

Texas Water Development Board



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

RESERVOIR STORAGE

October 2008

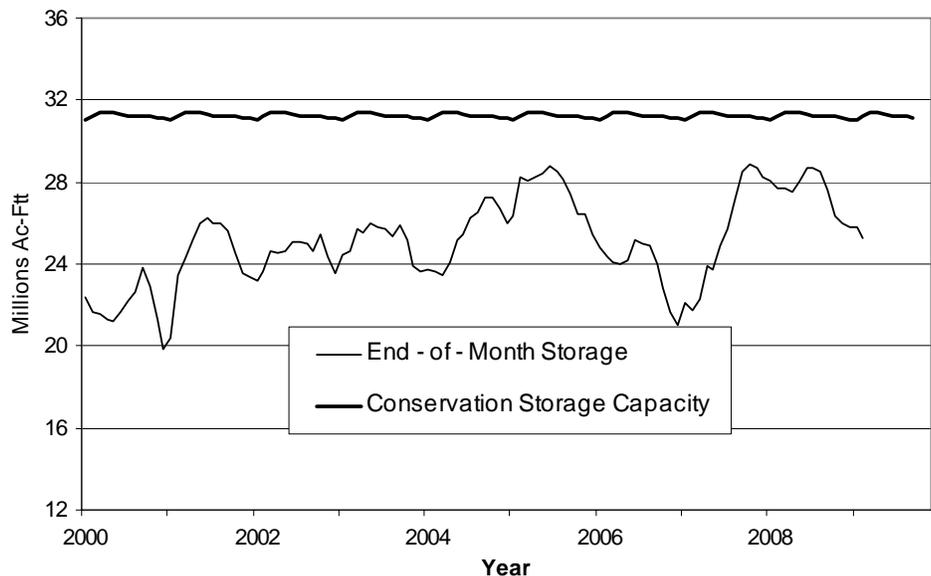
Near the end of October, the 109 reservoirs monitored for this report were 81 percent full*, on average, holding 25.27 million acre-feet in conservation storage, about 0.5 million acre-feet less than September and 2.78 million acre-feet less than October of 2007.

Storage was at 100% in 8 reservoirs. The Southern (93%) and Upper Coast (90%) are the only regions having storage at or above 90% of capacity; the High Plains (13%) and Trans-Pecos Regions (22%) remained very low. Three lakes were below 10% full: O C Fisher Lake was still effectively empty, Palo Duro (3%) was almost empty, and Lake Meredith stayed at approximately 8% of storage.

Over the past month, storage increased in three regions and decreased in the remaining six. Compared to this time last year, storage decreased in seven of the nine regions.

* 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.

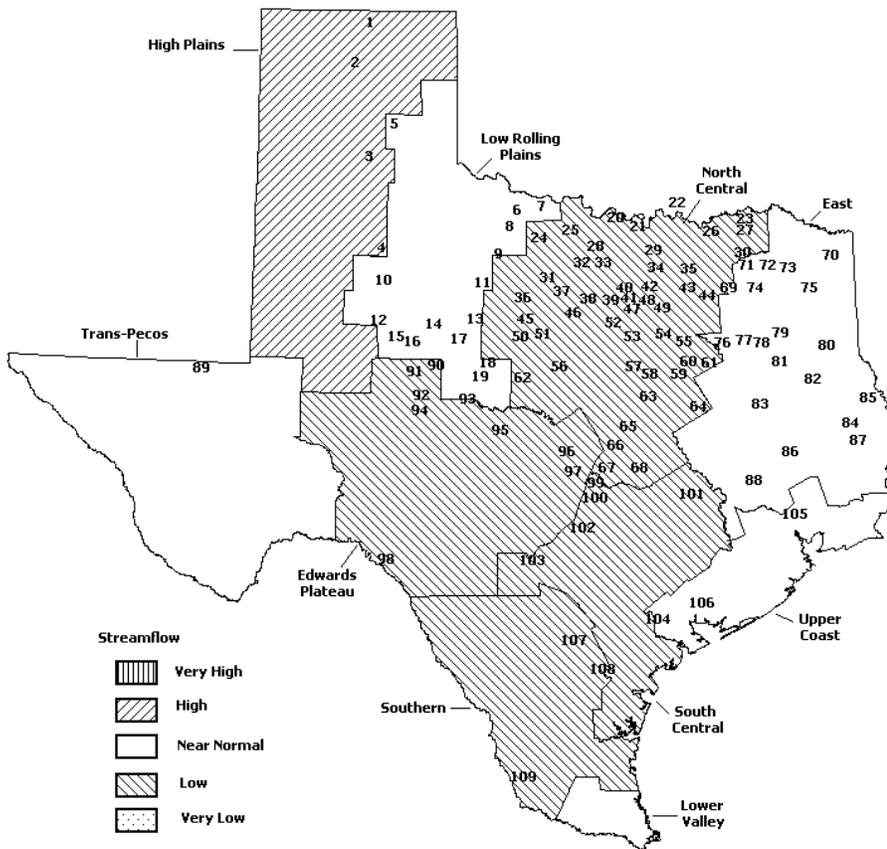
STREAMFLOW

Of 29 reporting index stations in October, computed 30-day mean flows were very high (<5%) at 1 station, high (5% - 30%) at 4 stations, low (70% - 95%) at 13 stations, very low (>95%) at 1 station, and near normal (30% - 70%) at the remaining 10 stations. Compared to September, flows increased at 10 index stations, decreased at 17 stations, and were unchanged at 2 stations.

