Texas Water Development Board

WATER Conditions

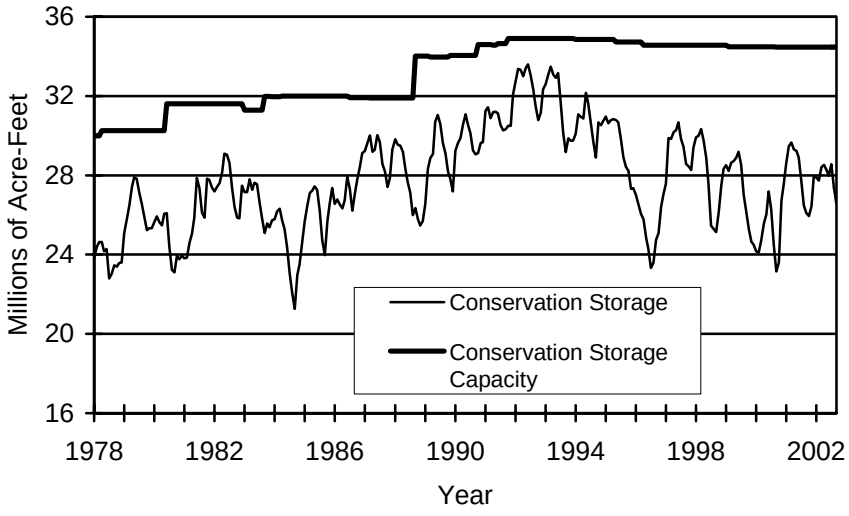
RESERVOIR STORAGE

September 2002

Near the end of September, the 77 reservoirs monitored for this report held 26.54 million acre-feet in conservation storage, or 77.0 percent of the conservation storage capacity of the State's major reservoirs. Statewide total storage is below the median for this time of year. Storage decreased for the month, down 0.84 million acre-feet (-2.4%). Compared to last year at this time, storage is up 0.45 million acre-feet (+1.3%).

Storage in the Upper Coast (100%) and South Central (96%) Regions are at or near capacity, while the High Plains (35%), Low Rolling Plains (46%), Trans-Pecos (14%), Edwards Plateau (43%) and Southern (44%) Regions remained low, though none significantly down from last month. The North Central (89%) and East (86%) Regions are in good shape, more or less what they were at this time last year. Storage is at 100% in 9 reservoirs, down 4 from last month.

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.

PO BOX 13231 • 1700 N. Congress Avenue • Austin, TX 78711-3231
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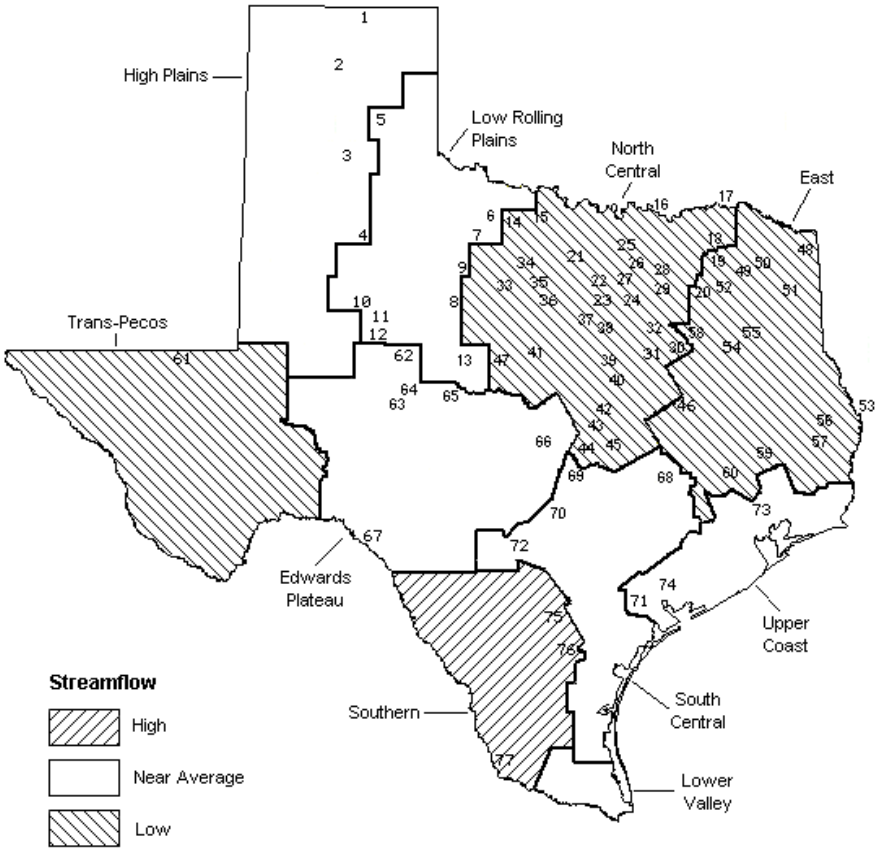
STREAMFLOW

