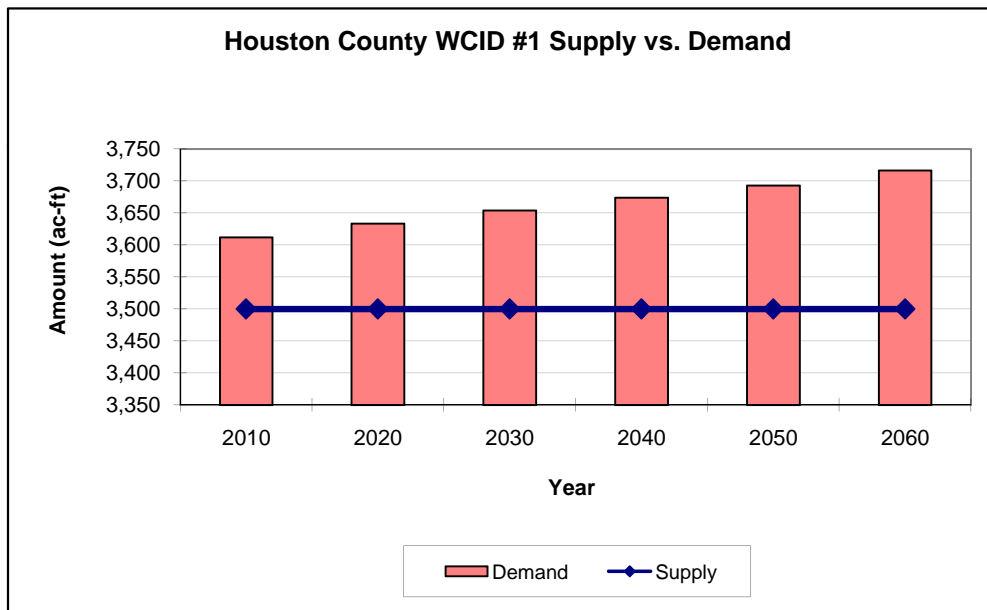
Houston County WCID #1 (Units: Acre-Feet per Year)

WUGs	Recipient	2010	2020	2030	2040	2050	2060
Grapeland	Grapeland	405	405	405	405	405	405
Houston County-Other	County-Other	89	90	91	93	96	100
Houston County Manufacturing	Manufacturing	169	190	209	227	243	263
Crockett	Crockett	1,841	1,841	1,841	1,841	1,841	1,841
Lovelady	Lovelady	77	77	77	77	77	77
Consolidated WSC	Consolidated WSC	1,031	1,031	1,031	1,031	1,031	1,031
Total Demand		3,612	3,634	3,654	3,674	3,693	3,717

Potential Future Customers							
Consolidated WSC	Consolidated WSC	1,031	1,031	1,031	1,031	1,031	1,031
Steam Electric Power	Nacogdoches Power	0	340	340	340	340	340
Total Potential Future Customers		1,031	1371	1371	1371	1371	1371

Current Supplies	Notes	2010	2020	2030	2040	2050	2060
Houston County Lake	*wr to use 3,500 ac-ft/yr	3,500	3,500	3,500	3,500	3,500	3,500
Total Supplies		3,500	3,500	3,500	3,500	3,500	3,500

Supplies Less Current Customer Demand		-112	-134	-154	-174	-193	-217
Supplies Less Potential Customer Demand		-1,143	-1,505	-1,525	-1,545	-1,564	-1,588

