

Texas Water Development Board



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

RESERVOIR STORAGE

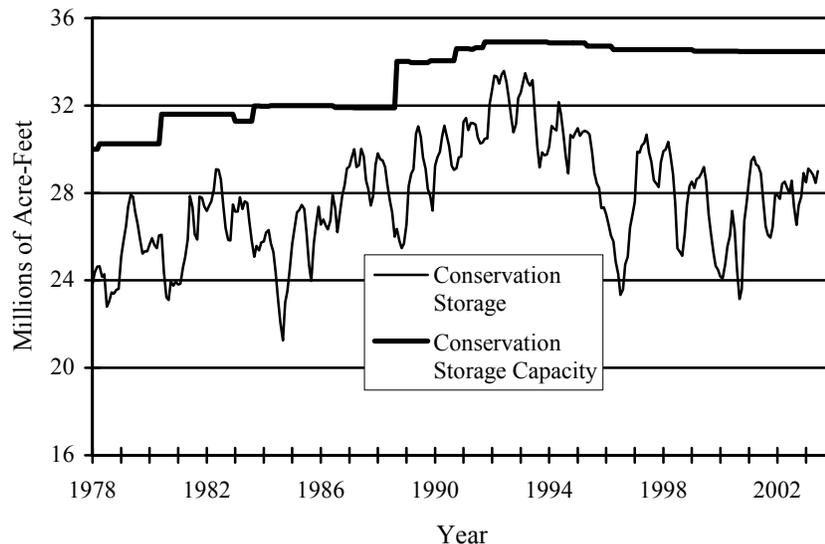
June 2003

Near the end of June, the 77 reservoirs monitored for this report held 29.00 million acre-feet in conservation storage, or 84.1 percent of the conservation storage capacity of the State's major reservoirs. Statewide total storage is below median for this time of year. Storage increased for the month, up 0.54 million acre-feet (+1.6%). Compared to last year at this time, storage is up 1.02 million acre-feet (+3.0%).

Storage in the North Central, East, Upper Coast and South Central Regions is reasonably comfortable, at 94%, 98%, 91% and 97%, respectively. The High Plains (31%), Low Rolling Plains (50%), Edwards Plateau (50%) and Southern (47%) all remained low. The Trans-Pecos Region is still very dry with 19% of capacity, the same as last month, in Red Bluff Reservoir. Storage is at 100% in 21 reservoirs this month, 1 more than last month.

Lake Colorado City in the Low Rolling Plains Region gained 5,820 acre-feet this month, 19% of its capacity, to bring it up to 66% of capacity.

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.

