

Texas Water Development Board



WATER Conditions

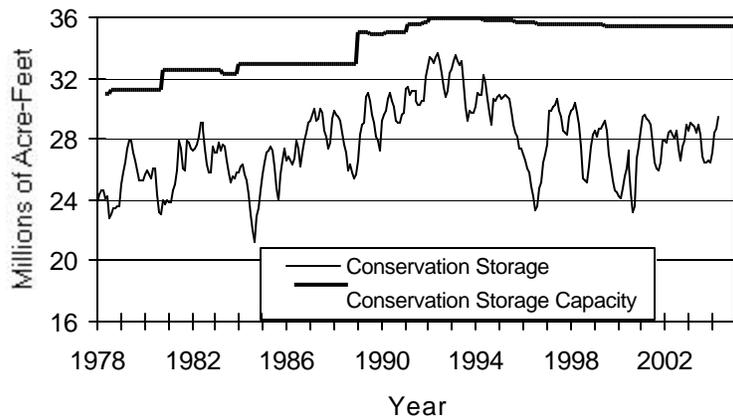
RESERVOIR STORAGE

April 2004

Near the end of April, the 77 reservoirs monitored for this report held 29.5 million acre-feet in conservation storage, or 86 percent of the conservation storage capacity of the state's major reservoirs. Statewide total storage is at normal for this time of year. Storage increased during the month by 799,510 acre-feet (2.3% of conservation storage capacity). Compared to the previous year, storage is greater, up 664,380 acre-feet (1.9%).

Storage is at capacity (100%) in the Upper Coast Region and South Central Region and near capacity in the East Region (98%), while the High Plains (24%) and Trans-Pecos (30%) Regions remained lower than one-third. Storage is at 100% in 27 reservoirs. Compared to this time last year, the Edwards Plateau had the largest increase in storage (+14%), while the High Plains had the steepest decline (-6%).

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

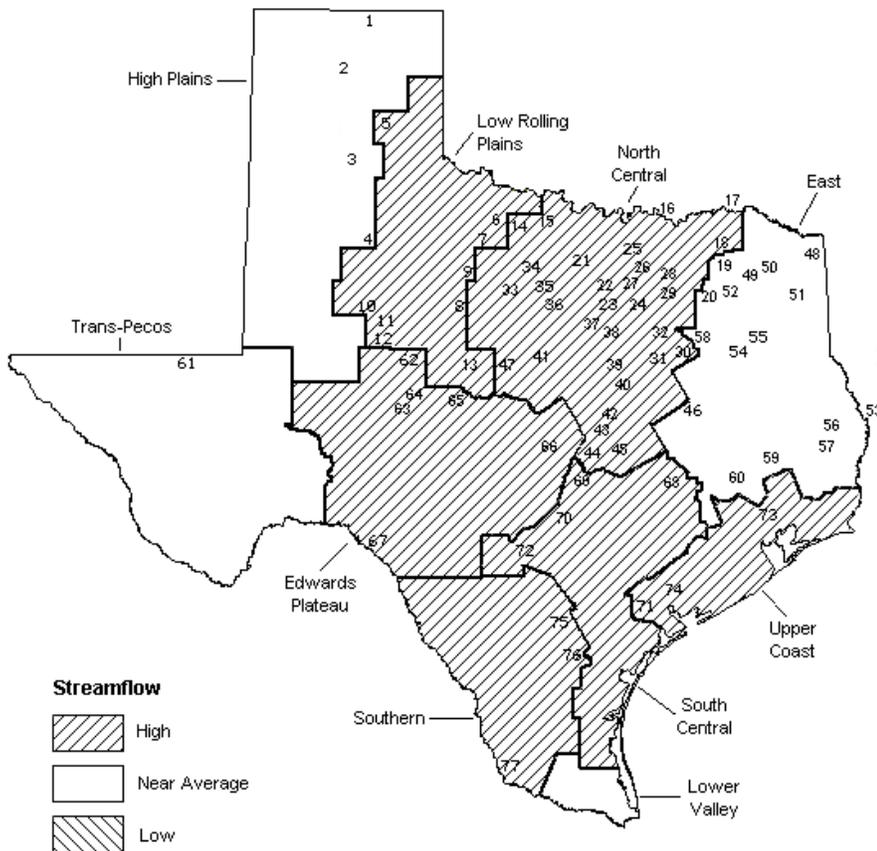
Of 29 reporting index stations in April, computed 31-day mean flows were very high (0% - 5% exceedance) at 4 stations, high (5% - 30% exceedance) at 17 stations, and near normal (30% - 70% exceedance) at 8 stations. In comparison to March, flows increased at 22 index stations, and decreased at 7.

