

Texas Water Development Board



WATER Conditions

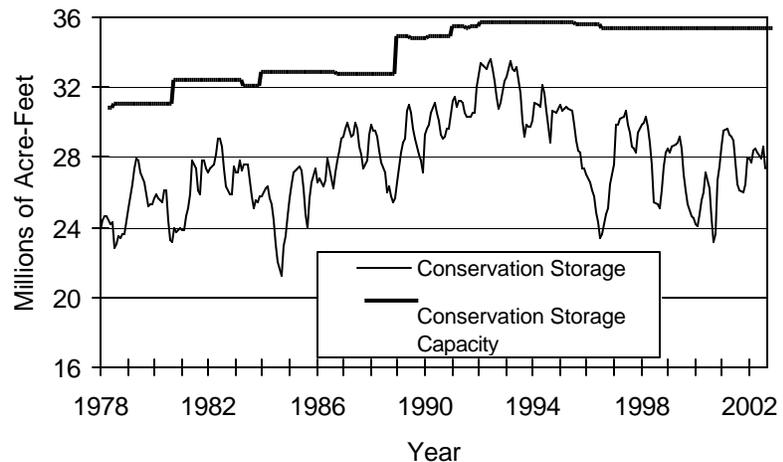
RESERVOIR STORAGE

August 2002

Near the end of August, the 77 reservoirs monitored for this report held 27.38 million acre-feet in conservation storage, or 79.4 percent of the conservation storage capacity of the State's major reservoirs. Statewide total storage is just below normal for this time of year. Storage decreased significantly for the month, down 1.18 million acre-feet (-3.4%). Compared to last year at this time, storage is up 0.90 million acre-feet (+2.6%).

Storage in the Upper Coast (98%) and South Central (99%) Regions are at or near capacity, while the High Plains (35%), Low Rolling Plains (48%), Trans-Pecos (14%), Edwards Plateau (44%) and Southern (44%) Regions remained low. The North Central (91%) and East (89%) Regions are lower than they were at this time last year. Storage is at 100% in 13 reservoirs, down 11 from last month.

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.

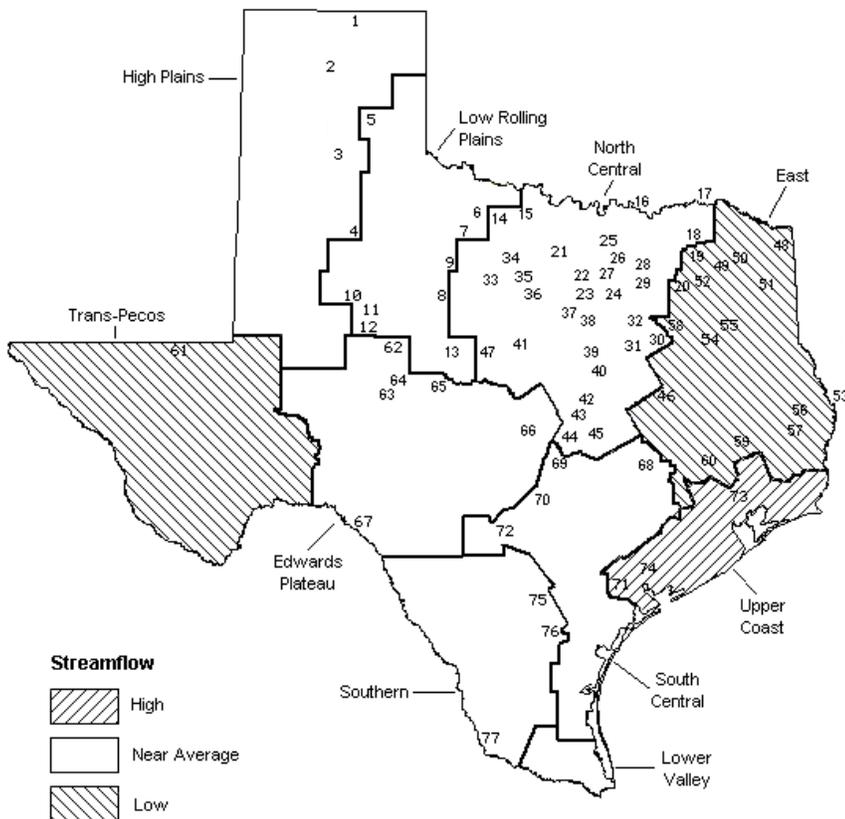
STREAMFLOW

Of 29 reporting index stations in August, computed 30-day mean flows were high (5% - 30% exceedance) at 7 stations, near normal (30% - 70% exceedance) at 12 stations, low (70% - 95% exceedance) at 9 stations and very low (95% - 100% exceedance) at 1 station. In comparison to July, flows increased at 3 index stations and decreased at 26.

