Texas Water Development Board

WATER Conditions

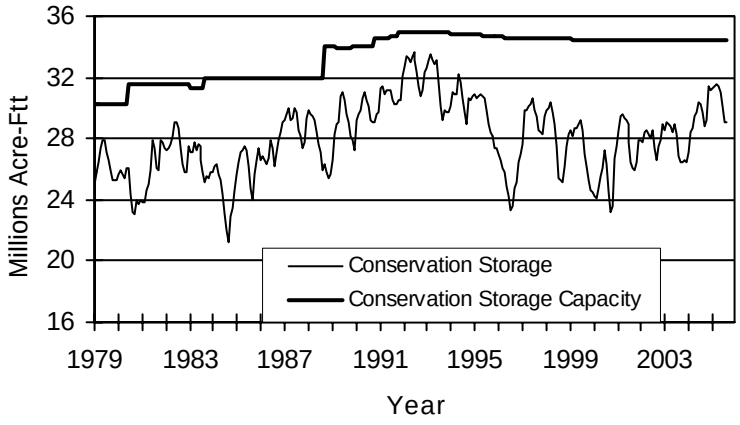
RESERVOIR STORAGE

August 2005

Near the end of August, the 77 reservoirs monitored for this report held 29.06 million acre-feet in conservation storage, or 84 percent of the conservation storage capacity of the state's major reservoirs. Storage decreased during the month by 0.06 million acre-feet (-0.2% of conservation storage capacity). Compared to last year, storage decreased by 635,150 acre-feet (-2%).

Storage was near capacity in the Upper Coast Region (94%), South Central Region (92%), Edwards Plateau Region (91%), and North Central Region (90%), but lower than one-third of capacity in the High Plains Region (29%) and Trans-Pecos Region (31%). Storage was at 100% in 8 reservoirs, and the Texas share of Amistad remained above its capacity, at 133%. Compared to this time last year, the storage increased in five regions with the greatest increase in the Edwards Plateau Region and Low Rolling Plains Region (20%), and decreased in four regions with the sharpest decrease in the East Region (-10%).

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.

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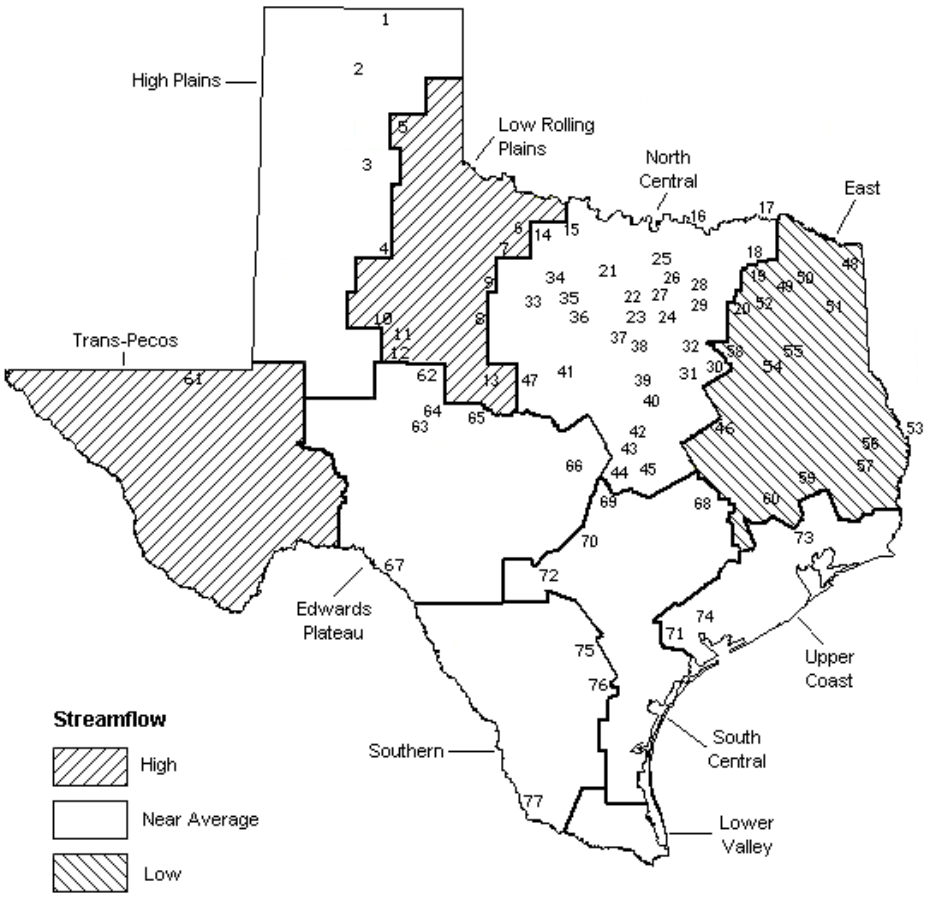
STREAMFLOW

Of 29 reporting index stations in August, computed 31-day mean flows were very high (<5%) at 2 stations, high (5% - 30%) at 6 stations, low (70% - 95%) at 8 stations, very low (>5%) at 1 station and near normal (30% - 70% exceedance) at the remaining 12 stations. Compared to July, flows have increased at 15 index stations and decreased at 14 stations.

