

Texas Water Development Board



WATER Conditions

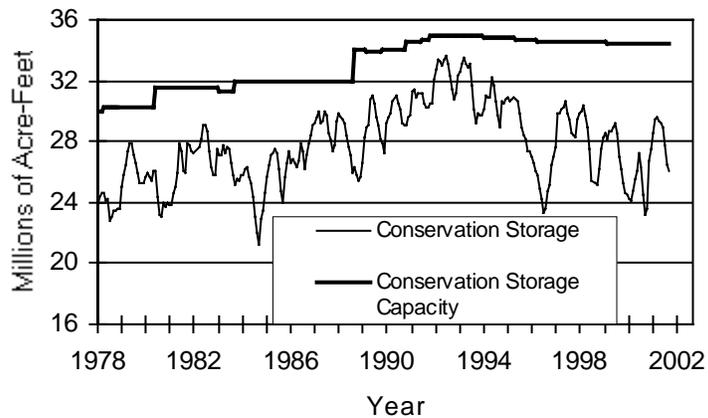
RESERVOIR STORAGE

September 2001

Near the end of September, the 77 reservoirs monitored for this report held 26.1 million acre-feet in conservation storage, or 75.7 percent of the conservation storage capacity of the State's major reservoirs. Statewide storage decreased by 0.4 million acre-feet (-1.1% of conservation storage capacity) during the month. Compared to September 2000, storage is up 2.94 million acre-feet (+8.5% of conservation storage capacity), but below the historical median for this time of year.

Storage decreased in most Regions this month; however the North Central and South Central Regions increased marginally (1.5% and 0.7%, respectively) and the Southern Region storage increased by 7.3%. The Upper Coast Region remained at capacity (100%). The Trans-Pecos Region (10.6%) remained below 25%. Storage is at 100% in 15 reservoirs, one more than last month. Storage is down relative to this time last year in the High Plains (-10.0%) and Trans-Pecos (-4.7%) 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.

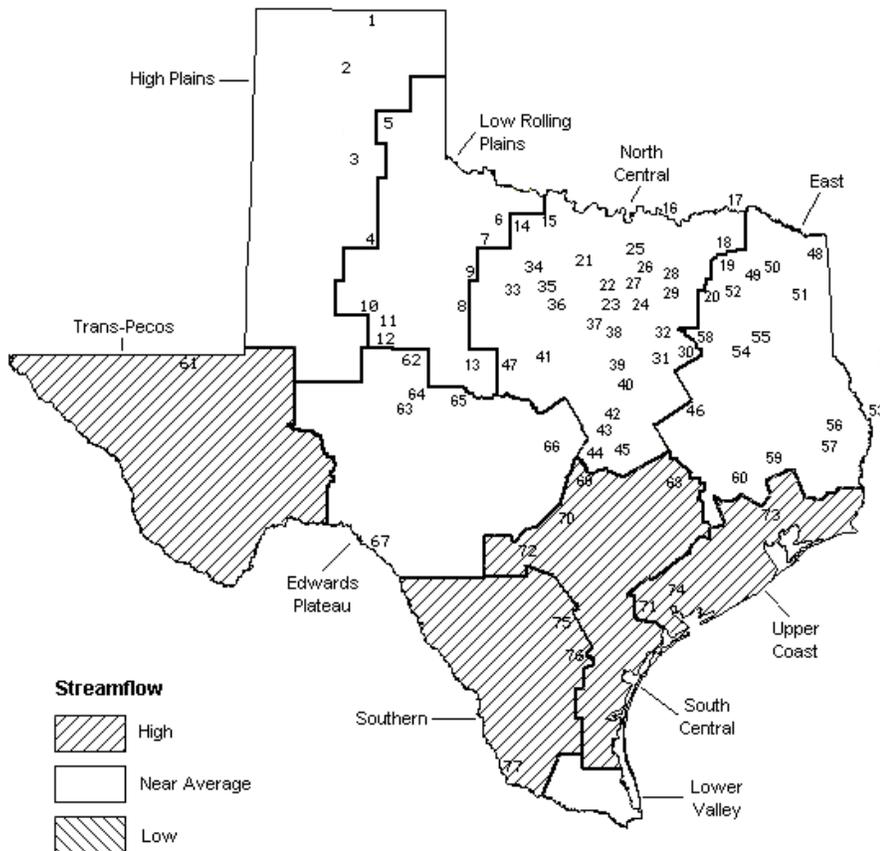
STREAMFLOW

Of 29 reporting index stations in September, computed 30-day mean flows were very high (0% - 5% exceedance) at 2 stations, high (5% - 30% exceedance) at 12 stations, near normal (30% - 70% exceedance) at 11 stations and low (70% - 95% exceedance) at 4 stations. In comparison to August, flows increased at 25 index stations, decreased at 3 stations, and remained unchanged at 1 station.

