

# Texas Water Development Board



# WATER Conditions

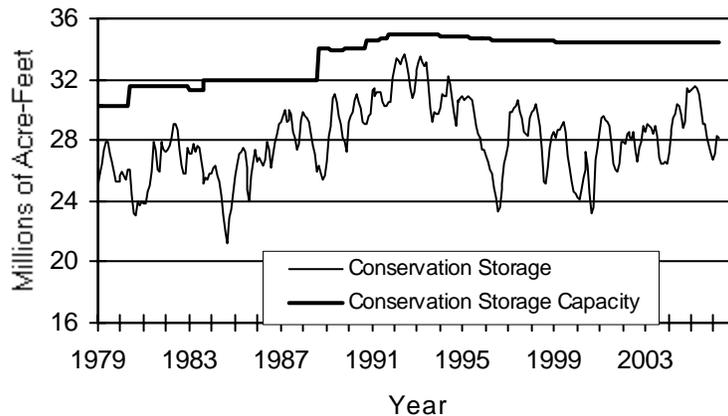
## RESERVOIR STORAGE

*April 2006*

Near the end of April, the 77 reservoirs monitored for this report held 28.2 million acre-feet in conservation storage, or 82 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 75,420 acre-feet (-0.2% of conservation storage capacity). Compared to last year, storage decreased by 3.26 million acre-feet (-9%).

Storage was below 90% of capacity in all Regions, with the lowest in the High Plains Region (23%). Storage was at 100% in 8 reservoirs. During April, storage increased in 11 reservoirs but decreased in 46 reservoirs. Regionally, storage decreased in 7 out of 9 Regions, increased 1% in the East Region, and remained unchanged in the North Central Region. Compared to this time last year, the storage decreased in all Regions, with the sharpest decrease in the South Central Region (-23%).

