Texas Water Development Board

WATER Conditions

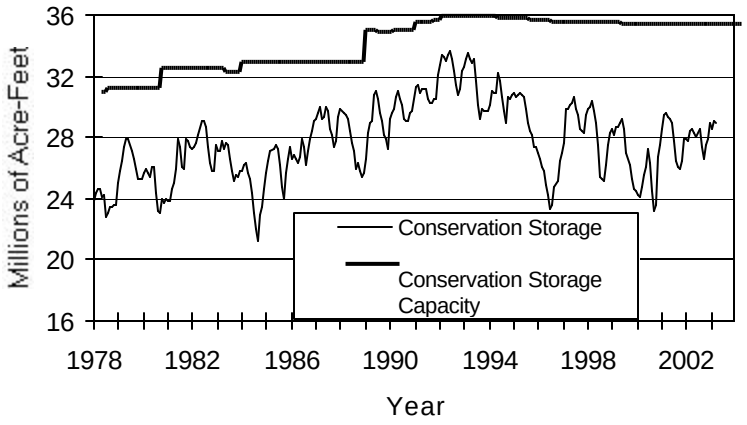
RESERVOIR STORAGE

March 2003

Near the end of March, the 77 reservoirs monitored for this report held 28.99 million acre-feet in conservation storage, or 84.1 percent of the conservation storage capacity of the State's major reservoirs. Statewide total storage is slightly below normal for this time of year. Storage decreased slightly during the month by 0.14 million acre-feet (-0.4% of conservation storage capacity). Compared to the previous year, storage is up 0.57 million acre-feet (+1.7%).

Storage in the East (98%), South Central (100%) and Upper Coast (99%) is at or near capacity, while the High Plains (32%), Low Rolling Plains (48%), Trans-Pecos (20%), Southern (52%) and Edwards Plateau (53%) Regions remain low. Storage in North Central Texas is high at 91%. Storage is at 100% in 31 reservoirs, down 7 from last month. Compared to this time last year, Southern Texas had the largest increase in storage (+24%), while the High Plains had the steepest decline (-9%).

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.

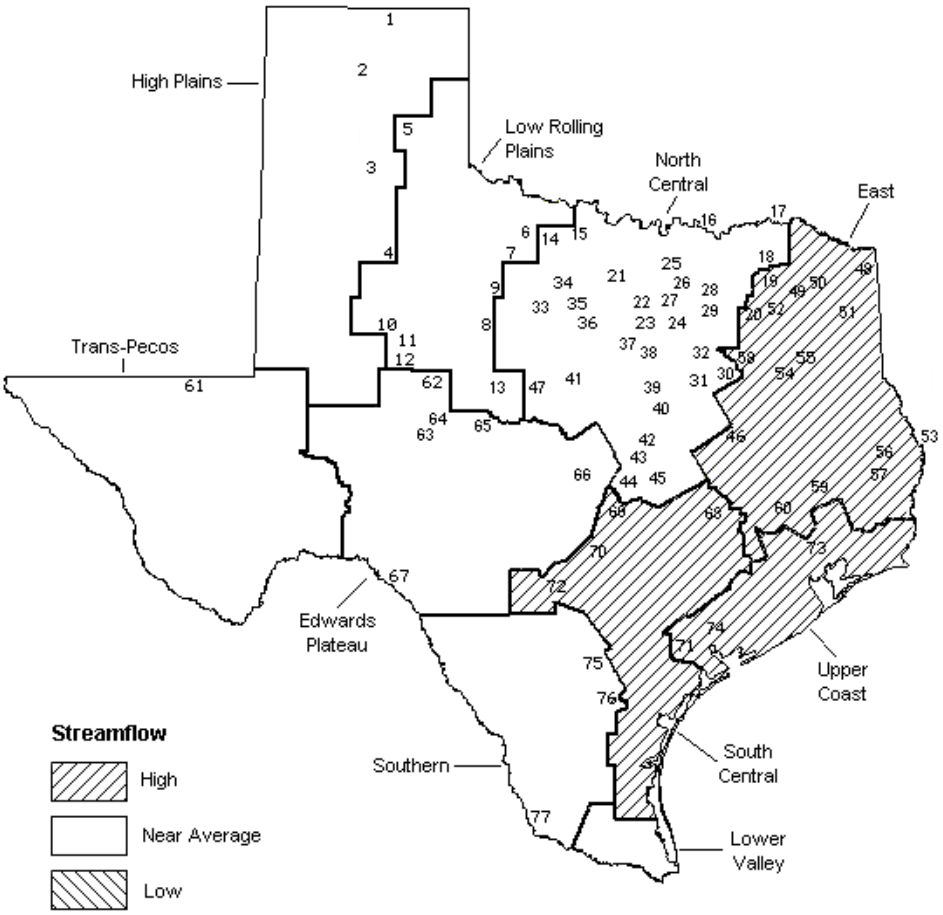
PO BOX 13231 • 1700 N. Congress Avenue • Austin, TX 78711-3231
Telephone (512) 463-7847 • Telefax (512) 475-2053 • 1-800-RELAYTX (for the hearing impaired)

STREAMFLOW

Of 29 reporting index stations in March, computed 30-day mean flows were high (5% - 30% exceedance) at 13 stations, near normal (30% - 70% exceedance) at 15 stations, and low (70% - 95% exceedance) at 1 station. In comparison to February, flows increased at 8 index stations and decreased at 21.