On a regional basis, flows in August were high in the Upper Coast Region, low in the East Texas Region, very low in the Trans-Pecos Region and near normal everywhere else.

AUGUST 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	Conservation	Change since		Change since		
		Storage Capacity (acre-feet)	Storage Late August 2002 (acre-feet) (%)	Late July 2002 (acre-feet) (%)	Late August 2001 (acre-feet) (%)			
HIGH PLAINS								
Palo Duro Reservoir	1	60,900	7,010 12	2,230 4	-1,090	-2		
Lake Meredith (Texas)	2	500,000	206,600 41	-7,200 -1	-91,600	-18		
Lake Meredith (Texas and Oklahoma)	(2)	779,560	206,600 27	-7,200 -1	-91,600	-12		
MacKenzie Reservoir	3	46,250	7,230 16	-110 0	-1,910	-4		
White River Lake	4	31,850	5,660 18	-1,020 -3	-3,080	-10		
TOTAL		639,000	226,500 35	-6,100 -1	-97,680	-15		
LOW ROLLING PLAINS								
Greenbelt Reservoir	5	58,200	22,070 38	-900 -2	-1,810	-3		
Lake Kemp	6	319,600	217,000 68	-10,000 -3	78,900	25		
Miller's Creek Reservoir	7	27,890	16,650 60	-1,000 -4	2,780	10		
Fort Phantom Hill Reservoir	8	70,030	48,650 69	-3,280 -5	17,590	25		
Lake Stamford	9	52,700	42,800 81	-3,290 -6	30,220	57		
Lake J. B. Thomas	10	202,300	20,470 10	-1,360 -1	3,960	2		
Lake Colorado City	11	30,800	17,120 56	-520 -2	-470	-2		
Champion Creek Reservoir	12	41,600	2,490 6	-210 -1	270	1		
Hords Creek Lake	13	8,600	2,580 30	-200 -2	-970	-11		
TOTAL		811,720	389,830 48	-20,760 -3	130,470	16		
NORTH CENTRAL								
Lake Kickapoo	14	106,000	87,400 82	-6,850 -6	4,060	4		
Lake Arrowhead	15	262,100	157,000 60	-9,100 -3	-11,200	-4		
Lake Texoma	16	2,722,300	2,572,000 94	-88,000 -3	361,000	13		
Pat Mayse Lake	17	124,500	111,300 89	-4,000 -3	-900	-1		
Cooper Lake	18	273,000	273,000 100	0 0	0	0		
Lake Sulphur Springs	19	17,710	16,870 95	-680 -4	5,390	30		
Lake Tawakoni	20	936,200	843,700 90	-23,500 -3	55,000	6		
Bridgeport Reservoir	21	374,830	299,000 80	-8,900 -2	-21,700	-6		
Eagle Mountain Reservoir	22	178,380	148,800 83	-16,800 -9	-9,900	-6		
Benbrook Lake	23	88,200	73,970 84	-4,380 -5	11,320	13		
Joe Pool Lake	24	175,800	172,800 98	-3,000 -2	-3,000	-2		
Ray Roberts Lake	25	798,760	780,900 98	-16,000 -2	8,000	1		
Lewisville Lake	26	555,000	555,000 100	0 0	0	0		
Grapevine Lake	27	187,700	170,200 91	-9,900 -5	14,300	8		
Lavon Lake	28	443,800	385,100 87	-38,200 -9	47,500	11		
Lake Ray Hubbard	29	413,420	368,900 89	-17,800 -4	-3,200	-1		
Richland-Chambers Creek Lake	30	1,103,820	1,078,000 98	-25,820 -2	19,000	2		
Navarro Mills Lake	31	55,810	53,000 95	-2,810 -5	4,640	8		
Bardwell Lake	32	53,580	43,290 81	-2,870 -5	1,900	4		
Hubbard Creek Reservoir	33	317,800	155,400 49	-5,900 -2	24,800	8		
Lake Graham	34	45,000	31,830 71	-2,030 -5	-4,840	-11		
Possum Kingdom Lake	35	551,820	515,500 93	-15,000 -3	52,300	9		