### 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.

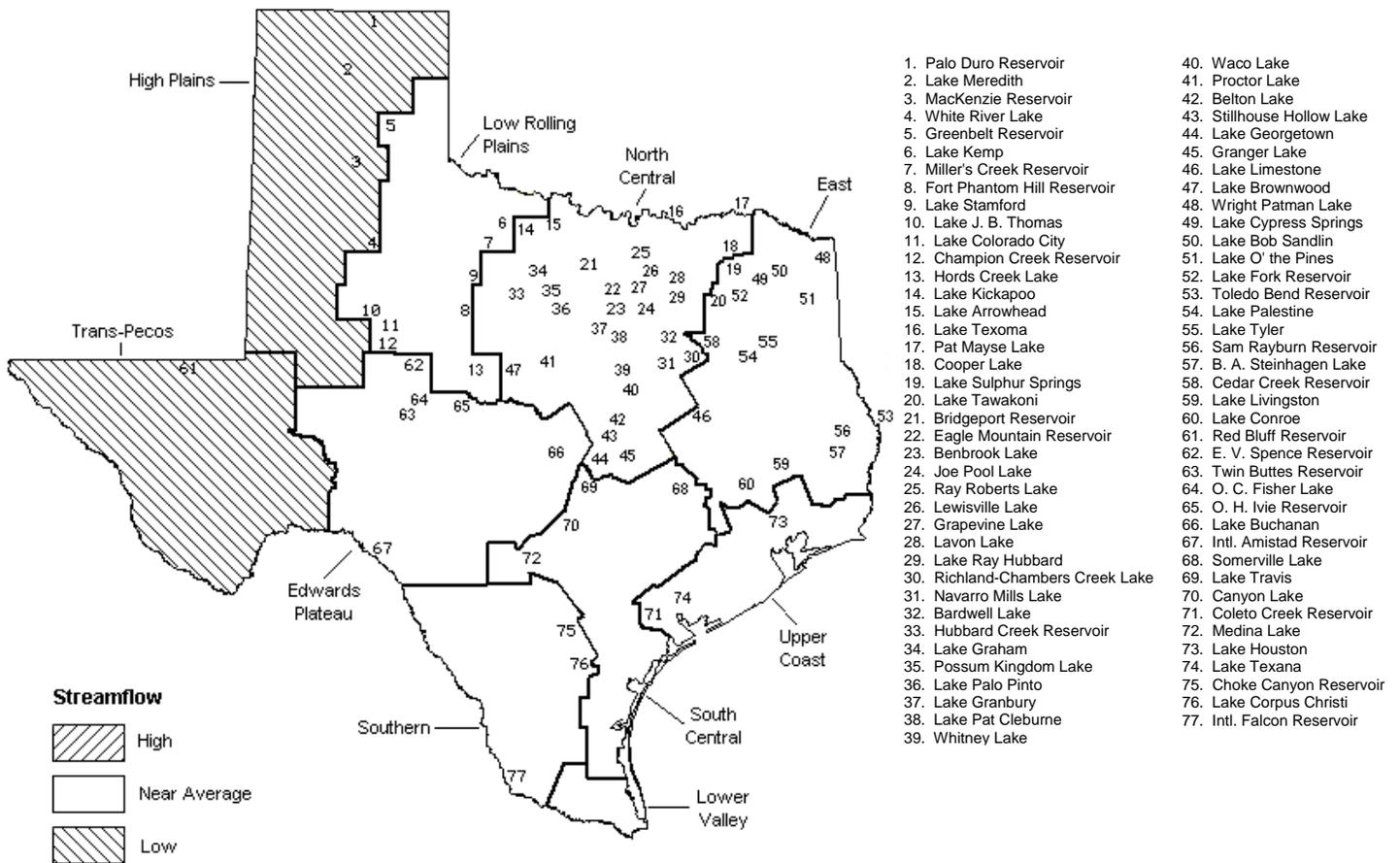
# STREAMFLOW

Of 29 reporting index stations in April, computed 30-day mean flows were low (70% - 95%) at 10 stations, and near normal (30% - 70% exceedance) at the remaining 19 stations. Compared to March, flows have increased at 6 index stations and decreased at 23 stations.

On a regional basis, flows in April were low in the High Plains and Trans-Pecos Regions but normal in all other Regions. Streamflow in the Lower Valley Region is not monitored.

## APRIL 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 Apr. 2006 (acre-feet) (%)	Change since Late March 2006 (acre-feet) (%)	Change since Late April 2005 (acre-feet) (%)	
<b>HIGH PLAINS</b>						
Palo Duro Reservoir	1	60,900	1,410	2	-180 0	-2,430 -4
Lake Meredith (Texas)	2	500,000	129,270	26	-5,320 -1	-43,440 -9
Lake Meredith (Texas and Oklahoma)	(2)	779,560	129,270	17	-5,320 -1	-43,440 -6
MacKenzie Reservoir	3	46,250	9,250	20	-170 0	-620 -1
White River Lake	4	31,850	4,940	16	-370 -1	-4,660 -15
TOTAL		639,000	144,870	23	-6,040 -1	-51,150 -8
<b>LOW ROLLING PLAINS</b>						
Greenbelt Reservoir	5	58,200	20,920	36	-480 -1	-3,000 -5
Lake Kemp	6	319,600	255,380	80	-8,520 -3	8,570 3
Miller's Creek Reservoir	7	27,890	24,290	87	-890 -3	3,710 13
Fort Phantom Hill Reservoir	8	70,030	45,480	65	1,800 3	-17,210 -25
Lake Stamford	9	52,700	44,650	85	-1,810 -3	11,390 22
Lake J. B. Thomas	10	202,300	50,180	25	-2,670 -1	-6,670 -3
Lake Colorado City	11	30,800	27,050	88	-290 -1	-2,840 -9
Champion Creek Reservoir	12	41,600	5,940	14	160 0	940 2
Hords Creek Lake	13	8,600	6,210	72	-170 -2	-1,880 -22
TOTAL		811,720	480,100	59	-12,870 -2	-6,990 -1
<b>NORTH CENTRAL</b>						
Lake Kickapoo	14	106,000	86,760	82	-2,790 -3	18,090 17
Lake Arrowhead	15	262,100	215,880	82	-4,450 -2	27,170 10