On a regional basis, flows in September were high in the Trans-Pecos, Southern, South Central and Upper Coast Regions and normal in all other Regions. There were no stations reporting very low flows, but very high flows were reported on Cibolo Creek and the Lavaca River.

SEPTEMBER 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. Coleto 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 September 2001 (acre-feet) (%)	Late August 2001 (acre-feet) (%)	Late September 2000 (acre-feet) (%)			
HIGH PLAINS								
Palo Duro Reservoir	1	60,900	7,440	12	-660	-1	-8,310	-14
Lake Meredith (Texas)	2	500,000	284,200	57	-14,000	-3	-52,500	-11
Lake Meredith (Texas and Oklahoma)	(2)	779,560	284,200	36	-14,000	-2	-52,500	-7
MacKenzie Reservoir	3	46,250	8,990	19	-150	0	760	2
White River Lake	4	31,850	8,140	26	-600	-2	-4,000	-13
TOTAL		639,000	308,770	48	-15,410	-2	-64,050	-10
LOW ROLLING PLAINS								
Greenbelt Reservoir	5	58,200	23,440	40	-440	-1	120	0
Lake Kemp	6	319,600	127,400	40	-10,700	-3	26,100	8
Miller's Creek Reservoir	7	27,890	13,260	48	-610	-2	6,860	25
Fort Phantom Hill Reservoir	8	70,030	32,450	46	1,390	2	10,110	14
Lake Stamford	9	52,700	13,930	26	1,350	3	6,770	13
Lake J. B. Thomas	10	202,300	17,880	9	1,370	1	-9,040	-4
Lake Colorado City	11	30,800	17,360	56	-230	-1	-4,740	-15
Champion Creek Reservoir	12	41,600	2,300	6	80	0	-2,080	-5
Hords Creek Lake	13	8,600	3,420	40	-130	-2	-10	0
TOTAL		811,720	251,440	31	-7,920	-1	34,090	4
NORTH CENTRAL								
Lake Kickapoo	14	106,000	79,750	75	-3,590	-3	41,010	39
Lake Arrowhead	15	262,100	161,400	62	-6,800	-3	70,100	27
Lake Texoma	16	2,722,300	2,494,000	92	283,000	10	251,000	9
Pat Mayse Lake	17	124,500	114,400	92	2,200	2	7,900	6
Cooper Lake	18	273,000	273,000	100	0	0	0	0
Lake Sulphur Springs	19	17,710	12,820	72	1,340	8	-2,540	-14
Lake Tawakoni	20	936,200	800,000	85	11,300	1	-50,600	-5
Bridgeport Reservoir	21	374,830	309,500	83	-11,200	-3	136,975	37
Eagle Mountain Reservoir	22	178,380	152,000	85	-6,700	-4	50,100	28
Benbrook Lake	23	88,200	66,330	75	3,680	4	15,420	17
Joe Pool Lake	24	175,800	175,800	100	0	0	14,400	8
Ray Roberts Lake	25	798,760	763,000	96	-9,900	-1	347,100	43
Lewisville Lake	26	555,000	538,300	97	-16,700	-3	227,900	41
Grapevine Lake	27	187,700	149,400	80	-6,500	-3	39,900	21
Lavon Lake	28	443,800	329,100	74	-8,500	-2	3,200	1
Lake Ray Hubbard	29	413,420	375,500	91	3,400	1	62,500	15
Richland-Chambers Creek Lake	30	1,103,820	1,042,000	94	-17,000	-2	11,000	1
Navarro Mills Lake	31	55,810	46,350	83	-2,010	-4	-360	-1
Bardwell Lake	32	53,580	41,900	78	510	1	-4,310	-8
Hubbard Creek Reservoir	33	317,800	127,400	40	-3,200	-1	-16,400	-5
Lake Graham	34	45,000	35,350	79	-1,320	-3	5,390	12
Poosum Kingdom Lake	35	551,820	453,700	82	-9,500	-2	23,900	4
Lake Palo Pinto	36	27,650	17,150	62	-1,540	-6	9,660	35
Lake Granbury	37	135,680	124,600	92	-2,800	-2	7,900	6
Lake Pat Cleburne	38	25,300	20,560	81	-230	-1	160	1
Whitney Lake	39	622,800	471,600	76	-11,600	-2	-12,400	-2
Waco Lake	40	144,500	133,300	92	2,800	2	2,800	2
Proctor Lake	41	55,590	40,530	73	-1,650	-3	33,250	60
Belton Lake	42	434,500	433,500	100	-1,000	0	64,800	15
Stillhouse Hollow Lake	43	226,060	225,700	100	-360	0	20,900	9
Lake Georgetown	44	37,010	31,210	84	-1,660	-4	16,220	44
Granger Lake	45	54,280	54,280	100	0	0	9,130	17
Lake Limestone	46	215,750	201,200	93	-4,000	-2	14,700	7
Lake Brownwood	47	143,400	109,400	76	100	0	26,610	19
TOTAL		11,908,050	10,404,030	87	180,570	2	1,427,315	12

