

Texas Water Development Board



Water **Conditions**

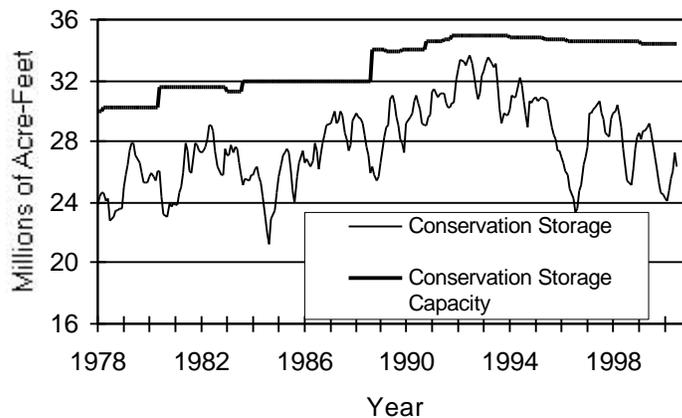
RESERVOIR STORAGE

July 2000

Near the end of July, the 77 reservoirs monitored for this report held 26.3 million acre-feet in conservation storage, or 76.2 percent of the conservation storage capacity of the State's major reservoirs. This is the fifth-lowest percentage of capacity for a July in 23 years of record. Storage decreased by 0.90 million acre-feet (-2.6% of conservation storage capacity) during the month. Compared to July 1999, storage is down 2.27 million acre-feet (-6.6%).

Conservation storage during the month decreased in all regions, with greatest decreases occurring in the South Central Region (-6.3%) and Upper Coast Region (-6.1%). Storage in the Edwards Plateau Region decreased by 0.5% and in the Trans-Pecos Region by 1.0%. Only 7 monitored reservoirs, primarily in the North Central and East regions, held 100 percent of conservation storage near the end of July.

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.

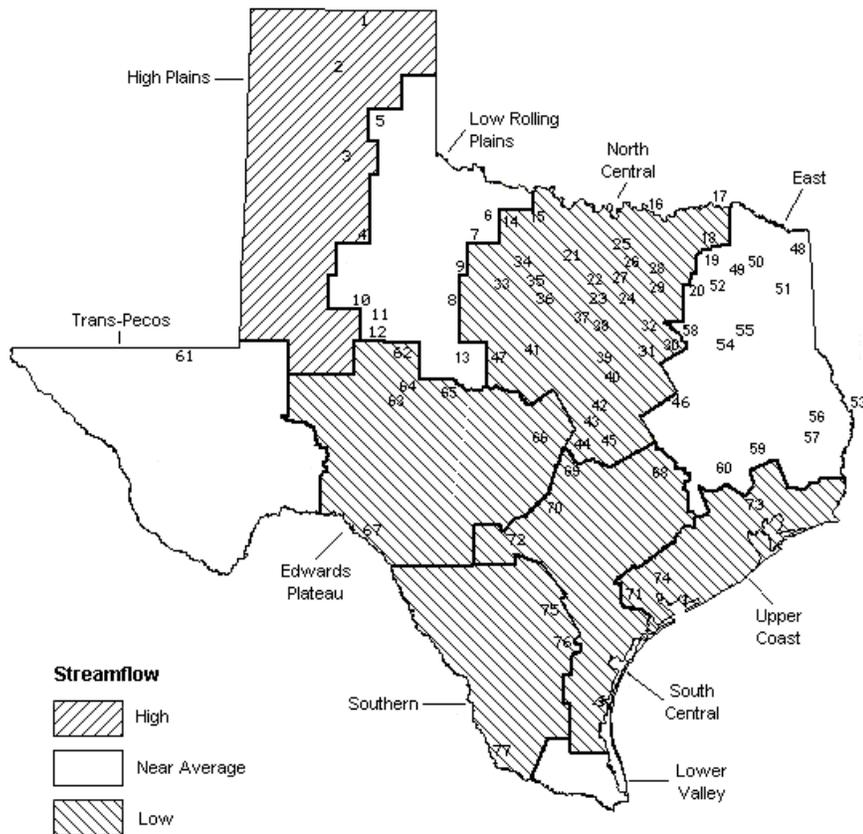
STREAMFLOW

Of 28 reporting index stations in July, computed 30-day mean flows were very high (0% - 5% exceedance) at 2 stations, high (5% - 30% exceedance) at 3 stations, near normal (30% - 70% exceedance) at 8 stations, low (70% - 95% exceedance) at 13 stations, and very low (95% - 100% exceedance) at 2 stations. The two very-low-flow stations were in the Southern Central Region (Navidad River near Hallettsville) and the Southern Region (Nueces River near Tilden). In comparison to June, flows decreased at 15 index stations and increased at 1 station.

