

GAM Run 07-14 Clarification Memo

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Texas Water Development Board
Groundwater Availability Modeling Section
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SUMMARY:

The members of Groundwater Management Area 15 at their meeting on November 8, 2007, requested clarification of several tables and figures in the GAM Run 07-14 report. This Clarification Memo addresses these requests. The following items are included with this memo:

1. A table of average water level changes (1999 water levels compared to 2060 water levels) for each county and model layer (aquifer) for the model run.
2. Figures of average water level changes (1999 water levels compared to 2060 water levels) for each county for each layer in the model.
3. A revised budget table with previous model run budgets (GAM run 07-12) included in the same table so that easy comparisons can be made of the current run to previous results.

Table 1. Average water level changes by county and aquifer. Negative values indicates an average lowering of water levels between 1999 and 2060 while a positive value indicates an increase in 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	0.0	-20.1	--
Austin	3.4	-2.8	-12.0
Bee	-13.8	-21.4	-11.1
Brazoria	0.5	-11.9	-18.2
Brooks	24.2	-10.1	1.0
Calhoun	0.7	-8.4	--
Colorado	-7.4	-11.7	-26.3
De Witt	-7.7	-6.2	-17.4
Duval	-6.7	-21.3	-36.3
Fayette	--	-13.8	-45.4
Fort Bend	2.2	-4.2	-16.2
Goliad	-0.6	-6.7	-14.1
Gonzales	--	--	-14.7
Jackson	-19.8	-25.0	-28.3
Jim Hogg	54.2	18.0	4.4
Jim Wells	-6.5	-127.6	-18.9
Karnes	--	-28.0	-52.7
Kenedy	3.6	-94.6	--
Kleberg	-4.1	-358.2	-25.3
Lavaca	-13.2	-13.0	-63.2
Live Oak	-11.3	-16.3	-31.7
McMullen	--	--	-13.6
Matagorda	-3.8	-23.5	--
Nueces	-9.7	-84.5	-10.9
Refugio	-1.3	-43.1	--
San Patricio	-3.8	-17.5	-12.8
Victoria	7.0	0.2	-5.8
Washington	--	--	-37.4
Webb	--	-85.6	-83.9
Wharton	-15.7	-11.4	-34.1

