

# Texas Water Development Board



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

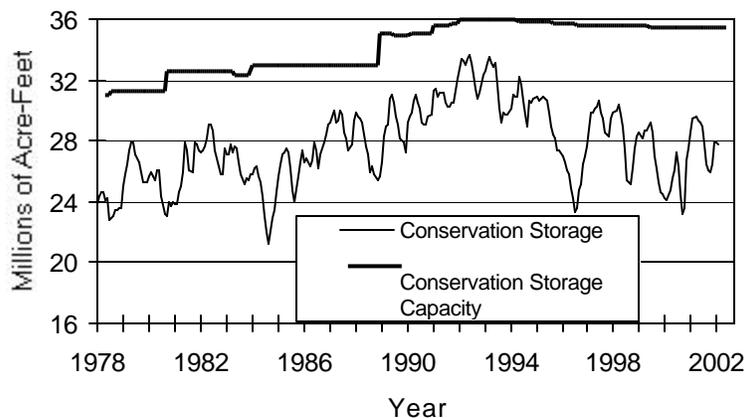
## RESERVOIR STORAGE

*February 2002*

Near the end of February, the 77 reservoirs monitored for this report held 27.7 million acre-feet in conservation storage, or 80.4 percent of the conservation storage capacity of the State's major reservoirs. Statewide total storage is below normal for this time of year. Storage decreased slightly (-0.4% of conservation storage capacity) during the month. Compared to February 2001, storage is down 1.7 million acre-feet (-5.1%).

For the month, storage remained nearly constant in all climatic Regions. The East (96%), South Central (99%), and Upper Coast (96%) are all near capacity, while the High Plains (42%) Low Rolling Plains (32%), Trans-Pecos (13%), Southern (31%) and Edwards Plateau (49%) Regions remained low. Storage is at 100% in 24 reservoirs, five less than last month. Compared to this time last year, storage decreased significantly in the High Plains (-16%), Trans-Pecos (-10%) and Edwards Plateau (-11%) 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.

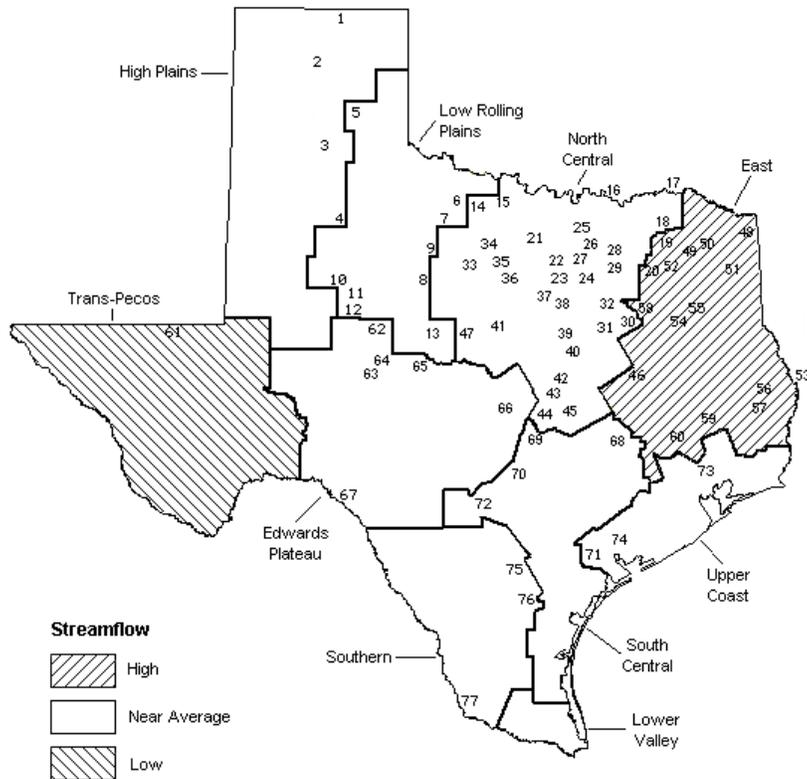
# STREAMFLOW

Of 29 reporting index stations in February, computed 30-day mean flows were high (5% - 30% exceedance) at 9 stations, near normal (30% - 70% exceedance) at 13 stations, and low (70% - 95% exceedance) at 7 stations. In comparison to January, flows increased at 15 index stations, decreased at 12 and remained unchanged at 2.

