

# Texas Water Development Board

## RESERVOIR STORAGE

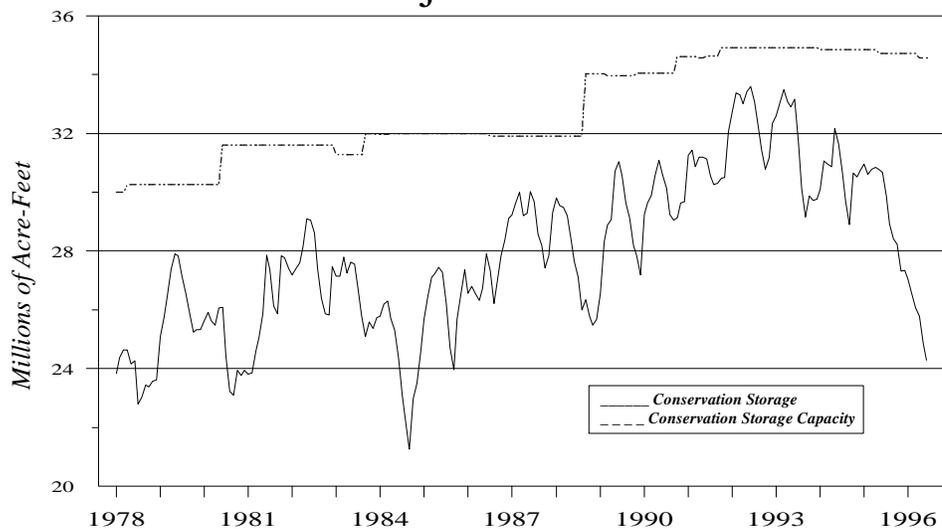
*July 1996*

Near the end of June, the 77 reservoirs monitored for this report held 24,286,980 acre-feet in conservation storage. This was 70 percent of the conservation storage capacity of the State's major reservoirs. Compared to last month, storage has decreased 576,630 acre-feet. Compared to this time last year, storage has decreased 6,386,460 acre-feet.

Of the monitored reservoirs, 5 held 100 percent or more of their conservation storage capacities near the end of June. Lakes Houston, Texana, and Granbury were full and spilling. An additional amount of water (acre-feet) was contained in the flood storage pool in each of the reservoirs as follows: Wright Patman, 132,870; and Proctor, 4,260.

