

# Texas Water Development Board



**W** *Conditions* **AT** **R**

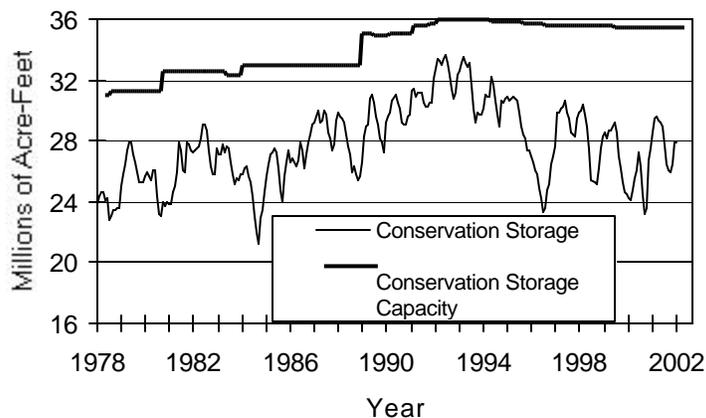
## RESERVOIR STORAGE

*January 2002*

Near the end of January, the 77 reservoirs monitored for this report held 27.9 million acre-feet in conservation storage, or 80.9 percent of the conservation storage capacity of the State's major reservoirs. Statewide total storage is near normal for this time of year. Storage decreased very slightly (-0.1% of conservation storage capacity) during the month. Compared to January 2001, storage is down 0.7 million acre-feet (-2.1%).

For the month, storage remained nearly constant in all climatic Regions. The East (97%), South Central (100%), and Upper Coast (99%) are all at or near capacity, while the High Plains (43%) Low Rolling Plains (32%), Trans-Pecos (13%), and Edwards Plateau (48%) Regions remained low. Storage is at 100% in 29 reservoirs, the same as last month. Compared to this time last year, storage decreased significantly in the High Plains (-15%), Trans-Pecos (-9%) and Edwards Plateau (-10%) 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.

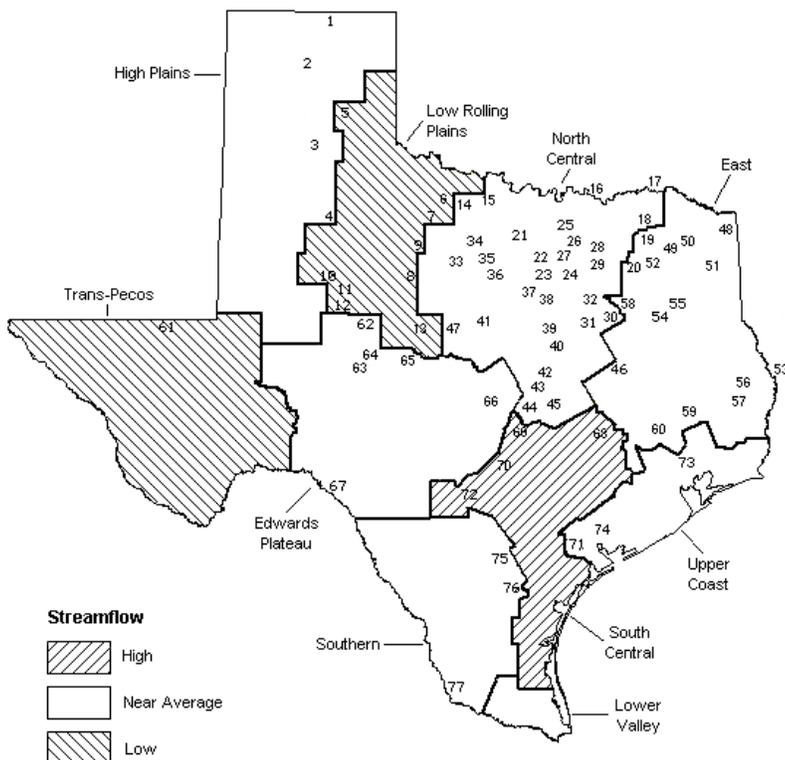
# STREAMFLOW

Of 29 reporting index stations in January, computed 30-day mean flows were high (5% - 30% exceedance) at 3 stations, near normal (30% - 70% exceedance) at 17 stations, and low (70% - 95% exceedance) at 9 stations. In comparison to December, flows increased at 6 index stations, decreased at 22 and remained unchanged at 1.

