

Texas Water Development Board



WATER Conditions

RESERVOIR STORAGE

February 2011

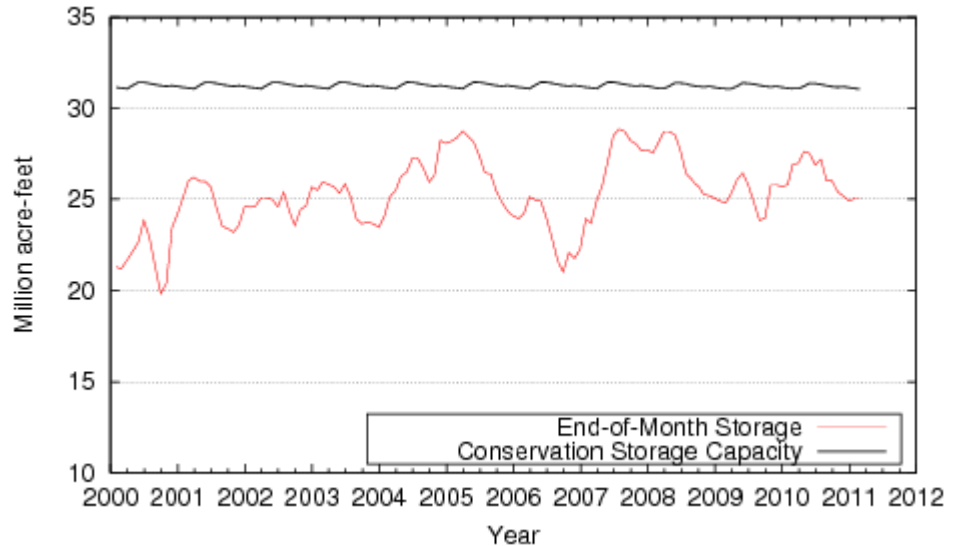
At the end of February, total storage in the state's 109 major reservoirs was at 25.05 million acre-feet*, or 81% of the total conservation storage capacity. This is within 0.005 million acre-feet of a month ago.

Storage was at 100% in 14 reservoirs, three more than last month. Six lakes were at or below 10% full: O. C. Fisher Lake Reservoir and Lake Meredith (total) were effectively empty, E.V. Spence Reservoir was at 3%, Hords Creek Lake at 4%, Lake J. B. Thomas at 5%, and Lake Electra was at 6% full.

One region had combined storage above 90%: Southern 94%. The High Plains (5%) and Trans-Pecos regions (25%) remained very low. Over the month, storage increased in the North Central and East regions, remained steady in the Trans-Pecos and decreased in the others. Over the 12-month period, storage increased in 3 and decreased in 6 regions.

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

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS



Figures are based on the 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. Reservoirs with a conservation storage capacity of 5,000 acre-feet or greater are included.