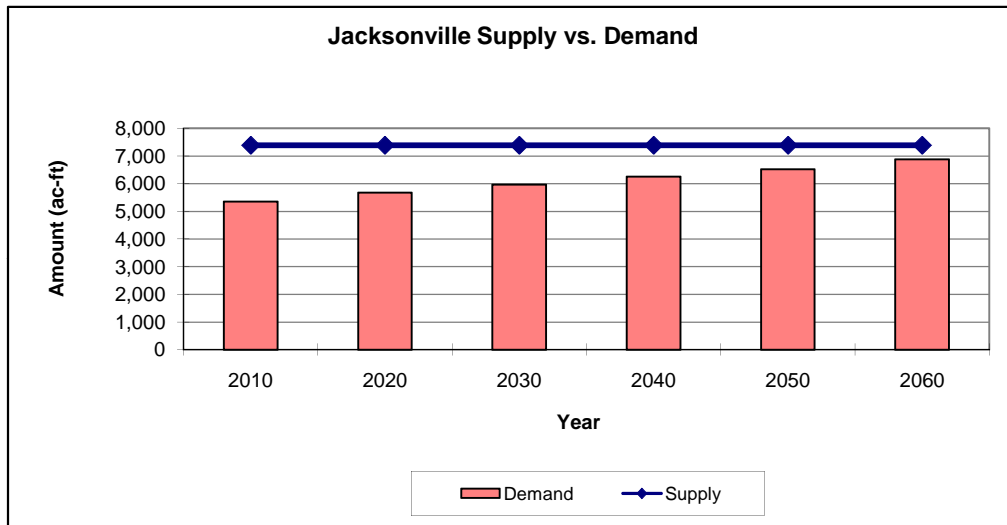


Jacksonville (Units: Acre-Feet per Year)

WUGs	Recipient	2010	2020	2030	2040	2050	2060
City of Jacksonville	Jacksonville	3,502	3,637	3,741	3,827	3,948	4,111
Cherokee County Manufacturing	Manufacturing	718	784	839	891	934	1,007
Cherokee County-Other	County-Other	226	198	154	95	68	55
North Cherokee WSC	N. Cherokee WSC	387	439	482	519	560	616
Bullard		10	10	10	10	10	10
Craft-Turney WSC	Craft-Turney WSC	515	614	742	908	995	1,078
Total Demand		5,358	5,682	5,968	6,250	6,515	6,877

Current Supplies	Notes	2010	2020	2030	2040	2050	2060
Lake Jacksonville	*CA3274 allows cosumptive use of 6,200 ac-ft, WTP capacity - 5173	5,173	5,173	5,173	5,173	5,173	5,173
Carrizo-Wilcox		2,218	2,218	2,218	2,218	2,218	2,218
Total Supplies		7,391	7,391	7,391	7,391	7,391	7,391

Supplies Less Current Customer Demand		2,034	1,710	1,423	1,142	876	515



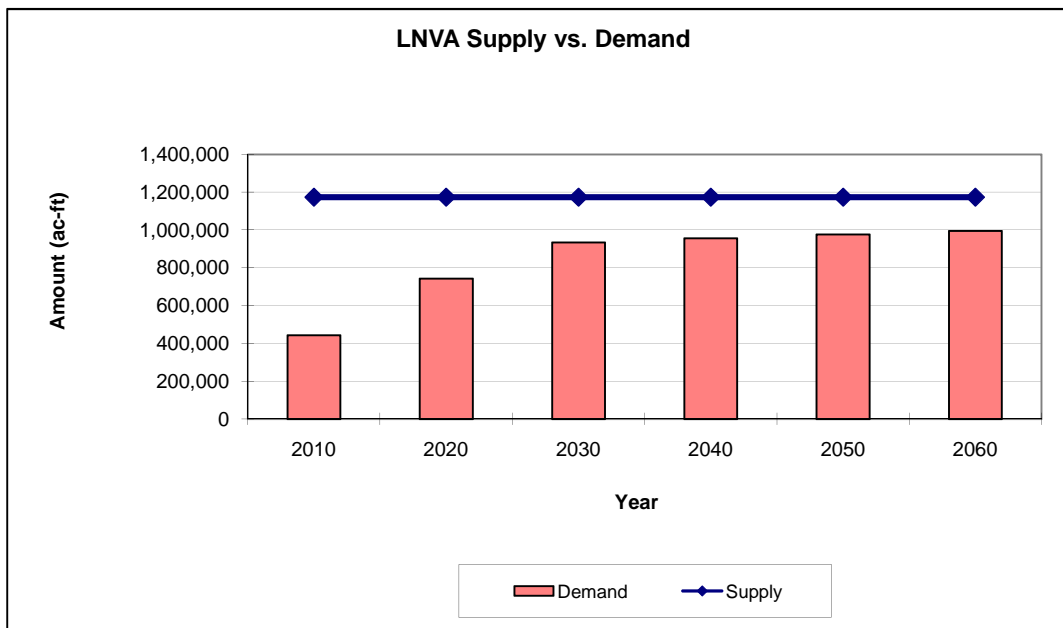
LNVA
(Units: Acre-Feet per Year)