On a regional basis, flows in February were high in the East Texas Region, low in the Trans-Pecos Region and near normal everywhere else.

## FEBRUARY 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 February 2002 (acre-feet) (%)	Late January 2002 (acre-feet) (%)	Late February 2001 (acre-feet) (%)			
<b>HIGH PLAINS</b>								
Palo Duro Reservoir	1	60,900	5,560	9	-310	-1	-6,630	-11
Lake Meredith (Texas)	2	500,000	248,600	50	-4,500	-1	-88,600	-18
Lake Meredith (Texas and Oklahoma)	(2)	779,560	248,600	32	-4,500	-1	-88,600	-11
MacKenzie Reservoir	3	46,250	8,350	18	-100	0	420	1
White River Lake	4	31,850	7,260	23	-200	-1	-4,290	-13
<b>TOTAL</b>		<b>639,000</b>	<b>269,770</b>	<b>42</b>	<b>-5,110</b>	<b>-1</b>	<b>-99,100</b>	<b>-16</b>
<b>LOW ROLLING PLAINS</b>								
Greenbelt Reservoir	5	58,200	24,330	42	100	0	180	0
Lake Kemp	6	319,600	133,900	42	200	0	-26,400	-8
Miller's Creek Reservoir	7	27,890	12,320	44	-260	-1	2,500	9
Fort Phantom Hill Reservoir	8	70,030	30,080	43	-170	0	-9,650	-14
Lake Stamford	9	52,700	15,300	29	-550	-1	2,960	6
Lake J. B. Thomas	10	202,300	19,210	9	-790	0	-5,940	-3
Lake Colorado City	11	30,800	18,650	61	-330	-1	-2,210	-7
Champion Creek Reservoir	12	41,600	2,120	5	-20	0	-2,340	-6
Hords Creek Lake	13	8,600	3,000	35	-70	-1	-1,390	-16
<b>TOTAL</b>		<b>811,720</b>	<b>258,910</b>	<b>32</b>	<b>-1,890</b>	<b>0</b>	<b>-42,290</b>	<b>-5</b>
<b>NORTH CENTRAL</b>								
Lake Kickapoo	14	106,000	69,580	66	-1,030	-1	-3,810	-4
Lake Arrowhead	15	262,100	150,800	58	-2,600	-1	-12,000	-5
Lake Texoma	16	2,722,300	2,388,000	88	-77,000	-3	-334,300	-12
Pat Mayse Lake	17	124,500	123,900	100	-600	0	-600	0
Cooper Lake	18	273,000	273,000	100	0	0	0	0
Lake Sulphur Springs	19	17,710	16,760	95	-950	-5	-950	-5
Lake Tawakoni	20	936,200	890,200	95	-27,400	-3	-46,000	-5
Bridgeport Reservoir	21	374,830	281,800	75	-4,400	-1	-31,700	-8
Eagle Mountain Reservoir	22	178,380	143,400	80	-400	0	-34,980	-20
Benbrook Lake	23	88,200	80,450	91	5,810	7	-7,750	-9
Joe Pool Lake	24	175,800	175,800	100	0	0	0	0
Ray Roberts Lake	25	798,760	764,900	96	6,200	1	-12,300	-2
Lewisville Lake	26	555,000	520,000	94	2,700	0	-35,000	-6
Grapevine Lake	27	187,700	144,900	77	-300	0	-42,800	-23
Lavon Lake	28	443,800	438,900	99	66,300	15	-4,900	-1
Lake Ray Hubbard	29	413,420	411,400	100	-2,020	0	-2,020	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	46,510	87	-2,650	-5	-7,070	-13
Hubbard Creek Reservoir	33	317,800	115,800	36	1,700	1	-40,900	-13
Lake Graham	34	45,000	32,940	73	-470	-1	-12,060	-27
Possum Kingdom Lake	35	551,820	449,600	81	-9,200	-2	-85,600	-16
Lake Palo Pinto	36	27,650	14,470	52	-480	-2	-12,700	-46
Lake Granbury	37	135,680	128,400	95	9,100	7	2,800	2
Lake Pat Cleburne	38	25,300	25,300	100	810	3	0	0
Whitney Lake	39	622,800	487,900	78	11,600	2	-134,900	-22
Waco Lake	40	144,500	144,500	100	0	0	0	0
Proctor Lake	41	55,590	34,990	63	-1,030	-2	-1,890	-3
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	215,400	100	-350	0	-200	0
Lake Brownwood	47	143,400	107,000	75	-1,300	-1	-14,000	-10
<b>TOTAL</b>		<b>11,908,050</b>	<b>10,588,080</b>	<b>89</b>	<b>-27,960</b>	<b>0</b>	<b>-875,630</b>	<b>-7</b>