Flows in July were above normal in the High Plains and below normal to near normal elsewhere. All reporting index stations in the South Central, Upper Coast, and Southern regions reported low or very low flows. Three stations reported zero flows in July - Elm Creek at Ballinger, Denton Creek near Justin, and Nueces River near Tilden.

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. 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		Change since		Change since		
		Storage Capacity (acre-feet)	Storage Late July 2000 (acre-feet) (%)	Late June 2000 (acre-feet) (%)	Late July 1999 (acre-feet) (%)			
HIGH PLAINS								
Palo Duro Reservoir	1	60,900	20,110 33	-2,730 -4	-9,236 -15			
Lake Meredith (Texas)	2	500,000	373,000 75	-8,700 -2	-37,700 -8			
Lake Meredith (Texas and Oklahoma)	(2)	779,560	373,000 48	-8,700 -1	-37,700 -5			
MacKenzie Reservoir	3	46,250	8,990 19	-300 -1	-1,650 -4			
White River Lake	4	31,850	14,100 44	-860 -3	-15,390 -48			
TOTAL		639,000	416,200 65	-12,590 -2	-63,976 -10			
LOW ROLLING PLAINS								
Greenbelt Reservoir	5	58,200	26,080 45	-970 -2	-2,190 -4			
Lake Kemp	6	319,600	141,600 44	-16,200 -5	-78,200 -24			
Miller's Creek Reservoir	7	27,890	8,040 29	-590 -2	-6,140 -22			
Fort Phantom Hill Reservoir	8	70,030	26,180 37	3,250 5	-140 0			
Lake Stamford	9	52,700	9,820 19	-460 -1	-200 0			
Lake J. B. Thomas	10	202,300	32,560 16	-2,640 -1	-6,830 -3			
Lake Colorado City	11	30,800	25,320 82	-1,580 -5	9,330 30			
Champion Creek Reservoir	12	41,600	5,020 12	-380 -1	-4,270 -10			
Hords Creek Lake	13	8,600	3,970 46	-350 -4	-437 -5			
TOTAL		811,720	278,590 34	-19,920 -2	-89,077 -11			
NORTH CENTRAL								
Lake Kickapoo	14	106,000	47,369 45	-1,184 -1	-16,341 -15			
Lake Arrowhead	15	262,100	107,700 41	-6,100 -2	-59,200 -23			
Lake Texoma	16	2,722,300	2,665,895 98	-23,462 -1	52,009 2			
Pat Mayse Lake	17	124,500	117,233 94	-6,514 -5	2,862 2			
Cooper Lake	18	273,000	267,743 98	-5,257 -2	22,152 8			
Lake Sulphur Springs	19	17,710	17,510 99	-200 -1	1,022 6			
Lake Tawakoni	20	936,200	924,700 99	-11,500 -1	10,100 1			
Bridgeport Reservoir	21	374,830	204,127 54	-9,113 -2	-93,731 -25			
Eagle Mountain Reservoir	22	178,380	127,440 71	-7,912 -4	-21,732 -12			
Benbrook Lake	23	88,200	77,110 87	-11,090 -13	-1,667 -2			
Joe Pool Lake	24	175,800	174,500 99	-1,300 -1	1,748 1			
Ray Roberts Lake	25	798,760	535,994 67	-17,903 -2	-163,722 -20			
Lewisville Lake	26	555,000	308,600 56	-34,800 -6	-130,627 -24			
Grapevine Lake	27	187,700	123,600 66	-7,400 -4	-33,235 -18			
Lavon Lake	28	443,800	409,544 92	-34,256 -8	8,034 2			
Lake Ray Hubbard	29	413,420	378,700 92	-34,720 -8	-34,720 -8			
Richland-Chambers Creek Lake	30	1,103,820	1,103,820 100	0 0	5,443 0			
Navarro Mills Lake	31	55,810	53,709 96	-2,101 -4	1,434 3			
Bardwell Lake	32	53,580	51,480 96	-2,100 -4	766 1			
Hubbard Creek Reservoir	33	317,800	164,800 52	-10,100 -3	-73,500 -23			
Lake Graham	34	45,000	34,650 77	-3,050 -7	-10,350 -23			
Possum Kingdom Lake	35	551,820	485,600 88	-700 0	107,139 19			
Lake Palo Pinto	36	42,200	24,614 58	-2,749 -7	-15,581 -37			
Lake Granbury	37	135,680	126,200 93	-6,251 -5	-6,493 -5			
Lake Pat Cleburne	38	25,300	24,235 96	-1,065 -4	1,688 7			
Whitney Lake	39	622,800	579,000 93	-37,400 -6	107,886 17			
Waco Lake	40	144,500	144,500 100	0 0	0 0			
Proctor Lake	41	55,590	12,230 22	-3,940 -7	-23,308 -42			
Belton Lake	42	434,500	392,000 90	-16,000 -4	-42,500 -10			
Stillhouse Hollow Lake	43	226,060	215,975 96	-5,732 -3	-10,085 -4			
Lake Georgetown	44	37,010	20,630 56	-2,900 -8	-16,380 -44			
Granger Lake	45	54,280	51,150 94	-3,130 -6	-3,130 -6			
Lake Limestone	46	215,750	207,400 96	-7,700 -4	-1,600 -1			
Lake Brownwood	47	143,400	96,510 67	-7,590 -5	-11,190 -8			
TOTAL		11,922,600	10,276,268 86	-325,219 -3	-446,809 -4			