Of 29 reporting index stations in September, computed 30-day mean flows were very high (0% - 5% exceedance) at 3 stations, high (5% - 30% exceedance) at 8 stations, near normal (30% - 70% exceedance) at 7 stations, low (70% - 95% exccedance) at 10 stations and very low (95% - 100% exceedance) at 1 station. Compared to August, flows increased at 17 index stations and decreased at 12.

On a regional basis, flows in September were very high in the Southern Region, low in the East Texas and North Central Regions, very low in the Trans-Pecos Region and near normal everywhere else.

SEPTEMBER 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 September 2002 (acre-feet)	(%)	Change since Late August 2002 (acre-feet)	(%)	Change since Late September 2001 (acre-feet)	(%)
HIGH PLAINS								
Palo Duro Reservoir	1	60,900	4,040	7	-2,970	-5	-3,400	-6
Lake Meredith (Texas)	2	500,000	204,600	41	-2,000	0	-79,600	-16
Lake Meredith (Texas and Oklahoma)	(2)	779,560	204,600	26	-2,000	0	-79,600	-10
MacKenzie Reservoir	3	46,250	7,030	15	-200	0	-1,960	-4
White River Lake	4	31,850	5,180	16	-480	-2	-2,960	-9
TOTAL		639,000	220,850	35	-5,650	-1	-87,920	-14
LOW ROLLING PLAINS								
Greenbelt Reservoir	5	58,200	21,780	37	-290	0	-1,660	-3
Lake Kemp	6	319,600	206,000	64	-11,000	-3	78,600	25
Miller's Creek Reservoir	7	27,890	15,810	57	-840	-3	2,550	9
Fort Phantom Hill Reservoir	8	70,030	46,040	66	-2,610	-4	13,590	19
Lake Stamford	9	52,700	40,690	77	-2,110	-4	26,760	51
Lake J. B. Thomas	10	202,300	19,590	10	-880	0	1,710	1
Lake Colorado City	11	30,800	16,920	55	-200	-1	-440	-1
Champion Creek Reservoir	12	41,600	2,360	6	-130	0	60	0
Hords Creek Lake	13	8,600	2,500	29	-80	-1	-920	-11
TOTAL		811,720	371,690	46	-18,140	-2	120,250	15
NORTH CENTRAL								
Lake Kickapoo	14	106,000	83,950	79	-3,450	-3	4,200	4
Lake Arrowhead	15	262,100	150,900	58	-6,100	-2	-10,500	-4
Lake Texoma	16	2,722,300	2,490,000	91	-82,000	-3	-4,000	0
Pat Mayse Lake	17	124,500	108,800	87	-2,500	-2	-5,600	-4
Cooper Lake	18	273,000	270,400	99	-2,600	-1	-2,600	-1
Lake Sulphur Springs	19	17,710	16,320	92	-550	-3	3,500	20
Lake Tawakoni	20	936,200	818,400	87	-25,300	-3	18,400	2
Bridgeport Reservoir	21	374,830	287,400	77	-11,600	-3	-22,100	-6
Eagle Mountain Reservoir	22	178,380	142,700	80	-6,100	-3	-9,300	-5
Benbrook Lake	23	88,200	69,160	78	-4,810	-5	2,830	3
Joe Pool Lake	24	175,800	168,800	96	-4,000	-2	-7,000	-4
Ray Roberts Lake	25	798,760	768,900	96	-12,000	-2	5,900	1
Lewisville Lake	26	555,000	555,000	100	0	0	16,700	3
Grapevine Lake	27	187,700	162,500	87	-7,700	-4	13,100	7
Lavon Lake	28	443,800	357,800	81	-27,300	-6	28,700	6
Lake Ray Hubbard	29	413,420	357,300	86	-11,600	-3	-18,200	-4
Richland-Chambers Creek Lake	30	1,103,820	1,052,000	95	-26,000	-2	10,000	1
Navarro Mills Lake	31	55,810	50,660	91	-2,340	-4	4,310	8
Bardwell Lake	32	53,580	41,090	77	-2,200	-4	-810	-2
Hubbard Creek Reservoir	33	317,800	152,000	48	-3,400	-1	24,600	8
Lake Graham	34	45,000	30,530	68	-1,300	-3	-4,820	-11
Possum Kingdom Lake	35	551,820	492,800	89	-22,700	-4	39,100	7
Lake Palo Pinto	36	27,650	17,540	63	-1,430	-5	390	1
Lake Granbury	37	135,680	133,600	98	-500	0	9,000	7
Lake Pat Cleburne	38	25,300	21,560	85	-1,320	-5	1,000	4
Whitney Lake	39	622,800	515,300	83	-28,400	-5	43,700	7
Waco Lake	40	144,500	136,300	94	-6,600	-5	3,000	2
Proctor Lake	41	55,590	48,850	88	-3,320	-6	8,320	15
Belton Lake	42	434,500	417,800	96	-8,900	-2	-15,700	-4
Stillhouse Hollow Lake	43	226,060	224,500	99	-1,560	-1	-1,200	-1
Lake Georgetown	44	37,010	37,010	100	0	0	5,800	16
Granger Lake	45	54,280	54,280	100	0	0	0	0
Lake Limestone	46	215,750	198,800	92	-6,000	-3	-2,400	-1
Lake Brownwood	47	143,400	123,300	86	-3,800	-3	13,900	10
TOTAL		11,908,050	10,556,250	89	-327,380	-3	152,220	1

