

# Texas Water Development Board



# WATER Conditions

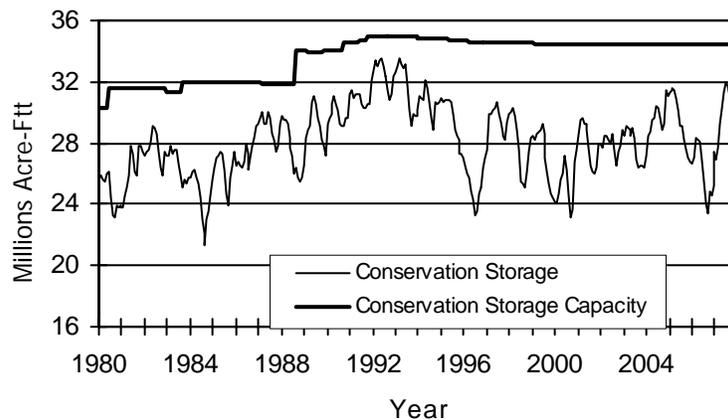
## RESERVOIR STORAGE

October 2007

Near the end of October, the 77 reservoirs monitored for this report held nearly 30.8 million acre-feet in conservation storage. As a statewide total, the state's major reservoirs are approximately 89% full, which is a record high for this time of year in the nearly 30 years of monitoring. Storage went down during the month by 0.2 million acre-feet (-1% of conservation storage capacity). Compared to October last year, reservoir storage increased by 6 million acre-feet (17%).

Toward the end of October this year, 20 reservoirs were at 100% of their conservation capacities. Regionally, storage was above 90% of capacity in the South Central (99%), Upper Coast (98%), North Central (95%), and Edwards Plateau (91%) Regions, but the High Plains and Trans-Pecos Regions are still experiencing storage below 30% of their regional capacities. In the past month, seven out of nine Regions observed decreases in storage and only two had increases. Lake Meredith, the largest reservoir in NW Texas, is only 12% full. Compared to this time last year, the storage increased everywhere except the High Plains, Upper Coast, and Trans-Pecos 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.

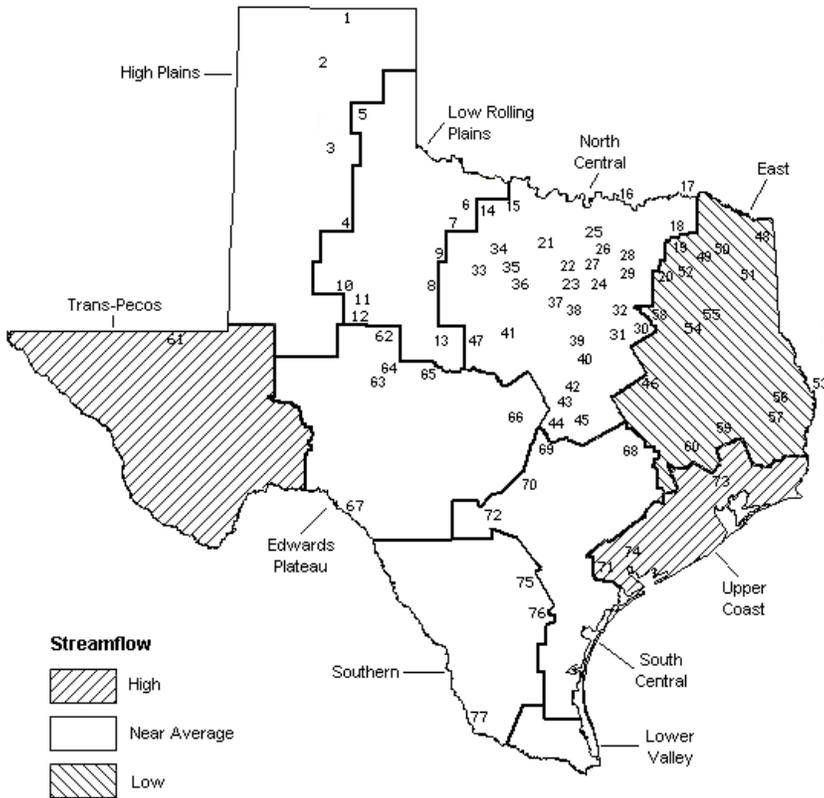
# STREAMFLOW

Of 29 reporting index stations in October, computed 30-day mean flows were high (5% - 30%) at 9 stations, low (70% - 95%) at 9 stations, and near normal (30% - 70% exceedance) at the remaining 11 stations. Compared to September, flows have increased at 5 index stations but decreased at 24 stations.

