

Texas Water Development Board



W **A** **T** **E** **R**
Conditions

RESERVOIR STORAGE

August 2010

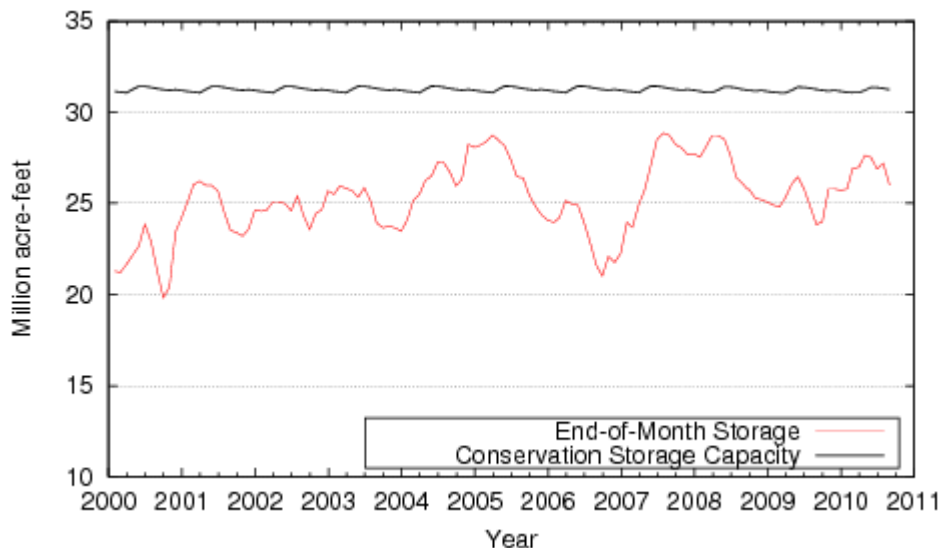
By the end of August, total storage in the state's 109 major reservoirs was 1.2 million acre-feet less than a month ago, at 26 million acre-feet in conservation storage. This is 4 % lower than last month, at 83% full*.

Storage was at 100% in only 5 reservoirs, including both international Amistad and Falcon reservoirs, Lake Kemp, Lake Stamford, and Lake Houston. This is 14 less than last month. Five lakes were at or below 10% full: O. C. Fisher Lake Reservoir was effectively empty, Lake Meredith (total) was at 2%, E.V. Spence Reservoir was at 4%, Lake J. B. Thomas was at 7%, and Electra Lake at 9% full.

Three regions had combined storage above 90%: Upper Coast 96%, Southern 95%, and North Central 90%. The High Plains (8%) and Trans-Pecos regions (17%) remained very low. Storage decreased in all regions over the month. Compared to last August, storage increased in 7 regions but decreased in 2 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.

