

# Texas Water Development Board



# WATER Conditions

## RESERVOIR STORAGE

May 2010

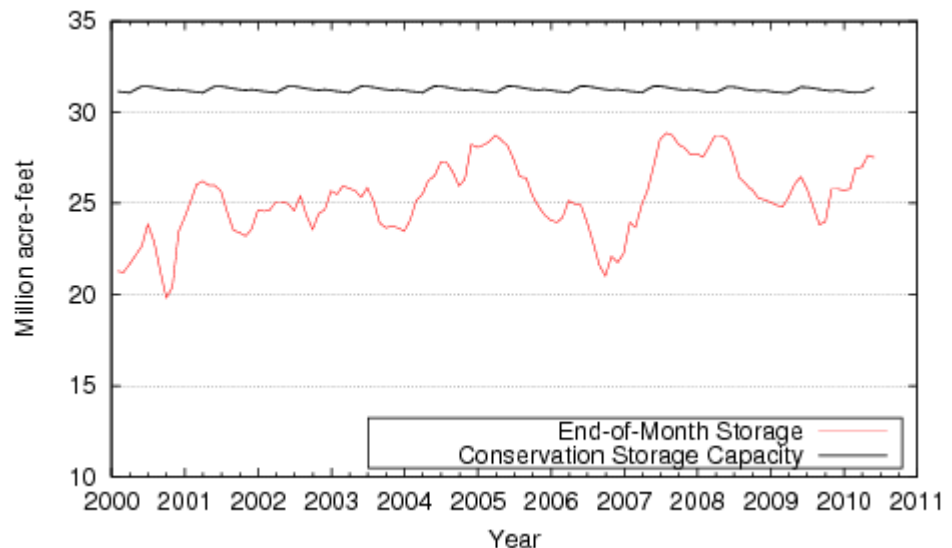
Total storage in the state's 109 major reservoirs was a little less than 1% lower than last month, at 88% full, with 27.5 million acre-feet in conservation storage\*.

Storage was at 100% in 36 reservoirs, fourteen less than last month. Most reservoirs at 100% storage level were in the Low Rolling Plains, East, South Central and North Central regions. There were five lakes at or below 10% full: O. C. Fisher Lake and Palo Duro Reservoir were effectively empty, Lake Meredith (total) was at 4%, E.V. Spence Reservoir was at 5%, and Lake J. B. Thomas was at 8% full.

Four regions had combined storage above 90%: Upper Coast 99%, East 96%, North Central 97%, and South Central 95%. The High Plains (6%) and Trans-Pecos regions (21%) remained very low. Storage increased in 5 regions and decreased in 4 regions over the month. Compared to last May, storage increased in 5 regions but decreased in 4 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.

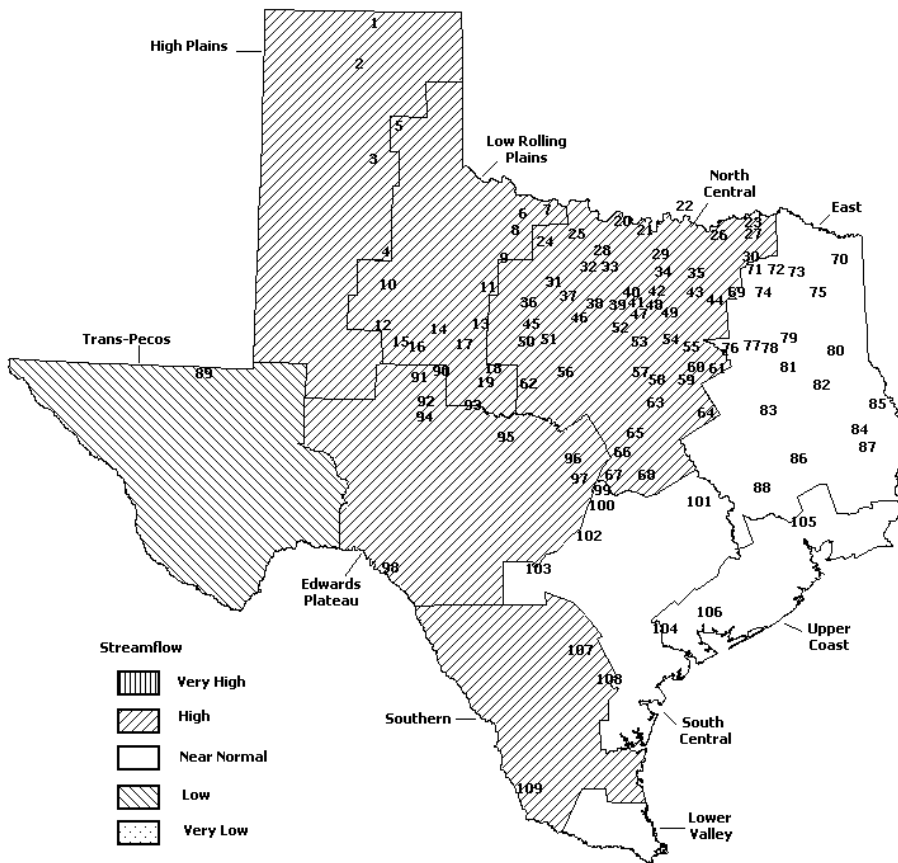
# STREAMFLOW

Of 29 reporting index stations in May, computed 31-day mean flows were high (5% - 30%) at 17 stations, low (70% - 95%) at 2 stations, and near normal (30% - 70%) at the remaining 10 stations. Compared to April, flows have increased at 12 index stations and decreased at 17 stations.

