

# Texas Water Development Board



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

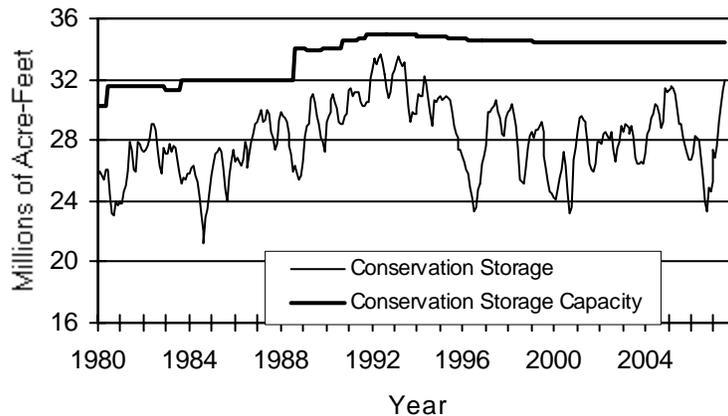
## RESERVOIR STORAGE

*July 2007*

Near the end of July, the 77 reservoirs monitored for this report held 31.9 million acre-feet in conservation storage. As a statewide total, the state's major reservoirs are approximately 93 percent full, which is above normal for this time of year. Storage went up during the month by 0.58 million acre-feet (2% of conservation storage capacity). Compared to July last year, storage increased by 6.38 million acre-feet (19%).

Toward the end of July this year, 45 reservoirs were at 100% of their conservation capacities. Regionally, storage was 100% of capacity in East and South Central Regions, and 99% in the North Central and Upper Coast Regions, but High Plains and Trans-Pecos Regions are still experiencing storage below 30% of their regional capacities. In the past month, five out of nine Regions observed increases in storage but four had decreases. Compared to this time last year, the storage increased in all Regions except Upper Coast Region, by 0.3% to 31%.

### 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.

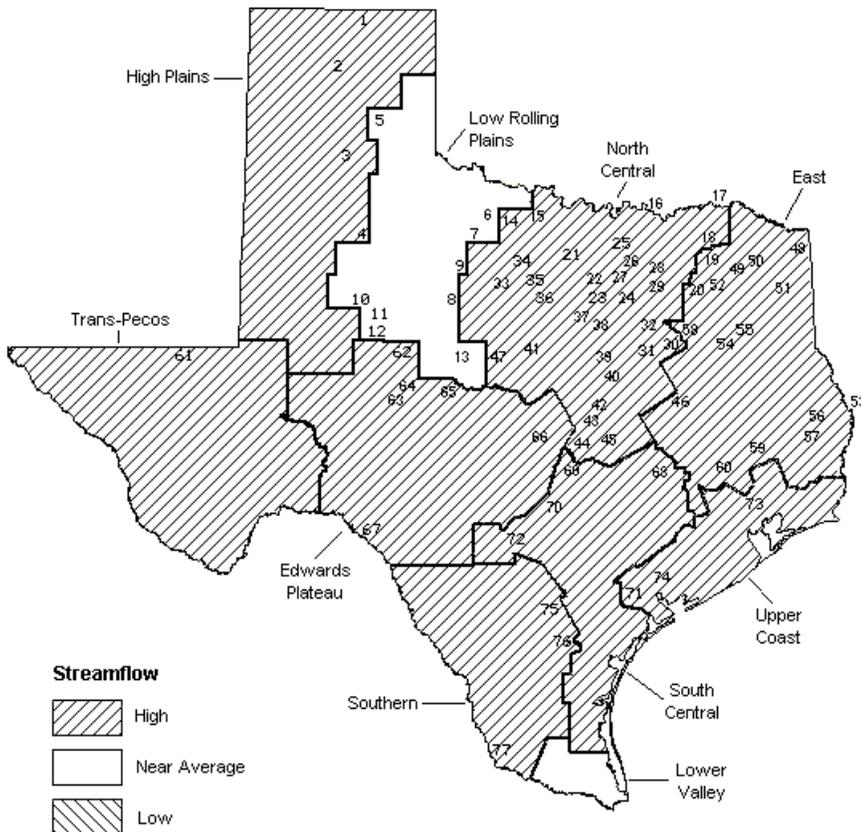
# STREAMFLOW

Of 29 reporting index stations in July, computed 30-day mean flows were very high (<5%) at 7 stations, high (5% - 30%) at 15 stations, low (70% - 95%) at 2 stations, and near normal (30% - 70% exceedance) at the remaining 5 stations. Compared to June, flows have increased at 18 index stations and decreased at 11 stations.