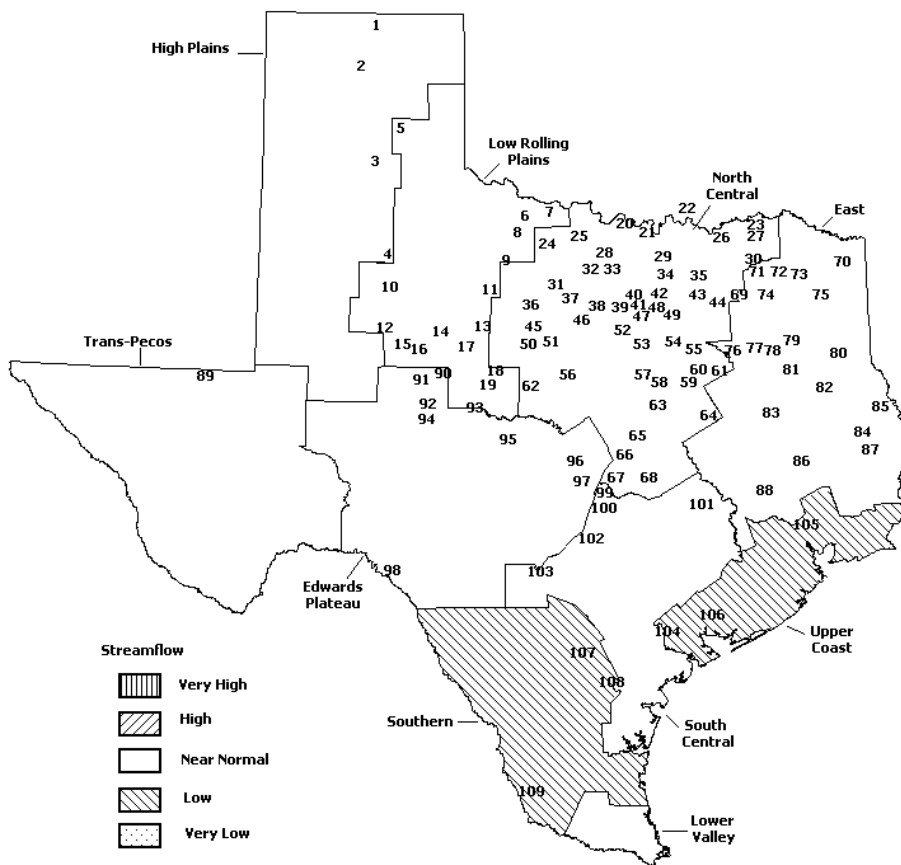
STREAMFLOW

Of 29 reporting index stations in February, computed 30-day mean flows were low (70% - 95%) at 10 stations, very high (0% - 5%) at 1 region, and near normal (30% - 70%) at the remaining 18 stations. Compared to January, flows have increased at 12 index stations and decreased at 16 stations.

On a regional basis, flows in February were low in the Upper Coast and Southern regions, and near normal everywhere else. Streamflow in the Lower Valley region is not monitored.

FEBRUARY 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. Waxahachie, 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. Murvail, 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. Brady 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 January 2011		Change since Late February 2010		
		Capacity (acre-feet)	Late Feb. (acre-feet)	2011 (%)	(acre-feet)	(%)	(acre-feet)	(%)
HIGH PLAINS								
Palo Duro Reservoir	1	60,897	11,080	18	-1,052	-2	10,798	18
Meredith, Lake (Texas)	2	500,000	3,953	1	325	0	-26,777	-5
Meredith, Lake (Texas & Oklahoma)	(2)	779,556	3,953	1	325	0	-26,777	-3
MacKenzie Reservoir	3	46,429	5,944	13	-59	0	243	1
White River Lake	4	29,880	9,991	33	-116	0	7,054	24
TOTAL		637,206	30,968	5	-902	0	-8,682	-1
LOW ROLLING PLAINS								
Greenbelt Lake	5	59,500	16,221	27	51	0	471	1
*Electra, Lake	6	5,626	355	6	-12	0	-301	-5
N. Fork Buffalo Crk Reservoir	7	15,400	5,767	37	-97	-1	-155	-1
Kemp, Lake	8	245,308	236,573	96	-2,711	-1	47,404	19
Millers Creek Reservoir	9	27,888	18,497	66	-265	-1	3,827	14
Alan Henry Reservoir	10	94,808	88,571	93	-257	0	3,563	4
Stamford, Lake	11	51,570	49,488	96	-595	-1	6,863	13
J B Thomas, Lake	12	199,931	10,042	5	-548	0	-29	0
Fort Phantom Hill, Lake	13	70,030	57,647	82	-203	0	4,741	7
Sweetwater, Lake	14	10,006	5,510	55	-4	0	-515	-5
Colorado City, Lake	15	31,793	14,433	45	-203	-1	-3,265	-10
Champion Creek Reservoir	16	41,618	6,763	16	-34	0	-1,035	-2
Abilene, Lake	17	6,099	4,658	76	-20	0	1,484	24
Coleman, Lake	18	38,076	20,822	55	-179	0	-3,103	-8
Hords Creek Lake	19	5,684	241	4	-62	-1	-1,188	-21
TOTAL		903,337	535,588	59	-5,139	-1	58,762	7
NORTH CENTRAL								
Nocona, Lake (Farmers Crk)	20	21,445	18,458	86	12	0	-2,987	-14
Hubert H Moss Lake	21	24,058	24,058	100	193	1	0	0
Texoma, Lake (Texas)	22	1,185,688	1,172,643	99	-18,382	-2	-13,045	-1
Texoma, Lake (Texas & Oklahoma)	(22)	2,371,376	2,345,287	99	-36,764	-2	-26,089	-1
*Pat Mayse Lake	23	117,844	102,180	87	-1,158	-1	-15,920	-14
Kickapoo, Lake	24	85,825	67,960	79	-671	-1	11,268	13
Arrowhead, Lake	25	235,997	191,619	81	-378	0	26,119	11
Bonham, Lake	26	11,026	10,131	92	-113	-1	-895	-8
Crook, Lake	27	9,195	8,926	97	734	8	-269	-3
Amon G Carter, Lake	28	19,903	17,610	88	130	1	-2,293	-12
Ray Roberts, Lake	29	798,758	764,244	96	3,134	0	-34,514	-4
Jim Chapman Lake (Cooper)	30	260,332	147,495	57	1,984	1	-112,837	-43
Graham, Lake	31	45,260	42,487	94	237	1	0	0
*Lost Creek Reservoir	32	11,950	10,979	92	-7	0	-971	-8
Bridgeport, Lake	33	366,236	319,845	87	-3,564	-1	-12,056	-3
Lewisville Lake	34	563,228	548,028	97	800	0	4,040	1
Lavon Lake	35	443,844	349,846	79	6,155	1	-93,998	-21
Hubbard Creek Reservoir	36	318,067	190,792	60	-223	0	-25,070	-8
Possum Kingdom Lake	37	540,340	516,093	96	487	0	-3,728	-1
*Mineral Wells, Lake	38	7,065	6,385	90	30	0	-680	-10
Weatherford, Lake	39	17,789	14,547	82	-39	0	-4,086	-23
Eagle Mountain Lake	40	179,880	164,898	92	913	1	-17,602	-10
Worth, Lake	41	24,500	19,085	78	-228	-1	-5,415	-22
Grapevine Lake	42	164,702	157,721	96	2,626	2	-6,981	-4
Ray Hubbard, Lake	43	452,040	396,426	88	3,774	1	-55,614	-12
New Terrell City Lake	44	8,583	7,655	89	403	5	-928	-11
Daniel, Lake	45	9,435	4,481	47	17	0	118	1
Palo Pinto, Lake	46	26,827	21,933	82	-332	-1	-5,217	-19
Benbrook Lake	47	85,648	84,418	99	1,700	2	-1,230	-1
Arlington, Lake	48	40,156	38,475	96	-286	-1	-170	0