On a regional basis, flows in May were high in the High Plains, Southern, North Central, Edwards Plateau, and Low Rolling Plains regions, low in Trans-Pecos region, and near normal everywhere else. Streamflow in the Lower Valley Region is not monitored.

## MAY 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. 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. 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 Aprilr		Change since Late May		
		Capacity (acre-feet)	Late May (acre-feet)	2010 (%)	2010 (acre-feet) (%)	2009 (acre-feet) (%)	2009 (%)	
<b>HIGH PLAINS</b>								
Palo Duro Reservoir	1	60,897	260	0	0	0	-1,170	-2
Meredith, Lake (Texas)	2	500,000	29,316	6	-2,914	-1	-22,259	-4
Meredith, Lake (Texas & Oklahoma)	(2)	779,556	29,316	4	-2,914	0	-22,259	-3
MacKenzie Reservoir	3	46,429	7,059	15	20	0	1,331	3
White River Lake	4	29,880	4,389	15	7	0	-1,042	-3
TOTAL		637,206	41,024	6	-2,887	0	-23,140	-4
<b>LOW ROLLING PLAINS</b>								
Greenbelt Lake	5	59,500	17,635	30	493	1	-481	-1
*Electra, Lake	6	5,626	659	12	-25	0	-117	-2
N. Fork Buffalo Crk Reservoir	7	15,400	6,879	45	590	4	1,922	12
Kemp, Lake	8	245,308	245,308	100	0	0	83,592	34
Millers Creek Reservoir	9	27,888	20,663	74	1,651	6	6,350	23
Alan Henry Reservoir	10	94,808	94,754	100	-54	0	3,997	4
Stamford, Lake	11	51,570	51,570	100	0	0	18,205	35
J B Thomas, Lake	12	199,931	15,552	8	-869	0	2,235	1
Fort Phantom Hill, Lake	13	70,030	56,564	81	3,820	5	741	1
Sweetwater, Lake	14	10,006	6,710	67	85	1	-225	-2
Colorado City, Lake	15	31,793	17,421	55	-391	-1	-3,103	-10
Champion Creek Reservoir	16	41,618	7,709	19	-5	0	-1,116	-3
Abilene, Lake	17	6,099	6,070	100	1,427	23	3,364	55
Coleman, Lake	18	38,076	25,587	67	770	2	-226	-1
Hords Creek Lake	19	5,684	1,243	22	-57	-1	-1,034	-18
TOTAL		903,337	574,324	64	7,435	1	114,104	13
<b>NORTH CENTRAL</b>								
Nocona, Lake (Farmers Crk)	20	21,445	21,445	100	0	0	0	0
Hubert H Moss Lake	21	24,058	23,929	99	-107	0	10	0
Texoma, Lake (Texas)	22	1,334,294	1,333,525	100	147,837	11	-769	0
Texoma, Lake (Texas & Oklahoma)	(22)	2,668,589	2,667,051	100	295,675	11	-1,538	0
*Pat Mayse Lake	23	117,844	117,844	100	0	0	-256	0
Kickapoo, Lake	24	85,825	82,701	96	10,338	12	44,701	52
Arrowhead, Lake	25	235,997	227,741	97	31,735	13	49,510	21
Bonham, Lake	26	11,026	10,398	94	-268	-2	-535	-5
Crook, Lake	27	9,195	8,657	94	-238	-3	-538	-6
Amon G Carter, Lake	28	19,903	19,903	100	0	0	1,103	6
Ray Roberts, Lake	29	798,758	795,262	100	-874	0	-3,496	0
Jim Chapman Lake (Cooper)	30	260,332	247,134	95	-8,335	-3	-13,198	-5
Graham, Lake	31	45,260	45,260	100	0	0	5,757	13
*Lost Creek Reservoir	32	11,950	11,940	100	-10	0	1,932	16
Bridgeport, Lake	33	366,236	366,236	100	0	0	92,147	25
Lewisville Lake	34	563,228	560,828	100	-1,333	0	16,840	3
Lavon Lake	35	443,844	436,700	98	-7,144	-2	-7,144	-2
Hubbard Creek Reservoir	36	318,067	218,020	69	1,799	1	-21,627	-7
Possum Kingdom Lake	37	540,340	520,955	96	-7,528	-1	45,948	9
*Mineral Wells, Lake	38	7,065	7,010	99	-55	-1	2,179	31
Weatherford, Lake	39	17,789	17,660	99	-75	0	4,582	26
Eagle Mountain Lake	40	179,880	179,880	100	0	0	28,863	16
Worth, Lake	41	24,500	24,365	99	-135	-1	7,164	29
Grapevine Lake	42	164,702	164,702	100	0	0	21,583	13
Ray Hubbard, Lake	43	452,040	437,611	97	-8,643	-2	-14,429	-3