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late September 2002 (acre-feet)	(%)	Change since Late August 2002 (acre-feet)	(%)	Change since Late September 2001 (acre-feet)	(%)
EAST								
Wright Patman Lake	48	142,700	142,700	100	0	0	0	0
Lake Cypress Springs	49	66,800	64,410	96	-1,780	-3	-2,390	-4
Lake Bob Sandlin	50	202,300	193,500	96	-3,000	-1	-8,800	-4
Lake O' the Pines	51	252,000	240,800	96	-6,100	-2	-11,200	-4
Lake Fork Reservoir	52	635,200	628,400	99	-6,800	-1	-6,800	-1
Toledo Bend Reservoir	53	4,472,900	3,530,000	79	-223,000	-5	249,000	6
Lake Palestine	54	411,300	375,100	91	-10,900	-3	-28,400	-7
Lake Tyler	55	73,700	73,700	100	0	0	0	0
Sam Rayburn Reservoir	56	2,876,300	2,278,000	79	-155,000	-5	-376,000	-13
B. A. Steinhagen Lake	57	94,200	87,110	92	39,170	42	38,920	41
Cedar Creek Reservoir	58	637,050	591,000	93	-16,400	-3	-5,100	-1
Lake Livingston	59	1,750,000	1,730,000	99	-10,000	-1	-10,000	-1
Lake Conroe	60	429,900	399,300	93	-5,000	-1	-15,400	-4
TOTAL		12,044,350	10,334,020	86	-398,810	-3	-176,170	-1
TRANS-PECOS								
Red Bluff Reservoir	61	307,000	43,200	14	1,070	0	10,630	3
TOTAL		307,000	43,200	14	1,070	0	10,630	3
EDWARDS PLATEAU								
E. V. Spence Reservoir	62	488,760	46,450	10	-2,590	-1	-13,790	-3
Twin Buttes Reservoir	63	177,800	5,890	3	-110	0	-2,730	-2
O.C. Fisher Lake	64	119,200	3,500	3	-570	0	-910	-1
O. H. Ivie Reservoir	65	554,340	216,300	39	-9,100	-2	-55,200	-10
Lake Buchanan	66	896,980	823,200	92	0	0	76,000	8
Amistad Reservoir (Texas)	67	1,771,030	646,000	36	-16,000	-1	-37,000	-2
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	841,000	27	-14,000	0	-34,000	-1
TOTAL		4,008,110	1,741,340	43	-28,370	-1	-33,630	-1
SOUTH CENTRAL								
Somerville Lake	68	155,060	151,900	98	-2,900	-2	-3,160	-2
Lake Travis	69	1,144,100	1,083,000	95	-48,000	-4	119,300	10
Canyon Lake	70	385,600	379,700	98	-5,900	-2	-5,900	-2
Coleto Creek Reservoir	71	35,060	31,410	90	1,580	5	-630	-2
Medina Lake	72	254,000	254,000	100	0	0	17,000	7
TOTAL		1,973,820	1,900,010	96	-55,220	-3	126,610	6
UPPER COAST								
Lake Houston	73	128,860	128,860	100	0	0	0	0
Lake Texana	74	157,900	157,700	100	5,200	3	-200	0
TOTAL		286,760	286,560	100	5,200	2	-200	0