On a regional basis, flows in August were high in the Trans-Pecos and Low Rolling Plains Regions, low in East Texas Region, and normal everywhere else. Streamflow in the Lower Valley Region is not monitored.

AUGUST STREAMFLOW CONDITIONS



Reservoirs Shown on Map

1. Palo Duro Reservoir
2. Lake Meredith
3. MacKenzie Reservoir
4. White River Lake
5. Greenbelt Reservoir
6. Lake Kemp
7. Miller's Creek Reservoir
8. Fort Phantom Hill Reservoir
9. Lake Stamford
10. Lake J. B. Thomas
11. Lake Colorado City
12. Champion Creek Reservoir
13. Hords Creek Lake
14. Lake Kickapoo
15. Lake Arrowhead
16. Lake Texoma
17. Pat Mayse Lake
18. Cooper Lake
19. Lake Sulphur Springs
20. Lake Tawakoni
21. Bridgeport Reservoir
22. Eagle Mountain Reservoir
23. Benbrook Lake
24. Joe Pool Lake
25. Ray Roberts Lake
26. Lewisville Lake
27. Grapevine Lake
28. Lavon Lake
29. Lake Ray Hubbard
30. Richland-Chambers Creek Lake
31. Navarro Mills Lake
32. Bardwell Lake
33. Hubbard Creek Reservoir
34. Lake Graham
35. Possum Kingdom Lake
36. Lake Palo Pinto
37. Lake Granbury
38. Lake Pat Cleburne
39. Whitney Lake
40. Waco Lake
41. Proctor Lake
42. Belton Lake
43. Stillhouse Hollow Lake
44. Lake Georgetown
45. Granger Lake
46. Lake Limestone
47. Lake Brownwood
48. Wright Patman Lake
49. Lake Cypress Springs
50. Lake Bob Sandlin
51. Lake O' the Pines
52. Lake Fork Reservoir
53. Toledo Bend Reservoir
54. Lake Palestine
55. Lake Tyler
56. Sam Rayburn Reservoir
57. B. A. Steinhagen Lake
58. Cedar Creek Reservoir
59. Lake Livingston
60. Lake Conroe
61. Red Bluff Reservoir
62. E. V. Spence Reservoir
63. Twin Buttes Reservoir
64. O. C. Fisher Lake
65. O. H. Ivie Reservoir
66. Lake Buchanan
67. Intl. Amistad Reservoir
68. Somerville Lake
69. Lake Travis
70. Canyon Lake
71. Coleto Creek Reservoir
72. Medina Lake
73. Lake Houston
74. Lake Texana
75. Choke Canyon Reservoir
76. Lake Corpus Christi
77. Intl. Falcon Reservoir