On a regional basis, flows in January were high in the South Central Region, near normal in the High Plains, North Central, East, Edwards Plateau, Upper Coast and Southern Regions and low in the Low Rolling Plains and Trans-Pecos Regions.

## JANUARY STREAMFLOW CONDITIONS

Reservoirs Shown on Map



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

## 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 January 2002 (acre-feet)	(%)	Late December 2001 (acre-feet)	(%)	Late January 2001 (acre-feet)	(%)	
<b>HIGH PLAINS</b>									
Palo Duro Reservoir	1	60,900	5,870	10	-300	0	-6,890	-11	
Lake Meredith (Texas)	2	500,000	253,100	51	-3,500	-1	-82,800	-17	
Lake Meredith (Texas and Oklahoma)	(2)	779,560	253,100	32	-3,500	0	-82,800	-11	
MacKenzie Reservoir	3	46,250	8,450	18	-110	0	450	1	
White River Lake	4	31,850	7,460	23	-240	-1	-4,130	-13	
TOTAL		639,000	274,880	43	-4,150	-1	-93,370	-15	
<b>LOW ROLLING PLAINS</b>									
Greenbelt Reservoir	5	58,200	24,230	42	110	0	600	1	
Lake Kemp	6	319,600	133,700	42	-2,000	-1	-13,000	-4	
Miller's Creek Reservoir	7	27,890	12,580	45	-260	-1	4,730	17	
Fort Phantom Hill Reservoir	8	70,030	30,250	43	-530	-1	-8,240	-12	
Lake Stamford	9	52,700	15,850	30	-420	-1	7,040	13	
Lake J. B. Thomas	10	202,300	20,000	10	-1,220	-1	-6,260	-3	
Lake Colorado City	11	30,800	18,980	62	-220	-1	-1,820	-6	
Champion Creek Reservoir	12	41,600	2,140	5	-40	0	-2,270	-5	
Hords Creek Lake	13	8,600	3,070	36	-80	-1	-1,030	-12	
TOTAL		811,720	260,800	32	-4,660	-1	-20,250	-2	
<b>NORTH CENTRAL</b>									
Lake Kickapoo	14	106,000	70,610	67	-1,290	-1	10,320	10	
Lake Arrowhead	15	262,100	153,400	59	-1,000	0	34,400	13	
Lake Texoma	16	2,722,300	2,465,000	91	-153,000	-6	-158,000	-6	
Pat Mayse Lake	17	124,500	124,500	100	0	0	0	0	
Cooper Lake	18	273,000	273,000	100	0	0	0	0	
Lake Sulphur Springs	19	17,710	17,710	100	4,200	24	0	0	
Lake Tawakoni	20	936,200	917,600	98	-1,600	0	-18,600	-2	
Bridgeport Reservoir	21	374,830	286,200	76	-3,300	-1	71,900	19	
Eagle Mountain Reservoir	22	178,380	143,800	81	-2,400	-1	19,100	11	
Benbrook Lake	23	88,200	74,640	85	4,610	5	-1,950	-2	
Joe Pool Lake	24	175,800	175,800	100	0	0	0	0	
Ray Roberts Lake	25	798,760	758,700	95	4,000	1	155,100	19	
Lewisville Lake	26	555,000	517,300	93	8,300	1	23,100	4	
Grapevine Lake	27	187,700	145,200	77	2,000	1	-37,100	-20	
Lavon Lake	28	443,800	372,600	84	35,300	8	-71,200	-16	
Lake Ray Hubbard	29	413,420	413,420	100	0	0	0	0	
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	49,160	92	-4,420	-8	-910	-2	
Hubbard Creek Reservoir	33	317,800	114,100	36	-5,100	-2	-26,600	-8	
Lake Graham	34	45,000	33,410	74	-550	-1	-4,470	-10	
Possum Kingdom Lake	35	551,820	458,800	83	-7,400	-1	-28,700	-5	
Lake Palo Pinto	36	27,650	14,950	54	-740	-3	2,970	11	
Lake Granbury	37	135,680	119,300	88	4,200	3	-16,380	-12	
Lake Pat Cleburne	38	25,300	24,490	97	4,060	16	-810	-3	
Whitney Lake	39	622,800	476,300	76	4,700	1	-48,500	-8	
Waco Lake	40	144,500	144,500	100	0	0	0	0	
Proctor Lake	41	55,590	36,020	65	-860	-2	14,710	26	
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	440	1	
Granger Lake	45	54,280	54,280	100	0	0	0	0	
Lake Limestone	46	215,750	215,750	100	1,950	1	0	0	
Lake Brownwood	47	143,400	108,300	76	-700	0	-300	0	
TOTAL		11,908,050	10,616,040	89	-109,040	-1	-81,480	-1	

