

# Texas Water Development Board

WATER  
Conditions

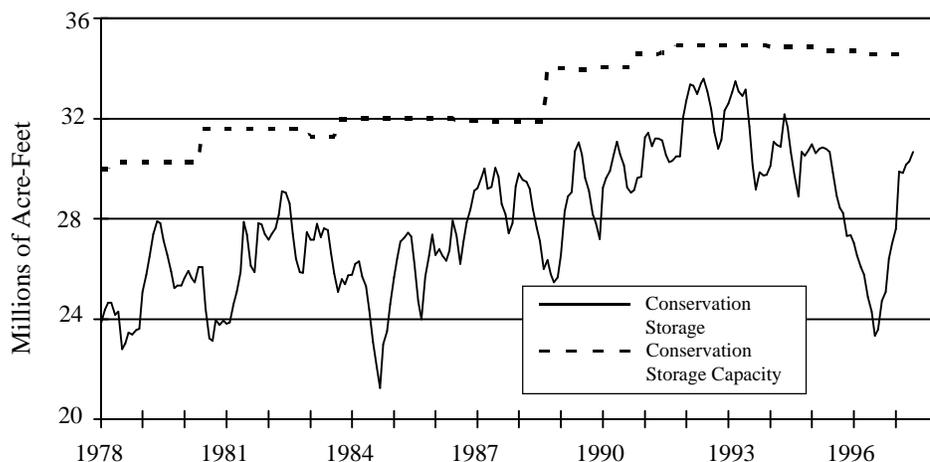
## RESERVOIR STORAGE

*July 1997*

Near the end of June, the 77 reservoirs monitored for this report held 30,669,000 acre-feet in conservation storage. This was 89 percent of the conservation storage capacity of the State's major reservoirs. Compared to last month, storage has increased 383,000 acre-feet. Compared to this month last year, storage has increased 6,382,020 acre-feet.

Of the monitored reservoirs, 48 held 100 percent or more of their conservation storage capacities near the end of June. Lakes Fort Phantom Hill, Mayse, Sulphur Springs, Tawakoni, Bridgeport, Eagle Mountain, Ray Hubbard, Graham, Possum Kingdom, Palo Pinto, Granbury, Cleburne, Limestone, Brownwood, Cypress Springs, Sandlin, Fork, Toledo Bend, Palestine, Tyler, Cedar, Livingston, Ivie, Coletto Creek, Medina, and Houston 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: Hords Creek, 1,090; Texoma, 145,000; Cooper, 4,380; Benbrook, 420; Pool, 1,040; Roberts, 4,110; Lewisville, 29,110; Lavon, 3,240; Navarro, 1,940; Whitney, 27,730; Waco, 8,570; Proctor, 95,210; Belton, 100,770; Stillhouse, 80,460; Georgetown, 890; Granger, 3,380; Patman, 198,650; Lake O' the Pines, 32,590; Rayburn, 6,850; Somerville, 340; Travis, 480,570; and Canyon, 269,290.