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late September 2001		Change since Late August 2001		Change since Late September 2000		
			(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	680	1	3,070	5	
Lake Bob Sandlin	50	202,300	202,300	100	10,200	5	9,700	5	
Lake O' the Pines	51	252,000	252,000	100	0	0	5,500	2	
Lake Fork Reservoir	52	635,200	635,200	100	0	0	15,500	2	
Toledo Bend Reservoir	53	4,472,900	3,281,000	73	-563,000	-13	-381,000	-9	
Lake Palestine	54	411,300	403,500	98	7,000	2	48,500	12	
Lake Tyler	55	73,700	73,700	100	0	0	18,590	25	
Sam Rayburn Reservoir	56	2,876,300	2,654,000	92	-130,000	-5	609,000	21	
B. A. Steinhagen Lake	57	94,200	48,190	51	-30,190	-32	-38,790	-41	
Cedar Creek Reservoir	58	637,050	596,100	94	4,800	1	58,600	9	
Lake Livingston	59	1,750,000	1,740,000	99	-6,000	0	129,000	7	
Lake Conroe	60	429,900	414,700	96	4,900	1	66,300	15	
TOTAL		12,044,350	10,510,190	87	-701,610	-6	543,970	5	
TRANS-PECOS									
Red Bluff Reservoir	61	307,000	32,570	11	-260	0	-14,490	-5	
TOTAL		307,000	32,570	11	-260	0	-14,490	-5	
EDWARDS PLATEAU									
E. V. Spence Reservoir	62	488,760	60,240	12	-2,520	-1	-23,740	-5	
Twin Buttes Reservoir	63	177,800	8,620	5	340	0	8,266	5	
O.C. Fisher Lake	64	119,200	4,410	4	-190	0	-2,430	-2	
O. H. Ivie Reservoir	65	554,340	271,500	49	1,200	0	-16,500	-3	
Lake Buchanan	66	896,980	747,200	83	-6,300	-1	314,700	35	
Amistad Reservoir (Texas)	67	1,771,030	683,000	39	-34,000	-2	-152,000	-9	
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	875,000	28	-24,000	-1	-120,000	-4	
TOTAL		4,008,110	1,774,970	44	-41,470	-1	128,296	3	
SOUTH CENTRAL									
Somerville Lake	68	155,060	155,060	100	5,960	4	53,160	34	
Lake Travis	69	1,144,100	963,700	84	-4,700	0	381,100	33	
Canyon Lake	70	385,600	385,600	100	0	0	50,900	13	
Coletto Creek Reservoir	71	35,060	32,040	91	-650	-2	8,060	23	
Medina Lake	72	254,000	237,000	93	13,200	5	131,400	52	
TOTAL		1,973,820	1,773,400	90	13,810	1	624,620	32	
UPPER COAST									
Lake Houston	73	128,860	128,860	100	0	0	25,160	20	
Lake Texana	74	157,900	157,900	100	0	0	38,700	25	
TOTAL		286,760	286,760	100	0	0	63,860	22	