## 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 January 2002 (acre-feet)	(%)	Late December 2001 (acre-feet)	(%)	Late January 2001 (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	0	0	
Lake O' the Pines	51	252,000	250,800	100	-1,200	0	-1,200	0	
Lake Fork Reservoir	52	635,200	635,200	100	0	0	0	0	
Toledo Bend Reservoir	53	4,472,900	4,231,000	95	59,000	1	-241,900	-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	0	0	
B. A. Steinhagen Lake	57	94,200	45,050	48	11,880	13	-24,740	-26	
Cedar Creek Reservoir	58	637,050	637,050	100	150	0	0	0	
Lake Livingston	59	1,750,000	1,750,000	100	0	0	0	0	
Lake Conroe	60	429,900	419,300	98	1,300	0	-3,600	-1	
TOTAL		12,044,350	11,741,500	97	71,130	1	-271,440	-2	
<b>TRANS-PECOS</b>									
Red Bluff Reservoir	61	307,000	39,450	13	1,500	0	-28,970	-9	
TOTAL		307,000	39,450	13	1,500	0	-28,970	-9	
<b>EDWARDS PLATEAU</b>									
E. V. Spence Reservoir	62	488,760	58,540	12	-2,290	0	-25,800	-5	
Twin Buttes Reservoir	63	177,800	8,210	5	360	0	-140	0	
O.C. Fisher Lake	64	119,200	4,390	4	-90	0	-5,540	-5	
O. H. Ivie Reservoir	65	554,340	254,200	46	-1,900	0	-63,700	-11	
Lake Buchanan	66	896,980	776,900	87	8,500	1	31,800	4	
Amistad Reservoir (Texas)	67	1,771,030	813,000	46	36,000	2	-334,000	-19	
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	978,000	31	29,000	1	-351,000	-11	
TOTAL		4,008,110	1,915,240	48	40,580	1	-397,380	-10	
<b>SOUTH CENTRAL</b>									
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	384,900	100	-700	0	-700	0	
Coletto Creek Reservoir	71	35,060	32,120	92	270	1	520	1	
Medina Lake	72	254,000	254,000	100	0	0	53,200	21	
TOTAL		1,973,820	1,970,180	100	-430	0	53,020	3	
<b>UPPER COAST</b>									
Lake Houston	73	128,860	128,860	100	0	0	0	0	
Lake Texana	74	157,900	155,100	98	-2,800	-2	-2,800	-2	
TOTAL		286,760	283,960	99	-2,800	-1	-2,800	-1	