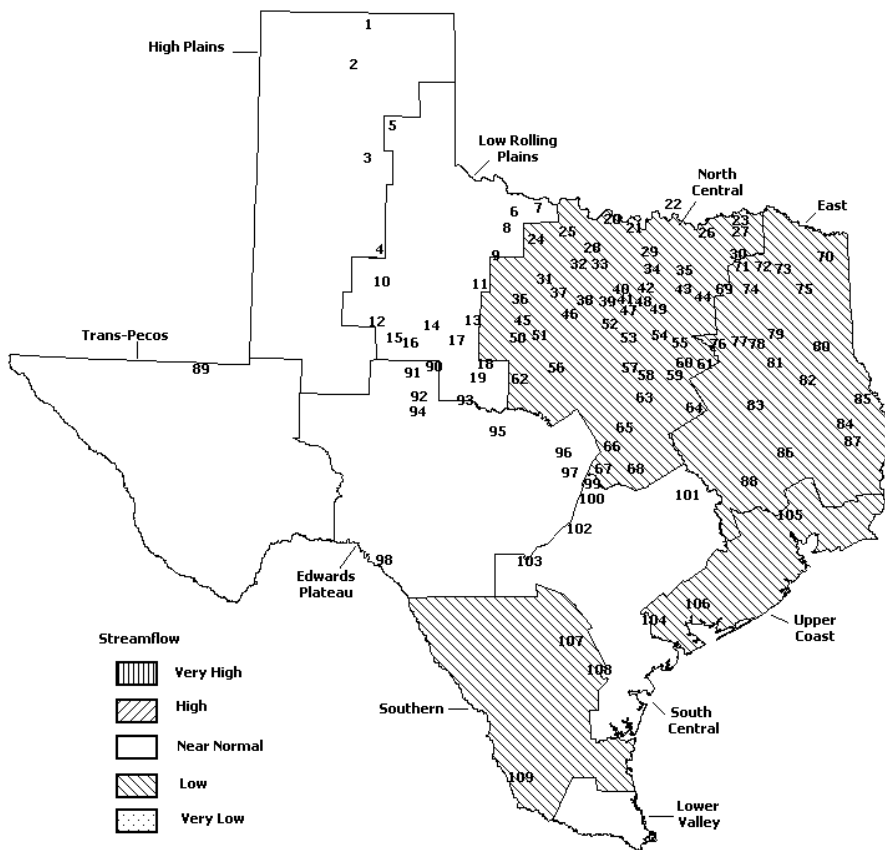
STREAMFLOW

Of 29 reporting index stations in August, computed 31-day mean flows were high (5% - 30%) at 1 stations, low (70% - 95%) at 15 stations, very low (> 95%) at 1 stations, and near normal (30% - 70%) at the remaining 12 stations. Compared to July, flows have increased at 1 index station and decreased at 28 stations.