## 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 February 2002 (acre-feet) (%)	Late January 2002 (acre-feet) (%)	Late February 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	242,900	96	-7,900	-3	-9,100	-4
Lake Fork Reservoir	52	635,200	635,200	100	0	0	0	0
Toledo Bend Reservoir	53	4,472,900	4,114,000	92	-117,000	-3	-358,900	-8
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	53,320	57	8,270	9	-22,390	-24
Cedar Creek Reservoir	58	637,050	635,000	100	-2,050	0	-2,050	0
Lake Livingston	59	1,750,000	1,731,000	99	-19,000	-1	-19,000	-1
Lake Conroe	60	429,900	417,800	97	-1,500	0	-1,300	0
TOTAL		12,044,350	11,602,320	96	-139,180	-1	-412,740	-3
<b>TRANS-PECOS</b>								
Red Bluff Reservoir	61	307,000	40,800	13	1,350	0	-31,000	-10
TOTAL		307,000	40,800	13	1,350	0	-31,000	-10
<b>EDWARDS PLATEAU</b>								
E. V. Spence Reservoir	62	488,760	56,550	12	-1,990	0	-27,030	-6
Twin Buttes Reservoir	63	177,800	8,490	5	280	0	-840	0
O.C. Fisher Lake	64	119,200	4,280	4	-110	0	-5,560	-5
O. H. Ivie Reservoir	65	554,340	250,700	45	-3,500	-1	-68,200	-12
Lake Buchanan	66	896,980	776,900	87	0	0	-10,700	-1
Amistad Reservoir (Texas)	67	1,771,030	852,000	48	39,000	2	-315,000	-18
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	990,000	31	12,000	0	-372,000	-12
TOTAL		4,008,110	1,948,920	49	33,680	1	-427,330	-11
<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	379,700	98	-5,200	-1	-5,900	-2
Coletto Creek Reservoir	71	35,060	31,360	89	-760	-2	210	1
Medina Lake	72	254,000	251,800	99	-2,200	-1	38,000	15
TOTAL		1,973,820	1,962,020	99	-8,160	0	32,310	2
<b>UPPER COAST</b>								
Lake Houston	73	128,860	128,860	100	0	0	0	0
Lake Texana	74	157,900	146,800	93	-8,300	-5	-7,800	-5
TOTAL		286,760	275,660	96	-8,300	-3	-7,800	-3