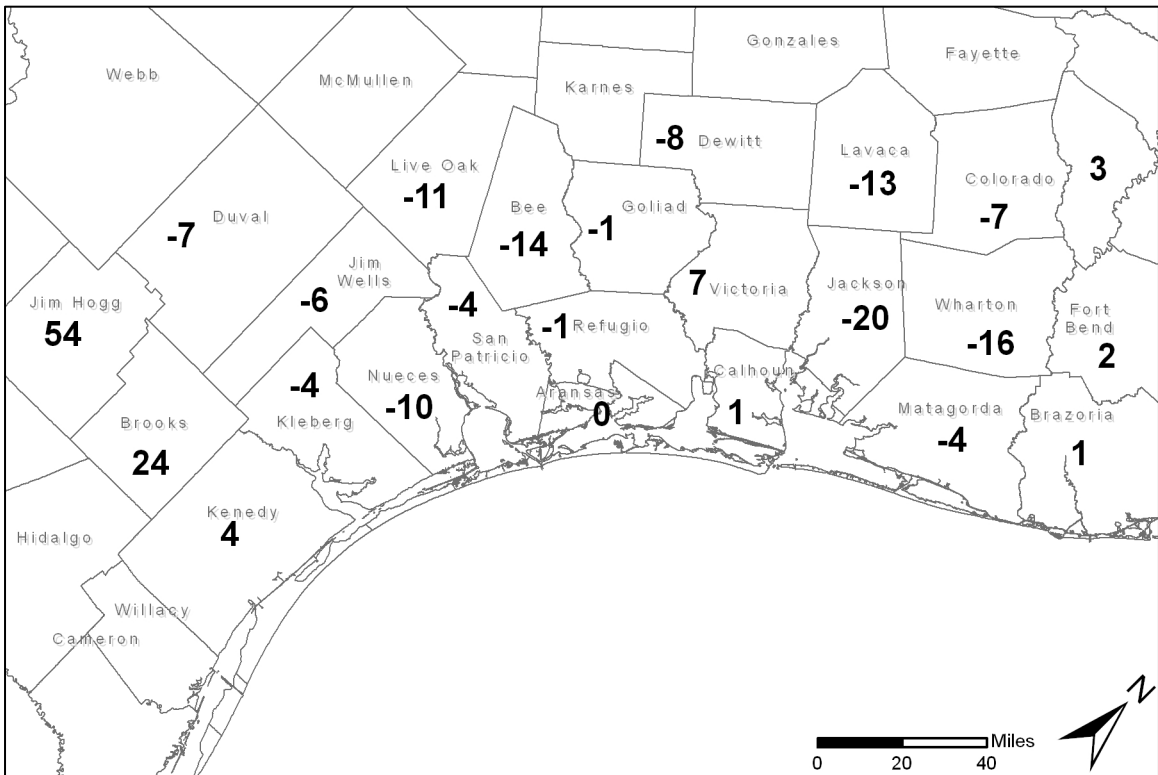


Figure 1. Average water level changes for each county in the Chicot Aquifer using the specified pumpage. Water level changes are in feet.

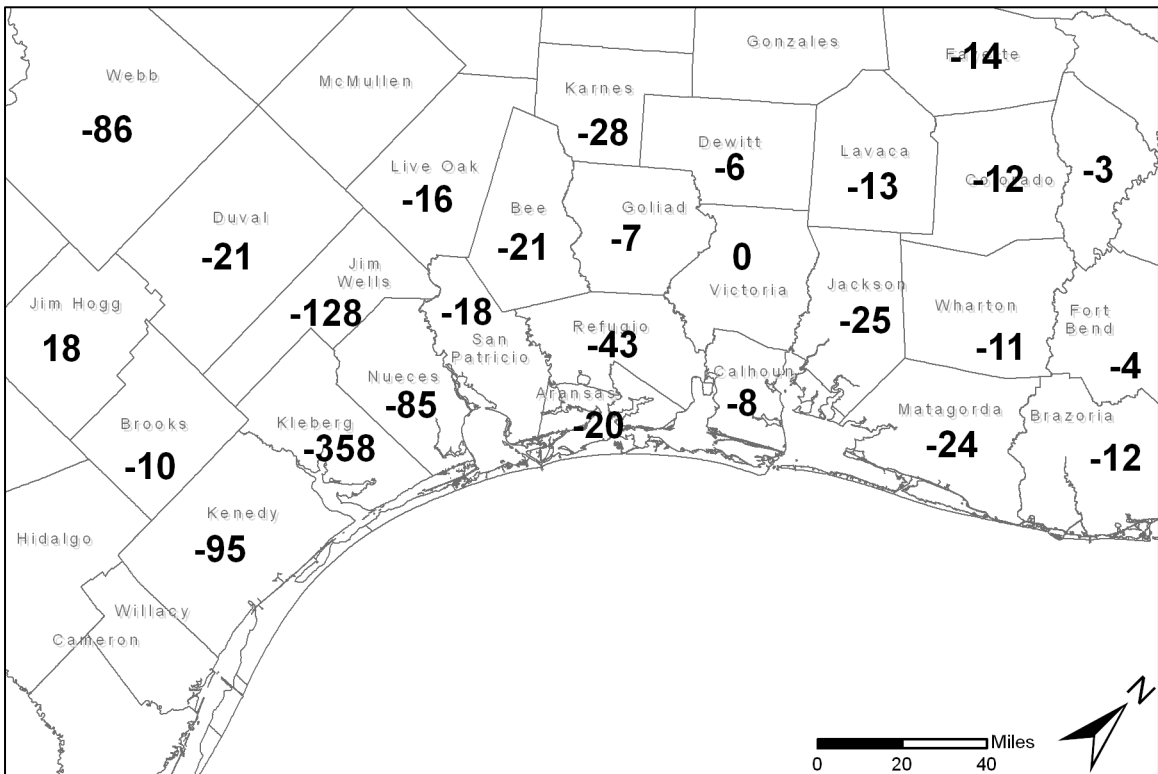


Figure 2. Average water level changes for each county in the Evangeline Aquifer using the specified pumpage. Water level changes are in feet.