On a regional basis, flows in April were very high in the Southern Region, high in Low Rolling Plains, North Central, Edwards Plateau, South Central, and Upper Coast, and near normal everywhere else.

APRIL 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 Apr. 2004 (acre-feet)	(%)	Change since Late March 2004 (acre-feet)	(%)	Change since Late April 2003 (acre-feet)	(%)
HIGH PLAINS								
Palo Duro Reservoir	1	60,900	2,330	4	-140	0	-540	-1
Lake Meredith (Texas)	2	500,000	140,730	28	4,900	1	-37,860	-8
Lake Meredith (Texas and Oklahoma)	(2)	779,560	140,730	18	4,900	1	-37,860	-5
MacKenzie Reservoir	3	46,250	5,730	12	-10	0	-1,700	-4
White River Lake	4	31,850	7,250	23	750	2	2,120	7
TOTAL		639,000	156,040	24	5,500	1	-37,980	-6
LOW ROLLING PLAINS								
Greenbelt Reservoir	5	58,200	25,240	43	460	1	1,950	3
Lake Kemp	6	319,600	182,850	57	-8,370	-3	-43,590	-14
Miller's Creek Reservoir	7	27,890	11,710	42	-120	0	-2,250	-8
Fort Phantom Hill Reservoir	8	70,030	32,760	47	3,970	6	-4,490	-6
Lake Stamford	9	52,700	32,130	61	1,400	3	-4,310	-8
Lake J. B. Thomas	10	202,300	24,080	12	470	0	5,720	3
Lake Colorado City	11	30,800	23,680	77	940	3	8,530	28
Champion Creek Reservoir	12	41,600	3,590	9	70	0	1,520	4
Hords Creek Lake	13	8,600	2,800	33	430	5	580	7
TOTAL		811,720	338,840	42	-750	0	-36,340	-4
NORTH CENTRAL								
Lake Kickapoo	14	106,000	59,390	56	-1,990	-2	-13,280	-13
Lake Arrowhead	15	262,100	119,010	45	-2,750	-1	-25,820	-10
Lake Texoma	16	2,722,300	2,478,630	91	91,320	3	66,340	2
Pat Mayse Lake	17	124,500	118,160	95	2,970	2	-610	0
Cooper Lake	18	273,000	216,130	79	-5,820	-2	-56,870	-21
Lake Sulphur Springs	19	17,710	15,600	88	470	3	-2,110	-12
Lake Tawakoni	20	936,200	861,600	92	14,500	2	-26,700	-3
Bridgeport Reservoir	21	374,830	230,200	61	5,500	1	-46,600	-12
Eagle Mountain Reservoir	22	178,380	150,700	84	2,900	2	10,100	6
Benbrook Lake	23	88,200	83,260	94	-980	-1	-180	0
Joe Pool Lake	24	175,800	175,800	100	0	0	0	0
Ray Roberts Lake	25	798,760	758,100	95	22,750	3	-34,420	-4
Lewisville Lake	26	555,000	555,000	100	8,250	1	0	0
Grapevine Lake	27	187,700	177,510	95	16,300	9	-4,990	-3
Lavon Lake	28	443,800	408,870	92	980	0	-34,930	-8
Lake Ray Hubbard	29	413,420	376,100	91	-4,800	-1	-28,800	-7
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	0	0	0	0
Bardwell Lake	32	53,580	53,580	100	6,780	13	5,290	10
Hubbard Creek Reservoir	33	317,800	131,860	41	9,030	3	-9,540	-3
Lake Graham	34	45,000	23,410	52	1,470	3	-3,940	-9
Possum Kingdom Lake	35	551,820	442,400	80	10,700	2	-11,200	-2
Lake Palo Pinto	36	27,650	17,230	62	-740	-3	-2,950	-11
Lake Granbury	37	135,680	133,600	98	100	0	0	0
Lake Pat Cleburne	38	25,300	25,300	100	410	2	0	0
Whitney Lake	39	622,800	556,860	89	51,350	8	66,520	11
Waco Lake	40	144,500	144,500	100	0	0	0	0
Proctor Lake	41	55,590	53,370	96	2,820	5	-2,220	-4
Belton Lake	42	434,500	434,500	100	0	0	0	0
Stillhouse Hollow Lake	43	226,060	226,060	100	6,120	3	0	0
Lake Georgetown	44	37,010	28,190	76	5,540	15	-8,820	-24
Granger Lake	45	54,280	54,280	100	0	0	0	0
Lake Limestone	46	215,750	214,030	99	-1,590	-1	-1,720	-1
Lake Brownwood	47	143,400	133,720	93	2,870	2	2,740	2
TOTAL		11,908,050	10,616,580	89	244,460	2	-164,710	-1