### 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.

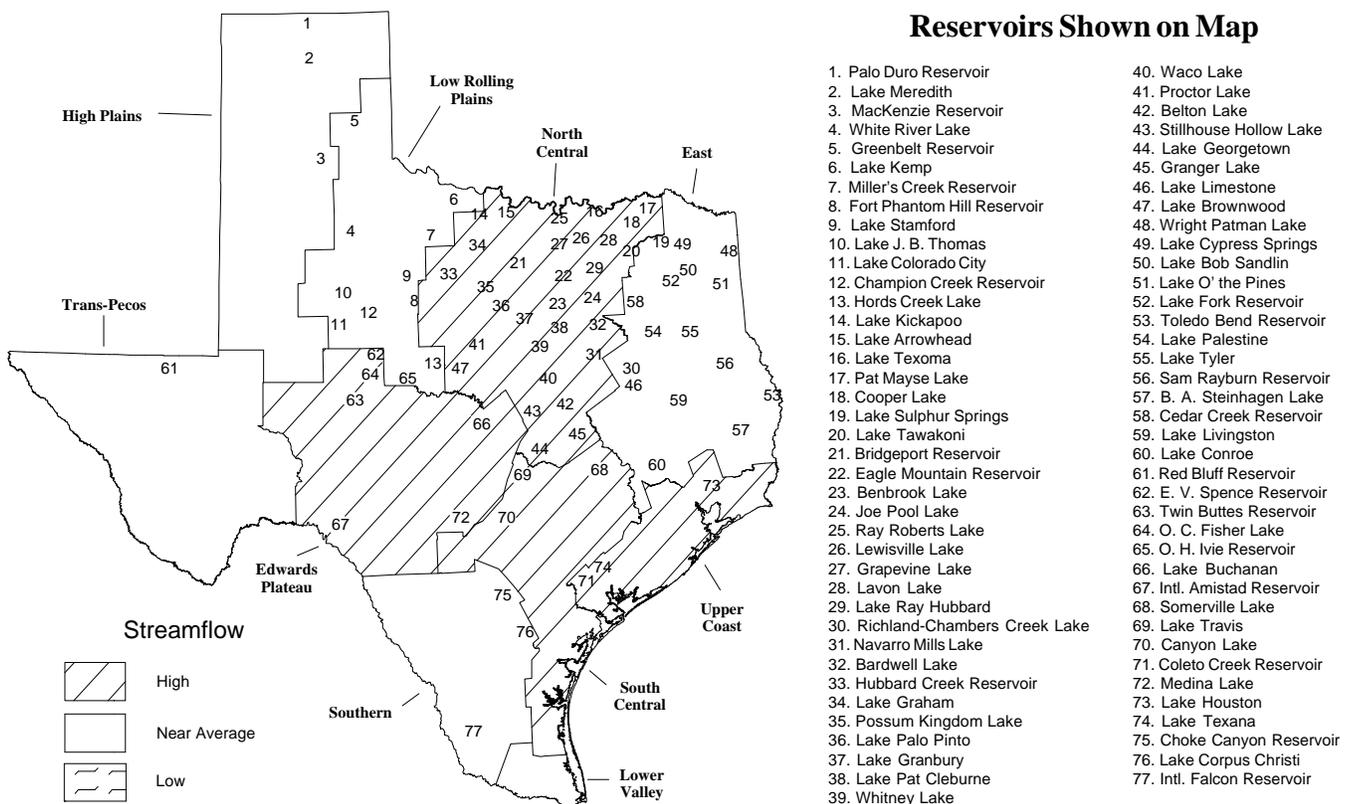
# STREAMFLOW

Streamflow conditions across Texas ranged from near-normal to above-normal during the month of June. The Eastern and Southern parts of the state received higher than normal rainfall which caused flooding of some streams. Rainfall throughout the rest of the state resulted in lower runoff from area streams than occurred in the month of May. The following is a summary of the measured flows at various index stations across the State.

The index station for the East Texas climatic division is located on the Neches River near Clifton. Streamflow past the gage was above-normal, averaging 1,140 cfs, or 838 percent of the monthly reference period median. This was 823 cfs above the station's near-normal flow level. Elsewhere across the State, the index station for the Edwards Plateau is located on the North Concho River near Carlsbad. Streamflow past the gage averaged 14.6 cfs during the month, or 885 percent of the reference period median. This value was above-normal, 0.5 cfs above the station's near-normal June flow level. The index station for South-central Texas is located on the Guadalupe River near Spring Branch. Flow during the month at the station was above-normal, averaging 6,458 cfs past the gage. This was 1,750 percent of the month's reference period median flow rate and was 5,586 cfs above the near-normal streamflow level.

