GAM Run 07-43

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EXECUTIVE SUMMARY:

We ran the groundwater availability model for the central part of the Gulf Coast Aquifer using a specified pumpage annually for a 60-year predictive simulation along with average recharge rates, evapotranspiration rates, and initial streamflows. The results of this model run indicated that using the specified pumpage in the model results in large areas of water level declines over the 60-year model run. These areas of water level declines occur in the Chicot, Evangeline, and Jasper aquifers and are caused by increased pumpage throughout most of the model area.

REQUESTOR:

Mr. Neil Hudgins from the Coastal Bend Groundwater Conservation District (on behalf of Groundwater Management Area 15).

DESCRIPTION OF REQUEST:

Mr. Hudgins asked for a baseline model run using the groundwater availability model for the central part of the Gulf Coast Aquifer. This model run would be a 60-year simulation using initial water levels from the end of the historic calibration simulation and average recharge conditions. Each year of the model run would use a pumpage approved by members of Groundwater Management Area 15.

METHODS:

Recharge and evapotranspiration rates and initial streamflows were averaged for the historic calibration-verification runs, representing 1981 to 1999. These averages were then used for each year of the 60-year predictive simulation along with the adjusted baseline pumpage. Resulting water levels and drawdowns were then evaluated and are described in the "Results" section below.

PARAMETERS AND ASSUMPTIONS:

The groundwater availability model for the central part of the Gulf Coast Aquifer was used for this model run. The parameters and assumptions for this model are described below:

- We used Version 1.01 of the groundwater availability model for the central part of the Gulf Coast Aquifer. This model assumes partial penetrating wells in the

Evangeline Aquifer due to a lack of data for aquifer properties in the lower portion of the aquifer.

- See Chowdhury and others (2004) and Waterstone and others (2003) for assumptions and limitations of the groundwater availability model for the central part of the Gulf Coast Aquifer.

- The mean absolute error (a measure of the difference between simulated and actual water levels during model calibration) in the entire model for 1999 is 26 feet, which is 4.6 percent of the hydraulic head drop across the model area (Chowdhury and others, 2004).

- The model includes four layers representing: the Chicot Aquifer (Layer 1), the Evangeline Aquifer (Layer 2), the Burkeville Confining Unit (Layer 3), and the Jasper Aquifer (Layer 4).

- Recharge rates, evapotranspiration rates, and initial streamflows are averages from the 1981 to 1999 calibration and verification time period.

- Pumpage used for each year of the 60-year predictive simulation was specified by members of Groundwater Management Areas 15 and 16. Details on this pumpage are given below.

Specified Pumpage

The pumpage specified by the members of Groundwater Management Area 15 was based on the baseline pumpage constructed for GAM Run 07-12 and GAM Run 07-14 (Donnelly, 2007a and 2007b). The assumptions used to create the baseline pumpage are detailed in the GAM Run 07-12 and 07-14 reports and will not be repeated in this report. The following modifications were made to the baseline pumpage to create the specified pumpage used in this simulation.

The baseline pumpage totals were increased in most counties in the model area. The total amount of pumpage used in each county in this simulation is shown in Table 1. Also included in Table 1 is the amount of pumpage assigned to each of the three aquifers (Chicot, Evangeline, and Jasper) within the Gulf Coast Aquifer System. The amount assigned to each aquifer was determined based on the percentages pumped from each aquifer in the baseline pumpage data set, unless the pumpage to each aquifer was specified by members of the Groundwater Management Area 15.

In addition to the total county pumpage, members of Groundwater Management Area 15 also had the option of specifying where the new pumpage would be allocated. The following specifications were made on where and how pumpage should be allocated.

- Bee County—a total of 20,000 acre-feet per year was placed in the Evangeline Aquifer (an increase of 18,894 acre-feet per year above the baseline pumpage) in the shaded area in the southern half of Bee County, as shown in Figure 1.

Table 1. Total pumpage for each county used in this model simulation. Pumpage is reported in acre-feet per year.

	Specified pumpage for this run				
	Total	Layer 1	Layer 2	Layer 3	Layer 4
Aransas	4,000	4,000	0	0	0
Austin	8,159	3,118	5,013	6	23
Bee	23,688	1,384	21,868	76	360
Brazoria	12,674	12,228	284	0	163
Brooks	4,040	359	3,681	0	0
Calhoun	7,500	7,311	189	0	0
Colorado	40,000	20,377	18,872	0	751
De Witt	14,880	213	3,800	193	10,674
Duval	14,168	755	8,002	76	5,335
Fayette	8,850	0	957	153	7,740
Fort Bend	8,808	5,921	2,887	0	0
Goliad	9,555	646	8,909	0	0
Gonzales	4	0	0	0	4
Jackson	70,000	51,035	18,965	0	0
Jim Hogg	4,879	76	1,849	0	2,954
Jim Wells	28,223	8,224	19,988	4	7
Karnes	5,429	0	1,147	282	4,000
Kenedy	104	42	62	0	0
Kleberg	30,742	2,967	27,775	0	0
Lavaca	30,202	4,554	18,600	149	6,900
Live Oak	23,622	115	7,121	1,427	14,960
Matagorda	45,000	35,611	9,389	0	0
McMullen	459	0	5	9	446
Nueces	56,000	16,800	39,200	0	0
Refugio	32,871	7,405	25,466	0	0
San Patricio	21,290	11,162	10,128	0	0
Victoria	75,192	7,870	67,322	0	0
Washington	6	0	0	0	6
Webb	2,000	0	1,901	0	99
Wharton	150,000	93,129	56,871	0	0

- Refugio County—25,000 acre-feet per year of additional pumpage was allocated to the Evangeline Aquifer and placed in two areas, shown in green in Figure 2. An additional 6,803 acre-feet per year was allocated to the Chicot Aquifer and placed in the three red areas shown in Figure 2.

- Victoria County—61,131 acre-feet per year of pumpage was allocated to the Evangeline Aquifer (Layer 2) in two areas, one in the City of Victoria and the second near the town of McFaddin, as shown in Figure 3. The total pumpage was divided equally between these two areas, and then allocated equally to all cells present in each area.

It is important to note that the values shown in Table 1 do not always match with total pumpage requests from members of Groundwater Management Area 15. This may be due to several factors, including:

1. Pumpage in the Burkeville Confining Unit (Layer 3), which was not included in the calculations of pumpage requested by individual districts;

2. Rounding errors in the allocation of pumpage between layers; and

3. Pumpage being specified for only a portion of a county or district.

However, in all cases the pumpage that was desired by the members of the groundwater management area was adhered to as well as possible. Differences between the requested pumpage and the actual pumpage are small and will not impact the overall conclusions of this simulation.

If locations for pumpage were not specified by members of Groundwater Management Area 15, the additional pumpage was distributed evenly across the entire active portion of each aquifer within each county. Pumpage modifications for those counties included in the model that are not in Groundwater Management Area 15 are not discussed in this report.

RESULTS:

Included in Appendix A are estimates of the water budgets after running the model for 60 years. The components of the water budget are described below.

- Wells—water produced from wells in each aquifer. This component is always shown as "Outflow" from the water budget, because all wells included in the model produce (rather than inject) water. Wells are modeled using the MODFLOW Well package.

- Springs and wetlands—water that drains from an aquifer if water levels are above the elevation of the spring or wetland. This component is always shown as "Outflow", or discharge, from the water budget. Springs and wetlands are modeled using the MODFLOW Drain package.

- Recharge—simulates areally distributed recharge due to precipitation falling on the outcrop areas of aquifers. Recharge is always shown as "Inflow" into the water budget.

- Vertical Leakage (Upward or Downward)—describes the vertical flow, or leakage, between two aquifers. This flow is controlled by the water levels in each aquifer and aquifer properties of each aquifer that define the amount of leakage that can occur. "Inflow" to an aquifer from an overlying or underlying aquifer will always equal the "Outflow" from the other aquifer.

- Storage—water stored in the aquifer. The storage component that is included in "Inflow" is water that is removed from storage in the aquifer (that is, water levels decline). The storage component that is included in "Outflow" is water that is added back into storage in the aquifer (that is, water levels increase). This component of the budget is often seen as water both going into and out of the aquifer because this is a regional budget, and water levels will decline in some

areas (water is being removed from storage) and will rise in others (water is being added to storage).

- Lateral flow—describes lateral flow within an aquifer between a county and adjacent counties.

- Evapotranspiration—water that flows out of an aquifer due to direct evaporation and plant transpiration. This component of the budget will always be shown as "Outflow". Evapotranspiration is modeled using the MODFLOW Evapotranspiration package.

- Rivers and Streams—water that flows between streams and rivers and an aquifer. The direction and amount of flow depends on the water level in the stream or river and the aquifer. In areas where water levels in the stream or river are above the water level in the aquifer, water flows into the aquifer and is shown as "Inflow" in the budget. In areas where water levels in the aquifer are above the water level in the stream or river, water flows out of the aquifer and into the stream and is shown as "Outflow" in the budget. Rivers and streams are modeled using the MODFLOW Stream package.

- General-Head Boundary—the model uses general-head boundaries to simulate the movement of water out of the Chicot Aquifer at the coast.

The results of the model run are described for the three aquifers in the model area: the Chicot (layer 1 in the model), the Evangeline (layer 2), and the Jasper (layer 4) aquifers. Results for the Burkeville Confining Unit (layer 3) are not discussed because this is a confining unit.

Initial water levels (end of 1999) for the Chicot, Evangeline, and Jasper aquifers are shown in Figures 4, 5, and 6, respectively. These figures show the starting water levels for this 60-year predictive model run. These figures all show that water levels are the highest in the outcrop portions of the aquifers, located farthest from the coast, and that water levels decrease as groundwater flows downdip towards the coast. A cone of depression (an area of decreased water levels around an area of heavy pumpage) can be observed in the Evangeline Aquifer in south-central Wharton County, as well as around the cities of Victoria and Kingsville in Victoria and Kleberg counties, respectively (Figure 5). Small cones of depression can also be observed in the Jasper Aquifer in southern Duval County, central Live Oak County, central DeWitt County, and central Lavaca County.

Water levels at the end of the 60-year predictive simulation for the Chicot, Evangeline, and Jasper aquifers are shown in Figures 7, 8, and 9, respectively. These figures show the impact of the increased pumpage in many parts of the model area. Some areas of drawdown are evident in the water level map for the Chicot Aquifer (Figure 7). Water levels in the Evangeline Aquifer (Figure 8) also show the impact of the additional pumpage in some areas of the model. A significant area of depression in the water levels can be seen in Figure 8 in Kleberg County. The impact of the additional pumpage in Refugio County in one of the two designated areas of the Evangeline, as well as the additional pumpage in the two areas in Victoria County can also be seen in Figure 8.

In the Jasper Aquifer, differences between initial water levels (Figure 6) and water levels after 60 years (Figure 9) are harder to discern because less pumpage was added to this aquifer than either the Chicot or Evangeline Aquifers. However, a new area of depressed water levels can be observed in Live Oak County in Figure 9.

In addition to water level maps, maps of water level changes for each aquifer were made. A water level change map shows the difference between the initial water levels and the water levels at the end of the 60-year run. These figures will help evaluate the impact of pumpage on the water levels over the length of the model run. Water level changes over the 60-year predictive simulation for the Chicot, Evangeline, and Jasper aquifers are shown in Figures 10, 11, and 12, respectively. Average water level changes for each aquifer in each county of the model are provided in Table 2.

Water levels in the Chicot Aquifer (Figure 10) show a decline (drawdown) throughout much of the model area. Significant declines can be observed in Bee, Jackson, Nueces, San Patricio, and Wharton counties where pumpage in the Chicot Aquifer was increased. Declines are greater than 50 feet around the Bee-San Patricio County line (Figure 10). Although pumpage in Victoria County was also increased in this model run, water levels show an increase across the county. This is due to the response of the aquifer to decreased pumping from the City of Victoria included in the baseline pumpage. Recovery in water levels can also be observed at the southern edge of the model in Brooks, Jim Hogg, and Kenedy counties. However, this is an unavoidable artifact of the way the model was constructed and should be ignored for management decisions.

In the Evangeline Aquifer (Figure 11) water level declines are observed across most of the southern/western portion of the model area, but not in the northern/eastern portions of the model area. Extremely high drawdowns are observed in Kleberg County where a large amount of pumpage from the Evangeline Aquifer was placed over a small area. Other areas of higher water level declines occur in Refugio, Nueces, and Victoria counties where pumpage was added to the Evangeline Aquifer. A large area of water level declines can be observed on the Refugio-Victoria county line in response to the large well field placed near the town of McFaddin. Throughout the remainder of the model area water level declines in the Evangeline Aquifer are less than 25 feet. Water levels are predicted to recover around Wharton and some surrounding counties in response to a significant decrease in pumpage in Wharton County. Similar to Figure 10, water level recovers at the southern edge of the model are a result of the model construction and may not be accurate.