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 January 2011		Change since Late February 2010		
			Late Feb. (acre-feet)	2011 (%)	(acre-feet)	(%)	(acre-feet)	(%)	
NORTH CENTRAL (Continue)									
Joe Pool Lake	49	142,861	142,861	100	0	0	0	0	
*Cisco, Lake	50	26,000	14,104	54	-58	0	-2,636	-10	
Leon, Lake	51	26,421	16,106	61	-112	0	-2,502	-9	
Granbury, Lake	52	128,046	127,064	99	5,512	4	2,039	2	
Pat Cleburne, Lake	53	26,008	24,615	95	47	0	-1,115	-4	
Waxahachie, Lake	54	10,779	9,478	88	506	5	-1,301	-12	
Bardwell Lake	55	46,122	46,122	100	0	0	0	0	
Proctor Lake	56	55,457	31,823	57	-362	-1	-10,705	-19	
Whitney, Lake	57	553,349	374,919	68	-4,921	-1	-144,770	-26	
Aquilla Lake	58	44,460	44,247	100	1,035	2	-845	-2	
Navarro Mills Lake	59	49,826	49,826	100	0	0	-5,991	-12	
*Halbert, Lake	60	6,033	3,827	63	-84	-1	-1,563	-26	
Richland-Chambers Reservoir	61	1,087,839	1,010,467	93	0	0	-93,349	-9	
*Brownwood, Lake	62	131,429	78,211	60	-800	-1	-15,299	-12	
Waco, Lake	62	198,943	198,943	100	1,251	1	0	0	
Limestone, Lake	64	208,015	180,364	87	-460	0	-27,407	-13	
Belton Lake	65	435,225	400,019	92	922	0	-35,206	-8	
Stillhouse Hollow Lake	66	227,771	227,771	100	0	0	0	0	
Georgetown, Lake	67	36,823	33,208	90	-1,180	-3	-3,615	-10	
Granger Lake	68	50,779	50,779	100	1,950	4	1,838	4	
Tawakoni, Lake	69	888,126	788,667	89	6,938	1	-99,459	-11	
TOTAL		10,455,933	9,272,839	89	8,132	0	-816,847	-8	
EAST									
Wright Patman Lake	70	122,593	122,593	100	0	0	0	0	
*Sulphur Springs, Lake	71	17,838	10,983	62	1,018	6	-6,855	-38	
Cypress Springs, Lake	72	66,756	64,422	97	0	0	-3,267	-5	
Bob Sandlin, Lake	73	200,579	175,734	88	3,374	2	-24,845	-12	
Fork Reservoir, Lake	74	604,927	525,241	87	8,777	1	-79,686	-13	
O the Pines, Lake	75	238,933	238,933	100	1,147	0	0	0	
Cedar Creek Reservoir in Trinity	76	644,686	570,496	88	9,384	1	-74,190	-12	
Athens, Lake	77	29,435	28,341	96	682	2	-1,094	-4	
Palestine, Lake	78	370,907	343,650	93	6,799	2	-27,257	-7	
Tyler, Lake	79	73,256	67,515	92	1,179	2	-5,741	-8	
Murvault, Lake	80	38,284	33,148	87	547	1	-5,136	-13	
Jacksonville, Lake	81	25,670	24,312	95	468	2	-5,988	-23	
Nacogdoches, Lake	82	39,521	29,465	75	-140	0	-10,056	-25	
Houston County Lake	83	17,113	16,744	98	444	3	-369	-2	
Sam Rayburn Reservoir	84	2,857,077	2,064,967	72	47,008	2	-792,110	-28	
Toledo Bend Reservoir (Texas)	85	2,236,450	1,631,770	73	13,932	1	-578,692	-26	
Toledo Bend Reservoir (TX & LA)	(85)	4,472,900	3,263,540	73	27,864	1	-1,157,385	-26	
*Livingston, Lake	86	1,741,867	1,741,867	100	0	0	0	0	
B A Steinhagen Lake	87	66,966	52,779	79	-961	-1	1,661	2	
Conroe, Lake	88	416,188	388,698	93	0	0	-27,490	-7	
TOTAL		9,809,046	8,131,658	83	93,658	1	-1,641,115	-17	
TRANS-PECOS									
Red Bluff Reservoir	89	289,670	71,962	25	120	0	-925	0	
TOTAL		289,670	71,962	25	120	0	-925	0	