Lake Palo Pinto	36	27,650	18,970 69	-2,300 -8	280	1		
Lake Granbury	37	135,680	134,100 99	1,000 1	6,700	5		
Lake Pat Cleburne	38	25,300	22,880 90	-1,610 -6	2,090	8		
Whitney Lake	39	622,800	543,700 87	-67,600 -11	60,500	10		
Waco Lake	40	144,500	142,900 99	-1,600 -1	12,400	9		
Proctor Lake	41	55,590	52,170 94	-3,420 -6	9,990	18		
Belton Lake	42	434,500	426,700 98	-7,800 -2	-7,800	-2		
Stillhouse Hollow Lake	43	226,060	226,060 100	0 0	0	0		
Lake Georgetown	44	37,010	37,010 100	0 0	4,140	11		
Granger Lake	45	54,280	54,280 100	0 0	0	0		
Lake Limestone	46	215,750	204,800 95	-9,200 -4	-400	0		
Lake Brownwood	47	143,400	127,100 89	-5,400 -4	17,800	12		
TOTAL		11,908,050	10,883,630 91	-399,470 -3	660,170	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 August 2002		Change since Late July 2002		Change since Late August 2001	
			(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	66,190	99	-610	-1	70	0
Lake Bob Sandlin	50	202,300	196,500	97	-5,800	-3	4,400	2
Lake O' the Pines	51	252,000	246,900	98	-5,100	-2	-5,100	-2
Lake Fork Reservoir	52	635,200	635,200	100	0	0	0	0
Toledo Bend Reservoir	53	4,472,900	3,753,000	84	-405,000	-9	-91,000	-2
Lake Palestine	54	411,300	386,000	94	-16,000	-4	-10,500	-3
Lake Tyler	55	73,700	73,700	100	0	0	0	0
Sam Rayburn Reservoir	56	2,876,300	2,433,000	85	-151,000	-5	-351,000	-12
B. A. Steinhagen Lake	57	94,200	47,940	51	3,300	4	-30,440	-32
Cedar Creek Reservoir	58	637,050	607,400	95	-19,500	-3	16,100	3
Lake Livingston	59	1,750,000	1,740,000	99	0	0	-6,000	0
Lake Conroe	60	429,900	404,300	94	-17,200	-4	-5,500	-1
TOTAL		12,044,350	10,732,830	89	-616,910	-5	-478,970	-4
TRANS-PECOS								
Red Bluff Reservoir	61	307,000	42,130	14	-260	0	9,300	3
TOTAL		307,000	42,130	14	-260	0	9,300	3
EDWARDS PLATEAU								
E. V. Spence Reservoir	62	488,760	49,040	10	-4,660	-1	-13,720	-3
Twin Buttes Reservoir	63	177,800	6,000	3	-20	0	-2,280	-1
O.C. Fisher Lake	64	119,200	4,070	3	-760	-1	-530	0
O. H. Ivie Reservoir	65	554,340	225,400	41	-11,600	-2	-44,900	-8
Lake Buchanan	66	896,980	823,200	92	-35,900	-4	69,700	8
Amistad Reservoir (Texas)	67	1,771,030	662,000	37	-8,000	0	-55,000	-3
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	855,000	27	26,000	1	-44,000	-1
TOTAL		4,008,110	1,769,710	44	-60,940	-2	-46,730	-1
SOUTH CENTRAL								
Somerville Lake	68	155,060	154,800	100	-260	0	5,700	4
Lake Travis	69	1,144,100	1,131,000	99	-13,100	-1	162,600	14
Canyon Lake	70	385,600	385,600	100	0	0	0	0
Coletto Creek Reservoir	71	35,060	29,830	85	-1,910	-5	-2,860	-8
Medina Lake	72	254,000	254,000	100	0	0	30,200	12
TOTAL		1,973,820	1,955,230	99	-15,270	-1	195,640	10
UPPER COAST								
Lake Houston	73	128,860	128,860	100	0	0	0	0
Lake Texana	74	157,900	152,500	97	-4,200	-3	-5,400	-3
TOTAL		286,760	281,360	98	-4,200	-1	-5,400	-2