On a regional basis, flows in March high in the East Texas, South Central, and Upper Coast Regions and near normal everywhere else.

MARCH 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 March 2003 (acre-feet)	(%)	Change since Late February 2003 (acre-feet)	(%)	Change since Late March 2002 (acre-feet)	(%)
HIGH PLAINS								
Palo Duro Reservoir	1	60,900	3,110	5	-150	0	-2,130	-3
Lake Meredith (Texas)	2	500,000	186,680	37	-4,260	-1	-53,820	-11
Lake Meredith (Texas and Oklahoma)	(2)	779,560	186,680	24	-4,260	-1	-53,820	-7
MacKenzie Reservoir	3	46,250	7,660	17	-140	0	-550	-1
White River Lake	4	31,850	5,280	17	-310	-1	-1,690	-5
TOTAL		639,000	202,730	32	-4,860	-1	-58,190	-9
LOW ROLLING PLAINS								
Greenbelt Reservoir	5	58,200	23,560	40	-50	0	-600	-1
Lake Kemp	6	319,600	237,500	74	-2,450	-1	96,500	30
Miller's Creek Reservoir	7	27,890	14,620	52	-120	0	1,700	6
Fort Phantom Hill Reservoir	8	70,030	40,090	57	-1,490	-2	8,830	13
Lake Stamford	9	52,700	37,950	72	-940	-2	4,800	9
Lake J. B. Thomas	10	202,300	19,270	10	-690	0	-1,630	-1
Lake Colorado City	11	30,800	15,760	51	-370	-1	-2,840	-9
Champion Creek Reservoir	12	41,600	2,170	5	-60	0	30	0
Hords Creek Lake	13	8,600	2,320	27	-60	-1	-650	-8
TOTAL		811,720	393,240	48	-6,230	-1	106,140	13
NORTH CENTRAL								
Lake Kickapoo	14	106,000	75,800	72	-2,260	-2	4,500	4
Lake Arrowhead	15	262,100	149,910	57	-2,120	-1	10	0
Lake Texoma	16	2,722,300	2,384,190	88	78,070	3	-134,810	-5
Pat Mayse Lake	17	124,500	122,410	98	-1,520	-1	-2,090	-2
Cooper Lake	18	273,000	273,000	100	0	0	0	0
Lake Sulphur Springs	19	17,710	17,710	100	0	0	600	3
Lake Tawakoni	20	936,200	892,900	95	-29,100	-3	-43,300	-5
Bridgeport Reservoir	21	374,830	278,800	74	-300	0	-14,600	-4
Eagle Mountain Reservoir	22	178,380	146,000	82	1,000	1	-21,500	-12
Benbrook Lake	23	88,200	87,260	99	-680	-1	-940	-1
Joe Pool Lake	24	175,800	175,800	100	0	0	0	0
Ray Roberts Lake	25	798,760	798,760	100	0	0	0	0
Lewisville Lake	26	555,000	555,000	100	0	0	0	0
Grapevine Lake	27	187,700	183,610	98	-2,420	-1	-4,090	-2
Lavon Lake	28	443,800	443,800	100	0	0	0	0
Lake Ray Hubbard	29	413,420	410,500	99	-2,920	-1	-2,920	-1
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	47,710	89	-5,870	-11	-5,510	-10
Hubbard Creek Reservoir	33	317,800	146,300	46	-2,500	-1	26,100	8
Lake Graham	34	45,000	28,390	63	-660	-1	-4,590	-10
Possum Kingdom Lake	35	551,820	465,200	84	-7,200	-1	11,600	2
Lake Palo Pinto	36	27,650	21,530	78	-540	-2	-2,900	-10
Lake Granbury	37	135,680	133,300	98	-300	0	1,900	1
Lake Pat Cleburne	38	25,300	24,700	98	1,260	5	-600	-2
Whitney Lake	39	622,800	491,650	79	21,430	3	-117,350	-19
Waco Lake	40	144,500	144,500	100	0	0	0	0
Proctor Lake	41	55,590	55,590	100	0	0	16,880	30
Belton Lake	42	434,500	434,500	100	0	0	0	0
Stillhouse Hollow Lake	43	226,060	226,060	100	0	0	0	0
Lake Georgetown	44	37,010	37,010	100	0	0	0	0
Granger Lake	45	54,280	54,280	100	0	0	0	0
Lake Limestone	46	215,750	215,750	100	0	0	0	0
Lake Brownwood	47	143,400	131,920	92	-620	0	23,720	17
TOTAL		11,908,050	10,813,470	91	42,750	0	-269,890	-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 March 2003 (acre-feet)	(%)	Change since Late February 2003 (acre-feet)	(%)	Change since Late March 2002 (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	227,110	90	-24,890	-10	-24,890	-10
Lake Fork Reservoir	52	635,200	635,200	100	0	0	0	0
Toledo Bend Reservoir	53	4,472,900	4,344,000	97	-128,900	-3	26,000	1
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	0	0
B. A. Steinhagen Lake	57	94,200	80,700	86	-8,880	-9	25,250	27
Cedar Creek Reservoir	58	637,050	637,050	100	0	0	0	0
Lake Livingston	59	1,750,000	1,735,000	99	-15,000	-1	-15,000	-1
Lake Conroe	60	429,900	413,300	96	-1,400	0	-4,300	-1
TOTAL		12,044,350	11,845,460	98	-179,070	-1	7,060	0
TRANS-PECOS								
Red Bluff Reservoir	61	307,000	60,380	20	630	0	18,850	6
TOTAL		307,000	60,380	20	630	0	18,850	6
EDWARDS PLATEAU								
E. V. Spence Reservoir	62	488,760	37,270	8	-2,530	-1	-17,380	-4
Twin Buttes Reservoir	63	177,800	6,480	4	580	0	-2,420	-1
O.C. Fisher Lake	64	119,200	3,130	3	-160	0	-1,010	-1
O. H. Ivie Reservoir	65	554,340	204,500	37	-3,600	-1	-43,000	-8
Lake Buchanan	66	896,980	895,050	100	8,970	1	103,250	12
Amistad Reservoir (Texas)	67	1,771,030	965,000	54	18,000	1	116,000	7
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	1,118,000	35	26,000	1	127,000	4
TOTAL		4,008,110	2,111,430	53	21,260	1	155,440	4
SOUTH CENTRAL								
Somerville Lake	68	155,060	155,060	100	0	0	0	0
Lake Travis	69	1,144,100	1,144,100	100	0	0	100	0
Canyon Lake	70	385,600	385,600	100	0	0	4,400	1
Coleto Creek Reservoir	71	35,060	31,680	90	20	0	890	3
Medina Lake	72	254,000	254,000	100	0	0	6,400	3
TOTAL		1,973,820	1,970,440	100	20	0	11,790	1
UPPER COAST								
Lake Houston	73	128,860	128,860	100	0	0	0	0
Lake Texana	74	157,900	155,040	98	-2,340	-1	15,240	10
TOTAL		286,760	283,900	99	-2,340	-1	15,240	5

