

# Texas Water Development Board



**W**ATER  
**Conditions**

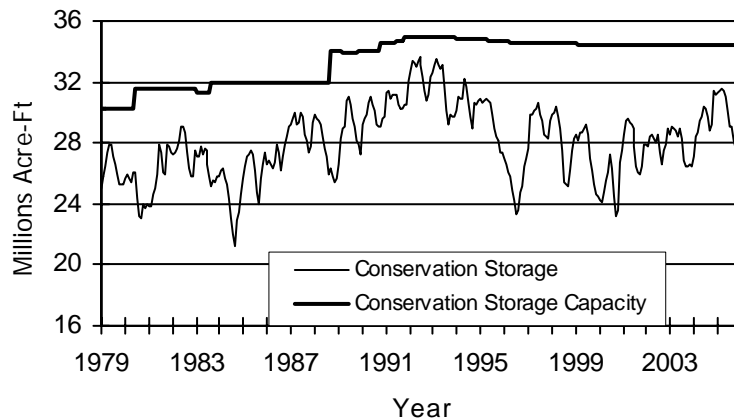
## RESERVOIR STORAGE

*November 2005*

Near the end of November, the 77 reservoirs monitored for this report held 27.08 million acre-feet in conservation storage, or 79 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 during the month by 0.51 million acre-feet (-1.5% of conservation storage capacity). Compared to last year, storage decreased by 4.39 million acre-feet (-13%).

Storage was near capacity in the Upper Coast Region (98%), but lower than one-third of capacity in the High Plains Region (26%). Storage was at 100% in 3 reservoirs, and the Texas share of Amistad remained above its capacity, at 132%. Compared to this time last year, the storage increased in two regions and by the same proportion: the Low Rolling Plains and the Southern Regions (4%), decreased in five regions with the sharpest decrease in the East Region (-21%), and was relatively flat in two regions: the Upper Coast and Edwards Plateau 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.