In the Jasper Aquifer (Figure 12) significant declines in water levels occur throughout the model area. Several areas of significant decline occur in DeWitt, Fayette, Karnes, Lavaca, and Live Oak counties (Figure 12), which is caused by additional pumping assigned to the Jasper Aquifer. Water level declines of up to 20 feet can be observed over most of the model area (Figure 12). An area of higher water level decline observed in southern Duval County was also observed in the baseline model run (GAM Run 07-12) and is not caused by additional pumpage used in this model run. A localized area of water level recovery occur in Bee County was also present in the baseline model run and is not due to pumpage used in this simulation. As with Figures 10 and 11, water level increases at the southern edge of the model are a result of the model construction and are not considered to be accurate.

Table 2. Average water level changes by county and aquifer. Negative values indicate a lowering of water levels between 1999 and 2060 while positive values indicate a recovery of water levels since 1999. A dashed line indicates the aquifer does not exist or was not modeled for a particular county.

County	Average Water Level Change (feet)		
	Chicot Aquifer (Layer 1)	Evangeline Aquifer (Layer 2)	Jasper Aquifer (Layer 4)
Aransas	-0.3	-26.2	--
Austin	4.3	1.6	-7.6
Bee	-12.8	-27.7	-12.1
Brazoria	0.7	-5.4	-12.9
Brooks	25.3	4.6	-0.5
Calhoun	0.0	-19.8	--
Colorado	-1.3	-3.0	-18.9
De Witt	2.5	-2.6	-39.5
Duval	-4.8	-15.0	-36.3
Fayette	--	-13.3	-45.2
Fort Bend	2.8	4.6	-8.4
Goliad	-0.4	-6.5	-10.2
Gonzales	--	--	-15.5
Jackson	-9.2	-9.2	-22.0
Jim Hogg	40.8	-3.5	-27.4
Jim Wells	-3.8	-59.4	-17.4
Karnes	--	-16.4	-19.8
Kenedy	5.4	-54.2	--
Kleberg	-2.8	-212.2	-17.9
Lavaca	-4.0	-6.3	-49.0
Live Oak	-19.1	-31.4	-55.7
McMullen	--	--	-16.4
Matagorda	-2.6	-12.0	--
Nueces	-8.7	-86.4	-13.3
Refugio	-1.4	-52.4	--
San Patricio	-14.3	-38.3	-30.2
Victoria	6.3	-39.4	-22.2
Washington	--	--	-37.6
Webb	--	-69.1	-69.9
Wharton	-5.5	8.0	-18.7

Because some of the desired future conditions for the groundwater management area may be based on discharge to springs or baseflow to rivers and streams, we also pulled the water budgets for each of these components for each county in the model area. These budgets are provided in Appendix A. The components of the water budget are divided up into "In" and "Out", representing water that is coming into and leaving from the aquifer. As might be expected, water from wells is only in the "Out" column, representing water that is pulled out of the budget or aquifer system from wells. Likewise, recharge is only found in the "In" column. Streams and rivers, however, have values in both the "In" and "Out" columns. This is because some streams lose water to the aquifer, and some gain water from the aquifer depending on the water levels in the aquifer. Also included in these budgets are values for vertical leakage to overlying and underlying formations as

well as lateral inflow from adjacent counties. Future model runs can be compared to these budgets to determine the impact of additional pumpage compared to this run.

REFERENCES:

Chowdhury, A.H., Wade, S., Mace, R.E., and Ridgeway, C., 2004, Groundwater Availability Model of the Central Gulf Coast Aquifer System: Numerical Simulations through 1999- Model Report, 114 p.

Donnelly, A.C.A., 2007a, GAM Run 07-12, Texas Water Development Board GAM Run Report, 39 p.

Donnelly, A.C.A., 2007b, GAM Run 07-14, Texas Water Development Board GAM Run Report, 26 p.

