Texas Water Development Board

WATER Conditions

RESERVOIR STORAGE

May 2009

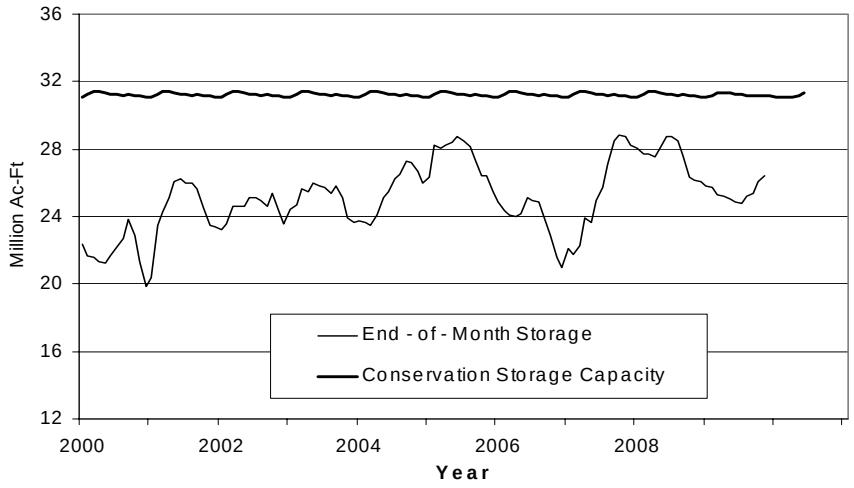
Storage in the state's major reservoirs continues to increase slowly. Near the end of May, the 109 reservoirs monitored for this report held 26.45 million acre-feet* in conservation storage, or 84 percent of the conservation storage capacity of the state's 175 major water supply reservoirs. This is 390,000 acre-feet more than last month.

Storage was at 100% in 26 reservoirs, with 14 out of these 26 reservoirs being in the North Central Region. On the other hand, five lakes were at or below 10% full: O C Fisher Lake was still effectively empty, Palo Duro (2%) was nearly empty, Lake Meredith and J B Thomas were both at 7%, and E.V. Spence has dropped to 8% full.

Both the East (98%) and the North Central (92%) regions have storage at or above 90% of capacity; the High Plains (10%) and Trans-Pecos regions (23%) remained very low. Storage increased in the North Central, East, and Low Rolling Plains 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.

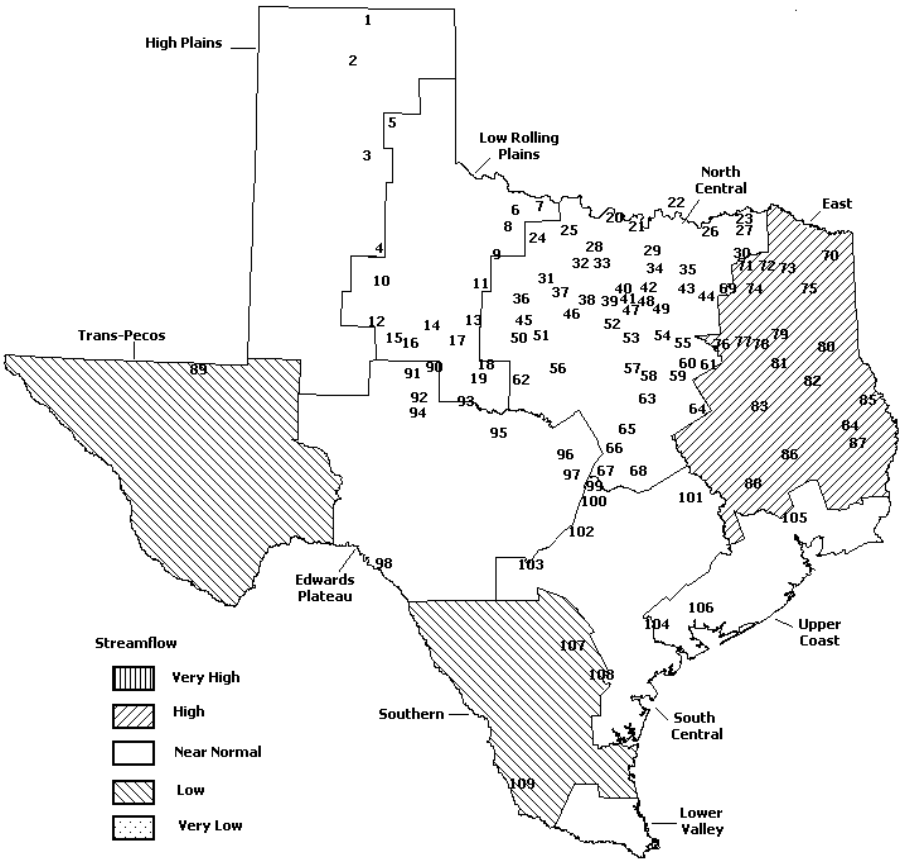
PO BOX 13231 • 1700 N. Congress Avenue • Austin, TX 78711-3231
Telephone (512) 463-7847 • Telefax (512) 475-2053 • 1-800-RELAYTX (for the hearing impaired)

STREAMFLOW

Of 29 reporting index stations in May, computed 30-day mean flows were very high (<5%) at 2 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 12 stations. Compared to April, flows have increased at 8 index stations and decreased at 20 stations.

