

Texas Water Development Board



WATER
Conditions

RESERVOIR STORAGE

September 2010

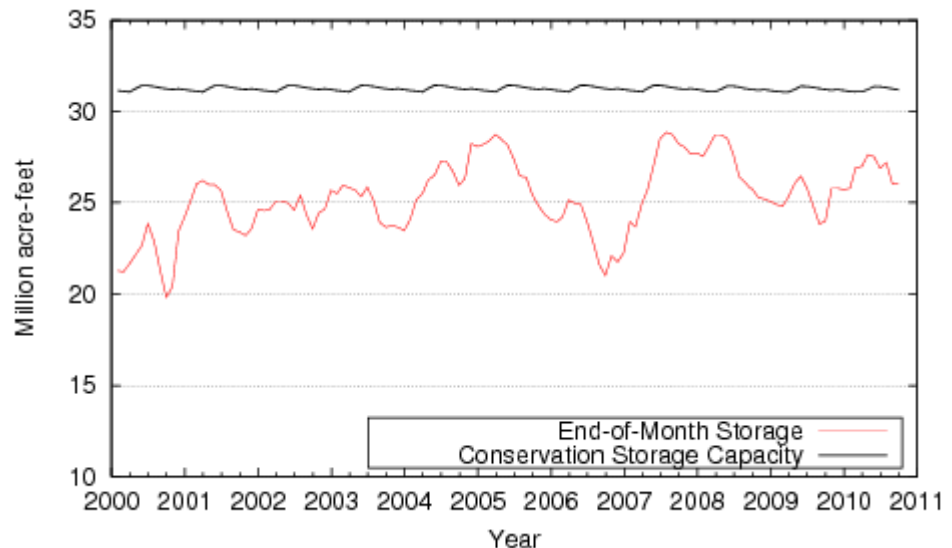
By the end of September, total storage in the state's 109 major reservoirs increased slightly by 14,500 acre-feet, remaining at 26 million acre-feet in conservation storage, or 83% full*. This is essentially the same as last month.

Storage was at 100% in 20 reservoirs, 15 more than last month. Five lakes were at or below 10% full: O. C. Fisher Lake Reservoir was effectively empty, Lake Meredith (total) was at 1%, E.V. Spence Reservoir was at 4%, Lake J. B. Thomas was at 7%, and Lake Electra at 9% full.

Three regions had combined storage above 90%: North Central 93%, Southern 96%, and Upper Coast 99%. The High Plains (7%) and Trans-Pecos regions (18%) remained very low. Storage increased in 6 regions and decreased in 3 regions over the month and over the year since last September.

* 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.

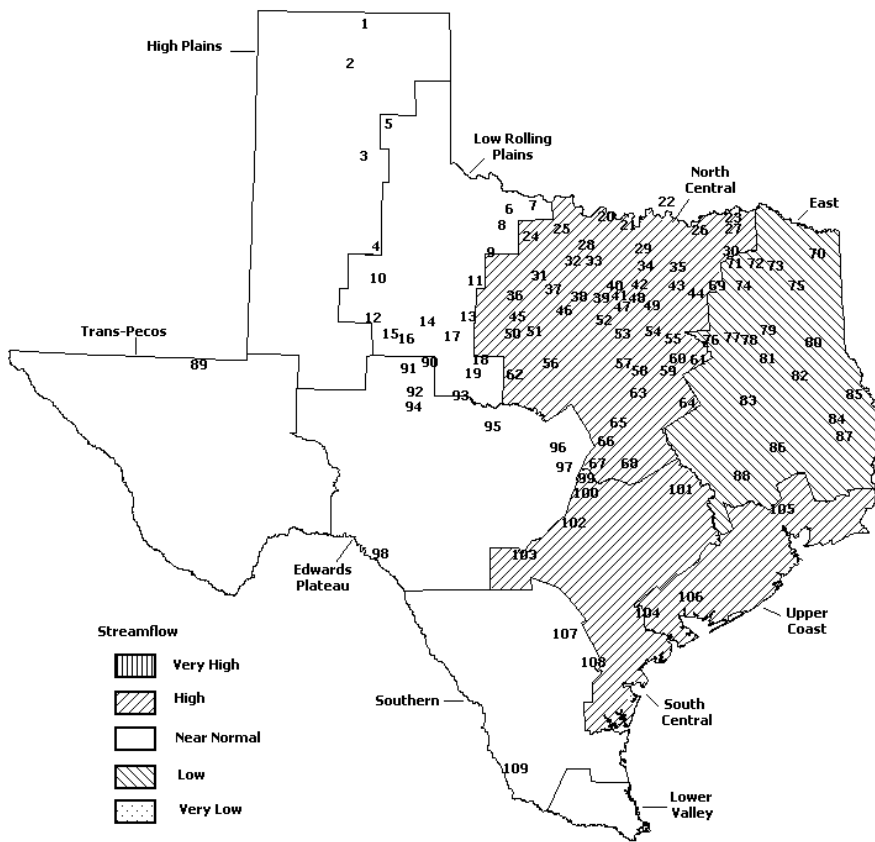
STREAMFLOW

Of 29 reporting index stations in September, computed 30-day mean flows were very high (>5%) at 1 station, high (5% - 30%) at 9 stations, low (70% - 95%) at 9 stations, and near normal (30% - 70%) at the remaining 10 stations. Compared to August, flows have increased at 21 index station and decreased at 8 stations.