On a regional basis, flows in July were very high in the North Central, South Central, Upper Coast, and Southern Regions, high in the High Plains, East Texas, Trans-Pecos, and Edwards plateau Regions, and normal in the Low Rolling Plains Region. Streamflow in the Lower Valley Region is not monitored.

## JULY 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. Grapevine 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. Coleta 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 July. 2007 (acre-feet) (%)	Change since Late June 2007 (acre-feet) (%)	Change since Late July 2006 (acre-feet) (%)
<b>HIGH PLAINS</b>					
Palo Duro Reservoir	1	60,900	2,110 3	-450 -1	1,140 2
Lake Meredith (Texas)	2	500,000	110,590 22	-4,410 -1	2,750 1
Lake Meredith (Texas and Oklahoma)	(2)	779,560	110,590 14	-4,410 -1	2,750 0
MacKenzie Reservoir	3	46,250	9,060 20	-250 -1	310 1
White River Lake	4	31,850	4,600 14	-410 -1	1,060 3
TOTAL		639,000	126,360 20	-5,520 -1	5,260 1
<b>LOW ROLLING PLAINS</b>					
Greenbelt Reservoir	5	58,200	24,330 42	-710 -1	5,690 10
Lake Kemp	6	319,600	305,490 96	14,230 4	109,160 34
Miller's Creek Reservoir	7	27,890	27,890 100	0 0	6,350 23
Fort Phantom Hill Reservoir	8	70,030	67,490 96	4,950 7	20,200 29
Lake Stamford	9	52,700	52,700 100	870 2	11,920 23
Lake J. B. Thomas	10	202,300	31,220 15	-2,950 -1	-7,970 -4
Lake Colorado City	11	30,800	25,480 83	-560 -2	980 3
Champion Creek Reservoir	12	41,600	6,430 15	-130 0	840 2
Hords Creek Lake	13	8,600	8,140 95	130 2	2,730 32
TOTAL		811,720	549,170 68	15,830 2	149,900 18
<b>NORTH CENTRAL</b>					
Lake Kickapoo	14	106,000	94,550 89	14,300 13	20,640 19
Lake Arrowhead	15	262,100	258,100 98	40,370 15	68,350 26
Lake Texoma	16	2,722,300	2,722,300 100	0 0	387,710 14
Pat Mayse Lake	17	124,500	124,500 100	0 0	38,060 31
Cooper Lake	18	273,000	273,000 100	40,610 15	145,320 53
Lake Sulphur Springs	19	17,710	17,710 100	0 0	2,500 14
Lake Tawakoni	20	936,200	903,600 97	46,800 5	297,000 32
Bridgeport Reservoir	21	374,830	374,830 100	0 0	155,030 41
Eagle Mountain Reservoir	22	178,380	178,380 100	0 0	38,180 21
Benbrook Lake	23	88,200	85,870 97	-2,330 -3	24,000 27
Joe Pool Lake	24	175,800	175,800 100	0 0	8,300 5
Ray Roberts Lake	25	798,760	798,760 100	0 0	129,290 16
Lewisville Lake	26	555,000	555,000 100	0 0	156,090 28
Grapevine Lake	27	187,700	187,700 100	0 0	63,250 34
Lavon Lake	28	443,800	443,800 100	0 0	216,740 49
Lake Ray Hubbard	29	413,420	413,420 100	0 0	61,420 15
Richland-Chambers Creek Lake	30	1,103,820	1,103,820 100	0 0	258,520 23
Navarro Mills Lake	31	55,810	55,810 100	0 0	25,460 46
Bardwell Lake	32	53,580	53,580 100	0 0	12,640 24
Hubbard Creek Reservoir	33	317,800	316,230 100	60,510 19	143,420 45
Lake Graham	34	45,000	44,860 100	-140 0	4,230 9
Possum Kingdom Lake	35	551,820	520,030 94	-16,720 -3	39,380 7
Lake Palo Pinto	36	27,650	26,200 95	-1,450 -5	8,930 32
Lake Granbury	37	135,680	132,990 98	2,300 2	5,100 4
Lake Pat Cleburne	38	25,300	25,300 100	0 0	3,330 13
Whitney Lake	39	622,800	622,800 100	0 0	112,170 18
Waco Lake	40	144,500	144,500 100	0 0	0 0
Proctor Lake	41	55,590	55,590 100	0 0	22,560 41
Belton Lake	42	434,500	434,500 100	0 0	43,080 10
Stillhouse Hollow Lake	43	226,060	226,060 100	0 0	3,360 1
Lake Georgetown	44	37,010	37,010 100	0 0	15,900 43
Granger Lake	45	54,280	54,280 100	0 0	3,770 7
Lake Limestone	46	215,750	215,750 100	0 0	17,570 8
Lake Brownwood	47	143,400	133,030 93	-10,370 -7	25,070 17
TOTAL		11,908,050	11,809,660 99	173,880 1	2,556,370 21

