

# Texas Water Development Board



**W** *Conditions* **ATERS**

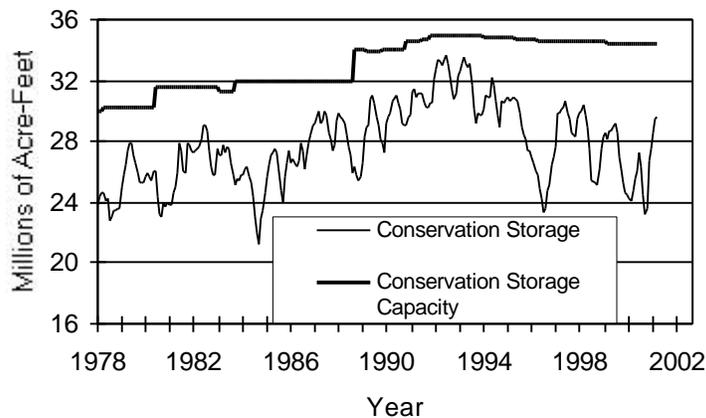
## RESERVOIR STORAGE

*March 2001*

Near the end of March, the 77 reservoirs monitored for this report held 29.7 million acre-feet in conservation storage, or 86.0 percent of the conservation storage capacity of the State's major reservoirs. Statewide total storage remains just below normal for this time of year. Storage increased by 0.18 million acre-feet (+0.5% of conservation storage capacity) during the month. Compared to March 2000, storage is up 4.92 million acre-feet (+14.3%). Statewide storage was steady at the end of the month

For the month, storage in only the Southern (-0.5%) climatic region decreased. The North Central (96.6%), East (99.8%), South Central (98.7%), and Upper Coast (99.8%) regions are all near capacity, while the Trans-Pecos (24.3%), and Southern (26.4%) regions remained below 30%. Storage is at 100% in 42 reservoirs, 4 more than last month. Storage in the High Plains (-9.2%), Trans-Pecos (-4.9%), and Southern (-0.4%) regions is down relative to this time last year.