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

SEPTEMBER STREAMFLOW CONDITIONS

Reservoirs Shown on Map



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

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage		Change since		Change since		
		Capacity (acre-feet)	Late Sep. (acre-feet)	2010 (%)	Late August 2010 (%)	Late September 2009 (acre-feet)	(%)	
HIGH PLAINS								
Palo Duro Reservoir	1	60,897	18,575	31	-2,551	-4	18,017	30
Meredith, Lake (Texas)	2	500,000	10,562	2	-4,315	-1	-25,414	-5
Meredith, Lake (Texas & Oklahoma)	(2)	779,556	10,562	1	-4,315	-1	-25,414	-3
MacKenzie Reservoir	3	46,429	6,417	14	-37	0	338	1
White River Lake	4	29,880	10,609	36	466	2	6,940	23
TOTAL		637,206	46,163	7	-6,437	-1	-119	0
LOW ROLLING PLAINS								
Greenbelt Lake	5	59,500	16,663	28	-557	-1	-61	0
*Electra, Lake	6	5,626	518	9	-12	0	38	1
N. Fork Buffalo Crk Reservoir	7	15,400	6,917	45	889	6	2,703	18
Kemp, Lake	8	245,308	245,308	100	0	0	93,868	38
Millers Creek Reservoir	9	27,888	21,074	76	1,052	4	7,914	28
Alan Henry Reservoir	10	94,808	93,760	99	-134	0	4,623	5
Stamford, Lake	11	51,570	51,570	100	0	0	14,258	28
J B Thomas, Lake	12	199,931	13,534	7	-434	0	2,616	1
Fort Phantom Hill, Lake	13	70,030	63,120	90	1,966	3	13,928	20
Sweetwater, Lake	14	10,006	5,996	60	-92	-1	-132	-1
Colorado City, Lake	15	31,793	16,001	50	159	1	-2,313	-7
Champion Creek Reservoir	16	41,618	7,253	17	135	0	-737	-2
Abilene, Lake	17	6,099	5,511	90	-259	-4	3,393	56
Coleman, Lake	18	38,076	22,835	60	-503	-1	165	0
Hords Creek Lake	19	5,684	692	12	-76	-1	-912	-16
TOTAL		903,337	570,752	63	2,134	0	139,351	15
NORTH CENTRAL								
Nocona, Lake (Farmers Crk)	20	21,445	19,617	91	13	0	524	2
Hubert H Moss Lake	21	24,058	23,791	99	780	3	1,625	7
Texoma, Lake (Texas)	22	1,239,693	1,234,167	100	14,672	1	368	0
Texoma, Lake (Texas & Oklahoma)	(22)	2,479,387	2,468,335	100	29,345	1	737	0
*Pat Mayse Lake	23	117,844	107,903	92	-273	0	-10,197	-9
Kickapoo, Lake	24	85,825	77,492	90	166	0	33,661	39
Arrowhead, Lake	25	235,997	205,334	87	1,199	1	50,655	21
Bonham, Lake	26	11,026	10,470	95	1,014	9	728	7
Crook, Lake	27	9,195	7,811	85	280	3	-1,270	-14
Amon G Carter, Lake	28	19,903	19,090	96	-130	-1	2,331	12
Ray Roberts, Lake	29	798,758	798,758	100	45,003	6	39,359	5
Jim Chapman Lake (Cooper)	30	260,332	181,007	70	-10,364	-4	-52,942	-20
Graham, Lake	31	45,260	44,869	99	3,425	8	8,110	18
*Lost Creek Reservoir	32	11,950	11,542	97	-17	0	1,950	16
Bridgeport, Lake	33	366,236	354,540	97	5,951	2	111,481	30
Lewisville Lake	34	563,228	563,228	100	70,013	12	75,814	13
Lavon Lake	35	443,844	351,345	79	10,572	2	-37,543	-8
Hubbard Creek Reservoir	36	318,067	201,121	63	1,618	1	-14,501	-5
Possum Kingdom Lake	37	540,340	515,769	95	-1,782	0	53,321	10
*Mineral Wells, Lake	38	7,065	7,026	99	713	10	1,466	21
Weatherford, Lake	39	17,789	16,305	92	-21	0	2,586	15
Eagle Mountain Lake	40	179,880	178,763	99	11,790	7	31,388	17
Worth, Lake	41	24,500	22,041	90	-135	-1	5,460	22
Grapevine Lake	42	164,702	164,702	100	10,376	6	14,808	9
Ray Hubbard, Lake	43	452,040	397,816	88	27,698	6	-51,537	-11
New Terrell City Lake	44	8,583	7,277	85	-40	0	-586	-7
Daniel, Lake	45	9,435	5,540	59	197	2	1,031	11
Palo Pinto, Lake	46	26,827	26,697	100	5,654	21	14,270	53
Benbrook Lake	47	85,648	77,087	90	7,375	9	6,119	7
Arlington, Lake	48	40,156	40,156	100	7,270	18	1,701	4

