

Initial GAM Simulations for Sparta, Queen City and Carrizo-Wilcox Aquifers

GMA 11 Technical Memorandum 15-01, Draft 1

William R. Hutchison, Ph.D., P.E., P.G.

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Introduction

As part of the joint planning process for Groundwater Management Area 11, a scope-of-work dated July 2, 2015 was developed to complete initial model simulations. This technical memorandum summarizes the results of data collection and GAM simulations that focused on evaluating certain specific concerns regarding the regional water plan and the plans for Forestar. These simulations will be used as part of the larger effort to develop the desired future conditions for the Carrizo-Wilcox, Queen City, and Sparta aquifers using the GAM that was used in the first round of joint planning.

Data input requirements for these initial simulations included estimates of future pumping organized by county and by aquifer. For these simulations, sources of information to obtain these data included data from the regional water plan, and data provided by Forestar. To place these future pumping estimates into context, historic pumping organized in the same fashion were developed from the TWDB database and from the calibrated GAM.

GMA 11 representatives gathered regional water plan strategy data, which was received on July 30, 2015 and August 21, 2015. Data from Forestar was provided by Forestar representatives on May 18, 2015.

Pumping Estimates

Historic pumping estimates were developed from the Texas Water Development Board (TWDB) pumping database (1980 and 1984 to 2012) and from the calibrated GAM (1975 to 1999). These estimates were then compared to the current modeled available groundwater (future pumping to meet the desired future condition).

The pumping estimates from TWDB are presented in tabular form in Appendix A for all aquifers. These historic pumping estimates are graphically compared with the calibrated GAM and the current modeled available groundwater (MAG) in Appendix B, organized by aquifer (Sparta, Queen City, and Carrizo-Wilcox). A county map of GMA 11 is also included in Appendix B for reference purposes.

Please note that the estimates for the calibrated GAM also include model input and output. For this GAM, some model cells went dry during the simulation period (1975 to 1999). This causes all pumping in that cell to be set to zero. Thus, in some counties, the input pumping is higher than the output pumping. Since the current DFC is based on a model simulation, the output pumping was used by TWDB to set the MAG.

A brief discussion of the graphs in each aquifer is presented below.

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Sparta Aquifer

In general, the TWDB pumping estimates and the calibrated GAM estimates of historic pumping are reasonably close, with a few exceptions. However, these exceptions represent a small amount of pumping.

In general, the modeled available groundwater is higher than the historic pumping, with some notable exceptions. In Houston County, the MAG is higher than the calibrated model, but the TWDB estimates of pumping has increased in recent years. The MAG is lower than the estimated pumping in the last few years.

In Smith and Wood counties, the TWDB includes estimates for pumping from the Sparta Aquifer. The Sparta Aquifer does not exist in these two counties.

Please note that there are no significant differences between input and output pumping from the GAM and that the MAGs are essentially constant from 2010 to 2060. This means that there are no dry cell issues.

Queen City Aquifer

In general, the TWDB pumping estimates and the calibrated GAM estimates of historic pumping are reasonably close, with the exception of Rusk County. However, this exception represents a small amount of pumping.

Except for Rusk County, all MAGs are considerably higher than the estimated historic pumping from the calibrated GAM. In Houston County, the MAG is higher than the calibrated GAM estimate of historic pumping, but lower than a few of the more recent years of estimated pumping from the TWDB pumping database.

Please note that there are no significant differences between input and output pumping from the GAM and that the MAGs are essentially constant from 2010 to 2060. This means that there are no significant dry cell issues.

Carrizo-Wilcox Aquifer

Please note that unlike the Sparta and the Queen City aquifers, there appear to be more instances where TWDB pumping database and calibrated GAM pumping estimates are different. For example, in Anderson County, the rate of increase in pumping is greater in the TWDB database than in the calibrated GAM. The MAG in Anderson County is almost twice the 1999 estimate of

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pumping from the calibrated model, but about equal to or slightly less than recent pumping estimates from the TWDB database.

In Angelina County, the TWDB database pumping estimates show a decline in pumping during the historic period of record, but these pumping estimates are higher than the calibrated GAM pumping estimates. The MAG in Angelina County is higher than the calibrated GAM historic pumping estimates, but is lower than TWDB pumping estimates of the 1990s.

In Bowie County, the effect of dry cells can be seen in the calibrated GAM estimates. Please note the deviation in input and output pumping estimates in the early 1980s, and the declining MAG values.

In Hopkins County, there appear to be some dry cells (deviation in input and output calibrated GAM pumping and declining MAG). Also, the MAG is lower than both sets of historic pumping. This resulted in “negative drawdown” or recovery for the DFC that was adopted in 2010.

In Nacogdoches County, a significant difference is evident in the TWDB database estimate of historic pumping and the calibrated GAM.

Discussion

Specific issues that needed to be addressed based on this review include resolving differences between TWDB database estimates of historic pumping, calibrated GAM estimates of historic pumping, and developing estimates of future pumping that represent increases in pumping.

The amount of future pumping is largely a policy decision by the representatives of GMA 11. However, from the previous joint planning process, the DFCs and MAGs appear to represent a planning and policy goal of increased pumping in the future. This review was more thorough than during the previous round of joint planning as evidenced by the increased interest in the process now as compared to 2010.

Simulation Descriptions

As outlined in the July 1, 2012 scope-of-work, seven simulations were completed. The base simulation includes estimates of future pumping based on the regional water plan data, and the proposed Forestar project. Six additional simulations would also be completed, three that sequentially increase pumping from the base amounts, and three that sequentially decrease pumping from the base amount. The objective of these simulations is provide the groundwater conservation districts in Groundwater Management Area 11 an opportunity to evaluate alternatives, assess the sensitivity to increases or decreases in pumping, and provide a frame of reference for discussion of the balancing between the highest practicable level of groundwater

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production and the conservation, preservation, protection, recharging, and prevention of waste of groundwater.

Forestar had previously developed three alternative simulations for its proposed project. These simulations were reviewed by the Texas Water Development Board (Oliver, 2012). Scenarios A and B included changes in pumping during the simulation period due to anticipated droughts. Scenario C, on the other hand, represented constant pumping during the simulation period. Because the simulations during the last round of joint planning did not factor changes during drought periods, and because the simulations were based on average conditions during all years, Scenario C of the Forestar proposed project was selected for the simulations as a starting point, since it also included future pumping that was the basis for the DFC and MAG developed in 2010 by GMA 11 (Oliver, 2010).

All simulations used the Scenario C model files as a foundation (Oliver, 2012). These files were selected because they included the Forestar pumping as well as the pumping associated with the DFC adopted in 2010 and the MAG that was issued by the TWDB. The files were modified to extend the simulation to 2070, and thus represented a 71-year simulation (2000 to 2070). Drawdowns were calculated from 1999 conditions (the final stress period of the calibrated model), as was done with the current DFCs.

The well files from Scenario C were replaced by seven new pumping files that were developed as follows:

- Scenario 1 = 70 % of Base Pumping
- Scenario 2 = 80 % of Base Pumping
- Scenario 3 = 90 % of Base Pumping
- Scenario 4 = Base Pumping
- Scenario 5 = 110 % of Base Pumping
- Scenario 6 = 120 % of Base Pumping
- Scenario 7 = 130 % of Base Pumping

Tabular summaries of input pumping are presented in Appendix C. The base simulation pumping was developed using

- The simulated pumping file for Scenario C
- The calibrated GAM pumping file
- TWDB pumping database estimates of historic pumping
- Regional Water Group (Regions D and I) groundwater pumping strategies

The results of this analysis are presented in below in Table 1 (Sparta Aquifer), Table 2 (Queen City Aquifer), and Table 3 (Carrizo-Wilcox Aquifer).

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Sparta Aquifer

Table 1 summarized the data associated with developing the base pumping for the simulations for the Sparta Aquifer. Base pumping for the Sparta Aquifer for all but two counties was set equal to that used in the Forestar Scenario C simulations.

Houston County was set higher than Scenario C to reflect the TWDB pumping database pumping estimate. Scenario C included 4,359 AF/yr of pumping in Rusk County. There are only four cells in layer 1 of the model in Rusk County and this pumping was eliminated.

Finally, please note that the TWDB pumping database included estimates of Sparta Aquifer pumping in Morris, Smith and Wood counties that was not included since the aquifer does not exist in these counties.

Region D and Region I had no groundwater pumping strategies for the Sparta Aquifer, so no additional pumping was included.

**Table 1. Development of Base Pumping for Simulations – Sparta Aquifer
All Pumping in AF/yr**

County	TWDB Pumping Database Estimate for 2012	Calibrated GAM Estimate for 1999	Forestar Scenario C Simulations	RWP Strategies - 2020	RWP Strategies - 2070	Base Pumping for Simulations
Anderson	266	157	616			616
Angelina	93	282	689			689
Cherokee	153	221	359			359
Houston	1,498	709	895			1,498
Morris	6					
Nacogdoches	121	339	408			408
Rusk		0	4,359			0
Sabine	59	66	295			295
San Augustine	175	60	205			205
Smith	961					
Trinity		15	615			615
Wood	54					
Total	3,386	1,849	8,441	0	0	4,685

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Queen City Aquifer

Table 2 summarizes summarized the data associated with developing the base pumping for the simulations for the Queen City Aquifer.

Please note that the Scenario C pumping is considerably higher than the historic estimates of pumping, except for Rusk County.

The base pumping for the simulations simply added the pumping for regional water planning group strategies in 2070 to all years in Camp, Smith, Titus, Upshur and Van Zandt counties. It would be reasonable to expect that these strategies could have been absorbed into the current MAG. However, in the interest of investigating the effect of additional pumping, the strategies were simply added to the simulations.

Carrizo-Wilcox Aquifer

Table 3 summarizes summarized the data associated with developing the base pumping for the simulations for the Carrizo-Wilcox Aquifer, which is represented in the GAM by four layers (Layers 5 to 8). Because the TWDB considers the Carrizo-Wilcox a single aquifer and all pumping estimates in the pumping database are combined, the calibrated GAM estimates are presented as the sum of the four model layers.

Please note that Table 3 includes an additional column as compared to Tables 1 and 2. In reviewing the individual layer pumping amounts between the calibrated GAM and Scenario C pumping files, there were instances where pumping in individual cells in the Scenario C files was lower than the calibrated model. Thus, the additional column represents the sum of the pumping when the maximum pumping in a cell between the calibrated model and Scenario C is assigned. The 2070 strategies were then added to the sum of maximum pumping column to obtain the base pumping for these simulations.

For all counties except Cass County, it appears that the strategies could have been absorbed into the current MAG. Cass County includes a strategy that represents a significant increase in pumping. In the interest of investigating the effect of additional pumping, the all strategies were simply added to the simulations.

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**Table 2. Development of Base Pumping for Simulations – Queen City Aquifer
All Pumping in AF/yr**

County	TWDB Pumping Database Estimate for 2012	Calibrated GAM Estimate for 1999	Forestar Scenario C Simulations	RWP Strategies - 2020	RWP Strategies - 2070	Base Pumping for Simulations
Anderson	1,050	770	20,852			20,852
Angelina		96	1,100			1,100
Camp	1	253	3,772	0	783	4,555
Cass	19	525	39,115			39,115
Cherokee	906	903	23,403			23,403
Gregg	145	287	7,568			7,568
Harrison	116	408	10,323			10,323
Henderson	645	784	15,838			15,838
Houston	434	244	2,321			2,321
Marion	5	151	15,591			15,591
Morris	25	205	9,577			9,577
Nacogdoches	233	313	4,992			4,992
Rusk		57	58			58
San Augustine		0	7			7
Smith	2,668	1,173	54,158	1,610	5,167	59,325
Titus		2	138	45	45	183
Upshur	619	1,284	25,597	970	1,775	27,372
Van Zandt	236	251	3,872	699	1,005	4,877
Wood	167	1,443	10,105			10,105
Total	7,269	9,149	248,387	3,324	8,775	257,162

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**Table 3. Development of Base Pumping for Simulations – Carrizo-Wilcox Aquifer
All Pumping in AF/yr**

County	TWDB Pumping Database Estimate for 2012	Calibrated GAM Estimate for 1999	Forestar Scenario C Simulations	Sum of Maximum Pumping for GAM and Scenario C	RWP Strategies - 2020	RWP Strategies - 2070	Base Pumping for Simulations
Anderson	8,856	4,681	29,066	29,066			29,066
Angelina	10,703	19,386	26,642	26,642	5,600	5,600	32,242
Bowie	2,409	3,524	12,691	12,967	3,700	4,140	17,107
Camp	2,414	1,321	4,045	4,047			4,047
Cass	1,370	2,768	3,767	3,943	11,659	15,224	19,167
Cherokee	6,518	7,856	20,672	20,672	0	250	20,922
Franklin	513	1,489	9,799	10,100			10,100
Gregg	2,047	2,700	7,643	7,643	280	393	8,036
Harrison	4,522	3,998	8,887	9,099	1,842	2,196	11,295
Henderson	6,218	7,610	9,550	9,550	600	4,865	14,415
Hopkins	3,994	4,987	4,245	6,583	820	940	7,523
Houston	2,227	835	22,928	22,929	3,500	3,500	26,429
Marion	558	1,124	2,077	2,080	432	648	2,728
Morris	697	1,255	2,660	2,665			2,665
Nacogdoches	5,562	14,210	21,116	21,117	1,644	3,059	24,176
Panola	4,007	4,447	9,788	9,933			9,933
Rains	537	1,129	1,737	1,956			1,956
Rusk	8,008	7,637	20,829	20,830			20,830
Sabine	285	741	6,849	6,850			6,850
San Augustine	424	632	1,788	1,788			1,788
Shelby	3,176	3,559	12,521	12,521			12,521
Smith	22,456	13,506	33,215	33,215	1,739	2,712	35,927
Titus	543	1,985	11,054	11,089			11,089
Trinity		27	2,214	2,214			2,214
Upshur	3,231	4,549	7,128	7,128			7,128
Van Zandt	4,489	5,779	10,996	11,024			11,024
Wood	7,070	4,455	21,735	21,738			21,738
Total	112,834	126,190	325,642	329,389	31,816	43,527	372,916

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Simulation Results

Among the important results are drawdown and output pumping. In addition, the issue of dry cell locations and the effect of these cells on pumping estimates was evaluated. During a review of the model output, it became apparent that there are areas where there is groundwater recovery (not drawdown) from 1999 to 2070. This appears due to inconsistencies between the initial heads (the heads at the end of the calibration period), recharge (assumed to be average for the entire simulation, and possibly the input specifications for the river (RIV), stream (STR), general head boundary (GHB), and evapotranspiration (EVT) packages. Maps of model layers 1, 3, 5, 6, 7 and 8 are presented in Appendix D that show the distribution of model cells that had positive drawdown, negative drawdown (water level recovery), and dry cells.

Groundwater Level Recovery and Dry Cell Effects

The areas of negative drawdown (water level recovery) appear to mostly in the outcrop areas which suggests that the recharge assumed for the simulation is inconsistent with the recharge of the last few years of the calibration period. This would result in groundwater level recoveries that would be independent of pumping. It is also possible that specifications in other packages which varied during the calibration period, but were set equal for these simulations are responsible for the areas with water level recovery.

The issue of dry cells and associated pumping reductions to potentially explain the water level recoveries was evaluated. Table 4 summarizes the Scenario 4 (base pumping) layer-by-layer pumping input, the pumping output, the sum of the pumping that was reduced to zero in the dry cells, and some comparison statistics. Please note that large areas of water level recovery are present in layer 1 (Sparta Aquifer) with no dry cells and no reduction in pumping. Layer 6 (Upper Wilcox) shows the largest reduction in pumping (almost 9 percent), yet has less areas of water level recovery than layer 7, which has a pumping reduction of less than 2 percent. This suggests that there is another factor to explain these groundwater level increases.

Additional work will be needed to develop simulation input files that will result in no water level recovery when pumping is increased during the simulations associated with the development of desired future conditions.

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Table 4. Summary of Pumping Input, Output, and Pumping Associated with Dry Cells Scenario 4
All Values in AF/yr

Model Layer	Pumping Input (Constant)	Pumping Output in 2070	Dry Wells in 2070	Total of Output and Dry Wells	Rounding Error	Dry Wells as a Percent of Pumping Input
Layer 1	4,672	4,672	0	4,672	< 1	0.00
Layer 2	0	0	0	0		
Layer 3	257,166	255,409	1,756	257,165	-1	0.68
Layer 4	0	0	0	0		
Layer 5	164,517	153,360	11,158	164,518	1	6.78
Layer 6	106,744	97,519	9,219	106,738	-6	8.64
Layer 7	90,754	89,418	1,340	90,758	4	1.48
Layer 8	10,902	10,862	42	10,904	2	0.39
Total	634,755	611,240	23,515	634,755	0	3.70

Drawdown Results

Drawdown results were the basis for the DFC that was adopted by GMA 11 in 2010. It is not required that GMA 11 adopt a DFC based on model results, but the results of these simulations are useful to compare and contrast with the current DFCs. The objective of these simulations is to consider the effects of proposed strategies in the Regional Water Plans and the proposed Forestar project. As discussed above, if the GAM is to be the basis of the DFCs, there will need to be additional work completed due to inconsistencies in the model files.

Average drawdowns were calculated as part of the GAM simulations used as part of the development of the DFC in 2010 (Oliver, 2010). In calculating the average drawdowns, the TWDB has developed guidelines that distinguish between modeled extent of the aquifer (the IBND array) and the official extent of the aquifer (the AQ_Active array).

For GMA 11, there is additional issues with the Sabine Uplift area on the designation of subdivisions of the Wilcox Formation. The readme file associated with the model grid file that designates the IBND and AQ_Active attribute for each cell (dated August 5, 2013) says that AQ_Active in layer 8 has a value of 2 where layer 8 does not represent the Lower Wilcox unit. However, inspection of the model grid file yields the conclusion that AQ_Active does not equal 2

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where is should be based on the maps attached to the readme file (e.g. Panola County has no AQ_Active equal to 2 in layer 8). All calculations of average drawdown used AQ_Active equal to 1 in calculating drawdowns (not IBND equal to 1).

In addition, and given the issue of recovering groundwater levels, it was assumed for the purposes of this analysis that all such areas will have no drawdown once the modifications to the model files have been completed. This is not a satisfactory result in the final submittals to TWDB, but given the circumstances (issues with the AQ_Active array, uncertainty on how GMA 11 will proceed with using the model to develop DFCs, and the need to complete a reviewable report for the November 4, 2015 GMA 11 meeting), the estimates of drawdown are presented as a means to begin a more substantive discussion regarding the factors related to the state water plan and the beginning of a discussion on balancing the development and conservation of groundwater.

Overall, the relationship between pumping and drawdown for the range of alternatives can be seen in Figure 1. Note that as pumping increases, drawdown increases. Recall that because of the elimination of areas with rising groundwater levels as shown in Appendix D, it is expected that the drawdowns from these simulations will tend to be higher than those developed in 2010.

Once the model files have been modified and corrected to appropriately account for the areas of increasing groundwater levels, these drawdown values would likely change, and could be slightly higher if the assumption applied for this analysis that these areas have little or no drawdown is incorrect.

For each scenario, the drawdown for each county and model layer from 1999 to 2070 is summarized in Appendix E. For each scenario, the pumping output (from the cbb file) for the year 2070 is summarized in Appendix F. The tables that summarized the pumping and drawdown associated with the current DFC and MAG (Oliver, 2010) are presented in Appendix G.

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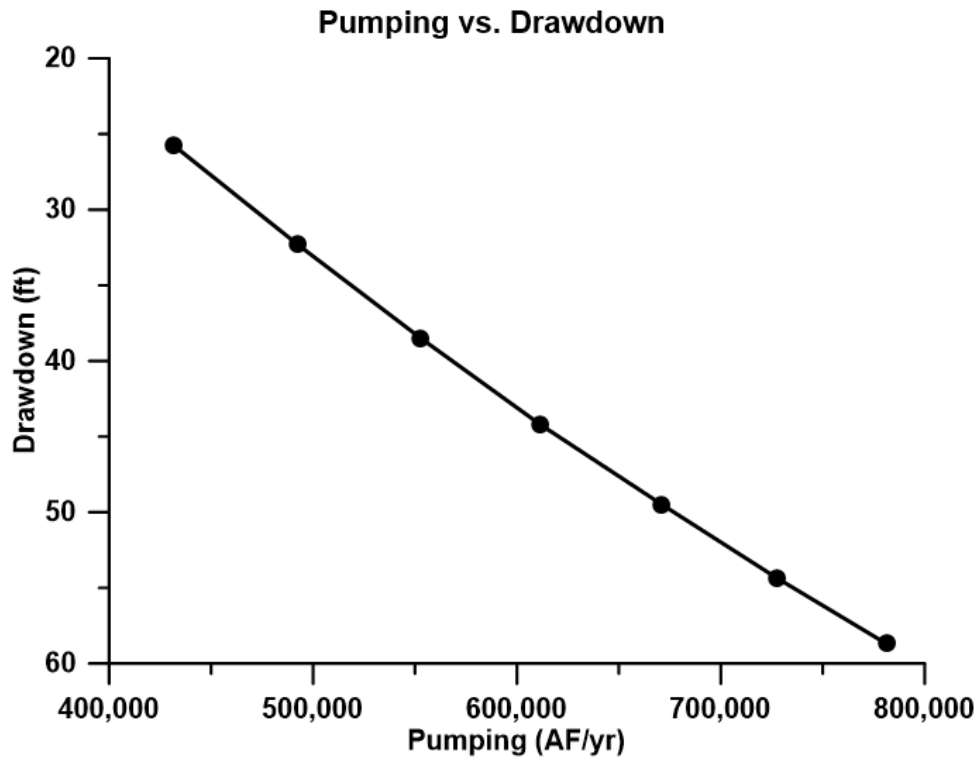


Figure 1. Overall Pumping vs. Drawdown Relationship for the Seven Scenarios

Recommendations for Next Steps

As developed above, if the model is to be the basis of the DFCs, the model files needs to be modified and corrected to deal with the areas of recovering groundwater levels. This may include modifications to one or more model packages to account for transient conditions at the end of the calibration period.

The current simulations varied pumping from the base case by applying multiplication factors over the entire area and equally across model layers. Specific changes to specific counties and/or layers can be accomplished once the representatives of GMA 11 have had a chance to review and discuss the results from these simulations.

Clarification with TWDB regarding the use of the AQ_Active array will be sought. Specifically, a copy of this draft Technical Memorandum will be forwarded to TWDB. I will follow-up with a phone call, and, if necessary, a meeting review the IBND and AQ_Active arrays and their proposer implementation.

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Appendix A
TWDB Historic Pumping Estimates for
Groundwater Management Area 11

Groundwater Pumping Estimates from Texas Water Development Board
Organized by County and Aquifer
All Values in AF/yr

Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
1980	ANDERSON	CARRIZO-WILCOX AQUIFER	2,267	349	854	0	0	139	3,609
1984	ANDERSON	CARRIZO-WILCOX AQUIFER	3,721	455	329	0	102	263	4,870
1985	ANDERSON	CARRIZO-WILCOX AQUIFER	4,277	303	405	0	113	275	5,373
1986	ANDERSON	CARRIZO-WILCOX AQUIFER	4,601	347	382	0	54	275	5,659
1987	ANDERSON	CARRIZO-WILCOX AQUIFER	4,884	346	359	0	54	282	5,925
1988	ANDERSON	CARRIZO-WILCOX AQUIFER	4,938	344	325	0	54	292	5,953
1989	ANDERSON	CARRIZO-WILCOX AQUIFER	5,044	431	303	0	27	303	6,108
1990	ANDERSON	CARRIZO-WILCOX AQUIFER	5,253	0	303	0	21	306	5,883
1991	ANDERSON	CARRIZO-WILCOX AQUIFER	4,910	0	318	0	24	311	5,563
1992	ANDERSON	CARRIZO-WILCOX AQUIFER	5,403	0	318	0	24	374	6,119
1993	ANDERSON	CARRIZO-WILCOX AQUIFER	5,400	0	315	0	171	366	6,252
1994	ANDERSON	CARRIZO-WILCOX AQUIFER	5,872	0	315	0	78	323	6,588
1995	ANDERSON	CARRIZO-WILCOX AQUIFER	6,473	0	430	0	180	321	7,404
1996	ANDERSON	CARRIZO-WILCOX AQUIFER	7,640	0	430	0	265	321	8,656
1997	ANDERSON	CARRIZO-WILCOX AQUIFER	7,324	0	430	0	254	321	8,329
1998	ANDERSON	CARRIZO-WILCOX AQUIFER	7,820	0	411	0	632	281	9,144
1999	ANDERSON	CARRIZO-WILCOX AQUIFER	7,381	0	430	0	309	288	8,408
2000	ANDERSON	CARRIZO-WILCOX AQUIFER	9,225	340	0	0	89	299	9,953
2001	ANDERSON	CARRIZO-WILCOX AQUIFER	8,555	340	0	0	89	146	9,130
2002	ANDERSON	CARRIZO-WILCOX AQUIFER	8,598	445	0	0	75	148	9,266
2003	ANDERSON	CARRIZO-WILCOX AQUIFER	8,920	445	0	0	16	133	9,514
2004	ANDERSON	CARRIZO-WILCOX AQUIFER	8,723	0	0	0	28	142	8,893
2005	ANDERSON	CARRIZO-WILCOX AQUIFER	9,013	0	0	0	52	34	9,099
2006	ANDERSON	CARRIZO-WILCOX AQUIFER	8,428	0	0	0	0	36	8,464
2007	ANDERSON	CARRIZO-WILCOX AQUIFER	7,495	0	0	0	263	36	7,794
2008	ANDERSON	CARRIZO-WILCOX AQUIFER	7,774	0	0	0	167	25	7,966
2009	ANDERSON	CARRIZO-WILCOX AQUIFER	7,930	0	0	0	394	26	8,350
2010	ANDERSON	CARRIZO-WILCOX AQUIFER	8,023	0	0	0	129	25	8,177
2011	ANDERSON	CARRIZO-WILCOX AQUIFER	8,559	0	0	0	229	25	8,813
2012	ANDERSON	CARRIZO-WILCOX AQUIFER	8,627	0	0	0	207	22	8,856
1980	ANDERSON	OTHER AQUIFER	146	0	0	0	0	43	189
1984	ANDERSON	OTHER AQUIFER	22	0	0	0	0	15	37
1985	ANDERSON	OTHER AQUIFER	19	0	0	0	0	17	36
1986	ANDERSON	OTHER AQUIFER	19	0	0	0	0	17	36
1987	ANDERSON	OTHER AQUIFER	17	0	0	0	0	17	34
1988	ANDERSON	OTHER AQUIFER	0	0	0	0	0	18	18
1989	ANDERSON	OTHER AQUIFER	0	0	0	0	0	19	19
1990	ANDERSON	OTHER AQUIFER	26	0	0	0	0	19	45
1991	ANDERSON	OTHER AQUIFER	14	0	0	0	0	19	33
1992	ANDERSON	OTHER AQUIFER	36	0	0	0	0	23	59
1993	ANDERSON	OTHER AQUIFER	56	0	0	0	0	23	79
1994	ANDERSON	OTHER AQUIFER	60	0	0	0	0	20	80
1995	ANDERSON	OTHER AQUIFER	50	0	0	0	0	20	70
1996	ANDERSON	OTHER AQUIFER	83	0	0	0	0	20	103
1997	ANDERSON	OTHER AQUIFER	84	0	0	0	0	20	104
1998	ANDERSON	OTHER AQUIFER	90	0	0	0	0	17	107
1999	ANDERSON	OTHER AQUIFER	85	0	0	0	0	18	103
2000	ANDERSON	OTHER AQUIFER	26	0	0	0	0	19	45
2001	ANDERSON	OTHER AQUIFER	29	0	0	0	0	10	39
2002	ANDERSON	OTHER AQUIFER	28	0	0	0	0	10	38
2003	ANDERSON	OTHER AQUIFER	27	0	0	0	0	9	36
2004	ANDERSON	OTHER AQUIFER	26	0	0	0	0	45	71
2005	ANDERSON	OTHER AQUIFER	28	0	0	0	0	11	39
2006	ANDERSON	OTHER AQUIFER	195	0	0	0	0	11	206
2007	ANDERSON	OTHER AQUIFER	161	0	0	0	0	11	172
2008	ANDERSON	OTHER AQUIFER	179	0	0	0	0	16	195
2009	ANDERSON	OTHER AQUIFER	190	0	0	0	0	17	207
2010	ANDERSON	OTHER AQUIFER	202	0	0	0	0	8	210
2011	ANDERSON	OTHER AQUIFER	209	0	0	0	0	8	217
2012	ANDERSON	OTHER AQUIFER	191	0	0	0	0	6	197
1980	ANDERSON	QUEEN CITY AQUIFER	824	0	753	0	0	289	1,866
1984	ANDERSON	QUEEN CITY AQUIFER	438	0	0	0	11	234	683
1985	ANDERSON	QUEEN CITY AQUIFER	422	0	0	0	12	244	678
1986	ANDERSON	QUEEN CITY AQUIFER	415	0	0	0	6	244	665
1987	ANDERSON	QUEEN CITY AQUIFER	384	0	0	0	6	250	640
1988	ANDERSON	QUEEN CITY AQUIFER	0	0	0	0	6	259	265
1989	ANDERSON	QUEEN CITY AQUIFER	0	0	0	0	1	269	270
1990	ANDERSON	QUEEN CITY AQUIFER	188	0	0	0	2	272	462
1991	ANDERSON	QUEEN CITY AQUIFER	106	0	0	0	2	277	385
1992	ANDERSON	QUEEN CITY AQUIFER	273	0	0	0	2	334	609
1993	ANDERSON	QUEEN CITY AQUIFER	422	0	0	0	1	328	751
1994	ANDERSON	QUEEN CITY AQUIFER	455	0	0	0	0	290	745
1995	ANDERSON	QUEEN CITY AQUIFER	380	0	0	0	0	288	668
1996	ANDERSON	QUEEN CITY AQUIFER	627	0	0	0	0	288	915
1997	ANDERSON	QUEEN CITY AQUIFER	631	0	0	0	0	288	919
1998	ANDERSON	QUEEN CITY AQUIFER	674	0	0	0	0	252	926
1999	ANDERSON	QUEEN CITY AQUIFER	636	0	0	0	0	259	895
2000	ANDERSON	QUEEN CITY AQUIFER	190	0	0	0	7	269	466

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
2001	ANDERSON	QUEEN CITY AQUIFER	217	0	0	0	7	132	356
2002	ANDERSON	QUEEN CITY AQUIFER	220	0	0	0	6	132	358
2003	ANDERSON	QUEEN CITY AQUIFER	212	0	0	0	1	120	333
2004	ANDERSON	QUEEN CITY AQUIFER	205	0	0	0	2	118	325
2005	ANDERSON	QUEEN CITY AQUIFER	220	0	0	0	4	28	252
2006	ANDERSON	QUEEN CITY AQUIFER	838	0	0	0	0	30	868
2007	ANDERSON	QUEEN CITY AQUIFER	695	0	0	0	21	30	746
2008	ANDERSON	QUEEN CITY AQUIFER	773	0	0	0	13	21	807
2009	ANDERSON	QUEEN CITY AQUIFER	818	0	0	0	31	22	871
2010	ANDERSON	QUEEN CITY AQUIFER	872	0	0	0	130	21	1,023
2011	ANDERSON	QUEEN CITY AQUIFER	899	0	0	0	229	21	1,149
2012	ANDERSON	QUEEN CITY AQUIFER	825	0	0	0	207	18	1,050
1980	ANDERSON	SPARTA AQUIFER	256	0	84	0	0	62	402
1984	ANDERSON	SPARTA AQUIFER	197	0	0	0	0	87	284
1985	ANDERSON	SPARTA AQUIFER	192	0	0	0	0	91	283
1986	ANDERSON	SPARTA AQUIFER	189	0	0	0	0	91	280
1988	ANDERSON	SPARTA AQUIFER	0	0	0	0	0	97	97
1989	ANDERSON	SPARTA AQUIFER	0	0	0	0	0	100	100
1990	ANDERSON	SPARTA AQUIFER	70	0	0	0	0	101	171
1991	ANDERSON	SPARTA AQUIFER	39	0	0	0	0	103	142
1992	ANDERSON	SPARTA AQUIFER	100	0	0	0	0	124	224
1993	ANDERSON	SPARTA AQUIFER	155	0	0	0	0	122	277
1994	ANDERSON	SPARTA AQUIFER	167	0	0	0	0	108	275
1995	ANDERSON	SPARTA AQUIFER	140	0	0	0	0	108	248
1996	ANDERSON	SPARTA AQUIFER	231	0	0	0	0	108	339
1997	ANDERSON	SPARTA AQUIFER	233	0	0	0	0	108	341
1998	ANDERSON	SPARTA AQUIFER	249	0	0	0	0	94	343
1999	ANDERSON	SPARTA AQUIFER	235	0	0	0	0	97	332
2000	ANDERSON	SPARTA AQUIFER	70	0	0	0	0	97	167
2001	ANDERSON	SPARTA AQUIFER	64	0	0	0	0	49	113
2002	ANDERSON	SPARTA AQUIFER	65	0	0	0	0	50	115
2003	ANDERSON	SPARTA AQUIFER	64	0	0	0	0	45	109
2004	ANDERSON	SPARTA AQUIFER	62	0	0	0	0	0	62
2005	ANDERSON	SPARTA AQUIFER	66	0	0	0	0	0	66
2006	ANDERSON	SPARTA AQUIFER	271	0	0	0	0	0	271
2007	ANDERSON	SPARTA AQUIFER	224	0	0	0	0	0	224
2008	ANDERSON	SPARTA AQUIFER	249	0	0	0	0	0	249
2009	ANDERSON	SPARTA AQUIFER	264	0	0	0	0	0	264
2010	ANDERSON	SPARTA AQUIFER	281	0	0	0	0	0	281
2011	ANDERSON	SPARTA AQUIFER	290	0	0	0	0	0	290
2012	ANDERSON	SPARTA AQUIFER	266	0	0	0	0	0	266
2008	ANDERSON	UNKNOWN	0	0	11	0	0	0	11
2009	ANDERSON	UNKNOWN	0	0	30	0	0	0	30
2010	ANDERSON	UNKNOWN	0	0	50	0	0	0	50
2011	ANDERSON	UNKNOWN	0	0	43	0	0	0	43
1980	ANGELINA	CARRIZO-WILCOX AQUIFER	8,244	21,296	0	0	0	0	29,540
1984	ANGELINA	CARRIZO-WILCOX AQUIFER	7,989	19,284	0	0	0	0	27,273
1985	ANGELINA	CARRIZO-WILCOX AQUIFER	8,222	19,120	0	0	0	0	27,342
1986	ANGELINA	CARRIZO-WILCOX AQUIFER	7,955	18,582	0	0	0	0	26,537
1987	ANGELINA	CARRIZO-WILCOX AQUIFER	7,673	18,561	0	0	0	0	26,234
1988	ANGELINA	CARRIZO-WILCOX AQUIFER	7,644	16,199	0	0	0	0	23,843
1989	ANGELINA	CARRIZO-WILCOX AQUIFER	7,845	23,578	0	0	0	0	31,423
1990	ANGELINA	CARRIZO-WILCOX AQUIFER	8,354	14,668	0	0	0	0	23,022
1991	ANGELINA	CARRIZO-WILCOX AQUIFER	8,201	13,565	22	0	0	0	21,788
1992	ANGELINA	CARRIZO-WILCOX AQUIFER	9,013	12,404	22	0	0	0	21,439
1993	ANGELINA	CARRIZO-WILCOX AQUIFER	8,816	11,999	22	0	0	0	20,837
1994	ANGELINA	CARRIZO-WILCOX AQUIFER	9,023	12,030	22	0	0	0	21,075
1995	ANGELINA	CARRIZO-WILCOX AQUIFER	9,132	12,552	22	0	0	0	21,706
1996	ANGELINA	CARRIZO-WILCOX AQUIFER	10,161	11,771	22	0	0	0	21,954
1997	ANGELINA	CARRIZO-WILCOX AQUIFER	10,705	11,262	22	0	0	0	21,989
1998	ANGELINA	CARRIZO-WILCOX AQUIFER	12,198	10,922	22	0	0	0	23,142
1999	ANGELINA	CARRIZO-WILCOX AQUIFER	12,266	10,715	22	0	0	0	23,003
2000	ANGELINA	CARRIZO-WILCOX AQUIFER	13,114	12,306	0	0	0	39	25,459
2001	ANGELINA	CARRIZO-WILCOX AQUIFER	12,435	8,995	0	0	0	38	21,468
2002	ANGELINA	CARRIZO-WILCOX AQUIFER	11,995	8,345	0	0	0	36	20,376
2003	ANGELINA	CARRIZO-WILCOX AQUIFER	11,793	9,137	0	0	0	34	20,964
2004	ANGELINA	CARRIZO-WILCOX AQUIFER	11,840	1,914	0	0	0	33	13,787
2005	ANGELINA	CARRIZO-WILCOX AQUIFER	12,984	610	0	0	0	7	13,601
2006	ANGELINA	CARRIZO-WILCOX AQUIFER	12,379	782	0	0	0	7	13,168
2007	ANGELINA	CARRIZO-WILCOX AQUIFER	11,641	20	0	0	0	7	11,668
2008	ANGELINA	CARRIZO-WILCOX AQUIFER	11,767	16	0	0	0	8	11,791
2009	ANGELINA	CARRIZO-WILCOX AQUIFER	11,355	16	0	0	0	8	11,379
2010	ANGELINA	CARRIZO-WILCOX AQUIFER	10,842	0	0	0	0	10	10,852
2011	ANGELINA	CARRIZO-WILCOX AQUIFER	11,894	0	0	0	0	10	11,904
2012	ANGELINA	CARRIZO-WILCOX AQUIFER	10,695	0	0	0	0	8	10,703
1980	ANGELINA	OTHER AQUIFER	2,645	0	0	0	191	70	2,906
1984	ANGELINA	OTHER AQUIFER	2,263	1,002	0	0	191	146	3,602
1985	ANGELINA	OTHER AQUIFER	2,322	892	0	0	153	95	3,462

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
1986	ANGELINA	OTHER AQUIFER	2,289	871	0	0	136	85	3,381
1987	ANGELINA	OTHER AQUIFER	2,013	853	0	0	136	88	3,090
1988	ANGELINA	OTHER AQUIFER	2,103	912	0	0	136	100	3,251
1989	ANGELINA	OTHER AQUIFER	2,328	831	0	0	0	88	3,247
1990	ANGELINA	OTHER AQUIFER	2,561	851	0	0	0	87	3,499
1991	ANGELINA	OTHER AQUIFER	2,542	777	0	0	0	88	3,407
1992	ANGELINA	OTHER AQUIFER	2,582	791	0	0	0	124	3,497
1993	ANGELINA	OTHER AQUIFER	2,417	774	0	0	30	122	3,343
1994	ANGELINA	OTHER AQUIFER	2,247	800	0	0	30	100	3,177
1995	ANGELINA	OTHER AQUIFER	2,180	777	0	0	30	100	3,087
1996	ANGELINA	OTHER AQUIFER	2,348	756	0	0	30	91	3,225
1997	ANGELINA	OTHER AQUIFER	2,197	687	0	0	30	89	3,003
1998	ANGELINA	OTHER AQUIFER	2,503	41	0	0	30	100	2,674
1999	ANGELINA	OTHER AQUIFER	2,517	1,023	0	0	30	116	3,686
2000	ANGELINA	OTHER AQUIFER	2,218	709	0	0	0	0	2,927
2001	ANGELINA	OTHER AQUIFER	2,217	761	0	0	0	0	2,978
2002	ANGELINA	OTHER AQUIFER	2,292	904	0	0	0	0	3,196
2003	ANGELINA	OTHER AQUIFER	2,299	918	0	0	0	0	3,217
2004	ANGELINA	OTHER AQUIFER	2,944	798	0	0	0	0	3,742
2005	ANGELINA	OTHER AQUIFER	2,128	799	0	0	0	0	2,927
2006	ANGELINA	OTHER AQUIFER	2,250	864	0	0	0	0	3,114
2007	ANGELINA	OTHER AQUIFER	2,180	971	0	0	0	0	3,151
2008	ANGELINA	OTHER AQUIFER	2,240	890	0	0	0	0	3,130
2009	ANGELINA	OTHER AQUIFER	2,207	902	0	0	0	0	3,109
2010	ANGELINA	OTHER AQUIFER	127	75	0	0	0	0	202
1980	ANGELINA	QUEEN CITY AQUIFER	150	0	0	0	186	23	359
1984	ANGELINA	QUEEN CITY AQUIFER	214	0	0	0	186	48	448
1985	ANGELINA	QUEEN CITY AQUIFER	187	0	0	0	149	47	383
1986	ANGELINA	QUEEN CITY AQUIFER	136	0	0	0	132	42	310
1987	ANGELINA	QUEEN CITY AQUIFER	105	0	0	0	132	44	281
1988	ANGELINA	QUEEN CITY AQUIFER	60	0	0	0	132	49	241
1989	ANGELINA	QUEEN CITY AQUIFER	224	0	0	0	0	44	268
1990	ANGELINA	QUEEN CITY AQUIFER	134	0	0	0	0	44	178
1991	ANGELINA	QUEEN CITY AQUIFER	143	0	0	0	0	45	188
1992	ANGELINA	QUEEN CITY AQUIFER	92	0	0	0	0	63	155
1993	ANGELINA	QUEEN CITY AQUIFER	75	0	0	0	0	62	137
1994	ANGELINA	QUEEN CITY AQUIFER	67	0	0	0	0	51	118
1995	ANGELINA	QUEEN CITY AQUIFER	31	0	0	0	0	51	82
1996	ANGELINA	QUEEN CITY AQUIFER	76	0	0	0	0	46	122
1997	ANGELINA	QUEEN CITY AQUIFER	59	0	0	0	0	45	104
1998	ANGELINA	QUEEN CITY AQUIFER	67	0	0	0	0	51	118
1999	ANGELINA	QUEEN CITY AQUIFER	68	0	0	0	0	59	127
2000	ANGELINA	QUEEN CITY AQUIFER	2	0	0	0	0	58	60
2001	ANGELINA	QUEEN CITY AQUIFER	7	0	0	0	0	57	64
2002	ANGELINA	QUEEN CITY AQUIFER	8	0	0	0	0	54	62
2003	ANGELINA	QUEEN CITY AQUIFER	8	0	0	0	0	50	58
2004	ANGELINA	QUEEN CITY AQUIFER	8	0	0	0	0	0	8
2005	ANGELINA	QUEEN CITY AQUIFER	8	0	0	0	0	0	8
1980	ANGELINA	SPARTA AQUIFER	150	0	0	0	186	24	360
1984	ANGELINA	SPARTA AQUIFER	214	0	0	0	186	49	449
1985	ANGELINA	SPARTA AQUIFER	187	0	0	0	148	47	382
1986	ANGELINA	SPARTA AQUIFER	136	0	0	0	132	42	310
1987	ANGELINA	SPARTA AQUIFER	105	0	0	0	132	44	281
1988	ANGELINA	SPARTA AQUIFER	60	0	0	0	132	49	241
1989	ANGELINA	SPARTA AQUIFER	224	0	0	0	0	44	268
1990	ANGELINA	SPARTA AQUIFER	134	0	0	0	0	44	178
1991	ANGELINA	SPARTA AQUIFER	143	0	0	0	0	45	188
1992	ANGELINA	SPARTA AQUIFER	92	0	0	0	0	63	155
1993	ANGELINA	SPARTA AQUIFER	75	0	0	0	0	62	137
1994	ANGELINA	SPARTA AQUIFER	67	0	0	0	0	51	118
1995	ANGELINA	SPARTA AQUIFER	31	0	0	0	0	51	82
1996	ANGELINA	SPARTA AQUIFER	76	0	0	0	0	46	122
1997	ANGELINA	SPARTA AQUIFER	59	0	0	0	0	45	104
1998	ANGELINA	SPARTA AQUIFER	67	0	0	0	0	51	118
1999	ANGELINA	SPARTA AQUIFER	68	0	0	0	0	59	127
2000	ANGELINA	SPARTA AQUIFER	2	0	0	0	0	58	60
2001	ANGELINA	SPARTA AQUIFER	0	0	0	0	0	57	57
2002	ANGELINA	SPARTA AQUIFER	0	0	0	0	0	54	54
2003	ANGELINA	SPARTA AQUIFER	0	0	0	0	0	50	50
2004	ANGELINA	SPARTA AQUIFER	0	0	0	0	0	33	33
2005	ANGELINA	SPARTA AQUIFER	0	0	0	0	0	7	7
2006	ANGELINA	SPARTA AQUIFER	88	0	0	0	0	7	95
2007	ANGELINA	SPARTA AQUIFER	73	0	0	0	0	7	80
2008	ANGELINA	SPARTA AQUIFER	81	0	0	0	0	8	89
2009	ANGELINA	SPARTA AQUIFER	96	0	0	0	0	8	104
2010	ANGELINA	SPARTA AQUIFER	112	0	0	0	0	10	122

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
2011	ANGELINA	SPARTA AQUIFER	130	0	0	0	0	10	140
2012	ANGELINA	SPARTA AQUIFER	85	0	0	0	0	8	93
2008	ANGELINA	UNKNOWN	0	0	71	0	0	0	71
2009	ANGELINA	UNKNOWN	0	0	43	0	0	0	43
2010	ANGELINA	UNKNOWN	0	0	15	0	0	0	15
2011	ANGELINA	UNKNOWN	0	0	10	0	0	0	10
2012	ANGELINA	UNKNOWN	0	0	27	0	0	0	27
2000	ANGELINA	YEGUA-JACKSON AQUIFER	0	0	0	0	30	76	106
2001	ANGELINA	YEGUA-JACKSON AQUIFER	0	0	0	0	9	74	83
2002	ANGELINA	YEGUA-JACKSON AQUIFER	0	0	0	0	9	70	79
2003	ANGELINA	YEGUA-JACKSON AQUIFER	0	0	0	0	25	67	92
2004	ANGELINA	YEGUA-JACKSON AQUIFER	0	0	0	0	109	133	242
2005	ANGELINA	YEGUA-JACKSON AQUIFER	0	0	0	0	209	26	235
2006	ANGELINA	YEGUA-JACKSON AQUIFER	455	0	0	0	186	27	668
2007	ANGELINA	YEGUA-JACKSON AQUIFER	377	0	0	0	0	28	405
2008	ANGELINA	YEGUA-JACKSON AQUIFER	421	0	0	0	0	33	454
2009	ANGELINA	YEGUA-JACKSON AQUIFER	498	0	0	0	214	31	743
2010	ANGELINA	YEGUA-JACKSON AQUIFER	2,468	1,384	0	0	238	40	4,130
2011	ANGELINA	YEGUA-JACKSON AQUIFER	2,376	975	0	0	265	39	3,655
2012	ANGELINA	YEGUA-JACKSON AQUIFER	1,872	790	0	0	274	33	2,969
1980	BOWIE	BLOSSOM AQUIFER	45	0	0	0	0	20	65
1984	BOWIE	BLOSSOM AQUIFER	59	0	0	0	0	22	81
1985	BOWIE	BLOSSOM AQUIFER	59	0	0	0	0	19	78
1986	BOWIE	BLOSSOM AQUIFER	48	0	0	0	0	21	69
1987	BOWIE	BLOSSOM AQUIFER	49	0	0	0	0	20	69
1988	BOWIE	BLOSSOM AQUIFER	46	0	0	0	0	20	66
1989	BOWIE	BLOSSOM AQUIFER	52	0	0	0	0	20	72
1990	BOWIE	BLOSSOM AQUIFER	66	0	0	0	0	22	88
1991	BOWIE	BLOSSOM AQUIFER	69	0	0	0	0	22	91
1992	BOWIE	BLOSSOM AQUIFER	63	0	0	0	0	18	81
1993	BOWIE	BLOSSOM AQUIFER	66	0	0	0	0	19	85
1994	BOWIE	BLOSSOM AQUIFER	66	0	0	0	0	21	87
1995	BOWIE	BLOSSOM AQUIFER	104	0	0	0	0	20	124
1996	BOWIE	BLOSSOM AQUIFER	106	0	0	0	0	27	133
1997	BOWIE	BLOSSOM AQUIFER	105	0	0	0	0	18	123
1998	BOWIE	BLOSSOM AQUIFER	99	0	0	0	0	19	118
1999	BOWIE	BLOSSOM AQUIFER	86	0	0	0	0	20	106
2000	BOWIE	BLOSSOM AQUIFER	62	0	0	0	0	20	82
2001	BOWIE	BLOSSOM AQUIFER	53	0	0	0	0	7	60
2002	BOWIE	BLOSSOM AQUIFER	62	0	0	0	0	7	69
2003	BOWIE	BLOSSOM AQUIFER	78	0	0	0	0	7	85
2004	BOWIE	BLOSSOM AQUIFER	75	0	0	0	0	0	75
2005	BOWIE	BLOSSOM AQUIFER	81	0	0	0	0	0	81
1980	BOWIE	CARRIZO-WILCOX AQUIFER	1,653	42	0	0	0	286	1,981
1984	BOWIE	CARRIZO-WILCOX AQUIFER	1,492	45	0	0	0	301	1,838
1985	BOWIE	CARRIZO-WILCOX AQUIFER	1,586	44	0	0	0	258	1,888
1986	BOWIE	CARRIZO-WILCOX AQUIFER	1,584	39	18	0	0	298	1,939
1987	BOWIE	CARRIZO-WILCOX AQUIFER	1,234	22	18	0	0	274	1,548
1988	BOWIE	CARRIZO-WILCOX AQUIFER	1,488	7	17	0	0	275	1,787
1989	BOWIE	CARRIZO-WILCOX AQUIFER	1,636	5	0	0	0	283	1,924
1990	BOWIE	CARRIZO-WILCOX AQUIFER	1,340	27	0	0	0	319	1,686
1991	BOWIE	CARRIZO-WILCOX AQUIFER	1,394	17	0	0	0	321	1,732
1992	BOWIE	CARRIZO-WILCOX AQUIFER	1,286	1	0	0	0	262	1,549
1993	BOWIE	CARRIZO-WILCOX AQUIFER	1,351	17	0	0	0	280	1,648
1994	BOWIE	CARRIZO-WILCOX AQUIFER	1,194	16	0	0	0	311	1,521
1995	BOWIE	CARRIZO-WILCOX AQUIFER	945	15	0	0	0	296	1,256
1996	BOWIE	CARRIZO-WILCOX AQUIFER	760	16	0	0	0	395	1,171
1997	BOWIE	CARRIZO-WILCOX AQUIFER	725	17	0	0	0	258	1,000
1998	BOWIE	CARRIZO-WILCOX AQUIFER	682	3	0	0	0	267	952
1999	BOWIE	CARRIZO-WILCOX AQUIFER	592	3	0	0	0	287	882
2000	BOWIE	CARRIZO-WILCOX AQUIFER	977	3	0	0	0	293	1,273
2001	BOWIE	CARRIZO-WILCOX AQUIFER	1,103	3	0	0	0	173	1,279
2002	BOWIE	CARRIZO-WILCOX AQUIFER	1,119	15	0	0	0	163	1,297
2003	BOWIE	CARRIZO-WILCOX AQUIFER	1,075	20	0	0	0	160	1,255
2004	BOWIE	CARRIZO-WILCOX AQUIFER	1,054	12	0	0	0	0	1,066
2005	BOWIE	CARRIZO-WILCOX AQUIFER	1,126	25	0	0	0	0	1,151
2006	BOWIE	CARRIZO-WILCOX AQUIFER	991	25	0	0	0	0	1,016
2007	BOWIE	CARRIZO-WILCOX AQUIFER	838	35	0	0	0	0	873
2008	BOWIE	CARRIZO-WILCOX AQUIFER	910	43	0	0	0	0	953
2009	BOWIE	CARRIZO-WILCOX AQUIFER	951	29	0	0	0	0	980
2010	BOWIE	CARRIZO-WILCOX AQUIFER	1,008	31	0	0	1,246	0	2,285
2011	BOWIE	CARRIZO-WILCOX AQUIFER	1,084	26	0	0	762	0	1,872
2012	BOWIE	CARRIZO-WILCOX AQUIFER	996	31	0	0	1,382	0	2,409
1980	BOWIE	NACATOCH AQUIFER	802	3	0	0	515	176	1,496
1984	BOWIE	NACATOCH AQUIFER	729	0	0	0	1,374	223	2,326
1985	BOWIE	NACATOCH AQUIFER	694	0	0	0	1,239	191	2,124
1986	BOWIE	NACATOCH AQUIFER	568	0	0	0	1,834	221	2,623
1987	BOWIE	NACATOCH AQUIFER	587	0	0	0	1,500	201	2,288

