

# Texas Water Development Board



# WATER Conditions

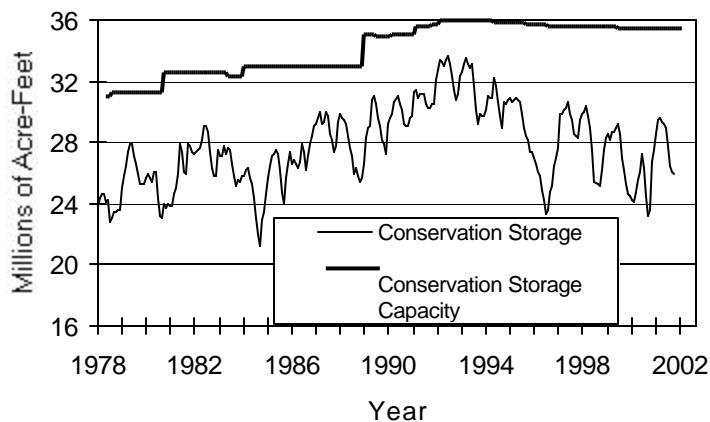
## RESERVOIR STORAGE

*October 2001*

Near the end of October, the 77 reservoirs monitored for this report held 25.9 million acre-feet in conservation storage, or 75.3 percent of the conservation storage capacity of the State's major reservoirs. Statewide storage decreased by 0.14 million acre-feet (-0.4% of conservation storage capacity) during the month. Compared to October 2000, storage is up 2.34 million acre-feet (+6.8% of conservation storage capacity), but below the historical median for this time of year.

Storage slightly decreased or held steady in most regions this month; however, the North Central Region increased marginally (0.6%). The Upper Coast Region remained at capacity (100%), and the Trans-Pecos Region (9.9%) remained below 25%. Storage is at 100% in 14 reservoirs, one less than last month. Storage is down relative to this time last year in the High Plains (-12.8%), Low Rolling Plains (-0.8), and Trans-Pecos (-7.7%) Regions.

