

# Texas Water Development Board



# WATER Conditions

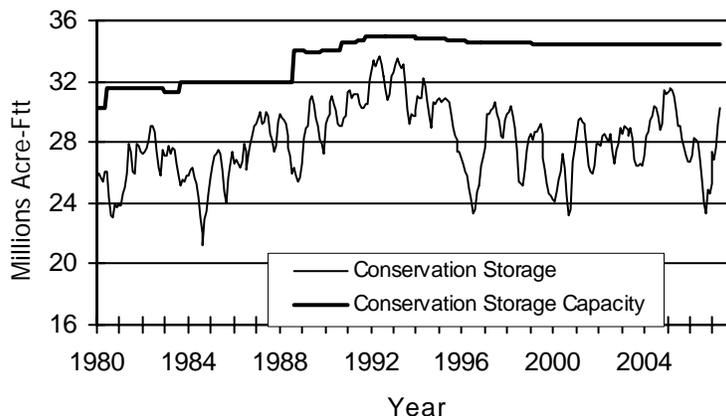
## RESERVOIR STORAGE

May 2007

Near the end of May, the 77 reservoirs monitored for this report held 30.27 million acre-feet in conservation storage, or 88 percent of the conservation storage capacity of the state's major reservoirs, thanks to the rainy weather in May. Statewide total storage is above normal for this time of year. Storage increased during the month by 1.08 million acre-feet (3% of conservation storage capacity). Compared to last year, storage increased by 2.2 million acre-feet (6%).

Storage was at or above 95% of capacity in four regions but below 90% in all others, with the lowest in the High Plains Region (21%). Storage was at 100% in 36 reservoirs. Regionally, storage increased in 7 out of 9 Regions and decreased in 2 Regions. However, compared to this time last year, the storage only increased in 5 but decreased in 4 Regions.

### CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS



Current data are based on elevation near end of month at 77 reservoirs that represent 98 percent of total conservation storage capacity in Texas reservoirs having a capacity of 5,000 acre-feet or more.

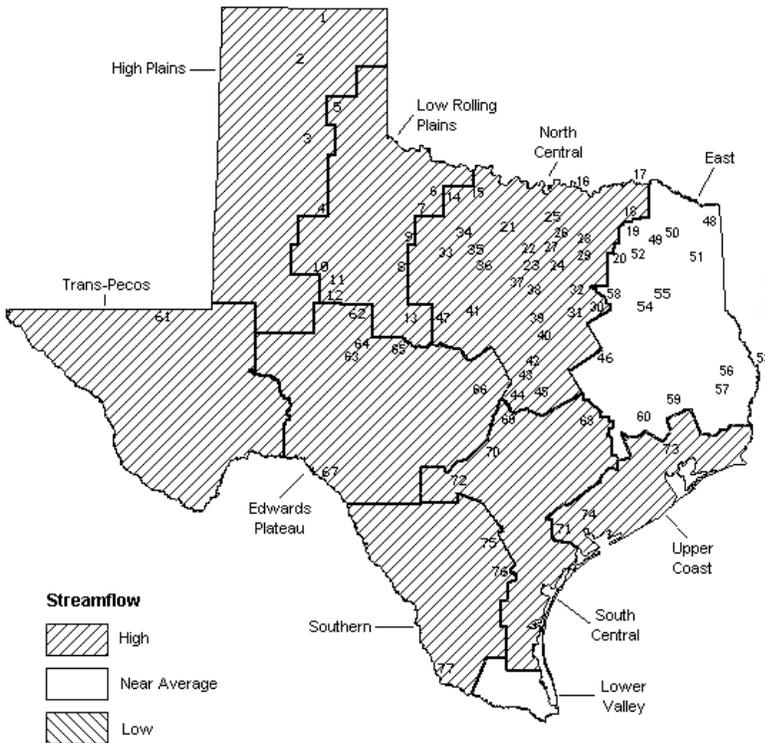
# STREAMFLOW

Of 29 reporting index stations in May, computed 30-day mean flows were very high (<5%) at 8 stations, high (5% - 30%) at 16 stations, and near normal (30% - 70% exceedance) at the remaining 5 stations. Compared to April, flows have increased at 26 index stations and decreased at 3 stations.

On a regional basis, flows in May were high in all except East Texas Region (normal). Streamflow in the Lower Valley Region is not monitored.