On a regional basis, flows in October were high in the High Plains Region, low in North Central, Edwards Plateau, Southern and South Central Regions, and normal in all other regions. Streamflow in the Lower Valley Region is not monitored.

OCTOBER 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 Capacity (acre-feet)	Conservation Storage		Change since Late September 2008 (acre- feet) (%)		Change since Late October 2007 (acre- feet) (%)		
			Late Oct. (acre- feet)	2008 (%)	2008 (acre- feet)	(%)	2007 (acre- feet)	(%)	
HIGH PLAINS									
Palo Duro Reservoir	1	60,897	1,657	3	863	1	580	1	
Meredith, Lake (Texas)	2	500,000	64,897	13	14,213	3	9,363	2	
Meredith, Lake (Texas & Oklahoma)	(2)	779,556	64,897	8	14,213	2	9,363	1	
MacKenzie Reservoir	3	46,429	6,122	13	-75	0	-1,502	-3	
White River Lake	4	29,880	7,344	25	596	2	5,460	18	
TOTAL		637,206	80,020	13	15,597	2	13,901	2	
LOW ROLLING PLAINS									
Greenbelt Lake	5	59,500	18,859	32	145	0	-3,031	-5	
*Electra, Lake	6	5,626	1,092	19	-62	-1	-762	-14	
N. Fork Buffalo Crk Reservoir	7	15,400	4,424	29	-173	-1	-811	-5	
Kemp, Lake	8	245,308	176,360	72	-11,192	-5	-68,948	-28	
Millers Creek Reservoir	9	27,888	17,748	64	-437	-2	-6,623	-24	
Alan Henry Reservoir	10	94,808	94,808	100	0	0	1,853	2	
Stamford, Lake	11	51,570	38,971	76	-1,032	-2	-12,599	-24	
J B Thomas, Lake	12	199,931	20,019	10	-1,574	-1	-9,602	-5	
Fort Phantom Hill, Lake	13	70,030	67,256	96	-347	0	-2,350	-3	
Sweetwater, Lake	14	10,006	7,964	80	-242	-2	753	8	
Colorado City, Lake	15	31,793	22,862	72	-119	0	-5,093	-16	
Champion Creek Reservoir	16	41,618	9,233	22	-95	0	-249	-1	
Abilene, Lake	17	6,099	4,379	72	-209	-3	-1,443	-24	
Coleman, Lake	18	38,076	29,616	78	-567	-1	-6,437	-17	
Hords Creek Lake	19	5,684	3,224	57	-122	-2	-1,907	-34	
TOTAL		903,337	516,815	57	-16,026	-2	-117,250	-13	
NORTH CENTRAL									
Nocona, Lake (Farmers Crk)	20	21,445	18,131	85	-619	-3	-2,022	-9	
Hubert H Moss Lake	21	24,058	21,692	90	-474	-2	-1,027	-4	
Texoma, Lake (Texas)	22	1,315,070	1,233,799	94	4,052	0	-5,895	0	
Texoma, Lake (Texas & Oklahoma)	(22)	2,630,141	2,467,598	94	8,104	0	-11,789	0	
*Pat Mayse Lake	23	118,100	109,775	93	-2,211	-2	-8,325	-7	
Kickapoo, Lake	24	85,825	43,791	51	-631	-1	-22,002	-26	
Arrowhead, Lake	25	235,997	168,588	71	-3,771	-2	-47,027	-20	
Bonham, Lake	26	11,026	8,715	79	-633	-6	-1,447	-13	
Crook, Lake	27	9,195	8,874	97	-124	-1	92	1	
Amon G Carter, Lake	28	19,903	17,219	87	-479	-2	-1,741	-9	
Ray Roberts, Lake	29	798,758	749,323	94	-18,341	-2	-49,435	-6	
Jim Chapman Lake (Cooper)	30	260,332	189,205	73	-16,848	-6	-105,384	-40	
Graham, Lake	31	45,260	42,820	95	-439	-1	1,921	4	
*Lost Creek Reservoir	32	11,950	10,792	90	-147	-1	-793	-7	
Bridgeport, Lake	33	366,236	295,125	81	-14,575	-4	-44,692	-12	
Lewisville Lake	34	543,988	430,884	79	-20,402	-4	-111,363	-20	
Lavon Lake	35	443,844	351,345	79	-13,721	-3	-46,821	-11	
Hubbard Creek Reservoir	36	318,067	272,596	86	-3,993	-1	-18,016	-6	
Possum Kingdom Lake	37	540,340	509,285	94	1,780	0	-5,674	-1	
*Mineral Wells, Lake	38	7,065	5,408	77	-147	-2	-887	-13	
Weatherford, Lake	39	18,645	13,200	71	-732	-4	-3,521	-19	
Eagle Mountain Lake	40	182,500	149,681	82	-5,265	-3	-20,599	-11	
Worth, Lake	41	24,500	19,280	79	974	4	-2,526	-10	
Grapevine Lake	42	164,702	126,444	77	-8,095	-5	-36,726	-22	
Ray Hubbard, Lake	43	452,040	425,732	94	-11,879	-3	-25,481	-6	
New Terrell City Lake	44	8,583	7,647	89	-266	-3	-800	-9	
Daniel, Lake	45	9,435	7,380	78	-135	-1	-1,093	-12	
Palo Pinto, Lake	46	27,150	17,247	64	-1,316	-5	-6,591	-24	
Benbrook Lake	47	85,648	57,808	67	-1,864	-2	-23,452	-27	
Arlington, Lake	48	38,740	23,114	60	-3,639	-9	-11,580	-30	