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
1988	BOWIE	NACATOCH AQUIFER	542	0	0	0	1,425	203	2,170
1989	BOWIE	NACATOCH AQUIFER	620	0	0	0	774	210	1,604
1990	BOWIE	NACATOCH AQUIFER	799	0	0	0	938	236	1,973
1991	BOWIE	NACATOCH AQUIFER	838	0	0	0	0	237	1,075
1992	BOWIE	NACATOCH AQUIFER	773	0	0	0	0	193	966
1993	BOWIE	NACATOCH AQUIFER	806	0	0	0	422	206	1,434
1994	BOWIE	NACATOCH AQUIFER	763	0	0	0	78	229	1,070
1995	BOWIE	NACATOCH AQUIFER	972	0	0	0	55	218	1,245
1996	BOWIE	NACATOCH AQUIFER	950	0	0	0	45	291	1,286
1997	BOWIE	NACATOCH AQUIFER	936	0	0	0	40	190	1,166
1998	BOWIE	NACATOCH AQUIFER	881	0	0	0	48	196	1,125
1999	BOWIE	NACATOCH AQUIFER	765	0	0	0	50	211	1,026
2000	BOWIE	NACATOCH AQUIFER	679	0	0	0	0	215	894
2001	BOWIE	NACATOCH AQUIFER	698	0	0	0	0	91	789
2002	BOWIE	NACATOCH AQUIFER	674	0	0	0	0	86	760
2003	BOWIE	NACATOCH AQUIFER	729	0	0	0	0	85	814
2004	BOWIE	NACATOCH AQUIFER	702	0	0	0	255	219	1,176
2005	BOWIE	NACATOCH AQUIFER	758	0	0	0	240	52	1,050
2006	BOWIE	NACATOCH AQUIFER	904	0	0	0	5	53	962
2007	BOWIE	NACATOCH AQUIFER	751	0	0	0	55	35	841
2008	BOWIE	NACATOCH AQUIFER	833	0	0	0	71	23	927
2009	BOWIE	NACATOCH AQUIFER	878	0	0	0	455	26	1,359
2010	BOWIE	NACATOCH AQUIFER	911	0	0	0	452	65	1,428
2011	BOWIE	NACATOCH AQUIFER	986	0	0	0	278	67	1,331
2012	BOWIE	NACATOCH AQUIFER	920	0	0	0	504	42	1,466
1980	BOWIE	OTHER AQUIFER	286	0	0	0	515	81	882
1984	BOWIE	OTHER AQUIFER	104	3	0	0	1,374	47	1,528
1985	BOWIE	OTHER AQUIFER	121	3	0	0	1,239	41	1,404
1986	BOWIE	OTHER AQUIFER	115	0	0	0	1,834	47	1,996
1987	BOWIE	OTHER AQUIFER	126	0	0	0	1,500	43	1,669
1988	BOWIE	OTHER AQUIFER	86	0	0	0	1,425	43	1,554
1989	BOWIE	OTHER AQUIFER	98	0	16	0	774	45	933
1990	BOWIE	OTHER AQUIFER	278	0	16	0	938	51	1,283
1991	BOWIE	OTHER AQUIFER	289	0	21	0	0	51	361
1992	BOWIE	OTHER AQUIFER	287	0	21	0	0	42	350
1993	BOWIE	OTHER AQUIFER	275	0	21	0	422	45	763
1994	BOWIE	OTHER AQUIFER	214	0	21	0	0	50	285
1995	BOWIE	OTHER AQUIFER	289	0	25	0	0	48	362
1996	BOWIE	OTHER AQUIFER	278	0	30	0	0	64	372
1997	BOWIE	OTHER AQUIFER	289	0	30	0	0	42	361
1998	BOWIE	OTHER AQUIFER	272	0	30	0	0	43	345
1999	BOWIE	OTHER AQUIFER	236	0	30	0	0	47	313
2000	BOWIE	OTHER AQUIFER	200	0	0	0	0	48	248
2001	BOWIE	OTHER AQUIFER	101	0	0	0	0	16	117
2002	BOWIE	OTHER AQUIFER	112	0	0	0	0	15	127
2003	BOWIE	OTHER AQUIFER	59	0	0	0	0	15	74
2004	BOWIE	OTHER AQUIFER	54	0	0	0	3,439	39	3,532
2005	BOWIE	OTHER AQUIFER	58	0	0	0	3,238	9	3,305
2006	BOWIE	OTHER AQUIFER	267	0	0	0	70	10	347
2007	BOWIE	OTHER AQUIFER	221	0	0	0	750	6	977
2008	BOWIE	OTHER AQUIFER	246	0	0	0	955	35	1,236
2009	BOWIE	OTHER AQUIFER	259	0	0	0	6,145	40	6,444
2010	BOWIE	OTHER AQUIFER	276	0	0	0	6,098	17	6,391
2011	BOWIE	OTHER AQUIFER	299	0	0	0	3,749	17	4,065
2012	BOWIE	OTHER AQUIFER	279	0	0	0	6,801	11	7,091
2008	BOWIE	UNKNOWN	0	0	0	0	0	0	0
2009	BOWIE	UNKNOWN	0	0	0	0	0	0	0
2010	BOWIE	UNKNOWN	0	0	0	0	0	0	0
2011	BOWIE	UNKNOWN	0	0	0	0	0	0	0
1980	CAMP	CARRIZO-WILCOX AQUIFER	1,327	0	119	0	0	111	1,557
1984	CAMP	CARRIZO-WILCOX AQUIFER	1,547	178	61	0	130	92	2,008
1985	CAMP	CARRIZO-WILCOX AQUIFER	1,560	179	63	0	128	79	2,009
1986	CAMP	CARRIZO-WILCOX AQUIFER	1,495	181	59	0	86	94	1,915
1987	CAMP	CARRIZO-WILCOX AQUIFER	1,560	0	56	0	86	90	1,792
1988	CAMP	CARRIZO-WILCOX AQUIFER	1,598	0	57	0	86	88	1,829
1989	CAMP	CARRIZO-WILCOX AQUIFER	1,515	0	53	0	54	93	1,715
1990	CAMP	CARRIZO-WILCOX AQUIFER	1,585	0	53	0	70	110	1,818
1991	CAMP	CARRIZO-WILCOX AQUIFER	1,683	0	11	0	70	110	1,874
1992	CAMP	CARRIZO-WILCOX AQUIFER	1,263	0	11	0	71	128	1,473
1993	CAMP	CARRIZO-WILCOX AQUIFER	1,364	0	11	0	21	135	1,531
1994	CAMP	CARRIZO-WILCOX AQUIFER	1,471	0	11	0	9	154	1,645
1995	CAMP	CARRIZO-WILCOX AQUIFER	1,284	0	18	0	9	158	1,469
1996	CAMP	CARRIZO-WILCOX AQUIFER	1,254	0	18	0	12	157	1,441
1997	CAMP	CARRIZO-WILCOX AQUIFER	1,414	0	18	0	12	134	1,578
1998	CAMP	CARRIZO-WILCOX AQUIFER	1,409	0	18	0	12	139	1,578
1999	CAMP	CARRIZO-WILCOX AQUIFER	1,272	0	18	0	12	142	1,444
2000	CAMP	CARRIZO-WILCOX AQUIFER	1,432	0	0	0	0	149	1,581
2001	CAMP	CARRIZO-WILCOX AQUIFER	1,355	0	0	0	0	234	1,589

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2002	CAMP	CARRIZO-WILCOX AQUIFER	1,340	430	0	0	0	164	1,934
2003	CAMP	CARRIZO-WILCOX AQUIFER	1,356	36	0	0	0	153	1,545
2004	CAMP	CARRIZO-WILCOX AQUIFER	1,442	0	0	0	0	381	1,823
2005	CAMP	CARRIZO-WILCOX AQUIFER	1,531	0	0	0	0	372	1,903
2006	CAMP	CARRIZO-WILCOX AQUIFER	1,578	0	0	0	0	394	1,972
2007	CAMP	CARRIZO-WILCOX AQUIFER	1,442	0	0	0	0	381	1,823
2008	CAMP	CARRIZO-WILCOX AQUIFER	1,507	0	0	0	3	380	1,890
2009	CAMP	CARRIZO-WILCOX AQUIFER	1,655	0	0	0	0	378	2,033
2010	CAMP	CARRIZO-WILCOX AQUIFER	1,801	0	0	0	0	783	2,584
2011	CAMP	CARRIZO-WILCOX AQUIFER	1,783	0	0	0	0	782	2,565
2012	CAMP	CARRIZO-WILCOX AQUIFER	1,676	0	0	0	0	738	2,414
1980	CAMP	QUEEN CITY AQUIFER	168	0	37	0	0	166	371
1984	CAMP	QUEEN CITY AQUIFER	200	20	21	0	15	137	393
1985	CAMP	QUEEN CITY AQUIFER	202	20	21	0	14	119	376
1986	CAMP	QUEEN CITY AQUIFER	188	20	20	0	10	141	379
1987	CAMP	QUEEN CITY AQUIFER	213	0	19	0	10	135	377
1988	CAMP	QUEEN CITY AQUIFER	204	0	19	0	10	133	366
1989	CAMP	QUEEN CITY AQUIFER	228	0	18	0	6	140	392
1990	CAMP	QUEEN CITY AQUIFER	165	0	18	0	8	165	356
1991	CAMP	QUEEN CITY AQUIFER	163	0	4	0	8	166	341
1992	CAMP	QUEEN CITY AQUIFER	159	0	4	0	8	192	363
1993	CAMP	QUEEN CITY AQUIFER	161	0	4	0	2	202	369
1994	CAMP	QUEEN CITY AQUIFER	152	0	4	0	8	231	395
1995	CAMP	QUEEN CITY AQUIFER	128	0	6	0	8	238	380
1996	CAMP	QUEEN CITY AQUIFER	142	0	6	0	11	236	395
1997	CAMP	QUEEN CITY AQUIFER	153	0	6	0	11	202	372
1998	CAMP	QUEEN CITY AQUIFER	152	0	6	0	11	209	378
1999	CAMP	QUEEN CITY AQUIFER	138	0	6	0	11	215	370
2000	CAMP	QUEEN CITY AQUIFER	5	0	0	0	0	223	228
2001	CAMP	QUEEN CITY AQUIFER	5	0	0	0	0	352	357
2002	CAMP	QUEEN CITY AQUIFER	5	0	0	0	0	248	253
2003	CAMP	QUEEN CITY AQUIFER	5	0	0	0	0	230	235
2004	CAMP	QUEEN CITY AQUIFER	5	0	0	0	0	0	5
2005	CAMP	QUEEN CITY AQUIFER	5	0	0	0	0	0	5
2006	CAMP	QUEEN CITY AQUIFER	1	0	0	0	0	0	1
2007	CAMP	QUEEN CITY AQUIFER	1	0	0	0	0	0	1
2008	CAMP	QUEEN CITY AQUIFER	1	0	0	0	0	0	1
2009	CAMP	QUEEN CITY AQUIFER	1	0	0	0	0	0	1
2010	CAMP	QUEEN CITY AQUIFER	1	0	0	0	0	0	1
2011	CAMP	QUEEN CITY AQUIFER	1	0	0	0	0	0	1
2012	CAMP	QUEEN CITY AQUIFER	1	0	0	0	0	0	1
2008	CAMP	UNKNOWN	0	0	3	0	0	0	3
2009	CAMP	UNKNOWN	0	0	3	0	0	0	3
2010	CAMP	UNKNOWN	0	0	2	0	0	0	2
2011	CAMP	UNKNOWN	0	0	5	0	0	0	5
1980	CASS	CARRIZO-WILCOX AQUIFER	3,047	0	902	0	0	79	4,028
1984	CASS	CARRIZO-WILCOX AQUIFER	3,291	11	567	3	0	183	4,055
1985	CASS	CARRIZO-WILCOX AQUIFER	3,266	11	629	1	0	159	4,066
1986	CASS	CARRIZO-WILCOX AQUIFER	3,172	11	756	3	0	157	4,099
1987	CASS	CARRIZO-WILCOX AQUIFER	3,162	2	689	0	0	156	4,009
1988	CASS	CARRIZO-WILCOX AQUIFER	3,103	1	792	0	0	168	4,064
1989	CASS	CARRIZO-WILCOX AQUIFER	3,051	1	767	1	0	173	3,993
1990	CASS	CARRIZO-WILCOX AQUIFER	2,780	1	767	0	0	174	3,722
1991	CASS	CARRIZO-WILCOX AQUIFER	2,500	0	819	0	0	178	3,497
1992	CASS	CARRIZO-WILCOX AQUIFER	1,981	0	819	0	0	177	2,977
1993	CASS	CARRIZO-WILCOX AQUIFER	1,818	0	819	0	6	165	2,808
1994	CASS	CARRIZO-WILCOX AQUIFER	1,801	0	819	0	0	176	2,796
1995	CASS	CARRIZO-WILCOX AQUIFER	1,898	0	822	0	0	164	2,884
1996	CASS	CARRIZO-WILCOX AQUIFER	1,754	0	822	0	0	170	2,746
1997	CASS	CARRIZO-WILCOX AQUIFER	1,796	0	822	0	0	154	2,772
1998	CASS	CARRIZO-WILCOX AQUIFER	1,751	0	481	0	0	166	2,398
1999	CASS	CARRIZO-WILCOX AQUIFER	1,649	0	741	0	0	188	2,578
2000	CASS	CARRIZO-WILCOX AQUIFER	1,210	0	0	0	0	173	1,383
2001	CASS	CARRIZO-WILCOX AQUIFER	1,150	0	0	0	0	115	1,265
2002	CASS	CARRIZO-WILCOX AQUIFER	1,132	0	0	0	0	113	1,245
2003	CASS	CARRIZO-WILCOX AQUIFER	1,256	0	0	0	0	105	1,361
2004	CASS	CARRIZO-WILCOX AQUIFER	1,283	0	0	0	0	143	1,426
2005	CASS	CARRIZO-WILCOX AQUIFER	1,382	0	0	0	0	18	1,400
2006	CASS	CARRIZO-WILCOX AQUIFER	1,248	0	0	0	0	18	1,266
2007	CASS	CARRIZO-WILCOX AQUIFER	1,131	0	0	0	0	18	1,149
2008	CASS	CARRIZO-WILCOX AQUIFER	1,502	0	0	0	0	12	1,514
2009	CASS	CARRIZO-WILCOX AQUIFER	1,294	0	0	0	0	13	1,307
2010	CASS	CARRIZO-WILCOX AQUIFER	1,643	0	0	0	0	27	1,670
2011	CASS	CARRIZO-WILCOX AQUIFER	1,380	0	0	0	0	28	1,408
2012	CASS	CARRIZO-WILCOX AQUIFER	1,351	0	0	0	0	19	1,370
1980	CASS	QUEEN CITY AQUIFER	394	0	316	0	0	249	959
1984	CASS	QUEEN CITY AQUIFER	450	0	0	0	0	167	617
1985	CASS	QUEEN CITY AQUIFER	487	0	0	0	0	146	633

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
1986	CASS	QUEEN CITY AQUIFER	471	0	0	0	0	144	615
1987	CASS	QUEEN CITY AQUIFER	462	0	0	0	0	144	606
1988	CASS	QUEEN CITY AQUIFER	469	0	0	0	0	154	623
1989	CASS	QUEEN CITY AQUIFER	484	0	0	0	0	160	644
1990	CASS	QUEEN CITY AQUIFER	713	0	0	0	0	160	873
1991	CASS	QUEEN CITY AQUIFER	720	0	0	0	0	163	883
1992	CASS	QUEEN CITY AQUIFER	714	0	0	0	0	163	877
1993	CASS	QUEEN CITY AQUIFER	743	0	0	0	6	153	902
1994	CASS	QUEEN CITY AQUIFER	714	0	0	0	9	164	887
1995	CASS	QUEEN CITY AQUIFER	777	0	0	0	8	153	938
1996	CASS	QUEEN CITY AQUIFER	784	0	0	0	11	158	953
1997	CASS	QUEEN CITY AQUIFER	783	0	0	0	11	143	937
1998	CASS	QUEEN CITY AQUIFER	763	0	0	0	11	154	928
1999	CASS	QUEEN CITY AQUIFER	719	0	0	0	11	175	905
2000	CASS	QUEEN CITY AQUIFER	118	0	0	0	0	161	279
2001	CASS	QUEEN CITY AQUIFER	84	0	0	0	0	74	158
2002	CASS	QUEEN CITY AQUIFER	74	0	0	0	0	73	147
2003	CASS	QUEEN CITY AQUIFER	22	0	0	0	0	68	90
2004	CASS	QUEEN CITY AQUIFER	21	0	0	0	0	31	52
2005	CASS	QUEEN CITY AQUIFER	29	0	0	0	0	4	33
2006	CASS	QUEEN CITY AQUIFER	36	0	0	0	0	4	40
2007	CASS	QUEEN CITY AQUIFER	31	0	0	0	0	4	35
2008	CASS	QUEEN CITY AQUIFER	33	0	0	0	0	8	41
2009	CASS	QUEEN CITY AQUIFER	33	0	0	0	0	8	41
2010	CASS	QUEEN CITY AQUIFER	40	0	0	0	0	8	48
2011	CASS	QUEEN CITY AQUIFER	16	0	0	0	0	8	24
2012	CASS	QUEEN CITY AQUIFER	13	0	0	0	0	6	19
2000	CASS	UNKNOWN	0	0	0	0	0	0	0
2001	CASS	UNKNOWN	0	0	0	0	0	0	0
2002	CASS	UNKNOWN	0	0	0	0	0	0	0
2008	CASS	UNKNOWN	0	0	0	0	0	0	0
2009	CASS	UNKNOWN	0	0	5	0	0	0	5
2010	CASS	UNKNOWN	0	0	10	0	0	0	10
2011	CASS	UNKNOWN	0	0	8	0	0	0	8
1980	CHEROKEE	CARRIZO-WILCOX AQUIFER	4,850	0	0	333	25	0	5,208
1984	CHEROKEE	CARRIZO-WILCOX AQUIFER	4,636	0	117	408	58	252	5,471
1985	CHEROKEE	CARRIZO-WILCOX AQUIFER	4,878	0	120	218	36	269	5,521
1986	CHEROKEE	CARRIZO-WILCOX AQUIFER	5,020	0	111	293	45	247	5,716
1987	CHEROKEE	CARRIZO-WILCOX AQUIFER	5,450	0	89	510	45	233	6,327
1988	CHEROKEE	CARRIZO-WILCOX AQUIFER	5,574	0	80	439	45	220	6,358
1989	CHEROKEE	CARRIZO-WILCOX AQUIFER	5,408	0	53	347	48	226	6,082
1990	CHEROKEE	CARRIZO-WILCOX AQUIFER	5,099	0	53	343	50	301	5,846
1991	CHEROKEE	CARRIZO-WILCOX AQUIFER	4,521	0	81	262	41	298	5,203
1992	CHEROKEE	CARRIZO-WILCOX AQUIFER	5,349	0	81	136	41	407	6,014
1993	CHEROKEE	CARRIZO-WILCOX AQUIFER	5,357	4	81	166	6	453	6,067
1994	CHEROKEE	CARRIZO-WILCOX AQUIFER	5,714	0	81	162	7	423	6,387
1995	CHEROKEE	CARRIZO-WILCOX AQUIFER	5,761	0	81	133	7	389	6,371
1996	CHEROKEE	CARRIZO-WILCOX AQUIFER	5,588	2	81	131	7	424	6,233
1997	CHEROKEE	CARRIZO-WILCOX AQUIFER	5,907	0	81	108	7	340	6,443
1998	CHEROKEE	CARRIZO-WILCOX AQUIFER	6,560	0	81	118	7	335	7,101
1999	CHEROKEE	CARRIZO-WILCOX AQUIFER	6,302	0	81	115	7	335	6,840
2000	CHEROKEE	CARRIZO-WILCOX AQUIFER	6,565	7	0	132	14	303	7,021
2001	CHEROKEE	CARRIZO-WILCOX AQUIFER	6,468	9	0	128	12	307	6,924
2002	CHEROKEE	CARRIZO-WILCOX AQUIFER	6,134	5	0	86	7	296	6,528
2003	CHEROKEE	CARRIZO-WILCOX AQUIFER	6,234	6	0	119	4	246	6,609
2004	CHEROKEE	CARRIZO-WILCOX AQUIFER	6,886	23	0	115	10	104	7,138
2005	CHEROKEE	CARRIZO-WILCOX AQUIFER	6,759	23	0	124	23	39	6,968
2006	CHEROKEE	CARRIZO-WILCOX AQUIFER	6,583	10	0	136	19	41	6,789
2007	CHEROKEE	CARRIZO-WILCOX AQUIFER	6,120	9	0	155	106	40	6,430
2008	CHEROKEE	CARRIZO-WILCOX AQUIFER	6,120	10	0	127	57	39	6,353
2009	CHEROKEE	CARRIZO-WILCOX AQUIFER	6,261	5	0	167	64	34	6,531
2010	CHEROKEE	CARRIZO-WILCOX AQUIFER	6,530	5	0	121	88	38	6,782
2011	CHEROKEE	CARRIZO-WILCOX AQUIFER	6,984	0	0	181	4	38	7,207
2012	CHEROKEE	CARRIZO-WILCOX AQUIFER	6,191	0	0	170	123	34	6,518
2000	CHEROKEE	OTHER AQUIFER	0	0	0	0	2	88	90
2001	CHEROKEE	OTHER AQUIFER	0	0	0	0	1	89	90
2002	CHEROKEE	OTHER AQUIFER	0	0	0	0	2	86	88
2003	CHEROKEE	OTHER AQUIFER	0	0	0	0	1	72	73
2004	CHEROKEE	OTHER AQUIFER	0	0	0	0	1	70	71
2005	CHEROKEE	OTHER AQUIFER	0	0	0	0	3	26	29
2006	CHEROKEE	OTHER AQUIFER	81	0	0	0	2	27	110
2007	CHEROKEE	OTHER AQUIFER	67	0	0	0	13	26	106
2008	CHEROKEE	OTHER AQUIFER	76	0	0	0	7	26	109
2009	CHEROKEE	OTHER AQUIFER	110	0	0	0	8	23	141
2010	CHEROKEE	OTHER AQUIFER	145	0	0	0	11	26	182
2011	CHEROKEE	OTHER AQUIFER	157	0	0	0	0	26	183
2012	CHEROKEE	OTHER AQUIFER	145	0	0	0	15	23	183
1980	CHEROKEE	QUEEN CITY AQUIFER	428	0	53	0	25	380	886

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
1984	CHEROKEE	QUEEN CITY AQUIFER	205	0	0	0	59	252	516
1985	CHEROKEE	QUEEN CITY AQUIFER	194	0	0	0	36	269	499
1986	CHEROKEE	QUEEN CITY AQUIFER	125	0	0	0	45	247	417
1987	CHEROKEE	QUEEN CITY AQUIFER	73	0	0	0	45	233	351
1988	CHEROKEE	QUEEN CITY AQUIFER	126	0	0	0	45	220	391
1989	CHEROKEE	QUEEN CITY AQUIFER	247	0	0	0	48	226	521
1990	CHEROKEE	QUEEN CITY AQUIFER	113	0	0	0	50	301	464
1991	CHEROKEE	QUEEN CITY AQUIFER	111	0	0	0	41	298	450
1992	CHEROKEE	QUEEN CITY AQUIFER	178	0	0	0	41	407	626
1993	CHEROKEE	QUEEN CITY AQUIFER	97	0	0	0	6	453	556
1994	CHEROKEE	QUEEN CITY AQUIFER	77	0	0	0	19	423	519
1995	CHEROKEE	QUEEN CITY AQUIFER	82	0	0	0	20	389	491
1996	CHEROKEE	QUEEN CITY AQUIFER	80	0	0	0	20	424	524
1997	CHEROKEE	QUEEN CITY AQUIFER	83	0	0	0	20	340	443
1998	CHEROKEE	QUEEN CITY AQUIFER	92	0	0	0	20	335	447
1999	CHEROKEE	QUEEN CITY AQUIFER	89	0	0	0	20	335	444
2000	CHEROKEE	QUEEN CITY AQUIFER	94	0	0	0	16	215	325
2001	CHEROKEE	QUEEN CITY AQUIFER	82	0	0	0	13	217	312
2002	CHEROKEE	QUEEN CITY AQUIFER	117	0	0	0	21	210	348
2003	CHEROKEE	QUEEN CITY AQUIFER	88	0	0	0	12	174	274
2004	CHEROKEE	QUEEN CITY AQUIFER	147	0	0	0	11	383	541
2005	CHEROKEE	QUEEN CITY AQUIFER	158	0	0	0	26	142	326
2006	CHEROKEE	QUEEN CITY AQUIFER	448	0	0	0	21	149	618
2007	CHEROKEE	QUEEN CITY AQUIFER	413	0	0	0	119	145	677
2008	CHEROKEE	QUEEN CITY AQUIFER	434	0	0	0	64	142	640
2009	CHEROKEE	QUEEN CITY AQUIFER	504	0	0	0	72	124	700
2010	CHEROKEE	QUEEN CITY AQUIFER	632	0	0	0	99	140	871
2011	CHEROKEE	QUEEN CITY AQUIFER	677	0	0	0	4	140	821
2012	CHEROKEE	QUEEN CITY AQUIFER	643	0	0	0	139	124	906
1980	CHEROKEE	SPARTA AQUIFER	6	0	28	0	0	204	238
1984	CHEROKEE	SPARTA AQUIFER	2	0	0	0	0	81	83
1985	CHEROKEE	SPARTA AQUIFER	3	0	0	0	0	88	91
1986	CHEROKEE	SPARTA AQUIFER	2	0	0	0	0	80	82
1987	CHEROKEE	SPARTA AQUIFER	2	0	0	0	0	76	78
1988	CHEROKEE	SPARTA AQUIFER	2	0	0	0	0	72	74
1989	CHEROKEE	SPARTA AQUIFER	2	0	0	0	0	74	76
1990	CHEROKEE	SPARTA AQUIFER	3	0	0	0	0	99	102
1991	CHEROKEE	SPARTA AQUIFER	3	0	0	0	0	98	101
1992	CHEROKEE	SPARTA AQUIFER	27	0	0	0	0	134	161
1993	CHEROKEE	SPARTA AQUIFER	6	0	0	0	0	149	155
1994	CHEROKEE	SPARTA AQUIFER	1	0	0	0	2	139	142
1995	CHEROKEE	SPARTA AQUIFER	0	0	0	0	2	128	130
1996	CHEROKEE	SPARTA AQUIFER	0	0	0	0	2	140	142
1997	CHEROKEE	SPARTA AQUIFER	0	0	0	0	2	112	114
1998	CHEROKEE	SPARTA AQUIFER	0	0	0	0	2	110	112
1999	CHEROKEE	SPARTA AQUIFER	0	0	0	0	2	110	112
2000	CHEROKEE	SPARTA AQUIFER	0	0	0	0	1	100	101
2001	CHEROKEE	SPARTA AQUIFER	0	0	0	0	1	101	102
2002	CHEROKEE	SPARTA AQUIFER	0	0	0	0	0	97	97
2003	CHEROKEE	SPARTA AQUIFER	0	0	0	0	0	81	81
2004	CHEROKEE	SPARTA AQUIFER	0	0	0	0	1	0	1
2005	CHEROKEE	SPARTA AQUIFER	0	0	0	0	1	0	1
2006	CHEROKEE	SPARTA AQUIFER	81	0	0	0	1	0	82
2007	CHEROKEE	SPARTA AQUIFER	67	0	0	0	7	0	74
2008	CHEROKEE	SPARTA AQUIFER	76	0	0	0	4	0	80
2009	CHEROKEE	SPARTA AQUIFER	110	0	0	0	4	0	114
2010	CHEROKEE	SPARTA AQUIFER	145	0	0	0	6	0	151
2011	CHEROKEE	SPARTA AQUIFER	157	0	0	0	0	0	157
2012	CHEROKEE	SPARTA AQUIFER	145	0	0	0	8	0	153
2008	CHEROKEE	UNKNOWN	0	0	101	0	0	0	101
2009	CHEROKEE	UNKNOWN	0	0	77	0	0	0	77
2010	CHEROKEE	UNKNOWN	0	0	53	0	0	0	53
2011	CHEROKEE	UNKNOWN	0	0	30	0	0	0	30
2012	CHEROKEE	UNKNOWN	0	0	3	0	0	0	3
1980	FRANKLIN	CARRIZO-WILCOX AQUIFER	305	0	552	0	0	342	1,199
1984	FRANKLIN	CARRIZO-WILCOX AQUIFER	265	0	631	0	0	423	1,319
1985	FRANKLIN	CARRIZO-WILCOX AQUIFER	302	0	768	0	0	446	1,516
1986	FRANKLIN	CARRIZO-WILCOX AQUIFER	318	0	1,222	0	0	413	1,953
1987	FRANKLIN	CARRIZO-WILCOX AQUIFER	331	0	1,117	0	0	395	1,843
1988	FRANKLIN	CARRIZO-WILCOX AQUIFER	450	0	1,153	0	0	410	2,013
1989	FRANKLIN	CARRIZO-WILCOX AQUIFER	456	0	706	0	0	378	1,540
1990	FRANKLIN	CARRIZO-WILCOX AQUIFER	383	0	706	0	0	521	1,610
1991	FRANKLIN	CARRIZO-WILCOX AQUIFER	282	0	1,399	0	0	516	2,197
1992	FRANKLIN	CARRIZO-WILCOX AQUIFER	275	0	1,399	0	0	637	2,311
1993	FRANKLIN	CARRIZO-WILCOX AQUIFER	162	0	1,399	0	3	668	2,232
1994	FRANKLIN	CARRIZO-WILCOX AQUIFER	310	0	1,408	0	2	582	2,302
1995	FRANKLIN	CARRIZO-WILCOX AQUIFER	125	0	1,354	0	2	572	2,053
1996	FRANKLIN	CARRIZO-WILCOX AQUIFER	178	0	1,354	0	3	567	2,102

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
1997	FRANKLIN	CARRIZO-WILCOX AQUIFER	92	0	895	0	3	460	1,450
1998	FRANKLIN	CARRIZO-WILCOX AQUIFER	122	0	894	0	3	452	1,471
1999	FRANKLIN	CARRIZO-WILCOX AQUIFER	289	0	895	0	3	484	1,671
2000	FRANKLIN	CARRIZO-WILCOX AQUIFER	198	0	0	0	0	449	647
2001	FRANKLIN	CARRIZO-WILCOX AQUIFER	176	0	0	0	0	249	425
2002	FRANKLIN	CARRIZO-WILCOX AQUIFER	64	0	0	0	0	229	293
2003	FRANKLIN	CARRIZO-WILCOX AQUIFER	70	0	0	0	0	225	295
2004	FRANKLIN	CARRIZO-WILCOX AQUIFER	41	0	0	0	0	217	258
2005	FRANKLIN	CARRIZO-WILCOX AQUIFER	51	0	0	0	0	428	479
2006	FRANKLIN	CARRIZO-WILCOX AQUIFER	52	0	0	0	0	426	478
2007	FRANKLIN	CARRIZO-WILCOX AQUIFER	42	0	0	0	33	335	410
2008	FRANKLIN	CARRIZO-WILCOX AQUIFER	45	0	0	0	0	444	489
2009	FRANKLIN	CARRIZO-WILCOX AQUIFER	34	0	0	0	0	440	474
2010	FRANKLIN	CARRIZO-WILCOX AQUIFER	22	0	0	0	0	517	539
2011	FRANKLIN	CARRIZO-WILCOX AQUIFER	22	0	0	0	0	516	538
2012	FRANKLIN	CARRIZO-WILCOX AQUIFER	18	0	0	0	0	495	513
2008	FRANKLIN	UNKNOWN	0	0	2	0	0	0	2
2009	FRANKLIN	UNKNOWN	0	0	1	0	0	0	1
2010	FRANKLIN	UNKNOWN	0	0	1	0	0	0	1
2011	FRANKLIN	UNKNOWN	0	0	15	0	0	0	15
2012	FRANKLIN	UNKNOWN	0	0	1	0	0	0	1
1980	GREGG	CARRIZO-WILCOX AQUIFER	690	250	152	1	0	47	1,140
1984	GREGG	CARRIZO-WILCOX AQUIFER	700	196	2,672	1	0	45	3,614
1985	GREGG	CARRIZO-WILCOX AQUIFER	688	186	129	1	0	36	1,040
1986	GREGG	CARRIZO-WILCOX AQUIFER	629	186	66	1	0	36	918
1987	GREGG	CARRIZO-WILCOX AQUIFER	372	161	66	1	0	33	633
1988	GREGG	CARRIZO-WILCOX AQUIFER	461	161	61	1	0	38	722
1989	GREGG	CARRIZO-WILCOX AQUIFER	368	161	29	1	0	41	600
1990	GREGG	CARRIZO-WILCOX AQUIFER	409	161	29	1	0	40	640
1991	GREGG	CARRIZO-WILCOX AQUIFER	513	161	11	1	0	41	727
1992	GREGG	CARRIZO-WILCOX AQUIFER	605	161	0	1	0	46	813
1993	GREGG	CARRIZO-WILCOX AQUIFER	627	161	0	1	20	43	852
1994	GREGG	CARRIZO-WILCOX AQUIFER	628	161	0	1	25	38	853
1995	GREGG	CARRIZO-WILCOX AQUIFER	583	161	0	19	25	38	826
1996	GREGG	CARRIZO-WILCOX AQUIFER	603	161	0	64	25	38	891
1997	GREGG	CARRIZO-WILCOX AQUIFER	552	162	0	113	25	40	892
1998	GREGG	CARRIZO-WILCOX AQUIFER	502	24	0	1	25	36	588
1999	GREGG	CARRIZO-WILCOX AQUIFER	563	24	0	101	25	44	757
2000	GREGG	CARRIZO-WILCOX AQUIFER	1,189	0	0	42	0	42	1,273
2001	GREGG	CARRIZO-WILCOX AQUIFER	1,158	0	0	258	0	36	1,452
2002	GREGG	CARRIZO-WILCOX AQUIFER	1,170	0	0	25	0	31	1,226
2003	GREGG	CARRIZO-WILCOX AQUIFER	1,242	0	0	267	0	24	1,533
2004	GREGG	CARRIZO-WILCOX AQUIFER	1,268	1	0	194	0	47	1,510
2005	GREGG	CARRIZO-WILCOX AQUIFER	3,567	0	0	242	7	23	3,839
2006	GREGG	CARRIZO-WILCOX AQUIFER	3,240	0	0	242	19	19	3,520
2007	GREGG	CARRIZO-WILCOX AQUIFER	1,648	0	0	242	0	23	1,913
2008	GREGG	CARRIZO-WILCOX AQUIFER	1,787	0	0	243	0	11	2,041
2009	GREGG	CARRIZO-WILCOX AQUIFER	1,855	3	0	242	0	12	2,112
2010	GREGG	CARRIZO-WILCOX AQUIFER	3,114	3	0	242	0	14	3,373
2011	GREGG	CARRIZO-WILCOX AQUIFER	2,448	3	0	242	13	15	2,721
2012	GREGG	CARRIZO-WILCOX AQUIFER	1,788	2	0	243	3	11	2,047
2006	GREGG	OTHER AQUIFER	22	0	0	0	0	0	22
2007	GREGG	OTHER AQUIFER	18	0	0	0	0	0	18
2008	GREGG	OTHER AQUIFER	20	0	0	0	0	0	20
2009	GREGG	OTHER AQUIFER	63	0	0	0	0	0	63
2010	GREGG	OTHER AQUIFER	106	0	0	0	0	0	106
2011	GREGG	OTHER AQUIFER	83	0	0	0	0	0	83
2012	GREGG	OTHER AQUIFER	83	0	0	0	0	0	83
1980	GREGG	QUEEN CITY AQUIFER	340	28	153	0	0	62	583
1984	GREGG	QUEEN CITY AQUIFER	258	0	1,312	0	0	57	1,627
1985	GREGG	QUEEN CITY AQUIFER	221	0	0	0	0	46	267
1986	GREGG	QUEEN CITY AQUIFER	208	0	90	0	0	46	344
1987	GREGG	QUEEN CITY AQUIFER	168	0	0	0	0	42	210
1989	GREGG	QUEEN CITY AQUIFER	192	0	0	0	0	53	245
1990	GREGG	QUEEN CITY AQUIFER	203	0	0	0	0	52	255
1991	GREGG	QUEEN CITY AQUIFER	211	0	0	0	0	53	264
1992	GREGG	QUEEN CITY AQUIFER	317	0	0	0	0	60	377
1993	GREGG	QUEEN CITY AQUIFER	275	0	0	0	0	56	331
1994	GREGG	QUEEN CITY AQUIFER	283	0	0	0	0	49	332
1995	GREGG	QUEEN CITY AQUIFER	518	0	0	0	0	49	567
1996	GREGG	QUEEN CITY AQUIFER	526	0	0	0	0	49	575
1997	GREGG	QUEEN CITY AQUIFER	532	0	0	0	0	52	584
1998	GREGG	QUEEN CITY AQUIFER	484	0	0	0	0	47	531
1999	GREGG	QUEEN CITY AQUIFER	542	0	0	0	0	57	599
2000	GREGG	QUEEN CITY AQUIFER	31	0	0	0	0	53	84
2001	GREGG	QUEEN CITY AQUIFER	31	0	0	0	0	38	69
2002	GREGG	QUEEN CITY AQUIFER	32	0	0	0	0	32	64
2003	GREGG	QUEEN CITY AQUIFER	32	0	0	0	0	24	56

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
2004	GREGG	QUEEN CITY AQUIFER	31	0	0	0	0	1	32
2005	GREGG	QUEEN CITY AQUIFER	33	0	0	0	2	0	35
2006	GREGG	QUEEN CITY AQUIFER	36	0	0	0	5	0	41
2007	GREGG	QUEEN CITY AQUIFER	29	0	0	0	0	0	29
2008	GREGG	QUEEN CITY AQUIFER	33	0	0	0	0	9	42
2009	GREGG	QUEEN CITY AQUIFER	102	0	0	0	0	10	112
2010	GREGG	QUEEN CITY AQUIFER	174	0	0	0	0	12	186
2011	GREGG	QUEEN CITY AQUIFER	136	0	0	0	3	12	151
2012	GREGG	QUEEN CITY AQUIFER	136	0	0	0	1	8	145
2008	GREGG	UNKNOWN	0	0	104	0	0	0	104
2009	GREGG	UNKNOWN	0	0	106	0	0	0	106
2010	GREGG	UNKNOWN	0	0	107	0	0	0	107
2011	GREGG	UNKNOWN	0	0	31	0	0	0	31
2012	GREGG	UNKNOWN	0	0	32	0	0	0	32
1980	HARRISON	CARRIZO-WILCOX AQUIFER	2,398	72	468	0	0	191	3,129
1984	HARRISON	CARRIZO-WILCOX AQUIFER	2,577	116	330	0	20	289	3,332
1985	HARRISON	CARRIZO-WILCOX AQUIFER	2,558	136	261	0	95	236	3,286
1986	HARRISON	CARRIZO-WILCOX AQUIFER	2,624	144	248	0	95	59	3,170
1987	HARRISON	CARRIZO-WILCOX AQUIFER	2,696	125	211	0	95	257	3,384
1988	HARRISON	CARRIZO-WILCOX AQUIFER	2,753	131	182	0	95	69	3,230
1989	HARRISON	CARRIZO-WILCOX AQUIFER	2,427	122	181	0	32	71	2,833
1990	HARRISON	CARRIZO-WILCOX AQUIFER	2,505	102	195	0	50	71	2,923
1991	HARRISON	CARRIZO-WILCOX AQUIFER	2,529	110	195	0	50	73	2,957
1992	HARRISON	CARRIZO-WILCOX AQUIFER	2,519	57	167	0	50	56	2,849
1993	HARRISON	CARRIZO-WILCOX AQUIFER	2,471	155	198	0	39	57	2,920
1994	HARRISON	CARRIZO-WILCOX AQUIFER	2,614	142	196	0	34	59	3,045
1995	HARRISON	CARRIZO-WILCOX AQUIFER	2,661	104	207	0	34	60	3,066
1996	HARRISON	CARRIZO-WILCOX AQUIFER	2,571	102	207	0	39	53	2,972
1997	HARRISON	CARRIZO-WILCOX AQUIFER	2,558	110	208	0	39	59	2,974
1998	HARRISON	CARRIZO-WILCOX AQUIFER	2,702	123	197	0	34	66	3,122
1999	HARRISON	CARRIZO-WILCOX AQUIFER	2,534	123	197	0	34	72	2,960
2000	HARRISON	CARRIZO-WILCOX AQUIFER	3,852	173	3	0	39	65	4,132
2001	HARRISON	CARRIZO-WILCOX AQUIFER	3,657	211	3	0	37	35	3,943
2002	HARRISON	CARRIZO-WILCOX AQUIFER	3,913	179	6	0	42	32	4,172
2003	HARRISON	CARRIZO-WILCOX AQUIFER	3,763	169	4	0	29	30	3,995
2004	HARRISON	CARRIZO-WILCOX AQUIFER	3,697	130	4	0	125	40	3,996
2005	HARRISON	CARRIZO-WILCOX AQUIFER	4,005	151	5	0	112	77	4,350
2006	HARRISON	CARRIZO-WILCOX AQUIFER	4,224	239	3	0	95	65	4,626
2007	HARRISON	CARRIZO-WILCOX AQUIFER	3,451	251	3	0	124	66	3,895
2008	HARRISON	CARRIZO-WILCOX AQUIFER	3,575	219	3	0	0	55	3,852
2009	HARRISON	CARRIZO-WILCOX AQUIFER	3,464	8,735	4	0	708	62	12,973
2010	HARRISON	CARRIZO-WILCOX AQUIFER	3,712	111	4	0	626	50	4,503
2011	HARRISON	CARRIZO-WILCOX AQUIFER	4,090	145	5	0	642	50	4,932
2012	HARRISON	CARRIZO-WILCOX AQUIFER	3,918	146	4	0	411	43	4,522
2006	HARRISON	OTHER AQUIFER	32	0	0	0	0	0	32
2007	HARRISON	OTHER AQUIFER	27	0	0	0	0	0	27
2008	HARRISON	OTHER AQUIFER	30	0	0	0	0	0	30
2009	HARRISON	OTHER AQUIFER	27	0	0	0	0	0	27
2010	HARRISON	OTHER AQUIFER	25	0	0	0	0	0	25
2011	HARRISON	OTHER AQUIFER	27	0	0	0	0	0	27
2012	HARRISON	OTHER AQUIFER	26	0	0	0	0	0	26
1980	HARRISON	QUEEN CITY AQUIFER	345	8	309	0	0	133	795
1984	HARRISON	QUEEN CITY AQUIFER	375	0	48	0	0	115	538
1985	HARRISON	QUEEN CITY AQUIFER	334	0	0	0	0	95	429
1986	HARRISON	QUEEN CITY AQUIFER	346	0	0	0	0	23	369
1987	HARRISON	QUEEN CITY AQUIFER	376	0	0	0	0	102	478
1988	HARRISON	QUEEN CITY AQUIFER	344	0	0	0	0	28	372
1989	HARRISON	QUEEN CITY AQUIFER	265	0	0	0	0	28	293
1990	HARRISON	QUEEN CITY AQUIFER	296	0	0	0	0	28	324
1991	HARRISON	QUEEN CITY AQUIFER	326	0	0	0	0	28	354
1992	HARRISON	QUEEN CITY AQUIFER	333	0	0	0	0	21	354
1993	HARRISON	QUEEN CITY AQUIFER	321	0	0	0	0	21	342
1994	HARRISON	QUEEN CITY AQUIFER	317	0	0	0	0	21	338
1995	HARRISON	QUEEN CITY AQUIFER	272	0	0	0	0	21	293
1996	HARRISON	QUEEN CITY AQUIFER	218	0	0	0	0	18	236
1997	HARRISON	QUEEN CITY AQUIFER	170	0	0	0	0	20	190
1998	HARRISON	QUEEN CITY AQUIFER	179	0	0	0	0	23	202
1999	HARRISON	QUEEN CITY AQUIFER	169	0	0	0	0	24	193
2000	HARRISON	QUEEN CITY AQUIFER	105	0	0	0	0	22	127
2001	HARRISON	QUEEN CITY AQUIFER	103	0	0	0	0	13	116
2002	HARRISON	QUEEN CITY AQUIFER	90	0	0	0	0	11	101
2003	HARRISON	QUEEN CITY AQUIFER	108	0	0	0	0	11	119
2004	HARRISON	QUEEN CITY AQUIFER	104	0	0	0	0	0	104
2005	HARRISON	QUEEN CITY AQUIFER	112	0	0	0	0	0	112
2006	HARRISON	QUEEN CITY AQUIFER	146	0	0	0	0	0	146
2007	HARRISON	QUEEN CITY AQUIFER	121	0	0	0	0	0	121
2008	HARRISON	QUEEN CITY AQUIFER	135	0	0	0	0	0	135
2009	HARRISON	QUEEN CITY AQUIFER	122	0	0	0	0	0	122

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2010	HARRISON	QUEEN CITY AQUIFER	111	0	0	0	0	0	111
2011	HARRISON	QUEEN CITY AQUIFER	124	0	0	0	0	0	124
2012	HARRISON	QUEEN CITY AQUIFER	116	0	0	0	0	0	116
2008	HARRISON	UNKNOWN	0	0	707	0	0	0	707
2009	HARRISON	UNKNOWN	0	0	801	0	0	0	801
2010	HARRISON	UNKNOWN	0	0	894	0	0	0	894
2011	HARRISON	UNKNOWN	0	0	624	0	0	0	624
2012	HARRISON	UNKNOWN	0	0	490	0	0	0	490
1980	HENDERSON	CARRIZO-WILCOX AQUIFER	2,658	0	304	0	100	386	3,448
1984	HENDERSON	CARRIZO-WILCOX AQUIFER	3,677	0	925	0	20	470	5,092
1985	HENDERSON	CARRIZO-WILCOX AQUIFER	3,708	0	906	0	70	462	5,146
1986	HENDERSON	CARRIZO-WILCOX AQUIFER	3,444	0	819	8	70	632	4,973
1987	HENDERSON	CARRIZO-WILCOX AQUIFER	3,691	0	411	1	70	379	4,552
1988	HENDERSON	CARRIZO-WILCOX AQUIFER	3,874	0	456	0	70	594	4,994
1989	HENDERSON	CARRIZO-WILCOX AQUIFER	3,704	0	102	0	20	607	4,433
1990	HENDERSON	CARRIZO-WILCOX AQUIFER	3,104	0	199	0	21	613	3,937
1991	HENDERSON	CARRIZO-WILCOX AQUIFER	2,944	0	200	1	21	625	3,791
1992	HENDERSON	CARRIZO-WILCOX AQUIFER	2,930	0	374	0	21	473	3,798
1993	HENDERSON	CARRIZO-WILCOX AQUIFER	3,329	0	374	1	20	451	4,175
1994	HENDERSON	CARRIZO-WILCOX AQUIFER	3,451	0	387	1	20	464	4,323
1995	HENDERSON	CARRIZO-WILCOX AQUIFER	3,629	0	475	0	20	459	4,583
1996	HENDERSON	CARRIZO-WILCOX AQUIFER	3,643	0	475	0	20	563	4,701
1997	HENDERSON	CARRIZO-WILCOX AQUIFER	3,447	1	492	0	20	434	4,394
1998	HENDERSON	CARRIZO-WILCOX AQUIFER	3,771	0	153	0	20	499	4,443
1999	HENDERSON	CARRIZO-WILCOX AQUIFER	3,767	0	474	0	20	490	4,751
2000	HENDERSON	CARRIZO-WILCOX AQUIFER	5,081	0	2	0	0	485	5,568
2001	HENDERSON	CARRIZO-WILCOX AQUIFER	4,953	0	0	0	0	294	5,247
2002	HENDERSON	CARRIZO-WILCOX AQUIFER	4,934	0	2	0	2	80	5,018
2003	HENDERSON	CARRIZO-WILCOX AQUIFER	4,601	0	2	0	22	242	4,867
2004	HENDERSON	CARRIZO-WILCOX AQUIFER	4,639	0	2	0	38	266	4,945
2005	HENDERSON	CARRIZO-WILCOX AQUIFER	5,066	187	2	0	40	327	5,622
2006	HENDERSON	CARRIZO-WILCOX AQUIFER	4,883	180	2	0	116	311	5,492
2007	HENDERSON	CARRIZO-WILCOX AQUIFER	4,607	169	2	0	136	313	5,227
2008	HENDERSON	CARRIZO-WILCOX AQUIFER	4,865	124	2	0	151	381	5,523
2009	HENDERSON	CARRIZO-WILCOX AQUIFER	5,392	124	2	0	0	192	5,710
2010	HENDERSON	CARRIZO-WILCOX AQUIFER	5,688	122	2	0	80	299	6,191
2011	HENDERSON	CARRIZO-WILCOX AQUIFER	6,255	122	2	0	30	299	6,708
2012	HENDERSON	CARRIZO-WILCOX AQUIFER	5,738	122	2	0	109	247	6,218
2006	HENDERSON	NACATOCH AQUIFER	7	0	0	0	0	0	7
2007	HENDERSON	NACATOCH AQUIFER	6	0	0	0	0	0	6
2008	HENDERSON	NACATOCH AQUIFER	6	0	0	0	0	0	6
2009	HENDERSON	NACATOCH AQUIFER	9	0	0	0	0	0	9
2010	HENDERSON	NACATOCH AQUIFER	13	0	0	0	0	0	13
2011	HENDERSON	NACATOCH AQUIFER	14	0	0	0	0	0	14
2012	HENDERSON	NACATOCH AQUIFER	12	0	0	0	0	0	12
1980	HENDERSON	OTHER AQUIFER	29	0	0	147	0	88	264
1984	HENDERSON	OTHER AQUIFER	37	0	0	104	0	107	248
1985	HENDERSON	OTHER AQUIFER	36	0	0	117	0	105	258
1986	HENDERSON	OTHER AQUIFER	30	0	0	113	0	144	287
1987	HENDERSON	OTHER AQUIFER	34	0	0	85	0	87	206
1988	HENDERSON	OTHER AQUIFER	38	0	0	16	0	136	190
1989	HENDERSON	OTHER AQUIFER	44	0	0	0	0	139	183
1990	HENDERSON	OTHER AQUIFER	40	0	0	0	0	140	180
1991	HENDERSON	OTHER AQUIFER	48	0	0	0	0	143	191
1992	HENDERSON	OTHER AQUIFER	23	0	0	0	0	108	131
1993	HENDERSON	OTHER AQUIFER	26	0	0	0	0	103	129
1994	HENDERSON	OTHER AQUIFER	25	0	0	0	0	106	131
1995	HENDERSON	OTHER AQUIFER	27	0	0	0	0	105	132
1996	HENDERSON	OTHER AQUIFER	33	0	0	0	0	129	162
1997	HENDERSON	OTHER AQUIFER	32	0	0	0	0	100	132
1998	HENDERSON	OTHER AQUIFER	35	0	0	0	0	115	150
1999	HENDERSON	OTHER AQUIFER	35	0	0	0	0	113	148
2000	HENDERSON	OTHER AQUIFER	46	0	0	0	0	111	157
2001	HENDERSON	OTHER AQUIFER	34	0	0	0	0	71	105
2002	HENDERSON	OTHER AQUIFER	35	0	0	0	0	20	55
2003	HENDERSON	OTHER AQUIFER	32	0	0	0	0	59	91
2004	HENDERSON	OTHER AQUIFER	32	0	0	0	0	61	93
2005	HENDERSON	OTHER AQUIFER	45	0	0	0	0	75	120
2006	HENDERSON	OTHER AQUIFER	264	0	0	0	0	72	336
2007	HENDERSON	OTHER AQUIFER	204	0	0	0	0	72	276
2008	HENDERSON	OTHER AQUIFER	233	0	0	0	0	104	337
2009	HENDERSON	OTHER AQUIFER	321	0	0	0	0	24	345
2010	HENDERSON	OTHER AQUIFER	391	0	0	0	0	65	456
2011	HENDERSON	OTHER AQUIFER	431	0	0	0	0	65	496
2012	HENDERSON	OTHER AQUIFER	384	0	0	0	0	54	438
1980	HENDERSON	QUEEN CITY AQUIFER	268	0	0	0	0	265	533
1984	HENDERSON	QUEEN CITY AQUIFER	172	0	0	0	0	323	495
1985	HENDERSON	QUEEN CITY AQUIFER	164	0	0	0	0	318	482

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
1986	HENDERSON	QUEEN CITY AQUIFER	158	0	0	0	0	435	593
1987	HENDERSON	QUEEN CITY AQUIFER	154	0	0	0	0	262	416
1988	HENDERSON	QUEEN CITY AQUIFER	154	0	0	0	0	410	564
1989	HENDERSON	QUEEN CITY AQUIFER	178	0	0	0	0	420	598
1990	HENDERSON	QUEEN CITY AQUIFER	465	0	0	0	0	424	889
1991	HENDERSON	QUEEN CITY AQUIFER	512	0	0	0	0	431	943
1992	HENDERSON	QUEEN CITY AQUIFER	540	0	0	0	0	327	867
1993	HENDERSON	QUEEN CITY AQUIFER	635	0	0	0	0	311	946
1994	HENDERSON	QUEEN CITY AQUIFER	539	0	0	0	0	321	860
1995	HENDERSON	QUEEN CITY AQUIFER	452	0	0	0	0	318	770
1996	HENDERSON	QUEEN CITY AQUIFER	474	0	0	0	0	391	865
1997	HENDERSON	QUEEN CITY AQUIFER	611	0	0	0	0	301	912
1998	HENDERSON	QUEEN CITY AQUIFER	668	0	0	0	0	347	1,015
1999	HENDERSON	QUEEN CITY AQUIFER	668	0	0	0	0	340	1,008
2000	HENDERSON	QUEEN CITY AQUIFER	264	0	0	0	0	335	599
2001	HENDERSON	QUEEN CITY AQUIFER	264	0	0	0	0	153	417
2002	HENDERSON	QUEEN CITY AQUIFER	259	0	0	0	0	42	301
2003	HENDERSON	QUEEN CITY AQUIFER	328	0	0	0	1	126	455
2004	HENDERSON	QUEEN CITY AQUIFER	330	0	0	0	1	104	435
2005	HENDERSON	QUEEN CITY AQUIFER	345	0	0	0	1	128	474
2006	HENDERSON	QUEEN CITY AQUIFER	387	0	0	0	3	122	512
2007	HENDERSON	QUEEN CITY AQUIFER	336	0	0	0	3	122	461
2008	HENDERSON	QUEEN CITY AQUIFER	368	0	0	0	4	17	389
2009	HENDERSON	QUEEN CITY AQUIFER	451	0	0	0	150	240	841
2010	HENDERSON	QUEEN CITY AQUIFER	354	0	0	0	53	147	554
2011	HENDERSON	QUEEN CITY AQUIFER	528	0	0	0	20	149	697
2012	HENDERSON	QUEEN CITY AQUIFER	450	0	0	0	72	123	645
2008	HENDERSON	UNKNOWN	0	0	45	0	0	0	45
2009	HENDERSON	UNKNOWN	0	0	56	0	0	0	56
2010	HENDERSON	UNKNOWN	0	0	66	0	0	0	66
2011	HENDERSON	UNKNOWN	0	0	52	0	0	0	52
1980	HOPKINS	CARRIZO-WILCOX AQUIFER	583	0	73	0	0	1,496	2,152
1984	HOPKINS	CARRIZO-WILCOX AQUIFER	908	0	0	0	0	1,670	2,578
1985	HOPKINS	CARRIZO-WILCOX AQUIFER	1,023	0	67	0	0	1,666	2,756
1986	HOPKINS	CARRIZO-WILCOX AQUIFER	1,016	0	138	0	0	1,485	2,639
1987	HOPKINS	CARRIZO-WILCOX AQUIFER	1,072	0	127	0	0	1,517	2,716
1988	HOPKINS	CARRIZO-WILCOX AQUIFER	1,052	0	133	0	0	1,246	2,431
1989	HOPKINS	CARRIZO-WILCOX AQUIFER	1,038	0	187	0	0	1,322	2,547
1990	HOPKINS	CARRIZO-WILCOX AQUIFER	962	0	120	0	0	2,253	3,335
1991	HOPKINS	CARRIZO-WILCOX AQUIFER	909	0	147	0	0	2,297	3,353
1992	HOPKINS	CARRIZO-WILCOX AQUIFER	1,128	0	143	0	0	2,670	3,941
1993	HOPKINS	CARRIZO-WILCOX AQUIFER	1,494	0	144	0	0	2,569	4,207
1994	HOPKINS	CARRIZO-WILCOX AQUIFER	1,579	0	145	0	0	2,800	4,524
1995	HOPKINS	CARRIZO-WILCOX AQUIFER	1,729	0	145	0	0	2,605	4,479
1996	HOPKINS	CARRIZO-WILCOX AQUIFER	1,692	0	145	0	0	2,536	4,373
1997	HOPKINS	CARRIZO-WILCOX AQUIFER	1,609	0	143	0	0	2,417	4,169
1998	HOPKINS	CARRIZO-WILCOX AQUIFER	1,792	0	78	0	0	1,873	3,743
1999	HOPKINS	CARRIZO-WILCOX AQUIFER	1,604	0	78	0	0	1,849	3,531
2000	HOPKINS	CARRIZO-WILCOX AQUIFER	1,619	0	67	0	0	1,825	3,511
2001	HOPKINS	CARRIZO-WILCOX AQUIFER	1,601	0	67	0	0	1,009	2,677
2002	HOPKINS	CARRIZO-WILCOX AQUIFER	1,873	0	67	0	0	997	2,937
2003	HOPKINS	CARRIZO-WILCOX AQUIFER	1,897	0	67	0	0	995	2,959
2004	HOPKINS	CARRIZO-WILCOX AQUIFER	1,859	0	67	0	0	810	2,736
2005	HOPKINS	CARRIZO-WILCOX AQUIFER	1,605	0	67	0	0	1,849	3,521
2006	HOPKINS	CARRIZO-WILCOX AQUIFER	1,745	0	67	0	241	1,960	4,013
2007	HOPKINS	CARRIZO-WILCOX AQUIFER	1,564	0	17	0	201	1,509	3,291
2008	HOPKINS	CARRIZO-WILCOX AQUIFER	1,493	0	0	0	16	1,636	3,145
2009	HOPKINS	CARRIZO-WILCOX AQUIFER	1,579	0	0	0	210	1,544	3,333
2010	HOPKINS	CARRIZO-WILCOX AQUIFER	1,412	0	0	0	2,317	1,469	5,198
2011	HOPKINS	CARRIZO-WILCOX AQUIFER	1,776	0	0	0	315	1,487	3,578
2012	HOPKINS	CARRIZO-WILCOX AQUIFER	1,652	0	0	0	880	1,462	3,994
1980	HOPKINS	NACATOCH AQUIFER	276	0	0	0	0	175	451
1984	HOPKINS	NACATOCH AQUIFER	230	0	0	0	0	196	426
1985	HOPKINS	NACATOCH AQUIFER	213	0	0	0	0	106	319
1986	HOPKINS	NACATOCH AQUIFER	247	0	0	0	0	95	342
1987	HOPKINS	NACATOCH AQUIFER	264	0	0	0	0	97	361
1988	HOPKINS	NACATOCH AQUIFER	295	0	0	0	0	79	374
1989	HOPKINS	NACATOCH AQUIFER	263	0	0	0	0	84	347
1990	HOPKINS	NACATOCH AQUIFER	326	0	0	0	0	143	469
1991	HOPKINS	NACATOCH AQUIFER	338	0	0	0	0	146	484
1992	HOPKINS	NACATOCH AQUIFER	334	0	0	0	0	170	504
1993	HOPKINS	NACATOCH AQUIFER	365	0	0	0	0	164	529
1994	HOPKINS	NACATOCH AQUIFER	402	0	0	0	0	179	581
1995	HOPKINS	NACATOCH AQUIFER	444	0	0	0	0	166	610
1996	HOPKINS	NACATOCH AQUIFER	438	0	0	0	0	162	600
1997	HOPKINS	NACATOCH AQUIFER	354	0	0	0	0	155	509
1998	HOPKINS	NACATOCH AQUIFER	394	0	0	0	0	120	514
1999	HOPKINS	NACATOCH AQUIFER	353	0	0	0	0	119	472