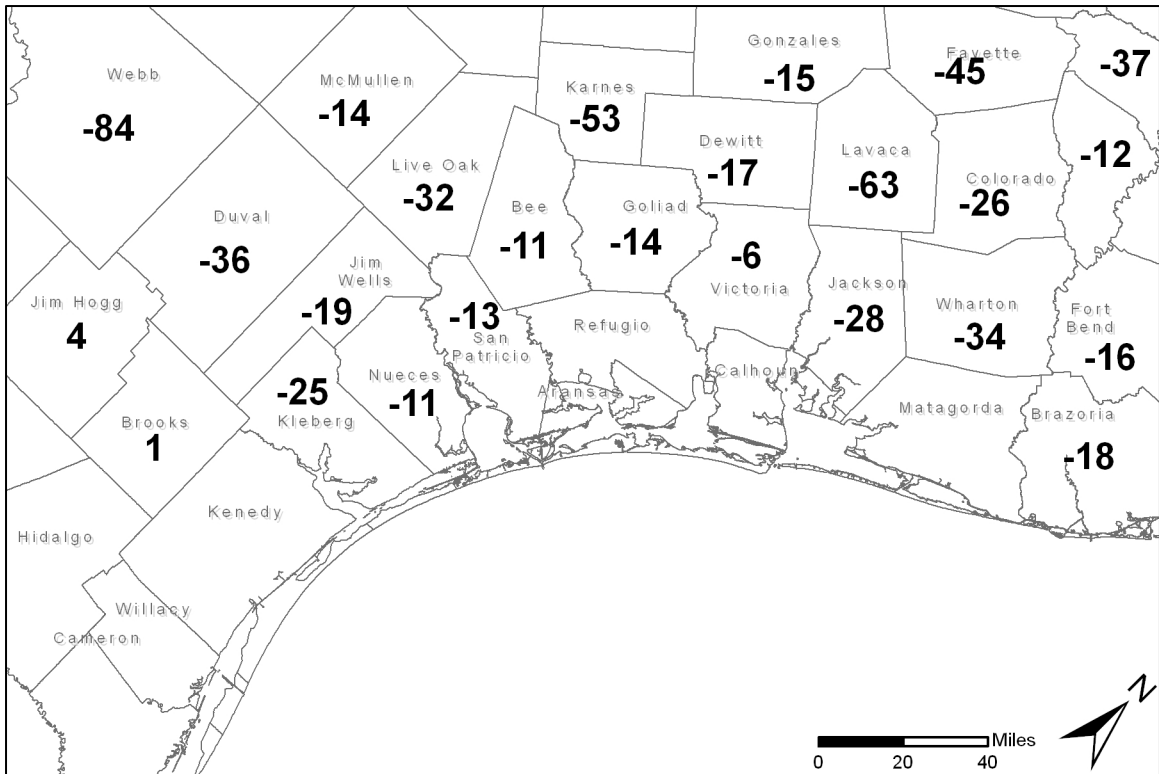


Figure 3. Average water level changes for each county in the Jasper Aquifer using the specified pumpage. Water level changes are in feet.

Table 2. 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). Budgets for Jim Hogg, Brooks, Kenedy, Brazoria, Fort Bend, and Austin counties represents only the portions of those counties located in the active portion of the model.

