

Texas Water Development Board



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

RESERVOIR STORAGE

January 2009

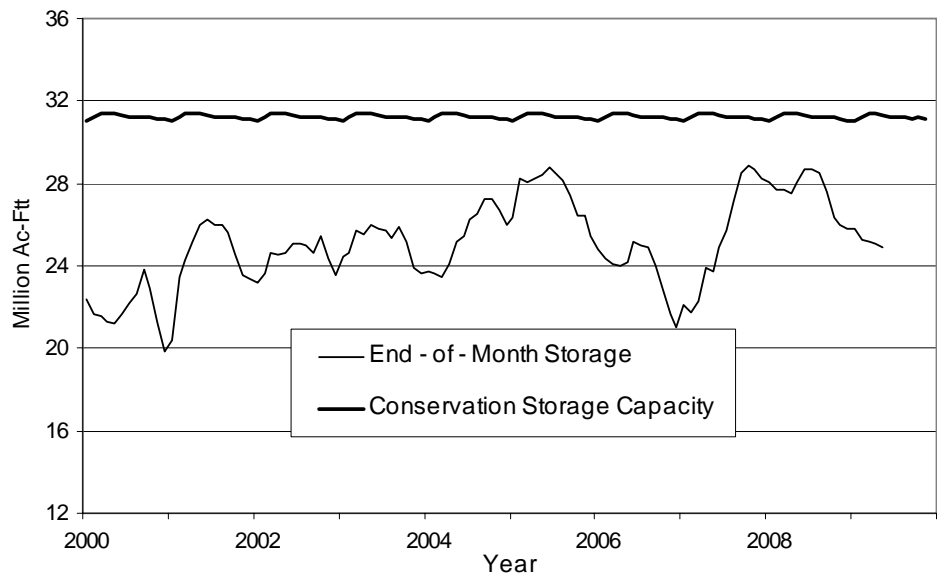
Near the end of January, the 109 reservoirs monitored for this report held 24.9 million acre-feet* in conservation storage, or 80 percent of the conservation storage capacity of the state's 175 major water supply reservoirs.

Storage was at 100% in 12 reservoirs, including Falcon and Amistad. Eight out of these 12 reservoirs are in the East 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 almost empty, Lake Meredith and J B Thomas both at 8%, and E.V. Spence is 10% full.

Regionally, the Southern Region (94%) is the only region having storage at or above 90% of capacity, and the High Plains (12%) and Trans-Pecos Regions (28%) remained very low. Storage increased in three regions and decreased in the remaining six in the past month, but increased in only two of the nine regions over the past 12 month period.

* 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.

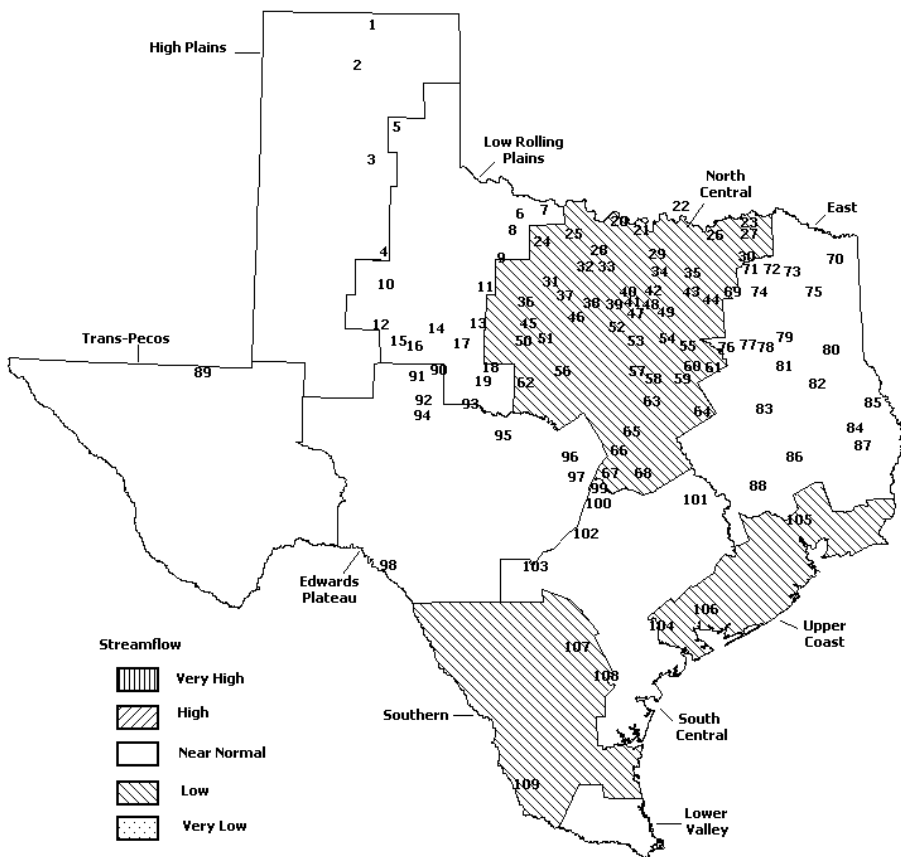
STREAMFLOW

Of 29 reporting index stations in January, computed 30-day mean flows were very high (<5%) at 1 station, high (5% - 30%) at 2 stations, low (70% - 95%) at 11 stations, very low (>95%) at 1 station, and near normal (30% - 70%) at the remaining 14 stations. Compared to December, flows have increased at 14 index stations and decreased at 13 stations.