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

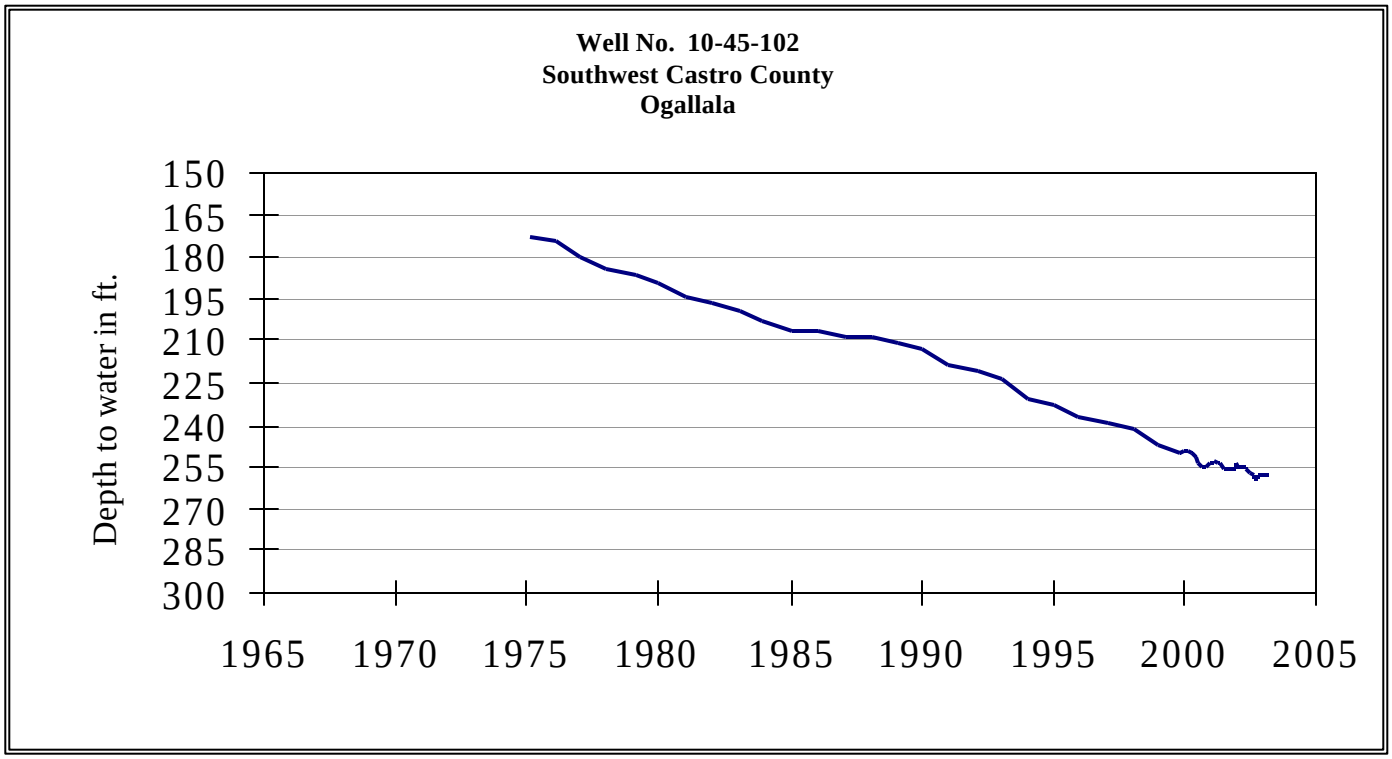
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late March 2003 (acre-feet)	(%)	Change since Late February 2003 (acre-feet)	(%)	Change since Late March 2002 (acre-feet)	(%)
			SOUTHERN					
Choke Canyon Reservoir	75	695,260	695,260	100	2,260	0	429,260	62
Lake Corpus Christi	76	241,240	241,240	100	0	0	15,440	6