WUGs	Recipient	2010	2020	2030	2040	2050	2060
Jasper County Manufacturing	Manufacturing	20,189	23,571	26,084	28,281	29,928	29,991
Mining - Hardin County	Mining	0	0	0	0	0	0
Groves	Groves	3,190	3,137	3,085	3,031	2,996	2,996
Nederland	Nederland	4,125	4,268	4,387	4,456	4,573	4,834
Port Arthur	Port Arthur	15,849	16,377	16,904	17,433	18,026	18,750
Port Neches	Port Neches	1,782	1,782	1,789	1,780	1,804	1,882
Jefferson County-Other	County-Other	188	244	291	327	368	445
Jefferson County Manufacturing	Manufacturing	144,032	235,566	235,566	260,566	285,566	310,566
Irrigation - Jefferson County	Irrigation	140,000	140,000	140,000	140,000	140,000	140,000
West Jefferson County MWD	West Jefferson County MWD	1,029	1,148	1,264	1,345	1,436	1,631
Jefferson County WCID #10	Jefferson County WCID #10	640	700	750	787	832	929
Nome	Nome	127	136	144	150	157	172
Trinity Bay Conservation District	Winnie & Stowell	2,688	2,688	2,688	2,688	2,688	2,688
Bolivar Peninsula SUD		6,000	6,000	6,000	6,000	6,000	6,000
Irrigation - Chambers County		37,000	37,000	37,000	37,000	37,000	37,000
Irrigation- Liberty County		23,000	23,000	23,000	23,000	23,000	23,000
Jefferson County LNG	Industry	0	179,225	358,450	358,450	358,450	358,450
Delivery Losses		43,982	67,484	77,166	70,824	63,898	56,360
Total Demand		443,822	742,326	934,568	956,117	976,721	995,694

Other Obligations		2010	2020	2030	2040	2050	2060
City of Beaumont - Reserve		31,360	31,360	31,360	31,360	31,360	31,360
West Vaco - Contract		50,000	50,000	50,000	50,000	50,000	50,000
City of Woodville - Contract		5,600	5,600	5,600	5,600	5,600	5,600
Obligation sub-total		86,960	86,960	86,960	86,960	86,960	86,960

Current Supplies		2010	2020	2030	2040	2050	2060
B. A. Steinhagen Lake/Sam Rayburn	*water right is for 792,000 ac-ft (transfer of 28,000 to Lufkin)	792,000	792,000	792,000	792,000	792,000	792,000
Pine Island Run-of-river Rights	Neches	381,876	381,876	381,876	381,876	381,876	381,876
Total Supplies		1,173,876	1,173,876	1,173,876	1,173,876	1,173,876	1,173,876

Supplies Less Current Customer Demand		730,054	431,550	239,308	217,759	197,155	178,182
Supplies Less Current Customer Demand & Other Obligations		643,094	344,590	152,348	130,799	110,195	91,222