Waterstone Engineering, Inc., and Parsons, Inc., 2003, Groundwater Availability of the Central Gulf Coast Aquifer: Numerical Simulations to 2050 Central Gulf Coast, Texas- Final Report: contract report to the Texas Water Development Board, 158 p.
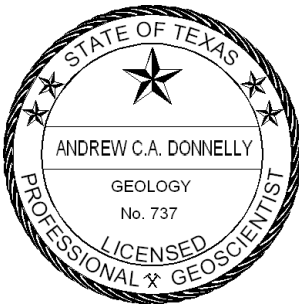
The seal appearing on this document was authorized by Andrew C.A. Donnelly, P.G. 737, on March 21, 2008.
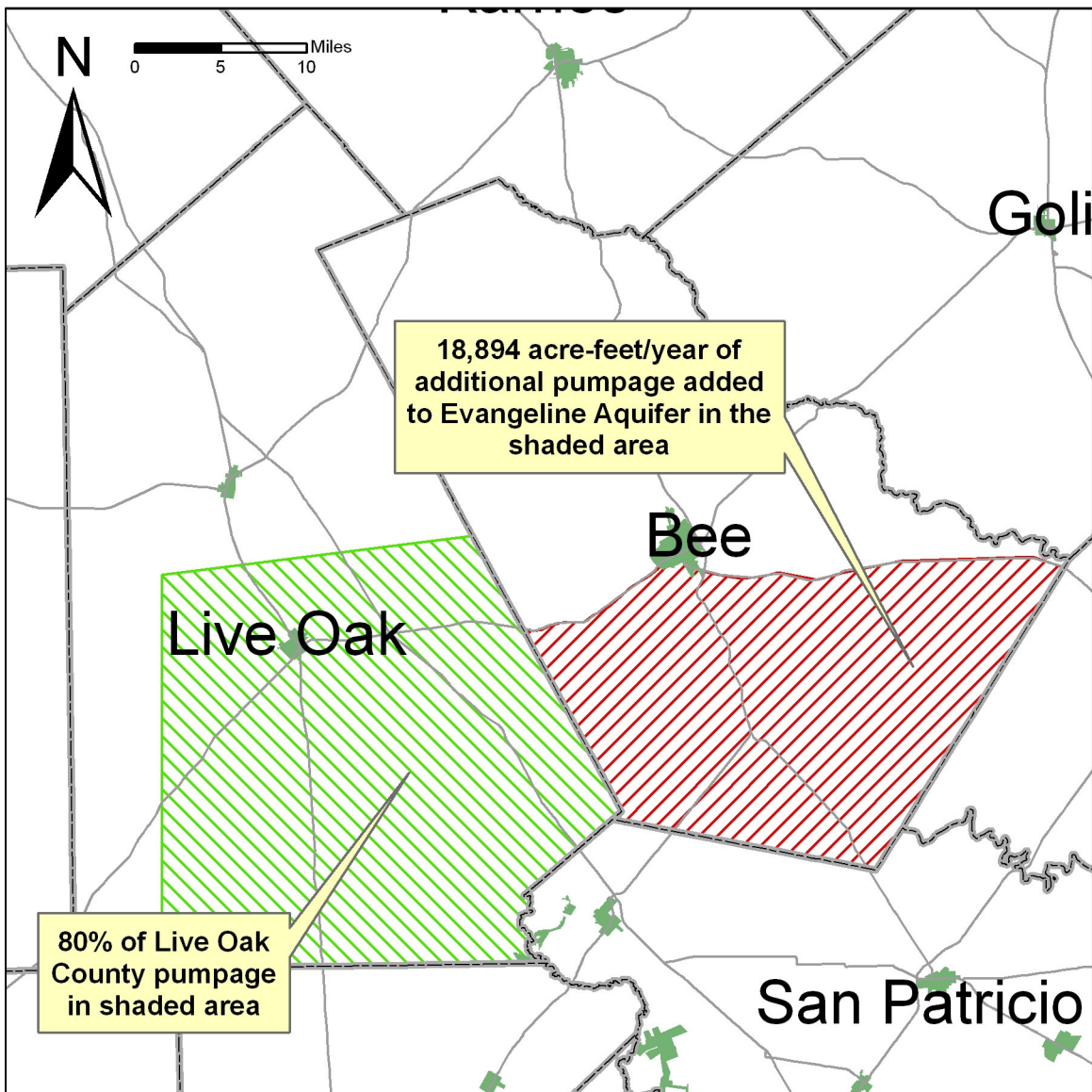
Figure 1. Location of additional pumpage in Bee and Live Oak counties. Pumpage in each county is concentrated in the shaded areas.
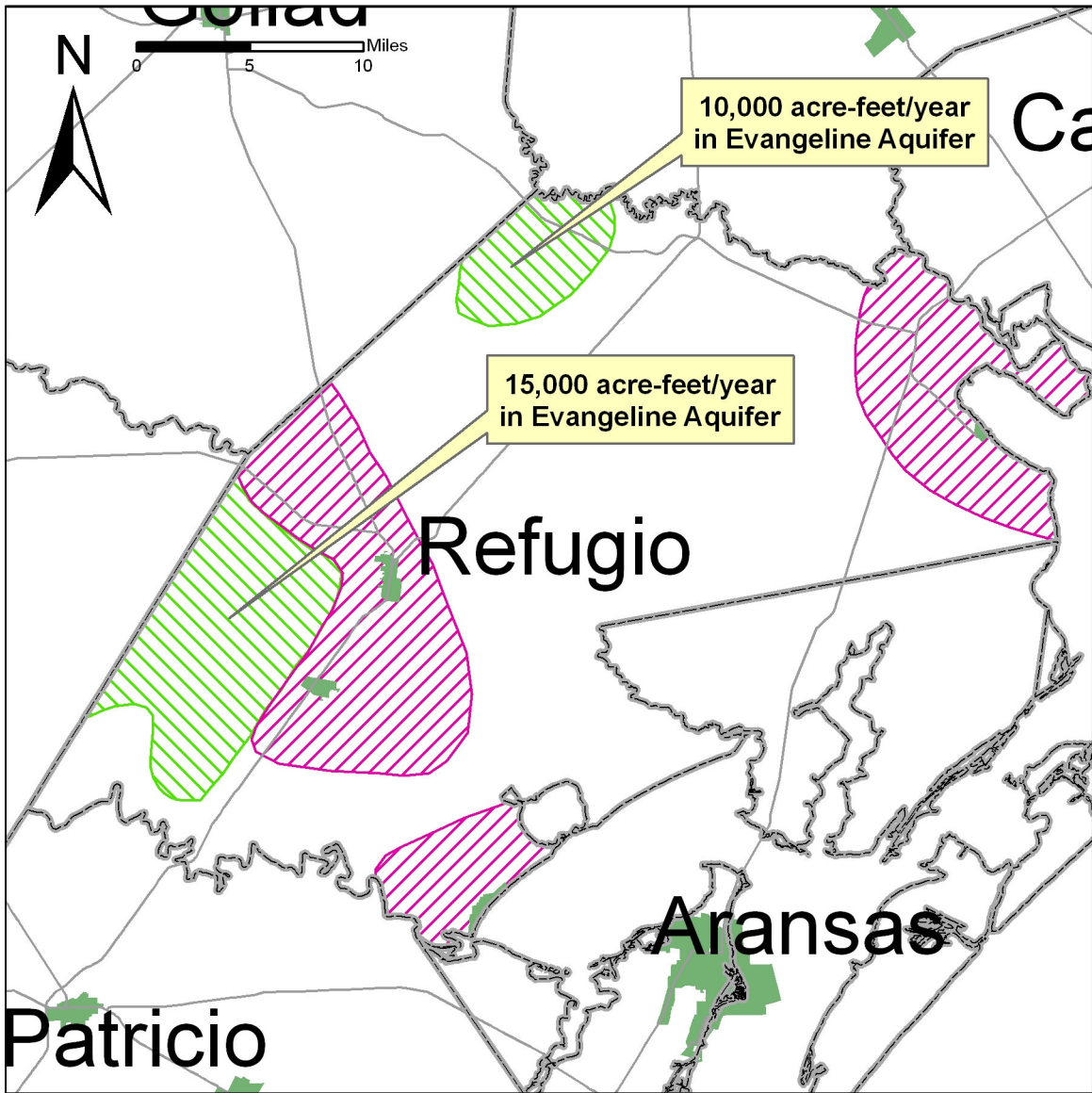
Figure 2. Location of additional pumpage in Refugio County. Pumpage in the Evangeline Aquifer is shown in the green areas, and pumpage in the Chicot Aquifer is shown in the red areas. An additional 6,803 acre-feet per year was allocated to the Chicot Aquifer.
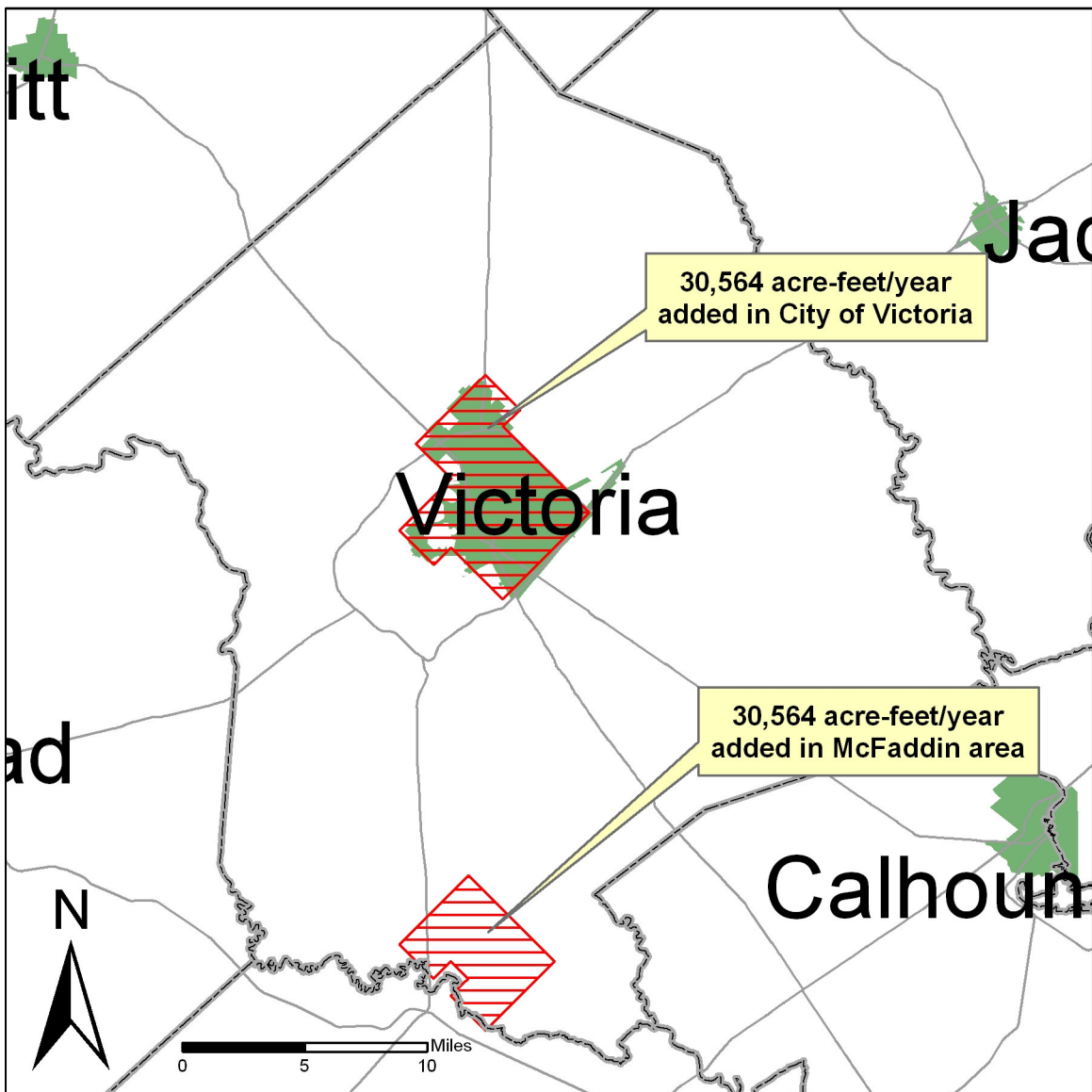
Figure 3. Location of additional pumpage in the Evangeline Aquifer in Victoria County.
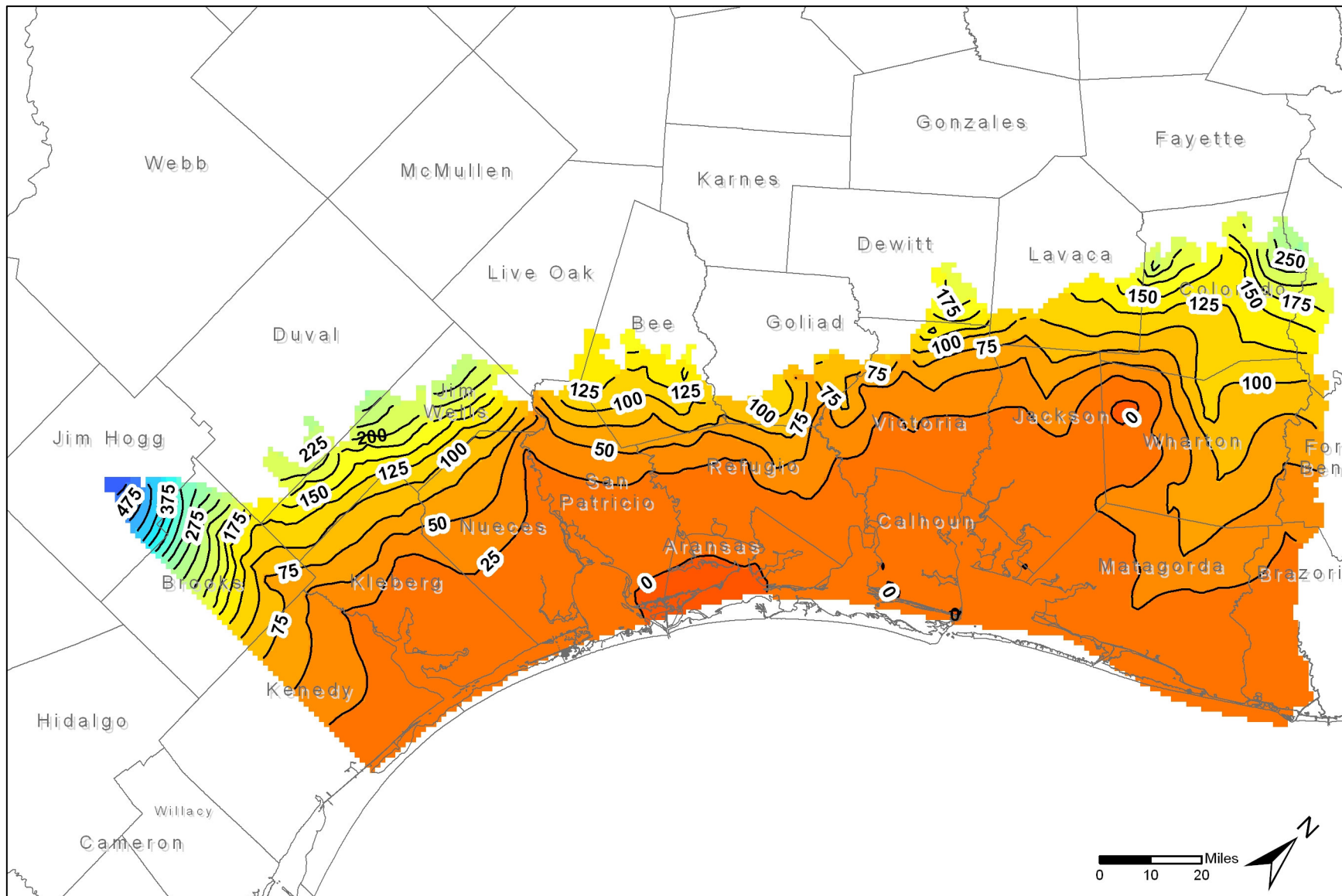
Figure 4. Initial water level elevations for the predictive model run in the Chicot Aquifer from the groundwater availability model for the central part of the Gulf Coast Aquifer. Water level elevations are in feet above mean sea level. Contour interval is 25 feet.