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 August 2010		Change since Late September 2009		
			Late Sep. (acre-feet)	2010 (%)	(acre-feet)	(%)	(acre-feet)	(%)	
NORTH CENTRAL (Continue)									
Joe Pool Lake	49	142,861	142,861	100	6,052	4	0	0	
*Cisco, Lake	50	26,000	15,228	59	159	1	-1,684	-6	
Leon, Lake	51	26,421	17,856	68	280	1	199	1	
Granbury, Lake	52	128,046	125,403	98	529	0	11,852	9	
Pat Cleburne, Lake	53	26,008	26,008	100	3,640	14	3,577	14	
Waxahachie, Lake	54	10,779	9,973	93	725	7	-806	-7	
Bardwell Lake	55	46,122	46,122	100	4,419	10	0	0	
Proctor Lake	56	55,457	37,086	67	-1,908	-3	10,199	18	
Whitney, Lake	57	553,349	518,173	94	19,703	4	174,894	32	
Aquilla Lake	58	44,460	44,460	100	4,677	11	237	1	
Navarro Mills Lake	59	49,826	49,408	99	4,527	9	-6,283	-13	
*Halbert, Lake	60	6,033	4,006	66	-169	-3	1,207	20	
Richland-Chambers Reservoir	61	1,087,839	1,049,254	96	23,383	2	48,194	4	
*Brownwood, Lake	62	131,429	87,217	66	-1,125	-1	-3,673	-3	
Waco, Lake	62	198,943	198,943	100	12,805	6	0	0	
Limestone, Lake	64	208,015	184,647	89	-3,802	-2	26,736	13	
Belton Lake	65	435,225	410,972	94	17,716	4	59,648	14	
Stillhouse Hollow Lake	66	227,771	227,771	100	1,788	1	7,761	3	
Georgetown, Lake	67	36,823	36,823	100	5,918	16	21,020	57	
Granger Lake	68	50,779	42,960	85	1,766	3	-5,583	-11	
Tawakoni, Lake	69	888,126	797,414	90	-13,028	-1	-36,990	-4	
TOTAL		10,509,938	9,743,849	93	301,072	3	600,685	6	
EAST									
Wright Patman Lake	70	248,069	235,636	95	-10,657	-4	-12,433	-5	
*Sulphur Springs, Lake	71	17,838	11,908	67	-284	-2	-5,930	-33	
Cypress Springs, Lake	72	66,756	62,434	94	-1,157	-2	-5,255	-8	
Bob Sandlin, Lake	73	200,579	176,661	88	-5,405	-3	-23,918	-12	
Fork Reservoir, Lake	74	604,927	544,740	90	-16,529	-3	-60,187	-10	
O the Pines, Lake	75	238,933	238,933	100	-16,323	-7	0	0	
Cedar Creek Reservoir in Trinity	76	644,686	581,706	90	-15,571	-2	-38,546	-6	
Athens, Lake	77	29,435	26,917	91	-1,047	-4	-1,442	-5	
Palestine, Lake	78	370,907	334,301	90	-13,173	-4	-25,304	-7	
Tyler, Lake	79	73,256	67,331	92	-2,526	-3	2,148	3	
Murvault, Lake	80	38,284	31,538	82	-709	-2	-5,926	-15	
Jacksonville, Lake	81	25,670	23,278	91	-465	-2	-5,240	-20	
Nacogdoches, Lake	82	39,521	31,179	79	-1,512	-4	-1,832	-5	
Houston County Lake	83	17,113	15,683	92	-413	-2	441	3	
Sam Rayburn Reservoir	84	2,857,077	2,086,663	73	-150,612	-5	-253,498	-9	
Toledo Bend Reservoir (Texas)	85	2,236,450	1,646,435	74	-194,685	-9	-291,313	-13	
Toledo Bend Reservoir (TX & LA)	(85)	4,472,900	3,292,870	74	-389,371	-9	-582,626	-13	
*Livingston, Lake	86	1,741,867	1,741,867	100	34,867	2	0	0	
B A Steinhagen Lake	87	66,966	60,010	90	-2,117	-3	-504	-1	
Conroe, Lake	88	416,188	395,025	95	-2,259	-1	5,769	1	
TOTAL		9,934,522	8,312,245	84	-400,577	-4	-722,970	-7	
TRANS-PECOS									
Red Bluff Reservoir	89	289,670	52,159	18	2,028	1	-12,104	-4	
TOTAL		289,670	52,159	18	2,028	1	-12,104	-4	