## MAY STREAMFLOW CONDITIONS

Reservoirs Shown on Map



- |                                  |                             |
|----------------------------------|-----------------------------|
| 1. Palo Duro Reservoir           | 40. Waco Lake               |
| 2. Lake Meredith                 | 41. Proctor Lake            |
| 3. MacKenzie Reservoir           | 42. Belton Lake             |
| 4. White River Lake              | 43. Stillhouse Hollow Lake  |
| 5. Greenbelt Reservoir           | 44. Lake Georgetown         |
| 6. Lake Kemp                     | 45. Granger Lake            |
| 7. Miller's Creek Reservoir      | 46. Lake Limestone          |
| 8. Fort Phantom Hill Reservoir   | 47. Lake Brownwood          |
| 9. Lake Stamford                 | 48. Wright Patman Lake      |
| 10. Lake J. B. Thomas            | 49. Lake Cypress Springs    |
| 11. Lake Colorado City           | 50. Lake Bob Sandlin        |
| 12. Champion Creek Reservoir     | 51. Lake O' the Pines       |
| 13. Hords Creek Lake             | 52. Lake Fork Reservoir     |
| 14. Lake Kickapoo                | 53. Toledo Bend Reservoir   |
| 15. Lake Arrowhead               | 54. Lake Palestine          |
| 16. Lake Texoma                  | 55. Lake Tyler              |
| 17. Pat Mayse Lake               | 56. Sam Rayburn Reservoir   |
| 18. Cooper Lake                  | 57. B. A. Steinhagen Lake   |
| 19. Lake Sulphur Springs         | 58. Cedar Creek Reservoir   |
| 20. Lake Tawakoni                | 59. Lake Livingston         |
| 21. Bridgeport Reservoir         | 60. Lake Conroe             |
| 22. Eagle Mountain Reservoir     | 61. Red Bluff Reservoir     |
| 23. Benbrook Lake                | 62. E. V. Spence Reservoir  |
| 24. Joe Pool Lake                | 63. Twin Buttes Reservoir   |
| 25. Ray Roberts Lake             | 64. O. C. Fisher Lake       |
| 26. Lewisville Lake              | 65. O. H. Ivie Reservoir    |
| 27. Grapeville Lake              | 66. Lake Buchanan           |
| 28. Lavon Lake                   | 67. Intl. Amistad Reservoir |
| 29. Lake Ray Hubbard             | 68. Somerville Lake         |
| 30. Richland-Chambers Creek Lake | 69. Lake Travis             |
| 31. Navarro Mills Lake           | 70. Canyon Lake             |
| 32. Bardwell Lake                | 71. Coletto Creek Reservoir |
| 33. Hubbard Creek Reservoir      | 72. Medina Lake             |
| 34. Lake Graham                  | 73. Lake Houston            |
| 35. Possum Kingdom Lake          | 74. Lake Texana             |
| 36. Lake Palo Pinto              | 75. Choke Canyon Reservoir  |
| 37. Lake Granbury                | 76. Lake Corpus Christi     |
| 38. Lake Pat Cleburne            | 77. Intl. Falcon Reservoir  |
| 39. Whitney Lake                 |                             |