WATER  
Conditions

### 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.*

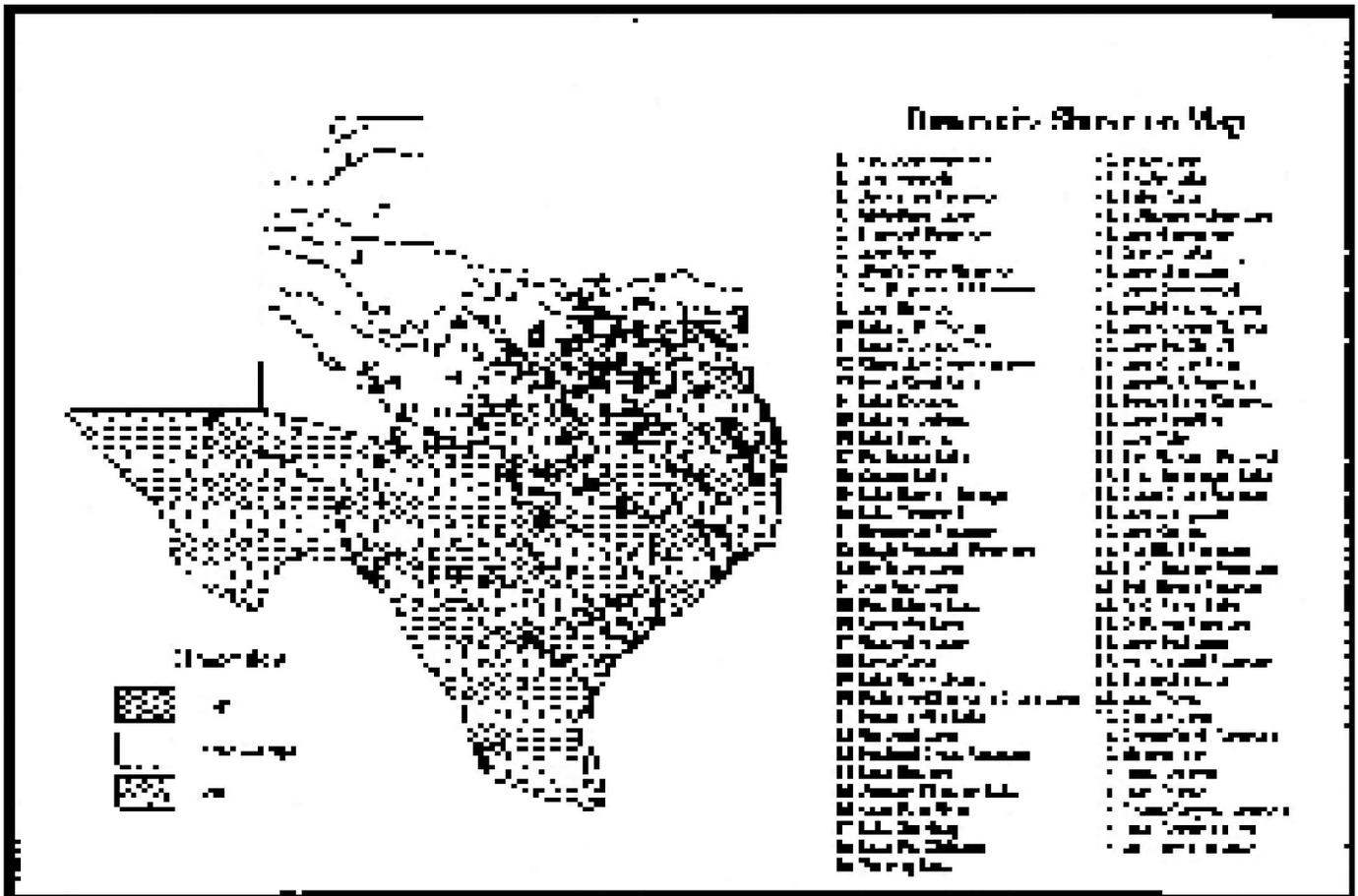
# STREAMFLOW

Streamflow conditions across Texas ranged from near normal to below normal throughout the state during the month of June. Rainfall during the month was scattered, producing local heavy runoff in a few parts of the state. The Sabine, Neches, and Trinity River basins in East Texas, and the Guadalupe, and Nueces basins in South Texas reported below normal streamflow. The remainder of the state reported near-normal streamflow rates during the month. The following is a summary of the measured flows at various index stations across the State.

The index station for East Texas is located on the Neches River near Rockland. Streamflow past the gage averaged 157 cubic feet per second (cfs) during the month of June. The monthly average flow rate, when compared to the 1961-90 reference period, was 13 percent of the reference period median and 310 cfs

below the near-normal level for this location. Elsewhere across the State, the index station for North and North-central Texas is located on the North Bosque River near Clifton. Streamflow past the gage averaged 117 cfs, or 86 percent of the monthly reference period median. This was 200 cfs below the station's above-normal flow level. For West Texas, the index station is located on the North Concho River near Carlsbad. No discharge was reported during the month past the gage. This was a normal condition for this location at this time of the year and was 14.1 cfs below the station's above normal flow level. The index station for South and Central Texas is located on the Guadalupe River near Spring Branch. Flow during the month at the station was below normal and averaged 44.9 cfs. This was 12 percent of the month's reference period median flow rate and was 100.1 cfs below the near normal streamflow level.

## STREAMFLOW CONDITIONS FOR JUNE COMPARED WITH PAST RECORD



CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	:	No.:	Conservation: Storage Capacity :	Conservation Storage in Acre-Feet and as Percent of Conservation Storage Capacity					
				Map:	(acre-feet) :	Late Jun 1996 :	Late May 1996 :	Late Jun 1995 _	
<b>HIGH PLAINS</b>									
Palo Duro Reservoir	1		60,900	3,450	6	1,940	3	2,450	4
Lake Meredith (Texas)	2		500,000	274,200	55	270,350	54	304,660	61
Lake Meredith (Texas and Oklahoma)	(2)		(779,560)	(274,200)	(35)	(270,350)	(35)	(304,660)	(38)
MacKenzie Reservoir	3		46,250	6,950	15	7,000	15	7,870	17
White River Lake	4		31,850	8,730	27	15,230	48	21,610	49
TOTAL			639,000	293,330	46	294,520	46	336,590	53
<b>LOW ROLLING PLAINS</b>									
Greenbelt Reservoir	5		58,200	20,020	34	19,970	34	24,180	42
Lake Kemp	6		319,600	192,270	60	200,320	63	311,160	97
Miller's Creek Reservoir	7		27,890	14,090	51	11,090	40	18,430	66
Fort Phantom Hill Reservoir	8		70,030	48,240	69	44,140	63	49,120	66
Lake Stamford	9		52,700	26,080	49	26,630	51	37,730	72
Lake J. B. Thomas	10		202,300	9,340	5	10,250	5	19,850	10
Lake Colorado City	11		30,800	17,850	58	17,980	58	23,470	76
Champion Creek Reservoir	12		41,600	26,300	63	27,380	66	33,590	81
Hords Creek Lake	13		8,600	6,090	71	6,400	74	7,640	89
TOTAL			811,720	360,280	44	364,160	45	525,170	65
<b>NORTH CENTRAL</b>									
Lake Kickapoo	14		106,000	73,380	69	75,980	72	106,000	100
Lake Arrowhead	15		262,100	201,950	77	207,170	79	262,000	100
Lake Texoma	16		2,722,300	2,637,600	97	2,564,600	94	2,722,300	100
Pat Mayse Lake	17		124,500	122,900	99	103,500	83	124,500	100
Cooper Lake	18		273,000	259,020	95	260,340	95	273,000	100
Lake Sulphur Springs	19		17,710	10,530	59	11,400	64	17,710	100
Lake Tawakoni	20		936,200	738,200	79	759,900	81	936,200	100
Bridgeport Reservoir	21		374,830	298,200	80	309,500	83	373,300	99
Eagle Mountain Reservoir	22		178,380	150,360	84	151,060	85	177,910	99
Benbrook Lake	23		88,200	84,850	96	86,520	98	88,200	100
Joe Pool Lake	24		175,800	146,360	83	149,470	85	175,800	100
Ray Roberts Lake	25		798,760	727,720	91	740,080	93	798,760	100
Lewisville Lake	26		555,000	349,700	63	364,550	66	555,000	100
Grapevine Lake	27		187,700	134,980	72	140,280	75	180,210	96
Lavon Lake	28		443,800	281,480	63	300,810	68	443,800	100
Lake Ray Hubbard	29		490,000	385,700	79	394,500	81	489,200	99
Richland-Chambers Creek Lake	30		1,103,820	904,450	82	931,360	84	1,135,970	99
Navarro Mills Lake	31		55,810	40,330	72	42,520	76	55,810	100
Bardwell Lake	32		53,580	41,540	78	43,320	81	51,900	97
Hubbard Creek Reservoir	33		317,800	231,200	73	232,200	73	252,100	79
Lake Graham	34		45,000	43,770	97	44,490	99	45,000	100
Possum Kingdom Lake	35		551,820	457,430	83	456,220	83	548,940	96
Lake Palo Pinto	36		42,200	37,820	90	32,580	77	41,400	98
Lake Granbury	37		135,680	135,680	100	126,860	93	135,680	100
Lake Pat Cleburne	38		25,300	18,800	74	18,600	74	25,300	100
Whitney Lake	39		622,800	465,340	75	485,640	78	622,800	100
Waco Lake	40		144,550	130,690	90	127,030	88	149,330	98