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 2000		Change since Late June 2000		Change since Late July 1999		
			(acre-feet)	(%)	(acre-feet)	(%)	(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	4,574	2	
Lake O' the Pines	51	252,000	252,000	100	0	0	0	0	
Lake Fork Reservoir	52	635,200	635,200	100	0	0	0	0	
Toledo Bend Reservoir	53	4,472,900	4,288,000	96	-122,000	-3	121,000	3	
Lake Palestine	54	411,300	395,500	96	-15,800	-4	-9,800	-2	
Lake Tyler	55	73,700	65,844	89	-5,330	-7	-7,856	-11	
Sam Rayburn Reservoir	56	2,876,300	2,239,000	78	-130,000	-5	-570,141	-20	
B. A. Steinhagen Lake	57	94,200	84,635	90	5,303	6	-869	-1	
Cedar Creek Reservoir	58	637,050	630,956	99	-6,094	-1	-6,094	-1	
Lake Livingston	59	1,750,000	1,711,000	98	-39,000	-2	-24,000	-1	
Lake Conroe	60	429,900	361,100	84	-12,900	-3	-54,000	-13	
TOTAL		12,044,350	11,075,035	92	-325,821	-3	-547,186	-5	
TRANS-PECOS									
Red Bluff Reservoir	61	307,000	63,780	21	-3,090	-1	-24,350	-8	
TOTAL		307,000	63,780	21	-3,090	-1	-24,350	-8	
EDWARDS PLATEAU									
E. V. Spence Reservoir	62	484,800	94,870	20	-4,360	-1	20,670	4	
Twin Buttes Reservoir	63	177,800	4,487	3	-3,432	-2	-12,155	-7	
O.C. Fisher Lake	64	119,200	9,750	8	-1,820	-2	-816	-1	
O. H. Ivie Reservoir	65	554,340	317,800	57	-16,400	-3	-65,300	-12	
Lake Buchanan	66	896,980	598,500	67	-62,400	-7	-247,683	-28	
Amistad Reservoir (Texas)	67	1,771,030	1,029,000	58	67,000	4	16,000	1	
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	1,232,000	39	85,000	3	-77,000	-2	
TOTAL		4,004,150	2,054,407	51	-21,412	-1	-289,284	-7	
SOUTH CENTRAL									
Somerville Lake	68	155,060	120,331	78	-16,577	-11	-34,729	-22	
Lake Travis	69	1,144,100	624,700	55	-76,100	-7	-393,352	-34	
Canyon Lake	70	385,600	343,608	89	-10,992	-3	-41,992	-11	
Coletto Creek Reservoir	71	35,060	28,010	80	-2,850	-8	-2,620	-7	
Medina Lake	72	254,000	132,300	52	-18,300	-7	-117,700	-46	
TOTAL		1,973,820	1,248,949	63	-124,819	-6	-590,393	-30	
UPPER COAST									
Lake Houston	73	128,860	121,500	94	-7,360	-6	-1,600	-1	
Lake Texana	74	157,900	142,900	91	-10,200	-6	-15,000	-9	
TOTAL		286,760	264,400	92	-17,560	-6	-16,600	-6	