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 September 2008		Change since Late October 2007		
			Late Oct. (acre- feet)	2008 (%)	(acre- feet)	(%)	(acre- feet)	(%)	
NORTH CENTRAL (Continue)									
Joe Pool Lake	49	142,861	125,194	88	-3,591	-3	-8,199	-6	
*Cisco, Lake	50	26,000	20,127	77	-370	-1	-1,632	-6	
Leon, Lake	51	26,421	22,319	84	-620	-2	-3,172	-12	
Granbury, Lake	52	128,046	111,099	87	1,461	1	-10,604	-8	
Pat Cleburne, Lake	53	25,730	20,377	79	-516	-2	-4,324	-17	
Waxahachie, Lake	54	10,779	9,375	87	103	1	-152	-1	
Bardwell Lake	55	46,122	37,672	82	-1,759	-4	-8,203	-18	
Proctor Lake	56	55,457	37,959	68	-2,200	-4	-17,498	-32	
Whitney, Lake	57	553,349	392,146	71	-12,592	-2	-65,381	-12	
Aquilla Lake	58	45,092	36,820	82	-376	-1	-6,570	-15	
Navarro Mills Lake	59	55,817	44,974	81	-1,828	-3	-7,803	-14	
*Halbert, Lake	60	6,033	3,841	64	-205	-3	-1,175	-19	
Richland-Chambers Reservoir	61	1,103,816	970,588	88	-24,829	-2	-96,648	-9	
*Brownwood, Lake	62	131,429	108,552	83	-2,685	-2	-17,478	-13	
Waco, Lake	62	198,943	182,244	92	3,088	2	-16,699	-8	
Limestone, Lake	64	208,015	188,687	91	-6,774	-3	-1,664	-1	
Belton Lake	65	435,225	417,488	96	-6,897	-2	-17,737	-4	
Stillhouse Hollow Lake	66	227,771	206,362	91	-10,020	-4	-21,409	-9	
Georgetown, Lake	67	36,823	16,504	45	-689	-2	-20,319	-55	
Granger Lake	68	52,525	41,138	78	-2,037	-4	-11,387	-22	
Tawakoni, Lake	69	888,126	759,907	86	-33,616	-4	-74,870	-8	
TOTAL		10,592,782	9,088,273	86	-230,892	-2	-1,015,830	-10	
EAST									
Wright Patman Lake	70	135,249	135,249	100	-112,820	-83	-104,236	-77	
*Sulphur Springs, Lake	71	17,838	14,715	82	-362	-2	-1,519	-9	
Cypress Springs, Lake	72	67,689	67,586	100	-103	0	588	1	
Bob Sandlin, Lake	73	200,579	198,317	99	-723	0	1,991	1	
Fork Reservoir, Lake	74	604,927	586,184	97	-7,655	-1	-13,200	-2	
O the Pines, Lake	75	238,933	238,933	100	0	0	0	0	
Cedar Creek Reservoir in Trinity	76	644,686	573,221	89	-15,025	-2	-44,782	-7	
Athens, Lake	77	29,435	28,090	95	144	0	-1,130	-4	
Palestine, Lake	78	370,907	370,689	100	-218	0	5,215	1	
Tyler, Lake	79	73,256	73,256	100	0	0	4,822	7	
Murvault, Lake	80	38,284	35,323	92	-1,202	-3	1,562	4	
Jacksonville, Lake	81	30,300	28,950	96	108	0	-1,350	-4	
Nacogdoches, Lake	82	39,521	35,158	89	-1,652	-4	-199	-1	
Houston County Lake	83	17,113	16,960	99	-153	-1	545	3	
Sam Rayburn Reservoir	84	2,857,077	2,098,583	73	-124,099	-4	-235,556	-8	
Toledo Bend Reservoir (Texas)	85	2,236,450	1,862,754	83	-22,435	-1	-10,416	0	
Toledo Bend Reservoir (TX & LA)	(85)	4,472,900	3,725,508	83	-44,870	-1	-20,832	0	
*Livingston, Lake	86	1,741,867	1,729,000	99	-8,000	0	-12,867	-1	
B A Steinhagen Lake	87	66,966	60,918	91	5,168	8	-2,218	-3	
Conroe, Lake	88	416,188	387,953	93	-3,536	-1	-10,696	-3	
TOTAL		9,827,265	8,541,839	87	-292,563	-3	-423,444	-4	
TRANS-PECOS									
Red Bluff Reservoir	89	289,670	63,304	22	2,077	1	-24,314	-8	
TOTAL		289,670	63,304	22	2,077	1	-24,314	-8	