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 Apr. 2004 (acre-feet) (%)	Late March 2004 (acre-feet) (%)	Late April 2003 (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	252,000	100	4,910	2	23,760	9
Lake Fork Reservoir	52	635,200	635,200	100	0	0	0	0
Toledo Bend Reservoir	53	4,472,900	4,257,000	95	108,000	2	-44,000	-1
Lake Palestine	54	411,300	411,300	100	0	0	2,010	0
Lake Tyler	55	73,700	73,700	100	0	0	0	0
Sam Rayburn Reservoir	56	2,876,300	2,876,300	100	0	0	0	0
B. A. Steinhagen Lake	57	94,200	85,950	91	-8,250	-9	-8,250	-9
Cedar Creek Reservoir	58	637,050	609,300	96	17,100	3	-22,600	-4
Lake Livingston	59	1,750,000	1,750,000	100	0	0	15,000	1
Lake Conroe	60	429,900	416,000	97	-3,700	-1	4,300	1
TOTAL		12,044,350	11,778,550	98	118,060	1	-29,780	0
TRANS-PECOS								
Red Bluff Reservoir	61	307,000	93,090	30	35,860	12	34,350	11
TOTAL		307,000	93,090	30	35,860	12	34,350	11
EDWARDS PLATEAU								
E. V. Spence Reservoir	62	488,760	49,140	10	2,140	0	15,010	3
Twin Buttes Reservoir	63	177,800	5,820	3	370	0	-350	0
O.C. Fisher Lake	64	119,200	2,770	2	-50	0	-30	0
O. H. Ivie Reservoir	65	554,340	195,310	35	3,480	1	-1,290	0
Lake Buchanan	66	896,980	866,130	97	36,890	4	-4,430	0
Amistad Reservoir (Texas)	67	1,771,030	1,565,000	88	72,000	4	550,000	31
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	1,758,000	56	64,000	2	665,000	21
TOTAL		4,008,110	2,684,170	67	114,830	3	558,910	14
SOUTH CENTRAL								
Somerville Lake	68	155,060	155,060	100	0	0	0	0
Lake Travis	69	1,144,100	1,144,100	100	139,200	12	0	0
Canyon Lake	70	385,600	385,600	100	5,510	1	0	0
Coletto Creek Reservoir	71	35,060	31,820	91	-140	0	330	1
Medina Lake	72	254,000	254,000	100	18,500	7	400	0
TOTAL		1,973,820	1,970,580	100	163,070	8	730	0
UPPER COAST								
Lake Houston	73	128,860	128,860	100	0	0	0	0
Lake Texana	74	157,900	157,480	100	2,440	2	13,770	9
TOTAL		286,760	286,340	100	2,440	1	13,770	5

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late Apr. 2004 (acre-feet)	(%)	Change since Late March 2004 (acre-feet)	(%)	Change since Late April 2003 (acre-feet)	(%)
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SOUTHERN

Choke Canyon Reservoir	75	695,260	693,000	100	3,000	0	0	0
Lake Corpus Christi	76	241,240	241,240	100	40	0	4,430	2
Falcon Reservoir (Texas)	77	1,555,120	637,000	41	113,000	7	321,000	21
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	1,502,000	57	280,000	11	1,033,000	39
TOTAL		2,491,620	1,571,240	63	116,040	5	325,430	13