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No.:	Conservation: Storage Capacity :	Conservation Storage in Acre-Feet and as Percent of Conservation Storage Capacity					
			Map:	(acre-feet) :	Late Jun 1996 :	Late May 1996 :	Late Jun 1995 _	
<b>NORTH CENTRAL - continued</b>								
Proctor Lake	41	55,590	55,590	100	53,520	96	59,300	100
Belton Lake	42	434,500	369,450	85	392,680	90	442,000	100
Stillhouse Hollow Lake	43	226,060	177,620	79	212,230	94	234,900	100
Lake Georgetown	44	37,010	18,770	51	19,910	54	37,050	100
Granger Lake	45	54,280	51,910	96	52,640	97	64,540	100
Lake Limestone	46	215,750	167,290	78	177,770	82	215,750	100
Lake Brownwood	47	143,400	123,800	86	109,100	76	138,500	97
TOTAL		11,999,230	10,074,410	84	10,178,330	85	11,980,260	99
<b>EAST</b>								
Wright Patman Lake	48	142,700	142,700	100	142,700	100	142,700	100
Lake Cypress Springs	49	66,800	64,950	97	65,320	98	66,800	100
Lake Bob Sandlin	50	202,300	165,580	82	170,050	84	200,350	99
Lake O' the Pines	51	252,000	249,190	99	245,860	98	252,000	100
Lake Fork Reservoir	52	635,200	564,460	89	572,180	90	632,200	99
Toledo Bend Reservoir	53	4,472,900	3,420,000	76	3,435,000	77	4,354,000	97
Lake Palestine	54	411,300	335,700	82	341,600	83	405,800	99
Lake Tyler	55	73,700	64,620	88	66,770	91	73,700	100
Sam Rayburn Reservoir	56	2,876,300	1,677,310	58	1,738,620	60	2,808,060	98
B. A. Steinhagen Lake	57	94,200	84,760	90	78,010	83	80,180	85
Cedar Creek Reservoir	58	637,050	530,400	83	509,080	80	672,300	100
Lake Livingston	59	1,750,000	1,637,000	94	1,735,000	99	1,750,000	100
Lake Conroe	60	429,900	413,970	96	420,770	98	424,270	99
TOTAL		12,044,350	9,350,640	78	9,520,960	79	11,862,360	98
<b>TRANS-PECOS</b>								
Red Bluff Reservoir	61	307,000	63,230	21	66,720	22	67,760	22
TOTAL		307,000	63,230	21	66,720	22	67,760	22
<b>EDWARDS PLATEAU</b>								
E. V. Spence Reservoir	62	484,800	106,600	22	116,800	24	180,900	37
Twin Buttes Reservoir	63	177,800	28,420	16	29,750	17	62,400	35
O. C. Fisher Lake	64	119,200	14,880	12	15,470	13	21,730	18
O. H. Ivie Reservoir	65	554,340	402,560	73	494,860	89	549,560	99
Lake Buchanan	66	896,980	697,730	78	716,750	80	835,370	93
Amistad Reservoir (Texas)	67	1,771,030	753,150	43	856,110	48	1,126,080	64
Amistad Reservoir (Texas and Mexico)	(67)	(3,151,300)	(953,390)	(30)	(1,049,060)	(33)	(1,227,410)	(39)
TOTAL		4,004,150	2,003,340	50	2,229,740	56	2,776,040	69
<b>SOUTH CENTRAL</b>								
Somerville Lake	68	155,060	110,420	71	131,830	85	160,100	100
Lake Travis	69	1,144,100	769,980	67	784,810	69	1,144,100	100
Canyon Lake	70	385,600	351,880	91	355,740	92	385,600	100
Coletto Creek Reservoir	71	35,060	23,620	67	23,070	66	32,080	92
Medina Lake	72	254,000	107,400	42	121,600	48	172,200	68
TOTAL		1,973,820	1,363,300	69	1,417,050	72	1,894,080	96