On a regional basis, flows in May were low in the Southern and Trans-Pecos regions, high in the East Texas Region, and normal in all other regions. Streamflow in the Lower Valley Region is not monitored.

MAY 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. Vrady 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. Coleto 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 Capacity (acre-feet)	Conservation Storage Late May 2009 (acre-feet)	(%)	Change since Late April 2009 (acre-feet)	(%)	Change since Late May 2008 (acre-feet)	(%)
HIGH PLAINS								
Palo Duro Reservoir	1	60,897	1,430	2	683	1	1,050	2
Meredith, Lake (Texas)	2	500,000	51,575	10	-4,873	-1	15,556	3
Meredith, Lake (Texas & Oklahoma)	(2)	779,556	51,575	7	-4,873	-1	15,556	2
MacKenzie Reservoir	3	46,429	5,728	12	-156	0	-1,083	-2
White River Lake	4	29,880	5,431	18	-393	-1	4,563	15
TOTAL		637,206	64,164	10	-4,739	-1	20,086	3
LOW ROLLING PLAINS								
Greenbelt Lake	5	59,500	18,116	30	-234	0	-2,827	-5
*Electra, Lake	6	5,626	776	14	-10	0	-908	-16
N. Fork Buffalo Crk Reservoir	7	15,400	4,957	32	948	6	285	2
Kemp, Lake	8	245,308	161,716	66	15,457	6	-83,592	-34
Millers Creek Reservoir	9	27,888	14,313	51	-412	-1	-7,044	-25
Alan Henry Reservoir	10	94,808	90,757	96	-1,076	-1	499	1
Stamford, Lake	11	51,570	33,365	65	1,020	2	-11,619	-23
J B Thomas, Lake	12	199,931	13,317	7	-894	0	-5,407	-3
Fort Phantom Hill, Lake	13	70,030	55,823	80	-1,316	-2	-13,436	-19
Sweetwater, Lake	14	10,006	6,935	69	-101	-1	-2,309	-23
Colorado City, Lake	15	31,793	20,524	65	-418	-1	-4,687	-15
Champion Creek Reservoir	16	41,618	8,825	21	-66	0	-273	-1
Abilene, Lake	17	6,099	2,706	44	-207	-3	-2,989	-49
Coleman, Lake	18	38,076	25,813	68	-726	-2	-8,270	-22
Hords Creek Lake	19	5,684	2,277	40	-152	-3	-1,995	-35
TOTAL		903,337	460,220	51	11,813	1	-144,572	-16
NORTH CENTRAL								
Nocona, Lake (Farmers Crk)	20	21,445	21,445	100	0	0	1,019	5
Hubert H Moss Lake	21	24,058	23,919	99	-139	-1	-139	-1
Texoma, Lake (Texas)	22	1,334,294	1,334,294	100	148,606	11	35,372	3
Texoma, Lake (Texas & Oklahoma)	(22)	2,668,589	2,668,589	100	297,213	11	70,745	3
*Pat Mayse Lake	23	118,100	118,100	100	0	0	0	0
Kickapoo, Lake	24	85,825	38,000	44	652	1	-17,850	-21
Arrowhead, Lake	25	235,997	178,231	76	20,687	9	-20,440	-9
Bonham, Lake	26	11,026	10,933	99	535	5	-93	-1
Crook, Lake	27	9,195	9,195	100	0	0	104	1
Amon G Carter, Lake	28	19,903	18,800	94	3,337	17	-841	-4
Ray Roberts, Lake	29	798,758	798,758	100	48,604	6	0	0
Jim Chapman Lake (Cooper)	30	260,332	260,332	100	82,697	32	0	0
Graham, Lake	31	45,260	39,503	87	-438	-1	-5,683	-13
*Lost Creek Reservoir	32	11,950	10,008	84	-131	-1	-1,853	-16
Bridgeport, Lake	33	366,236	274,089	75	-39,581	-11	-92,147	-25
Lewisville Lake	34	543,988	543,988	100	103,720	19	0	0
Lavon Lake	35	443,844	443,844	100	57,127	13	0	0
Hubbard Creek Reservoir	36	318,067	239,647	75	-3,091	-1	-68,785	-22
Possum Kingdom Lake	37	540,340	475,007	88	-613	0	-42,706	-8
*Mineral Wells, Lake	38	7,065	4,831	68	-141	-2	-1,917	-27
Weatherford, Lake	39	18,645	13,078	70	628	3	-5,266	-28
Eagle Mountain Lake	40	182,500	151,017	83	7,837	4	-31,483	-17
Worth, Lake	41	24,500	17,201	70	310	1	-4,806	-20
Grapevine Lake	42	164,702	143,119	87	25,817	16	-21,583	-13
Ray Hubbard, Lake	43	452,040	452,040	100	23,440	5	0	0
New Terrell City Lake	44	8,583	8,583	100	822	10	0	0
Daniel, Lake	45	9,435	5,582	59	-205	-2	-3,853	-41
Palo Pinto, Lake	46	27,150	11,475	42	-639	-2	-13,972	-51
Benbrook Lake	47	85,648	82,248	96	11,441	13	-3,400	-4
Arlington, Lake	48	38,740	37,544	97	152	0	-797	-2