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

AUGUST 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. Coleta 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 July 2010		Change since Late August 2009		
		Capacity (acre-feet)	Late Aug. (acre-feet)	2010 (%)	(acre-feet)	(%)	(acre-feet)	(%)
HIGH PLAINS								
Palo Duro Reservoir	1	60,897	21,126	35	-3,628	-6	20,401	34
Meredith, Lake (Texas)	2	500,000	14,877	3	-4,692	-1	-25,125	-5
Meredith, Lake (Texas & Oklahoma)	(2)	779,556	14,877	2	-4,692	-1	-25,125	-3
MacKenzie Reservoir	3	46,429	6,454	14	-376	-1	252	1
White River Lake	4	29,880	10,143	34	-742	-2	6,189	21
TOTAL		637,206	52,600	8	-9,438	-1	1,717	0
LOW ROLLING PLAINS								
Greenbelt Lake	5	59,500	17,220	29	-1,003	-2	609	1
*Electra, Lake	6	5,626	530	9	-123	-2	12	0
N. Fork Buffalo Crk Reservoir	7	15,400	6,028	39	-571	-4	1,634	11
Kemp, Lake	8	245,308	245,308	100	0	0	95,442	39
Millers Creek Reservoir	9	27,888	20,022	72	-1,505	-5	6,736	24
Alan Henry Reservoir	10	94,808	93,894	99	-914	-1	4,161	4
Stamford, Lake	11	51,570	51,570	100	0	0	14,777	29
J B Thomas, Lake	12	199,931	13,968	7	-1,306	-1	2,941	1
Fort Phantom Hill, Lake	13	70,030	61,154	87	-3,298	-5	11,660	17
Sweetwater, Lake	14	10,006	6,088	61	-438	-4	-59	-1
Colorado City, Lake	15	31,793	15,842	50	-615	-2	-2,802	-9
Champion Creek Reservoir	16	41,618	7,118	17	-243	-1	-1,012	-2
Abilene, Lake	17	6,099	5,770	95	-282	-5	3,587	59
Coleman, Lake	18	38,076	23,338	61	-1,203	-3	195	1
Hords Creek Lake	19	5,684	768	14	-256	-5	-885	-16
TOTAL		903,337	568,618	63	-11,757	-1	136,996	15
NORTH CENTRAL								
Nocona, Lake (Farmers Crk)	20	21,445	19,604	91	-1,627	-8	372	2
Hubert H Moss Lake	21	24,058	23,011	96	-523	-2	720	3
Texoma, Lake (Texas)	22	1,248,903	1,219,495	98	-66,918	-5	-11,357	-1
Texoma, Lake (Texas & Oklahoma)	(22)	2,497,806	2,438,990	98	-133,836	-5	-22,714	-1
*Pat Mayse Lake	23	117,844	108,176	92	-5,312	-5	-9,690	-8
Kickapoo, Lake	24	85,825	77,326	90	-5,261	-6	37,015	43
Arrowhead, Lake	25	235,997	204,135	86	-15,693	-7	48,312	20
Bonham, Lake	26	11,026	9,456	86	-891	-8	216	2
Crook, Lake	27	9,195	7,531	82	-500	-5	-1,137	-12
Amon G Carter, Lake	28	19,903	19,220	97	-683	-3	3,177	16
Ray Roberts, Lake	29	798,758	753,755	94	-17,614	-2	-11,345	-1
Jim Chapman Lake (Cooper)	30	260,332	191,371	74	-23,197	-9	-35,898	-14
Graham, Lake	31	45,260	41,444	92	-2,352	-5	6,646	15
*Lost Creek Reservoir	32	11,950	11,559	97	-318	-3	2,193	18
Bridgeport, Lake	33	366,236	348,589	95	-17,647	-5	105,815	29
Lewisville Lake	34	563,228	493,215	88	-40,742	-7	15,627	3
Lavon Lake	35	443,844	340,773	77	-41,804	-9	-41,804	-9
Hubbard Creek Reservoir	36	318,067	199,503	63	-9,477	-3	-19,957	-6
Possum Kingdom Lake	37	540,340	517,551	96	-4,863	-1	54,490	10
*Mineral Wells, Lake	38	7,065	6,313	89	-511	-7	758	11
Weatherford, Lake	39	17,789	16,326	92	-1,120	-6	2,684	15
Eagle Mountain Lake	40	179,880	166,973	93	-12,475	-7	22,954	13
Worth, Lake	41	24,500	22,176	91	68	0	5,471	22
Grapevine Lake	42	164,702	154,326	94	-6,580	-4	10,119	6
Ray Hubbard, Lake	43	452,040	370,118	82	-29,287	-6	-56,434	-12
New Terrell City Lake	44	8,583	7,317	85	-512	-6	-322	-4