### 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.

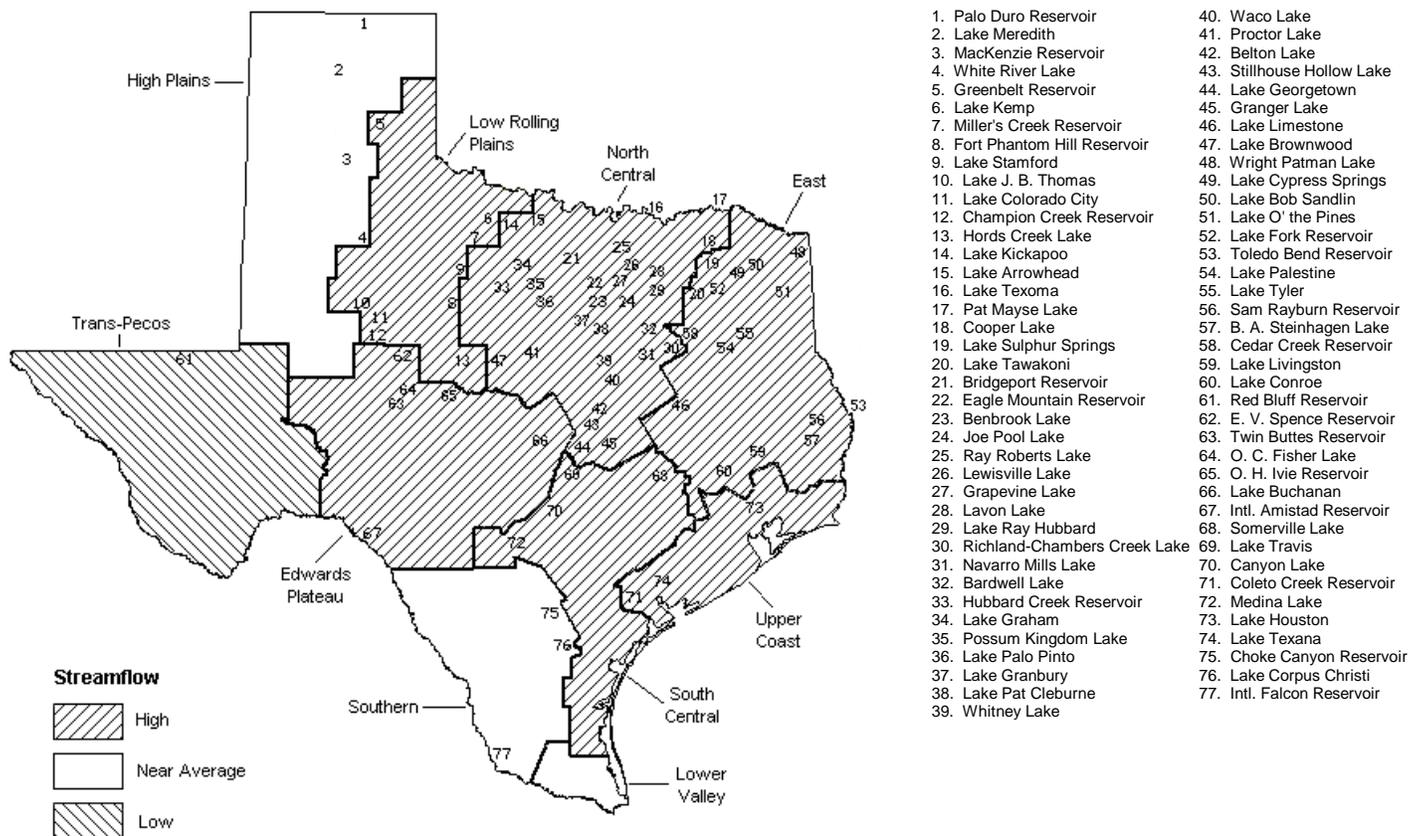
# STREAMFLOW

Of 29 reporting index stations in February, computed 30-day mean flows were very high (0% - 5% exceedance) at 6 stations, high (5% - 30% exceedance) at 15 stations, near normal (30% - 70% exceedance) at 6 stations, and low (70% - 95% exceedance) at 2 stations. In comparison to February, flows increased at 22 index stations and decreased at 7.

On a regional basis, flows in March were very high in East Texas. Four of five index stations in the East region were very high, with two at or exceeding the 1% exceedance flow. All other regions were under high flow conditions except the High Plains and Southern regions (near normal), and the Trans-Pecos region (low). Again this month, low flows were reported at only the Pecos River near Girvin and Atascosa River at Whitsett stations.

## MARCH 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 March 2001 (acre-feet) (%)	Late February 2001 (acre-feet) (%)	Late March 2000 (acre-feet) (%)			
<b>HIGH PLAINS</b>								
Palo Duro Reservoir	1	60,900	11,870 19	-320 -1	-4,062 -7			
Lake Meredith (Texas)	2	500,000	349,700 70	12,500 3	-49,900 -10			
Lake Meredith (Texas and Oklahoma)	(2)	779,560	349,700 45	12,500 2	-49,900 -6			
MacKenzie Reservoir	3	46,250	8,570 19	640 1	-790 -2			
White River Lake	4	31,850	11,860 37	310 1	-4,160 -13			
TOTAL		639,000	382,000 60	13,130 2	-58,912 -9			
<b>LOW ROLLING PLAINS</b>								
Greenbelt Reservoir	5	58,200	24,550 42	400 1	2,060 4			
Lake Kemp	6	319,600	190,900 60	30,600 10	22,100 7			
Miller's Creek Reservoir	7	27,890	14,110 51	4,290 15	3,310 12			
Fort Phantom Hill Reservoir	8	70,030	40,110 57	380 1	16,730 24			
Lake Stamford	9	52,700	17,920 34	5,580 11	7,400 14			
Lake J. B. Thomas	10	202,300	24,840 12	-310 0	-6,820 -3			
Lake Colorado City	11	30,800	20,620 67	-240 -1	-8,490 -28			
Champion Creek Reservoir	12	41,600	4,380 11	-80 0	-900 -2			
Hords Creek Lake	13	8,600	4,470 52	80 1	1,472 17			
TOTAL		811,720	341,900 42	40,700 5	36,862 5			
<b>NORTH CENTRAL</b>								
Lake Kickapoo	14	106,000	100,300 95	26,910 25	47,519 45			
Lake Arrowhead	15	262,100	203,200 78	40,400 15	77,700 30			
Lake Texoma	16	2,722,300	2,588,000 95	-134,300 -5	146,491 5			
Pat Mayse Lake	17	124,500	124,500 100	0 0	6,858 6			
Cooper Lake	18	273,000	273,000 100	0 0	9,227 3			
Lake Sulphur Springs	19	17,710	17,710 100	0 0	0 0			
Lake Tawakoni	20	936,200	936,200 100	0 0	185,000 20			
Bridgeport Reservoir	21	374,830	374,800 100	61,300 16	165,563 44			
Eagle Mountain Reservoir	22	178,380	178,380 100	0 0	46,468 26			
Benbrook Lake	23	88,200	88,200 100	0 0	13,980 16			
Joe Pool Lake	24	175,800	175,800 100	0 0	15,786 9			
Ray Roberts Lake	25	798,760	798,760 100	21,560 3	229,021 29			
Lewisville Lake	26	555,000	555,000 100	0 0	213,811 39			
Grapevine Lake	27	187,700	187,700 100	0 0	58,382 31			
Lavon Lake	28	443,800	443,800 100	0 0	111,652 25			
Lake Ray Hubbard	29	413,420	413,100 100	-320 0	-320 0			
Richland-Chambers Creek Lake	30	1,103,820	1,103,820 100	0 0	158,302 14			
Navarro Mills Lake	31	55,810	55,810 100	0 0	15,818 28			
Bardwell Lake	32	53,580	53,580 100	0 0	11,385 21			
Hubbard Creek Reservoir	33	317,800	159,800 50	3,100 1	-30,800 -10			
Lake Graham	34	45,000	45,000 100	0 0	6,780 15			
Possum Kingdom Lake	35	551,820	530,500 96	-4,700 -1	69,200 13			
Lake Palo Pinto	36	27,650	26,910 97	-260 -1	-533 -2			
Lake Granbury	37	135,680	128,100 94	2,500 2	9,000 7			
Lake Pat Cleburne	38	25,300	25,300 100	0 0	9,446 37			
Whitney Lake	39	622,800	622,800 100	0 0	193,200 31			
Waco Lake	40	144,500	144,500 100	0 0	30,995 21			
Proctor Lake	41	55,590	55,590 100	18,710 34	36,199 65			
Belton Lake	42	434,500	434,500 100	0 0	63,699 15			
Stillhouse Hollow Lake	43	226,060	226,060 100	0 0	15,825 7			
Lake Georgetown	44	37,010	37,010 100	0 0	13,048 35			
Granger Lake	45	54,280	54,280 100	0 0	1,141 2			
Lake Limestone	46	215,750	215,750 100	150 0	42,850 20			
Lake Brownwood	47	143,400	129,200 90	8,200 6	49,150 34			
TOTAL		11,908,050	11,506,960 97	43,250 0	2,021,843 17			

