

Texas Water Development Board



WATER **Conditions**

RESERVOIR STORAGE

April 2009

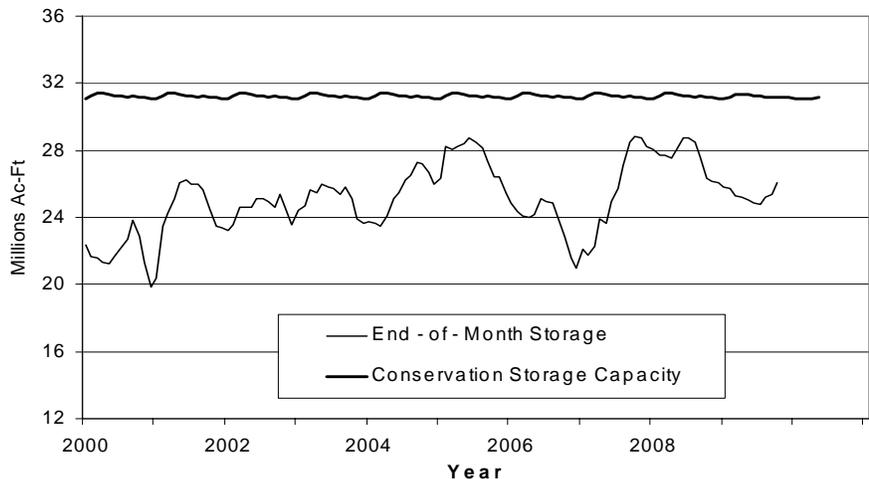
Storage in the state's major reservoirs continues to increase slowly. Near the end of April, the 109 reservoirs monitored for this report held 26.06 million acre-feet* in conservation storage, or 84 percent of the conservation storage capacity of the state's 175 major water supply reservoirs. This is 709,000 acre-feet more than last month.

Storage was at 100% in 27 reservoirs, including Falcon and Amistad. Sixteen out of these 27 reservoirs are in the East Region. On the other hand, five lakes were at or below 10% full: O C Fisher Lake was still effectively empty, Palo Duro (1%) was almost empty, Lake Meredith and J B Thomas were both at 7%, and E.V. Spence is only 9% full.

Only the East Region (98%) has storage at or above 90% of capacity; the High Plains (11%) and Trans-Pecos regions (26%) remained very low. Storage increased in the North Central, East, South Central, and Upper Coast regions but decreased everywhere else over the month. Since last year, storage increased in the Southern and High Plains regions, and decreased everywhere else.

* Only the Texas share of storage in border reservoirs is counted.

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS



Figures are based on end of the month data at 109 major reservoirs that represent 95 percent of the total conservation storage capacity of the 175 major water supply reservoirs in Texas. By definition, a major reservoir has a conservation storage capacity of 5,000 acre-feet or greater.

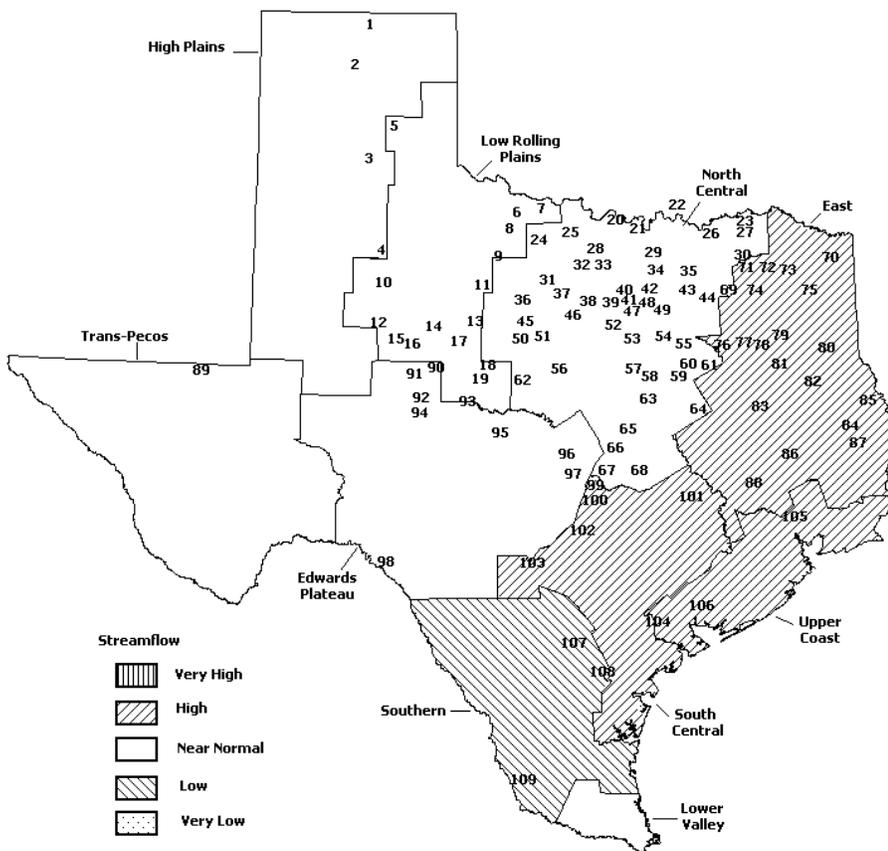
STREAMFLOW

Of 29 reporting index stations in April, computed 30-day mean flows were very high (<5%) at 3 stations, high (5% - 30%) at 10 stations, low (70% - 95%) at 4 stations, very low (>95%) at 1 station, and near normal (30% - 70%) at the remaining 11 stations. Compared to March, flows have increased at 17 index stations and decreased at 10 stations.

On a regional basis, flows in April were low in the Southern Region, high in East Texas, South Central, and Upper Coast regions, and normal in all other regions. Streamflow in the Lower Valley Region is not monitored.