Daniel, Lake	45	9,435	5,343	57	-557	-6	756	8
Palo Pinto, Lake	46	26,827	21,043	78	-2,760	-10	13,515	50
Benbrook Lake	47	85,648	69,712	81	-10,040	-12	6,421	7
Arlington, Lake	48	40,156	32,886	82	-5,570	-14	3,337	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 July 2010		Change since Late August 2009		
			Late Aug. (acre-feet)	2010 (%)	(acre-feet)	(%)	(acre-feet)	(%)	
NORTH CENTRAL (Continue)									
Joe Pool Lake	49	142,861	136,809	96	-5,683	-4	1,255	1	
*Cisco, Lake	50	26,000	15,069	58	-3,131	-12	-1,886	-7	
Leon, Lake	51	26,421	17,576	67	-1,141	-4	-245	-1	
Granbury, Lake	52	128,046	124,874	98	-151	0	22,883	18	
Pat Cleburne, Lake	53	26,008	22,368	86	-1,326	-5	2,959	11	
Waxahachie, Lake	54	10,779	9,248	86	-491	-5	949	9	
Bardwell Lake	55	46,122	41,703	90	-2,562	-6	3,327	7	
Proctor Lake	56	55,457	38,994	70	-5,368	-10	10,867	20	
Whitney, Lake	57	553,349	498,470	90	-26,200	-5	173,689	31	
Aquilla Lake	58	44,460	39,783	89	-2,889	-6	2,561	6	
Navarro Mills Lake	59	49,826	44,881	90	-3,875	-8	-1,007	-2	
*Halbert, Lake	60	6,033	4,175	69	-499	-8	1,444	24	
Richland-Chambers Reservoir	61	1,087,839	1,025,871	94	-41,191	-4	103,045	9	
*Brownwood, Lake	62	131,429	88,342	67	-6,077	-5	-3,992	-3	
Waco, Lake	62	198,943	186,138	94	-11,388	-6	7,458	4	
Limestone, Lake	64	208,015	188,449	91	-12,125	-6	24,195	12	
Belton Lake	65	435,225	393,256	90	-14,104	-3	51,471	12	
Stillhouse Hollow Lake	66	227,771	225,983	99	-1,788	-1	21,960	10	
Georgetown, Lake	67	36,823	30,905	84	-4,558	-12	17,165	47	
Granger Lake	68	50,779	41,194	81	-2,251	-4	4,444	9	
Tawakoni, Lake	69	888,126	810,442	91	-32,909	-4	2,171	0	
TOTAL		10,519,148	9,442,777	90	-504,473	-5	597,367	6	
EAST									
Wright Patman Lake	70	262,330	246,293	94	-31,193	-12	-16,037	-6	
*Sulphur Springs, Lake	71	17,838	12,192	68	-914	-5	-5,646	-32	
Cypress Springs, Lake	72	66,756	63,591	95	-2,110	-3	-4,029	-6	
Bob Sandlin, Lake	73	200,579	182,066	91	-10,081	-5	-17,155	-9	
Fork Reservoir, Lake	74	604,927	561,269	93	-23,595	-4	-34,418	-6	
O the Pines, Lake	75	267,672	255,256	95	-12,416	-5	-11,834	-4	
Cedar Creek Reservoir in Trinity	76	644,686	597,277	93	-29,727	-5	-5,605	-1	
Athens, Lake	77	29,435	27,964	95	-1,345	-5	54	0	
Palestine, Lake	78	370,907	347,474	94	-17,565	-5	-850	0	
Tyler, Lake	79	73,256	69,857	95	-2,693	-4	4,186	6	
Murvault, Lake	80	38,284	32,247	84	-1,875	-5	-4,078	-11	
Jacksonville, Lake	81	25,670	23,743	92	-1,033	-4	-4,909	-19	
Nacogdoches, Lake	82	39,521	32,691	83	-1,995	-5	-1,110	-3	
Houston County Lake	83	17,113	16,096	94	-496	-3	1,173	7	
Sam Rayburn Reservoir	84	2,857,077	2,237,275	78	-212,927	-7	-198,512	-7	
Toledo Bend Reservoir (Texas)	85	2,236,450	1,841,120	82	-58,701	-3	-94,154	-4	
Toledo Bend Reservoir (TX & LA)	(85)	4,472,900	3,682,241	82	-117,401	-3	-188,308	-4	
*Livingston, Lake	86	1,741,867	1,707,000	98	-34,867	-2	-28,000	-2	
B A Steinhagen Lake	87	66,966	62,127	93	3,830	6	-2,218	-3	
Conroe, Lake	88	416,188	397,284	95	-11,303	-3	5,981	1	
TOTAL		9,977,522	8,712,822	87	-451,006	-5	-417,161	-4	
TRANS-PECOS									
Red Bluff Reservoir	89	289,670	50,131	17	-9,194	-3	-14,869	-5	
TOTAL		289,670	50,131	17	-9,194	-3	-14,869	-5	

