

Texas Water Development Board



WATER Conditions

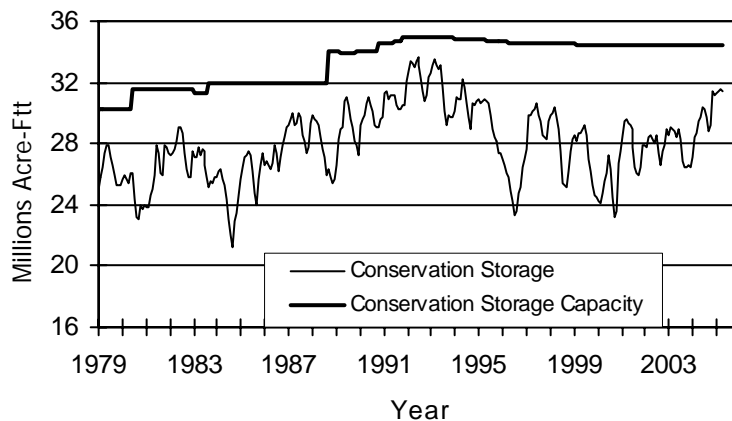
RESERVOIR STORAGE

April 2005

Near the end of April, the 77 reservoirs monitored for this report held 31.45 million acre-feet in conservation storage, or **91.2** percent of the conservation storage capacity of the state's major reservoirs. Storage decreased during the month by 0.15 million acre-feet (0.45% of conservation storage capacity). Compared to last year, storage increased by 1.95 million acre-feet (6%).

Storage was at capacity (100%) in the South Central Region, near capacity in the East (98%), Upper Coast (97%), Edwards Plateau (96%), and North Central (92%) Regions, but lower than one-third of capacity in the High Plains (31%) Region. Storage was at 100% in 32 reservoirs, and the Texas share of Amistad continued to remain above its capacity, reaching 144%. Compared to this time last year, all Regions except three had increases in storage with the greatest increase in the Edwards Plateau Region (+29%). Storage in the East and South Central Regions remained unchanged, and storage in Upper Cost Region had a decrease of 3%.

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.