APRIL STREAMFLOW CONDITIONS

Reservoirs Shown on Map



1. Palo Duro Reservoir
2. Meredith, Lake
3. MacKenzie Reservoir
4. White River Lake
5. Greenbelt Lake
6. Electra, Lake
7. N. Fork Buffalo Creek Reservoir
8. Kemp, Lake
9. Miller's Creek Reservoir
10. Alan Henry Reservoir
11. Stamford, Lake
12. Lake J. B. Thomas
13. Fort Phantom Hill, Lake
14. Sweetwater, Lake
15. Colorado City, Lake
16. Champion Creek Reservoir
17. Abilene, Lake
18. Coleman, Lake
19. Hords Creek Lake
20. Farmers Creek Reservoir
21. Hubert H Moss Lake
22. Texoma, Lake
23. Pat Mayse Lake
24. Lake Kickapoo
25. Lake Arrowhead
26. Bonham, Lake
27. Crook, Lake
28. Amon G Carter, Lake
29. Ray Roberts, Lake
30. Jim Chapman Lake
31. Graham, Lake
32. Lost Creek Reservoir
33. Bridgeport Reservoir
34. Lewisville Lake
35. Lavon Lake
36. Hubbard Creek Reservoir
37. Possum Kingdom Lake
38. Mineral Wells, Lake
39. Weatherford, Lake
40. Eagle Mountain Lake
41. Worth, Lake
42. Grapevine Lake
43. Lake Ray Hubbard
44. New Terrell City Lake
45. Daniel, Lake
46. Palo Pinto, Lake
47. Benbrook Lake
48. Arlington, Lake
49. Joe Pool Lake
50. Cisco, Lake
51. Leon, Lake
52. Lake Granbury
53. Pat Cleburne, Lake
54. Waxahacie, Lake
55. Bardwell Lake
56. Proctor Lake
57. Whitney Lake
58. Aquilla Lake
59. Navarro Mills Lake
60. Halbert, Lake
61. Richland-Chambers Reservoir
62. Lake Brownwood
63. Waco Lake
64. Limestone, Lake
65. Belton Lake
66. Stillhouse Hollow Lake
67. Georgetown, Lake
68. Granger Lake
69. Tawakoni, Lake
70. Wright Patman Lake
71. Sulphur Springs, Lake
72. Cypress Springs, Lake
73. Bob Sandlin, Lake
74. Fork Reservoir, Lake
75. O' the Pines, Lake
76. Cedar Creek Reservoir Trinity
77. Athens, Lake
78. Palestine, Lake
79. Tyler, Lake
80. Murvaul, Lake
81. Jacksonville, Lake
82. Nacogdoches, Lake
83. Houston County Lake
84. Sam Rayburn Reservoir
85. Toledo Bend Reservoir
86. Livingston, Lake
87. B. A. Steinhagen Lake
88. Conroe, Lake
89. Red Bluff Reservoir
90. Oak Creek Reservoir
91. E. V. Spence Reservoir
92. O. C. Fisher Lake
93. O. H. Ivie Reservoir
94. Twin Buttes Reservoir
95. Vradly Creek Reservoir
96. Buchanan, Lake
97. Lyndon B Johnson, Lake
98. Amistad Reservoir, Intl.
99. Travis, Lake
100. Austin, Lake
101. Somerville Lake
102. Canyon Lake
103. Medina Lake
104. Coletto Creek Reservoir
105. Lake Houston
106. Texana, Lake
107. Choke Canyon Reservoir
108. Lake Corpus Christi
109. Falcon Reservoir, Intl.

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage		Change since Late March		Change since Late April		
		Capacity (acre-feet)	Late Apr. 2009 (acre-feet) (%)	2009 (acre-feet) (%)	2009 (acre-feet) (%)	2008 (acre-feet) (%)	2008 (acre-feet) (%)	
HIGH PLAINS								
Palo Duro Reservoir	1	60,897	747	1	-27	0	254	0
Meredith, Lake (Texas)	2	500,000	56,448	11	-1,692	0	16,092	3
Meredith, Lake (Texas & Oklahoma)	(2)	779,556	56,448	7	-1,692	0	16,092	2
MacKenzie Reservoir	3	46,429	5,884	13	295	1	-1,155	-2
White River Lake	4	29,880	5,824	19	-361	-1	5,316	18
TOTAL		637,206	68,903	11	-1,785	0	20,507	3
LOW ROLLING PLAINS								
Greenbelt Lake	5	59,500	18,350	31	-100	0	-3,250	-5
*Electra, Lake	6	5,626	786	14	-22	0	-947	-17
N. Fork Buffalo Crk Reservoir	7	15,400	4,009	26	338	2	-491	-3
Kemp, Lake	8	245,308	146,259	60	-6,672	-3	-99,049	-40
Millers Creek Reservoir	9	27,888	14,725	53	-439	-2	-6,783	-24
Alan Henry Reservoir	10	94,808	91,833	97	289	0	1,339	1
Stamford, Lake	11	51,570	32,345	63	-620	-1	-13,762	-27
J B Thomas, Lake	12	199,931	14,211	7	-642	0	-6,848	-3
Fort Phantom Hill, Lake	13	70,030	57,139	82	-2,167	-3	-10,541	-15
Sweetwater, Lake	14	10,006	7,036	70	-234	-2	-640	-6
Colorado City, Lake	15	31,793	20,942	66	-398	-1	-4,865	-15
Champion Creek Reservoir	16	41,618	8,891	21	-22	0	-398	-1
Abilene, Lake	17	6,099	2,913	48	-333	-5	-2,943	-48
Coleman, Lake	18	38,076	26,539	70	-559	-1	-8,541	-22
Hords Creek Lake	19	5,684	2,429	43	-147	-3	-2,102	-37
TOTAL		903,337	448,407	50	-11,728	-1	-159,821	-18
NORTH CENTRAL								
Nocona, Lake (Farmers Crk)	20	21,445	21,445	100	5,136	24	941	4
Hubert H Moss Lake	21	24,058	24,058	100	3,090	13	182	1
Texoma, Lake (Texas)	22	1,185,688	1,185,688	100	0	0	0	0
Texoma, Lake (Texas & Oklahoma)	(22)	2,371,376	2,371,376	100	0	0	0	0
*Pat Mayse Lake	23	118,100	118,100	100	3,790	3	0	0
Kickapoo, Lake	24	85,825	37,348	44	205	0	-18,596	-22
Arrowhead, Lake	25	235,997	157,544	67	8,930	4	-45,925	-19
Bonham, Lake	26	11,026	10,398	94	2,454	22	-628	-6
Crook, Lake	27	9,195	9,195	100	145	2	104	1
Amon G Carter, Lake	28	19,903	15,463	78	-94	0	-4,440	-22
Ray Roberts, Lake	29	798,758	750,154	94	37,791	5	-48,604	-6
Jim Chapman Lake (Cooper)	30	260,332	177,635	68	13,971	5	-82,697	-32
Graham, Lake	31	45,260	39,941	88	967	2	-5,245	-12
*Lost Creek Reservoir	32	11,950	10,139	85	0	0	-1,811	-15
Bridgeport, Lake	33	366,236	313,670	86	51,214	14	-52,566	-14
Lewisville Lake	34	543,988	440,268	81	5,644	1	-103,720	-19
Lavon Lake	35	443,844	386,717	87	11,837	3	-57,127	-13
Hubbard Creek Reservoir	36	318,067	242,738	76	-6,202	-2	-69,052	-22
Possum Kingdom Lake	37	540,340	475,620	88	-9,691	-2	-45,821	-8
*Mineral Wells, Lake	38	7,065	4,972	70	-102	-1	-2,093	-30
Weatherford, Lake	39	18,645	12,450	67	321	2	-6,125	-33
Eagle Mountain Lake	40	182,500	143,180	78	-1,373	-1	-39,320	-22
Worth, Lake	41	24,500	16,891	69	62	0	-7,609	-31
Grapevine Lake	42	164,702	117,302	71	-438	0	-47,400	-29
Ray Hubbard, Lake	43	452,040	428,600	95	410	0	-23,440	-5
New Terrell City Lake	44	8,583	7,761	90	66	1	-822	-10
Daniel, Lake	45	9,435	5,787	61	-304	-3	-3,648	-39
Palo Pinto, Lake	46	27,150	12,114	45	-815	-3	-14,392	-53
Benbrook Lake	47	85,648	70,807	83	2,630	3	-14,841	-17
Arlington, Lake	48	38,740	37,392	97	4,830	12	-1,348	-3