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late May (acre-feet)	2009 (%)	Change since Late April 2009 (acre-feet)	(%)	Change since Late May 2008 (acre-feet)	(%)
NORTH CENTRAL (Continue)								
Joe Pool Lake	49	142,861	141,237	99	3,247	2	-1,624	-1
*Cisco, Lake	50	26,000	19,877	76	1,436	6	-1,222	-5
Leon, Lake	51	26,421	19,383	73	-445	-2	-6,464	-24
Granbury, Lake	52	128,046	113,624	89	-2,266	-2	-10,495	-8
Pat Cleburne, Lake	53	25,730	22,461	87	1,279	5	-2,987	-12
Waxahachie, Lake	54	10,779	10,272	95	-373	-3	-507	-5
Bardwell Lake	55	46,122	43,182	94	1,540	3	-2,940	-6
Proctor Lake	56	55,457	32,416	58	-1,484	-3	-21,750	-39
Whitney, Lake	57	553,349	379,363	69	6,190	1	-138,810	-25
Aquilla Lake	58	45,092	45,062	100	-30	0	659	1
Navarro Mills Lake	59	55,817	55,817	100	0	0	0	0
*Halbert, Lake	60	6,033	3,926	65	-209	-3	-1,637	-27
Richland-Chambers Reservoir	61	1,103,816	1,006,299	91	19,747	2	-96,695	-9
*Brownwood, Lake	62	131,429	96,782	74	-1,005	-1	-23,263	-18
Waco, Lake	62	198,943	198,943	100	0	0	0	0
Limestone, Lake	64	208,015	204,355	98	-3,660	-2	-3,172	-2
Belton Lake	65	435,225	429,684	99	1,565	0	-5,541	-1
Stillhouse Hollow Lake	66	227,771	218,196	96	1,251	1	-9,575	-4
Georgetown, Lake	67	36,823	19,566	53	309	1	-9,866	-27
Granger Lake	68	52,525	45,128	86	2,490	5	-7,397	-14
Tawakoni, Lake	69	888,126	888,126	100	143,690	16	0	0
TOTAL		10,612,006	9,758,510	92	664,706	6	-644,405	-6
EAST								
Wright Patman Lake	70	307,973	307,973	100	56,057	18	0	0
*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	0	0	0	0
O the Pines, Lake	75	267,672	267,672	100	28,739	11	0	0
Cedar Creek Reservoir in Trinity	76	644,686	635,362	99	-9,324	-1	-9,324	-1
Athens, Lake	77	29,435	29,435	100	0	0	0	0
Palestine, Lake	78	370,907	370,255	100	-652	0	-652	0
Tyler, Lake	79	73,256	72,597	99	-659	-1	-659	-1
Murvaul, Lake	80	38,284	38,249	100	-35	0	478	1
Jacksonville, Lake	81	30,300	30,178	100	-122	0	-122	0
Nacogdoches, Lake	82	39,521	38,302	97	-1,219	-3	-129	0
Houston County Lake	83	17,113	16,884	99	-229	-1	-203	-1
Sam Rayburn Reservoir	84	2,857,077	2,678,501	94	-39,286	-1	-41,507	-1
Toledo Bend Reservoir (Texas)	85	2,236,450	2,221,215	99	-7,169	0	-4,481	0
Toledo Bend Reservoir (TX & LA)	(85)	4,472,900	4,442,431	99	-14,338	0	-8,962	0
*Livingston, Lake	86	1,741,867	1,741,867	100	0	0	0	0
B A Steinhagen Lake	87	66,966	62,228	93	-201	0	-1,814	-3
Conroe, Lake	88	416,188	412,290	99	-3,898	-1	-2,923	-1
TOTAL		10,028,728	9,814,041	98	22,002	0	-61,336	-1
TRANS-PECOS								
Red Bluff Reservoir	89	289,670	66,333	23	-8,681	-3	-23,485	-8
TOTAL		289,670	66,333	23	-8,681	-3	-23,485	-8