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

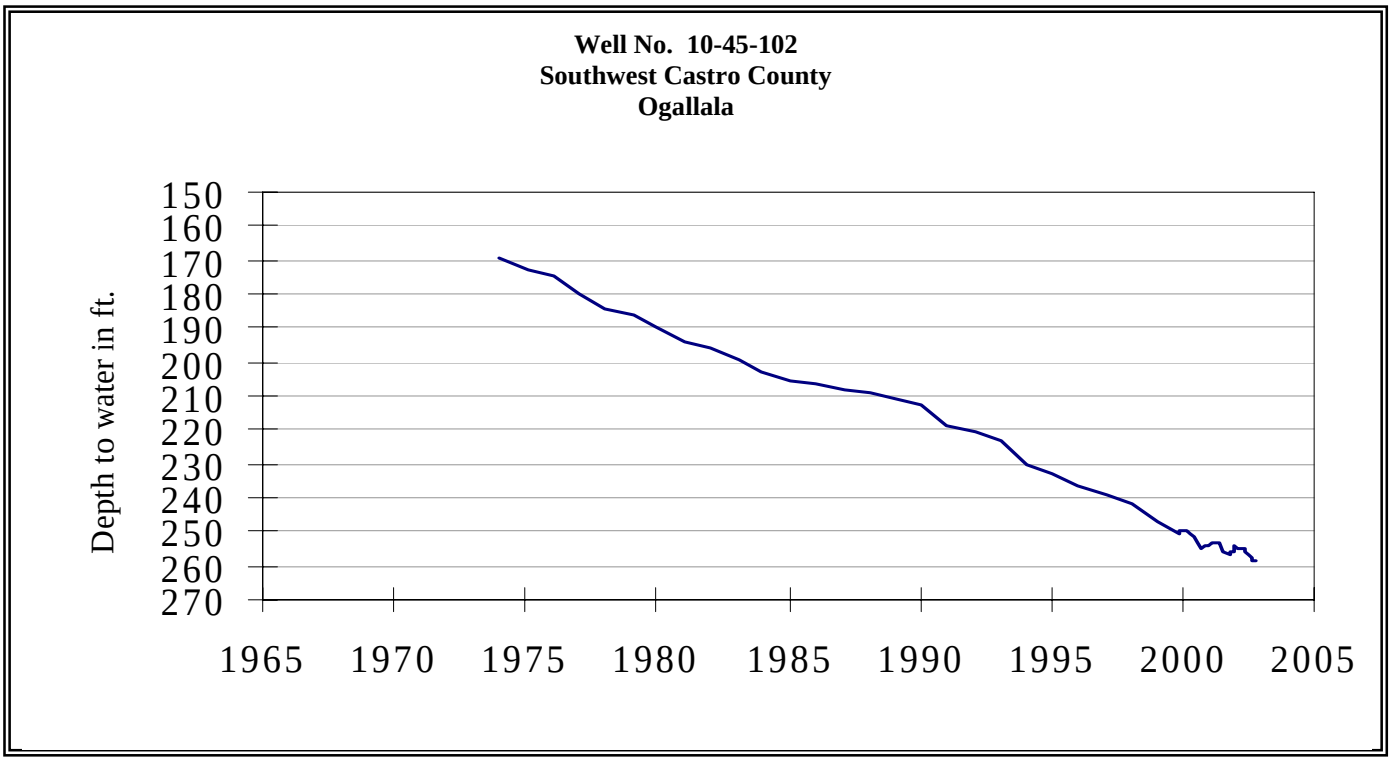
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late September 2002 (acre-feet)	(%)	Change since Late August 2002 (acre-feet)	(%)	Change since Late September 2001 (acre-feet)	(%)
SOUTHERN								
Choke Canyon Reservoir	75	695,260	689,000	99	-5,000	-1	455,000	65
Lake Corpus Christi	76	241,240	241,240	100	2,540	1	64,840	27
Falcon Reservoir (Texas)	77	1,555,120	156,000	10	-9,000	-1	-181,000	-12
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	369,000	14	110,000	4	-81,000	-3
TOTAL		2,491,620	1,086,240	44	-11,460	0	338,840	14
STATE TOTAL		34,470,430	26,540,160	77	-838,760	-2	450,630	1