On a regional basis, flows in January were low in the North Central, Upper Coast, and Southern Regions, but normal in all other regions. Streamflow in the Lower Valley Region is not monitored.

JANUARY 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		Change since Late December 2009		Change since Late January 2008		
		Capacity (acre-feet)	Late Jan. (acre-feet)	2009 (%)	2009 (%)	2008 (acre-feet)	2008 (%)	
HIGH PLAINS								
Palo Duro Reservoir	1	60,897	1,033	2	-146	0	290	0
Meredith, Lake (Texas)	2	500,000	62,381	12	-1,556	0	13,058	3
Meredith, Lake (Texas & Oklahoma)	(2)	779,556	62,381	8	-1,556	0	13,058	2
MacKenzie Reservoir	3	46,429	5,750	12	-87	0	-1,567	-3
White River Lake	4	29,880	6,659	22	-254	-1	5,327	18
TOTAL		637,206	75,823	12	-2,043	0	17,108	3
LOW ROLLING PLAINS								
Greenbelt Lake	5	59,500	18,350	31	-81	0	-3,560	-6
*Electra, Lake	6	5,626	922	16	-53	-1	-782	-14
N. Fork Buffalo Crk Reservoir	7	15,400	3,960	26	-125	-1	-869	-6
Kemp, Lake	8	245,308	167,119	68	-2,860	-1	-78,189	-32
Millers Creek Reservoir	9	27,888	16,075	58	-440	-2	-6,855	-25
Alan Henry Reservoir	10	94,808	92,766	98	-672	-1	1,485	2
Stamford, Lake	11	51,570	35,278	68	-1,117	-2	-14,309	-28
J B Thomas, Lake	12	199,931	16,162	8	-296	0	-9,096	-5
Fort Phantom Hill, Lake	13	70,030	62,043	89	-1,410	-2	-2,928	-4
Sweetwater, Lake	14	10,006	7,467	75	-151	-2	-68	-1
Colorado City, Lake	15	31,793	21,712	68	-307	-1	-5,229	-16
Champion Creek Reservoir	16	41,618	8,925	21	-67	0	-470	-1
Abilene, Lake	17	6,099	3,675	60	-225	-4	-1,865	-31
Coleman, Lake	18	38,076	27,801	73	-532	-1	-6,946	-18
Hords Creek Lake	19	5,684	2,801	49	-128	-2	-1,937	-34
TOTAL		903,337	485,056	54	-8,464	-1	-131,618	-15
NORTH CENTRAL								
Nocona, Lake (Farmers Crk)	20	21,445	16,856	79	-328	-2	-2,288	-11
Hubert H Moss Lake	21	24,058	20,868	87	-233	-1	-1,621	-7
Texoma, Lake (Texas)	22	1,209,709	1,209,709	100	-32,563	-3	35,006	3
Texoma, Lake (Texas & Oklahoma)	(22)	2,419,418	2,419,418	100	-65,126	-3	70,012	3
*Pat Mayse Lake	23	118,100	105,609	89	-1,501	-1	-12,257	-10
Kickapoo, Lake	24	85,825	39,092	46	-1,256	-1	-20,571	-24
Arrowhead, Lake	25	235,997	156,853	66	-2,948	-1	-49,281	-21
Bonham, Lake	26	11,026	8,007	73	-203	-2	-1,794	-16
Crook, Lake	27	9,195	8,709	95	-52	-1	-196	-2
Amon G Carter, Lake	28	19,903	15,949	80	-310	-2	-2,024	-10
Ray Roberts, Lake	29	798,758	722,604	90	-7,330	-1	-57,601	-7
Jim Chapman Lake (Cooper)	30	260,332	154,476	59	-8,074	-3	-135,151	-52
Graham, Lake	31	45,260	40,519	90	-498	-1	2,029	4
*Lost Creek Reservoir	32	11,950	10,316	86	-107	-1	-911	-8
Bridgeport, Lake	33	366,236	273,583	75	-6,952	-2	-44,829	-12
Lewisville Lake	34	543,988	425,219	78	-7,793	-1	-91,494	-17
Lavon Lake	35	443,844	360,341	81	4,498	1	-17,233	-4
Hubbard Creek Reservoir	36	318,067	257,296	81	-3,714	-1	-20,692	-7
Poosum Kingdom Lake	37	540,340	497,305	92	-4,144	-1	-17,491	-3
*Mineral Wells, Lake	38	7,065	5,131	73	-88	-1	-912	-13
Weatherford, Lake	39	18,645	12,020	64	-392	-2	-3,821	-20
Eagle Mountain Lake	40	182,500	143,562	79	-1,449	-1	-17,713	-10
Worth, Lake	41	24,500	18,241	74	-779	-3	-3,126	-13
Grapevine Lake	42	164,702	118,452	72	-2,794	-2	-35,426	-22
Ray Hubbard, Lake	43	452,040	415,157	92	-10,985	-2	-33,576	-7
New Terrell City Lake	44	8,583	7,277	85	-233	-3	-1,034	-12
Daniel, Lake	45	9,435	6,572	70	-240	-3	-1,102	-12
Palo Pinto, Lake	46	27,150	14,373	53	-909	-3	-7,175	-26
Benbrook Lake	47	85,648	61,040	71	1,338	2	-20,395	-24