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

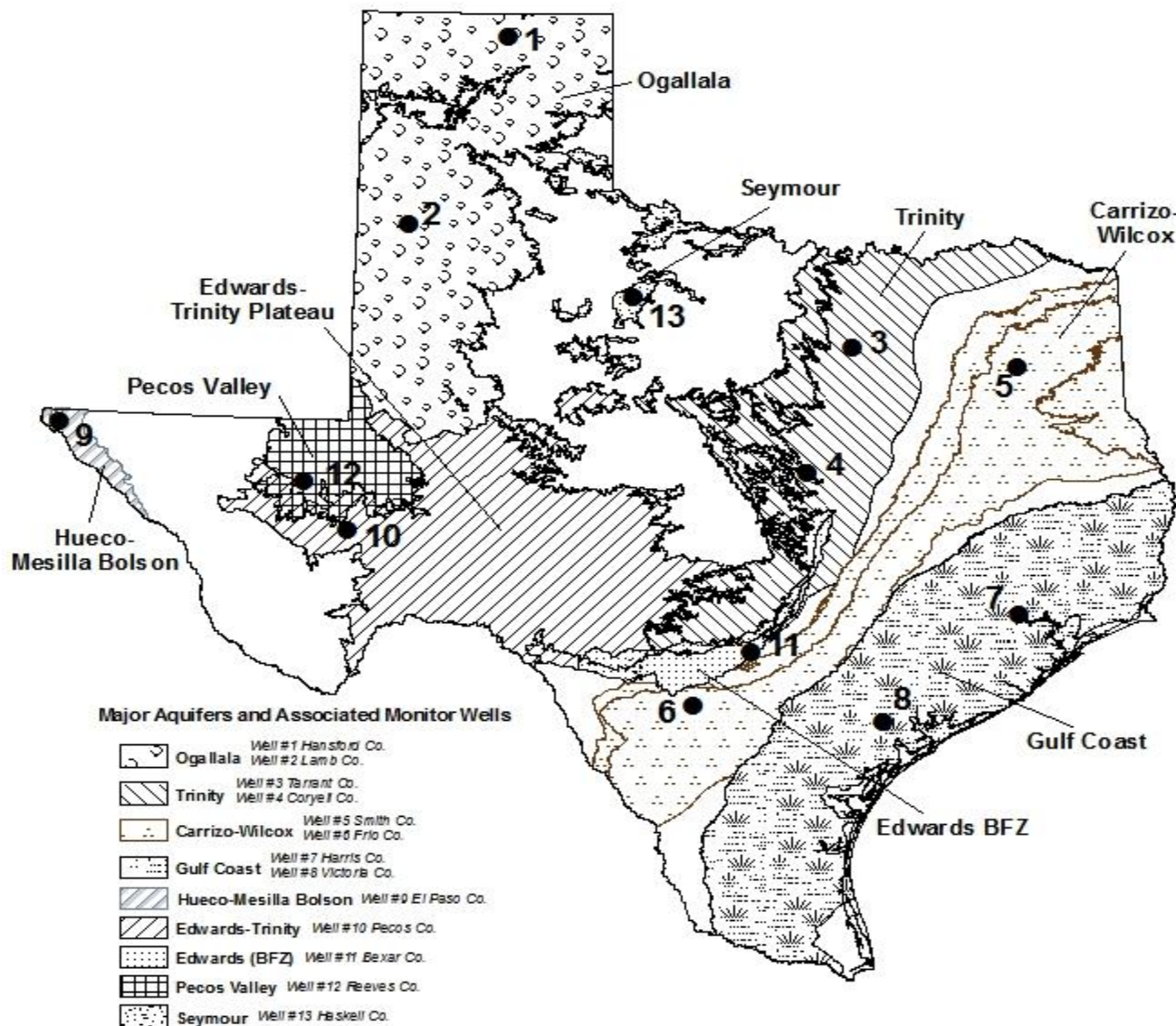
Name of Lake or Reservoir	No. on Map	Conservation Storage		Change since Late August		Change since Late September		
		Capacity (acre-feet)	Late Sep. (acre-feet)	2010 (%)	2010 (acre-feet)	(%)	2009 (acre-feet)	(%)
EDWARDS PLATEAU								
Oak Creek Reservoir	90	39,260	24,761	63	1,245	3	299	1
E V Spence Reservoir	91	517,272	20,980	4	0	0	-8,724	-2
O C Fisher Lake	92	79,483	0	0	0	0	0	0
*O H Ivie Reservoir	93	554,335	198,668	36	-8,083	-1	-50,059	-9
Twin Buttes Reservoir	94	177,850	22,146	12	-2,083	-1	-6,057	-3
Brady Creek Reservoir	95	29,110	14,607	50	-410	-1	-124	0
Buchanan, Lake	96	824,519	682,551	83	4,685	1	326,092	40
Lyndon B Johnson, Lake	97	113,323	111,926	99	1,276	1	486	0
*Amistad Reservoir (Texas)	98	1,840,849	1,841,000	100	1,000	0	89,000	5
*Amistad Reservoir (TX & Mexico)	(98)	3,275,532	3,275,532	100	0	0	146,532	4
TOTAL		4,176,001	2,916,639	70	-2,370	0	350,913	8
SOUTH CENTRAL								
Travis, Lake	99	1,113,255	936,132	84	63,080	6	516,393	46
*Austin, Lake	100	21,804	20,881	96	-136	-1	-287	-1
Somerville Lake	101	147,104	137,181	93	-1,494	-1	19,181	13
Canyon Lake	102	378,781	378,781	100	9,954	3	111,813	30
Medina Lake	103	254,823	188,350	74	11,344	4	127,083	50
*Coletto Creek Reservoir	104	31,040	31,040	100	1,876	6	7,711	25
TOTAL		1,946,807	1,692,365	87	84,624	4	781,894	40
UPPER COAST								
Houston, Lake	105	128,863	128,863	100	0	0	0	0
Texana, Lake	106	153,246	151,504	99	9,023	6	44,105	29
TOTAL		282,109	280,367	99	9,023	3	44,105	16
SOUTHERN								
Choke Canyon Reservoir	107	695,262	596,301	86	7,395	1	110,326	16
Corpus Christi, Lake	108	256,961	251,902	98	17,608	7	178,624	70
*Falcon Reservoir (Texas)	109	1,551,034	1,551,000	100	0	0	564,000	36
*Falcon Reservoir (TX & Mexico)	(109)	2,646,817	2,646,817	100	0	0	936,817	35
TOTAL		2,503,257	2,399,203	96	25,003	1	852,950	34
STATE TOTAL		31,182,847	26,013,742	83	14,500	0	2,034,705	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