Note:

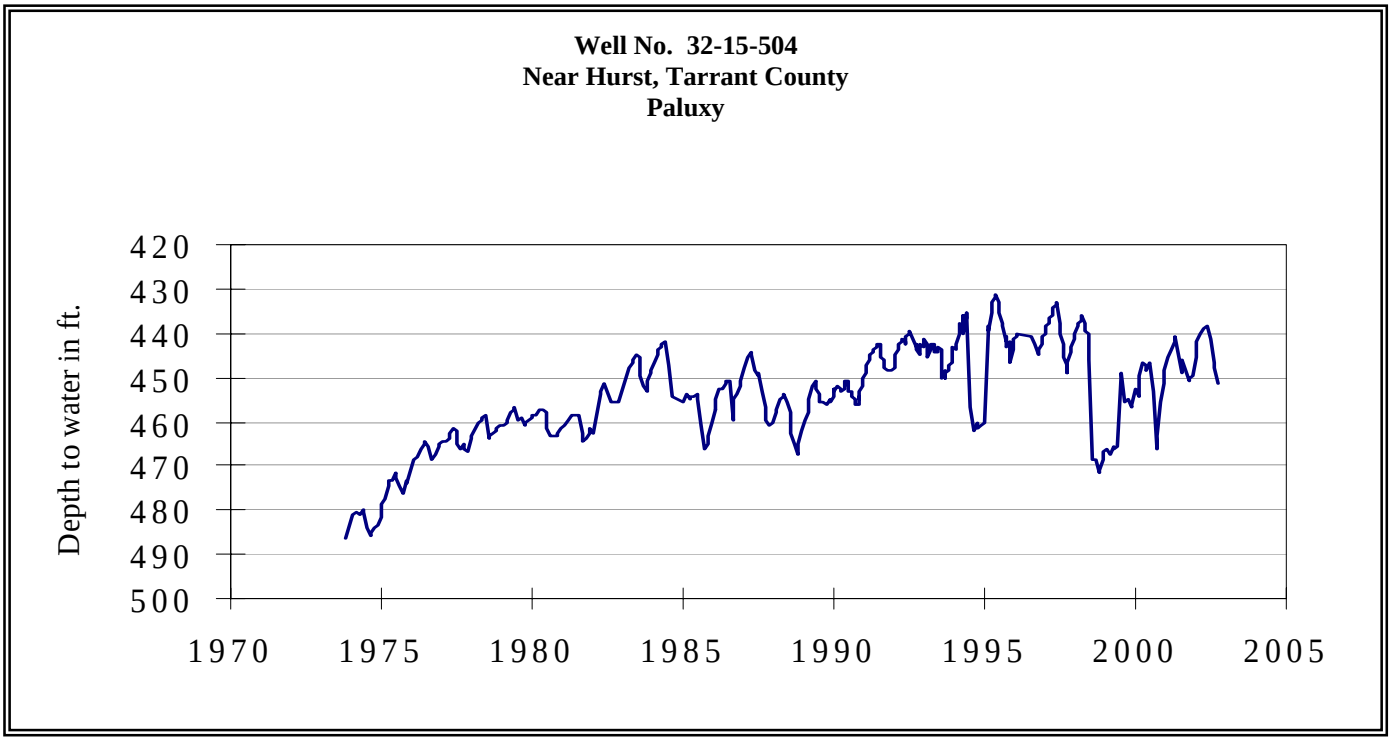
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included 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). Figures in parentheses 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. Texas (United States' share) and Mexico and are not included in State total.