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
2000	HOPKINS	NACATOCH AQUIFER	350	0	0	0	0	117	467
2001	HOPKINS	NACATOCH AQUIFER	353	0	0	0	0	35	388
2002	HOPKINS	NACATOCH AQUIFER	354	0	0	0	0	35	389
2003	HOPKINS	NACATOCH AQUIFER	356	0	0	0	0	34	390
2004	HOPKINS	NACATOCH AQUIFER	359	0	0	0	0	131	490
2005	HOPKINS	NACATOCH AQUIFER	415	0	0	0	0	299	714
2006	HOPKINS	NACATOCH AQUIFER	480	0	0	0	0	316	796
2007	HOPKINS	NACATOCH AQUIFER	405	0	0	0	0	243	648
2008	HOPKINS	NACATOCH AQUIFER	414	0	0	0	0	635	1,049
2009	HOPKINS	NACATOCH AQUIFER	459	0	0	0	0	600	1,059
2010	HOPKINS	NACATOCH AQUIFER	494	0	0	0	0	521	1,015
2011	HOPKINS	NACATOCH AQUIFER	509	0	0	0	0	532	1,041
2012	HOPKINS	NACATOCH AQUIFER	590	0	0	0	0	523	1,113
1980	HOPKINS	OTHER AQUIFER	31	0	0	0	0	0	31
1984	HOPKINS	OTHER AQUIFER	87	0	0	0	0	0	87
1985	HOPKINS	OTHER AQUIFER	44	0	0	0	0	0	44
1986	HOPKINS	OTHER AQUIFER	100	0	0	0	0	0	100
1987	HOPKINS	OTHER AQUIFER	110	0	0	0	0	0	110
1988	HOPKINS	OTHER AQUIFER	98	0	0	0	0	0	98
1989	HOPKINS	OTHER AQUIFER	107	0	0	0	0	0	107
1990	HOPKINS	OTHER AQUIFER	106	0	0	0	0	0	106
1991	HOPKINS	OTHER AQUIFER	107	0	0	0	0	0	107
1992	HOPKINS	OTHER AQUIFER	107	0	0	0	0	0	107
1993	HOPKINS	OTHER AQUIFER	79	0	0	0	0	0	79
1994	HOPKINS	OTHER AQUIFER	84	0	0	0	0	0	84
1995	HOPKINS	OTHER AQUIFER	92	0	0	0	0	0	92
1996	HOPKINS	OTHER AQUIFER	94	0	0	0	0	0	94
1997	HOPKINS	OTHER AQUIFER	92	0	0	0	0	0	92
1998	HOPKINS	OTHER AQUIFER	102	0	0	0	0	0	102
1999	HOPKINS	OTHER AQUIFER	92	0	0	0	0	0	92
2000	HOPKINS	OTHER AQUIFER	15	0	0	0	0	0	15
2001	HOPKINS	OTHER AQUIFER	11	0	0	0	0	0	11
2002	HOPKINS	OTHER AQUIFER	12	0	0	0	0	0	12
2003	HOPKINS	OTHER AQUIFER	11	0	0	0	0	0	11
2004	HOPKINS	OTHER AQUIFER	11	0	0	0	0	0	11
2005	HOPKINS	OTHER AQUIFER	12	0	0	0	0	0	12
2008	HOPKINS	UNKNOWN	0	0	747	0	0	0	747
2009	HOPKINS	UNKNOWN	0	0	745	0	0	0	745
2010	HOPKINS	UNKNOWN	0	0	742	0	0	0	742
2011	HOPKINS	UNKNOWN	0	0	754	0	0	0	754
1980	HOUSTON	CARRIZO-WILCOX AQUIFER	641	0	0	0	0	45	686
1984	HOUSTON	CARRIZO-WILCOX AQUIFER	586	0	0	0	0	70	656
1985	HOUSTON	CARRIZO-WILCOX AQUIFER	633	0	0	0	0	72	705
1986	HOUSTON	CARRIZO-WILCOX AQUIFER	577	0	0	0	0	53	630
1987	HOUSTON	CARRIZO-WILCOX AQUIFER	702	0	0	0	1	61	764
1988	HOUSTON	CARRIZO-WILCOX AQUIFER	722	0	0	0	0	65	787
1989	HOUSTON	CARRIZO-WILCOX AQUIFER	566	0	0	0	0	66	632
1990	HOUSTON	CARRIZO-WILCOX AQUIFER	390	0	0	0	390	67	457
1991	HOUSTON	CARRIZO-WILCOX AQUIFER	196	0	0	0	0	68	264
1992	HOUSTON	CARRIZO-WILCOX AQUIFER	195	0	0	0	0	67	262
1993	HOUSTON	CARRIZO-WILCOX AQUIFER	340	0	0	0	0	64	404
1994	HOUSTON	CARRIZO-WILCOX AQUIFER	803	0	0	0	35	69	907
1995	HOUSTON	CARRIZO-WILCOX AQUIFER	856	0	0	0	30	62	948
1996	HOUSTON	CARRIZO-WILCOX AQUIFER	917	0	0	0	41	62	1,020
1997	HOUSTON	CARRIZO-WILCOX AQUIFER	897	0	0	0	41	54	992
1998	HOUSTON	CARRIZO-WILCOX AQUIFER	911	0	0	0	41	61	1,013
1999	HOUSTON	CARRIZO-WILCOX AQUIFER	965	0	0	0	41	64	1,070
2000	HOUSTON	CARRIZO-WILCOX AQUIFER	948	0	0	0	115	65	1,128
2001	HOUSTON	CARRIZO-WILCOX AQUIFER	1,072	0	0	0	85	40	1,197
2002	HOUSTON	CARRIZO-WILCOX AQUIFER	1,050	0	0	0	151	39	1,240
2003	HOUSTON	CARRIZO-WILCOX AQUIFER	1,250	0	0	0	54	38	1,342
2004	HOUSTON	CARRIZO-WILCOX AQUIFER	1,059	0	0	0	114	67	1,240
2005	HOUSTON	CARRIZO-WILCOX AQUIFER	1,092	0	0	0	165	31	1,288
2006	HOUSTON	CARRIZO-WILCOX AQUIFER	854	0	0	0	205	26	1,085
2007	HOUSTON	CARRIZO-WILCOX AQUIFER	1,171	0	0	0	269	23	1,463
2008	HOUSTON	CARRIZO-WILCOX AQUIFER	1,766	0	0	0	66	30	1,862
2009	HOUSTON	CARRIZO-WILCOX AQUIFER	1,624	0	0	0	89	30	1,743
2010	HOUSTON	CARRIZO-WILCOX AQUIFER	1,659	0	0	0	48	28	1,735
2011	HOUSTON	CARRIZO-WILCOX AQUIFER	2,229	0	0	0	30	29	2,288
2012	HOUSTON	CARRIZO-WILCOX AQUIFER	1,963	0	0	0	246	18	2,227
1980	HOUSTON	OTHER AQUIFER	909	0	0	0	0	202	1,111
1984	HOUSTON	OTHER AQUIFER	1,490	10	78	0	0	274	1,852
1985	HOUSTON	OTHER AQUIFER	1,399	5	125	0	0	278	1,807
1986	HOUSTON	OTHER AQUIFER	1,433	5	119	0	1	207	1,765
1987	HOUSTON	OTHER AQUIFER	1,256	0	108	0	0	237	1,601
1988	HOUSTON	OTHER AQUIFER	1,046	0	111	0	1	250	1,408
1989	HOUSTON	OTHER AQUIFER	1,112	0	103	0	0	254	1,469
1990	HOUSTON	OTHER AQUIFER	1,256	0	103	0	0	259	1,618

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
1991	HOUSTON	OTHER AQUIFER	1,241	0	143	0	0	265	1,649
1992	HOUSTON	OTHER AQUIFER	1,224	0	143	0	0	259	1,626
1993	HOUSTON	OTHER AQUIFER	1,022	0	140	0	0	246	1,408
1994	HOUSTON	OTHER AQUIFER	901	0	140	0	0	265	1,306
1995	HOUSTON	OTHER AQUIFER	943	0	140	0	0	239	1,322
1996	HOUSTON	OTHER AQUIFER	965	0	140	0	0	239	1,344
1997	HOUSTON	OTHER AQUIFER	981	0	140	0	0	210	1,331
1998	HOUSTON	OTHER AQUIFER	997	0	140	0	0	237	1,374
1999	HOUSTON	OTHER AQUIFER	1,055	0	140	0	0	249	1,444
2000	HOUSTON	OTHER AQUIFER	1,212	0	0	0	32	253	1,497
2001	HOUSTON	OTHER AQUIFER	1,297	0	0	0	24	146	1,467
2002	HOUSTON	OTHER AQUIFER	1,299	0	0	0	42	141	1,482
2003	HOUSTON	OTHER AQUIFER	1,303	0	0	0	15	142	1,460
2004	HOUSTON	OTHER AQUIFER	1,225	0	0	0	19	123	1,367
2005	HOUSTON	OTHER AQUIFER	1,216	0	0	0	28	56	1,300
2006	HOUSTON	OTHER AQUIFER	1,224	0	0	0	34	47	1,305
2007	HOUSTON	OTHER AQUIFER	1,234	0	0	0	45	43	1,322
2008	HOUSTON	OTHER AQUIFER	1,285	0	0	0	11	51	1,347
2009	HOUSTON	OTHER AQUIFER	1,268	0	0	0	15	51	1,334
2010	HOUSTON	OTHER AQUIFER	1,251	0	0	0	73	53	1,377
2011	HOUSTON	OTHER AQUIFER	208	0	0	0	45	56	309
2012	HOUSTON	OTHER AQUIFER	195	0	0	0	373	35	603
1980	HOUSTON	QUEEN CITY AQUIFER	131	0	0	0	0	112	243
1984	HOUSTON	QUEEN CITY AQUIFER	165	1	0	0	14	115	295
1985	HOUSTON	QUEEN CITY AQUIFER	167	1	0	0	12	117	297
1986	HOUSTON	QUEEN CITY AQUIFER	168	1	0	0	12	87	268
1987	HOUSTON	QUEEN CITY AQUIFER	166	0	0	0	12	100	278
1988	HOUSTON	QUEEN CITY AQUIFER	174	0	0	0	12	105	291
1989	HOUSTON	QUEEN CITY AQUIFER	165	0	0	0	12	107	284
1990	HOUSTON	QUEEN CITY AQUIFER	163	0	0	0	12	109	284
1991	HOUSTON	QUEEN CITY AQUIFER	158	0	0	0	12	112	282
1992	HOUSTON	QUEEN CITY AQUIFER	147	0	0	0	12	109	268
1993	HOUSTON	QUEEN CITY AQUIFER	142	0	0	0	101	104	347
1994	HOUSTON	QUEEN CITY AQUIFER	147	0	0	0	35	112	294
1995	HOUSTON	QUEEN CITY AQUIFER	145	0	0	0	30	101	276
1996	HOUSTON	QUEEN CITY AQUIFER	145	0	0	0	41	101	287
1997	HOUSTON	QUEEN CITY AQUIFER	135	0	0	0	41	89	265
1998	HOUSTON	QUEEN CITY AQUIFER	137	0	0	0	41	100	278
1999	HOUSTON	QUEEN CITY AQUIFER	145	0	0	0	41	105	291
2000	HOUSTON	QUEEN CITY AQUIFER	118	0	0	0	147	107	372
2001	HOUSTON	QUEEN CITY AQUIFER	126	0	0	0	109	49	284
2002	HOUSTON	QUEEN CITY AQUIFER	127	0	0	0	192	47	366
2003	HOUSTON	QUEEN CITY AQUIFER	133	0	0	0	68	48	249
2004	HOUSTON	QUEEN CITY AQUIFER	115	0	0	0	152	37	304
2005	HOUSTON	QUEEN CITY AQUIFER	115	0	0	0	221	17	353
2006	HOUSTON	QUEEN CITY AQUIFER	93	0	0	0	273	14	380
2007	HOUSTON	QUEEN CITY AQUIFER	94	0	0	0	359	13	466
2008	HOUSTON	QUEEN CITY AQUIFER	92	0	0	0	88	11	191
2009	HOUSTON	QUEEN CITY AQUIFER	122	0	0	0	119	11	252
2010	HOUSTON	QUEEN CITY AQUIFER	94	0	0	0	64	19	177
2011	HOUSTON	QUEEN CITY AQUIFER	98	0	0	0	40	20	158
2012	HOUSTON	QUEEN CITY AQUIFER	93	0	0	0	328	13	434
1980	HOUSTON	SPARTA AQUIFER	38	0	0	0	0	315	353
1984	HOUSTON	SPARTA AQUIFER	86	6	32	0	12	387	523
1985	HOUSTON	SPARTA AQUIFER	79	3	33	0	12	392	519
1986	HOUSTON	SPARTA AQUIFER	78	3	32	0	12	292	417
1987	HOUSTON	SPARTA AQUIFER	77	0	29	0	12	334	452
1988	HOUSTON	SPARTA AQUIFER	82	0	30	0	12	352	476
1989	HOUSTON	SPARTA AQUIFER	72	0	27	0	12	358	469
1990	HOUSTON	SPARTA AQUIFER	95	0	27	0	11	365	498
1991	HOUSTON	SPARTA AQUIFER	101	0	38	0	11	372	522
1992	HOUSTON	SPARTA AQUIFER	90	0	38	0	11	365	504
1993	HOUSTON	SPARTA AQUIFER	94	0	37	0	0	346	477
1994	HOUSTON	SPARTA AQUIFER	102	0	37	0	76	371	586
1995	HOUSTON	SPARTA AQUIFER	95	0	37	0	65	335	532
1996	HOUSTON	SPARTA AQUIFER	94	0	37	0	88	335	554
1997	HOUSTON	SPARTA AQUIFER	90	0	37	0	88	295	510
1998	HOUSTON	SPARTA AQUIFER	91	0	37	0	88	333	549
1999	HOUSTON	SPARTA AQUIFER	97	0	37	0	88	350	572
2000	HOUSTON	SPARTA AQUIFER	6	0	0	0	314	299	619
2001	HOUSTON	SPARTA AQUIFER	7	0	0	0	234	177	418
2002	HOUSTON	SPARTA AQUIFER	7	0	0	0	413	171	591
2003	HOUSTON	SPARTA AQUIFER	7	0	0	0	147	172	326
2004	HOUSTON	SPARTA AQUIFER	7	0	0	0	76	174	257
2005	HOUSTON	SPARTA AQUIFER	8	0	0	0	110	79	197
2006	HOUSTON	SPARTA AQUIFER	31	0	0	0	137	67	235
2007	HOUSTON	SPARTA AQUIFER	26	0	0	0	180	60	266
2008	HOUSTON	SPARTA AQUIFER	35	0	0	0	44	68	147

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
2009	HOUSTON	SPARTA AQUIFER	116	0	0	0	59	68	243
2010	HOUSTON	SPARTA AQUIFER	324	0	0	0	32	78	434
2011	HOUSTON	SPARTA AQUIFER	1,357	0	0	0	20	81	1,458
2012	HOUSTON	SPARTA AQUIFER	1,282	0	0	0	164	52	1,498
2008	HOUSTON	UNKNOWN	0	0	7	0	0	0	7
2009	HOUSTON	UNKNOWN	0	0	10	0	0	0	10
2010	HOUSTON	UNKNOWN	0	0	13	0	0	0	13
2011	HOUSTON	UNKNOWN	0	0	120	0	0	0	120
2012	HOUSTON	UNKNOWN	0	0	66	0	0	0	66
2000	HOUSTON	YEGUA-JACKSON AQUIFER	0	0	0	0	0	56	56
2001	HOUSTON	YEGUA-JACKSON AQUIFER	0	0	0	0	0	19	19
2002	HOUSTON	YEGUA-JACKSON AQUIFER	0	0	0	0	0	18	18
2003	HOUSTON	YEGUA-JACKSON AQUIFER	0	0	0	0	0	18	18
2004	HOUSTON	YEGUA-JACKSON AQUIFER	0	0	0	0	0	18	18
2005	HOUSTON	YEGUA-JACKSON AQUIFER	0	0	0	0	0	8	8
2006	HOUSTON	YEGUA-JACKSON AQUIFER	43	0	0	0	0	7	50
2007	HOUSTON	YEGUA-JACKSON AQUIFER	36	0	0	0	0	6	42
2008	HOUSTON	YEGUA-JACKSON AQUIFER	40	0	0	0	0	0	40
2009	HOUSTON	YEGUA-JACKSON AQUIFER	160	0	0	0	0	0	160
2010	HOUSTON	YEGUA-JACKSON AQUIFER	500	0	0	0	0	12	512
2011	HOUSTON	YEGUA-JACKSON AQUIFER	546	0	0	0	0	13	559
2012	HOUSTON	YEGUA-JACKSON AQUIFER	462	0	0	0	0	8	470
1980	MARION	CARRIZO-WILCOX AQUIFER	527	9	7	0	0	22	565
1984	MARION	CARRIZO-WILCOX AQUIFER	520	14	0	0	0	31	565
1985	MARION	CARRIZO-WILCOX AQUIFER	547	25	69	0	0	24	665
1986	MARION	CARRIZO-WILCOX AQUIFER	499	25	65	0	0	19	608
1987	MARION	CARRIZO-WILCOX AQUIFER	494	18	61	0	0	21	594
1988	MARION	CARRIZO-WILCOX AQUIFER	503	33	60	0	0	23	619
1989	MARION	CARRIZO-WILCOX AQUIFER	518	34	56	0	0	23	631
1990	MARION	CARRIZO-WILCOX AQUIFER	370	26	56	0	0	23	475
1991	MARION	CARRIZO-WILCOX AQUIFER	399	35	53	0	0	23	510
1992	MARION	CARRIZO-WILCOX AQUIFER	364	0	53	0	0	25	442
1993	MARION	CARRIZO-WILCOX AQUIFER	440	0	53	0	55	27	575
1994	MARION	CARRIZO-WILCOX AQUIFER	439	0	53	0	63	25	580
1995	MARION	CARRIZO-WILCOX AQUIFER	483	0	83	1	59	20	646
1996	MARION	CARRIZO-WILCOX AQUIFER	474	0	83	1	55	22	635
1997	MARION	CARRIZO-WILCOX AQUIFER	472	0	83	74	55	26	710
1998	MARION	CARRIZO-WILCOX AQUIFER	527	0	83	88	55	19	772
1999	MARION	CARRIZO-WILCOX AQUIFER	402	0	83	100	55	21	661
2000	MARION	CARRIZO-WILCOX AQUIFER	657	1	0	99	0	144	901
2001	MARION	CARRIZO-WILCOX AQUIFER	686	1	0	96	0	18	801
2002	MARION	CARRIZO-WILCOX AQUIFER	654	0	0	0	0	17	671
2003	MARION	CARRIZO-WILCOX AQUIFER	628	0	0	82	0	17	727
2004	MARION	CARRIZO-WILCOX AQUIFER	642	0	0	60	0	50	752
2005	MARION	CARRIZO-WILCOX AQUIFER	720	0	0	82	0	6	808
2006	MARION	CARRIZO-WILCOX AQUIFER	812	0	0	79	0	6	897
2007	MARION	CARRIZO-WILCOX AQUIFER	693	0	0	73	0	6	772
2008	MARION	CARRIZO-WILCOX AQUIFER	714	0	0	74	0	4	792
2009	MARION	CARRIZO-WILCOX AQUIFER	621	0	0	81	0	4	706
2010	MARION	CARRIZO-WILCOX AQUIFER	394	0	0	91	0	12	497
2011	MARION	CARRIZO-WILCOX AQUIFER	556	0	0	75	0	12	643
2012	MARION	CARRIZO-WILCOX AQUIFER	469	0	0	82	0	7	558
2006	MARION	OTHER AQUIFER	12	0	0	0	0	0	12
2007	MARION	OTHER AQUIFER	10	0	0	0	0	0	10
2008	MARION	OTHER AQUIFER	11	0	0	0	0	0	11
2009	MARION	OTHER AQUIFER	7	0	0	0	0	0	7
2010	MARION	OTHER AQUIFER	3	0	0	0	0	0	3
2011	MARION	OTHER AQUIFER	3	0	0	0	0	0	3
2012	MARION	OTHER AQUIFER	2	0	0	0	0	0	2
1980	MARION	QUEEN CITY AQUIFER	352	0	6	0	0	40	398
1984	MARION	QUEEN CITY AQUIFER	303	0	0	0	0	57	360
1985	MARION	QUEEN CITY AQUIFER	303	0	0	0	0	44	347
1986	MARION	QUEEN CITY AQUIFER	284	0	0	0	0	35	319
1987	MARION	QUEEN CITY AQUIFER	255	0	0	0	0	40	295
1988	MARION	QUEEN CITY AQUIFER	272	0	0	0	0	43	315
1989	MARION	QUEEN CITY AQUIFER	283	0	0	0	0	42	325
1990	MARION	QUEEN CITY AQUIFER	391	0	0	0	0	42	433
1991	MARION	QUEEN CITY AQUIFER	381	0	0	0	0	43	424
1992	MARION	QUEEN CITY AQUIFER	314	0	0	0	0	48	362
1993	MARION	QUEEN CITY AQUIFER	364	0	0	0	0	52	416
1994	MARION	QUEEN CITY AQUIFER	338	0	0	0	0	48	386
1995	MARION	QUEEN CITY AQUIFER	273	0	0	0	0	39	312
1996	MARION	QUEEN CITY AQUIFER	267	1	0	0	0	44	312
1997	MARION	QUEEN CITY AQUIFER	279	3	0	0	0	53	335
1998	MARION	QUEEN CITY AQUIFER	312	3	0	0	0	39	354
1999	MARION	QUEEN CITY AQUIFER	237	3	0	0	0	44	284
2000	MARION	QUEEN CITY AQUIFER	138	3	0	0	0	290	431
2001	MARION	QUEEN CITY AQUIFER	121	3	0	0	0	38	162

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
2002	MARION	QUEEN CITY AQUIFER	122	0	0	0	0	34	156
2003	MARION	QUEEN CITY AQUIFER	133	0	0	0	0	34	167
2004	MARION	QUEEN CITY AQUIFER	129	0	0	0	0	0	129
2005	MARION	QUEEN CITY AQUIFER	139	0	0	0	0	0	139
2006	MARION	QUEEN CITY AQUIFER	35	0	0	0	0	0	35
2007	MARION	QUEEN CITY AQUIFER	30	0	0	0	0	0	30
2008	MARION	QUEEN CITY AQUIFER	31	0	0	0	0	0	31
2009	MARION	QUEEN CITY AQUIFER	24	0	0	0	0	0	24
2010	MARION	QUEEN CITY AQUIFER	6	0	0	0	0	0	6
2011	MARION	QUEEN CITY AQUIFER	6	0	0	0	0	0	6
2012	MARION	QUEEN CITY AQUIFER	5	0	0	0	0	0	5
2000	MARION	UNKNOWN	0	0	0	0	0	0	0
2001	MARION	UNKNOWN	0	0	0	0	0	0	0
2002	MARION	UNKNOWN	0	0	0	0	0	0	0
2008	MARION	UNKNOWN	0	0	82	0	0	0	82
2009	MARION	UNKNOWN	0	0	96	0	0	0	96
2010	MARION	UNKNOWN	0	0	109	0	0	0	109
2011	MARION	UNKNOWN	0	0	87	0	0	0	87
2012	MARION	UNKNOWN	0	0	17	0	0	0	17
1980	MORRIS	CARRIZO-WILCOX AQUIFER	1,048	221	0	0	0	77	1,346
1984	MORRIS	CARRIZO-WILCOX AQUIFER	830	15	0	0	170	79	1,094
1985	MORRIS	CARRIZO-WILCOX AQUIFER	857	7	0	0	151	75	1,090
1986	MORRIS	CARRIZO-WILCOX AQUIFER	712	6	0	0	151	76	945
1987	MORRIS	CARRIZO-WILCOX AQUIFER	654	6	0	0	151	82	893
1988	MORRIS	CARRIZO-WILCOX AQUIFER	728	0	0	0	84	87	899
1989	MORRIS	CARRIZO-WILCOX AQUIFER	709	6,412	0	0	0	90	7,211
1990	MORRIS	CARRIZO-WILCOX AQUIFER	527	6,412	0	0	0	90	7,029
1991	MORRIS	CARRIZO-WILCOX AQUIFER	533	6,412	32	0	0	92	7,069
1992	MORRIS	CARRIZO-WILCOX AQUIFER	513	40	32	0	0	136	721
1993	MORRIS	CARRIZO-WILCOX AQUIFER	503	32	32	0	0	128	695
1994	MORRIS	CARRIZO-WILCOX AQUIFER	446	31	32	0	0	102	611
1995	MORRIS	CARRIZO-WILCOX AQUIFER	512	34	32	0	0	113	691
1996	MORRIS	CARRIZO-WILCOX AQUIFER	500	31	32	0	0	107	670
1997	MORRIS	CARRIZO-WILCOX AQUIFER	621	30	32	0	0	85	768
1998	MORRIS	CARRIZO-WILCOX AQUIFER	638	30	32	0	0	91	791
1999	MORRIS	CARRIZO-WILCOX AQUIFER	490	32	32	0	0	102	656
2000	MORRIS	CARRIZO-WILCOX AQUIFER	559	88	0	0	0	104	751
2001	MORRIS	CARRIZO-WILCOX AQUIFER	562	25	0	0	0	43	630
2002	MORRIS	CARRIZO-WILCOX AQUIFER	552	21	0	0	0	53	626
2003	MORRIS	CARRIZO-WILCOX AQUIFER	508	76	0	0	0	62	646
2004	MORRIS	CARRIZO-WILCOX AQUIFER	499	79	0	0	0	141	719
2005	MORRIS	CARRIZO-WILCOX AQUIFER	548	196	0	0	0	63	807
2006	MORRIS	CARRIZO-WILCOX AQUIFER	625	72	0	0	0	68	765
2007	MORRIS	CARRIZO-WILCOX AQUIFER	550	77	0	0	0	68	695
2008	MORRIS	CARRIZO-WILCOX AQUIFER	585	20	0	0	0	52	657
2009	MORRIS	CARRIZO-WILCOX AQUIFER	645	23	0	0	0	58	726
2010	MORRIS	CARRIZO-WILCOX AQUIFER	691	23	0	0	0	78	792
2011	MORRIS	CARRIZO-WILCOX AQUIFER	685	23	0	0	0	82	790
2012	MORRIS	CARRIZO-WILCOX AQUIFER	621	19	0	0	0	57	697
2006	MORRIS	OTHER AQUIFER	6	0	0	0	0	0	6
2007	MORRIS	OTHER AQUIFER	5	0	0	0	0	0	5
2008	MORRIS	OTHER AQUIFER	5	0	0	0	0	0	5
2009	MORRIS	OTHER AQUIFER	6	0	0	0	0	0	6
2010	MORRIS	OTHER AQUIFER	7	0	0	0	0	0	7
2011	MORRIS	OTHER AQUIFER	6	0	0	0	0	0	6
2012	MORRIS	OTHER AQUIFER	6	0	0	0	0	0	6
1980	MORRIS	QUEEN CITY AQUIFER	201	0	0	0	0	80	281
1984	MORRIS	QUEEN CITY AQUIFER	154	0	0	0	85	65	304
1985	MORRIS	QUEEN CITY AQUIFER	153	0	0	0	74	64	291
1986	MORRIS	QUEEN CITY AQUIFER	149	0	0	0	74	64	287
1987	MORRIS	QUEEN CITY AQUIFER	130	0	0	0	74	68	272
1988	MORRIS	QUEEN CITY AQUIFER	131	0	0	0	41	72	244
1989	MORRIS	QUEEN CITY AQUIFER	143	0	0	0	0	75	218
1990	MORRIS	QUEEN CITY AQUIFER	278	0	0	0	0	76	354
1991	MORRIS	QUEEN CITY AQUIFER	278	0	0	0	0	77	355
1992	MORRIS	QUEEN CITY AQUIFER	259	0	0	0	0	114	373
1993	MORRIS	QUEEN CITY AQUIFER	285	0	0	0	0	107	392
1994	MORRIS	QUEEN CITY AQUIFER	284	0	0	0	0	85	369
1995	MORRIS	QUEEN CITY AQUIFER	240	0	0	0	0	94	334
1996	MORRIS	QUEEN CITY AQUIFER	240	0	0	0	0	89	329
1997	MORRIS	QUEEN CITY AQUIFER	205	0	0	0	0	72	277
1998	MORRIS	QUEEN CITY AQUIFER	211	0	0	0	0	77	288
1999	MORRIS	QUEEN CITY AQUIFER	162	0	0	0	0	86	248
2000	MORRIS	QUEEN CITY AQUIFER	103	0	0	0	0	90	193
2001	MORRIS	QUEEN CITY AQUIFER	91	0	0	0	0	52	143
2002	MORRIS	QUEEN CITY AQUIFER	92	0	0	0	0	65	157
2003	MORRIS	QUEEN CITY AQUIFER	94	0	0	0	0	76	170
2004	MORRIS	QUEEN CITY AQUIFER	92	0	0	0	0	0	92

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2005	MORRIS	QUEEN CITY AQUIFER	98	0	0	0	0	0	98
2006	MORRIS	QUEEN CITY AQUIFER	23	0	0	0	0	0	23
2007	MORRIS	QUEEN CITY AQUIFER	19	0	0	0	0	0	19
2008	MORRIS	QUEEN CITY AQUIFER	21	0	0	0	0	0	21
2009	MORRIS	QUEEN CITY AQUIFER	24	0	0	0	0	0	24
2010	MORRIS	QUEEN CITY AQUIFER	27	0	0	0	0	0	27
2011	MORRIS	QUEEN CITY AQUIFER	25	0	0	0	0	0	25
2012	MORRIS	QUEEN CITY AQUIFER	25	0	0	0	0	0	25
2006	MORRIS	SPARTA AQUIFER	6	0	0	0	0	0	6
2007	MORRIS	SPARTA AQUIFER	5	0	0	0	0	0	5
2008	MORRIS	SPARTA AQUIFER	5	0	0	0	0	0	5
2009	MORRIS	SPARTA AQUIFER	6	0	0	0	0	0	6
2010	MORRIS	SPARTA AQUIFER	7	0	0	0	0	0	7
2011	MORRIS	SPARTA AQUIFER	6	0	0	0	0	0	6
2012	MORRIS	SPARTA AQUIFER	6	0	0	0	0	0	6
2008	MORRIS	UNKNOWN	0	0	0	0	0	0	0
2009	MORRIS	UNKNOWN	0	0	0	0	0	0	0
2010	MORRIS	UNKNOWN	0	0	0	0	0	0	0
2011	MORRIS	UNKNOWN	0	0	0	0	0	0	0
1980	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	6,558	21	0	0	0	432	7,011
1984	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	6,701	0	0	0	19	381	7,101
1985	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	6,874	0	0	0	39	277	7,190
1986	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,148	0	0	0	40	290	7,478
1987	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,260	0	0	0	40	280	7,580
1988	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,806	0	0	0	40	281	8,127
1989	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,922	0	0	0	138	292	8,352
1990	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,481	0	0	0	140	349	7,970
1991	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,235	0	0	0	140	349	7,724
1992	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,744	0	0	0	140	350	8,234
1993	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	8,250	0	0	0	980	360	9,590
1994	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,861	0	0	0	1,117	391	9,369
1995	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	8,532	0	0	0	1,016	352	9,900
1996	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,218	0	0	0	1,016	472	8,706
1997	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,351	0	0	0	1,016	329	8,696
1998	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,152	0	0	0	1,016	295	8,463
1999	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,113	0	0	0	1,016	320	8,449
2000	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,801	0	0	0	186	333	8,320
2001	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,678	20	0	0	419	320	8,437
2002	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,288	31	0	0	187	321	7,827
2003	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	6,665	20	0	0	395	278	7,358
2004	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,140	11	0	0	281	340	7,772
2005	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	7,461	32	0	0	206	83	7,782
2006	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	6,924	27	0	0	248	92	7,291
2007	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	5,911	110	0	0	143	77	6,241
2008	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	6,157	31	0	0	145	82	6,415
2009	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	5,258	24	0	0	226	84	5,592
2010	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	5,871	30	0	0	141	184	6,226
2011	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	6,268	36	0	0	298	182	6,784
2012	NACOGDOCHES	CARRIZO-WILCOX AQUIFER	5,336	25	0	0	31	170	5,562
1980	NACOGDOCHES	OTHER AQUIFER	34	0	0	0	0	51	85
1984	NACOGDOCHES	OTHER AQUIFER	22	0	0	0	0	45	67
1985	NACOGDOCHES	OTHER AQUIFER	16	0	0	0	0	33	49
1986	NACOGDOCHES	OTHER AQUIFER	21	0	0	0	0	35	56
1987	NACOGDOCHES	OTHER AQUIFER	26	0	0	0	0	33	59
1988	NACOGDOCHES	OTHER AQUIFER	21	0	0	0	0	32	53
1989	NACOGDOCHES	OTHER AQUIFER	23	0	0	0	0	35	58
1990	NACOGDOCHES	OTHER AQUIFER	16	0	0	0	0	41	57
1991	NACOGDOCHES	OTHER AQUIFER	15	0	0	0	0	41	56
1992	NACOGDOCHES	OTHER AQUIFER	14	0	0	0	0	41	55
1993	NACOGDOCHES	OTHER AQUIFER	13	0	0	0	0	42	55
1994	NACOGDOCHES	OTHER AQUIFER	9	0	0	0	0	46	55
1995	NACOGDOCHES	OTHER AQUIFER	22	0	0	0	0	41	63
1996	NACOGDOCHES	OTHER AQUIFER	22	0	0	0	0	55	77
1997	NACOGDOCHES	OTHER AQUIFER	5	0	0	0	0	38	43
1998	NACOGDOCHES	OTHER AQUIFER	5	0	0	0	0	34	39
1999	NACOGDOCHES	OTHER AQUIFER	5	0	0	0	0	37	42
2000	NACOGDOCHES	OTHER AQUIFER	1	0	0	0	0	39	40
2001	NACOGDOCHES	OTHER AQUIFER	1	0	0	0	0	37	38
2002	NACOGDOCHES	OTHER AQUIFER	1	0	0	0	0	37	38
2003	NACOGDOCHES	OTHER AQUIFER	1	0	0	0	0	32	33
2004	NACOGDOCHES	OTHER AQUIFER	1	0	0	0	0	31	32
2005	NACOGDOCHES	OTHER AQUIFER	1	0	0	0	0	8	9
2006	NACOGDOCHES	OTHER AQUIFER	56	0	0	0	0	8	64
2007	NACOGDOCHES	OTHER AQUIFER	46	0	0	0	0	7	53
2008	NACOGDOCHES	OTHER AQUIFER	51	0	0	0	0	7	58
2009	NACOGDOCHES	OTHER AQUIFER	63	0	0	0	0	8	71
2010	NACOGDOCHES	OTHER AQUIFER	74	0	0	0	0	17	91
2011	NACOGDOCHES	OTHER AQUIFER	63	0	0	0	0	17	80

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
2012	NACOGDOCHES	OTHER AQUIFER	61	0	0	0	0	15	76
1980	NACOGDOCHES	QUEEN CITY AQUIFER	96	0	0	0	0	144	240
1984	NACOGDOCHES	QUEEN CITY AQUIFER	62	0	0	0	0	127	189
1985	NACOGDOCHES	QUEEN CITY AQUIFER	46	0	0	0	0	92	138
1986	NACOGDOCHES	QUEEN CITY AQUIFER	59	0	0	0	0	97	156
1987	NACOGDOCHES	QUEEN CITY AQUIFER	72	0	0	0	0	93	165
1988	NACOGDOCHES	QUEEN CITY AQUIFER	59	0	0	0	0	93	152
1989	NACOGDOCHES	QUEEN CITY AQUIFER	64	0	0	0	0	97	161
1990	NACOGDOCHES	QUEEN CITY AQUIFER	43	0	0	0	0	116	159
1991	NACOGDOCHES	QUEEN CITY AQUIFER	41	0	0	0	0	116	157
1992	NACOGDOCHES	QUEEN CITY AQUIFER	38	0	0	0	0	116	154
1993	NACOGDOCHES	QUEEN CITY AQUIFER	37	0	0	0	0	119	156
1994	NACOGDOCHES	QUEEN CITY AQUIFER	24	0	0	0	0	129	153
1995	NACOGDOCHES	QUEEN CITY AQUIFER	61	0	0	0	0	116	177
1996	NACOGDOCHES	QUEEN CITY AQUIFER	60	0	0	0	0	156	216
1997	NACOGDOCHES	QUEEN CITY AQUIFER	14	0	0	0	0	109	123
1998	NACOGDOCHES	QUEEN CITY AQUIFER	14	0	0	0	0	98	112
1999	NACOGDOCHES	QUEEN CITY AQUIFER	14	0	0	0	0	106	120
2000	NACOGDOCHES	QUEEN CITY AQUIFER	2	0	0	0	0	110	112
2001	NACOGDOCHES	QUEEN CITY AQUIFER	2	0	0	0	0	106	108
2002	NACOGDOCHES	QUEEN CITY AQUIFER	2	0	0	0	0	106	108
2003	NACOGDOCHES	QUEEN CITY AQUIFER	2	0	0	0	0	92	94
2004	NACOGDOCHES	QUEEN CITY AQUIFER	2	0	0	0	0	124	126
2005	NACOGDOCHES	QUEEN CITY AQUIFER	2	0	0	0	0	30	32
2006	NACOGDOCHES	QUEEN CITY AQUIFER	159	0	0	0	0	34	193
2007	NACOGDOCHES	QUEEN CITY AQUIFER	131	0	0	0	0	28	159
2008	NACOGDOCHES	QUEEN CITY AQUIFER	146	0	0	0	0	30	176
2009	NACOGDOCHES	QUEEN CITY AQUIFER	177	0	0	0	0	31	208
2010	NACOGDOCHES	QUEEN CITY AQUIFER	210	0	0	0	0	67	277
2011	NACOGDOCHES	QUEEN CITY AQUIFER	178	0	0	0	0	66	244
2012	NACOGDOCHES	QUEEN CITY AQUIFER	171	0	0	0	0	62	233
1980	NACOGDOCHES	SPARTA AQUIFER	108	0	0	0	0	162	270
1984	NACOGDOCHES	SPARTA AQUIFER	70	0	0	0	0	142	212
1985	NACOGDOCHES	SPARTA AQUIFER	52	0	0	0	0	104	156
1986	NACOGDOCHES	SPARTA AQUIFER	66	0	0	0	0	109	175
1987	NACOGDOCHES	SPARTA AQUIFER	81	0	0	0	0	105	186
1988	NACOGDOCHES	SPARTA AQUIFER	67	0	0	0	0	105	172
1989	NACOGDOCHES	SPARTA AQUIFER	72	0	0	0	0	109	181
1990	NACOGDOCHES	SPARTA AQUIFER	49	0	0	0	0	131	180
1991	NACOGDOCHES	SPARTA AQUIFER	47	0	0	0	0	131	178
1992	NACOGDOCHES	SPARTA AQUIFER	43	0	0	0	0	131	174
1993	NACOGDOCHES	SPARTA AQUIFER	42	0	0	0	0	135	177
1994	NACOGDOCHES	SPARTA AQUIFER	27	0	0	0	0	147	174
1995	NACOGDOCHES	SPARTA AQUIFER	70	0	0	0	0	132	202
1996	NACOGDOCHES	SPARTA AQUIFER	69	0	0	0	0	177	246
1997	NACOGDOCHES	SPARTA AQUIFER	16	0	0	0	0	123	139
1998	NACOGDOCHES	SPARTA AQUIFER	16	0	0	0	0	110	126
1999	NACOGDOCHES	SPARTA AQUIFER	15	0	0	0	0	120	135
2000	NACOGDOCHES	SPARTA AQUIFER	2	0	0	0	0	125	127
2001	NACOGDOCHES	SPARTA AQUIFER	2	0	0	0	0	120	122
2002	NACOGDOCHES	SPARTA AQUIFER	2	0	0	0	0	120	122
2003	NACOGDOCHES	SPARTA AQUIFER	2	0	0	0	0	104	106
2004	NACOGDOCHES	SPARTA AQUIFER	2	0	0	0	0	0	2
2005	NACOGDOCHES	SPARTA AQUIFER	2	0	0	0	0	0	2
2006	NACOGDOCHES	SPARTA AQUIFER	112	0	0	0	0	0	112
2007	NACOGDOCHES	SPARTA AQUIFER	93	0	0	0	0	0	93
2008	NACOGDOCHES	SPARTA AQUIFER	103	0	0	0	0	0	103
2009	NACOGDOCHES	SPARTA AQUIFER	125	0	0	0	0	0	125
2010	NACOGDOCHES	SPARTA AQUIFER	149	0	0	0	0	0	149
2011	NACOGDOCHES	SPARTA AQUIFER	125	0	0	0	0	0	125
2012	NACOGDOCHES	SPARTA AQUIFER	121	0	0	0	0	0	121
2008	NACOGDOCHES	UNKNOWN	0	0	345	0	0	0	345
2009	NACOGDOCHES	UNKNOWN	0	0	352	0	0	0	352
2010	NACOGDOCHES	UNKNOWN	0	0	359	0	0	0	359
2011	NACOGDOCHES	UNKNOWN	0	0	825	0	0	0	825
2012	NACOGDOCHES	UNKNOWN	0	0	683	0	0	0	683
2006	NACOGDOCHES	YEGUA-JACKSON AQUIFER	19	0	0	0	0	0	19
2007	NACOGDOCHES	YEGUA-JACKSON AQUIFER	15	0	0	0	0	0	15
2008	NACOGDOCHES	YEGUA-JACKSON AQUIFER	17	0	0	0	0	0	17
2009	NACOGDOCHES	YEGUA-JACKSON AQUIFER	21	0	0	0	0	0	21
2010	NACOGDOCHES	YEGUA-JACKSON AQUIFER	25	0	0	0	0	0	25
2011	NACOGDOCHES	YEGUA-JACKSON AQUIFER	21	0	0	0	0	0	21
2012	NACOGDOCHES	YEGUA-JACKSON AQUIFER	20	0	0	0	0	0	20
1980	PANOLA	CARRIZO-WILCOX AQUIFER	2,233	0	244	2	0	708	3,187
1984	PANOLA	CARRIZO-WILCOX AQUIFER	2,316	0	358	125	0	654	3,453
1985	PANOLA	CARRIZO-WILCOX AQUIFER	2,495	15	426	11	0	640	3,587
1986	PANOLA	CARRIZO-WILCOX AQUIFER	2,188	16	3,305	20	0	670	6,199
1987	PANOLA	CARRIZO-WILCOX AQUIFER	2,229	20	989	24	0	695	3,957

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1988	PANOLA	CARRIZO-WILCOX AQUIFER	2,290	20	1,047	16	0	705	4,078
1989	PANOLA	CARRIZO-WILCOX AQUIFER	2,203	19	1,078	17	0	747	4,064
1990	PANOLA	CARRIZO-WILCOX AQUIFER	2,212	59	1,078	17	0	858	4,224
1991	PANOLA	CARRIZO-WILCOX AQUIFER	2,184	14	1,044	155	0	869	4,266
1992	PANOLA	CARRIZO-WILCOX AQUIFER	2,381	20	1,051	0	0	812	4,264
1993	PANOLA	CARRIZO-WILCOX AQUIFER	2,324	20	1,064	0	0	815	4,223
1994	PANOLA	CARRIZO-WILCOX AQUIFER	2,322	20	1,064	0	0	1,090	4,496
1995	PANOLA	CARRIZO-WILCOX AQUIFER	2,395	20	1,045	0	0	1,059	4,519
1996	PANOLA	CARRIZO-WILCOX AQUIFER	2,306	0	1,944	0	0	1,126	5,376
1997	PANOLA	CARRIZO-WILCOX AQUIFER	2,268	0	1,947	0	0	1,128	5,343
1998	PANOLA	CARRIZO-WILCOX AQUIFER	2,186	0	1,947	0	0	1,118	5,251
1999	PANOLA	CARRIZO-WILCOX AQUIFER	2,219	0	1,947	0	0	1,216	5,382
2000	PANOLA	CARRIZO-WILCOX AQUIFER	2,743	0	7	0	0	1,238	3,988
2001	PANOLA	CARRIZO-WILCOX AQUIFER	2,808	921	7	0	0	1,264	5,000
2002	PANOLA	CARRIZO-WILCOX AQUIFER	2,564	473	7	0	0	1,254	4,298
2003	PANOLA	CARRIZO-WILCOX AQUIFER	2,588	513	7	0	0	1,249	4,357
2004	PANOLA	CARRIZO-WILCOX AQUIFER	2,589	424	7	0	0	1,270	4,290
2005	PANOLA	CARRIZO-WILCOX AQUIFER	2,546	498	8	0	0	320	3,372
2006	PANOLA	CARRIZO-WILCOX AQUIFER	3,148	185	7	0	18	333	3,691
2007	PANOLA	CARRIZO-WILCOX AQUIFER	2,689	338	7	0	31	327	3,392
2008	PANOLA	CARRIZO-WILCOX AQUIFER	2,444	260	1	0	64	304	3,073
2009	PANOLA	CARRIZO-WILCOX AQUIFER	2,637	408	1	0	31	314	3,391
2010	PANOLA	CARRIZO-WILCOX AQUIFER	5,203	0	483	0	346	136	6,168
2011	PANOLA	CARRIZO-WILCOX AQUIFER	3,617	0	562	0	383	139	4,701
2012	PANOLA	CARRIZO-WILCOX AQUIFER	3,256	0	518	0	137	96	4,007
2008	PANOLA	UNKNOWN	0	0	1,297	0	0	0	1,297
2009	PANOLA	UNKNOWN	0	0	1,319	0	0	0	1,319
2010	PANOLA	UNKNOWN	0	0	1,340	0	0	0	1,340
2011	PANOLA	UNKNOWN	0	0	629	0	0	0	629
2012	PANOLA	UNKNOWN	0	0	1,050	0	0	0	1,050
1980	RAINS	CARRIZO-WILCOX AQUIFER	166	0	0	0	0	149	315
1984	RAINS	CARRIZO-WILCOX AQUIFER	68	0	0	0	0	211	279
1985	RAINS	CARRIZO-WILCOX AQUIFER	0	0	0	0	0	197	197
1986	RAINS	CARRIZO-WILCOX AQUIFER	0	0	0	0	0	183	183
1987	RAINS	CARRIZO-WILCOX AQUIFER	0	0	0	0	0	200	200
1988	RAINS	CARRIZO-WILCOX AQUIFER	0	0	0	0	0	192	192
1989	RAINS	CARRIZO-WILCOX AQUIFER	0	0	0	0	0	202	202
1990	RAINS	CARRIZO-WILCOX AQUIFER	0	0	0	0	0	252	252
1991	RAINS	CARRIZO-WILCOX AQUIFER	0	0	0	0	0	251	251
1992	RAINS	CARRIZO-WILCOX AQUIFER	0	0	0	0	0	223	223
1993	RAINS	CARRIZO-WILCOX AQUIFER	0	0	0	0	0	217	217
1994	RAINS	CARRIZO-WILCOX AQUIFER	0	0	0	0	0	233	233
1995	RAINS	CARRIZO-WILCOX AQUIFER	0	0	0	0	0	233	233
1996	RAINS	CARRIZO-WILCOX AQUIFER	0	0	0	0	0	229	229
1997	RAINS	CARRIZO-WILCOX AQUIFER	0	0	0	0	0	227	227
1998	RAINS	CARRIZO-WILCOX AQUIFER	0	0	0	0	0	211	211
1999	RAINS	CARRIZO-WILCOX AQUIFER	0	0	0	0	0	220	220
2000	RAINS	CARRIZO-WILCOX AQUIFER	248	0	0	0	0	216	464
2001	RAINS	CARRIZO-WILCOX AQUIFER	265	0	0	0	0	200	465
2002	RAINS	CARRIZO-WILCOX AQUIFER	274	0	0	0	0	182	456
2003	RAINS	CARRIZO-WILCOX AQUIFER	288	0	0	0	0	190	478
2004	RAINS	CARRIZO-WILCOX AQUIFER	269	0	0	0	0	218	487
2005	RAINS	CARRIZO-WILCOX AQUIFER	296	0	0	0	0	28	324
2006	RAINS	CARRIZO-WILCOX AQUIFER	315	0	0	0	0	27	342
2007	RAINS	CARRIZO-WILCOX AQUIFER	261	0	0	0	58	24	343
2008	RAINS	CARRIZO-WILCOX AQUIFER	299	0	0	0	0	24	323
2009	RAINS	CARRIZO-WILCOX AQUIFER	276	0	0	0	0	24	300
2010	RAINS	CARRIZO-WILCOX AQUIFER	819	0	0	0	0	21	840
2011	RAINS	CARRIZO-WILCOX AQUIFER	544	0	0	0	7	21	572
2012	RAINS	CARRIZO-WILCOX AQUIFER	465	0	0	0	53	19	537
1980	RAINS	OTHER AQUIFER	55	0	0	0	0	49	104
1984	RAINS	OTHER AQUIFER	22	0	0	0	0	53	75
1985	RAINS	OTHER AQUIFER	0	0	0	0	0	49	49
1986	RAINS	OTHER AQUIFER	0	0	0	0	0	46	46
1987	RAINS	OTHER AQUIFER	0	0	0	0	0	50	50
1988	RAINS	OTHER AQUIFER	0	0	0	0	0	48	48
1989	RAINS	OTHER AQUIFER	0	0	0	0	0	51	51
1990	RAINS	OTHER AQUIFER	0	0	0	0	0	64	64
1992	RAINS	OTHER AQUIFER	0	0	0	0	0	57	57
1993	RAINS	OTHER AQUIFER	0	0	0	0	0	56	56
1994	RAINS	OTHER AQUIFER	0	0	0	0	0	60	60
1995	RAINS	OTHER AQUIFER	0	0	0	0	0	60	60
1996	RAINS	OTHER AQUIFER	0	0	0	0	0	59	59
1997	RAINS	OTHER AQUIFER	0	0	0	0	0	58	58
1998	RAINS	OTHER AQUIFER	0	0	0	0	0	54	54
1999	RAINS	OTHER AQUIFER	0	0	0	0	0	56	56
2000	RAINS	OTHER AQUIFER	29	0	0	0	0	54	83
2001	RAINS	OTHER AQUIFER	31	0	0	0	0	51	82