On a regional basis, flows in October were high in the Trans-Pecos and Upper Coast Regions, low in the East Texas Region, but normal everywhere else. Streamflow in the Lower Valley Region is not monitored.

## OCTOBER 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 Oct. 2007 (acre-feet) (%)	Late September 2007 (acre-feet) (%)	Late October 2006 (acre-feet) (%)			
<b>HIGH PLAINS</b>								
Palo Duro Reservoir	1	60,900	1,420	2	-200	0	560	1
Lake Meredith (Texas)	2	500,000	93,980	19	-5,520	-1	-15,620	-3
Lake Meredith (Texas and Oklahoma)	(2)	779,560	93,980	12	-5,520	-1	-15,620	-2
MacKenzie Reservoir	3	46,250	8,450	18	-230	0	-410	-1
White River Lake	4	31,850	3,840	12	-390	-1	-860	-3
TOTAL		639,000	107,690	17	-6,340	-1	-16,330	-3
<b>LOW ROLLING PLAINS</b>								
Greenbelt Reservoir	5	58,200	22,190	38	-1,670	-3	4,010	7
Lake Kemp	6	319,600	276,480	87	-13,960	-4	63,980	20
Miller's Creek Reservoir	7	27,890	25,650	92	-1,320	-5	4,190	15
Fort Phantom Hill Reservoir	8	70,030	69,610	99	-420	-1	28,360	40
Lake Stamford	9	52,700	52,300	99	-400	-1	17,340	33
Lake J. B. Thomas	10	202,300	30,280	15	-2,500	-1	-4,490	-2
Lake Colorado City	11	30,800	28,280	92	-800	-3	4,170	14
Champion Creek Reservoir	12	41,600	10,360	25	-270	-1	5,100	12
Hords Creek Lake	13	8,600	7,560	88	-270	-3	2,730	32
TOTAL		811,720	522,710	64	-21,610	-3	125,390	15
<b>NORTH CENTRAL</b>								
Lake Kickapoo	14	106,000	83,670	79	-4,770	-5	11,260	11
Lake Arrowhead	15	262,100	233,920	89	-7,760	-3	58,870	22
Lake Texoma	16	2,722,300	2,563,150	94	-43,180	-2	113,400	4
Pat Mayse Lake	17	124,500	118,100	95	760	1	38,600	31
Cooper Lake	18	273,000	273,000	100	0	0	187,690	69
Lake Sulphur Springs	19	17,710	16,230	92	-1,210	-7	2,650	15
Lake Tawakoni	20	936,200	834,800	89	-19,000	-2	321,200	34
Bridgeport Reservoir	21	374,830	339,800	91	-16,500	-4	147,000	39
Eagle Mountain Reservoir	22	178,380	170,300	95	-1,800	-1	51,700	29
Benbrook Lake	23	88,200	81,260	92	600	1	30,900	35
Joe Pool Lake	24	175,800	167,430	95	-8,370	-5	6,300	4
Ray Roberts Lake	25	798,760	798,760	100	0	0	207,110	26
Lewisville Lake	26	555,000	555,000	100	0	0	169,730	31
Grapevine Lake	27	187,700	179,450	96	-8,250	-4	74,180	40
Lavon Lake	28	443,800	411,240	93	-8,010	-2	238,170	54
Lake Ray Hubbard	29	413,420	412,700	100	6,100	1	84,800	21
Richland-Chambers Creek Lake	30	1,103,820	1,100,000	100	-3,820	0	352,000	32
Navarro Mills Lake	31	55,810	53,920	97	-1,890	-3	29,590	53
Bardwell Lake	32	53,580	46,220	86	-940	-2	6,970	13
Hubbard Creek Reservoir	33	317,800	297,670	94	-8,720	-3	141,280	44
Lake Graham	34	45,000	40,940	91	-1,800	-4	5,590	12
Possum Kingdom Lake	35	551,820	529,640	96	-1,520	0	22,220	4
Lake Palo Pinto	36	27,650	24,340	88	-1,420	-5	11,000	40
Lake Granbury	37	135,680	130,260	96	-3,210	-2	15,000	11
Lake Pat Cleburne	38	25,300	24,700	98	-600	-2	6,200	25
Whitney Lake	39	622,800	525,590	84	-45,970	-7	78,570	13
Waco Lake	40	144,500	144,500	100	0	0	21,160	15
Proctor Lake	41	55,590	55,590	100	0	0	28,520	51
Belton Lake	42	434,500	434,500	100	0	0	74,600	17
Stillhouse Hollow Lake	43	226,060	226,060	100	0	0	16,350	7
Lake Georgetown	44	37,010	37,010	100	0	0	20,360	55
Granger Lake	45	54,280	54,280	100	0	0	6,190	11
Lake Limestone	46	215,750	197,060	91	-6,560	-3	12,860	6
Lake Brownwood	47	143,400	126,670	88	-3,340	-2	29,670	21
TOTAL		11,908,050	11,287,760	95	-191,180	-2	2,621,690	22

