Texas Water Development Board

WATER Conditions

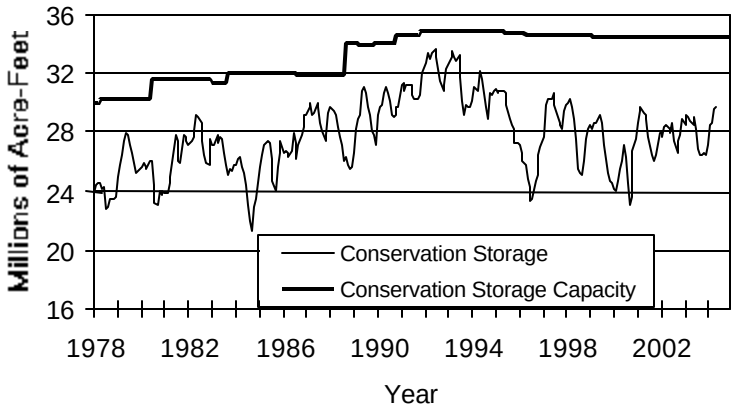
RESERVOIR STORAGE

May 2004

Near the end of May, the 77 reservoirs monitored for this report held 29.7 million acre-feet in conservation storage, or 86.2 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 203,460 acre-feet (0.6% of conservation storage capacity). Compared to the previous year, storage is greater, up 1,236,970 acre-feet (3.6%).

Storage is at capacity (100%) in the Upper Coast Region, near capacity in South Central and the East Regions (99%), while the High Plains (23%) and Trans-Pecos (27%) Regions remained lower than one-third. Storage is at 100% in 23 reservoirs. Compared to this time last year, the Edwards Plateau Region had the largest increase in storage (+19.6%), while the High Plains and the Low Rolling Regions had the steepest decline (-5.7%).

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.

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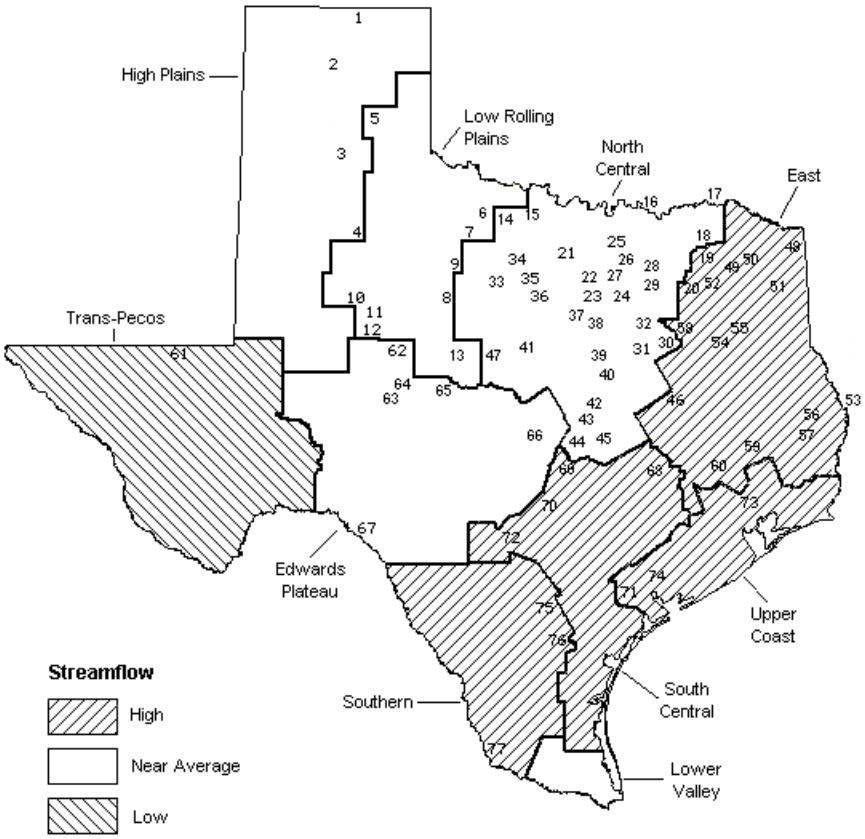
STREAMFLOW

Of 29 reporting index stations in May, computed 31-day mean flows were very high (0% - 5% exceedance) at 3 stations, high (5% - 30% exceedance) at 12 stations, near normal (30% - 70% exceedance) at 11 stations, and low (70 – 95%) at 3 stations. In comparison to April, flows increased at 10 index stations, and decreased at 19.

On a regional basis, flows in May were very high in the Upper Coast Region, high in the East, the South Central and the Southern Regions, low in the Trans-Pecos Region, and near normal everywhere else.