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 January 2011		Change since Late February 2010		
			Late Feb. (acre-feet)	2011 (%)	(acre-feet)	(%)	(acre-feet)	(%)	
EDWARDS PLATEAU									
Oak Creek Reservoir	90	39,260	22,615	58	-126	0	-1,333	-3	
E V Spence Reservoir	91	517,272	13,051	3	-950	0	-11,503	-2	
O C Fisher Lake	92	79,483	0	0	0	0	0	0	
*O H Ivie Reservoir	93	554,335	174,287	31	-2,866	-1	-67,030	-12	
Twin Buttes Reservoir	94	177,850	20,137	11	74	0	-13,439	-8	
Brady Creek Reservoir	95	29,110	12,778	44	-87	0	-4,085	-14	
Buchanan, Lake	96	875,610	661,555	76	-5,182	-1	69,457	8	
Lyndon B Johnson, Lake	97	113,323	112,351	99	668	1	397	0	
*Amistad Reservoir (Texas)	98	1,840,849	1,841,000	100	0	0	106,000	6	
*Amistad Reservoir (TX & Mexico)	(98)	3,275,532	3,275,532	100	0	0	108,532	3	
TOTAL		4,227,092	2,857,774	68	-8,469	0	78,464	2	
SOUTH CENTRAL									
Travis, Lake	99	1,113,255	851,072	76	-28,822	-3	-189,561	-17	
*Austin, Lake	100	21,804	20,790	95	13,567	62	-272	-1	
Somerville Lake	101	147,104	127,229	86	-414	0	-19,875	-14	
Canyon Lake	102	378,781	366,166	97	-2,903	-1	-12,615	-3	
Medina Lake	103	254,823	159,568	63	-4,626	-2	64,212	25	
*Coletto Creek Reservoir	104	31,040	31,040	100	0	0	0	0	
TOTAL		1,946,807	1,555,865	80	-23,198	-1	-158,111	-8	
UPPER COAST									
Houston, Lake	105	128,863	128,863	100	0	0	0	0	
Texana, Lake	106	153,246	120,926	79	-6,787	-4	-32,320	-21	
TOTAL		282,109	249,789	89	-6,787	-2	-32,320	-11	
SOUTHERN									
Choke Canyon Reservoir	107	695,262	550,411	79	-3,621	-1	60,253	9	
Corpus Christi, Lake	108	256,961	222,442	87	-3,892	-2	62,656	24	
*Falcon Reservoir (Texas)	109	1,551,034	1,568,000	101	-48,000	-3	529,000	34	
*Falcon Reservoir (TX & Mexico)	(109)	2,646,817	2,520,000	95	29,000	1	751,000	28	
TOTAL		2,503,257	2,340,853	94	-55,513	-2	651,909	26	
STATE TOTAL		31,054,457	25,047,296	81	1,902	0	-1,868,865	-6	