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

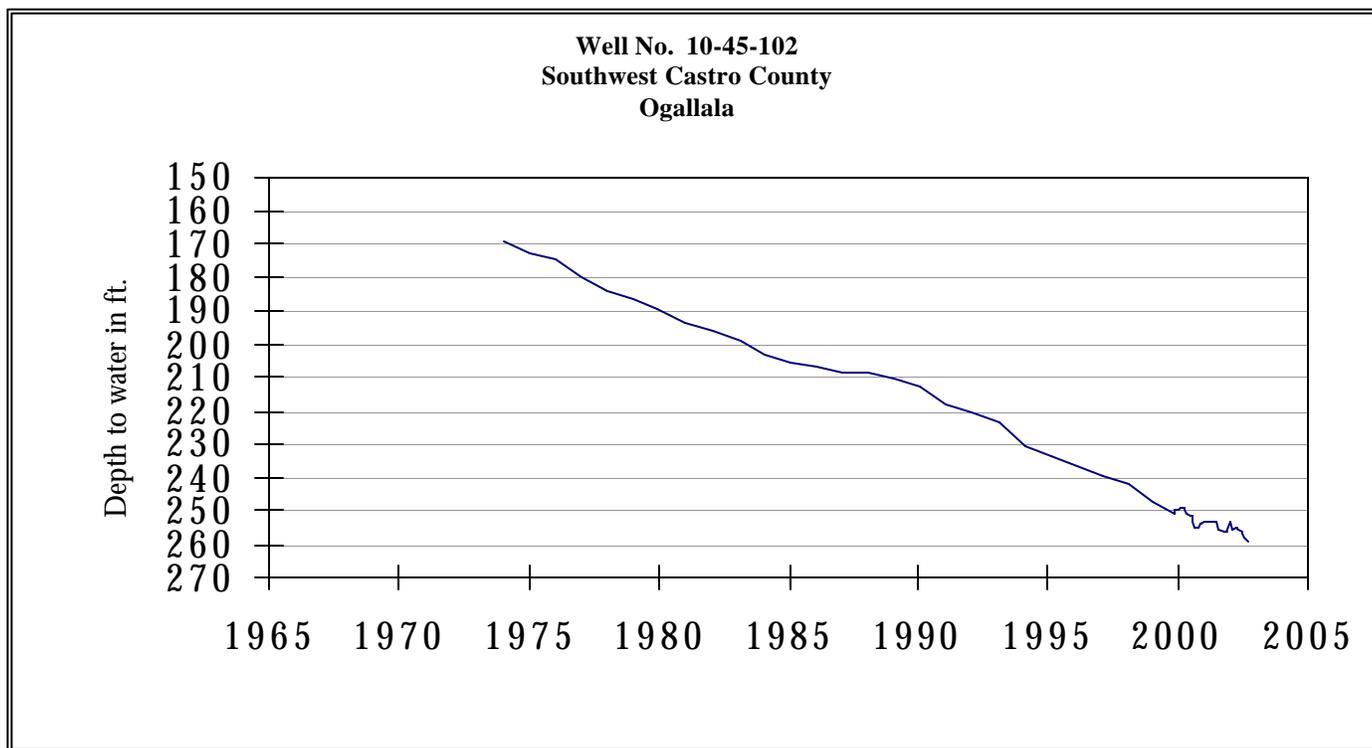
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity	Conservation Storage		Change since Late July		Change since Late August		
		(acre-feet)	Late August 2002 (acre-feet)	(%)	2002 (acre-feet)	(%)	2001 (acre-feet)	(%)	
SOUTHERN									
Choke Canyon Reservoir	75	695,260	694,000	100	5,000	1	461,000	66	
Lake Corpus Christi	76	241,240	238,700	99	-2,000	-1	123,900	51	
Falcon Reservoir (Texas)	77	1,555,120	165,000	11	-57,000	-4	-52,000	-3	
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	259,000	10	-59,000	-2	16,000	1	
TOTAL		2,491,620	1,097,700	44	-54,000	-2	532,900	21	
STATE TOTAL		34,470,430	27,378,920	79	-1,177,910	-3	899,700	3	

Note:

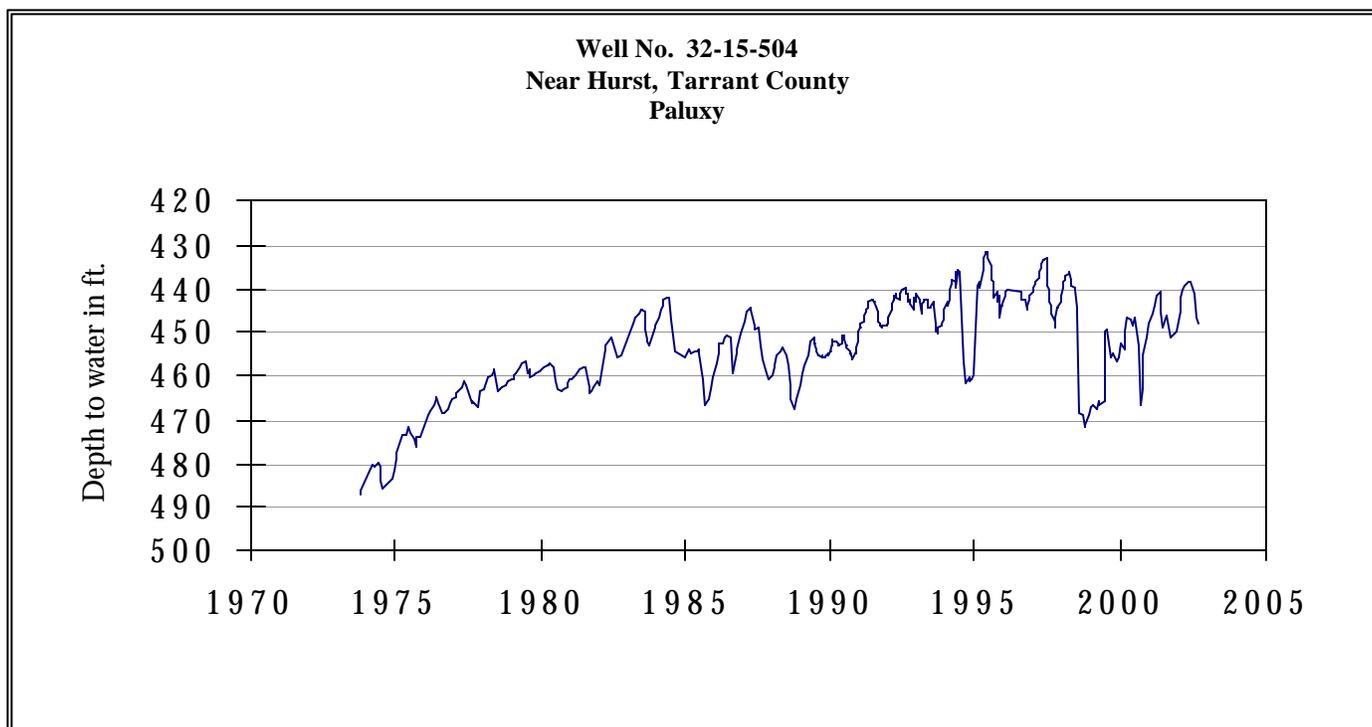
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included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

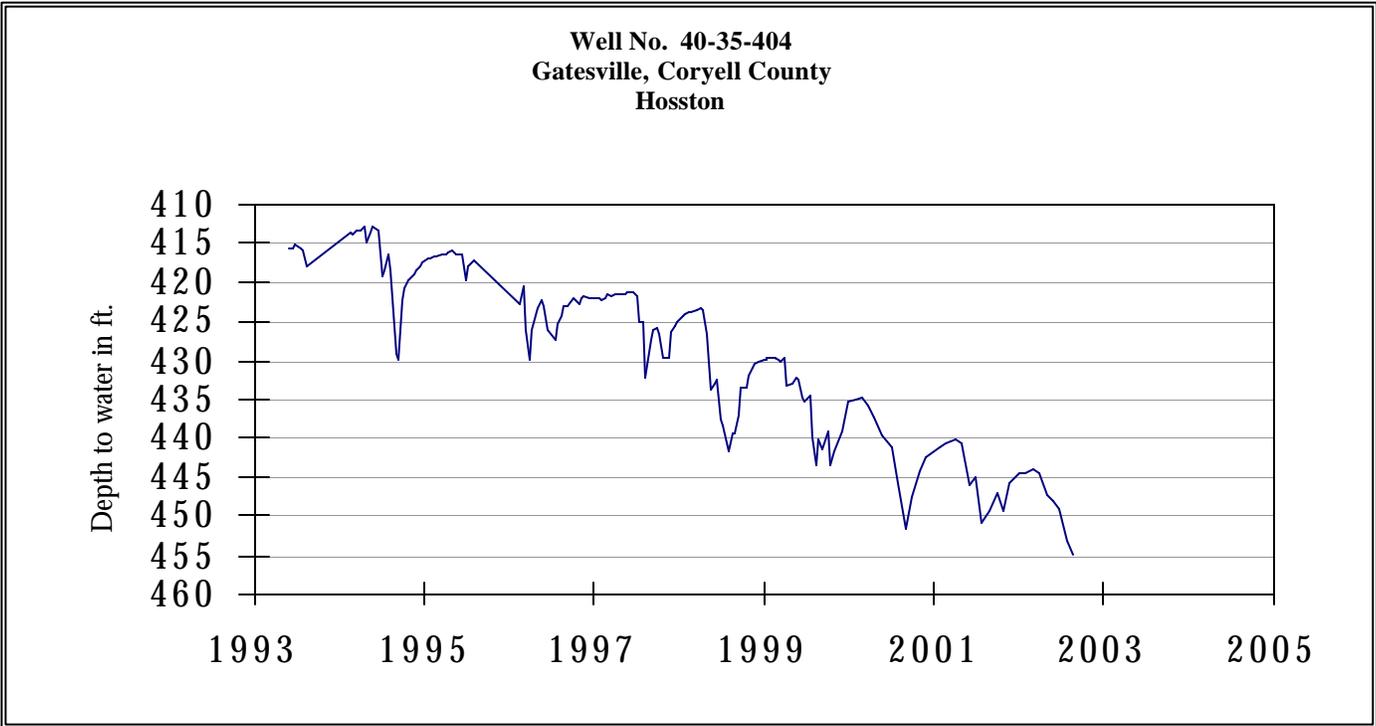
AUGUST GROUND WATER LEVELS IN OBSERVATION WELLS