MAY STREAMFLOW CONDITIONS



Reservoirs Shown on Map

1. Palo Duro Reservoir
2. Lake Meredith
3. MacKenzie Reservoir
4. White River Lake
5. Greenbelt Reservoir
6. Lake Kemp
7. Miller's Creek Reservoir
8. Fort Phantom Hill Reservoir
9. Lake Stamford
10. Lake J. B. Thomas
11. Lake Colorado City
12. Champion Creek Reservoir
13. Hords Creek Lake
14. Lake Kickapoo
15. Lake Arrowhead
16. Lake Texoma
17. Pat Mayse Lake
18. Cooper Lake
19. Lake Sulphur Springs
20. Lake Tawakoni
21. Bridgeport Reservoir
22. Eagle Mountain Reservoir
23. Benbrook Lake
24. Joe Pool Lake
25. Ray Roberts Lake
26. Lewisville Lake
27. Grapevine Lake
28. Lavon Lake
29. Lake Ray Hubbard
30. Richland-Chambers Creek Lake
31. Navarro Mills Lake
32. Bardwell Lake
33. Hubbard Creek Reservoir
34. Lake Graham
35. Possum Kingdom Lake
36. Lake Palo Pinto
37. Lake Granbury
38. Lake Pat Cleburne
39. Whitney Lake
40. Waco Lake
41. Proctor Lake
42. Belton Lake
43. Stillhouse Hollow Lake
44. Lake Georgetown
45. Granger Lake
46. Lake Limestone
47. Lake Brownwood
48. Wright Patman Lake
49. Lake Cypress Springs
50. Lake Bob Sandlin
51. Lake O' the Pines
52. Lake Fork Reservoir
53. Toledo Bend Reservoir
54. Lake Palestine
55. Lake Tyler
56. Sam Rayburn Reservoir
57. B. A. Steinhagen Lake
58. Cedar Creek Reservoir
59. Lake Livingston
60. Lake Conroe
61. Red Bluff Reservoir
62. E. V. Spence Reservoir
63. Twin Buttes Reservoir
64. O. C. Fisher Lake
65. O. H. Ivie Reservoir
66. Lake Buchanan
67. Intl. Amistad Reservoir
68. Somerville Lake
69. Lake Travis
70. Canyon Lake
71. Coleto Creek Reservoir
72. Medina Lake
73. Lake Houston
74. Lake Texana
75. Choke Canyon Reservoir
76. Lake Corpus Christi
77. Intl. Falcon Reservoir

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late May 2004 (acre-feet)	(%)	Change since Late April 2004 (acre-feet)	(%)	Change since Late May 2003 (acre-feet)	(%)
HIGH PLAINS								
Palo Duro Reservoir	1	60,900	2,270	4	-60	0	-940	-2
Lake Meredith (Texas)	2	500,000	134,360	27	-6,370	-1	-35,570	-7
Lake Meredith (Texas and Oklahoma)	(2)	779,560	134,360	17	-6,370	-1	-35,570	-5
MacKenzie Reservoir	3	46,250	5,500	12	-230	0	-1,680	-4
White River Lake	4	31,850	6,580	21	-670	-2	1,900	6
TOTAL		639,000	148,710	23	-7,330	-1	-36,290	-6
LOW ROLLING PLAINS								
Greenbelt Reservoir	5	58,200	24,460	42	-780	-1	1,710	3
Lake Kemp	6	319,600	168,550	53	-14,300	-4	-51,790	-16
Miller's Creek Reservoir	7	27,890	11,040	40	-670	-2	-2,310	-8
Fort Phantom Hill Reservoir	8	70,030	31,850	45	-910	-1	-3,710	-5
Lake Stamford	9	52,700	30,430	58	-1,700	-3	-4,410	-8
Lake J. B. Thomas	10	202,300	21,850	11	-2,230	-1	3,780	2
Lake Colorado City	11	30,800	22,760	74	-920	-3	8,330	27
Champion Creek Reservoir	12	41,600	3,350	8	-240	-1	1,360	3
Hords Creek Lake	13	8,600	2,720	32	-80	-1	580	7
TOTAL		811,720	317,010	39	-21,830	-3	-46,460	-6
NORTH CENTRAL								
Lake Kickapoo	14	106,000	56,230	53	-3,160	-3	-20,210	-19
Lake Arrowhead	15	262,100	115,650	44	-3,360	-1	-31,140	-12
Lake Texoma	16	2,722,300	2,491,900	92	13,270	0	-40,170	-1
Pat Mayse Lake	17	124,500	117,110	94	-1,050	-1	-2,140	-2
Cooper Lake	18	273,000	206,400	76	-9,730	-4	-66,600	-24
Lake Sulphur Springs	19	17,710	17,040	96	1,440	8	-670	-4
Lake Tawakoni	20	936,200	871,800	93	10,200	1	-13,400	-1
Bridgeport Reservoir	21	374,830	227,400	61	-2,800	-1	-42,200	-11
Eagle Mountain Reservoir	22	178,380	141,500	79	-9,200	-5	-700	0
Benbrook Lake	23	88,200	88,200	100	4,940	6	6,060	7
Joe Pool Lake	24	175,800	175,800	100	0	0	0	0
Ray Roberts Lake	25	798,760	758,100	95	0	0	-37,650	-5
Lewisville Lake	26	555,000	555,000	100	0	0	0	0
Grapevine Lake	27	187,700	165,050	88	-12,460	-7	-20,760	-11
Lavon Lake	28	443,800	403,540	91	-5,330	-1	-38,280	-9
Lake Ray Hubbard	29	413,420	366,100	89	-10,000	-2	-39,800	-10
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	640	1
Bardwell Lake	32	53,580	46,760	87	-6,820	-13	-2,760	-5
Hubbard Creek Reservoir	33	317,800	128,770	41	-3,090	-1	-9,330	-3
Lake Graham	34	45,000	22,700	50	-710	-2	-3,960	-9
Possum Kingdom Lake	35	551,820	438,100	79	-4,300	-1	-3,600	-1
Lake Palo Pinto	36	27,650	18,470	67	1,240	4	-520	-2
Lake Granbury	37	135,680	133,300	98	-300	0	-200	0
Lake Pat Cleburne	38	25,300	25,300	100	0	0	340	1
Whitney Lake	39	622,800	584,420	94	27,560	4	107,980	17
Waco Lake	40	144,500	144,500	100	0	0	60	0
Proctor Lake	41	55,590	51,990	94	-1,380	-2	-1,910	-3
Belton Lake	42	434,500	434,500	100	0	0	1,270	0
Stillhouse Hollow Lake	43	226,060	226,060	100	0	0	0	0
Lake Georgetown	44	37,010	30,940	84	2,750	7	-4,950	-13
Granger Lake	45	54,280	54,280	100	0	0	0	0
Lake Limestone	46	215,750	210,490	98	-3,540	-2	-1,610	-1
Lake Brownwood	47	143,400	130,200	91	-3,520	-2	2,250	2
TOTAL		11,908,050	10,597,230	89	-19,350	0	-263,960	-2