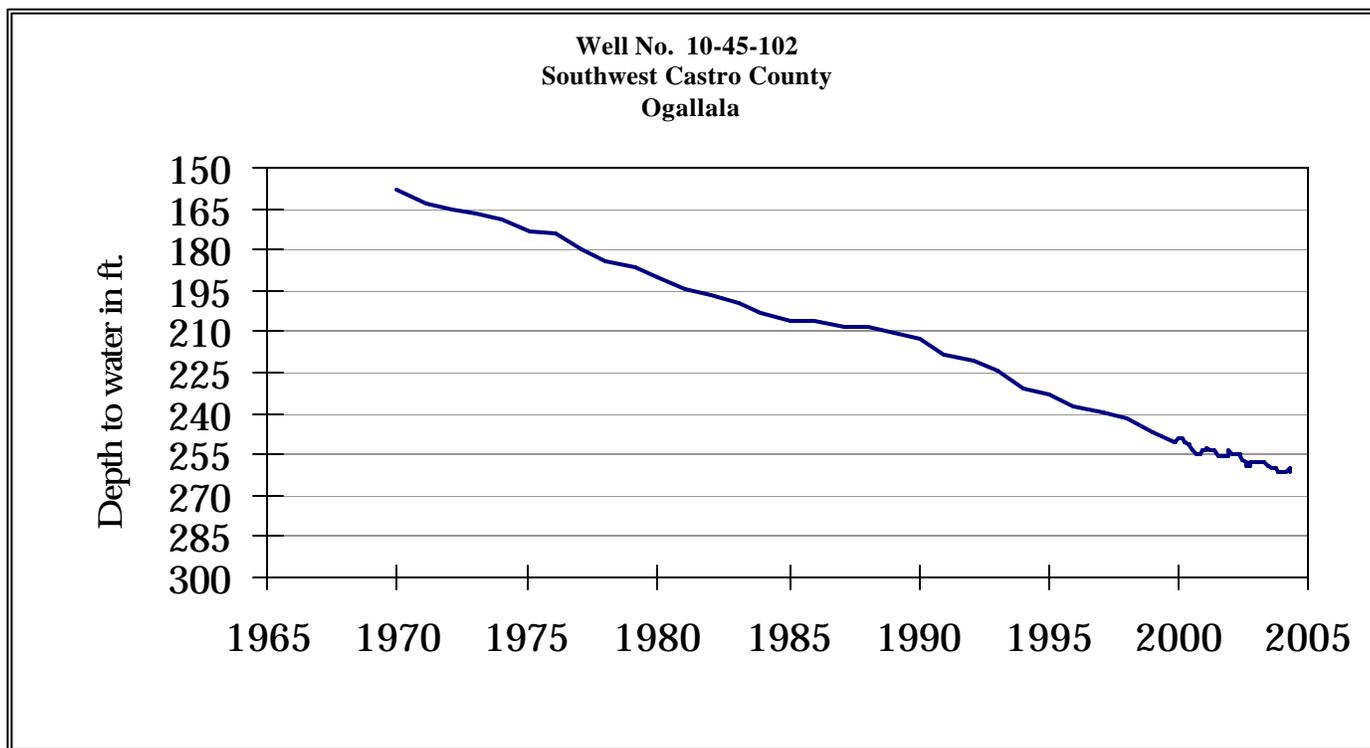
STATE TOTAL		34,470,430	29,495,430	86	799,510	2	664,380	2
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Note:

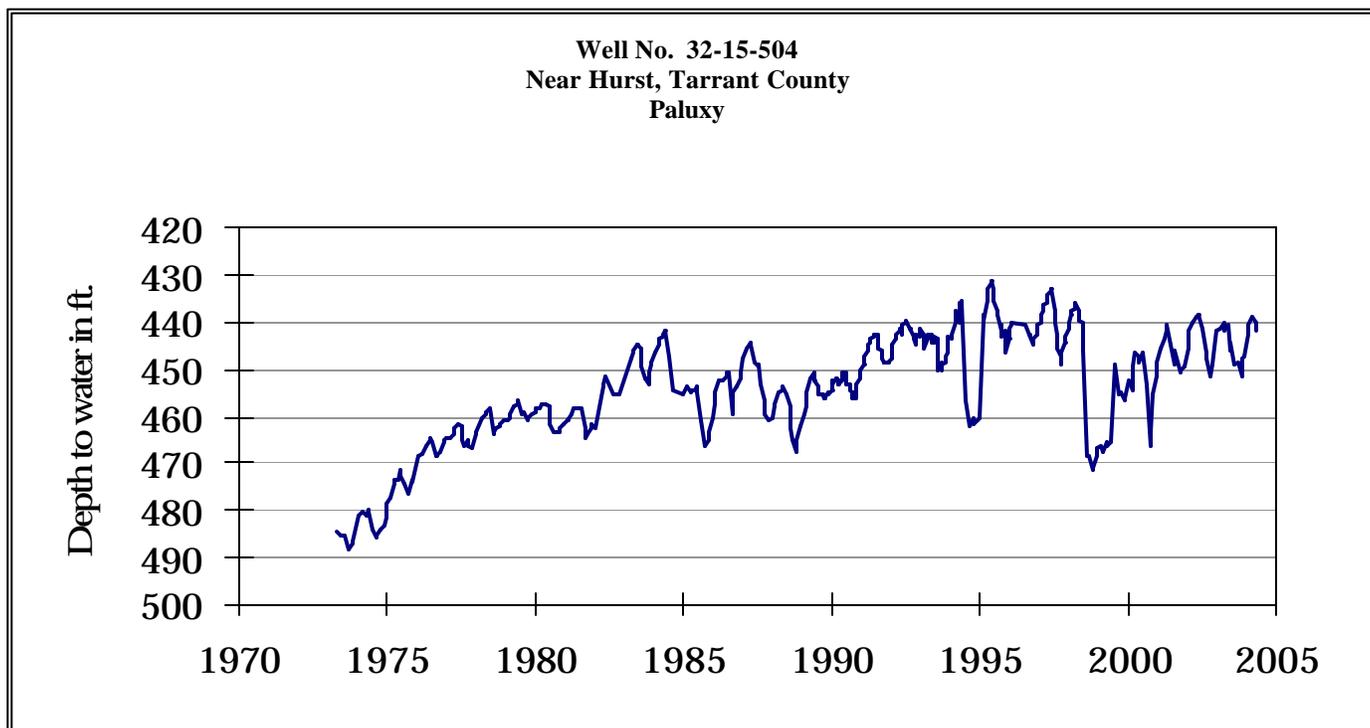
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included 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). Preliminary figures are shown for the Texas' share of conservation storage in all reservoirs.