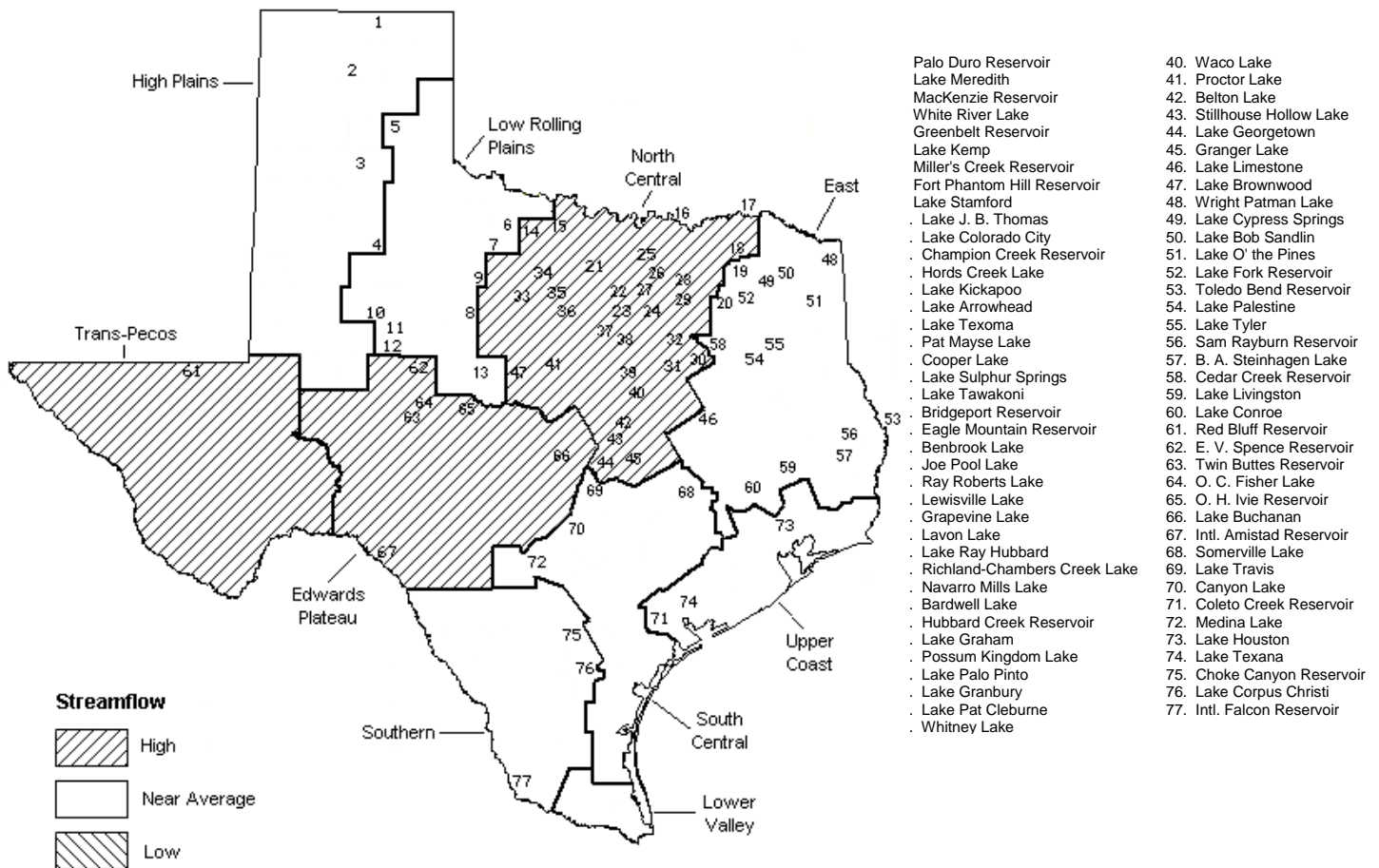
STREAMFLOW

Of 29 reporting index stations in April, computed 30-day mean flows were high (5% - 30% exceedance) at 11 stations, low (70% - 95%) at 1 station, and near normal (30% - 70% exceedance) at 17 stations. Compared to March, flows have increased at 4 index stations and decreased at 25 stations.

On a regional basis, flows in April were high in the North Central, Trans-Pecos, and Edwards Plateau Regions and normal everywhere else. Streamflow in the Lower Valley Region is not monitored.

APRIL STREAMFLOW CONDITIONS

Reservoirs Shown on Map



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. 2005 (acre-feet) (%)	Late March 2005 (acre-feet) (%)	Late April 2004 (acre-feet) (%)			
HIGH PLAINS								
Palo Duro Reservoir	1	60,900	3,840	6	-260	0	1,510	2
Lake Meredith (Texas)	2	500,000	172,710	35	-3,060	-1	31,980	6
Lake Meredith (Texas and Oklahoma)	(2)	779,560	172,710	22	-3,060	0	31,980	4
MacKenzie Reservoir	3	46,250	9,870	21	-140	0	4,140	9
White River Lake	4	31,850	9,600	30	-430	-1	2,350	7
TOTAL		639,000	196,020	31	-3,890	-1	39,980	6
LOW ROLLING PLAINS								
Greenbelt Reservoir	5	58,200	23,920	41	210	0	-1,320	-2
Lake Kemp	6	319,600	246,810	77	-7,510	-2	63,960	20
Miller's Creek Reservoir	7	27,890	20,580	74	-790	-3	8,870	32
Fort Phantom Hill Reservoir	8	70,030	62,690	90	-2,910	-4	29,930	43
Lake Stamford	9	52,700	33,260	63	-1,900	-4	1,130	2
Lake J. B. Thomas	10	202,300	56,850	28	-2,630	-1	32,770	16
Lake Colorado City	11	30,800	29,890	97	-740	-2	6,210	20
Champion Creek Reservoir	12	41,600	5,000	12	-130	0	1,410	3
Hords Creek Lake	13	8,600	8,090	94	-330	-4	5,290	62
TOTAL		811,720	487,090	60	-16,730	-2	148,250	18
NORTH CENTRAL								
Lake Kickapoo	14	106,000	68,670	65	-3,130	-3	9,280	9
Lake Arrowhead	15	262,100	188,710	72	-6,040	-2	69,700	27
Lake Texoma	16	2,722,300	2,240,420	82	-72,270	-3	-238,210	-9
Pat Mayse Lake	17	124,500	120,590	97	-3,220	-3	2,430	2
Cooper Lake	18	273,000	273,000	100	0	0	56,870	21
Lake Sulphur Springs	19	17,710	17,710	100	0	0	2,110	12
Lake Tawakoni	20	936,200	866,900	93	-14,100	-2	5,300	1
Bridgeport Reservoir	21	374,830	348,100	93	-3,600	-1	117,900	31
Eagle Mountain Reservoir	22	178,380	176,100	99	-2,280	-1	25,400	14
Benbrook Lake	23	88,200	84,240	96	-3,960	-4	980	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	40,660	5
Lewisville Lake	26	555,000	555,000	100	0	0	0	0
Grapevine Lake	27	187,700	181,550	97	220	0	4,040	2
Lavon Lake	28	443,800	443,800	100	0	0	34,930	8
Lake Ray Hubbard	29	413,420	413,300	100	0	0	37,200	9
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	47,920	89	1,010	2	-5,660	-11
Hubbard Creek Reservoir	33	317,800	182,310	57	-4,110	-1	50,450	16
Lake Graham	34	45,000	39,890	89	-980	-2	16,480	37
Possum Kingdom Lake	35	551,820	487,800	88	-19,600	-4	45,400	8
Lake Palo Pinto	36	27,650	25,400	92	-1,240	-4	8,170	30
Lake Granbury	37	135,680	133,100	98	1,200	1	-500	0
Lake Pat Cleburne	38	25,300	25,300	100	0	0	0	0
Whitney Lake	39	622,800	594,140	95	10,180	2	37,280	6
Waco Lake	40	144,500	144,500	100	0	0	0	0
Proctor Lake	41	55,590	55,590	100	0	0	2,220	4
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	8,820	24
Granger Lake	45	54,280	54,280	100	0	0	0	0
Lake Limestone	46	215,750	213,900	99	-260	0	-130	0
Lake Brownwood	47	143,400	131,640	92	-2,570	-2	-2,080	-1
TOTAL		11,908,050	10,945,620	92	-124,750	-1	329,040	3