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage		Change since Late February 2001		Change since Late March 2000		
			Late March 2001 (acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)	(%)	
<b>EAST</b>									
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	14,700	7	
Lake O' the Pines	51	252,000	252,000	100	0	0	0	0	
Lake Fork Reservoir	52	635,200	635,200	100	0	0	30,100	5	
Toledo Bend Reservoir	53	4,472,900	4,472,900	100	0	0	860,900	19	
Lake Palestine	54	411,300	411,300	100	0	0	35,900	9	
Lake Tyler	55	73,700	73,700	100	0	0	12,105	16	
Sam Rayburn Reservoir	56	2,876,300	2,876,300	100	0	0	961,300	33	
B. A. Steinhagen Lake	57	94,200	73,970	79	-1,740	-2	18,389	20	
Cedar Creek Reservoir	58	637,050	637,050	100	0	0	88,975	14	
Lake Livingston	59	1,750,000	1,750,000	100	0	0	0	0	
Lake Conroe	60	429,900	423,300	98	4,200	1	51,000	12	
TOTAL		12,044,350	12,017,520	100	2,460	0	2,073,369	17	
<b>TRANS-PECOS</b>									
Red Bluff Reservoir	61	307,000	74,720	24	2,920	1	-15,190	-5	
TOTAL		307,000	74,720	24	2,920	1	-15,190	-5	
<b>EDWARDS PLATEAU</b>									
E. V. Spence Reservoir	62	488,760	81,940	17	-1,640	0	-16,620	-3	
Twin Buttes Reservoir	63	177,800	10,020	6	690	0	4,409	2	
O.C. Fisher Lake	64	119,200	9,000	8	-840	-1	-5,680	-5	
O. H. Ivie Reservoir	65	554,340	319,600	58	700	0	18,200	3	
Lake Buchanan	66	896,980	838,900	94	51,300	6	231,482	26	
Amistad Reservoir (Texas)	67	1,771,030	1,185,000	67	18,000	1	137,000	8	
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	1,380,000	44	18,000	1	-38,000	-1	
TOTAL		4,008,110	2,444,460	61	68,210	2	368,791	9	
<b>SOUTH CENTRAL</b>									
Somerville Lake	68	155,060	155,060	100	0	0	35,950	23	
Lake Travis	69	1,144,100	1,144,100	100	0	0	326,053	28	
Canyon Lake	70	385,600	385,600	100	0	0	30,564	8	
Coletto Creek Reservoir	71	35,060	31,580	90	430	1	3,590	10	
Medina Lake	72	254,000	232,300	91	18,500	7	53,000	21	
TOTAL		1,973,820	1,948,640	99	18,930	1	449,157	23	
<b>UPPER COAST</b>									
Lake Houston	73	128,860	128,860	100	0	0	17,460	14	
Lake Texana	74	157,900	157,200	100	2,600	2	38,700	25	
TOTAL		286,760	286,060	100	2,600	1	56,160	20	