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late May 2004 (acre-feet)	(%)	Change since Late April 2004 (acre-feet)	(%)	Change since Late May 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	0	0	14,900	6
Lake Fork Reservoir	52	635,200	635,200	100	0	0	7,800	1
Toledo Bend Reservoir	53	4,472,900	4,428,000	99	171,000	4	216,000	5
Lake Palestine	54	411,300	411,300	100	0	0	0	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	28,180	1
B. A. Steinhagen Lake	57	94,200	90,620	96	4,670	5	390	0
Cedar Creek Reservoir	58	637,050	630,700	99	21,400	3	-4,000	-1
Lake Livingston	59	1,750,000	1,737,000	99	-13,000	-1	13,000	1
Lake Conroe	60	429,900	415,500	97	-500	0	8,800	2
TOTAL		12,044,350	11,962,120	99	183,570	2	285,070	2
TRANS-PECOS								
Red Bluff Reservoir	61	307,000	83,760	27	-9,330	-3	25,120	8
TOTAL		307,000	83,760	27	-9,330	-3	25,120	8
EDWARDS PLATEAU								
E. V. Spence Reservoir	62	488,760	46,110	9	-3,030	-1	14,410	3
Twin Buttes Reservoir	63	177,800	5,440	3	-380	0	-560	0
O.C. Fisher Lake	64	119,200	2,480	2	-290	0	140	0
O. H. Ivie Reservoir	65	554,340	187,530	34	-7,780	-1	-770	0
Lake Buchanan	66	896,980	863,950	96	-2,180	0	10,920	1
Amistad Reservoir (Texas)	67	1,771,030	1,609,000	91	44,000	2	761,000	43
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	1,795,000	57	37,000	1	829,000	26
TOTAL		4,008,110	2,714,510	68	30,340	1	785,140	20
SOUTH CENTRAL								
Somerville Lake	68	155,060	155,060	100	0	0	230	0
Lake Travis	69	1,144,100	1,135,800	99	-8,300	-1	41,400	4
Canyon Lake	70	385,600	385,600	100	0	0	0	0
Coleto Creek Reservoir	71	35,060	32,120	92	300	1	3,270	9
Medina Lake	72	254,000	254,000	100	0	0	7,200	3
TOTAL		1,973,820	1,962,580	99	-8,000	0	52,100	3
UPPER COAST								
Lake Houston	73	128,860	128,860	100	0	0	0	0
Lake Texana	74	157,900	156,870	99	-610	0	22,970	15
TOTAL		286,760	285,730	100	-610	0	22,970	8