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

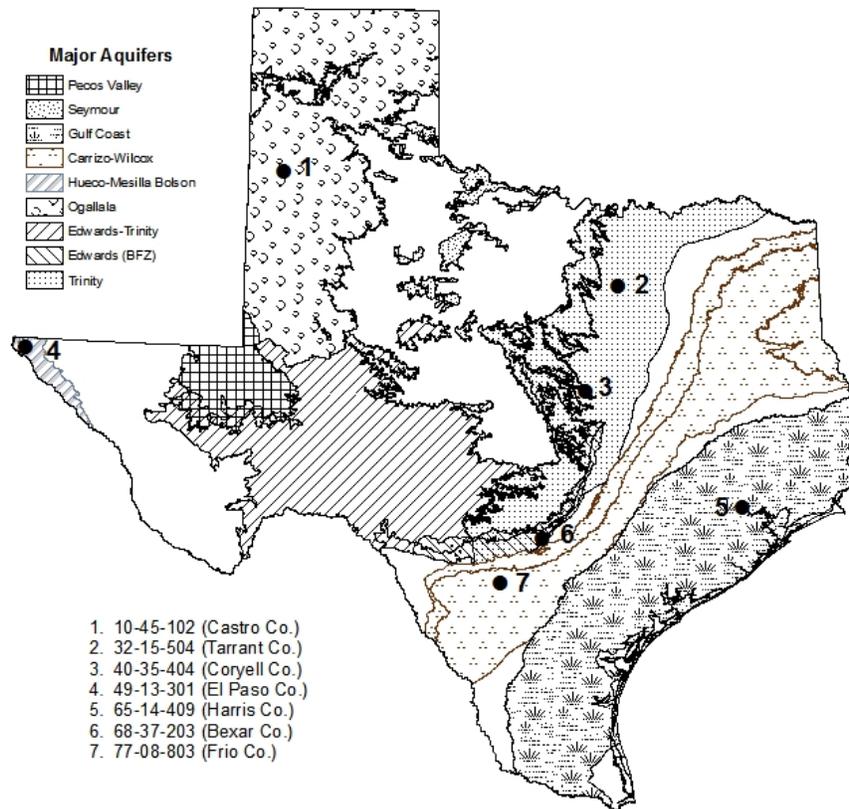
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage		Change since Late September 2008		Change since Late October 2007		
			Late Oct. (acre- feet)	2008 (%)	(acre- feet)	(%)	(acre- feet)	(%)	
EDWARDS PLATEAU									
Oak Creek Reservoir	90	39,260	31,875	81	-764	-2	-6,629	-17	
E V Spence Reservoir	91	517,272	57,993	11	-2,952	-1	-20,817	-4	
O C Fisher Lake	92	79,483	0	0	0	0	0	0	
*O H Ivie Reservoir	93	554,335	318,795	58	-7,871	-1	-55,820	-10	
Twin Buttes Reservoir	94	177,850	49,549	28	-1,337	-1	-14,874	-8	
Brady Creek Reservoir	95	29,110	15,415	53	-538	-2	-721	-2	
Buchanan, Lake	96	824,519	602,152	73	-42,400	-5	-230,177	-28	
Lyndon B Johnson, Lake	97	113,690	113,368	100	1,800	2	449	0	
*Amistad Reservoir (Texas)	98	1,840,849	1,857,000	101	-382,000	-21	-411,000	-22	
*Amistad Reservoir (TX & Mexico)	(98)	3,275,532	3,306,000	101	509,000	16	492,000	15	
TOTAL		4,176,368	3,046,147	73	-436,062	-10	-739,589	-18	
SOUTH CENTRAL									
Travis, Lake	99	1,113,902	726,951	65	-16,989	-2	-373,802	-34	
*Austin, Lake	100	21,804	20,609	95	-166	-1	-408	-2	
Somerville Lake	101	147,104	120,997	82	-3,996	-3	-20,452	-14	
Canyon Lake	102	378,781	303,694	80	-6,067	-2	-75,087	-20	
Medina Lake	103	254,823	160,500	63	-8,739	-3	-93,500	-37	
*Coleto Creek Reservoir	104	31,040	23,523	76	108	0	-7,517	-24	
TOTAL		1,947,454	1,356,274	70	-35,849	-2	-570,767	-29	
UPPER COAST									
Houston, Lake	105	128,863	128,863	100	0	0	390	0	
Texana, Lake	106	153,246	124,344	81	-8,186	-5	-25,327	-17	
TOTAL		282,109	253,207	90	-8,186	-3	-24,937	-9	
SOUTHERN									
Choke Canyon Reservoir	107	695,262	587,237	84	-14,072	-2	-94,593	-14	
Corpus Christi, Lake	108	256,961	183,209	71	-16,459	-6	-72,668	-28	
*Falcon Reservoir (Texas)	109	1,551,034	1,551,000	100	536,000	35	293,000	19	
*Falcon Reservoir (TX & Mexico)	(109)	2,646,817	2,546,000	96	1,143,000	43	766,000	29	
TOTAL		2,503,257	2,321,446	93	505,469	20	125,739	5	
STATE TOTAL		31,159,448	25,267,325	81	-496,435	-2	-2,776,490	-9	