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
2002	RAINS	OTHER AQUIFER	32	0	0	0	0	46	78
2003	RAINS	OTHER AQUIFER	33	0	0	0	0	48	81
2004	RAINS	OTHER AQUIFER	31	0	0	0	0	0	31
2005	RAINS	OTHER AQUIFER	34	0	0	0	0	0	34
2006	RAINS	OTHER AQUIFER	36	0	0	0	0	0	36
2007	RAINS	OTHER AQUIFER	30	0	0	0	0	0	30
2008	RAINS	OTHER AQUIFER	34	0	0	0	0	0	34
2009	RAINS	OTHER AQUIFER	32	0	0	0	0	0	32
2010	RAINS	OTHER AQUIFER	30	0	0	0	0	0	30
2011	RAINS	OTHER AQUIFER	28	0	0	0	0	0	28
2012	RAINS	OTHER AQUIFER	24	0	0	0	0	0	24
2008	RAINS	UNKNOWN	0	0	0	0	0	0	0
2009	RAINS	UNKNOWN	0	0	0	0	0	0	0
2010	RAINS	UNKNOWN	0	0	0	0	0	0	0
2011	RAINS	UNKNOWN	0	0	0	0	0	0	0
1980	RUSK	CARRIZO-WILCOX AQUIFER	4,725	0	562	0	0	558	5,845
1984	RUSK	CARRIZO-WILCOX AQUIFER	4,364	0	1,604	0	33	535	6,536
1985	RUSK	CARRIZO-WILCOX AQUIFER	5,459	0	2,286	0	38	479	8,262
1986	RUSK	CARRIZO-WILCOX AQUIFER	5,097	0	2,389	0	19	451	7,956
1987	RUSK	CARRIZO-WILCOX AQUIFER	4,944	0	1,928	0	19	430	7,321
1988	RUSK	CARRIZO-WILCOX AQUIFER	5,527	0	1,855	0	19	447	7,848
1989	RUSK	CARRIZO-WILCOX AQUIFER	5,295	0	1,890	0	32	455	7,672
1990	RUSK	CARRIZO-WILCOX AQUIFER	5,353	0	1,702	0	27	479	7,561
1991	RUSK	CARRIZO-WILCOX AQUIFER	5,225	0	1,142	18	27	487	6,899
1992	RUSK	CARRIZO-WILCOX AQUIFER	5,254	0	1,133	24	27	468	6,906
1993	RUSK	CARRIZO-WILCOX AQUIFER	5,514	0	1,106	23	149	479	7,271
1994	RUSK	CARRIZO-WILCOX AQUIFER	5,275	0	1,077	18	38	441	6,849
1995	RUSK	CARRIZO-WILCOX AQUIFER	5,968	0	1,093	20	151	391	7,623
1996	RUSK	CARRIZO-WILCOX AQUIFER	6,199	0	1,093	179	149	333	7,953
1997	RUSK	CARRIZO-WILCOX AQUIFER	5,863	0	1,105	14	149	346	7,477
1998	RUSK	CARRIZO-WILCOX AQUIFER	6,135	0	1,105	18	149	401	7,808
1999	RUSK	CARRIZO-WILCOX AQUIFER	5,621	0	1,105	18	149	433	7,326
2000	RUSK	CARRIZO-WILCOX AQUIFER	7,154	0	38	11	18	436	7,657
2001	RUSK	CARRIZO-WILCOX AQUIFER	6,526	184	7	12	49	221	6,999
2002	RUSK	CARRIZO-WILCOX AQUIFER	6,635	143	6	97	49	217	7,147
2003	RUSK	CARRIZO-WILCOX AQUIFER	6,724	150	6	99	73	201	7,253
2004	RUSK	CARRIZO-WILCOX AQUIFER	6,696	176	6	113	92	221	7,304
2005	RUSK	CARRIZO-WILCOX AQUIFER	6,644	210	3	0	92	231	7,180
2006	RUSK	CARRIZO-WILCOX AQUIFER	6,887	188	0	287	100	202	7,664
2007	RUSK	CARRIZO-WILCOX AQUIFER	6,137	71	0	356	25	216	6,805
2008	RUSK	CARRIZO-WILCOX AQUIFER	6,529	188	0	147	29	209	7,102
2009	RUSK	CARRIZO-WILCOX AQUIFER	6,347	196	0	183	0	194	6,920
2010	RUSK	CARRIZO-WILCOX AQUIFER	6,822	0	173	358	0	224	7,577
2011	RUSK	CARRIZO-WILCOX AQUIFER	8,226	0	160	1,023	172	223	9,804
2012	RUSK	CARRIZO-WILCOX AQUIFER	7,399	0	115	245	69	180	8,008
2001	RUSK	OTHER AQUIFER	0	0	0	0	0	0	0
2002	RUSK	OTHER AQUIFER	0	0	0	0	0	0	0
2006	RUSK	OTHER AQUIFER	44	0	0	0	0	0	44
2007	RUSK	OTHER AQUIFER	36	0	0	0	0	0	36
2008	RUSK	OTHER AQUIFER	40	0	0	0	0	0	40
2009	RUSK	OTHER AQUIFER	52	0	0	0	0	0	52
2010	RUSK	OTHER AQUIFER	64	0	0	0	0	0	64
2011	RUSK	OTHER AQUIFER	68	0	0	0	136	0	204
2012	RUSK	OTHER AQUIFER	64	0	0	2,132	54	0	2,250
1980	RUSK	QUEEN CITY AQUIFER	67	0	72	0	0	35	174
1984	RUSK	QUEEN CITY AQUIFER	32	0	86	0	0	31	149
1985	RUSK	QUEEN CITY AQUIFER	32	0	206	0	0	28	266
1986	RUSK	QUEEN CITY AQUIFER	25	0	195	0	0	27	247
1987	RUSK	QUEEN CITY AQUIFER	22	0	183	0	0	25	230
1988	RUSK	QUEEN CITY AQUIFER	30	0	165	0	0	26	221
1989	RUSK	QUEEN CITY AQUIFER	41	0	153	0	0	27	221
1990	RUSK	QUEEN CITY AQUIFER	39	0	153	0	0	28	220
1991	RUSK	QUEEN CITY AQUIFER	45	0	99	0	0	28	172
1992	RUSK	QUEEN CITY AQUIFER	44	0	99	0	0	27	170
1993	RUSK	QUEEN CITY AQUIFER	48	0	96	0	0	28	172
1994	RUSK	QUEEN CITY AQUIFER	32	0	96	0	0	26	154
1995	RUSK	QUEEN CITY AQUIFER	35	0	96	0	0	23	154
1996	RUSK	QUEEN CITY AQUIFER	26	0	96	0	0	20	142
1997	RUSK	QUEEN CITY AQUIFER	26	0	96	0	0	21	143
1998	RUSK	QUEEN CITY AQUIFER	27	0	96	0	0	24	147
1999	RUSK	QUEEN CITY AQUIFER	25	0	96	0	0	26	147
2000	RUSK	QUEEN CITY AQUIFER	5	0	0	0	0	26	31
2001	RUSK	QUEEN CITY AQUIFER	5	0	0	0	0	15	20
2002	RUSK	QUEEN CITY AQUIFER	4	0	0	0	0	14	18
2003	RUSK	QUEEN CITY AQUIFER	5	0	0	0	0	14	19
2004	RUSK	QUEEN CITY AQUIFER	4	0	0	0	0	0	4
2005	RUSK	QUEEN CITY AQUIFER	5	0	0	0	0	0	5
2008	RUSK	UNKNOWN	0	0	1,233	0	0	0	1,233

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
2009	RUSK	UNKNOWN	0	0	1,059	0	0	0	1,059
2010	RUSK	UNKNOWN	0	0	885	0	0	0	885
2011	RUSK	UNKNOWN	0	0	387	0	0	0	387
2012	RUSK	UNKNOWN	0	0	310	0	0	0	310
1980	SABINE	CARRIZO-WILCOX AQUIFER	214	0	0	0	0	65	279
1984	SABINE	CARRIZO-WILCOX AQUIFER	81	0	0	0	0	64	145
1985	SABINE	CARRIZO-WILCOX AQUIFER	48	0	0	0	0	57	105
1986	SABINE	CARRIZO-WILCOX AQUIFER	46	0	0	0	0	60	106
1987	SABINE	CARRIZO-WILCOX AQUIFER	44	0	0	0	0	73	117
1988	SABINE	CARRIZO-WILCOX AQUIFER	46	0	0	0	50	75	171
1989	SABINE	CARRIZO-WILCOX AQUIFER	72	0	0	0	0	76	148
1990	SABINE	CARRIZO-WILCOX AQUIFER	77	0	0	0	0	84	161
1991	SABINE	CARRIZO-WILCOX AQUIFER	72	0	0	0	0	86	158
1992	SABINE	CARRIZO-WILCOX AQUIFER	82	0	0	0	0	74	156
1993	SABINE	CARRIZO-WILCOX AQUIFER	94	0	0	0	0	77	171
1994	SABINE	CARRIZO-WILCOX AQUIFER	102	0	0	0	0	28	130
1995	SABINE	CARRIZO-WILCOX AQUIFER	91	0	0	0	0	22	113
1996	SABINE	CARRIZO-WILCOX AQUIFER	97	0	0	0	0	20	117
1997	SABINE	CARRIZO-WILCOX AQUIFER	90	0	0	0	0	46	136
1998	SABINE	CARRIZO-WILCOX AQUIFER	116	0	0	0	0	97	213
1999	SABINE	CARRIZO-WILCOX AQUIFER	63	0	0	0	0	92	155
2000	SABINE	CARRIZO-WILCOX AQUIFER	245	0	0	0	0	116	361
2001	SABINE	CARRIZO-WILCOX AQUIFER	250	0	0	0	0	102	352
2002	SABINE	CARRIZO-WILCOX AQUIFER	292	0	0	0	0	103	395
2003	SABINE	CARRIZO-WILCOX AQUIFER	375	0	0	0	0	110	485
2004	SABINE	CARRIZO-WILCOX AQUIFER	352	0	0	0	0	85	437
2005	SABINE	CARRIZO-WILCOX AQUIFER	389	0	0	0	0	45	434
2006	SABINE	CARRIZO-WILCOX AQUIFER	107	0	0	0	0	46	153
2007	SABINE	CARRIZO-WILCOX AQUIFER	223	0	0	0	0	45	268
2008	SABINE	CARRIZO-WILCOX AQUIFER	200	0	0	0	0	55	255
2009	SABINE	CARRIZO-WILCOX AQUIFER	532	0	0	0	0	57	589
2010	SABINE	CARRIZO-WILCOX AQUIFER	177	0	0	0	0	7	184
2011	SABINE	CARRIZO-WILCOX AQUIFER	323	0	0	0	0	7	330
2012	SABINE	CARRIZO-WILCOX AQUIFER	279	0	0	0	0	6	285
2006	SABINE	GULF COAST AQUIFER	5	0	0	0	0	0	5
2007	SABINE	GULF COAST AQUIFER	4	0	0	0	0	0	4
2008	SABINE	GULF COAST AQUIFER	148	0	0	0	0	0	148
2009	SABINE	GULF COAST AQUIFER	11	0	0	0	0	0	11
2010	SABINE	GULF COAST AQUIFER	18	0	0	0	0	0	18
2011	SABINE	GULF COAST AQUIFER	20	0	0	0	0	0	20
2012	SABINE	GULF COAST AQUIFER	18	0	0	0	0	0	18
1980	SABINE	OTHER AQUIFER	415	132	0	0	0	42	589
1984	SABINE	OTHER AQUIFER	264	433	0	0	0	40	737
1985	SABINE	OTHER AQUIFER	273	417	0	0	0	36	726
1986	SABINE	OTHER AQUIFER	255	420	0	0	0	38	713
1987	SABINE	OTHER AQUIFER	274	457	0	0	0	46	777
1988	SABINE	OTHER AQUIFER	312	418	0	0	0	47	777
1989	SABINE	OTHER AQUIFER	322	432	0	0	0	48	802
1990	SABINE	OTHER AQUIFER	330	374	0	0	0	53	757
1991	SABINE	OTHER AQUIFER	319	364	0	0	0	54	737
1992	SABINE	OTHER AQUIFER	281	402	0	0	0	47	730
1993	SABINE	OTHER AQUIFER	294	455	0	0	0	49	798
1994	SABINE	OTHER AQUIFER	287	512	0	0	0	18	817
1995	SABINE	OTHER AQUIFER	271	451	0	0	0	14	736
1996	SABINE	OTHER AQUIFER	285	368	0	0	0	13	666
1997	SABINE	OTHER AQUIFER	276	374	0	0	0	29	679
1998	SABINE	OTHER AQUIFER	356	260	0	0	0	61	677
1999	SABINE	OTHER AQUIFER	192	158	0	0	0	58	408
2000	SABINE	OTHER AQUIFER	327	214	0	0	0	20	561
2001	SABINE	OTHER AQUIFER	270	225	0	0	0	4	499
2002	SABINE	OTHER AQUIFER	258	242	0	0	0	4	504
2003	SABINE	OTHER AQUIFER	218	140	0	0	0	4	362
2004	SABINE	OTHER AQUIFER	205	95	0	0	0	0	300
2005	SABINE	OTHER AQUIFER	306	130	0	0	0	0	436
2006	SABINE	OTHER AQUIFER	193	93	0	0	0	0	286
2007	SABINE	OTHER AQUIFER	194	93	0	0	0	0	287
2008	SABINE	OTHER AQUIFER	198	0	0	0	0	0	198
2009	SABINE	OTHER AQUIFER	30	0	0	0	0	0	30
2010	SABINE	OTHER AQUIFER	48	0	0	0	0	0	48
2011	SABINE	OTHER AQUIFER	52	0	0	0	0	0	52
2012	SABINE	OTHER AQUIFER	122	0	0	0	0	0	122
1980	SABINE	SPARTA AQUIFER	160	0	0	0	0	35	195
1984	SABINE	SPARTA AQUIFER	44	0	0	0	0	34	78
1985	SABINE	SPARTA AQUIFER	38	0	0	0	0	31	69
1986	SABINE	SPARTA AQUIFER	37	0	0	0	0	33	70
1987	SABINE	SPARTA AQUIFER	38	0	0	0	0	40	78
1988	SABINE	SPARTA AQUIFER	39	0	0	0	0	40	79
1989	SABINE	SPARTA AQUIFER	41	0	0	0	0	41	82

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
1990	SABINE	SPARTA AQUIFER	42	0	0	0	0	45	87
1991	SABINE	SPARTA AQUIFER	40	0	0	0	0	46	86
1992	SABINE	SPARTA AQUIFER	42	0	0	0	0	40	82
1993	SABINE	SPARTA AQUIFER	45	0	0	0	0	41	86
1994	SABINE	SPARTA AQUIFER	46	0	0	0	0	15	61
1995	SABINE	SPARTA AQUIFER	31	0	0	0	0	12	43
1996	SABINE	SPARTA AQUIFER	31	0	0	0	0	11	42
1997	SABINE	SPARTA AQUIFER	30	0	0	0	0	25	55
1998	SABINE	SPARTA AQUIFER	39	0	0	0	0	52	91
1999	SABINE	SPARTA AQUIFER	21	0	0	0	0	50	71
2000	SABINE	SPARTA AQUIFER	3	0	0	0	0	63	66
2001	SABINE	SPARTA AQUIFER	3	0	0	0	0	52	55
2002	SABINE	SPARTA AQUIFER	3	0	0	0	0	52	55
2003	SABINE	SPARTA AQUIFER	3	0	0	0	0	56	59
2004	SABINE	SPARTA AQUIFER	3	0	0	0	0	27	30
2005	SABINE	SPARTA AQUIFER	3	0	0	0	0	15	18
2006	SABINE	SPARTA AQUIFER	15	0	0	0	0	15	30
2007	SABINE	SPARTA AQUIFER	12	0	0	0	0	15	27
2008	SABINE	SPARTA AQUIFER	14	0	0	0	0	27	41
2009	SABINE	SPARTA AQUIFER	34	0	0	0	0	28	62
2010	SABINE	SPARTA AQUIFER	56	0	0	0	0	3	59
2011	SABINE	SPARTA AQUIFER	61	0	0	0	0	3	64
2012	SABINE	SPARTA AQUIFER	57	0	0	0	0	2	59
2008	SABINE	UNKNOWN	0	0	138	0	0	0	138
2009	SABINE	UNKNOWN	0	0	201	0	0	0	201
2010	SABINE	UNKNOWN	0	0	264	0	0	0	264
2011	SABINE	UNKNOWN	0	0	222	0	0	0	222
2012	SABINE	UNKNOWN	0	0	37	0	0	0	37
2000	SABINE	YEGUA-JACKSON AQUIFER	0	0	0	0	0	53	53
2001	SABINE	YEGUA-JACKSON AQUIFER	0	0	0	0	0	50	50
2002	SABINE	YEGUA-JACKSON AQUIFER	0	0	0	0	0	51	51
2003	SABINE	YEGUA-JACKSON AQUIFER	0	0	0	0	0	54	54
2004	SABINE	YEGUA-JACKSON AQUIFER	0	0	0	0	0	118	118
2005	SABINE	YEGUA-JACKSON AQUIFER	0	0	0	0	0	62	62
2006	SABINE	YEGUA-JACKSON AQUIFER	127	0	0	0	0	63	190
2007	SABINE	YEGUA-JACKSON AQUIFER	105	0	0	0	0	62	167
2008	SABINE	YEGUA-JACKSON AQUIFER	117	0	0	0	0	30	147
2009	SABINE	YEGUA-JACKSON AQUIFER	294	0	0	0	0	31	325
2010	SABINE	YEGUA-JACKSON AQUIFER	706	0	0	0	0	8	714
2011	SABINE	YEGUA-JACKSON AQUIFER	608	0	0	0	0	8	616
2012	SABINE	YEGUA-JACKSON AQUIFER	581	0	0	0	0	6	587
1980	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	283	0	0	0	0	79	362
1984	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	131	0	0	0	0	67	198
1985	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	122	0	0	0	0	60	182
1986	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	134	0	0	0	0	68	202
1987	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	126	0	0	0	0	74	200
1988	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	135	0	0	0	100	76	311
1989	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	144	0	0	0	0	77	221
1990	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	140	0	0	0	0	85	225
1991	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	106	0	0	0	0	87	193
1992	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	88	0	0	0	0	93	181
1993	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	95	0	0	0	39	93	227
1994	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	99	3	0	0	75	31	208
1995	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	115	3	0	0	77	33	228
1996	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	87	3	0	0	77	29	196
1997	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	102	2	0	0	77	53	234
1998	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	106	2	0	0	77	103	288
1999	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	108	3	0	0	77	98	286
2000	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	241	3	0	0	112	128	484
2001	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	289	4	0	0	82	83	458
2002	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	294	4	0	0	82	84	464
2003	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	381	5	0	0	50	83	519
2004	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	276	3	0	0	50	131	460
2005	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	359	3	0	0	50	40	452
2006	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	309	3	0	0	63	40	415
2007	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	298	5	0	0	0	42	345
2008	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	329	4	0	0	0	109	442
2009	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	352	6	0	0	0	111	469
2010	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	386	5	0	0	0	27	418
2011	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	416	4	0	0	14	27	461
2012	SAN AUGUSTINE	CARRIZO-WILCOX AQUIFER	395	3	0	0	0	26	424
1980	SAN AUGUSTINE	OTHER AQUIFER	300	0	0	0	0	101	401
1984	SAN AUGUSTINE	OTHER AQUIFER	249	0	0	0	0	85	334
1985	SAN AUGUSTINE	OTHER AQUIFER	245	0	0	0	0	77	322
1986	SAN AUGUSTINE	OTHER AQUIFER	248	0	0	0	0	87	335
1987	SAN AUGUSTINE	OTHER AQUIFER	234	0	0	0	0	94	328
1988	SAN AUGUSTINE	OTHER AQUIFER	240	0	0	0	0	97	337
1989	SAN AUGUSTINE	OTHER AQUIFER	227	0	0	0	0	99	326

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
1990	SAN AUGUSTINE	OTHER AQUIFER	217	0	0	0	0	110	327
1991	SAN AUGUSTINE	OTHER AQUIFER	176	0	0	0	0	113	289
1992	SAN AUGUSTINE	OTHER AQUIFER	197	0	0	0	0	120	317
1993	SAN AUGUSTINE	OTHER AQUIFER	220	0	0	0	0	121	341
1994	SAN AUGUSTINE	OTHER AQUIFER	231	0	0	0	0	40	271
1995	SAN AUGUSTINE	OTHER AQUIFER	250	0	0	0	0	44	294
1996	SAN AUGUSTINE	OTHER AQUIFER	240	0	0	0	0	38	278
1997	SAN AUGUSTINE	OTHER AQUIFER	253	0	0	0	0	69	322
1998	SAN AUGUSTINE	OTHER AQUIFER	264	0	0	0	0	134	398
1999	SAN AUGUSTINE	OTHER AQUIFER	267	0	0	0	0	128	395
2000	SAN AUGUSTINE	OTHER AQUIFER	411	0	0	0	0	167	578
2001	SAN AUGUSTINE	OTHER AQUIFER	338	0	0	0	0	160	498
2002	SAN AUGUSTINE	OTHER AQUIFER	342	0	0	0	0	160	502
2003	SAN AUGUSTINE	OTHER AQUIFER	310	0	0	0	0	159	469
2004	SAN AUGUSTINE	OTHER AQUIFER	305	0	0	0	0	40	345
2005	SAN AUGUSTINE	OTHER AQUIFER	316	0	0	0	0	12	328
2006	SAN AUGUSTINE	OTHER AQUIFER	194	0	0	0	0	12	206
2007	SAN AUGUSTINE	OTHER AQUIFER	188	0	0	0	0	13	201
2008	SAN AUGUSTINE	OTHER AQUIFER	98	0	0	0	0	0	98
2009	SAN AUGUSTINE	OTHER AQUIFER	109	0	0	0	0	0	109
2010	SAN AUGUSTINE	OTHER AQUIFER	119	0	0	0	0	7	126
2011	SAN AUGUSTINE	OTHER AQUIFER	124	0	0	0	0	7	131
2012	SAN AUGUSTINE	OTHER AQUIFER	118	0	0	0	0	6	124
1980	SAN AUGUSTINE	SPARTA AQUIFER	51	0	0	0	0	50	101
1984	SAN AUGUSTINE	SPARTA AQUIFER	59	0	0	0	0	43	102
1985	SAN AUGUSTINE	SPARTA AQUIFER	50	0	0	0	0	38	88
1986	SAN AUGUSTINE	SPARTA AQUIFER	58	0	0	0	0	43	101
1987	SAN AUGUSTINE	SPARTA AQUIFER	48	0	0	0	0	47	95
1988	SAN AUGUSTINE	SPARTA AQUIFER	42	0	0	0	0	48	90
1989	SAN AUGUSTINE	SPARTA AQUIFER	41	0	0	0	0	49	90
1990	SAN AUGUSTINE	SPARTA AQUIFER	37	0	0	0	0	54	91
1991	SAN AUGUSTINE	SPARTA AQUIFER	28	0	0	0	0	55	83
1992	SAN AUGUSTINE	SPARTA AQUIFER	29	0	0	0	0	58	87
1993	SAN AUGUSTINE	SPARTA AQUIFER	37	0	0	0	39	58	134
1994	SAN AUGUSTINE	SPARTA AQUIFER	47	0	0	0	0	19	66
1995	SAN AUGUSTINE	SPARTA AQUIFER	42	0	0	0	0	21	63
1996	SAN AUGUSTINE	SPARTA AQUIFER	32	0	0	0	0	18	50
1997	SAN AUGUSTINE	SPARTA AQUIFER	32	0	0	0	0	33	65
1998	SAN AUGUSTINE	SPARTA AQUIFER	33	0	0	0	0	64	97
1999	SAN AUGUSTINE	SPARTA AQUIFER	34	0	0	0	0	61	95
2000	SAN AUGUSTINE	SPARTA AQUIFER	29	0	0	0	0	80	109
2001	SAN AUGUSTINE	SPARTA AQUIFER	30	0	0	0	0	76	106
2002	SAN AUGUSTINE	SPARTA AQUIFER	31	0	0	0	0	77	108
2003	SAN AUGUSTINE	SPARTA AQUIFER	26	0	0	0	0	76	102
2004	SAN AUGUSTINE	SPARTA AQUIFER	25	0	0	0	0	159	184
2005	SAN AUGUSTINE	SPARTA AQUIFER	27	0	0	0	0	49	76
2006	SAN AUGUSTINE	SPARTA AQUIFER	95	0	0	0	0	49	144
2007	SAN AUGUSTINE	SPARTA AQUIFER	78	0	0	0	0	52	130
2008	SAN AUGUSTINE	SPARTA AQUIFER	85	0	0	0	0	0	85
2009	SAN AUGUSTINE	SPARTA AQUIFER	113	0	0	0	0	0	113
2010	SAN AUGUSTINE	SPARTA AQUIFER	142	0	0	0	0	27	169
2011	SAN AUGUSTINE	SPARTA AQUIFER	158	0	0	0	0	27	185
2012	SAN AUGUSTINE	SPARTA AQUIFER	150	0	0	0	0	25	175
2008	SAN AUGUSTINE	UNKNOWN	0	0	53	0	0	0	53
2009	SAN AUGUSTINE	UNKNOWN	0	0	167	0	0	0	167
2010	SAN AUGUSTINE	UNKNOWN	0	0	281	0	0	0	281
2011	SAN AUGUSTINE	UNKNOWN	0	0	984	0	0	0	984
2012	SAN AUGUSTINE	UNKNOWN	0	0	369	0	0	0	369
2006	SAN AUGUSTINE	YEGUA-JACKSON AQUIFER	110	0	0	0	0	0	110
2007	SAN AUGUSTINE	YEGUA-JACKSON AQUIFER	91	0	0	0	0	0	91
2008	SAN AUGUSTINE	YEGUA-JACKSON AQUIFER	99	0	0	0	0	0	99
2009	SAN AUGUSTINE	YEGUA-JACKSON AQUIFER	132	0	0	0	0	0	132
2010	SAN AUGUSTINE	YEGUA-JACKSON AQUIFER	166	0	0	0	0	0	166
2011	SAN AUGUSTINE	YEGUA-JACKSON AQUIFER	184	0	0	0	0	0	184
2012	SAN AUGUSTINE	YEGUA-JACKSON AQUIFER	175	0	0	0	0	0	175
1980	SHELBY	CARRIZO-WILCOX AQUIFER	2,015	23	0	0	0	748	2,786
1984	SHELBY	CARRIZO-WILCOX AQUIFER	2,661	2	0	0	5	584	3,252
1985	SHELBY	CARRIZO-WILCOX AQUIFER	1,891	4	0	0	12	561	2,468
1986	SHELBY	CARRIZO-WILCOX AQUIFER	1,645	4	0	0	13	588	2,250
1987	SHELBY	CARRIZO-WILCOX AQUIFER	1,753	0	0	0	13	664	2,430
1988	SHELBY	CARRIZO-WILCOX AQUIFER	1,439	0	0	0	39	684	2,162
1989	SHELBY	CARRIZO-WILCOX AQUIFER	1,591	0	0	0	11	721	2,323
1990	SHELBY	CARRIZO-WILCOX AQUIFER	1,600	52	0	0	12	785	2,449
1991	SHELBY	CARRIZO-WILCOX AQUIFER	1,673	66	0	0	12	801	2,552
1992	SHELBY	CARRIZO-WILCOX AQUIFER	1,875	63	0	0	12	779	2,729
1993	SHELBY	CARRIZO-WILCOX AQUIFER	1,681	49	0	0	29	781	2,540
1994	SHELBY	CARRIZO-WILCOX AQUIFER	1,568	57	0	0	32	1,107	2,764
1995	SHELBY	CARRIZO-WILCOX AQUIFER	1,501	45	0	0	29	1,137	2,712

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
1996	SHELBY	CARRIZO-WILCOX AQUIFER	1,478	50	0	0	29	1,161	2,718
1997	SHELBY	CARRIZO-WILCOX AQUIFER	1,494	57	0	0	29	1,201	2,781
1998	SHELBY	CARRIZO-WILCOX AQUIFER	1,623	62	0	0	29	1,231	2,945
1999	SHELBY	CARRIZO-WILCOX AQUIFER	1,716	71	0	0	29	1,329	3,145
2000	SHELBY	CARRIZO-WILCOX AQUIFER	2,351	64	0	0	26	1,393	3,834
2001	SHELBY	CARRIZO-WILCOX AQUIFER	1,975	48	0	0	20	1,048	3,091
2002	SHELBY	CARRIZO-WILCOX AQUIFER	1,927	36	0	0	24	1,051	3,038
2003	SHELBY	CARRIZO-WILCOX AQUIFER	1,913	14	0	0	22	1,074	3,023
2004	SHELBY	CARRIZO-WILCOX AQUIFER	1,931	1	0	0	20	1,099	3,051
2005	SHELBY	CARRIZO-WILCOX AQUIFER	2,155	1	0	0	23	562	2,741
2006	SHELBY	CARRIZO-WILCOX AQUIFER	2,062	1	0	0	27	588	2,678
2007	SHELBY	CARRIZO-WILCOX AQUIFER	1,888	0	0	0	20	579	2,487
2008	SHELBY	CARRIZO-WILCOX AQUIFER	1,757	0	0	0	25	530	2,312
2009	SHELBY	CARRIZO-WILCOX AQUIFER	2,046	0	0	0	0	571	2,617
2010	SHELBY	CARRIZO-WILCOX AQUIFER	2,484	0	0	0	0	459	2,943
2011	SHELBY	CARRIZO-WILCOX AQUIFER	2,910	0	0	0	13	452	3,375
2012	SHELBY	CARRIZO-WILCOX AQUIFER	2,731	0	0	0	8	437	3,176
2008	SHELBY	UNKNOWN	0	0	77	0	0	0	77
2009	SHELBY	UNKNOWN	0	0	359	0	0	0	359
2010	SHELBY	UNKNOWN	0	0	640	0	0	0	640
2011	SHELBY	UNKNOWN	0	0	1,380	0	0	0	1,380
2012	SHELBY	UNKNOWN	0	0	240	0	0	0	240
1980	SMITH	CARRIZO-WILCOX AQUIFER	16,100	10	329	0	25	90	16,554
1984	SMITH	CARRIZO-WILCOX AQUIFER	17,466	1,004	358	0	0	108	18,936
1985	SMITH	CARRIZO-WILCOX AQUIFER	17,215	1,020	506	0	0	91	18,832
1986	SMITH	CARRIZO-WILCOX AQUIFER	16,672	853	499	0	0	97	18,121
1987	SMITH	CARRIZO-WILCOX AQUIFER	17,175	744	465	0	0	91	18,475
1988	SMITH	CARRIZO-WILCOX AQUIFER	23,727	662	473	0	92	96	25,050
1989	SMITH	CARRIZO-WILCOX AQUIFER	16,878	637	441	0	20	99	18,075
1990	SMITH	CARRIZO-WILCOX AQUIFER	14,728	464	441	0	5	102	15,740
1991	SMITH	CARRIZO-WILCOX AQUIFER	14,744	390	435	0	5	104	15,678
1992	SMITH	CARRIZO-WILCOX AQUIFER	15,972	377	435	0	5	93	16,882
1993	SMITH	CARRIZO-WILCOX AQUIFER	17,194	328	422	0	57	87	18,088
1994	SMITH	CARRIZO-WILCOX AQUIFER	17,752	406	422	0	62	95	18,737
1995	SMITH	CARRIZO-WILCOX AQUIFER	19,503	418	161	0	56	89	20,227
1996	SMITH	CARRIZO-WILCOX AQUIFER	19,278	457	167	0	62	79	20,043
1997	SMITH	CARRIZO-WILCOX AQUIFER	18,764	406	167	0	62	79	19,478
1998	SMITH	CARRIZO-WILCOX AQUIFER	20,340	343	164	0	62	90	20,999
1999	SMITH	CARRIZO-WILCOX AQUIFER	20,937	387	165	0	62	100	21,651
2000	SMITH	CARRIZO-WILCOX AQUIFER	21,988	0	0	0	129	95	22,212
2001	SMITH	CARRIZO-WILCOX AQUIFER	21,336	0	0	0	86	49	21,471
2002	SMITH	CARRIZO-WILCOX AQUIFER	20,440	0	0	0	86	45	20,571
2003	SMITH	CARRIZO-WILCOX AQUIFER	20,815	263	0	0	79	42	21,199
2004	SMITH	CARRIZO-WILCOX AQUIFER	19,198	310	0	0	109	58	19,675
2005	SMITH	CARRIZO-WILCOX AQUIFER	19,771	289	0	0	103	152	20,315
2006	SMITH	CARRIZO-WILCOX AQUIFER	20,230	361	0	0	249	166	21,006
2007	SMITH	CARRIZO-WILCOX AQUIFER	19,611	453	0	0	0	168	20,232
2008	SMITH	CARRIZO-WILCOX AQUIFER	21,683	361	0	0	0	100	22,144
2009	SMITH	CARRIZO-WILCOX AQUIFER	11,334	196	0	0	251	128	11,909
2010	SMITH	CARRIZO-WILCOX AQUIFER	9,615	179	0	0	38	177	10,009
2011	SMITH	CARRIZO-WILCOX AQUIFER	13,990	154	0	0	180	178	13,502
2012	SMITH	CARRIZO-WILCOX AQUIFER	21,868	156	263	0	41	128	22,456
1992	SMITH	OTHER AQUIFER	0	58	0	0	0	0	58
1993	SMITH	OTHER AQUIFER	0	46	0	0	0	0	46
1994	SMITH	OTHER AQUIFER	0	49	0	0	0	0	49
1995	SMITH	OTHER AQUIFER	0	59	0	0	0	0	59
1996	SMITH	OTHER AQUIFER	0	40	0	0	0	0	40
1997	SMITH	OTHER AQUIFER	0	51	0	0	0	0	51
1998	SMITH	OTHER AQUIFER	0	7	0	0	0	0	7
1999	SMITH	OTHER AQUIFER	0	62	0	0	0	0	62
2000	SMITH	OTHER AQUIFER	0	57	0	0	0	0	57
2001	SMITH	OTHER AQUIFER	0	70	0	0	0	0	70
2002	SMITH	OTHER AQUIFER	0	71	0	0	0	0	71
2003	SMITH	OTHER AQUIFER	0	71	0	0	0	0	71
2008	SMITH	OTHER AQUIFER	0	133	0	0	0	0	133
2009	SMITH	OTHER AQUIFER	0	162	0	0	0	0	162
2010	SMITH	OTHER AQUIFER	0	180	0	0	0	0	180
2011	SMITH	OTHER AQUIFER	0	167	0	0	0	0	167
2012	SMITH	OTHER AQUIFER	0	120	0	0	0	0	120
1980	SMITH	QUEEN CITY AQUIFER	378	0	360	0	25	333	1,096
1984	SMITH	QUEEN CITY AQUIFER	343	44	147	0	0	403	937
1985	SMITH	QUEEN CITY AQUIFER	307	35	309	0	0	339	990
1986	SMITH	QUEEN CITY AQUIFER	312	32	273	0	0	367	984
1987	SMITH	QUEEN CITY AQUIFER	274	0	257	0	228	339	1,098
1988	SMITH	QUEEN CITY AQUIFER	288	0	266	0	91	358	1,003
1989	SMITH	QUEEN CITY AQUIFER	252	0	248	0	19	371	890
1990	SMITH	QUEEN CITY AQUIFER	518	0	248	0	5	381	1,152
1991	SMITH	QUEEN CITY AQUIFER	486	0	245	0	5	387	1,123

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
1992	SMITH	QUEEN CITY AQUIFER	473	0	245	0	5	349	1,072
1993	SMITH	QUEEN CITY AQUIFER	507	0	238	0	57	326	1,128
1994	SMITH	QUEEN CITY AQUIFER	444	0	238	0	51	356	1,089
1995	SMITH	QUEEN CITY AQUIFER	680	0	90	0	44	332	1,146
1996	SMITH	QUEEN CITY AQUIFER	658	0	92	0	50	295	1,095
1997	SMITH	QUEEN CITY AQUIFER	589	0	92	0	50	295	1,026
1998	SMITH	QUEEN CITY AQUIFER	638	0	91	0	50	337	1,116
1999	SMITH	QUEEN CITY AQUIFER	658	0	92	0	50	372	1,172
2000	SMITH	QUEEN CITY AQUIFER	76	0	0	0	54	352	482
2001	SMITH	QUEEN CITY AQUIFER	75	0	0	0	34	201	310
2002	SMITH	QUEEN CITY AQUIFER	71	0	0	0	34	187	292
2003	SMITH	QUEEN CITY AQUIFER	74	0	0	0	31	175	280
2004	SMITH	QUEEN CITY AQUIFER	74	0	0	0	61	163	298
2005	SMITH	QUEEN CITY AQUIFER	83	0	0	0	57	430	570
2006	SMITH	QUEEN CITY AQUIFER	615	0	0	0	139	470	1,224
2007	SMITH	QUEEN CITY AQUIFER	517	0	0	0	0	476	993
2008	SMITH	QUEEN CITY AQUIFER	586	0	0	0	0	433	1,019
2009	SMITH	QUEEN CITY AQUIFER	941	0	0	0	141	327	1,409
2010	SMITH	QUEEN CITY AQUIFER	2,436	0	0	0	22	424	2,882
2011	SMITH	QUEEN CITY AQUIFER	2,415	0	0	0	101	427	2,943
2012	SMITH	QUEEN CITY AQUIFER	2,339	0	0	0	23	306	2,668
2000	SMITH	SPARTA AQUIFER	0	0	0	0	25	0	25
2001	SMITH	SPARTA AQUIFER	0	0	0	0	17	0	17
2002	SMITH	SPARTA AQUIFER	0	0	0	0	17	0	17
2003	SMITH	SPARTA AQUIFER	0	0	0	0	16	0	16
2004	SMITH	SPARTA AQUIFER	0	0	0	0	24	0	24
2005	SMITH	SPARTA AQUIFER	0	0	0	0	22	0	22
2006	SMITH	SPARTA AQUIFER	400	0	0	0	54	0	454
2007	SMITH	SPARTA AQUIFER	335	0	0	0	0	0	335
2008	SMITH	SPARTA AQUIFER	378	0	0	0	0	0	378
2009	SMITH	SPARTA AQUIFER	614	0	0	0	26	0	640
2010	SMITH	SPARTA AQUIFER	857	0	0	0	4	0	861
2011	SMITH	SPARTA AQUIFER	961	0	0	0	19	0	980
2012	SMITH	SPARTA AQUIFER	957	0	0	0	4	0	961
2008	SMITH	UNKNOWN	0	0	97	0	0	0	97
2009	SMITH	UNKNOWN	0	0	101	0	0	0	101
2010	SMITH	UNKNOWN	0	0	105	0	0	0	105
2011	SMITH	UNKNOWN	0	0	91	0	0	0	91
2012	SMITH	UNKNOWN	0	0	1	0	0	0	1
1980	TITUS	CARRIZO-WILCOX AQUIFER	422	316	0	62	0	356	1,156
1984	TITUS	CARRIZO-WILCOX AQUIFER	486	235	165	16	0	426	1,328
1985	TITUS	CARRIZO-WILCOX AQUIFER	409	290	359	2	0	362	1,422
1986	TITUS	CARRIZO-WILCOX AQUIFER	436	74	1,475	85	0	358	2,428
1987	TITUS	CARRIZO-WILCOX AQUIFER	448	145	319	4	0	376	1,292
1988	TITUS	CARRIZO-WILCOX AQUIFER	423	57	320	4	50	389	1,243
1989	TITUS	CARRIZO-WILCOX AQUIFER	446	242	318	31	0	400	1,437
1990	TITUS	CARRIZO-WILCOX AQUIFER	407	209	318	4	0	416	1,354
1991	TITUS	CARRIZO-WILCOX AQUIFER	405	115	1,736	4	0	424	2,684
1992	TITUS	CARRIZO-WILCOX AQUIFER	410	122	1,736	4	0	304	2,576
1993	TITUS	CARRIZO-WILCOX AQUIFER	430	112	1,729	4	0	322	2,597
1994	TITUS	CARRIZO-WILCOX AQUIFER	446	300	1,729	4	0	387	2,866
1995	TITUS	CARRIZO-WILCOX AQUIFER	487	120	1,729	0	0	375	2,711
1996	TITUS	CARRIZO-WILCOX AQUIFER	500	295	1,729	0	0	395	2,919
1997	TITUS	CARRIZO-WILCOX AQUIFER	527	223	1,729	0	0	356	2,835
1998	TITUS	CARRIZO-WILCOX AQUIFER	541	176	1,729	0	0	362	2,808
1999	TITUS	CARRIZO-WILCOX AQUIFER	535	199	1,729	0	0	383	2,846
2000	TITUS	CARRIZO-WILCOX AQUIFER	91	194	0	0	0	358	643
2001	TITUS	CARRIZO-WILCOX AQUIFER	92	104	0	0	0	184	380
2002	TITUS	CARRIZO-WILCOX AQUIFER	91	90	0	0	0	176	357
2003	TITUS	CARRIZO-WILCOX AQUIFER	92	104	0	0	0	154	350
2004	TITUS	CARRIZO-WILCOX AQUIFER	97	96	0	0	0	173	366
2005	TITUS	CARRIZO-WILCOX AQUIFER	102	93	0	0	0	183	378
2006	TITUS	CARRIZO-WILCOX AQUIFER	118	94	0	22	0	201	435
2007	TITUS	CARRIZO-WILCOX AQUIFER	100	80	0	0	0	157	337
2008	TITUS	CARRIZO-WILCOX AQUIFER	111	100	0	0	0	190	401
2009	TITUS	CARRIZO-WILCOX AQUIFER	115	91	0	0	46	198	450
2010	TITUS	CARRIZO-WILCOX AQUIFER	120	90	1	0	0	226	437
2011	TITUS	CARRIZO-WILCOX AQUIFER	141	90	1	0	109	224	565
2012	TITUS	CARRIZO-WILCOX AQUIFER	155	132	2	0	46	208	543
2002	TITUS	NACATOCH AQUIFER	63	0	0	0	0	0	63
2007	TITUS	NACATOCH AQUIFER	100	0	0	0	0	0	100
2008	TITUS	NACATOCH AQUIFER	100	0	0	0	0	0	100
2009	TITUS	NACATOCH AQUIFER	100	0	0	0	0	0	100
1980	TITUS	OTHER AQUIFER	128	0	0	0	0	59	187
1984	TITUS	OTHER AQUIFER	97	0	0	0	0	55	152
1985	TITUS	OTHER AQUIFER	125	0	0	0	0	46	171
1986	TITUS	OTHER AQUIFER	108	0	0	0	0	46	154
1987	TITUS	OTHER AQUIFER	48	0	0	0	0	48	96

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
1988	TITUS	OTHER AQUIFER	46	0	0	0	0	50	96
1989	TITUS	OTHER AQUIFER	48	0	0	0	0	51	99
1990	TITUS	OTHER AQUIFER	96	0	0	0	0	53	149
1991	TITUS	OTHER AQUIFER	98	0	0	0	0	54	152
1992	TITUS	OTHER AQUIFER	100	0	0	0	0	39	139
1993	TITUS	OTHER AQUIFER	99	0	0	0	0	41	140
1994	TITUS	OTHER AQUIFER	102	0	0	0	0	49	151
1995	TITUS	OTHER AQUIFER	114	0	0	0	0	47	161
1996	TITUS	OTHER AQUIFER	117	0	0	0	0	50	167
1997	TITUS	OTHER AQUIFER	125	0	0	0	0	45	170
1998	TITUS	OTHER AQUIFER	128	0	0	0	0	46	174
1999	TITUS	OTHER AQUIFER	127	0	0	0	0	48	175
2000	TITUS	OTHER AQUIFER	8	0	0	0	0	45	53
2001	TITUS	OTHER AQUIFER	8	0	0	0	0	26	34
2002	TITUS	OTHER AQUIFER	9	0	0	0	0	25	34
2003	TITUS	OTHER AQUIFER	9	0	0	0	0	22	31
2004	TITUS	OTHER AQUIFER	9	0	0	0	0	0	9
2005	TITUS	OTHER AQUIFER	9	0	0	0	0	0	9
2008	TITUS	UNKNOWN	0	0	400	0	0	0	400
2009	TITUS	UNKNOWN	0	0	402	0	0	0	402
2010	TITUS	UNKNOWN	0	0	405	0	0	0	405
2011	TITUS	UNKNOWN	0	0	91	0	0	0	91
1988	TRINITY	GULF COAST AQUIFER	24	0	0	0	0	0	24
1989	TRINITY	GULF COAST AQUIFER	24	0	0	0	0	0	24
1990	TRINITY	GULF COAST AQUIFER	39	0	0	0	0	0	39
1991	TRINITY	GULF COAST AQUIFER	39	0	0	0	0	0	39
1992	TRINITY	GULF COAST AQUIFER	39	0	0	0	0	0	39
1993	TRINITY	GULF COAST AQUIFER	31	0	0	0	0	0	31
1994	TRINITY	GULF COAST AQUIFER	35	0	0	0	0	0	35
1995	TRINITY	GULF COAST AQUIFER	53	0	0	0	0	0	53
1996	TRINITY	GULF COAST AQUIFER	38	0	0	0	0	0	38
1997	TRINITY	GULF COAST AQUIFER	38	0	0	0	0	0	38
1998	TRINITY	GULF COAST AQUIFER	38	0	0	0	0	0	38
1999	TRINITY	GULF COAST AQUIFER	21	0	0	0	0	0	21
2000	TRINITY	GULF COAST AQUIFER	73	0	0	0	0	0	73
2001	TRINITY	GULF COAST AQUIFER	140	0	0	0	0	0	140
2002	TRINITY	GULF COAST AQUIFER	141	0	0	0	0	0	141
2003	TRINITY	GULF COAST AQUIFER	139	0	0	0	0	0	139
2004	TRINITY	GULF COAST AQUIFER	147	0	0	0	0	0	147
2005	TRINITY	GULF COAST AQUIFER	82	0	0	0	0	0	82
2006	TRINITY	GULF COAST AQUIFER	396	0	0	0	0	0	396
2007	TRINITY	GULF COAST AQUIFER	492	0	0	0	0	0	492
2008	TRINITY	GULF COAST AQUIFER	349	0	0	0	0	0	349
2009	TRINITY	GULF COAST AQUIFER	367	0	0	0	0	0	367
2010	TRINITY	GULF COAST AQUIFER	419	0	0	0	0	0	419
2011	TRINITY	GULF COAST AQUIFER	460	0	0	0	0	0	460
2012	TRINITY	GULF COAST AQUIFER	333	0	0	0	0	0	333
1980	TRINITY	OTHER AQUIFER	1,325	0	0	0	0	136	1,461
1984	TRINITY	OTHER AQUIFER	501	0	0	0	0	224	725
1985	TRINITY	OTHER AQUIFER	528	0	0	0	0	224	752
1986	TRINITY	OTHER AQUIFER	549	0	0	0	0	224	773
1987	TRINITY	OTHER AQUIFER	695	0	0	0	0	210	905
1988	TRINITY	OTHER AQUIFER	785	0	0	0	50	222	1,057
1989	TRINITY	OTHER AQUIFER	863	0	0	0	3	193	1,059
1990	TRINITY	OTHER AQUIFER	976	0	0	0	4	191	1,171
1991	TRINITY	OTHER AQUIFER	1,049	0	8	0	4	195	1,256
1992	TRINITY	OTHER AQUIFER	891	0	8	0	4	234	1,137
1993	TRINITY	OTHER AQUIFER	754	0	8	0	3	214	979
1994	TRINITY	OTHER AQUIFER	832	0	8	0	3	180	1,023
1995	TRINITY	OTHER AQUIFER	640	0	8	0	3	180	831
1996	TRINITY	OTHER AQUIFER	767	0	8	0	3	174	952
1997	TRINITY	OTHER AQUIFER	1,125	0	8	0	3	187	1,323
1998	TRINITY	OTHER AQUIFER	1,126	0	8	0	3	164	1,301
1999	TRINITY	OTHER AQUIFER	613	0	8	0	3	174	798
2000	TRINITY	OTHER AQUIFER	1,199	0	0	0	0	0	1,199
2001	TRINITY	OTHER AQUIFER	843	0	0	0	0	0	843
2002	TRINITY	OTHER AQUIFER	787	0	0	0	0	0	787
2003	TRINITY	OTHER AQUIFER	784	0	0	0	0	0	784
2004	TRINITY	OTHER AQUIFER	767	0	0	0	0	0	767
2005	TRINITY	OTHER AQUIFER	832	0	0	0	0	0	832
2006	TRINITY	OTHER AQUIFER	460	0	0	0	0	0	460
2007	TRINITY	OTHER AQUIFER	456	0	0	0	0	0	456
2008	TRINITY	OTHER AQUIFER	507	0	0	0	0	0	507
2009	TRINITY	OTHER AQUIFER	724	0	0	0	0	0	724
2010	TRINITY	OTHER AQUIFER	416	0	0	0	0	0	416
2011	TRINITY	OTHER AQUIFER	297	0	0	0	0	0	297
2012	TRINITY	OTHER AQUIFER	253	0	0	0	0	0	253
2000	TRINITY	TRINITY AQUIFER	0	0	0	0	0	0	0

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
2001	TRINITY	TRINITY AQUIFER	0	0	0	0	0	0	0
2002	TRINITY	TRINITY AQUIFER	0	0	0	0	0	0	0
2003	TRINITY	TRINITY AQUIFER	0	0	0	0	0	0	0
2005	TRINITY	TRINITY AQUIFER	0	0	0	0	0	0	0
2006	TRINITY	TRINITY AQUIFER	0	0	0	0	50	0	50
2007	TRINITY	TRINITY AQUIFER	0	0	0	0	0	0	0
2009	TRINITY	TRINITY AQUIFER	0	0	0	0	0	0	0
2011	TRINITY	TRINITY AQUIFER	0	0	0	0	43	0	43
2012	TRINITY	TRINITY AQUIFER	0	0	0	0	42	0	42
2008	TRINITY	UNKNOWN	0	0	0	0	0	0	0
2009	TRINITY	UNKNOWN	0	0	0	0	0	0	0
2010	TRINITY	UNKNOWN	0	0	6	0	0	0	6
2011	TRINITY	UNKNOWN	0	0	3	0	0	0	3
2000	TRINITY	YEGUA-JACKSON AQUIFER	0	0	0	0	0	162	162
2001	TRINITY	YEGUA-JACKSON AQUIFER	0	0	0	0	0	88	88
2002	TRINITY	YEGUA-JACKSON AQUIFER	0	0	0	0	0	82	82
2003	TRINITY	YEGUA-JACKSON AQUIFER	0	0	0	0	0	91	91
2004	TRINITY	YEGUA-JACKSON AQUIFER	0	0	0	0	0	91	91
2005	TRINITY	YEGUA-JACKSON AQUIFER	0	0	0	0	0	28	28
2006	TRINITY	YEGUA-JACKSON AQUIFER	194	0	0	0	50	28	272
2007	TRINITY	YEGUA-JACKSON AQUIFER	162	0	0	0	0	23	185
2008	TRINITY	YEGUA-JACKSON AQUIFER	179	0	0	0	0	20	199
2009	TRINITY	YEGUA-JACKSON AQUIFER	186	0	0	0	0	19	205
2010	TRINITY	YEGUA-JACKSON AQUIFER	390	0	0	0	0	24	414
2011	TRINITY	YEGUA-JACKSON AQUIFER	472	0	0	0	43	23	538
2012	TRINITY	YEGUA-JACKSON AQUIFER	434	0	0	0	41	18	493
1980	UPSHUR	CARRIZO-WILCOX AQUIFER	2,388	296	1	0	0	55	2,740
1984	UPSHUR	CARRIZO-WILCOX AQUIFER	3,077	157	1	0	0	113	3,348
1985	UPSHUR	CARRIZO-WILCOX AQUIFER	3,113	99	0	0	0	98	3,310
1986	UPSHUR	CARRIZO-WILCOX AQUIFER	2,687	90	0	0	0	106	2,883
1987	UPSHUR	CARRIZO-WILCOX AQUIFER	2,819	121	0	0	0	101	3,041
1988	UPSHUR	CARRIZO-WILCOX AQUIFER	2,919	163	0	0	0	98	3,180
1989	UPSHUR	CARRIZO-WILCOX AQUIFER	2,869	157	0	0	0	98	3,124
1990	UPSHUR	CARRIZO-WILCOX AQUIFER	2,800	171	0	0	0	131	3,102
1991	UPSHUR	CARRIZO-WILCOX AQUIFER	2,775	188	1	0	0	130	3,094
1992	UPSHUR	CARRIZO-WILCOX AQUIFER	2,479	225	1	0	0	191	2,896
1993	UPSHUR	CARRIZO-WILCOX AQUIFER	2,664	206	1	0	11	208	3,090
1994	UPSHUR	CARRIZO-WILCOX AQUIFER	2,890	146	1	0	15	190	3,242
1995	UPSHUR	CARRIZO-WILCOX AQUIFER	2,911	150	1	0	15	167	3,244
1996	UPSHUR	CARRIZO-WILCOX AQUIFER	2,882	146	1	0	15	239	3,283
1997	UPSHUR	CARRIZO-WILCOX AQUIFER	3,054	164	1	0	15	150	3,384
1998	UPSHUR	CARRIZO-WILCOX AQUIFER	3,355	160	1	0	15	150	3,681
1999	UPSHUR	CARRIZO-WILCOX AQUIFER	3,350	129	1	0	15	154	3,649
2000	UPSHUR	CARRIZO-WILCOX AQUIFER	3,397	153	0	0	0	152	3,702
2001	UPSHUR	CARRIZO-WILCOX AQUIFER	3,315	183	0	0	0	98	3,596
2002	UPSHUR	CARRIZO-WILCOX AQUIFER	3,275	134	0	0	0	94	3,503
2003	UPSHUR	CARRIZO-WILCOX AQUIFER	3,340	100	0	0	0	95	3,535
2004	UPSHUR	CARRIZO-WILCOX AQUIFER	3,272	31	0	0	0	221	3,524
2005	UPSHUR	CARRIZO-WILCOX AQUIFER	3,638	35	0	0	0	128	3,801
2006	UPSHUR	CARRIZO-WILCOX AQUIFER	3,630	47	0	0	0	120	3,797
2007	UPSHUR	CARRIZO-WILCOX AQUIFER	3,060	38	0	0	100	106	3,304
2008	UPSHUR	CARRIZO-WILCOX AQUIFER	2,942	46	0	0	0	127	3,115
2009	UPSHUR	CARRIZO-WILCOX AQUIFER	2,982	36	0	0	0	135	3,153
2010	UPSHUR	CARRIZO-WILCOX AQUIFER	3,246	41	0	0	58	100	3,445
2011	UPSHUR	CARRIZO-WILCOX AQUIFER	3,519	32	0	0	54	101	3,706
2012	UPSHUR	CARRIZO-WILCOX AQUIFER	3,105	35	0	0	1	90	3,231
2004	UPSHUR	OTHER AQUIFER	0	0	0	0	0	43	43
2005	UPSHUR	OTHER AQUIFER	0	0	0	0	0	25	25
2006	UPSHUR	OTHER AQUIFER	0	0	0	0	0	24	24
2007	UPSHUR	OTHER AQUIFER	0	0	0	0	0	21	21
2008	UPSHUR	OTHER AQUIFER	0	0	0	0	0	13	13
2009	UPSHUR	OTHER AQUIFER	0	0	0	0	0	13	13
2010	UPSHUR	OTHER AQUIFER	0	0	0	0	0	15	15
2011	UPSHUR	OTHER AQUIFER	0	0	0	0	0	15	15
2012	UPSHUR	OTHER AQUIFER	0	0	0	0	0	14	14
1980	UPSHUR	QUEEN CITY AQUIFER	803	16	1	0	0	364	1,184
1984	UPSHUR	QUEEN CITY AQUIFER	694	0	0	0	0	341	1,035
1985	UPSHUR	QUEEN CITY AQUIFER	677	0	0	0	0	296	973
1986	UPSHUR	QUEEN CITY AQUIFER	631	0	0	0	0	316	947
1987	UPSHUR	QUEEN CITY AQUIFER	666	0	0	0	0	303	969
1988	UPSHUR	QUEEN CITY AQUIFER	601	0	0	0	0	296	897
1989	UPSHUR	QUEEN CITY AQUIFER	615	0	0	0	0	296	911
1990	UPSHUR	QUEEN CITY AQUIFER	843	0	0	0	0	399	1,242
1991	UPSHUR	QUEEN CITY AQUIFER	857	0	0	0	0	395	1,252
1992	UPSHUR	QUEEN CITY AQUIFER	850	0	0	0	0	580	1,430
1993	UPSHUR	QUEEN CITY AQUIFER	819	1	0	0	4	630	1,454
1994	UPSHUR	QUEEN CITY AQUIFER	0	781	0	0	0	578	1,359
1995	UPSHUR	QUEEN CITY AQUIFER	846	0	0	0	0	506	1,352