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 December 2009		Change since Late January 2008	
			Late Jan. (acre-feet)	2009 (%)	(acre-feet)	(%)	(acre-feet)	(%)
NORTH CENTRAL (Continue)								
Joe Pool Lake	49	142,861	124,212	87	-140	0	-10,189	-7
*Cisco, Lake	50	26,000	19,129	74	-301	-1	-1,901	-7
Leon, Lake	51	26,421	20,828	79	-456	-2	-3,643	-14
Granbury, Lake	52	128,046	108,525	85	-3,130	-2	-10,215	-8
Pat Cleburne, Lake	53	25,730	19,492	76	-277	-1	-4,885	-19
Waxahachie, Lake	54	10,779	10,291	95	-239	-2	-81	-1
Bardwell Lake	55	46,122	36,303	79	-252	-1	-8,736	-19
Proctor Lake	56	55,457	35,666	64	-873	-2	-18,589	-34
Whitney, Lake	57	553,349	364,142	66	-4,905	-1	-54,182	-10
Aquilla Lake	58	45,092	33,604	75	-919	-2	-8,266	-18
Navarro Mills Lake	59	55,817	41,161	74	-991	-2	-10,156	-18
*Halbert, Lake	60	6,033	3,296	55	-188	-3	-1,477	-24
Richland-Chambers Reservoir	61	1,103,816	909,539	82	-17,195	-2	-126,722	-11
*Brownwood, Lake	62	131,429	102,130	78	-1,852	-1	-19,358	-15
Waco, Lake	62	198,943	174,330	88	-2,450	-1	-24,613	-12
Limestone, Lake	64	208,015	175,643	84	-2,994	-1	-10,311	-5
Belton Lake	65	435,225	399,670	92	-4,078	-1	-35,555	-8
Stillhouse Hollow Lake	66	227,771	195,825	86	-3,017	-1	-31,946	-14
Georgetown, Lake	67	36,823	17,347	47	512	1	-16,548	-45
Granger Lake	68	52,525	39,046	74	-371	-1	-13,479	-26
Tawakoni, Lake	69	888,126	708,992	80	-10,126	-1	-108,327	-12
TOTAL		10,487,421	8,690,420	83	-144,333	-1	-1,088,652	-10
EAST								
Wright Patman Lake	70	122,593	122,593	100	0	0	0	0
*Sulphur Springs, Lake	71	17,838	14,929	84	231	1	-2,070	-12
Cypress Springs, Lake	72	67,689	66,964	99	-725	-1	0	0
Bob Sandlin, Lake	73	200,579	200,579	100	3,348	2	6,656	3
Fork Reservoir, Lake	74	604,927	581,432	96	-2,112	0	-16,631	-3
O the Pines, Lake	75	238,933	238,933	100	0	0	0	0
Cedar Creek Reservoir in Trinity	76	644,686	564,442	88	-6,962	-1	-44,046	-7
Athens, Lake	77	29,435	28,628	97	198	1	-807	-3
Palestine, Lake	78	370,907	370,907	100	0	0	1,304	0
Tyler, Lake	79	73,256	73,256	100	0	0	2,801	4
Murvaul, Lake	80	38,284	38,284	100	0	0	3,294	9
Jacksonville, Lake	81	30,300	30,070	99	338	1	-230	-1
Nacogdoches, Lake	82	39,521	35,397	90	317	1	-942	-2
Houston County Lake	83	17,113	17,113	100	0	0	0	0
Sam Rayburn Reservoir	84	2,857,077	2,178,282	76	26,254	1	-122,727	-4
Toledo Bend Reservoir (Texas)	85	2,236,450	1,937,748	87	23,086	1	5,772	0
Toledo Bend Reservoir (TX & LA)	(85)	4,472,900	3,875,496	87	46,172	1	11,544	0
*Livingston, Lake	86	1,741,867	1,741,867	100	0	0	0	0
B A Steinhagen Lake	87	66,966	49,021	73	-3,408	-5	-11,493	-17
Conroe, Lake	88	416,188	393,164	94	-1,861	0	-19,711	-5
TOTAL		9,814,609	8,683,609	88	38,704	0	-198,830	-2
TRANS-PECOS								
Red Bluff Reservoir	89	289,670	79,716	28	1,478	1	-27,904	-10
TOTAL		289,670	79,716	28	1,478	1	-27,904	-10