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

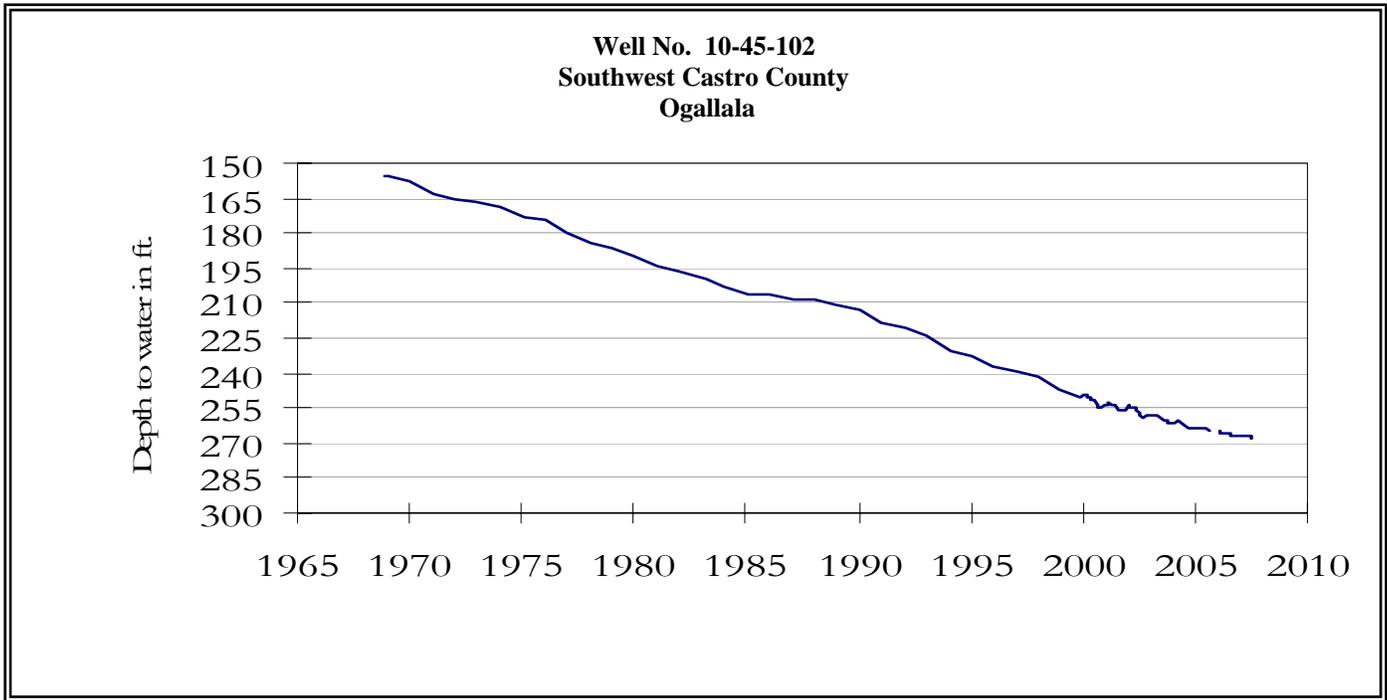
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late July, 2007 (acre-feet) (%)	Change since Late June 2007 (acre-feet) (%)	Change since Late July 2006 (acre-feet) (%)
<b>EAST</b>					
Wright Patman Lake	48	142,700	142,700 100	0 0	0 0
Lake Cypress Springs	49	66,800	66,800 100	0 0	10,130 15
Lake Bob Sandlin	50	202,300	198,700 98	38,800 19	57,300 28
Lake O' the Pines	51	252,000	252,000 100	0 0	61,900 25
Lake Fork Reservoir	52	635,200	635,200 100	0 0	55,700 9
Toledo Bend Reservoir	53	4,472,900	4,472,900 100	118,900 3	1,145,900 26
Lake Palestine	54	411,300	411,300 100	0 0	73,800 18
Lake Tyler	55	73,700	73,700 100	0 0	19,680 27
Sam Rayburn Reservoir	56	2,876,300	2,876,300 100	0 0	240,730 8
B. A. Steinhagen Lake	57	94,200	53,860 57	-8,130 -9	35,110 37
Cedar Creek Reservoir	58	637,050	637,050 100	0 0	119,650 19
Lake Livingston	59	1,750,000	1,750,000 100	0 0	230,000 13
Lake Conroe	60	429,900	415,600 97	-4,700 -1	66,700 16
<b>TOTAL</b>		<b>12,044,350</b>	<b>11,986,110 100</b>	<b>144,870 1</b>	<b>2,116,600 18</b>
<b>TRANS-PECOS</b>					
Red Bluff Reservoir	61	307,000	87,240 28	-10,490 -3	770 0
<b>TOTAL</b>		<b>307,000</b>	<b>87,240 28</b>	<b>-10,490 -3</b>	<b>770 0.3</b>
<b>EDWARDS PLATEAU</b>					
E. V. Spence Reservoir	62	488,760	71,250 15	-3,070 -1	-3,990 -1
Twin Buttes Reservoir	63	177,800	50,970 29	1,220 1	14,060 8
O.C. Fisher Lake	64	119,200	7,550 6	-360 0	-2,390 -2