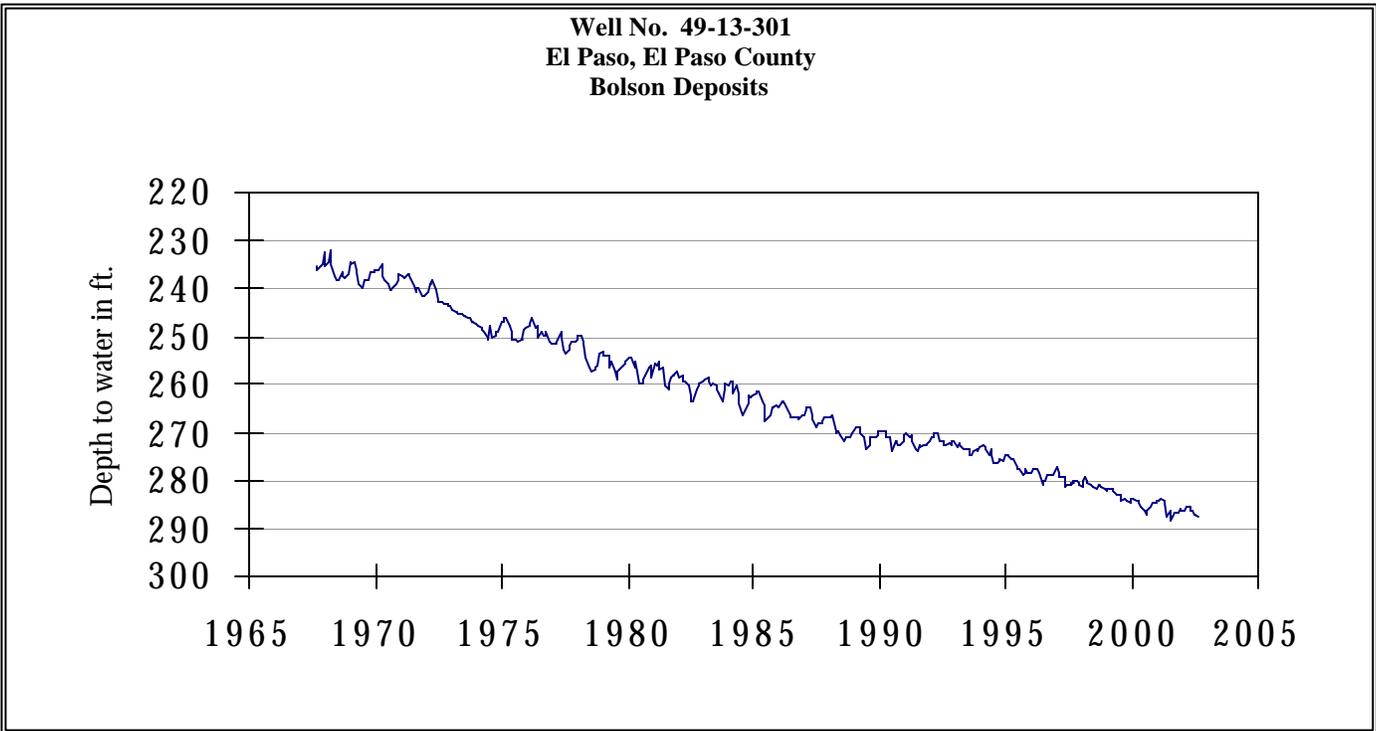
The late August water-level measurement in this Ogallala aquifer well, elevation 3,816 feet above sea level, was 258.73 feet below land surface. This measurement was 0.65 feet below last month's measurement, last year's measurement was not recorded however, the current water level is 102.73 feet below the initial measurement recorded in 1968.