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

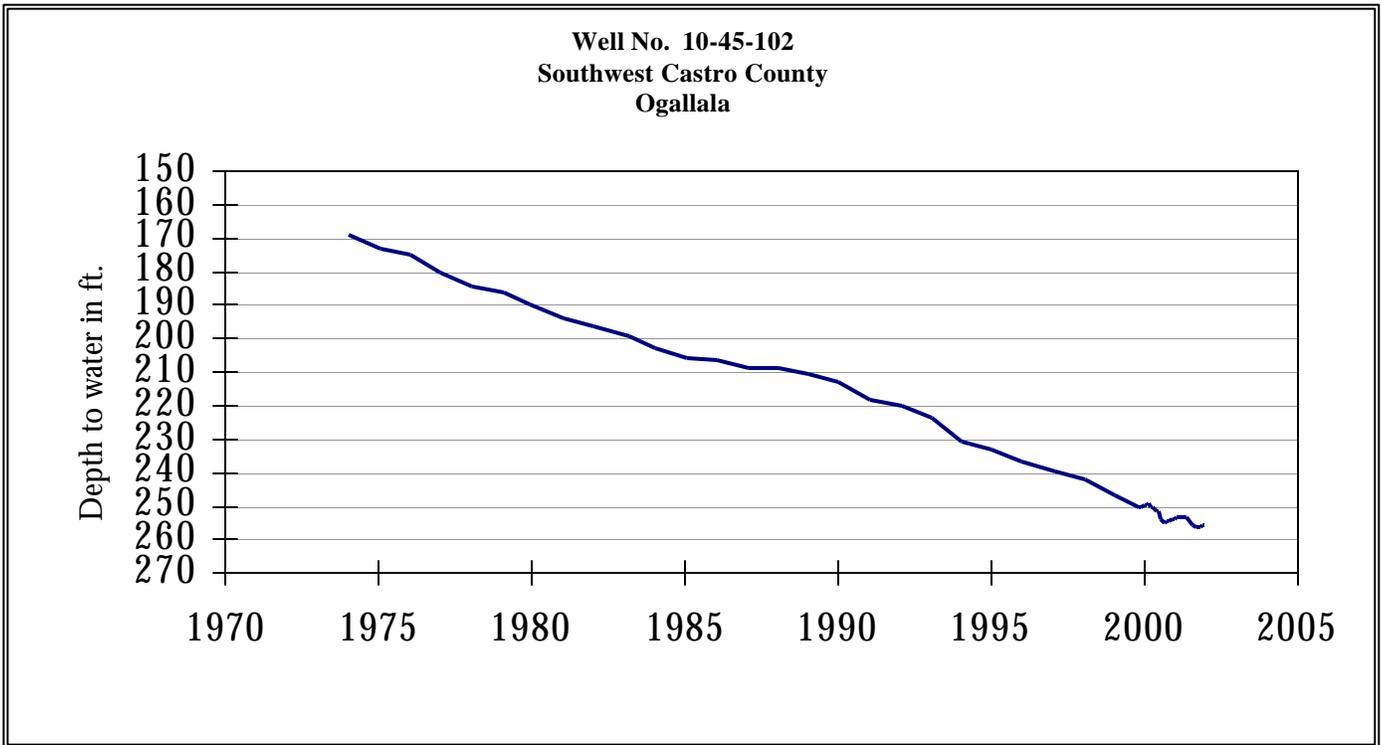
Name of Lake or Reservoir	No. on Map	Conservation Storage	Conservation Storage		Change since Late December		Change since Late January	
		Capacity (acre-feet)	Late January 2002 (acre-feet)	(%)	2001 (acre-feet)	(%)	2001 (acre-feet)	(%)
<b>SOUTHERN</b>								
Choke Canyon Reservoir	75	695,260	278,000	40	-5,000	-1	5,000	1
Lake Corpus Christi	76	241,240	241,240	100	0	0	135,940	56
Falcon Reservoir (Texas)	77	1,555,120	257,000	17	-36,000	-2	-24,000	-2
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	428,000	16	-34,000	-1	95,000	4
TOTAL		2,491,620	776,240	31	-41,000	-2	116,940	5
<b>STATE TOTAL</b>		34,470,430	27,878,290	81	-48,870	0	-725,730	-2