New Terrell City Lake	44	8,583	8,523	99	-60	-1	-60	-1
Daniel, Lake	45	9,435	6,699	71	2,442	26	1,117	12
Palo Pinto, Lake	46	26,827	26,719	100	-108	0	15,244	57
Benbrook Lake	47	85,648	85,648	100	543	1	3,400	4
Arlington, Lake	48	40,156	37,642	94	-2,284	-6	98	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 Aprilr 2010		Change since Late May 2009	
			Late May (acre-feet)	2010 (%)	(acre-feet)	(%)	(acre-feet)	(%)
<b>NORTH CENTRAL (Continue)</b>								
Joe Pool Lake	49	142,861	142,861	100	0	0	1,624	1
*Cisco, Lake	50	26,000	16,322	63	-216	-1	-3,555	-14
Leon, Lake	51	26,421	19,536	74	-304	-1	153	1
Granbury, Lake	52	128,046	124,043	97	-1,813	-1	10,419	8
Pat Cleburne, Lake	53	26,008	25,961	100	-47	0	3,500	13
Waxahachie, Lake	54	10,779	10,779	100	0	0	507	5
Bardwell Lake	55	46,122	46,122	100	0	0	2,940	6
Proctor Lake	56	55,457	51,853	94	-1,468	-3	19,437	35
Whitney, Lake	57	553,349	524,237	95	-29,112	-5	144,874	26
Aquilla Lake	58	44,460	44,460	100	0	0	-602	-1
Navarro Mills Lake	59	49,826	49,640	100	-186	0	-6,177	-12
*Halbert, Lake	60	6,033	5,097	84	-174	-3	1,171	19
Richland-Chambers Reservoir	61	1,087,839	1,083,598	100	-4,241	0	77,299	7
*Brownwood, Lake	62	131,429	101,436	77	-2,835	-2	4,654	4
Waco, Lake	62	198,943	198,943	100	0	0	0	0
Limestone, Lake	64	208,015	203,989	98	-4,026	-2	-366	0
Belton Lake	65	435,225	413,100	95	-1,423	0	-16,584	-4
Stillhouse Hollow Lake	66	227,771	227,771	100	0	0	9,575	4
Georgetown, Lake	67	36,823	36,823	100	0	0	17,257	47
Granger Lake	68	50,779	43,106	85	676	1	-2,022	-4
Tawakoni, Lake	69	888,126	886,220	100	-1,906	0	-1,906	0
<b>TOTAL</b>		<b>10,604,539</b>	<b>10,300,834</b>	<b>97</b>	<b>110,422</b>	<b>1</b>	<b>542,324</b>	<b>5</b>
<b>EAST</b>								
Wright Patman Lake	70	307,973	288,930	94	-7,878	-3	-19,043	-6
*Sulphur Springs, Lake	71	17,838	17,838	100	602	3	0	0
Cypress Springs, Lake	72	66,756	66,692	100	-64	0	-997	-1
Bob Sandlin, Lake	73	200,579	199,674	100	-905	0	-905	0
Fork Reservoir, Lake	74	604,927	604,927	100	0	0	0	0
O the Pines, Lake	75	267,672	244,162	91	5,229	2	-23,510	-9
Cedar Creek Reservoir in Trinity	76	644,686	636,327	99	-5,787	-1	965	0
Athens, Lake	77	29,435	29,058	99	-377	-1	-377	-1
Palestine, Lake	78	370,907	358,519	97	-9,780	-3	-11,736	-3
Tyler, Lake	79	73,256	71,656	98	-1,600	-2	-941	-1
Murvaul, Lake	80	38,284	37,159	97	-1,125	-3	-1,090	-3
Jacksonville, Lake	81	25,670	25,086	98	-584	-2	-5,092	-20
Nacogdoches, Lake	82	39,521	36,912	93	-1,455	-4	-1,390	-4
Houston County Lake	83	17,113	16,859	99	-254	-1	-25	0
Sam Rayburn Reservoir	84	2,857,077	2,703,351	95	-125,661	-4	24,850	1
Toledo Bend Reservoir (Texas)	85	2,236,450	2,031,674	91	-82,037	-4	-189,541	-8
Toledo Bend Reservoir (TX & LA)	(85)	4,472,900	4,063,349	91	-164,074	-4	-379,082	-8
*Livingston, Lake	86	1,741,867	1,741,867	100	0	0	0	0
B A Steinhagen Lake	87	66,966	62,429	93	907	1	201	0
Conroe, Lake	88	416,188	408,392	98	-5,457	-1	-3,898	-1
<b>TOTAL</b>		<b>10,023,165</b>	<b>9,581,512</b>	<b>96</b>	<b>-236,226</b>	<b>-2</b>	<b>-232,529</b>	<b>-2</b>
<b>TRANS-PECOS</b>								
Red Bluff Reservoir	89	289,670	60,699	21	-9,936	-3	-5,634	-2
<b>TOTAL</b>		<b>289,670</b>	<b>60,699</b>	<b>21</b>	<b>-9,936</b>	<b>-3</b>	<b>-5,634</b>	<b>-2</b>