### 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.

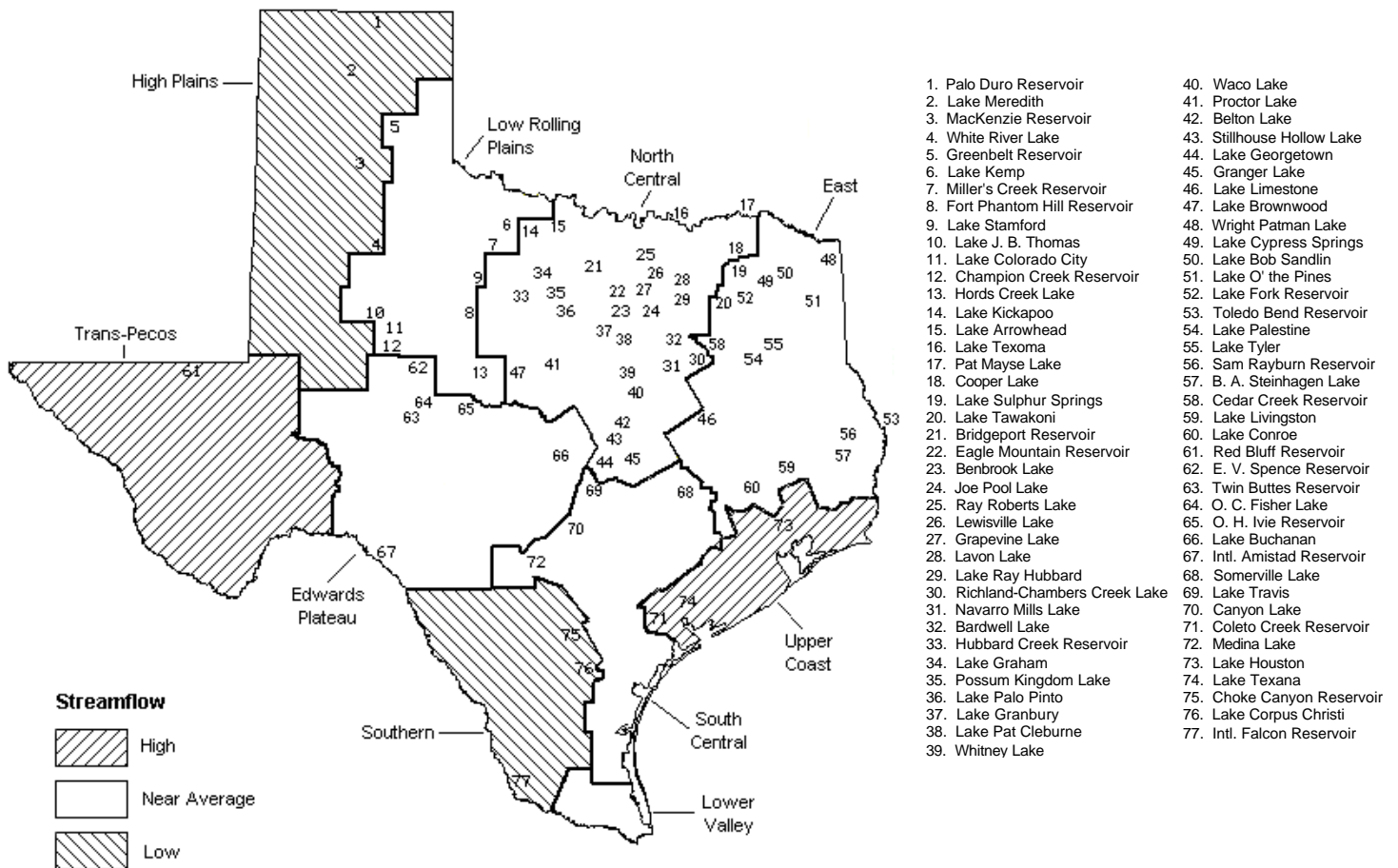
# STREAMFLOW

Of 29 reporting index stations in October, computed 30-day mean flows were high (5% - 30% exceedance) at 9 stations, near normal (30% - 70% exceedance) at 13 stations, low (70% - 95% exceedance) at 6 stations, and very low (95% - 100% exceedance) at 1 station. In comparison to September, flows increased at 8 index stations, decreased at 20 stations, and remained unchanged at 1 station.

On a regional basis, flows in October were high in the Trans-Pecos and Upper Coast Regions, low in the High Plains and Southern Regions and normal in all other regions. Very low flows were reported at the station on the Canadian River near Amarillo.