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

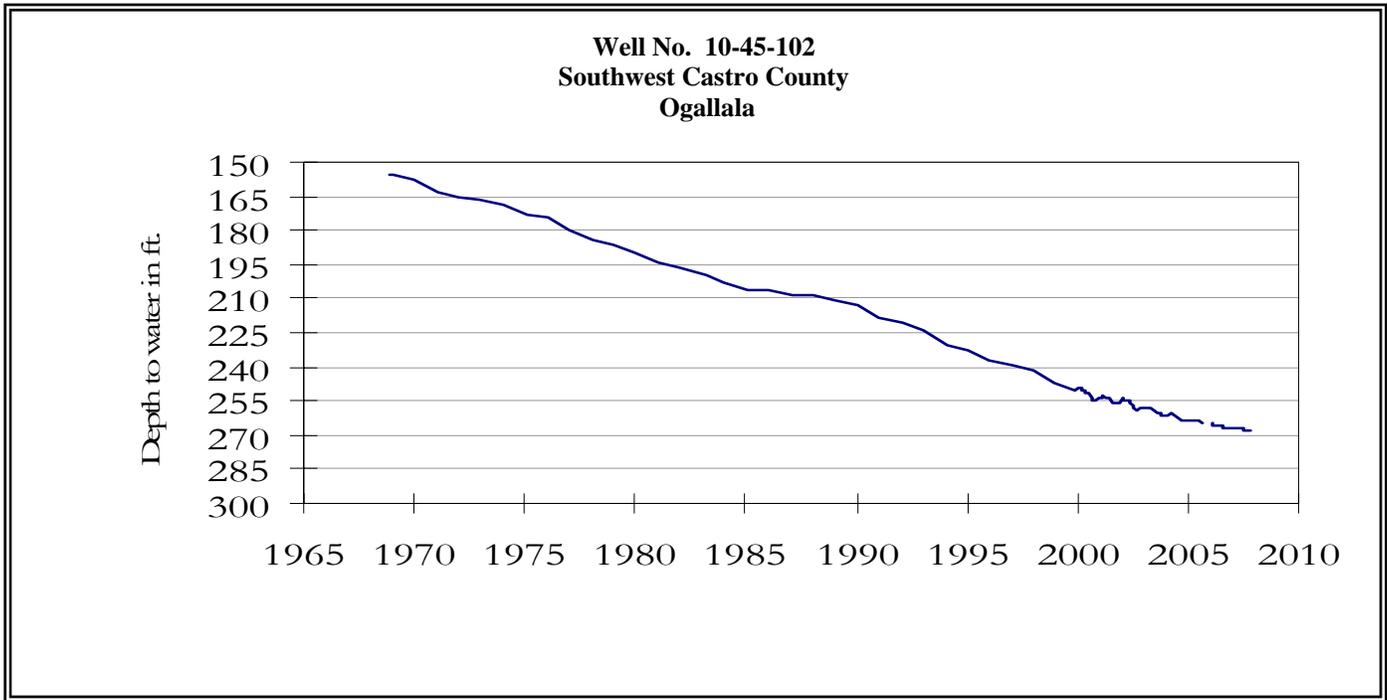
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late Oct. 2007 (acre-feet) (%)	Change since Late September 2007 (acre-feet) (%)	Change since Late October 2006 (acre-feet) (%)
<b>EAST</b>					
Wright Patman Lake	48	142,700	142,700 100	0 0	0 0
Lake Cypress Springs	49	66,800	66,800 100	0 0	14,760 22
Lake Bob Sandlin	50	202,300	200,400 99	-1,900 -1	75,500 37
Lake O' the Pines	51	252,000	250,610 99	-1,390 -1	87,340 35
Lake Fork Reservoir	52	635,200	635,200 100	0 0	93,600 15
Toledo Bend Reservoir	53	4,472,900	3,750,000 84	-38,000 -1	435,000 10
Lake Palestine	54	411,300	405,530 99	6,280 2	106,670 26
Lake Tyler	55	73,700	73,700 100	0 0	27,060 37
Sam Rayburn Reservoir	56	2,876,300	2,368,890 82	-141,050 -5	-359,590 -13
B. A. Steinhagen Lake	57	94,200	63,120 67	2,540 3	32,340 34
Cedar Creek Reservoir	58	637,050	611,800 96	-13,900 -2	166,300 26
Lake Livingston	59	1,750,000	1,747,000 100	-3,000 0	-3,000 0
Lake Conroe	60	429,900	398,700 93	-4,500 -1	7,500 2
<b>TOTAL</b>		<b>12,044,350</b>	<b>10,714,450 89</b>	<b>-194,920 -2</b>	<b>683,480 6</b>
<b>TRANS-PECOS</b>					
Red Bluff Reservoir	61	307,000	85,660 28	-590 0	-5,420 -2
<b>TOTAL</b>		<b>307,000</b>	<b>85,660 28</b>	<b>-590 0</b>	<b>-5,420 -2</b>
<b>EDWARDS PLATEAU</b>					
E. V. Spence Reservoir	62	488,760	78,810 16	-4,060 -1	6,810 1
Twin Buttes Reservoir	63	177,800	71,730 40	190 0	36,420 20