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## STREAMFLOW CONDITIONS FOR JUNE COMPARED WITH PAST RECORD



CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage in Acre-Feet and as Percent of Conservation Storage Capacity					
			Late June 1997		Late May 1997		Late June 1996	
HIGH PLAINS								
Palo Duro Reservoir	1	60,900	12,180	20	12,750	21	3,450	6
Lake Meredith (Texas)	2	500,000	376,870	75	371,710	74	274,200	55
Lake Meredith (Texas & Oklahoma)	(2)	(779,560)	(376,870)	(48)	(371,710)	(48)	(270,350)	(35)
MacKenzie Reservoir	3	46,250	9,170	20	8,950	19	6,950	15
White River Lake	4	31,850	14,900	47	14,270	45	8,730	27
TOTAL		639,000	413,120	65	407,680	64	293,330	46
LOW ROLLING PLAINS								
Greenbelt Reservoir	5	58,200	29,810	51	29,850	51	20,020	34
Lake Kemp	6	319,600	273,440	86	268,800	84	192,270	60
Miller's Creek Reservoir	7	27,890	15,000	54	13,710	49	14,090	51
Fort Phantom Hill Reservoir	8	70,030	70,030	100	70,030	100	48,240	69
Lake Stamford	9	52,700	34,920	66	26,080	49	26,080	49
Lake J. B. Thomas	10	202,300	25,750	13	13,740	7	9,340	5
Lake Colorado City	11	30,800	21,300	69	18,100	59	17,850	58
Champion Creek Reservoir	12	41,600	25,700	62	22,100	53	26,300	63
Hords Creek Lake	13	8,600	8,600	100	8,100	94	6,090	71
TOTAL		811,720	504,550	62	470,510	58	360,280	44
NORTH CENTRAL								
Lake Kickapoo	14	106,000	74,420	70	71,820	68	73,380	69
Lake Arrowhead	15	262,100	241,220	92	238,910	91	201,950	77
Lake Texoma	16	2,722,300	2,722,300	100	2,722,300	100	2,637,600	97
Pat Mayse Lake	17	124,500	124,200	100	124,500	100	122,900	99
Cooper Lake	18	273,000	273,000	100	273,000	100	259,020	95
Lake Sulphur Springs	19	17,710	17,710	100	17,710	100	10,530	59
Lake Tawakoni	20	936,200	936,200	100	936,200	100	738,200	79
Bridgeport Reservoir	21	374,830	374,830	100	374,830	100	298,200	80
Eagle Mountain Reservoir	22	178,380	178,380	100	178,380	100	150,360	84
Benbrook Lake	23	88,200	88,200	100	88,200	100	84,850	96
Joe Pool Lake	24	175,800	175,800	100	175,800	100	146,360	83
Ray Roberts Lake	25	798,760	798,760	100	798,760	100	727,720	91
Lewisville Lake	26	555,000	555,000	100	555,000	100	349,700	63
Grapevine Lake	27	187,700	184,740	98	187,700	100	134,980	72
Lavon Lake	28	443,800	443,800	100	443,800	100	281,480	63
Lake Ray Hubbard	29	490,000	490,000	100	490,000	100	385,700	79
Richland-Chambers Creek Lake	30	1,103,820	1,102,620	99	1,103,820	100	904,450	82
Navarro Mills Lake	31	55,810	55,810	100	55,810	100	40,330	72
Bardwell Lake	32	53,580	51,680	96	51,400	96	41,540	78
Hubbard Creek Reservoir	33	317,800	316,100	99	314,000	99	231,200	73
Lake Graham	34	45,000	45,000	100	45,000	100	43,770	97
Possum Kingdom Lake	35	551,820	551,820	100	545,410	99	457,430	83
Lake Palo Pinto	36	42,200	42,200	100	42,200	100	37,820	90
Lake Granbury	37	135,680	135,680	100	135,680	100	135,680	100
Lake Pat Cleburne	38	25,300	25,300	100	25,300	100	18,800	74
Whitney Lake	39	622,800	622,800	100	622,800	100	465,340	75
Waco Lake	40	144,550	144,550	100	144,550	100	130,690	90