**Note:**

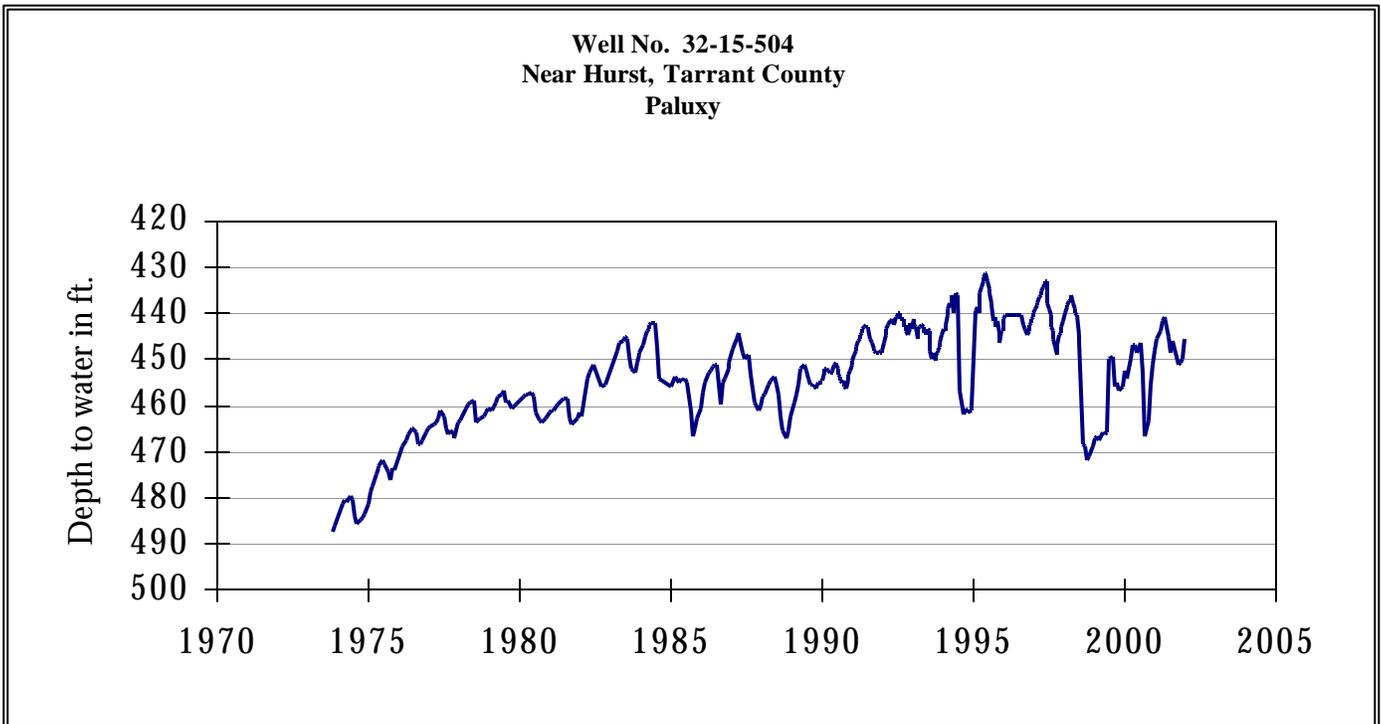
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included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