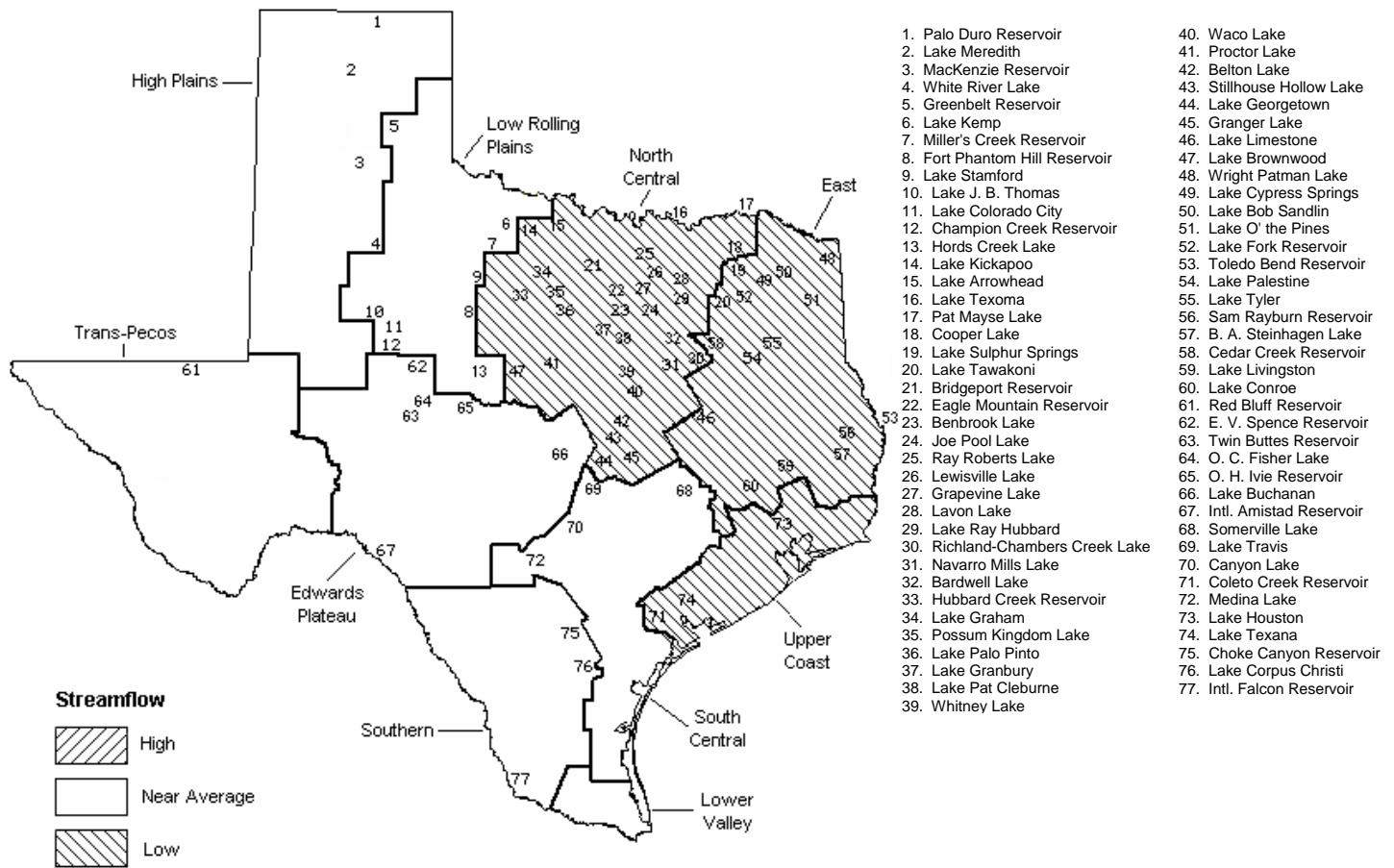
# STREAMFLOW

Of 29 reporting index stations in November, computed 30-day mean flows were high (5% - 30%) at 2 stations, low (70% - 95%) at 11 stations, very low (95% - 100%) at 1 station, and near normal (30% - 70% exceedance) at the remaining 15 stations. Compared to October, flows have increased at 14 index stations and decreased at 15 stations.

On a regional basis, flows in November were low in North Central, East Texas and Upper Coast Regions, and normal everywhere else. Streamflow in the Lower Valley Region is not monitored.

## NOVEMBER STREAMFLOW CONDITIONS

Reservoirs Shown on Map



## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage		Conservation Storage Late Nov.		Change since Late October		Change since Late November	
		Capacity (acre-feet)		2005 (acre-feet)	(%)	2005 (acre-feet)	(%)	2004 (acre-feet)	(%)
<b>HIGH PLAINS</b>									
Palo Duro Reservoir	1	60,900		2,290	4	0	0	-2,520	-4
Lake Meredith (Texas)	2	500,000		150,190	30	-5,450	-1	-13,810	-3
Lake Meredith (Texas and Oklahoma)	(2)	779,560		150,190	19	-5,450	-1	-13,810	-2
MacKenzie Reservoir	3	46,250		9,890	21	-160	0	-170	0
White River Lake	4	31,850		6,410	20	-370	-1	-3,490	-11
<b>TOTAL</b>		<b>639,000</b>		<b>168,780</b>	<b>26</b>	<b>-5,980</b>	<b>-1</b>	<b>-19,990</b>	<b>-3</b>
<b>LOW ROLLING PLAINS</b>									
Greenbelt Reservoir	5	58,200		21,840	38	-400	-1	-860	-1
Lake Kemp	6	319,600		281,120	88	-5,520	-2	37,660	12
Miller's Creek Reservoir	7	27,890		27,000	97	-890	-3	5,470	20
Fort Phantom Hill Reservoir	8	70,030		49,470	71	-2,650	-4	-19,370	-28
Lake Stamford	9	52,700		51,280	97	-1,420	-3	14,640	28
Lake J. B. Thomas	10	202,300		61,570	30	-2,980	-1	-790	0
Lake Colorado City	11	30,800		28,640	93	-550	-2	-2,160	-7
Champion Creek Reservoir	12	41,600		4,500	11	-1,310	-3	-430	-1
Hords Creek Lake	13	8,600		6,930	81	-190	-2	-540	-6
<b>TOTAL</b>		<b>811,720</b>		<b>532,350</b>	<b>66</b>	<b>-15,910</b>	<b>-2</b>	<b>33,620</b>	<b>4</b>
<b>NORTH CENTRAL</b>									
Lake Kickapoo	14	106,000		95,750	90	-3,010	-3	21,160	20
Lake Arrowhead	15	262,100		230,480	88	-6,310	-2	39,950	15
Lake Texoma	16	2,722,300		2,441,950	90	-44,480	-2	-280,350	-10
Pat Mayse Lake	17	124,500		96,140	77	-2,720	-2	-20,450	-16
Cooper Lake	18	273,000		152,610	56	-16,190	-6	-49,730	-18
Lake Sulphur Springs	19	17,710		11,790	67	-550	-3	-5,920	-33
Lake Tawakoni	20	936,200		640,500	68	-25,300	-3	-253,900	-27
Bridgeport Reservoir	21	374,830		257,900	69	-9,000	-2	-87,100	-23
Eagle Mountain Reservoir	22	178,380		140,200	79	-1,400	-1	-33,200	-19
Benbrook Lake	23	88,200		46,040	52	-3,980	-5	-42,160	-48
Joe Pool Lake	24	175,800		153,180	87	-3,240	-2	-22,620	-13
Ray Roberts Lake	25	798,760		712,820	89	-13,740	-2	-85,940	-11
Lewisville Lake	26	555,000		462,810	83	-16,790	-3	-92,190	-17
Grapevine Lake	27	187,700		140,000	75	-4,800	-3	-47,700	-25
Lavon Lake	28	443,800		284,640	64	-12,950	-3	-148,840	-34
Lake Ray Hubbard	29	413,420		341,300	83	-9,700	-2	-64,200	-16
Richland-Chambers Creek Lake	30	1,103,820		958,000	87	-25,900	-2	-145,820	-13
Navarro Mills Lake	31	55,810		40,930	73	-2,020	-4	-14,880	-27
Bardwell Lake	32	53,580		36,540	68	-1,780	-3	-17,040	-32
Hubbard Creek Reservoir	33	317,800		187,720	59	-4,300	-1	970	0
Lake Graham	34	45,000		43,840	97	-1,160	-3	4,110	9
Possum Kingdom Lake	35	551,820		505,110	92	-10,270	-2	-36,790	-7
Lake Palo Pinto	36	27,650		16,000	58	-1,320	-5	-10,680	-39
Lake Granbury	37	135,680		130,530	96	-3,080	-2	-1,470	-1
Lake Pat Cleburne	38	25,300		19,260	76	-500	-2	-6,040	-24
Whitney Lake	39	622,800		540,570	87	-21,070	-3	-82,230	-13
Waco Lake	40	144,500		144,500	100	0	0	0	0
Proctor Lake	41	55,590		37,670	68	-1,480	-3	-17,920	-32
Belton Lake	42	434,500		411,780	95	-7,430	-2	-22,720	-5
Stillhouse Hollow Lake	43	226,060		222,510	98	-1,070	0	-3,550	-2
Lake Georgetown	44	37,010		25,580	69	-2,240	-6	-11,430	-31
Granger Lake	45	54,280		53,880	99	-130	0	-400	-1
Lake Limestone	46	215,750		174,050	81	-5,860	-3	-41,700	-19
Lake Brownwood	47	143,400		122,480	85	-2,730	-2	-14,860	-10
<b>TOTAL</b>		<b>11,908,050</b>		<b>9,879,060</b>	<b>83</b>	<b>-266,500</b>	<b>-2</b>	<b>-1,595,640</b>	<b>-13</b>