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
1996	UPSHUR	QUEEN CITY AQUIFER	814	0	0	0	0	724	1,538
1997	UPSHUR	QUEEN CITY AQUIFER	836	0	0	0	0	453	1,289
1998	UPSHUR	QUEEN CITY AQUIFER	918	0	0	0	0	452	1,370
1999	UPSHUR	QUEEN CITY AQUIFER	917	0	0	0	0	463	1,380
2000	UPSHUR	QUEEN CITY AQUIFER	384	0	0	0	0	460	844
2001	UPSHUR	QUEEN CITY AQUIFER	408	0	0	0	0	297	705
2002	UPSHUR	QUEEN CITY AQUIFER	400	0	0	0	0	284	684
2003	UPSHUR	QUEEN CITY AQUIFER	389	0	0	0	0	288	677
2004	UPSHUR	QUEEN CITY AQUIFER	383	0	0	0	0	111	494
2005	UPSHUR	QUEEN CITY AQUIFER	396	0	0	0	0	64	460
2006	UPSHUR	QUEEN CITY AQUIFER	550	0	0	0	0	60	610
2007	UPSHUR	QUEEN CITY AQUIFER	495	0	0	0	100	53	648
2008	UPSHUR	QUEEN CITY AQUIFER	526	0	0	0	0	63	589
2009	UPSHUR	QUEEN CITY AQUIFER	561	0	0	0	0	67	628
2010	UPSHUR	QUEEN CITY AQUIFER	590	0	0	0	58	50	698
2011	UPSHUR	QUEEN CITY AQUIFER	585	0	0	0	54	50	689
2012	UPSHUR	QUEEN CITY AQUIFER	573	0	0	0	1	45	619
2008	UPSHUR	UNKNOWN	0	0	28	0	0	0	28
2009	UPSHUR	UNKNOWN	0	0	35	0	0	0	35
2010	UPSHUR	UNKNOWN	0	0	41	0	0	0	41
2011	UPSHUR	UNKNOWN	0	0	44	0	0	0	44
2012	UPSHUR	UNKNOWN	0	0	1	0	0	0	1
1980	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,644	684	1,795	0	0	627	5,750
1984	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,716	343	888	0	0	774	4,721
1985	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,631	191	1,291	0	0	664	4,777
1986	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,733	268	1,039	0	0	752	4,792
1987	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,731	422	947	0	0	677	4,777
1988	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,855	396	923	0	0	700	4,874
1989	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,808	415	778	0	0	721	4,722
1990	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,801	159	778	0	0	759	4,497
1991	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,819	156	1,061	0	0	769	4,805
1992	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,798	190	1,044	0	0	818	4,850
1993	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,911	339	1,044	0	19	787	5,100
1994	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,891	139	1,067	0	30	821	4,948
1995	VAN ZANDT	CARRIZO-WILCOX AQUIFER	3,033	255	1,074	0	19	848	5,229
1996	VAN ZANDT	CARRIZO-WILCOX AQUIFER	3,012	574	1,093	0	112	793	5,584
1997	VAN ZANDT	CARRIZO-WILCOX AQUIFER	3,326	178	1,093	0	91	844	5,532
1998	VAN ZANDT	CARRIZO-WILCOX AQUIFER	3,644	258	669	0	623	784	5,978
1999	VAN ZANDT	CARRIZO-WILCOX AQUIFER	3,504	292	673	0	146	838	5,453
2000	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,522	0	225	0	33	835	3,615
2001	VAN ZANDT	CARRIZO-WILCOX AQUIFER	3,071	0	73	0	33	305	3,482
2002	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,867	0	102	0	33	300	3,302
2003	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,916	0	252	0	0	314	3,482
2004	VAN ZANDT	CARRIZO-WILCOX AQUIFER	2,755	0	337	0	0	296	3,388
2005	VAN ZANDT	CARRIZO-WILCOX AQUIFER	3,871	0	220	0	0	501	4,592
2006	VAN ZANDT	CARRIZO-WILCOX AQUIFER	3,617	0	384	0	80	512	4,593
2007	VAN ZANDT	CARRIZO-WILCOX AQUIFER	3,257	0	156	0	0	332	3,745
2008	VAN ZANDT	CARRIZO-WILCOX AQUIFER	3,185	289	0	0	0	514	3,988
2009	VAN ZANDT	CARRIZO-WILCOX AQUIFER	3,076	253	0	0	33	543	3,905
2010	VAN ZANDT	CARRIZO-WILCOX AQUIFER	3,910	0	0	0	87	469	4,466
2011	VAN ZANDT	CARRIZO-WILCOX AQUIFER	4,410	189	0	0	143	470	5,212
2012	VAN ZANDT	CARRIZO-WILCOX AQUIFER	3,891	167	0	0	1	430	4,489
1980	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
1984	VAN ZANDT	OTHER AQUIFER	6	0	0	0	0	10	16
1985	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
1986	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
1987	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
1988	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
1989	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
1990	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
1991	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
1992	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
1993	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
1994	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
1995	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
1996	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
1997	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
1998	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
1999	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
2000	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	4	4
2001	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	2	2
2002	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	2	2
2003	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	2	2
2004	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	49	49
2005	VAN ZANDT	OTHER AQUIFER	0	0	0	0	0	83	83
2006	VAN ZANDT	OTHER AQUIFER	54	0	0	0	0	85	139
2007	VAN ZANDT	OTHER AQUIFER	45	0	0	0	0	55	100
2008	VAN ZANDT	OTHER AQUIFER	50	0	0	0	0	44	94

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Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
2009	VAN ZANDT	OTHER AQUIFER	102	0	0	0	0	47	149
2010	VAN ZANDT	OTHER AQUIFER	155	0	0	0	0	43	198
2011	VAN ZANDT	OTHER AQUIFER	168	0	0	0	0	43	211
2012	VAN ZANDT	OTHER AQUIFER	147	0	0	0	0	39	186
1980	VAN ZANDT	QUEEN CITY AQUIFER	71	0	0	0	0	101	172
1984	VAN ZANDT	QUEEN CITY AQUIFER	102	0	58	0	0	125	285
1985	VAN ZANDT	QUEEN CITY AQUIFER	112	0	239	0	0	107	458
1986	VAN ZANDT	QUEEN CITY AQUIFER	125	0	4	0	0	121	250
1987	VAN ZANDT	QUEEN CITY AQUIFER	122	0	3	0	0	109	234
1988	VAN ZANDT	QUEEN CITY AQUIFER	120	0	4	0	0	113	237
1989	VAN ZANDT	QUEEN CITY AQUIFER	56	0	3	0	0	116	175
1990	VAN ZANDT	QUEEN CITY AQUIFER	136	0	3	0	0	122	261
1991	VAN ZANDT	QUEEN CITY AQUIFER	145	0	24	0	0	124	293
1992	VAN ZANDT	QUEEN CITY AQUIFER	137	0	24	0	0	132	293
1993	VAN ZANDT	QUEEN CITY AQUIFER	127	0	24	0	0	127	278
1994	VAN ZANDT	QUEEN CITY AQUIFER	123	0	24	0	0	132	279
1995	VAN ZANDT	QUEEN CITY AQUIFER	0	0	24	0	0	137	161
1996	VAN ZANDT	QUEEN CITY AQUIFER	0	0	24	0	0	128	152
1997	VAN ZANDT	QUEEN CITY AQUIFER	0	0	24	0	0	136	160
1998	VAN ZANDT	QUEEN CITY AQUIFER	0	0	15	0	0	126	141
1999	VAN ZANDT	QUEEN CITY AQUIFER	0	0	14	0	0	135	149
2000	VAN ZANDT	QUEEN CITY AQUIFER	0	0	0	0	0	135	135
2001	VAN ZANDT	QUEEN CITY AQUIFER	0	0	0	0	0	37	37
2002	VAN ZANDT	QUEEN CITY AQUIFER	0	0	0	0	0	36	36
2003	VAN ZANDT	QUEEN CITY AQUIFER	0	0	0	0	0	38	38
2006	VAN ZANDT	QUEEN CITY AQUIFER	39	0	0	0	0	0	39
2007	VAN ZANDT	QUEEN CITY AQUIFER	33	0	0	0	0	0	33
2008	VAN ZANDT	QUEEN CITY AQUIFER	36	0	0	0	0	0	36
2009	VAN ZANDT	QUEEN CITY AQUIFER	73	0	0	0	0	0	73
2010	VAN ZANDT	QUEEN CITY AQUIFER	112	0	0	0	0	0	112
2011	VAN ZANDT	QUEEN CITY AQUIFER	121	0	0	0	0	0	121
2012	VAN ZANDT	QUEEN CITY AQUIFER	236	0	0	0	0	0	236
2008	VAN ZANDT	UNKNOWN	0	0	113	0	0	0	113
2009	VAN ZANDT	UNKNOWN	0	0	118	0	0	0	118
2010	VAN ZANDT	UNKNOWN	0	0	123	0	0	0	123
2011	VAN ZANDT	UNKNOWN	0	0	123	0	0	0	123
2012	VAN ZANDT	UNKNOWN	0	0	1	0	0	0	1
1980	WOOD	CARRIZO-WILCOX AQUIFER	3,301	22	4	0	0	136	3,463
1984	WOOD	CARRIZO-WILCOX AQUIFER	4,208	3	1,003	0	328	141	5,683
1985	WOOD	CARRIZO-WILCOX AQUIFER	4,220	3	1,547	0	382	133	6,285
1986	WOOD	CARRIZO-WILCOX AQUIFER	4,186	3	1,387	0	400	136	6,112
1987	WOOD	CARRIZO-WILCOX AQUIFER	4,486	41	1,319	0	187	142	6,175
1988	WOOD	CARRIZO-WILCOX AQUIFER	4,681	38	1,204	0	76	135	6,134
1989	WOOD	CARRIZO-WILCOX AQUIFER	4,483	8	1,121	0	195	141	5,948
1990	WOOD	CARRIZO-WILCOX AQUIFER	3,628	2	4	0	165	181	3,980
1991	WOOD	CARRIZO-WILCOX AQUIFER	3,542	4	0	0	165	180	3,891
1992	WOOD	CARRIZO-WILCOX AQUIFER	3,686	2	0	0	165	255	4,108
1993	WOOD	CARRIZO-WILCOX AQUIFER	3,769	0	0	0	71	251	4,091
1994	WOOD	CARRIZO-WILCOX AQUIFER	4,009	0	0	0	135	253	4,397
1995	WOOD	CARRIZO-WILCOX AQUIFER	4,149	0	0	0	131	255	4,535
1996	WOOD	CARRIZO-WILCOX AQUIFER	4,244	0	0	0	103	272	4,619
1997	WOOD	CARRIZO-WILCOX AQUIFER	4,593	0	0	0	103	225	4,921
1998	WOOD	CARRIZO-WILCOX AQUIFER	4,787	0	0	0	103	210	5,100
1999	WOOD	CARRIZO-WILCOX AQUIFER	4,500	0	0	0	103	226	4,829
2000	WOOD	CARRIZO-WILCOX AQUIFER	4,697	2	0	0	103	208	5,010
2001	WOOD	CARRIZO-WILCOX AQUIFER	4,830	0	0	0	78	171	5,079
2002	WOOD	CARRIZO-WILCOX AQUIFER	4,943	0	0	0	78	181	5,202
2003	WOOD	CARRIZO-WILCOX AQUIFER	5,138	193	0	0	81	181	5,593
2004	WOOD	CARRIZO-WILCOX AQUIFER	5,608	193	0	0	83	493	6,377
2005	WOOD	CARRIZO-WILCOX AQUIFER	5,819	460	0	0	82	80	6,441
2006	WOOD	CARRIZO-WILCOX AQUIFER	5,257	677	0	0	3	63	6,000
2007	WOOD	CARRIZO-WILCOX AQUIFER	5,041	629	0	0	56	50	5,776
2008	WOOD	CARRIZO-WILCOX AQUIFER	4,935	617	0	0	0	63	5,615
2009	WOOD	CARRIZO-WILCOX AQUIFER	6,235	617	0	0	0	67	6,919
2010	WOOD	CARRIZO-WILCOX AQUIFER	5,565	663	0	0	215	63	6,506
2011	WOOD	CARRIZO-WILCOX AQUIFER	5,792	663	0	0	163	63	6,681
2012	WOOD	CARRIZO-WILCOX AQUIFER	6,238	663	0	0	109	60	7,070
2004	WOOD	OTHER AQUIFER	0	0	0	0	0	35	35
2005	WOOD	OTHER AQUIFER	0	0	0	0	0	6	6
2006	WOOD	OTHER AQUIFER	0	0	0	0	0	4	4
2007	WOOD	OTHER AQUIFER	0	0	0	0	0	4	4
2008	WOOD	OTHER AQUIFER	0	0	0	0	0	4	4
2009	WOOD	OTHER AQUIFER	0	0	0	0	0	4	4
2010	WOOD	OTHER AQUIFER	0	0	0	0	0	4	4
2011	WOOD	OTHER AQUIFER	0	0	0	0	0	4	4
2012	WOOD	OTHER AQUIFER	0	0	0	0	0	4	4
1980	WOOD	QUEEN CITY AQUIFER	520	0	2,842	0	0	409	3,771
1984	WOOD	QUEEN CITY AQUIFER	165	0	2,616	0	137	424	3,342

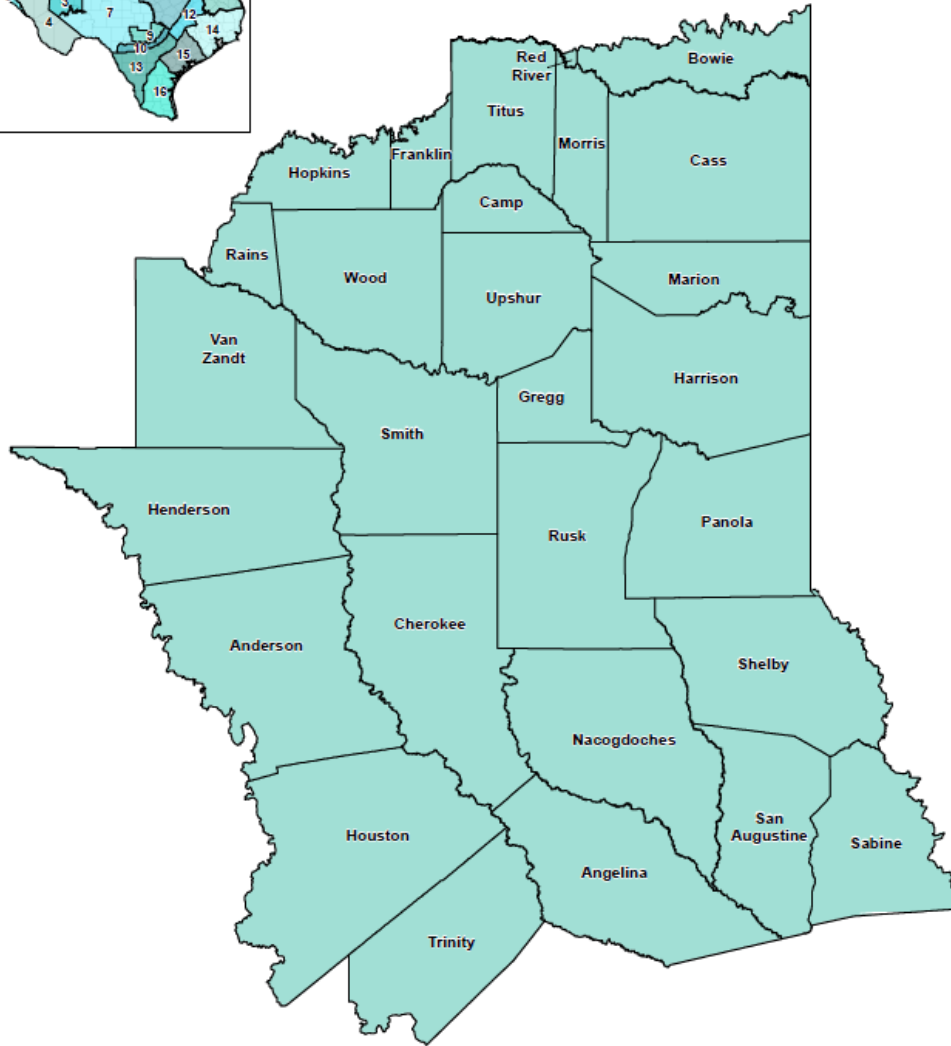
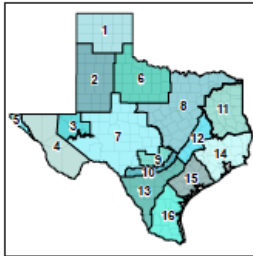
Groundwater Pumping Estimates from Texas Water Development Board
Organized by County and Aquifer
All Values in AF/yr

Year	County	Aquifer	Municipal	Manufacturing	Mining	Steam Electric Power	Irrigation	Livestock	Total
1985	WOOD	QUEEN CITY AQUIFER	161	0	3,182	0	128	400	3,871
1986	WOOD	QUEEN CITY AQUIFER	168	0	2,619	0	133	410	3,330
1987	WOOD	QUEEN CITY AQUIFER	170	0	2,258	0	63	427	2,918
1988	WOOD	QUEEN CITY AQUIFER	166	0	2,034	0	26	406	2,632
1989	WOOD	QUEEN CITY AQUIFER	165	0	2,040	0	65	426	2,696
1990	WOOD	QUEEN CITY AQUIFER	198	0	3,157	0	54	545	3,954
1991	WOOD	QUEEN CITY AQUIFER	214	0	2,841	0	54	542	3,651
1992	WOOD	QUEEN CITY AQUIFER	223	0	2,488	0	54	770	3,535
1993	WOOD	QUEEN CITY AQUIFER	233	0	2,535	0	23	757	3,548
1994	WOOD	QUEEN CITY AQUIFER	237	0	2,626	0	0	761	3,624
1995	WOOD	QUEEN CITY AQUIFER	309	0	560	0	0	766	1,635
1996	WOOD	QUEEN CITY AQUIFER	336	0	560	0	0	819	1,715
1997	WOOD	QUEEN CITY AQUIFER	246	0	488	0	0	676	1,410
1998	WOOD	QUEEN CITY AQUIFER	256	0	280	0	0	629	1,165
1999	WOOD	QUEEN CITY AQUIFER	241	0	280	0	0	678	1,199
2000	WOOD	QUEEN CITY AQUIFER	382	0	0	0	46	617	1,045
2001	WOOD	QUEEN CITY AQUIFER	331	0	0	0	34	510	875
2002	WOOD	QUEEN CITY AQUIFER	362	0	0	0	34	536	932
2003	WOOD	QUEEN CITY AQUIFER	378	0	0	0	36	539	953
2004	WOOD	QUEEN CITY AQUIFER	266	0	0	0	36	130	432
2005	WOOD	QUEEN CITY AQUIFER	264	0	0	0	28	21	313
2006	WOOD	QUEEN CITY AQUIFER	256	0	0	0	1	17	274
2007	WOOD	QUEEN CITY AQUIFER	130	0	0	0	24	13	167
2008	WOOD	QUEEN CITY AQUIFER	163	0	0	0	0	17	180
2009	WOOD	QUEEN CITY AQUIFER	172	0	0	0	0	18	190
2010	WOOD	QUEEN CITY AQUIFER	181	0	0	0	91	17	289
2011	WOOD	QUEEN CITY AQUIFER	131	0	0	0	69	17	217
2012	WOOD	QUEEN CITY AQUIFER	105	0	0	0	46	16	167
2004	WOOD	SPARTA AQUIFER	0	0	0	0	0	35	35
2005	WOOD	SPARTA AQUIFER	0	0	0	0	0	6	6
2006	WOOD	SPARTA AQUIFER	53	0	0	0	0	4	57
2007	WOOD	SPARTA AQUIFER	44	0	0	0	0	4	48
2008	WOOD	SPARTA AQUIFER	49	0	0	0	0	4	53
2009	WOOD	SPARTA AQUIFER	54	0	0	0	0	4	58
2010	WOOD	SPARTA AQUIFER	59	0	0	0	0	4	63
2011	WOOD	SPARTA AQUIFER	64	0	0	0	0	4	68
2012	WOOD	SPARTA AQUIFER	50	0	0	0	0	4	54
2008	WOOD	UNKNOWN	0	0	5	0	0	0	5
2009	WOOD	UNKNOWN	0	0	8	0	0	0	8
2010	WOOD	UNKNOWN	0	0	12	0	0	0	12
2011	WOOD	UNKNOWN	0	0	12	0	0	0	12
2012	WOOD	UNKNOWN	0	0	2	0	0	0	2

Appendix B

Graphical Comparison of TWDB Historic Pumping Estimates, Calibrated GAM Pumping Estimates and Modeled Available Groundwater for Groundwater Management Area 11

Groundwater Management Area #11




DISCLAIMER: This map was generated by the Texas Water Development Board using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the information shown herein nor to its suitability for a particular use. The scale and location of all mapped data are approximate. Map date: JAN-2014

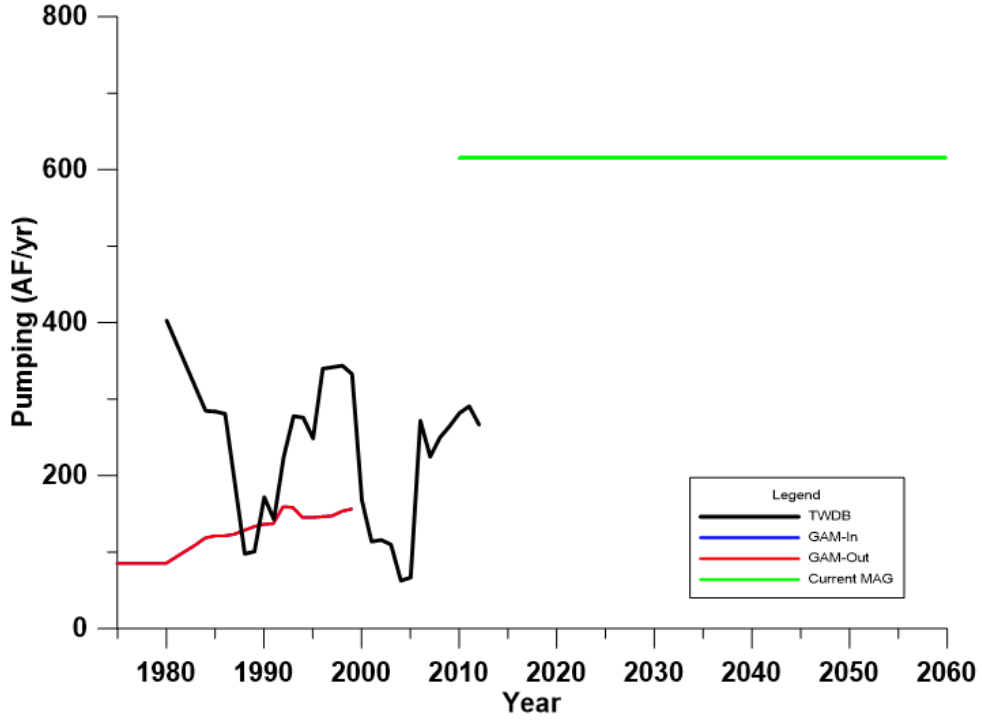


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Austin, Texas 78711-3231
www.twdb.texas.gov

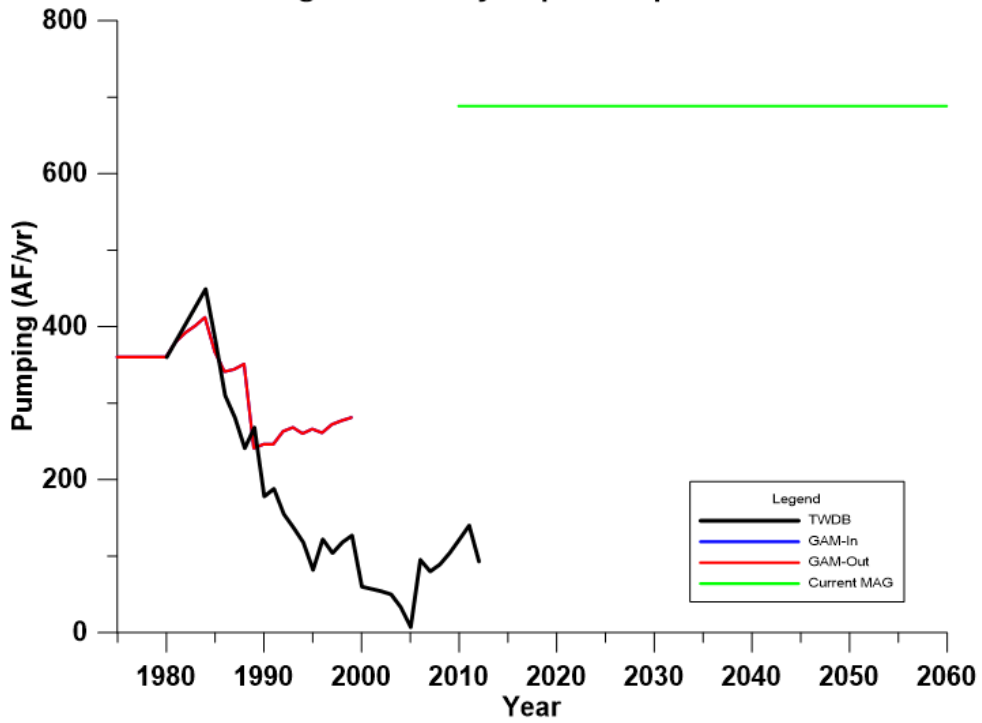


MISSION: The Texas Water Development Board's (TWDB) mission is to provide leadership, planning, financial assistance, information, and education for the conservation and responsible development of water for Texas. 

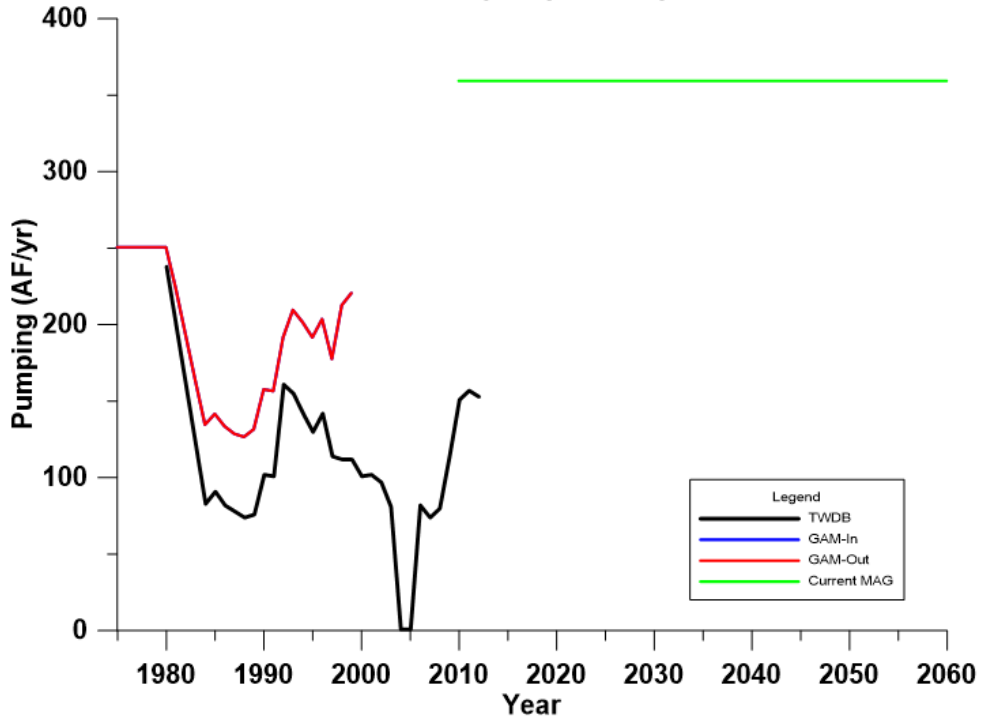
Anderson County - Sparta Aquifer



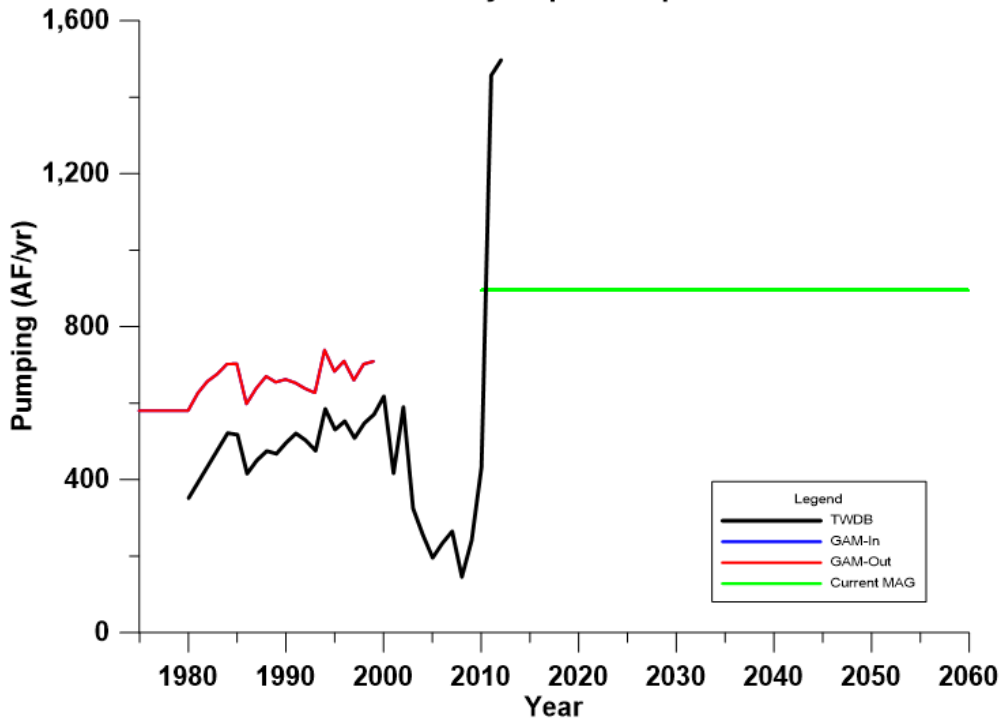
Angelina County - Sparta Aquifer



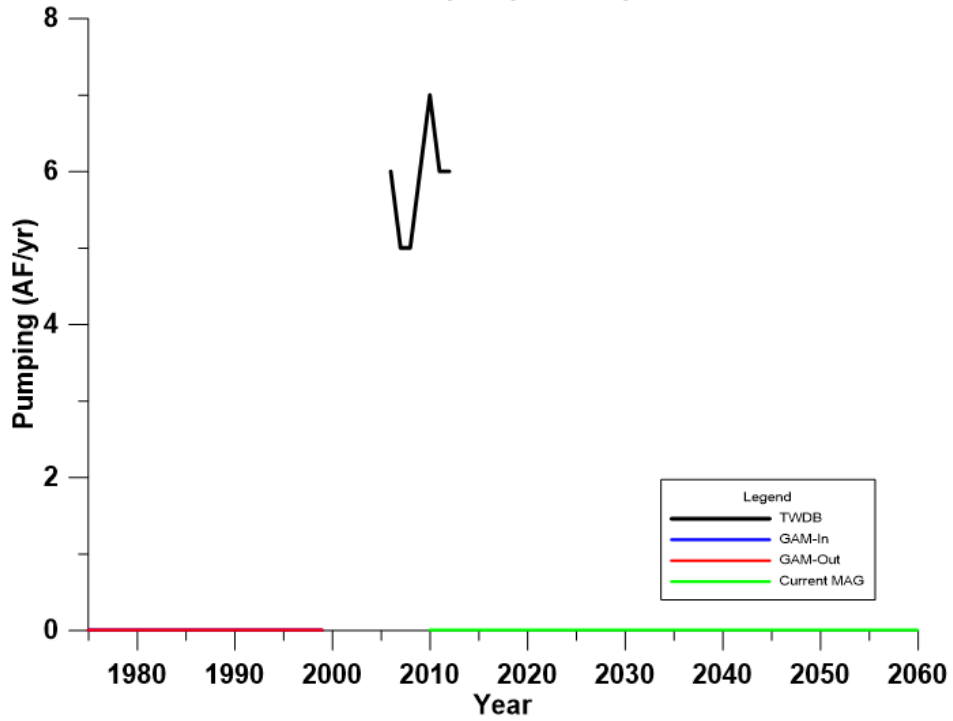
Cherokee County - Sparta Aquifer



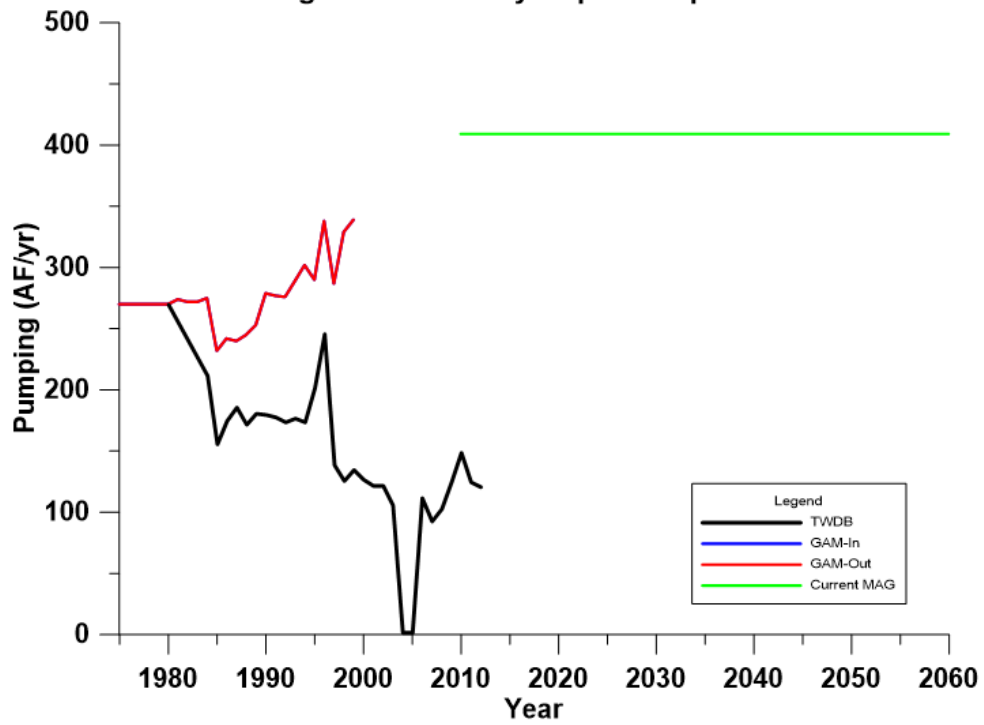
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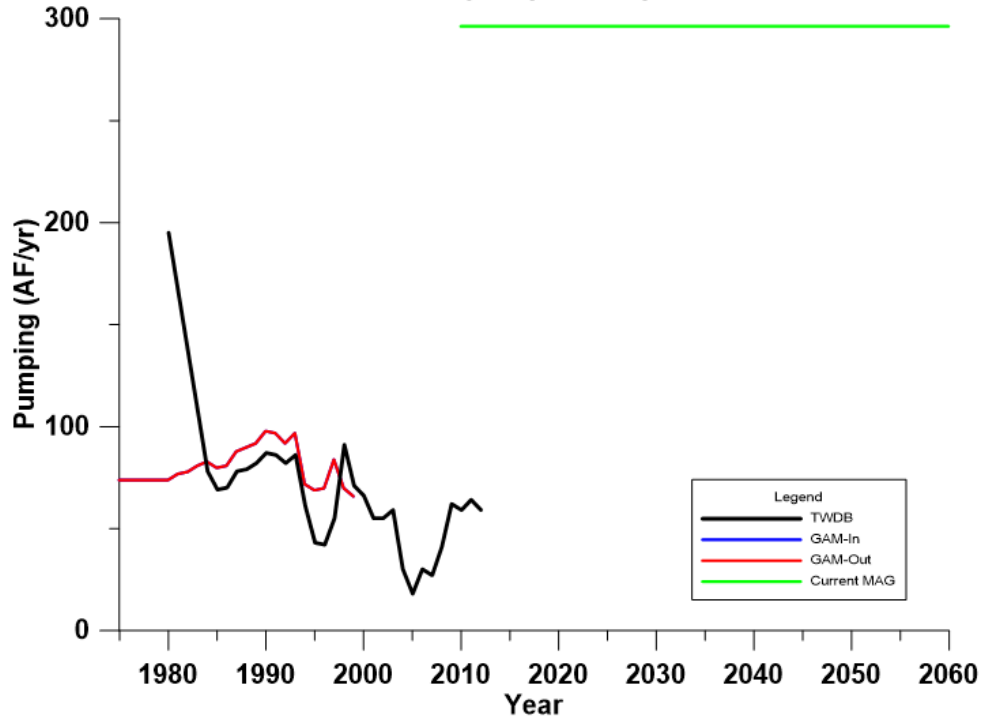
Morris County - Sparta Aquifer



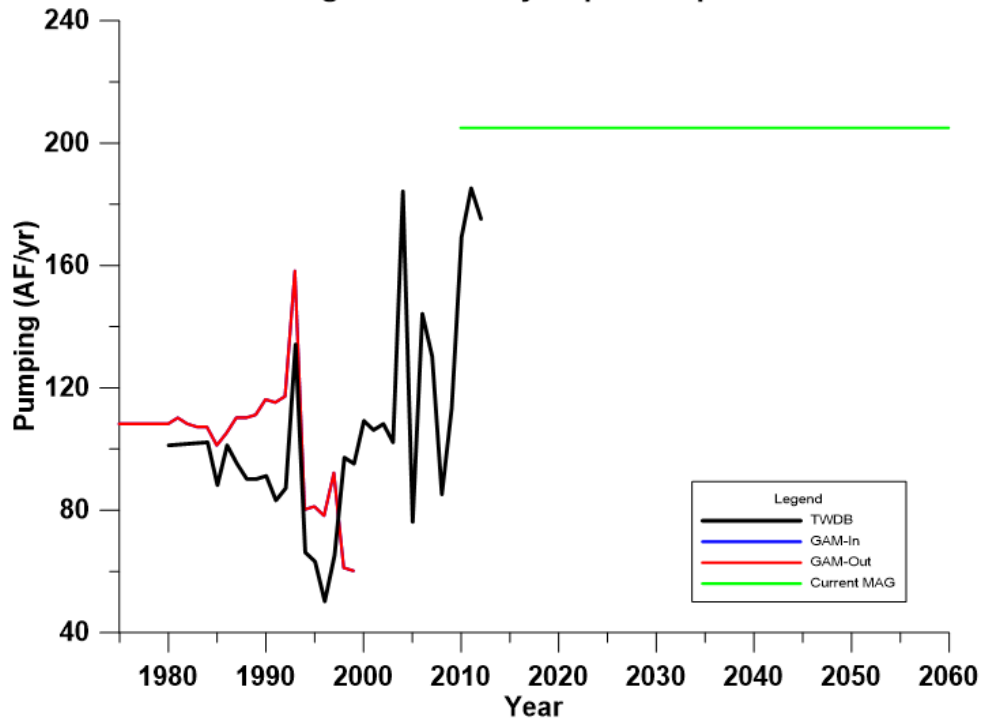
Nacogdoches County - Sparta Aquifer

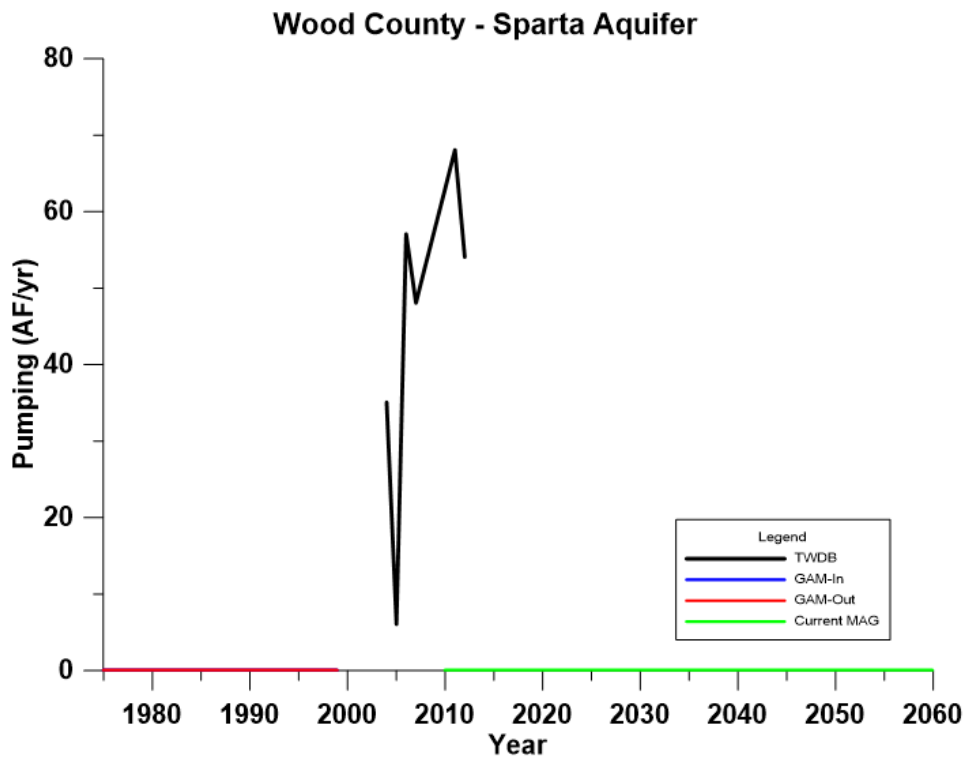
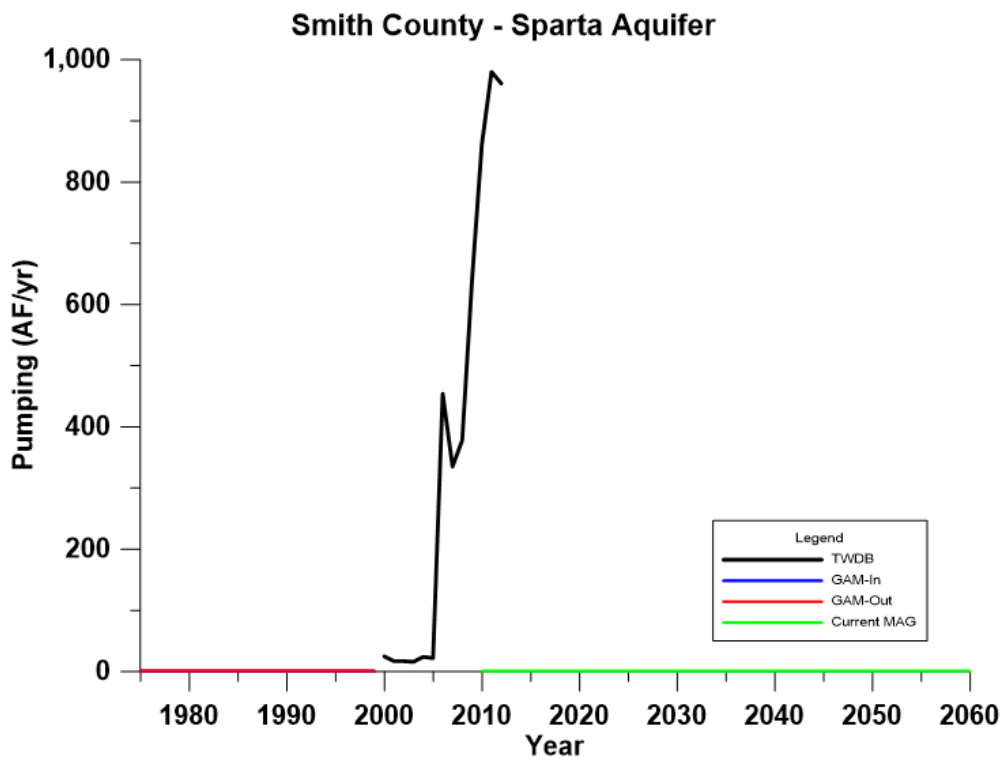