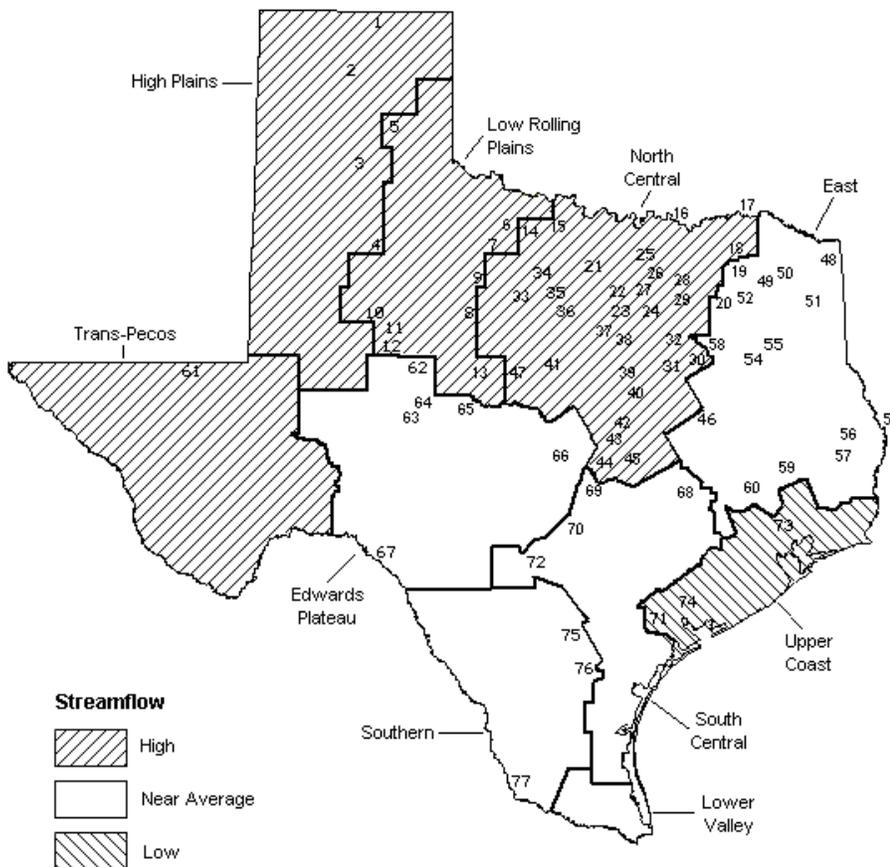
STREAMFLOW

Of 29 reporting index stations in June, computed 30-day mean flows were very high (0% - 5% exceedance) at 1 station (Wolf Creek at Lipscomb), high (5% - 30% exceedance) at 13 stations, near normal (30% - 70% exceedance) at 12 stations, and low (70% - 95% exceedance) at 3 stations. Compared to May, flows decreased at 5 index stations and increased at 24.

On a regional basis, flows in June were high in the High Plains, Low Rolling Plains, North Central and Trans-Pecos Regions, normal in East Texas, Edwards Plateau and South Central Regions, and low in the Upper Coast Region.

JUNE 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. 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 June 2003 (acre-feet) (%)	Change since Late May 2003 (acre-feet) (%)	Change since Late June 2002 (acre-feet) (%)
HIGH PLAINS					
Palo Duro Reservoir	1	60,900	4,630 8	1,420 2	-440 -1
Lake Meredith (Texas)	2	500,000	175,330 35	5,400 1	-43,270 -9
Lake Meredith (Texas and Oklahoma)	(2)	779,560	175,330 22	5,400 1	-43,270 -6
MacKenzie Reservoir	3	46,250	7,220 16	40 0	-270 -1
White River Lake	4	31,850	8,400 26	3,720 12	1,670 5
TOTAL		639,000	195,580 31	10,580 2	-42,310 -7
LOW ROLLING PLAINS					
Greenbelt Reservoir	5	58,200	24,270 42	1,520 3	870 1
Lake Kemp	6	319,600	233,580 73	13,240 4	57,580 18
Miller's Creek Reservoir	7	27,890	16,040 58	2,690 10	-1,930 -7
Fort Phantom Hill Reservoir	8	70,030	42,910 61	7,350 10	14,670 21
Lake Stamford	9	52,700	41,470 79	6,630 13	5,430 10
Lake J. B. Thomas	10	202,300	24,230 12	6,160 3	4,830 2
Lake Colorado City	11	30,800	20,250 66	5,820 19	2,330 8
Champion Creek Reservoir	12	41,600	3,250 8	1,260 3	360 1
Hords Creek Lake	13	8,600	2,270 26	130 2	-320 -4
TOTAL		811,720	408,270 50	44,800 6	83,820 10
NORTH CENTRAL					
Lake Kickapoo	14	106,000	80,030 76	3,590 3	-12,720 -12
Lake Arrowhead	15	262,100	147,900 56	1,110 0	-19,000 -7
Lake Texoma	16	2,722,300	2,722,300 100	190,230 7	0 0
Pat Mayse Lake	17	124,500	120,290 97	1,040 1	1,990 2
Cooper Lake	18	273,000	273,000 100	0 0	0 0
Lake Sulphur Springs	19	17,710	17,710 100	0 0	0 0
Lake Tawakoni	20	936,200	881,800 94	-3,400 0	1,600 0
Bridgeport Reservoir	21	374,830	307,700 82	38,100 10	-2,800 -1
Eagle Mountain Reservoir	22	178,380	151,500 85	9,300 5	-24,100 -14
Benbrook Lake	23	88,200	83,410 95	1,270 1	1,590 2
Joe Pool Lake	24	175,800	175,800 100	0 0	0 0
Ray Roberts Lake	25	798,760	791,350 99	-4,400 -1	-7,410 -1
Lewisville Lake	26	555,000	555,000 100	0 0	0 0
Grapevine Lake	27	187,700	182,950 97	-2,860 -2	-750 0
Lavon Lake	28	443,800	436,770 98	-5,050 -1	-7,030 -2
Lake Ray Hubbard	29	413,420	410,700 99	4,800 1	15,500 4
Richland-Chambers Creek Lake	30	1,103,820	1,103,820 100	0 0	0 0
Navarro Mills Lake	31	55,810	55,810 100	640 1	0 0
Bardwell Lake	32	53,580	48,110 90	-1,410 -3	690 1
Hubbard Creek Reservoir	33	317,800	147,800 47	9,700 3	23,400 7
Lake Graham	34	45,000	29,000 64	2,340 5	-5,710 -13
Possum Kingdom Lake	35	551,820	503,200 91	61,500 11	-16,300 -3
Lake Palo Pinto	36	27,650	19,430 70	440 2	-3,050 -11
Lake Granbury	37	135,680	133,800 99	300 0	2,900 2
Lake Pat Cleburne	38	25,300	24,410 96	-550 -2	-890 -4
Whitney Lake	39	622,800	481,550 77	5,110 1	-141,250 -23
Waco Lake	40	144,500	144,500 100	60 0	3,500 2
Proctor Lake	41	55,590	55,190 99	1,290 2	7,910 14
Belton Lake	42	434,500	434,500 100	1,270 0	1,000 0
Stillhouse Hollow Lake	43	226,060	226,060 100	0 0	0 0
Lake Georgetown	44	37,010	34,940 94	-950 -3	-1,440 -4
Granger Lake	45	54,280	54,280 100	0 0	0 0
Lake Limestone	46	215,750	212,600 99	500 0	-3,150 -1
Lake Brownwood	47	143,400	134,690 94	6,740 5	25,090 17
TOTAL		11,908,050	11,181,900 94	320,710 3	-160,430 -1