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

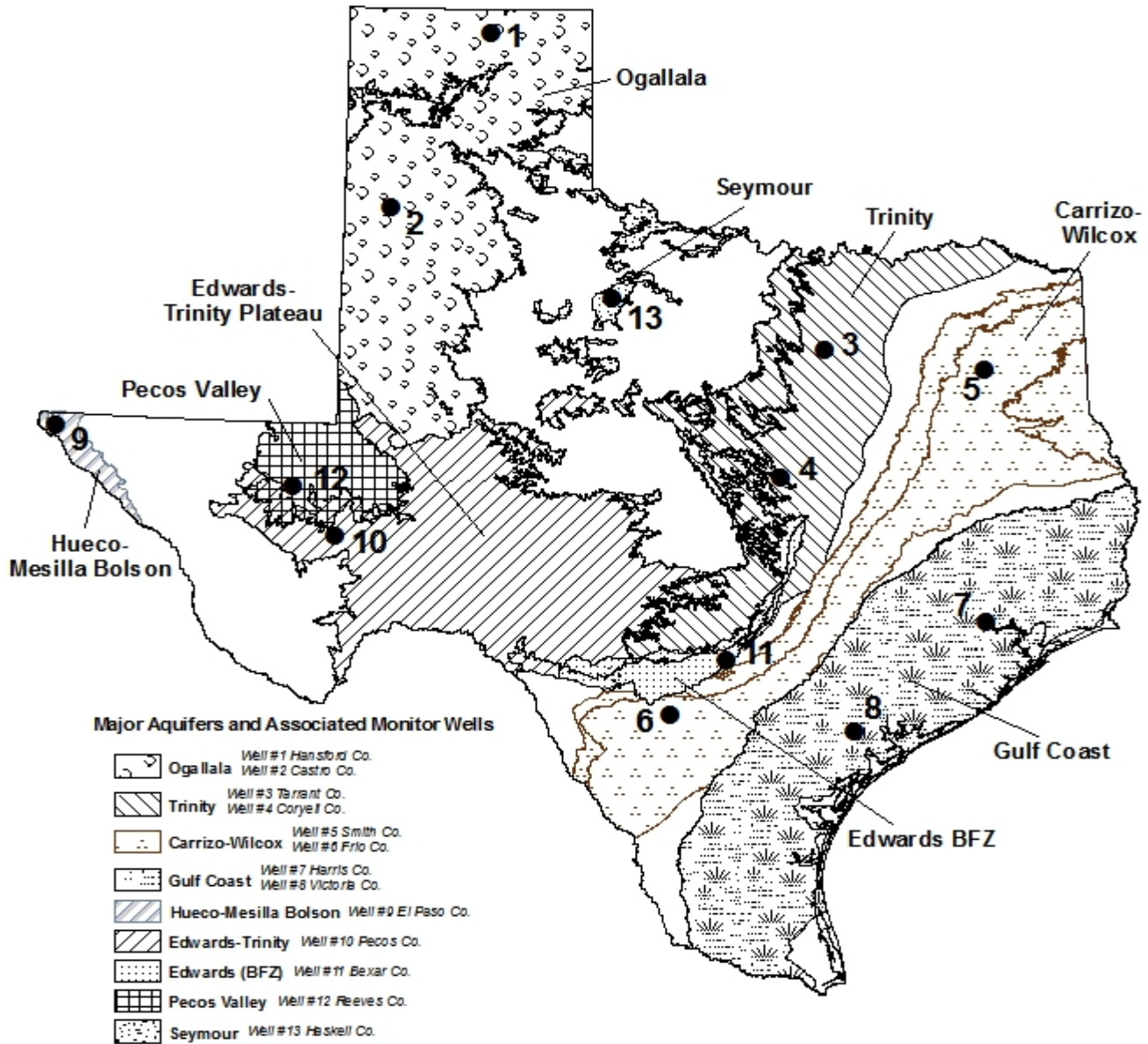
Name of Lake or Reservoir	No. on Map	Conservation Storage		2010 (%)	Change since Late Aprilr 2010		Change since Late May 2009		
		Capacity (acre-feet)	Late May (acre-feet)		(acre-feet)	(%)	(acre-feet)	(%)	
<b>EDWARDS PLATEAU</b>									
Oak Creek Reservoir	90	39,260	26,427	67	458	1	-1,554	-4	
E V Spence Reservoir	91	517,272	26,399	5	1,762	0	-16,048	-3	
O C Fisher Lake	92	79,483	0	0	0	0	0	0	
*O H Ivie Reservoir	93	554,335	233,610	42	-3,258	-1	-46,843	-8	
Twin Buttes Reservoir	94	177,850	36,059	20	-1,000	-1	-6,579	-4	
Brady Creek Reservoir	95	29,110	16,939	58	-394	-1	1,334	5	
Buchanan, Lake	96	824,519	692,447	84	19,658	2	146,421	18	
Lyndon B Johnson, Lake	97	113,323	110,893	98	425	0	-354	0	
*Amistad Reservoir (Texas)	98	1,840,849	1,775,000	96	9,000	0	-51,000	-3	
*Amistad Reservoir (TX & Mexico)	(98)	3,275,532	3,192,000	97	23,000	1	-40,000	-1	
TOTAL		4,176,001	2,917,774	70	26,651	1	25,377	1	
<b>SOUTH CENTRAL</b>									
Travis, Lake	99	1,113,255	1,084,385	97	-28,870	-3	435,858	39	
*Austin, Lake	100	21,804	20,941	96	332	2	257	1	
Somerville Lake	101	147,104	146,143	99	-961	-1	9,602	7	
Canyon Lake	102	378,781	378,781	100	0	0	93,314	25	
Medina Lake	103	254,823	185,519	73	38,664	15	79,459	31	
*Coletto Creek Reservoir	104	31,040	31,040	100	0	0	5,522	18	
TOTAL		1,946,807	1,846,809	95	9,165	0	624,012	32	
<b>UPPER COAST</b>									
Houston, Lake	105	128,863	128,863	100	0	0	0	0	
Texana, Lake	106	153,246	150,312	98	6,943	5	33,417	22	
TOTAL		282,109	279,175	99	6,943	2	33,417	12	
<b>SOUTHERN</b>									
Choke Canyon Reservoir	107	695,262	619,929	89	17,904	3	91,655	13	
Corpus Christi, Lake	108	256,961	236,594	92	5,661	2	111,590	43	
*Falcon Reservoir (Texas)	109	1,551,034	1,052,000	68	-42,000	-3	-219,000	-14	
*Falcon Reservoir (TX & Mexico)	(109)	2,646,817	1,650,000	62	-305,000	-12	-280,000	-11	
TOTAL		2,503,257	1,908,523	76	-18,435	-1	-15,755	-1	
<b>STATE TOTAL</b>		<b>31,366,091</b>	<b>27,510,674</b>	<b>88</b>	<b>-106,868</b>	<b>0</b>	<b>1,062,176</b>	<b>3</b>	