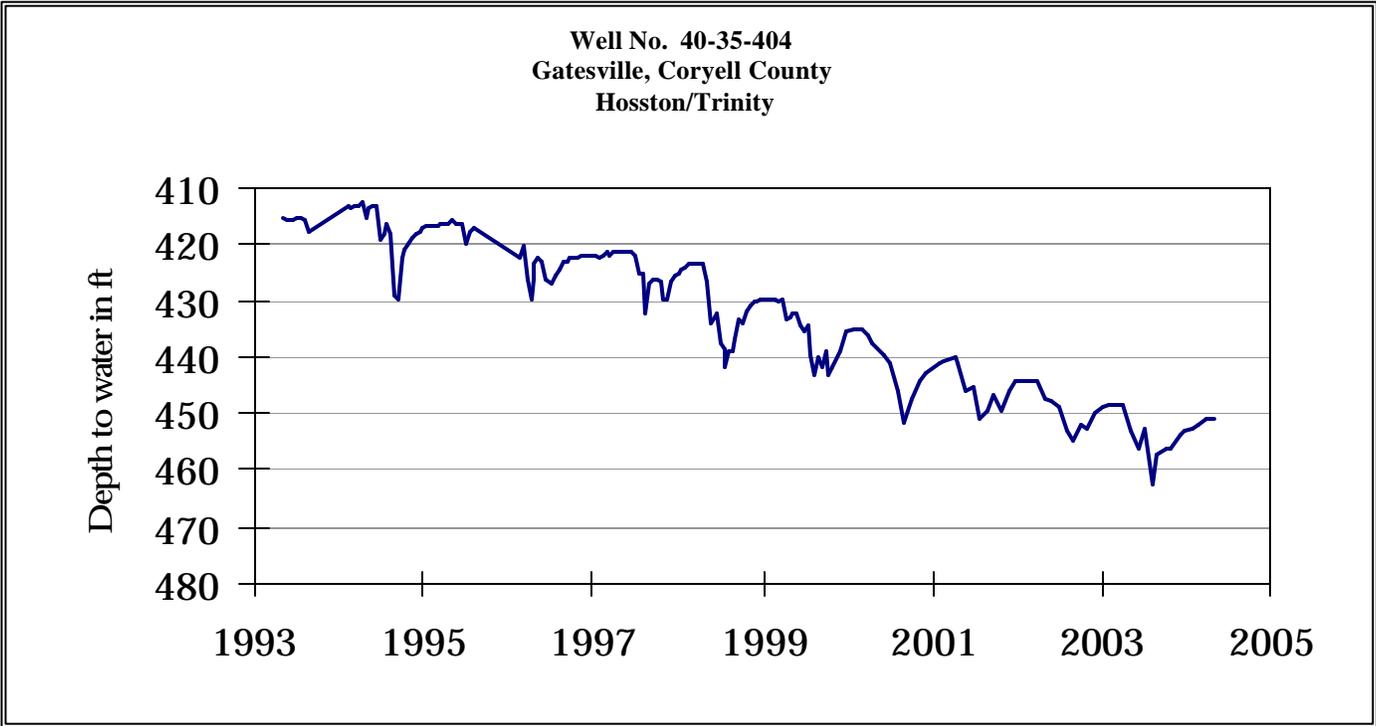
APRIL GROUND WATER LEVELS IN OBSERVATION WELLS