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

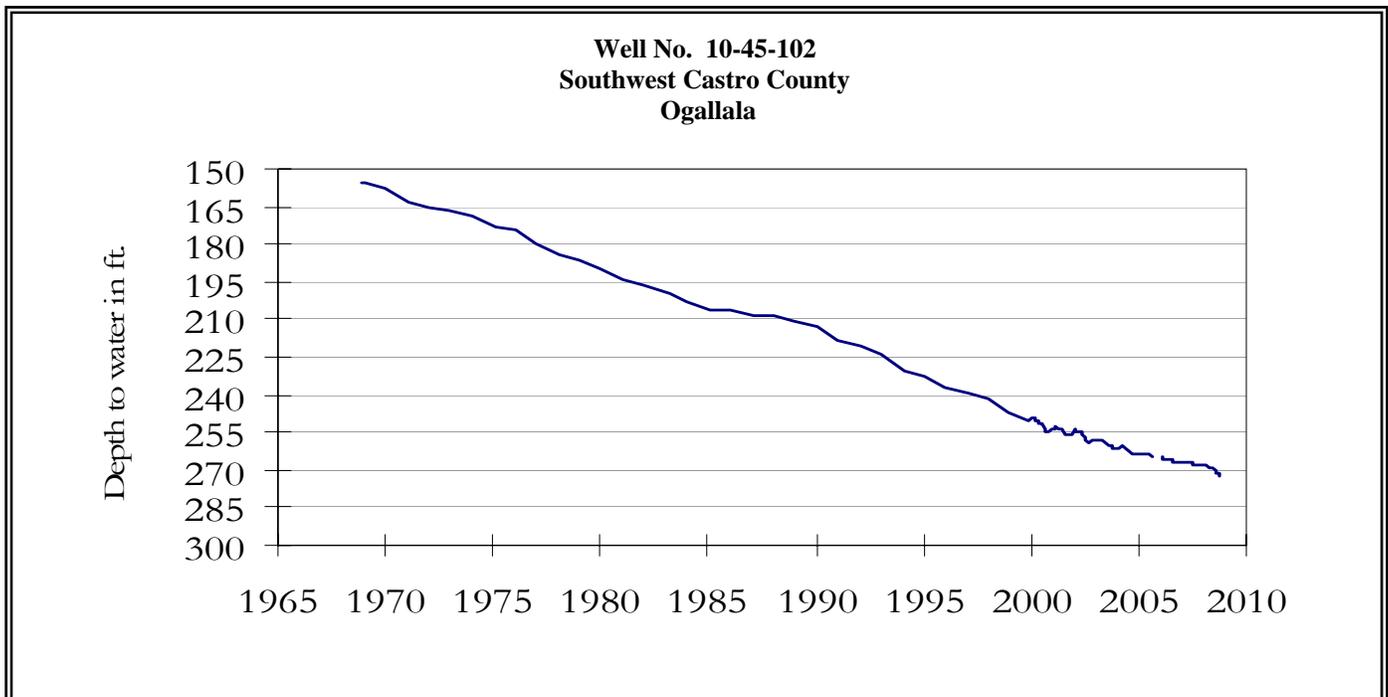
Note

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 $100 \times (\text{current conservation storage} - \text{past conservation storage}) / \text{conservation storage capacity}$. Figures shown are for the Texas share of conservation storage in all reservoirs.

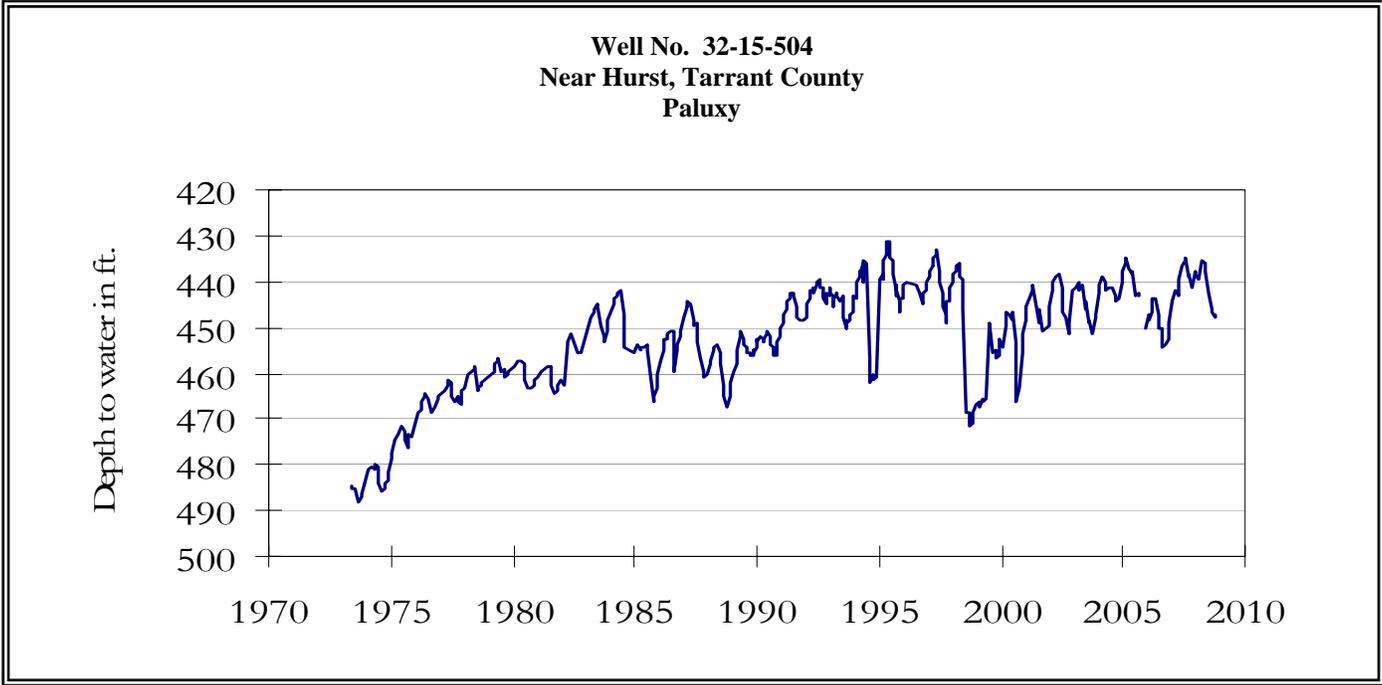
GROUND WATER LEVELS IN OBSERVATION WELLS