O. H. Ivie Reservoir	65	554,340	349,600 63	47,100 8	102,000 18
Lake Buchanan	66	896,980	841,020 94	-15,260 -2	213,560 24
Amistad Reservoir (Texas)	67	1,771,030	2,114,000 119	-60,000 -3	240,000 14
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	2,708,000 86	-28,000 -1	335,000 11
<b>TOTAL</b>		<b>4,008,110</b>	<b>3,434,390 86</b>	<b>-30,370 -1</b>	<b>563,240 14</b>
<b>SOUTH CENTRAL</b>					
Somerville Lake	68	155,060	155,060 100	0 0	24,080 16
Lake Travis	69	1,144,100	1,144,100 100	0 0	405,200 35
Canyon Lake	70	385,600	385,600 100	0 0	45,870 12
Coletto Creek Reservoir	71	35,060	32,450 93	520 1	5,710 16
Medina Lake	72	254,000	254,000 100	47,700 19	128,400 51
<b>TOTAL</b>		<b>1,973,820</b>	<b>1,971,210 100</b>	<b>48,220 2</b>	<b>609,260 31</b>
<b>UPPER COAST</b>					
Lake Houston	73	128,860	128,860 100	0 0	0 0
Lake Texana	74	157,900	153,630 97	-100 0	-3,340 -2
<b>TOTAL</b>		<b>286,760</b>	<b>282,490 99</b>	<b>-100 0</b>	<b>-3,340 -1</b>
<b>SOUTHERN</b>					
Choke Canyon Reservoir	75	695,260	695,260 100	67,760 10	142,260 20
Lake Corpus Christi	76	241,240	241,240 100	0 0	164,130 68
Falcon Reservoir (Texas)	77	1,555,120	729,000 47	176,000 11	78,000 5
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	1,052,000 40	255,000 10	78,000 3
<b>TOTAL</b>		<b>2,491,620</b>	<b>1,665,500 67</b>	<b>243,760 10</b>	<b>384,390 15</b>
<b>STATE TOTAL</b>		<b>34,470,430</b>	<b>31,912,130 93</b>	<b>580,080 2</b>	<b>6,382,450 19</b>

Note:

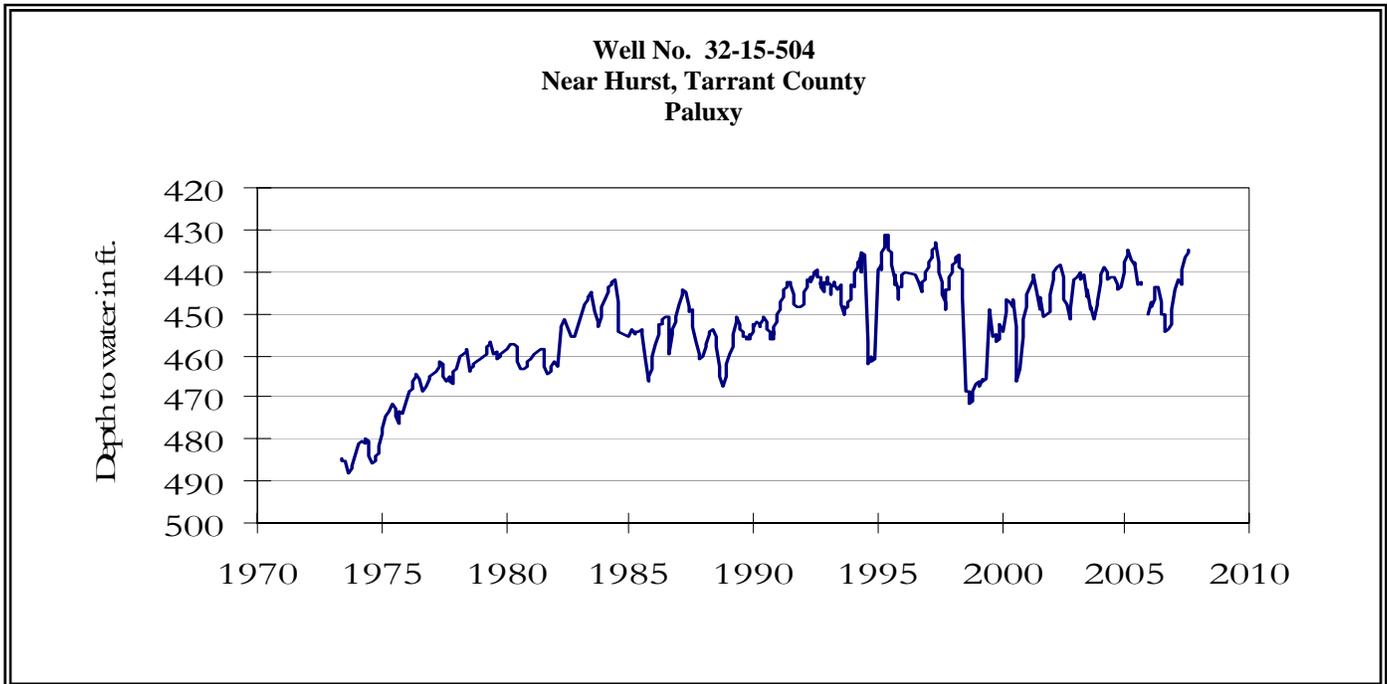
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included 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.