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage		Change since Late March 2009		Change since Late April 2008		
			Late Apr. (acre-feet)	2009 (%)	(acre-feet)	(%)	(acre-feet)	(%)	
NORTH CENTRAL (Continue)									
Joe Pool Lake	49	142,861	137,990	97	6,758	5	-4,871	-3	
*Cisco, Lake	50	26,000	18,441	71	-301	-1	-3,004	-12	
Leon, Lake	51	26,421	19,828	75	-457	-2	-6,593	-25	
Granbury, Lake	52	128,046	115,890	91	-2,704	-2	-7,927	-6	
Pat Cleburne, Lake	53	25,730	21,182	82	819	3	-4,548	-18	
Waxahachie, Lake	54	10,779	10,645	99	697	6	-134	-1	
Bardwell Lake	55	46,122	41,642	90	1,831	4	-4,480	-10	
Proctor Lake	56	55,457	33,900	61	-1,022	-2	-21,557	-39	
Whitney, Lake	57	553,349	373,173	67	7,301	1	-180,176	-33	
Aquilla Lake	58	45,092	45,092	100	2,199	5	0	0	
Navarro Mills Lake	59	55,817	55,817	100	734	1	0	0	
*Halbert, Lake	60	6,033	4,135	69	747	12	-1,365	-23	
Richland-Chambers Reservoir	61	1,103,816	986,552	89	61,772	6	-117,264	-11	
*Brownwood, Lake	62	131,429	97,787	74	-1,563	-1	-26,523	-20	
Waco, Lake	62	198,943	198,943	100	6,252	3	0	0	
Limestone, Lake	64	208,015	208,015	100	22,180	11	366	0	
Belton Lake	65	435,225	428,119	98	18,778	4	-7,106	-2	
Stillhouse Hollow Lake	66	227,771	216,945	95	21,959	10	-10,826	-5	
Georgetown, Lake	67	36,823	19,257	52	841	2	-10,631	-29	
Granger Lake	68	52,525	42,638	81	2,715	5	-9,887	-19	
Tawakoni, Lake	69	888,126	744,436	84	9,080	1	-143,690	-16	
TOTAL		10,463,400	9,093,804	87	293,090	3	-1,256,259	-12	
EAST									
Wright Patman Lake	70	307,973	251,916	82	129,323	42	-56,057	-18	
*Sulphur Springs, Lake	71	17,838	17,838	100	0	0	0	0	
Cypress Springs, Lake	72	67,689	67,689	100	0	0	0	0	
Bob Sandlin, Lake	73	200,579	200,579	100	0	0	0	0	
Fork Reservoir, Lake	74	604,927	604,927	100	3,696	1	4,488	1	
O the Pines, Lake	75	238,933	238,933	100	0	0	0	0	
Cedar Creek Reservoir in Trinity	76	644,686	644,686	100	29,578	5	2,572	0	
Athens, Lake	77	29,435	29,435	100	0	0	0	0	
Palestine, Lake	78	370,907	370,907	100	0	0	0	0	
Tyler, Lake	79	73,256	73,256	100	0	0	0	0	
Murvaul, Lake	80	38,284	38,284	100	0	0	35	0	
Jacksonville, Lake	81	30,300	30,300	100	0	0	0	0	
Nacogdoches, Lake	82	39,521	39,521	100	0	0	1,154	3	
Houston County Lake	83	17,113	17,113	100	0	0	0	0	
Sam Rayburn Reservoir	84	2,857,077	2,717,787	95	294,355	10	-44,417	-2	
Toledo Bend Reservoir (Texas)	85	2,236,450	2,228,384	100	67,209	3	19,714	1	
Toledo Bend Reservoir (TX & LA)	(85)	4,472,900	4,456,769	100	134,418	3	39,429	1	
*Livingston, Lake	86	1,741,867	1,741,867	100	0	0	0	0	
B A Steinhagen Lake	87	66,966	62,429	93	10,524	16	1,915	3	
Conroe, Lake	88	416,188	416,188	100	15,006	4	3,508	1	
TOTAL		9,999,989	9,792,039	98	549,691	5	-67,088	-1	
TRANS-PECOS									
Red Bluff Reservoir	89	289,670	75,014	26	-3,309	-1	-24,221	-8	
TOTAL		289,670	75,014	26	-3,309	-1	-24,221	-8	