Sabine County - Sparta Aquifer

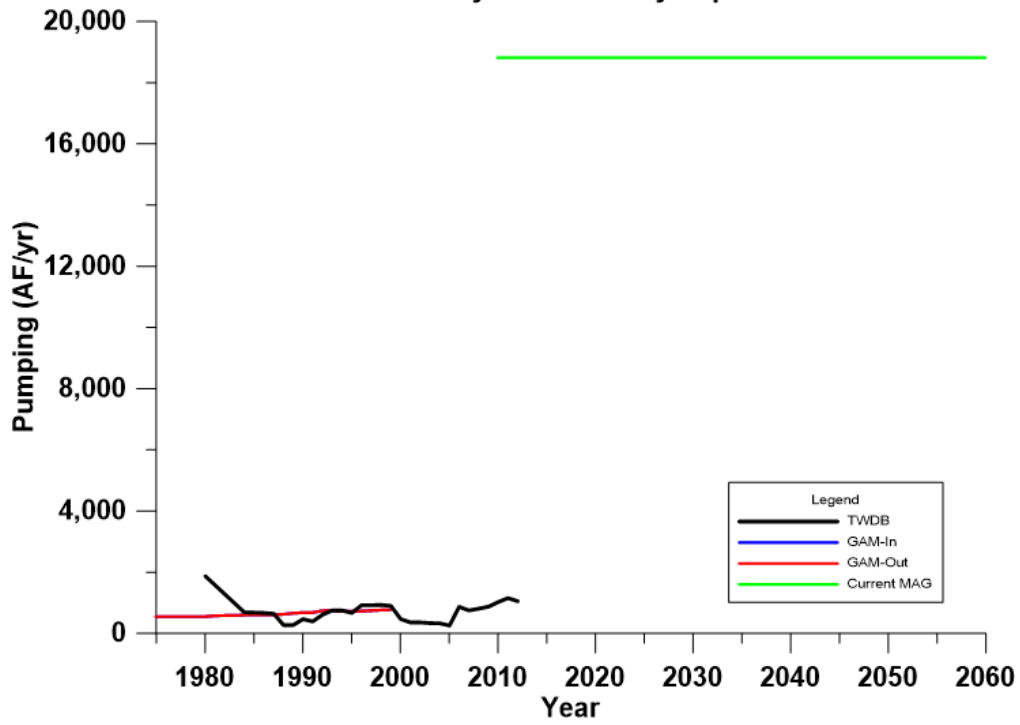


San Augustine County - Sparta Aquifer

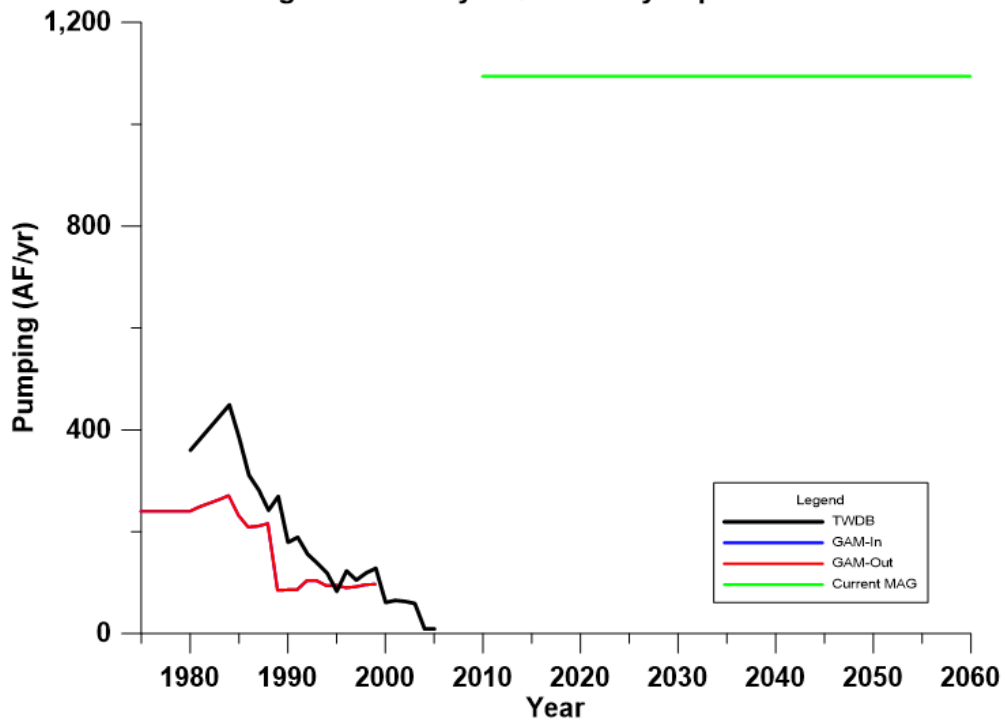




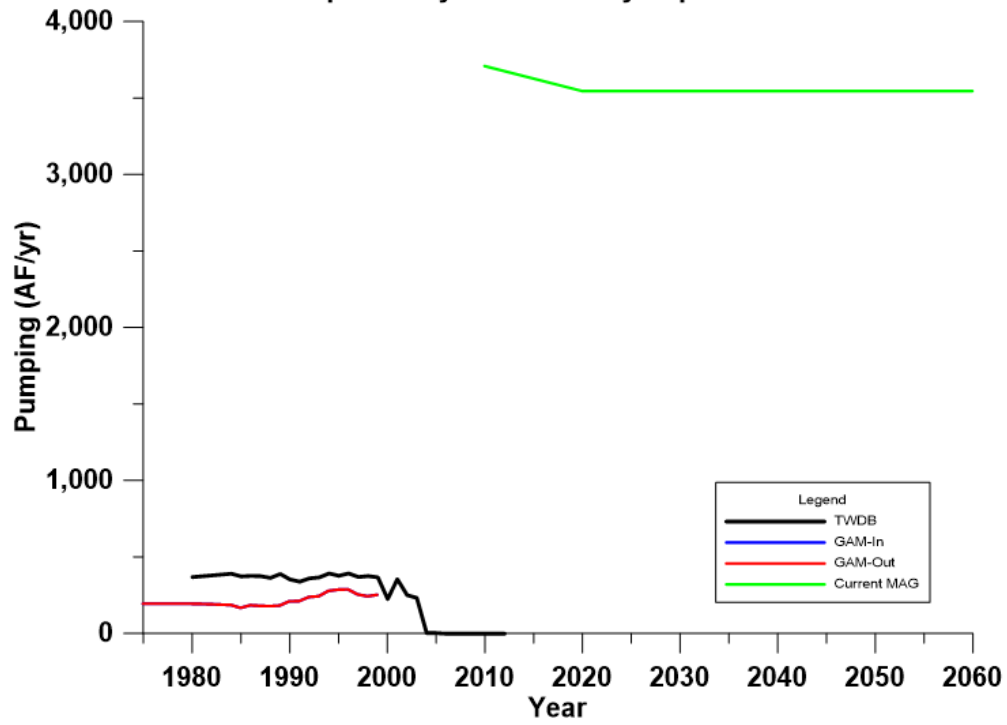
Anderson County - Queen City Aquifer



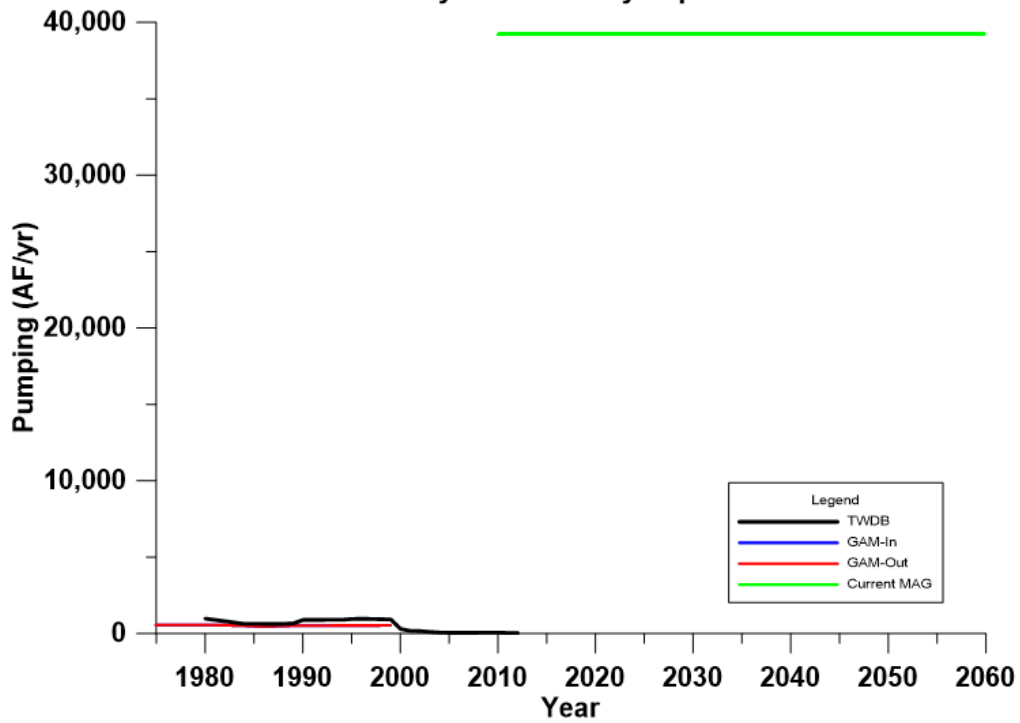
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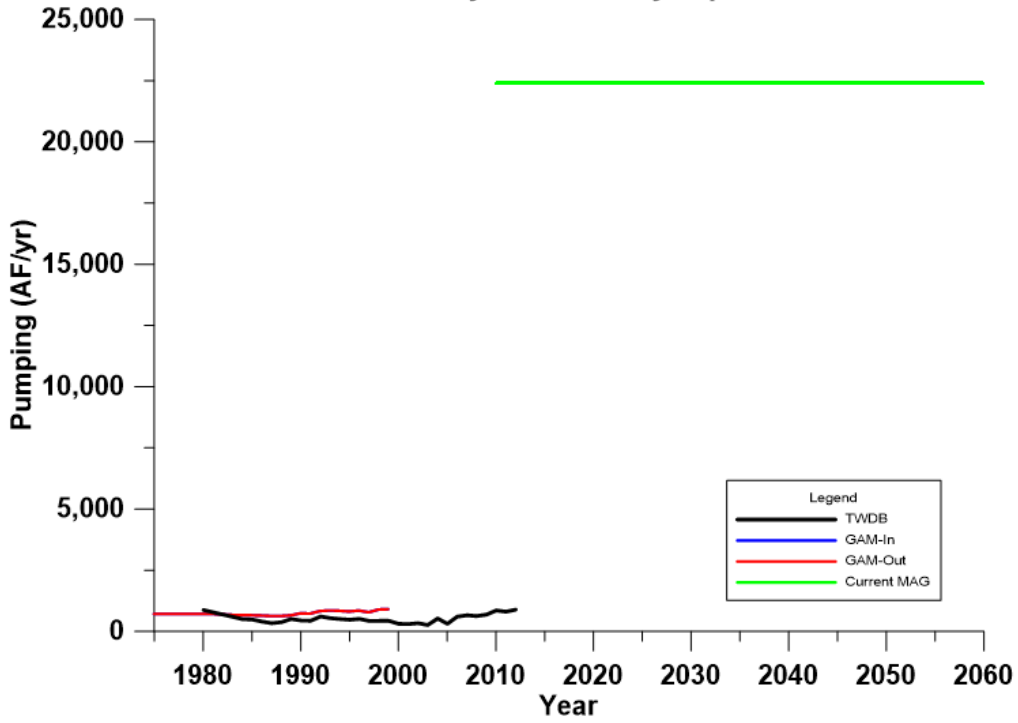
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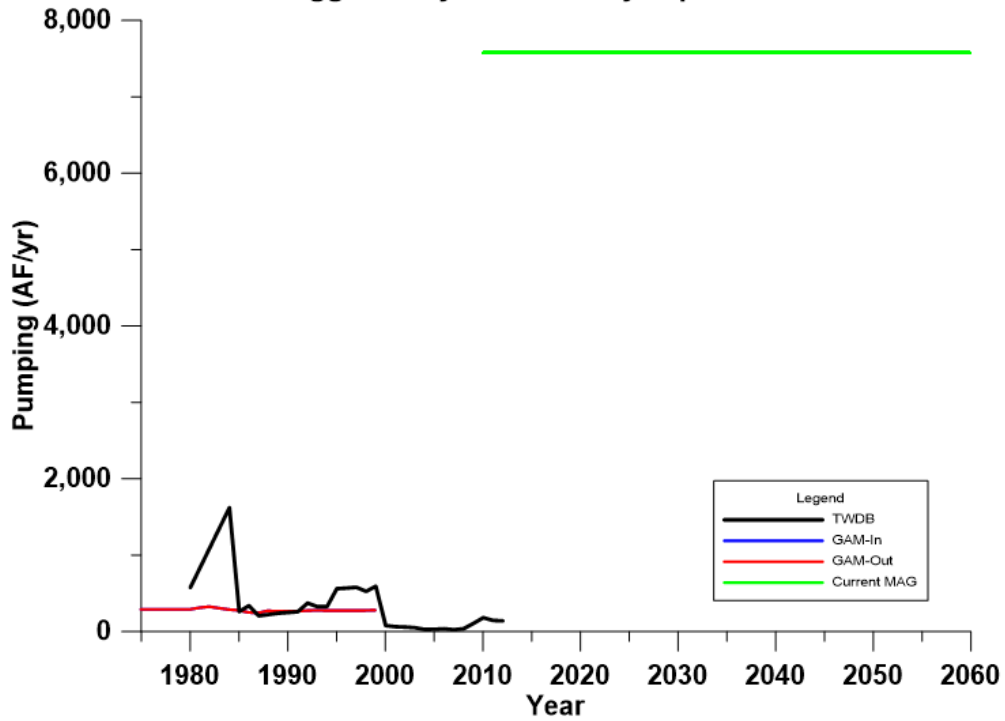
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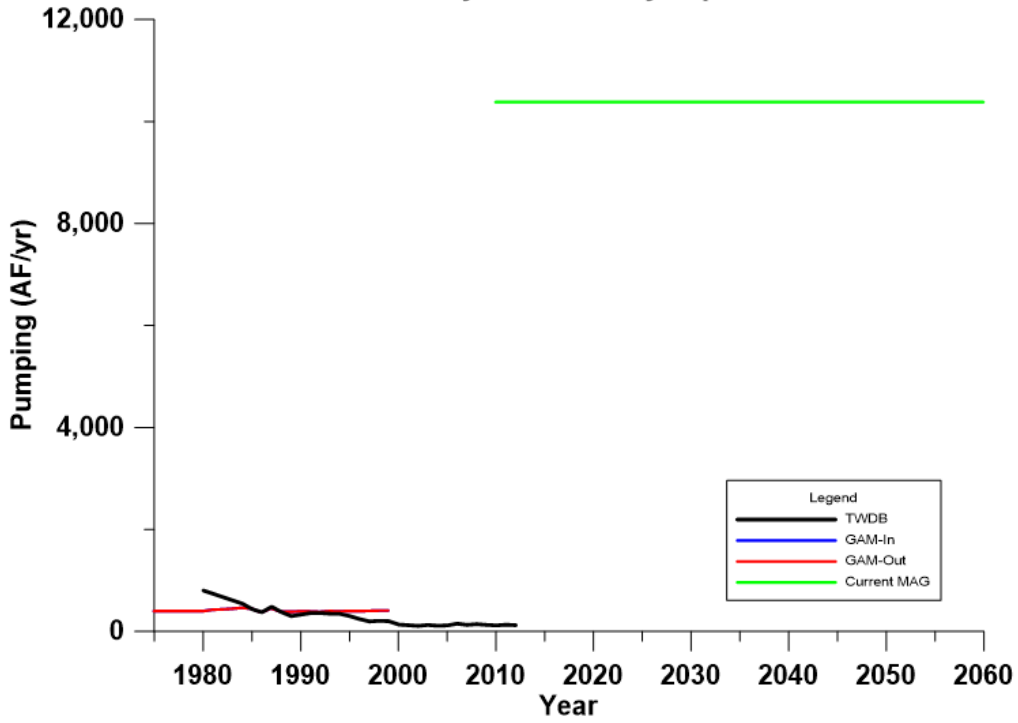
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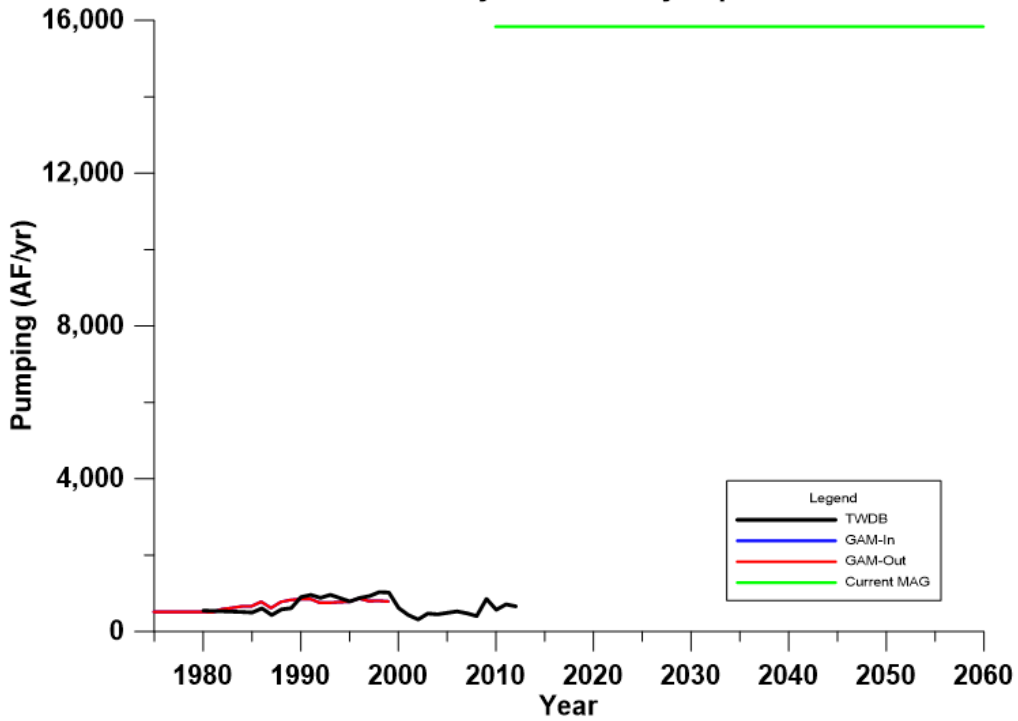
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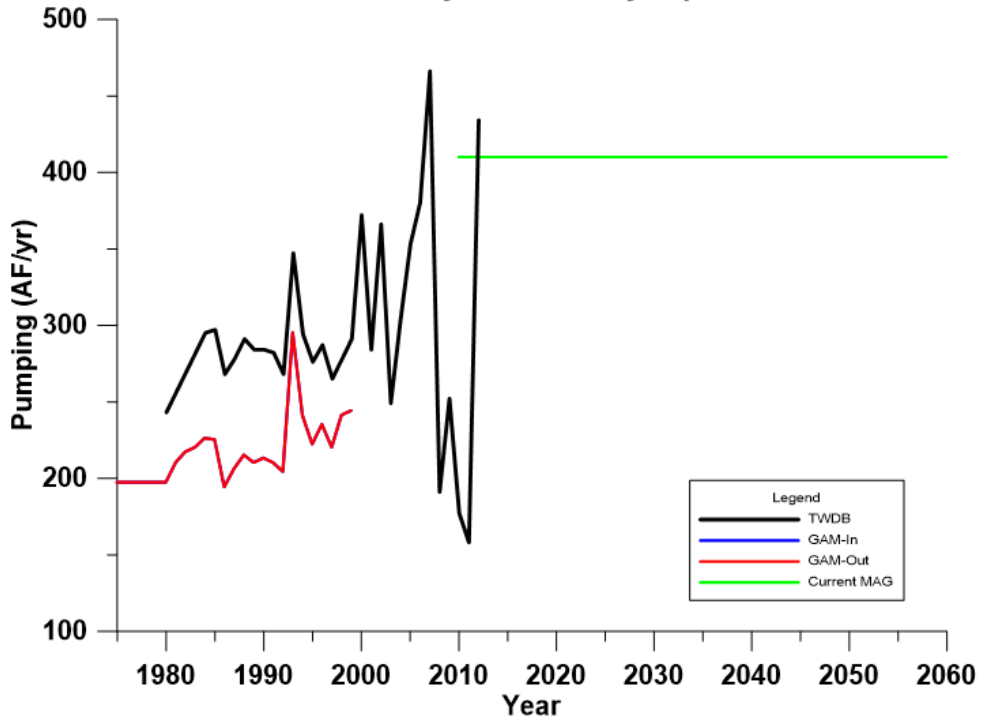
Harrison County - Queen City Aquifer



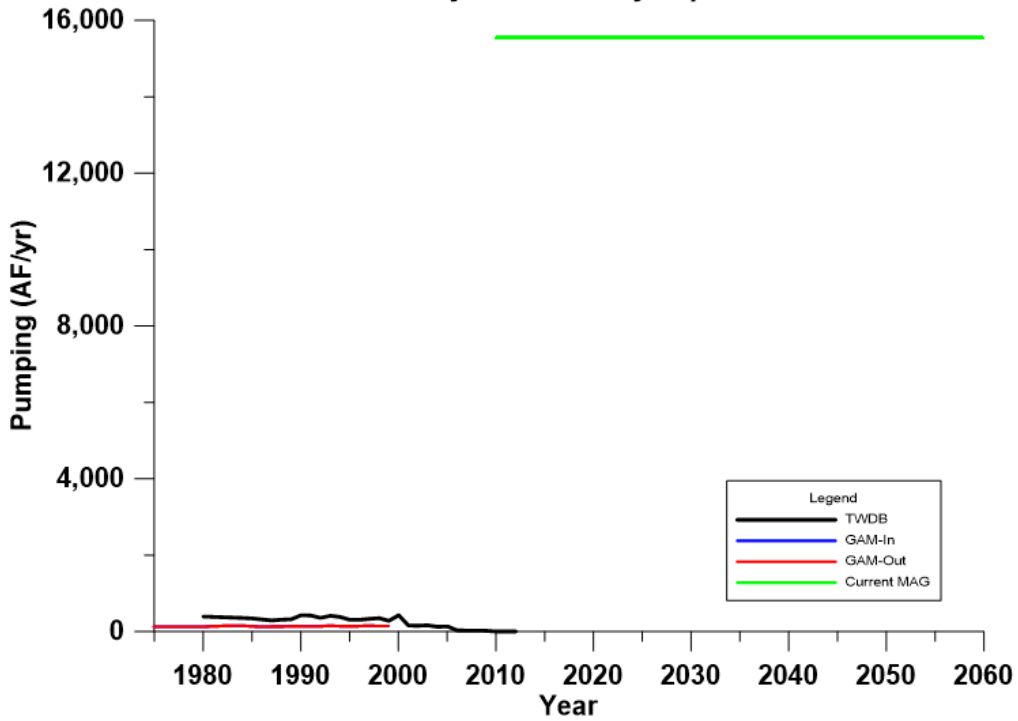
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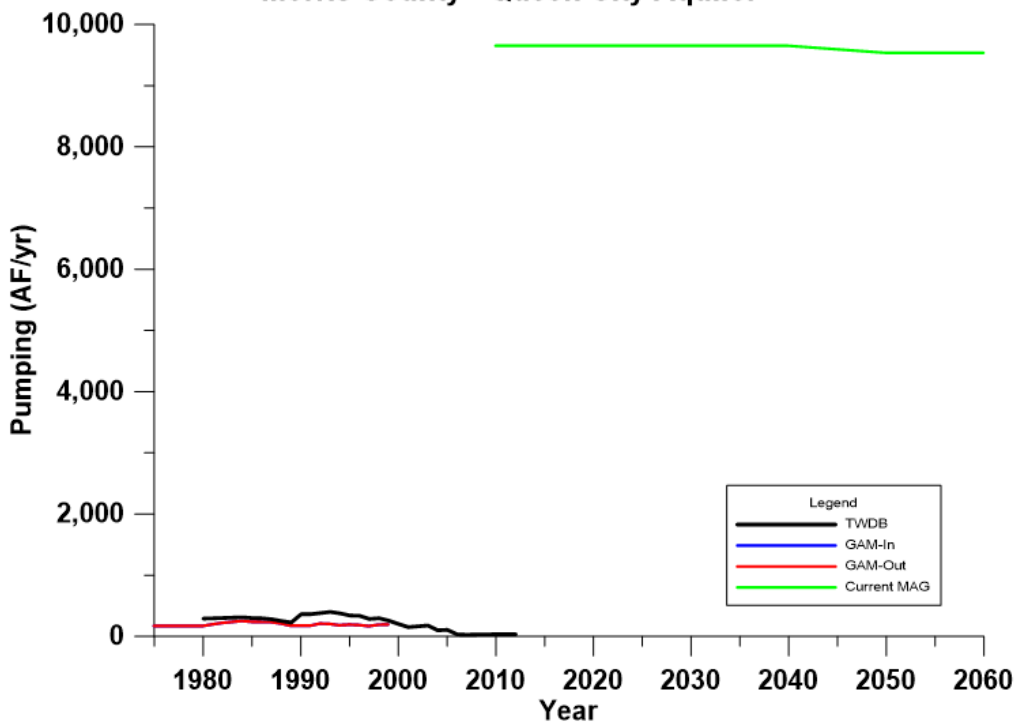
Houston County - Queen City Aquifer



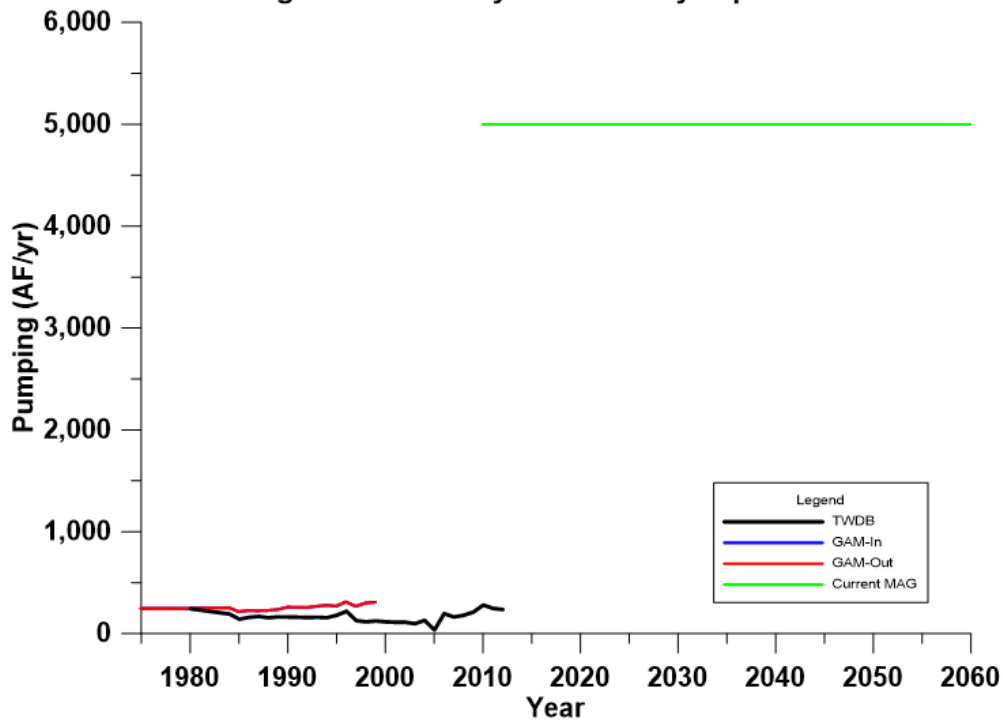
Marion County - Queen City Aquifer



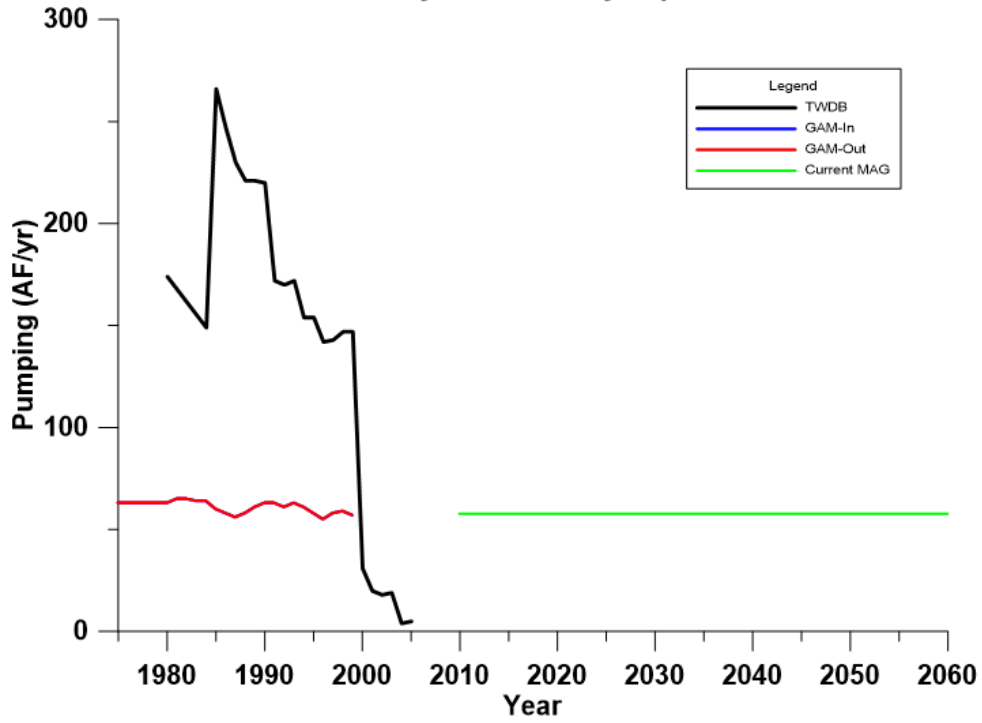
Morris County - Queen City Aquifer



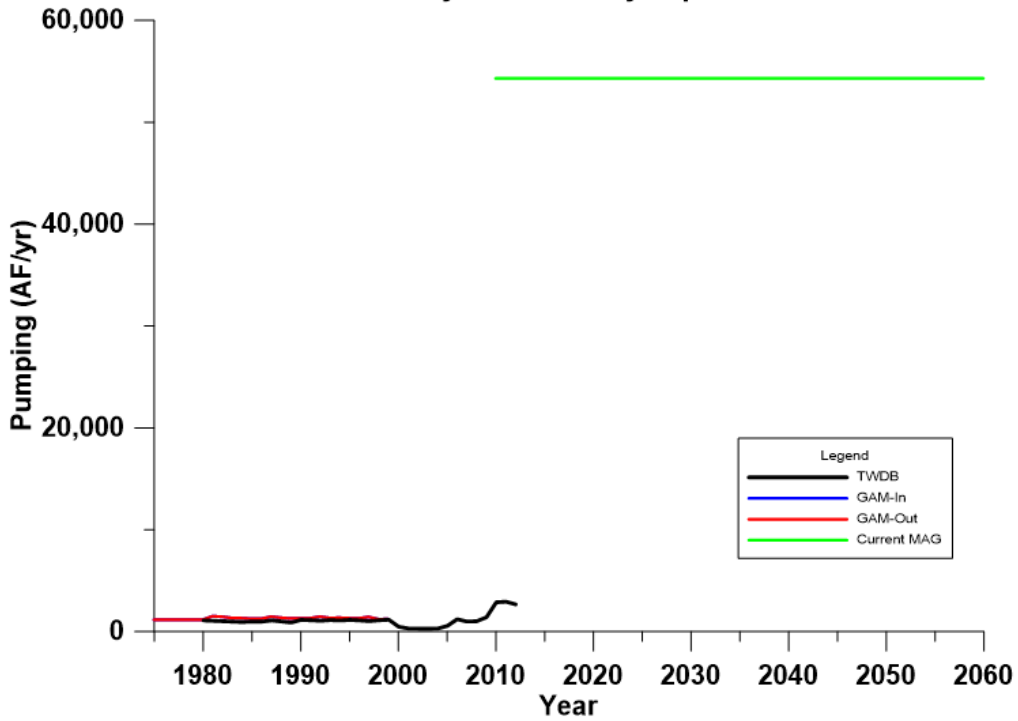
Nacogdoches County - Queen City Aquifer



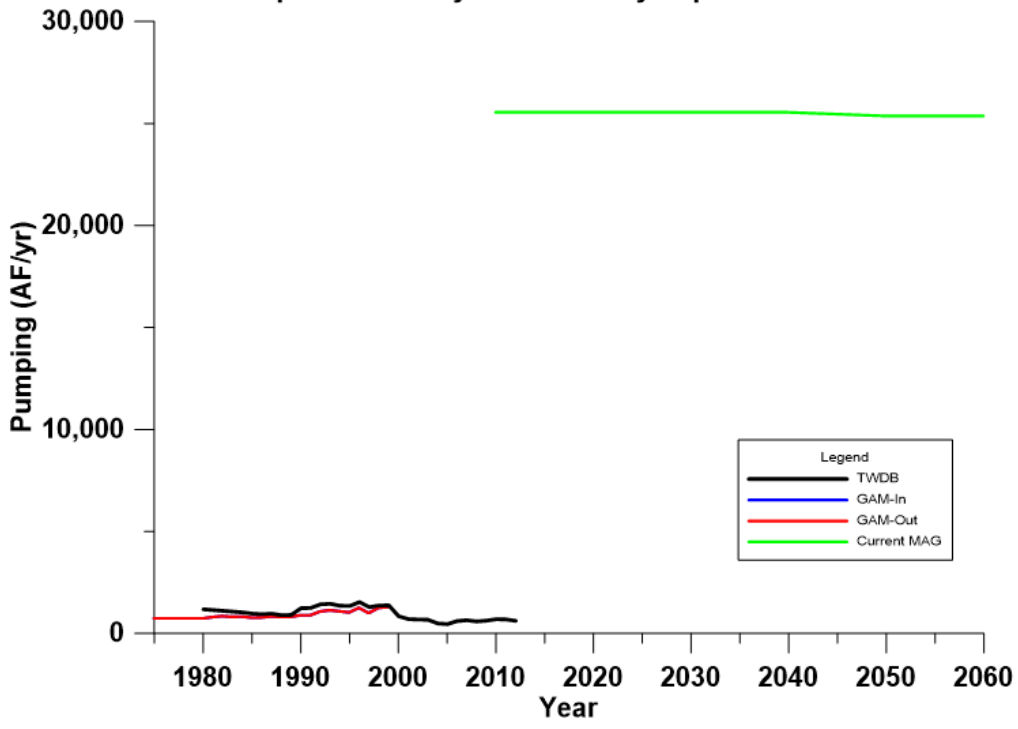
Rusk County - Queen City Aquifer



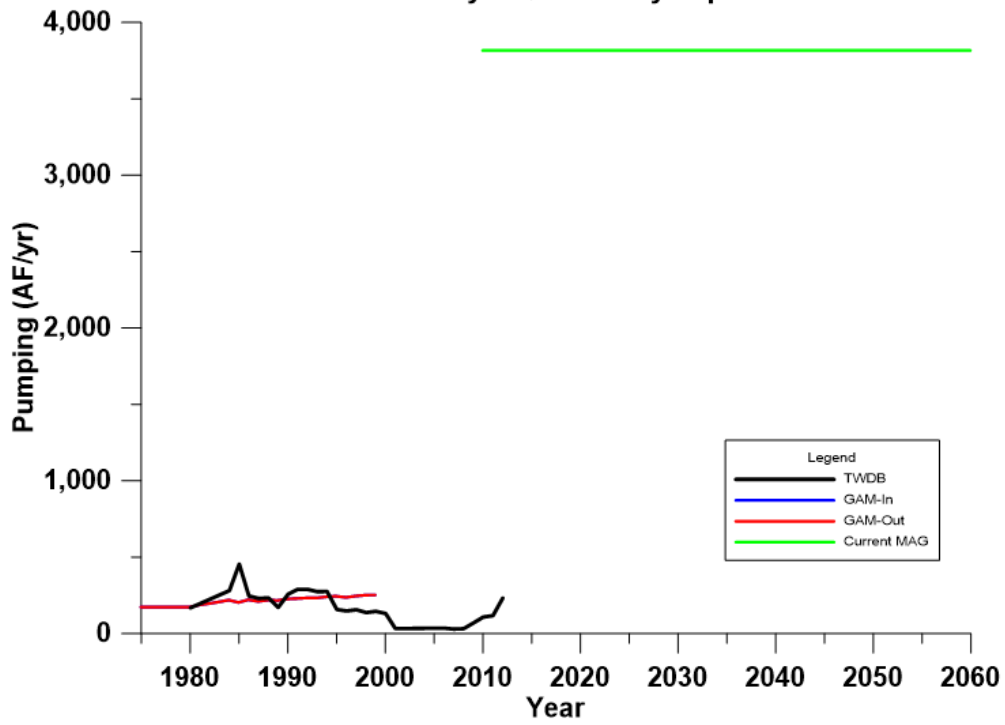
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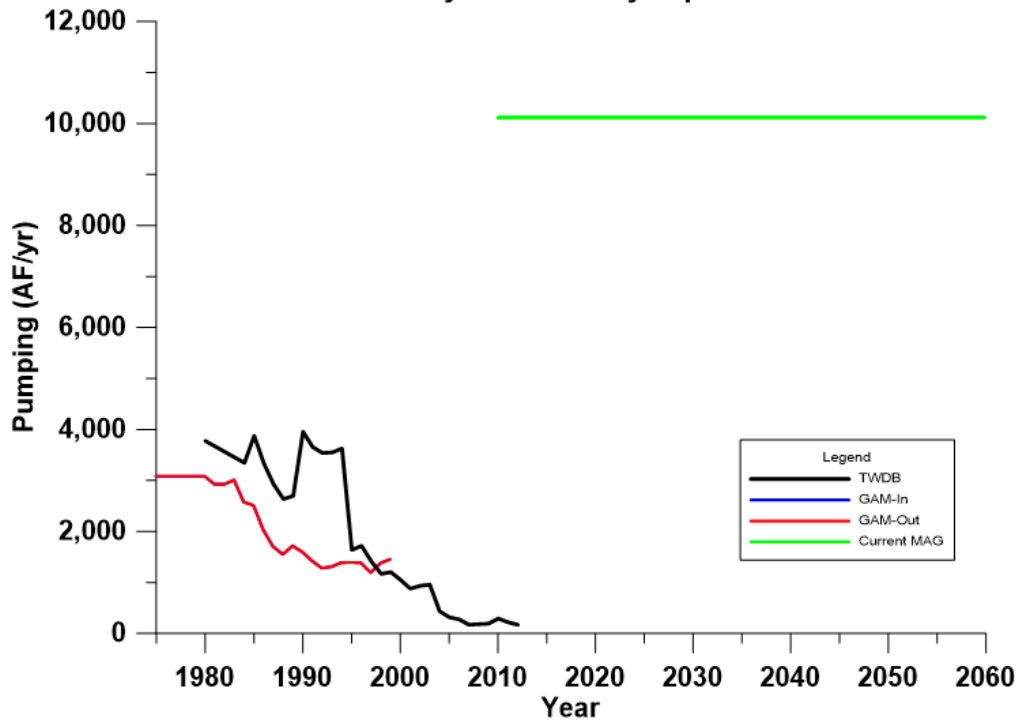
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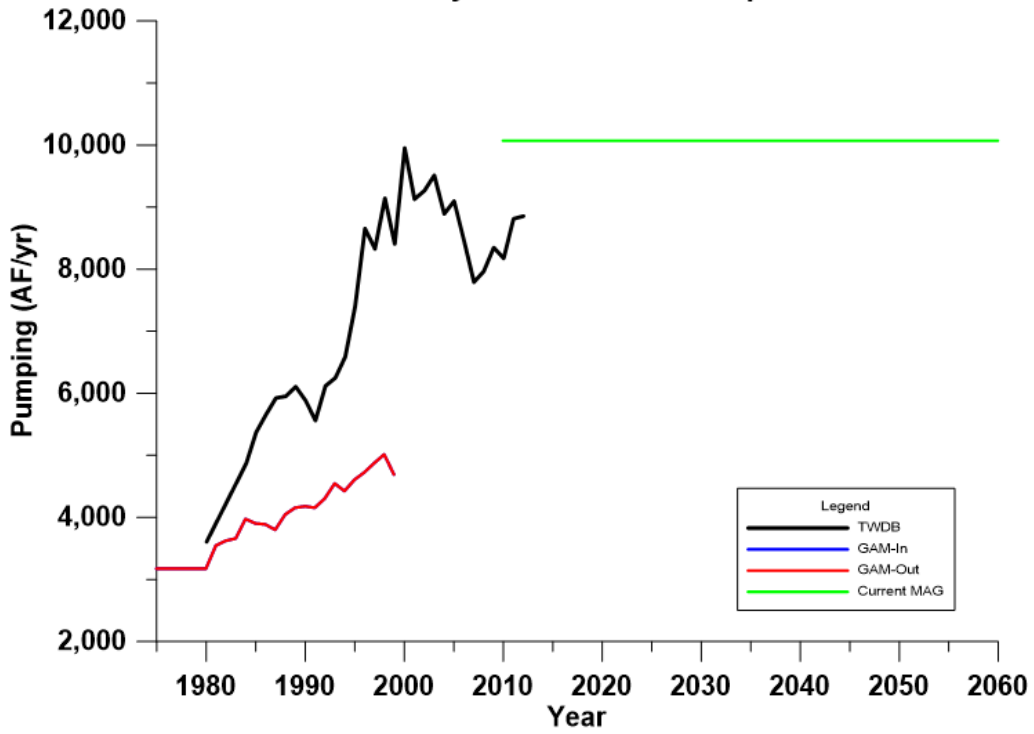
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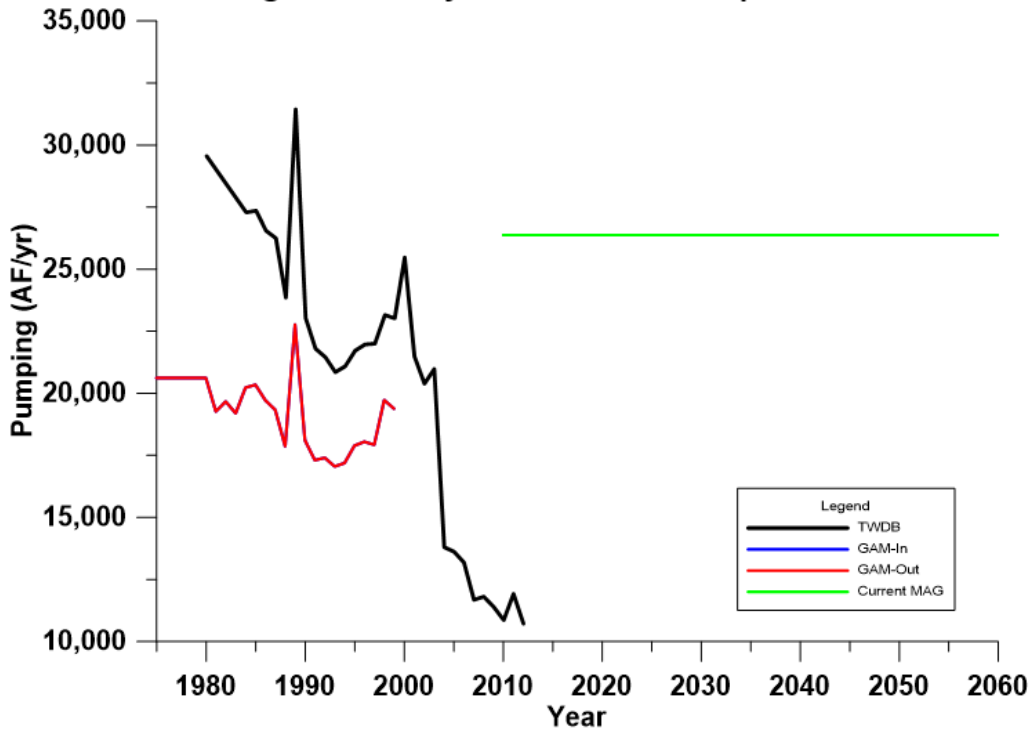
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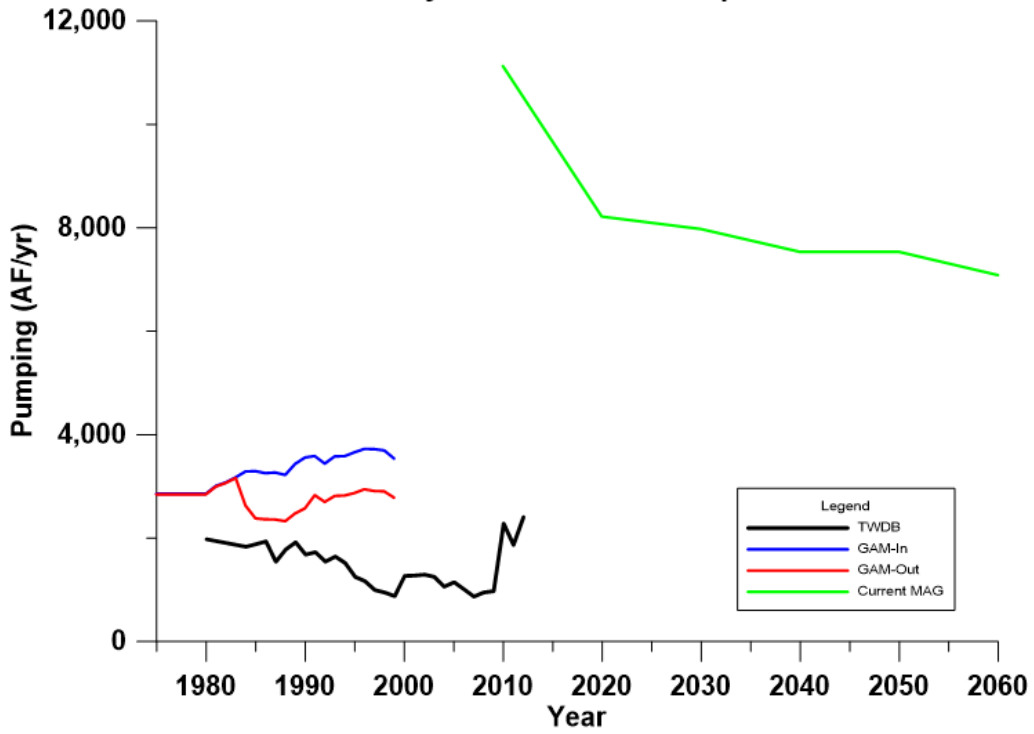
Anderson County - Carrizo-Wilcox Aquifer



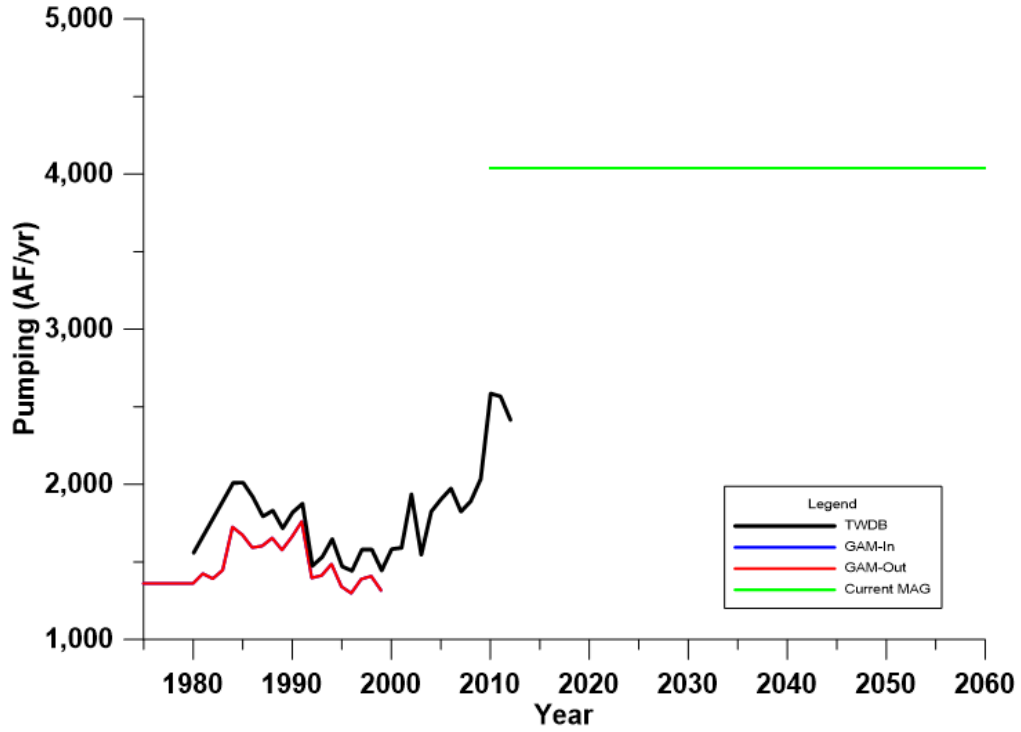
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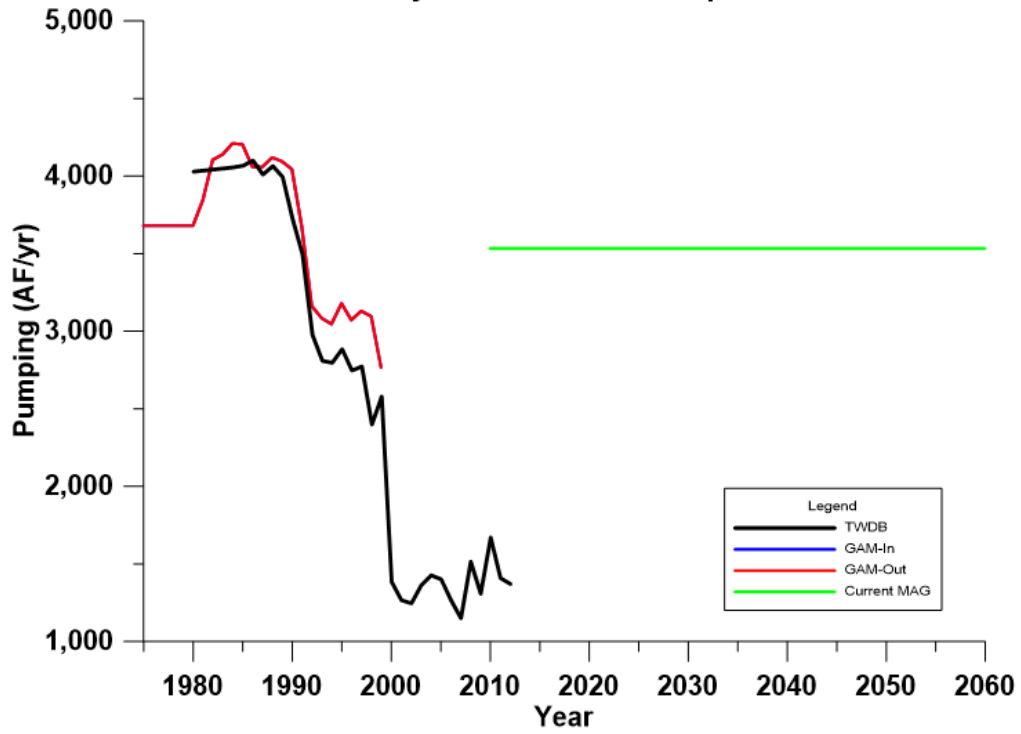
Bowie County - Carrizo-Wilcox Aquifer



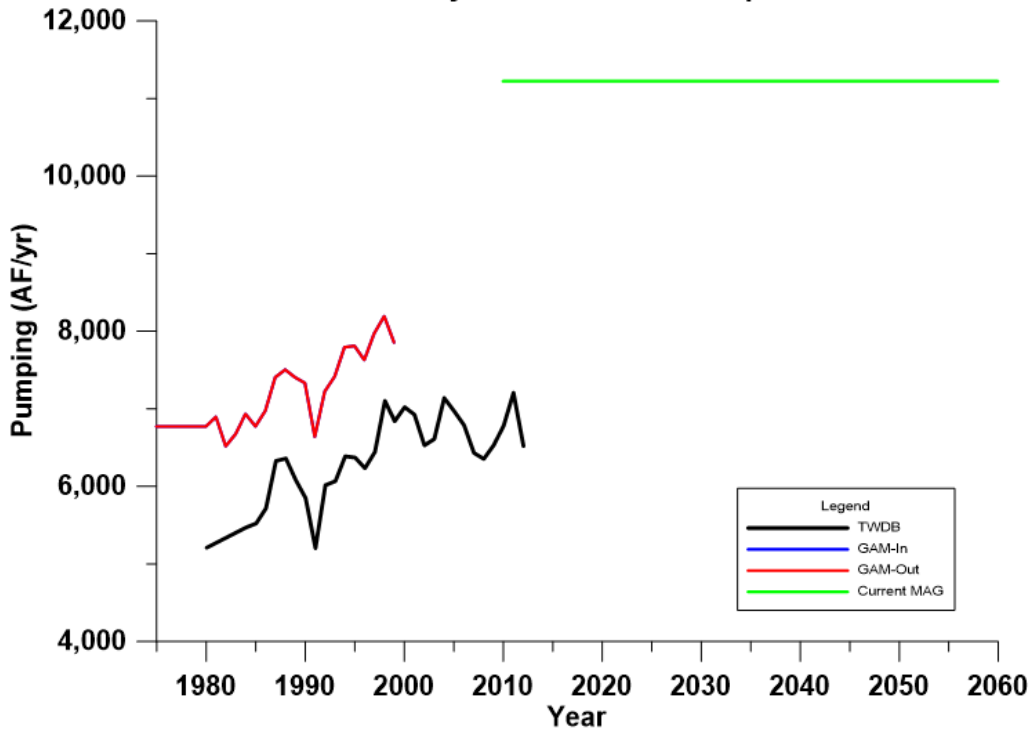
Camp County - Carrizo-Wilcox Aquifer

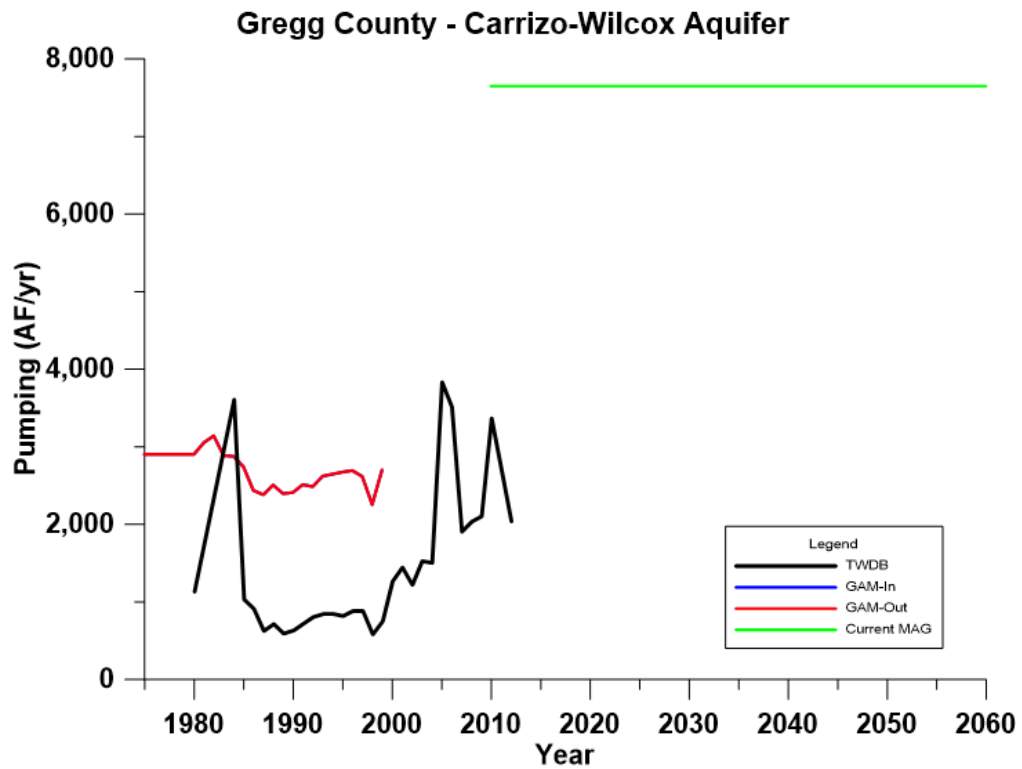
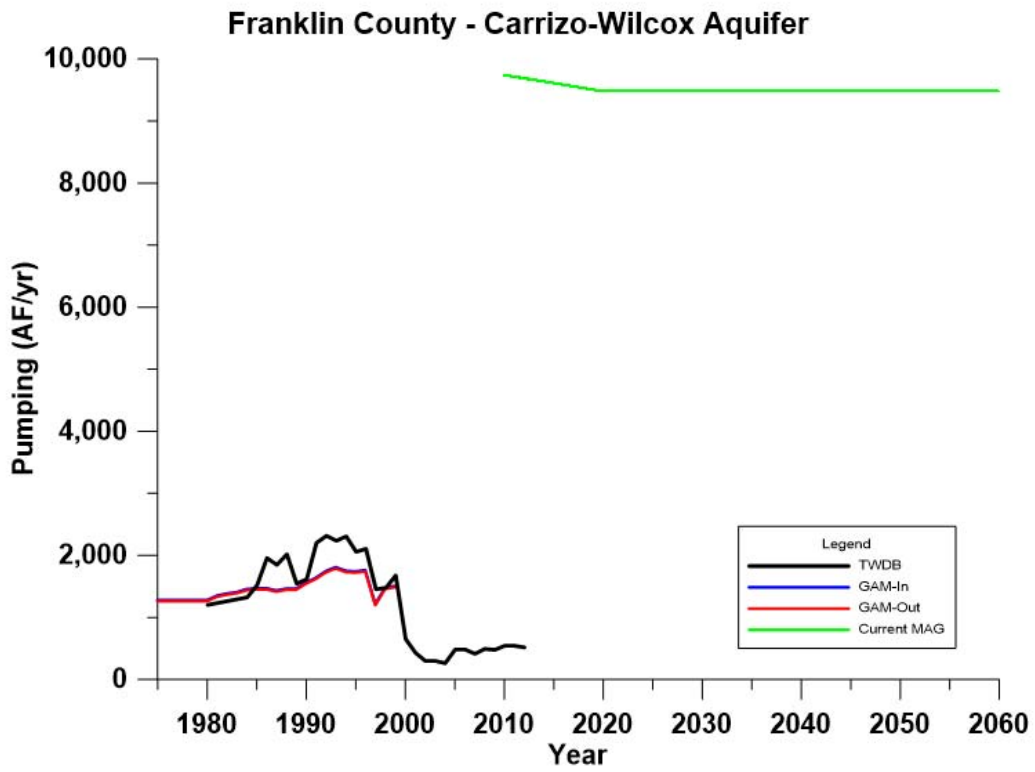


Cass County - Carrizo-Wilcox Aquifer

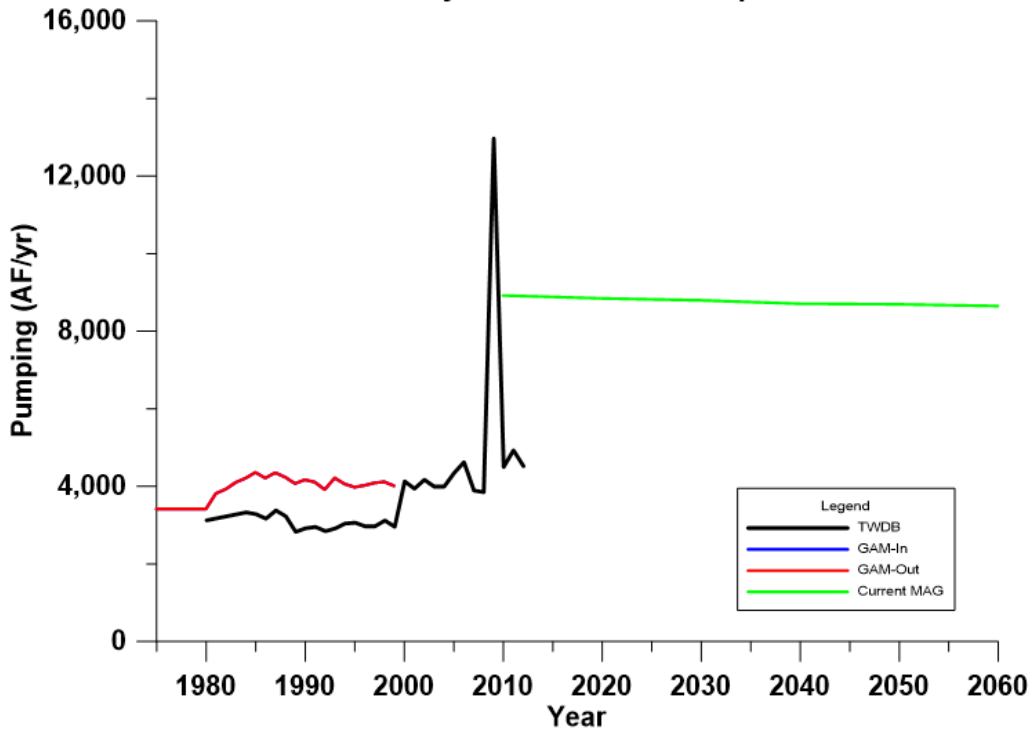


Cherokee County - Carrizo-Wilcox Aquifer

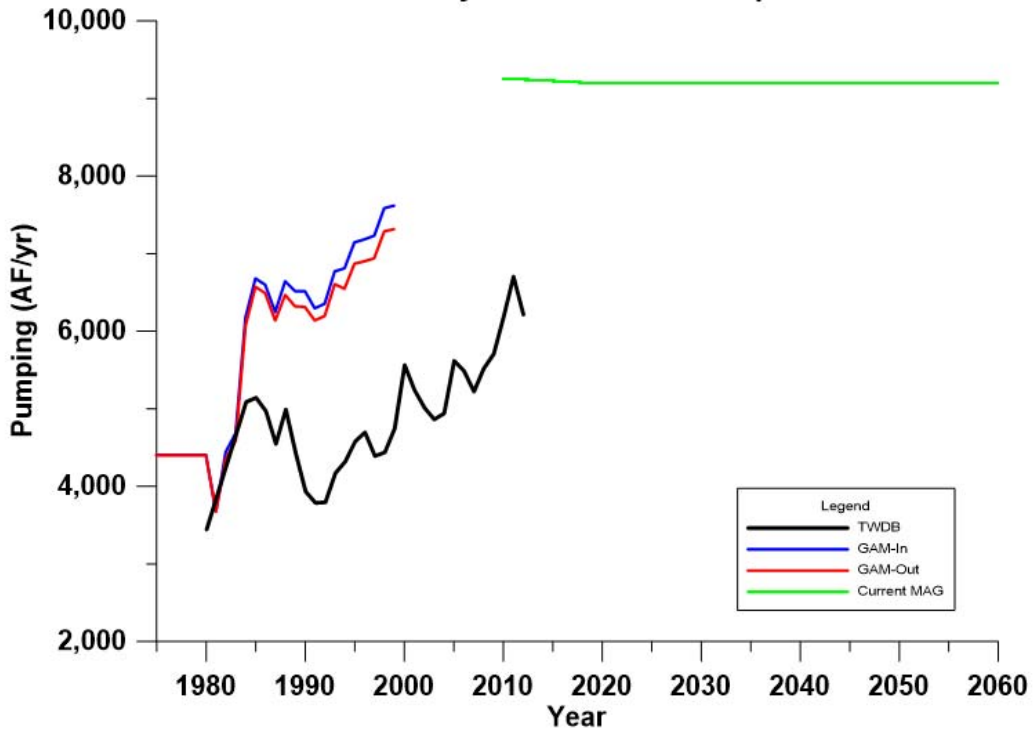




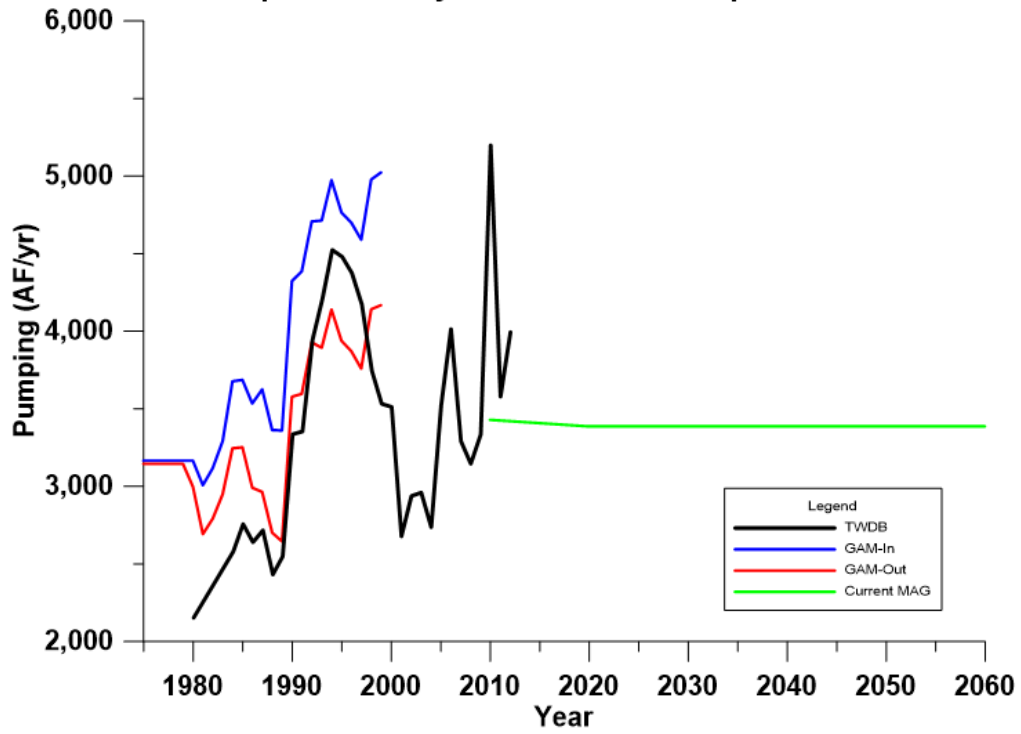
Harrison County - Carrizo-Wilcox Aquifer