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

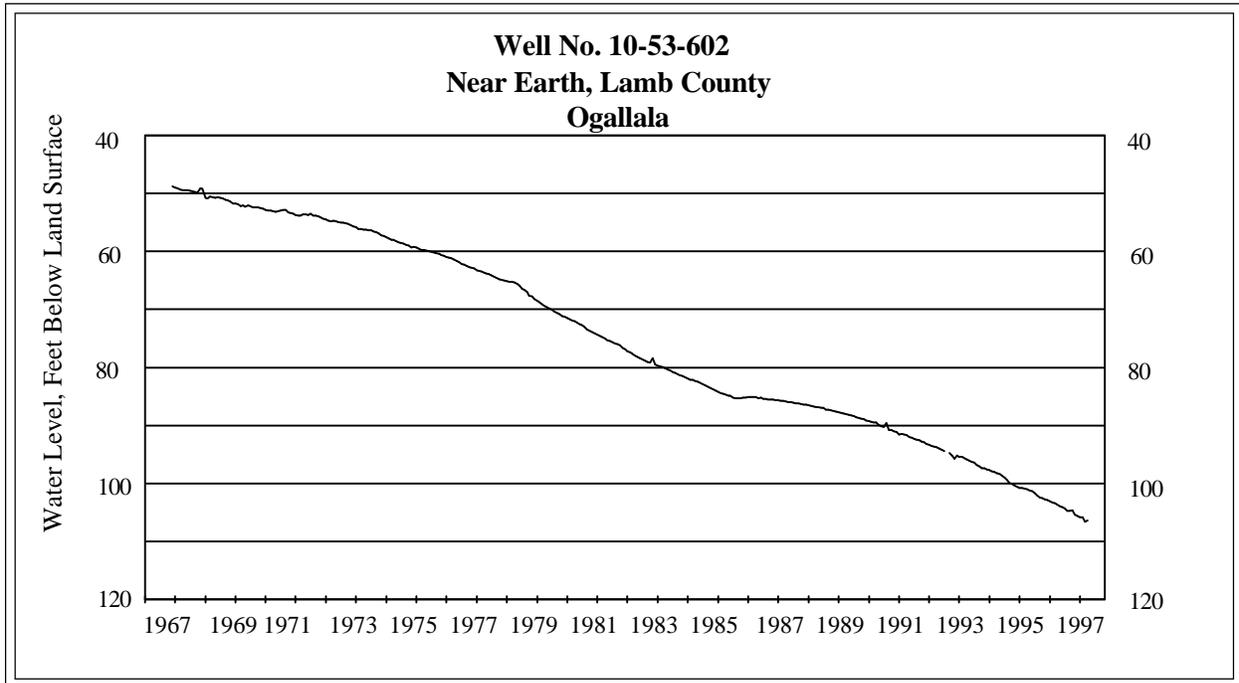
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage in Acre-Feet and as Percent of Conservation Storage Capacity					
			Late June 1997		Late May 1997		Late June 1996	
NORTH CENTRAL (continued)								
Proctor Lake	41	55,590	55,590	100	55,590	100	55,590	100
Belton Lake	42	434,500	434,500	100	434,500	100	369,450	85
Stillhouse Hollow Lake	43	226,060	226,060	100	226,060	100	177,620	79
Lake Georgetown	44	37,010	37,010	100	37,010	100	18,770	51
Granger Lake	45	54,280	54,280	100	54,280	100	51,910	96
Lake Limestone	46	215,750	215,750	100	215,750	100	167,290	78
Lake Brownwood	47	143,400	143,400	100	143,400	100	123,800	86
TOTAL		11,999,230	11,938,710	99	11,929,470	99	10,074,410	84
EAST								
Wright Patman Lake	48	142,700	142,700	100	142,700	100	142,700	100
Lake Cypress Springs	49	66,800	66,800	100	66,800	100	64,950	97
Lake Bob Sandlin	50	202,300	202,300	100	202,300	100	165,580	82
Lake O' the Pines	51	252,000	252,000	100	252,000	100	249,190	99
Lake Fork Reservoir	52	635,200	635,200	100	635,200	100	564,460	89
Toledo Bend Reservoir	53	4,472,900	4,472,900	100	4,472,900	100	3,420,000	76
Lake Palestine	54	411,300	411,300	100	411,300	100	335,700	82
Lake Tyler	55	73,700	73,700	100	73,700	100	64,620	88
Sam Rayburn Reservoir	56	2,876,300	2,876,300	100	2,876,300	100	1,677,310	58
B. A. Steinhagen Lake	57	94,200	74,850	79	86,930	92	84,760	90
Cedar Creek Reservoir	58	637,050	637,050	100	637,050	100	530,400	83
Lake Livingston	59	1,750,000	1,750,000	100	1,750,000	100	1,637,000	94
Lake Conroe	60	429,900	414,970	97	414,970	97	413,970	96
TOTAL		12,044,350	12,010,070	99	12,022,150	99	9,350,640	78
TRANS-PECOS								
Red Bluff Reservoir	61	307,000	61,480	20	64,960	21	63,230	21
TOTAL		307,000	61,480	20	64,960	21	63,230	21
EDWARDS PLATEAU								
E. V. Spence Reservoir	62	484,800	142,600	29	124,300	26	106,600	22
Twin Buttes Reservoir	63	177,800	69,860	39	71,280	40	28,420	16
O. C. Fisher Lake	64	119,200	20,580	17	19,720	17	14,880	12
O. H. Ivie Reservoir	65	554,340	554,340	100	501,860	91	402,560	73
Lake Buchanan	66	896,980	857,630	96	850,760	95	697,730	78
Amistad Reservoir (Texas)	67	1,771,030	961,500	54	921,780	52	753,150	43
Amistad Reservoir (Texas & Mexico)	(67)	(3,151,300)	(1,517,650)	(48)	(1,420,360)	(45)	(1,260,650)	(40)
TOTAL		4,004,150	2,606,510	65	2,489,700	62	2,003,340	50
SOUTH CENTRAL								
Somerville Lake	68	155,060	155,060	100	155,060	100	110,420	71
Lake Travis	69	1,144,100	1,144,100	100	1,144,100	100	769,980	67
Canyon Lake	70	385,600	385,600	100	385,600	100	351,880	91
Coleto Creek Reservoir	71	35,060	35,060	100	35,060	100	23,620	67
Medina Lake	72	254,000	254,000	100	123,400	49	107,400	42
TOTAL		1,973,820	1,973,820	100	1,843,220	93	1,363,300	69