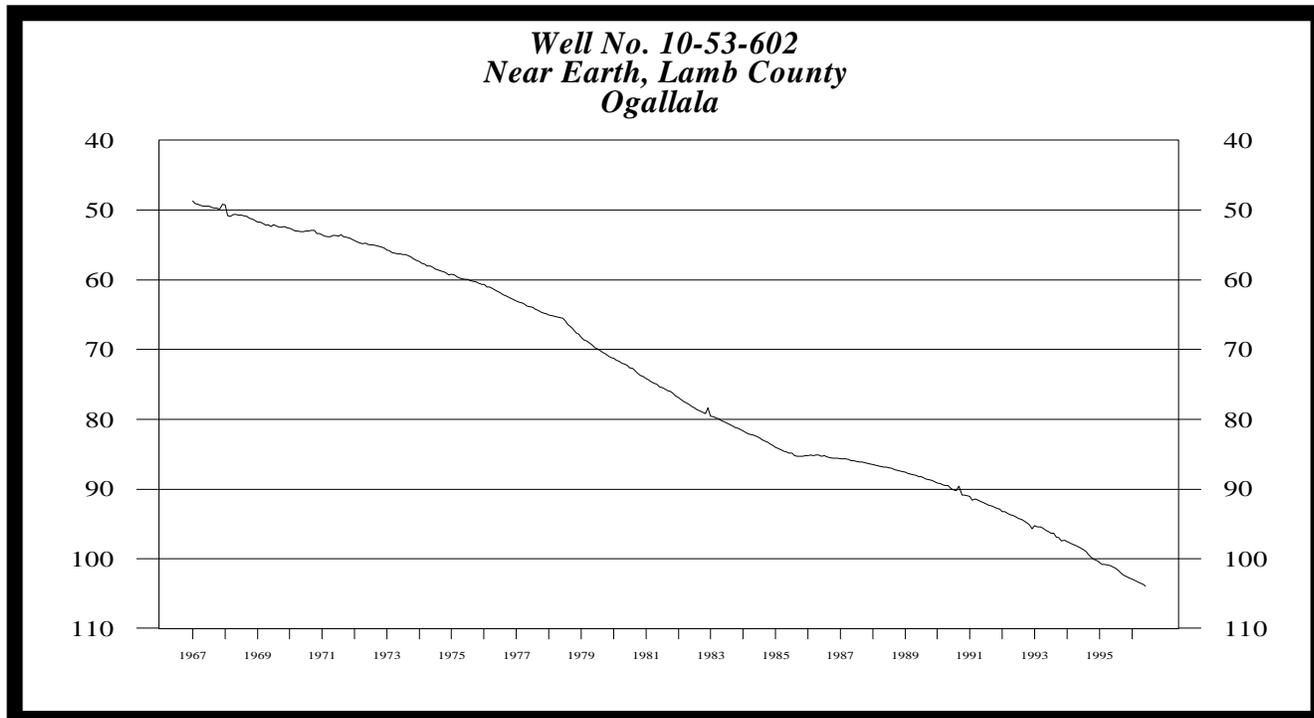
CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. :	Conservation: Storage Capacity :	Conservation Storage in Acre-Feet and as Percent of Conservation Storage Capacity					
			Map:	(acre-feet) :	Late Jun 1996 :	Late May 1996 :	Late Jun 1995 :	
<b>UPPER COAST</b>								
Lake Houston	73	128,860	128,860	100	128,860	100	140,500	100
Lake Texana	74	157,900	157,900	100	133,460	85	156,090	99
TOTAL		286,760	286,760	100	262,320	91	296,590	100
<b>SOUTHERN</b>								
Choke Canyon Reservoir	75	695,260	196,910	28	212,000	30	357,960	52
Lake Corpus Christi	76	241,240	84,000	35	90,810	38	135,600	56
Falcon Reservoir (Texas)	77	1,555,120	210,780	14	227,000	15	441,030	28
Falcon Reservoir (Texas and Mexico)	(77)	(2,653,290)	(323,470)	(12)	(328,340)	(12)	(507,500)	(19)
TOTAL		2,491,620	491,690	20	529,810	21	934,590	38
STATE TOTAL		34,557,650	24,286,980	70	24,863,610	72	30,673,440	88

**NOTES:** 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). Percentages are based on the conservation storage capacity of and the conservation storage in the reservoirs for date shown. 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 parenthesis 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. Figures in parentheses show the total conservation storage for both Texas (United States' share) and Mexico and are not included in State total.

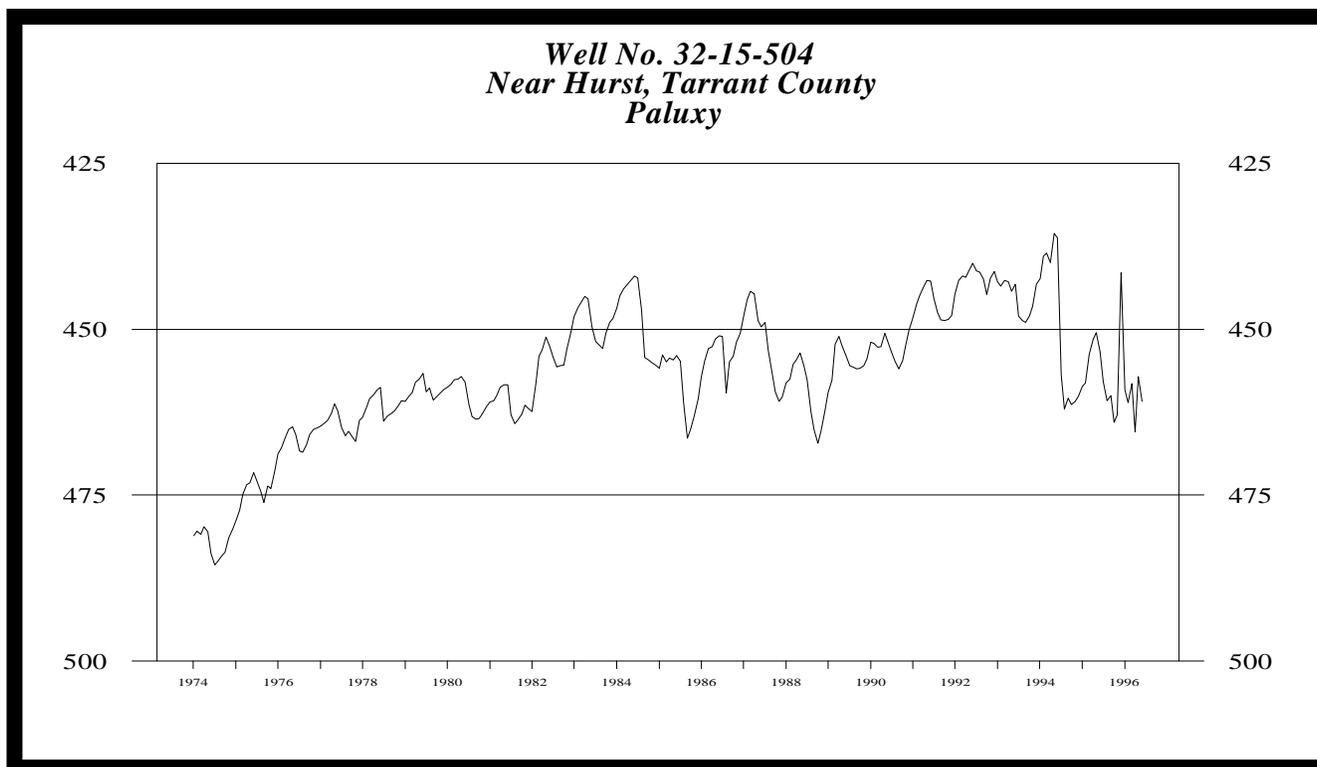
# GROUND WATER LEVELS IN OBSERVATION WELLS