\* 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.

# GROUNDWATER LEVELS IN OBSERVATION WELLS



May, 2010

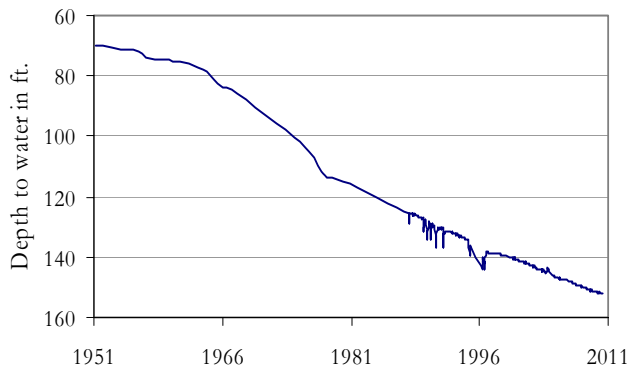
Water level measurements were available for all thirteen key monitoring wells. Water levels declined in all monitoring wells since the beginning of May, ranging from 0.08 feet in the Bexar County Edwards BFZ (J-17) well to 18.82 feet in the Pecos County Edwards-Trinity Plateau well. The J-17 well in San Antonio recorded a water level of 50.40 feet below land surface, 0.08 feet below last month's measurement. This water level is 20.60 feet above the Stage 1 critical management level.

	(1) Hansford 0354301	(2) Castro 1045102	(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
May 2010	152.22	276.86	442.71	477.72	430.37	409.45	206.28	33.08	291.41	216.92	50.40	147.95	44.07
April 2010	151.85	276.70	441.46	476.04	429.72	395.40	205.61	32.21	290.26	198.10	50.32	142.02	43.75
Month Change	-0.37	-0.16	-1.25	-1.68	-0.65	-14.05	-0.67	-0.87	-1.15	-18.82	-0.08	-5.93	-0.32
Year Change	-0.90	-1.58	-1.63	-3.48	0.20	55.42	N/A	-6.38	-0.46	-6.97	23.46	-4.42	0.97
Historical Change	-82.10	-120.86	-64.71	-185.72	-64.37	-129.45	-70.78	0.92	-59.51	29.96	-3.76	-55.86	-2.74

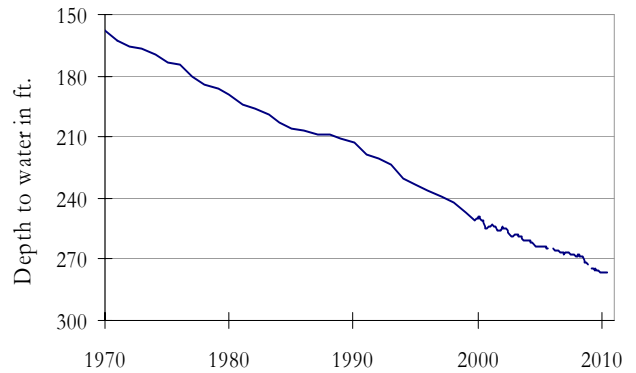
\* ID is used in this publication to differentiate between the monitoring well number (1 - 13) as displayed on the aquifer map and the TWDB's six- or seven-digit state well "identification" number.