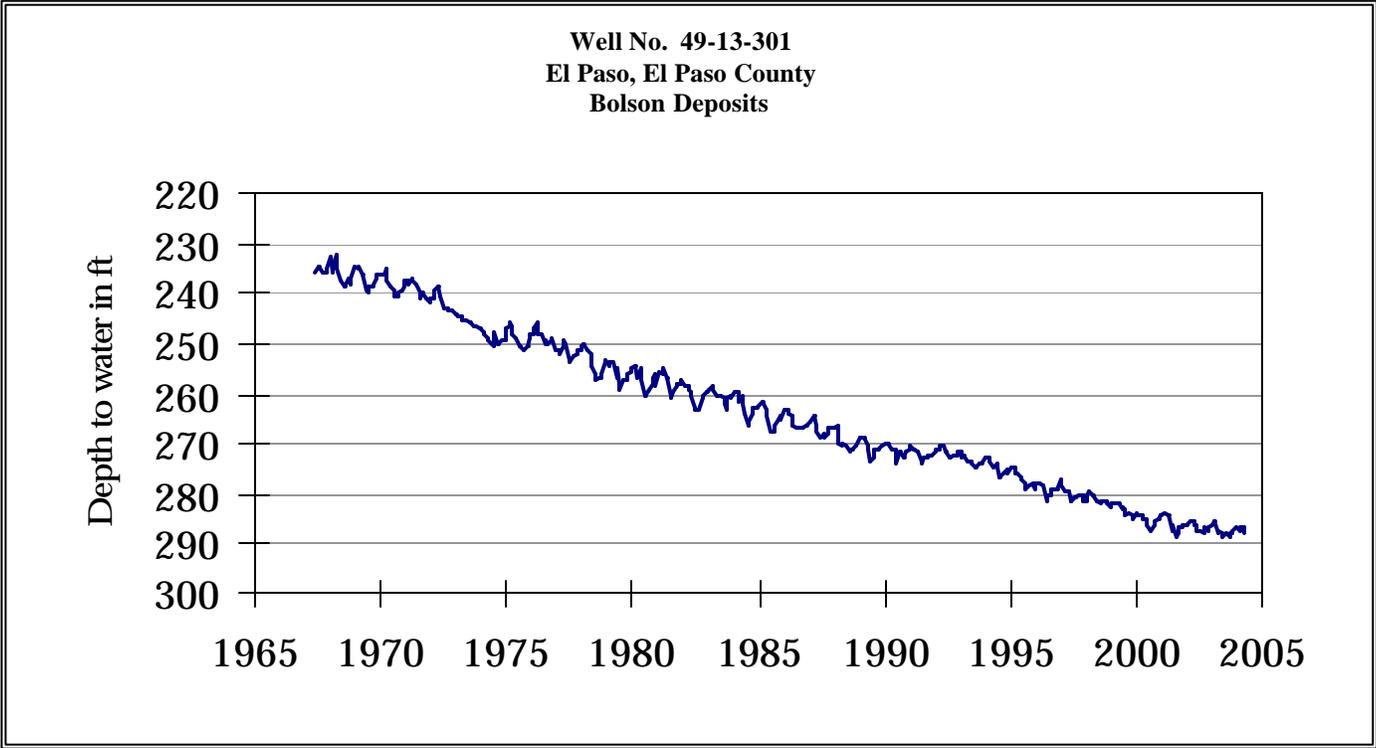
The late April water-level measurement in this Ogallala aquifer well, elevation 3,816 feet above sea level, was 261.30 feet below land surface. This measurement was 0.50 foot below last month's measurement, 2.67 feet below last year's measurement, and 105.30 feet below the initial measurement recorded in 1968.



The late April water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 442.20 feet below land surface. This measurement was 2.30 feet below last month's measurement, 1.45 feet below last year's measurement, and 48.81 feet below the initial measurement recorded in 1953.