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

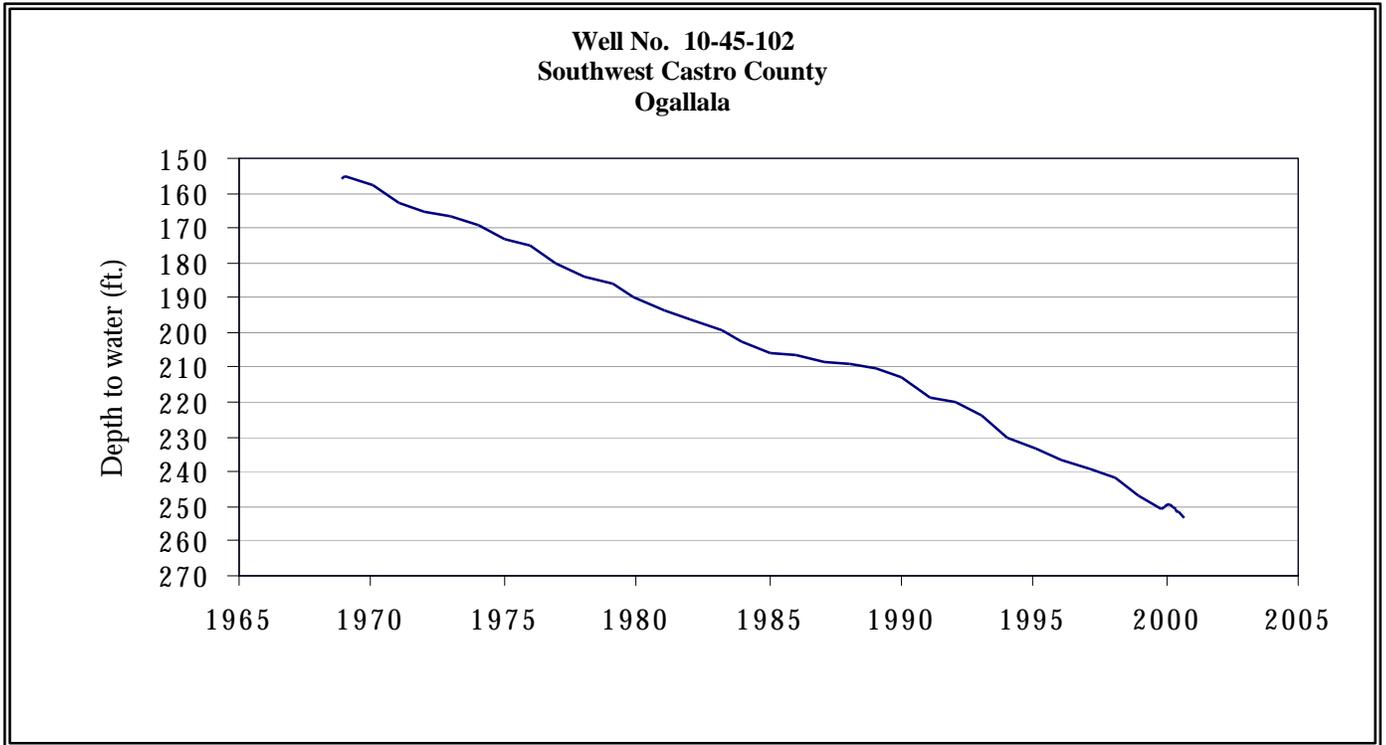
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late July 2000 (acre-feet) (%)	Change since Late June 2000 (acre-feet) (%)	Change since Late July 1999 (acre-feet) (%)
SOUTHERN					
Choke Canyon Reservoir	75	695,260	259,000 37	-14,000 -2	-86,000 -12
Lake Corpus Christi	76	241,240	97,790 41	-28,010 -12	-79,110 -33
Falcon Reservoir (Texas)	77	1,555,120	248,000 16	-9,000 -1	-39,000 -3
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	286,000 11	-19,000 -1	-224,000 -8
TOTAL		2,491,620	604,790 24	-51,010 -2	-204,110 -8
 STATE TOTAL		 34,481,020	 26,282,419 76	 -901,441 -3	 -2,271,785 -7

Note:

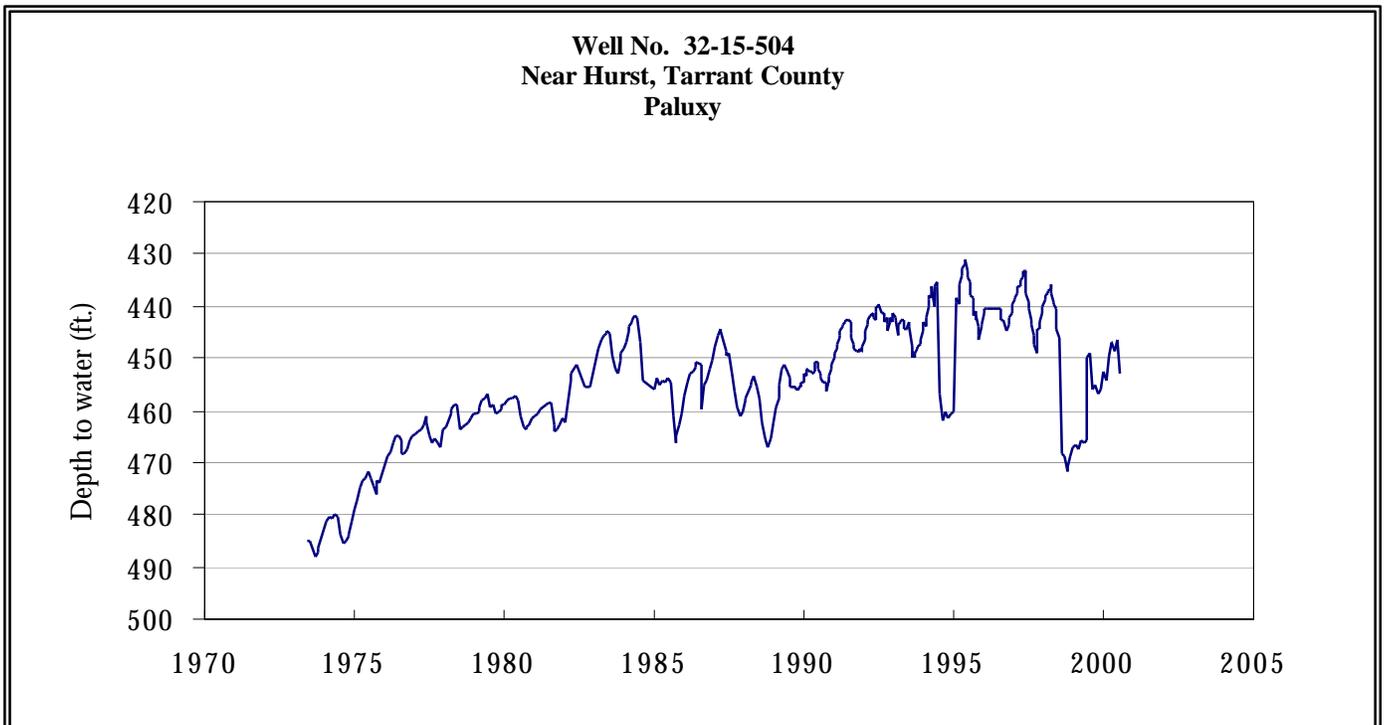
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included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

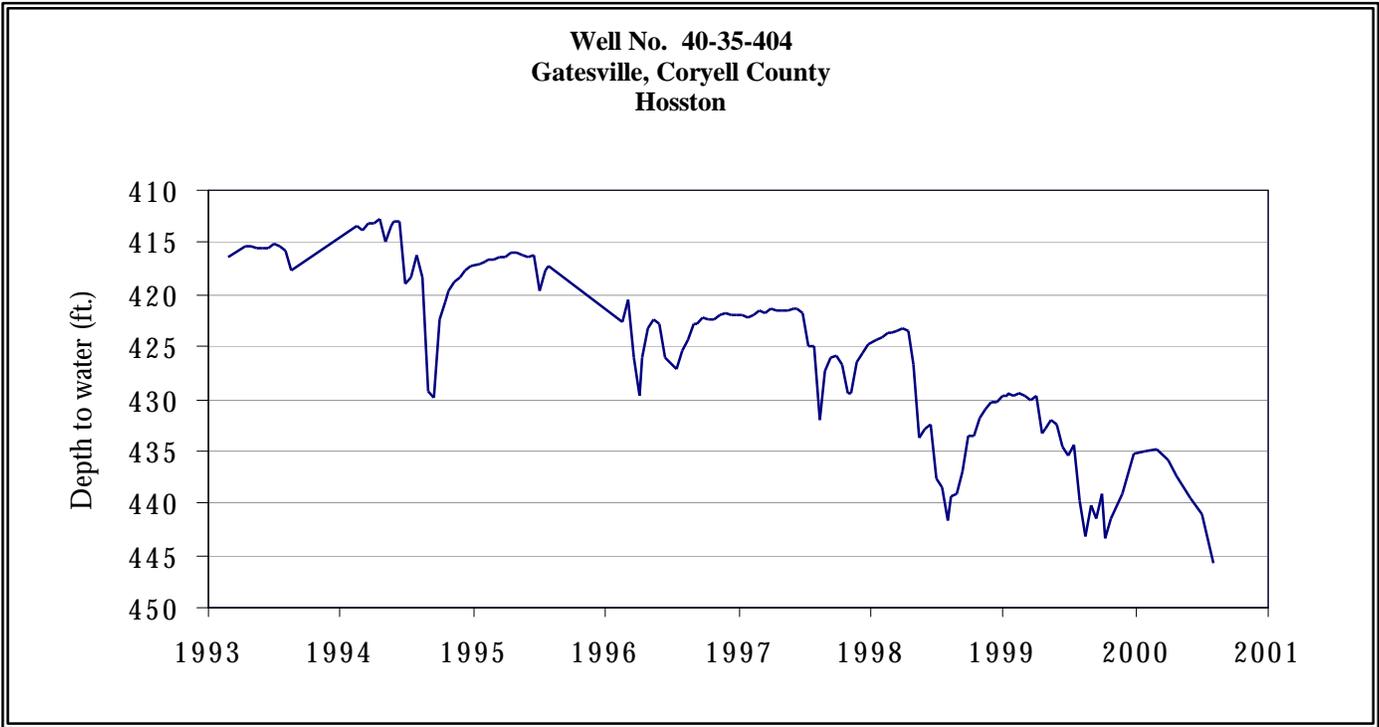
JULY GROUND WATER LEVELS IN OBSERVATION WELLS