# JANUARY GROUND WATER LEVELS IN OBSERVATION WELLS

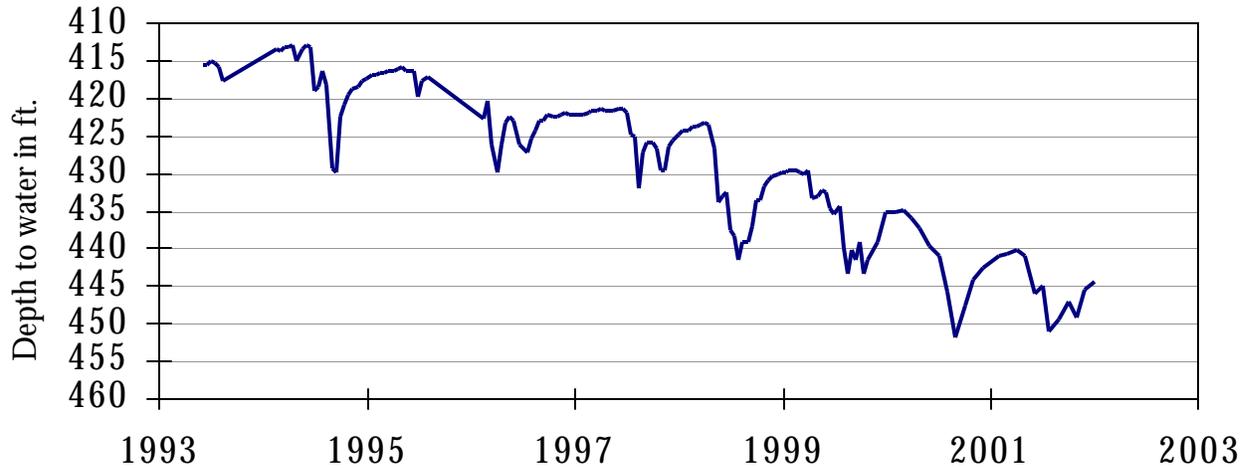


The late January water-level measurement in this Ogallala aquifer well, elevation 3,816 feet above sea level, was 255.25 feet below land surface. This measurement was 0.05 feet above last month's measurement, 1.79 feet below last year's measurement, and 99.25 feet below the initial measurement recorded in 1968.



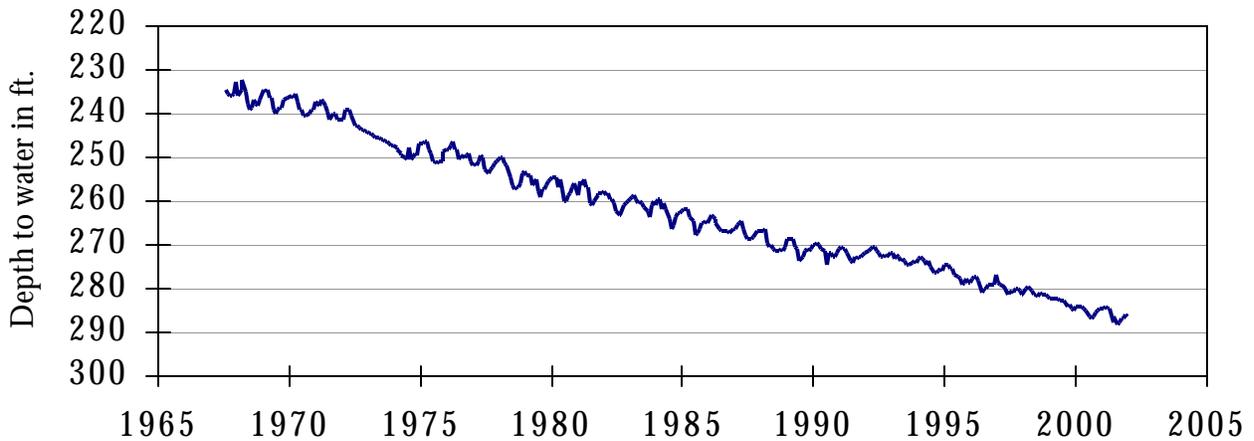
The late January water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 442.06 feet below land surface. This measurement was 3.31 feet above last month's measurement, 3.56 feet above last year's measurement, and 48.67 feet below the initial measurement recorded in 1953.