## OCTOBER STREAMFLOW CONDITIONS

Reservoirs Shown on Map



## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late October 2001 (acre-feet)		Change since Late September 2001 (acre-feet)		Change since Late October 2000 (acre-feet)	
				(%)	(%)		(%)	(%)
<b>HIGH PLAINS</b>								
Palo Duro Reservoir	1	60,900	7,220	12	-220	0	-7,900	-13
Lake Meredith (Texas)	2	500,000	269,800	54	-14,400	-3	-70,200	-14
Lake Meredith (Texas and Oklahoma)	(2)	779,560	269,800	35	-14,400	-2	-70,200	-9
MacKenzie Reservoir	3	46,250	8,770	19	-220	0	550	1
White River Lake	4	31,850	7,630	24	-510	-2	-4,200	-13
TOTAL		639,000	293,420	46	-15,350	-2	-81,750	-13
<b>LOW ROLLING PLAINS</b>								
Greenbelt Reservoir	5	58,200	22,520	39	-920	-2	-830	-1
Lake Kemp	6	319,600	117,300	37	-10,100	-3	6,700	2
Miller's Creek Reservoir	7	27,890	12,700	46	-560	-2	6,350	23
Fort Phantom Hill Reservoir	8	70,030	30,630	44	-1,820	-3	-5,860	-8
Lake Stamford	9	52,700	15,150	29	1,220	2	8,030	15
Lake J. B. Thomas	10	202,300	16,230	8	-1,650	-1	-13,780	-7
Lake Colorado City	11	30,800	16,760	54	-600	-2	-5,060	-16
Champion Creek Reservoir	12	41,600	2,190	5	-110	0	-2,230	-5
Hords Creek Lake	13	8,600	3,270	38	-150	-2	-210	-2
TOTAL		811,720	236,750	29	-14,690	-2	-6,890	-1
<b>NORTH CENTRAL</b>								
Lake Kickapoo	14	106,000	75,800	72	-3,950	-4	34,780	33
Lake Arrowhead	15	262,100	158,600	61	-2,800	-1	64,790	25
Lake Texoma	16	2,722,300	2,606,000	96	112,000	4	-48,000	-2
Pat Mayse Lake	17	124,500	118,100	95	3,700	3	12,100	10
Cooper Lake	18	273,000	273,000	100	0	0	0	0
Lake Sulphur Springs	19	17,710	11,310	64	-1,510	-9	-3,850	-22
Lake Tawakoni	20	936,200	830,000	89	30,000	3	-1,600	0
Bridgeport Reservoir	21	374,830	299,700	80	-9,800	-3	133,340	36
Eagle Mountain Reservoir	22	178,380	147,800	83	-4,200	-2	45,100	25
Benbrook Lake	23	88,200	65,860	75	-470	-1	15,170	17
Joe Pool Lake	24	175,800	175,600	100	-200	0	14,200	8
Ray Roberts Lake	25	798,760	758,100	95	-4,900	-1	334,400	42
Lewisville Lake	26	555,000	528,100	95	-10,200	-2	217,800	39
Grapevine Lake	27	187,700	144,000	77	-5,400	-3	34,400	18
Lavon Lake	28	443,800	315,100	71	-14,000	-3	1,500	0
Lake Ray Hubbard	29	413,420	379,300	92	3,800	1	63,600	15
Richland-Chambers Creek Lake	30	1,103,820	1,038,000	94	-4,000	0	21,000	2
Navarro Mills Lake	31	55,810	55,810	100	9,460	17	9,780	18
Bardwell Lake	32	53,580	45,420	85	3,520	7	610	1
Hubbard Creek Reservoir	33	317,800	124,000	39	-3,400	-1	-16,800	-5
Lake Graham	34	45,000	34,880	78	-470	-1	3,620	8
Possum Kingdom Lake	35	551,820	455,400	83	1,700	0	25,800	5
Lake Palo Pinto	36	27,650	16,060	58	-1,090	-4	9,120	33
Lake Granbury	37	135,680	116,800	86	-7,800	-6	2,200	2
Lake Pat Cleburne	38	25,300	20,140	80	-420	-2	-20	0
Whitney Lake	39	622,800	460,300	74	-11,300	-2	-22,900	-4
Waco Lake	40	144,500	134,000	93	700	0	10,900	8
Proctor Lake	41	55,590	38,170	69	-2,360	-4	31,770	57
Belton Lake	42	434,500	429,300	99	-4,200	-1	62,200	14
Stillhouse Hollow Lake	43	226,060	225,700	100	0	0	20,000	9
Lake Georgetown	44	37,010	29,860	81	-1,350	-4	15,710	42
Granger Lake	45	54,280	54,280	100	0	0	4,910	9
Lake Limestone	46	215,750	203,100	94	1,900	1	23,400	11
Lake Brownwood	47	143,400	109,100	76	-300	0	24,960	17
TOTAL		11,908,050	10,476,690	88	72,660	1	1,143,990	10

## 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 October 2001 (acre-feet) (%)	Late September 2001 (acre-feet) (%)	Late October 2000 (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	2,730	4
Lake Bob Sandlin	50	202,300	202,300	100	0	0	11,400	6
Lake O' the Pines	51	252,000	252,000	100	0	0	10,700	4
Lake Fork Reservoir	52	635,200	635,200	100	0	0	22,700	4
Toledo Bend Reservoir	53	4,472,900	3,123,000	70	-158,000	-4	-458,000	-10
Lake Palestine	54	411,300	401,500	98	-2,000	0	48,800	12
Lake Tyler	55	73,700	73,700	100	0	0	20,600	28
Sam Rayburn Reservoir	56	2,876,300	2,651,000	92	-3,000	0	673,000	23
B. A. Steinhagen Lake	57	94,200	32,510	35	-15,680	-17	-56,810	-60
Cedar Creek Reservoir	58	637,050	631,300	99	35,200	6	109,300	17
Lake Livingston	59	1,750,000	1,732,000	99	-8,000	0	110,000	6
Lake Conroe	60	429,900	415,100	97	400	0	69,500	16
TOTAL		12,044,350	10,359,110	86	-151,080	-1	563,920	5
<b>TRANS-PECOS</b>								
Red Bluff Reservoir	61	307,000	30,370	10	-2,200	-1	-23,620	-8
TOTAL		307,000	30,370	10	-2,200	-1	-23,620	-8
<b>EDWARDS PLATEAU</b>								
E. V. Spence Reservoir	62	488,760	56,950	12	-3,290	-1	-31,660	-6
Twin Buttes Reservoir	63	177,800	7,120	4	-1,500	-1	-900	-1
O.C. Fisher Lake	64	119,200	4,120	3	-290	0	-6,160	-5
O. H. Ivie Reservoir	65	554,340	262,500	47	-9,000	-2	-30,700	-6
Lake Buchanan	66	896,980	739,100	82	-8,100	-1	299,400	33
Amistad Reservoir (Texas)	67	1,771,030	695,000	39	12,000	1	-170,000	-10
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	882,000	28	7,000	0	-146,000	-5
TOTAL		4,008,110	1,764,790	44	-10,180	0	59,980	1
<b>SOUTH CENTRAL</b>								
Somerville Lake	68	155,060	154,900	100	-160	0	50,400	33
Lake Travis	69	1,144,100	974,900	85	11,200	1	310,200	27
Canyon Lake	70	385,600	384,100	100	-1,500	0	100	0
Coletto Creek Reservoir	71	35,060	31,550	90	-490	-1	7,850	22
Medina Lake	72	254,000	234,600	92	-2,400	-1	100,800	40
TOTAL		1,973,820	1,780,050	90	6,650	0	469,350	24
<b>UPPER COAST</b>								
Lake Houston	73	128,860	128,860	100	0	0	29,390	23
Lake Texana	74	157,900	156,600	99	-1,300	-1	32,800	21
TOTAL		286,760	285,460	100	-1,300	0	62,190	22