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. 2005 (acre-feet) (%)	Change since Late March 2005 (acre-feet) (%)	Change since Late April 2004 (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	241,480 96	-7,360 -3	-10,520 -4
Lake Fork Reservoir	52	635,200	635,200 100	0 0	0 0
Toledo Bend Reservoir	53	4,472,900	4,259,000 95	94,000 2	2,000 0
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	83,740 89	-650 -1	-2,210 -2
Cedar Creek Reservoir	58	637,050	636,900 100	0 0	27,600 4
Lake Livingston	59	1,750,000	1,748,000 100	-2,000 0	-2,000 0
Lake Conroe	60	429,900	414,900 97	-2,700 -1	-1,100 0
TOTAL		12,044,350	11,792,320 98	81,290 1	13,770 0
TRANS-PECOS					
Red Bluff Reservoir	61	307,000	128,300 42	-1,570 -1	35,210 11
TOTAL		307,000	128,300 42	-1,570 -1	35,210 11
EDWARDS PLATEAU					
E. V. Spence Reservoir	62	488,760	74,540 15	-2,670 -1	25,400 5
Twin Buttes Reservoir	63	177,800	39,620 22	800 0	33,800 19
O.C. Fisher Lake	64	119,200	7,010 6	-330 0	4,240 4
O. H. Ivie Reservoir	65	554,340	316,600 57	-1,800 0	121,290 22
Lake Buchanan	66	896,980	868,350 97	-19,950 -2	2,220 0
Amistad Reservoir (Texas)	67	1,771,030	2,554,000 144	-44,000 -2	989,000 56
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	2,920,000 93	-47,000 -1	1,162,000 37
TOTAL		4,008,110	3,860,120 96	-67,950 -2	1,175,950 29
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	0 0
Canyon Lake	70	385,600	385,600 100	6,340 2	0 0
Coleta Creek Reservoir	71	35,060	31,930 91	-110 0	110 0
Medina Lake	72	254,000	254,000 100	0 0	0 0
TOTAL		1,973,820	1,970,690 100	6,230 0	110 0
UPPER COAST					
Lake Houston	73	128,860	128,860 100	0 0	0 0
Lake Texana	74	157,900	150,240 95	-6,320 -4	-7,240 -5
TOTAL		286,760	279,100 97	-6,320 -2	-7,240 -3