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late June 2003 (acre-feet) (%)	Change since Late May 2003 (acre-feet) (%)	Change since Late June 2002 (acre-feet) (%)
EAST					
Wright Patman Lake	48	142,700	142,700 100	0 0	0 0
Lake Cypress Springs	49	66,800	66,800 100	0 0	0 0
Lake Bob Sandlin	50	202,300	202,300 100	0 0	0 0
Lake O' the Pines	51	252,000	240,950 96	3,850 2	-11,050 -4
Lake Fork Reservoir	52	635,200	633,800 100	6,400 1	-1,400 0
Toledo Bend Reservoir	53	4,472,900	4,274,000 96	62,000 1	-82,000 -2
Lake Palestine	54	411,300	411,300 100	0 0	5,800 1
Lake Tyler	55	73,700	73,700 100	0 0	0 0
Sam Rayburn Reservoir	56	2,876,300	2,857,190 99	9,070 0	167,190 6
B. A. Steinhagen Lake	57	94,200	85,950 91	-4,280 -5	21,760 23
Cedar Creek Reservoir	58	637,050	636,600 100	1,900 0	10,600 2
Lake Livingston	59	1,750,000	1,738,000 99	14,000 1	-12,000 -1
Lake Conroe	60	429,900	413,500 96	6,800 2	10,900 3
TOTAL		12,044,350	11,776,790 98	99,740 1	109,800 1
TRANS-PECOS					
Red Bluff Reservoir	61	307,000	57,000 19	-1,640 -1	16,720 5
TOTAL		307,000	57,000 19	-1,640 -1	16,720 5
EDWARDS PLATEAU					
E. V. Spence Reservoir	62	488,760	58,730 12	27,030 6	4,410 1
Twin Buttes Reservoir	63	177,800	5,560 3	-440 0	-650 0
O.C. Fisher Lake	64	119,200	4,760 4	2,420 2	1,780 1
O. H. Ivie Reservoir	65	554,340	222,400 40	34,100 6	-3,700 -1
Lake Buchanan	66	896,980	866,130 97	13,100 1	87,130 10
Amistad Reservoir (Texas)	67	1,771,030	860,000 49	12,000 1	234,000 13
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	1,017,000 32	51,000 2	205,000 7
TOTAL		4,008,110	2,017,580 50	88,210 2	322,970 8
SOUTH CENTRAL					
Somerville Lake	68	155,060	155,060 100	230 0	2,360 2
Lake Travis	69	1,144,100	1,101,600 96	7,200 1	136,300 12
Canyon Lake	70	385,600	385,600 100	0 0	0 0
Coleta Creek Reservoir	71	35,060	29,340 84	490 1	620 2
Medina Lake	72	254,000	247,500 97	700 0	10,000 4
TOTAL		1,973,820	1,919,100 97	8,620 0	149,280 8
UPPER COAST					
Lake Houston	73	128,860	128,860 100	0 0	0 0
Lake Texana	74	157,900	131,100 83	-2,800 -2	-7,700 -5
TOTAL		286,760	259,960 91	-2,800 -1	-7,700 -3

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late June 2003 (acre-feet) (%)	Change since Late May 2003 (acre-feet) (%)	Change since Late June 2002 (acre-feet) (%)
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SOUTHERN

Choke Canyon Reservoir	75	695,260	691,000	99	6,000	1	420,000	60
Lake Corpus Christi	76	241,240	207,740	86	-16,220	-7	-760	0
Falcon Reservoir (Texas)	77	1,555,120	284,000	18	-21,000	-1	129,000	8
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	357,000	13	16,000	1	131,000	5
TOTAL		2,491,620	1,182,740	47	-31,220	-1	548,240	22