Lake Texoma	16	2,722,300	2,513,930	92	90,720 3	273,510 10
Pat Mayse Lake	17	124,500	98,540	79	-1,440 -1	-22,050 -18
Cooper Lake	18	273,000	180,430	66	-13,520 -5	-92,570 -34
Lake Sulphur Springs	19	17,710	17,710	100	0 0	0 0
Lake Tawakoni	20	936,200	695,600	74	-18,600 -2	-171,300 -18
Bridgeport Reservoir	21	374,830	242,200	65	900 0	-105,900 -28
Eagle Mountain Reservoir	22	178,380	146,000	82	1,500 1	-30,100 -17
Benbrook Lake	23	88,200	74,170	84	4,230 5	-10,070 -11
Joe Pool Lake	24	175,800	175,800	100	0 0	0 0
Ray Roberts Lake	25	798,760	718,200	90	4,580 1	-80,560 -10
Lewisville Lake	26	555,000	467,540	84	-8,270 -1	-87,460 -16
Grapevine Lake	27	187,700	143,090	76	890 0	-38,460 -20
Lavon Lake	28	443,800	300,590	68	-12,810 -3	-143,210 -32
Lake Ray Hubbard	29	413,420	411,100	99	-2,320 -1	-2,200 -1
Richland-Chambers Creek Lake	30	1,103,820	939,600	85	-6,200 -1	-164,220 -15
Navarro Mills Lake	31	55,810	37,510	67	-1,060 -2	-18,300 -33
Bardwell Lake	32	53,580	47,270	88	40 0	-650 -1
Hubbard Creek Reservoir	33	317,800	179,610	57	-730 0	-2,700 -1
Lake Graham	34	45,000	41,300	92	-230 -1	1,410 3
Possum Kingdom Lake	35	551,820	486,340	88	-160 0	-1,460 0
Lake Palo Pinto	36	27,650	14,930	54	-1,060 -4	-10,470 -38
Lake Granbury	37	135,680	132,830	98	-870 -1	-270 0
Lake Pat Cleburne	38	25,300	25,180	100	-120 0	-120 0
Whitney Lake	39	622,800	535,270	86	-7,720 -1	-58,870 -9
Waco Lake	40	144,500	144,500	100	0 0	0 0
Proctor Lake	41	55,590	35,800	64	-1,720 -3	-19,790 -36
Belton Lake	42	434,500	402,680	93	-830 0	-31,820 -7
Stillhouse Hollow Lake	43	226,060	226,060	100	0 0	0 0
Lake Georgetown	44	37,010	22,870	62	1,780 5	-14,140 -38
Granger Lake	45	54,280	54,280	100	1,310 2	0 0
Lake Limestone	46	215,750	213,500	99	-2,250 -1	-400 0
Lake Brownwood	47	143,400	116,700	81	-1,490 -1	-14,940 -10
TOTAL		11,908,050	10,143,770	85	17,310 0	-801,850 -7