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

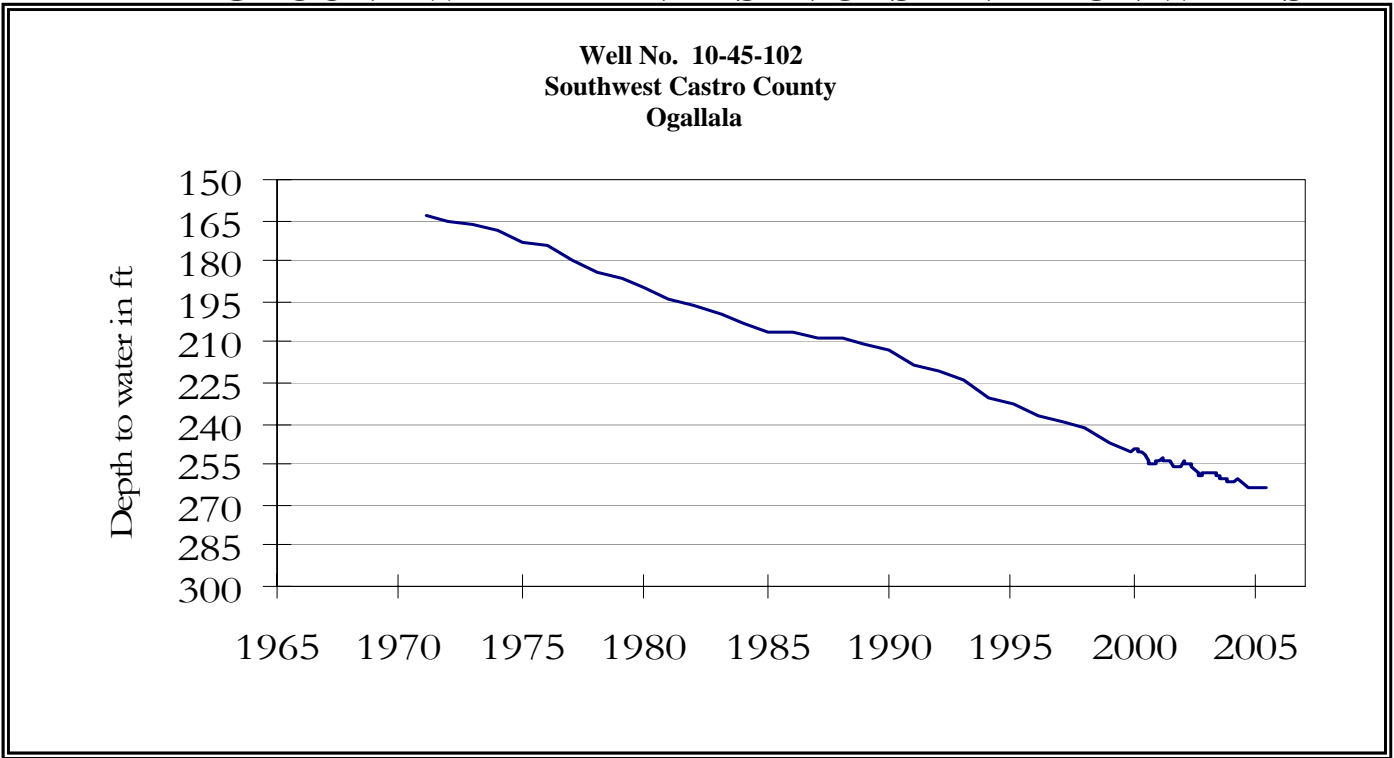
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late Apr. 2005 (acre-feet) (%)	Change since Late March 2005 (acre-feet) (%)	Change since Late April 2004 (acre-feet) (%)
SOUTHERN					
Choke Canyon Reservoir	75	695,260	692,000 100	1,000 0	-1,000 0
Lake Corpus Christi	76	241,240	241,240 100	0 0	0 0
Falcon Reservoir (Texas)	77	1,555,120	856,000 55	-22,000 -1	219,000 14
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	1,440,000 54	-414,000 -16	-62,000 -2
TOTAL		2,491,620	1,789,240 72	-21,000 -1	218,000 9
 STATE TOTAL		 34,470,430	 31,448,500 91	 -154,690 0	 1,953,070 6

Note:

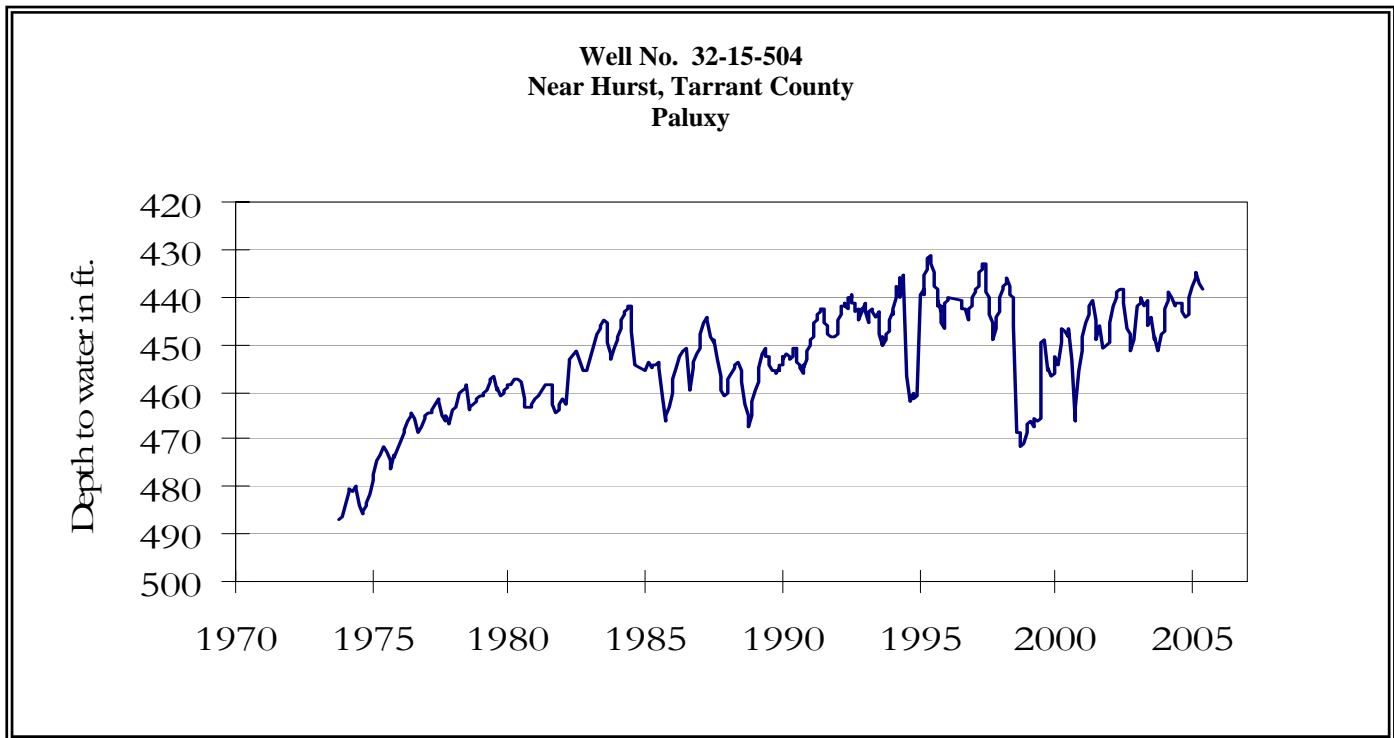
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included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