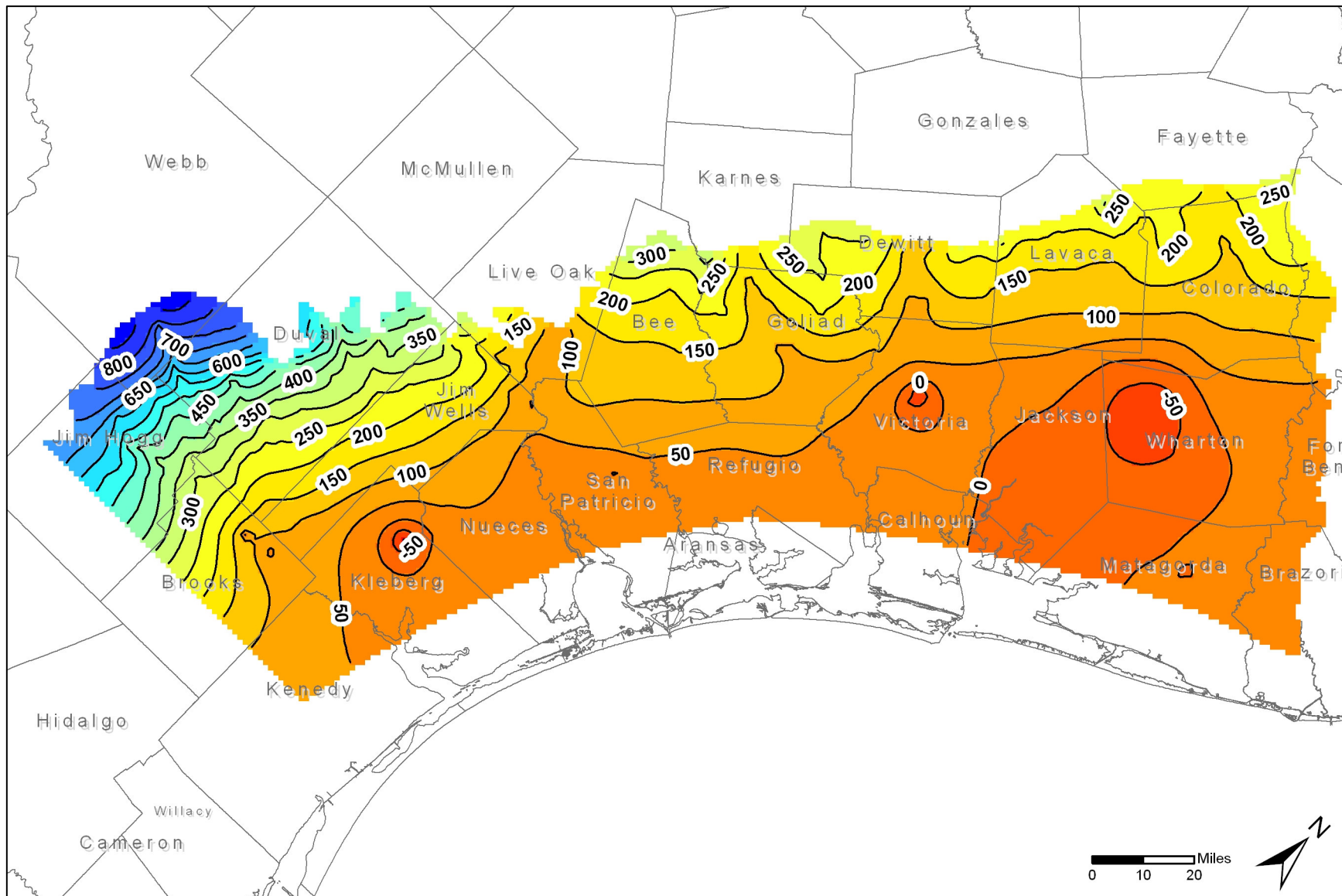
Figure 5. Initial water level elevations for the predictive model run in the Evangeline Aquifer from the groundwater availability model for the central part of the Gulf Coast Aquifer. Water level elevations are in feet above mean sea level. Contour interval is 50 feet.
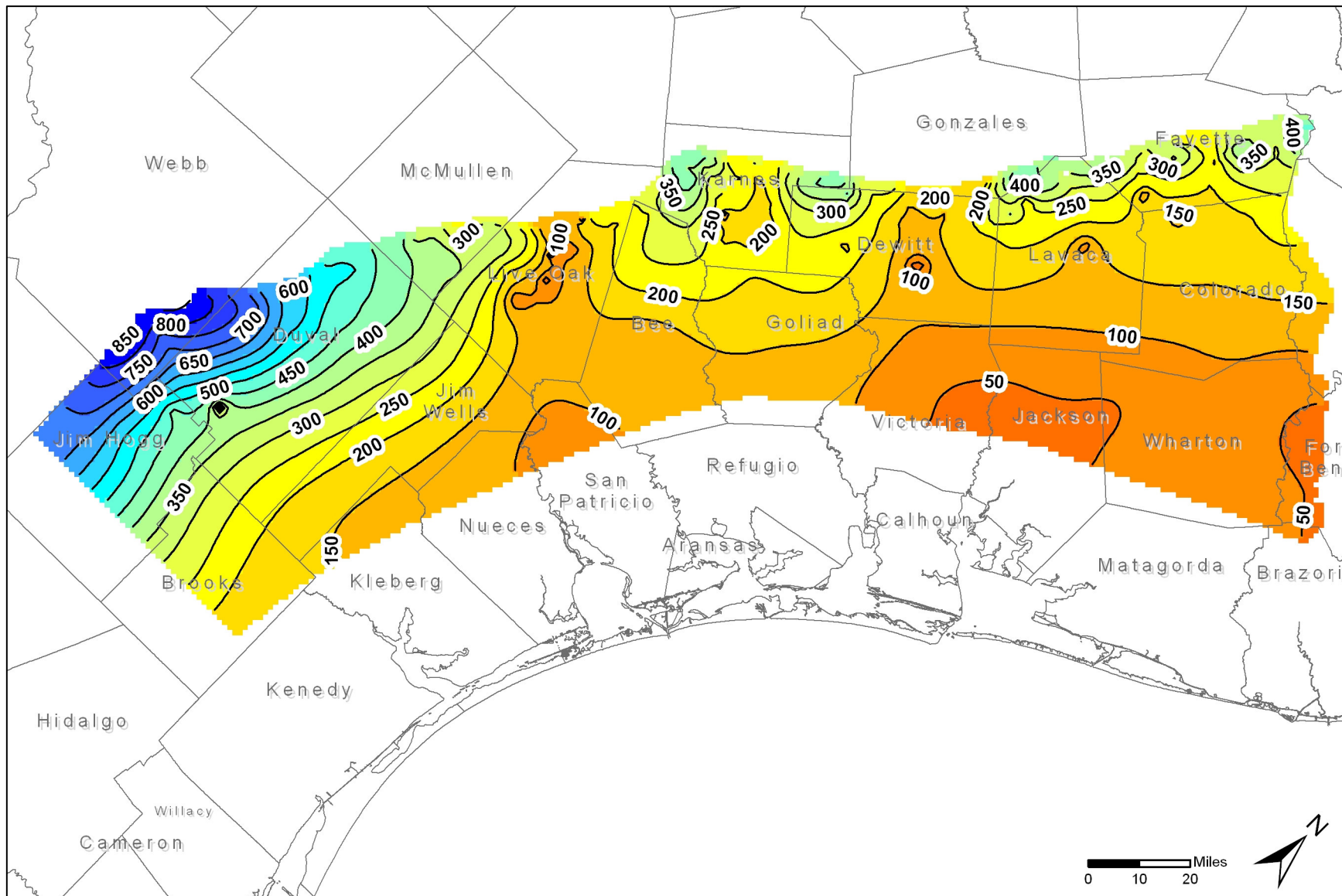
Figure 6. Initial water level elevations for the predictive model run in the Jasper Aquifer from the groundwater availability model for the central part of the Gulf Coast Aquifer. Water level elevations are in feet above mean sea level. Contour interval is 50 feet.
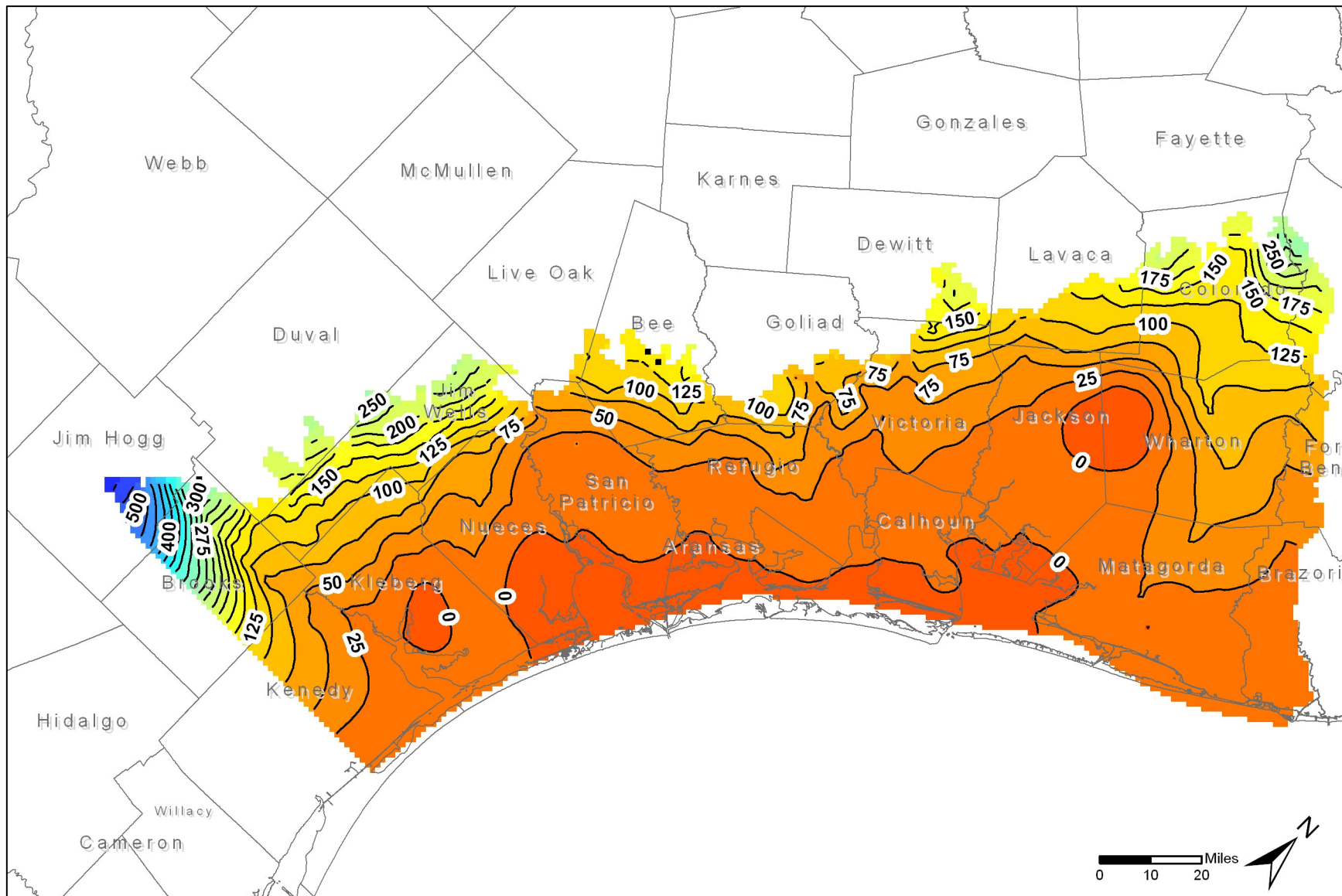
Figure 7. Water level elevations after 60 years using the specified pumpage in the Chicot Aquifer. Water level elevations are in feet above mean sea level. Contour interval is 25 feet. Dry cells are shown in black.
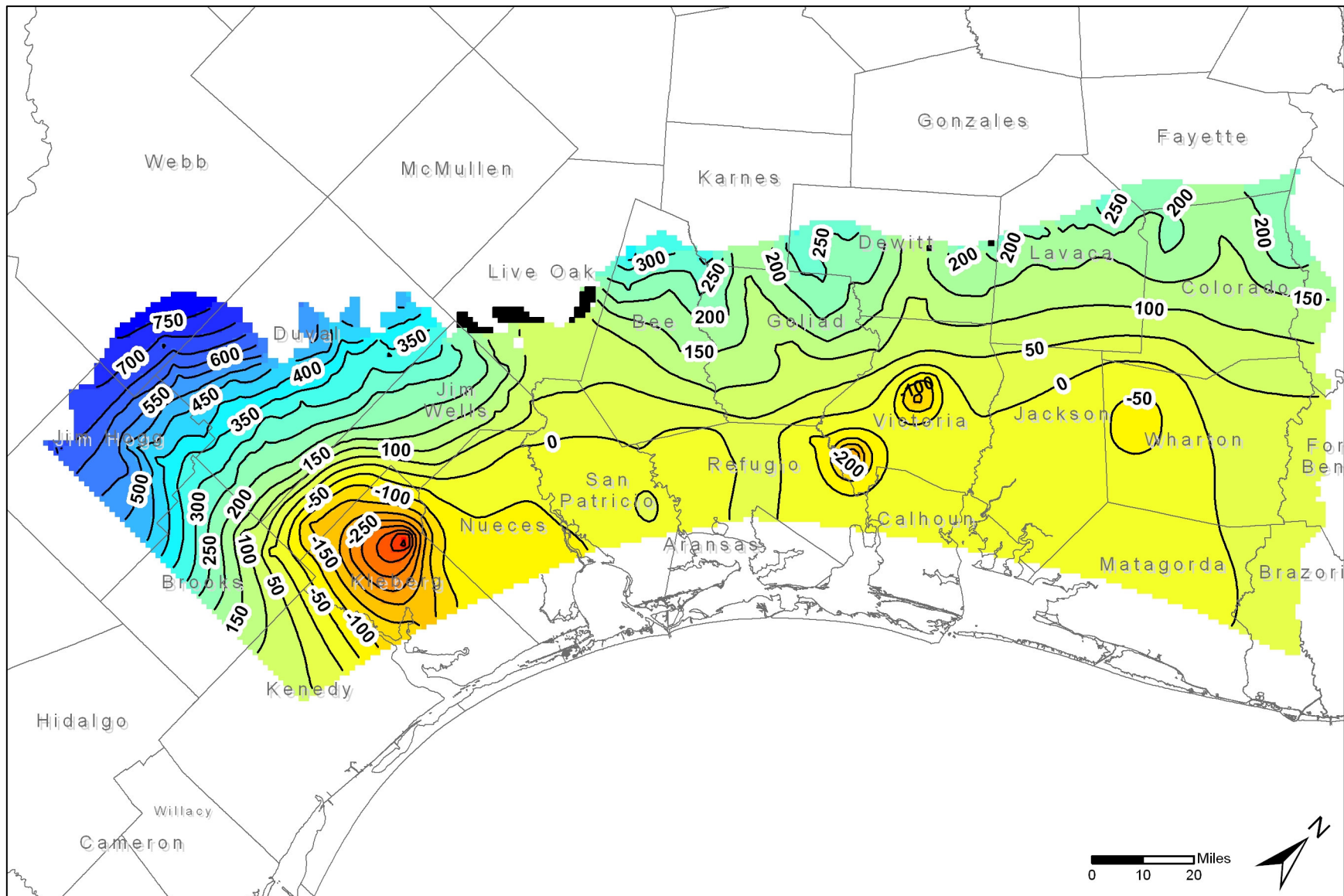
Figure 8. Water level elevations after 60 years using the specified pumpage in the Evangeline Aquifer. Water level elevations are in feet above mean sea level. Contour interval is 50 feet. Dry cells are shown in black.