The late August water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 448.05 feet below land surface. This measurement was 1.30 feet below last month's measurement, 4.00 feet above last year's measurement, and 54.66 feet below the initial measurement recorded in 1953.

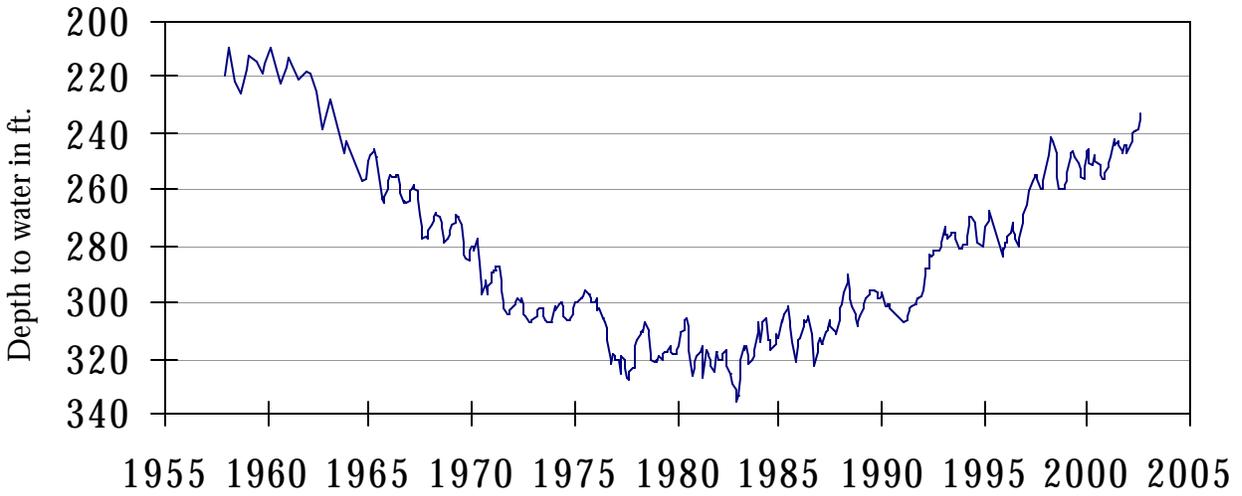


The late August water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 454.81 feet below land surface. This measurement was 1.65 feet below last month's measurement, 5.46 feet below last year's measurement, and 162.81 feet below the initial measurement recorded in 1955.



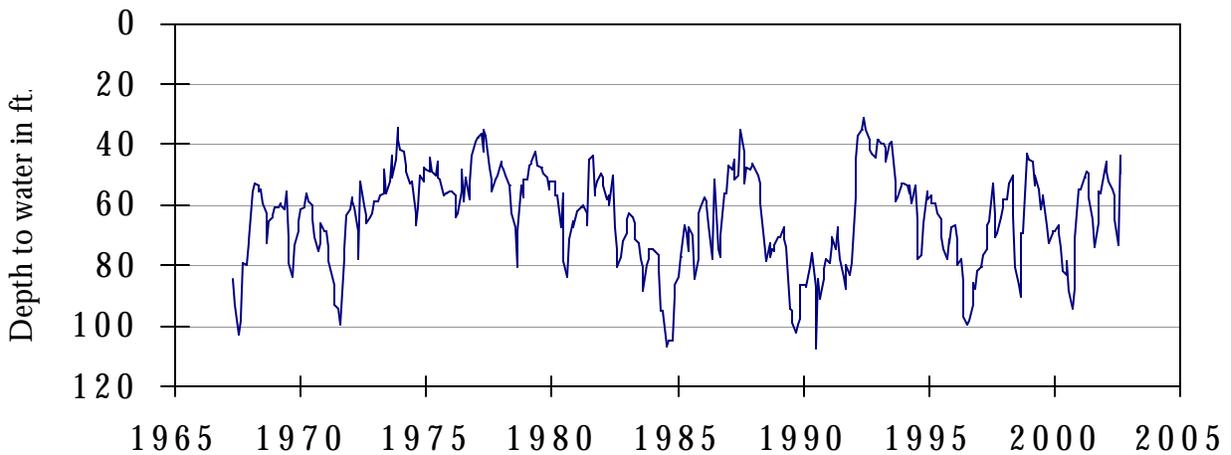
The late August water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 287.74 feet below land surface. This was 0.39 feet below last month's measurement, 0.13 feet above last year's measurement, and 55.84 feet below the initial measurement recorded in 1964.