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late Aug. 2005 (acre-feet)	(%)	Change since Late July 2005 (acre-feet)	(%)	Change since Late August 2004 (acre-feet)	(%)
HIGH PLAINS								
Palo Duro Reservoir	1	60,900	2,690	4	-280	0	-2,600	-4
Lake Meredith (Texas)	2	500,000	167,410	33	-4,620	-1	14,680	3
Lake Meredith (Texas and Oklahoma)	(2)	779,560	167,410	21	-4,620	-1	14,680	2
MacKenzie Reservoir	3	46,250	10,430	23	0	0	3,090	7
White River Lake	4	31,850	7,570	24	-330	-1	450	1
TOTAL		639,000	188,100	29	-5,230	-1	15,620	2
LOW ROLLING PLAINS								
Greenbelt Reservoir	5	58,200	23,910	41	-760	-1	1,130	2
Lake Kemp	6	319,600	253,710	79	45,710	14	52,260	16
Miller's Creek Reservoir	7	27,890	27,890	100	7,910	28	12,420	45
Fort Phantom Hill Reservoir	8	70,030	57,400	82	3,430	5	17,590	25
Lake Stamford	9	52,700	52,700	100	19,440	37	21,260	40
Lake J. B. Thomas	10	202,300	69,380	34	19,740	10	44,520	22
Lake Colorado City	11	30,800	30,210	98	2,460	8	8,380	27
Champion Creek Reservoir	12	41,600	5,960	14	1,250	3	1,600	4
Hords Creek Lake	13	8,600	7,630	89	210	2	4,180	49
TOTAL		811,720	528,790	65	99,390	12	163,340	20
NORTH CENTRAL								
Lake Kickapoo	14	106,000	100,810	95	40,390	38	30,790	29
Lake Arrowhead	15	262,100	215,450	82	41,400	16	62,640	24
Lake Texoma	16	2,722,300	2,463,800	91	205,860	8	-100,220	-4
Pat Mayse Lake	17	124,500	106,270	85	-3,620	-3	-6,930	-6
Cooper Lake	18	273,000	203,010	74	-18,530	-7	18,120	7
Lake Sulphur Springs	19	17,710	15,000	85	-570	-3	-1,730	-10
Lake Tawakoni	20	936,200	724,000	77	-39,700	-4	-141,400	-15
Bridgeport Reservoir	21	374,830	299,400	80	-10,600	-3	-46,900	-13
Eagle Mountain Reservoir	22	178,380	150,100	84	-7,800	-4	-13,900	-8
Benbrook Lake	23	88,200	61,010	69	-12,160	-14	-16,280	-18
Joe Pool Lake	24	175,800	165,560	94	-4,480	-3	-10,240	-6
Ray Roberts Lake	25	798,760	763,240	96	-1,420	0	-35,520	-4
Lewisville Lake	26	555,000	545,210	98	-9,790	-2	-9,790	-2
Grapevine Lake	27	187,700	156,760	84	-4,930	-3	-27,430	-15
Lavon Lake	28	443,800	358,030	81	-30,110	-7	-67,930	-15
Lake Ray Hubbard	29	413,420	380,300	92	-7,600	-2	-16,400	-4
Richland-Chambers Creek Lake	30	1,103,820	1,052,000	95	-25,000	-2	-51,820	-5
Navarro Mills Lake	31	55,810	48,130	86	-1,710	-3	-7,680	-14
Bardwell Lake	32	53,580	43,110	80	-1,690	-3	-3,510	-7
Hubbard Creek Reservoir	33	317,800	201,720	63	18,480	6	74,900	24
Lake Graham	34	45,000	38,370	85	920	2	6,930	15
Possum Kingdom Lake	35	551,820	544,600	99	81,200	15	4,300	1
Lake Palo Pinto	36	27,650	20,230	73	-1,190	-4	-60	0
Lake Granbury	37	135,680	133,200	98	7,800	6	0	0
Lake Pat Cleburne	38	25,300	21,730	86	-1,020	-4	-3,570	-14
Whitney Lake	39	622,800	617,570	99	73,040	12	-5,230	-1
Waco Lake	40	144,500	144,500	100	0	0	0	0
Proctor Lake	41	55,590	45,150	81	-1,540	-3	-10,440	-19
Belton Lake	42	434,500	434,500	100	8,870	2	0	0
Stillhouse Hollow Lake	43	226,060	226,060	100	0	0	0	0
Lake Georgetown	44	37,010	32,830	89	440	1	-1,600	-4
Granger Lake	45	54,280	54,280	100	0	0	0	0
Lake Limestone	46	215,750	195,940	91	1,990	1	-12,980	-6
Lake Brownwood	47	143,400	132,190	92	9,400	7	-350	0
TOTAL		11,908,050	10,694,060	90	306,330	3	-394,230	-3

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late Aug. 2005 (acre-feet)	(%)	Change since Late July 2005 (acre-feet)	(%)	Change since Late August 2004 (acre-feet)	(%)
EAST								
Wright Patman Lake	48	142,700	142,700	100	0	0	0	0
Lake Cypress Springs	49	66,800	61,750	92	-1,750	-3	-4,090	-6
Lake Bob Sandlin	50	202,300	175,700	87	-5,900	-3	-21,100	-10
Lake O' the Pines	51	252,000	202,760	80	-8,610	-3	-49,240	-20
Lake Fork Reservoir	52	635,200	613,200	97	-18,100	-3	-22,000	-3
Toledo Bend Reservoir	53	4,472,900	3,228,000	72	-350,000	-8	-801,000	-18
Lake Palestine	54	411,300	372,720	91	-18,000	-4	-31,800	-8
Lake Tyler	55	73,700	68,040	92	-2,620	-4	-5,660	-8
Sam Rayburn Reservoir	56	2,876,300	2,509,940	87	-148,590	-5	-146,400	-5
B. A. Steinhagen Lake	57	94,200	91,010	97	21,440	23	17,510	19
Cedar Creek Reservoir	58	637,050	576,300	90	-22,300	-4	-41,000	-6
Lake Livingston	59	1,750,000	1,712,000	98	-5,000	0	-38,000	-2
Lake Conroe	60	429,900	392,300	91	-2,000	0	-9,700	-2
TOTAL		12,044,350	10,146,420	84	-561,430	-5	-1,152,480	-10
TRANS-PECOS								
Red Bluff Reservoir	61	307,000	95,950	31	240	0	29,620	10
TOTAL		307,000	95,950	31	240	0	29,620	10
EDWARDS PLATEAU								
E. V. Spence Reservoir	62	488,760	102,900	21	36,310	7	58,140	12
Twin Buttes Reservoir	63	177,800	43,840	25	4,120	2	39,280	22
O.C. Fisher Lake	64	119,200	16,700	14	10,930	9	14,970	13
O. H. Ivie Reservoir	65	554,340	309,300	56	7,600	1	138,220	25
Lake Buchanan	66	896,980	839,990	94	10,750	1	-35,010	-4
Amistad Reservoir (Texas)	67	1,771,030	2,354,000	133	0	0	578,000	33
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	2,791,000	89	36,000	1	725,000	23
TOTAL		4,008,110	3,666,730	91	69,710	2	793,600	20
SOUTH CENTRAL								
Somerville Lake	68	155,060	142,610	92	-3,010	-2	-12,000	-8
Lake Travis	69	1,144,100	1,033,800	90	20,400	2	-110,300	-10
Canyon Lake	70	385,600	377,610	98	-1,980	-1	-6,710	-2
Coleto Creek Reservoir	71	35,060	29,080	83	-1,860	-5	-1,940	-6
Medina Lake	72	254,000	234,100	92	-5,000	-2	-19,900	-8
TOTAL		1,973,820	1,817,200	92	8,550	0	-150,850	-8
UPPER COAST								
Lake Houston	73	128,860	128,860	100	0	0	0	0
Lake Texana	74	157,900	141,520	90	-13,010	-8	-11,810	-7
TOTAL		286,760	270,380	94	-13,010	-5	-11,810	-4
SOUTHERN								
Choke Canyon Reservoir	75	695,260	656,000	94	-17,000	-2	-39,260	-6
Lake Corpus Christi	76	241,240	182,400	76	-20,300	-8	-57,700	-24
Falcon Reservoir (Texas)	77	1,555,120	811,000	52	72,000	5	169,000	11
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	1,326,000	50	140,000	5	-284,000	-11
TOTAL		2,491,620	1,649,400	66	34,700	1	72,040	3
STATE TOTAL		34,470,430	29,057,030	84	-60,750	0	-635,150	-2