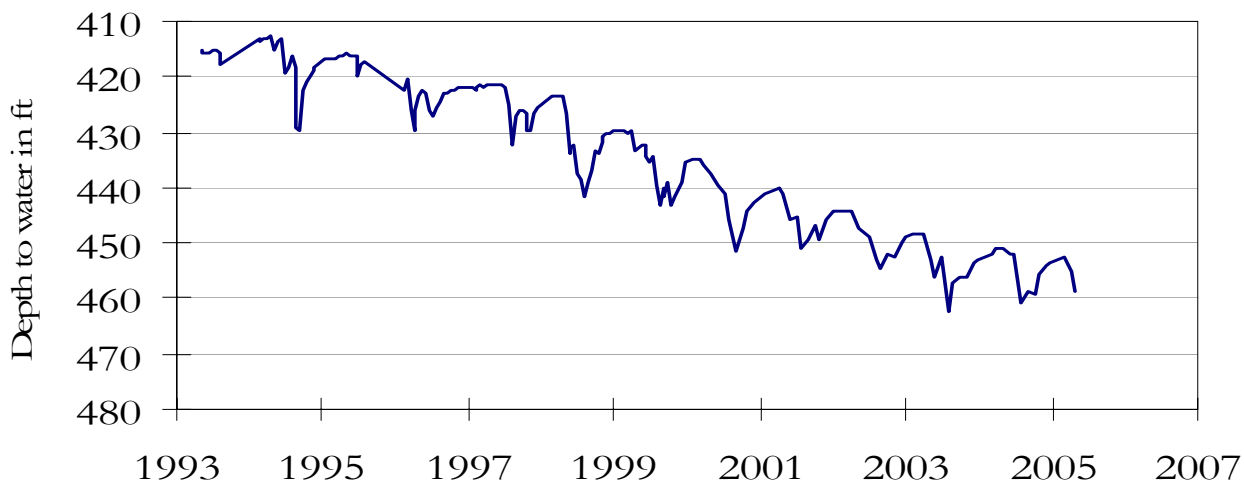


The late April water-level measurement in this Ogallala aquifer well, elevation 3,816 feet above sea level, was 263.37 feet below land surface. This measurement was 0.04 foot below last month's measurement, 2.07 feet below last year's measurement, and 107.37 feet below the initial measurement recorded in 1968.



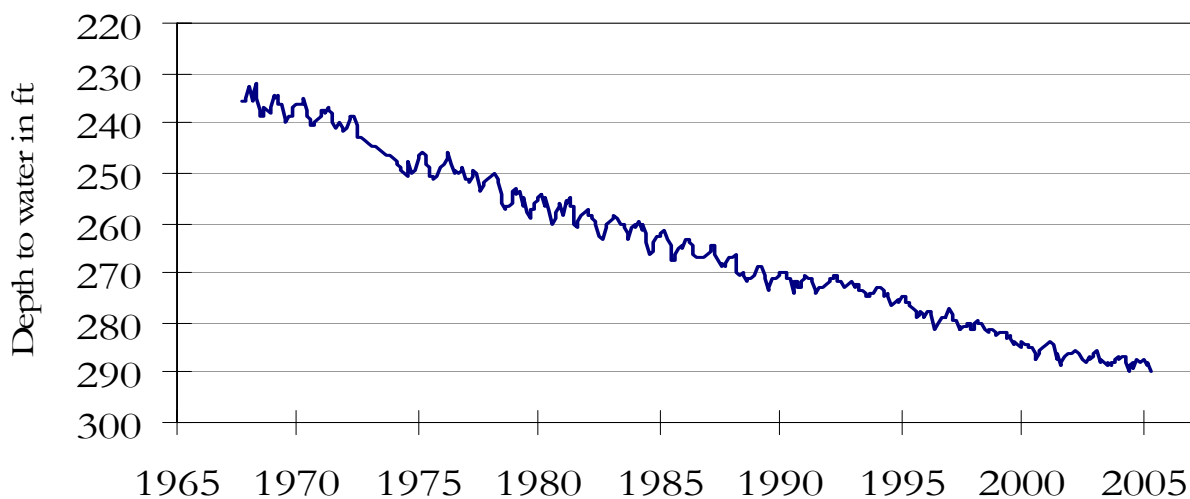
The late April water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 438.64 feet below land surface. This measurement was 1.20 feet below last month's measurement, 3.56 feet above last year's measurement, and 60.64 feet below the initial measurement recorded in 1955. The initial measurement used in previous monthly reports has been revised to 378.0 from 393.39 feet below land surface.