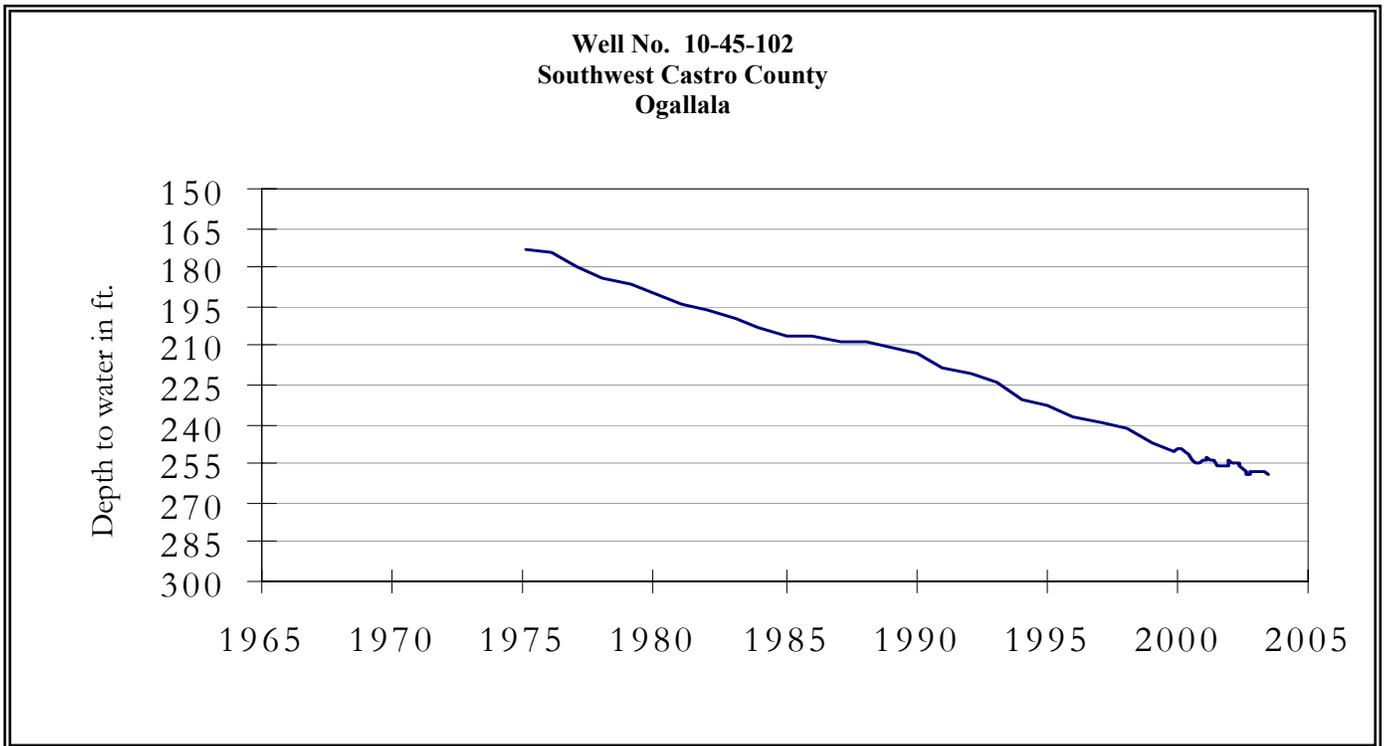
STATE TOTAL		34,470,430	28,998,920	84	537,000	2	1,020,390	3
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Note:

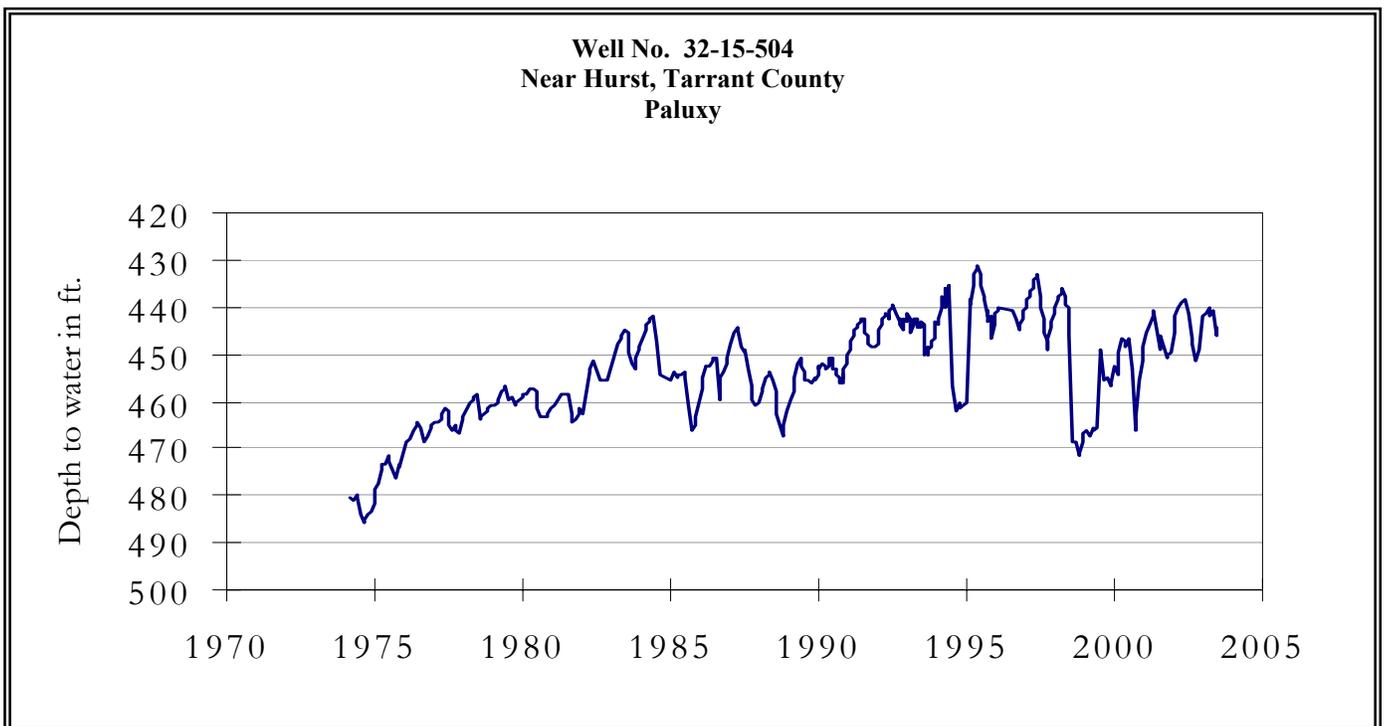
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included 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 % Change = 100 * (current conservation storage - past conservation storage)/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). Figures in parentheses for Lake Meredith represent the total conservation storage excluding 58,014 acre-feet of dead storage and are not included in State total. Preliminary figures are shown for the United States' share of conservation storage in International Amistad and International Falcon Reservoirs; the estimates may be subject to revision on completion of international water accounting. Texas (United States' share) and Mexico and are not included in State total.

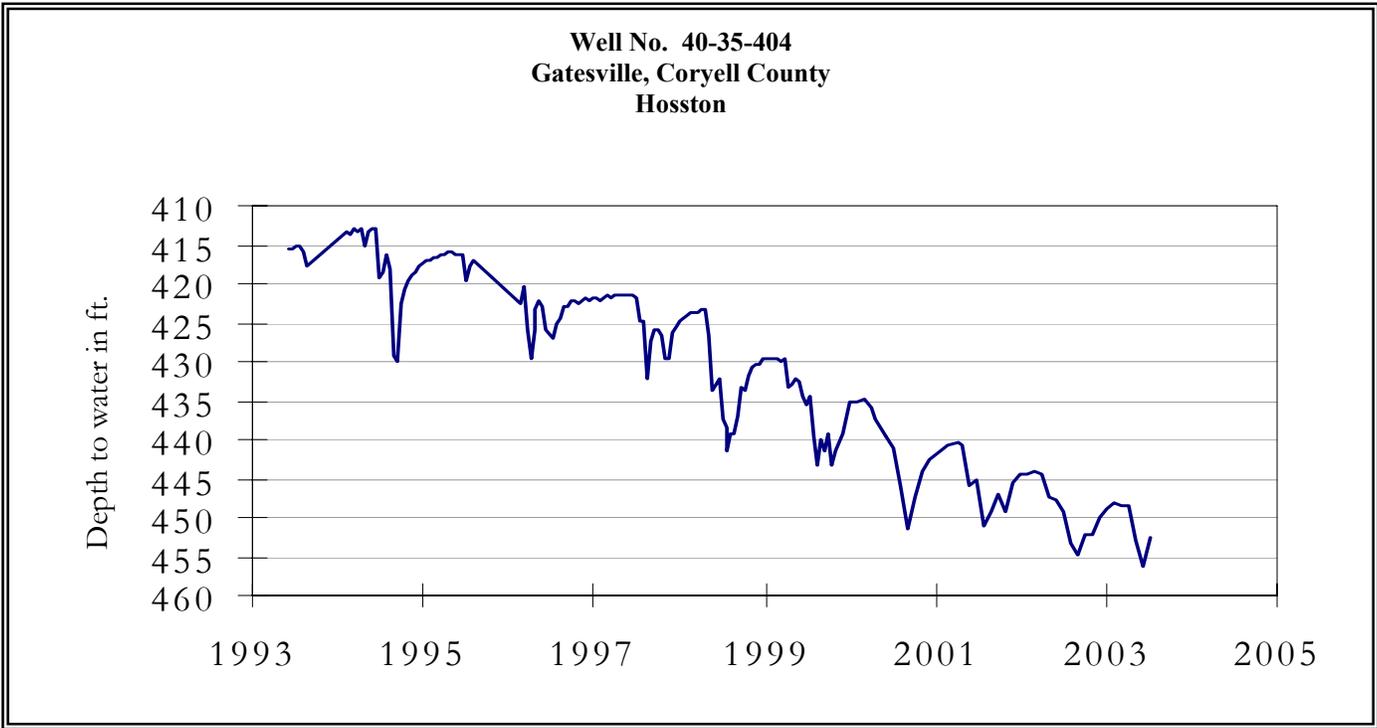
JUNE GROUND WATER LEVELS IN OBSERVATION WELLS