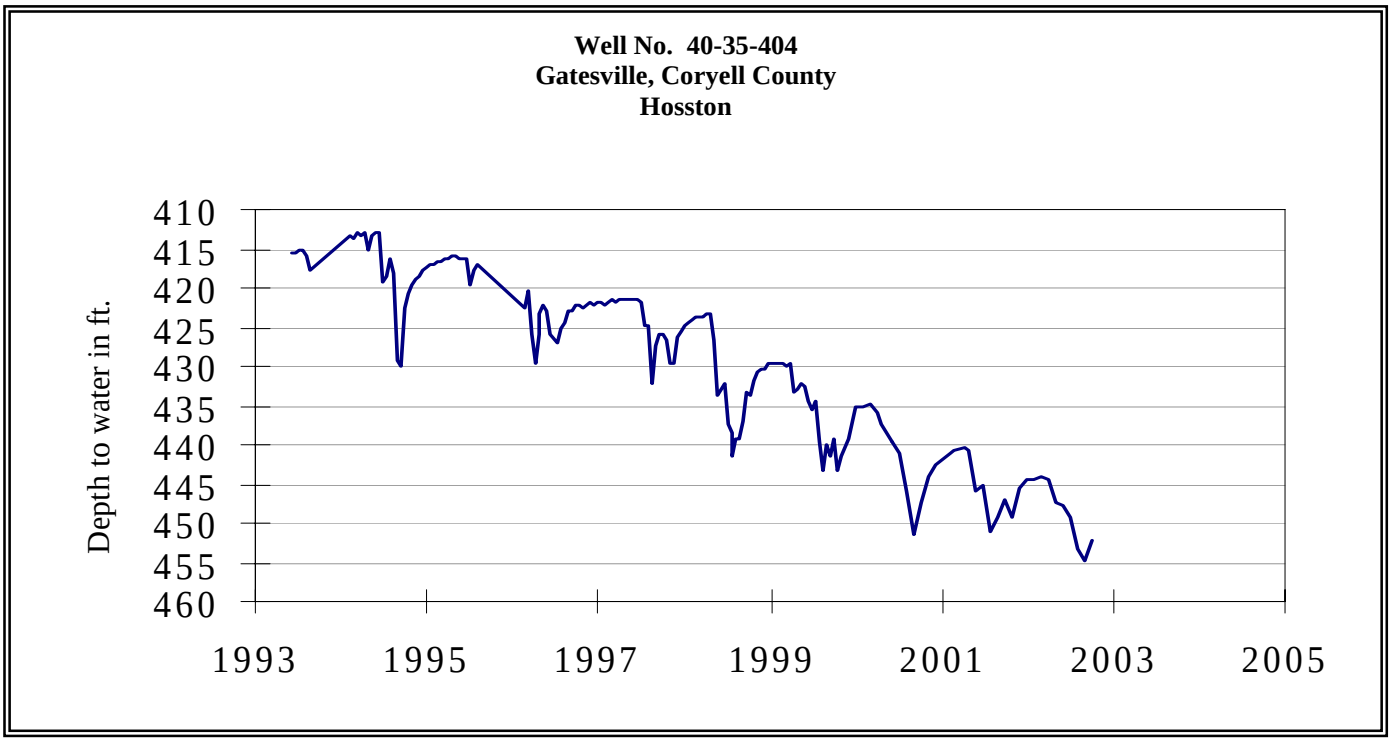
SEPTEMBER GROUND WATER LEVELS IN OBSERVATION WELLS