Aransas				
	GAM07-12		GAM07-14	
	Baseline		Availability	
	In	Out	In	Out
Chicot				
Storage	0	0	1	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	11	0	11
General Head Boundaries	1,104	3,497	1,417	3,111
Wells	0	1,827	0	1,827
Streams and Rivers	2,351	669	2,456	646
Recharge	164	0	164	0
Evapotranspiration	0	741	0	729
Lateral Inflow	4,229	1,161	3,670	1,355
Vertical Leakage Downward	58	0	0	30
Evangeline				
Storage	0	0	0	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	0	0	0
Streams and Rivers	0	0	0	0
Recharge	0	0	0	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	0	58	30	0
Lateral Inflow	105	47	136	166
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 2. (continued)

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

Table 2. (continued)

Bee				
	GAM07-12 Baseline		GAM07-14 Availability	
	In	Out	In	Out
Chicot				
Storage	0	15	1,424	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	1,383	0	9,620
Streams and Rivers	4,811	10,996	7,027	975
Recharge	18,921	0	18,825	0
Evapotranspiration	0	219	0	45
Lateral Inflow	775	8,671	972	5,568
Vertical Leakage Downward	937	4,160	0	12,041
Evangeline				
Storage	0	41	173	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	2,973	0	13,553
Streams and Rivers	4,008	3,783	6,758	2,190
Recharge	4,993	0	5,089	0
Evapotranspiration	0	2	0	0
Vertical Leakage Upward	4,160	937	12,041	0
Lateral Inflow	2,354	6,841	5,104	13,006
Vertical Leakage Downward	96	1,031	612	1,023
Jasper				
Storage	39	187	594	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	260	0	658
Streams and Rivers	94	96	159	58
Recharge	23	0	24	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	884	148	1,152	270
Lateral Inflow	492	844	453	1,395

Table 2. (continued)

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

Table 2. (continued)

Brooks				
	GAM07-12 Baseline		GAM07-14 Availability	
	In	Out	In	Out
Chicot				
Storage	0	3	98	0
Reservoirs (River package)	3,431	0	3,431	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	359	0	359
Streams and Rivers	1,073	23,128	1,349	19,705
Recharge	23,402	0	23,402	0
Evapotranspiration	0	1,826	0	1,763
Lateral Inflow	5,005	4,877	4,674	4,580
Vertical Leakage Downward	1,365	4,081	507	7,051
Evangeline				
Storage	1	3	574	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	3,681	0	3,681
Streams and Rivers	0	863	5	828
Recharge	340	0	340	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	4,081	1,365	7,051	507
Lateral Inflow	2,680	1,752	3,308	7,610
Vertical Leakage Downward	808	245	1,562	214
Jasper				
Storage	1	208	282	58
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	0	0	0
Streams and Rivers	0	0	0	0
Recharge	0	0	0	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	197	785	188	998
Lateral Inflow	1,448	655	1,399	813

Table 2. (continued)

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

Table 2. (continued)

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

Table 2. (continued)

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

Table 2. (continued)

Duval				
	GAM07-12 Baseline		GAM07-14 Availability	
	In	Out	In	Out
Chicot				
Storage	1	0	106	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	394	0	733
Streams and Rivers	1,544	3,215	3,451	1,230
Recharge	5,270	0	5,270	0
Evapotranspiration	0	34	0	17
Lateral Inflow	671	3,467	666	3,184
Vertical Leakage Downward	339	715	40	4,368
Evangeline				
Storage	72	0	859	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	4,363	0	7,949
Streams and Rivers	2,962	8,272	6,070	4,955
Recharge	14,506	0	14,506	0
Evapotranspiration	0	335	0	28
Vertical Leakage Upward	715	339	4,368	40
Lateral Inflow	1,410	3,973	1,769	12,000
Vertical Leakage Downward	1,001	3,384	1,032	3,632
Jasper				
Storage	866	0	2,131	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	2,892	0	5,283
Streams and Rivers	0	0	0	0
Recharge	189	0	189	0
Evapotranspiration	0	412	0	371
Vertical Leakage Upward	3,597	940	4,188	431
Lateral Inflow	2,256	2,663	2,127	2,550

Table 2. (continued)