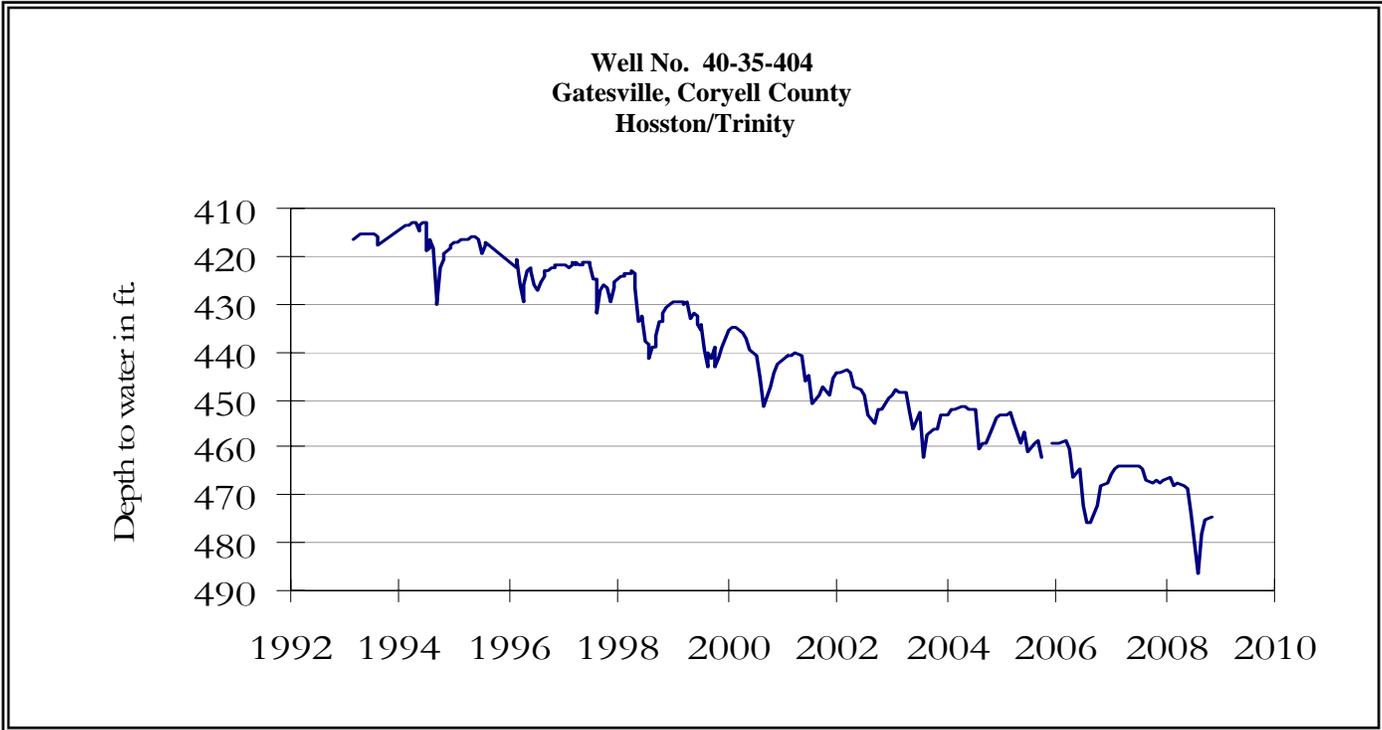
OCTOBER GROUND WATER LEVELS IN OBSERVATION WELLS



The late October water-level measurement in this Ogallala Aquifer well, elevation 3,816 feet above sea level, was 272.13 feet below land surface. This measurement was 0.32 feet below last month's measurement, 4.00 feet below last year's measurement, and 116.13 feet below the initial measurement recorded in 1968. No water level measurements were recorded for September through December 2005.

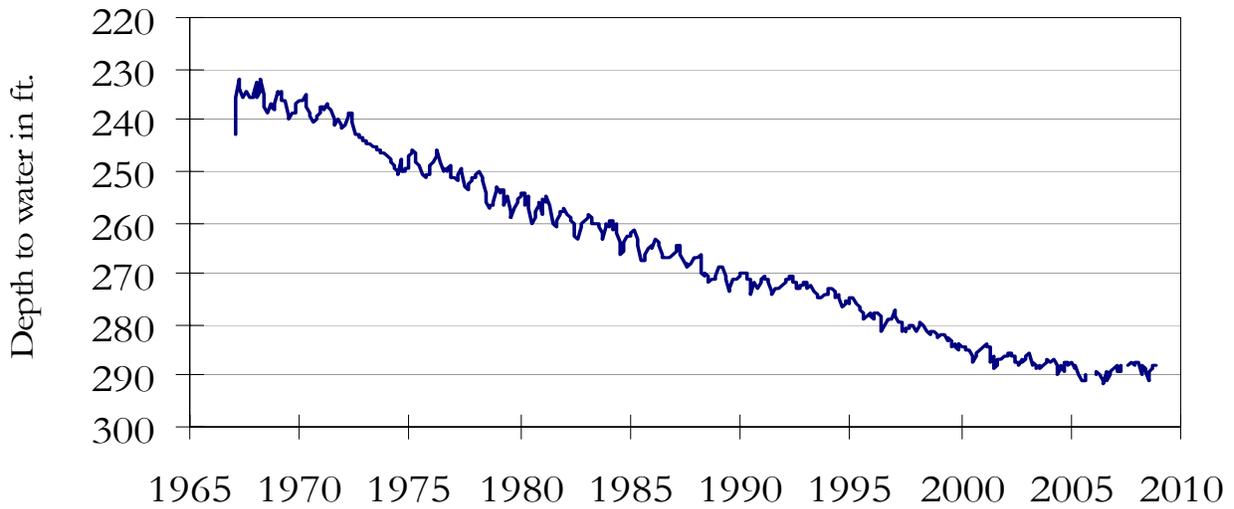


The late October water-level measurement in this Paluxy Formation Trinity Aquifer well, elevation 535 feet above sea level, was 447.12 feet below land surface. This measurement was 0.57 feet above last month's measurement, 5.64 feet below last year's measurement, and 69.12 feet below the initial measurement recorded in 1953. No water level measurements were recorded for September or October 2005.