O.C. Fisher Lake	64	119,200	10,990 9	-640 -1	2,610 2
O. H. Ivie Reservoir	65	554,340	374,600 68	-6,900 -1	144,700 26
Lake Buchanan	66	896,980	832,330 93	-210 0	343,400 38
Amistad Reservoir (Texas)	67	1,771,030	2,268,000 128	254,000 14	373,000 21
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	2,814,000 89	61,000 2	231,000 7
<b>TOTAL</b>		<b>4,008,110</b>	<b>3,636,460 91</b>	<b>242,380 6</b>	<b>906,940 23</b>
<b>SOUTH CENTRAL</b>					
Somerville Lake	68	155,060	149,250 96	-3,220 -2	-5,810 -4
Lake Travis	69	1,144,100	1,144,100 100	0 0	511,220 45
Canyon Lake	70	385,600	379,180 98	-3,060 -1	53,860 14
Coletto Creek Reservoir	71	35,060	31,490 90	0 0	6,130 17
Medina Lake	72	254,000	254,000 100	0 0	150,900 59
<b>TOTAL</b>		<b>1,973,820</b>	<b>1,958,020 99</b>	<b>-6,280 0</b>	<b>716,300 36</b>
<b>UPPER COAST</b>					
Lake Houston	73	128,860	128,860 100	0 0	0 0
Lake Texana	74	157,900	151,630 96	3,260 2	-4,520 -3
<b>TOTAL</b>		<b>286,760</b>	<b>280,490 98</b>	<b>3,260 1</b>	<b>-4,520 -2</b>
<b>SOUTHERN</b>					
Choke Canyon Reservoir	75	695,260	682,900 98	-11,100 -2	153,100 22
Lake Corpus Christi	76	241,240	241,240 100	0 0	134,540 56
Falcon Reservoir (Texas)	77	1,555,120	1,258,000 81	-9,000 -1	635,000 41
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	1,780,000 67	14,000 1	699,000 26
<b>TOTAL</b>		<b>2,491,620</b>	<b>2,182,140 88</b>	<b>-20,100 -1</b>	<b>922,640 37</b>
<b>STATE TOTAL</b>		<b>34,470,430</b>	<b>30,775,380 89</b>	<b>-195,380 -1</b>	<b>5,950,170 17</b>

Note:

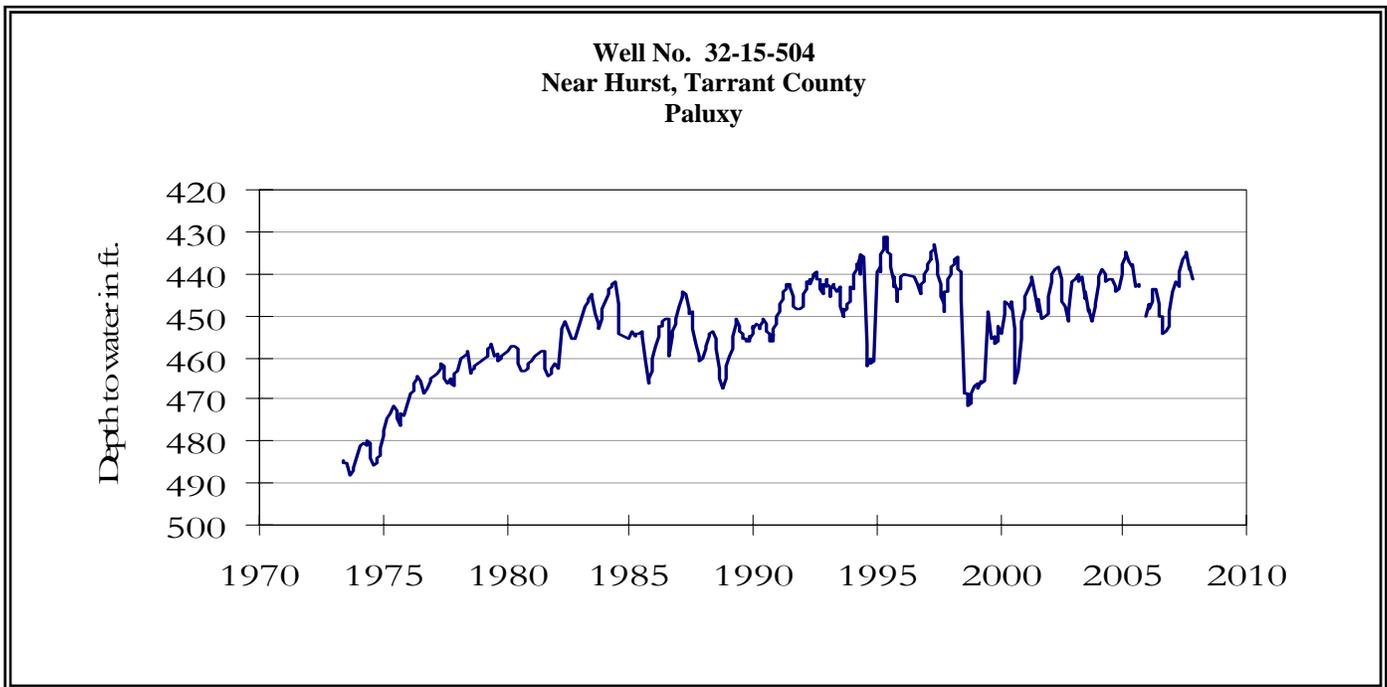
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included 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 the date shown. Percent change is given by  $\% \text{ Change} = 100 * (\text{current conservation storage} - \text{past conservation storage}) / \text{conservation storage capacity}$ .

Current data are based on elevations near end of the 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 shown are for the Texas share of conservation storage in all reservoirs.

# OCTOBER GROUND WATER LEVELS IN OBSERVATION WELLS

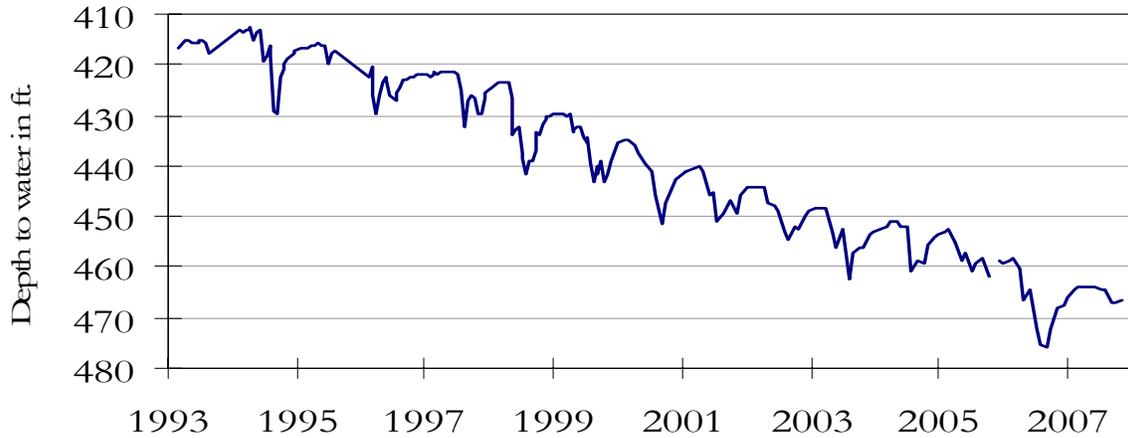


The late October water-level measurement in this Ogallala Aquifer well, elevation 3,816 feet above sea level, was 268.13 feet below land surface. This measurement was 0.13 feet below last month's measurement, 1.02 feet below last year's measurement, and 112.13 feet below the initial measurement recorded in 1968. No water level measurements were recorded for September through December 2005.