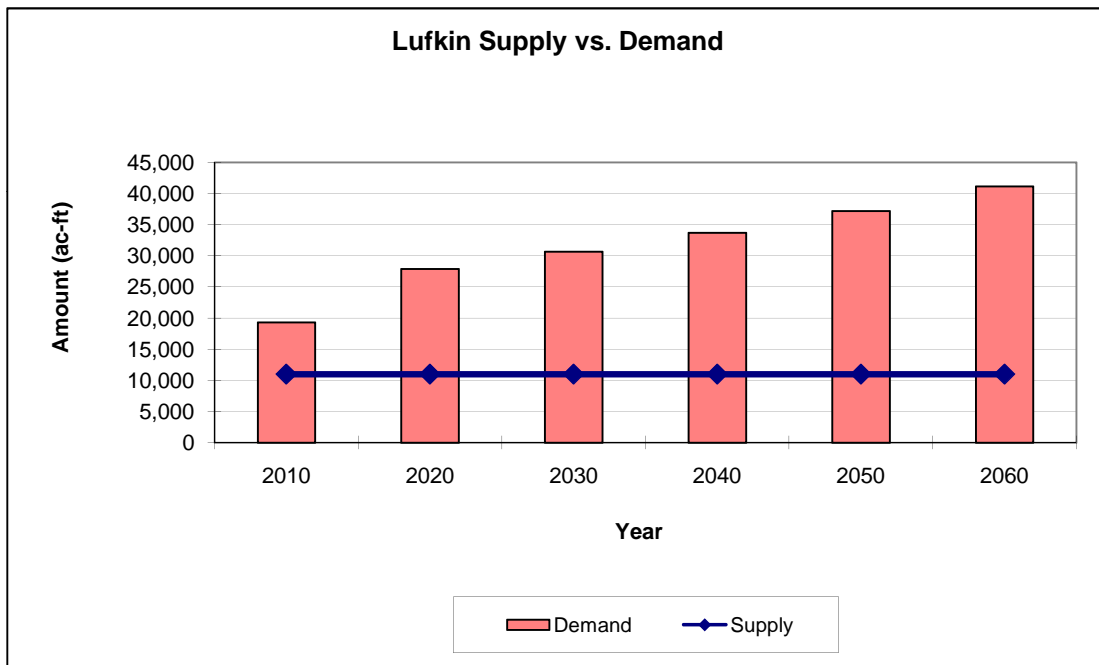


Lufkin (Units: Acre-Feet per Year)

WUGs	Recipient	2010	2020	2030	2040	2050	2060
City of Lufkin	Lufkin	7,546	8,444	9,446	10,565	11,951	13,599
Angelina County-Other	County-Other	91	94	99	104	115	131
Angelina County Manufacturing	Manufacturing	9,550	17,255	18,981	20,879	22,966	25,263
Angelina County-Other	Redland WSC	107	104	101	98	97	97
Angelina County-Other	Angelina Fresh Water	40	54	66	72	80	88
Huntington	Huntington	20	27	33	36	40	44
City of Diboll	Diboll	1,940	1,940	1,940	1,940	1,940	1,940
Total Demand		19,294	27,918	30,664	33,694	37,189	41,162

Current Supplies		2010	2020	2030	2040	2050	2060
Carrizo-Wilcox		11,000	11,000	11,000	11,000	11,000	11,000
Lake Kurth		0	0	0	0	0	0
Sam Rayburn		0	0	0	0	0	0
Total Supplies		11,000	11,000	11,000	11,000	11,000	11,000

Supplies Less Current Customer Demand		2010	2020	2030	2040	2050	2060
		-8,294	-16,918	-19,664	-22,694	-26,189	-30,162

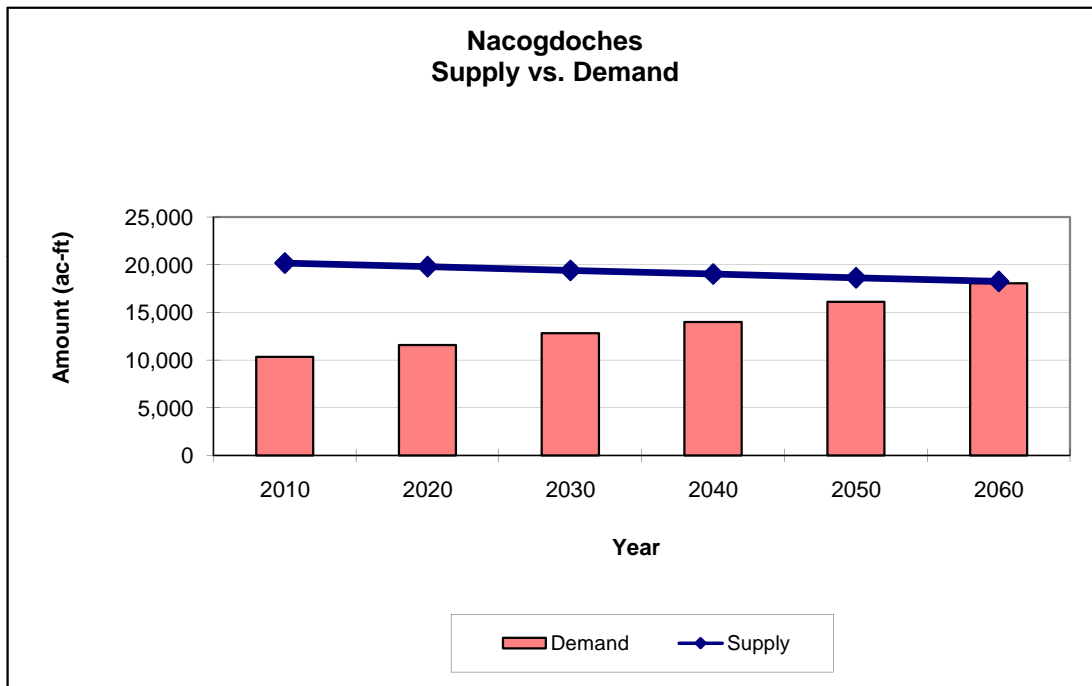


Nacogdoches (Units: Acre-Feet per Year)