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

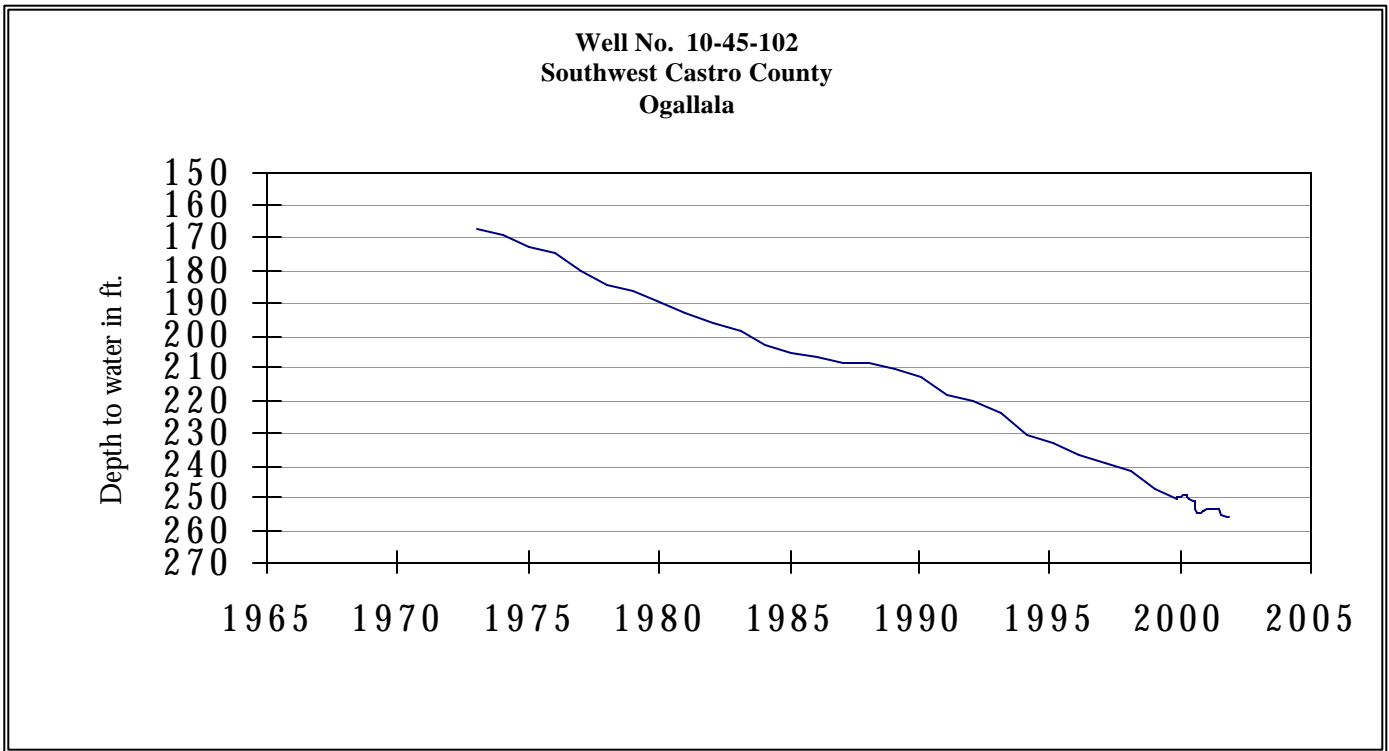
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late October 2001 (acre-feet) (%)		Change since Late September 2001 (acre-feet) (%)		Change since Late October 2000 (acre-feet) (%)	
<b>SOUTHERN</b>								
Choke Canyon Reservoir	75	695,260	226,000	33	-8,000	-1	-15,000	-2
Lake Corpus Christi	76	241,240	163,700	68	-12,700	-5	100,410	42
Falcon Reservoir (Texas)	77	1,555,120	329,000	21	-8,000	-1	68,000	4
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	452,000	17	2,000	0	154,000	6
TOTAL		2,491,620	718,700	29	-28,700	-1	153,410	6
<b>STATE TOTAL</b>		34,470,430	25,945,340	75	-144,190	0	2,340,580	7