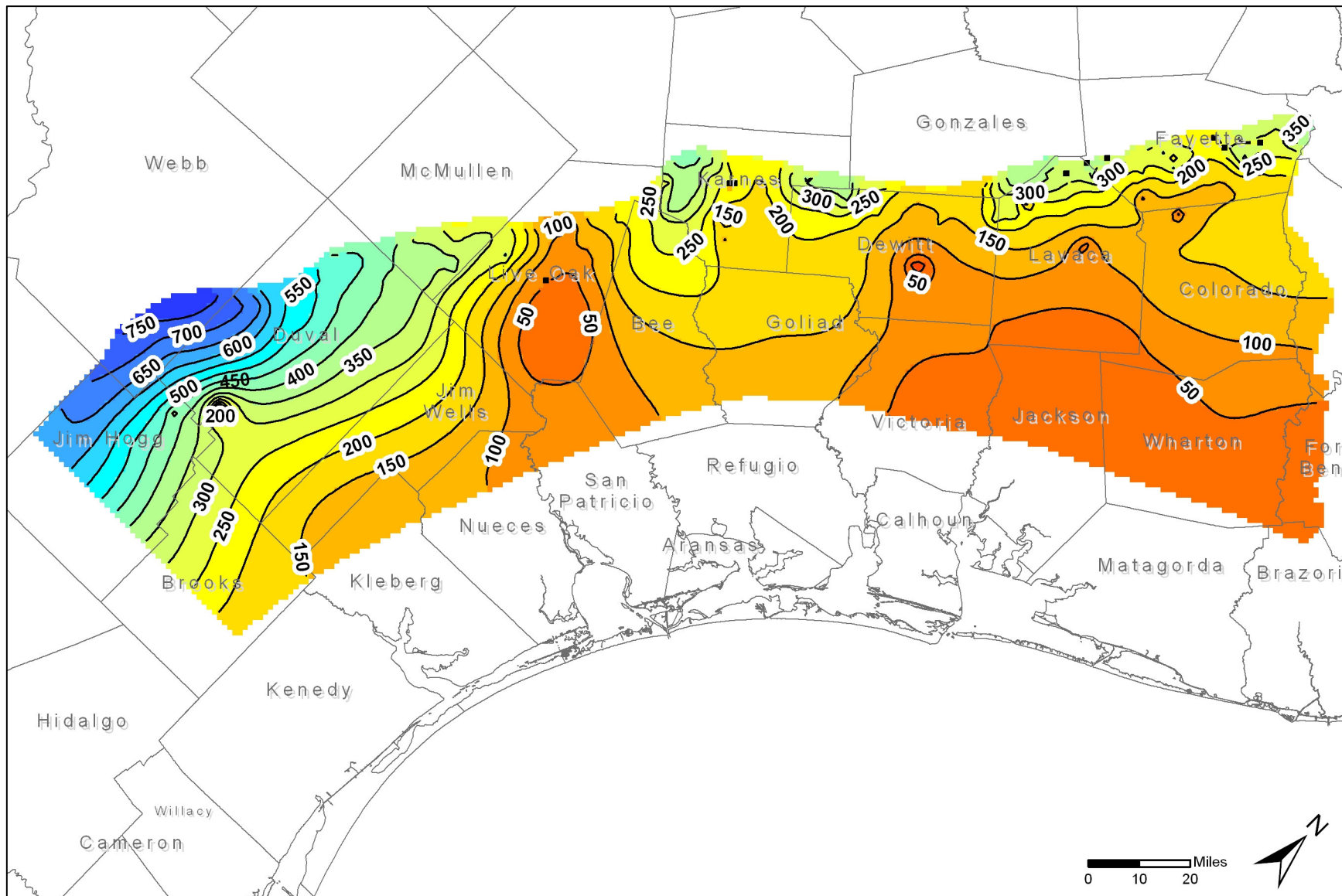
Figure 9. Water level elevations after 60 years using the specified pumpage in the Jasper Aquifer. Water level elevations are in feet above mean sea level. Contour interval is 50 feet. Dry cells are shown in black.
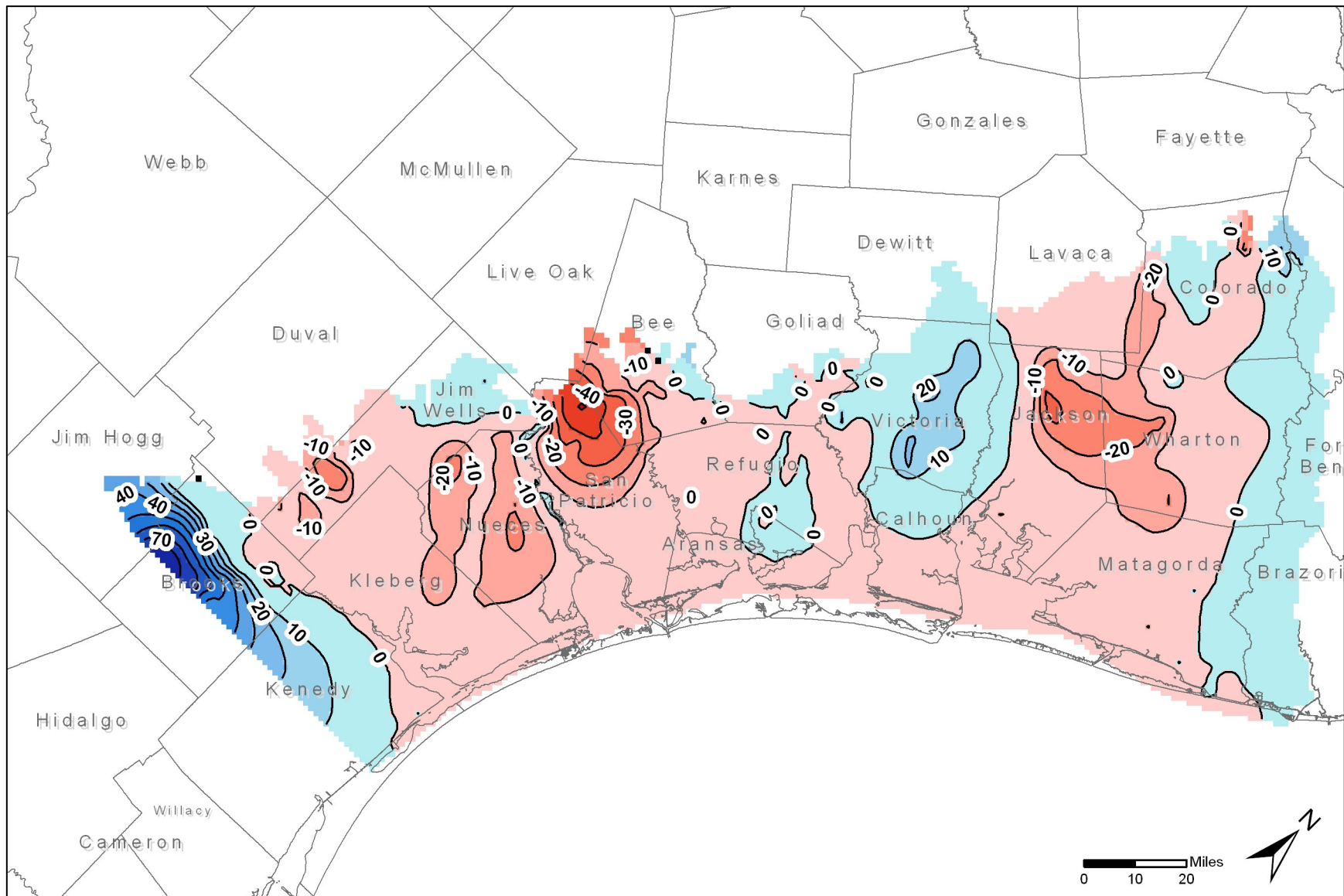
Figure 10. Changes in water levels after 60 years using the specified pumpage in the Chicot Aquifer. Drawdowns are in feet. Contour interval is 10 feet. Decreases in water levels (drawdowns) are shown in red. Increases in water levels are shown in blue. Dry cells are shown in black.
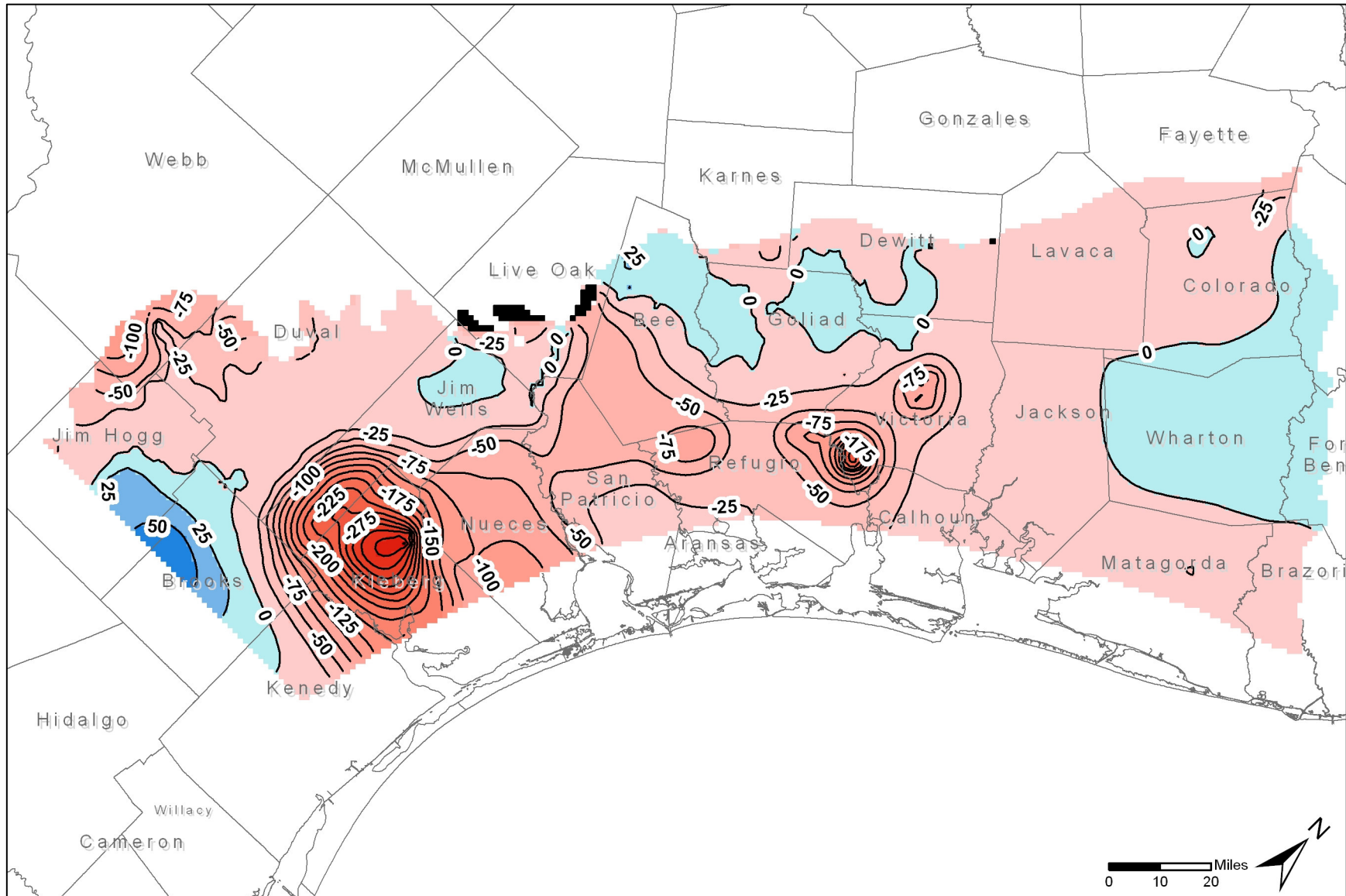
Figure 11. Changes in water levels after 60 years using the specified pumpage in the Evangeline Aquifer. Drawdowns are in feet. Contour interval is 25 feet. Decreases in water levels (drawdowns) are shown in red. Increases in water levels are shown in blue. Dry cells are shown in black.
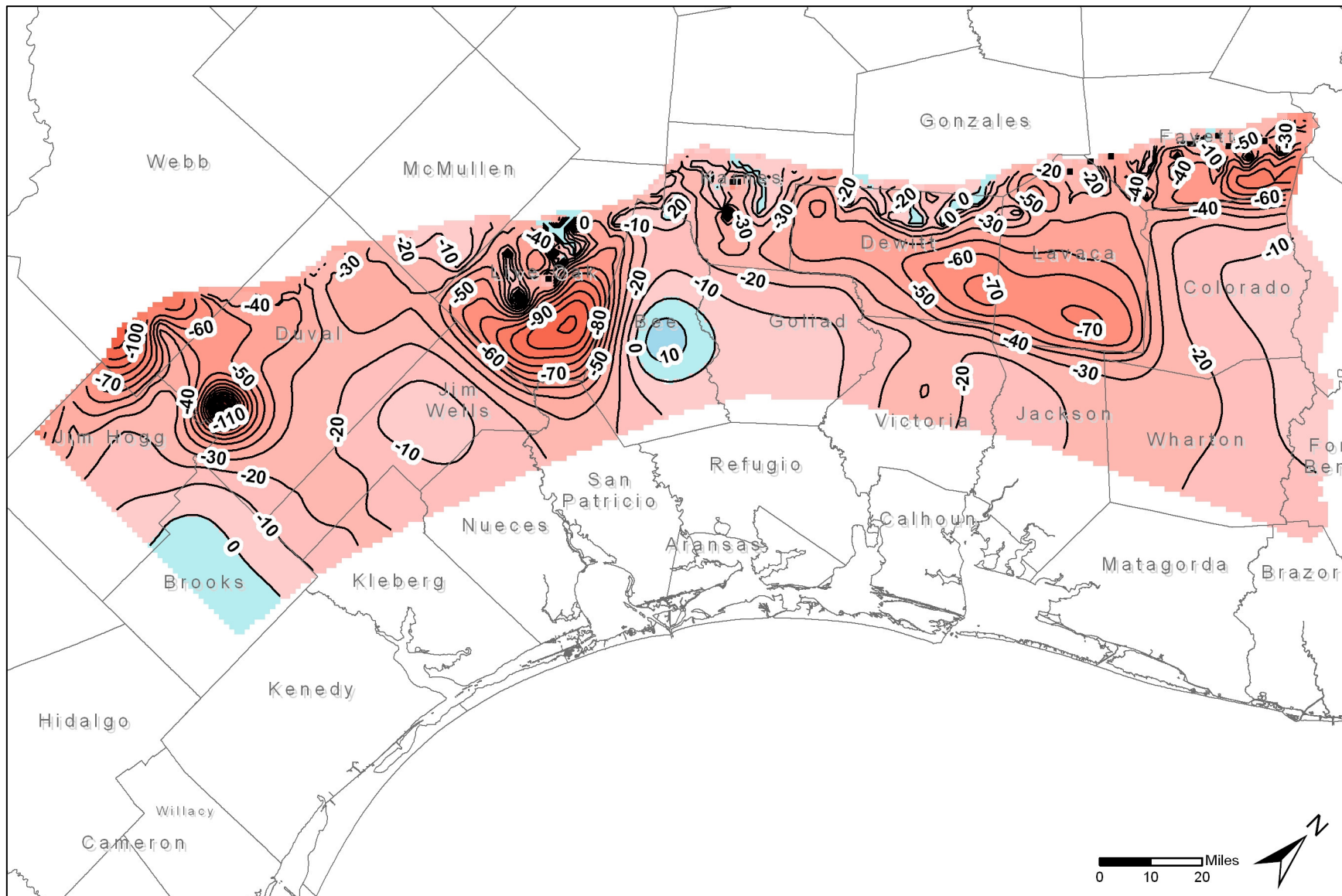
Figure 12. Changes in water levels after 60 years using the specified pumpage in the Jasper Aquifer. Drawdowns are in feet. Contour interval is 10 feet. Decreases in water levels (drawdowns) are shown in red. Increases in water levels are shown in blue. Dry cells are shown in black.