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

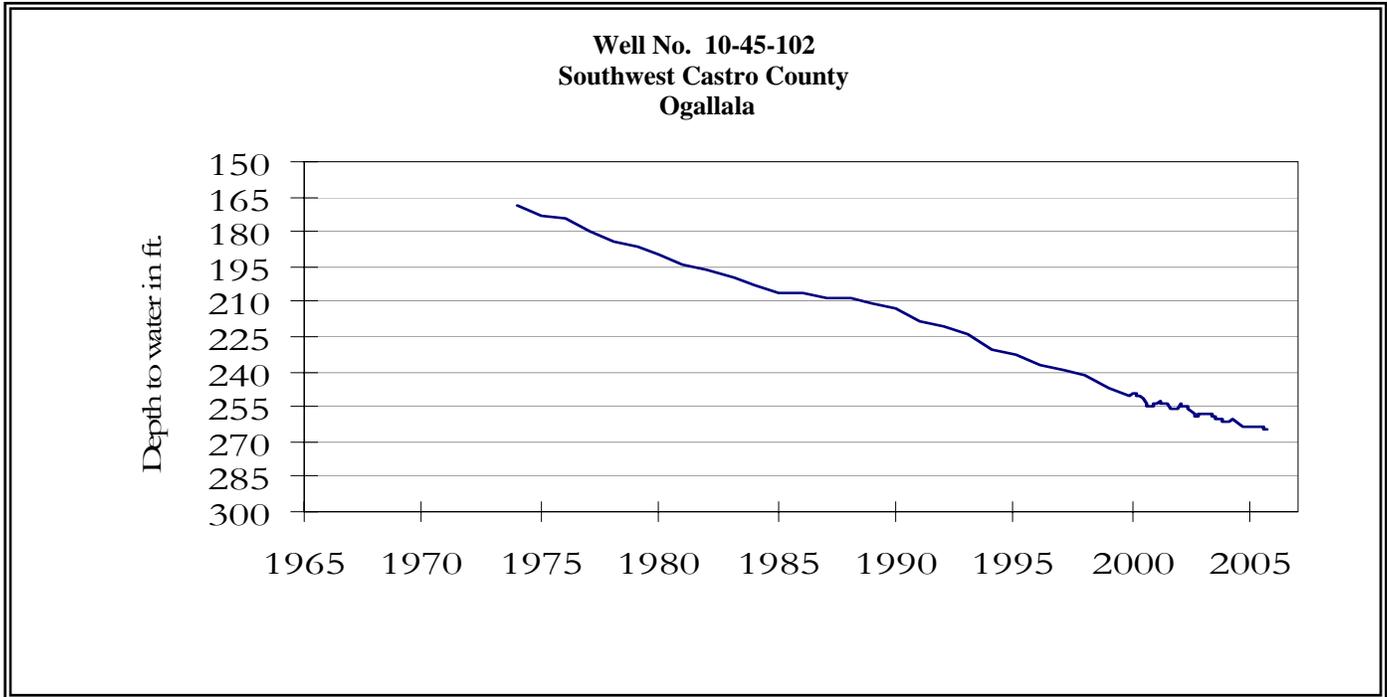
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage		Change since Late March 2006		Change since Late April 2005		
			(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)	(%)	
<b>EAST</b>									
Wright Patman Lake	48	142,700	142,700	100	0	0	0	0	
Lake Cypress Springs	49	66,800	62,080	93	-850	-1	-4,720	-7	
Lake Bob Sandlin	50	202,300	163,000	81	-1,100	-1	-39,300	-19	
Lake O' the Pines	51	252,000	214,810	85	-780	0	-26,670	-11	
Lake Fork Reservoir	52	635,200	612,500	96	-2,300	0	-22,700	-4	
Toledo Bend Reservoir	53	4,472,900	3,877,000	87	66,000	1	-382,000	-9	
Lake Palestine	54	411,300	369,350	90	-6,510	-2	-41,950	-10	
Lake Tyler	55	73,700	63,510	86	-1,110	-2	-10,190	-14	
Sam Rayburn Reservoir	56	2,876,300	2,762,920	96	41,000	1	-113,380	-4	
B. A. Steinhagen Lake	57	94,200	74,780	79	-14,410	-15	-8,960	-10	
Cedar Creek Reservoir	58	637,050	582,400	91	2,700	0	-54,500	-9	
Lake Livingston	59	1,750,000	1,471,000	84	40,000	2	-277,000	-16	
Lake Conroe	60	429,900	352,100	82	-1,600	0	-62,800	-15	
<b>TOTAL</b>		<b>12,044,350</b>	<b>10,748,150</b>	<b>89</b>	<b>121,040</b>	<b>1</b>	<b>-1,044,170</b>	<b>-9</b>	
<b>TRANS-PECOS</b>									
Red Bluff Reservoir	61	307,000	122,580	40	-6,020	-2	-5,720	-2	
<b>TOTAL</b>		<b>307,000</b>	<b>122,580</b>	<b>40</b>	<b>-6,020</b>	<b>-2</b>	<b>-5,720</b>	<b>-2</b>	
<b>EDWARDS PLATEAU</b>									
E. V. Spence Reservoir	62	488,760	87,390	18	-2,250	0	12,850	3	
Twin Buttes Reservoir	63	177,800	54,590	31	660	0	14,970	8	
O.C. Fisher Lake	64	119,200	12,490	10	-390	0	5,480	5	
O. H. Ivie Reservoir	65	554,340	282,200	51	-5,200	-1	-34,400	-6	
Lake Buchanan	66	896,980	712,510	79	-19,700	-2	-155,840	-17	
Amistad Reservoir (Texas)	67	1,771,030	2,114,000	119	-57,000	-3	-440,000	-25	
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	2,600,000	83	-43,000	-1	-320,000	-10	
<b>TOTAL</b>		<b>4,008,110</b>	<b>3,263,180</b>	<b>81</b>	<b>-83,880</b>	<b>-2</b>	<b>-596,940</b>	<b>-15</b>	
<b>SOUTH CENTRAL</b>									
Somerville Lake	68	155,060	131,900	85	3,140	2	-23,160	-15	
Lake Travis	69	1,144,100	857,700	75	-19,500	-2	-286,400	-25	
Canyon Lake	70	385,600	350,340	91	-3,770	-1	-35,260	-9	
Coleto Creek Reservoir	71	35,060	22,770	65	-1,100	-3	-9,160	-26	
Medina Lake	72	254,000	162,900	64	-11,900	-5	-91,100	-36	
<b>TOTAL</b>		<b>1,973,820</b>	<b>1,525,610</b>	<b>77</b>	<b>-33,130</b>	<b>-2</b>	<b>-445,080</b>	<b>-23</b>	
<b>UPPER COAST</b>									
Lake Houston	73	128,860	128,860	100	0	0	0	0	
Lake Texana	74	157,900	117,150	74	-6,230	-4	-33,090	-21	
<b>TOTAL</b>		<b>286,760</b>	<b>246,010</b>	<b>86</b>	<b>-6,230</b>	<b>-2</b>	<b>-33,090</b>	<b>-12</b>	
<b>SOUTHERN</b>									
Choke Canyon Reservoir	75	695,260	589,000	85	-10,000	-1	-103,000	-15	
Lake Corpus Christi	76	241,240	103,800	43	-12,600	-5	-137,440	-57	
Falcon Reservoir (Texas)	77	1,555,120	824,000	53	-43,000	-3	-32,000	-2	
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	1,292,000	49	-201,000	-8	-148,000	-6	
<b>TOTAL</b>		<b>2,491,620</b>	<b>1,516,800</b>	<b>61</b>	<b>-65,600</b>	<b>-3</b>	<b>-272,440</b>	<b>-11</b>	
<b>STATE TOTAL</b>		<b>34,470,430</b>	<b>28,191,070</b>	<b>82</b>	<b>-75,420</b>	<b>0</b>	<b>-3,257,430</b>	<b>-9</b>	