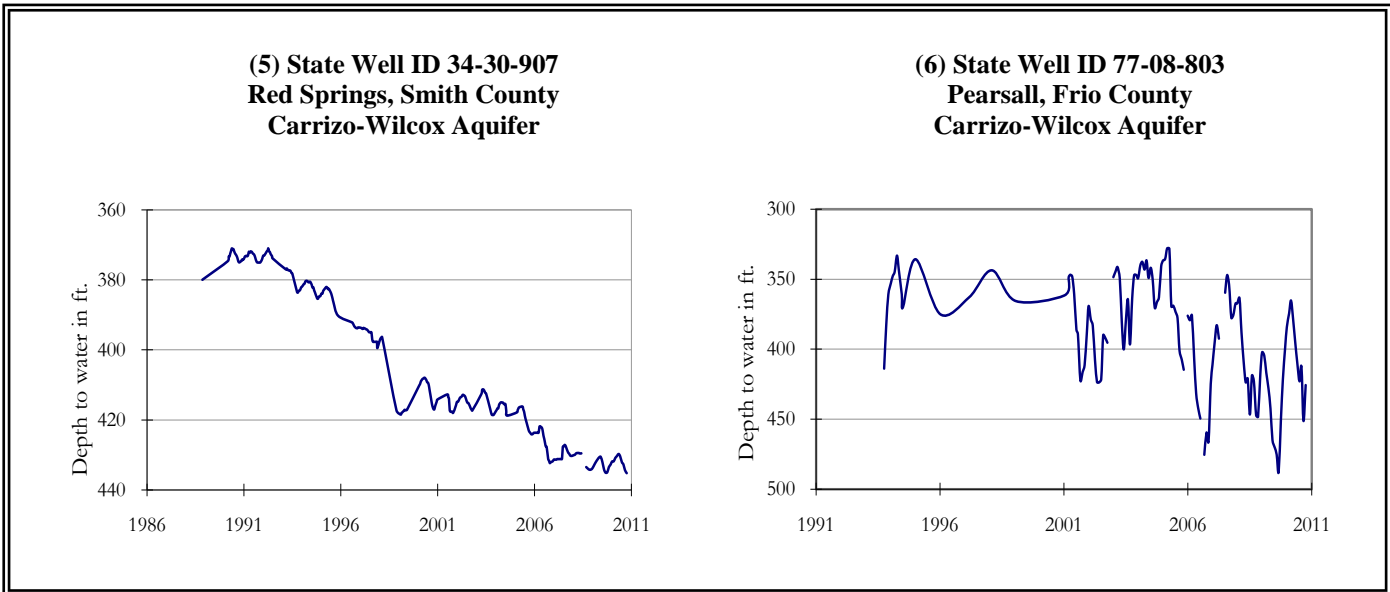
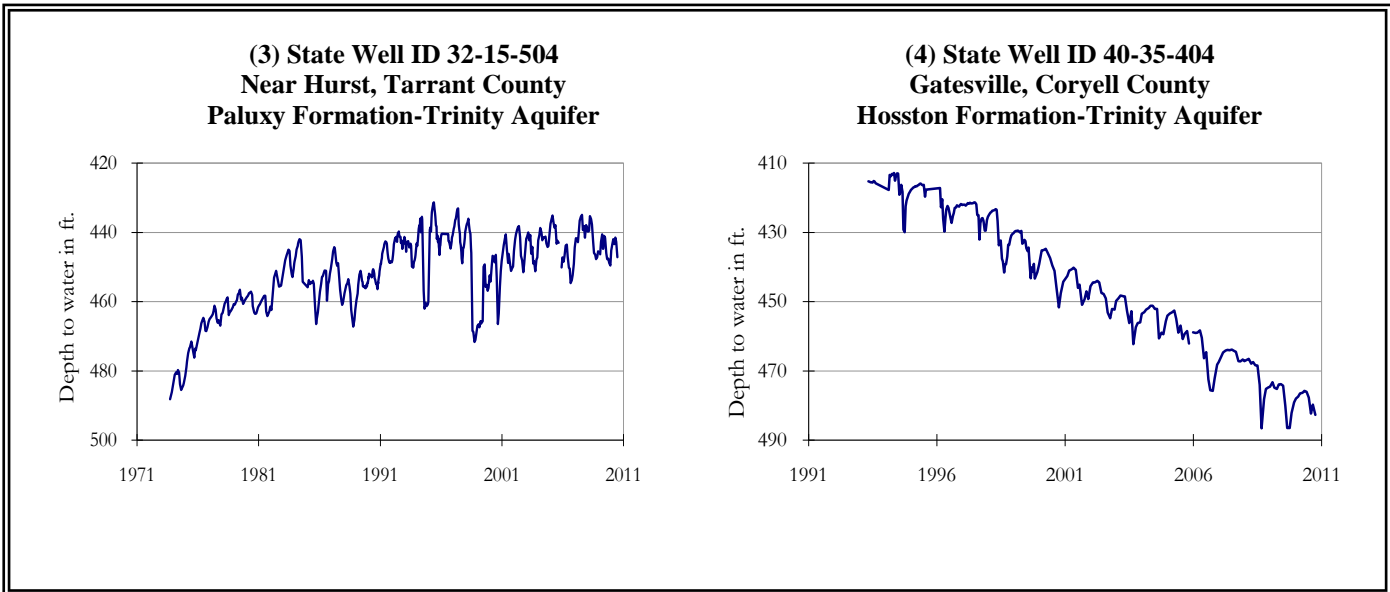