**Well No. 40-35-404
Gatesville, Coryell County
Hosston/Trinity**



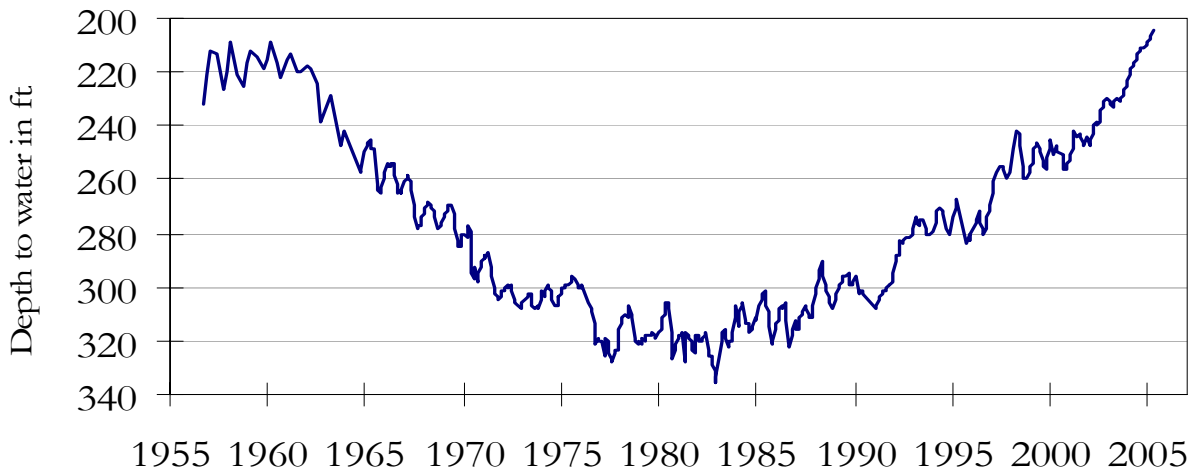
The late April water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 458.91 feet below land surface. This water level was 4.01 feet below last month's measurement, 7.71 feet below last year's measurement, and 166.91 feet below the initial measurement recorded in 1955.

**Well No. 49-13-301
El Paso, El Paso County
Bolson Deposits**



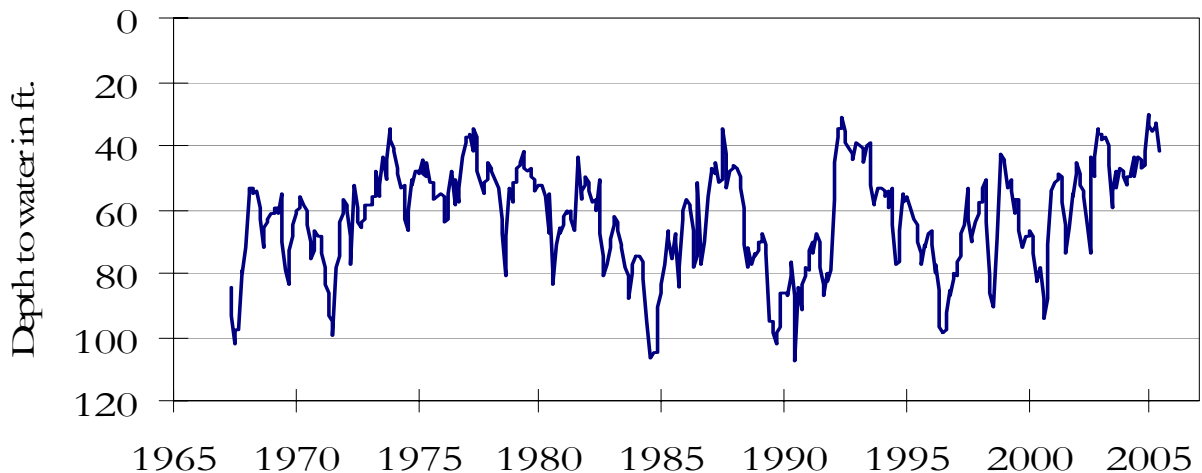
The late April water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 289.83 feet below land surface. This was 1.22 feet below last month's measurement, 2.03 feet below last year's measurement, and 57.93 feet below the initial measurement recorded in 1964.

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



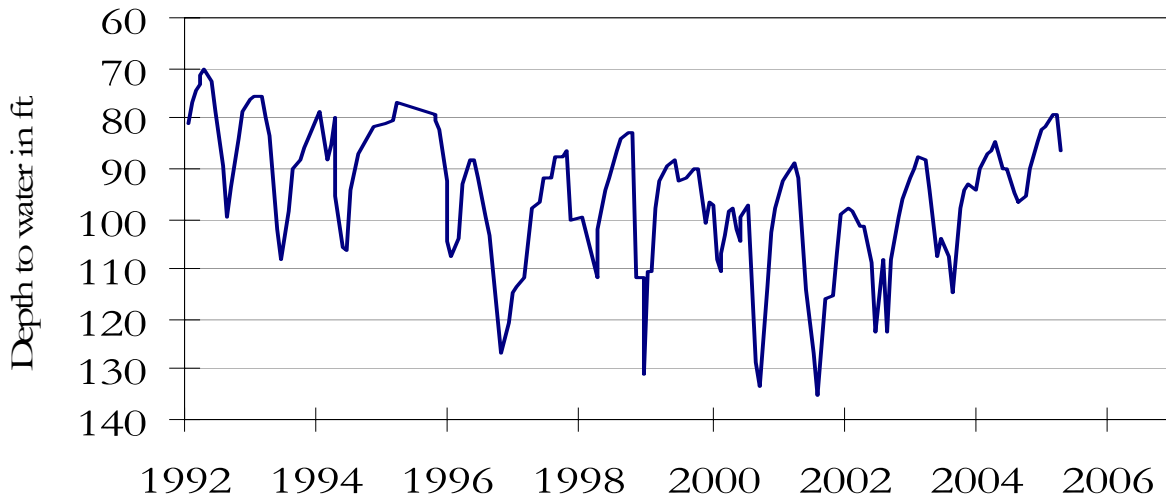
The late April water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 204.09 feet below land surface. This was 0.64 foot above last month's measurement, 11.91 feet above last year's measurement, and 68.59 feet below the initial measurement recorded in 1947. The initial measurement used in previous monthly reports has been revised to 135.5 from 103.23 feet below land surface.