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

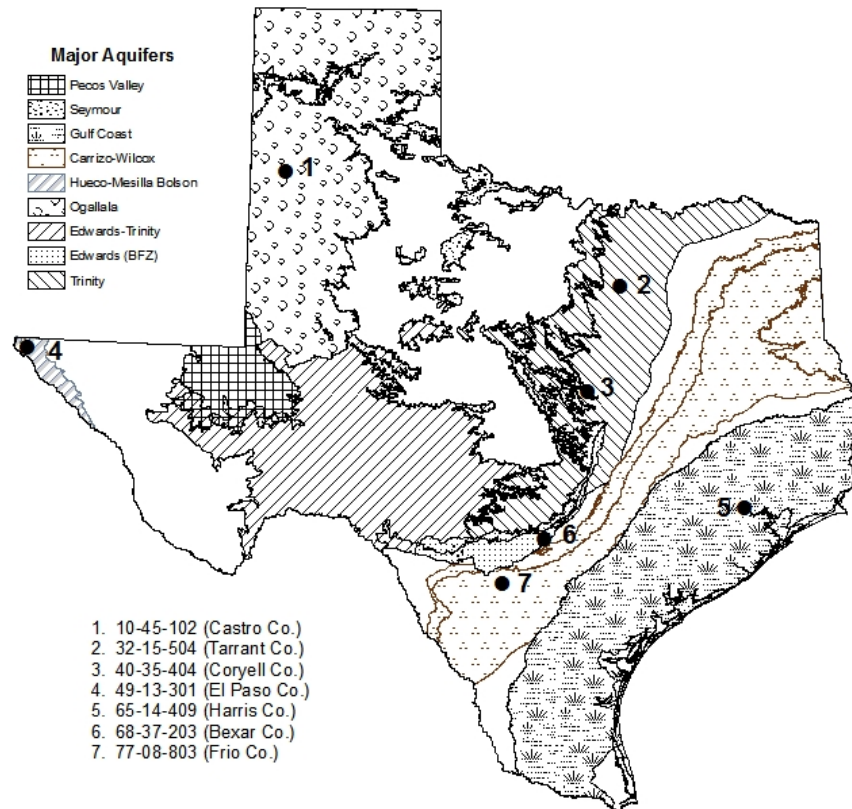
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage		Change since Late December 2009		Change since Late January 2008		
			Late Jan. (acre-feet)	2009 (%)	(acre-feet)	(%)	(acre-feet)	(%)	
EDWARDS PLATEAU									
Oak Creek Reservoir	90	39,260	30,017	76	-576	-1	-8,052	-21	
E V Spence Reservoir	91	517,272	51,508	10	-2,121	0	-22,381	-4	
O C Fisher Lake	92	79,483	0	0	0	0	0	0	
*O H Ivie Reservoir	93	554,335	302,632	55	-3,545	-1	-68,189	-12	
Twin Buttes Reservoir	94	177,850	46,224	26	-880	0	-23,375	-13	
Brady Creek Reservoir	95	29,110	14,109	48	-398	-1	-1,393	-5	
Buchanan, Lake	96	875,610	573,159	65	0	0	-271,568	-31	
Lyndon B Johnson, Lake	97	113,690	112,854	99	64	0	27,764	24	
*Amistad Reservoir (Texas)	98	1,840,849	1,879,000	102	22,000	1	-390,000	-21	
*Amistad Reservoir (TX & Mexico)	(98)	3,275,532	3,275,532	100	0	0	441,532	13	
TOTAL		4,227,459	3,009,503	71	14,544	0	-757,194	-18	
SOUTH CENTRAL									
Travis, Lake	99	1,113,902	697,955	63	-9,900	-1	-415,947	-37	
*Austin, Lake	100	21,804	20,972	96	152	1	14,047	64	
Somerville Lake	101	147,104	115,244	78	-1,658	-1	-31,860	-22	
Canyon Lake	102	378,781	292,202	77	-2,836	-1	-86,579	-23	
Medina Lake	103	254,823	136,449	54	-7,318	-3	-103,861	-41	
*Coletto Creek Reservoir	104	31,040	23,264	75	-87	0	-7,705	-25	
TOTAL		1,947,454	1,286,086	66	-21,647	-1	-631,905	-32	
UPPER COAST									
Houston, Lake	105	128,863	128,863	100	0	0	0	0	
Texana, Lake	106	153,246	109,548	71	-6,224	-4	-38,198	-25	
TOTAL		282,109	238,411	85	-6,224	-2	-38,198	-14	
SOUTHERN									
Choke Canyon Reservoir	107	695,262	559,238	80	-7,883	-1	-111,430	-16	
Corpus Christi, Lake	108	256,961	164,855	64	-3,961	-2	-90,841	-35	
*Falcon Reservoir (Texas)	109	1,551,034	1,630,000	105	-20,000	-1	424,000	27	
*Falcon Reservoir (TX & Mexico)	(109)	2,646,817	2,646,817	100	0	0	1,211,817	46	
TOTAL		2,503,257	2,354,093	94	-31,844	-1	221,729	9	
STATE TOTAL		31,092,522	24,902,717	80	-159,829	-1	-2,635,464	-8	