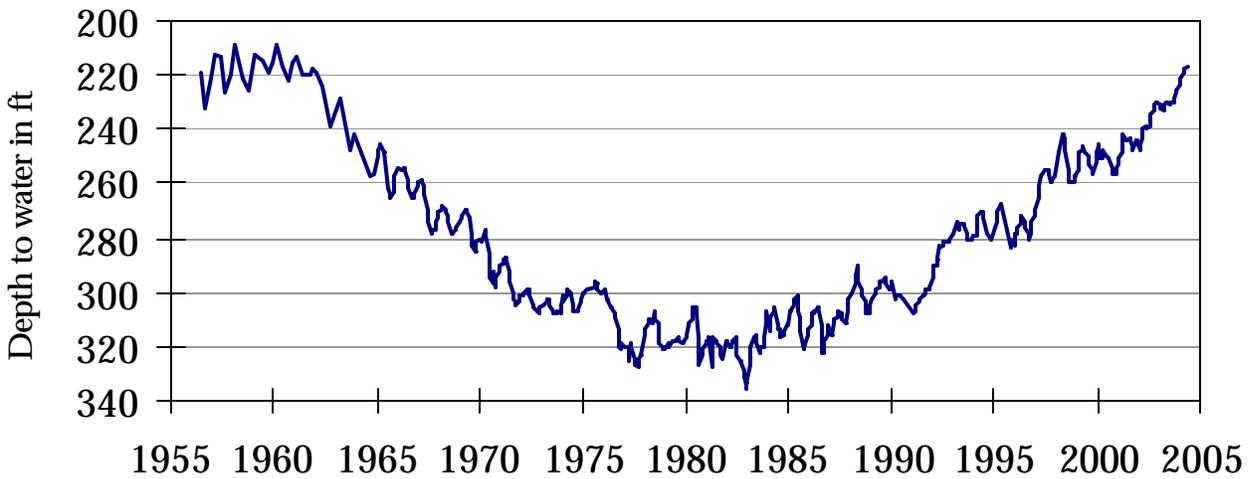


The late April water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 451.20 feet below land surface. This measurement is the same as last month's measurement, 1.58 feet below last year's measurement, and 159.20 feet below the initial measurement recorded in 1955.



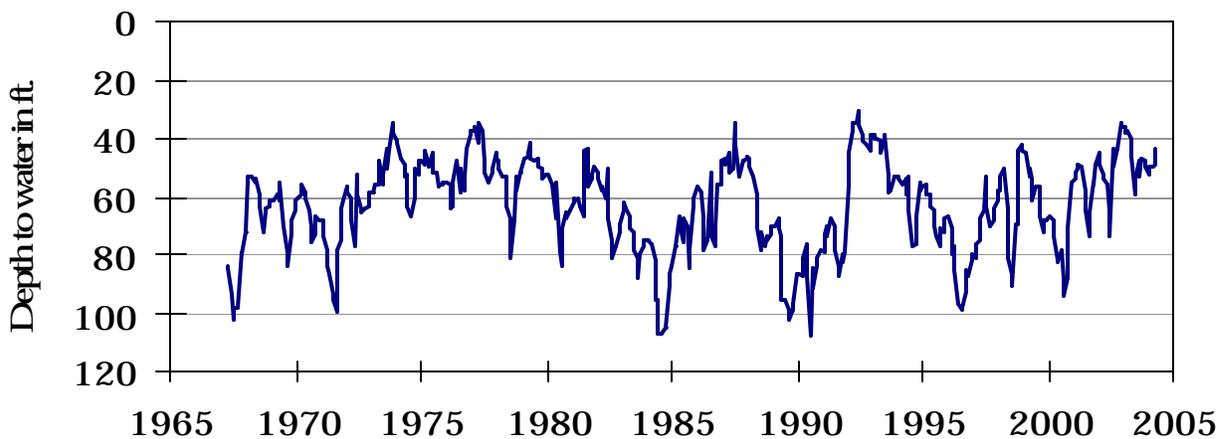
The late April water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 287.80 feet below land surface. This was 0.90 foot below last month's measurement, 0.35 foot below last year's measurement, and 55.90 feet below the initial measurement recorded in 1964.