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

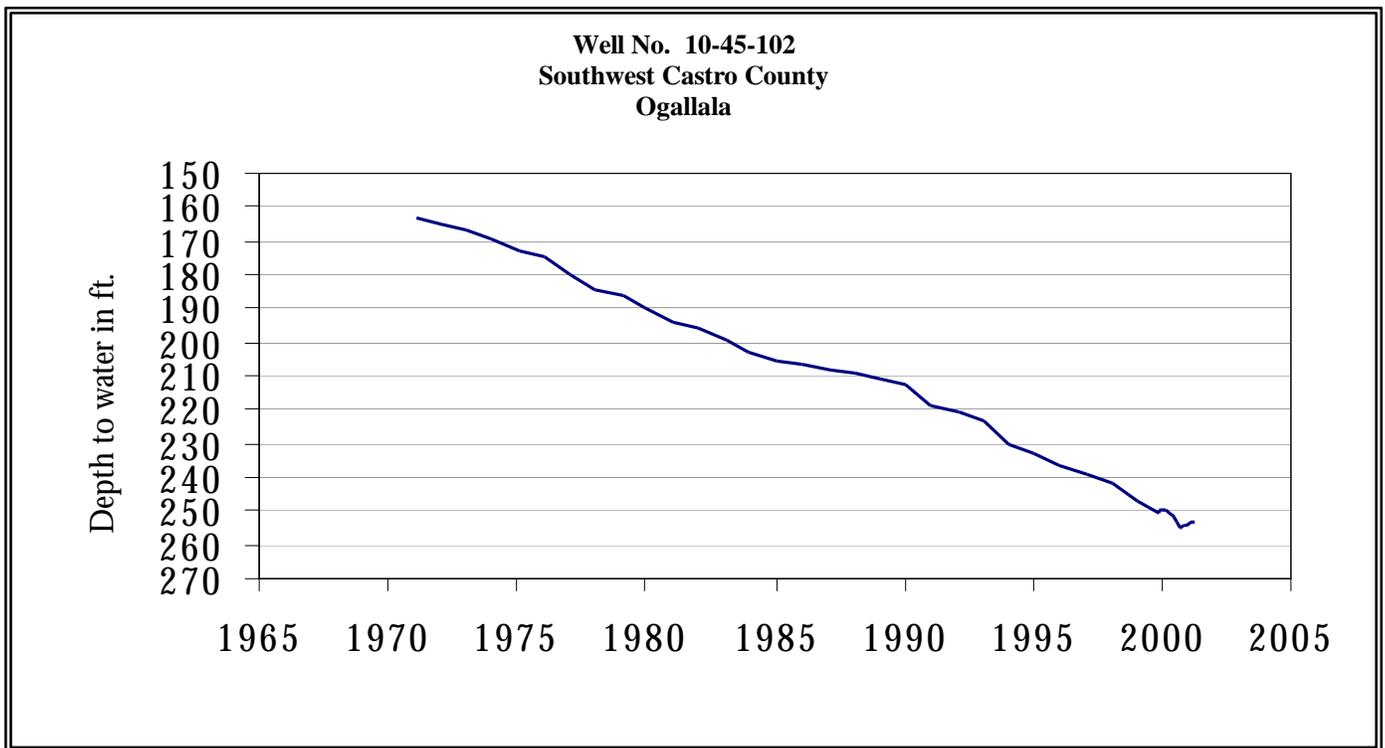
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late March 2001 (acre-feet)	(%)	Change since Late February 2001 (acre-feet)	(%)	Change since Late March 2000 (acre-feet)	(%)
<b>SOUTHERN</b>								
Choke Canyon Reservoir	75	695,260	270,000	39	-2,000	0	-13,000	-2
Lake Corpus Christi	76	241,240	101,600	42	-1,700	-1	-44,200	-18
Falcon Reservoir (Texas)	77	1,555,120	285,000	18	-8,000	-1	47,000	3
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	330,000	12	-17,000	-1	-216,000	-8
TOTAL		2,491,620	656,600	26	-11,700	0	-10,200	0
<b>STATE TOTAL</b>		34,470,430	29,658,860	86	180,500	1	4,921,880	14