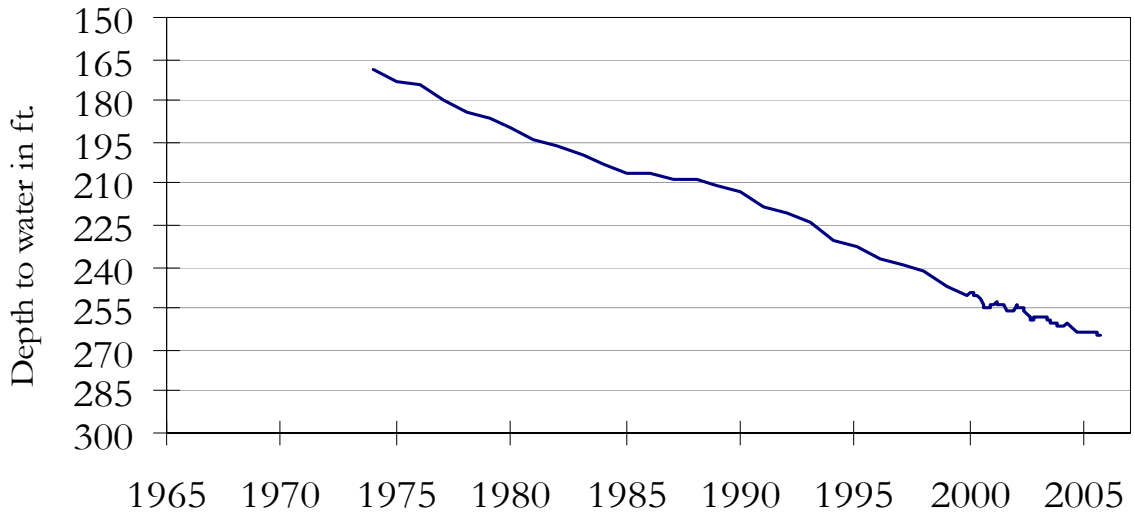
Note:

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

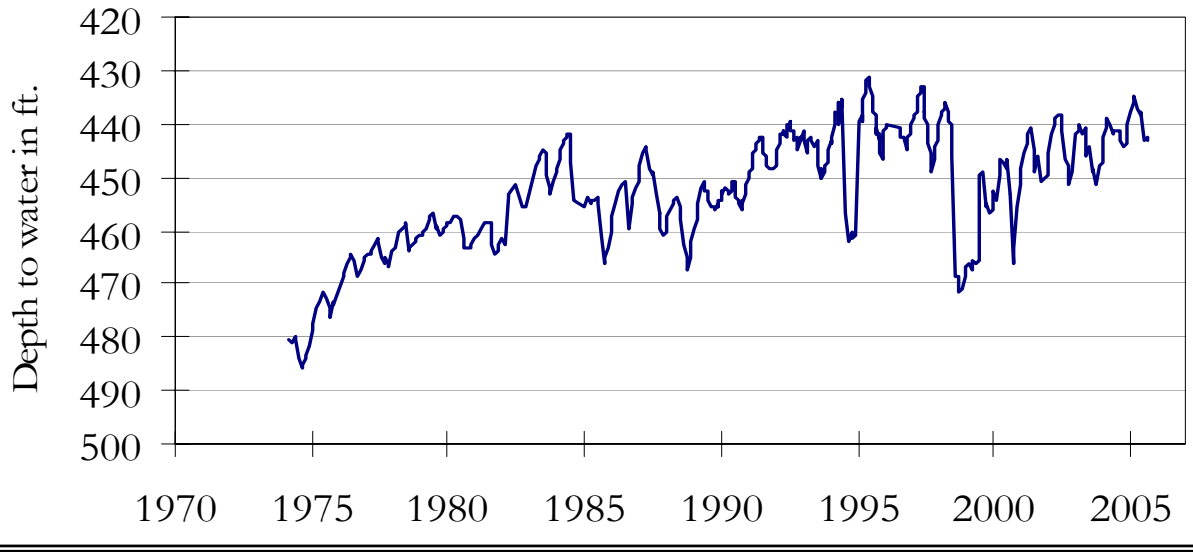
AUGUST GROUND WATER LEVELS IN OBSERVATION WELLS