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

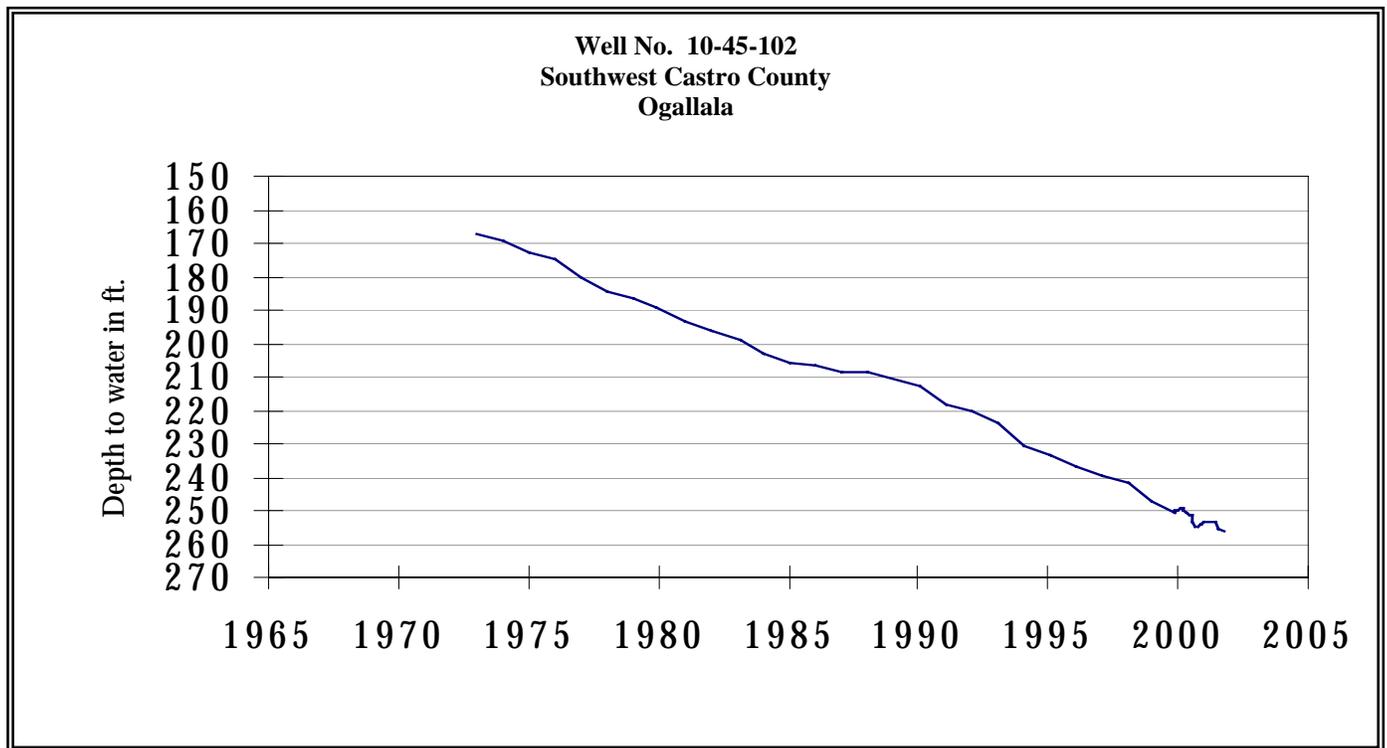
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late September 2001 (acre-feet) (%)		Change since Late August 2001 (acre-feet) (%)		Change since Late September 2000 (acre-feet) (%)		
SOUTHERN									
Choke Canyon Reservoir	75	695,260	234,000	34	1,000	0	-4,000	-1	
Lake Corpus Christi	76	241,240	176,400	73	61,600	26	107,210	44	
Falcon Reservoir (Texas)	77	1,555,120	337,000	22	120,000	8	97,000	6	
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	450,000	17	207,000	8	176,000	7	
TOTAL		2,491,620	747,400	30	182,600	7	200,210	8	
STATE TOTAL		34,470,430	26,089,530	76	-389,690	-1	2,943,821	9	

Note:

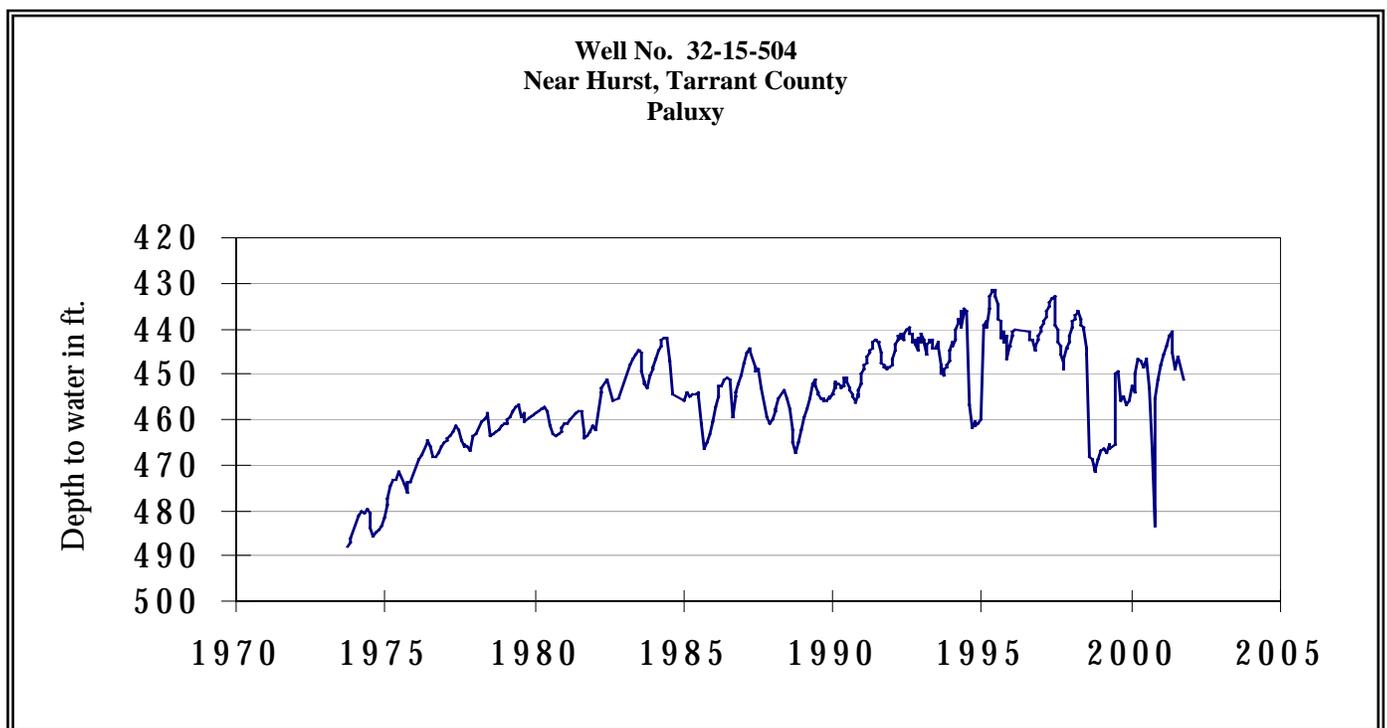
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included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

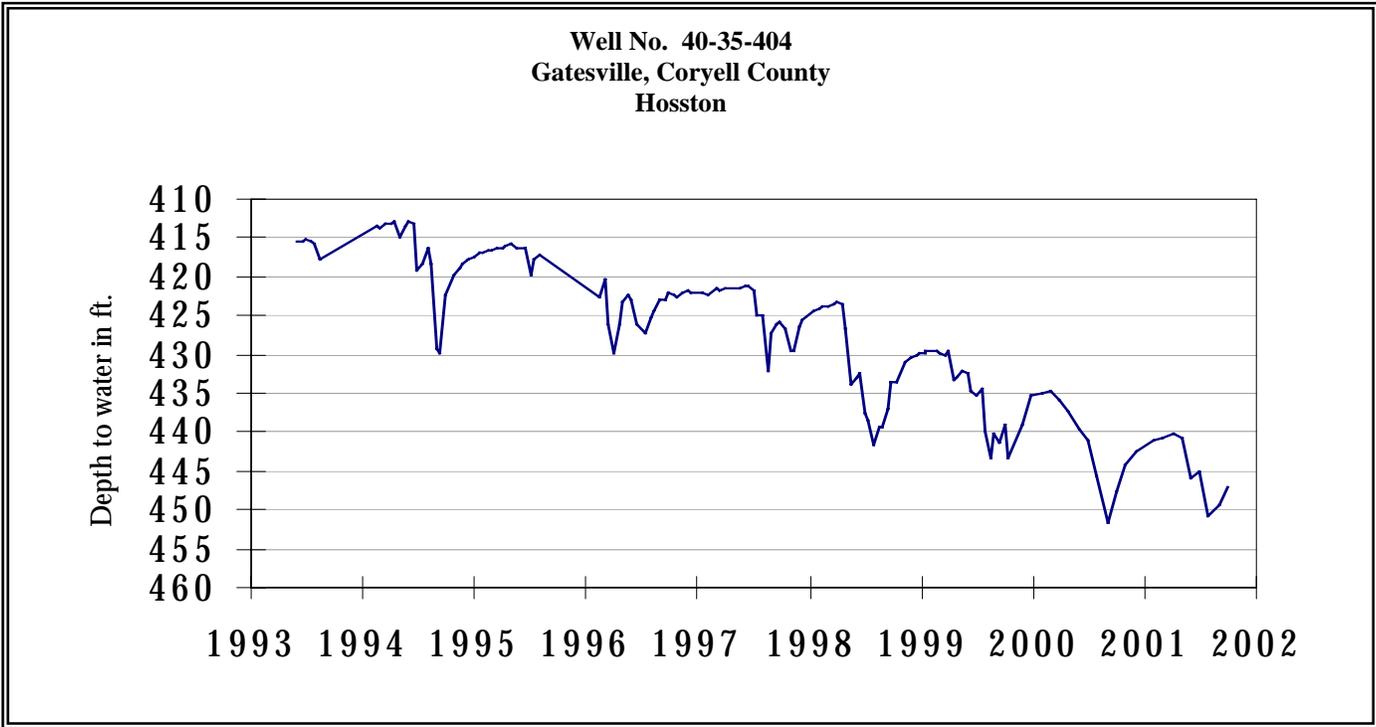
SEPTEMBER GROUND WATER LEVELS IN OBSERVATION WELLS