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

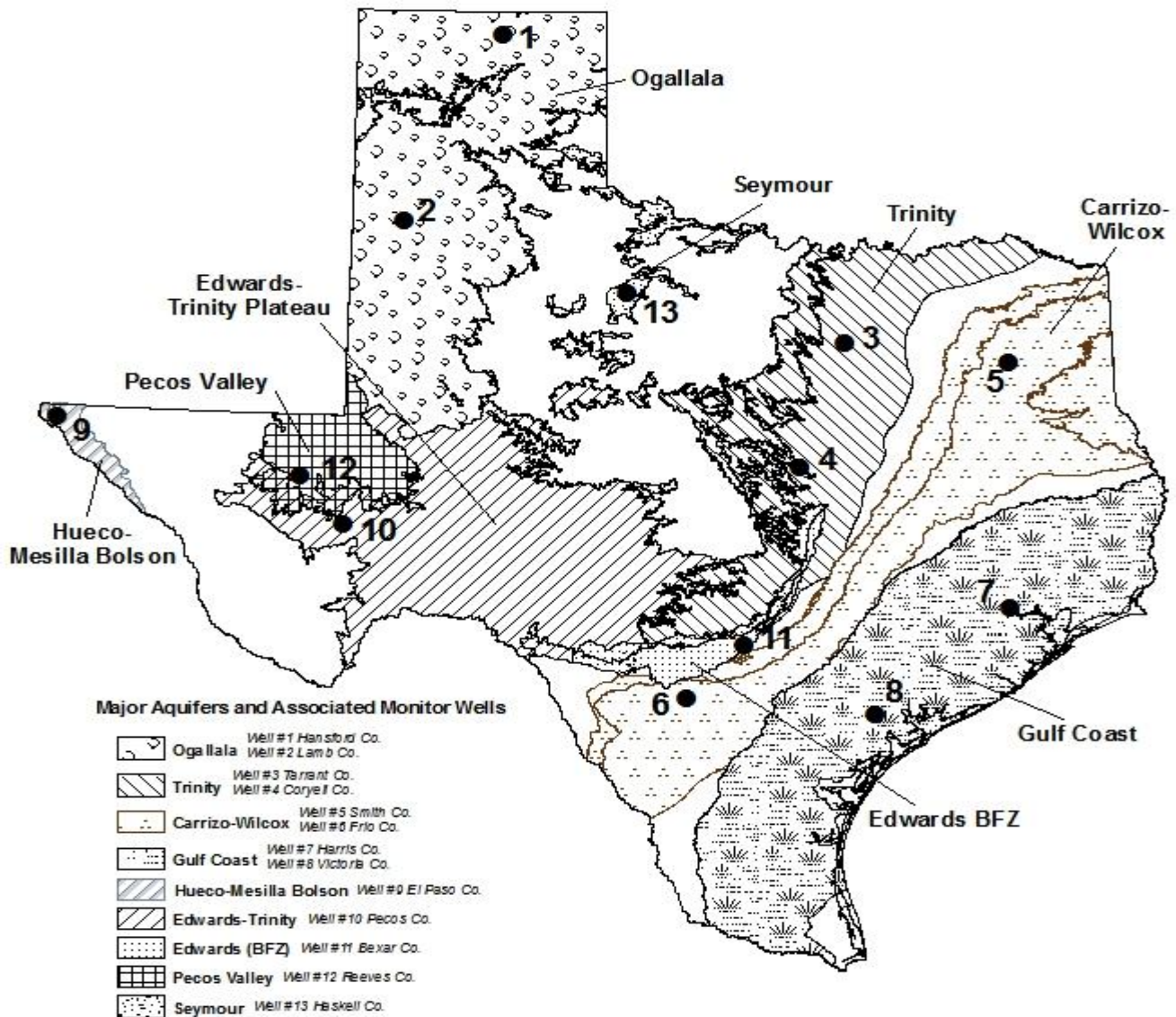
Name of Lake or Reservoir	No. on Map	Conservation Storage		2010 (%)	Change since Late July 2010		Change since Late August 2009		
		Capacity (acre-feet)	Late Aug. (acre-feet)		(acre-feet)	(%)	(acre-feet)	(%)	
EDWARDS PLATEAU									
Oak Creek Reservoir	90	39,260	23,516	60	-1,245	-3	-1,544	-4	
E V Spence Reservoir	91	517,272	20,980	4	-3,615	-1	-11,408	-2	
O C Fisher Lake	92	79,483	0	0	0	0	0	0	
*O H Ivie Reservoir	93	554,335	206,751	37	-11,983	-2	-44,995	-8	
Twin Buttes Reservoir	94	177,850	24,229	14	-6,161	-3	-4,811	-3	
Brady Creek Reservoir	95	29,110	15,017	52	-906	-3	1,418	5	
Buchanan, Lake	96	824,519	677,866	82	-22,751	-3	310,532	38	
Lyndon B Johnson, Lake	97	113,323	110,650	98	-608	-1	-83	0	
*Amistad Reservoir (Texas)	98	1,840,849	1,840,000	100	0	0	60,000	3	
*Amistad Reservoir (TX & Mexico)	(98)	3,275,532	3,275,532	100	0	0	97,532	3	
TOTAL		4,176,001	2,919,009	70	-47,269	-1	309,109	7	
SOUTH CENTRAL									
Travis, Lake	99	1,113,255	873,052	78	-82,249	-7	437,081	39	
*Austin, Lake	100	21,804	21,017	96	-76	0	287	1	
Somerville Lake	101	147,104	138,675	94	-7,788	-5	30,393	21	
Canyon Lake	102	378,781	368,827	97	-9,954	-3	106,866	28	
Medina Lake	103	254,823	177,006	69	-8,967	-4	112,019	44	
*Coletto Creek Reservoir	104	31,040	29,164	94	-1,876	-6	6,504	21	
TOTAL		1,946,807	1,607,741	83	-110,910	-6	693,150	36	
UPPER COAST									
Houston, Lake	105	128,863	128,863	100	0	0	0	0	
Texana, Lake	106	153,246	142,481	93	-10,123	-7	50,802	33	
TOTAL		282,109	271,344	96	-10,123	-4	50,802	18	
SOUTHERN									
Choke Canyon Reservoir	107	695,262	588,906	85	-18,844	-3	112,969	16	
Corpus Christi, Lake	108	256,961	234,294	91	-14,717	-6	159,481	62	
*Falcon Reservoir (Texas)	109	1,551,034	1,551,000	100	0	0	530,000	34	
*Falcon Reservoir (TX & Mexico)	(109)	2,646,817	2,646,817	100	0	0	923,817	35	
TOTAL		2,503,257	2,374,200	95	-33,561	-1	802,450	32	
STATE TOTAL		31,235,057	25,999,242	83	-1,187,731	-4	2,159,561	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 $100 * (\text{current conservation storage} - \text{past conservation storage}) / \text{conservation storage capacity}$. Figures shown are for the Texas share of conservation storage in all reservoirs.