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late May, 2007 (acre-feet) (%)	Change since Late April 2007 (acre-feet) (%)	Change since Late May 2006 (acre-feet) (%)
<b>HIGH PLAINS</b>					
Palo Duro Reservoir	1	60,900	3,010 5	1,680 3	1,800 3
Lake Meredith (Texas)	2	500,000	116,280 23	-260 0	-5,410 -1
Lake Meredith (Texas and Oklahoma)	(2)	779,560	116,280 15	-260 0	-5,410 -1
MacKenzie Reservoir	3	46,250	9,240 20	50 0	120 0
White River Lake	4	31,850	4,830 15	60 0	260 1
TOTAL		639,000	133,360 21	1,530 0	-3,230 -1
<b>LOW ROLLING PLAINS</b>					
Greenbelt Reservoir	5	58,200	24,510 42	2,210 4	4,150 7
Lake Kemp	6	319,600	248,420 78	13,300 4	-880 0
Miller's Creek Reservoir	7	27,890	21,260 76	1,200 4	-3,110 -11
Fort Phantom Hill Reservoir	8	70,030	52,210 75	12,120 17	-2,440 -3
Lake Stamford	9	52,700	48,000 91	9,930 19	970 2
Lake J. B. Thomas	10	202,300	34,740 17	9,280 5	-11,920 -6
Lake Colorado City	11	30,800	25,940 84	2,120 7	-810 -3
Champion Creek Reservoir	12	41,600	6,600 16	700 2	370 1
Hords Creek Lake	13	8,600	5,620 65	740 9	-460 -5
TOTAL		811,720	467,300 58	51,600 6	-14,130 -2
<b>NORTH CENTRAL</b>					
Lake Kickapoo	14	106,000	70,800 67	4,110 4	-13,600 -13
Lake Arrowhead	15	262,100	191,310 73	7,930 3	-22,010 -8
Lake Texoma	16	2,722,300	2,722,300 100	18,040 1	65,890 2
Pat Mayse Lake	17	124,500	124,360 100	4,010 3	28,110 23
Cooper Lake	18	273,000	182,320 67	23,800 9	17,440 6
Lake Sulphur Springs	19	17,710	17,710 100	0 0	490 3
Lake Tawakoni	20	936,200	762,700 81	101,000 11	83,600 9
Bridgeport Reservoir	21	374,830	313,800 84	34,900 9	51,200 14
Eagle Mountain Reservoir	22	178,380	178,380 100	9,980 6	33,980 19
Benbrook Lake	23	88,200	88,200 100	0 0	11,490 13
Joe Pool Lake	24	175,800	175,800 100	0 0	0 0
Ray Roberts Lake	25	798,760	742,550 93	85,830 11	23,540 3
Lewisville Lake	26	555,000	555,000 100	0 0	97,390 18
Grapevine Lake	27	187,700	187,700 100	0 0	44,360 24
Lavon Lake	28	443,800	443,800 100	58,550 13	158,670 36
Lake Ray Hubbard	29	413,420	413,420 100	8,820 2	15,320 4
Richland-Chambers Creek Lake	30	1,103,820	1,103,820 100	0 0	190,720 17
Navarro Mills Lake	31	55,810	55,810 100	0 0	20,440 37
Bardwell Lake	32	53,580	53,580 100	6,310 12	7,360 14
Hubbard Creek Reservoir	33	317,800	180,540 57	16,600 5	-3,950 -1
Lake Graham	34	45,000	43,370 96	5,250 12	-180 0
Possum Kingdom Lake	35	551,820	538,100 98	25,370 5	9,480 2
Lake Palo Pinto	36	27,650	27,470 99	880 3	7,290 26
Lake Granbury	37	135,680	135,080 100	2,020 1	2,020 1
Lake Pat Cleburne	38	25,300	25,300 100	0 0	490 2
Whitney Lake	39	622,800	622,800 100	0 0	49,700 8
Waco Lake	40	144,500	144,500 100	0 0	0 0
Proctor Lake	41	55,590	55,590 100	13,870 25	12,760 23
Belton Lake	42	434,500	434,500 100	0 0	22,840 5
Stillhouse Hollow Lake	43	226,060	226,060 100	0 0	380 0
Lake Georgetown	44	37,010	37,010 100	0 0	11,950 32
Granger Lake	45	54,280	54,280 100	0 0	1,470 3
Lake Limestone	46	215,750	215,750 100	1,720 1	4,090 2
Lake Brownwood	47	143,400	132,680 93	11,270 8	12,940 9
TOTAL		11,908,050	11,256,390 95	440,260 4	945,670 8