Falcon Reservoir (Texas)	77	1,555,120	368,000	24	-10,000	-1	143,000	9
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	730,000	28	3,000	0	404,000	15
TOTAL		2,491,620	1,304,500	52	-7,740	0	587,700	24
STATE TOTAL		34,470,430	28,985,550	84	-135,580	0	574,140	2

Note:

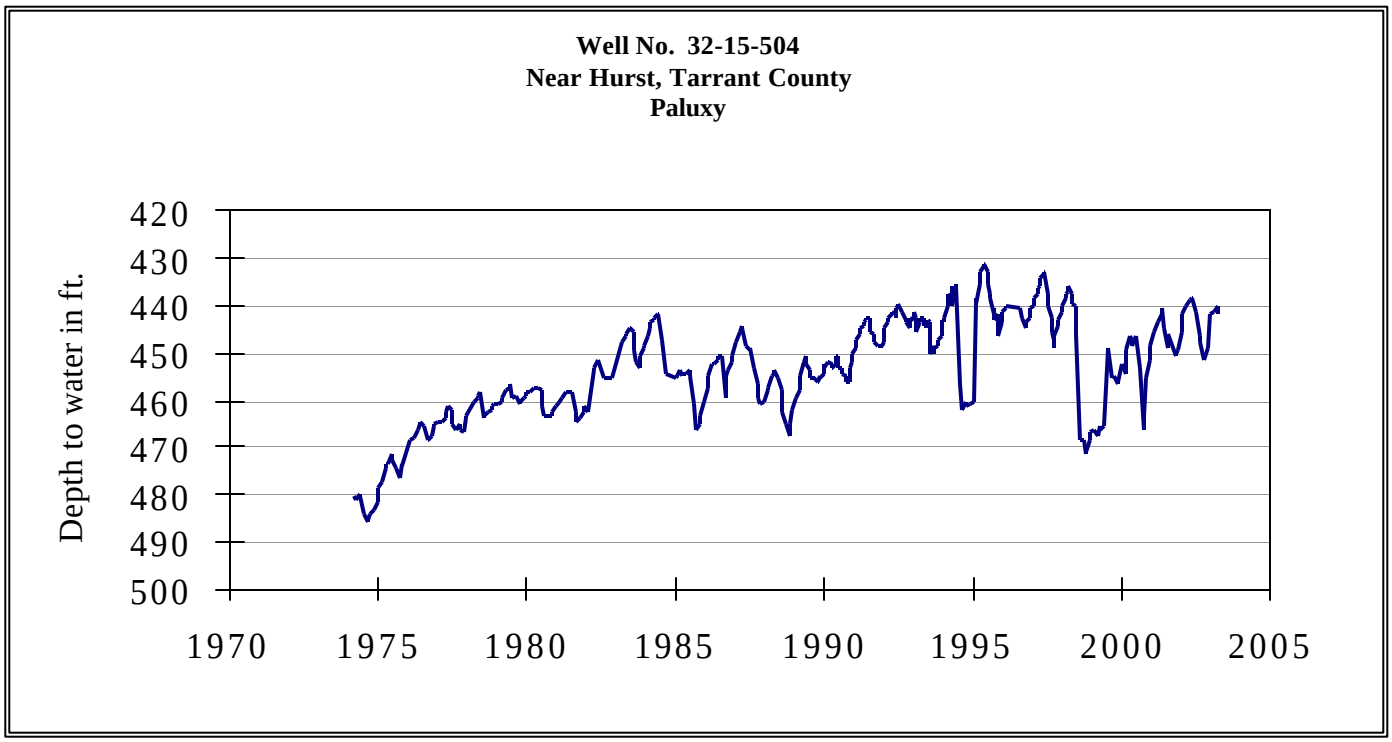
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included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