GROUNDWATER LEVELS IN OBSERVATION WELLS



August, 2010

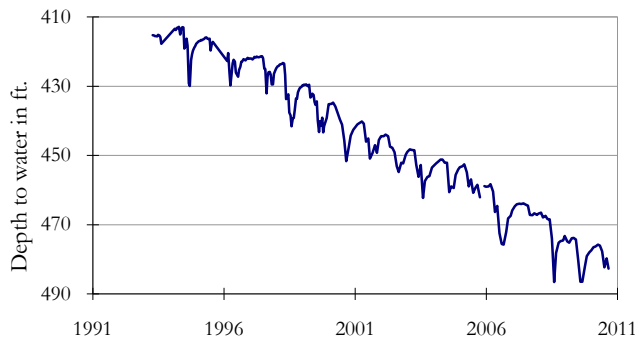
Water level measurements were available for twelve out of the thirteen key monitoring wells. Water levels rose in three of the thirteen monitoring wells since the beginning of August, ranging from 0.09 feet in the Hansford County Ogallala well to 0.60 feet in the El Paso County Hueco-Mesilla Bolson well. Water levels declined in the remaining monitoring wells, ranging from 0.06 feet in the Pecos County Edwards-Trinity Plateau well to 38.60 feet in the Frio County Carrizo-Wilcox well. The J-17 well in San Antonio recorded a water level of 63.32 feet below land surface, 5.88 feet below last month's measurement. This water level is 7.68 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
August 2010	152.17	138.32	N/A	482.68	434.34	451.11	199.49	33.47	291.37	208.76	63.32	151.62	46.00
July 2010	152.26	137.04	N/A	479.71	432.73	412.51	199.61	33.25	291.97	208.70	57.44	149.37	44.70
Month Change	0.09	-0.28	N/A	-2.97	-1.61	-38.6	0.12	-0.22	0.60	-0.06	-5.88	-2.25	-1.30
Year Change	-0.67	-1.31	N/A	3.79	0.73	36.55	N/A	-0.12	-0.69	9.49	24.77	-2.90	0.47
Historical Change	-82.05	-110.17	N/A	-190.68	-68.34	-228.89	-63.99	0.53	-59.47	38.12	-16.68	-59.93	-4.67

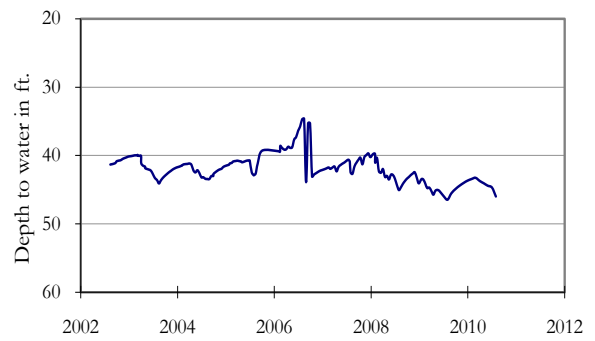
* ID is used in this publication to differentiate between the monitoring well number (1 - 13) as displayed on the aquifer map and the TWDB's six- or seven-digit state well "identification" number.

AUGUST GROUNDWATER LEVELS IN OBSERVATION WELLS

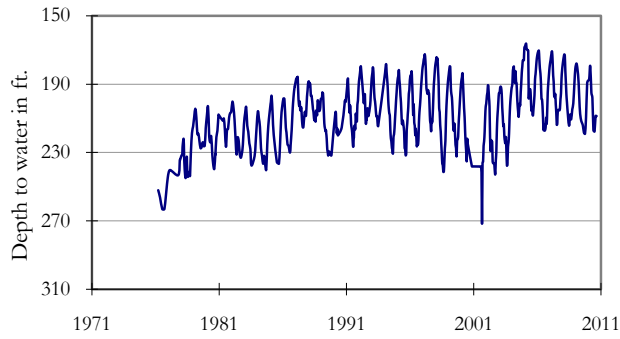
**(1) State Well ID 03-54-301
Near Spearman, Hansford County
Ogallala Aquifer**



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



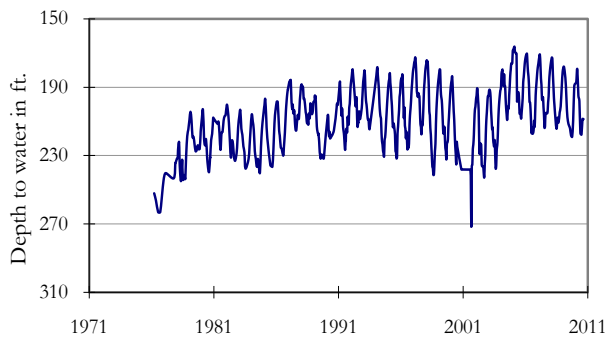
**(3) State Well ID 32-15-504
Near Hurst, Tarrant County
Paluxy Formation-Trinity Aquifer**



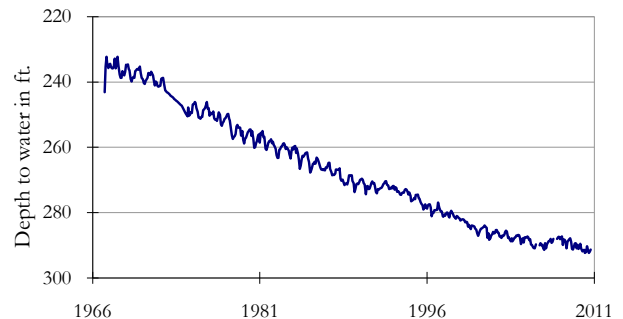
**(4) State Well ID 40-35-404
Gatesville, Coryell County
Hosston Formation-Trinity Aquifer**