**Note:**

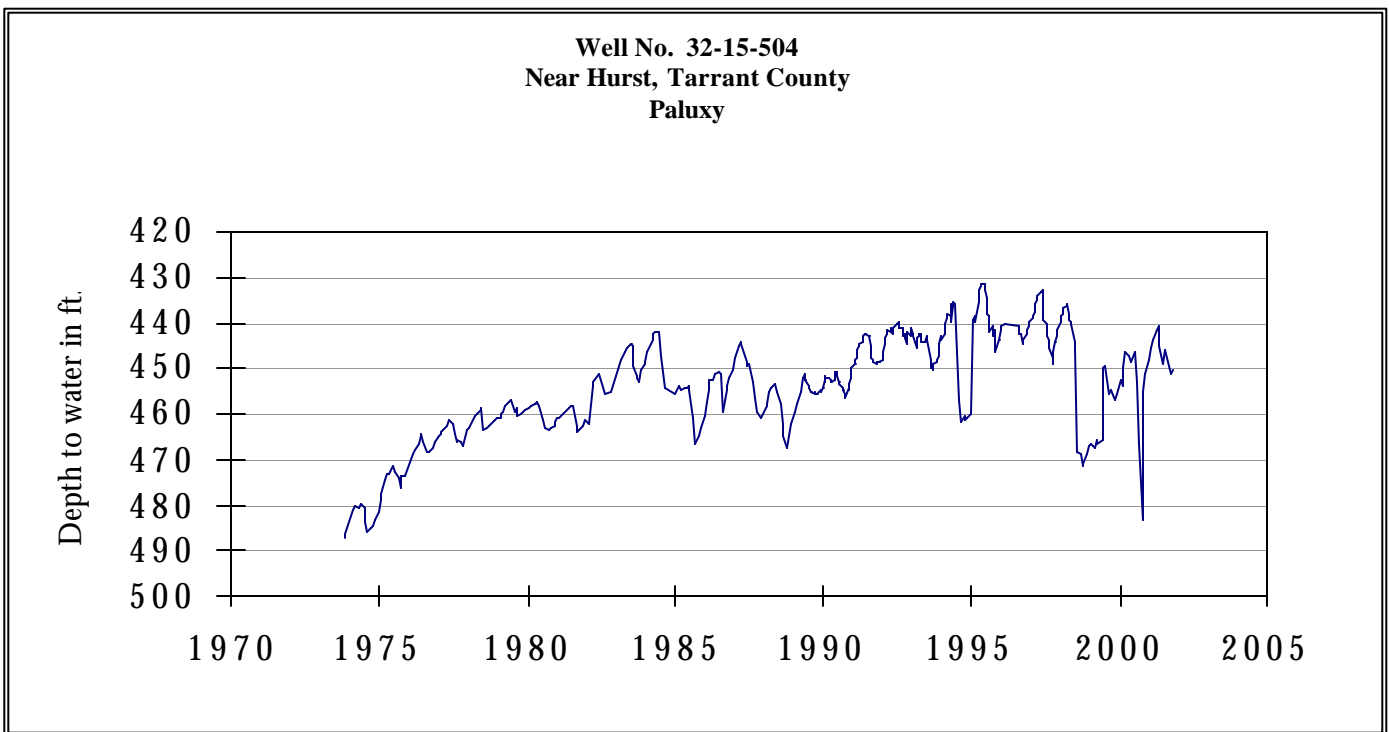
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included 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. This month's storage capacity for Twin Buttes Reservoir is an estimate.