# MAY GROUNDWATER LEVELS IN OBSERVATION WELLS

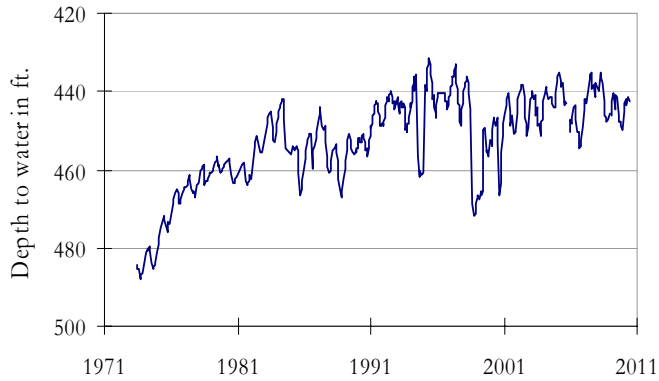
**(1) State Well ID 03-54-301  
Near Spearman, Hansford County  
Ogallala Aquifer**



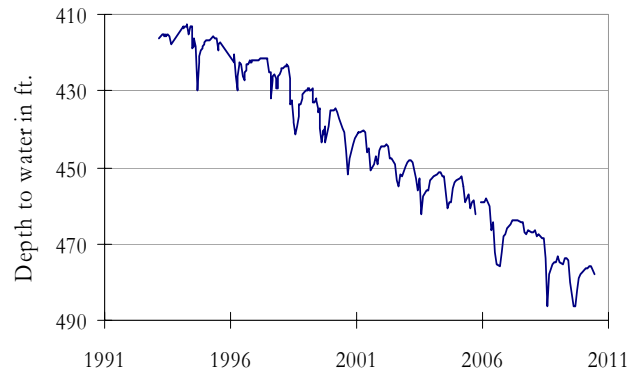
**(2) State Well ID 10-45-102  
Southwest Castro County  
Ogallala Aquifer**



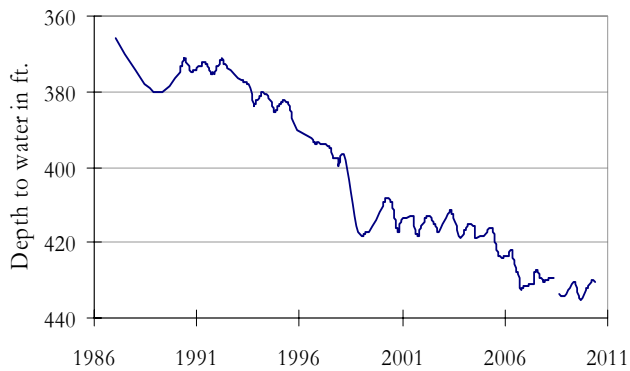
**(3) State Well ID 32-15-504  
Near Hurst, Tarrant County  
Paluxy Formation-Trinity Aquifer**



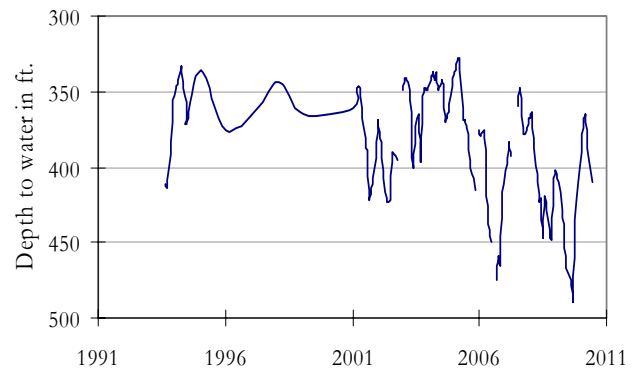
**(4) State Well ID 40-35-404  
Gatesville, Coryell County  
Hosston Formation-Trinity Aquifer**



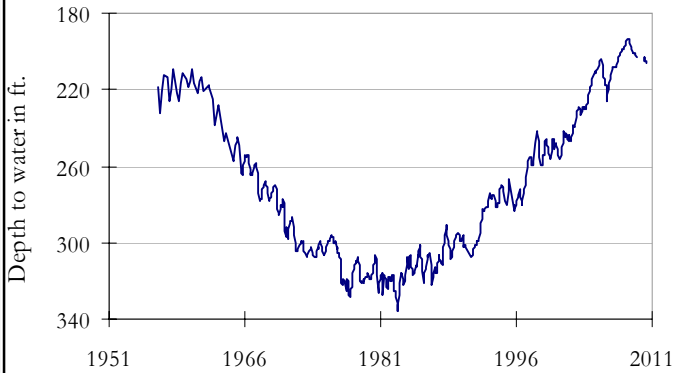
**(5) State Well ID 34-30-907  
Red Springs, Smith County  
Carrizo-Wilcox Aquifer**