Water Level, Feet Below Land Surface



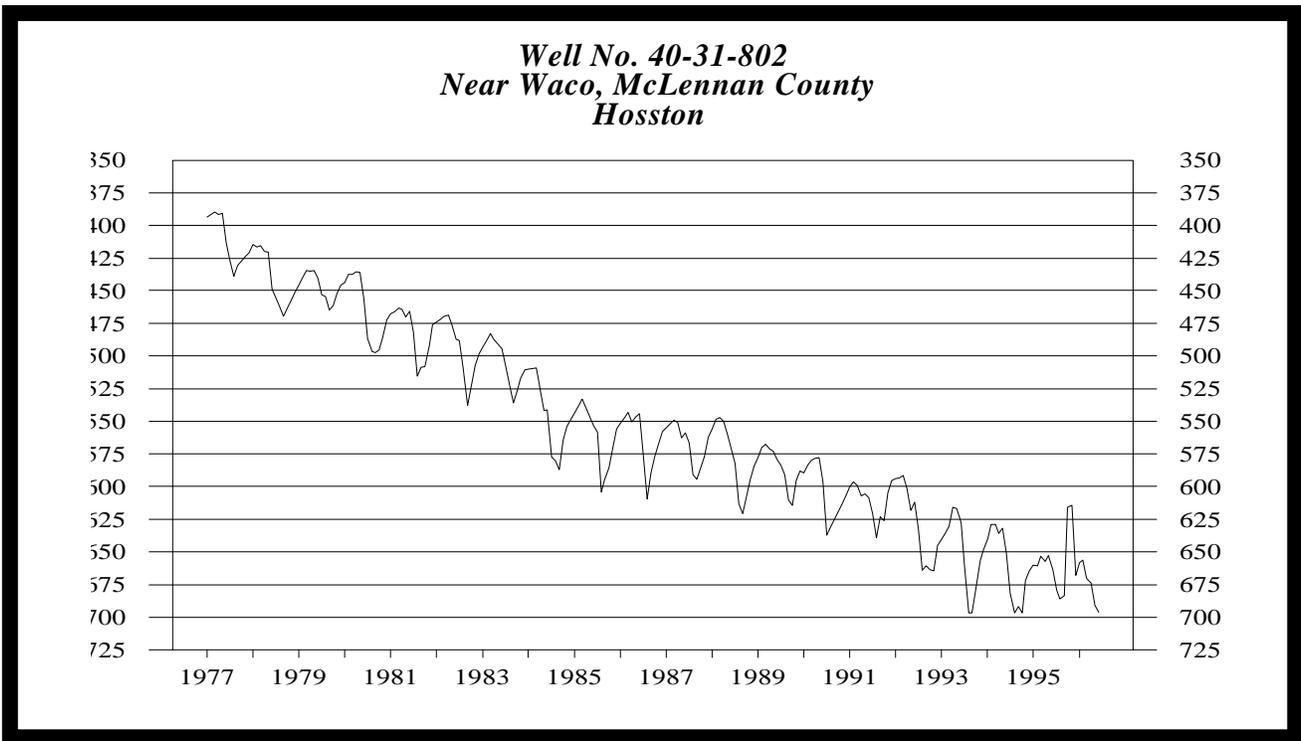
The June water-level measurement in this Ogallala aquifer well, elevation 3667 feet above sea level, was 103.94 feet below land surface. This was 0.33 of a foot below last month's measurement, 2.73 feet below last year's measurement, and 75.79 feet below the initial measurement recorded in 1950.