Note:

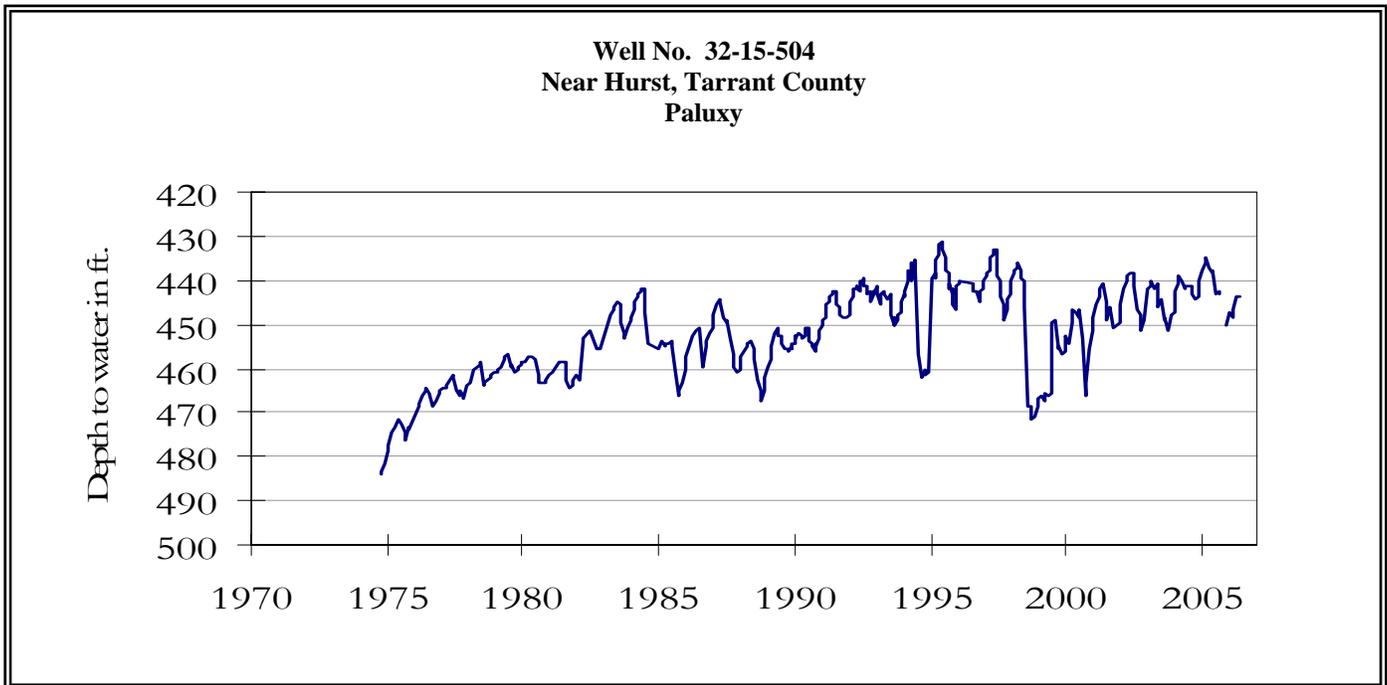
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included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

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). Preliminary figures are shown for the Texas' share of conservation storage in all reservoirs.