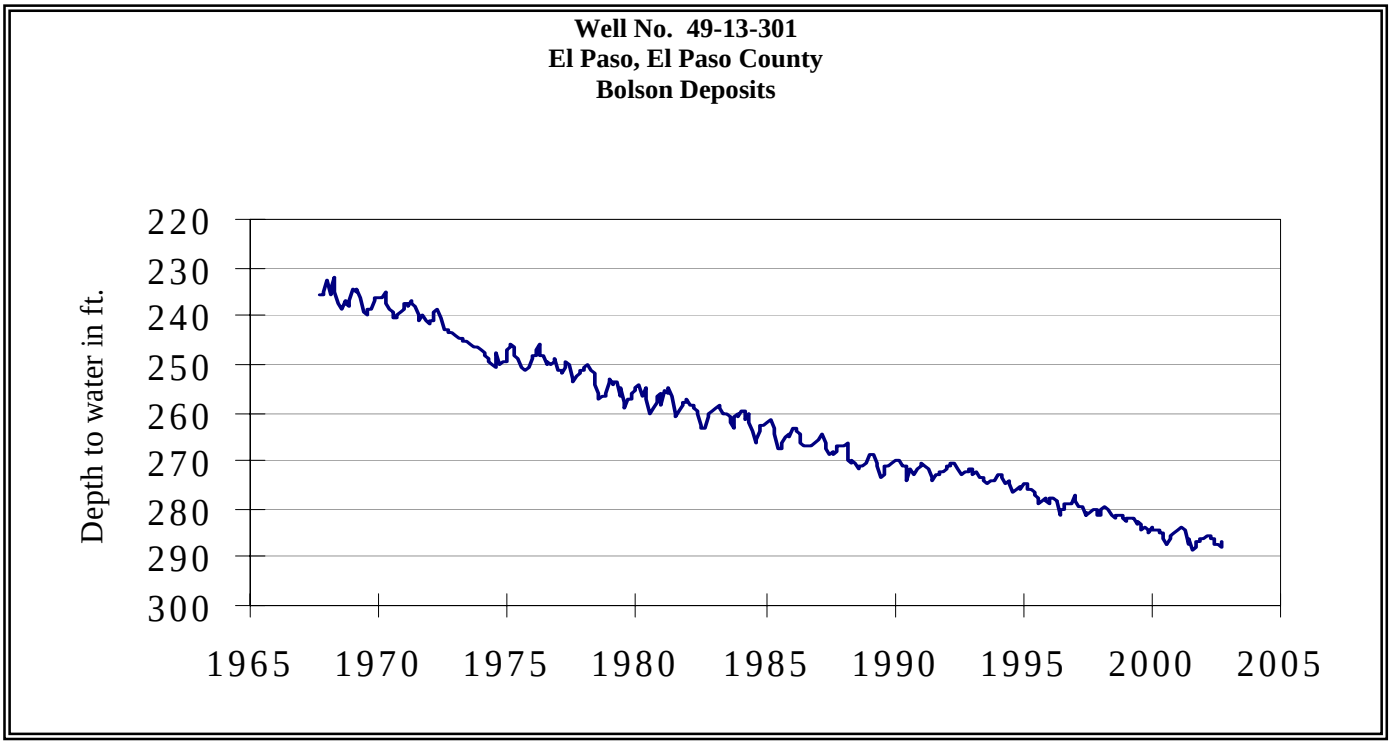
The late September water-level measurement in this Ogallala aquifer well, elevation 3,816 feet above sea level, was 258.69 feet below land surface. This measurement was 0.04 feet above last month's measurement, 2.35 feet below last year's measurement, and 102.69 feet below the initial measurement recorded in 1968.