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late Nov. 2005 (acre-feet)	(%)	Change since Late October 2005 (acre-feet)	(%)	Change since Late November 2004 (acre-feet)	(%)
<b>EAST</b>								
Wright Patman Lake	48	142,700	142,700	100	0	0	0	0
Lake Cypress Springs	49	66,800	57,900	87	-840	-1	-6,680	-10
Lake Bob Sandlin	50	202,300	159,400	79	-3,500	-2	-35,200	-17
Lake O' the Pines	51	252,000	181,610	72	-9,100	-4	-70,390	-28
Lake Fork Reservoir	52	635,200	574,600	90	-9,900	-2	-60,600	-10
Toledo Bend Reservoir	53	4,472,900	3,019,000	67	-79,000	-2	-1,210,000	-27
Lake Palestine	54	411,300	341,580	83	-6,470	-2	-67,210	-16
Lake Tyler	55	73,700	60,740	82	-1,900	-3	-12,960	-18
Sam Rayburn Reservoir	56	2,876,300	2,367,880	82	-52,620	-2	-508,420	-18
B. A. Steinhagen Lake	57	94,200	55,630	59	10,580	11	-38,570	-41
Cedar Creek Reservoir	58	637,050	522,900	82	-14,600	-2	-114,150	-18
Lake Livingston	59	1,750,000	1,418,000	81	-7,000	0	-332,000	-19
Lake Conroe	60	429,900	341,400	79	-3,800	-1	-80,300	-19
TOTAL		12,044,350	9,243,340	77	-178,150	-1	-2,536,480	-21
<b>TRANS-PECOS</b>								
Red Bluff Reservoir	61	307,000	105,470	34	12,770	4	-9,870	-3
TOTAL		307,000	105,470	34	12,770	4	-9,870	-3
<b>EDWARDS PLATEAU</b>								
E. V. Spence Reservoir	62	488,760	96,420	20	-2,460	-1	17,340	4
Twin Buttes Reservoir	63	177,800	46,830	26	1,170	1	24,290	14
O.C. Fisher Lake	64	119,200	14,270	12	-650	-1	6,650	6
O. H. Ivie Reservoir	65	554,340	292,200	53	-5,000	-1	62,100	11
Lake Buchanan	66	896,980	774,640	86	-4,100	0	-122,340	-14
Amistad Reservoir (Texas)	67	1,771,030	2,336,000	132	-19,000	-1	14,000	1
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	2,778,000	88	-7,000	0	-31,000	-1
TOTAL		4,008,110	3,560,360	89	-30,040	-1	2,040	0
<b>SOUTH CENTRAL</b>								
Somerville Lake	68	155,060	121,440	78	-7,520	-5	-33,620	-22
Lake Travis	69	1,144,100	895,340	78	-19,560	-2	-248,760	-22
Canyon Lake	70	385,600	363,250	94	-2,490	-1	-22,350	-6
Coletto Creek Reservoir	71	35,060	26,250	75	-1,180	-3	-5,790	-17
Medina Lake	72	254,000	203,600	80	-8,600	-3	-50,400	-20
TOTAL		1,973,820	1,609,880	82	-39,350	-2	-360,920	-18
<b>UPPER COAST</b>								
Lake Houston	73	128,860	128,860	100	0	0	0	0
Lake Texana	74	157,900	151,430	96	13,390	8	-1,400	-1
TOTAL		286,760	280,290	98	13,390	5	-1,400	0