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

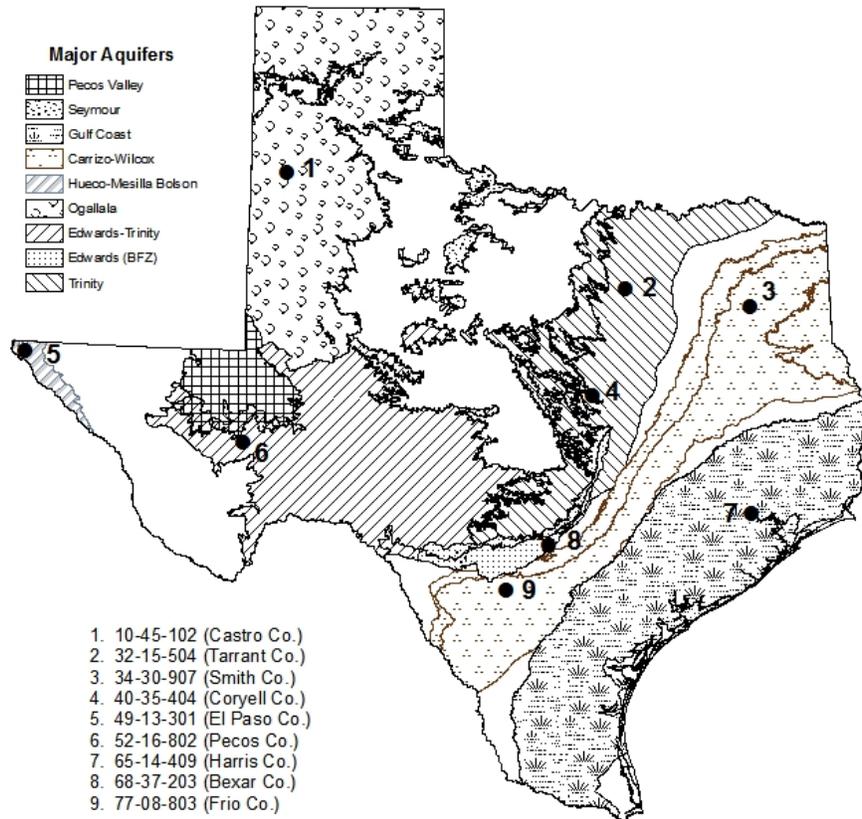
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage		Change since Late March 2009		Change since Late April 2008		
			Late Apr. (acre-feet)	2009 (%)	(acre-feet)	(%)	(acre-feet)	(%)	
EDWARDS PLATEAU									
Oak Creek Reservoir	90	39,260	28,201	72	-798	-2	-9,364	-24	
E V Spence Reservoir	91	517,272	45,247	9	-2,673	-1	-23,550	-5	
O C Fisher Lake	92	79,483	0	0	0	0	0	0	
*O H Ivie Reservoir	93	554,335	287,156	52	-6,022	-1	-90,711	-16	
Twin Buttes Reservoir	94	177,850	44,953	25	-228	0	-28,421	-16	
Brady Creek Reservoir	95	29,110	16,105	55	2,270	8	-1,470	-5	
Buchanan, Lake	96	824,519	572,299	69	7,746	1	-252,220	-31	
Lyndon B Johnson, Lake	97	113,690	111,761	98	1,028	1	0	0	
*Amistad Reservoir (Texas)	98	1,840,849	1,845,000	100	-37,000	-2	-401,000	-22	
*Amistad Reservoir (TX & Mexico)	(98)	3,275,532	3,275,532	100	0	0	706,532	22	
TOTAL		4,176,368	2,950,722	71	-35,677	-1	-806,736	-19	
SOUTH CENTRAL									
Travis, Lake	99	1,113,902	695,442	62	5,159	0	-368,198	-33	
*Austin, Lake	100	21,804	21,002	96	-45	0	-75	0	
Somerville Lake	101	147,104	140,275	95	25,985	18	-6,829	-5	
Canyon Lake	102	378,781	287,988	76	-1,655	0	-88,012	-23	
Medina Lake	103	254,823	118,095	46	-6,742	-3	-101,633	-40	
*Coledo Creek Reservoir	104	31,040	25,886	83	1,931	6	-4,356	-14	
TOTAL		1,947,454	1,288,688	66	24,633	1	-569,103	-29	
UPPER COAST									
Houston, Lake	105	128,863	128,863	100	0	0	0	0	
Texana, Lake	106	153,246	123,177	80	30,730	20	-14,684	-10	
TOTAL		282,109	252,040	89	30,730	11	-14,684	-5	
SOUTHERN									
Choke Canyon Reservoir	107	695,262	531,137	76	-12,031	-2	-126,847	-18	
Corpus Christi, Lake	108	256,961	134,049	52	-15,760	-6	-105,387	-41	
*Falcon Reservoir (Texas)	109	1,551,034	1,424,000	92	-108,000	-7	462,000	30	
*Falcon Reservoir (TX & Mexico)	(109)	2,646,817	2,198,000	83	-448,817	-17	1,104,000	42	
TOTAL		2,503,257	2,089,186	83	-135,791	-5	229,766	9	
STATE TOTAL		31,202,790	26,058,803	84	709,854	2	-2,647,639	-8	

* Conservation volume is used as conservation storage capacity because the dead storage is unknown.

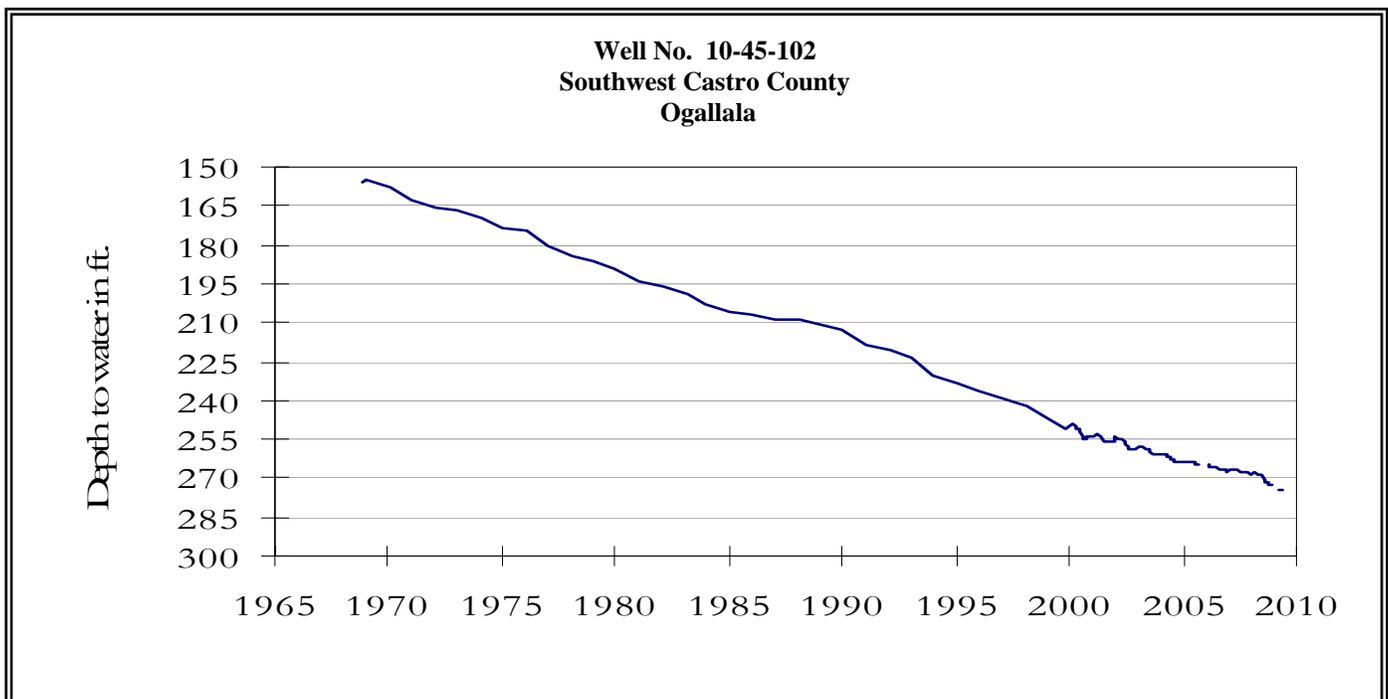
Note

Conservation storage capacity is the space available to store water above the lowest outlet and below the top of conservation pool, or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included is any water in flood control storage (above the top of conservation pool or normal maximum operating level), or any water in the dead storage. Conservation storage percentage is based on the conservation storage capacity of the reservoir and the conservation storage in the reservoir on date shown. Percent change is given by $100 * (\text{current conservation storage} - \text{past conservation storage}) / \text{conservation storage capacity}$. Figures shown are for the Texas share of conservation storage in all reservoirs.