# OCTOBER GROUND WATER LEVELS IN OBSERVATION WELLS

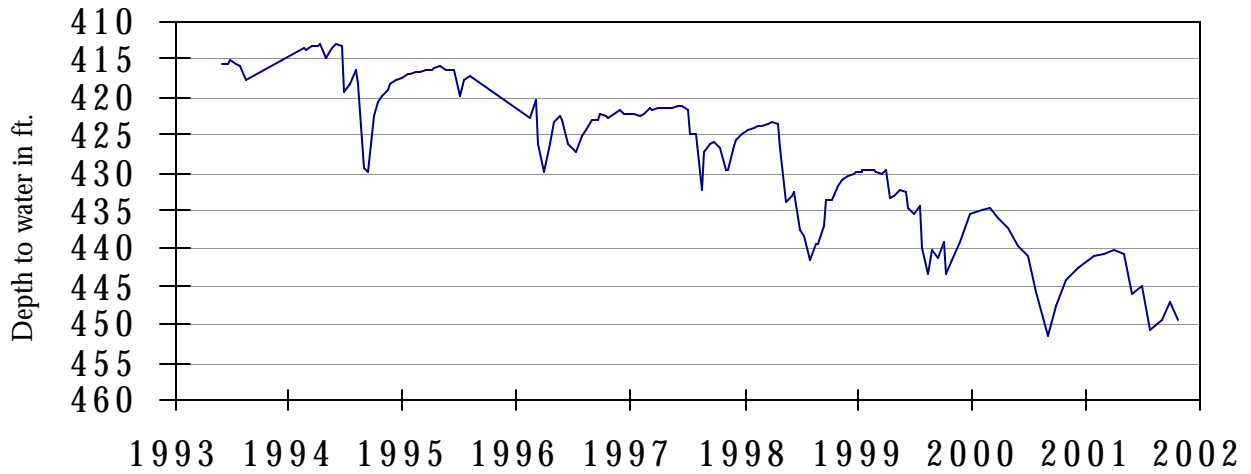


The late October water-level measurement in this Ogallala aquifer well, elevation 3,816 feet above sea level, was 256.03 feet below land surface. This measurement was 0.31 feet above last month's measurement, 1.72 feet below last year's measurement, and 100.03 feet below the initial measurement recorded in 1968.



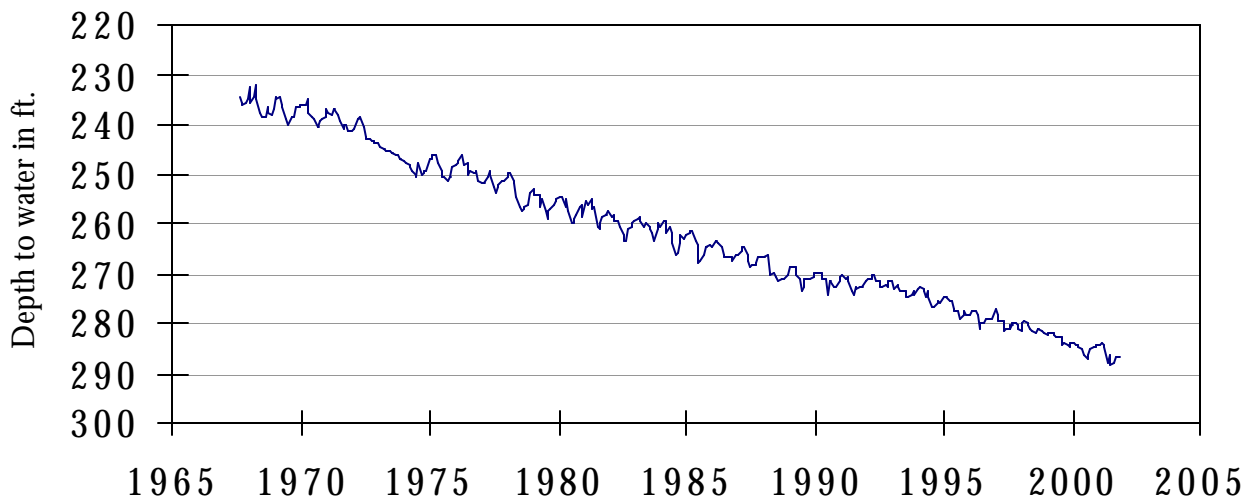
The late October water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 450.48 feet below land surface. This measurement was 0.63 feet above last month's measurement, 5.07 feet above last year's measurement, and 57.09 feet below the initial measurement recorded in 1953.