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

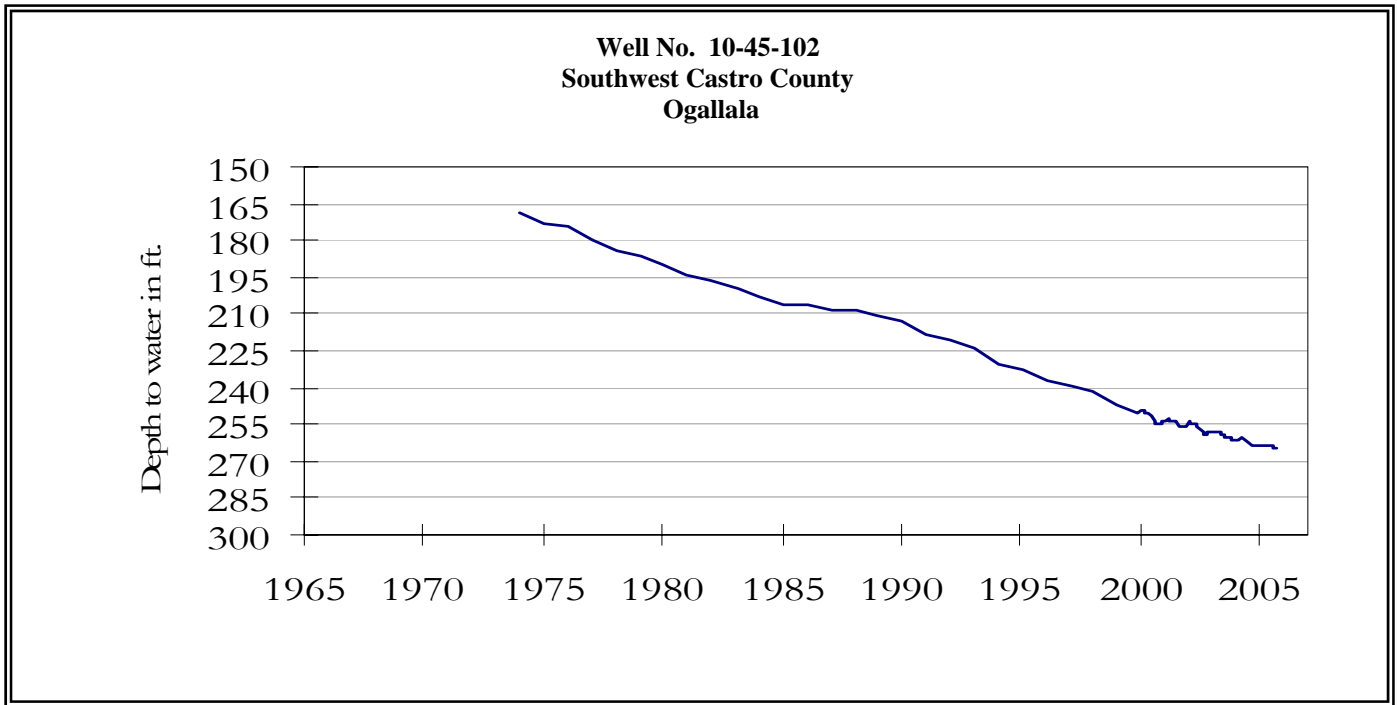
Name of Lake or Reservoir	No. on Map	Conservation Storage	Conservation Storage		Change since Late October		Change since Late November	
		Capacity (acre-feet)	Late Nov. 2005 (acre-feet)	(%)	2005 (acre-feet)	(%)	2004 (acre-feet)	(%)
<b>SOUTHERN</b>								
Choke Canyon Reservoir	75	695,260	623,000	90	-11,000	-2	-71,000	-10
Lake Corpus Christi	76	241,240	151,000	63	-9,400	-4	-90,240	-37
Falcon Reservoir (Texas)	77	1,555,120	925,000	59	18,000	1	257,000	17
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	1,546,000	58	50,000	2	-219,000	-8
TOTAL		2,491,620	1,699,000	68	-2,400	0	95,760	4
 <b>STATE TOTAL</b>		 34,470,430	 27,078,530	 79	 -512,170	 -1	 -4,392,880	 -13