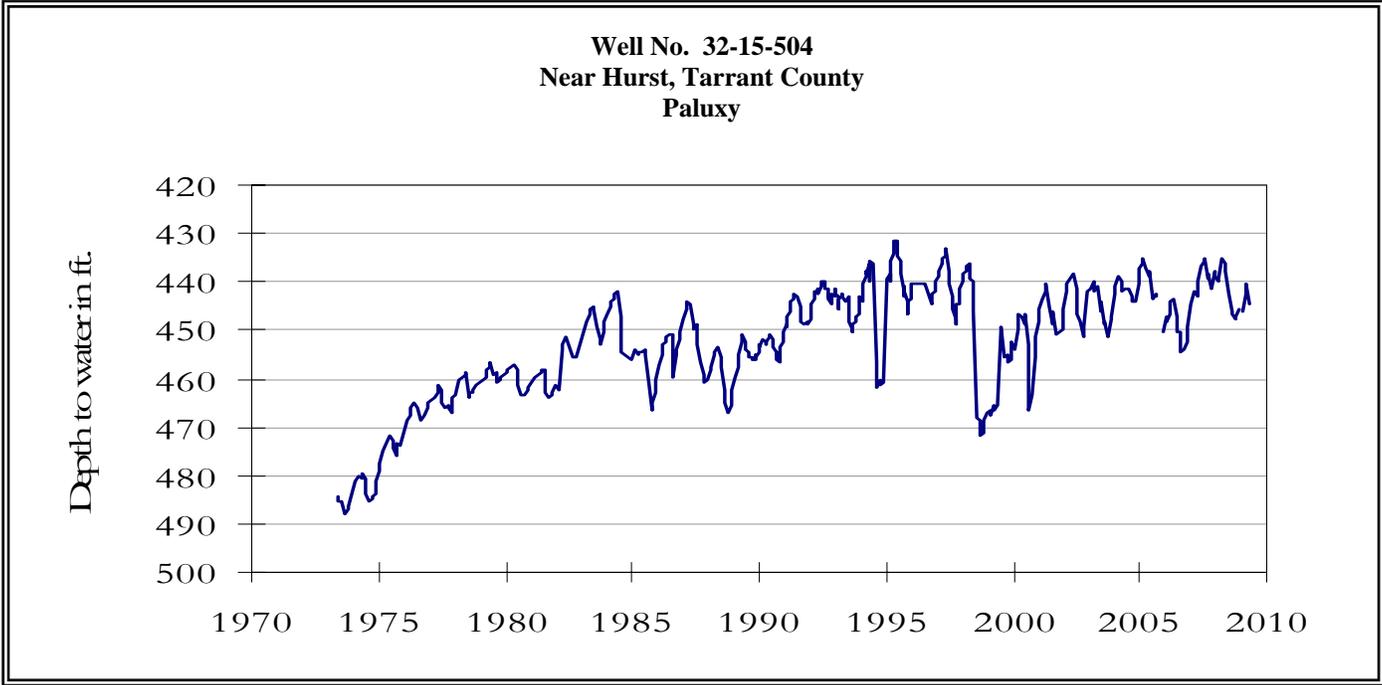
GROUND WATER LEVELS IN OBSERVATION WELLS



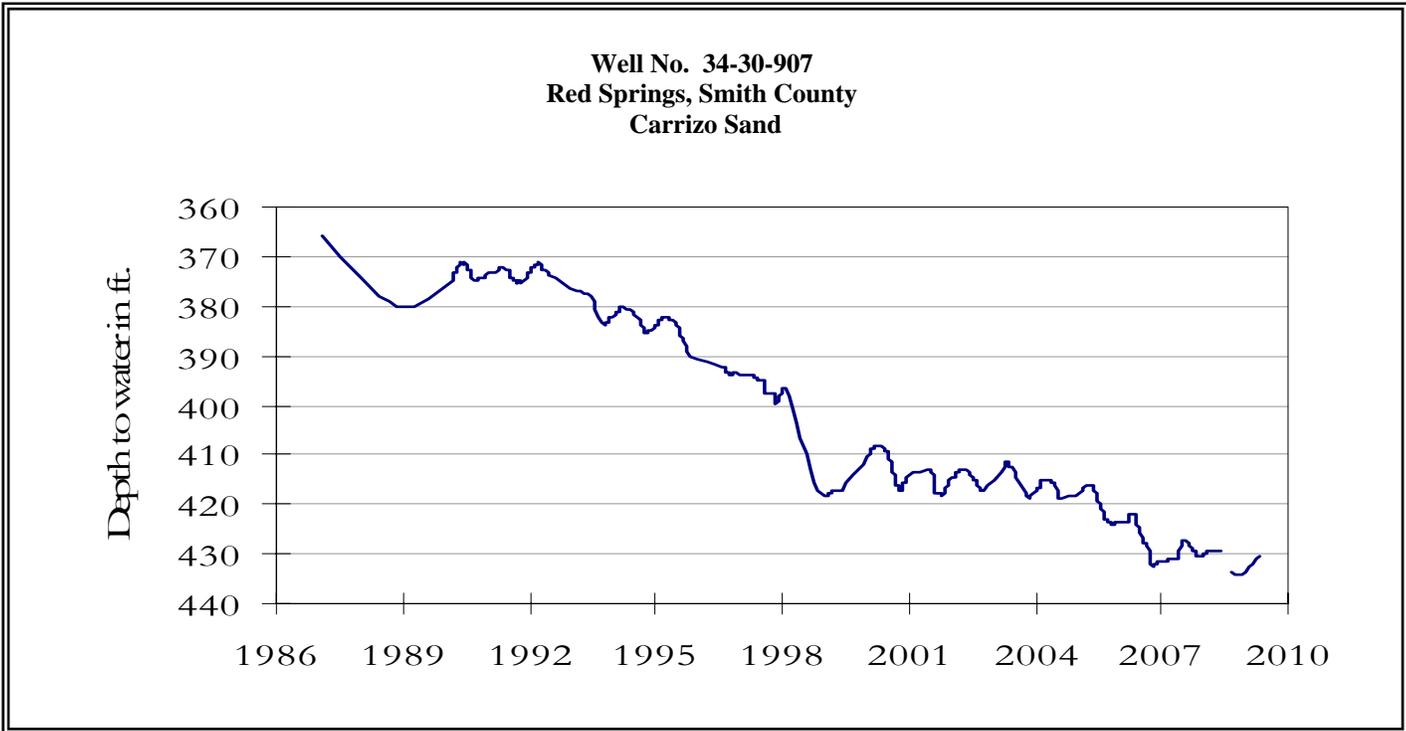
APRIL GROUNDWATER LEVELS IN OBSERVATION WELLS