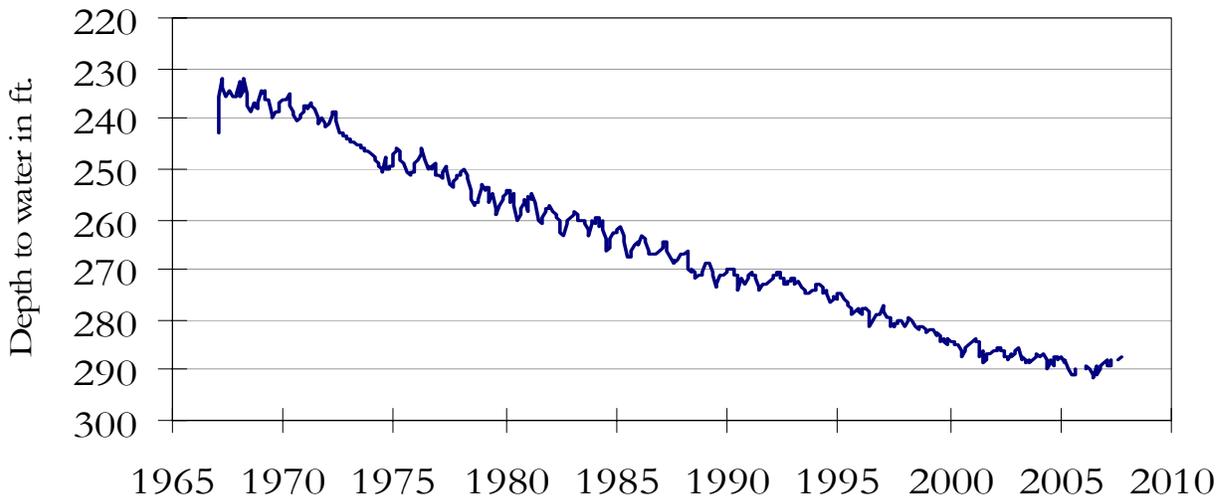
The late October water-level measurement in this Paluxy Formation Trinity Aquifer well, elevation 535 feet above sea level, was 441.48 feet below land surface. This measurement was 3.34 feet below last month's measurement, 10.82 feet above last year's measurement, and 63.48 feet below the initial measurement recorded in 1953. No water level measurements were recorded for September or October 2005.

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



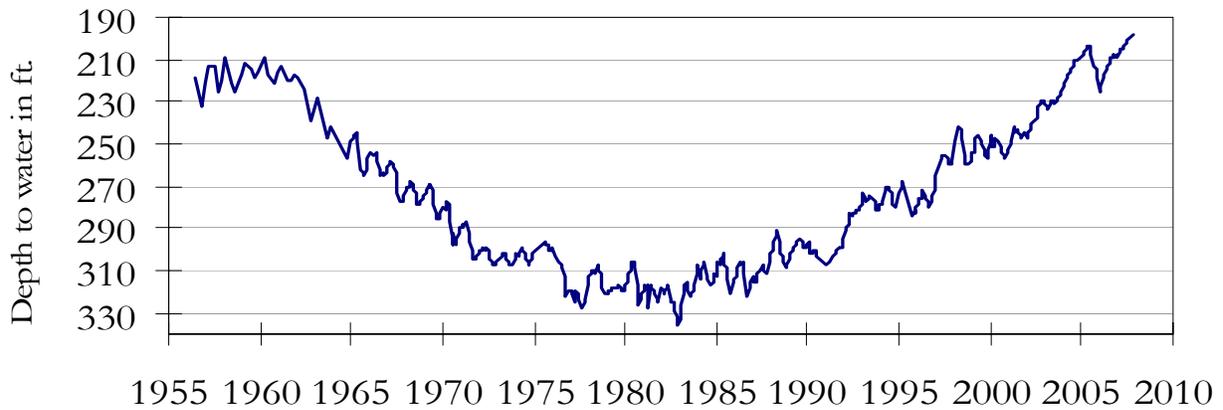
The late October water-level measurement in this Hosston Formation Trinity Aquifer well, elevation 823 feet above sea level, was 466.72 feet below land surface. This water level was 0.54 feet above last month's measurement, 1.45 feet above last year's measurement, and 174.72 feet below the initial measurement recorded in 1955. No water level measurement was recorded for October 2005.