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

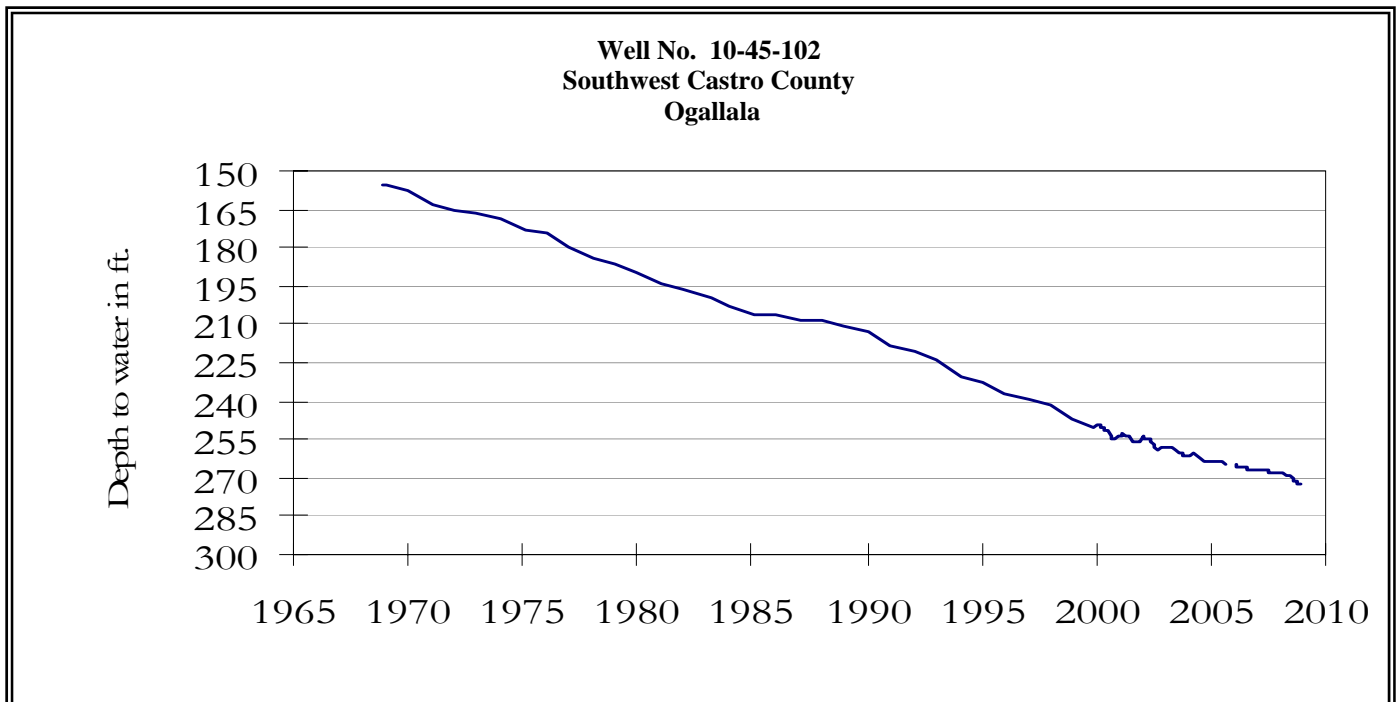
Note

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.