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

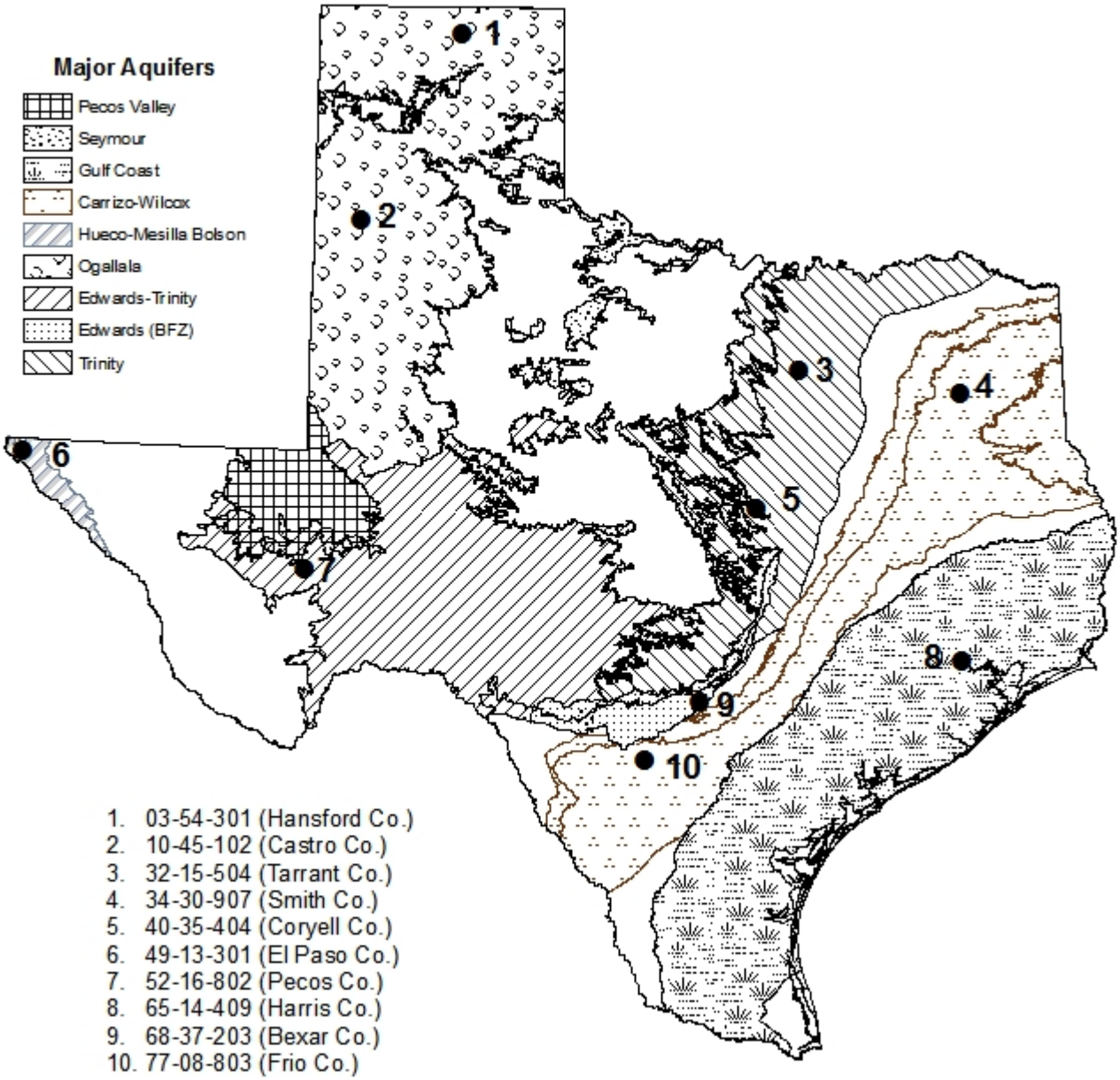
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late May 2009 (acre-feet)	(%)	Change since Late April 2009 (acre-feet)	(%)	Change since Late May 2008 (acre-feet)	(%)
EDWARDS PLATEAU								
Oak Creek Reservoir	90	39,260	27,981	71	-220	-1	-8,989	-23
E V Spence Reservoir	91	517,272	42,447	8	-2,800	-1	-24,990	-5
O C Fisher Lake	92	79,483	0	0	0	0	0	0
*O H Ivie Reservoir	93	554,335	280,453	51	-6,703	-1	-86,867	-16
Twin Buttes Reservoir	94	177,850	42,638	24	-2,315	-1	-27,389	-15
Brady Creek Reservoir	95	29,110	15,605	54	-500	-2	-4,518	-16
Buchanan, Lake	96	824,519	546,026	66	-26,273	-3	-273,093	-33
Lyndon B Johnson, Lake	97	113,690	111,247	98	-514	0	-643	-1
*Amistad Reservoir (Texas)	98	1,840,849	1,826,000	99	-19,000	-1	-368,000	-20
*Amistad Reservoir (TX & Mexico)	(98)	3,275,532	3,232,000	99	-43,532	-1	942,000	29
TOTAL		4,176,368	2,892,397	69	-58,325	-1	-794,489	-19
SOUTH CENTRAL								
Travis, Lake	99	1,113,902	648,527	58	-46,915	-4	-384,652	-35
*Austin, Lake	100	21,804	20,684	95	-318	-1	-197	-1
Somerville Lake	101	147,104	136,541	93	-3,734	-3	-10,242	-7
Canyon Lake	102	378,781	285,467	75	-2,521	-1	-83,602	-22
Medina Lake	103	254,823	106,060	42	-12,035	-5	-105,193	-41
*Coleto Creek Reservoir	104	31,040	25,518	82	-368	-1	-3,030	-10
TOTAL		1,947,454	1,222,797	63	-65,891	-3	-586,916	-30
UPPER COAST								
Houston, Lake	105	128,863	128,863	100	0	0	0	0
Texana, Lake	106	153,246	116,895	76	-6,282	-4	-11,334	-7
TOTAL		282,109	245,758	87	-6,282	-2	-11,334	-4
SOUTHERN								
Choke Canyon Reservoir	107	695,262	528,274	76	-2,863	0	-121,734	-18
Corpus Christi, Lake	108	256,961	125,004	49	-9,045	-4	-103,099	-40
*Falcon Reservoir (Texas)	109	1,551,034	1,271,000	82	-153,000	-10	399,000	26
*Falcon Reservoir (TX & Mexico)	(109)	2,646,817	1,930,000	73	-268,000	-10	884,000	33
TOTAL		2,503,257	1,924,278	77	-164,908	-7	174,167	7
STATE TOTAL		31,380,135	26,448,498	84	389,695	1	-2,072,284	-7