# APRIL GROUND WATER LEVELS IN OBSERVATION WELLS

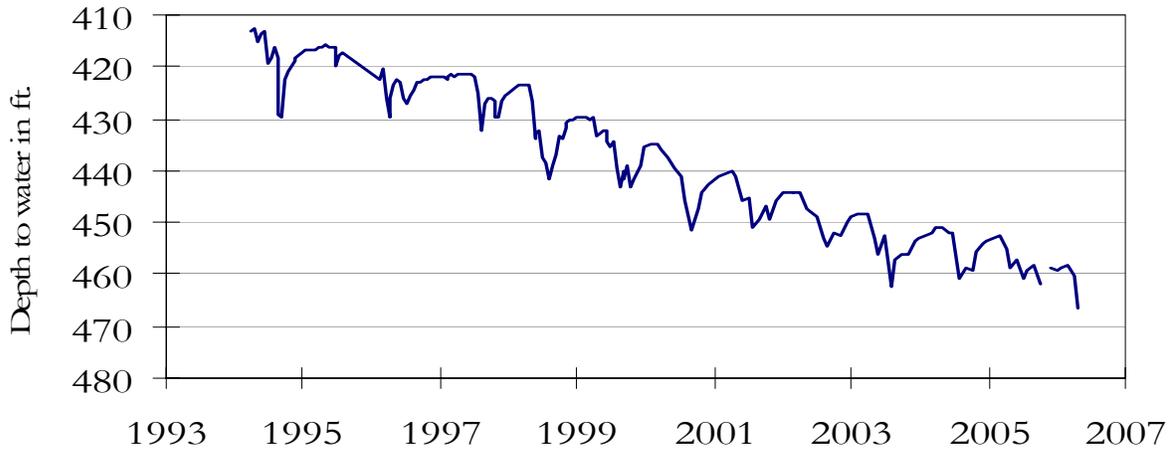


The water-level measurement is not available this month for this Ogallala aquifer well (recorder under repair). The graph presented is from last month's report.



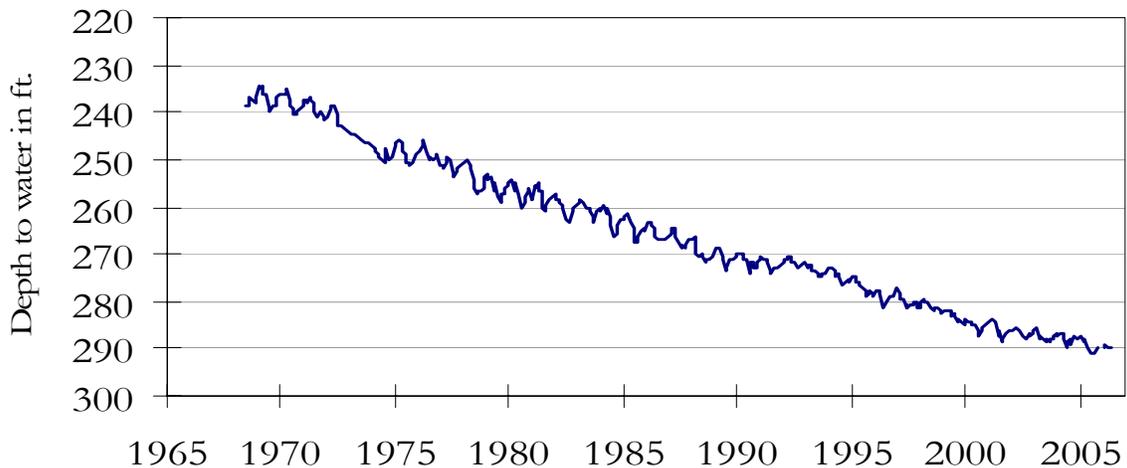
The late April water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 443.53 feet below land surface. This measurement was 0.29 feet above last month's measurement, 4.89 feet below last year's measurement, and 65.53 feet below the initial measurement recorded in 1953. No water level measurements were recorded for September or October 2005.