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

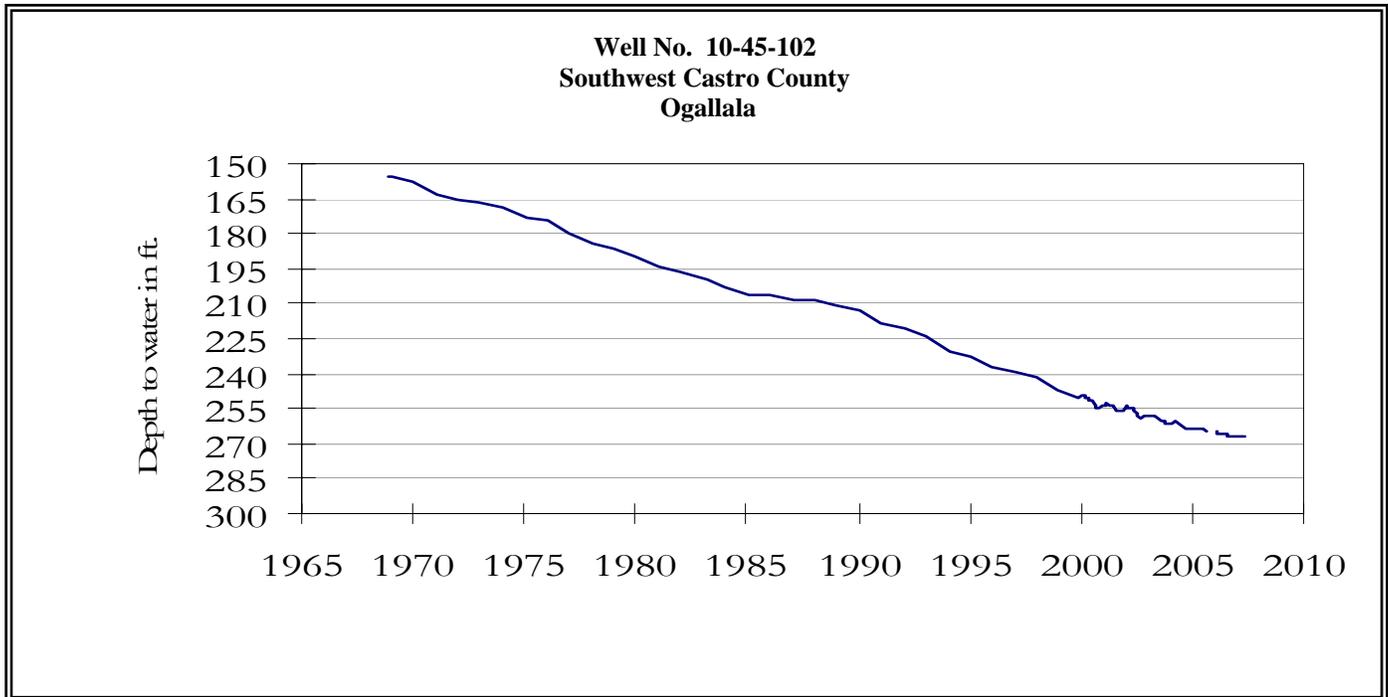
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late May, 2007 (acre-feet) (%)	Change since Late April 2007 (acre-feet) (%)	Change since Late May 2006 (acre-feet) (%)
<b>EAST</b>					
Wright Patman Lake	48	142,700	142,700 100	0 0	0 0
Lake Cypress Springs	49	66,800	66,710 100	5,840 9	6,260 9
Lake Bob Sandlin	50	202,300	142,200 70	2,200 1	-17,100 -8
Lake O' the Pines	51	252,000	252,000 100	8,240 3	42,980 17
Lake Fork Reservoir	52	635,200	635,200 100	0 0	27,600 4
Toledo Bend Reservoir	53	4,472,900	4,248,000 95	-63,000 -1	453,000 10
Lake Palestine	54	411,300	411,300 100	0 0	44,840 11
Lake Tyler	55	73,700	73,700 100	4,630 6	12,960 18
Sam Rayburn Reservoir	56	2,876,300	2,876,300 100	19,110 1	127,950 4
B. A. Steinhagen Lake	57	94,200	240 0	150 0	-21,130 -22
Cedar Creek Reservoir	58	637,050	637,050 100	2,050 0	70,250 11
Lake Livingston	59	1,750,000	1,750,000 100	0 0	210,000 12
Lake Conroe	60	429,900	418,500 97	900 0	67,500 16
TOTAL		12,044,350	11,653,900 97	-19,880 0	1,025,110 9
<b>TRANS-PECOS</b>					
Red Bluff Reservoir	61	307,000	102,470 33	1,730 1	-4,830 -2
TOTAL		307,000	102,470 33	1,730 1	-4,830 -2
<b>EDWARDS PLATEAU</b>					
E. V. Spence Reservoir	62	488,760	75,370 15	5,330 1	-9,610 -2
Twin Buttes Reservoir	63	177,800	48,170 27	5,680 3	-1,930 -1
O.C. Fisher Lake	64	119,200	8,080 7	390 0	-3,630 -3
O. H. Ivie Reservoir	65	554,340	261,200 47	39,900 7	-13,400 -2
Lake Buchanan	66	896,980	777,530 87	231,110 26	59,170 7
Amistad Reservoir (Texas)	67	1,771,030	2,008,000 113	81,000 5	-6,000 0
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	2,567,000 81	-135,000 -4	52,000 2
TOTAL		4,008,110	3,178,350 79	363,410 9	24,600 1
<b>SOUTH CENTRAL</b>					
Somerville Lake	68	155,060	155,060 100	0 0	23,980 15
Lake Travis	69	1,144,100	1,144,100 100	167,970 15	278,900 24
Canyon Lake	70	385,600	385,600 100	0 0	34,170 9
Coletto Creek Reservoir	71	35,060	32,090 92	-360 -1	8,980 26
Medina Lake	72	254,000	180,500 71	59,700 24	26,900 11
TOTAL		1,973,820	1,897,350 96	227,310 12	372,930 19
<b>UPPER COAST</b>					
Lake Houston	73	128,860	128,860 100	0 0	0 0
Lake Texana	74	157,900	153,330 97	-900 -1	23,390 15
TOTAL		286,760	282,190 98	-900 0	23,390 8
<b>SOUTHERN</b>					
Choke Canyon Reservoir	75	695,260	583,400 84	43,400 6	5,400 1
Lake Corpus Christi	76	241,240	207,100 86	18,300 8	114,590 48
Falcon Reservoir (Texas)	77	1,555,120	508,000 33	-49,000 -3	-267,000 -17
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	678,000 26	-159,000 -6	-422,000 -16
TOTAL		2,491,620	1,298,500 52	12,700 1	-147,010 -6
<b>STATE TOTAL</b>		<b>34,470,430</b>	<b>30,269,810 88</b>	<b>1,077,760 3</b>	<b>2,222,500 6</b>