* 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*(current conservation storage - past conservation storage)/conservation storage capacity. Figures shown are for the Texas share of conservation storage in all reservoirs.

GROUND WATER LEVELS IN OBSERVATION WELLS

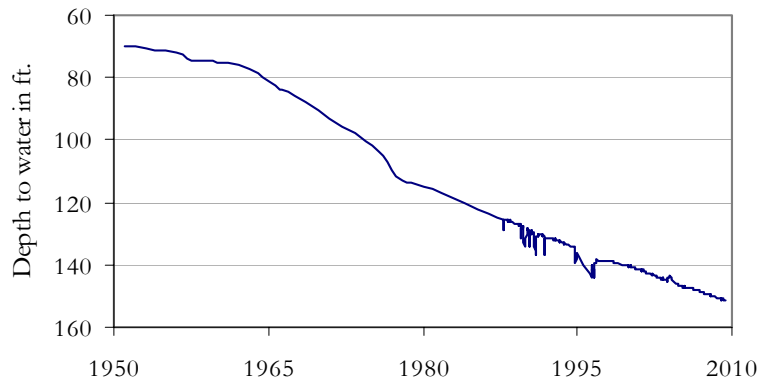


May, 2009

Water level measurements were available for nine out of the ten key monitoring wells. Water levels rose in two of the ten monitoring wells since the beginning of May, ranging from 0.13 feet in the Smith Co. Carrizo well to 3.61 feet in the Tarrant Co. Trinity well. Water levels declined in the remaining monitoring wells, ranging from 0.26 feet in the Hansford Co. Ogallala well to 22.49 feet in the Frio Co. Carrizo well. The J-17 well in San Antonio recorded a water level of 73.86 feet below land surface, 3.06 feet below last month's measurement. This water level is 2.86 feet below the Stage 1 critical management level. Stage 1 drought restrictions are currently in place.

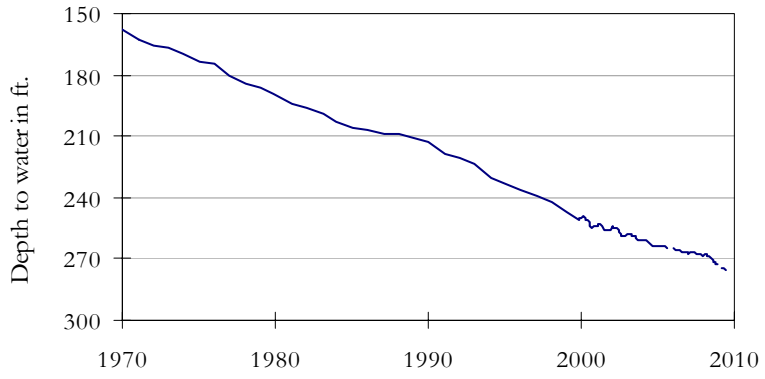
MAY GROUNDWATER LEVELS IN OBSERVATION WELLS