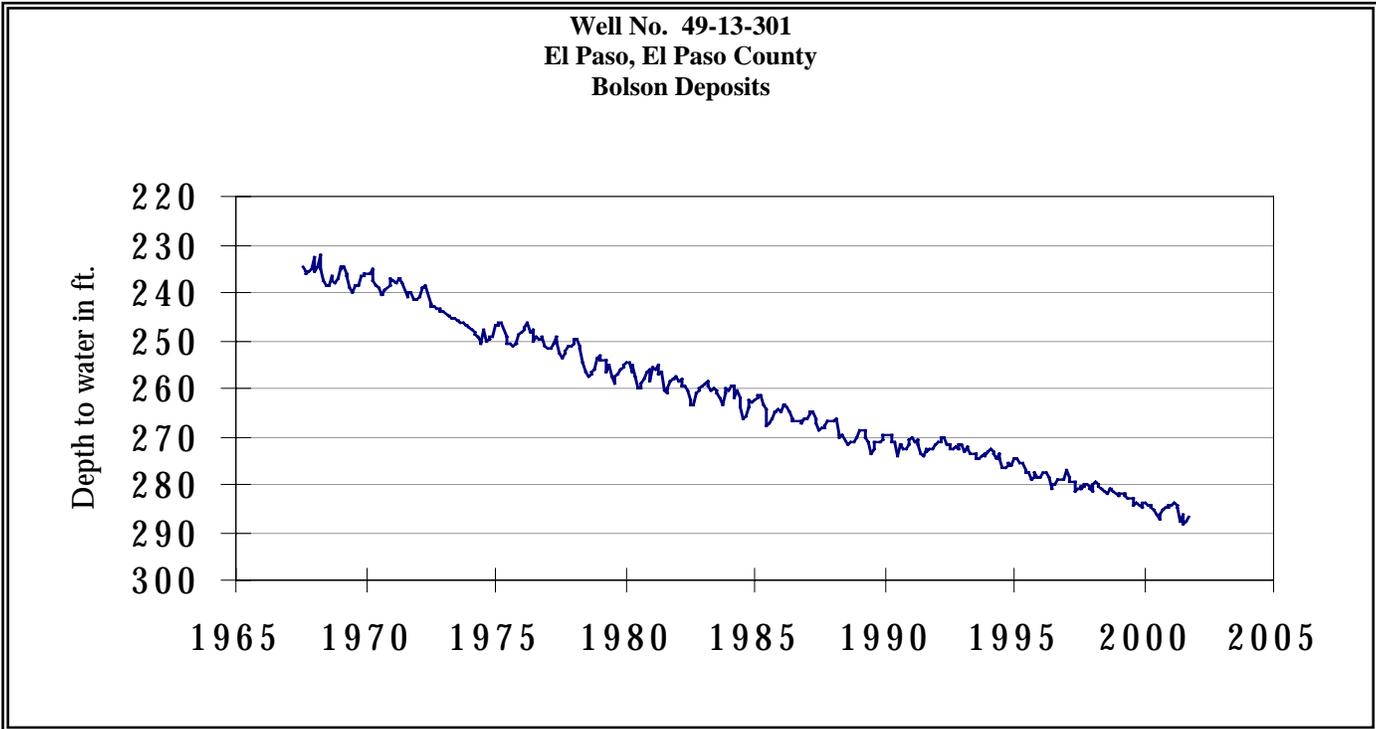
The late September water-level measurement in this Ogallala aquifer well, elevation 3,816 feet above sea level, was 256.34 feet below land surface. Last month's measurement was not reported, however, this month's water level is 1.76 feet below last year's measurement, and 100.34 feet below the initial measurement recorded in 1968.