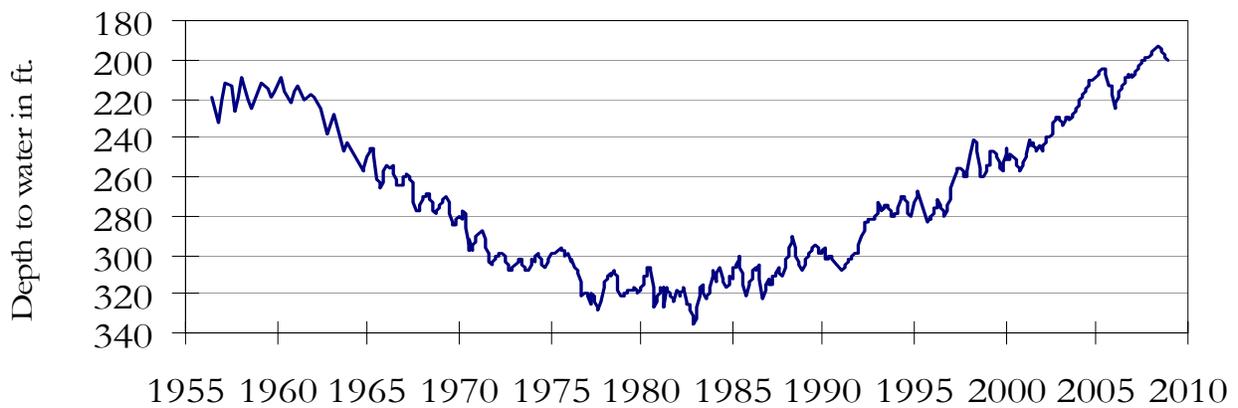
The late October water-level measurement in this Hosston Formation Trinity Aquifer well, elevation 823 feet above sea level, was 474.70 feet below land surface. This water level was 0.47 feet above last month's measurement, 7.98 feet below last year's measurement, and 182.70 feet below the initial measurement recorded in 1955. No water level measurement was recorded for October 2005.

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



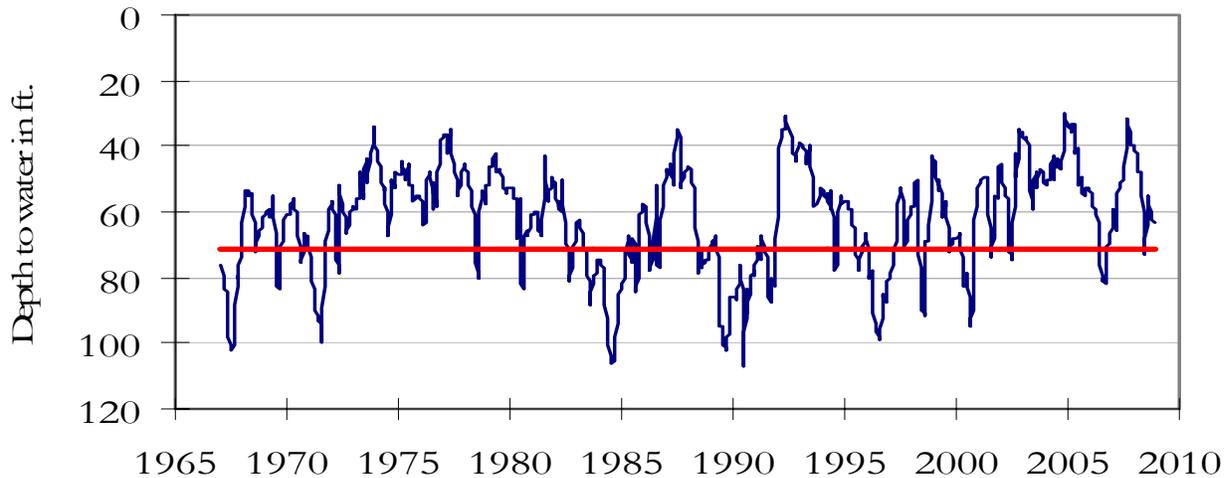
The late October water-level measurement in this Hueco Bolson Aquifer well, elevation 3,882 feet above sea level, was 287.88 feet below land surface. This water level was 0.25 feet above last month's measurement, 0.50 feet below last year's measurement, and 55.98 feet below the initial measurement in 1964. No water level measurements were recorded for May through July 2007, and October or December 2005.

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



The late October water-level measurement in this Evangeline Formation Gulf Coast Aquifer well, elevation 66 feet above sea level, was 200.48 feet below land surface. This was 1.58 feet below last month's measurement, 2.09 feet below last year's measurement, and 64.98 feet below the initial measurement recorded in 1947.