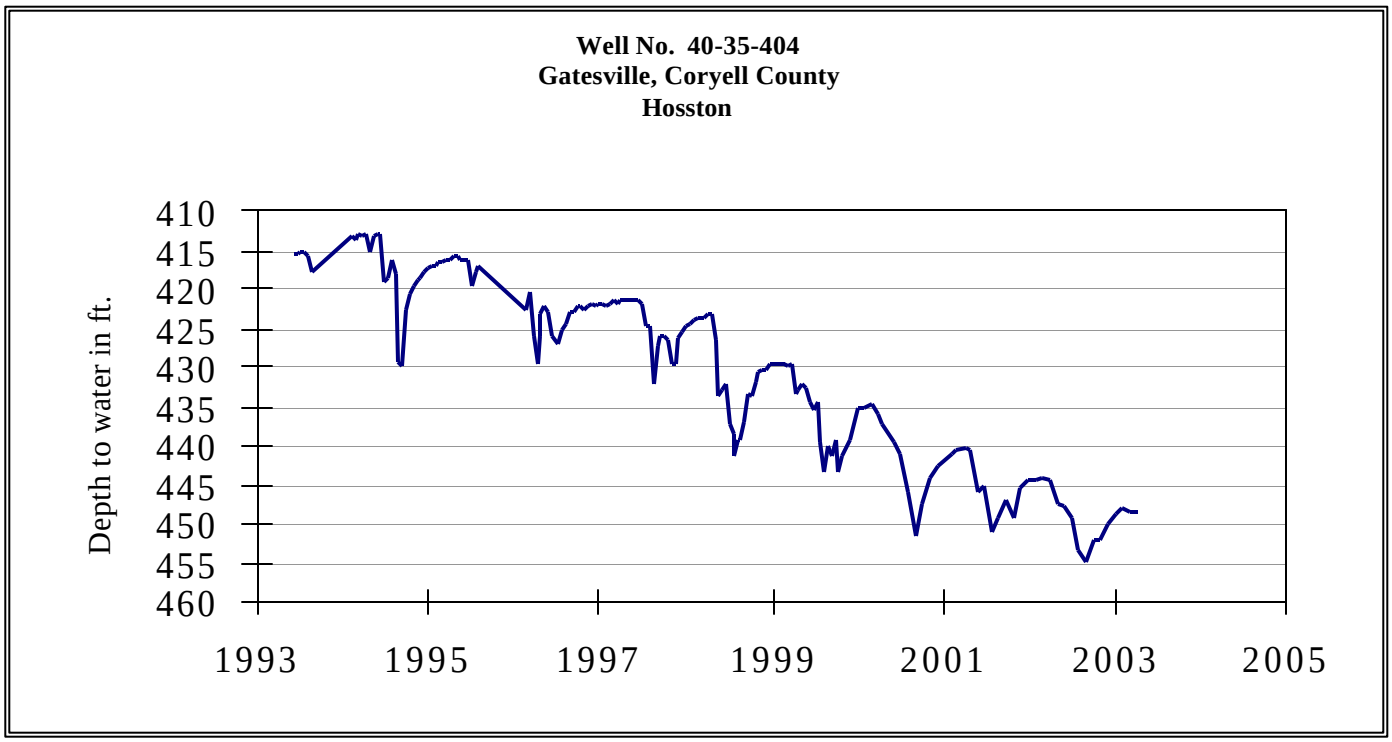
MARCH GROUND WATER LEVELS IN OBSERVATION WELLS