GROUND WATER LEVELS IN OBSERVATION WELLS

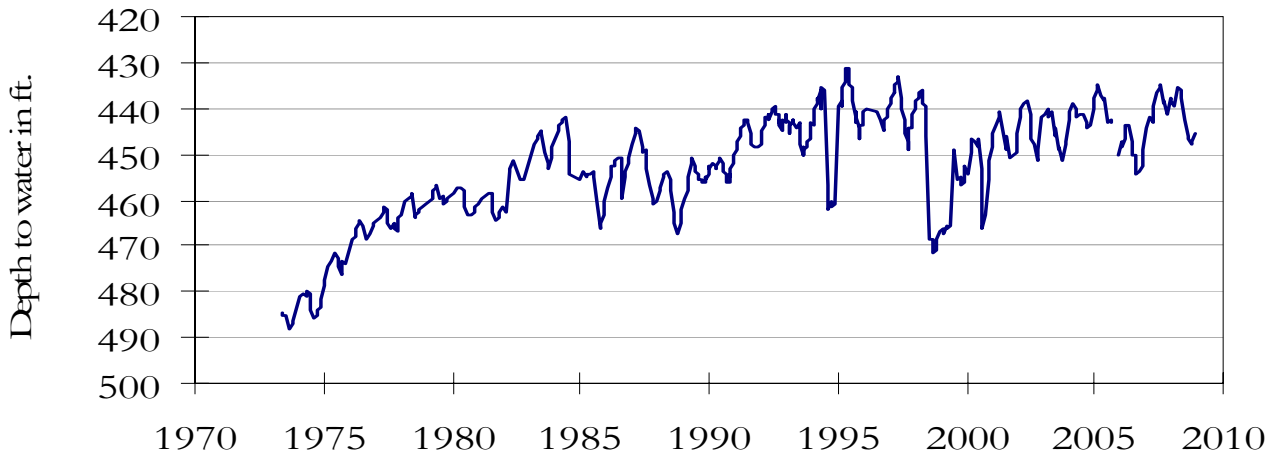


JANUARY GROUNDWATER LEVELS IN OBSERVATION WELLS



The water-level measurement was not available for this Ogallala Aquifer well (recorder under repair). The graph presented is from last month's report.

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



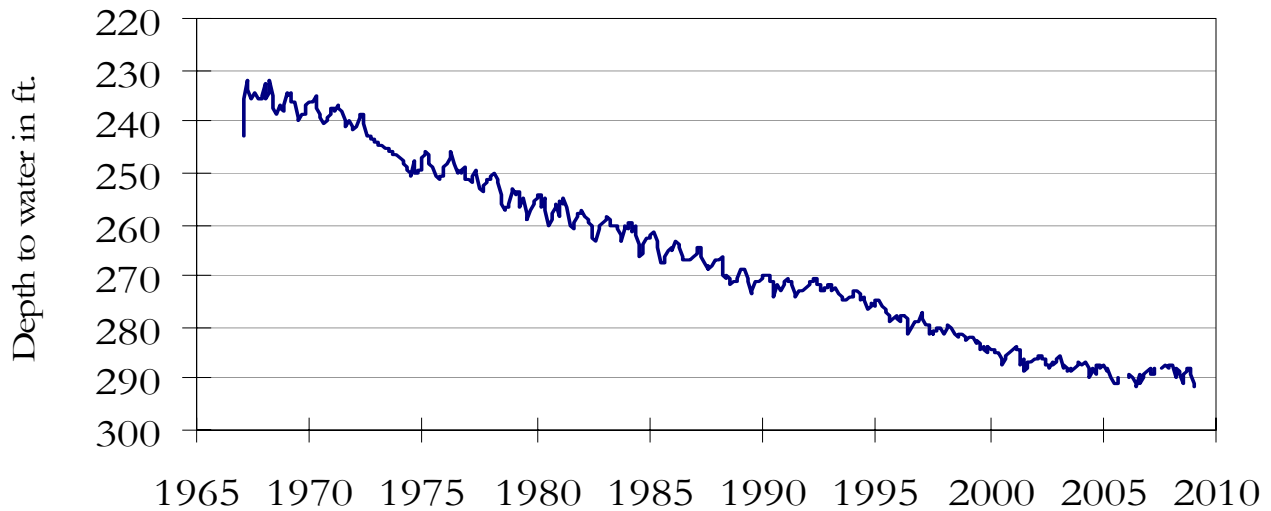
The late January water level measurement in this Paluxy Formation Trinity Aquifer well, elevation 535 feet above sea level, was 446.34 feet below land surface. This measurement was 6.58 feet below last year's measurement, and 68.34 feet below the initial measurement recorded in 1953. No water level measurements were recorded for September or October 2005 and December 2008.