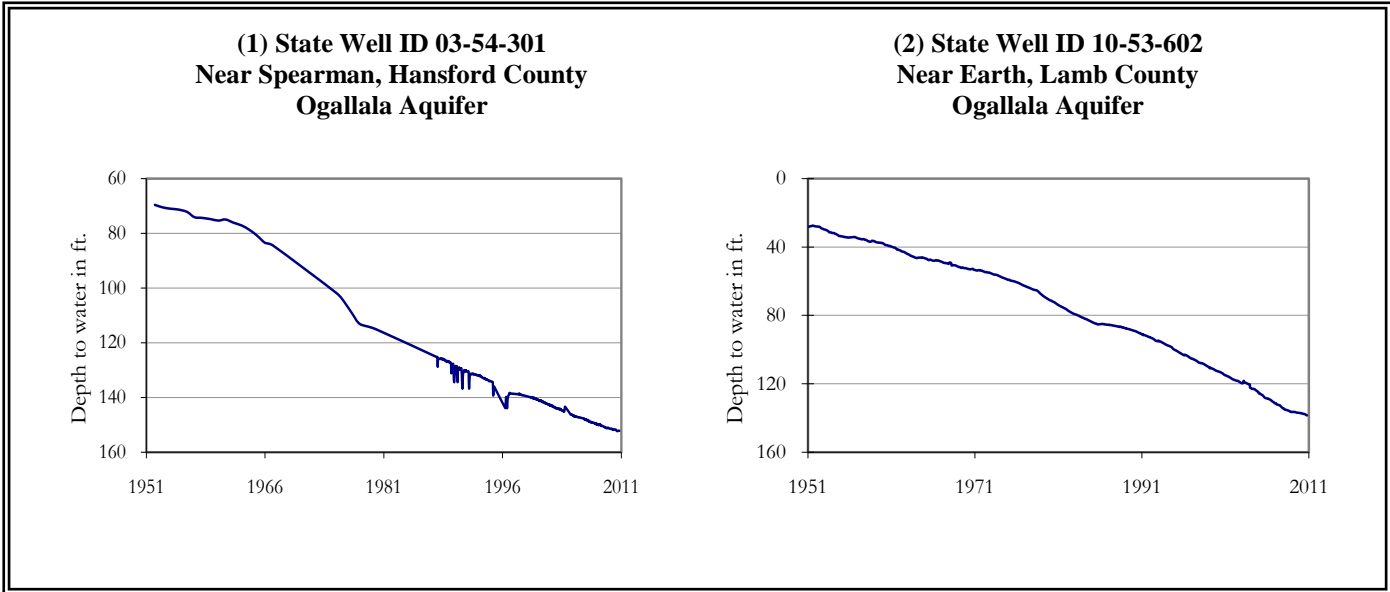
September, 2010