Water Level, Feet Below Land Surface



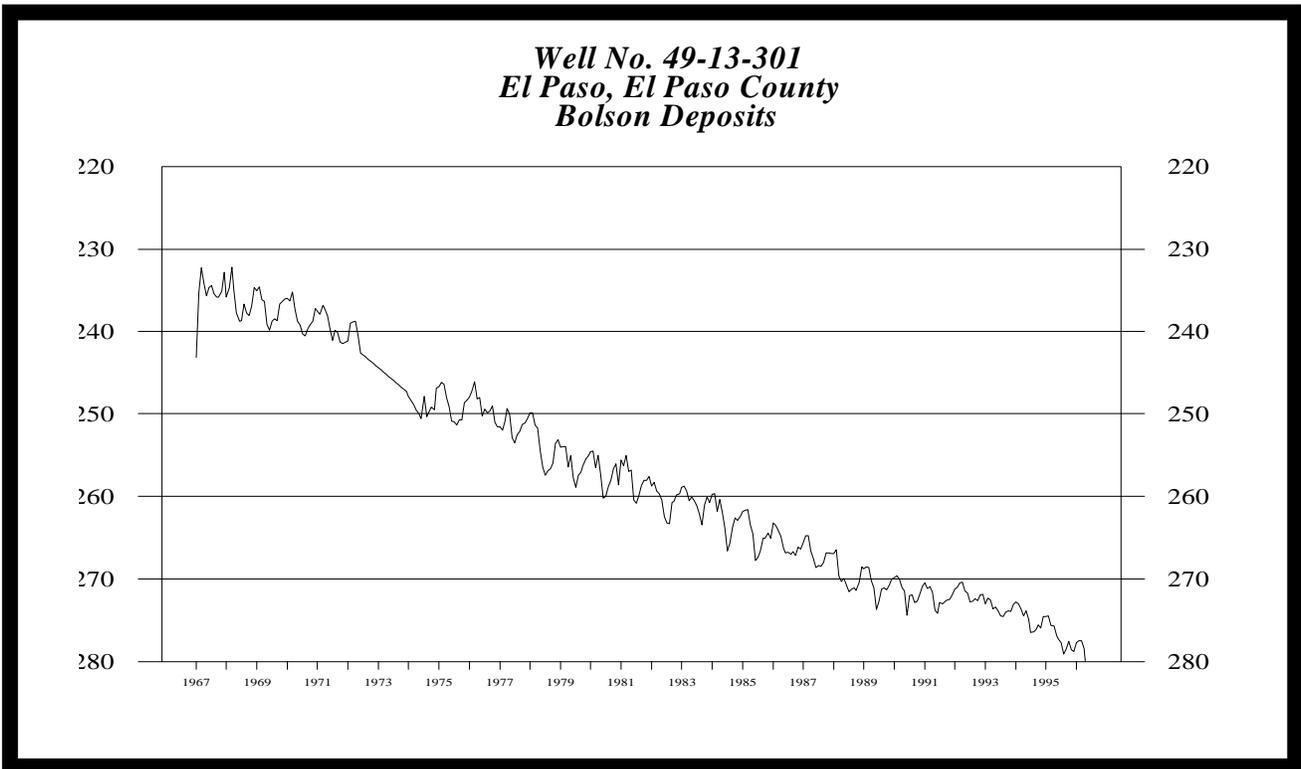
The June water-level measurement in this Paluxy aquifer well, elevation 535 feet above sea level, was 460.86 feet below land surface. This was 3.69 feet below last month's measurement, 7.44 feet below last year's measurement, and 67.47 feet below the initial measurement recorded in 1953.

Water Level, Feet Below Land Surface



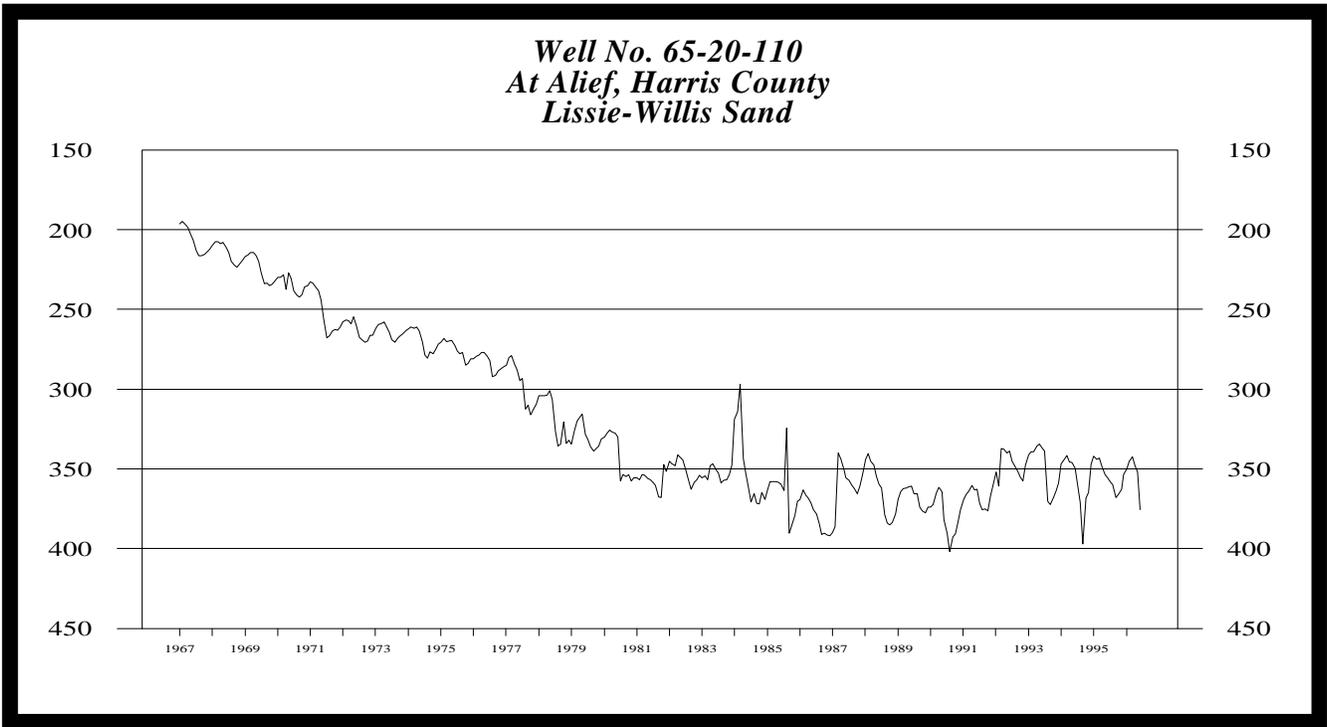
The June water-level measurement in this Hosston Formation aquifer well, elevation 593 feet above sea level, was 696.51 feet below land surface. This was 5.58 feet below last month's measurement, 33.06 feet below last year's measurement, and 420.95 feet below the initial measurement recorded in 1964.