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



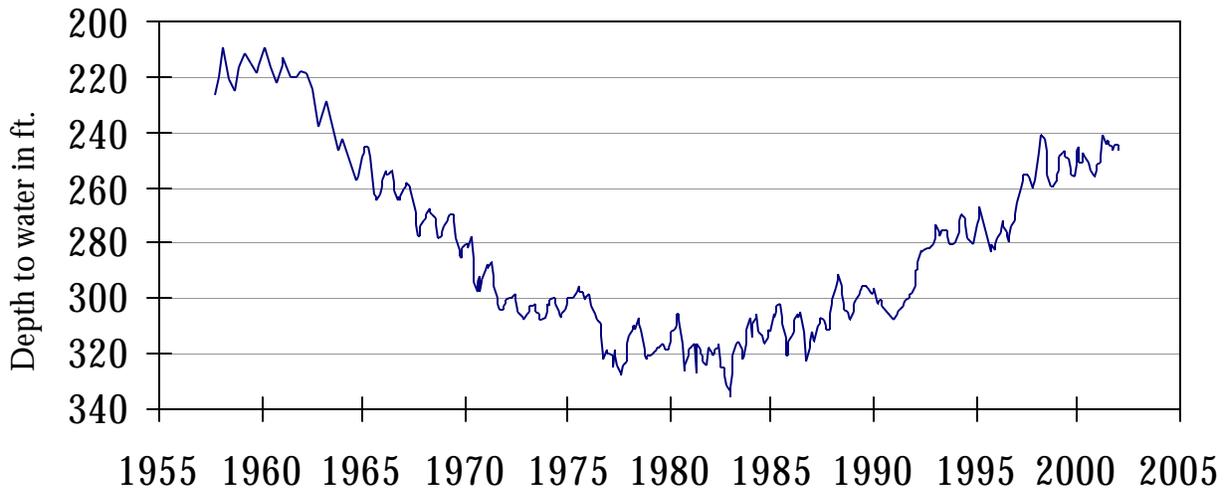
The late January water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 444.45 feet below land surface. This measurement was 0.04 feet below last month's measurement, 3.45 feet below last year's measurement, and 152.45 feet below the initial measurement recorded in 1955.

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



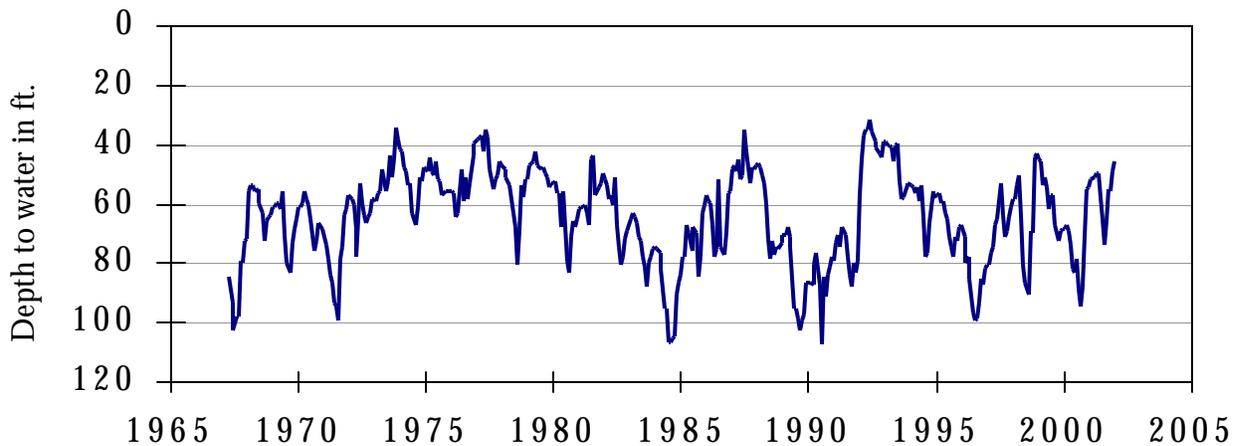
The late January water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 286.27 feet below land surface. This was 0.08 feet above last month's measurement, 1.88 feet below last year's measurement, and 54.37 feet below the initial measurement recorded in 1964.