Well No. 03-54-301
Near Spearman, Hansford County
Ogallala



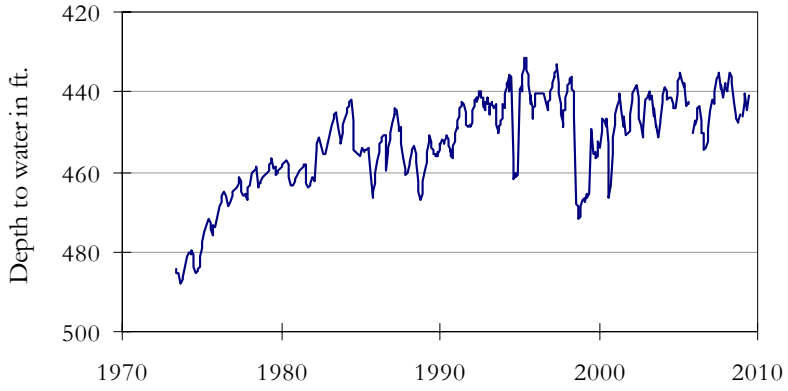
The late May water level measurement in this Ogallala Aquifer well, elevation 2,962 feet above sea level, was 151.32 feet below land surface. This measurement was 0.26 feet below last month's measurement, 1.10 feet below last year's measurement, and 80.20 feet below the initial measurement recorded in 1951.

Well No. 10-45-102
Southwest Castro County
Ogallala



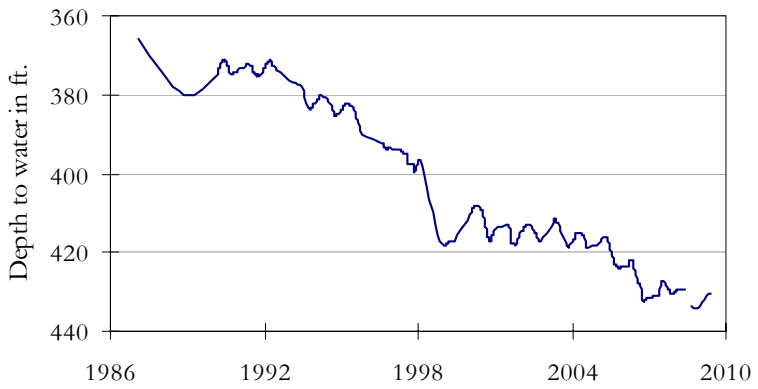
The late May water level measurement in this Ogallala Aquifer well, elevation 3,816 feet above sea level, was 275.28 feet below land surface. This measurement was 0.39 feet below last month's measurement, 6.37 feet below last year's measurement, and 119.28 feet below the initial measurement recorded in 1968.

Well No. 32-15-504
Near Hurst, Tarrant County
Paluxy



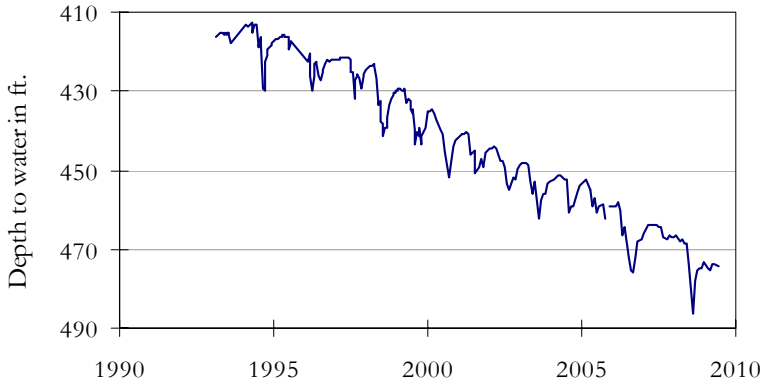
The late May water level measurement in this Paluxy Formation Trinity Aquifer well, elevation 535 feet above sea level, was 441.08 feet below land surface. This measurement was 3.61 feet above last month's measurement, 3.41 feet below last year's measurement, and 63.08 feet below the initial measurement recorded in 1955.

Well No. 34-30-907
Red Springs, Smith County
Carrizo Sand



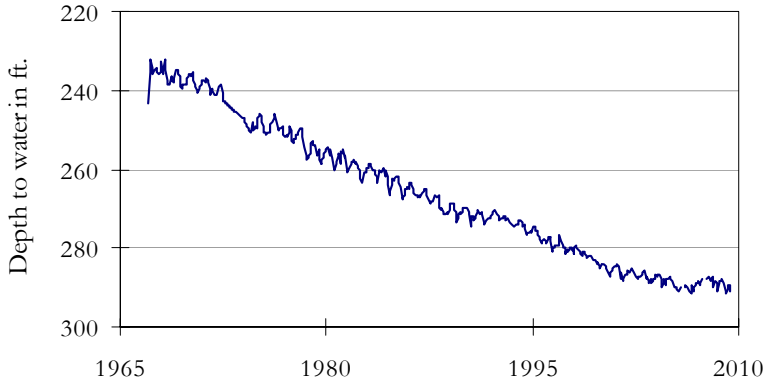
The late May water level measurement in this Carrizo-Wilcox Aquifer well, elevation 555 feet above sea level, was 430.57 feet below land surface. This water level was 0.13 feet above last month's measurement, 1.01 feet below last year's measurement, and 64.57 feet below the initial measurement recorded in 1987.