Appendix A

Summary of Water Budgets
After 60 Years

Table A-1. Annual water budgets for each county at the end of the 60-year predictive model run using the specified pumpage in the groundwater availability model for the central part of the Gulf Coast Aquifer (in acre-feet per year). Water budgets for Jim Hogg, Brooks, Kenedy, Brazoria, Fort Bend, and Austin counties represent only the portions of those counties located in the active portion of the model.

Aransas						
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	0	0	1	0	1	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	11	0	11	0	9
General Head Boundaries	1,104	3,497	1,417	3,111	2,434	2,489
Wells	0	1,827	0	1,827	0	4,001
Streams and Rivers	2,351	669	2,456	646	2,673	582
Recharge	164	0	164	0	164	0
Evapotranspiration	0	741	0	729	0	709
Lateral Inflow	4,229	1,161	3,670	1,355	3,931	1,359
Vertical Leakage Downward	58	0	0	30	0	54
Evangeline						
Storage	0	0	0	0	0	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	0	0	0	0	0
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	0	58	30	0	54	0
Lateral Inflow	105	47	136	166	33	87
Vertical Leakage Downward	--	--	--	--	--	--
Jasper						
Storage	--	--	--	--	--	--
Reservoirs (River package)	--	--	--	--	--	--
Springs (Drain package)	--	--	--	--	--	--
General Head Boundaries	--	--	--	--	--	--
Wells	--	--	--	--	--	--
Streams and Rivers	--	--	--	--	--	--
Recharge	--	--	--	--	--	--
Evapotranspiration	--	--	--	--	--	--
Vertical Leakage Upward	--	--	--	--	--	--
Lateral Inflow	--	--	--	--	--	--

Table A-1. (continued)

	Austin					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	2	0	8	0	4	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	3,118	0	3,118	0	3,118
Streams and Rivers	6,108	1,333	6,782	1,164	6,202	1,346
Recharge	6,758	0	6,758	0	6,758	0
Evapotranspiration	0	17	0	17	0	18
Lateral Inflow	2,481	4,051	2,300	4,190	2,442	4,072
Vertical Leakage Downward	0	6,830	0	7,359	0	6,852
Evangeline						
Storage	2	0	9	0	7	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	3,931	0	3,931	0	3,931
Streams and Rivers	0	0	0	0	0	0
Recharge	90	0	90	0	90	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	6,830	0	7,359	0	6,852	0
Lateral Inflow	1,409	4,341	1,263	4,707	1,341	4,276
Vertical Leakage Downward	42	102	35	118	38	121
Jasper						
Storage	16	0	48	0	27	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	23	0	23	0	23
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	97	40	121	27	122	33
Lateral Inflow	103	153	83	203	90	183

Table A-1. (continued)

	Bee					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	0	15	1,424	0	1,281	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	1,383	0	9,620	0	690
Streams and Rivers	4,811	10,996	7,027	975	6,589	1,801
Recharge	18,921	0	18,825	0	18,825	0
Evapotranspiration	0	219	0	45	0	69
Lateral Inflow	775	8,671	972	5,568	572	7,884
Vertical Leakage Downward	937	4,160	0	12,041	0	16,821
Evangeline						
Storage	0	41	173	0	451	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	2,973	0	13,553	0	21,868
Streams and Rivers	4,008	3,783	6,758	2,190	6,482	2,564
Recharge	4,993	0	5,089	0	5,089	0
Evapotranspiration	0	2	0	0	0	0
Vertical Leakage Upward	4,160	937	12,041	0	16,821	0
Lateral Inflow	2,354	6,841	5,104	13,006	4,850	9,116
Vertical Leakage Downward	96	1,031	612	1,023	826	974
Jasper						
Storage	39	187	594	0	623	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	260	0	658	0	362
Streams and Rivers	94	96	159	58	126	70
Recharge	23	0	24	0	23	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	884	148	1,152	270	1,068	336
Lateral Inflow	492	844	453	1,395	501	1,573

Table A-1. (continued)

Brazoria						
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	2	0	7	0	3	0
Reservoirs (River package)	338	0	341	0	338	0
Springs (Drain package)	0	72	0	63	0	73
General Head Boundaries	0	1,200	0	1,138	0	1,202
Wells	0	8,727	0	8,727	0	8,727
Streams and Rivers	9,469	19,328	9,872	18,989	9,500	19,236
Recharge	15,152	0	15,152	0	15,152	0
Evapotranspiration	0	1,338	0	1,320	0	1,340
Lateral Inflow	12,042	4,985	11,885	5,069	11,998	5,093
Vertical Leakage Downward	0	1,353	0	1,950	0	1,321
Evangeline						
Storage	2	0	10	0	4	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	284	0	284	0	284
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	1,353	0	1,950	0	1,321	0
Lateral Inflow	480	1,662	543	2,347	809	1,953
Vertical Leakage Downward	102	0	126	0	98	0
Jasper						
Storage	31	0	44	0	27	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	0	0	0	0	0
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	0	33	0	33	0	32
Lateral Inflow	8	5	0	11	9	4

Table A-1. (continued)

	Brooks					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	0	3	98	0	50	0
Reservoirs (River package)	3,431	0	3,431	0	3,431	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	359	0	359	0	359
Streams and Rivers	1,073	23,128	1,349	19,705	1,370	20,795
Recharge	23,402	0	23,402	0	23,402	0
Evapotranspiration	0	1,826	0	1,763	0	1,782
Lateral Inflow	5,005	4,877	4,674	4,580	4,445	4,707
Vertical Leakage Downward	1,365	4,081	507	7,051	647	5,702
Evangeline						
Storage	1	3	574	0	138	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	3,681	0	3,681	0	3,681
Streams and Rivers	0	863	5	828	3	795
Recharge	340	0	340	0	340	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	4,081	1,365	7,051	507	5,702	647
Lateral Inflow	2,680	1,752	3,308	7,610	2,840	4,810
Vertical Leakage Downward	808	245	1,562	214	1,139	230
Jasper						
Storage	1	208	282	58	197	17
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	0	0	0	0	0
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	197	785	188	998	227	834
Lateral Inflow	1,448	655	1,399	813	1,127	700

Table A-1. (continued)

	Calhoun					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	2	1	23	0	10	0
Reservoirs (River package)	2,993	0	3,269	0	3,612	0
Springs (Drain package)	0	1,151	0	1,021	0	875
General Head Boundaries	144	12,828	1,694	8,289	2,242	6,954
Wells	0	1,464	0	2,853	0	7,298
Streams and Rivers	6,370	3,564	3,899	2,066	2,655	940
Recharge	3,039	0	3,039	0	3,039	0
Evapotranspiration	0	1,282	0	1,224	0	1,183
Lateral Inflow	11,465	3,826	9,871	4,707	12,256	2,908
Vertical Leakage Downward	337	234	13	1,648	0	3,657
Evangeline						
Storage	1	0	7	0	2	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	27	0	64	0	178
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	234	337	1,648	13	3,657	0
Lateral Inflow	1,033	906	190	1,773	541	4,034
Vertical Leakage Downward	1	0	4	0	11	0
Jasper						
Storage	--	--	--	--	--	--
Reservoirs (River package)	--	--	--	--	--	--
Springs (Drain package)	--	--	--	--	--	--
General Head Boundaries	--	--	--	--	--	--
Wells	--	--	--	--	--	--
Streams and Rivers	--	--	--	--	--	--
Recharge	--	--	--	--	--	--
Evapotranspiration	--	--	--	--	--	--
Vertical Leakage Upward	--	--	--	--	--	--
Lateral Inflow	--	--	--	--	--	--

Table A-1. (continued)

	Colorado					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	**Out**	**In**	**Out**	**In**	**Out**
Chicot						
Storage	183	15	1,463	0	415	0
Reservoirs (River package)	1,408	0	1,408	0	1,408	0
Springs (Drain package)	0	6	0	5	0	6
General Head Boundaries	0	0	0	0	0	0
Wells	0	16,930	0	24,378	0	20,379
Streams and Rivers	28,347	12,482	33,916	8,349	28,408	10,889
Recharge	35,074	0	35,074	0	35,074	0
Evapotranspiration	0	57	0	54	0	57
Lateral Inflow	8,838	21,384	8,743	20,894	8,147	18,490
Vertical Leakage Downward	703	23,677	322	27,245	505	24,136
Evangeline						
Storage	5	4	70	0	35	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	15,681	0	22,580	0	18,875
Streams and Rivers	3,928	3,103	5,238	1,978	4,585	2,381
Recharge	2,515	0	2,515	0	2,515	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	23,677	703	27,245	322	24,136	505
Lateral Inflow	8,786	19,394	8,880	18,816	7,813	16,889
Vertical Leakage Downward	473	508	565	813	405	844
Jasper						
Storage	112	1	481	0	317	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	624	0	900	0	754
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	485	226	1,029	59	956	100
Lateral Inflow	595	341	268	819	248	667

Table A-1. (continued)

De Witt						
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	0	0	11	0	0	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	98	0	3,482	0	213
Streams and Rivers	2,094	1,229	4,183	246	2,582	925
Recharge	4,569	0	4,569	0	4,569	0
Evapotranspiration	0	25	0	0	0	16
Lateral Inflow	0	1,467	89	1,214	0	1,516
Vertical Leakage Downward	0	3,845	0	3,910	0	4,481
Evangeline						
Storage	4	0	63	0	64	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	970	0	7,662	0	3,085
Streams and Rivers	8,294	8,747	12,430	5,692	10,778	6,346
Recharge	5,786	0	5,773	0	5,773	0
Evapotranspiration	0	60	0	56	0	56
Vertical Leakage Upward	3,845	0	3,910	0	4,481	0
Lateral Inflow	987	7,133	1,143	7,413	1,044	7,719
Vertical Leakage Downward	87	2,090	43	2,539	0	4,934
Jasper						
Storage	562	2	1,326	0	2,183	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	2,674	0	3,801	0	10,676
Streams and Rivers	780	643	1,053	454	2,223	118
Recharge	243	0	243	0	243	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	2,322	160	2,934	72	5,556	11
Lateral Inflow	663	1,090	459	1,688	1,059	458

Table A-1. (continued)

	Duval					
	GAM07-12 Baseline Pumpage		**GAM07-14 Availability Pumpage**		**GAM07-43 New Pumpage**	
	In	**Out**	**In**	**Out**	**In**	**Out**
Chicot						
Storage	1	0	106	0	95	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	394	0	733	0	733
Streams and Rivers	1,544	3,215	3,451	1,230	2,912	1,768
Recharge	5,270	0	5,270	0	5,270	0
Evapotranspiration	0	34	0	17	0	18
Lateral Inflow	671	3,467	666	3,184	634	3,377
Vertical Leakage Downward	339	715	40	4,368	66	3,082
Evangeline						
Storage	72	0	859	0	387	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	4,363	0	7,949	0	8,000
Streams and Rivers	2,962	8,272	6,070	4,955	4,594	5,203
Recharge	14,506	0	14,506	0	14,506	0
Evapotranspiration	0	335	0	28	0	32
Vertical Leakage Upward	715	339	4,368	40	3,082	66
Lateral Inflow	1,410	3,973	1,769	12,000	1,488	7,707
Vertical Leakage Downward	1,001	3,384	1,032	3,632	692	3,741
Jasper						
Storage	866	0	2,131	0	2,051	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	2,892	0	5,283	0	5,338
Streams and Rivers	0	0	0	0	0	0
Recharge	189	0	189	0	189	0
Evapotranspiration	0	412	0	371	0	370
Vertical Leakage Upward	3,597	940	4,188	431	4,340	331
Lateral Inflow	2,256	2,663	2,127	2,550	2,043	2,583

Table A-1. (continued)

	Fayette					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	--	--	--	--	--	--
Reservoirs (River package)	--	--	--	--	--	--
Springs (Drain package)	--	--	--	--	--	--
General Head Boundaries	--	--	--	--	--	--
Wells	--	--	--	--	--	--
Streams and Rivers	--	--	--	--	--	--
Recharge	--	--	--	--	--	--
Evapotranspiration	--	--	--	--	--	--
Lateral Inflow	--	--	--	--	--	--
Vertical Leakage Downward	--	--	--	--	--	--
Evangeline						
Storage	5	0	43	0	41	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	169	0	884	0	957
Streams and Rivers	94	773	803	59	755	67
Recharge	1,737	0	1,737	0	1,737	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	--	--	--	--	--	--
Lateral Inflow	108	700	51	565	65	463
Vertical Leakage Downward	56	356	0	1,126	0	1,110
Jasper						
Storage	1,107	0	3,693	0	3,711	0
Reservoirs (River package)	117	0	201	0	202	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	1,583	0	7,308	0	7,391
Streams and Rivers	677	452	1,241	19	1,251	18
Recharge	355	0	354	0	354	0
Evapotranspiration	0	11	0	5	0	5
Vertical Leakage Upward	507	314	1,769	9	1,755	10
Lateral Inflow	145	549	361	278	402	250

Table A-1. (continued)