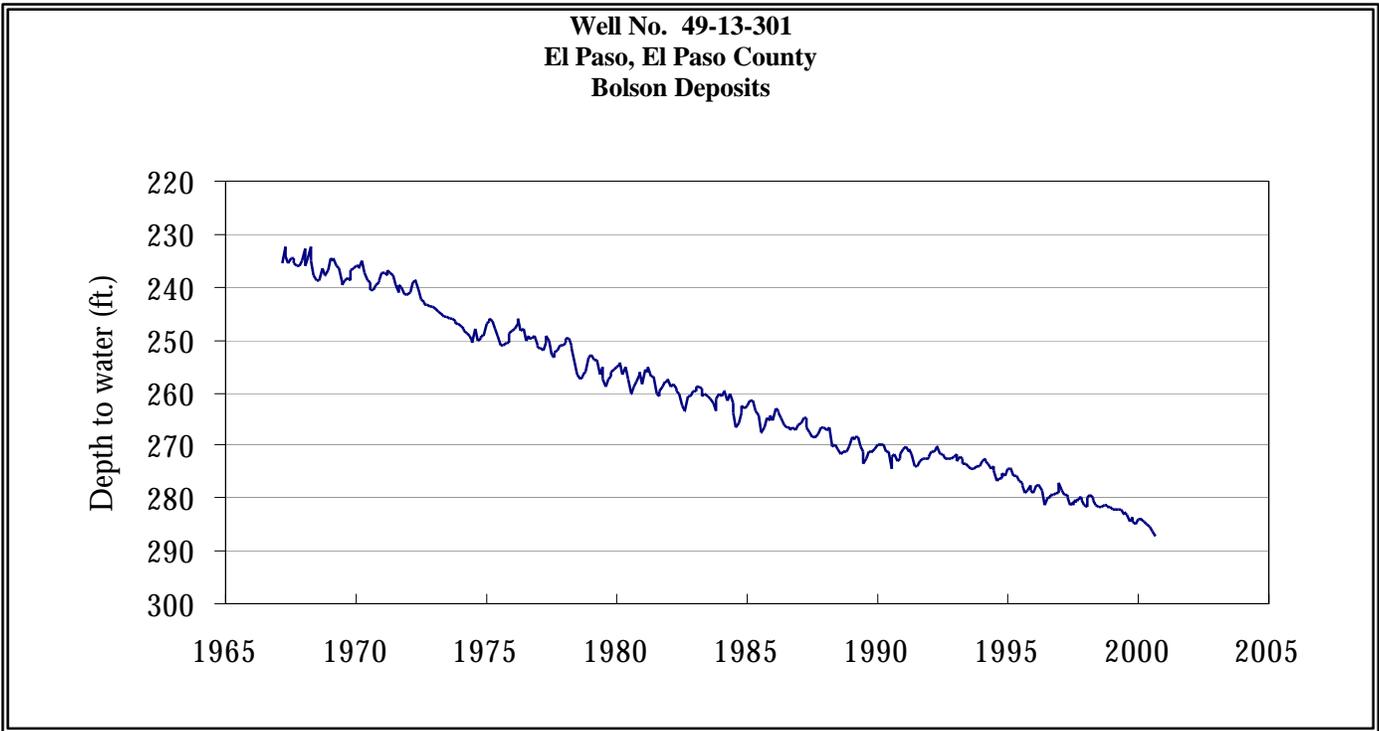
The late July water-level measurement in this Ogallala aquifer well, elevation 3,816 feet above sea level, was 253.60 feet below land surface. This measurement was 2.05 feet below last month's measurement and 97.6 feet below the initial measurement recorded in 1968.