Water level measurements were available for twelve out of the thirteen key monitoring wells. Water levels rose in nine of the thirteen monitoring wells since the beginning of September ranging from 0.35 feet in the Harris County Gulf Coast Aquifer well to 25.53 feet in the Frio County Carrizo Aquifer well. Water levels declined in the remaining monitoring wells, ranging from 0.06 feet in the Hansford County Ogallala Aquifer well to 0.87 feet in the Smith County Carrizo-Wilcox Aquifer well. The J-17 well in San Antonio recorded a water level of 50.76 feet below land surface, 12.56 feet above last month's measurement. This water level is 20.24 feet above the Stage 1 critical management level.

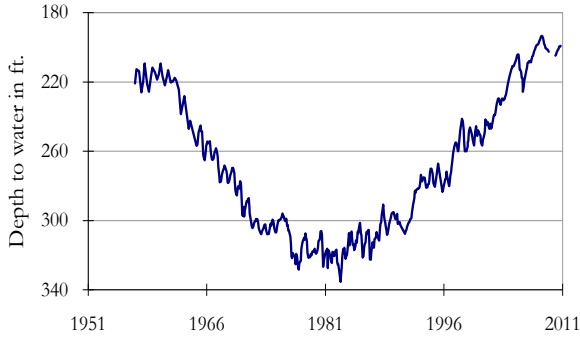
	(1) Hansford 0354301	(2) Lamb 1053602	(3) Tarrant 3215504	(4) Coryell 4035404	(5) Smith 3430907	(6) Frio 7708803	(7) Harris 6514409	(8) Victoria 8017502	(9) El Paso 4913301	(10) Pecos 5216802	(11) Bexar 6837203	(12) Reeves 4644501	(13) Haskell 2135748
September	152.23	138.59	N/A	480.94	435.21	425.58	199.14	33.02	290.35	208.13	50.76	147.59	44.98
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
Month Change	-0.06	-0.27	N/A	1.74	-0.87	25.53	0.35	0.45	1.02	0.63	12.56	4.03	1.02
Year Change	-0.84	-1.55	N/A	1.23	-6.27	24.84	N/A	2.35	-0.83	10.91	28.57	-2.01	0.55
Historical Change	-82.11	-110.44	N/A	-188.94	-75.2	-145.58	-63.64	0.98	-58.45	38.75	-4.12	-55.5	-3.65

* 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.

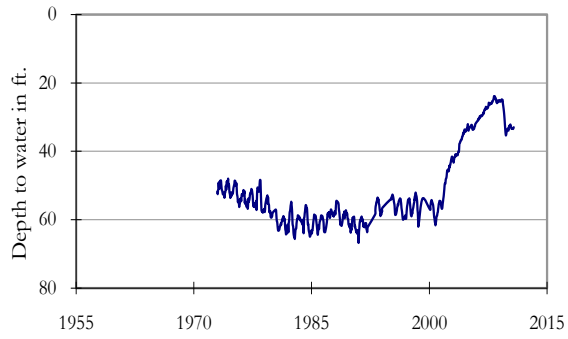
AUGUST GROUNDWATER LEVELS IN OBSERVATION WELLS



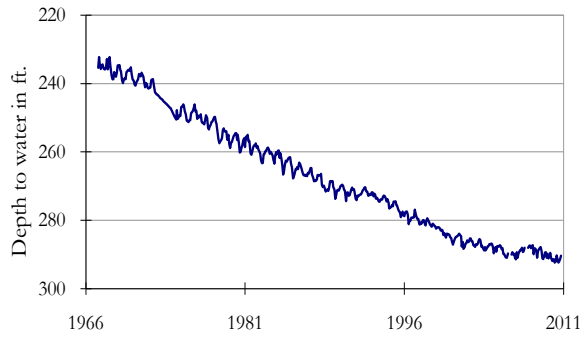
(7) State Well ID 65-14-409
Alief, Harris County
Evangeline Formation-Gulf Coast Aquifer



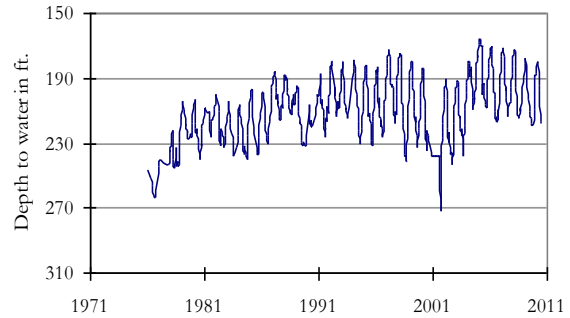
(8) State Well ID 80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



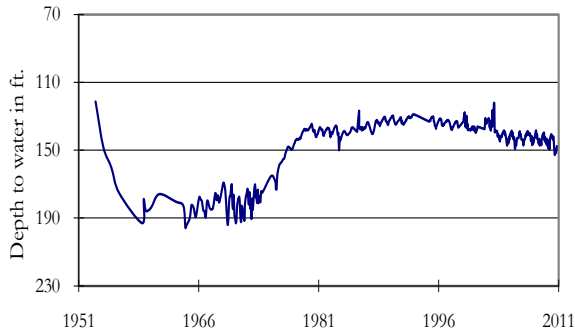
(9) State Well ID 49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolson Aquifer