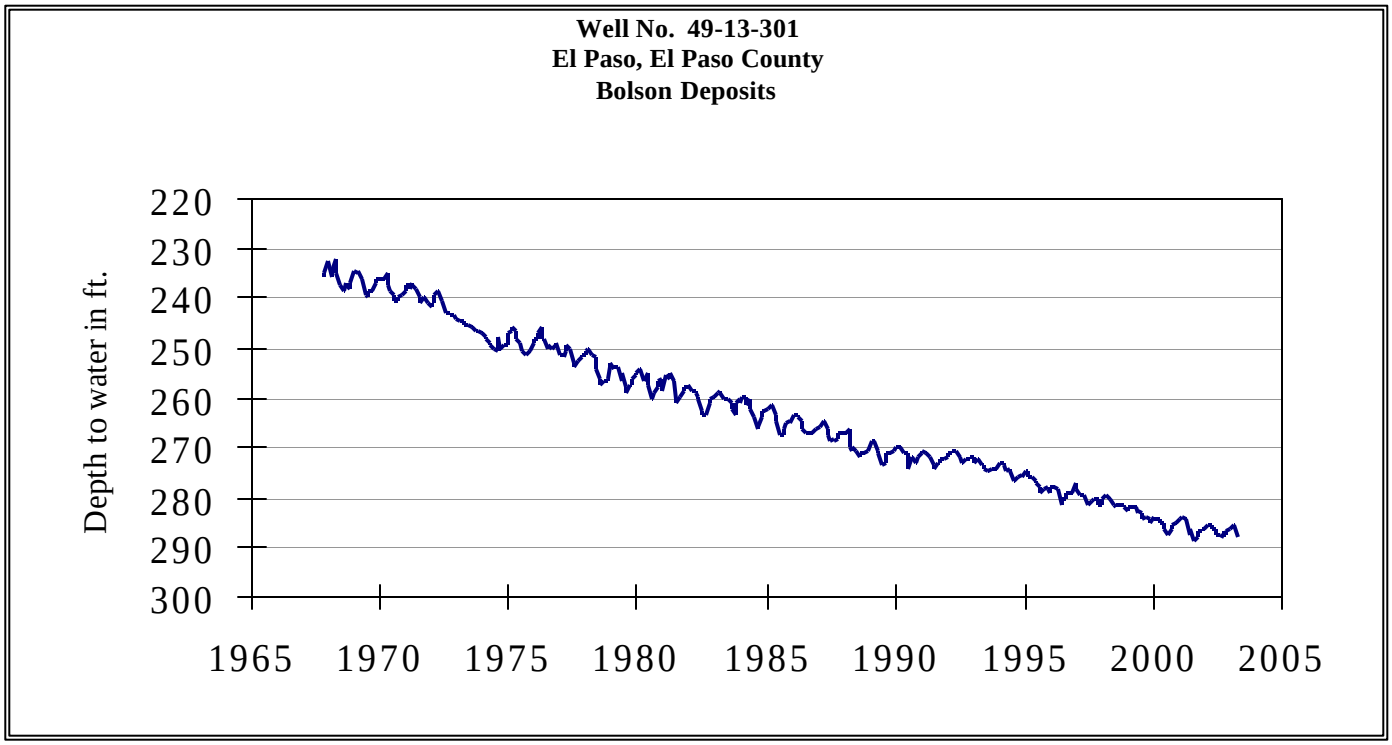
The late March water-level measurement in this Ogallala aquifer well, elevation 3,816 feet above sea level, was 258.32 feet below land surface. This measurement was 0.67 feet below last month's measurement, 3.40 feet below last year's measurement, and 102.32 feet below the initial measurement recorded in 1968.



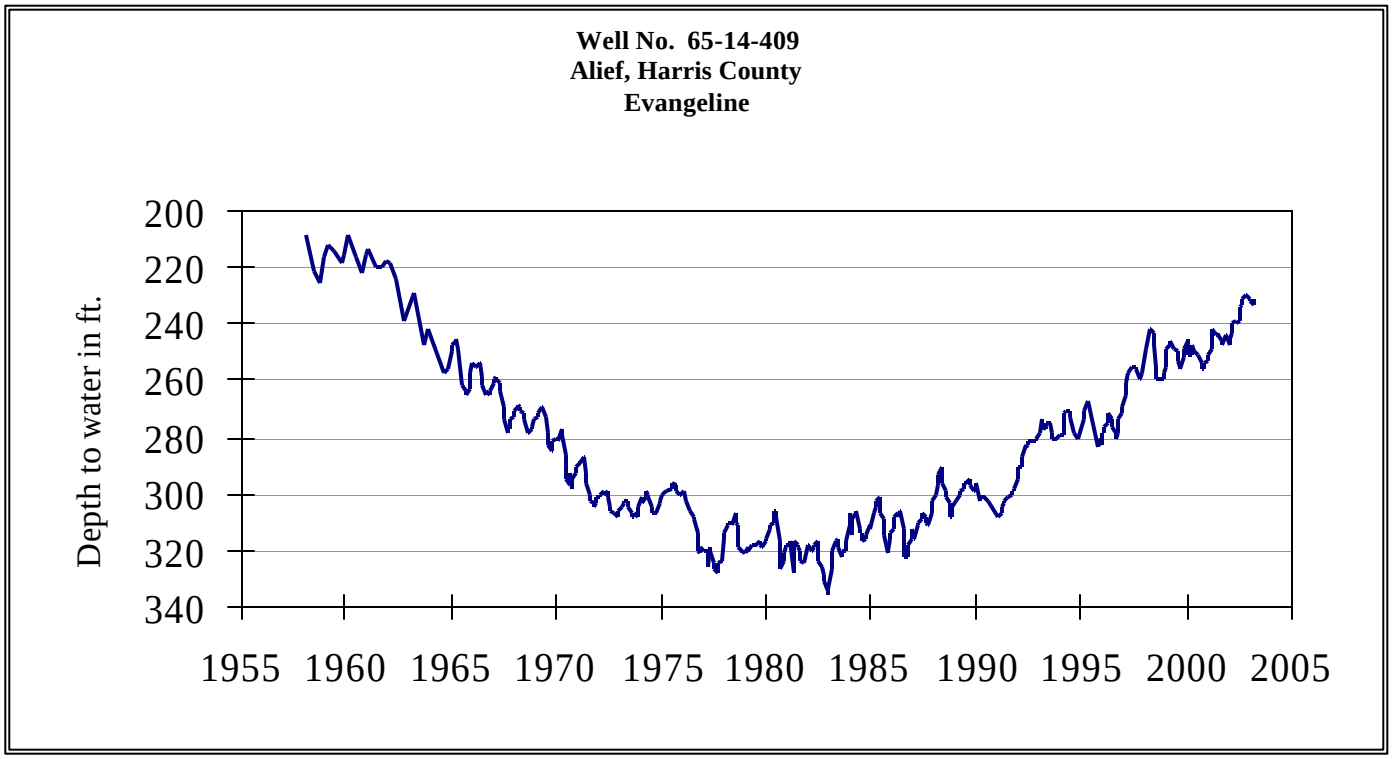
The late March water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 442.21 feet below land surface. This measurement was 2.16 feet below last month's measurement, 3.00 feet below last year's measurement, and 48.82 feet below the initial measurement recorded in 1953.