Water Level, Feet Below Land Surface



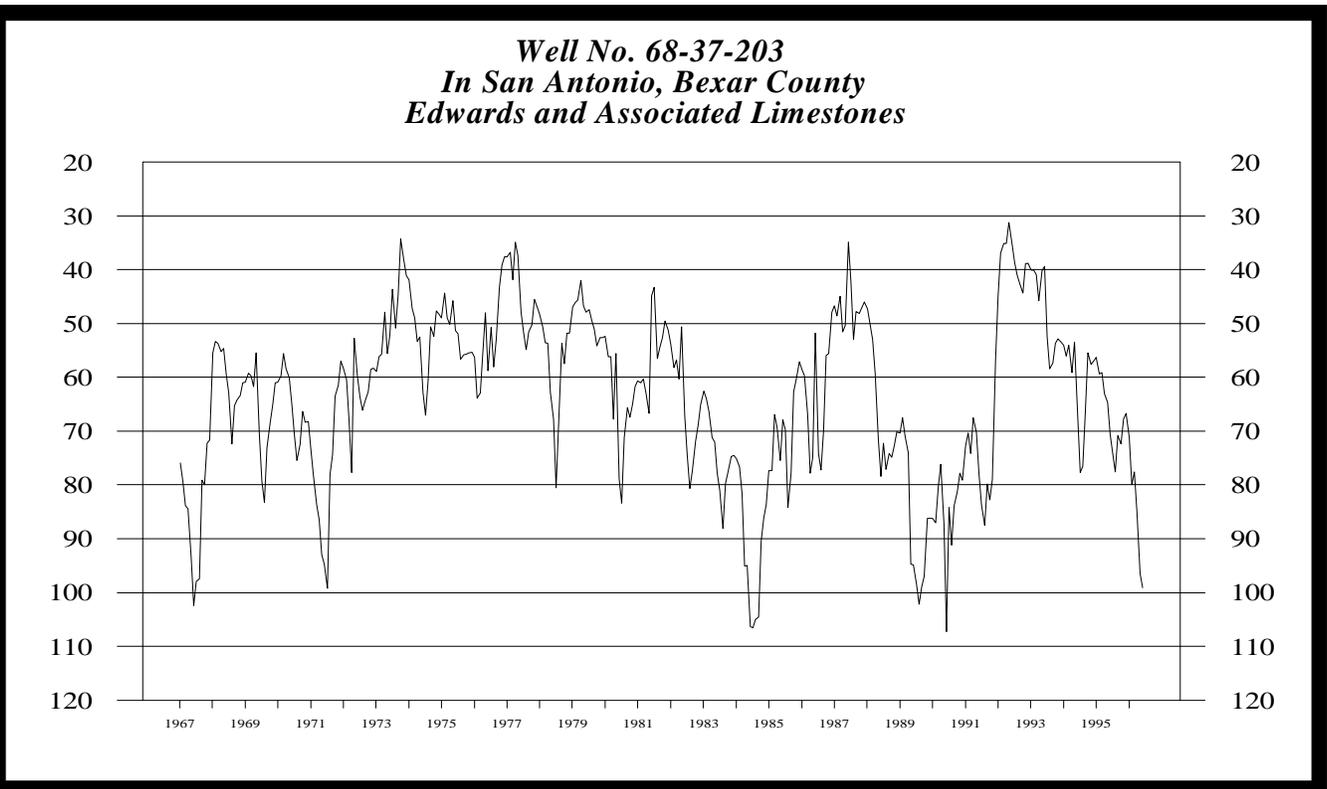
The June water-level measurement in this Bolson Deposits aquifer well, elevation 3882 feet above sea level, was 281.11 feet below land surface. This was 2.73 feet below last month's measurement, 3.76 feet below last year's measurement, and 49.87 feet below the initial measurement recorded in 1964.