**Note:**

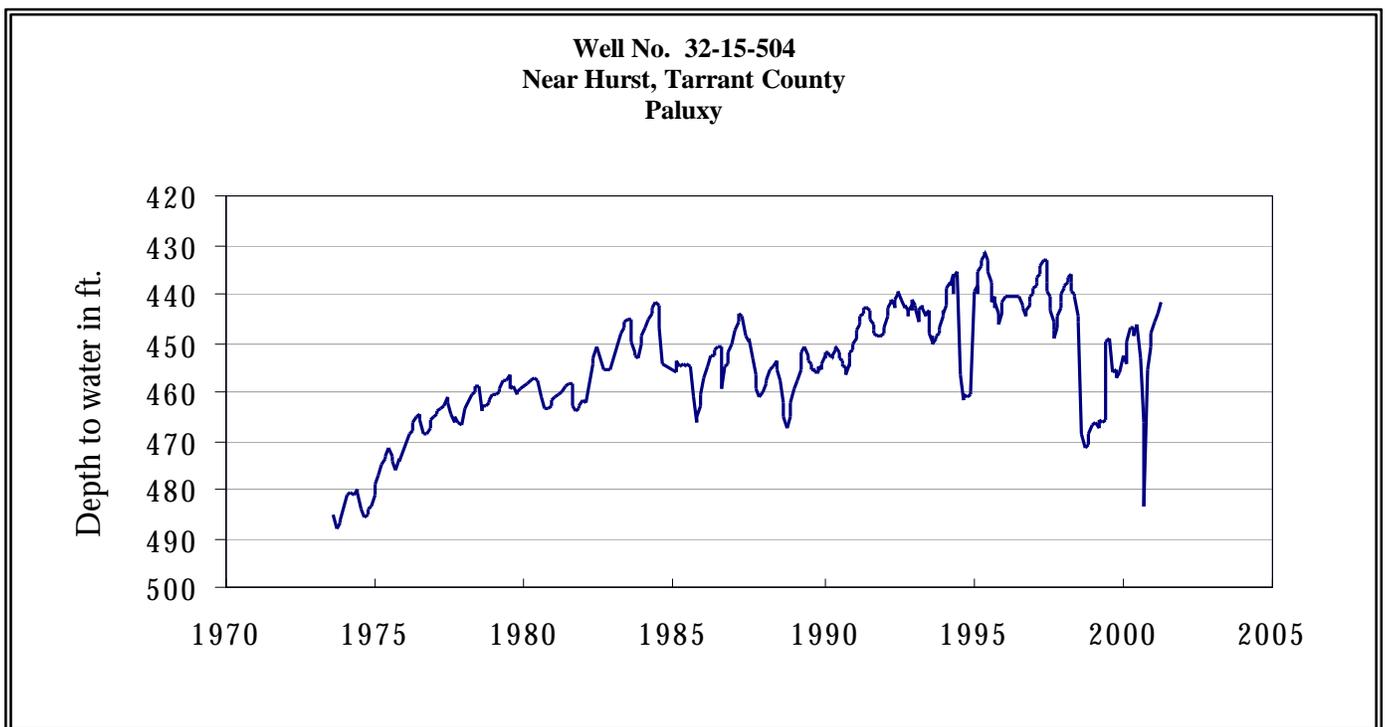
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included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