Note:

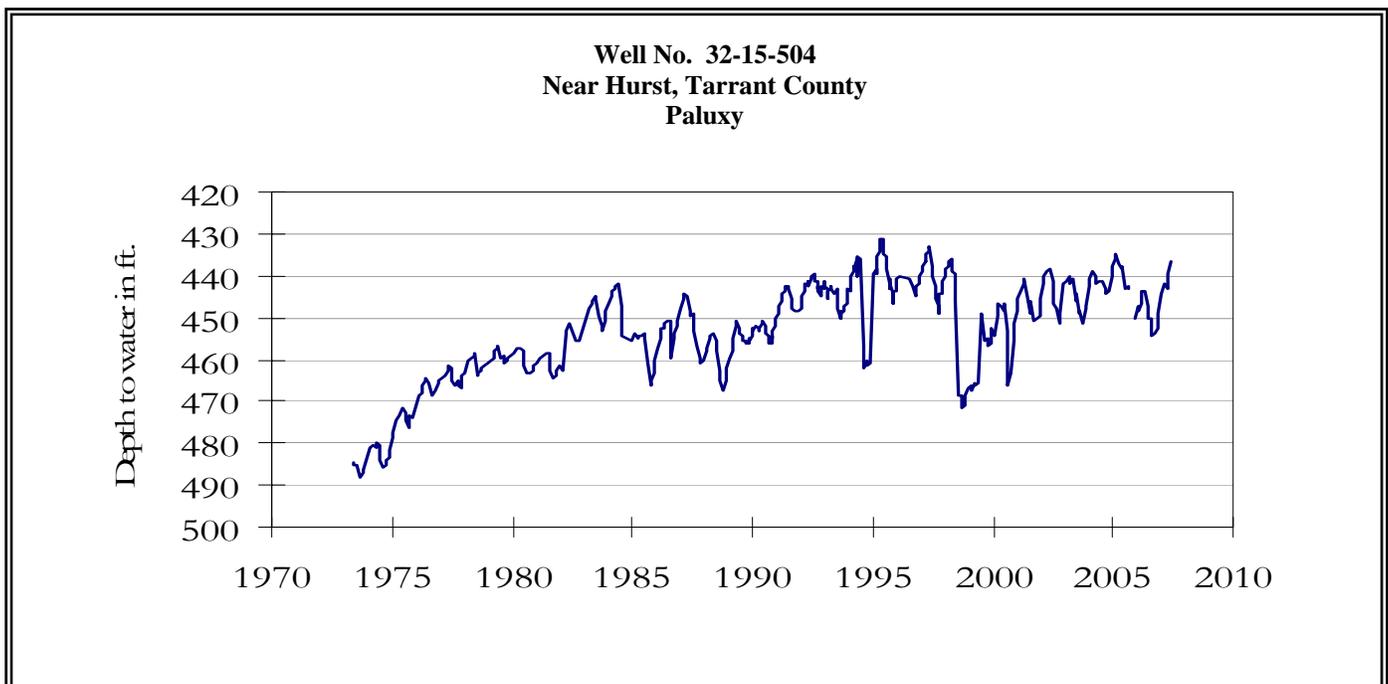
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included is any water in flood control storage (above the top of conservation pool or normal maximum operating level), or any water in so called dead storage (in the bottom of the reservoir, below the invert of lowest outlet works and consequently not removable by gravity flow alone.) Percentage of conservation storage is based on the conservation storage capacity of the reservoir and the conservation storage in the reservoir for date shown. Percent change is given by  $\% \text{ Change} = 100 * (\text{current conservation storage} - \text{past conservation storage}) / \text{conservation storage capacity}$ .