**Note:**

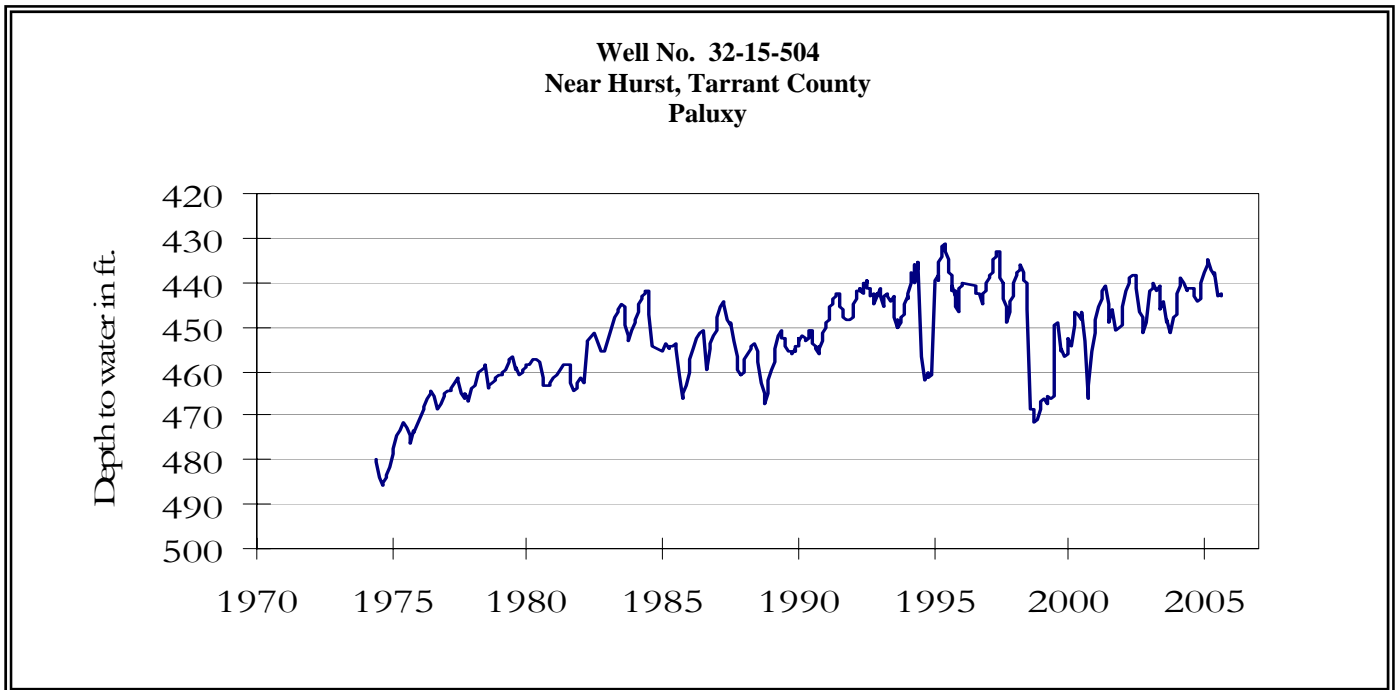
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included 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). This month the storage of Palo Duro Reservoir was unavailable. Preliminary figures are shown for the Texas' share of conservation storage in all reservoirs.

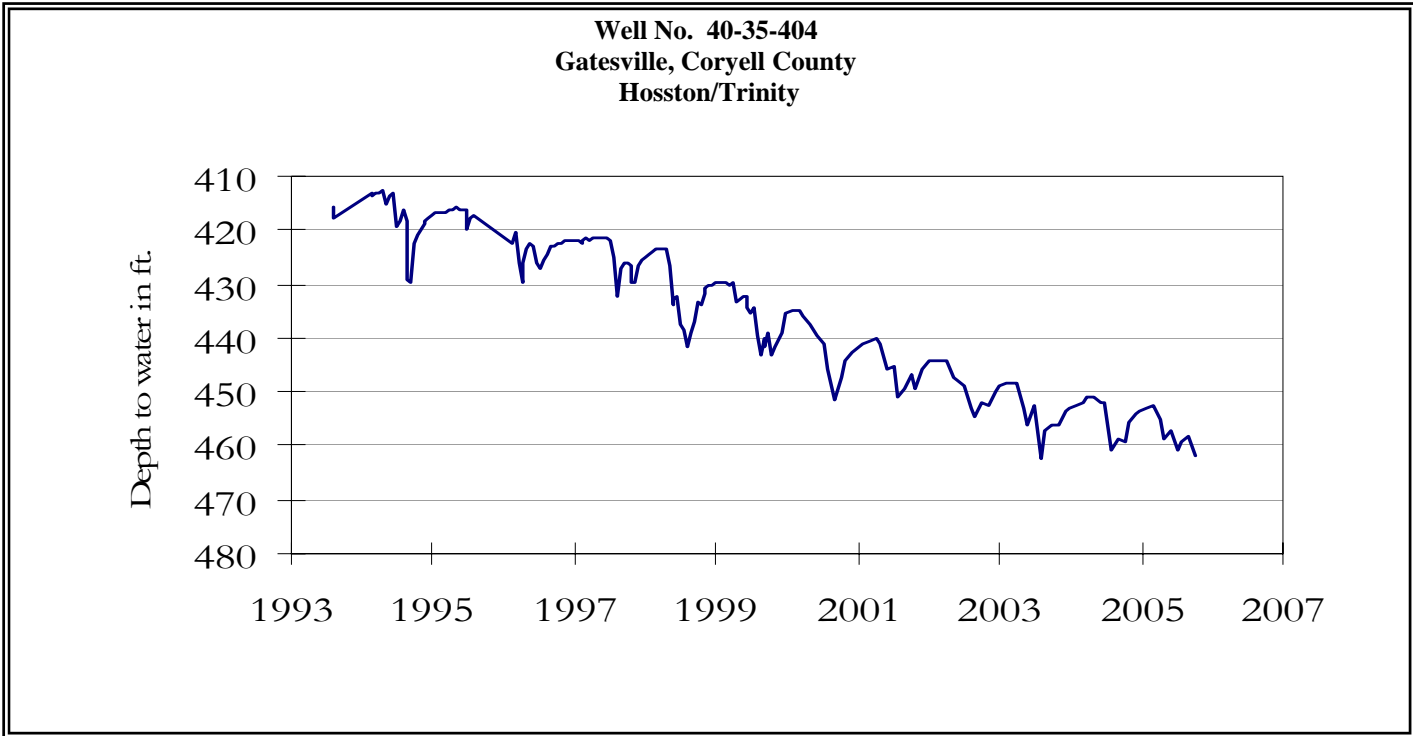
# NOVEMBER GROUND WATER LEVELS IN OBSERVATION WELLS