WUGs	Recipient	2010	2020	2030	2040	2050	2060
City of Nacogdoches	City of Nacogdoches	7,625	8,423	9,218	9,939	11,352	12,540
Nacogdoches County Manufacturing	Manufacturing	2,288	2,553	2,786	3,016	3,214	3,468
Nacogdoches County-Other	D&M WSC	406	452	491	540	652	780
Appleby WSC	Appleby WSC	25	145	317	511	878	1,274
Total Demand		10,344	11,573	12,812	14,006	16,096	18,062

Current Supplies	Notes	2010	2020	2030	2040	2050	2060
Lake Nacogdoches	*wr for 22,000 ac-ft	17,067	16,683	16,300	15,917	15,533	15,150
Carrizo-Wilcox		3,100	3,100	3,100	3,100	3,100	3,100
Total Supplies		20,167	19,783	19,400	19,017	18,633	18,250

Supplies Less Current Customer Demand		2010	2020	2030	2040	2050	2060
		9,823	8,210	6,588	5,010	2,537	188



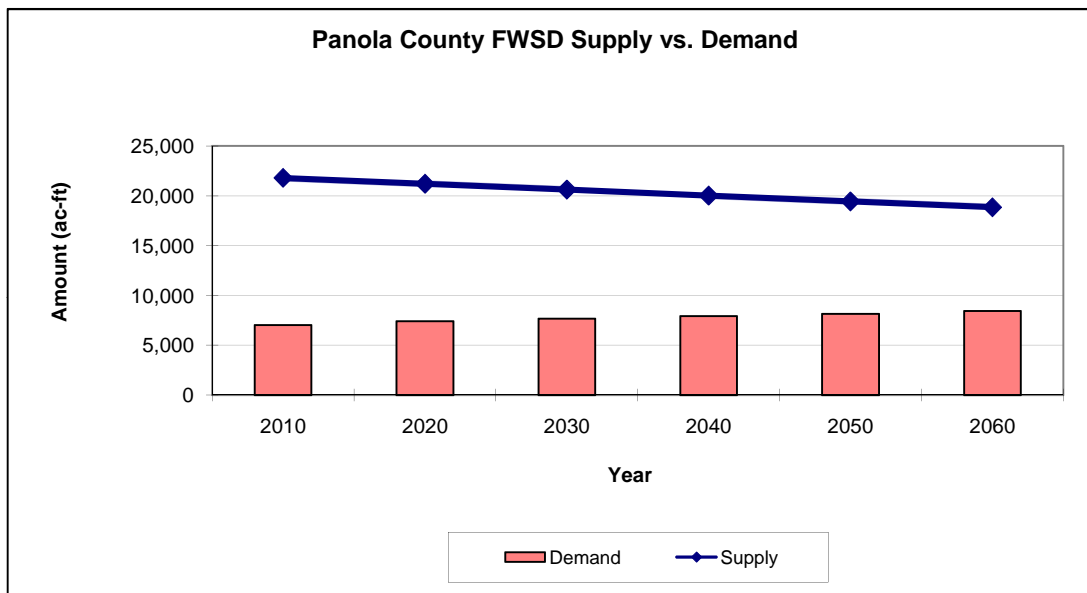
Panola County FWSD (Units: Acre-Feet per Year)

WUGs	Recipient	2010	2020	2030	2040	2050	2060
City of Carthage*	Carthage	2,274	2,297	2,311	2,317	2,326	2,343
Panola County-Other	County-Other	1,487	1,487	1,487	1,487	1,487	1,487
Panola County Manufacturing	Manufacturing	1,018	1,078	1,125	1,171	1,211	1,290
Panola County Mining	Mining	2,254	2,563	2,752	2,943	3,137	3,322
Total Demand		7,032	7,424	7,675	7,918	8,160	8,442

* City of Carthage has a contract for 13,443 acre-feet per year.