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

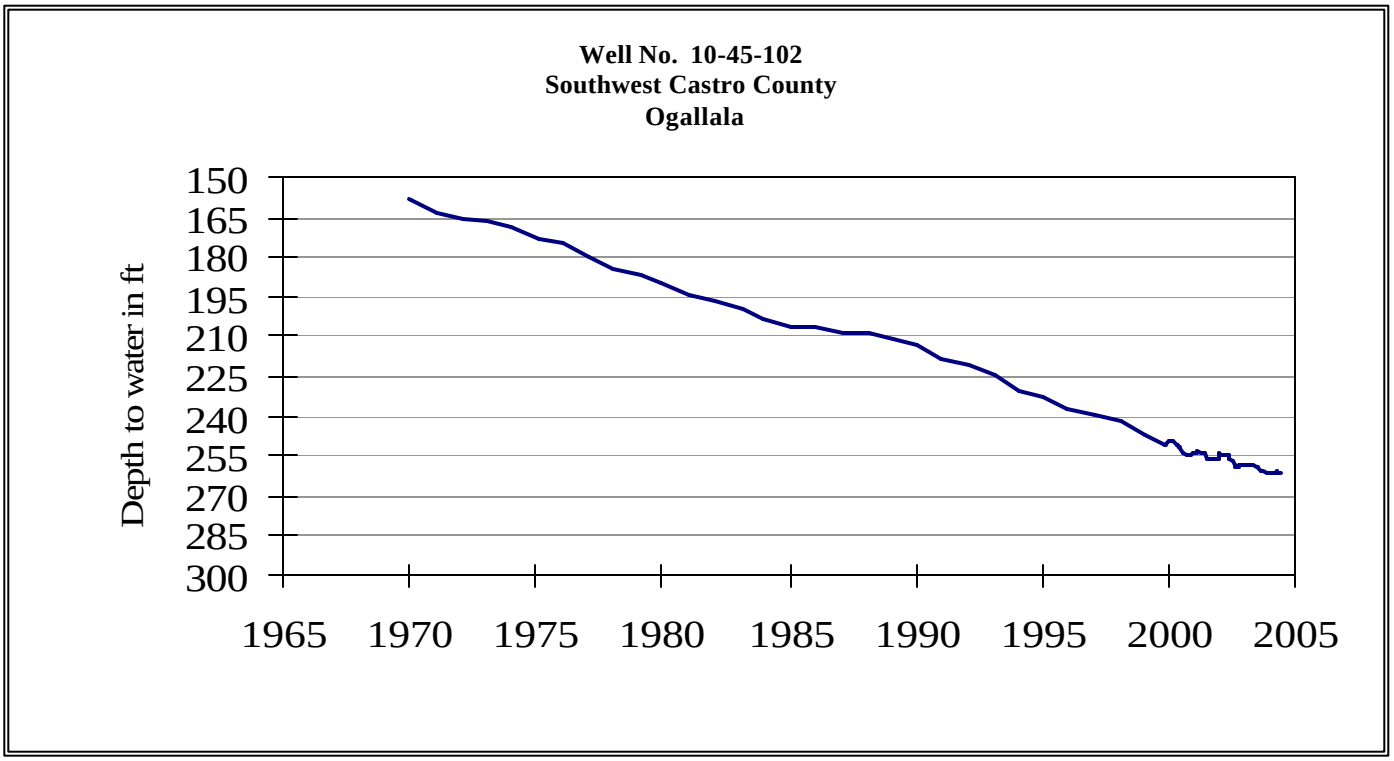
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late May 2004 (acre-feet)	(%)	Change since Late April 2004 (acre-feet)	(%)	Change since Late May 2003 (acre-feet)	(%)
			SOUTHERN					
Choke Canyon Reservoir	75	695,260	691,000	99	-2,000	0	6,000	1
Lake Corpus Christi	76	241,240	241,240	100	0	0	17,280	7
Falcon Reservoir (Texas)	77	1,555,120	695,000	45	58,000	4	390,000	25
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	1,606,000	61	104,000	4	1,265,000	48
TOTAL		2,491,620	1,627,240	65	56,000	2	413,280	17
STATE TOTAL		34,470,430	29,698,890	86	203,460	1	1,236,970	4

Note:

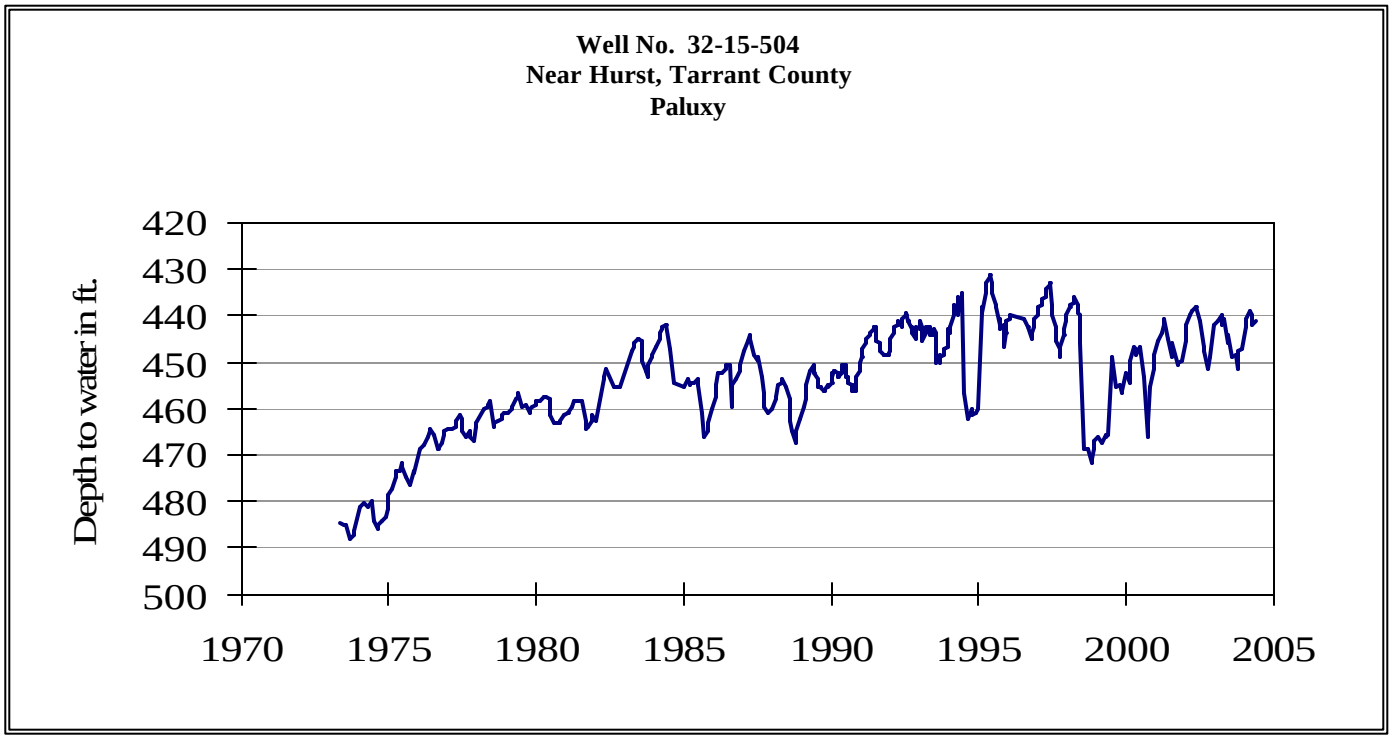
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included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