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

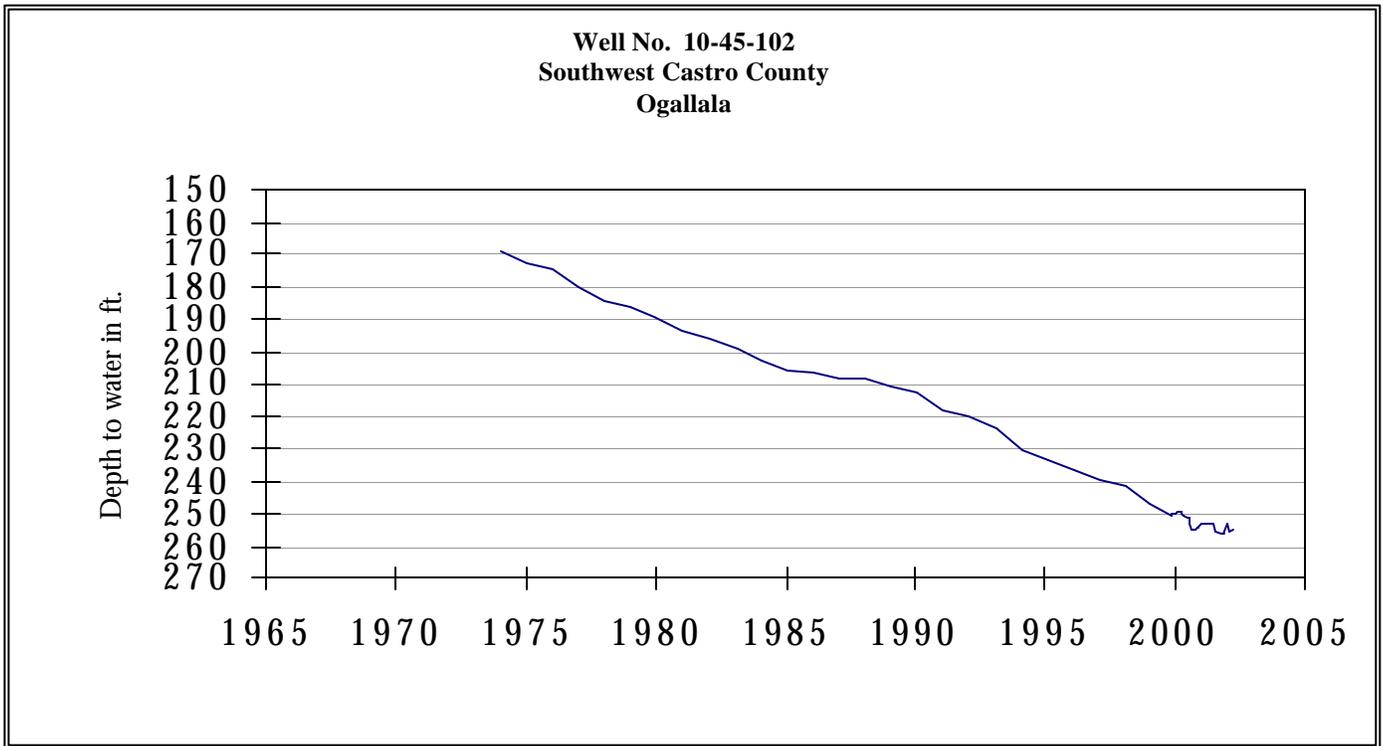
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late February 2002 (acre-feet) (%)		Change since Late January 2002 (acre-feet) (%)		Change since Late February 2001 (acre-feet) (%)		
<b>SOUTHERN</b>									
Choke Canyon Reservoir	75	695,260	273,000	39	-5,000	-1	1,000	0	
Lake Corpus Christi	76	241,240	234,700	97	-6,540	-3	131,400	54	
Falcon Reservoir (Texas)	77	1,555,120	276,000	18	19,000	1	-17,000	-1	
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	381,000	14	-47,000	-2	34,000	1	
TOTAL		2,491,620	783,700	31	7,460	0	115,400	5	
<b>STATE TOTAL</b>		<b>34,470,430</b>	<b>27,730,180</b>	<b>80</b>	<b>-148,110</b>	<b>0</b>	<b>-1,748,180</b>	<b>-5</b>	