Current Supplies	Notes	2010	2020	2030	2040	2050	2060
	*owned by PCFWSD and has right for 22,400 ac-ft (COA #4654)						
Lake Murvaul		21,792	21,203	20,615	20,027	19,438	18,850
Total Supplies		21,792	21,203	20,615	20,027	19,438	18,850

Supplies Less Current Customer Demand	2010	2020	2030	2040	2050	2060
	14,759	13,779	12,940	12,109	11,278	10,408

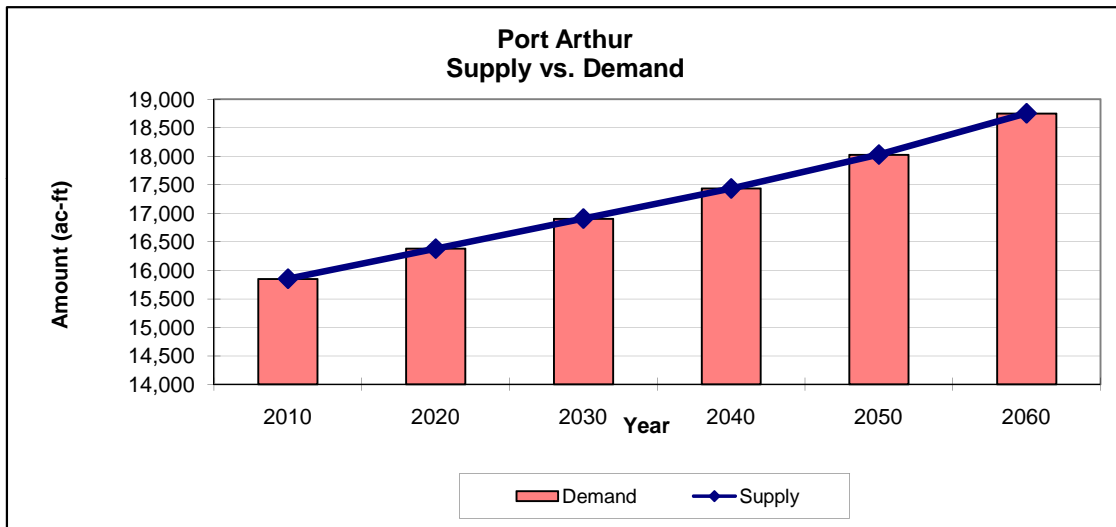


Port Arthur (Units: Acre-Feet per Year)

WUGs	Recipient	2010	2020	2030	2040	2050	2060
City of Port Arthur	Port Arthur	9,704	9,510	9,315	9,122	8,993	8,993
Jefferson County Other	Texas Parks and Wildlife	5	5	5	5	5	5
Manufacturing	Motiva	129	144	159	174	189	205
Manufacturing	Std Alloys & Mfg	3	3	3	3	3	5
Manufacturing	Transit Mix Concrete	1	1	1	1	1	2
Manufacturing	Signal International TX	24	27	30	33	36	38
Manufacturing	Great Lakes Carbon	578	646	714	782	850	918
Manufacturing	Huntsman Corp	5,327	5,954	6,581	7,208	7,835	8,460
Manufacturing	KMTEx Inc.	78	87	96	105	114	124
Total Demand		15,849	16,377	16,904	17,433	18,026	18,750

Current Supplies		2010	2020	2030	2040	2050	2060
LNVA (Sam Rayburn)		15,849	16,377	16,904	17,433	18,026	18,750
Treated effluent	Std Alloys & Mfg	3	3	3	3	3	3
Total Supplies		15,852	16,380	16,907	17,436	18,029	18,753

Supplies Less Current Customer Demand		2010	2020	2030	2040	2050	2060
		3	3	3	3	3	3