Well No. 10-45-102
Southwest Castro County
Ogallala

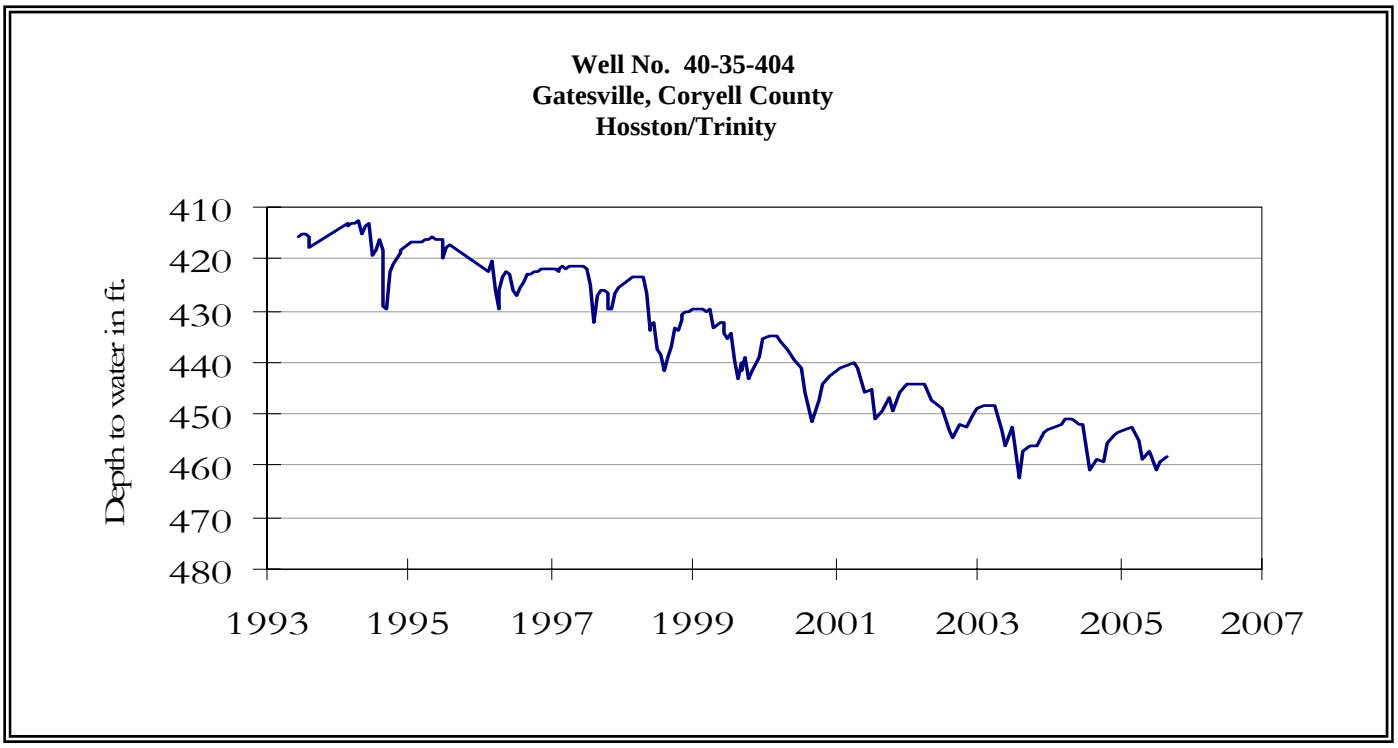


The late August water-level measurement in this Ogallala aquifer well, elevation 3,816 feet above sea level, was 264.81 feet below land surface. This measurement was 0.41 feet below last month's measurement, 1.31 feet below last year's measurement, and 108.81 feet below the initial measurement recorded in 1968.