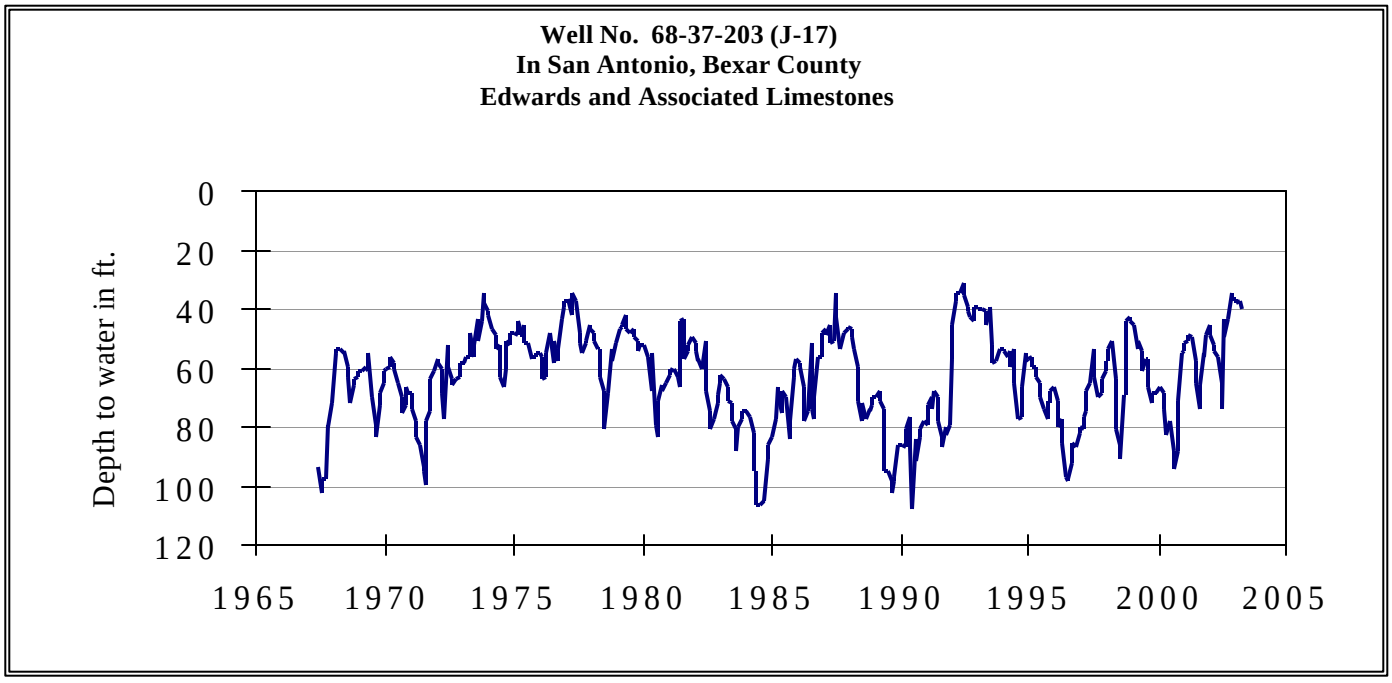
The late March water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 448.54 feet below land surface. This measurement was 0.16 feet below last month's measurement, 4.09 feet below last year's measurement, and 156.54 feet below the initial measurement recorded in 1955.