The late July water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 452.91 feet below land surface. This measurement was 6.45 feet below last month's measurement, 3.61 feet above last year's measurement, and 59.52 feet below the initial measurement recorded in 1953.

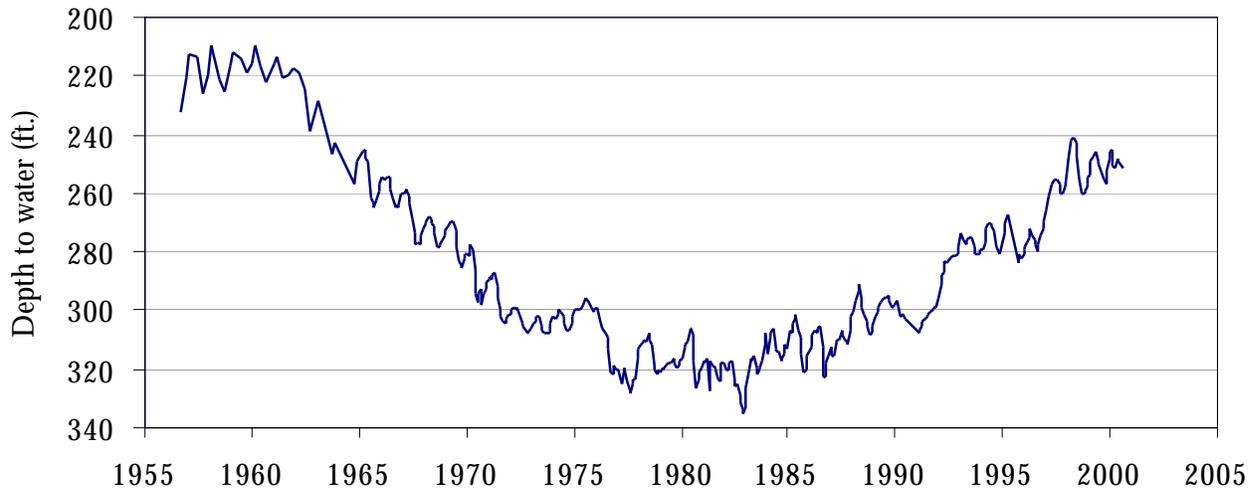


The late July water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 445.77 feet below land surface. This measurement was 4.69 feet below last month's measurement, 11.20 feet below last year's measurement, and 153.77 feet below the initial measurement recorded in 1955.



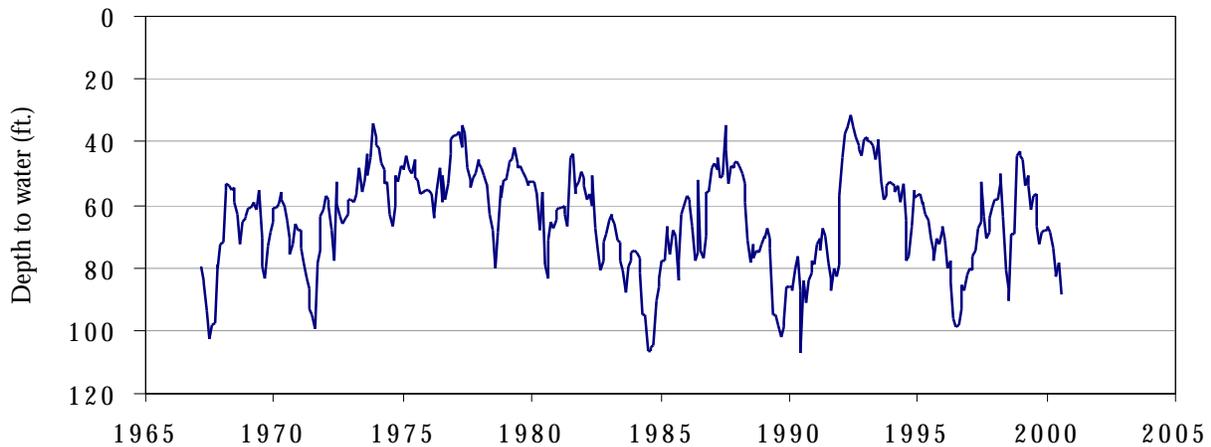
The late July water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 287.13 feet below land surface. This was 0.76 feet below last month's measurement, 4.23 feet below last year's measurement, and 55.23 feet below the initial measurement recorded in 1964.