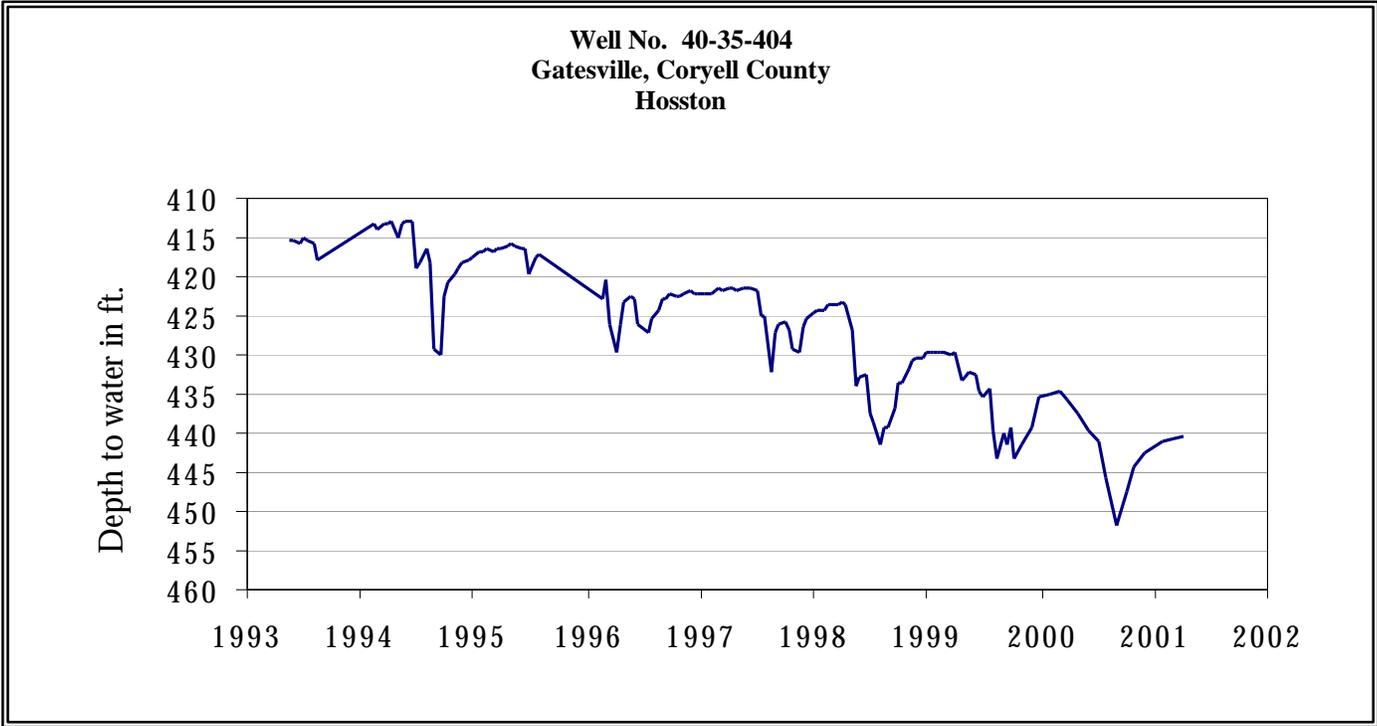
## MARCH GROUND WATER LEVELS IN OBSERVATION WELLS



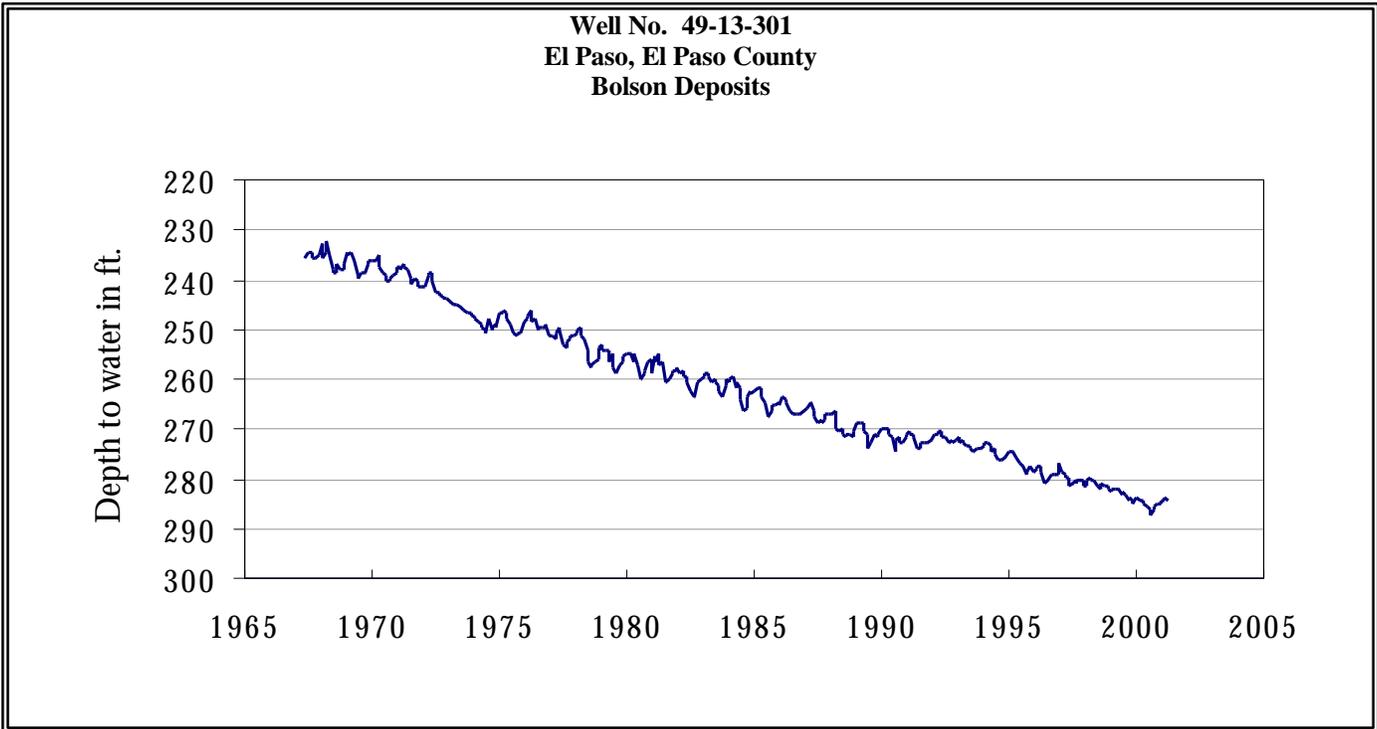
The late March water-level measurement in this Ogallala aquifer well, elevation 3,816 feet above sea level, was 253.33 feet below land surface. This measurement was 0.22 feet above last month's measurement, 3.16 feet below last year's measurement, and 97.33 feet below the initial measurement recorded in 1968.