The late September water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 451.11 feet below land surface. This measurement was 0.94 feet above last month's measurement, 32.31 feet above last year's measurement, and 57.72 feet below the initial measurement recorded in 1953.

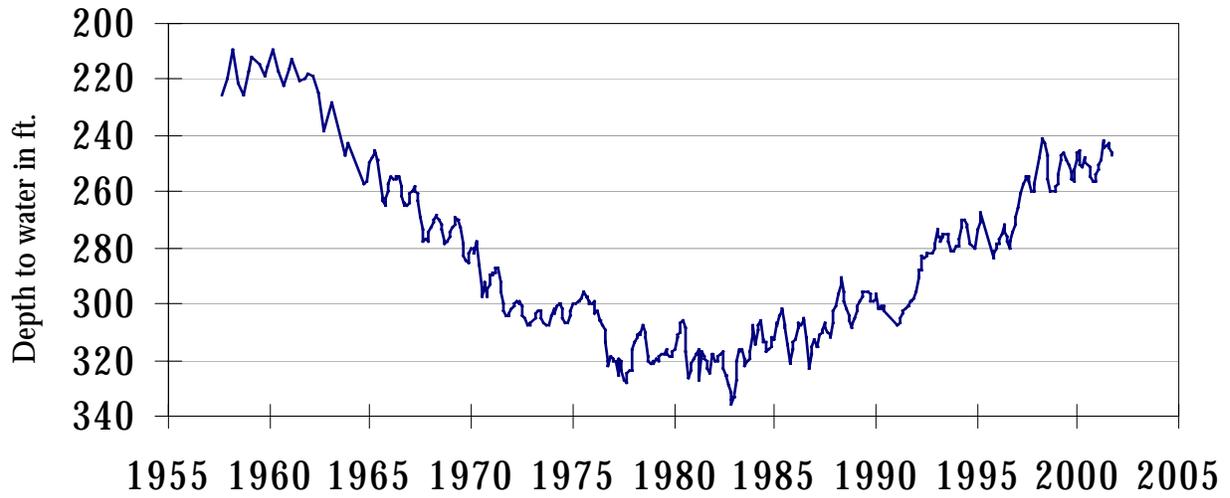


The late September water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 447.04 feet below land surface. This measurement was 2.31 feet above last month's measurement, 0.50 feet above last year's measurement, and 155.04 feet below the initial measurement recorded in 1955.



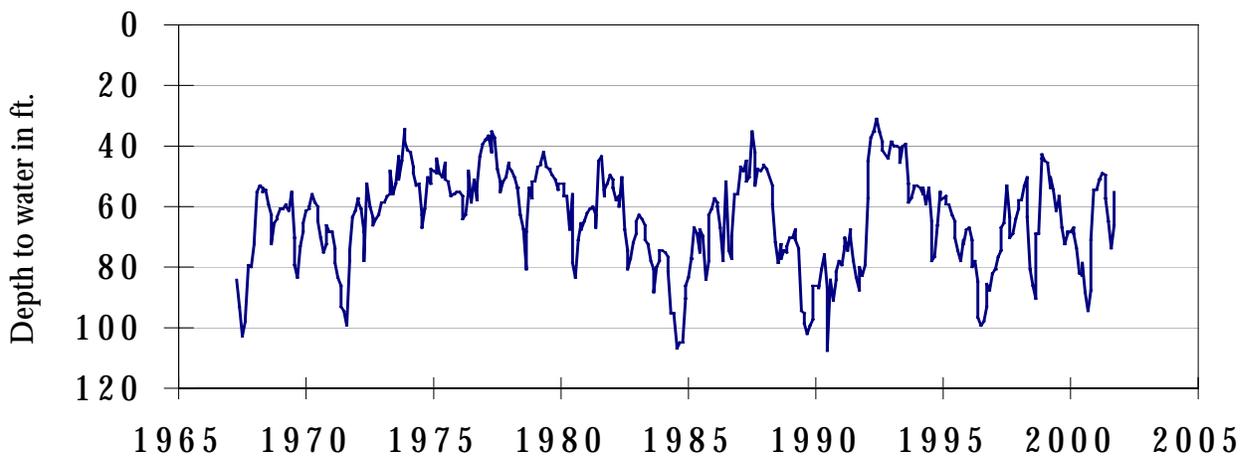
The late September water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 286.94 feet below land surface. This was 0.93 feet above last month's measurement, 1.41 feet below last year's measurement, and 55.04 feet below the initial measurement recorded in 1964.