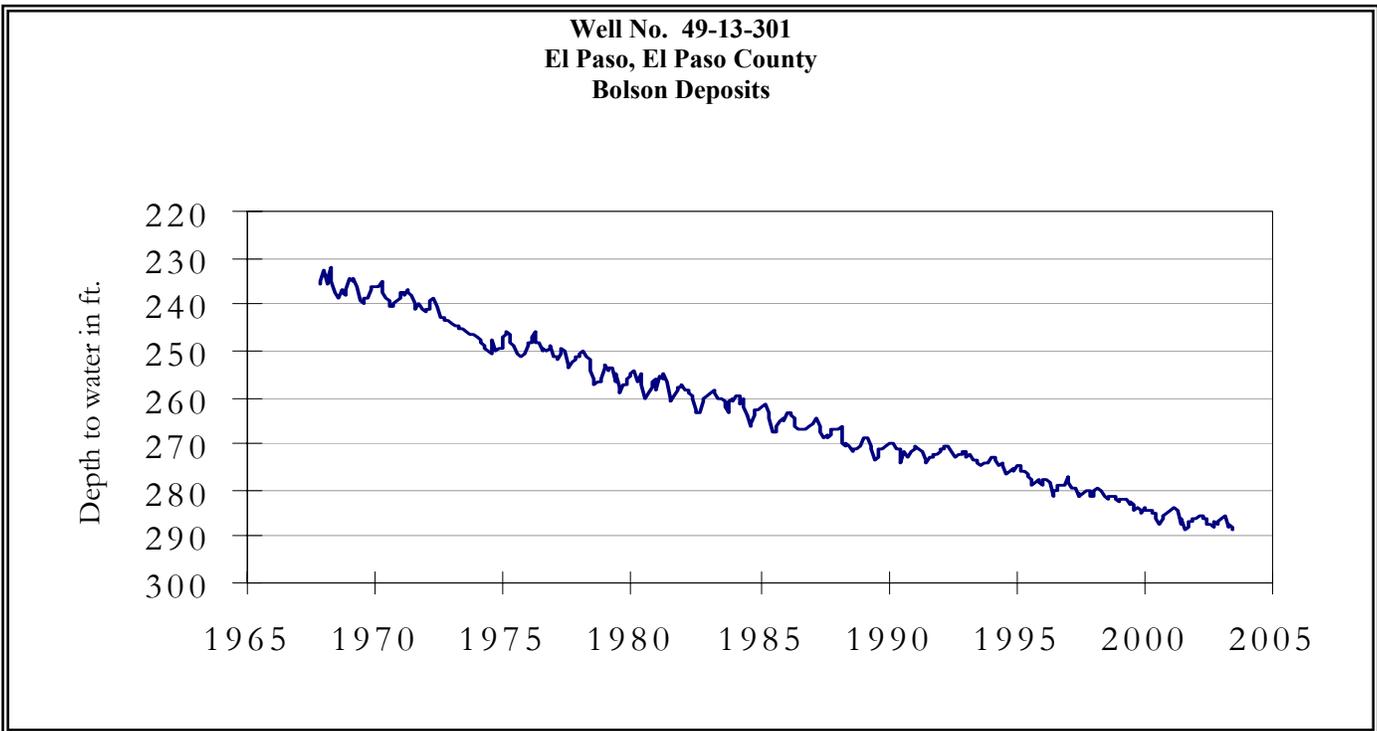
The late June water-level measurement in this Ogallala aquifer well, elevation 3,816 feet above sea level, was 259.24 feet below land surface. This measurement was 0.23 feet below last month's measurement, 2.26 feet below last year's measurement, and 103.24 feet below the initial measurement recorded in 1968.