Fort Bend						
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	5	0	13	0	6	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	5,921	0	5,921	0	5,921
Streams and Rivers	8,234	6,299	8,309	5,980	8,134	6,794
Recharge	884	0	884	0	884	0
Evapotranspiration	0	18	0	17	0	19
Lateral Inflow	10,575	4,483	10,552	4,473	10,792	4,433
Vertical Leakage Downward	0	2,976	0	3,368	0	2,649
Evangeline						
Storage	2	0	8	0	3	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	2,882	0	2,882	0	2,882
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	2,976	0	3,368	0	2,649	0
Lateral Inflow	2,298	2,654	2,281	3,015	2,335	2,331
Vertical Leakage Downward	251	0	240	0	222	0
Jasper						
Storage	135	0	206	0	115	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	0	0	0	0	0
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	0	226	0	202	0	200
Lateral Inflow	107	16	49	53	101	16

Table A-1. (continued)

	Goliad					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	0	0	15	0	13	0
Reservoirs (River package)	1,500	0	1,547	0	1,558	0
Springs (Drain package)	0	12	0	5	0	3
General Head Boundaries	0	0	0	0	0	0
Wells	0	650	0	1,383	0	679
Streams and Rivers	2,234	8,879	3,297	6,652	3,367	6,344
Recharge	10,556	0	10,556	0	10,556	0
Evapotranspiration	0	218	0	163	0	158
Lateral Inflow	912	4,690	773	3,406	750	3,460
Vertical Leakage Downward	783	1,535	105	4,684	60	5,661
Evangeline						
Storage	2	0	59	0	38	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	5,493	0	11,457	0	8,906
Streams and Rivers	16,678	15,202	18,789	9,515	18,595	10,221
Recharge	7,979	0	7,979	0	7,979	0
Evapotranspiration	0	43	0	31	0	31
Vertical Leakage Upward	1,535	783	4,684	105	5,661	60
Lateral Inflow	3,800	8,457	4,612	14,976	4,123	17,168
Vertical Leakage Downward	437	454	574	613	650	660
Jasper						
Storage	19	14	355	0	281	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	0	0	0	0	0
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	387	377	663	287	645	336
Lateral Inflow	526	540	376	1,107	224	812

Table A-1. (continued)

Gonzales						
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	--	--	--	--	--	--
Reservoirs (River package)	--	--	--	--	--	--
Springs (Drain package)	--	--	--	--	--	--
General Head Boundaries	--	--	--	--	--	--
Wells	--	--	--	--	--	--
Streams and Rivers	--	--	--	--	--	--
Recharge	--	--	--	--	--	--
Evapotranspiration	--	--	--	--	--	--
Lateral Inflow	--	--	--	--	--	--
Vertical Leakage Downward	--	--	--	--	--	--
Evangeline						
Storage	--	--	--	--	--	--
Reservoirs (River package)	--	--	--	--	--	--
Springs (Drain package)	--	--	--	--	--	--
General Head Boundaries	--	--	--	--	--	--
Wells	--	--	--	--	--	--
Streams and Rivers	--	--	--	--	--	--
Recharge	--	--	--	--	--	--
Evapotranspiration	--	--	--	--	--	--
Vertical Leakage Upward	--	--	--	--	--	--
Lateral Inflow	--	--	--	--	--	--
Vertical Leakage Downward	--	--	--	--	--	--
Jasper						
Storage	396	0	451	0	485	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	1	0	1	0	1
General Head Boundaries	0	0	0	0	0	0
Wells	0	4	0	4	0	4
Streams and Rivers	12	164	20	160	15	154
Recharge	139	0	139	0	139	0
Evapotranspiration	0	70	0	68	0	68
Vertical Leakage Upward	--	--	--	--	--	--
Lateral Inflow	43	350	21	398	33	445

Table A-1. (continued)

Jackson						
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	481	1	3,128	0	772	0
Reservoirs (River package)	4,149	0	4,213	0	4,167	0
Springs (Drain package)	0	100	0	36	0	84
General Head Boundaries	80	610	1,733	142	483	227
Wells	0	39,090	0	64,067	0	51,036
Streams and Rivers	55,771	26,417	53,223	8,086	54,088	18,738
Recharge	11,805	0	11,805	0	11,805	0
Evapotranspiration	0	529	0	385	0	484
Lateral Inflow	21,348	16,126	24,456	10,085	23,316	10,828
Vertical Leakage Downward	23	10,791	0	15,760	0	13,233
Evangeline						
Storage	9	0	77	0	20	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	14,417	0	23,697	0	18,856
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	10,791	23	15,760	0	13,233	0
Lateral Inflow	13,015	10,172	14,774	8,214	10,932	6,228
Vertical Leakage Downward	760	0	1,296	1	875	3
Jasper						
Storage	174	3	461	0	346	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	0	0	0	0	0
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	0	390	51	385	41	325
Lateral Inflow	261	42	101	228	33	95

Table A-1. (continued)

	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
Jim Hogg						
	In	**Out**	**In**	**Out**	**In**	**Out**
Chicot						
Storage	0	2	0	2	1	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	14	0	14	0	75
Streams and Rivers	0	2,024	0	2,009	0	1,807
Recharge	6,440	0	6,440	0	6,440	0
Evapotranspiration	0	443	0	442	0	435
Lateral Inflow	382	3,251	377	3,261	346	3,032
Vertical Leakage Downward	313	1,399	310	1,399	201	1,640
Evangeline						
Storage	4	42	30	17	149	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	371	0	371	0	1,848
Streams and Rivers	342	4,069	412	3,655	581	2,518
Recharge	7,165	0	7,165	0	7,165	0
Evapotranspiration	0	657	0	584	0	392
Vertical Leakage Upward	1,399	313	1,399	310	1,640	201
Lateral Inflow	504	1,996	321	2,037	354	1,853
Vertical Leakage Downward	549	2,514	408	2,761	134	3,212
Jasper						
Storage	11	399	51	269	629	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	594	0	594	0	2,955
Streams and Rivers	0	0	0	0	0	0
Recharge	155	0	155	0	155	0
Evapotranspiration	0	172	0	162	0	132
Vertical Leakage Upward	2,370	533	2,628	392	3,188	110
Lateral Inflow	1,355	2,194	865	2,284	1,062	1,837

Table A-1. (continued)

	Jim Wells					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	8	0	281	0	164	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	14	0	5	0	10
General Head Boundaries	0	0	0	0	0	0
Wells	0	2,257	0	13,567	0	8,223
Streams and Rivers	5,557	18,173	14,515	6,284	12,765	10,086
Recharge	25,328	0	25,328	0	25,328	0
Evapotranspiration	0	237	0	157	0	153
Lateral Inflow	3,722	9,291	3,316	8,293	3,540	8,914
Vertical Leakage Downward	568	5,212	209	15,340	114	14,522
Evangeline						
Storage	5	0	4,994	0	1,657	0
Reservoirs (River package)	562	0	562	0	562	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	2,491	0	36,421	0	19,975
Streams and Rivers	561	4,370	1,019	3,410	973	3,328
Recharge	2,234	0	2,234	0	2,234	0
Evapotranspiration	0	8	0	5	0	4
Vertical Leakage Upward	5,212	568	15,340	209	14,522	114
Lateral Inflow	3,693	5,521	18,266	7,387	9,515	8,438
Vertical Leakage Downward	865	175	5,254	237	2,743	336
Jasper						
Storage	100	3	1,410	0	1,055	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	7	0	7	0	7
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	132	735	245	1,971	397	1,201
Lateral Inflow	1,765	1,251	1,625	1,302	1,476	1,720

Table A-1. (continued)

Karnes	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	--	--	--	--	--	--
Reservoirs (River package)	--	--	--	--	--	--
Springs (Drain package)	--	--	--	--	--	--
General Head Boundaries	--	--	--	--	--	--
Wells	--	--	--	--	--	--
Streams and Rivers	--	--	--	--	--	--
Recharge	--	--	--	--	--	--
Evapotranspiration	--	--	--	--	--	--
Lateral Inflow	--	--	--	--	--	--
Vertical Leakage Downward	--	--	--	--	--	--
Evangeline						
Storage	0	0	61	3	36	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	104	0	1,147	0	1,147
Streams and Rivers	280	581	486	3	458	52
Recharge	884	0	839	0	884	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	--	--	--	--	--	--
Lateral Inflow	214	539	358	305	316	360
Vertical Leakage Downward	36	190	0	286	24	159
Jasper						
Storage	1,497	8	7,538	21	2,499	2
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	2,231	0	12,607	0	3,715
Streams and Rivers	747	551	2,239	0	817	275
Recharge	417	0	417	0	417	0
Evapotranspiration	0	78	0	1	0	49
Vertical Leakage Upward	395	97	936	0	449	10
Lateral Inflow	560	652	1,877	379	472	602

Table A-1. (continued)

	Kenedy					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	1	0	110	0	46	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	18,999	0	17,601	0	18,236
Wells	0	41	0	41	0	41
Streams and Rivers	897	6,442	952	4,947	910	5,595
Recharge	25,221	0	25,221	0	25,221	0
Evapotranspiration	0	2,283	0	2,169	0	2,218
Lateral Inflow	4,224	2,619	3,919	2,580	4,082	2,501
Vertical Leakage Downward	214	175	0	2,859	0	1,671
Evangeline						
Storage	3	0	158	0	74	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	62	0	62	0	62
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	175	214	2,859	0	1,671	0
Lateral Inflow	728	663	1,406	4,983	1,134	3,188
Vertical Leakage Downward	33	1	623	0	372	0
Jasper						
Storage	--	--	--	--	--	--
Reservoirs (River package)	--	--	--	--	--	--
Springs (Drain package)	--	--	--	--	--	--
General Head Boundaries	--	--	--	--	--	--
Wells	--	--	--	--	--	--
Streams and Rivers	--	--	--	--	--	--
Recharge	--	--	--	--	--	--
Evapotranspiration	--	--	--	--	--	--
Vertical Leakage Upward	--	--	--	--	--	--
Lateral Inflow	--	--	--	--	--	--

Table A-1. (continued)

	Kleberg					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	6	0	431	0	203	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	1	0	0	0	0
General Head Boundaries	0	16,786	3,803	7,454	1,132	9,946
Wells	0	948	0	5,086	0	2,963
Streams and Rivers	19,863	12,407	26,367	7,961	23,384	8,762
Recharge	4,486	0	4,486	0	4,486	0
Evapotranspiration	0	1,137	0	933	0	992
Lateral Inflow	12,640	4,515	12,126	5,964	11,974	6,020
Vertical Leakage Downward	55	1,256	0	19,816	0	12,493
Evangeline	0	0	0	0		
Storage	20	0	6,479	0	2,108	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	7,682	0	44,910	0	27,775
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	1,256	55	19,816	0	12,493	0
Lateral Inflow	5,789	427	15,229	4,062	10,582	1,989
Vertical Leakage Downward	1,095	0	7,448	0	4,584	0
Jasper						
Storage	100	0	817	0	513	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	0	0	0	0	0
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	0	431	0	1,089	0	826
Lateral Inflow	388	57	321	48	365	52

Table A-1. (continued)

	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
Lavaca						
	In	Out	In	Out	In	Out
Chicot						
Storage	89	0	1,349	0	282	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	1,726	0	5,784	0	4,551
Streams and Rivers	8,823	5,526	12,585	1,454	12,264	3,122
Recharge	18,276	0	18,276	0	18,276	0
Evapotranspiration	0	3	0	1	0	2
Lateral Inflow	1,537	15,123	1,176	16,680	1,462	16,297
Vertical Leakage Downward	85	6,433	4	9,469	4	8,315
Evangeline						
Storage	6	0	61	9	37	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	6,907	0	23,405	0	18,604
Streams and Rivers	9,941	6,149	21,548	1,624	16,949	2,566
Recharge	6,093	0	6,051	0	6,093	0
Evapotranspiration	0	4	0	2	0	3
Vertical Leakage Upward	6,433	85	9,469	4	8,315	4
Lateral Inflow	4,055	13,064	3,892	13,715	4,103	12,387
Vertical Leakage Downward	189	513	73	2,331	37	1,976
Jasper						
Storage	1,331	1	3,021	0	2,546	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	2,404	0	8,533	0	6,688
Streams and Rivers	597	0	879	0	834	0
Recharge	170	0	169	0	169	0
Evapotranspiration	0	5	0	0	0	0
Vertical Leakage Upward	669	179	3,502	14	2,852	16
Lateral Inflow	478	656	1,278	302	849	544

Table A-1. (continued)