The late March water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 441.76 feet below land surface. This measurement was 1.97 feet above last month's measurement, 4.99 feet above last year's measurement, and 48.37 feet below the initial measurement recorded in 1953.

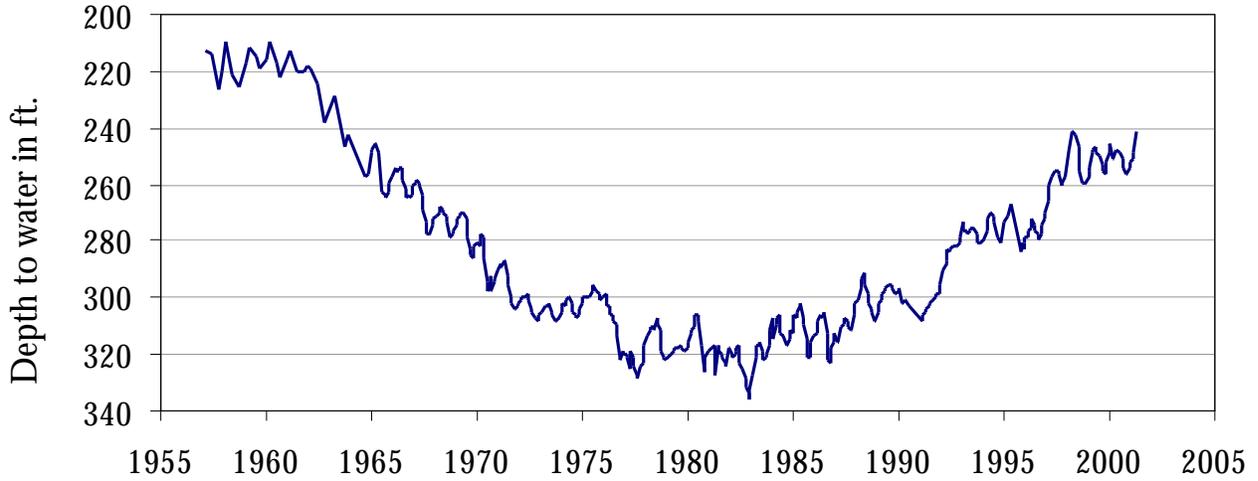


The late March water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 440.20 feet below land surface. This measurement was 0.49 feet above last month's measurement, 4.37 feet below last year's measurement, and 148.20 feet below the initial measurement recorded in 1955.



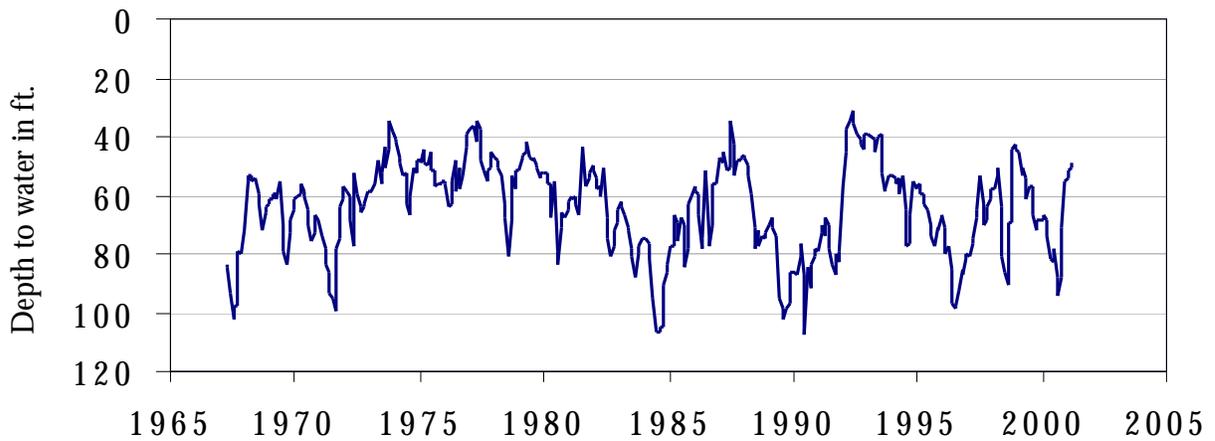
The late March water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 284.43 feet below land surface. This was 0.46 feet below last month's measurement, 0.16 feet below last year's measurement, and 52.53 feet below the initial measurement recorded in 1964.