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

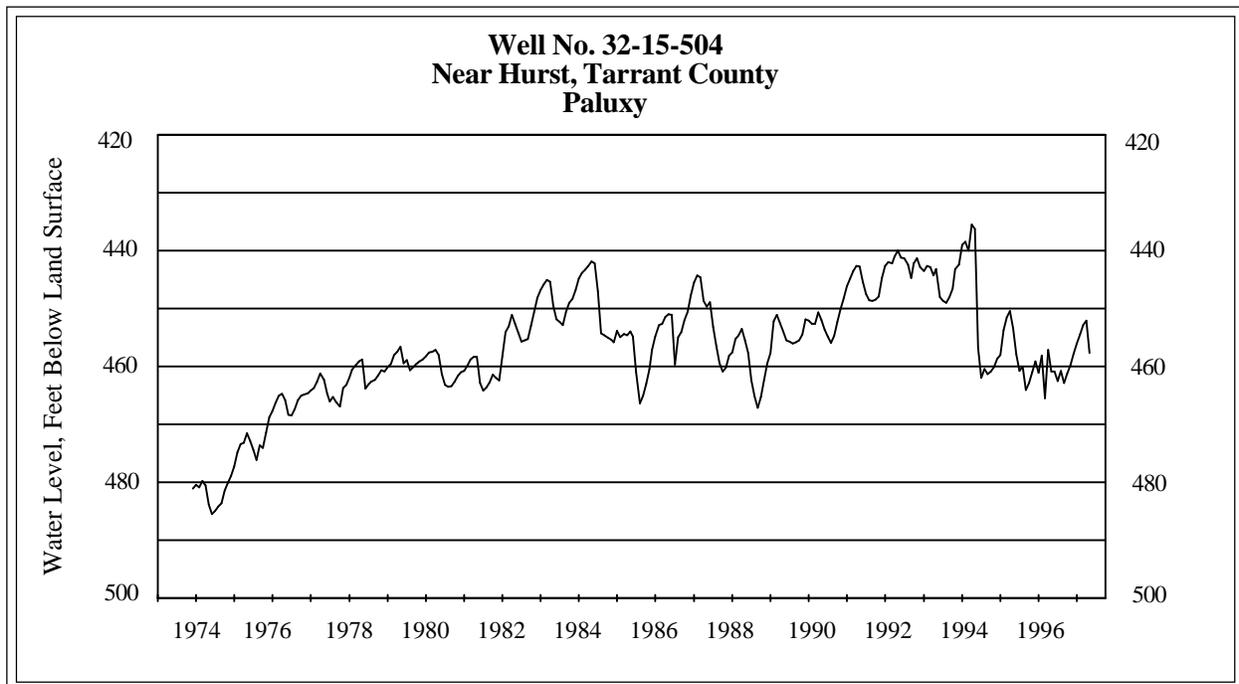
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage in Acre-Feet and as Percent of Conservation Storage Capacity					
			Late June 1997		Late May 1997		Late June 1996	
UPPER COAST								
Lake Houston	73	128,860	128,860	100	128,860	100	128,860	100
Lake Texana	74	157,900	157,630	99	157,540	99	157,900	100
TOTAL		286,760	286,490	99	286,400	99	286,760	100
SOUTHERN								
Choke Canyon Reservoir	75	695,260	291,510	42	174,210	25	196,910	28
Lake Corpus Christi	76	241,240	186,300	77	135,600	56	84,000	35
Falcon Reservoir (Texas)	77	1,555,120	396,440	25	462,100	30	210,780	14
Falcon Reservoir (Texas & Mexico)	(77)	(2,653,290)	(690,720)	(26)	(782,340)	(29)	(328,340)	(12)
TOTAL		2,491,620	874,250	35	771,910	31	491,690	20
STATE TOTAL		34,557,650	30,669,000	89	30,286,000	88	24,286,980	70

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 74 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 Texas (United States' share) and Mexico and are not included in State total.

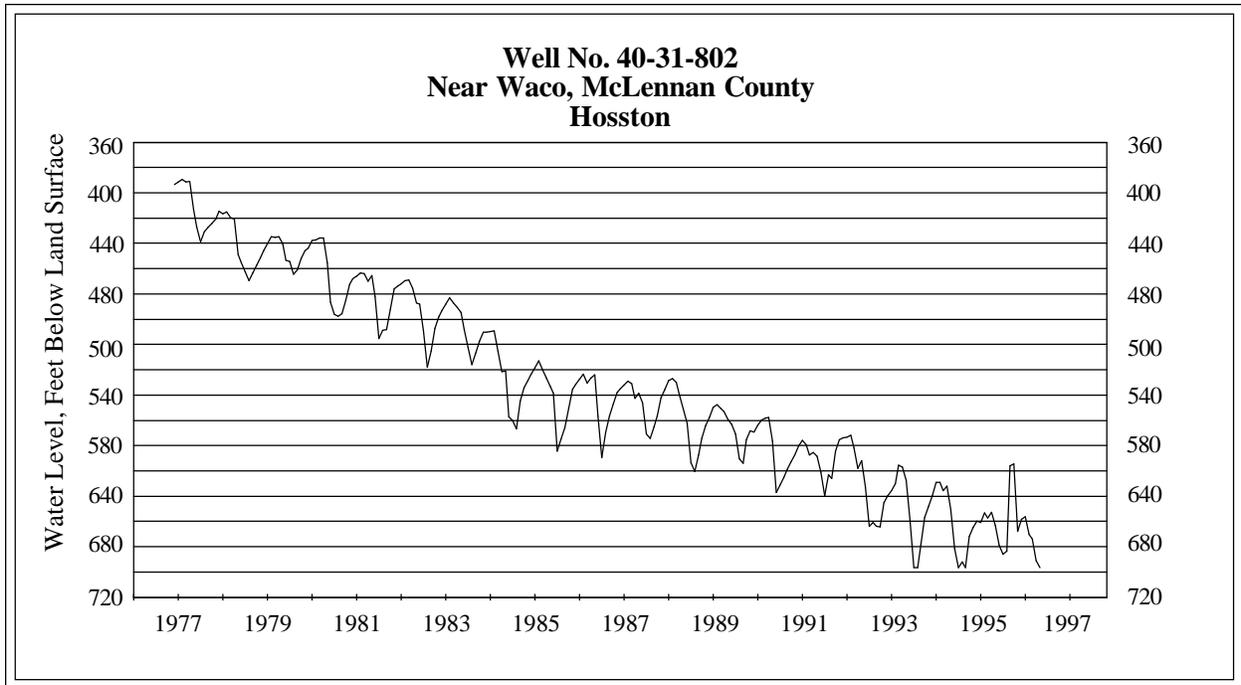
# GROUND WATER LEVELS IN OBSERVATION WELLS