**Note:**

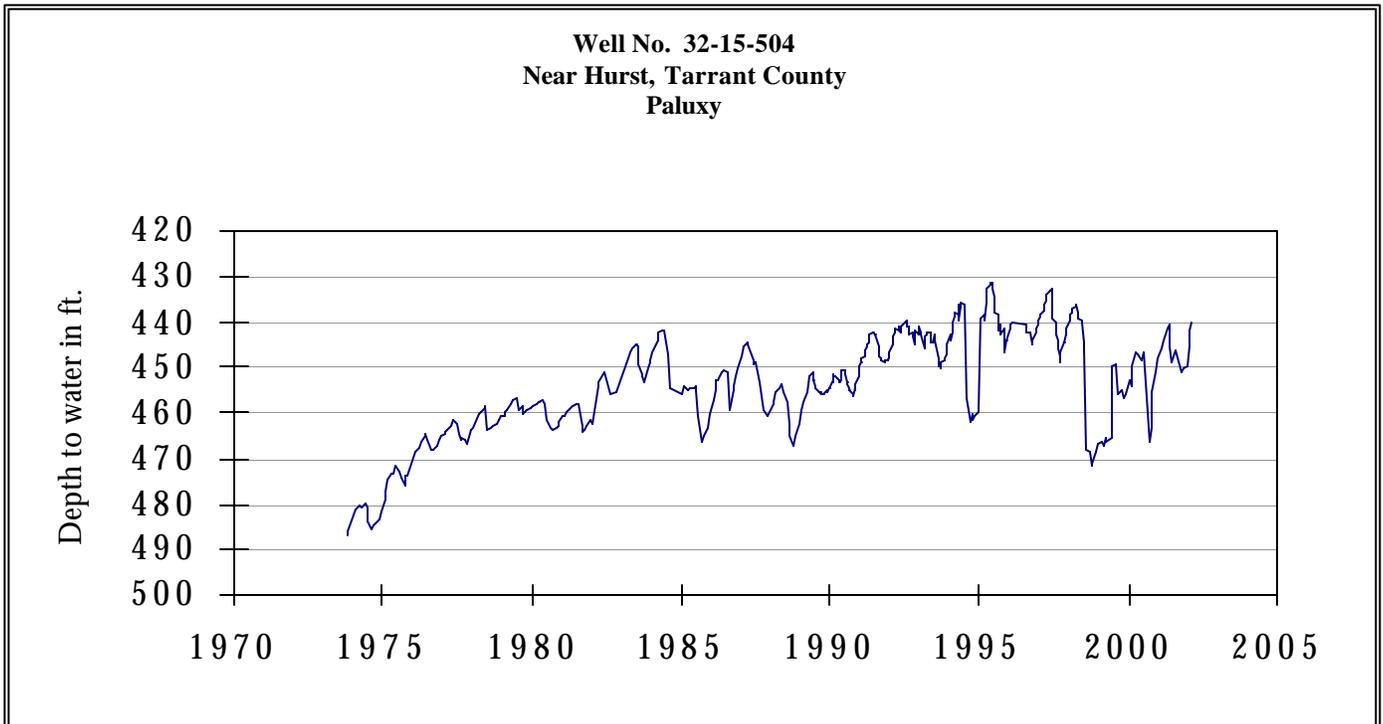
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included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

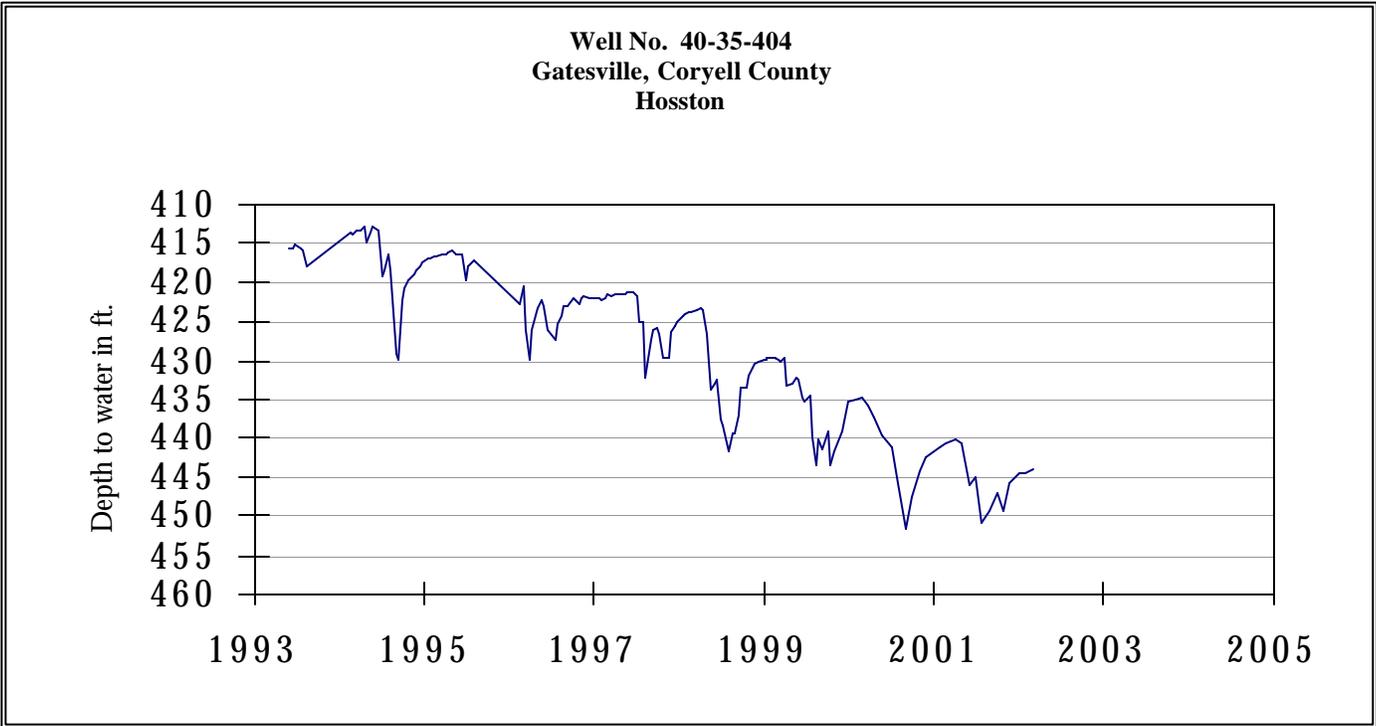
# FEBRUARY GROUND WATER LEVELS IN OBSERVATION WELLS