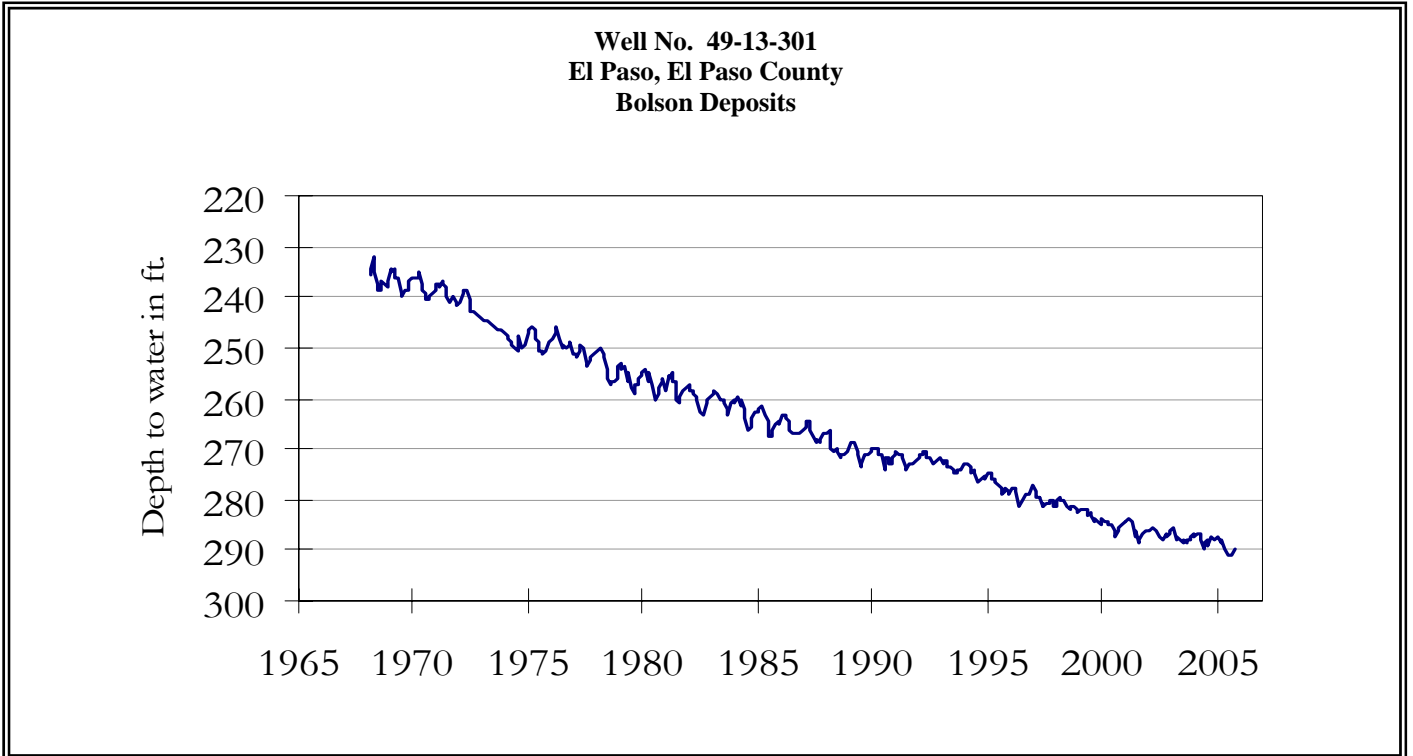
The water-level measurement is not available this month for this Ogallala aquifer well. The graph presented is from the last month it was reported.