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



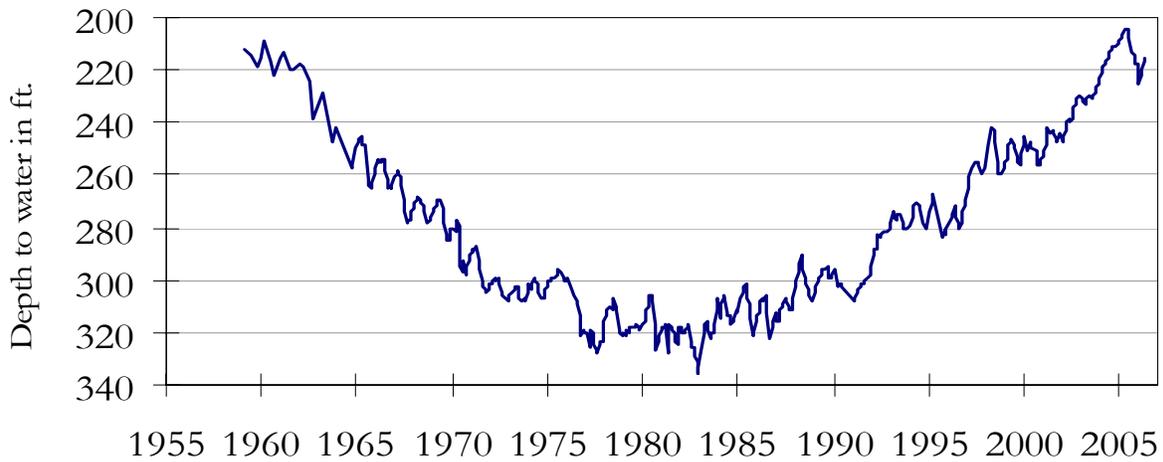
The late April water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 466.32 feet below land surface. This water level was 5.92 feet below last month's measurement, 7.41 feet below last year's measurement, and 174.32 feet below the initial measurement recorded in 1955. No water level measurement was recorded for October 2005.

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



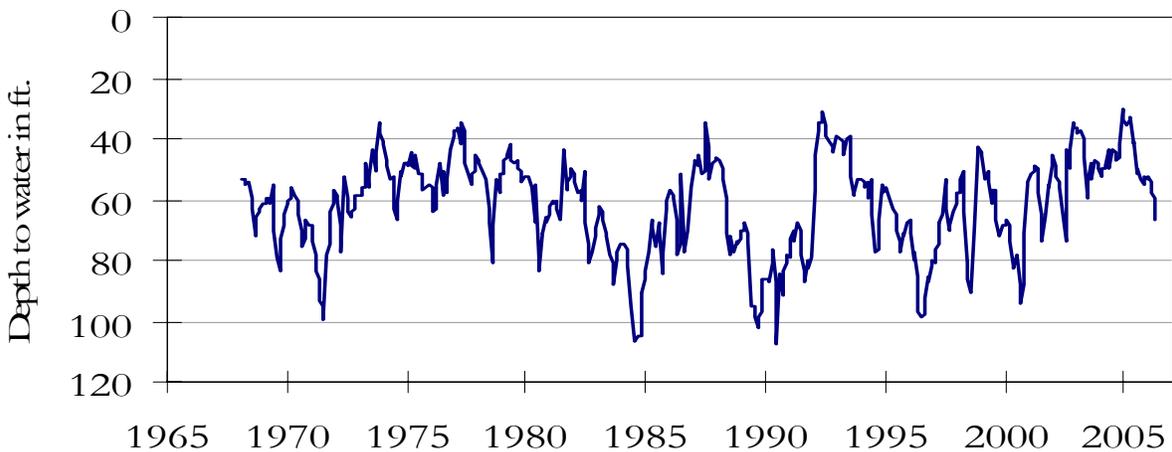
The late April water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 289.79 feet below land surface. This was 0.23 feet above last month's measurement, 0.04 feet above last year's measurement, and 57.89 feet below the initial measurement in 1964. No water level measurements were recorded for October or December 2005.

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



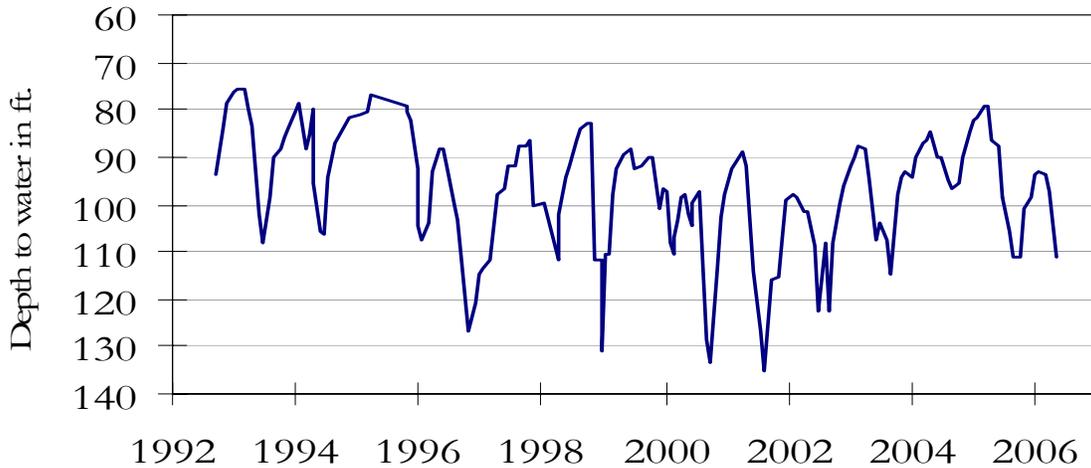
The late April water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 215.03 feet below land surface. This was 1.71 feet above last month's measurement, 10.94 feet below last year's measurement, and 79.53 feet below the initial measurement recorded in 1947.