The late June water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 444.22 feet below land surface. This measurement was 1.89 feet above last month's measurement, 2.89 feet below last year's measurement, and 50.83 feet below the initial measurement recorded in 1953.

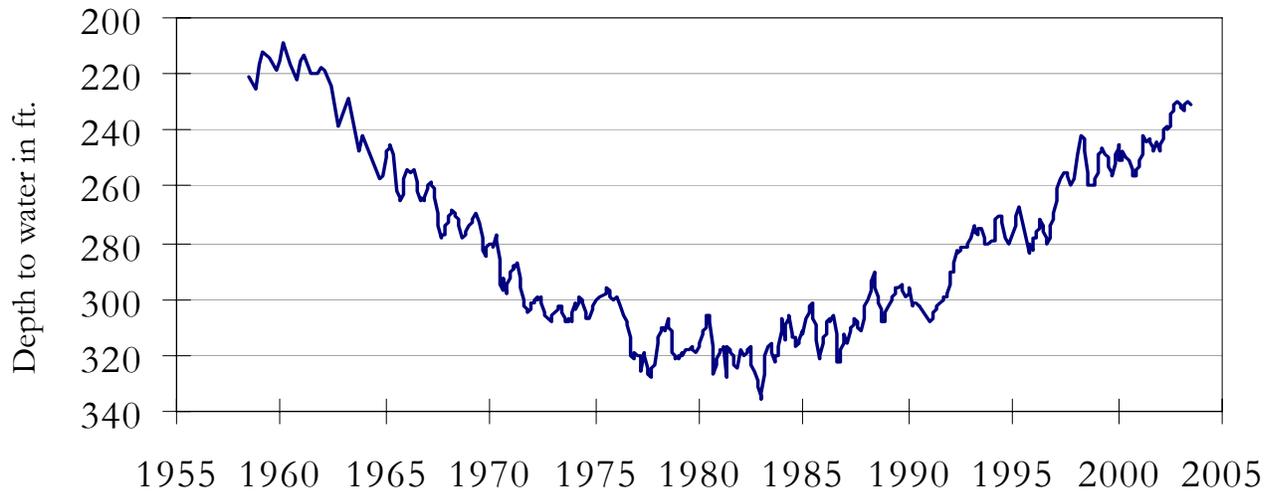


The late June water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 452.77 feet below land surface. This measurement was 3.39 feet above last month's measurement, 3.68 feet below last year's measurement, and 160.77 feet below the initial measurement recorded in 1955.



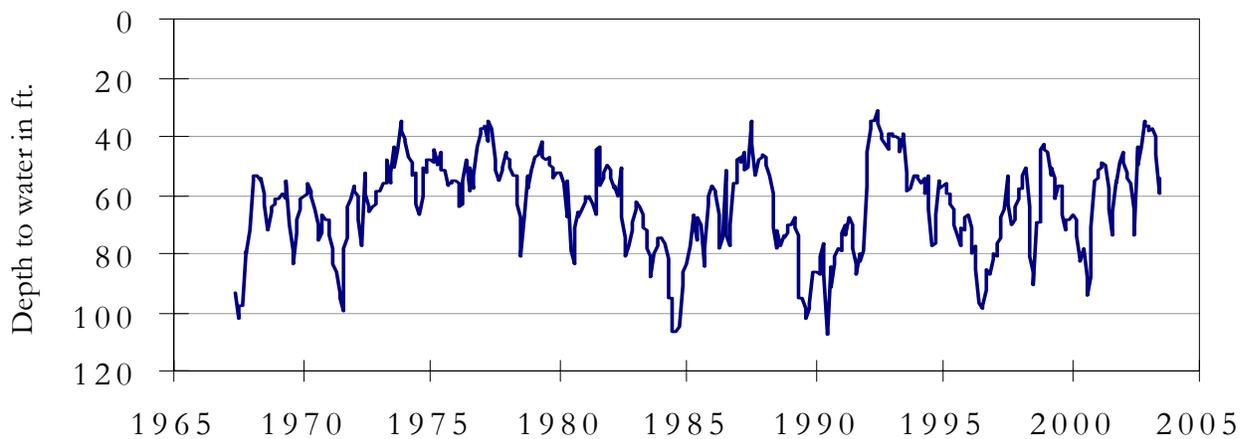
The late June water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 288.83 feet below land surface. This was 0.68 feet below last month's measurement, 1.54 feet below last year's measurement, and 56.93 feet below the initial measurement recorded in 1964.