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



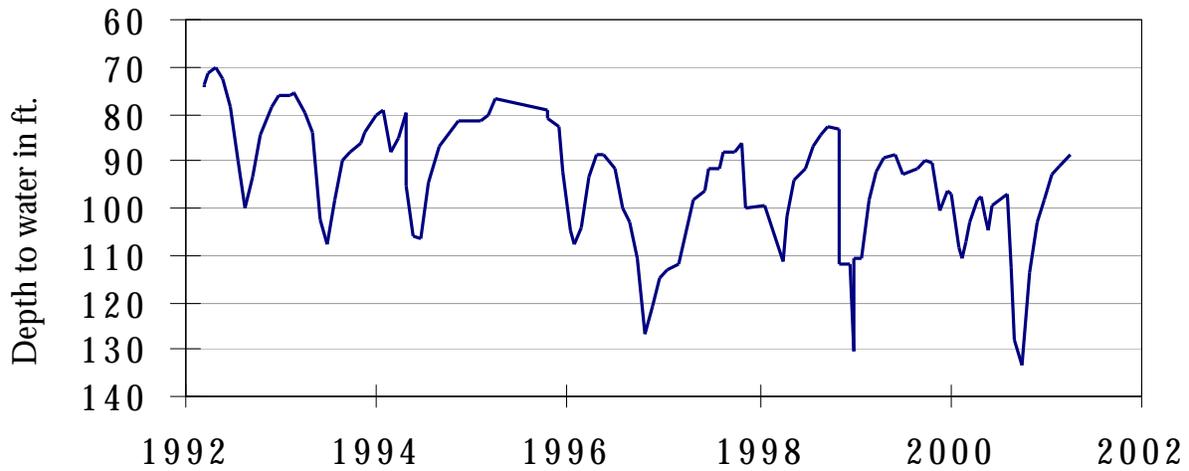
The late March water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 241.68 feet below land surface. This was 6.76 feet above last month's measurement, 9.10 feet above last year's measurement, and 138.45 feet below the initial measurement recorded in 1947.

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



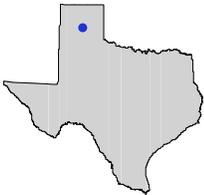
The late March water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 49.19 feet below land surface. This was 1.74 feet above last month's measurement, 24.63 feet above last year's measurement, and 10.43 feet above the initial measurement recorded in 1962.

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



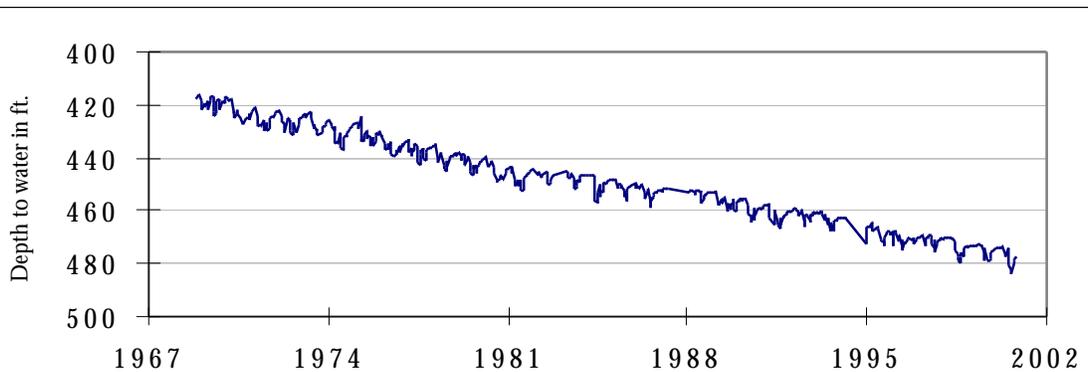
The late March water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 88.70 feet below land surface. This measurement was 2.56 feet above last month's measurement, 14.39 feet above last year's measurement, and 7.45 feet below the initial measurement recorded in 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 0636602**  
**Carson County**



This 767 ft. deep recorder well, located approximately 30 miles northeast of Amarillo, at an elevation of 3545 feet above sea level, was completed in the Ogallala aquifer. The water levels reflect the reservoir's drawdown due to increased regional groundwater demands coupled with periods of drought or near-drought conditions.