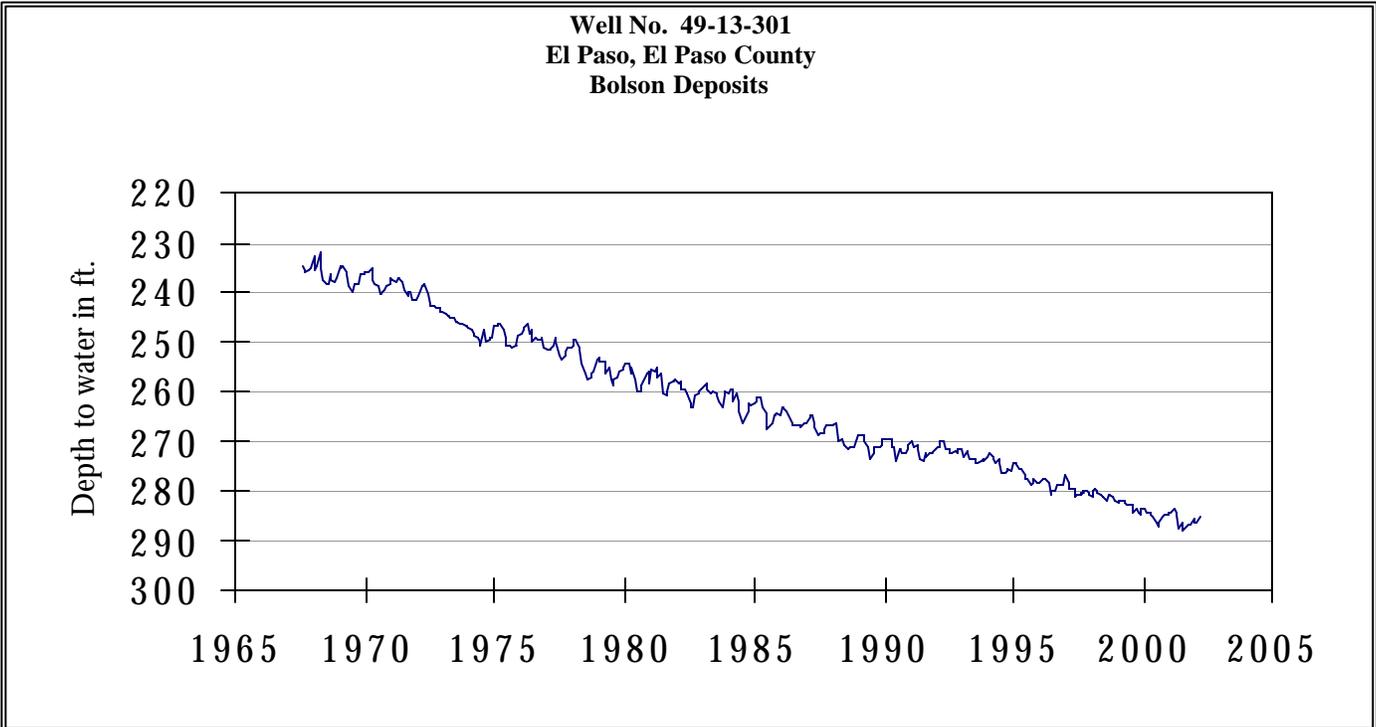
The late February water-level measurement in this Ogallala aquifer well, elevation 3,816 feet above sea level, was 254.94 feet below land surface. This measurement was 0.31 feet above last month's measurement, 1.83 feet below last year's measurement, and 98.94 feet below the initial measurement recorded in 1968.