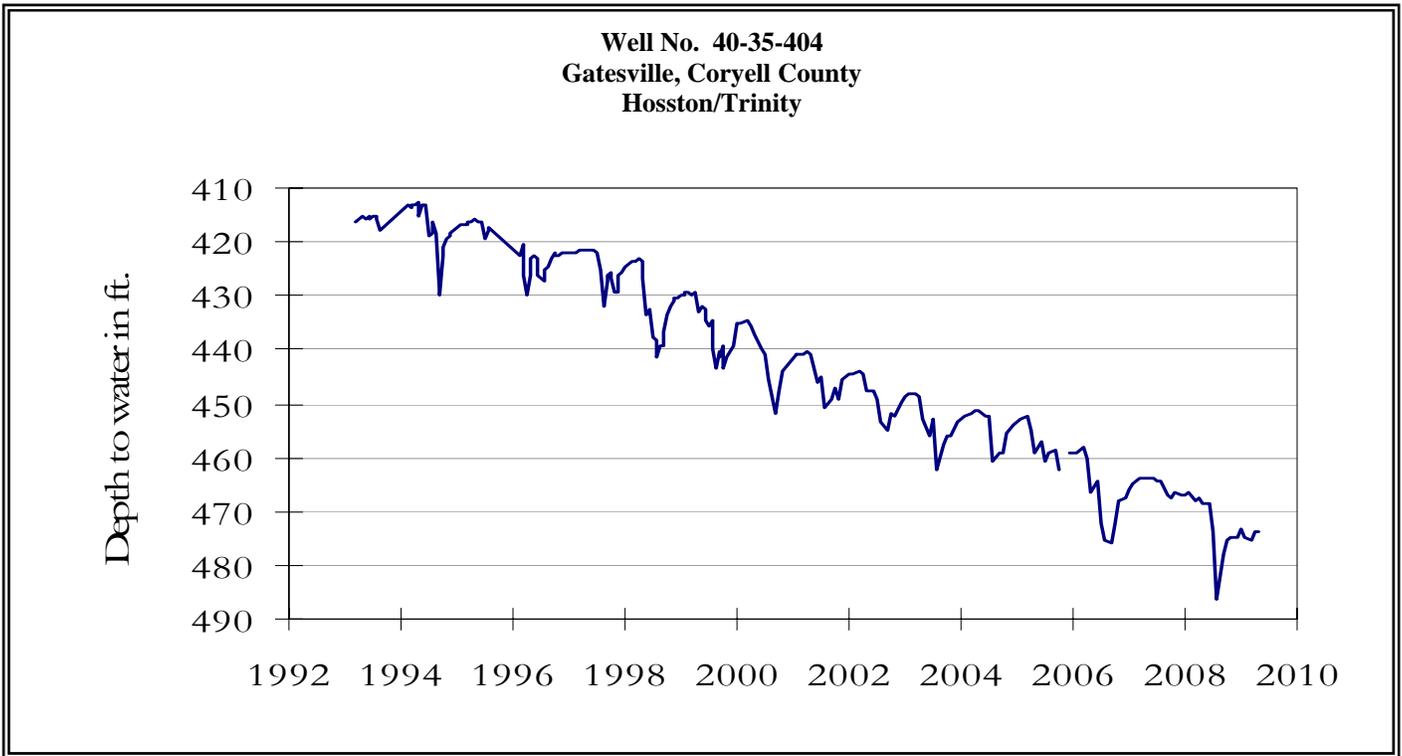
The late April water level measurement in this Ogallala Aquifer well, elevation 3,816 feet above sea level, was 274.89 feet below land surface. This measurement was 0.37 feet below last month's measurement, 6.05 feet below last year's measurement, and 118.89 feet below the initial measurement recorded in 1968. No water level measurements were recorded for September through December 2005, December 2008, and January 2009.



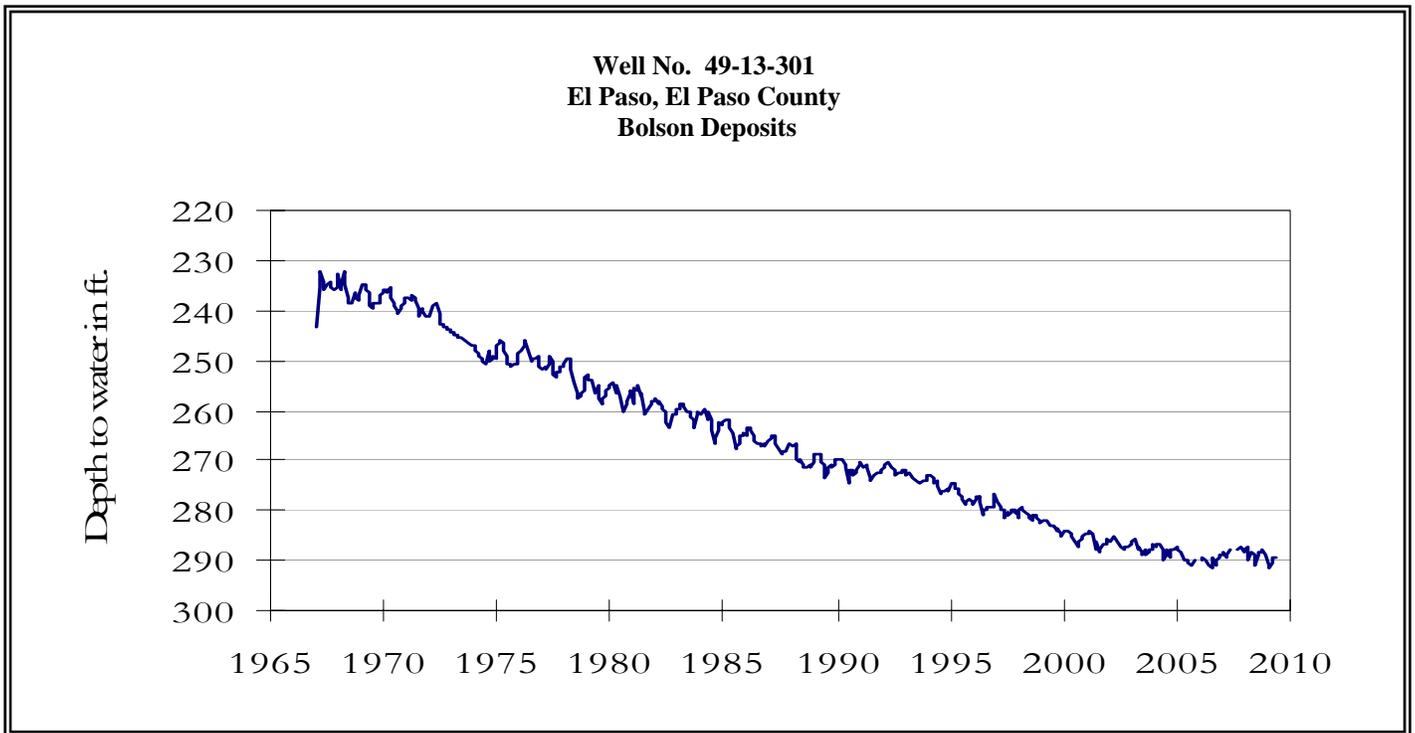
The late April water level measurement in this Paluxy Formation Trinity Aquifer well, elevation 535 feet above sea level, was 444.69 feet below land surface. This measurement was 4.13 feet below last month's measurement, 8.57 feet below last year's measurement, and 66.69 feet below the initial measurement recorded in 1955. No water level measurements were recorded for September or October 2005 and December 2008.