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



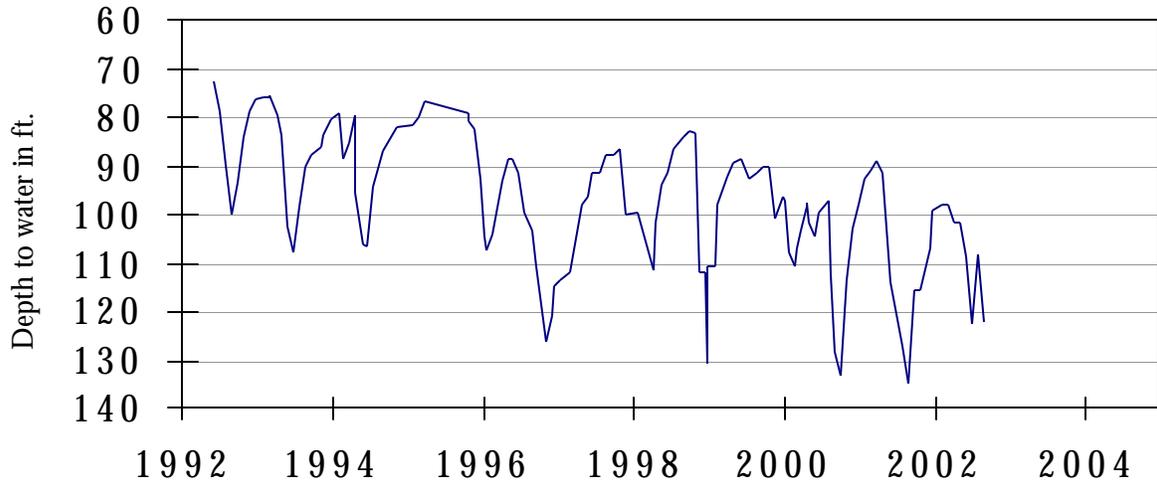
The late August water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 232.66 feet below land surface. This was 2.04 feet above last month's measurement, 13.12 feet above last year's measurement, and 129.43 feet below the initial measurement recorded in 1947.

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



The late August water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 49.63 feet below land surface. This was 6.31 feet below last month's measurement, 16.37 feet above last year's measurement, and 9.99 feet above the initial measurement recorded in 1962.

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



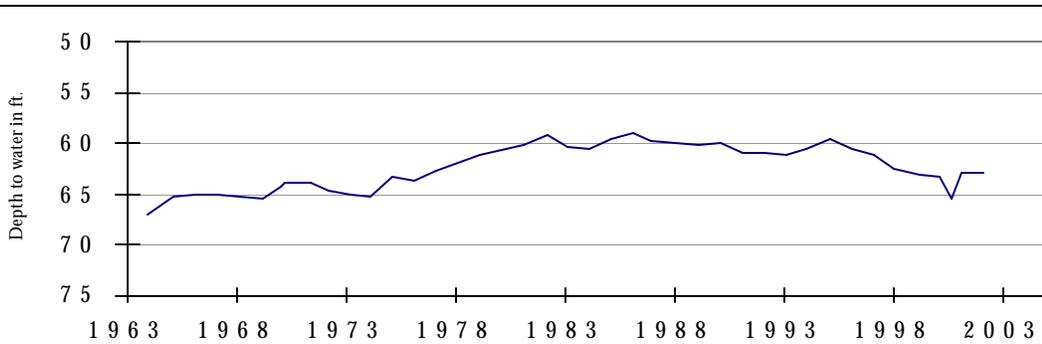
The late August water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 122.52 feet below land surface. This measurement was 14.22 feet below last month's measurement, 12.43 feet above last year's measurement, and 41.27 feet below the initial measurement recorded 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. 6733401
Guadalupe County**



This 81 ft. deep observation well, located approximately 10 miles south of Seguin, at an elevation of 561 feet above sea level, was completed in the recharge area of the Wilcox aquifer. The graph illustrates minor change in the well's water level even during drought periods that occurred within Texas during the 1970s, early 1980s, and late 1990s.

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