The late November water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 450.12 feet below land surface. This measurement was 7.19 feet below August's measurement, 9.94 feet below last year's measurement, and 72.12 feet below the initial measurement recorded in 1953.

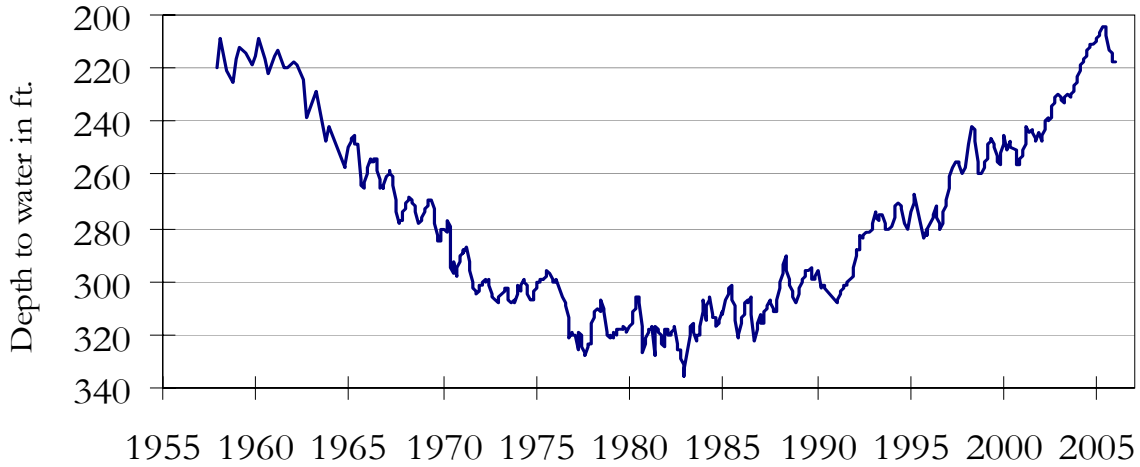


The late November water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 458.89 feet below land surface. This water level was 3.16 feet above September's measurement, 4.82 feet below last year's measurement, and 166.89 feet below the initial measurement recorded in 1955.



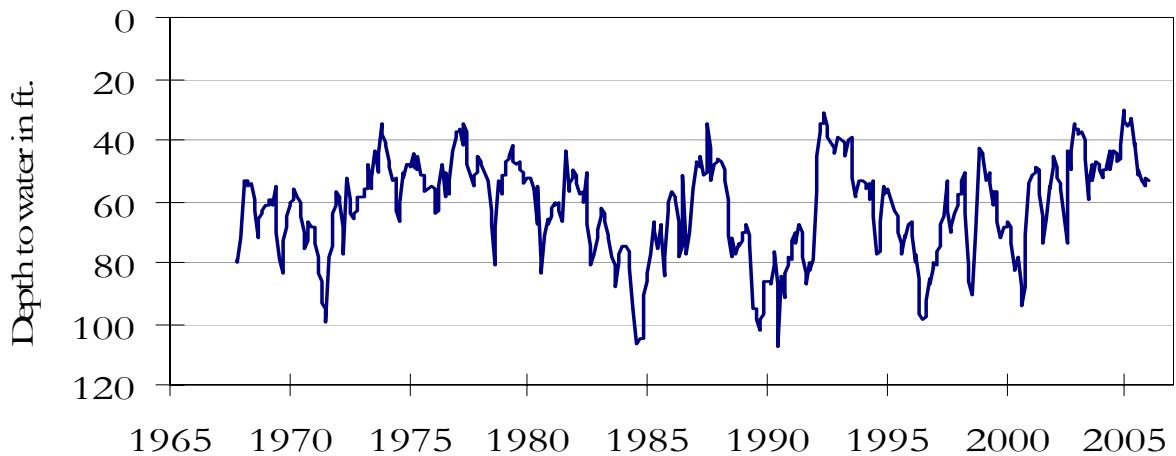
The late November water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 289.83 feet below land surface. This was 0.06 feet below September's measurement, 2.15 feet below last year's measurement, and 57.93 feet below the initial measurement in 1964.

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



The late November water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 218.00 feet below land surface. This was 0.50 feet below last month's measurement, 8.35 feet below last year's measurement, and 82.50 feet below the initial measurement recorded in 1947.