Live Oak						
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	0	0	63	0	96	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	88	0	88	0	88
Streams and Rivers	177	0	177	0	177	0
Recharge	1,194	0	1,194	0	1,194	0
Evapotranspiration	0	6	0	4	0	5
Lateral Inflow	242	190	92	301	237	196
Vertical Leakage Downward	0	1,328	0	1,133	0	1,414
Evangeline	0	0	0	0		
Storage	0	8	123	0	140	3
Reservoirs (River package)	2,634	0	2,890	0	3,012	0
Springs (Drain package)	0	5	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	1,802	0	4,140	0	5,857
Streams and Rivers	635	8,684	1,106	5,915	1,720	3,683
Recharge	4,205	0	4,205	0	3,475	0
Evapotranspiration	0	68	0	38	0	27
Vertical Leakage Upward	1,328	0	1,133	0	1,414	0
Lateral Inflow	2,561	767	1,550	693	1,450	1,249
Vertical Leakage Downward	254	284	30	251	29	419
Jasper						
Storage	1,386	65	2,949	0	4,244	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	2,744	0	7,705	0	12,386
Streams and Rivers	441	394	997	90	1,623	32
Recharge	527	0	528	0	529	0
Evapotranspiration	0	56	0	39	0	29
Vertical Leakage Upward	386	949	1,151	268	2,600	107
Lateral Inflow	1,955	488	2,684	207	3,728	168

Table A-1. (continued)

	Matagorda					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	92	0	337	0	107	0
Reservoirs (River package)	795	0	804	0	801	0
Springs (Drain package)	0	215	0	189	0	204
General Head Boundaries	897	10,747	2,496	8,702	1,483	9,419
Wells	0	27,682	0	38,931	0	35,596
Streams and Rivers	58,043	30,017	65,190	25,697	60,216	28,102
Recharge	23,061	0	23,061	0	23,061	0
Evapotranspiration	0	3,095	0	2,981	0	3,061
Lateral Inflow	12,254	14,546	11,547	15,560	12,975	13,114
Vertical Leakage Downward	0	8,845	0	11,374	0	9,146
Evangeline						
Storage	7	0	36	0	11	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	7,240	0	10,207	0	9,326
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	8,845	0	11,374	0	9,146	0
Lateral Inflow	2,565	4,431	3,057	4,569	2,762	2,834
Vertical Leakage Downward	229	0	303	0	225	0
Jasper						
Storage	--	--	--	--	--	--
Reservoirs (River package)	--	--	--	--	--	--
Springs (Drain package)	--	--	--	--	--	--
General Head Boundaries	--	--	--	--	--	--
Wells	--	--	--	--	--	--
Streams and Rivers	--	--	--	--	--	--
Recharge	--	--	--	--	--	--
Evapotranspiration	--	--	--	--	--	--
Vertical Leakage Upward	--	--	--	--	--	--
Lateral Inflow	--	--	--	--	--	--

Table A-1. (continued)

McMullen						
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	--	--	--	--	--	--
Reservoirs (River package)	--	--	--	--	--	--
Springs (Drain package)	--	--	--	--	--	--
General Head Boundaries	--	--	--	--	--	--
Wells	--	--	--	--	--	--
Streams and Rivers	--	--	--	--	--	--
Recharge	--	--	--	--	--	--
Evapotranspiration	--	--	--	--	--	--
Lateral Inflow	--	--	--	--	--	--
Vertical Leakage Downward	--	--	--	--	--	--
Evangeline						
Storage	--	--	--	--	--	--
Reservoirs (River package)	--	--	--	--	--	--
Springs (Drain package)	--	--	--	--	--	--
General Head Boundaries	--	--	--	--	--	--
Wells	--	--	--	--	--	--
Streams and Rivers	--	--	--	--	--	--
Recharge	--	--	--	--	--	--
Evapotranspiration	--	--	--	--	--	--
Vertical Leakage Upward	--	--	--	--	--	--
Lateral Inflow	--	--	--	--	--	--
Vertical Leakage Downward	--	--	--	--	--	--
Jasper						
Storage	401	0	624	0	756	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	19	0	286	0	445
Streams and Rivers	368	590	465	520	532	483
Recharge	249	0	249	0	249	0
Evapotranspiration	0	116	0	105	0	99
Vertical Leakage Upward	258	0	333	0	353	0
Lateral Inflow	205	756	190	950	205	1,069

Table A-1. (continued)

	Nueces					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	9	0	1,217	0	475	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	89	0	59	0	22
General Head Boundaries	91	4,039	4,137	467	4,384	354
Wells	0	1,862	0	15,935	0	16,797
Streams and Rivers	11,348	11,049	36,234	1,836	40,156	1,323
Recharge	4,795	0	4,795	0	4,795	0
Evapotranspiration	0	372	0	281	0	284
Lateral Inflow	8,976	6,697	10,109	5,722	10,412	7,232
Vertical Leakage Downward	1,235	2,345	5	32,198	0	34,211
Evangeline						
Storage	2	0	88	0	41	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	1,083	0	33,913	0	39,053
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	2,345	1,235	32,198	5	34,211	0
Lateral Inflow	2,047	2,501	6,217	6,302	6,742	3,633
Vertical Leakage Downward	424	0	1,715	0	1,693	0
Jasper	0	0	0	0		
Storage	26	1	265	0	302	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	0	0	0	0	0
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	0	330	0	567	0	570
Lateral Inflow	402	98	396	93	397	129

Table A-1. (continued)

	Refugio					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	0	1	58	0	98	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	129	0	92	0	81
General Head Boundaries	0	7,900	19	6,266	38	5,800
Wells	0	597	0	6,800	0	7,341
Streams and Rivers	27,574	39,589	36,727	21,749	40,057	19,780
Recharge	14,669	0	14,669	0	14,669	0
Evapotranspiration	0	1,906	0	1,725	0	1,700
Lateral Inflow	14,002	10,469	10,226	8,717	10,819	10,286
Vertical Leakage Downward	4,671	325	34	16,385	0	20,693
Evangeline						
Storage	0	0	9	0	9	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	466	0	35,465	0	25,466
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	325	4,671	16,385	34	20,693	0
Lateral Inflow	6,615	1,818	19,299	751	16,313	12,091
Vertical Leakage Downward	18	2	559	0	539	0
Jasper						
Storage	--	--	--	--	--	--
Reservoirs (River package)	--	--	--	--	--	--
Springs (Drain package)	--	--	--	--	--	--
General Head Boundaries	--	--	--	--	--	--
Wells	--	--	--	--	--	--
Streams and Rivers	--	--	--	--	--	--
Recharge	--	--	--	--	--	--
Evapotranspiration	--	--	--	--	--	--
Vertical Leakage Upward	--	--	--	--	--	--
Lateral Inflow	--	--	--	--	--	--

Table A-1. (continued)

	San Patricio					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	0	63	623	0	1,923	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	376	0	250	0	45
General Head Boundaries	30	4,366	654	2,651	866	2,090
Wells	0	2,404	0	3,877	0	11,192
Streams and Rivers	3,004	12,018	3,593	6,015	5,352	3,175
Recharge	12,704	0	12,704	0	12,704	0
Evapotranspiration	0	515	0	440	0	383
Lateral Inflow	7,138	3,500	4,558	3,439	7,739	2,270
Vertical Leakage Downward	1,601	1,234	44	5,503	11	9,438
Evangeline						
Storage	0	2	21	0	68	0
Reservoirs (River package)	676	0	823	0	1,085	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	1,304	0	2,110	0	10,087
Streams and Rivers	0	657	0	584	0	335
Recharge	148	0	148	0	148	0
Evapotranspiration	0	13	0	10	0	6
Vertical Leakage Upward	1,234	1,601	5,503	44	9,438	11
Lateral Inflow	2,429	1,225	1,116	5,408	2,045	3,313
Vertical Leakage Downward	326	11	546	1	979	11
Jasper						
Storage	0	26	157	0	340	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	0	0	0	0	0
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	5	315	5	320	16	502
Lateral Inflow	358	23	280	122	409	263

Table A-1. (continued)

	Victoria					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	0	20	165	0	55	0
Reservoirs (River package)	1,046	0	1,056	0	1,056	0
Springs (Drain package)	0	1,653	0	1,383	0	1,159
General Head Boundaries	0	594	0	389	0	416
Wells	0	7,680	0	22,769	0	7,867
Streams and Rivers	40,668	38,578	50,301	24,469	55,454	16,238
Recharge	24,830	0	24,830	0	24,830	0
Evapotranspiration	0	1,022	0	875	0	803
Lateral Inflow	7,789	19,437	7,198	19,289	6,903	18,590
Vertical Leakage Downward	1,250	6,601	56	14,434	0	43,226
Evangeline						
Storage	0	1	12	0	12	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	6,191	0	18,360	0	67,322
Streams and Rivers	1,611	4,238	2,021	2,465	3,789	2,005
Recharge	743	0	743	0	743	0
Evapotranspiration	0	27	0	26	0	25
Vertical Leakage Upward	6,601	1,250	14,434	56	43,226	0
Lateral Inflow	8,988	6,572	9,909	6,952	26,348	6,293
Vertical Leakage Downward	386	49	778	37	1,713	189
Jasper						
Storage	0	99	150	0	479	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	0	0	0	0	0
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	39	393	48	516	213	888
Lateral Inflow	637	184	556	238	395	198

Table A-1. (continued)

Washington						
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	**Out**	**In**	**Out**	**In**	**Out**
Chicot						
Storage	--	--	--	--	--	--
Reservoirs (River package)	--	--	--	--	--	--
Springs (Drain package)	--	--	--	--	--	--
General Head Boundaries	--	--	--	--	--	--
Wells	--	--	--	--	--	--
Streams and Rivers	--	--	--	--	--	--
Recharge	--	--	--	--	--	--
Evapotranspiration	--	--	--	--	--	--
Lateral Inflow	--	--	--	--	--	--
Vertical Leakage Downward	--	--	--	--	--	--
Evangeline						
Storage	--	--	--	--	--	--
Reservoirs (River package)	--	--	--	--	--	--
Springs (Drain package)	--	--	--	--	--	--
General Head Boundaries	--	--	--	--	--	--
Wells	--	--	--	--	--	--
Streams and Rivers	--	--	--	--	--	--
Recharge	--	--	--	--	--	--
Evapotranspiration	--	--	--	--	--	--
Vertical Leakage Upward	--	--	--	--	--	--
Lateral Inflow	--	--	--	--	--	--
Vertical Leakage Downward	--	--	--	--	--	--
Jasper						
Storage	11	0	21	0	22	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	6	0	6	0	6
Streams and Rivers	0	0	0	0	0	0
Recharge	1	0	1	0	1	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	--	--	--	--	--	--
Lateral Inflow	2	8	0	17	0	17

Table A-1. (continued)

	Webb					
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	--	--	--	--	--	--
Reservoirs (River package)	--	--	--	--	--	--
Springs (Drain package)	--	--	--	--	--	--
General Head Boundaries	--	--	--	--	--	--
Wells	--	--	--	--	--	--
Streams and Rivers	--	--	--	--	--	--
Recharge	--	--	--	--	--	--
Evapotranspiration	--	--	--	--	--	--
Lateral Inflow	--	--	--	--	--	--
Vertical Leakage Downward	--	--	--	--	--	--
Evangeline						
Storage	0	0	372	0	11	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	135	0	2,786	0	1,899
Streams and Rivers	0	770	79	32	14	120
Recharge	3,008	0	2,996	0	3,008	0
Evapotranspiration	0	471	0	0	0	2
Vertical Leakage Upward	--	--	--	--	--	--
Lateral Inflow	43	315	72	81	33	143
Vertical Leakage Downward	331	1,692	13	632	51	953
Jasper						
Storage	5	5	141	0	138	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	7	0	148	0	99
Streams and Rivers	0	0	0	0	0	0
Recharge	46	0	46	0	46	0
Evapotranspiration	0	88	0	59	0	66
Vertical Leakage Upward	1,680	325	651	12	957	49
Lateral Inflow	151	1,457	190	810	109	1,036

Table A-1. (continued)

Wharton						
	GAM07-12 Baseline Pumpage		GAM07-14 Availability Pumpage		GAM07-43 New Pumpage	
	In	Out	In	Out	In	Out
Chicot						
Storage	740	0	2,450	0	761	0
Reservoirs (River package)	537	0	537	0	537	0
Springs (Drain package)	0	9	0	8	0	9
General Head Boundaries	0	0	0	0	0	0
Wells	0	111,755	0	114,552	0	93,128
Streams and Rivers	121,457	13,331	127,760	12,631	112,345	14,564
Recharge	21,792	0	21,792	0	21,792	0
Evapotranspiration	0	243	0	233	0	256
Lateral Inflow	36,668	19,087	34,606	19,369	27,406	20,601
Vertical Leakage Downward	0	36,773	0	40,353	0	34,283
Evangeline						
Storage	18	0	81	0	24	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	68,245	0	69,980	0	56,871
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	36,773	0	40,353	0	34,283	0
Lateral Inflow	32,102	2,925	30,172	3,062	24,035	3,393
Vertical Leakage Downward	2,208	0	2,429	0	1,889	0
Jasper						
Storage	803	0	1,277	0	730	0
Reservoirs (River package)	0	0	0	0	0	0
Springs (Drain package)	0	0	0	0	0	0
General Head Boundaries	0	0	0	0	0	0
Wells	0	0	0	1,062	0	0
Streams and Rivers	0	0	0	0	0	0
Recharge	0	0	0	0	0	0
Evapotranspiration	0	0	0	0	0	0
Vertical Leakage Upward	0	970	45	595	0	813
Lateral Inflow	274	105	370	35	190	106