Current data are based on elevations near end of month at 77 reservoirs that together represent 98 percent of the total conservation storage capacity of major Texas reservoirs (those with capacity of 5,000 acre-feet or more each). Preliminary figures are shown for the Texas' share of conservation storage in all reservoirs.

## MAY GROUND WATER LEVELS IN OBSERVATION WELLS

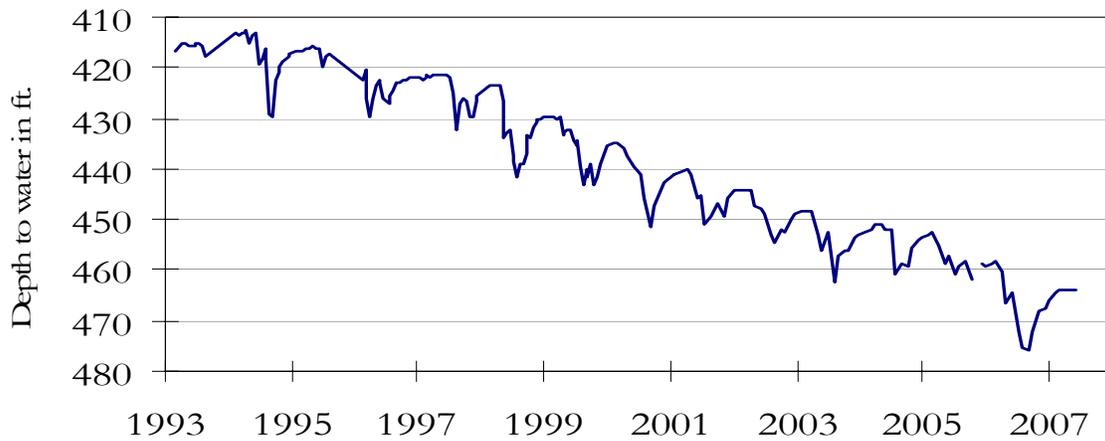


The late May water-level measurement in this Ogallala Aquifer well, elevation 3,816 feet above sea level, was 267.01 feet below land surface. This measurement was 0.06 feet above last month's measurement, 1.26 feet below last year's measurement, and 111.01 feet below the initial measurement recorded in 1968. No water level measurements were recorded for September through December 2005.



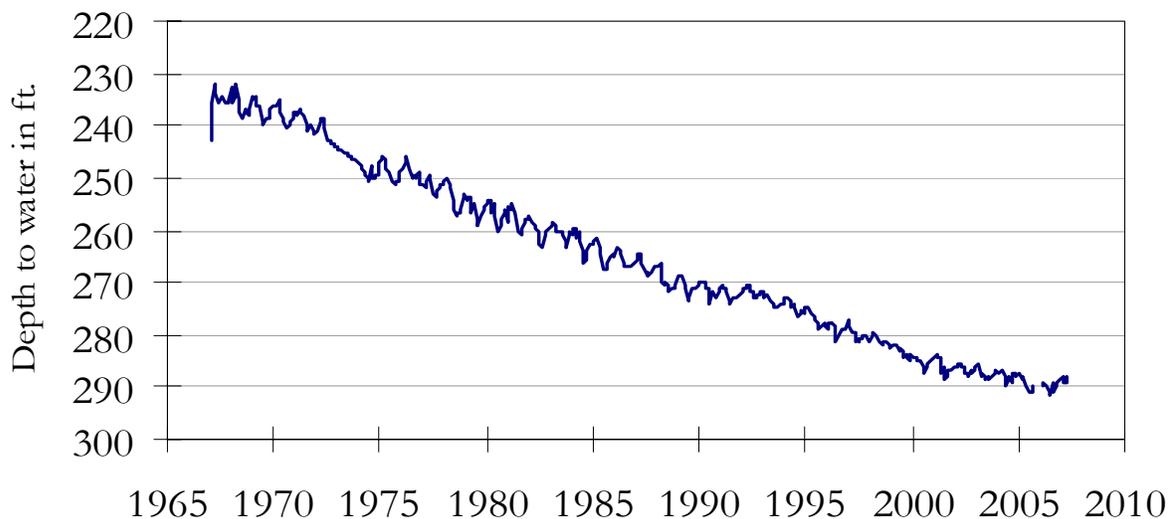
The late May water-level measurement in this Paluxy Formation Trinity Aquifer well, elevation 535 feet above sea level, was 436.57 feet below land surface. This measurement was 3.23 feet above last month's measurement, 10.46 feet above last year's measurement, and 58.57 feet below the initial measurement recorded in 1953. No water level measurements were recorded for September or October 2005.