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



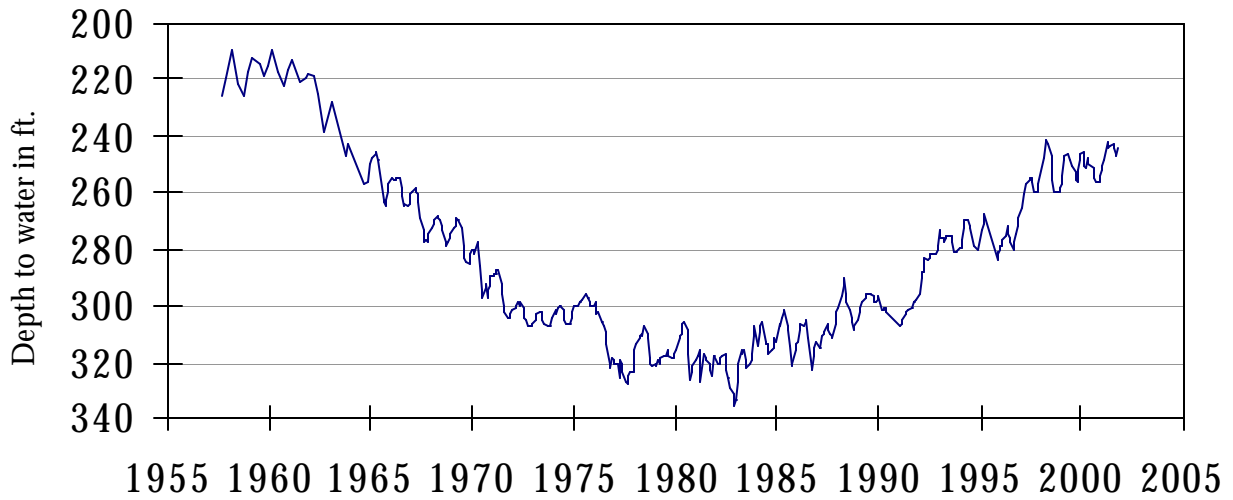
The late October water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 449.25 feet below land surface. This measurement was 2.21 feet below last month's measurement, 5.02 feet below last year's measurement, and 157.25 feet below the initial measurement recorded in 1955.

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



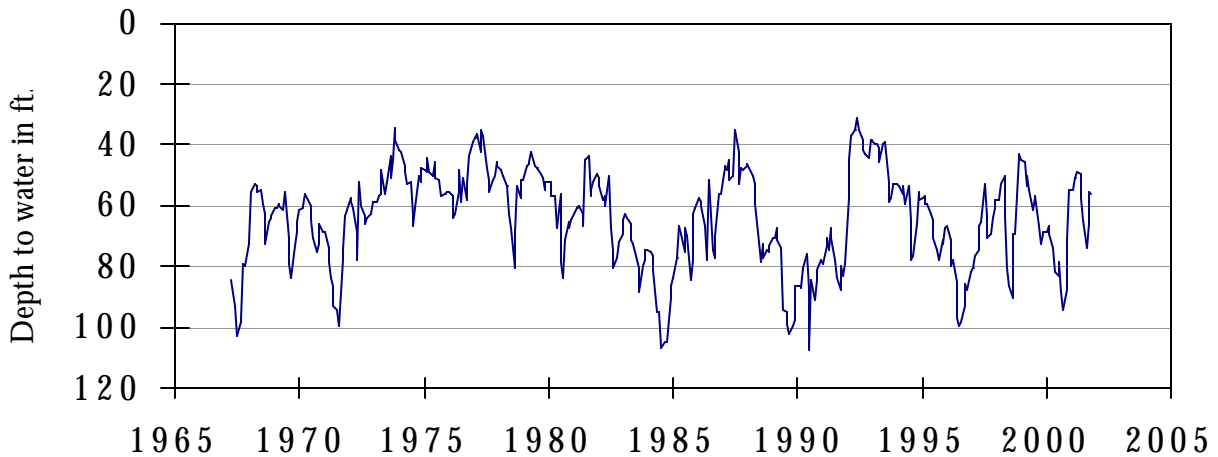
The late October water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 286.69 feet below land surface. This was 0.25 feet above last month's measurement, 1.69 feet below last year's measurement, and 54.79 feet below the initial measurement recorded in 1964.

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



The late October water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 244.02 feet below land surface. This was 2.971 feet above last month's measurement, 12.61 feet above last year's measurement, and 140.79 feet below the initial measurement recorded in 1947.