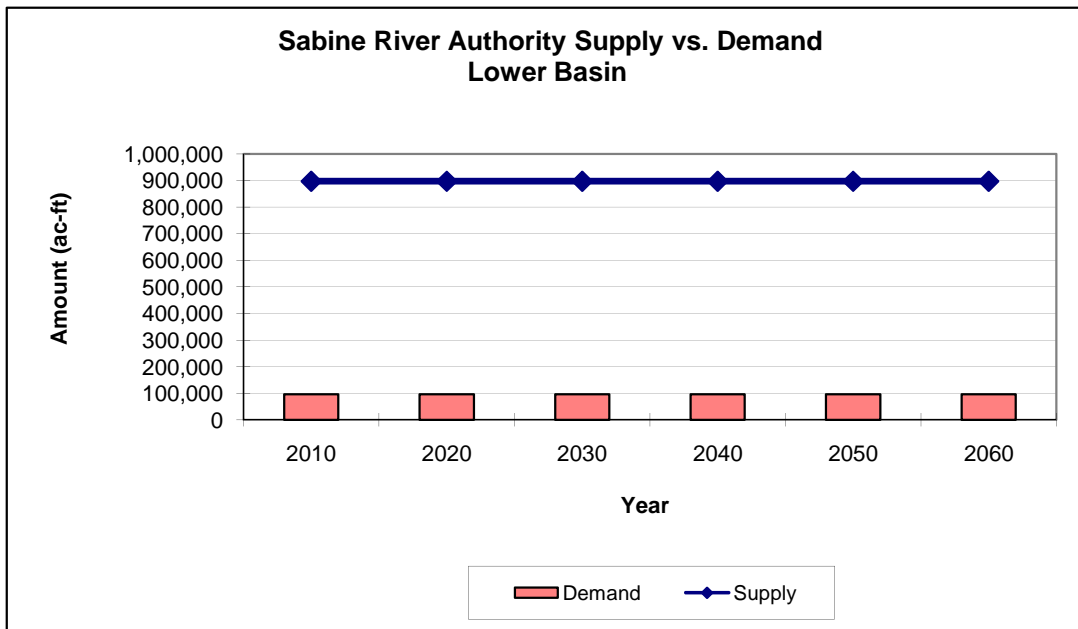


Sabine River Authority
(Units: Acre-Feet per Year)

Lower Basin Customers	Contract Amount	2010	2020	2030	2040	2050	2060
Toledo Bend:							
Hemphill	1,841	1,841	1,841	1,841	1,841	1,841	1,841
Huxley	280	280	280	280	280	280	280
Tenaska	17,922	17,922	17,922	17,922	17,922	17,922	17,922
Beechwood WSC	190	190	190	190	190	190	190
El Camino WS	18	18	18	18	18	18	18
Pendleton Utility Corp	28	28	28	28	28	28	28
Canal (Gulf Coast Division)							
Honeywell	1,120	1,120	1,120	1,120	1,120	1,120	1,120
Bayer	1,120	1,120	1,120	1,120	1,120	1,120	1,120
Chevron Phillips	2,240	2,240	2,240	2,240	2,240	2,240	2,240
E.I. DuPont	24,643	24,643	24,643	24,643	24,643	24,643	24,643
Entergy	4,481	4,481	4,481	4,481	4,481	4,481	4,481
Firestone	737	737	737	737	737	737	737
Temple Inland	22,403	22,403	22,403	22,403	22,403	22,403	22,403
Gerdau Ameristeel US Inc. (Neches)	1,120	1,120	1,120	1,120	1,120	1,120	1,120
Lanxess	1,120	1,120	1,120	1,120	1,120	1,120	1,120
A. Schulman, Inc.	224	224	224	224	224	224	224
Cottonwood Energy	13,442	13,442	13,442	13,442	13,442	13,442	13,442
Rose City (Neches)	478	478	478	478	478	478	478
Irrigation (Orange Co. demands)	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Total demands - Lower basin		95,907	95,907	95,907	95,907	95,907	95,907

Current Supplies - Lower basin	2010	2020	2030	2040	2050	2060
Toledo Bend	750,000	750,000	750,000	750,000	750,000	750,000
Sabine River, Run-of-the-River supplies	147,100	147,100	147,100	147,100	147,100	147,100
Total Supplies	897,100	897,100	897,100	897,100	897,100	897,100