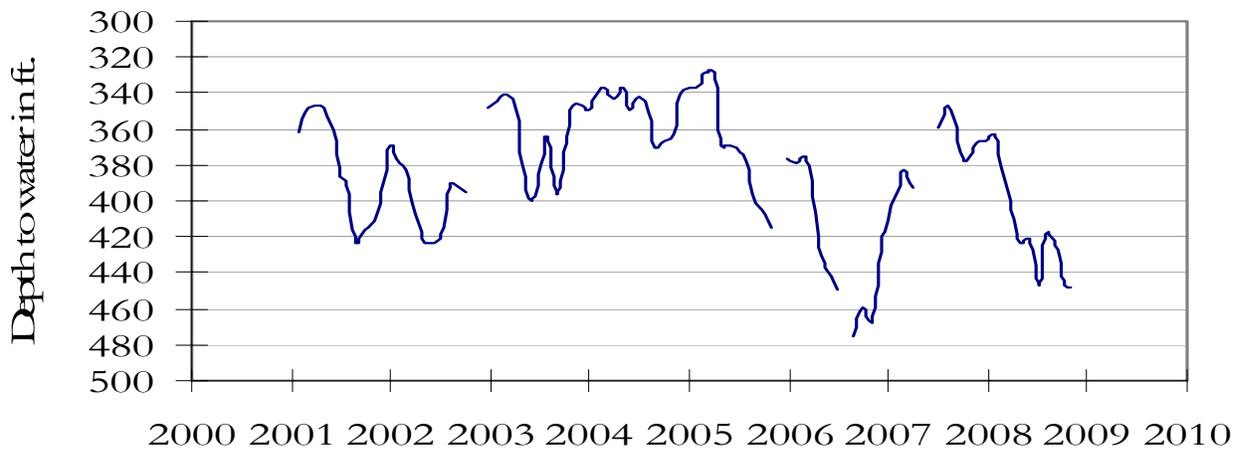
Well No. 68-37-203 (J-17)
In San Antonio, Bexar County
Edwards and Associated Limestones



The late October water-level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 62.97 feet below land surface. This was 0.97 feet below last month's measurement, 24.37 feet below last year's measurement, and 16.33 feet below the initial measurement recorded in 1962.

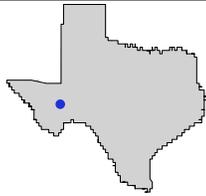
*** Water levels below the red line indicate Edwards Aquifer Authority Stage 1 drought restrictions. ***

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



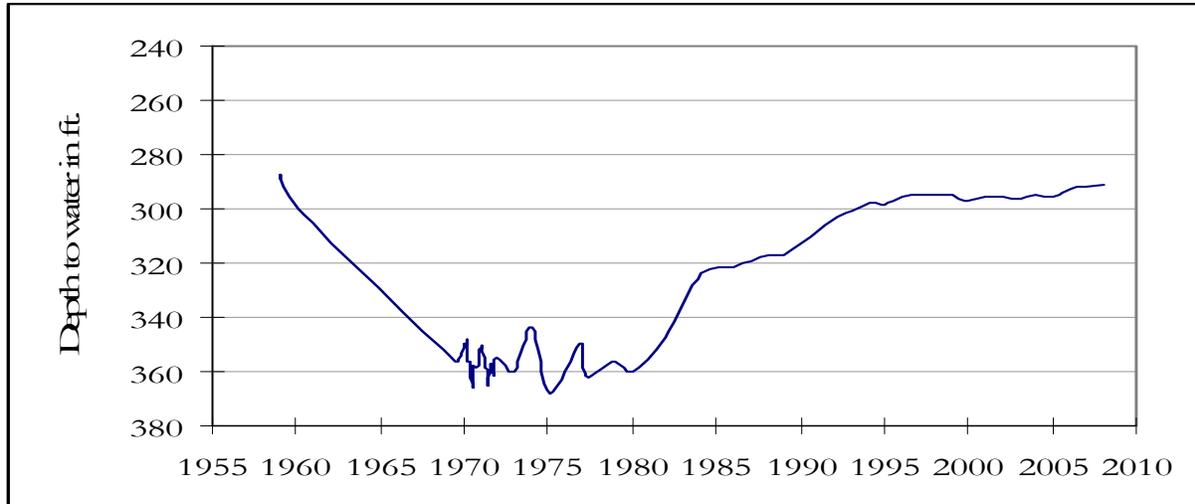
The late October water-level measurement in this Carrizo-Wilcox Aquifer well, elevation 652 feet above sea level, was 448.09 feet below land surface. This was 1.01 feet below last month's measurement, 72.48 feet below last year's measurement, and 168.09 feet below the initial measurement recorded in 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 46-59-105 Reeves County



This water level observation well, located 8 miles north of Balmorhea, at an elevation of 2999 feet ASL, was completed in the Cenozoic Pecos Alluvium aquifer. Water-level declines in excess of 100 feet historically have occurred in this area, but have moderated since the mid 1970s with decrease in irrigation pumpage.

October, 2008

Water level measurements were available for all seven key monitoring wells. Water levels rose in three of the reporting monitoring wells since the beginning of September, ranging from 0.25 feet in the El Paso Co. Hueco Bolson well to 0.57 feet in the Tarrant Co. Trinity well. Water levels declined in the remaining monitoring wells, ranging from 0.32 feet in the Castro Co. Ogallala well to 1.58 feet in the Harris Co. Gulf Coast Well. The J-17 well in San Antonio recorded a water level of 62.97 feet below land surface, 0.97 feet below last month's measurement. This water level is 8.03 feet above the Stage 1 critical management level.

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