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



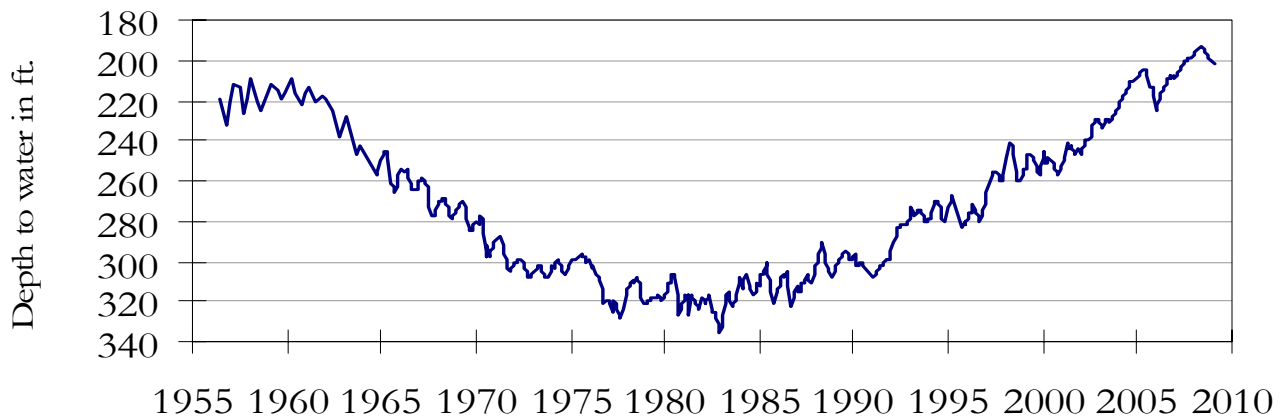
The late January water level measurement in this Hosston Formation Trinity Aquifer well, elevation 823 feet above sea level, was 474.84 feet below land surface. This water level was 1.58 feet below last month's measurement, 8.33 feet below last year's measurement, and 182.84 feet below the initial measurement recorded in 1955. No water level measurement was recorded for October 2005.

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



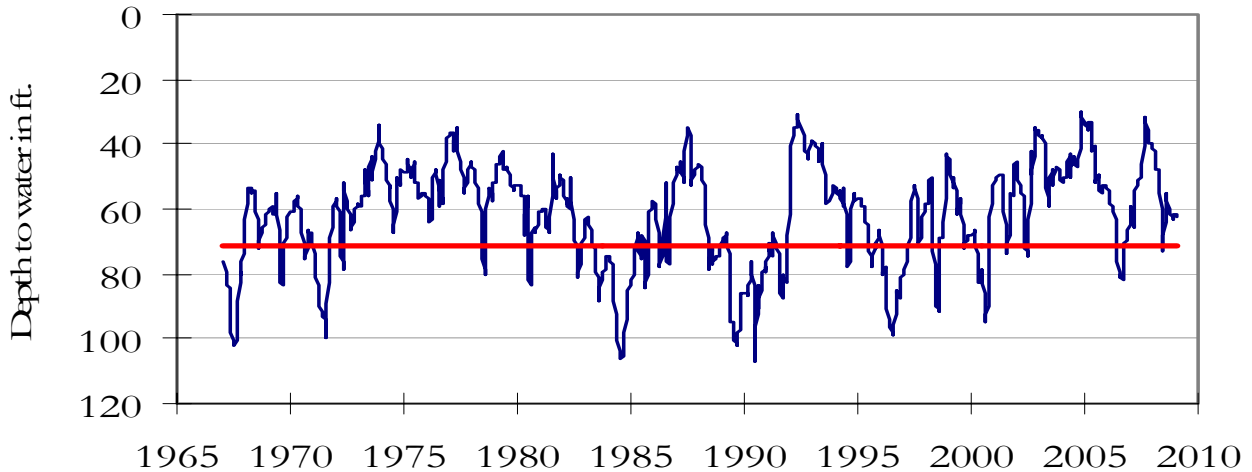
The late January water level measurement in this Hueco Bolson Aquifer well, elevation 3,882 feet above sea level, was 291.37 feet below land surface. This water level was 0.24 feet below last month's measurement, 4.06 feet below last year's measurement, and 59.47 feet below the initial measurement in 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 January water level measurement in this Evangeline Formation Gulf Coast Aquifer well, elevation 66 feet above sea level, was 201.43 feet below land surface. This was 0.35 feet below last month's measurement, 5.26 feet below last year's measurement, and 65.93 feet below the initial measurement recorded in 1947.