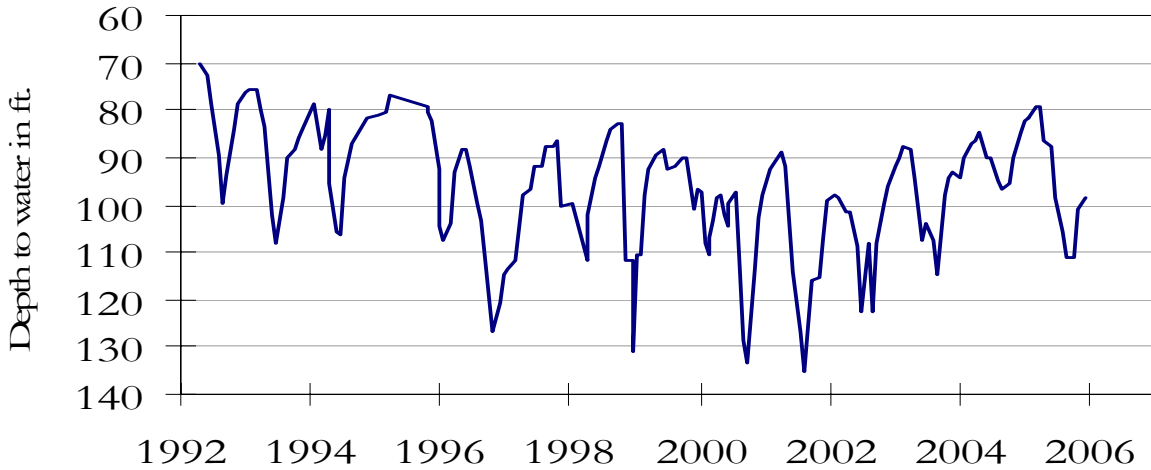
**Well No. 68-37-203 (J-17)  
In San Antonio, Bexar County  
Edwards and Associated Limestones**



The late November water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 52.89 feet below land surface. This was 0.34 feet below last month's measurement, 23.11 feet below last year's measurement, and 6.25 feet below the initial measurement recorded in 1962.

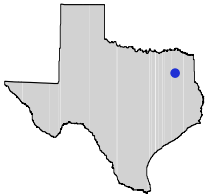


**Well No. 68-60-912  
Between Poteet and Pleasanton, Atascosa County  
Carrizo**



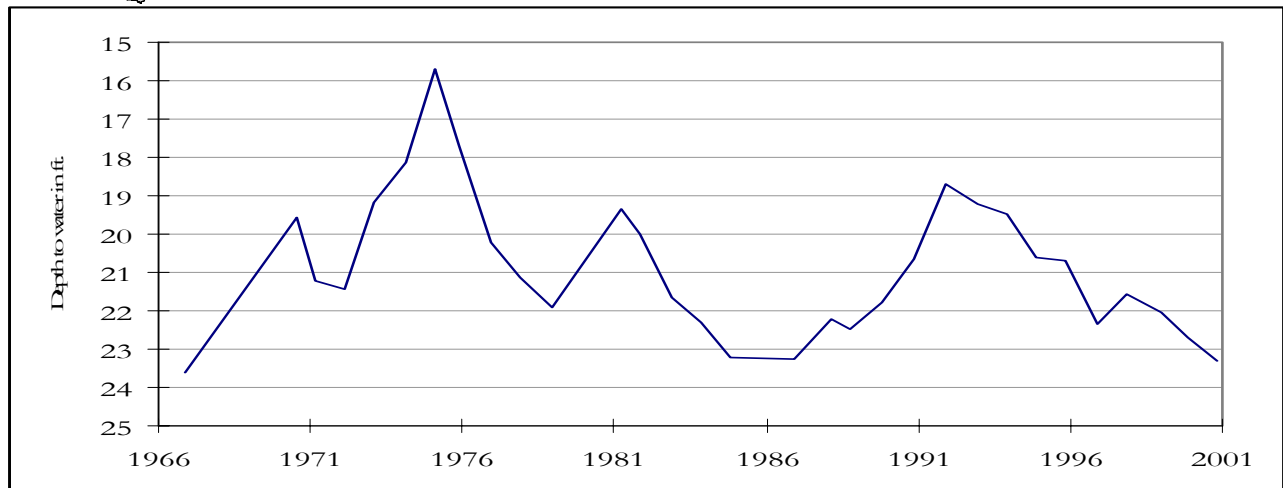
The late November water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 98.24 feet below land surface. This measurement was 2.61 feet above last month's measurement, 13.61 feet below last year's measurement, and 62.88 feet below the initial measurement recorded 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. 35-10-102  
Upshur County**



This unused water level observation well, located 10 miles northeast of Gilmer, at an elevation of 370 feet ASL, was completed in the Queen City aquifer. The aquifer provides water for domestic and livestock purposes throughout its extent, with significant amounts of water for municipal and industrial supply in northeast Texas.

November, 2005

Water level measurements were available for six of the seven key monitoring wells. Water levels declined in four of the monitoring wells since the last measurement, ranging from 0.06 feet in the El Paso Co. (Bolson Deposits) well to 7.19 feet in the Tarrant Co. Trinity well. Water levels rose in the remaining two monitoring wells, ranging from 2.61 feet in the Atascosa Co. Carrizo well to 3.16 feet in the Coryell Co. Hosston/Trinity well. The J-17 well recorded a water level of 52.89 feet below land surface. This water level is approximately twenty-seven (27) feet above the Stage 1 critical management criteria.

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