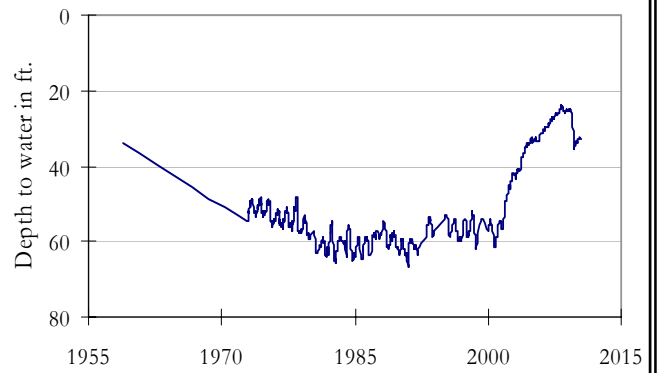
**(6) State Well ID 77-08-803  
Pearsall, Frio County  
Carrizo-Wilcox Aquifer**



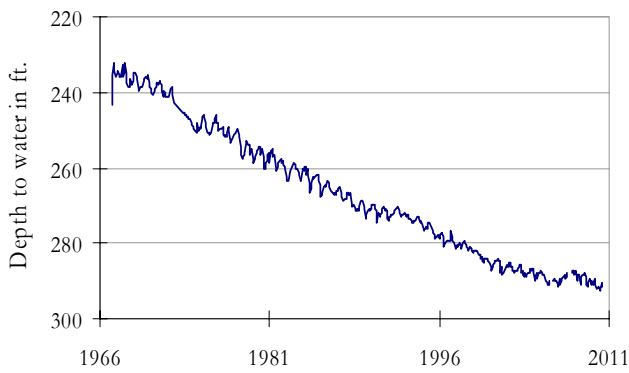
**(7) State Well ID 65-14-409**  
**Alief, Harris County**  
**Evangeline Formation-Gulf Coast Aquifer**



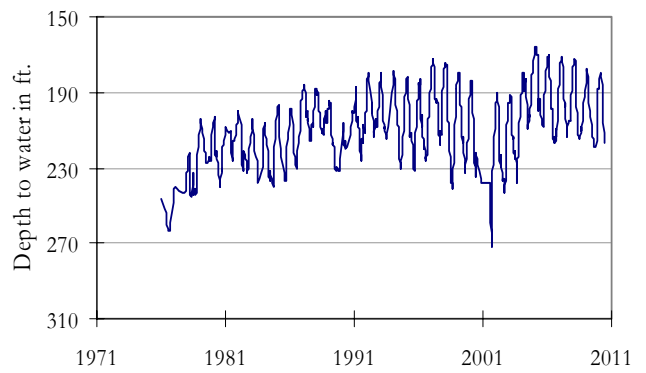
**(8) State Well ID 80-17-502**  
**Near Bloomington, Victoria County**  
**Lissie Formation-Gulf Coast Aquifer**



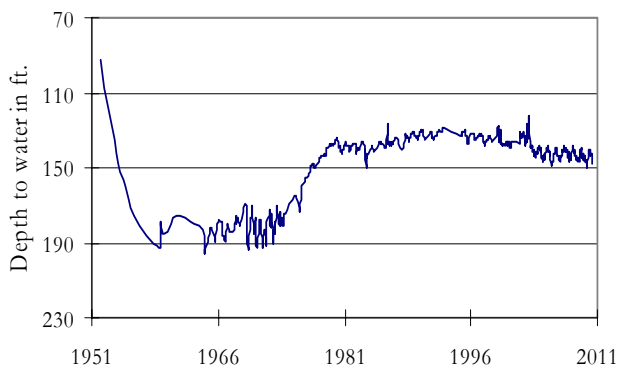
**(9) State Well ID 49-13-301**  
**El Paso, El Paso County**  
**Hueco-Mesilla Bolson Aquifer**



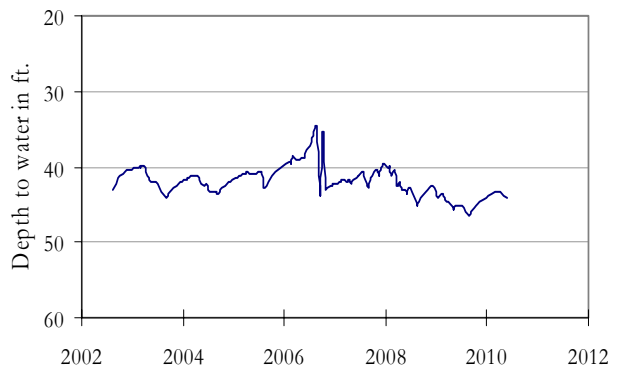
**(10) State Well ID 52-16-802**  
**Fort Stockton, Pecos County**  
**Edwards-Trinity (Plateau) Aquifer**