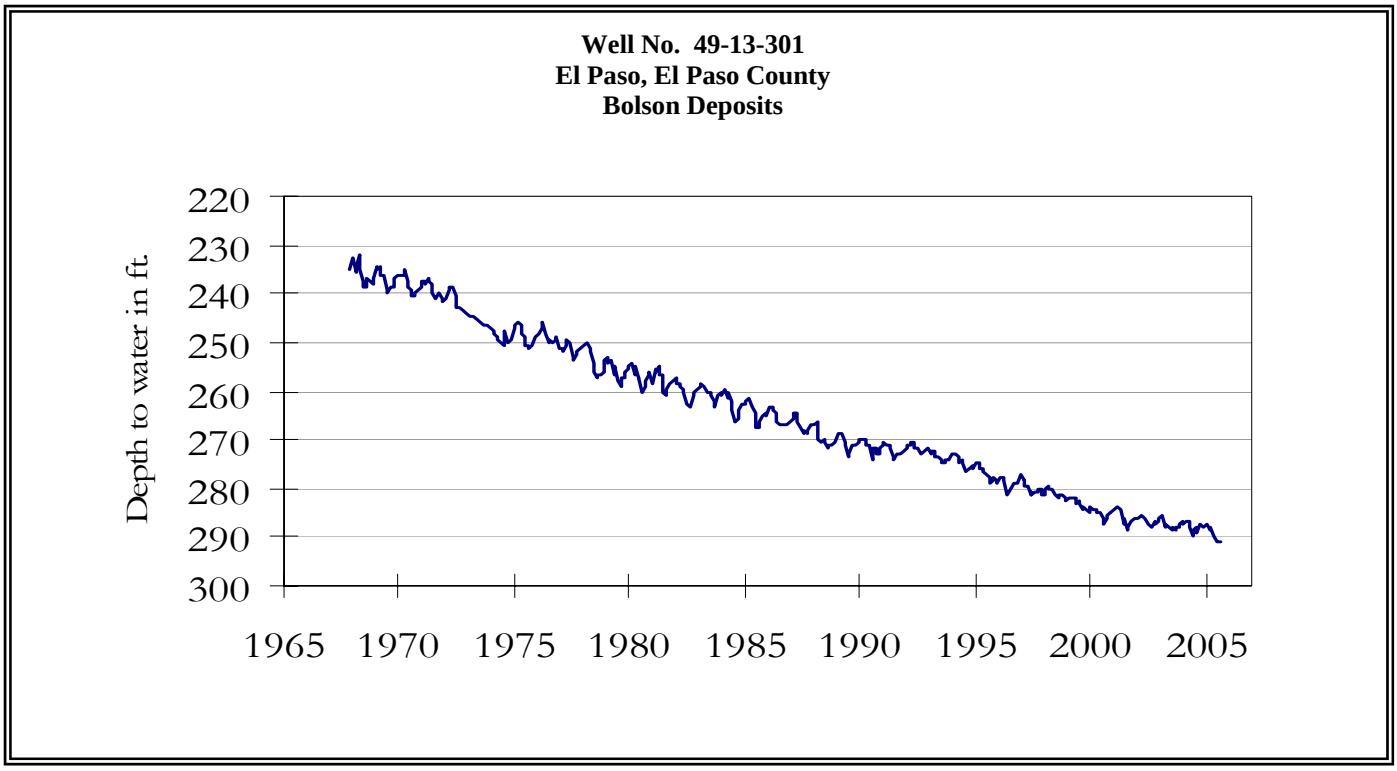
Well No. 32-15-504
Near Hurst, Tarrant County
Paluxy



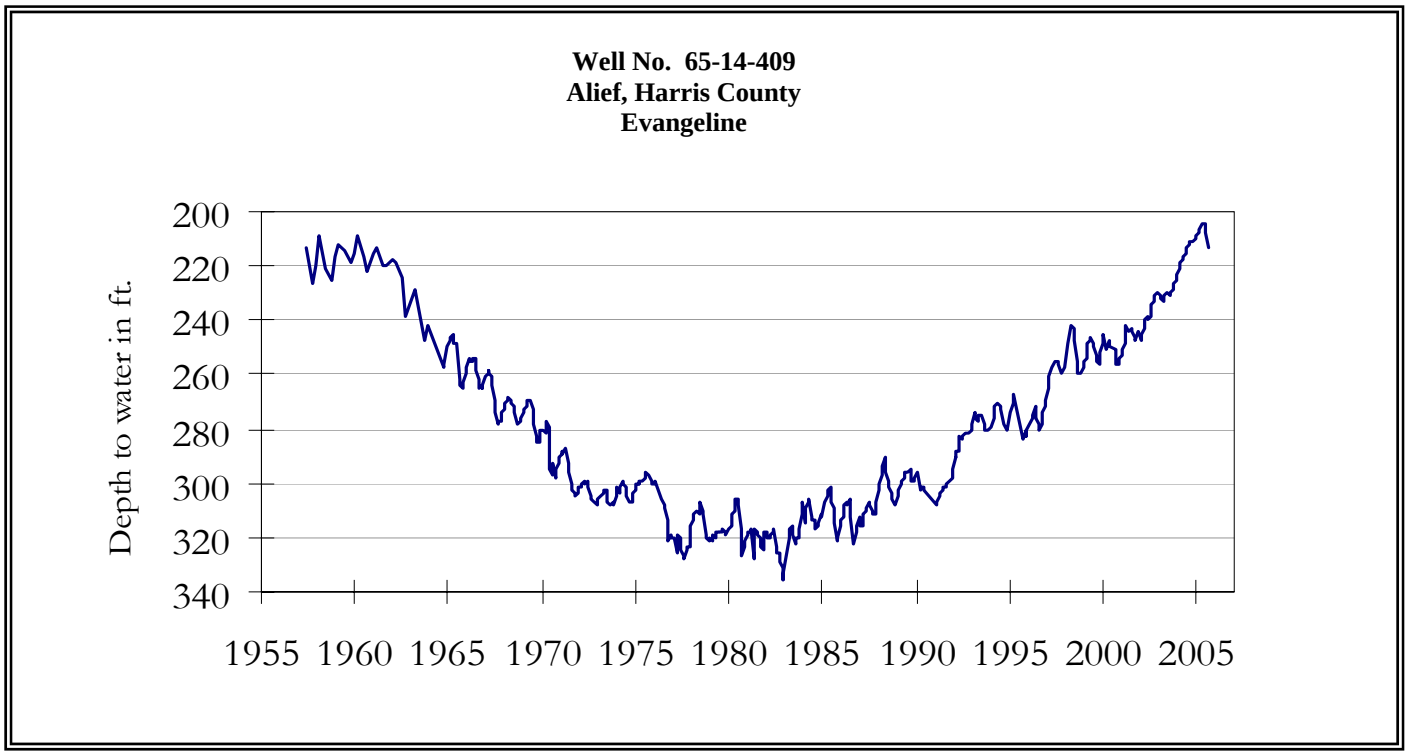
The late August water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 442.93 feet below land surface. This measurement was 0.48 feet below last month's measurement, 0.27 feet above last year's measurement, and 64.93 feet below the initial measurement recorded in 1953.