Fayette				
	GAM07-12 Baseline		GAM07-14 Availability	
	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
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	169	0	884
Streams and Rivers	94	773	803	59
Recharge	1,737	0	1,737	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	--	--	--	--
Lateral Inflow	108	700	51	565
Vertical Leakage Downward	56	356	0	1,126
Jasper				
Storage	1,107	0	3,693	0
Reservoirs (River package)	117	0	201	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	1,583	0	7,308
Streams and Rivers	677	452	1,241	19
Recharge	355	0	354	0
Evapotranspiration	0	11	0	5
Vertical Leakage Upward	507	314	1,769	9
Lateral Inflow	145	549	361	278

Table 2. (continued)

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

Table 2. (continued)

Goliad				
	GAM07-12 Baseline		GAM07-14 Availability	
	In	Out	In	Out
Chicot				
Storage	0	0	15	0
Reservoirs (River package)	1,500	0	1,547	0
Springs (Drain package)	0	12	0	5
General Head Boundaries	0	0	0	0
Wells	0	650	0	1,383
Streams and Rivers	2,234	8,879	3,297	6,652
Recharge	10,556	0	10,556	0
Evapotranspiration	0	218	0	163
Lateral Inflow	912	4,690	773	3,406
Vertical Leakage Downward	783	1,535	105	4,684
Evangeline				
Storage	2	0	59	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	5,493	0	11,457
Streams and Rivers	16,678	15,202	18,789	9,515
Recharge	7,979	0	7,979	0
Evapotranspiration	0	43	0	31
Vertical Leakage Upward	1,535	783	4,684	105
Lateral Inflow	3,800	8,457	4,612	14,976
Vertical Leakage Downward	437	454	574	613
Jasper				
Storage	19	14	355	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	0	0	0
Streams and Rivers	0	0	0	0
Recharge	0	0	0	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	387	377	663	287
Lateral Inflow	526	540	376	1,107

Table 2. (continued)

Gonzales				
	GAM07-12 Baseline		GAM07-14 Availability	
	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
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	1	0	1
General Head Boundaries	0	0	0	0
Wells	0	4	0	4
Streams and Rivers	12	164	20	160
Recharge	139	0	139	0
Evapotranspiration	0	70	0	68
Vertical Leakage Upward	--	--	--	--
Lateral Inflow	43	350	21	398

Table 2. (continued)

Jackson				
	GAM07-12 Baseline		GAM07-14 Availability	
	In	Out	In	Out
Chicot				
Storage	481	1	3,128	0
Reservoirs (River package)	4,149	0	4,213	0
Springs (Drain package)	0	100	0	36
General Head Boundaries	80	610	1,733	142
Wells	0	39,090	0	64,067
Streams and Rivers	55,771	26,417	53,223	8,086
Recharge	11,805	0	11,805	0
Evapotranspiration	0	529	0	385
Lateral Inflow	21,348	16,126	24,456	10,085
Vertical Leakage Downward	23	10,791	0	15,760
Evangeline				
Storage	9	0	77	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	14,417	0	23,697
Streams and Rivers	0	0	0	0
Recharge	0	0	0	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	10,791	23	15,760	0
Lateral Inflow	13,015	10,172	14,774	8,214
Vertical Leakage Downward	760	0	1,296	1
Jasper				
Storage	174	3	461	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	0	0	0
Streams and Rivers	0	0	0	0
Recharge	0	0	0	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	0	390	51	385
Lateral Inflow	261	42	101	228

Table 2. (continued)

Jim Hogg				
	GAM07-12 Baseline		GAM07-14 Availability	
	In	Out	In	Out
Chicot				
Storage	0	2	0	2
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	14	0	14
Streams and Rivers	0	2,024	0	2,009
Recharge	6,440	0	6,440	0
Evapotranspiration	0	443	0	442
Lateral Inflow	382	3,251	377	3,261
Vertical Leakage Downward	313	1,399	310	1,399
Evangeline				
Storage	4	42	30	17
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	371	0	371
Streams and Rivers	342	4,069	412	3,655
Recharge	7,165	0	7,165	0
Evapotranspiration	0	657	0	584
Vertical Leakage Upward	1,399	313	1,399	310
Lateral Inflow	504	1,996	321	2,037
Vertical Leakage Downward	549	2,514	408	2,761
Jasper				
Storage	11	399	51	269
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	594	0	594
Streams and Rivers	0	0	0	0
Recharge	155	0	155	0
Evapotranspiration	0	172	0	162
Vertical Leakage Upward	2,370	533	2,628	392
Lateral Inflow	1,355	2,194	865	2,284