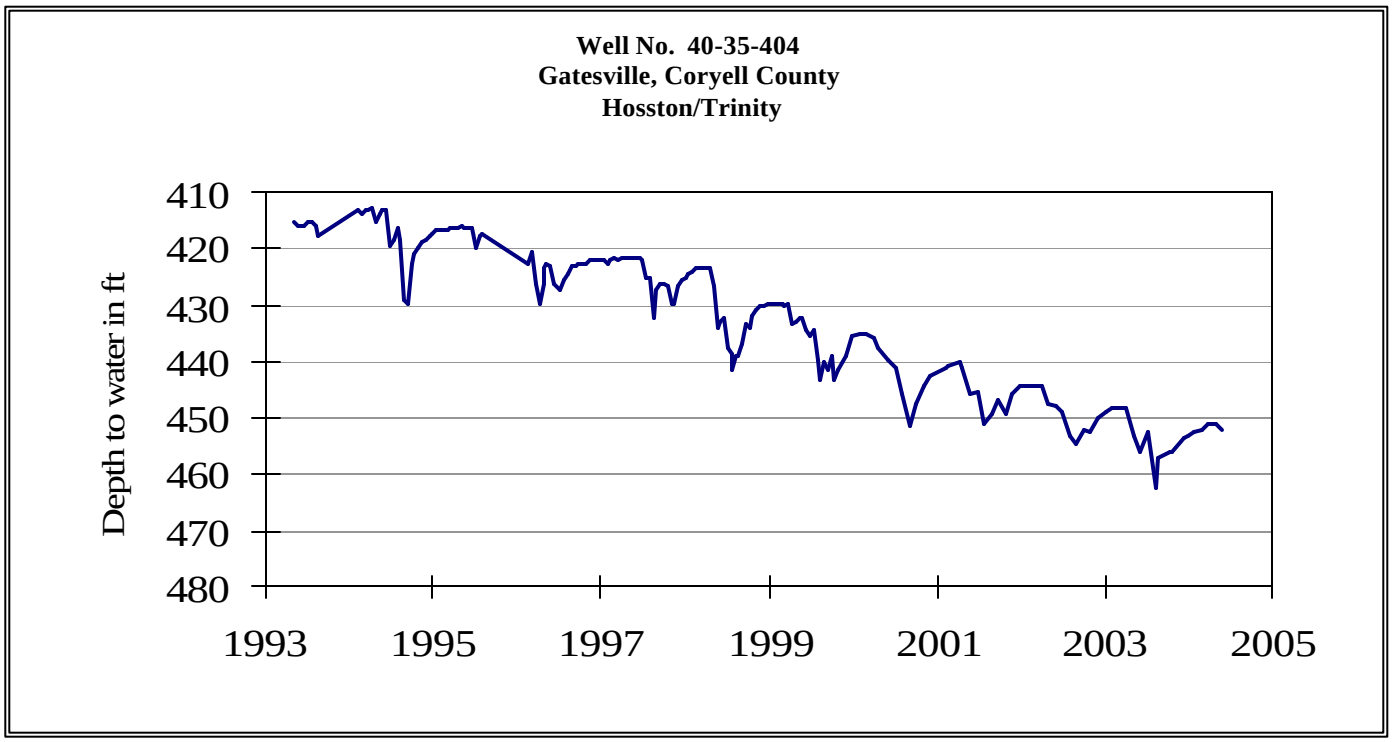
MAY GROUND WATER LEVELS IN OBSERVATION WELLS