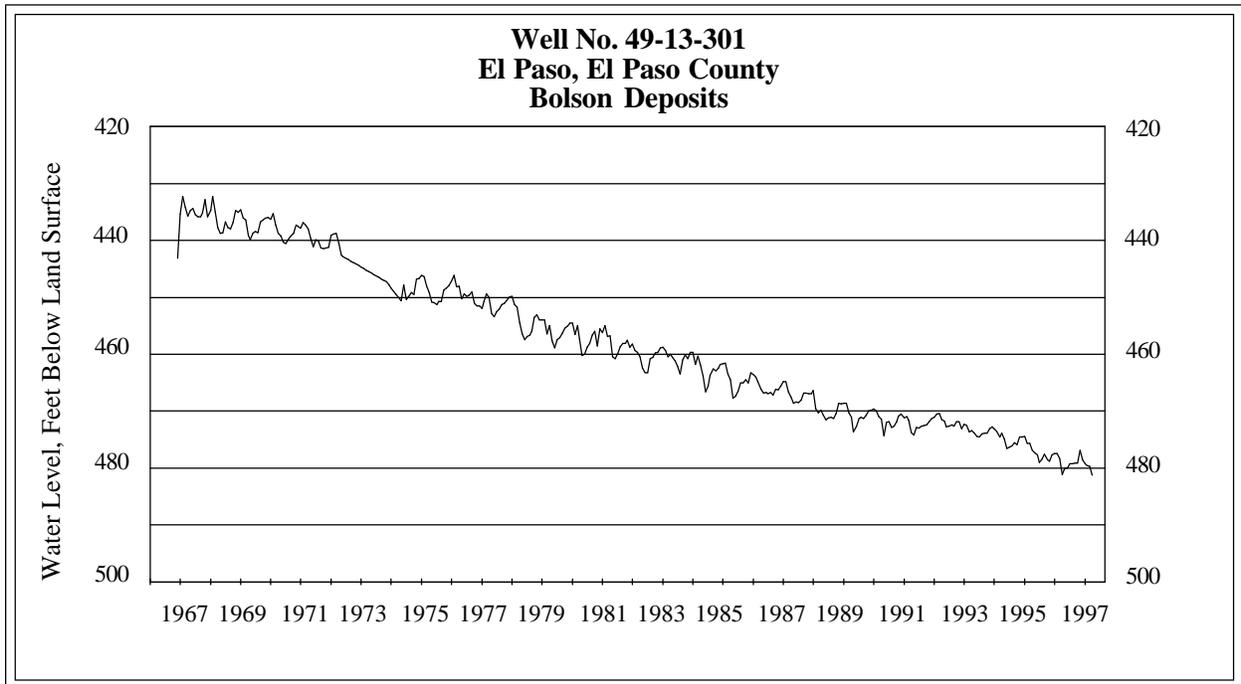
The June water-level measurement in this Ogallala aquifer well, elevation 3667 feet above sea level, was not available for the month.