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



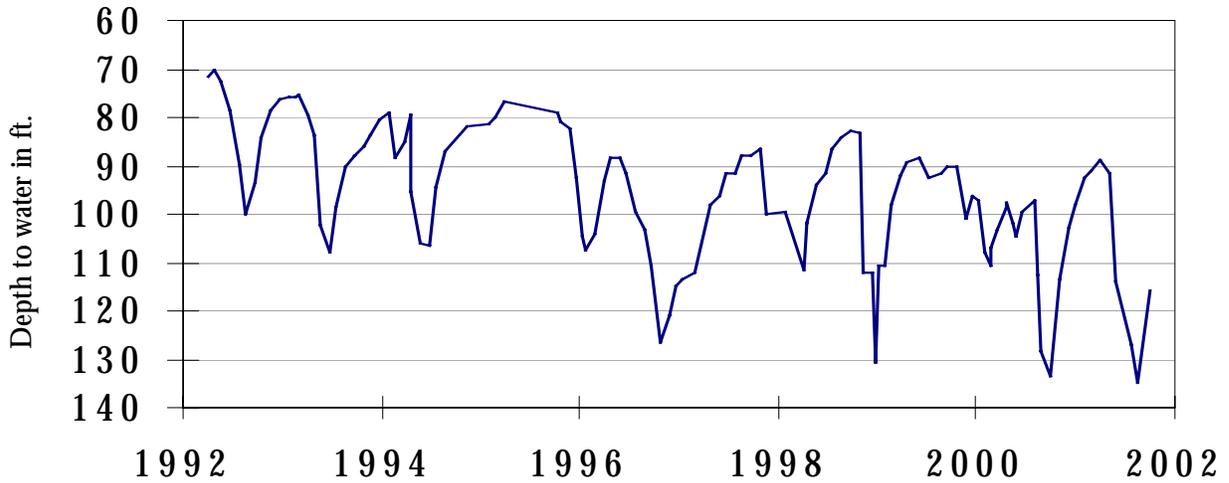
The late September water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 246.99 feet below land surface. This was 1.21 feet below last month's measurement, 9.07 feet above last year's measurement, and 143.76 feet below the initial measurement recorded in 1947.

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



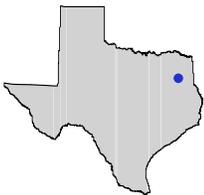
The late September water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 55.13 feet below land surface. This was 10.87 feet above last month's measurement, 32.75 feet above last year's measurement, and 4.49 feet above the initial measurement recorded in 1962.

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



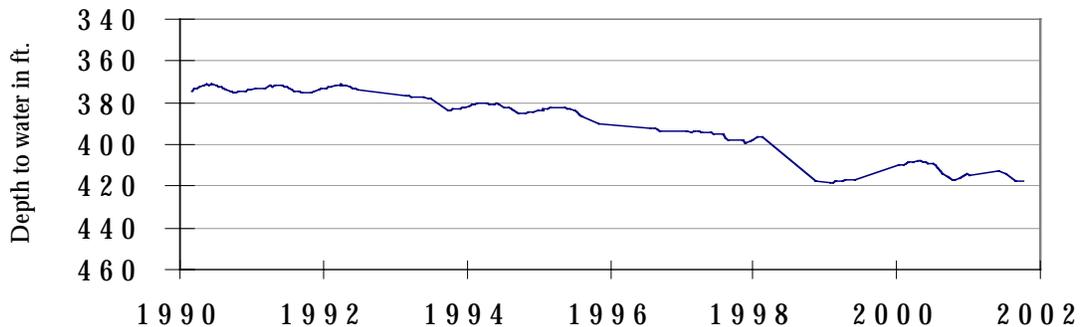
The late September water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 115.83 feet below land surface. This measurement was 19.12 feet above last month's measurement, 17.67 feet above last year's measurement, and 34.58 feet below the initial measurement recorded 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 3430907
Smith County**



This 710 ft. deep recorder well, located approximately 13 miles north of Tyler, at an elevation of 555 feet above sea level, was completed in the Carrizo aquifer. The water levels reflect the aquifer's steady drawdown of approximately 4.5 feet per year due to irrigation and metropolitan demands coupled with lack of adequate recharge.

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