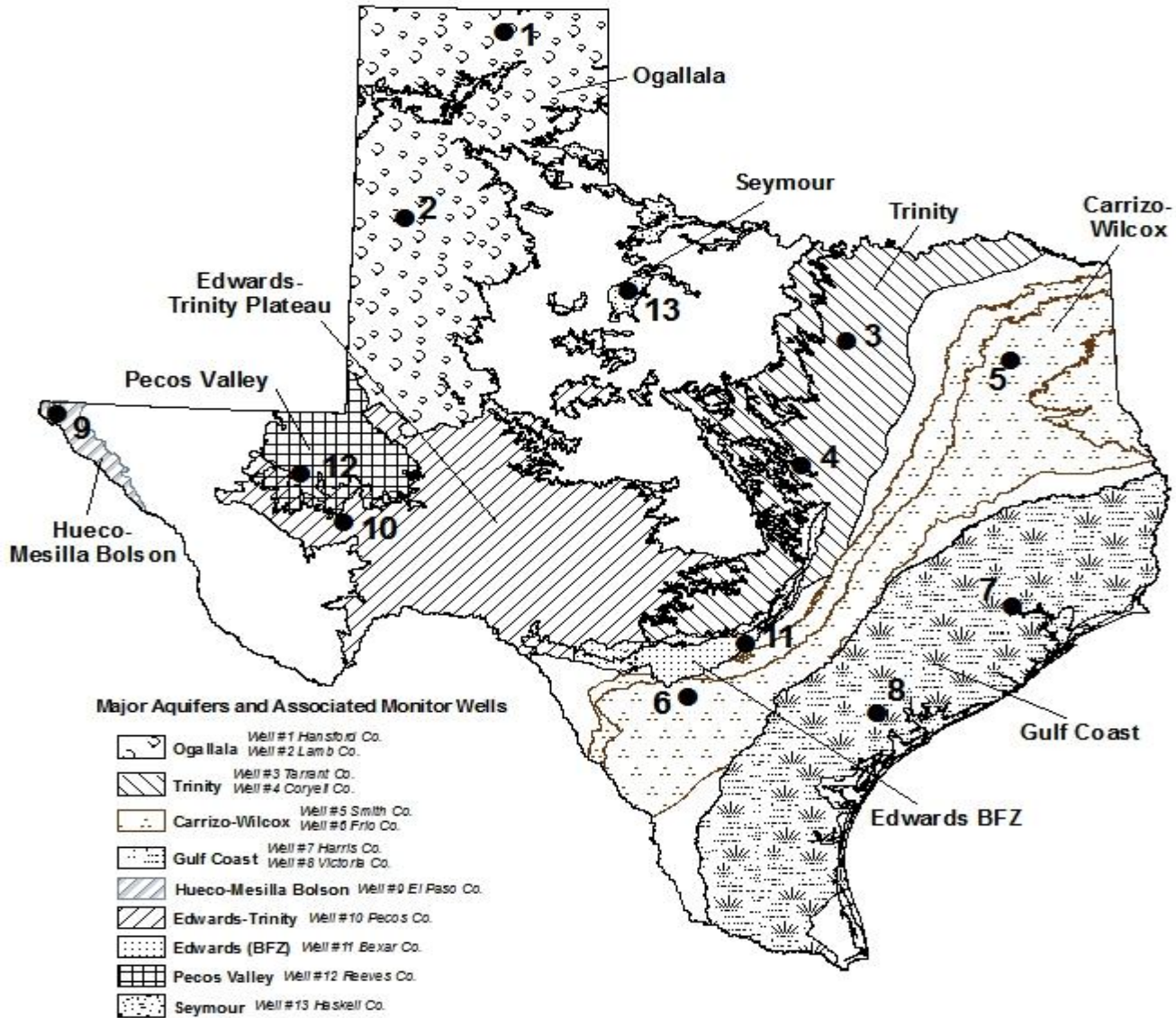
* Conservation volume is used as conservation storage capacity because the dead storage is unknown.

Notes:

The large monthly increase (62%) in Lake Austin's storage was due to restoration of its water level after maintenance work.

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.

GROUNDWATER LEVELS IN OBSERVATION WELLS



February, 2011

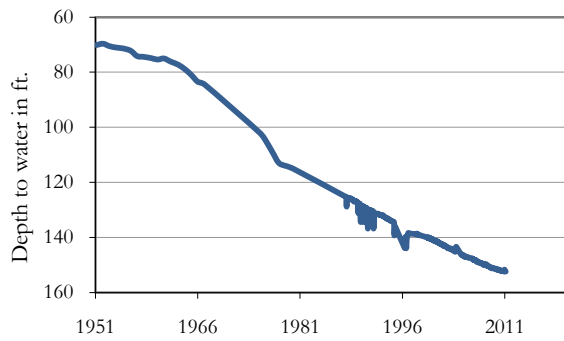
Water level measurements were available for all 13 key monitoring wells. Water levels rose in 7 of the 12 monitoring wells since the beginning of February ranging from 0.09 feet in the Haskell County Seymour Aquifer well to 1.83 feet in the Pecos County Edwards-Trinity Aquifer well. Water levels declined in the remaining monitoring wells, ranging from 0.05 feet in the Lamb County Ogallala Aquifer and Victoria County Gulf Coast Aquifer wells to 2.65 feet in the Bexar County J-17 Edwards Aquifer well. The J-17 well in San Antonio recorded a water level of 61.56 feet below land surface. This water level is 9.44 feet above the Stage 1 critical management level.