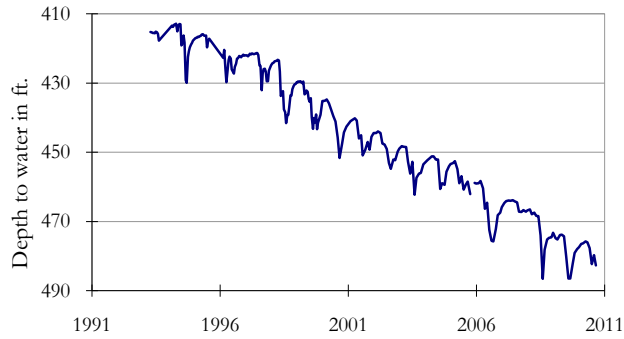
**(5) State Well ID 34-30-907
Red Springs, Smith County
Carrizo-Wilcox Aquifer**



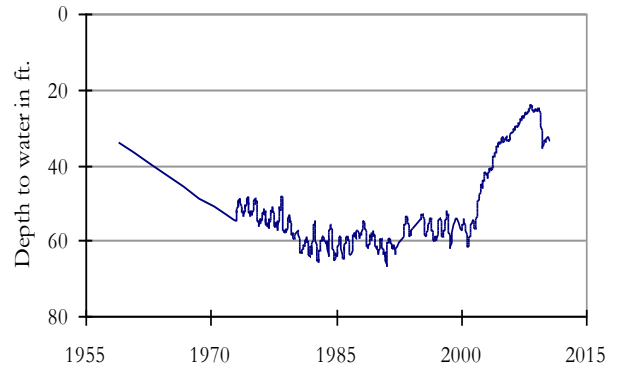
**(6) State Well ID 77-08-803
Pearsall, Frio County
Carrizo-Wilcox Aquifer**



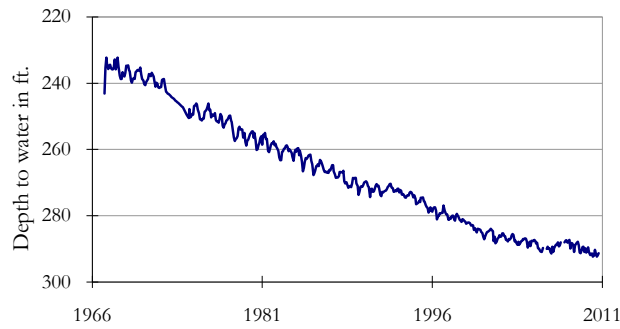
(7) State Well ID 65-14-409
Alief, Harris County
Evangeline Formation-Gulf Coast Aquifer



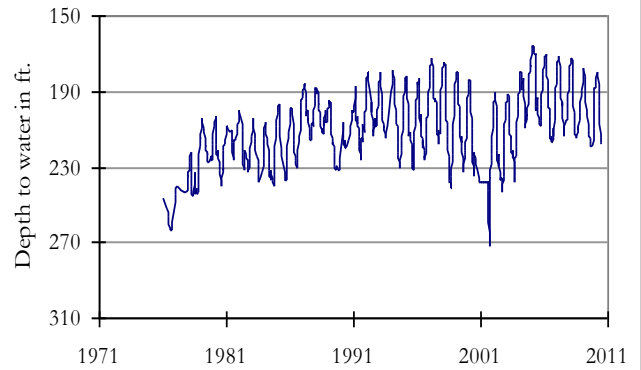
(8) State Well ID 80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



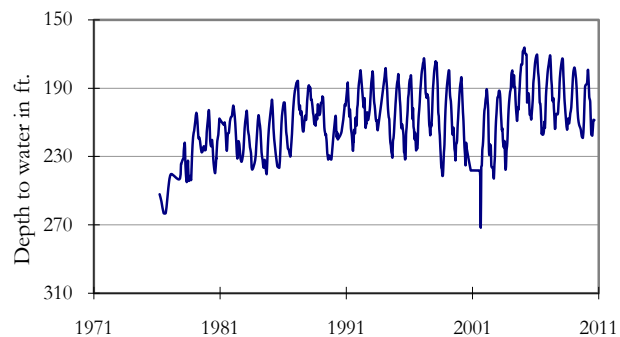
(9) State Well ID 49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolson Aquifer