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



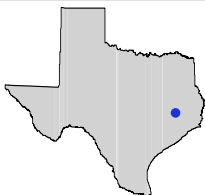
The late April water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 41.82 feet below land surface. This was 8.74 feet below last month's measurement, 1.38 feet above last year's measurement, and 4.82 feet above the initial measurement recorded in 1932. The initial measurement used in previous monthly reports has been revised to 59.62 from 46.64 feet below land surface.

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



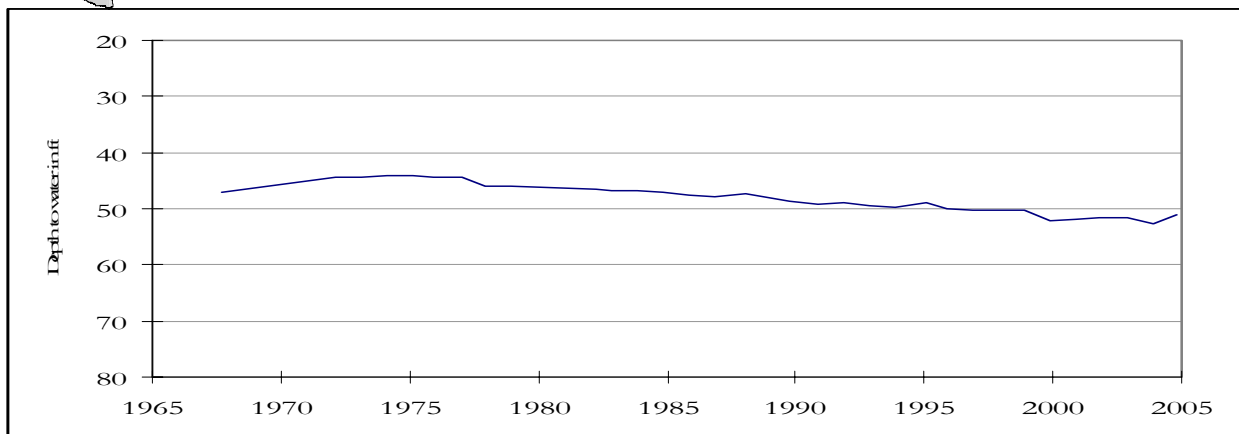
The late April water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 86.40 feet below land surface. This measurement was 7.03 feet below last month's measurement, 1.51 feet below last year's measurement, and 51.04 feet below the initial measurement recorded in 1965. The initial measurement used in previous monthly reports has been revised to 35.36 from 81.25 feet below land surface.

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. 37-43-902
Angelina County**



This water level observation well, located 7 miles southeast of Lufkin, at an elevation of 295 feet ASL, was completed in the Yegua Aquifer. Yields from most wells are small, less than 50 gals./min. Water quality varies greatly within the aquifer. As indicated by the graph, pumping volumes are less than annual recharge amounts.

April, 2005

Water levels declined in six of the seven key monitoring wells since the beginning of April, ranging from 0.04 feet in the Castro County Ogallala well to 8.74 feet in the Bexar County Edwards well. The water level rose 0.64 feet in the Harris Co. Evangeline well. The J-17 well recorded a water level of 41.82 feet below the land surface, a decline of 8.74 feet from the March 2005 measurement. This water level is approximately thirty-eight (38) feet above the Stage I critical water management criteria.

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