The late February water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 440.44 feet below land surface. This measurement was 1.62 feet above last month's measurement, 3.29 feet above last year's measurement, and 47.05 feet below the initial measurement recorded in 1953.

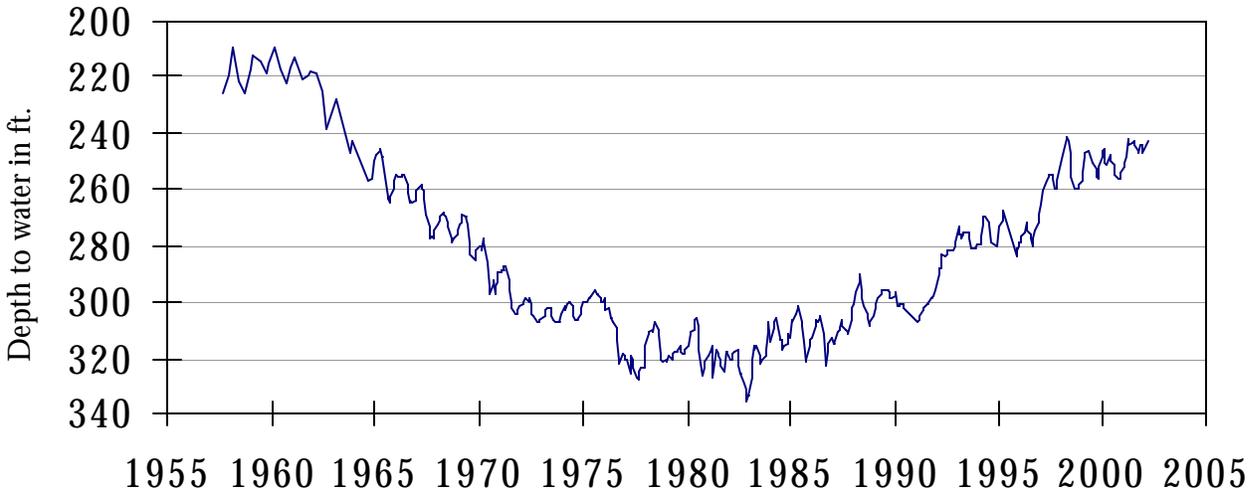


The late February water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 444.00 feet below land surface. This measurement was 0.45 feet above last month's measurement, 3.31 feet below last year's measurement, and 152.00 feet below the initial measurement recorded in 1955.



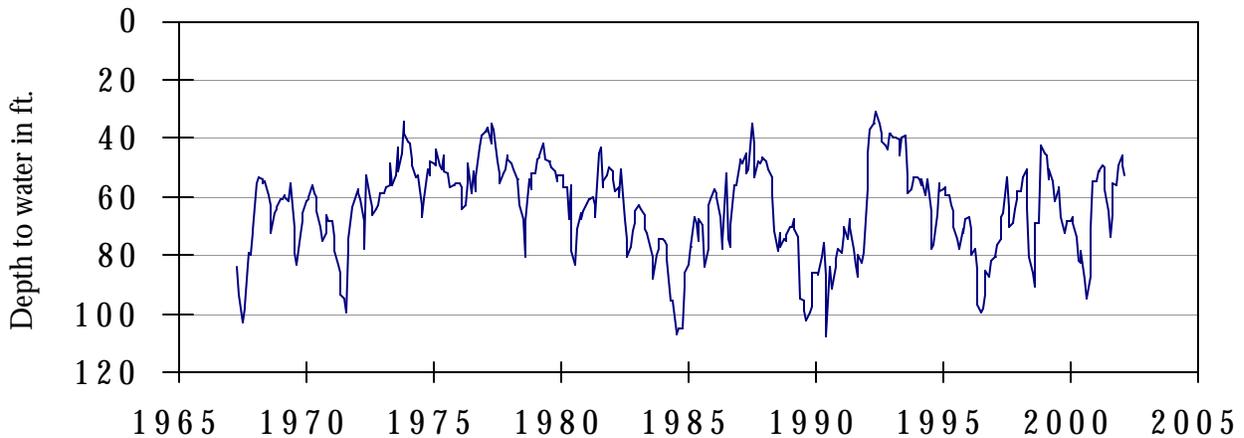
The late February water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 285.32 feet below land surface. This was 0.95 feet above last month's measurement, 1.35 feet below last year's measurement, and 53.42 feet below the initial measurement recorded in 1964.