Table 2. (continued)

Jim Wells				
	GAM07-12 Baseline		GAM07-14 Availability	
	In	Out	In	Out
Chicot				
Storage	8	0	281	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	14	0	5
General Head Boundaries	0	0	0	0
Wells	0	2,257	0	13,567
Streams and Rivers	5,557	18,173	14,515	6,284
Recharge	25,328	0	25,328	0
Evapotranspiration	0	237	0	157
Lateral Inflow	3,722	9,291	3,316	8,293
Vertical Leakage Downward	568	5,212	209	15,340
Evangeline				
Storage	5	0	4,994	0
Reservoirs (River package)	562	0	562	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	2,491	0	36,421
Streams and Rivers	561	4,370	1,019	3,410
Recharge	2,234	0	2,234	0
Evapotranspiration	0	8	0	5
Vertical Leakage Upward	5,212	568	15,340	209
Lateral Inflow	3,693	5,521	18,266	7,387
Vertical Leakage Downward	865	175	5,254	237
Jasper				
Storage	100	3	1,410	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	7	0	7
Streams and Rivers	0	0	0	0
Recharge	0	0	0	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	132	735	245	1,971
Lateral Inflow	1,765	1,251	1,625	1,302

Table 2. (continued)

Karnes				
	GAM07-12 Baseline		GAM07-14 Availability	
	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
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	104	0	1,147
Streams and Rivers	280	581	486	3
Recharge	884	0	839	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	--	--	--	--
Lateral Inflow	214	539	358	305
Vertical Leakage Downward	36	190	0	286
Jasper				
Storage	1,497	8	7,538	21
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	2,231	0	12,607
Streams and Rivers	747	551	2,239	0
Recharge	417	0	417	0
Evapotranspiration	0	78	0	1
Vertical Leakage Upward	395	97	936	0
Lateral Inflow	560	652	1,877	379

Table 2. (continued)

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

Table 2. (continued)

Kleberg				
	GAM07-12 Baseline		GAM07-14 Availability	
	In	Out	In	Out
Chicot				
Storage	6	0	431	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	1	0	0
General Head Boundaries	0	16,786	3,803	7,454
Wells	0	948	0	5,086
Streams and Rivers	19,863	12,407	26,367	7,961
Recharge	4,486	0	4,486	0
Evapotranspiration	0	1,137	0	933
Lateral Inflow	12,640	4,515	12,126	5,964
Vertical Leakage Downward	55	1,256	0	19,816
Evangeline				
Storage	20	0	6,479	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	7,682	0	44,910
Streams and Rivers	0	0	0	0
Recharge	0	0	0	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	1,256	55	19,816	0
Lateral Inflow	5,789	427	15,229	4,062
Vertical Leakage Downward	1,095	0	7,448	0
Jasper				
Storage	100	0	817	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	0	0	0
Streams and Rivers	0	0	0	0
Recharge	0	0	0	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	0	431	0	1,089
Lateral Inflow	388	57	321	48

Table 2. (continued)

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

Table 2. (continued)

Live Oak				
	GAM07-12 Baseline		GAM07-14 Availability	
	In	Out	In	Out
Chicot				
Storage	0	0	63	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	88	0	88
Streams and Rivers	177	0	177	0
Recharge	1,194	0	1,194	0
Evapotranspiration	0	6	0	4
Lateral Inflow	242	190	92	301
Vertical Leakage Downward	0	1,328	0	1,133
Evangeline				
Storage	0	0	123	0
Reservoirs (River package)	2,634	0	2,890	0
Springs (Drain package)	0	5	0	0
General Head Boundaries	0	0	0	0
Wells	0	1,802	0	4,140
Streams and Rivers	635	8,684	1,106	5,915
Recharge	4,205	0	4,205	0
Evapotranspiration	0	68	0	38
Vertical Leakage Upward	1,328	0	1,133	0
Lateral Inflow	2,561	767	1,550	693
Vertical Leakage Downward	254	284	30	251
Jasper				
Storage	1,386	65	2,949	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	2,744	0	7,705
Streams and Rivers	441	394	997	90
Recharge	527	0	528	0
Evapotranspiration	0	56	0	39
Vertical Leakage Upward	386	949	1,151	268
Lateral Inflow	1,955	488	2,684	207