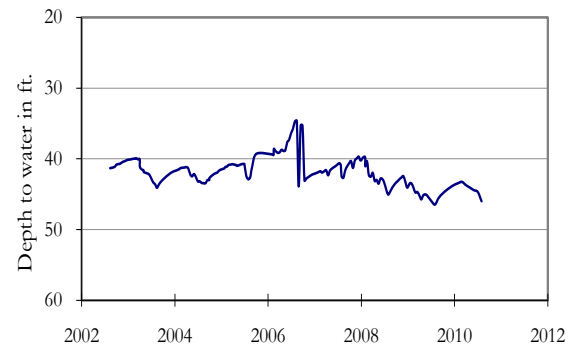
(10) State Well ID 52-16-802
Fort Stockton, Pecos County
Edwards-Trinity (Plateau) Aquifer



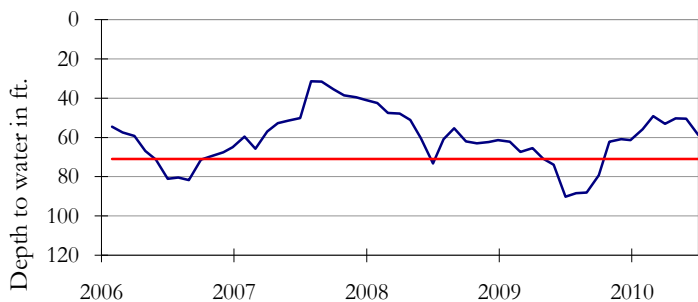
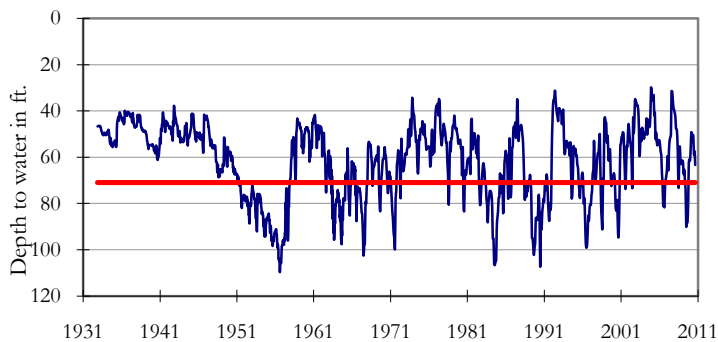
(12) State Well ID 46-44-501
Near Pecos, Reeves County
Pecos Valley Aquifer



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



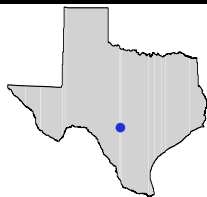
**(11) State Well ID 68-37-203 (J-17)
In San Antonio, Bexar County
Edwards (BFZ) Aquifer**



The late August water level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 63.32 feet below land surface. This was 5.88 feet below last month's measurement, 24.77 feet above last year's measurement, and 16.68 feet below the initial measurement recorded in 1932.

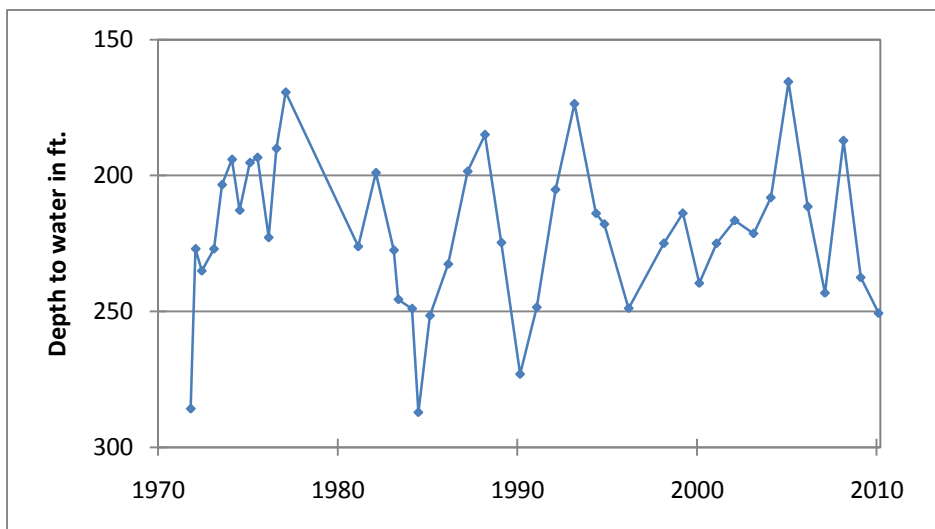
***** Water levels below the red line indicate Edwards Aquifer Authority Stage 1 drought restrictions. *****

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 69-44-301
Uvalde County**



This water level observation well, located 4 miles northwest of Sabinal, at an elevation of 1003 feet above sea level, was completed in the Edwards (BFZ) Aquifer. The water levels in the Edwards (BFZ) Aquifer fluctuate greatly depending upon rainfall in the recharge area and due to the amount of water pumped during times of drought.

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