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



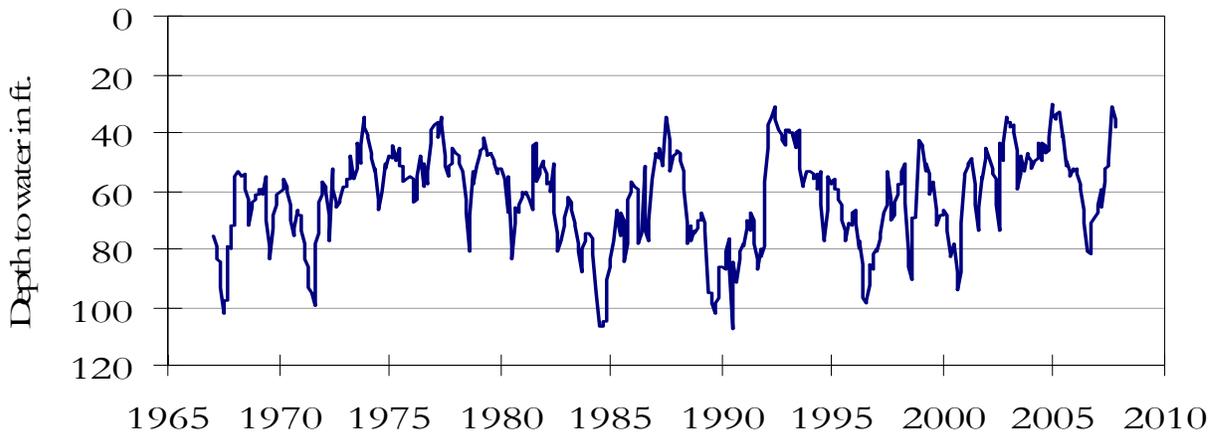
The late October water-level measurement in this Hueco Bolson Aquifer well, elevation 3,882 feet above sea level, was 287.38 feet below land surface. This water level was 0.09 feet above last month's measurement, 1.82 feet above last year's measurement, and 55.48 feet below the initial measurement in 1964. No water level measurements were recorded for May through July 2007, and October or December 2005.

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



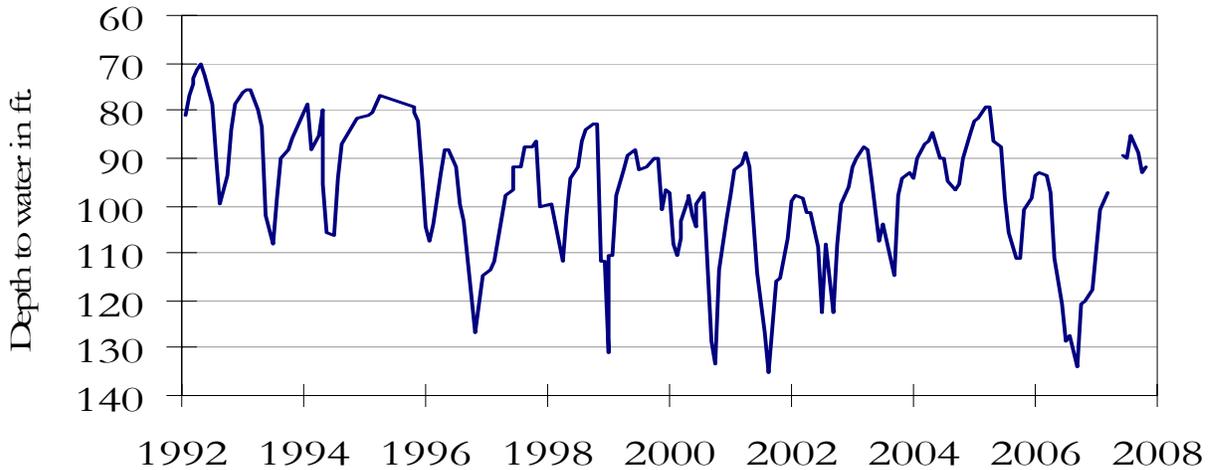
The late October water-level measurement in this Evangeline Formation Gulf Coast Aquifer well, elevation 66 feet above sea level, was 198.39 feet below land surface. This was 0.26 feet above last month's measurement, 10.14 feet above last year's measurement, and 62.89 feet below the initial measurement recorded in 1947.