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



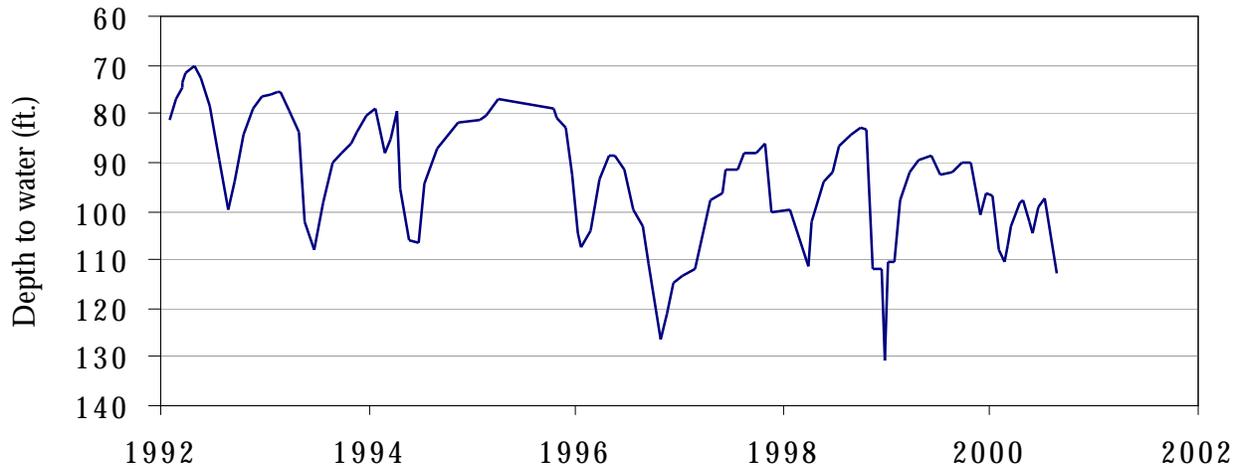
The late July water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 251.12 feet below land surface. This was 2.01 feet below last month's measurement, 1.11 feet below last year's measurement, and 147.89 feet below the initial measurement recorded in 1947.

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



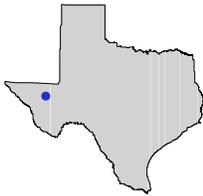
The late July water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 88.33 feet below land surface. This was 9.90 feet below last month's measurement, 31.73 feet below last year's measurement, and 28.71 feet below the initial measurement recorded in 1962.

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



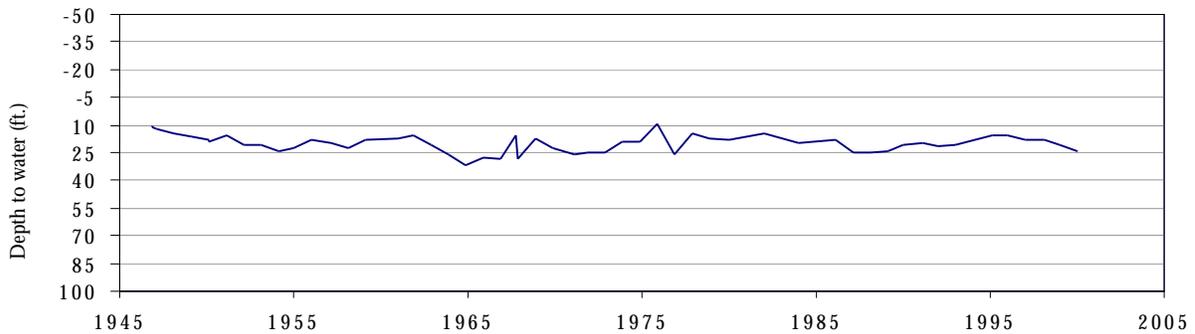
The late July water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 112.78 feet below land surface. This measurement was 15.55 feet below last month's measurement, 16.38 feet above last year's measurement, and 31.53 feet below the initial measurement recorded in 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 46-29-701
Ward County**



This water-level observation well, elevation 2,600 feet above sea level, was completed in the Pecos Alluvium aquifer at a depth of 115 feet. The well is located about 2 miles east of the Pecos River. Dry weather conditions have a direct influence on both the Pecos River and this well's water levels.