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



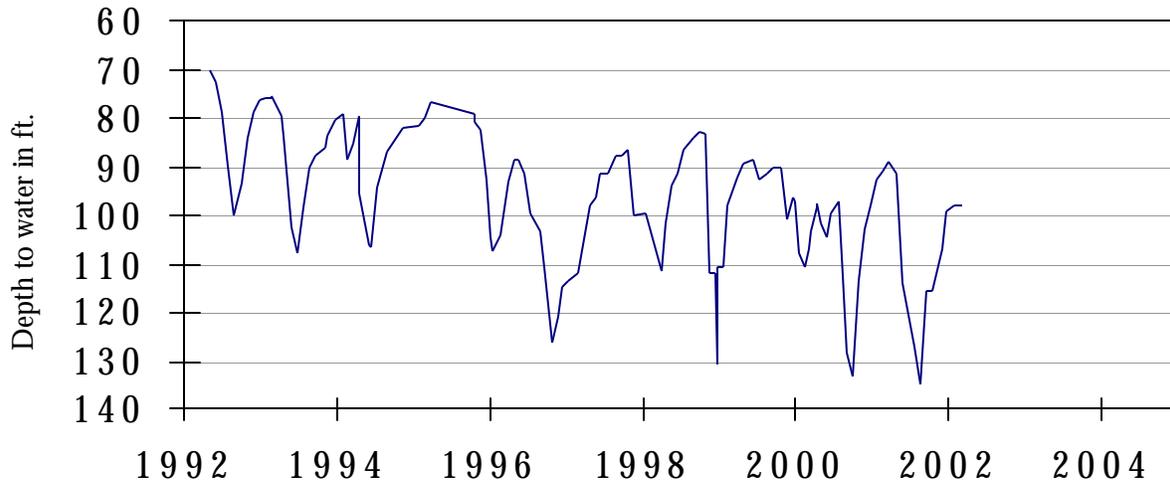
The late February water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 242.88 feet below land surface. This was 1.78 feet above last month's measurement, 5.56 feet above last year's measurement, and 139.65 feet below the initial measurement recorded in 1947.

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



The late February water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 52.46 feet below land surface. This was 3.46 feet below last month's measurement, 1.53 feet below last year's measurement, and 7.16 feet above the initial measurement recorded in 1962.

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



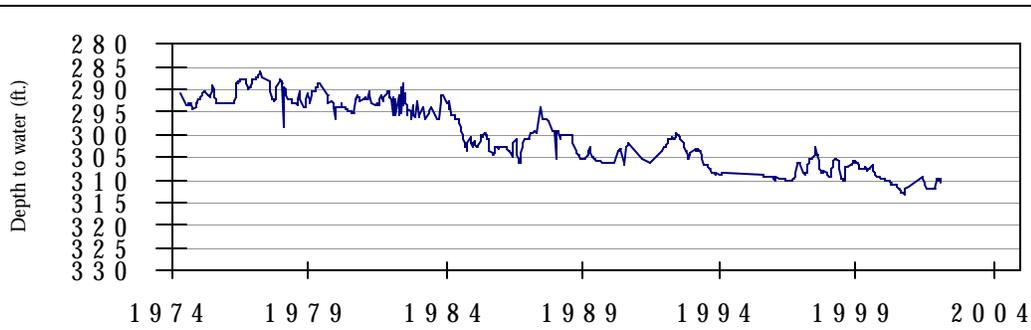
The late February water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 98.35 feet below land surface. This measurement was 0.46 feet below last month's measurement, 7.09 feet below last year's measurement, and 17.10 feet below the initial measurement recorded 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. 6919401  
Real County**



This 820 ft. deep recorder well, located approximately 38 miles southeast of the town of Rocksprings, at an elevation of 1,595 feet above sea level, was completed in the southern portion of the Hosston aquifer. The aquifer water levels illustrate an overall decline through time along with drawdown during the irrigation season and recharge during the winter the months

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