Table 2. (continued)

Matagorda				
	GAM07-12 Baseline		GAM07-14 Availability	
	In	Out	In	Out
Chicot				
Storage	92	0	337	0
Reservoirs (River package)	795	0	804	0
Springs (Drain package)	0	215	0	189
General Head Boundaries	897	10,747	2,496	8,702
Wells	0	27,682	0	38,931
Streams and Rivers	58,043	30,017	65,190	25,697
Recharge	23,061	0	23,061	0
Evapotranspiration	0	3,095	0	2,981
Lateral Inflow	12,254	14,546	11,547	15,560
Vertical Leakage Downward	0	8,845	0	11,374
Evangeline				
Storage	7	0	36	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	7,240	0	10,207
Streams and Rivers	0	0	0	0
Recharge	0	0	0	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	8,845	0	11,374	0
Lateral Inflow	2,565	4,431	3,057	4,569
Vertical Leakage Downward	229	0	303	0
Jasper				
Storage	--	--	--	--
Reservoirs (River package)	--	--	--	--
Springs (Drain package)	--	--	--	--
General Head Boundaries	--	--	--	--
Wells	--	--	--	--
Streams and Rivers	--	--	--	--
Recharge	--	--	--	--
Evapotranspiration	--	--	--	--
Vertical Leakage Upward	--	--	--	--
Lateral Inflow	--	--	--	--

Table 2. (continued)

McMullen				
	GAM07-12 Baseline		GAM07-14 Availability	
	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
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	19	0	286
Streams and Rivers	368	590	465	520
Recharge	249	0	249	0
Evapotranspiration	0	116	0	105
Vertical Leakage Upward	258	0	333	0
Lateral Inflow	205	756	190	950

Table 2. (continued)

Nueces				
	GAM07-12 Baseline		GAM07-14 Availability	
	In	Out	In	Out
Chicot				
Storage	9	0	1,217	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	89	0	59
General Head Boundaries	91	4,039	4,137	467
Wells	0	1,862	0	15,935
Streams and Rivers	11,348	11,049	36,234	1,836
Recharge	4,795	0	4,795	0
Evapotranspiration	0	372	0	281
Lateral Inflow	8,976	6,697	10,109	5,722
Vertical Leakage Downward	1,235	2,345	5	32,198
Evangeline				
Storage	2	0	88	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	1,083	0	33,913
Streams and Rivers	0	0	0	0
Recharge	0	0	0	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	2,345	1,235	32,198	5
Lateral Inflow	2,047	2,501	6,217	6,302
Vertical Leakage Downward	424	0	1,715	0
Jasper				
Storage	0	0	265	0
Reservoirs (River package)	26	1	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	0	0	0
Streams and Rivers	0	0	0	0
Recharge	0	0	0	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	0	330	0	567
Lateral Inflow	402	98	396	93

Table 2. (continued)

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

Table 2. (continued)

San Patricio				
	GAM07-12 Baseline		GAM07-14 Availability	
	In	Out	In	Out
Chicot				
Storage	0	63	623	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	376	0	250
General Head Boundaries	30	4,366	654	2,651
Wells	0	2,404	0	3,877
Streams and Rivers	3,004	12,018	3,593	6,015
Recharge	12,704	0	12,704	0
Evapotranspiration	0	515	0	440
Lateral Inflow	7,138	3,500	4,558	3,439
Vertical Leakage Downward	1,601	1,234	44	5,503
Evangeline				
Storage	0	2	21	0
Reservoirs (River package)	676	0	823	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	1,304	0	2,110
Streams and Rivers	0	657	0	584
Recharge	148	0	148	0
Evapotranspiration	0	13	0	10
Vertical Leakage Upward	1,234	1,601	5,503	44
Lateral Inflow	2,429	1,225	1,116	5,408
Vertical Leakage Downward	326	11	546	1
Jasper				
Storage	0	26	157	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	0	0	0
Streams and Rivers	0	0	0	0
Recharge	0	0	0	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	5	315	5	320
Lateral Inflow	358	23	280	122