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



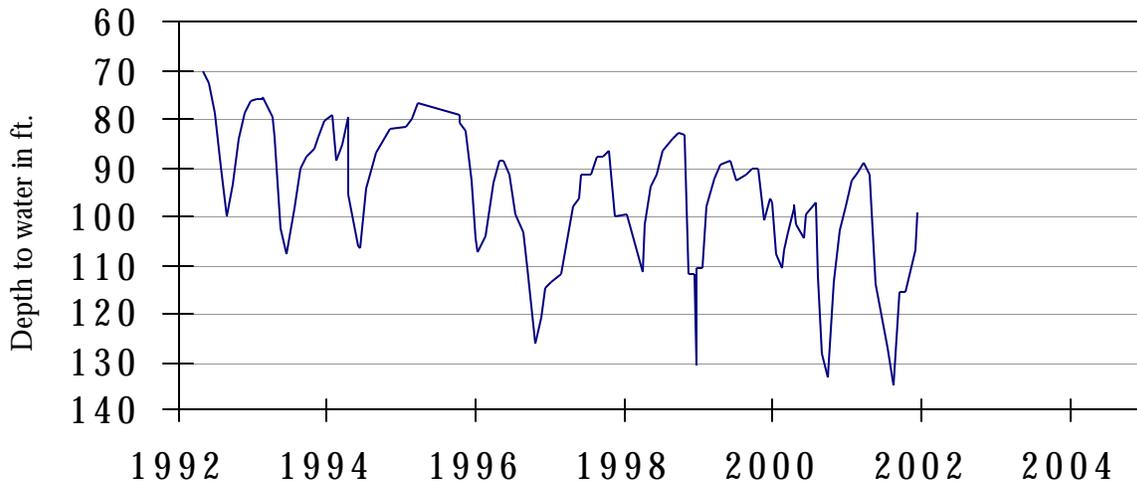
The late January water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 244.66 feet below land surface. This was 2.21 feet above last month's measurement, 5.82 feet above last year's measurement, and 141.43 feet below the initial measurement recorded in 1947

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



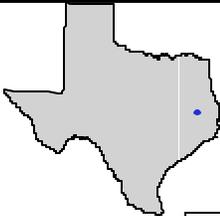
The late January water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 49.0 feet below land surface. This was 3.4 feet below last month's measurement, 2.20 feet above last year's measurement, and 10.62 feet above the initial measurement recorded in 1962.

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



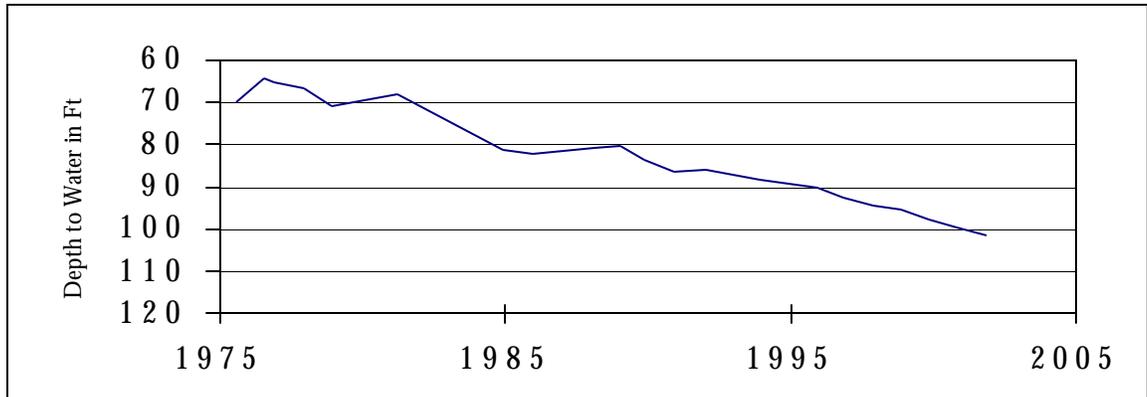
The late January water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 97.89 feet below land surface. This measurement was 1.31 feet above last month's measurement, 5.28 feet above last year's measurement, and 16.64 feet below the initial measurement recorded in 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 60-39-404  
San Jacinto County**



This 380-foot deep domestic well, located in south-central San Jacinto County at an elevation of 240 feet above sea level, was completed in the Evangeline Formation of the Gulf Coast aquifer. The water level has dropped 30 feet since the initial measurement was recorded in 1975.

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