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



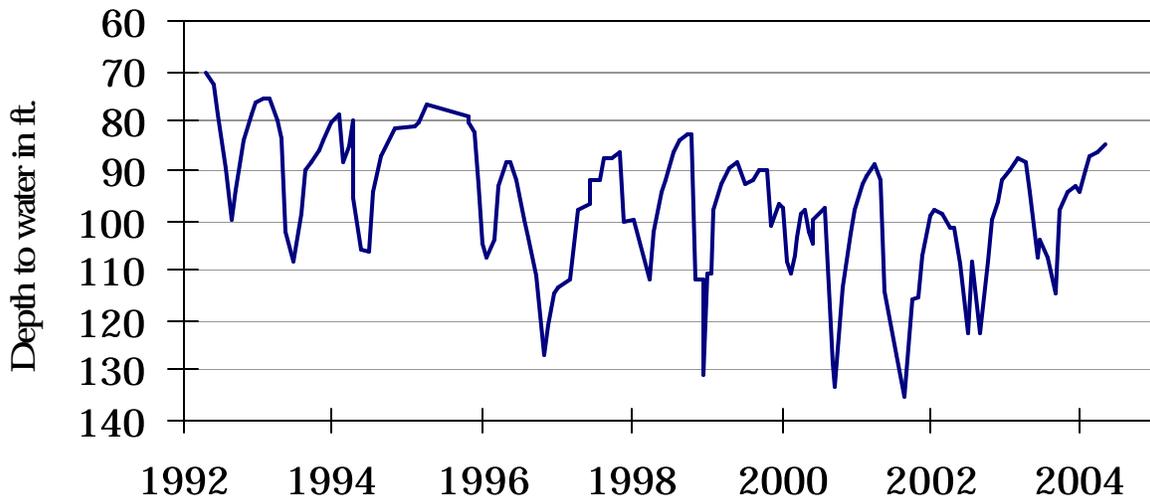
The late April water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 216.00 feet below land surface. This was 1.50 feet above last month's measurement, 13.59 feet above last year's measurement, and 112.77 feet below the initial measurement recorded in 1947.

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



The late April water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 43.20 feet below land surface. This was 5.40 feet above last month's measurement, 3.38 feet above last year's measurement, and 16.42 feet above the initial measurement recorded in 1962.

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



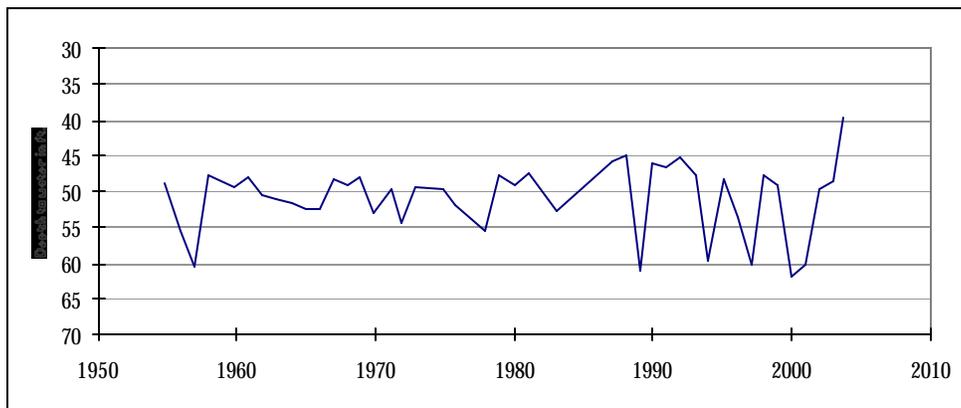
The late April water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 84.89 feet below land surface. This measurement was 1.75 foot above last month's measurement, 1.47 feet above last year's measurement, and 5.39 feet below the initial measurement recorded in 1965.

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. 45-29-601
Crane County**



This observation well, located ten miles north of the town of Crane at an elevation of 2,660 feet ASL, was completed in the Cenozoic Pecos Alluvium. Water pumped from this aquifer is used primarily for irrigation. The erratic water level expressed by the graph is due to possibly heavy pumping of a near by well. Oil filed operations that in the past has led to groundwater contamination problems should be monitored closely.

April 30, 2004

Water levels increased in three key monitoring wells since the beginning of April, ranging from 1.5 feet in the Alief well, Harris County (Evangeline Formation Gulf Coast aquifer) to 5.4 feet in San Antonio well, Bexar County (Edwards Aquifer) and decreased in three key monitoring wells, ranging from 0.5 feet in Southwest Castro County well (Ogallala aquifer) to 2.3 feet in Near Hurst well, Tarrant County (Paluxy Formation Trinity aquifer).

TEXAS WATER DEVELOPMENT BOARD

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