Well No. 40-35-404
Gatesville, Coryell County
Hosston/Trinity



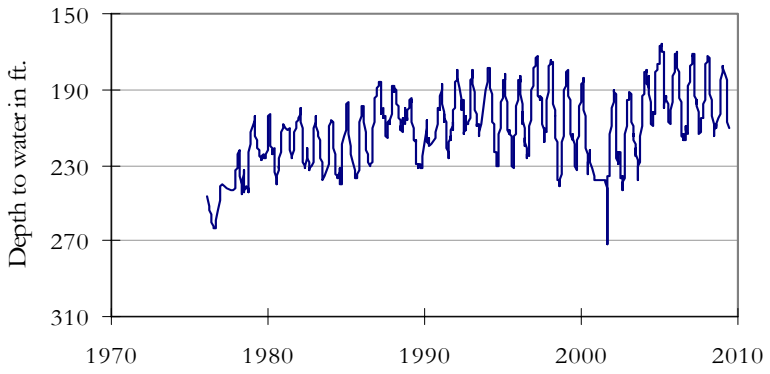
The late May water level measurement in this Hosston Formation Trinity Aquifer well, elevation 823 feet above sea level, was 474.24 feet below land surface. This water level was 0.42 feet below last month's measurement, 5.74 feet below last year's measurement, and 182.24 feet below the initial measurement recorded in 1955.

Well No. 49-13-301
El Paso, El Paso County
Bolson Deposits



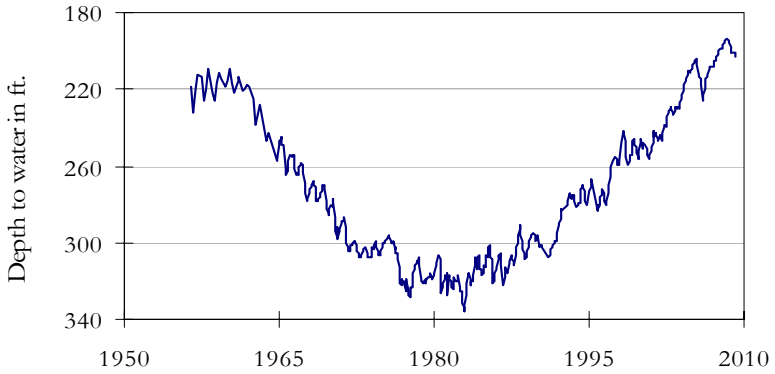
The late May water level measurement in this Hueco Bolson Aquifer well, elevation 3,882 feet above sea level, was 290.57 feet below land surface. This water level was 1.21 feet below last month's measurement, 1.63 feet below last year's measurement, and 58.67 feet below the initial measurement in 1964.

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



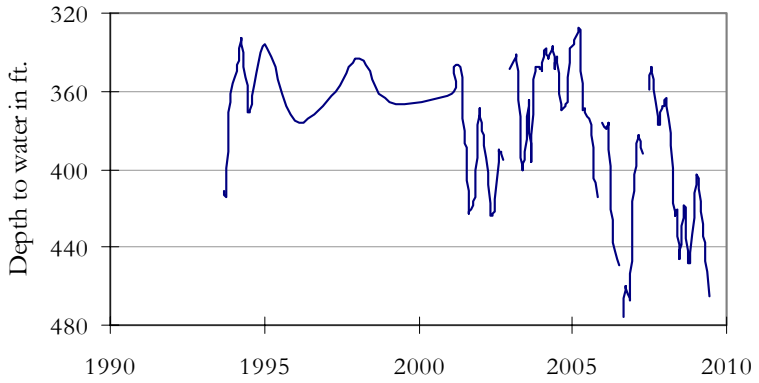
The late May water level measurement in this Edwards-Trinity Plateau Aquifer well, elevation 3,199 feet above sea level, was 209.95 feet below land surface. This water level was 6.65 feet below last month's measurement, 1.50 feet below last year's measurement, and 36.93 feet above the initial measurement in 1976.