## JULY GROUND WATER LEVELS IN OBSERVATION WELLS

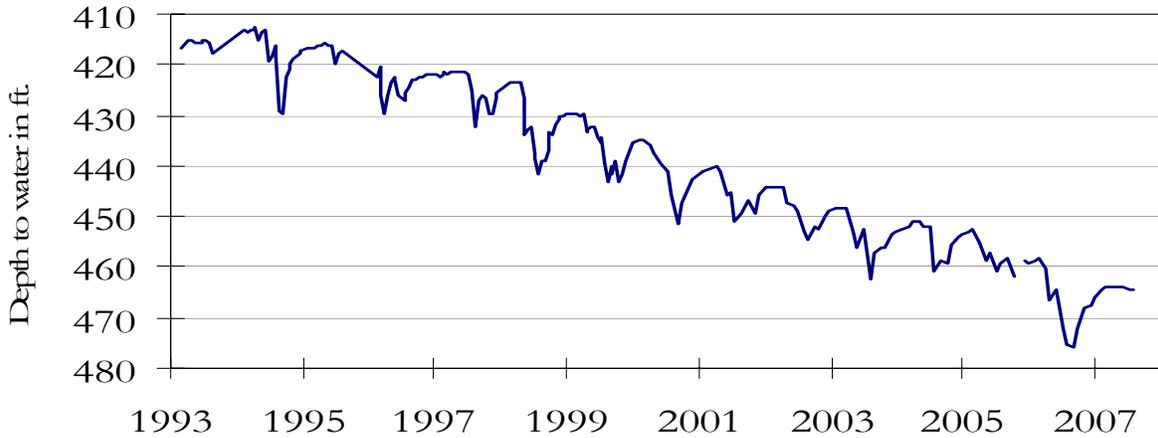


The late July water-level measurement in this Ogallala Aquifer well, elevation 3,816 feet above sea level, was 267.56 feet below land surface. This measurement was 0.22 feet below last month's measurement, 1.04 feet below last year's measurement, and 111.56 feet below the initial measurement recorded in 1968. No water level measurements were recorded for September through December 2005.



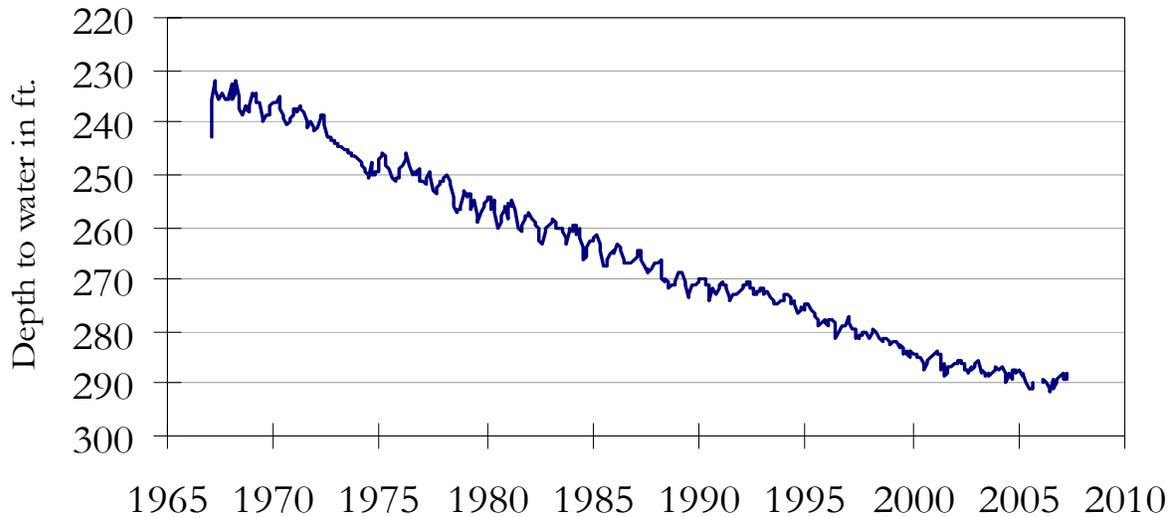
The late July water-level measurement in this Paluxy Formation Trinity Aquifer well, elevation 535 feet above sea level, was 434.98 feet below land surface. This measurement was 0.52 feet above last month's measurement, 15.47 feet above last year's measurement, and 56.98 feet below the initial measurement recorded in 1953. No water level measurements were recorded for September or October 2005.

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



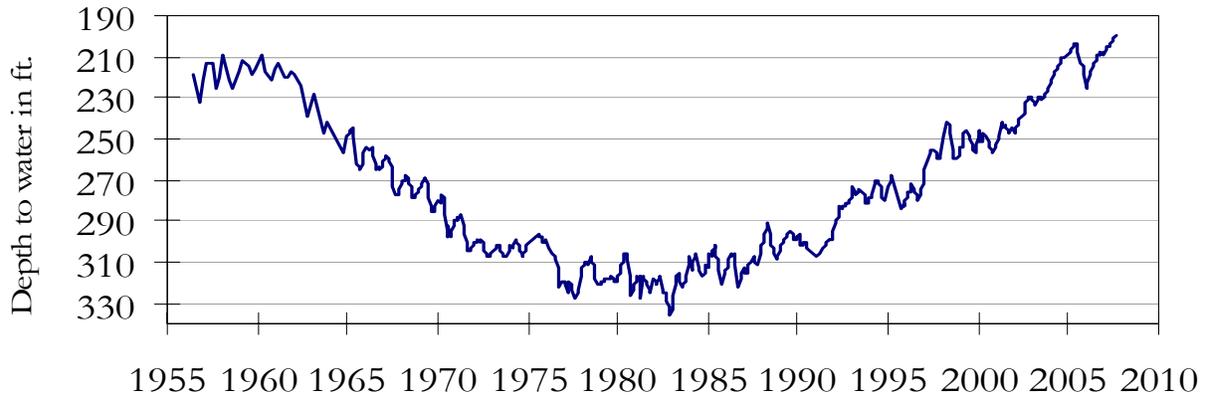
The late July water-level measurement in this Hosston Formation Trinity Aquifer well, elevation 823 feet above sea level, was 464.46 feet below land surface. This water level was 0.24 feet below last month's measurement, 11.10 feet above last year's measurement, and 172.46 feet below the initial measurement recorded in 1955. No water level measurement was recorded for October 2005.