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



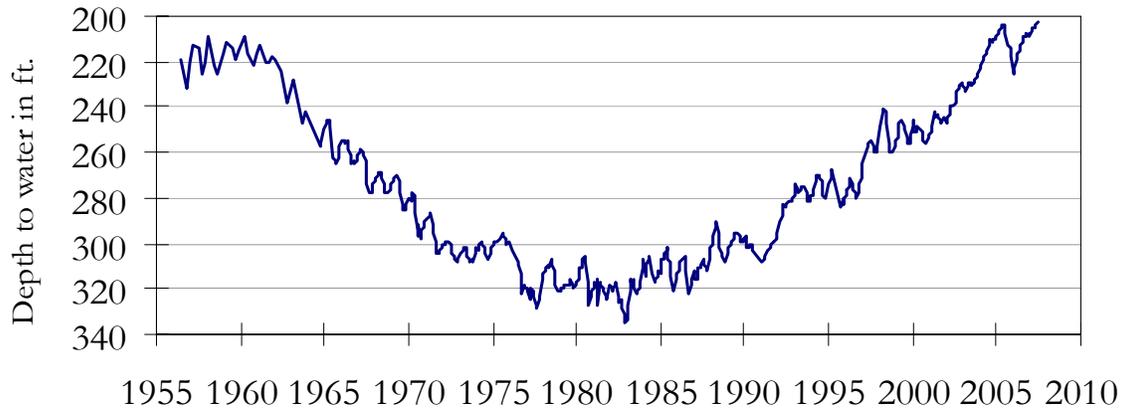
The late May water-level measurement in this Hosston Formation Trinity Aquifer well, elevation 823 feet above sea level, was 463.86 feet below land surface. This water level was 0.18 feet below last month's measurement, 0.72 feet above last year's measurement, and 171.86 feet below the initial measurement recorded in 1955. No water level measurement was recorded for October 2005.

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



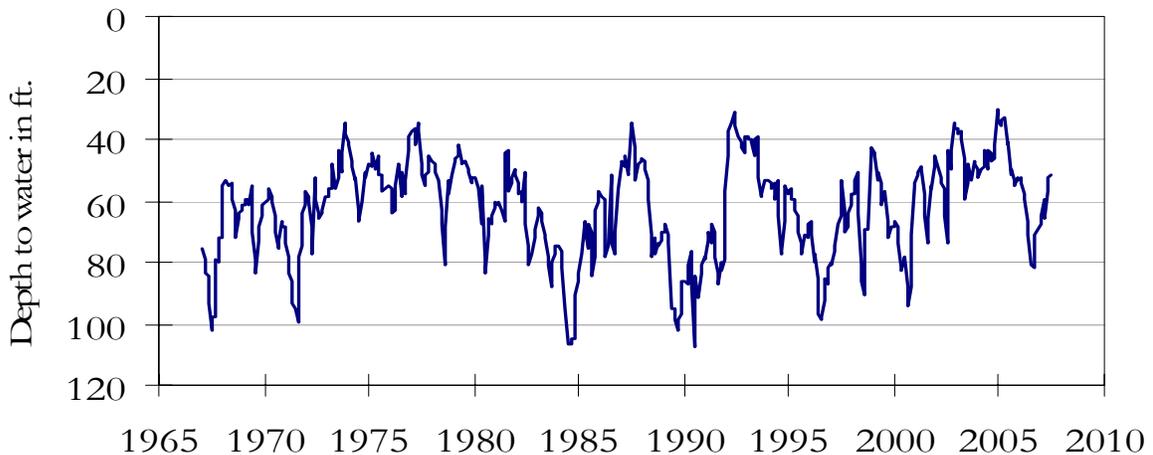
The water-level measurement was not available for this Hueco Bolson Aquifer well (recorder under repair). The graph presented is from last month's report.