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



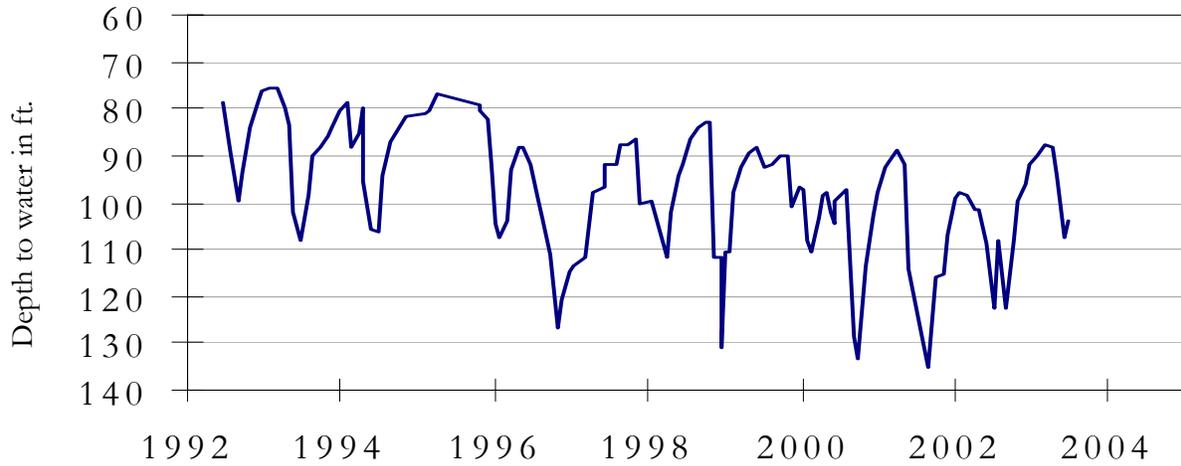
The late June water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 230.56 feet below land surface. This was 0.94 feet below last month's measurement, 7.75 feet above last year's measurement, and 127.33 feet below the initial measurement recorded in 1947.

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



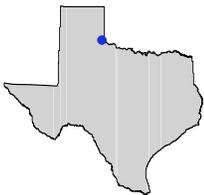
The late June water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 54.45 feet below land surface. This was 5.11 feet above last month's measurement, 18.93 feet above last year's measurement, and 5.17 feet above the initial measurement recorded in 1962.

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



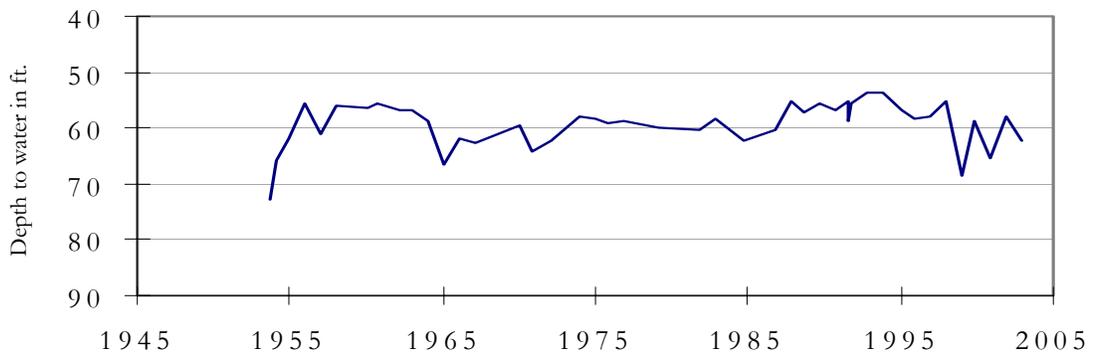
The late June water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 103.87 feet below land surface. This measurement was 3.69 feet above last month's measurement, 18.93 feet above last year's measurement, and 22.62 feet below the initial measurement recorded in 1965.

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. 1223603
Childress County**



This 177 ft. deep irrigation well, located 18 miles north of Childress, at an elevation of 1,745 feet above sea level, was completed in the Blaine Aquifer. As the water level data indicates, no local significant water level declines have occurred. Also, no considerable water level declines have been noted regionally for the Blaine Aquifer.

*TEXAS WATER DEVELOPMENT BOARD
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