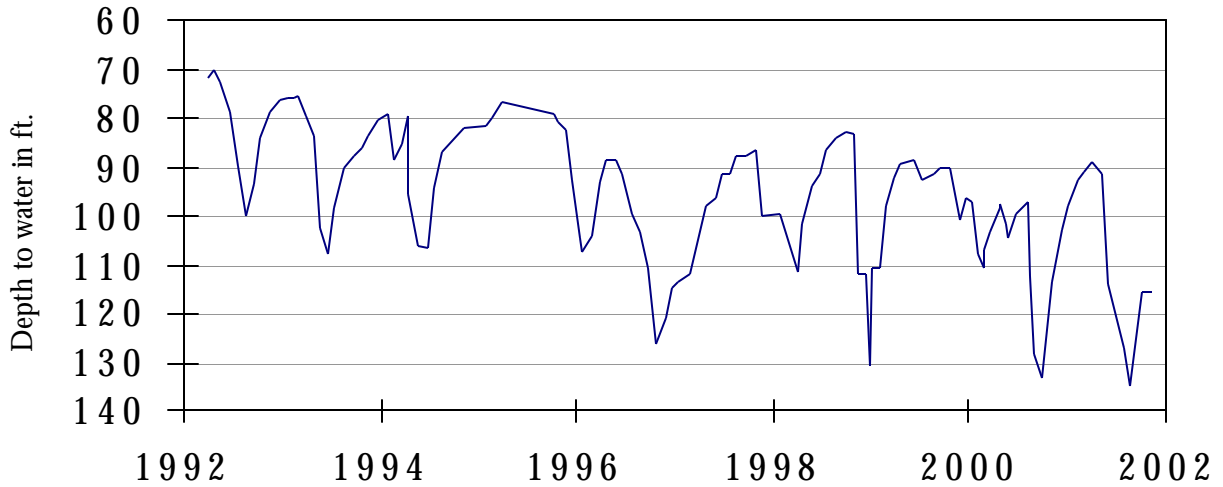
**Well No. 68-37-203 (J-17)  
In San Antonio, Bexar County  
Edwards and Associated Limestones**



The late October water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 55.67 feet below land surface. This was 0.54 feet above last month's measurement, 15.62 feet above last year's measurement, and 3.95 feet above the initial measurement recorded in 1962.

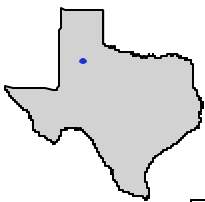


**Well No. 68-60-912  
Between Poteet and Pleasanton, Atascosa County  
Carrizo**



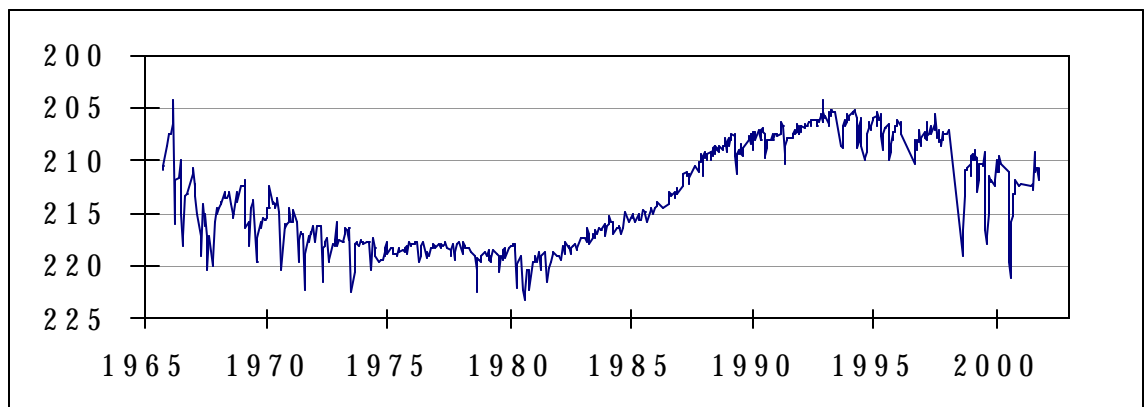
The late October water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 115.62 feet below land surface. This measurement was 0.21 feet above last month's measurement, 2.05 feet above last year's measurement, and 34.37 feet below the initial measurement recorded 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 2330103  
Crosby County**



This 300 ft. deep recorder well, located approximately 40 miles east of Lubbock, at an elevation of 3052 feet above sea level, was completed in the Ogallala aquifer. The water levels reflect long periods of drought with out adequate recharge coupled with shorter periods of drawdown due to annual irrigation demands.

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