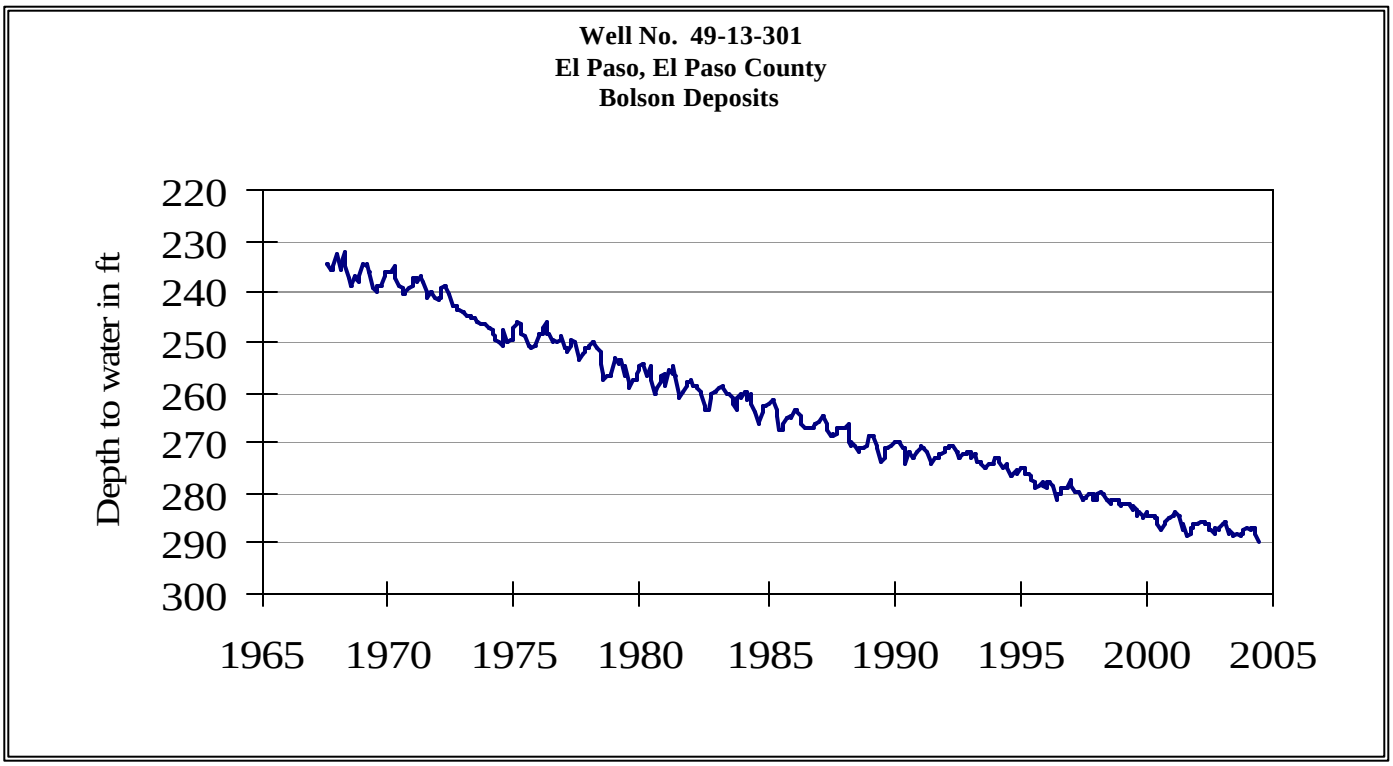
The late May water-level measurement in this Ogallala aquifer well, elevation 3,816 feet above sea level, was 261.90 feet below land surface. This measurement was 0.60 foot below last month's measurement, 2.89 feet below last year's measurement, and 105.90 feet below the initial measurement recorded in 1968.



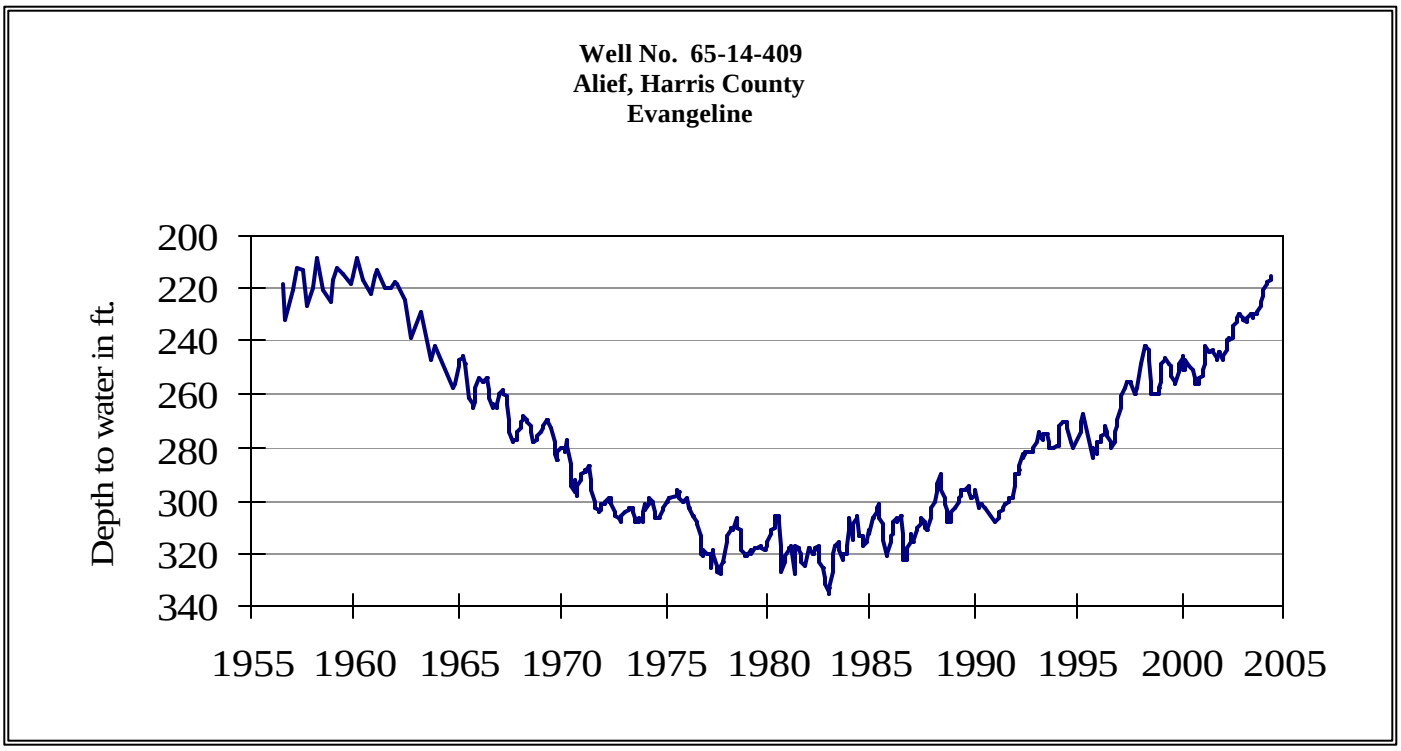
The late May water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 441.43 feet below land surface. This measurement was 0.77 feet above last month's measurement, 4.68 feet above last year's measurement, and 48.04 feet below the initial measurement recorded in 1953.