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



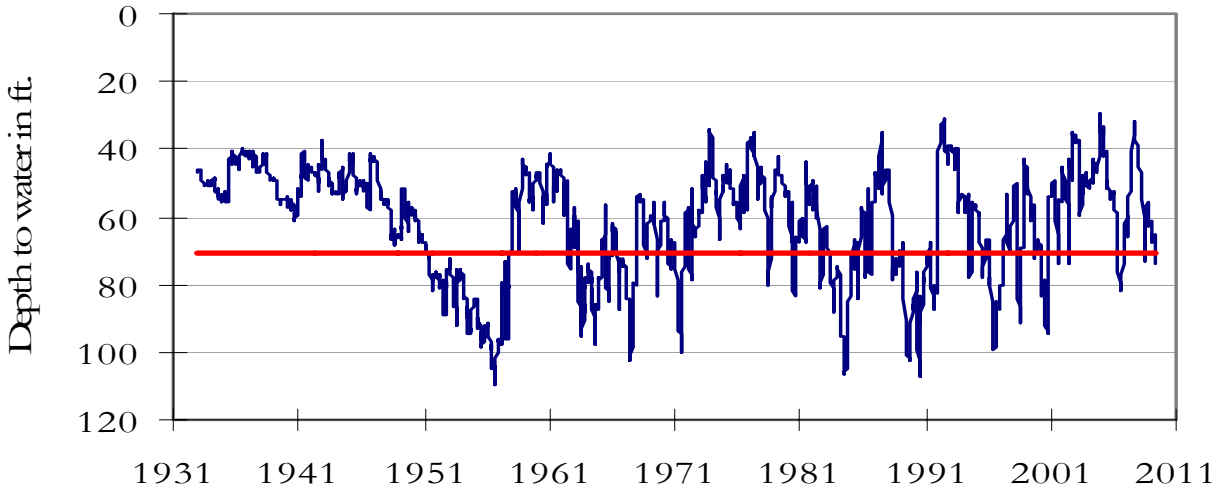
The late May water level measurement in this Evangeline Formation Gulf Coast Aquifer well, elevation 66 feet above sea level was not available.

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



The late May water level measurement in this Carrizo-Wilcox Aquifer well, elevation 652 feet above sea level, was 464.87 feet below land surface. This was 22.49 feet below last month's measurement, 43.96 feet below last year's measurement, and 184.87 feet below the initial measurement recorded in 1963.

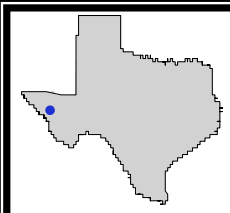
Well No. 68-37-203 (J-17)
In San Antonio, Bexar County
Edwards and Associated Limestones



The late May water level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 73.86 feet below land surface. This was 3.06 feet below last month's measurement, 13.46 feet below last year's measurement, and 27.22 feet below the initial measurement recorded in 1932. Stage 1 drought restrictions are still in place.

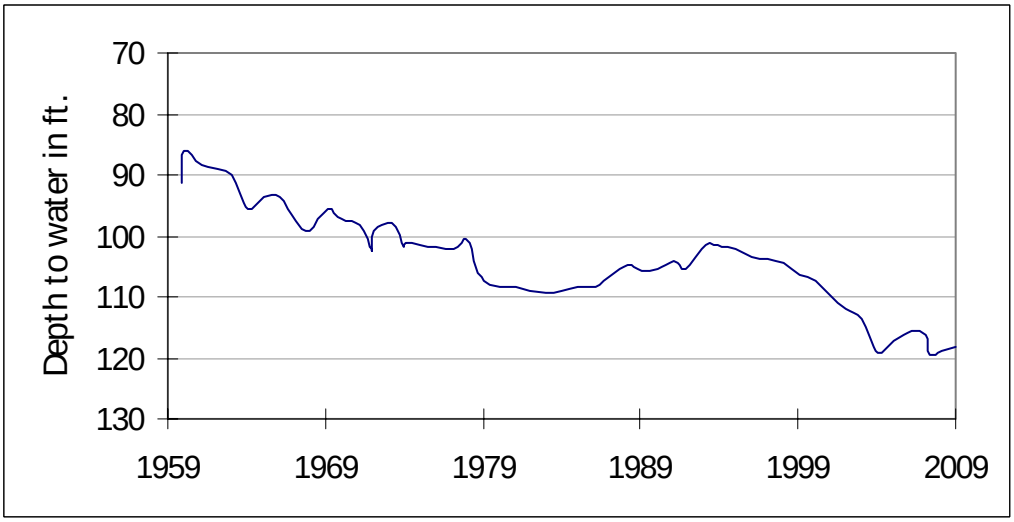
***** Water levels below the red line indicate Edwards Aquifer Authority Stage 1 drought restrictions. *****

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 47-17-206
Hudspeth County



This water level observation well, located 11 miles southwest of Pine Springs, at an elevation of 3699 feet ASL, was completed in the Capitan Reef Complex Aquifer. Water is contained in solution cavities and fractures that are unevenly distributed within several formations throughout the aquifer. Water level declines have occurred in some areas as a result of localized production.

TEXAS WATER DEVELOPMENT BOARD
1700 N. CONGRESS AVE.
P.O. BOX 13231
AUSTIN TX 78711-3231