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



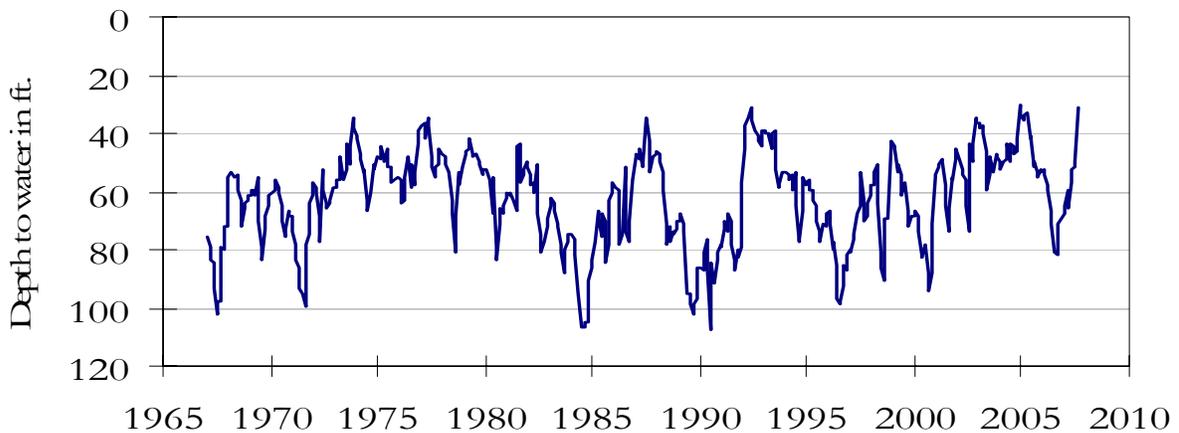
The water-level measurement was not available for this Hueco Bolson Aquifer well (recorder under repair). The graph presented is from last month's report.

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



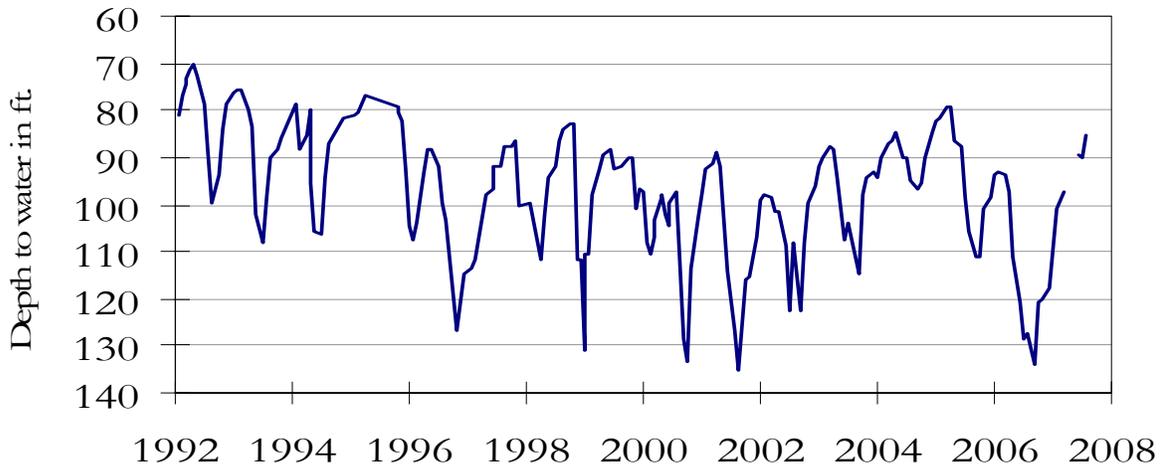
The late July water-level measurement in this Evangeline Formation Gulf Coast Aquifer well, elevation 66 feet above sea level, was 199.82 feet below land surface. This was 1.10 feet above last month's measurement, 9.35 feet above last year's measurement, and 64.32 feet below the initial measurement recorded in 1947.