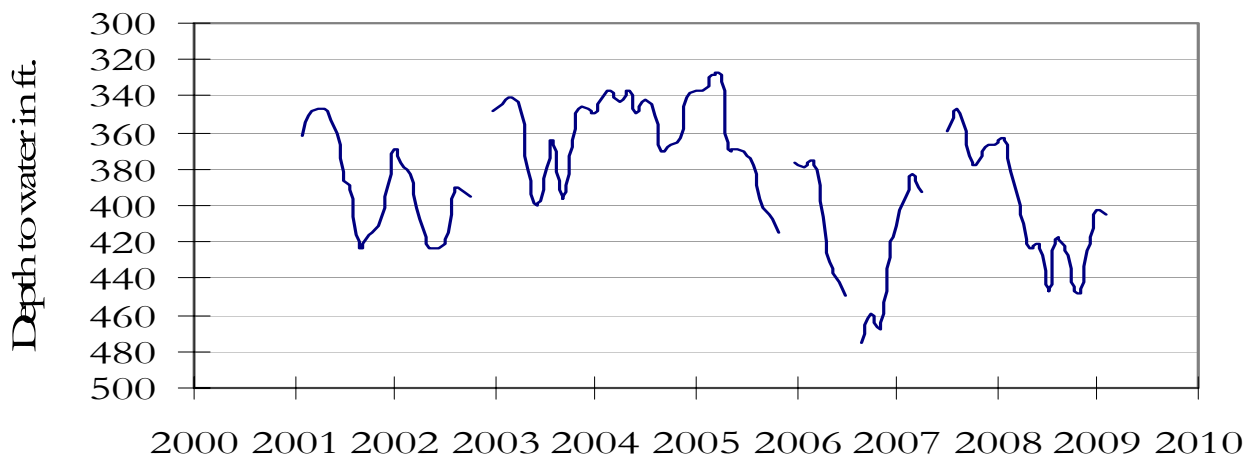
Well No. 68-37-203 (J-17)
In San Antonio, Bexar County
Edwards and Associated Limestones



The late January water level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 62.23 feet below land surface. This was 0.85 feet below last month's measurement, 19.76 feet below last year's measurement, and 15.59 feet below the initial measurement recorded in 1962.

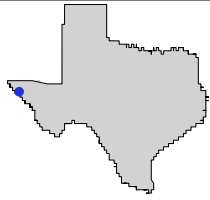
***** Water levels below the red line indicate Edwards Aquifer Authority Stage 1 drought restrictions. *****

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



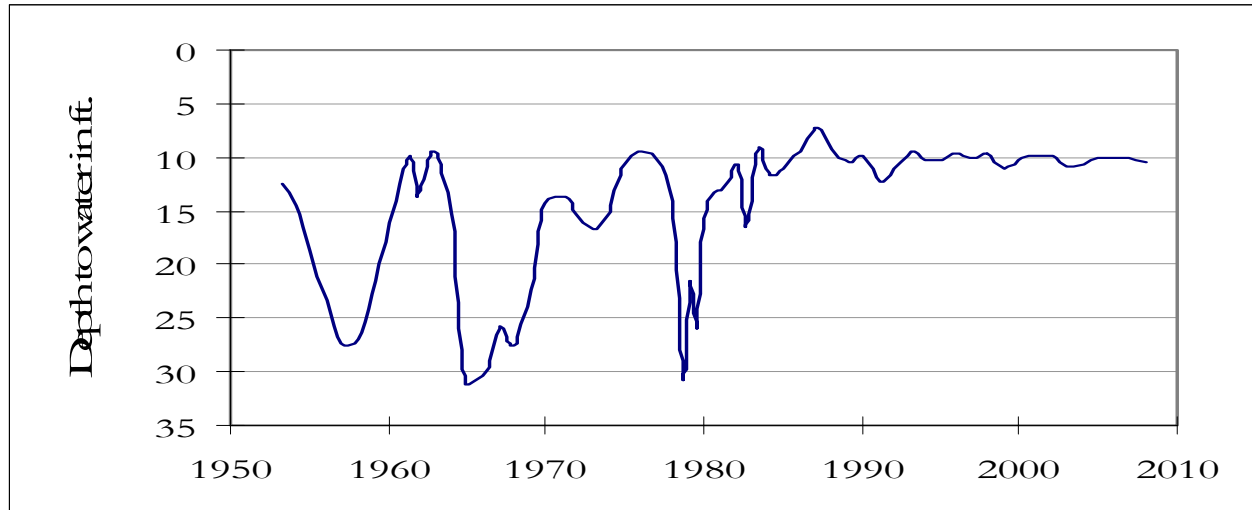
The late January water level measurement in this Carrizo-Wilcox Aquifer well, elevation 652 feet above sea level, was 404.65 feet below land surface. This was 2.30 feet below last month's measurement, 41.19 feet below last year's measurement, and 124.65 feet below the initial measurement recorded in 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 48-42-701 Hudspeth County



This water level observation well, located 2 miles southwest of Fort Hancock, at an elevation of 3520 feet ASL, was completed in the Hueco Bolson aquifer. Nearly 90 percent of the water pumped from the Hueco Bolson is used for public supply. The world's largest inland desalination plant located in El Paso uses brackish groundwater from the Hueco Bolson aquifer

January, 2009

Water level measurements were available for six of the seven key monitoring wells. Water levels declined in all reporting monitoring wells since the beginning of January, ranging from 0.24 feet in the El Paso Co. Hueco Bolson well to 2.30 feet in the Frio Co. Carrizo well. The J-17 well in San Antonio recorded a water level of 62.23 feet below land surface, 0.85 feet below last month's measurement. This water level is 8.77 feet above the Stage 1 critical management level.

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