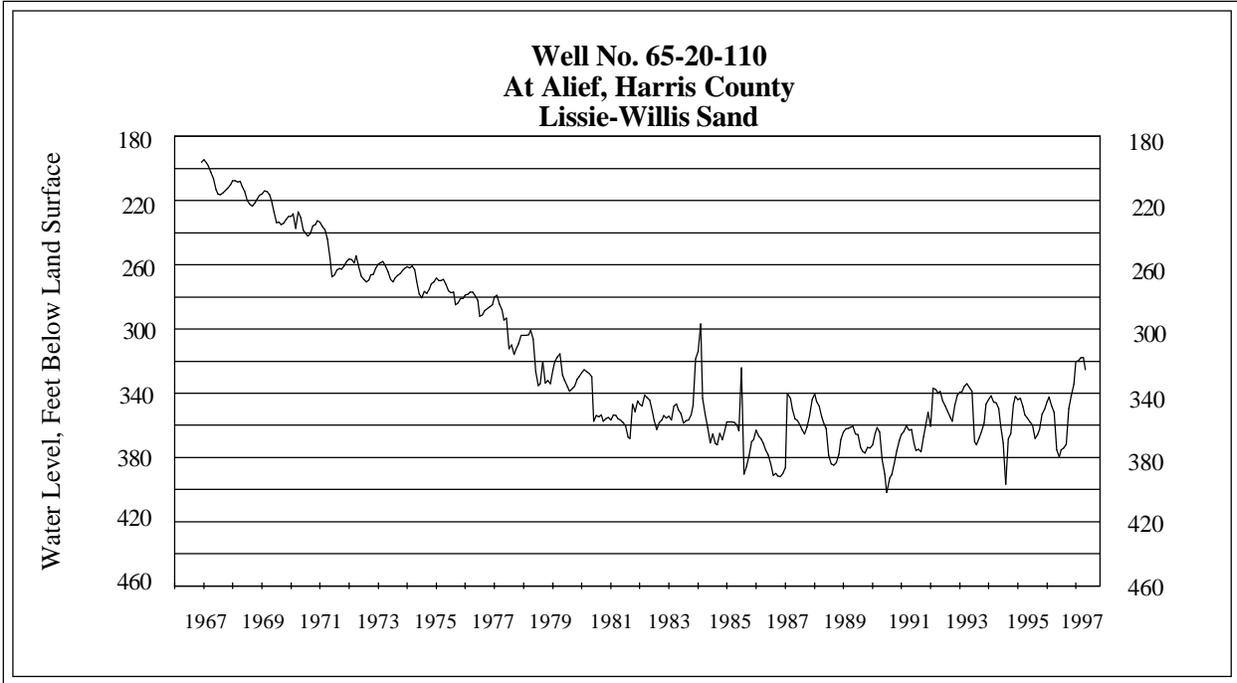
The June water-level measurement in this Paluxy aquifer well, elevation 535 feet above sea level, was 457.71 feet below land surface . The June measurement was 5.62 feet below last month's measurement, 3.15 feet above last year's measurement, and 64.32 feet below the initial measurement recorded in 1953.



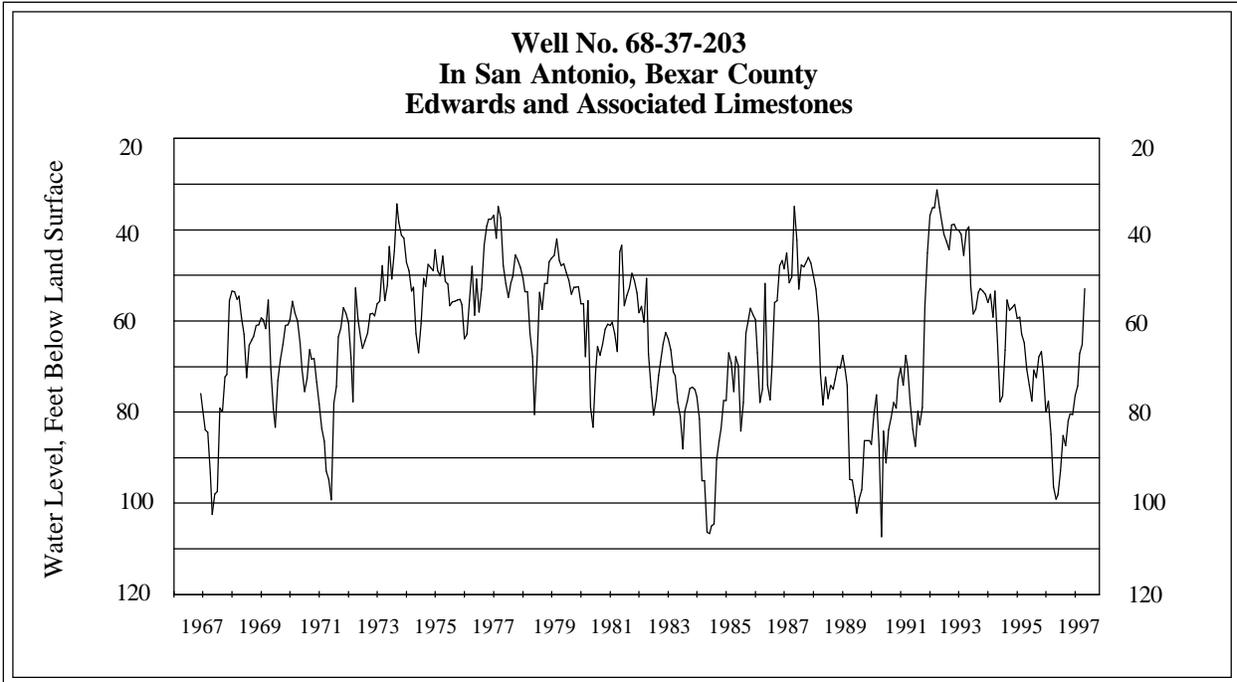
The June water-level measurement in this Hosston Formation aquifer well, elevation 593 feet above sea level, was not available for the month .