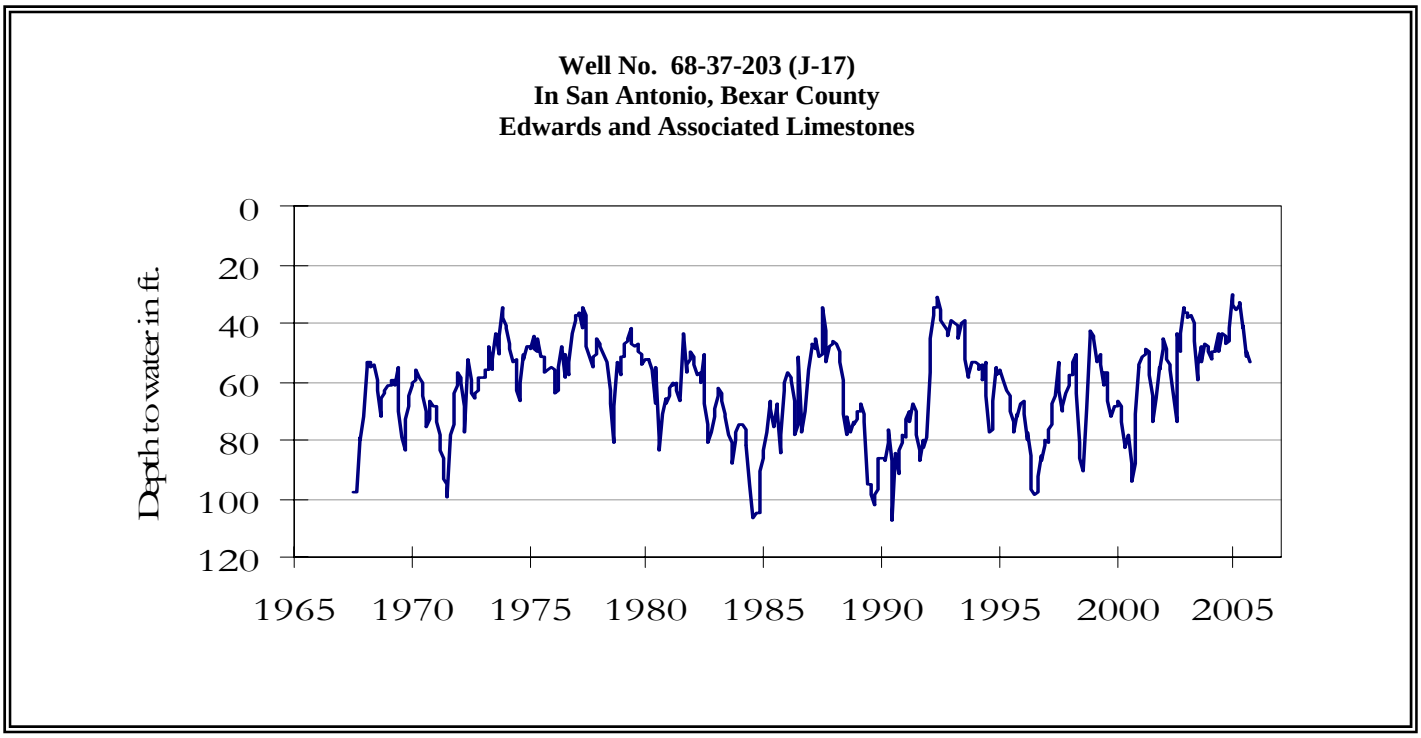
The late August water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 458.46 feet below land surface. This water level was 0.81 feet above last month's measurement, 0.44 feet above last year's measurement, and 166.46 feet below the initial measurement recorded in 1955.



The late August water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 290.97 feet below land surface. This was 0.13 feet below last month's measurement, 1.77 feet below last year's measurement, and 59.07 feet below the initial measurement recorded in 1964.