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



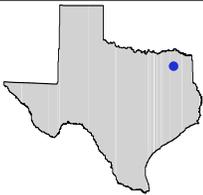
The late October water-level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 38.60 feet below land surface. This was 3.20 feet below last month's measurement, 30.90 feet above last year's measurement, and 8.04 feet above the initial measurement recorded in 1962.

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



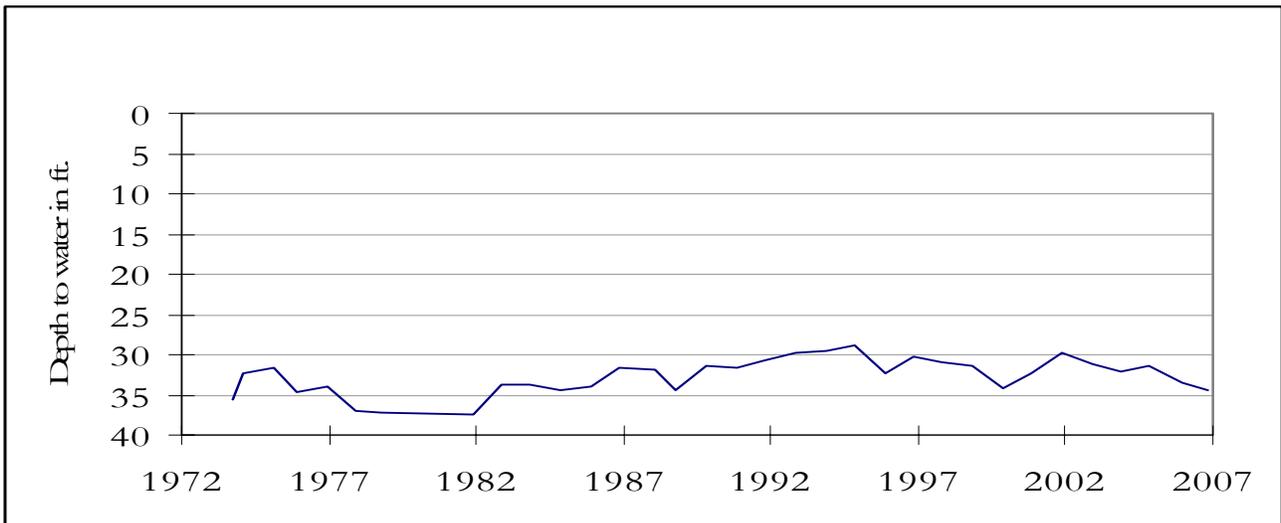
The late October water-level measurement in this Carrizo Aquifer well, elevation 446 feet above sea level, was 92.16 feet below land surface. This measurement was 0.90 feet above last month's measurement, 27.98 feet above last year's measurement, and 56.80 feet below the initial measurement recorded in 1965. No water level measurements were recorded for March and April 2007.

***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 16-28-902  
Bowie County**



This water level observation well, located 6 miles west of New Boston, at an elevation of 352 feet ASL, was completed in the Nacatoch Aquifer. Stabilization of water levels in this aquifer is a result of reduced pumpage for municipal use and conversion to surface water supplies.

October, 2007

Water level measurements were available for all seven key monitoring wells. Water levels rose in four of the seven monitoring wells since the beginning of October, ranging from 0.09 feet in the El Paso Co. Hueco Bolson well to 0.90 feet in the Atascosa Co. Carrizo well. Water levels declined in the remaining monitoring wells, ranging from 0.13 feet in the Castro Co. Ogallala well to 3.34 feet in the Tarrant Co. Trinity well. The J-17 well recorded a water level of 38.60 feet below land surface, 3.20 feet below last month's measurement. This water level is 41.40 feet above the Stage 1 critical management level.

*TEXAS WATER DEVELOPMENT BOARD*

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*P.O. BOX 13231*

*AUSTIN TX 78711-3231*