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



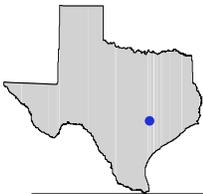
The late April water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 66.90 feet below land surface. This was 7.72 feet below last month's measurement, 25.08 feet below last year's measurement, and 20.26 feet below the initial measurement recorded in 1962.

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



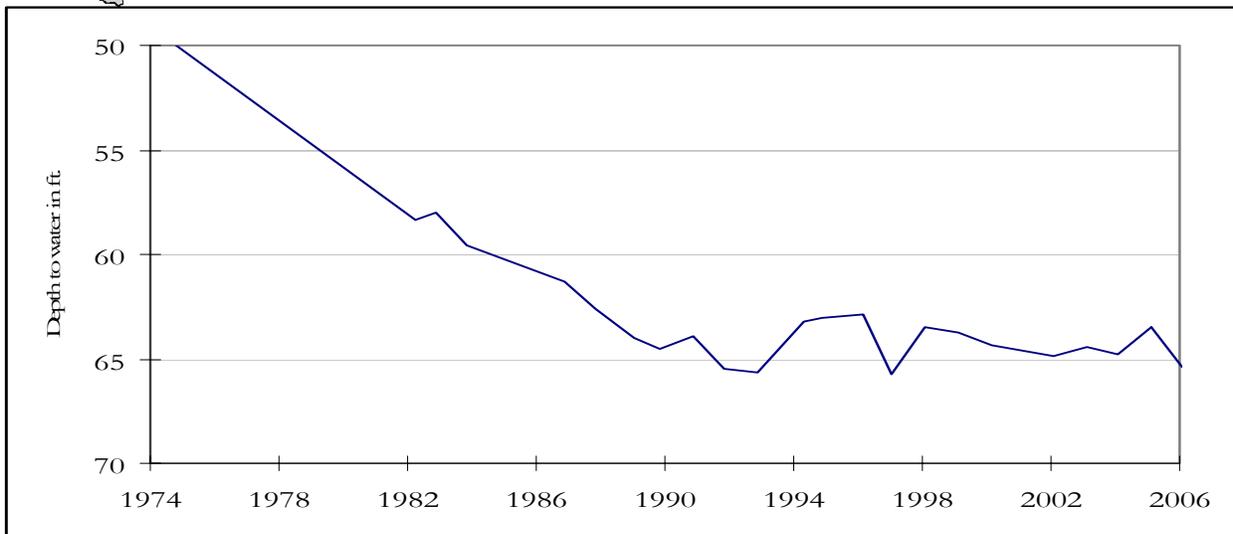
The late April water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 111.35 feet below land surface. This measurement was 13.88 feet below last month's measurement, 24.95 feet below last year's measurement, and 75.99 feet below the initial measurement recorded 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. 59-35-208  
Burleson County**



This water level observation well, located 2 miles south of Caldwell, at an elevation of 382 feet ASL, was completed in the Sparta aquifer. After an initial decline of fifteen feet from the original measurement, water levels in the aquifer have remained fairly constant.

April, 2006

Water level measurements were available for six of the seven key monitoring wells. Water levels declined in three of the monitoring wells since the beginning of April, ranging from 5.92 feet in the Coryell Co. Hosston/Trinity well to 13.88 feet in the Atascosa Co. Carrizo well. Water levels rose in the remaining three monitoring wells, ranging from 0.23 feet in the El Paso Co. (Bolson Deposits) well to 1.71 feet in the Harris Co. Evangeline well. The J-17 well recorded a water level of 66.90 feet below land surface. This water level is approximately thirteen (13) feet above the Stage 1 critical management level.

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