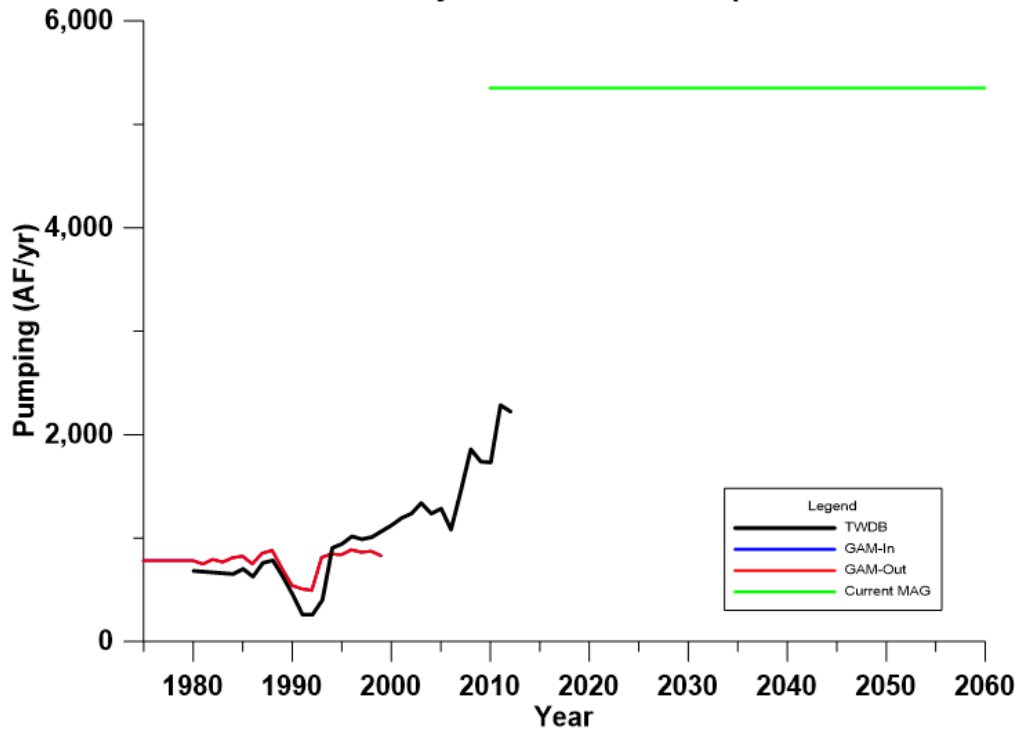
Henderson County - Carrizo-Wilcox Aquifer



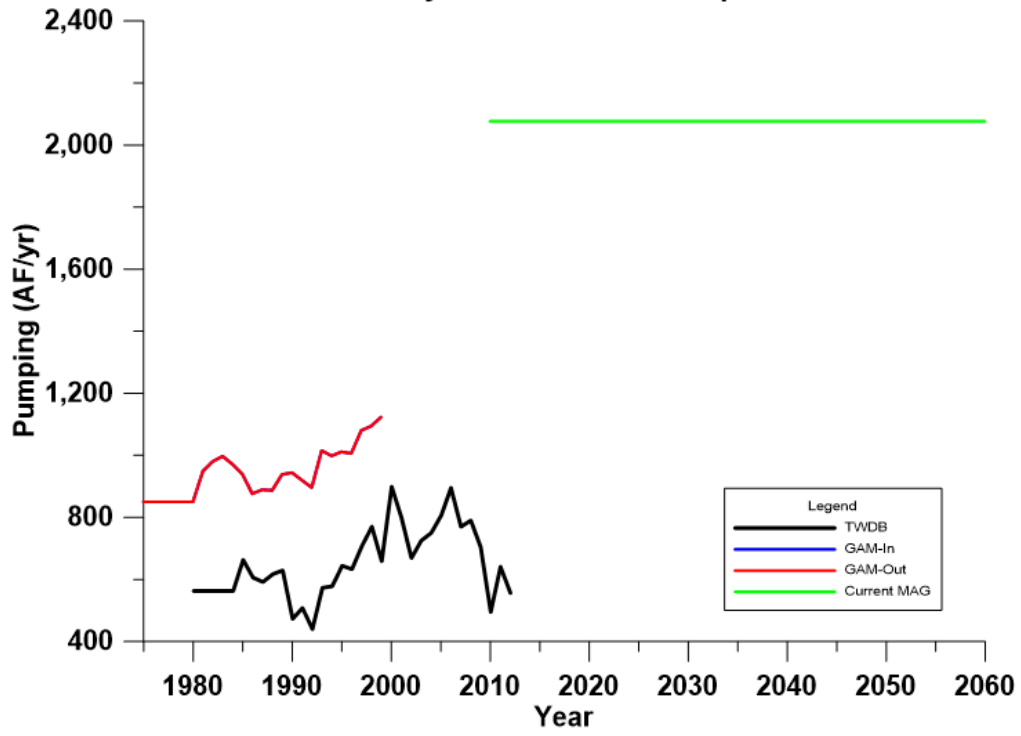
Hopkins County - Carrizo-Wilcox Aquifer



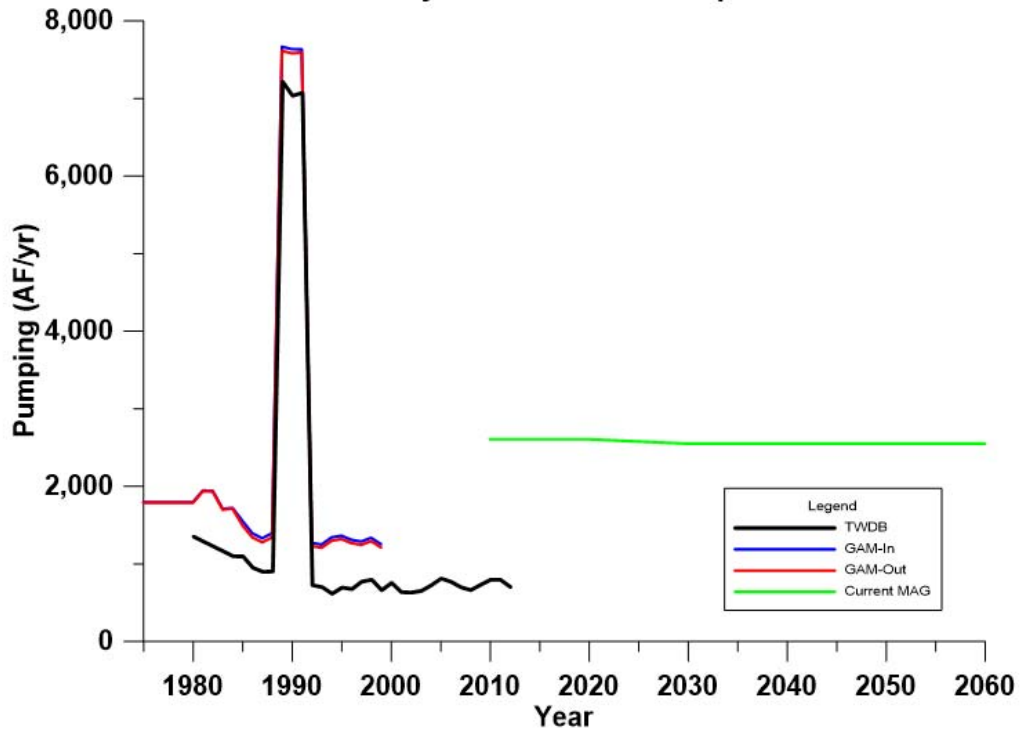
Houston County - Carrizo-Wilcox Aquifer



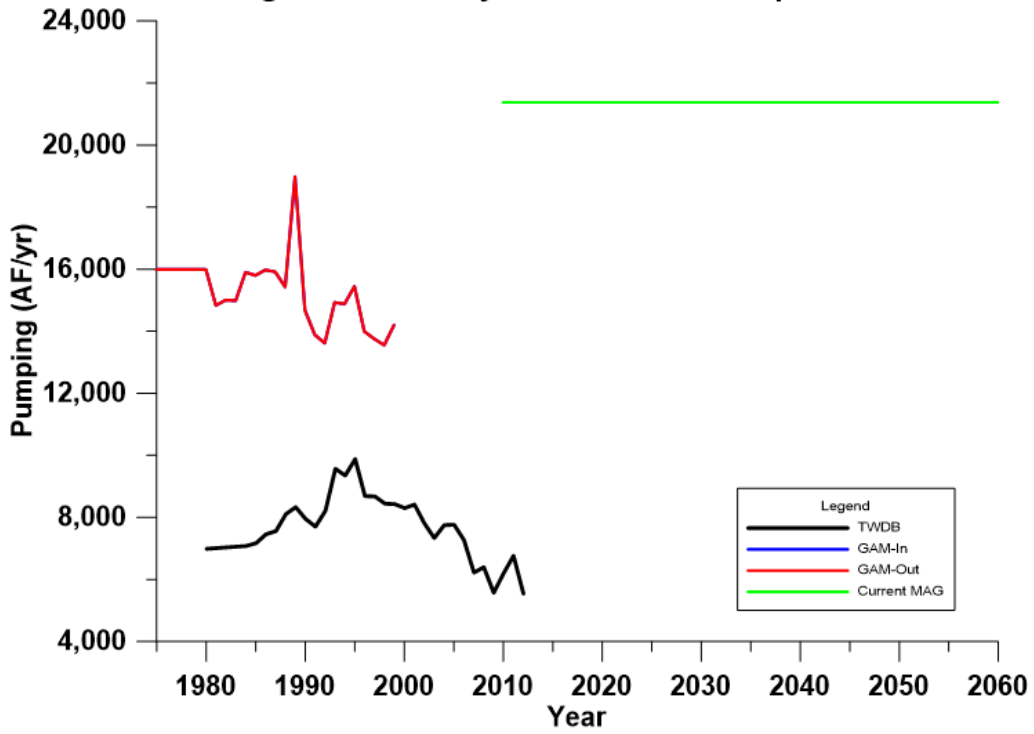
Marion County - Carrizo-Wilcox Aquifer



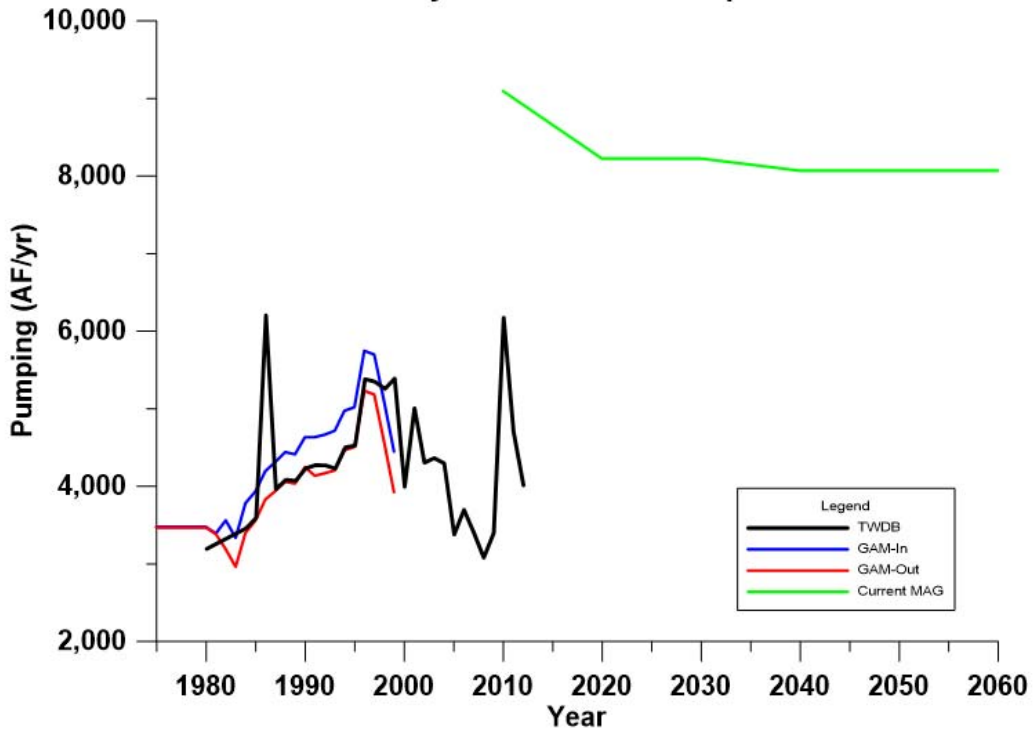
Morris County - Carrizo-Wilcox Aquifer



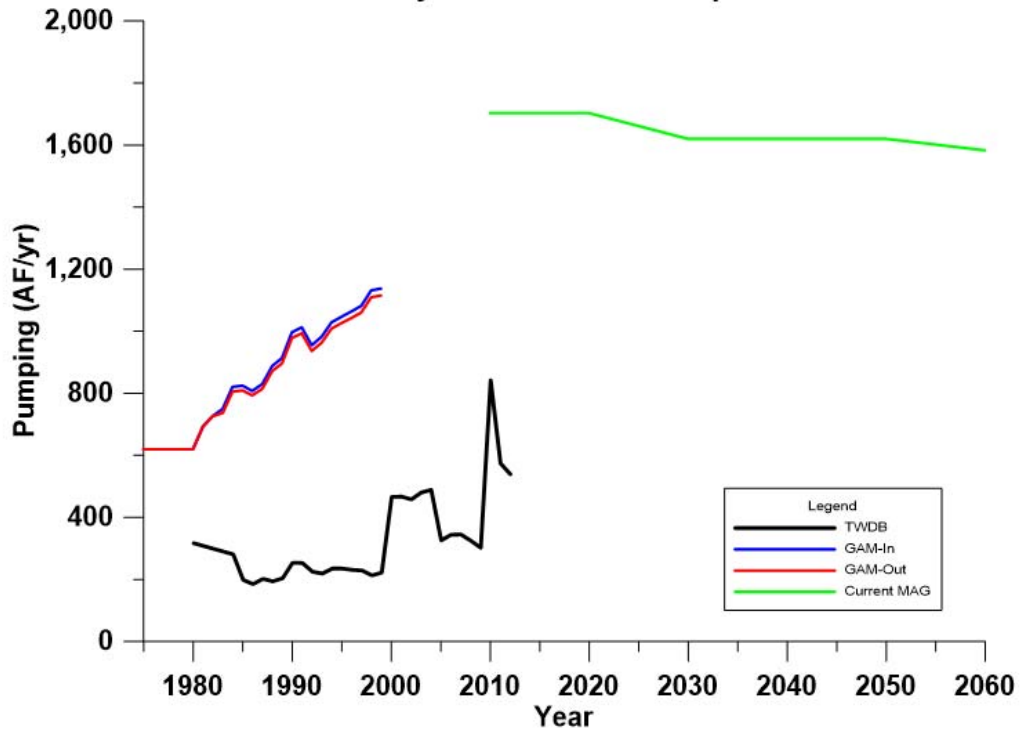
Nacogdoches County - Carrizo-Wilcox Aquifer



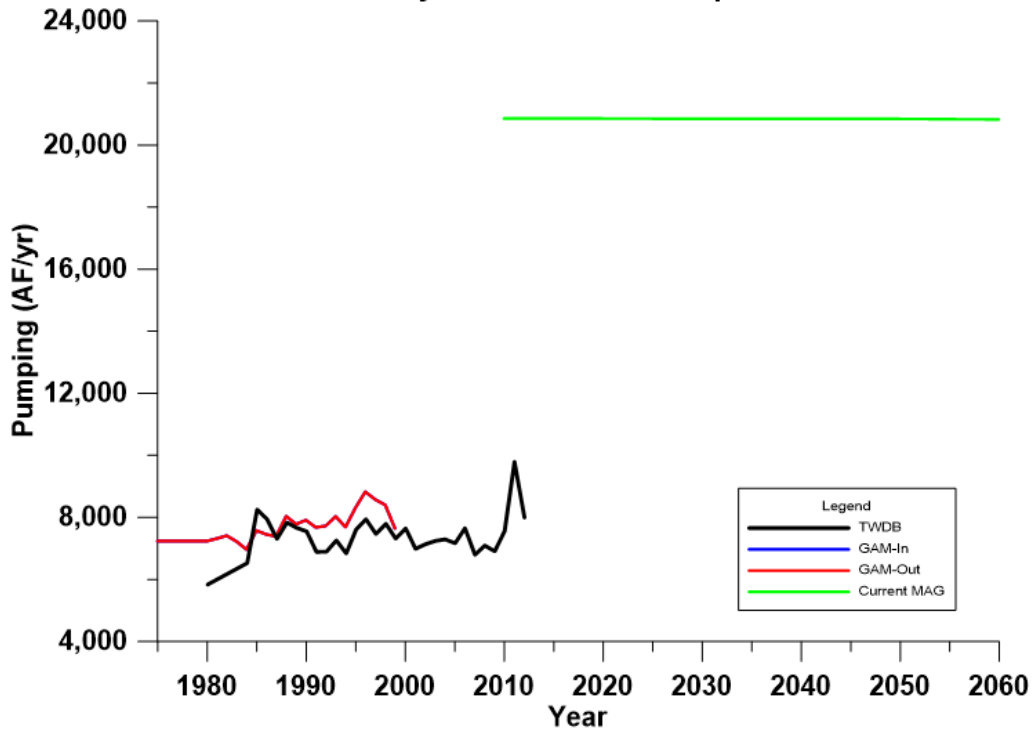
Panola County - Carrizo-Wilcox Aquifer



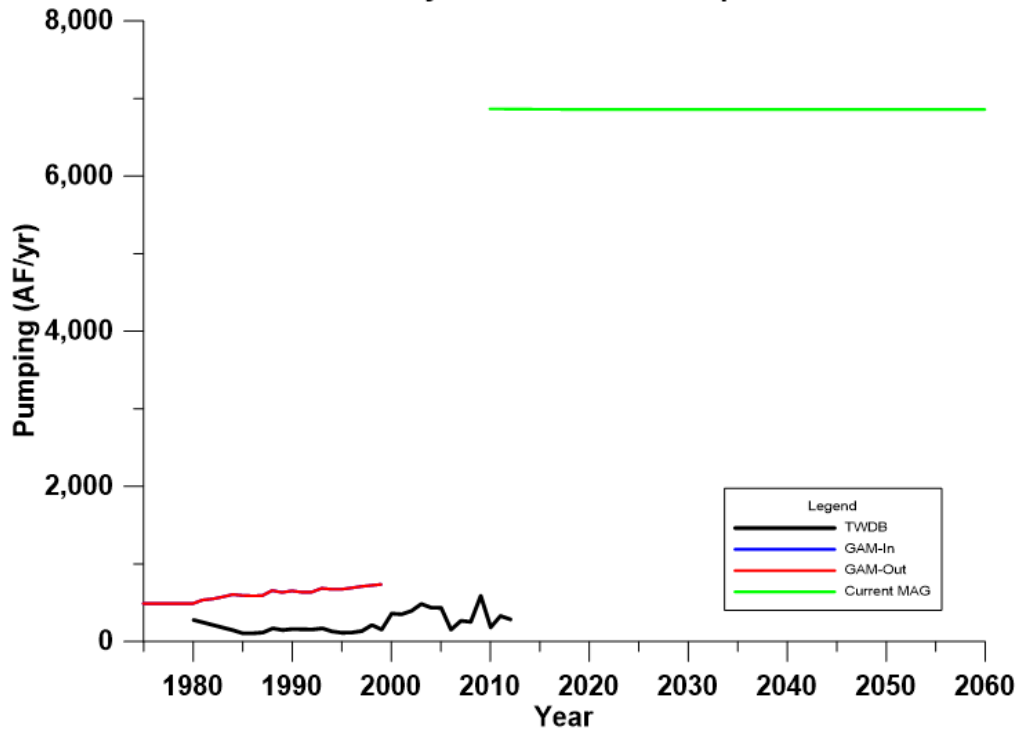
Rains County - Carrizo-Wilcox Aquifer



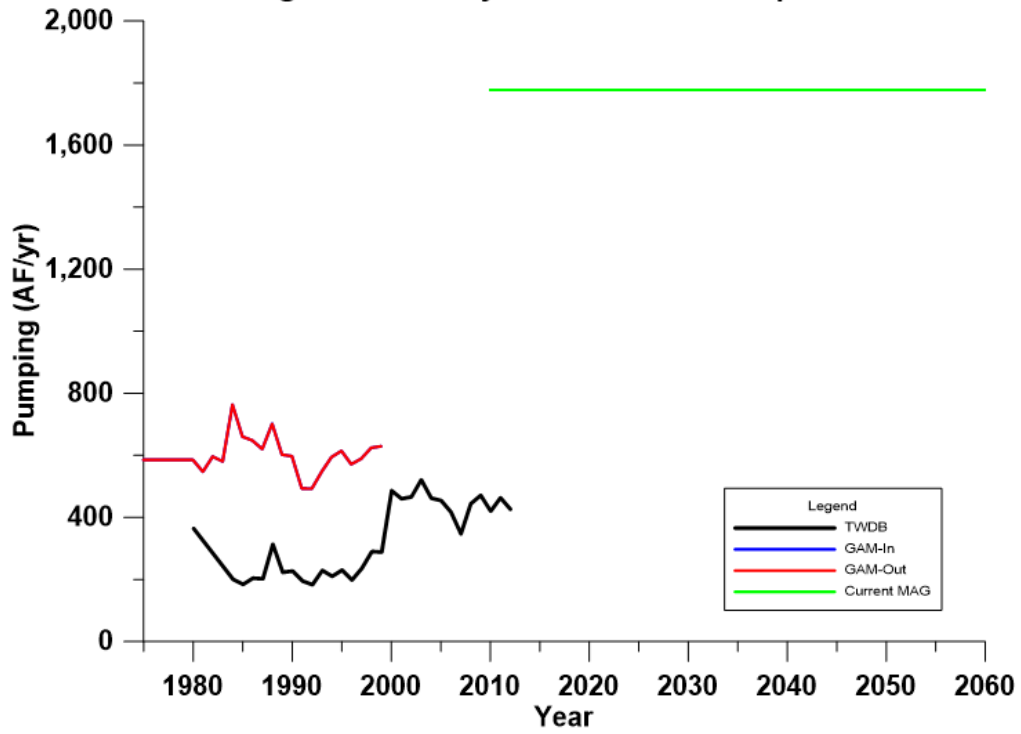
Rusk County - Carrizo-Wilcox Aquifer



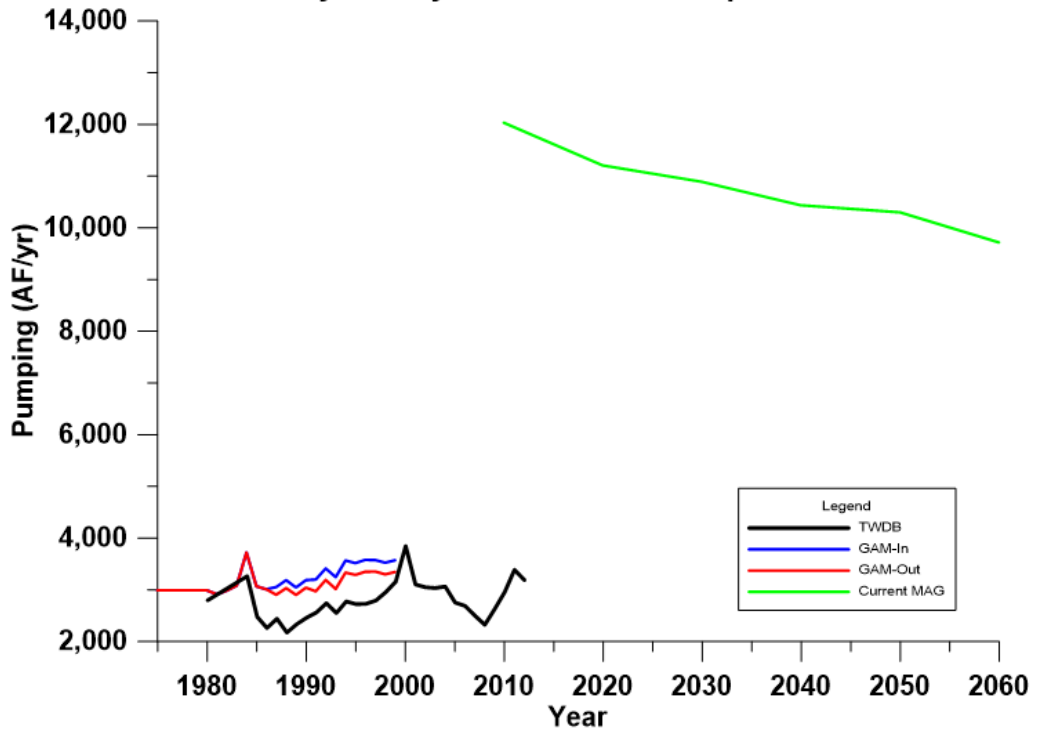
Sabine County - Carrizo-Wilcox Aquifer



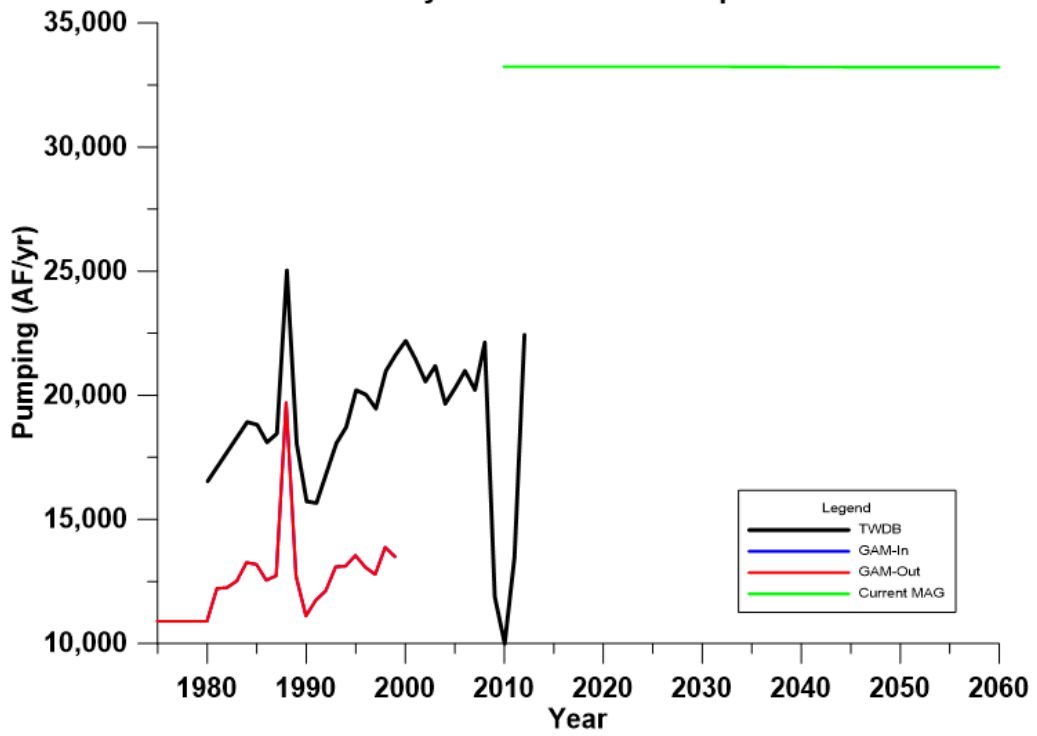
San Augustine County - Carrizo-Wilcox Aquifer

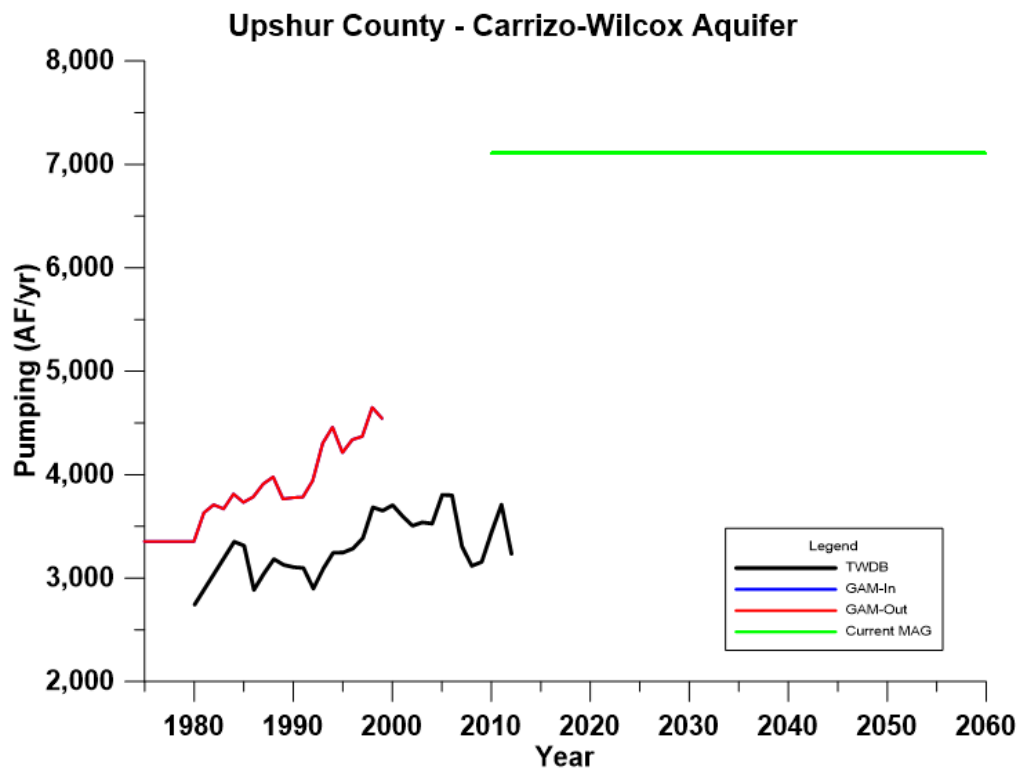
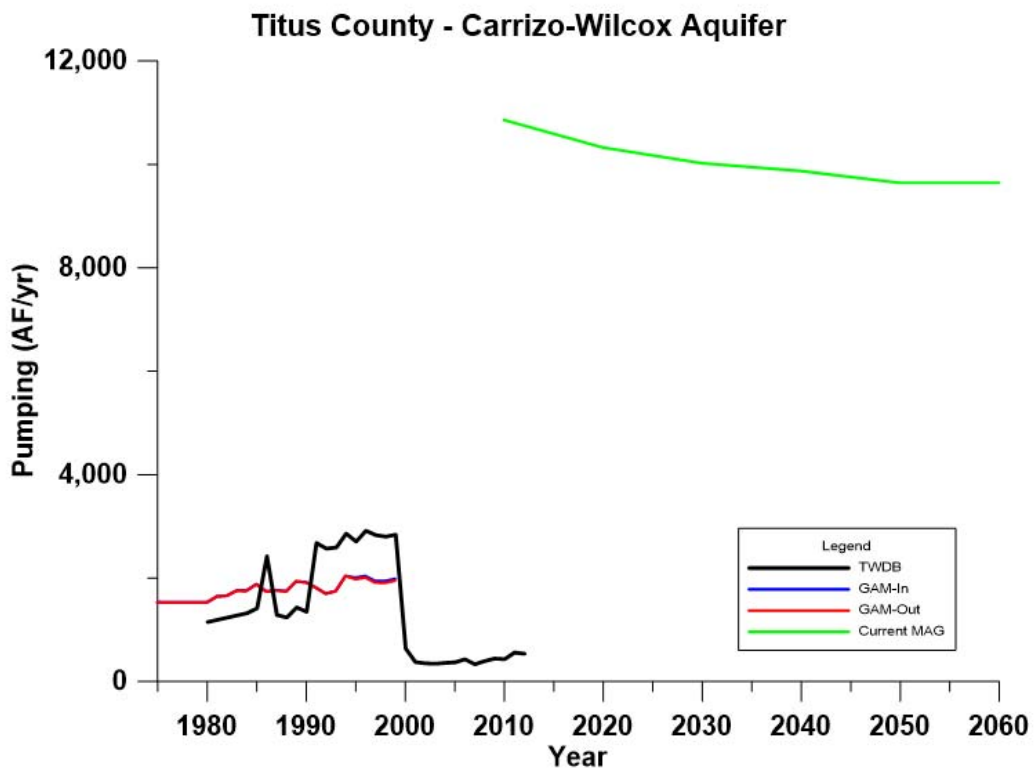


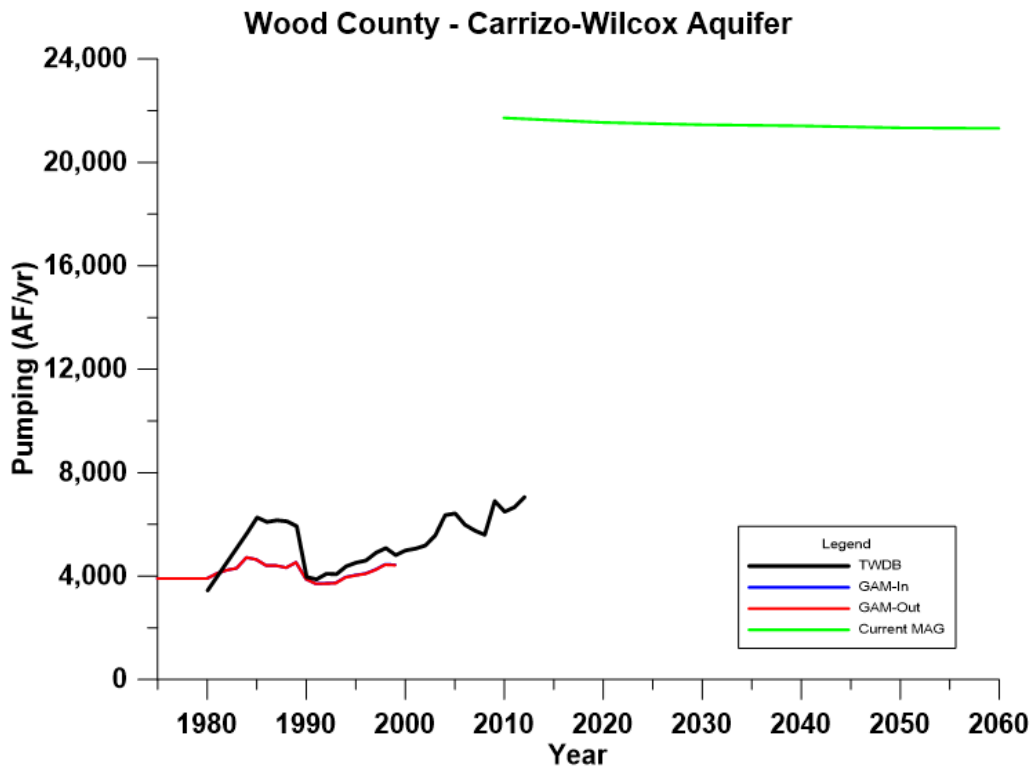
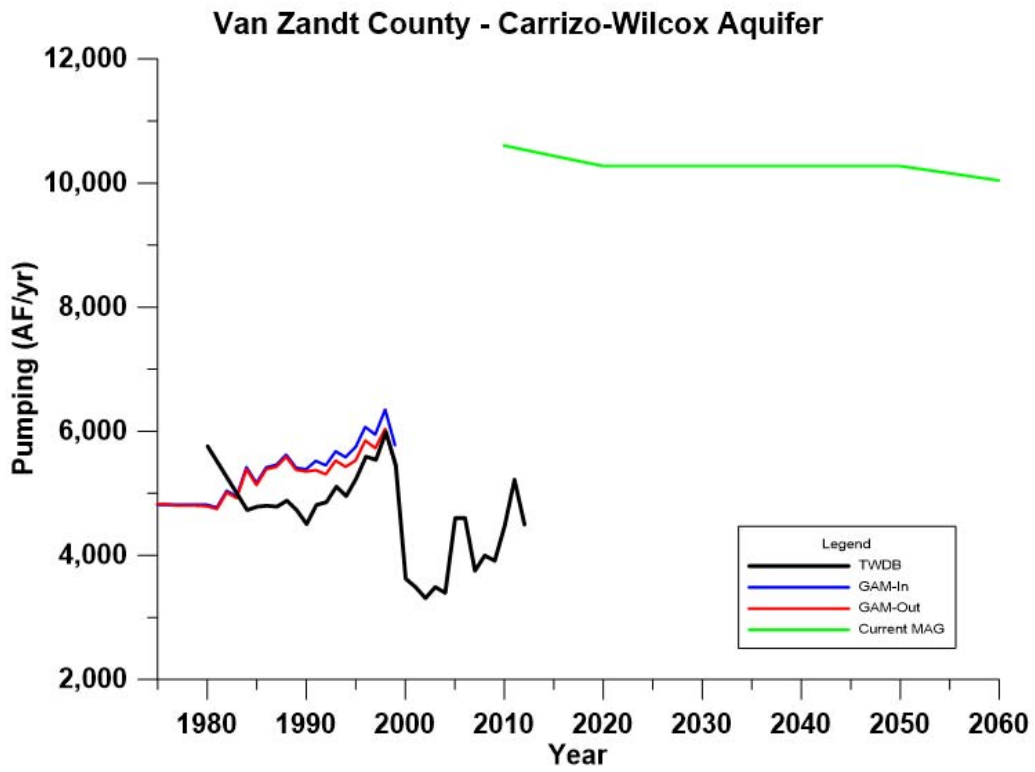
Shelby County - Carrizo-Wilcox Aquifer



Smith County - Carrizo-Wilcox Aquifer







Appendix C

Tabular Summary of Simulation Pumping Input Organized by County and Model Layer for Seven Alternative Simulations Groundwater Management Area 11

Input Pumping – Scenario 1

All Values in AF/yr

County	Simulated Pumping								
	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Total
Anderson	431	0	14,597	0	6,925	6,823	6,404	198	35,378
Angelina	480	0	774	0	20,134	2,443	0	0	23,831
Bowie	0	0	0	0	0	6,591	5,129	255	11,975
Camp	0	0	3,188	0	1,376	778	678	1	6,021
Cass	0	0	27,379	0	6,750	3,721	2,345	600	40,795
Cherokee	251	0	16,382	0	4,882	6,778	2,986	0	31,279
Franklin	0	0	0	0	1,408	879	4,572	211	7,070
Gregg	0	0	5,298	0	3,054	1,751	820	0	10,923
Harrison	0	0	7,226	0	4,794	1,514	1,408	188	15,130
Henderson	0	0	11,087	0	4,996	1,942	1,439	1,714	21,178
Hopkins	0	0	0	0	499	162	2,846	1,759	5,266
Houston	1,044	0	1,624	0	6,399	5,791	6,304	0	21,162
Marion	0	0	10,914	0	1,305	389	212	3	12,823
Morris	0	0	6,704	0	899	282	680	3	8,568
Nacogdoches	285	0	3,496	0	8,620	7,766	537	1	20,705
Panola	0	0	0	0	1,768	541	4,034	608	6,951
Rains	0	0	0	0	0	462	700	207	1,369
Rusk	0	0	42	0	4,867	3,607	6,109	0	14,625
Sabine	206	0	0	0	2,953	1,184	329	329	5,001
San Augustine	143	0	4	0	791	455	8	0	1,401
Shelby	0	0	0	0	2,971	2,324	3,397	75	8,767
Smith	0	0	41,526	0	11,353	10,342	3,453	0	66,674
Titus	0	0	128	0	2,206	1,343	4,191	23	7,891
Trinity	429	0	0	0	1,550	0	0	0	1,979
Upshur	0	0	19,160	0	2,933	1,627	430	0	24,150
Van Zandt	0	0	3,414	0	2,241	1,089	2,928	1,460	11,132
Wood	0	0	7,073	0	9,488	4,133	1,595	2	22,291
Total	3,269	0	180,016	0	115,162	74,717	63,534	7,637	444,335

Input Pumping – Scenario 2

All Values in AF/yr

County	Simulated Pumping								
	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Total
Anderson	493	0	16,682	0	7,914	7,798	7,318	228	40,433
Angelina	551	0	879	0	23,009	2,790	0	0	27,229
Bowie	0	0	0	0	0	7,533	5,861	291	13,685
Camp	0	0	3,643	0	1,572	889	775	2	6,881
Cass	0	0	31,291	0	7,714	4,253	2,680	685	46,623
Cherokee	287	0	18,723	0	5,579	7,746	3,411	0	35,746
Franklin	0	0	0	0	1,609	1,005	5,226	241	8,081
Gregg	0	0	6,054	0	3,491	2,001	937	0	12,483
Harrison	0	0	8,258	0	5,479	1,730	1,610	215	17,292
Henderson	0	0	12,671	0	5,710	2,220	1,644	1,958	24,203
Hopkins	0	0	0	0	570	185	3,253	2,011	6,019
Houston	1,194	0	1,857	0	7,313	6,625	7,205	0	24,194
Marion	0	0	12,473	0	1,491	445	243	3	14,655
Morris	0	0	7,662	0	1,028	323	777	4	9,794
Nacogdoches	326	0	3,995	0	9,852	8,875	612	1	23,661
Panola	0	0	0	0	2,021	618	4,610	696	7,945
Rains	0	0	0	0	0	528	800	236	1,564
Rusk	0	0	48	0	5,562	4,123	6,981	0	16,714
Sabine	236	0	0	0	3,377	1,352	377	377	5,719
San Augustine	163	0	8	0	904	520	8	0	1,603
Shelby	0	0	0	0	3,395	2,656	3,882	85	10,018
Smith	0	0	47,458	0	12,975	11,820	3,946	0	76,199
Titus	0	0	146	0	2,521	1,535	4,789	26	9,017
Trinity	490	0	0	0	1,774	0	0	0	2,264
Upshur	0	0	21,898	0	3,352	1,859	491	0	27,600
Van Zandt	0	0	3,902	0	2,561	1,244	3,346	1,668	12,721
Wood	0	0	8,084	0	10,843	4,723	1,824	2	25,476
Total	3,740	0	205,732	0	131,616	85,396	72,606	8,729	507,819

Input Pumping – Scenario 3

All Values in AF/yr

County	Simulated Pumping								
	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Total
Anderson	554	0	18,767	0	8,904	8,773	8,232	250	45,480
Angelina	617	0	990	0	25,885	3,139	0	0	30,631
Bowie	0	0	0	0	0	8,475	6,594	328	15,397
Camp	0	0	4,099	0	1,769	1,000	872	2	7,742
Cass	0	0	35,202	0	8,678	4,784	3,015	771	52,450
Cherokee	322	0	21,063	0	6,276	8,714	3,836	0	40,211
Franklin	0	0	0	0	1,810	1,131	5,879	271	9,091
Gregg	0	0	6,811	0	3,927	2,251	1,054	0	14,043
Harrison	0	0	9,291	0	6,163	1,946	1,810	241	19,451
Henderson	0	0	14,255	0	6,423	2,497	1,850	2,205	27,230
Hopkins	0	0	0	0	642	208	3,659	2,262	6,771
Houston	1,343	0	2,088	0	8,228	7,450	8,105	0	27,214
Marion	0	0	14,033	0	1,677	500	273	4	16,487
Morris	0	0	8,619	0	1,156	363	874	4	11,016
Nacogdoches	367	0	4,494	0	11,083	9,985	688	1	26,618
Panola	0	0	0	0	2,274	696	5,187	782	8,939
Rains	0	0	0	0	0	594	900	266	1,760
Rusk	0	0	54	0	6,257	4,638	7,854	0	18,803
Sabine	265	0	0	0	3,798	1,523	421	421	6,428
San Augustine	184	0	8	0	1,016	586	9	0	1,803
Shelby	0	0	0	0	3,820	2,988	4,367	94	11,269
Smith	0	0	53,390	0	14,596	13,297	4,440	0	85,723
Titus	0	0	165	0	2,836	1,727	5,388	29	10,145
Trinity	552	0	0	0	1,992	0	0	0	2,544
Upshur	0	0	24,635	0	3,770	2,091	553	0	31,049
Van Zandt	0	0	4,389	0	2,881	1,400	3,764	1,877	14,311
Wood	0	0	9,094	0	12,199	5,314	2,051	3	28,661
Total	4,204	0	231,447	0	148,060	96,070	81,675	9,811	571,267

Input Pumping – Scenario 4

All Values in AF/yr

County	Simulated Pumping								
	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Total
Anderson	616	0	20,853	0	9,893	9,748	9,147	281	50,538
Angelina	687	0	1,102	0	28,764	3,486	0	0	34,039
Bowie	0	0	0	0	0	9,416	7,326	364	17,106
Camp	0	0	4,554	0	1,965	1,111	969	2	8,601
Cass	0	0	39,114	0	9,643	5,316	3,350	856	58,279
Cherokee	358	0	23,403	0	6,974	9,683	4,262	0	44,680
Franklin	0	0	0	0	2,011	1,256	6,532	301	10,100
Gregg	0	0	7,568	0	4,363	2,501	1,171	0	15,603
Harrison	0	0	10,323	0	6,848	2,163	2,011	268	21,613
Henderson	0	0	15,838	0	7,137	2,774	2,056	2,449	30,254
Hopkins	0	0	0	0	713	232	4,066	2,513	7,524
Houston	1,492	0	2,321	0	9,142	8,275	9,006	0	30,236
Marion	0	0	15,592	0	1,864	556	303	4	18,319
Morris	0	0	9,577	0	1,285	403	971	5	12,241
Nacogdoches	407	0	4,994	0	12,314	11,094	771	1	29,581
Panola	0	0	0	0	2,526	773	5,763	869	9,931
Rains	0	0	0	0	0	661	1,000	295	1,956
Rusk	0	0	60	0	6,953	5,153	8,727	0	20,893
Sabine	295	0	0	0	4,220	1,691	469	469	7,144
San Augustine	204	0	8	0	1,129	651	9	0	2,001
Shelby	0	0	0	0	4,244	3,320	4,853	104	12,521
Smith	0	0	59,322	0	16,218	14,775	4,933	0	95,248
Titus	0	0	183	0	3,151	1,919	5,987	33	11,273
Trinity	613	0	0	0	2,216	0	0	0	2,829
Upshur	0	0	27,372	0	4,189	2,324	614	0	34,499
Van Zandt	0	0	4,877	0	3,201	1,555	4,182	2,085	15,900
Wood	0	0	10,105	0	13,554	5,904	2,279	3	31,845
Total	4,672	0	257,166	0	164,517	106,740	90,757	10,902	634,754

Input Pumping – Scenario 5

All Values in AF/yr

County	Simulated Pumping								
	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Total
Anderson	677	0	22,938	0	10,883	10,722	10,061	312	55,593
Angelina	758	0	1,213	0	31,640	3,834	1	0	37,446
Bowie	0	0	0	0	0	10,358	8,059	401	18,818
Camp	0	0	5,010	0	2,162	1,222	1,066	2	9,462
Cass	0	0	43,025	0	10,607	5,847	3,685	942	64,106
Cherokee	394	0	25,744	0	7,671	10,651	4,687	0	49,147
Franklin	0	0	0	0	2,212	1,382	7,185	331	11,110
Gregg	0	0	8,324	0	4,800	2,751	1,289	0	17,164
Harrison	0	0	11,355	0	7,533	2,379	2,212	295	23,774
Henderson	0	0	17,422	0	7,851	3,052	2,261	2,693	33,279
Hopkins	0	0	0	0	784	255	4,472	2,765	8,276
Houston	1,641	0	2,553	0	10,056	9,108	9,906	0	33,264
Marion	0	0	17,151	0	2,050	612	334	5	20,152
Morris	0	0	10,535	0	1,413	444	1,068	5	13,465
Nacogdoches	448	0	5,493	0	13,546	12,204	847	1	32,539
Panola	0	0	0	0	2,779	850	6,339	957	10,925
Rains	0	0	0	0	0	727	1,100	325	2,152
Rusk	0	0	66	0	7,648	5,669	9,600	0	22,983
Sabine	325	0	0	0	4,641	1,859	517	517	7,859
San Augustine	224	0	8	0	1,243	716	10	0	2,201
Shelby	0	0	0	0	4,669	3,652	5,338	114	13,773
Smith	0	0	65,254	0	17,840	16,252	5,426	0	104,772
Titus	0	0	201	0	3,466	2,111	6,586	36	12,400
Trinity	674	0	0	0	2,440	0	0	0	3,114
Upshur	0	0	30,109	0	4,609	2,556	675	0	37,949
Van Zandt	0	0	5,365	0	3,521	1,711	4,601	2,294	17,492
Wood	0	0	11,115	0	14,910	6,495	2,507	3	35,030
Total	5,141	0	282,881	0	180,974	117,419	99,832	11,998	698,245

Input Pumping – Scenario 6

All Values in AF/yr

County	Simulated Pumping								
	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Total
Anderson	739	0	25,023	0	11,872	11,697	10,975	334	60,640
Angelina	824	0	1,325	0	34,515	4,182	1	0	40,847
Bowie	0	0	0	0	0	11,300	8,792	437	20,529
Camp	0	0	5,465	0	2,358	1,333	1,163	2	10,321
Cass	0	0	46,936	0	11,571	6,378	4,020	1,028	69,933
Cherokee	430	0	28,084	0	8,368	11,619	5,112	0	53,613
Franklin	0	0	0	0	2,413	1,507	7,838	361	12,119
Gregg	0	0	9,081	0	5,236	3,001	1,406	0	18,724
Harrison	0	0	12,388	0	8,218	2,595	2,413	322	25,936
Henderson	0	0	19,006	0	8,565	3,329	2,466	2,940	36,306
Hopkins	0	0	0	0	856	278	4,879	3,016	9,029
Houston	1,789	0	2,785	0	10,970	9,933	10,807	0	36,284
Marion	0	0	18,710	0	2,237	667	364	5	21,983
Morris	0	0	11,492	0	1,542	484	1,165	6	14,689
Nacogdoches	488	0	5,992	0	14,777	13,313	923	1	35,494
Panola	0	0	0	0	3,032	927	6,915	1,043	11,917
Rains	0	0	0	0	0	793	1,200	354	2,347
Rusk	0	0	72	0	8,343	6,184	10,472	0	25,071
Sabine	353	0	0	0	5,063	2,029	561	561	8,567
San Augustine	245	0	8	0	1,355	782	10	0	2,400
Shelby	0	0	0	0	5,093	3,984	5,823	123	15,023
Smith	0	0	71,187	0	19,462	17,730	5,920	0	114,299
Titus	0	0	220	0	3,781	2,302	7,184	39	13,526
Trinity	735	0	0	0	2,658	0	0	0	3,393
Upshur	0	0	32,846	0	5,027	2,788	737	0	41,398
Van Zandt	0	0	5,852	0	3,841	1,866	5,019	2,502	19,080
Wood	0	0	12,126	0	16,265	7,085	2,735	3	38,214
Total	5,603	0	308,598	0	197,418	128,086	108,900	13,077	761,682

Input Pumping – Scenario 7

All Values in AF/yr

County	Simulated Pumping								
	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Total
Anderson	800	0	27,108	0	12,861	12,672	11,889	364	65,694
Angelina	895	0	1,430	0	37,391	4,530	1	0	44,247
Bowie	0	0	0	0	0	12,241	9,524	473	22,238
Camp	0	0	5,921	0	2,555	1,444	1,260	3	11,183
Cass	0	0	50,847	0	12,536	6,910	4,355	1,113	75,761
Cherokee	466	0	30,424	0	9,066	12,588	5,538	0	58,082
Franklin	0	0	0	0	2,614	1,633	8,491	391	13,129
Gregg	0	0	9,838	0	5,673	3,251	1,523	0	20,285
Harrison	0	0	13,420	0	8,903	2,812	2,615	349	28,099
Henderson	0	0	20,590	0	9,278	3,607	2,672	3,184	39,331
Hopkins	0	0	0	0	927	301	5,285	3,267	9,780
Houston	1,940	0	3,017	0	11,884	10,757	11,708	0	39,306
Marion	0	0	20,269	0	2,423	723	394	6	23,815
Morris	0	0	12,450	0	1,670	524	1,263	6	15,913
Nacogdoches	530	0	6,492	0	16,009	14,423	998	1	38,453
Panola	0	0	0	0	3,284	1,005	7,492	1,131	12,912
Rains	0	0	0	0	0	859	1,299	384	2,542
Rusk	0	0	78	0	9,038	6,699	11,345	0	27,160
Sabine	383	0	0	0	5,487	2,198	609	609	9,286
San Augustine	265	0	12	0	1,468	846	11	0	2,602
Shelby	0	0	0	0	5,517	4,316	6,309	133	16,275
Smith	0	0	77,119	0	21,084	19,207	6,413	0	123,823
Titus	0	0	238	0	4,096	2,494	7,783	42	14,653
Trinity	797	0	0	0	2,882	0	0	0	3,679
Upshur	0	0	35,584	0	5,446	3,021	798	0	44,849
Van Zandt	0	0	6,340	0	4,161	2,022	5,437	2,711	20,671
Wood	0	0	13,136	0	17,620	7,675	2,963	4	41,398
Total	6,076	0	334,313	0	213,873	138,758	117,975	14,171	825,166