	(1) Hansford 0354301	(2) Lamb 1053602	(3) Tarrant 3215504	(4) Coryell 4035404	(5) Smith 3430907	(6) Frio 7708803	(7) Harris 6514409	(8) Victoria 8017502	(9) El Paso 4913301	(10) Pecos 5216802	(11) Bexar 6837203	(12) Reeves 4644501	(13) Haskell 2135748
February 2011	152.44	139.16	446.41	479.83	431.37	390.21	195.32	32.68	291.41	191.88	61.56	143.92	43.62
January 2011	152.30	139.11	446.80	480.32	432.18	N/A	195.89	32.63	291.51	193.71	58.91	142.53	43.71
Month Change	-0.14	-0.05	0.39	0.49	0.81	N/A	0.57	-0.05	0.1	1.83	-2.65	-1.39	0.09
Year Change	-0.68	-1.74	-4.48	-3.54	-0.49	-25.01	8.95	-0.08	0.91	-12.6	-12.44	-1.96	-0.18
Historical Change	-82.32	-111.01	-68.41	-187.83	-65.37	-110.21	-59.82	1.32	-59.51	55	-14.92	-51.83	-2.29

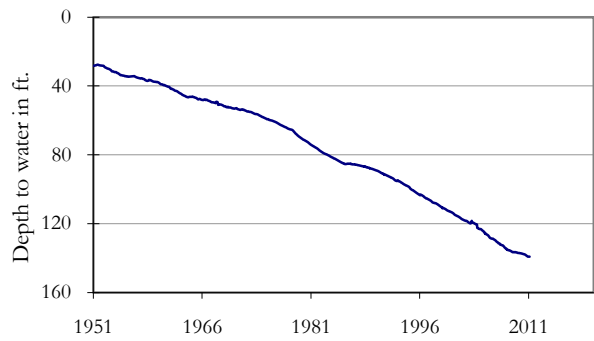
* ID is used in this publication to differentiate between the monitoring well number (1 - 13) as displayed on the aquifer map and the TWDB's six- or seven-digit state well "identification" number.

FEBRUARY GROUNDWATER LEVELS IN OBSERVATION WELLS

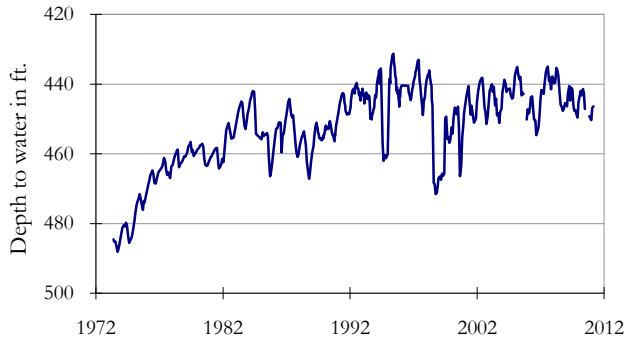
(1) State Well ID 03-54-301
Near Spearman, Hansford County
Ogallala Aquifer



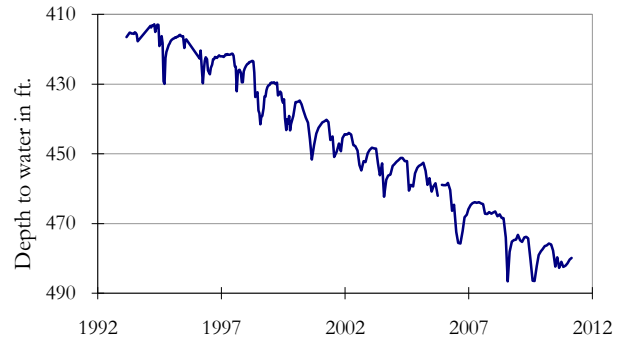
(2) State Well ID 10-53-602
Near Earth, Lamb County
Ogallala Aquifer



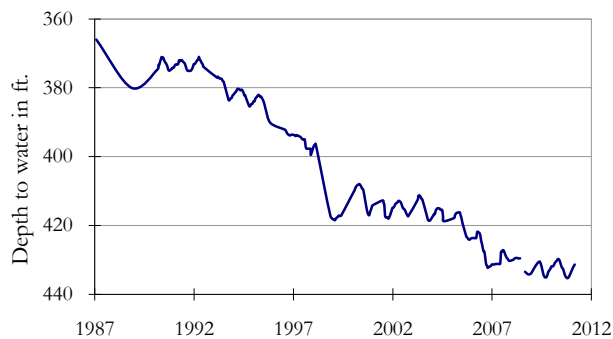
(3) State Well ID 32-15-504
Near Hurst, Tarrant County
Paluxy Formation-Trinity Aquifer



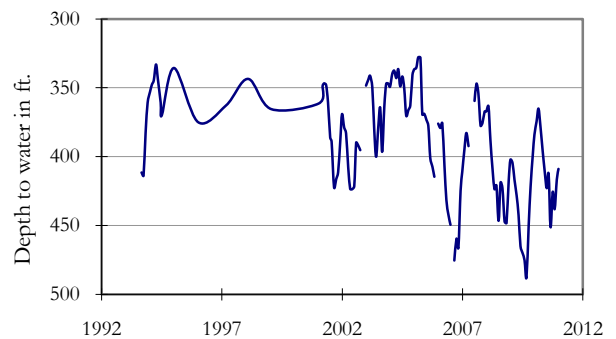
(4) State Well ID 40-35-404
Gatesville, Coryell County
Hosston Formation-Trinity Aquifer