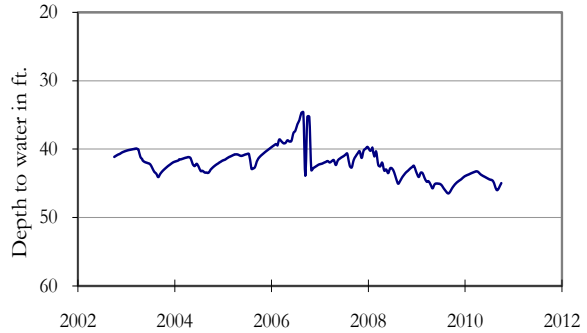
(10) State Well ID 52-16-802
Fort Stockton, Pecos County
Edwards-Trinity (Plateau) Aquifer



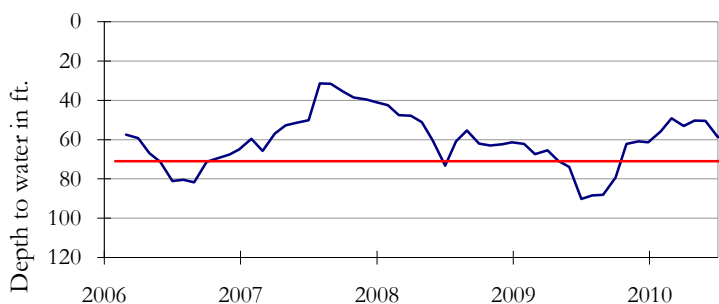
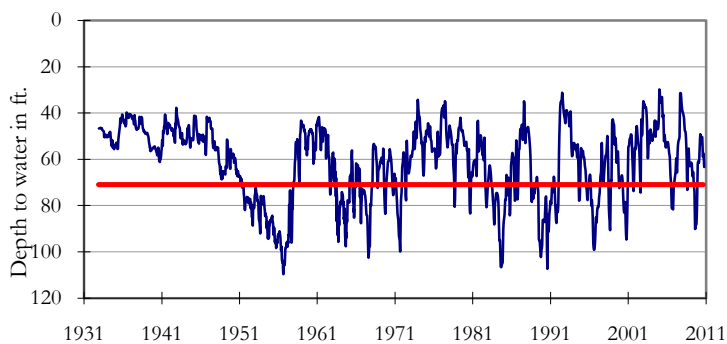
(12) State Well ID 46-44-501
Near Pecos, Reeves County
Pecos Valley Aquifer



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



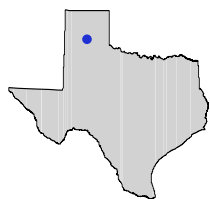
**(11) State Well ID 68-37-203 (J-17)
In San Antonio, Bexar County
Edwards (BFZ) Aquifer**



The late September water level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 50.76 feet below land surface. This was 12.56 feet above last month's measurement, 28.57 feet above last year's measurement, and 4.12 feet below the initial measurement recorded in 1932.

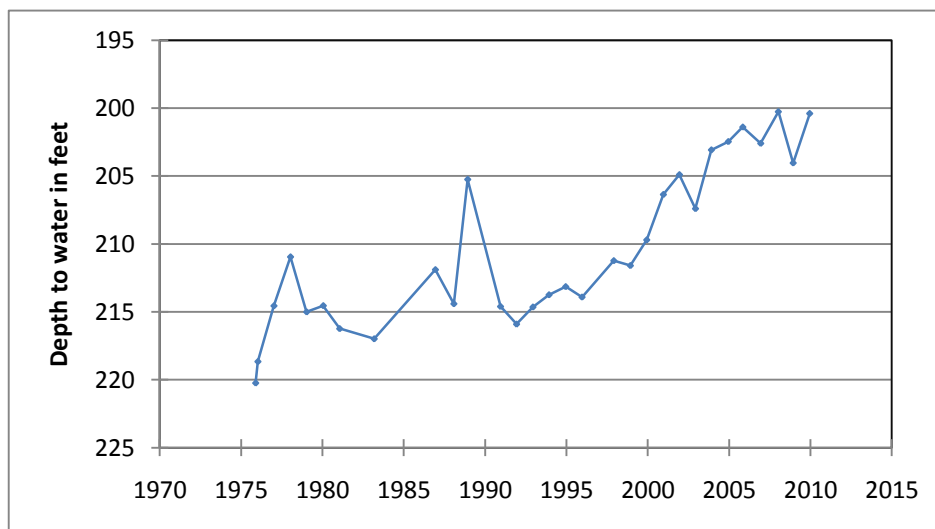
***** Water levels below the red line indicate Edwards Aquifer Authority Stage 1 drought restrictions. *****

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 06-59-901
Randall County**



This Dockum Aquifer water level observation well is located 12 miles south-southeast of Amarillo at an elevation of 3,487 feet above sea level. Water levels have both declined and risen in different portions of the Dockum Aquifer. The hydrograph of this water level monitor well indicates that the water level in the aquifer south-southeast of Abilene has primarily been rising between 1975 and 2010.

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