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



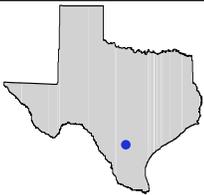
The late July water-level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 31.40 feet below land surface. This was 18.70 feet above last month's measurement, 49.08 feet above last year's measurement, and 15.24 feet above the initial measurement recorded in 1962.

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



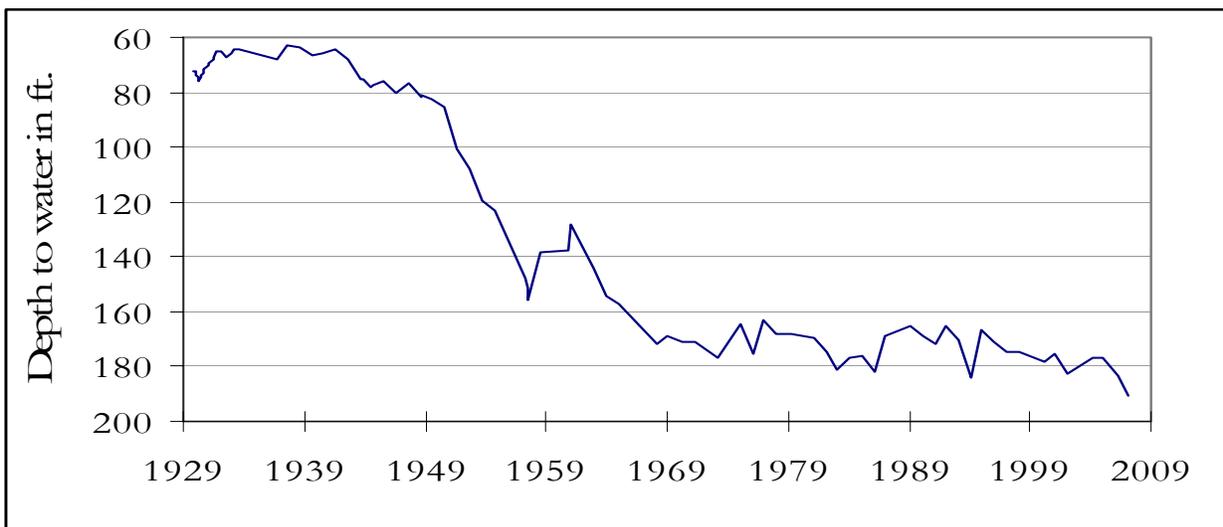
The late July water-level measurement in this Carrizo Aquifer well, elevation 446 feet above sea level, was 85.28 feet below land surface. This measurement was 5.03 feet above last month's measurement, 42.10 feet above last year's measurement, and 49.92 feet below the initial measurement recorded in 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 No77-42-801  
Dimmit County**



This water level observation well, located 15 miles south of Carrizo Springs, at an elevation of 613 feet ASL, was completed in the Carrizo-Wilcox Aquifer. Water level declines have occurred in this area due to irrigation pumping.

July, 2007

Water level measurements were available for six of the seven key monitoring wells. Water levels rose in four of the monitoring wells since the beginning of July, ranging from 0.52 feet in the Tarrant Co. Paluxy well to 18.70 feet in the Bexar Co. Edwards well. Water levels declined in the remaining monitoring wells, ranging from 0.22 feet in the Castro Co. Ogallala well to 0.24 feet in the Coryell Co. Trinity well. The J-17 well recorded a water level of 31.40 feet below land surface. This water level is 48.60 feet above the Stage 1 critical management level.

*TEXAS WATER DEVELOPMENT BOARD*

*1700 N. CONGRESS AVE.*

*P.O. BOX 13231*

*AUSTIN TX 78711-3231*