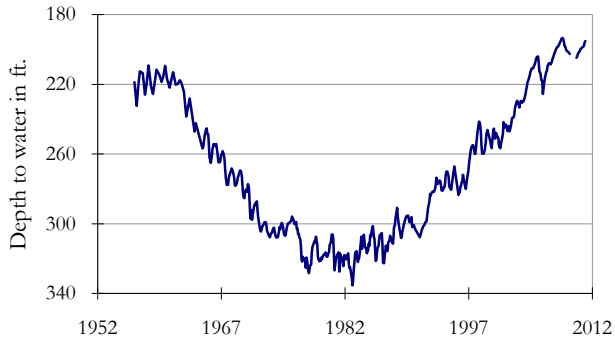
(5) State Well ID 34-30-907
Red Springs, Smith County
Carrizo-Wilcox Aquifer



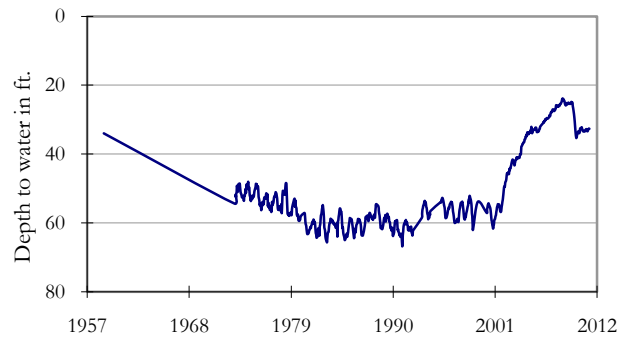
(6) State Well ID 77-08-803
Pearsall, Frio County
Carrizo-Wilcox Aquifer



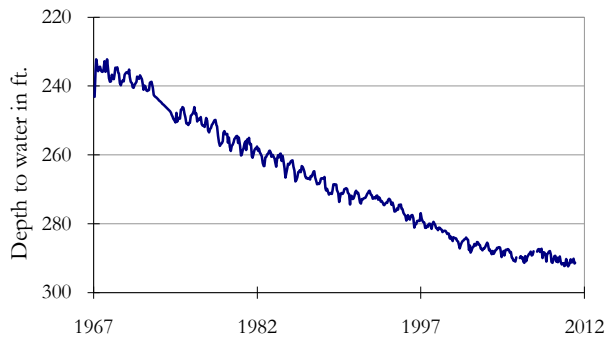
(7) State Well ID 65-14-409
Aliief, Harris County
Evangeline Formation-Gulf Coast Aquifer



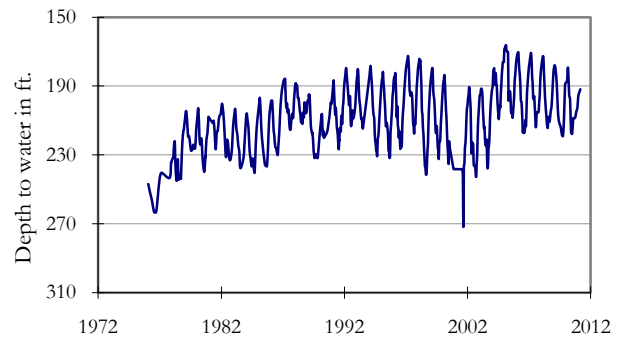
(8) State Well ID 80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



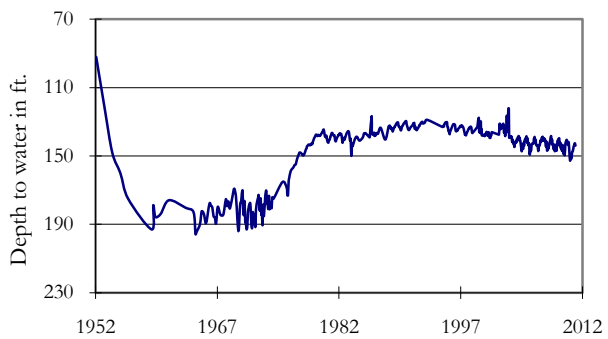
(9) State Well ID 49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolson Aquifer



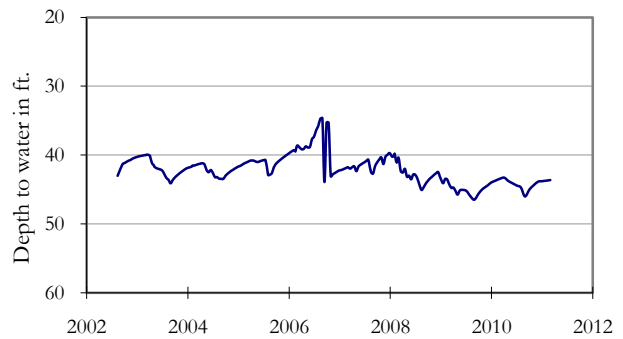
(10) State Well ID 52-16-802
Fort Stockton, Pecos County
Edwards-Trinity (Plateau) Aquifer