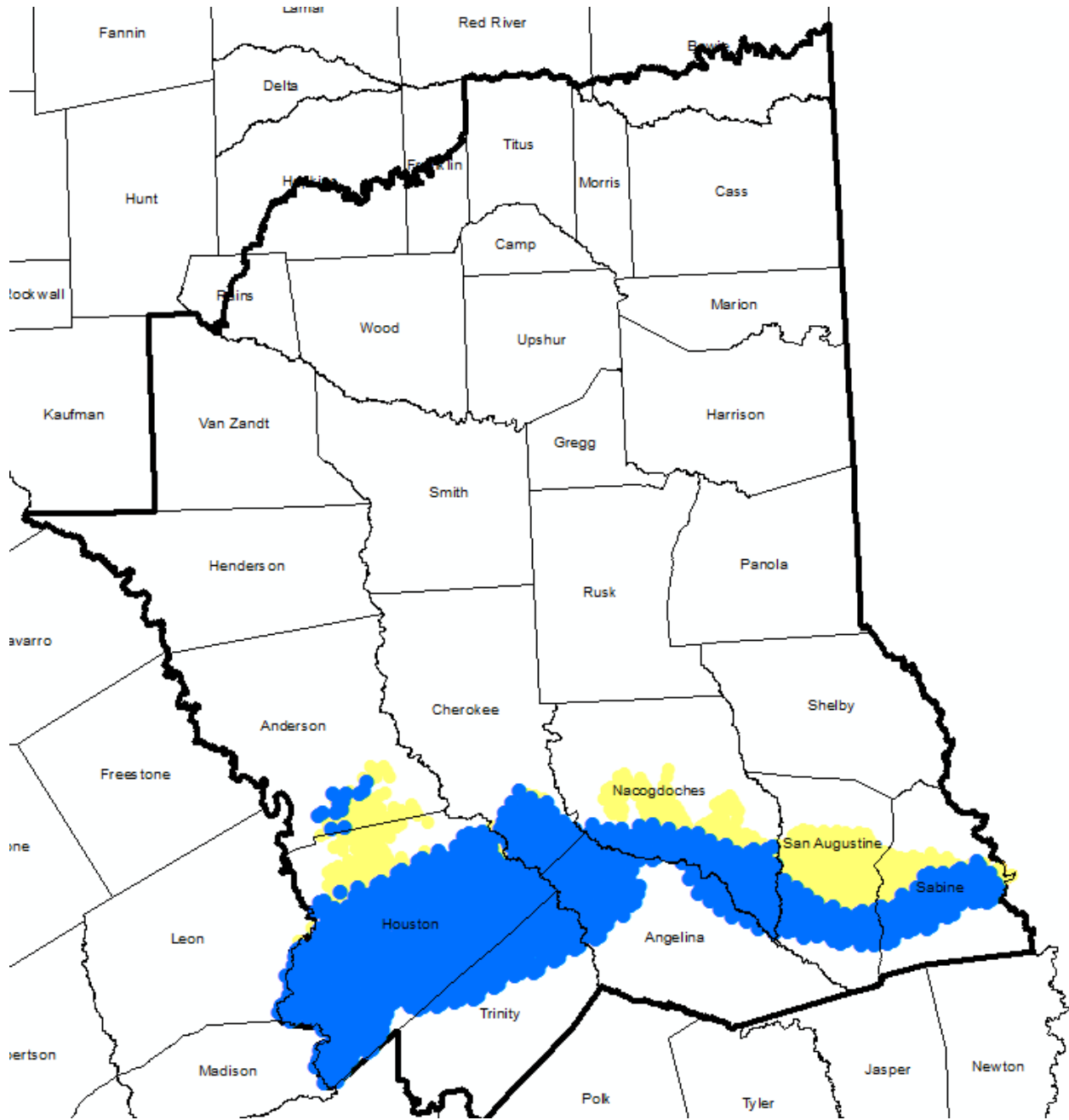
Appendix D

**Distribution of Model Cells with Positive Drawdown,
Negative Drawdown (Water Level Recovery), and Dry
Cells**

Scenario 4

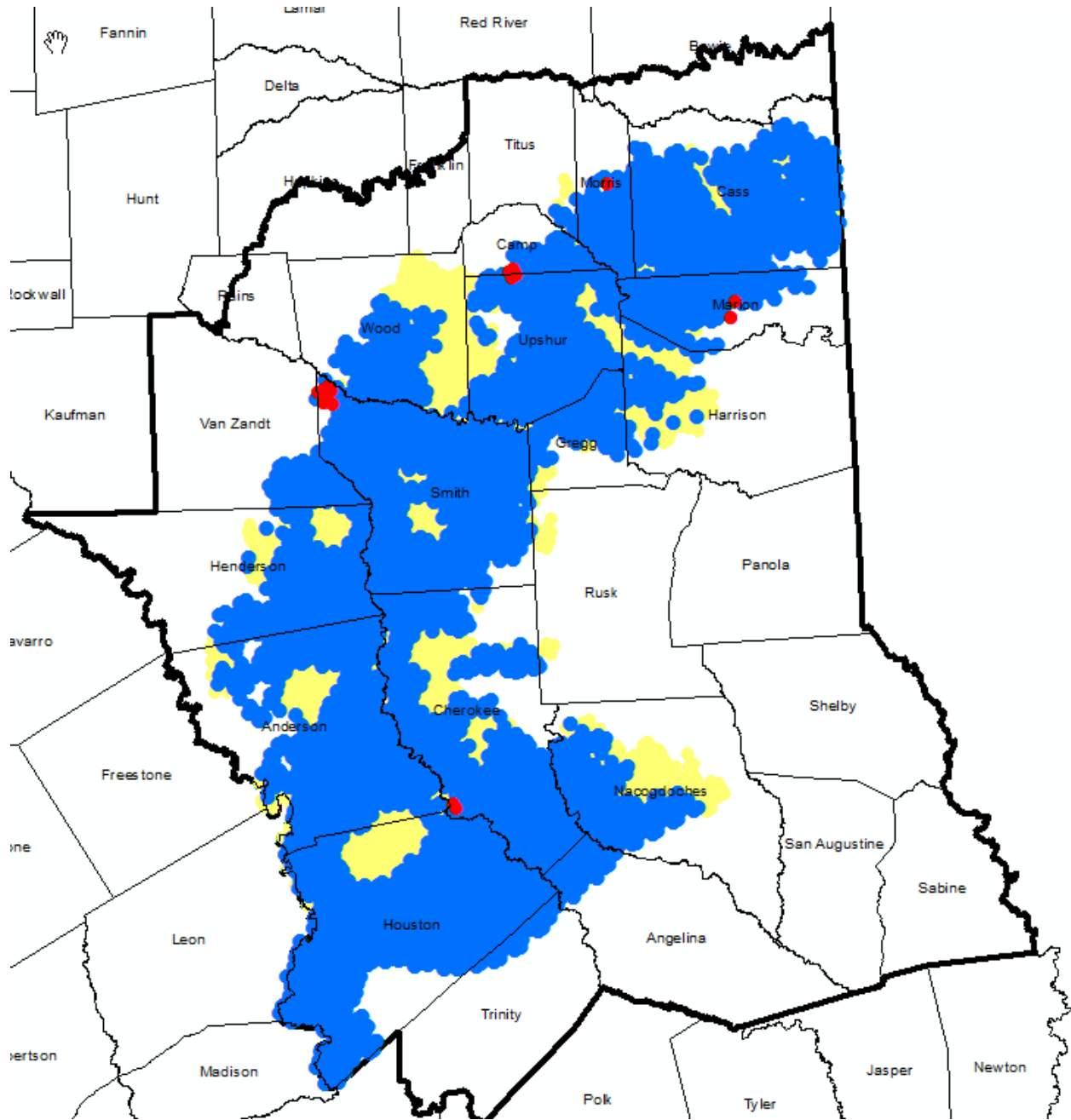
Groundwater Management Area 11

Model Layer 1 (Sparta Aquifer)



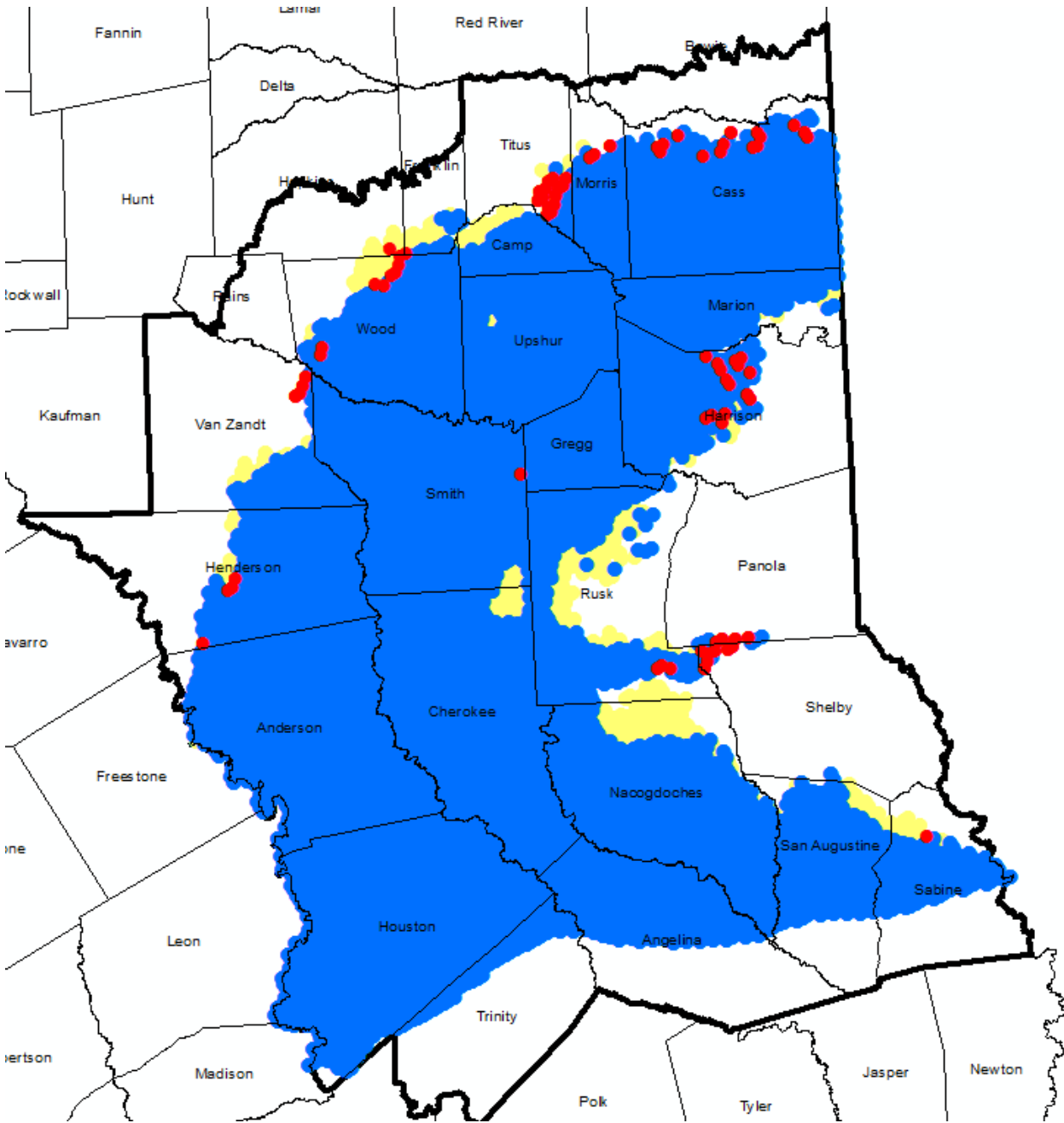
- Positive Drawdown
- Negative Drawdown
- Dry Cells
- ▣ GMA 11 Boundary
- ▣ County Boundaries

Model Layer 3 (Queen City Aquifer)



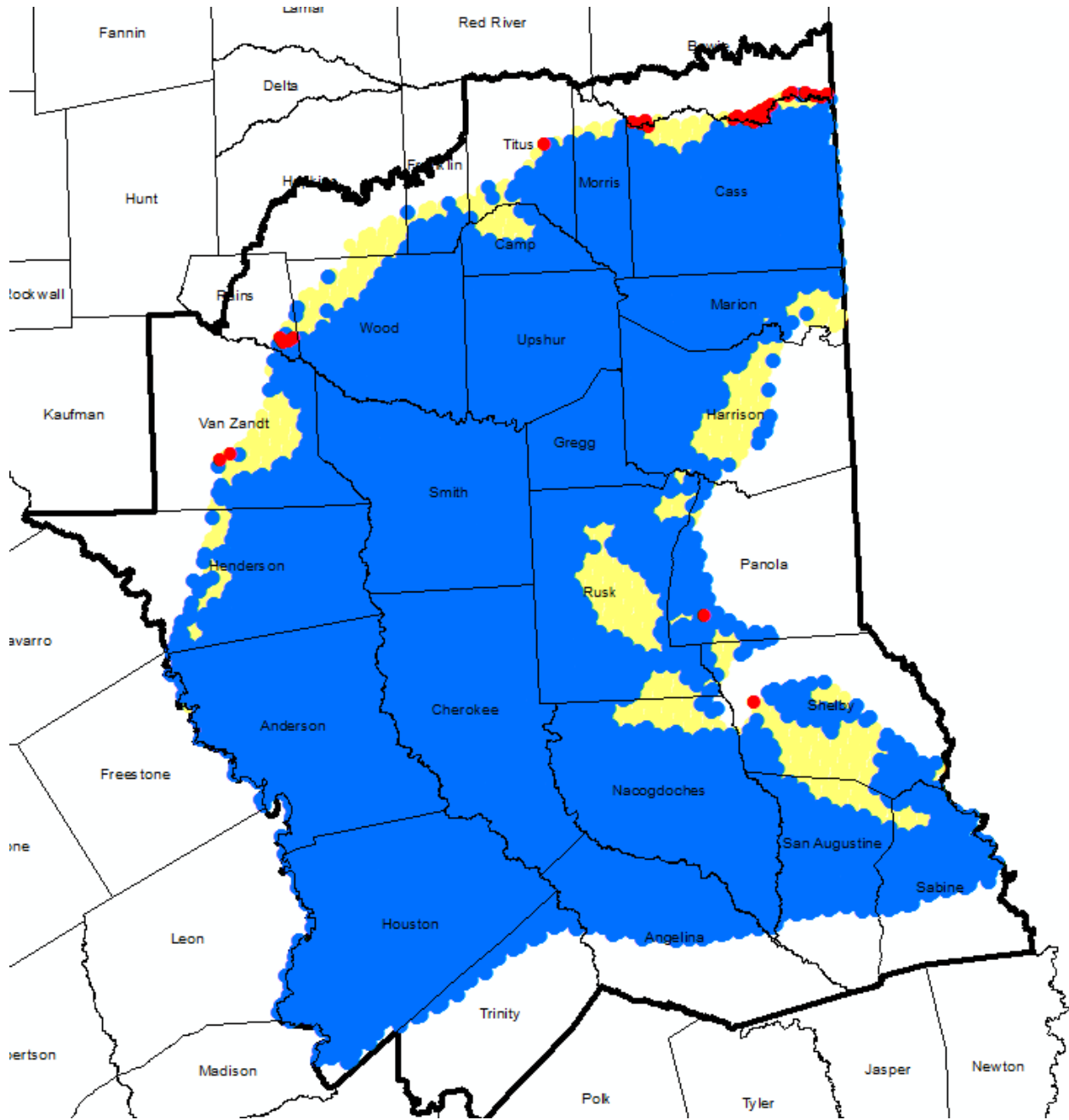
- Positive Drawdown
- Negative Drawdown
- Dry Cells
- ▣ GMA 11 Boundary
- ▣ County Boundaries

Model Layer 5 (Carrizo Aquifer)



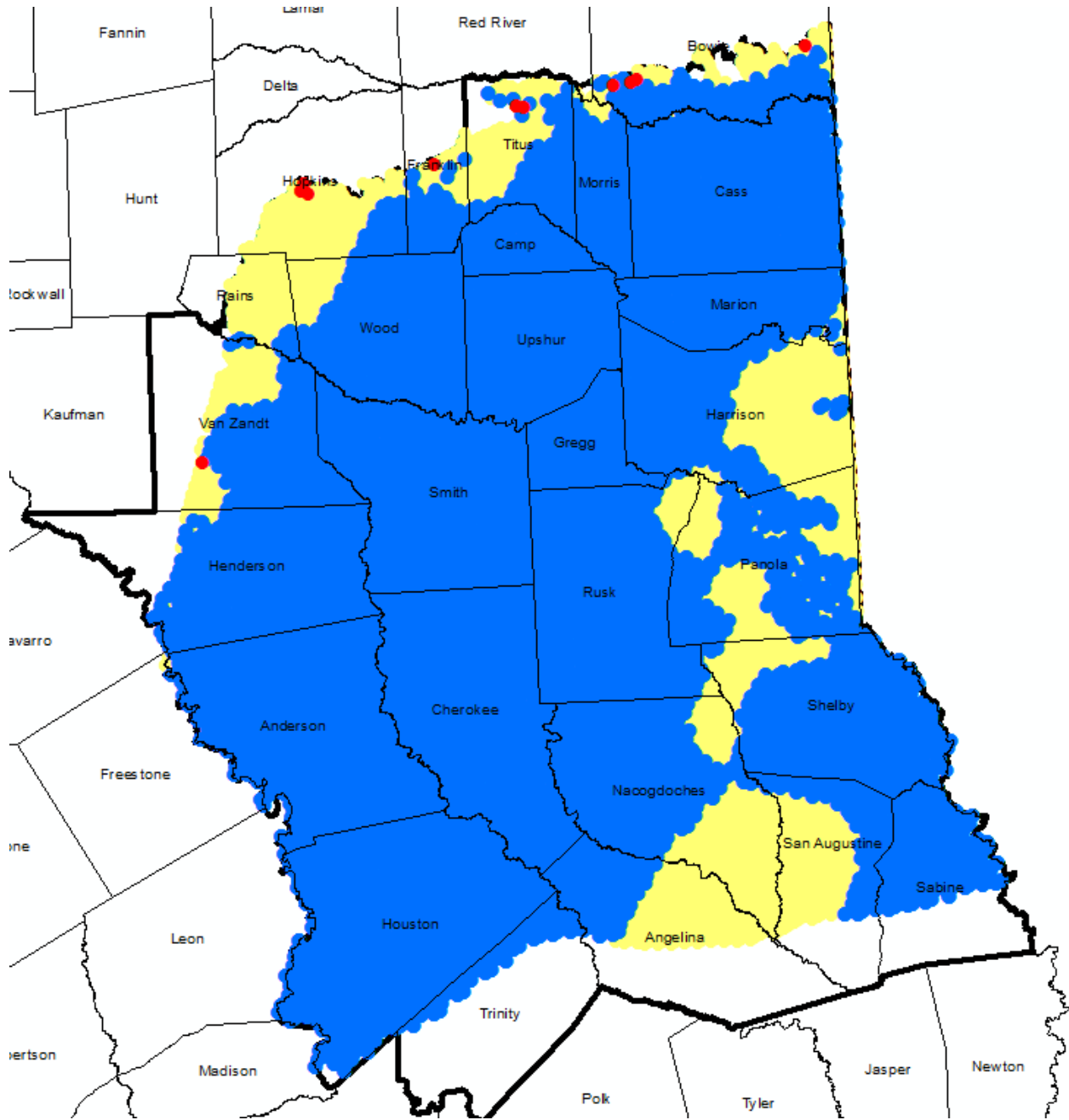
- Positive Drawdown
- Negative Drawdown
- Dry Cells
- ▬ GMA 11 Boundary
- ▭ County Boundaries

Layer 6 (Upper Wilcox Aquifer)



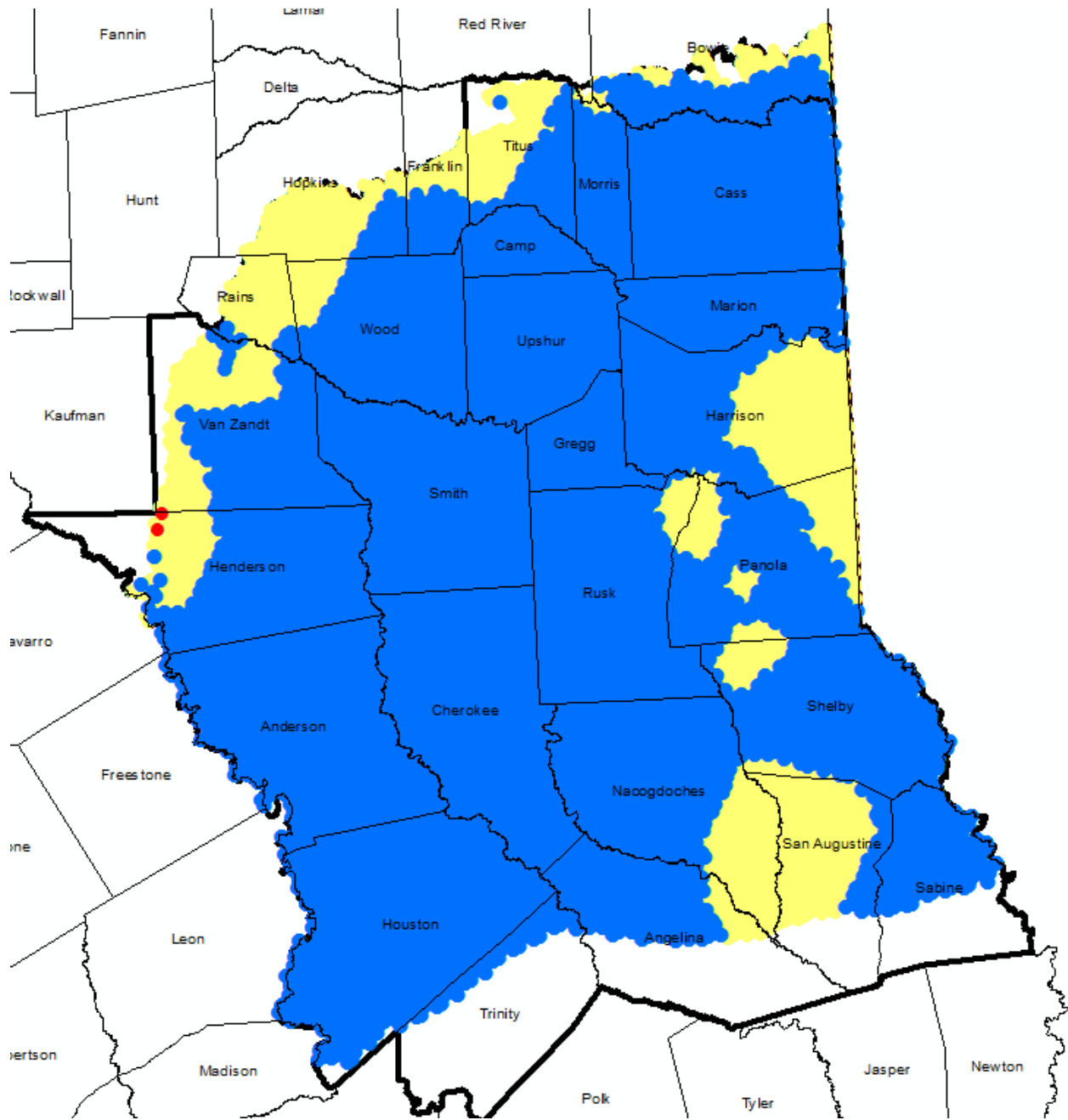
- Positive Drawdown
- Negative Drawdown
- Dry Cells
- ▣ GMA 11 Boundary
- ▣ County Boundaries

Layer 7 (Middle Wilcox Aquifer)



- Positive Drawdown
- Negative Drawdown
- Dry Cells
- ▬ GMA 11 Boundary
- County Boundaries

Layer 8 (Lower Wilcox Aquifer)



- Positive Drawdown
- Negative Drawdown
- Dry Cells
- ▣ GMA 11 Boundary
- ▣ County Boundaries

Appendix E

**Tabular Summary of Drawdown
Organized by County and Model Layer for
Seven Alternative Simulations
Groundwater Management Area 11**

Simulated Average Drawdown (1999 to 2070) – Scenario 1
All Values in ft

County	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	All Layers
Anderson	0	3	8	27	65	70	64	37	45
Angelina	8	9	13	7	19	7	4	5	8
Bowie						5	4	3	3
Camp			11	6	16	14	24	23	17
Cass			5	19	48	40	38	39	32
Cherokee	10	12	11	19	53	73	77	47	46
Franklin				0	0	4	12	10	9
Gregg			5	11	34	38	40	40	29
Harrison			1	6	21	15	9	9	10
Henderson			4	15	39	32	29	21	24
Hopkins				0	0	0	2	1	1
Houston	2	3	5	28	63	61	58	24	32
Marion			13	14	30	25	25	25	23
Morris			6	11	31	28	25	24	22
Nacogdoches	3	4	4	6	6	9	7	6	6
Panola				0	5	2	2	2	2
Rains						6	0	0	0
Rusk			0	2	6	8	15	14	11
Sabine	1	2		3	7	5	3	2	3
San Augustine	0	1		2	6	2	0	0	1
Shelby				0	6	1	3	1	2
Smith		1	9	28	79	87	70	61	54
Titus			3	4	17	14	7	6	8
Trinity	4	4	5	17	45	20	14	13	14
Upshur		0	5	13	40	46	48	48	33
Van Zandt			6	12	25	15	15	11	13
Wood		1	4	26	73	58	38	37	41
Total	3	4	7	17	42	38	30	22	26

Simulated Average Drawdown (1999 to 2070) – Scenario 2
All Values in ft

County	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	All Layers
Anderson	0	3	9	31	77	82	77	46	53
Angelina	11	12	15	24	51	20	6	8	20
Bowie						6	4	4	4
Camp			14	7	20	18	33	32	22
Cass			7	23	57	48	47	48	40
Cherokee	11	14	12	23	64	88	93	59	56
Franklin				0	0	6	16	14	12
Gregg			6	12	40	45	50	50	36
Harrison			2	7	26	19	11	11	13
Henderson			5	19	49	40	36	27	31
Hopkins				0	0	0	2	2	2
Houston	3	4	5	34	76	73	69	29	38
Marion			16	18	38	31	32	32	29
Morris			9	17	38	34	31	30	28
Nacogdoches	4	5	5	13	18	20	10	10	12
Panola				0	3	2	3	3	3
Rains						7	0	0	1
Rusk			0	2	7	10	22	21	15
Sabine	2	3		6	11	6	4	3	5
San Augustine	1	1		5	11	5	0	0	3
Shelby				0	7	1	3	1	2
Smith		1	11	33	95	107	87	76	67
Titus			3	5	19	16	9	8	10
Trinity	6	6	7	26	63	32	20	17	20
Upshur		0	6	17	50	58	60	60	42
Van Zandt			8	14	30	18	18	14	17
Wood		1	4	32	89	70	48	47	50
Total	4	5	8	22	53	47	37	29	32

Simulated Average Drawdown (1999 to 2070) – Scenario 3
All Values in ft

County	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	All Layers
Anderson	0	4	9	35	86	92	89	55	61
Angelina	13	15	18	40	83	41	9	11	32
Bowie						8	5	5	5
Camp			16	8	23	22	41	41	27
Cass			8	26	66	56	56	57	47
Cherokee	11	15	14	27	73	101	108	70	65
Franklin				0	0	7	20	18	15
Gregg			8	13	44	52	59	59	42
Harrison			3	8	30	22	14	14	16
Henderson			6	23	58	48	43	33	37
Hopkins				0	0	0	3	3	3
Houston	3	4	6	40	88	84	78	34	44
Marion			20	21	44	37	38	38	34
Morris			13	20	46	40	37	36	33
Nacogdoches	5	7	6	21	32	32	14	13	19
Panola				0	4	2	3	3	3
Rains						8	1	0	1
Rusk			0	3	8	11	28	28	19
Sabine	3	3		8	15	8	5	4	6
San Augustine	1	2		8	17	9	0	0	5
Shelby				0	9	2	4	2	3
Smith		1	14	38	109	124	103	90	78
Titus			4	5	21	18	11	10	12
Trinity	7	7	9	35	80	45	26	20	26
Upshur		0	8	20	59	69	72	72	50
Van Zandt			9	16	35	21	22	17	20
Wood		1	5	37	103	82	57	56	59
Total	5	6	9	27	63	56	44	34	39

Simulated Average Drawdown (1999 to 2070) – Scenario 4
All Values in ft

County	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	All Layers
Anderson	0	4	10	38	95	102	100	63	68
Angelina	16	18	20	56	113	60	12	14	44
Bowie						4	6	6	6
Camp			18	9	26	26	50	49	32
Cass			10	30	75	64	64	65	53
Cherokee	12	17	15	29	80	112	123	80	72
Franklin				0	1	9	24	22	18
Gregg			10	14	49	58	67	67	47
Harrison			4	9	34	25	17	16	18
Henderson			7	26	65	54	50	39	42
Hopkins				0	0	1	4	4	4
Houston	4	5	7	45	99	95	88	39	49
Marion			23	24	51	43	44	44	40
Morris			17	22	52	45	42	42	39
Nacogdoches	6	8	7	28	44	43	18	17	25
Panola				0	2	2	4	4	4
Rains						7	1	1	1
Rusk			0	3	9	13	35	34	22
Sabine	3	4		10	18	10	6	5	8
San Augustine	2	2		12	22	13	1	0	7
Shelby				0	3	1	5	3	3
Smith		1	17	42	119	138	116	102	87
Titus			4	5	21	19	13	12	14
Trinity	9	9	11	44	97	56	32	23	32
Upshur		0	10	22	66	78	82	82	57
Van Zandt			11	18	39	23	25	19	23
Wood		2	5	41	116	92	66	64	67
Total	6	7	11	31	72	64	51	40	44

Simulated Average Drawdown (1999 to 2070) – Scenario 5
All Values in ft

County	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	All Layers
Anderson	0	5	11	41	102	110	111	71	74
Angelina	18	21	23	71	143	80	16	17	55
Bowie						5	7	7	7
Camp			21	10	29	30	58	57	37
Cass			13	33	82	71	71	73	59
Cherokee	13	18	16	32	87	121	136	90	80
Franklin				0	1	10	29	26	21
Gregg			12	15	52	63	75	75	51
Harrison			5	10	37	28	19	19	21
Henderson			9	28	71	60	55	44	47
Hopkins				0	0	1	5	5	5
Houston	4	5	8	50	111	105	97	44	55
Marion			27	27	57	48	50	50	45
Morris			20	25	59	51	47	47	43
Nacogdoches	8	9	8	34	56	53	23	21	31
Panola				0	4	2	4	5	4
Rains						8	1	1	1
Rusk			0	3	10	14	41	41	26
Sabine	4	5		13	22	11	7	7	10
San Augustine	2	3		15	27	17	2	1	10
Shelby				0	5	2	6	4	4
Smith		1	20	45	127	150	129	114	95
Titus			4	5	22	21	15	15	16
Trinity	10	11	12	52	113	68	38	26	37
Upshur		0	12	25	72	85	91	91	63
Van Zandt			13	20	42	26	28	22	25
Wood		2	6	46	128	103	74	72	74
Total	6	8	13	34	80	71	57	45	50

Simulated Average Drawdown (1999 to 2070) – Scenario 6
All Values in ft

County	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	All Layers
Anderson	0	5	12	43	109	118	121	79	80
Angelina	20	23	25	83	168	96	20	20	65
Bowie						6	9	8	8
Camp			22	11	32	33	65	65	41
Cass			15	36	88	77	78	80	64
Cherokee	14	20	18	34	93	129	149	100	86
Franklin				0	1	12	33	31	25
Gregg			14	16	56	68	82	82	56
Harrison			7	11	41	31	21	21	23
Henderson			10	30	77	65	61	49	51
Hopkins				0	0	1	6	7	6
Houston	5	6	8	55	121	114	106	49	60
Marion			31	30	62	53	55	55	49
Morris			24	28	65	56	52	52	48
Nacogdoches	8	11	9	39	63	62	28	25	36
Panola				0	6	2	4	6	5
Rains						9	1	1	1
Rusk			0	3	10	16	47	47	29
Sabine	5	6		15	26	13	9	8	11
San Augustine	3	3		18	32	21	3	2	12
Shelby				0	2	2	7	5	5
Smith		2	23	48	134	161	141	124	103
Titus			4	5	22	22	18	17	17
Trinity	12	12	14	60	128	78	43	29	43
Upshur		0	14	27	77	92	99	99	69
Van Zandt			14	21	45	28	30	25	28
Wood		2	7	49	138	112	81	79	81
Total	7	9	14	38	87	77	63	50	54

Simulated Average Drawdown (1999 to 2070) – Scenario 7
All Values in ft

County	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	All Layers
Anderson	0	6	13	46	116	126	131	86	86
Angelina	22	26	27	96	194	113	25	23	76
Bowie						7	9	9	9
Camp			23	12	35	36	73	72	45
Cass			18	38	92	80	78	77	66
Cherokee	15	21	19	36	98	136	161	109	92
Franklin				0	2	13	38	35	28
Gregg			16	17	59	72	89	89	60
Harrison			9	11	43	33	23	23	25
Henderson			11	32	82	70	66	54	55
Hopkins				0	0	1	7	8	7
Houston	5	6	9	60	131	123	115	53	65
Marion			34	32	67	57	59	59	53
Morris			27	30	70	60	57	57	52
Nacogdoches	9	12	9	43	67	70	32	29	40
Panola				0	7	3	5	6	5
Rains						9	1	1	2
Rusk			0	3	11	17	53	53	33
Sabine	6	7		18	30	15	10	9	13
San Augustine	3	4		21	37	24	5	3	14
Shelby				0	2	2	8	6	6
Smith		2	27	51	140	170	152	134	109
Titus			4	6	24	24	20	19	19
Trinity	13	14	16	68	143	88	48	32	48
Upshur		0	17	28	82	99	107	107	74
Van Zandt			16	22	48	30	33	27	30
Wood		2	7	53	146	120	88	86	87
Total	8	9	16	41	93	83	68	54	59

Appendix F

**Tabular Summary of Simulation Pumping Output (from cbb file)
Organized by County and Model Layer for
Seven Alternative Simulations
Groundwater Management Area 11**

Output Pumping – Scenario 1

All Values in AF/yr

County	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Total
Anderson	431	0	14,597	0	6,925	6,823	6,404	198	35,378
Angelina	480	0	774	0	20,133	2,443	0	0	23,830
Bowie	0	0	0	0	0	1,423	5,075	251	6,749
Camp	0	0	3,050	0	1,376	778	678	1	5,883
Cass	0	0	27,379	0	6,593	3,000	2,345	600	39,917
Cherokee	251	0	16,382	0	4,882	6,778	2,986	0	31,279
Franklin	0	0	0	0	1,326	879	4,430	211	6,846
Gregg	0	0	5,298	0	3,054	1,751	820	0	10,923
Harrison	0	0	7,226	0	4,599	1,514	1,408	188	14,935
Henderson	0	0	11,087	0	4,537	1,942	1,437	1,711	20,714
Hopkins	0	0	0	0	334	162	2,290	1,739	4,525
Houston	1,044	0	1,624	0	6,399	5,791	6,304	0	21,162
Marion	0	0	10,914	0	1,305	389	212	3	12,823
Morris	0	0	6,704	0	857	282	680	3	8,526
Nacogdoches	285	0	3,496	0	8,620	7,766	537	1	20,705
Panola	0	0	0	0	677	539	4,034	608	5,858
Rains	0	0	0	0	0	354	700	207	1,261
Rusk	0	0	42	0	4,860	3,607	6,109	0	14,618
Sabine	206	0	0	0	2,953	1,184	329	329	5,001
San Augustine	143	0	4	0	791	455	8	0	1,401
Shelby	0	0	0	0	1,422	2,320	3,397	75	7,214
Smith	0	0	41,480	0	11,335	10,342	3,453	0	66,610
Titus	0	0	128	0	1,333	1,333	4,157	23	6,974
Trinity	429	0	0	0	1,550	0	0	0	1,979
Upshur	0	0	19,160	0	2,933	1,627	430	0	24,150
Van Zandt	0	0	3,414	0	1,672	1,085	2,889	1,458	10,518
Wood	0	0	7,073	0	9,308	4,133	1,595	2	22,111
Total	3,269	0	179,832	0	109,774	68,700	62,707	7,608	431,890

Output Pumping – Scenario 2

All Values in AF/yr

County	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Total
Anderson	493	0	16,682	0	7,914	7,798	7,318	228	40,433
Angelina	551	0	879	0	23,009	2,791	0	0	27,230
Bowie	0	0	0	0	0	1,397	5,800	286	7,483
Camp	0	0	3,486	0	1,572	889	775	2	6,724
Cass	0	0	31,291	0	7,479	3,428	2,680	685	45,563
Cherokee	287	0	18,723	0	5,579	7,746	3,411	0	35,746
Franklin	0	0	0	0	1,515	1,005	5,062	241	7,823
Gregg	0	0	6,054	0	3,491	2,001	937	0	12,483
Harrison	0	0	8,258	0	5,200	1,730	1,610	215	17,013
Henderson	0	0	12,671	0	5,185	2,220	1,643	1,954	23,673
Hopkins	0	0	0	0	382	185	2,617	1,987	5,171
Houston	1,194	0	1,857	0	7,313	6,625	7,205	0	24,194
Marion	0	0	12,419	0	1,488	445	243	3	14,598
Morris	0	0	7,662	0	950	323	777	4	9,716
Nacogdoches	326	0	3,995	0	9,852	8,875	612	1	23,661
Panola	0	0	0	0	648	616	4,610	696	6,570
Rains	0	0	0	0	0	404	800	236	1,440
Rusk	0	0	48	0	5,546	4,123	6,981	0	16,698
Sabine	236	0	0	0	3,370	1,352	377	377	5,712
San Augustine	163	0	8	0	904	520	8	0	1,603
Shelby	0	0	0	0	1,519	2,652	3,882	85	8,138
Smith	0	0	47,302	0	12,954	11,820	3,946	0	76,022
Titus	0	0	146	0	1,443	1,523	4,750	26	7,888
Trinity	490	0	0	0	1,774	0	0	0	2,264
Upshur	0	0	21,898	0	3,352	1,859	491	0	27,600
Van Zandt	0	0	3,902	0	1,864	1,240	3,302	1,667	11,975
Wood	0	0	8,084	0	10,530	4,723	1,824	2	25,163
Total	3,740	0	205,365	0	124,833	78,290	71,661	8,695	492,584

Output Pumping – Scenario 3

All Values in AF/yr

County	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Total
Anderson	554	0	18,767	0	8,904	8,773	8,232	250	45,480
Angelina	617	0	990	0	25,885	3,138	0	0	30,630
Bowie	0	0	0	0	0	1,572	6,451	322	8,345
Camp	0	0	3,782	0	1,769	1,000	872	2	7,425
Cass	0	0	35,202	0	8,305	3,856	3,015	771	51,149
Cherokee	322	0	20,908	0	6,276	8,714	3,836	0	40,056
Franklin	0	0	0	0	1,705	1,131	5,695	271	8,802
Gregg	0	0	6,811	0	3,927	2,251	1,054	0	14,043
Harrison	0	0	9,291	0	5,808	1,946	1,810	241	19,096
Henderson	0	0	14,255	0	5,820	2,497	1,848	2,201	26,621
Hopkins	0	0	0	0	430	208	2,944	2,236	5,818
Houston	1,343	0	2,088	0	8,228	7,450	8,105	0	27,214
Marion	0	0	13,971	0	1,675	500	273	4	16,423
Morris	0	0	8,516	0	1,069	363	874	4	10,826
Nacogdoches	367	0	4,494	0	11,083	9,985	688	1	26,618
Panola	0	0	0	0	729	693	5,186	782	7,390
Rains	0	0	0	0	0	455	900	266	1,621
Rusk	0	0	54	0	6,240	4,638	7,854	0	18,786
Sabine	265	0	0	0	3,791	1,523	421	421	6,421
San Augustine	184	0	8	0	1,016	586	9	0	1,803
Shelby	0	0	0	0	1,498	2,983	4,367	94	8,942
Smith	0	0	53,097	0	14,551	13,297	4,440	0	85,385
Titus	0	0	165	0	1,522	1,714	5,344	29	8,774
Trinity	552	0	0	0	1,992	0	0	0	2,544
Upshur	0	0	24,461	0	3,770	2,091	553	0	30,875
Van Zandt	0	0	4,389	0	2,097	1,395	3,715	1,875	13,471
Wood	0	0	9,094	0	11,806	5,314	2,051	3	28,268
Total	4,204	0	230,343	0	139,896	88,073	80,537	9,773	552,826

Output Pumping – Scenario 4

All Values in AF/yr

County	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Total
Anderson	616	0	20,853	0	9,893	9,748	9,147	281	50,538
Angelina	687	0	1,102	0	28,764	3,486	0	0	34,039
Bowie	0	0	0	0	0	1,468	7,167	358	8,993
Camp	0	0	4,202	0	1,965	1,111	969	2	8,249
Cass	0	0	39,114	0	9,162	4,285	3,350	856	56,767
Cherokee	358	0	23,058	0	6,512	9,683	4,262	0	43,873
Franklin	0	0	0	0	1,894	1,256	6,328	301	9,779
Gregg	0	0	7,568	0	4,363	2,501	1,171	0	15,603
Harrison	0	0	10,323	0	6,378	2,163	2,011	268	21,143
Henderson	0	0	15,838	0	6,303	2,774	2,053	2,444	29,412
Hopkins	0	0	0	0	478	232	3,194	2,484	6,388
Houston	1,492	0	2,321	0	9,142	8,274	9,006	0	30,235
Marion	0	0	15,456	0	1,861	556	303	4	18,180
Morris	0	0	9,355	0	1,188	403	971	5	11,922
Nacogdoches	407	0	4,994	0	12,314	11,094	771	1	29,581
Panola	0	0	0	0	660	770	5,763	869	8,062
Rains	0	0	0	0	0	449	1,000	295	1,744
Rusk	0	0	60	0	6,923	5,153	8,727	0	20,863
Sabine	295	0	0	0	4,212	1,691	469	469	7,136
San Augustine	204	0	8	0	1,129	651	9	0	2,001
Shelby	0	0	0	0	828	3,314	4,853	104	9,099
Smith	0	0	58,866	0	16,157	14,775	4,933	0	94,731
Titus	0	0	183	0	1,591	1,904	5,938	33	9,649
Trinity	613	0	0	0	2,216	0	0	0	2,829
Upshur	0	0	27,127	0	4,189	2,324	614	0	34,254
Van Zandt	0	0	4,877	0	2,203	1,549	4,128	2,084	14,841
Wood	0	0	10,105	0	13,036	5,904	2,279	3	31,327
Total	4,672	0	255,410	0	153,361	97,518	89,416	10,861	611,238

Output Pumping – Scenario 5

All Values in AF/yr

County	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Total
Anderson	677	0	22,938	0	10,883	10,722	10,061	312	55,593
Angelina	758	0	1,213	0	31,640	3,834	1	0	37,446
Bowie	0	0	0	0	0	1,615	7,776	394	9,785
Camp	0	0	4,622	0	2,162	1,222	1,066	2	9,074
Cass	0	0	43,025	0	9,966	4,714	3,685	942	62,332
Cherokee	394	0	25,175	0	7,163	10,651	4,687	0	48,070
Franklin	0	0	0	0	2,083	1,382	6,856	331	10,652
Gregg	0	0	8,257	0	4,763	2,751	1,289	0	17,060
Harrison	0	0	11,355	0	6,982	2,379	2,212	295	23,223
Henderson	0	0	17,422	0	6,934	3,052	2,259	2,687	32,354
Hopkins	0	0	0	0	526	255	3,513	2,697	6,991
Houston	1,641	0	2,553	0	10,056	9,109	9,906	0	33,265
Marion	0	0	16,858	0	2,044	612	334	5	19,853
Morris	0	0	10,214	0	1,306	444	1,068	5	13,037
Nacogdoches	448	0	5,493	0	13,546	12,204	847	1	32,539
Panola	0	0	0	0	726	847	6,339	957	8,869
Rains	0	0	0	0	0	494	1,100	325	1,919
Rusk	0	0	66	0	7,607	5,669	9,600	0	22,942
Sabine	325	0	0	0	4,623	1,859	517	517	7,841
San Augustine	224	0	8	0	1,243	716	10	0	2,201
Shelby	0	0	0	0	910	3,646	5,338	114	10,008
Smith	0	0	64,538	0	17,743	16,252	5,426	0	103,959
Titus	0	0	201	0	1,640	2,095	6,532	36	10,504
Trinity	674	0	0	0	2,440	0	0	0	3,114
Upshur	0	0	29,839	0	4,609	2,556	675	0	37,679
Van Zandt	0	0	5,365	0	2,423	1,704	4,541	2,292	16,325
Wood	0	0	11,115	0	14,288	6,495	2,507	3	34,408
Total	5,141	0	280,257	0	168,306	107,279	98,145	11,915	671,043

Output Pumping – Scenario 6

All Values in AF/yr

County	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Total
Anderson	739	0	24,823	0	11,872	11,697	10,975	334	60,440
Angelina	824	0	1,325	0	34,515	4,182	1	0	40,847
Bowie	0	0	0	0	0	1,761	8,483	430	10,674
Camp	0	0	4,911	0	2,358	1,333	1,163	2	9,767
Cass	0	0	46,936	0	10,791	5,142	4,020	1,028	67,917
Cherokee	430	0	27,463	0	7,814	11,619	5,112	0	52,438
Franklin	0	0	0	0	2,273	1,507	7,479	361	11,620
Gregg	0	0	8,958	0	5,195	3,001	1,406	0	18,560
Harrison	0	0	12,388	0	7,537	2,595	2,413	322	25,255
Henderson	0	0	19,006	0	7,564	3,329	2,464	2,934	35,297
Hopkins	0	0	0	0	573	278	3,748	2,942	7,541
Houston	1,789	0	2,785	0	10,970	9,933	10,807	0	36,284
Marion	0	0	18,312	0	2,229	667	364	5	21,577
Morris	0	0	10,976	0	1,425	484	1,165	6	14,056
Nacogdoches	488	0	5,992	0	12,213	13,313	923	1	32,930
Panola	0	0	0	0	792	924	6,915	1,043	9,674
Rains	0	0	0	0	0	539	1,200	354	2,093
Rusk	0	0	72	0	8,298	6,184	10,472	0	25,026
Sabine	353	0	0	0	5,043	2,029	561	561	8,547
San Augustine	245	0	8	0	1,355	782	10	0	2,400
Shelby	0	0	0	0	530	3,977	5,823	123	10,453
Smith	0	0	70,248	0	19,356	17,730	5,920	0	113,254
Titus	0	0	220	0	1,729	2,285	7,126	39	11,399
Trinity	735	0	0	0	2,658	0	0	0	3,393
Upshur	0	0	32,496	0	4,668	2,788	737	0	40,689
Van Zandt	0	0	5,852	0	2,643	1,859	4,953	2,500	17,807
Wood	0	0	12,126	0	15,450	7,085	2,735	3	37,399
Total	5,603	0	304,897	0	179,851	117,023	106,975	12,988	727,337

Output Pumping – Scenario 7

All Values in AF/yr

County	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Total
Anderson	800	0	26,892	0	12,861	12,672	11,889	364	65,478
Angelina	895	0	1,430	0	37,391	4,530	1	0	44,247
Bowie	0	0	0	0	0	1,908	9,167	465	11,540
Camp	0	0	5,107	0	2,530	1,444	1,260	3	10,344
Cass	0	0	50,847	0	11,632	5,571	4,355	5	72,410
Cherokee	466	0	29,303	0	8,465	12,588	5,538	0	56,360
Franklin	0	0	0	0	2,462	1,633	8,102	391	12,588
Gregg	0	0	9,704	0	5,628	3,251	1,523	0	20,106
Harrison	0	0	13,420	0	7,982	2,812	2,615	349	27,178
Henderson	0	0	20,590	0	8,194	3,607	2,669	3,178	38,238
Hopkins	0	0	0	0	621	301	4,061	3,187	8,170
Houston	1,940	0	3,017	0	11,884	10,757	11,708	0	39,306
Marion	0	0	19,414	0	2,415	723	394	6	22,952
Morris	0	0	11,710	0	1,544	524	1,263	6	15,047
Nacogdoches	530	0	6,492	0	10,526	14,423	998	1	32,970
Panola	0	0	0	0	858	1,001	7,492	1,131	10,482
Rains	0	0	0	0	0	515	1,299	384	2,198
Rusk	0	0	78	0	8,990	6,699	11,345	0	27,112
Sabine	383	0	0	0	5,465	2,198	609	609	9,264
San Augustine	265	0	12	0	1,468	846	11	0	2,602
Shelby	0	0	0	0	574	4,309	6,309	133	11,325
Smith	0	0	74,992	0	20,939	19,207	6,413	0	121,551
Titus	0	0	238	0	1,873	2,476	7,719	42	12,348
Trinity	797	0	0	0	2,882	0	0	0	3,679
Upshur	0	0	35,119	0	5,057	3,021	798	0	43,995
Van Zandt	0	0	6,340	0	2,841	2,014	5,366	2,708	19,269
Wood	0	0	13,136	0	16,682	7,675	2,963	4	40,460
Total	6,076	0	327,841	0	191,764	126,705	115,867	12,966	781,219

Appendix G

**Drawdown and Pumping Summary from GAM Task 10-009
(Oliver, 2010) used as Basis for Current DFC and MAGs
Adopted by
Groundwater Management Area 11**

Table 2. Pumping output from the groundwater availability model in Groundwater Management Area 11 for the Carrizo-Wilcox, Queen City, and Sparta aquifers for the for the last year of the predictive simulation (2060). All values are in acre-feet per year. "Anderson (ACUWCD)" refers to the Anderson County Underground Water Conservation District within Anderson County. "Anderson (NTVGCD)" refers to the portion of Neches and Trinity Valleys Groundwater Conservation District in Anderson County.

County	Sparta	Queen City	Carrizo	Upper Wilcox	Middle Wilcox	Lower Wilcox	Total
Anderson (ACUWCD)		951	282	107	15	7	1,361
Anderson (NTVGCD)	616	17,849	6,896	2,169	336	267	28,133
Angelina	689	1,093	23,540	2,874	0	0	28,196
Bowie				1,542	5,541	0	7,083
Camp		3,542	1,963	1,110	968	0	7,583
Cass		39,194	1,989	882	663	0	42,727
Cherokee	359	22,396	5,556	5,647	19	0	33,977
Franklin			1,895	1,257	6,332	0	9,484
Gregg		7,573	4,153	2,380	1,116	0	15,222
Harrison		10,373	5,262	1,746	1,627	4	19,012
Henderson		15,849	4,365	1,837	1,364	1,619	25,034
Hopkins			325	203	2,864	0	3,392
Houston	896	410	5,317	38	0	0	6,662
Marion		15,549	1,420	425	232	0	17,626
Morris		9,537	1,193	404	961	0	12,095
Nacogdoches	409	5,002	11,000	9,707	678	0	26,796
Panola		0	810	770	5,764	725	8,069
Rains				506	1,001	76	1,583
Rusk		58	6,927	5,156	8,731	0	20,872
Sabine	296	0	4,221	1,695	471	471	7,154
San Augustine	205	7	1,130	645	5	0	1,992
Shelby		0	1,451	3,316	4,855	106	9,728
Smith	0	54,254	14,987	13,673	4,566	0	87,479
Titus		138	1,791	1,905	5,941	0	9,776
Trinity	616	0	2,215	0	0	0	2,831
Upshur	0	25,390	4,182	2,321	612	0	32,505
Van Zandt		3,814	2,322	1,541	4,129	2,059	13,864
Wood	0	10,112	13,124	5,906	2,281	0	31,423
Total	4,085	243,090	128,316	69,762	61,071	5,334	511,659

Table 3. Average drawdown over the 51-year predictive groundwater availability model run in Groundwater Management Area 11 for the Carrizo-Wilcox, Queen City, and Sparta aquifers and Weches and Reklaw confining units. All values are in feet. "Anderson (ACUWCD)" refers to the Anderson County Underground Water Conservation District within Anderson County. "Anderson (NTVGCD)" refers to the portion of Neches and Trinity Valleys Groundwater Conservation District in Anderson County. Negative values indicate a rise in water levels.

County	Sparta	Weches (CU)	Queen City	Reklaw (CU)	Carrizo	Upper Wilcox	Middle Wilcox	Lower Wilcox	Overall
Anderson (ACUWCD)			1	12	35	26	12	5	15
Anderson (NTVGCD)	-2	1	7	15	36	26	11	4	16
Angelina	10	11	16	22	42	5	-18	-3	11
Bowie						21	0	0	1
Camp			12	0	18	17	39	0	19
Cass			8	6	10	7	7	0	8
Cherokee	7	14	11	11	32	32	15	10	18
Franklin				-16	-3	7	19	0	11
Gregg			7	11	42	49	56	79	35
Harrison			0	2	24	13	5	4	9
Henderson			4	15	41	32	27	15	23
Hopkins				-22	-12	-15	-28	0	-26
Houston	2	1	2	15	35	12	2	-2	8
Marion			17	11	21	15	15	0	16
Morris			13	10	29	25	23	0	21
Nacogdoches	3	3	11	10	14	11	-10	-6	4
Panola			-11	-19	11	2	1	4	2
Rains						7	-10	-5	-8
Rusk	0	-46	-15	-2	6	6	23	21	12
Sabine	5	5	7	15	24	13	6	5	10
San Augustine	-4	-4	-3	11	20	9	-3	-2	3
Shelby			-18	-19	23	-3	3	1	1
Smith	-5	-5	11	34	103	118	92	76	68
Titus			-1	-3	31	14	5	0	9
Trinity	5	4	4	12	33	-3	-7	-1	6
Upshur	-5	-5	5	17	56	66	66	97	44
Van Zandt			7	11	31	13	17	11	14
Wood	-5	-7	-2	36	110	83	55	114	59
Total	3	4	7	15	38	26	15	11	17