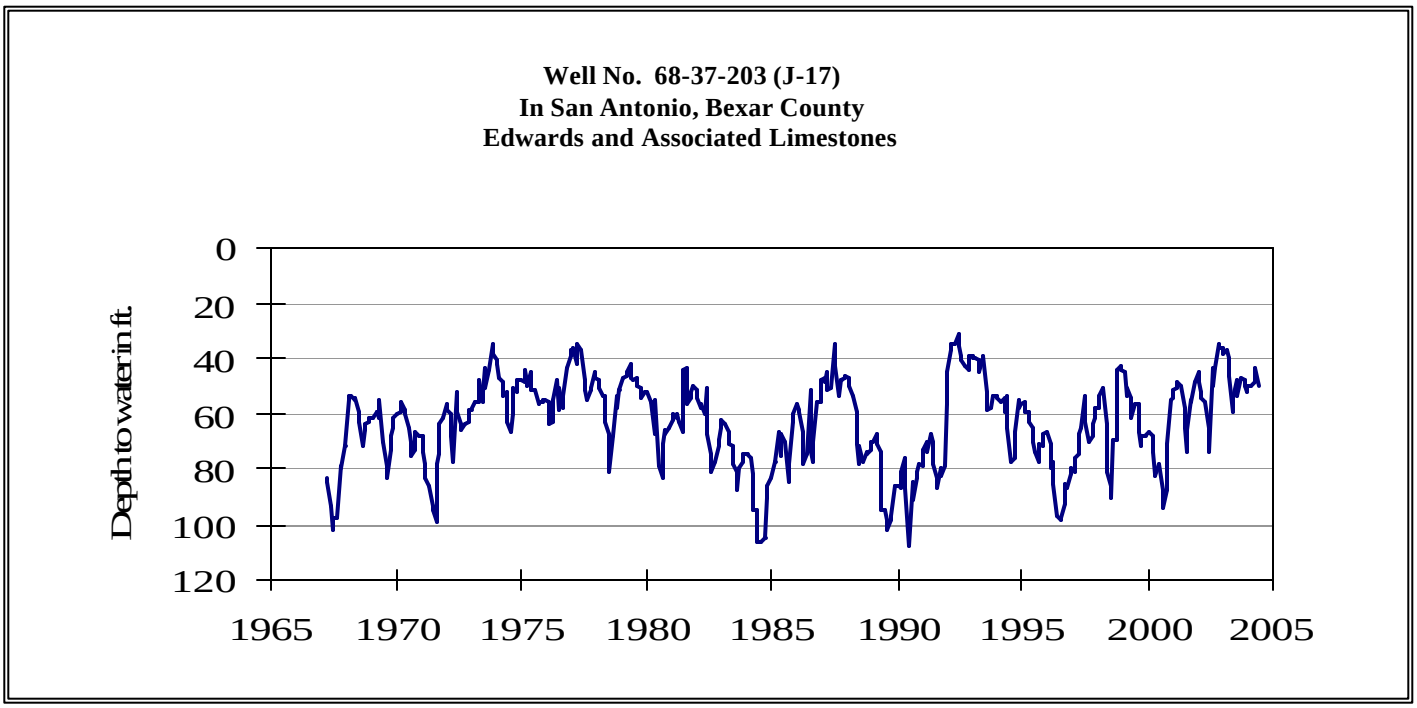
The late May water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 452.10 feet below land surface. This measurement was 0.90 feet below last month's measurement, 4.06 feet below last year's measurement, and 160.10 feet below the initial measurement recorded in 1955.



The late May water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 289.68 feet below land surface. This was 1.88 foot below last month's measurement, 1.53 foot below last year's measurement, and 57.78 feet below the initial measurement recorded in 1964.