The late April water level measurement in this Carrizo-Wilcox Aquifer well, elevation 555 feet above sea level, was 430.70 feet below land surface. This water level was 0.55 feet above last month's measurement, 1.11 feet below last year's measurement, and 64.70 feet below the initial measurement recorded in 1987. No water level measurements were recorded for June and July 2008.

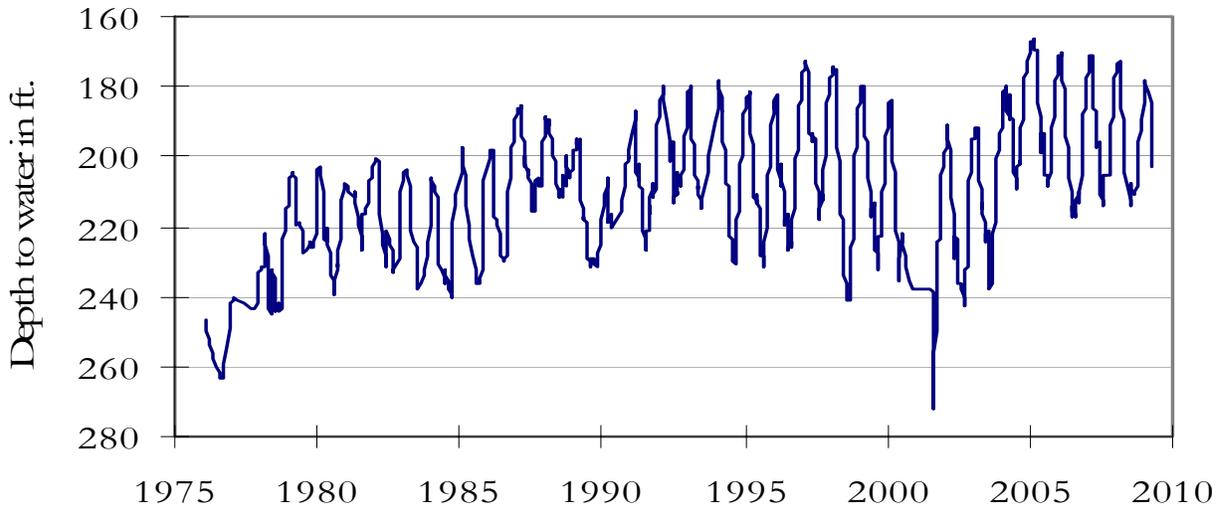


The late April water level measurement in this Hosston Formation Trinity Aquifer well, elevation 823 feet above sea level, was 473.82 feet below land surface. This water level was 0.13 feet above last month's measurement, 5.49 feet below last year's measurement, and 181.82 feet below the initial measurement recorded in 1955. No water level measurement was recorded for October 2005.



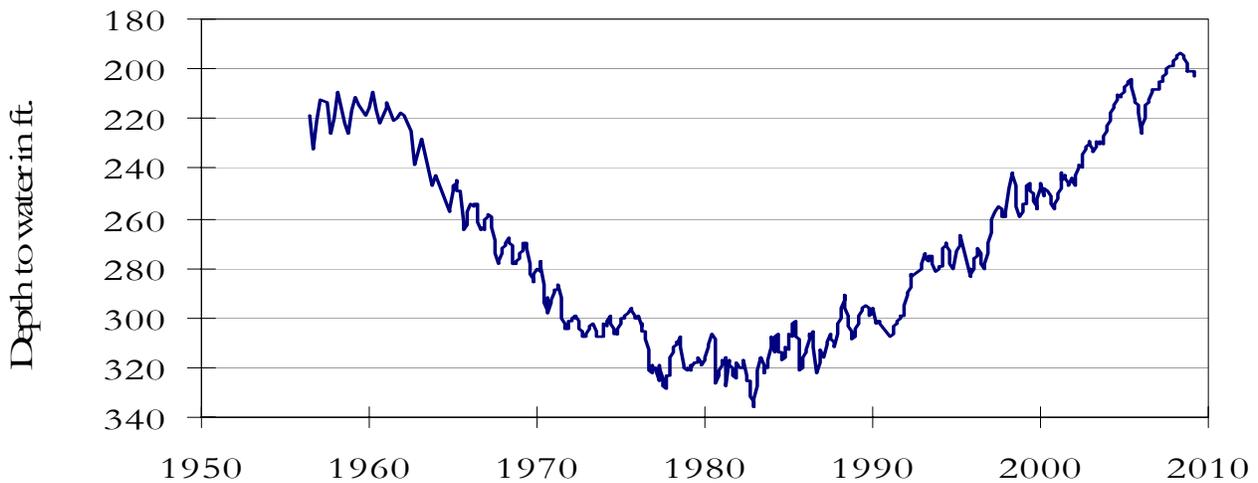
The late April water level measurement in this Hueco Bolson Aquifer well, elevation 3,882 feet above sea level, was 289.36 feet below land surface. This water level was 0.09 feet above last month's measurement, 1.00 feet below last year's measurement, and 57.46 feet below the initial measurement in 1964. No water level measurements were recorded for May through July 2007, and October or December 2005.

**Well No. 52-16-802
Fort Stockton, Pecos County
Edwards and Associated Limestones**



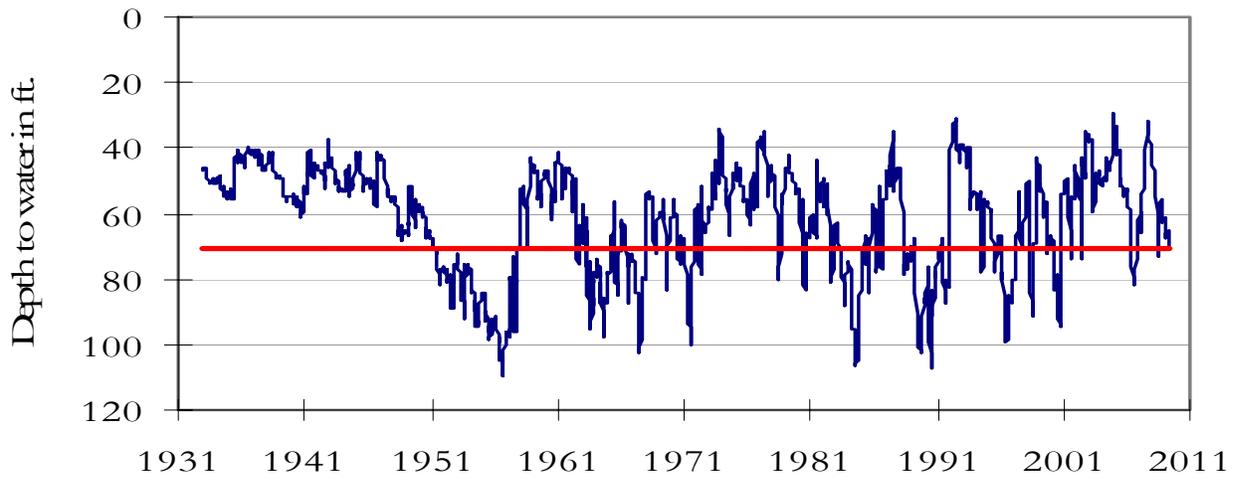
The late April water level measurement in this Edwards-Trinity Plateau Aquifer well, elevation 3,199 feet above sea level, was 203.30 feet below land surface. This water level was 13.89 feet below last month's measurement, 2.74 feet below last year's measurement, and 43.58 feet above the initial measurement in 1976.