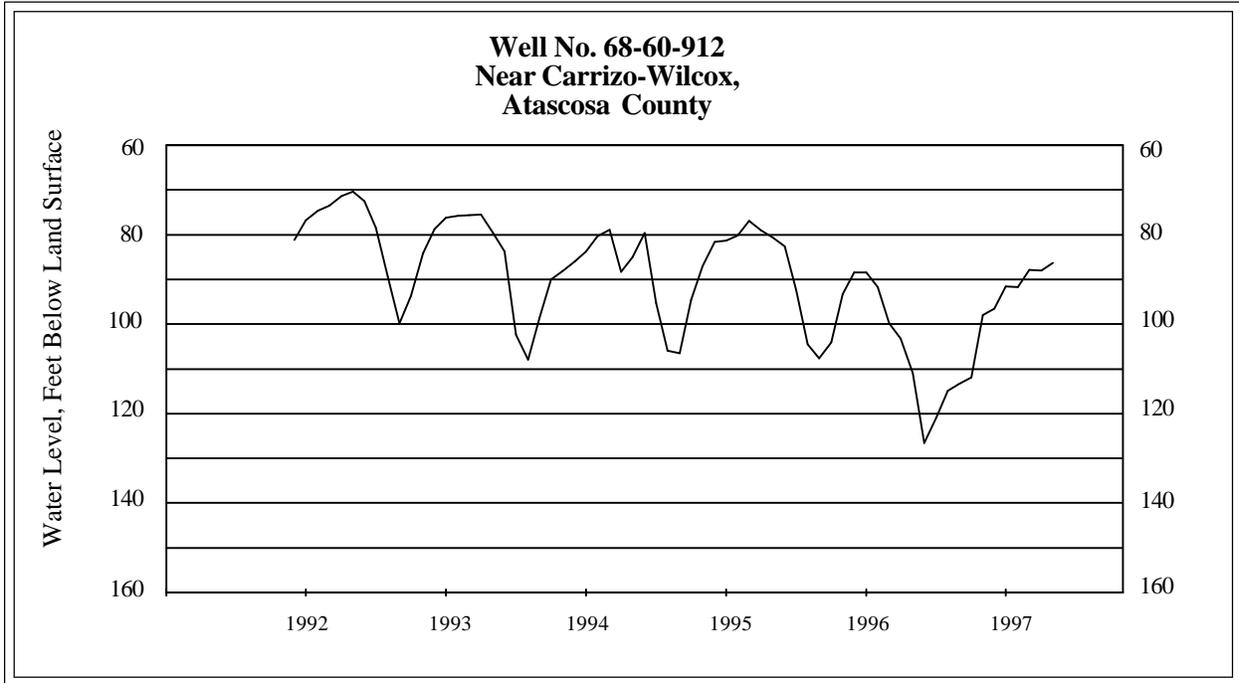
The June water-level measurement in this Bolson Deposits aquifer well, elevation 3882 feet above sea level, was 281.22 feet below land surface. This was 1.56 feet below last month's measurement, .11 feet below last year's measurement, and 49.32 feet below the initial measurement recorded in 1964.



The June water-level measurement in this Lissie Willis Sand aquifer well, elevation 83 feet above sea level, was 325.24 feet below land surface. This was 7.44 feet below last month's measurement, 50.27 feet above last year's measurement, and 289.24 feet below the initial measurement recorded in 1939.



The June water-level measurement in this Edwards aquifer well, elevation 731 feet above sea level, was 52.90 feet below land surface. This was 12.30 feet above last month's measurement, 46.20 feet above last year's measurement, and 6.72 feet above the initial measurement recorded in 1962.



The June water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 86.30 feet below land surface. This was 1.66 feet above last month's measurement, 24.62 feet above last year's measurement, and 5.05 feet below the initial measurement recorded in 1992.