Water Level, Feet Below Land Surface



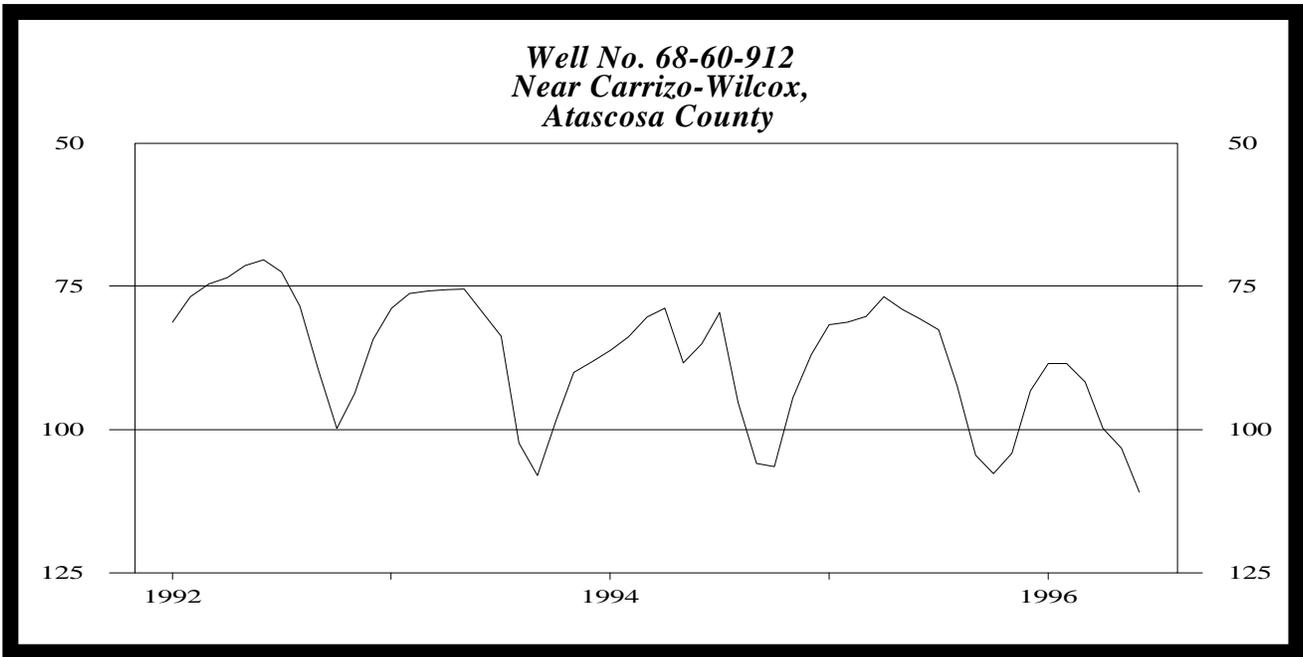
The June water-level measurement in this Lissie Willis Sand aquifer well , elevation 83 feet above sea level, was 375.51 feet below land surface. This was 23.47 feet below last month's measurement, 20.01 feet below last year's measurement, and 339.51 feet below the initial measurement recorded in 1939.

Water Level, Feet Below Land Surface



The June water-level measurement in this Edwards aquifer well, elevation 731 feet above sea level, was 99.1feet below land surface. This was 2.60 feet below last month's measurement, 28.5 feet below last year's measurement, and 39.48 feet below the initial measurement recorded in 1962.

Water Level, Feet Below Land Surface



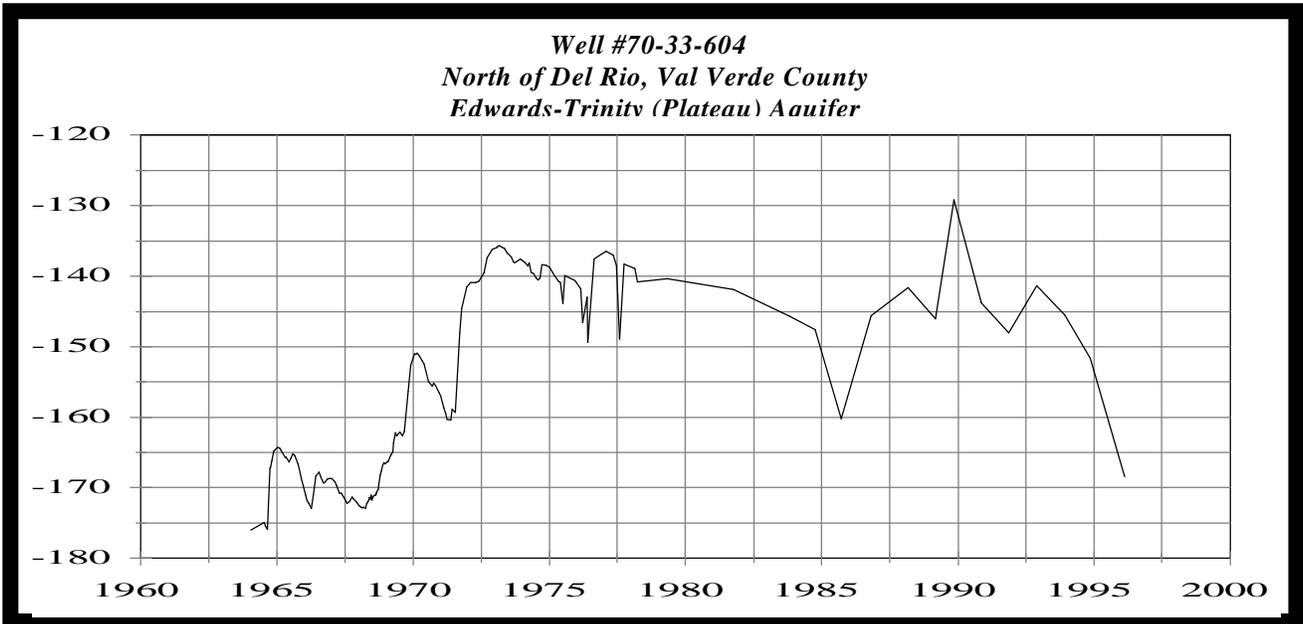
The June water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 110.92 feet above land surface. This was 7.65 feet below last month's measurement, 30.22 feet below last year's measurement, and 75.56 feet below the initial measurement recorded in 1965.



## Hydrograph of the Month

Each month this space features a hydrograph (marked • on the map) depicting different aquifers and different conditions in Texas.

Water Level, Feet Below Land Surface



Water levels in this household/stock well, completed in the Edwards-Trinity (Plateau) aquifer at an elevation of 1259 feet above sea level, have dropped nearly 25 feet in the past three years after an overall increase of 35 feet from 1965 to 1980. As lake levels have dropped in the Amistad Reservoir, ground-water levels have also declined in other wells in the vicinity.