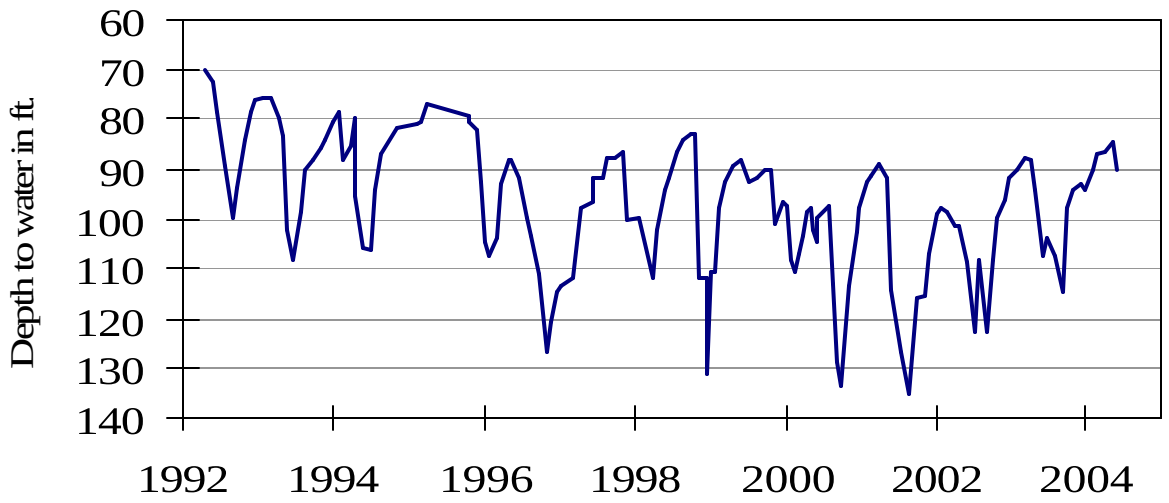


The late May water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 214.93 feet below land surface. This was 1.07 feet above last month's measurement, 14.69 feet above last year's measurement, and 111.70 feet below the initial measurement recorded in 1947.



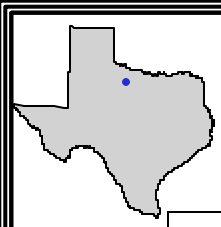
The late May water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 50.21 feet below land surface. This was 7.01 feet below last month's measurement, 9.35 feet above last year's measurement, and 9.41 feet above the initial measurement recorded in 1962.

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



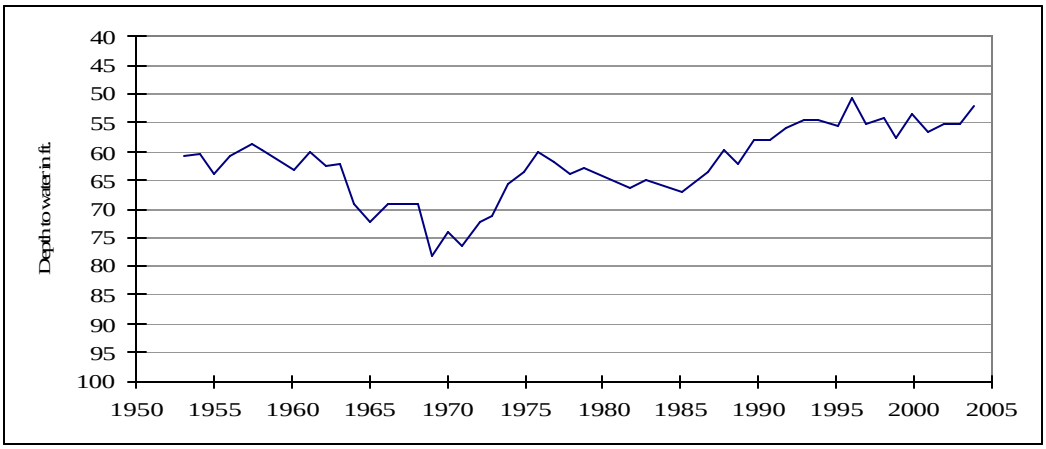
The late May water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 90.35 feet below land surface. This measurement was 5.46 foot below last month's measurement, 17.21 feet above last year's measurement, and 9.10 feet below the initial measurement recorded in 1965.

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. 1342402
Hardeman County



This observation well, located seven miles west of the town of Quanah at an elevation of 1,548 feet ASL, was completed in the Blaine aquifer. Water pumped from this aquifer is used primarily for irrigation. To date, no significant regional water level declines have been noted, however, localized declines have been recorded in areas dependent upon groundwater for irrigation purposes. Recovery of water levels in this area is usually quick in response to seasonal rainfall.

May 31, 2004
Water levels increased in two key monitoring wells since the beginning of May, ranging from 0.77 feet in the Near Hurst well, Tarrant County (Paluxy Formation Trinity aquifer well) to 1.07 feet in the Alief well, Harris County (Evangeline Formation Gulf Coast aquifer) and decreased in five key monitoring wells, ranging from 0.6 feet in the Southwest Castro County well (Ogallala aquifer) to 5.46 feet in the well between Poteet and Pleasanton, Atascosa County (Carrizo aquifer).

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