Supplies Less Current Customer Demand	801,193	801,193	801,193	801,193	801,193	801,193
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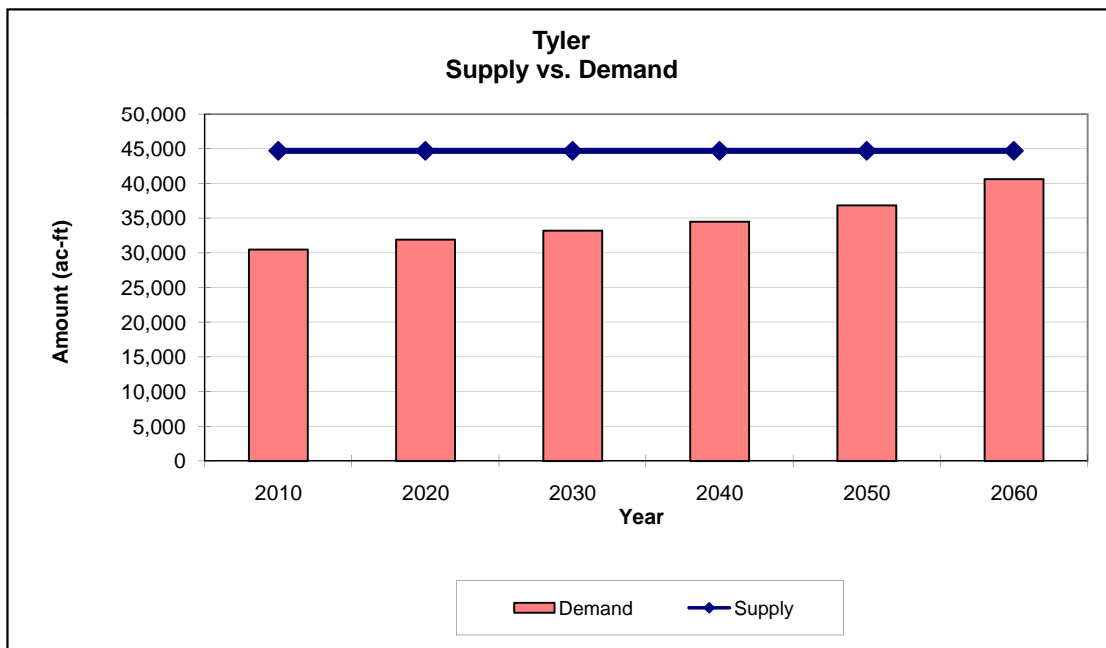
Tyler (Units: Acre-Feet per Year)

WUGs	Recipient	2010	2020	2030	2040	2050	2060
Tyler	Tyler (Region I)	25,528	26,385	27,211	28,007	29,771	32,253
Tyler	Tyler (Region D)	358	464	567	668	844	1,081
Smith County Manufacturing	Manufacturing	2,885	3,223	3,523	3,811	4,055	4,391
Whitehouse	Whitehouse	687	749	807	868	984	1,145
Southern Utilities Company	Southern Utilities Company	303	315	325	338	370	918
Smith County Other	Walnut Grove	445	467	491	515	541	568
Smith County Irrigation	Irrigation/Golf courses	300	300	300	300	300	300
Total Demand		30,506	31,903	33,224	34,506	36,865	40,656

Current Supplies	Notes	2010	2020	2030	2040	2050	2060
Lake Tyler/Tyler East		23,541	23,541	23,541	23,541	23,541	23,541
Lake Bellwood	*Tyler has wr to use 2,100 ac-ft (CA 3237)	0	0	0	0	0	0
Lake Palestine	limited to infrastructure (30 mgd)	16,815	16,815	16,815	16,815	16,815	16,815
Carrizo-Wilcox	reduced supplies due to aquifer limits	4,340	4,340	4,340	4,340	4,340	4,340
Total Supplies		44,696	44,696	44,696	44,696	44,696	44,696

* Lake Bellwood is used only for manufacturing directly from the lake.

Supplies Less Current Customer Demand		2010	2020	2030	2040	2050	2060
		14,190	12,793	11,472	10,190	7,831	4,040



Upper Neches River Municipal Water Authority
(Units: Acre-Feet per Year)

WUGs	Recipient	2010	2020	2030	2040	2050	2060
City of Dallas (not connected)		114,337	114,337	114,337	114,337	114,337	114,337
City of Tyler		67,200	67,200	67,200	67,200	67,200	67,200
City of Palestine		28,000	28,000	28,000	28,000	28,000	28,000
Smith County-Other (1%)		93	82	73	64	57	51
Super Tree Farm for International Paper (Cherokee County irrigation)		300	300	300	300	300	300
TECON (Henderson County-Other)		100	100	100	100	100	100
Emerald Bay Golf Course (Smith County irrigation)		105	105	105	105	105	105
Total Demand		210,135	210,124	210,115	210,106	210,099	210,093

Current Supplies		2010	2020	2030	2040	2050	2060
Lake Palestine System		207,458	205,417	203,375	201,333	199,292	197,250
Total Supplies		207,458	205,417	203,375	201,333	199,292	197,250

Supplies Less Current Customer Demand		2010	2020	2030	2040	2050	2060
		-2,677	-4,708	-6,740	-8,773	-10,808	-12,843