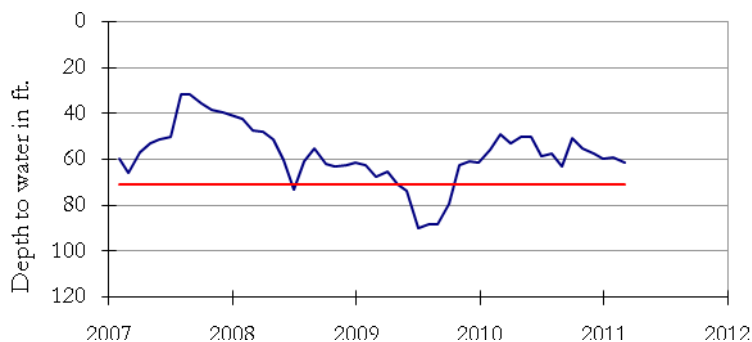
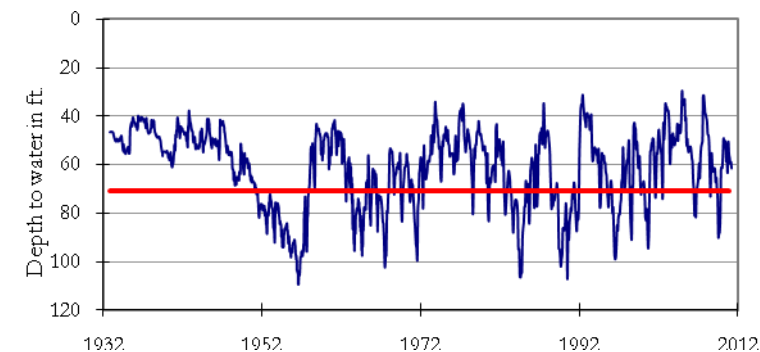
(12) State Well ID 46-44-501
Near Pecos, Reeves County
Pecos Valley Aquifer



(13) State Well ID 21-35-748
Near O'Brien, Haskell County
Seymour Aquifer



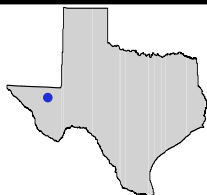
**(11) State Well ID 68-37-203 (J-17)
In San Antonio, Bexar County
Edwards (BFZ) Aquifer**



The late February water level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 61.56 feet below land surface. This was 2.65 feet below last month's measurement, 12.44 feet below last year's measurement, and 14.92 feet below the initial measurement recorded in 1932.

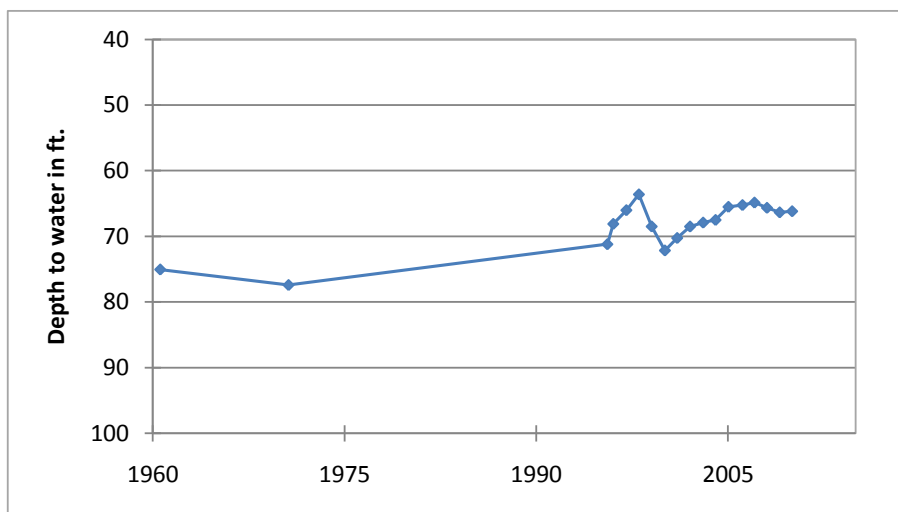
***** Water levels below the red line indicate Edwards Aquifer Authority Stage 1 drought restrictions. *****

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.

**State Well ID 4754201
Culberson County**



This Rustler Aquifer water level observation well is located 34 miles northeast of Van Horn at an elevation of 3,756 feet above sea level. No significant water level declines have been observed in this well. The Rustler Aquifer consists of dolomite, limestone, and gypsum of the Rustler Formation, which extends into the subsurface toward the center of the Delaware Basin to the east. Although some parts of the aquifer produce fresh water containing less than 1,000 milligrams per liter of total dissolved solids, the water is generally slightly to moderately saline and contains total dissolved solids ranging between 1,000 and 4,600 milligrams per liter.

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