**Well No. 65-14-409
Alief, Harris County
Evangeline**



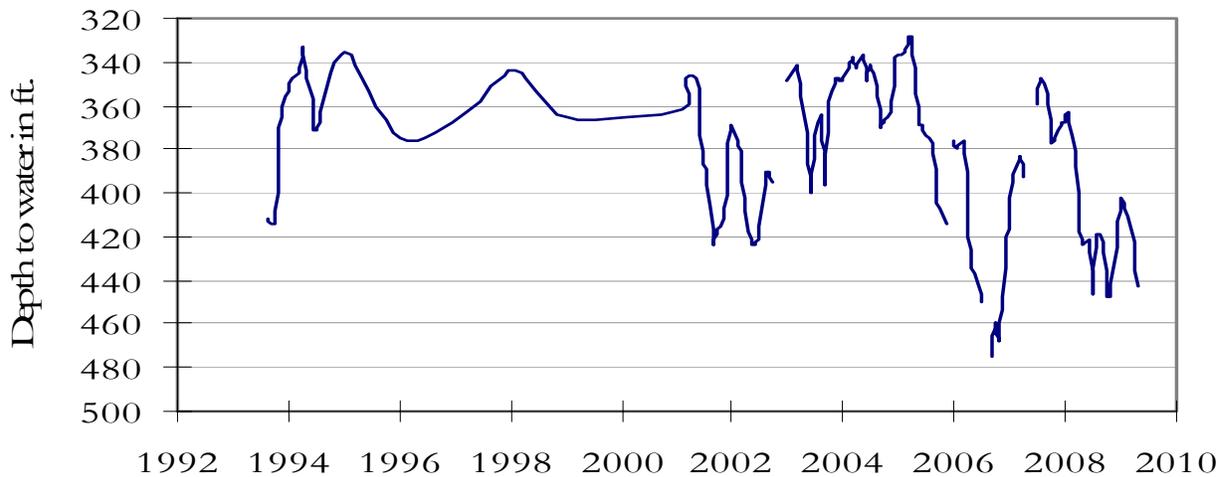
The late April water level measurement in this Evangeline Formation Gulf Coast Aquifer well, elevation 66 feet above sea level was not available.

Well No. 68-37-203 (J-17)
In San Antonio, Bexar County
Edwards and Associated Limestones



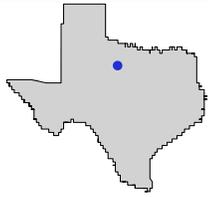
The late April water level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 70.80 feet below land surface. This was 5.35 feet below last month's measurement, 19.74 feet below last year's measurement, and 24.16 feet below the initial measurement recorded in 1932. Stage 1 drought restrictions were enacted on 4/28/2009 by the Edwards Aquifer Authority due to low spring flow.
***** Water levels below the red line indicate Edwards Aquifer Authority Stage 1 drought restrictions. *****

Well No. 77-08-803
Pearsall, Frio County
Carrizo Sand



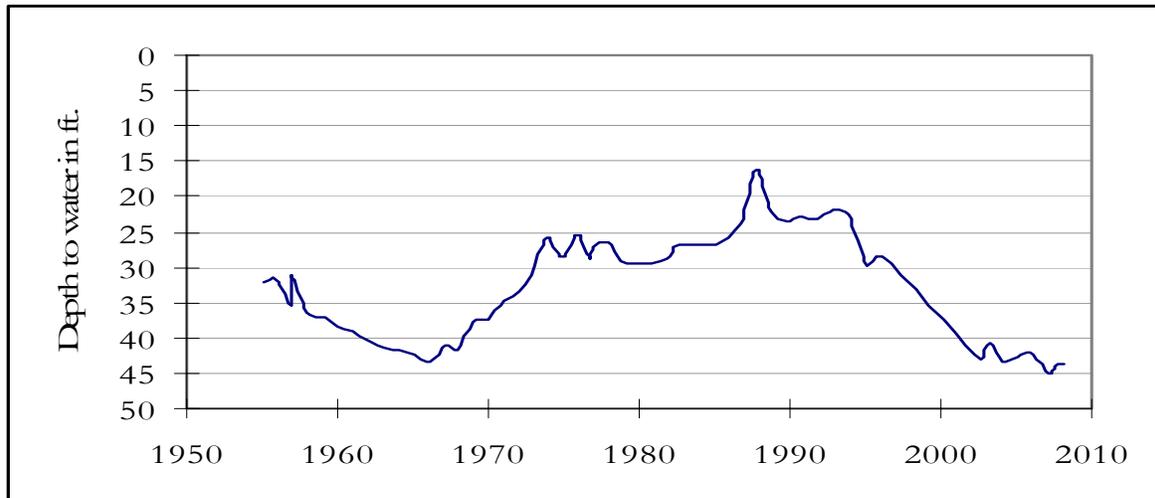
The late April water level measurement in this Carrizo-Wilcox Aquifer well, elevation 652 feet above sea level, was 442.38 feet below land surface. This was 14.16 feet below last month's measurement, 18.66 feet below last year's measurement, and 162.38 feet below the initial measurement recorded in 1963. No water level measurements were recorded for April and May 2007, July 2006, November 2005, and October through November 2002.

HYDROGRAPH OF THE MONTH



Each month this space features a new hydrograph (marked with the • symbol on the map) depicting different aquifers and different conditions in Texas.

Well No 21-42-201 Haskell County



This water level observation well, located 2 miles southeast of O'Brien, at an elevation of 1570 feet ASL, was completed in the Seymour aquifer. Almost all of the groundwater pumped from the aquifer, 90 percent, is used for irrigation. Water level declines have reduced saturated thickness in some portions of the aquifer.

April, 2009

Water level measurements were available for eight out of the nine key monitoring wells. Water levels rose in three of the nine monitoring wells since the beginning of April, ranging from 0.09 feet in the El Paso Co. Hueco Bolson well to 0.55 feet in the Smith Co. Carrizo well. Water levels declined in the remaining monitoring wells, ranging from 0.37 feet in the Castro Co. Ogallala well to 14.16 feet in the Frio Co. Carrizo well. The J-17 well in San Antonio recorded a water level of 70.80 feet below land surface, 5.35 feet below last month's measurement. This water level is 0.20 feet above the Stage 1 critical management level. However, due to low springflow at San Marcos Springs, the Edwards Aquifer Authority issued Stage 1 drought restrictions on April 28, 2009.

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