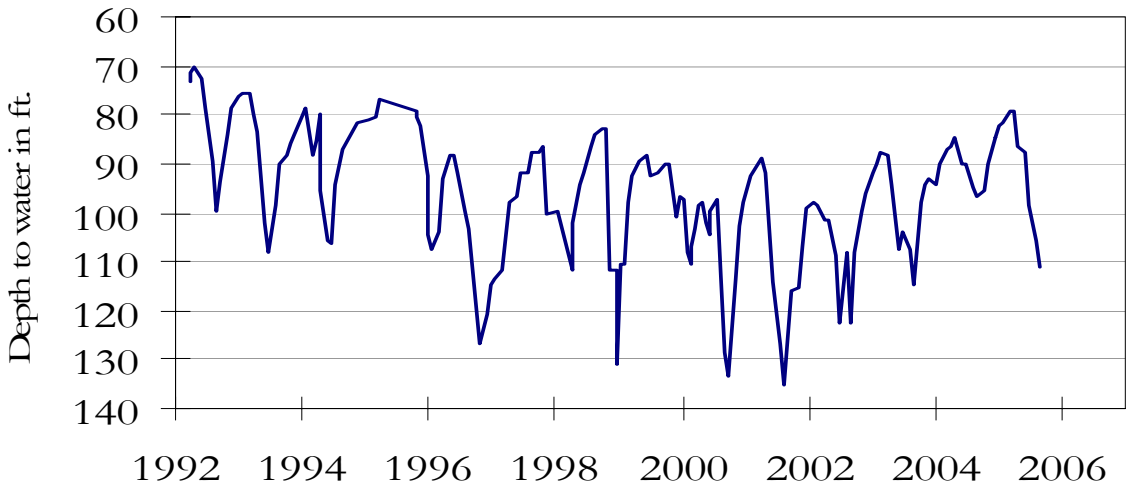


The late August water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 213.01 feet below land surface. This was 0.16 feet below last month's measurement, 2.21 feet below last year's measurement, and 77.51 feet below the initial measurement recorded in 1947.



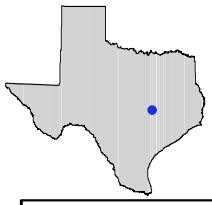
The late August water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 53.26 feet below land surface. This was 3.88 feet below last month's measurement, 6.26 feet below last year's measurement, and 6.62 feet below the initial measurement recorded in 1962.

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



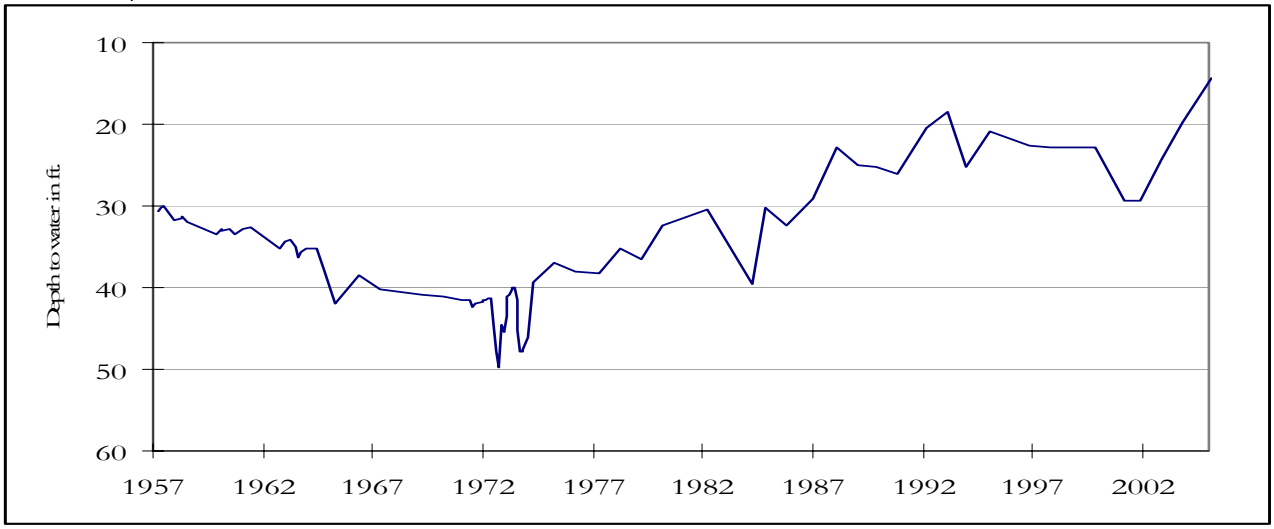
The late August water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 111.09 feet below land surface. This measurement was 5.63 feet below last month's measurement, 14.26 feet below last year's measurement, and 75.73 feet below the initial measurement recorded 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. 59-20-603
Brazos County



This water level observation well, located 5 miles west of Bryan, at an elevation of 241 feet ASL, was completed in the Brazos River Alluvium aquifer. Recharge to the aquifer is chiefly by precipitation on the flood plain surface. Water-level data indicate that the aquifer is readily replenished by rainfall.

August, 2005

Water levels declined in six of the seven key monitoring wells since the beginning of August, ranging from 0.13 feet in the El Paso Co. (Bolson Deposits) well to 5.63 feet in the Atascosa Co. Carrizo well. The water level rose 0.81 feet in the Coryell Co. Hosston/Trinity well. The J-17 well recorded a water level of 53.26 feet below land surface, a decline of 3.88 feet from the July 2005 measurement. This water level is approximately twenty-seven (27) feet above the Stage 1 critical management criteria.

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