The late March water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 287.75 feet below land surface. This was 1.92 feet below last month's measurement, 2.37 feet below last year's measurement, and 55.85 feet below the initial measurement recorded in 1964.

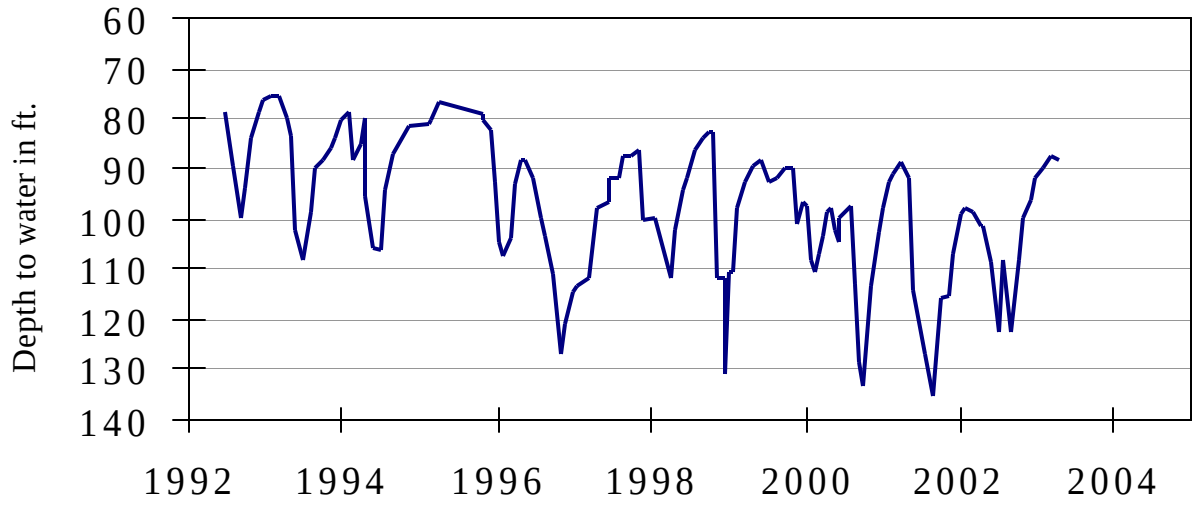


The late March water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 230.81 feet below land surface. This was 2.42 feet above last month's measurement, 9.15 feet above last year's measurement, and 127.58 feet below the initial measurement recorded in 1947.



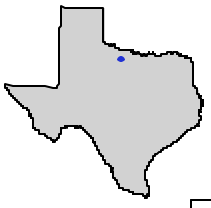
The late March water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 39.79 feet below land surface. This was 2.25 feet below last month's measurement, 14.57 feet above last year's measurement, and 19.83 feet above the initial measurement recorded in 1962.

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



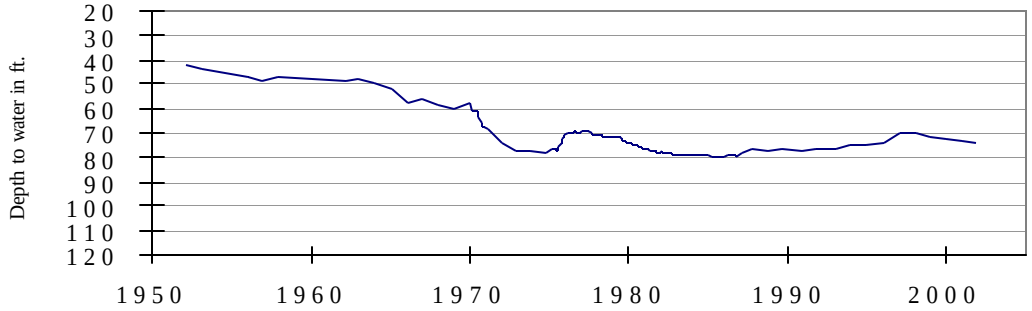
The late March water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 88.11 feet below land surface. This measurement was 0.27 feet below last month's measurement, 13.66 feet above last year's measurement, and 6.86 feet below the initial measurement recorded in 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. 1346504
Wilbarger County



This 120 ft. deep water level observation well, located 12 miles north of the city of Vernon, at an elevation of 1,409 feet above sea level, was completed in the Seymour aquifer. Water levels have remained fairly consistent since the 1980's indicating that aquifer withdraw/recharge rates are in equilibrium. This is very important because additional future surface water supplies are unlikely in the Seymour area.

TEXAS WATER DEVELOPMENT BOARD
1700 N. CONGRESS AVE.
P.O. BOX 13231
AUSTIN TX 78711-3231