Table 2. (continued)

Victoria				
	GAM07-12 Baseline		GAM07-14 Availability	
	In	Out	In	Out
Chicot				
Storage	0	20	165	0
Reservoirs (River package)	1,046	0	1,056	0
Springs (Drain package)	0	1,653	0	1,383
General Head Boundaries	0	594	0	389
Wells	0	7,680	0	22,769
Streams and Rivers	40,668	38,578	50,301	24,469
Recharge	24,830	0	24,830	0
Evapotranspiration	0	1,022	0	875
Lateral Inflow	7,789	19,437	7,198	19,289
Vertical Leakage Downward	1,250	6,601	56	14,434
Evangeline				
Storage	0	1	12	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	6,191	0	18,360
Streams and Rivers	1,611	4,238	2,021	2,465
Recharge	743	0	743	0
Evapotranspiration	0	27	0	26
Vertical Leakage Upward	6,601	1,250	14,434	56
Lateral Inflow	8,988	6,572	9,909	6,952
Vertical Leakage Downward	386	49	778	37
Jasper				
Storage	0	99	150	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	0	0	0
Streams and Rivers	0	0	0	0
Recharge	0	0	0	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	39	393	48	516
Lateral Inflow	637	184	556	238

Table 2. (continued)

Washington				
	GAM07-12 Baseline		GAM07-14 Availability	
	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
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	6	0	6
Streams and Rivers	0	0	0	0
Recharge	1	0	1	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	--	--	--	--
Lateral Inflow	2	8	0	17

Table 2. (continued)

Webb				
	GAM07-12 Baseline		GAM07-14 Availability	
	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
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	135	0	2,786
Streams and Rivers	0	770	79	32
Recharge	3,008	0	2,996	0
Evapotranspiration	0	471	0	0
Vertical Leakage Upward	--	--	--	--
Lateral Inflow	43	315	72	81
Vertical Leakage Downward	331	1,692	13	632
Jasper				
Storage	5	5	141	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	7	0	148
Streams and Rivers	0	0	0	0
Recharge	46	0	46	0
Evapotranspiration	0	88	0	59
Vertical Leakage Upward	1,680	325	651	12
Lateral Inflow	151	1,457	190	810

Table 2. (continued)

Wharton				
	GAM07-12 Baseline		GAM07-14 Availability	
	In	Out	In	Out
Chicot				
Storage	740	0	2,450	0
Reservoirs (River package)	537	0	537	0
Springs (Drain package)	0	9	0	8
General Head Boundaries	0	0	0	0
Wells	0	111,755	0	114,552
Streams and Rivers	121,457	13,331	127,760	12,631
Recharge	21,792	0	21,792	0
Evapotranspiration	0	243	0	233
Lateral Inflow	36,668	19,087	34,606	19,369
Vertical Leakage Downward	0	36,773	0	40,353
Evangeline				
Storage	18	0	81	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	68,245	0	69,980
Streams and Rivers	0	0	0	0
Recharge	0	0	0	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	36,773	0	40,353	0
Lateral Inflow	32,102	2,925	30,172	3,062
Vertical Leakage Downward	2,208	0	2,429	0
Jasper				
Storage	803	0	1,277	0
Reservoirs (River package)	0	0	0	0
Springs (Drain package)	0	0	0	0
General Head Boundaries	0	0	0	0
Wells	0	0	0	1,062
Streams and Rivers	0	0	0	0
Recharge	0	0	0	0
Evapotranspiration	0	0	0	0
Vertical Leakage Upward	0	970	45	595
Lateral Inflow	274	105	370	35