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



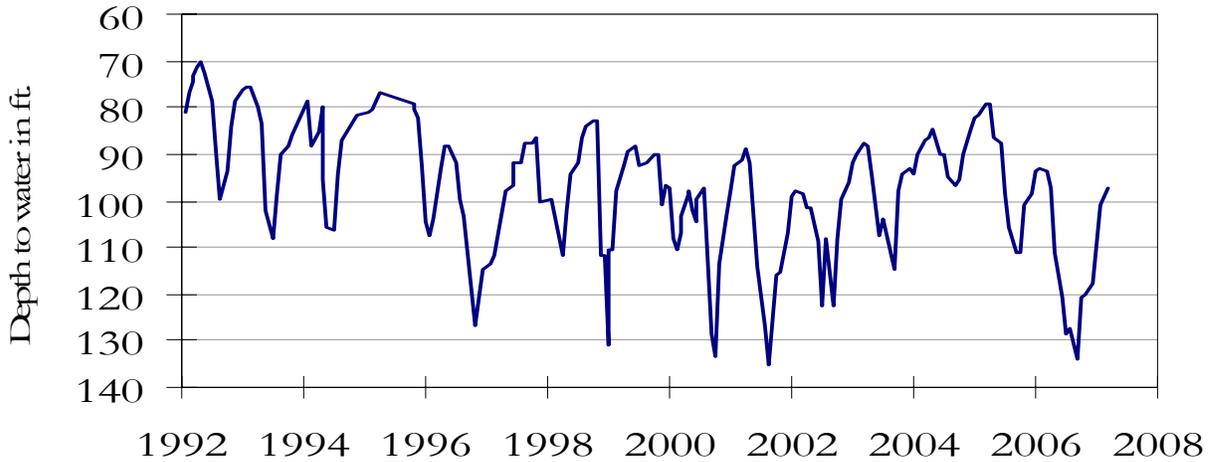
The late May water-level measurement in this Evangeline Formation Gulf Coast Aquifer well, elevation 66 feet above sea level, was 202.15 feet below land surface. This was 1.29 feet above last month's measurement, 11.10 feet above last year's measurement, and 66.65 feet below the initial measurement recorded in 1947.

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



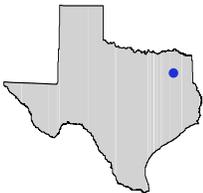
The late May water-level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 51.50 feet below land surface. This was 1.30 feet above last month's measurement, 19.78 feet above last year's measurement, and 4.86 feet below the initial measurement recorded in 1962.

**Well No. 68-60-912  
Between Poteet and Pleasanton, Atascosa County  
Carrizo**



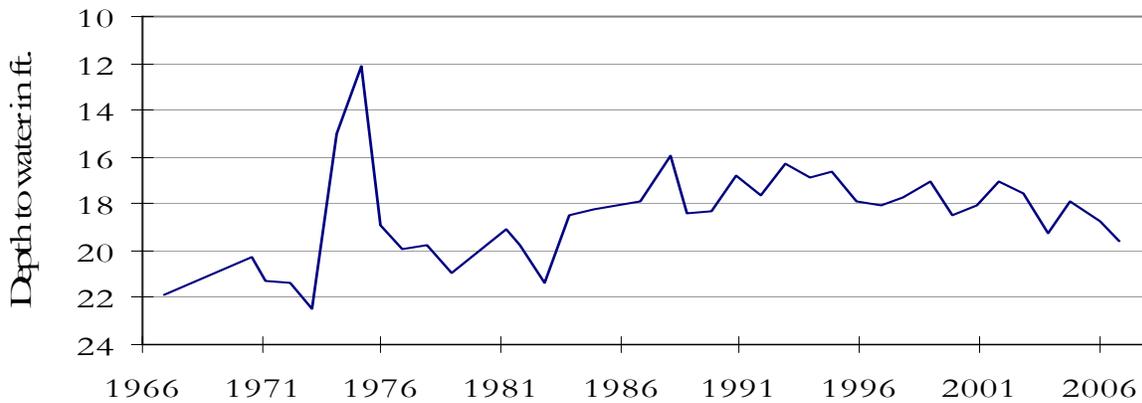
The late May water-level measurement in this Carrizo Aquifer well, elevation 446 feet above sea level, was 89.38 feet below land surface. This measurement was 31.67 feet above last year's measurement, and 54.02 feet below the initial measurement recorded in 1965. No water level measurements were recorded for March and April 2007.

***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. 35-10-502  
Upshur County**



This water level observation well, located 6 miles east of Gilmer, at an elevation of 390 feet ASL, was completed in the Queen City Aquifer. Water levels have remained fairly stable over time in the northern part of the aquifer.

May, 2007

Water level measurements were available for six of the seven key monitoring wells. Water levels rose in five of the monitoring wells since the beginning of May, ranging from 0.06 feet in the Castro Co. Ogallala well to 3.23 feet in the Tarrant Co. Trinity well. The J-17 well recorded a water level of 51.50 feet below land surface. This water level is 28.50 feet above the Stage 1 critical management level.

*TEXAS WATER DEVELOPMENT BOARD*

*1700 N. CONGRESS AVE.*

*P.O. BOX 13231*

*AUSTIN TX 78711-3231*