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

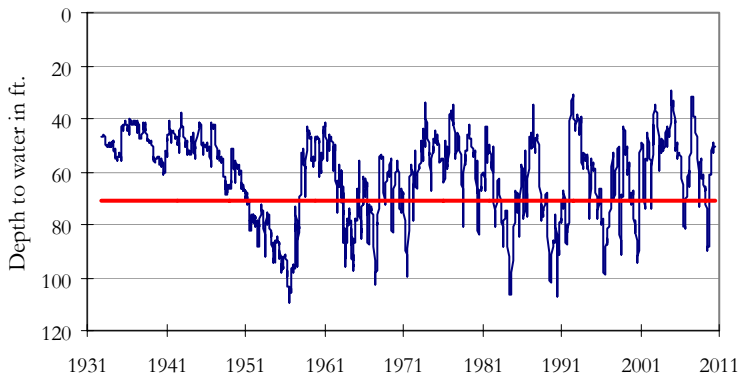


**(13) State Well ID 21-35-748**  
**Near O'Brien, Haskell County**  
**Seymour Aquifer**

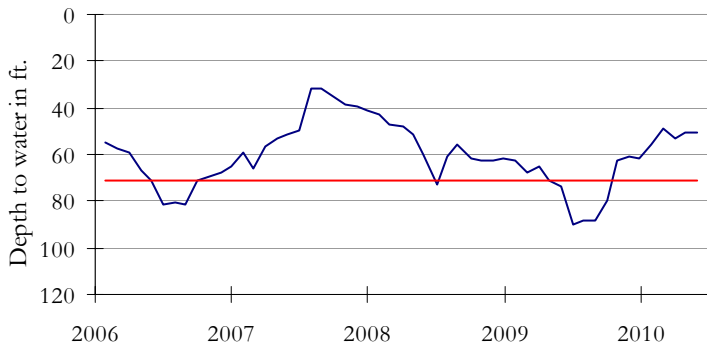




**(11) State Well ID 68-37-203 (J-17)  
In San Antonio, Bexar County  
Edwards (BFZ) Aquifer**

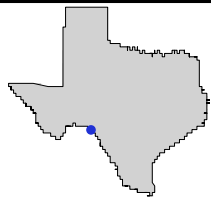


The late May water level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 50.40 feet below land surface. This was 0.08 feet below last month's measurement, 23.46 feet above last year's measurement, and 3.76 feet below the initial measurement recorded in 1932.



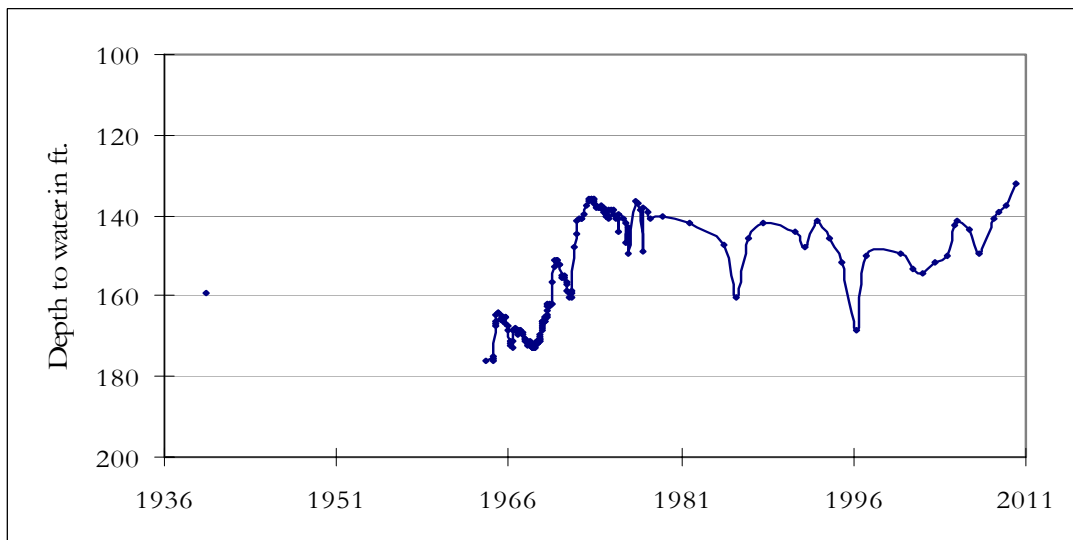
**\*\*\* Water levels below the red line indicate Edwards Aquifer Authority Stage 1 drought restrictions. \*\*\***

***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 70-33-604  
Val Verde County**



This water level observation well, located 5 miles north of Del Rio, at an elevation of 1,165 feet above sea level, was completed in the Edwards-Trinity Plateau Aquifer. Water levels have remained relatively stable because recharge has generally kept pace with the relatively low amounts of pumping throughout the aquifer. On a local scale, since the completion of Lake Amistad in 1969, lake levels may also have an influence on the aquifer in the nearby vicinity.

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