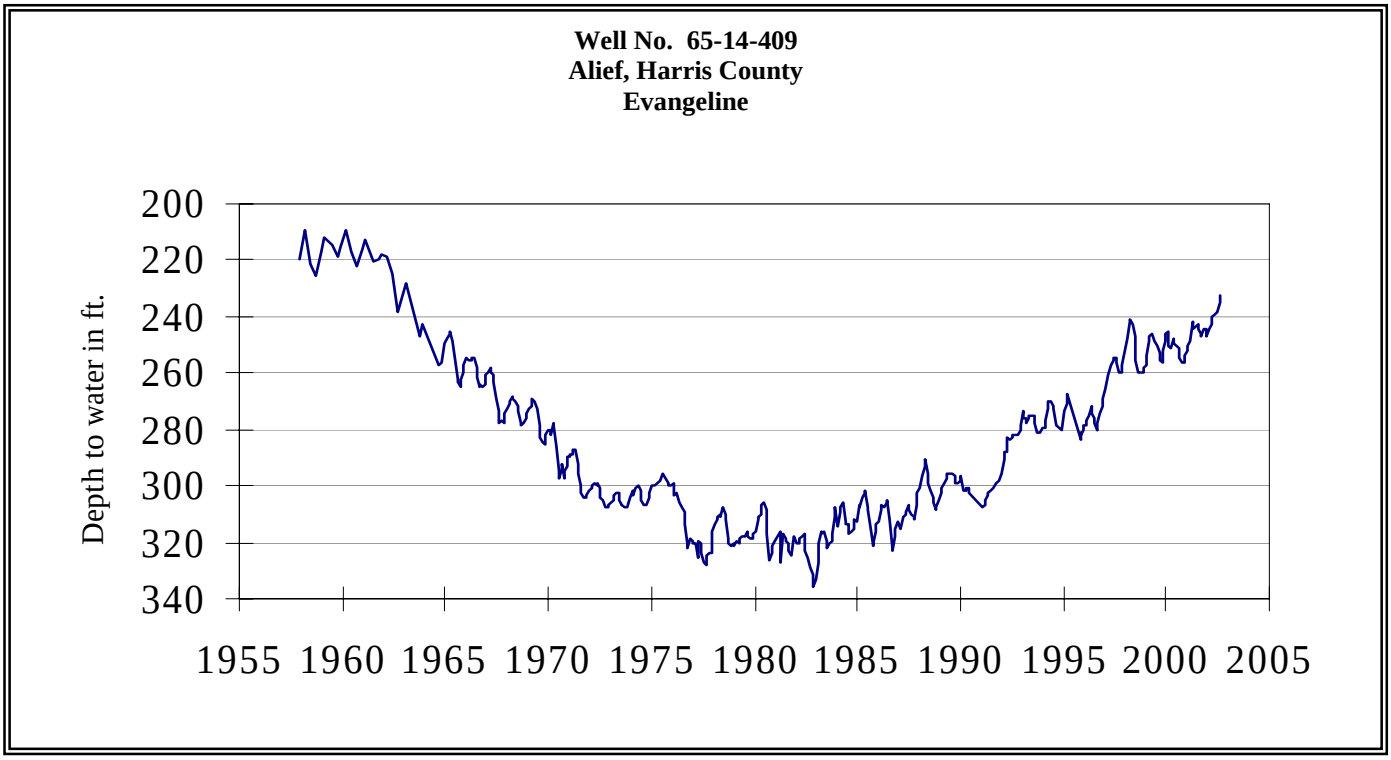
The late September water-level measurement in this Paluxy Formation Trinity aquifer well, elevation 535 feet above sea level, was 451.45 feet below land surface. This measurement was 3.40 feet below last month's measurement, 0.34 feet above last year's measurement, and 58.06 feet below the initial measurement recorded in 1953.



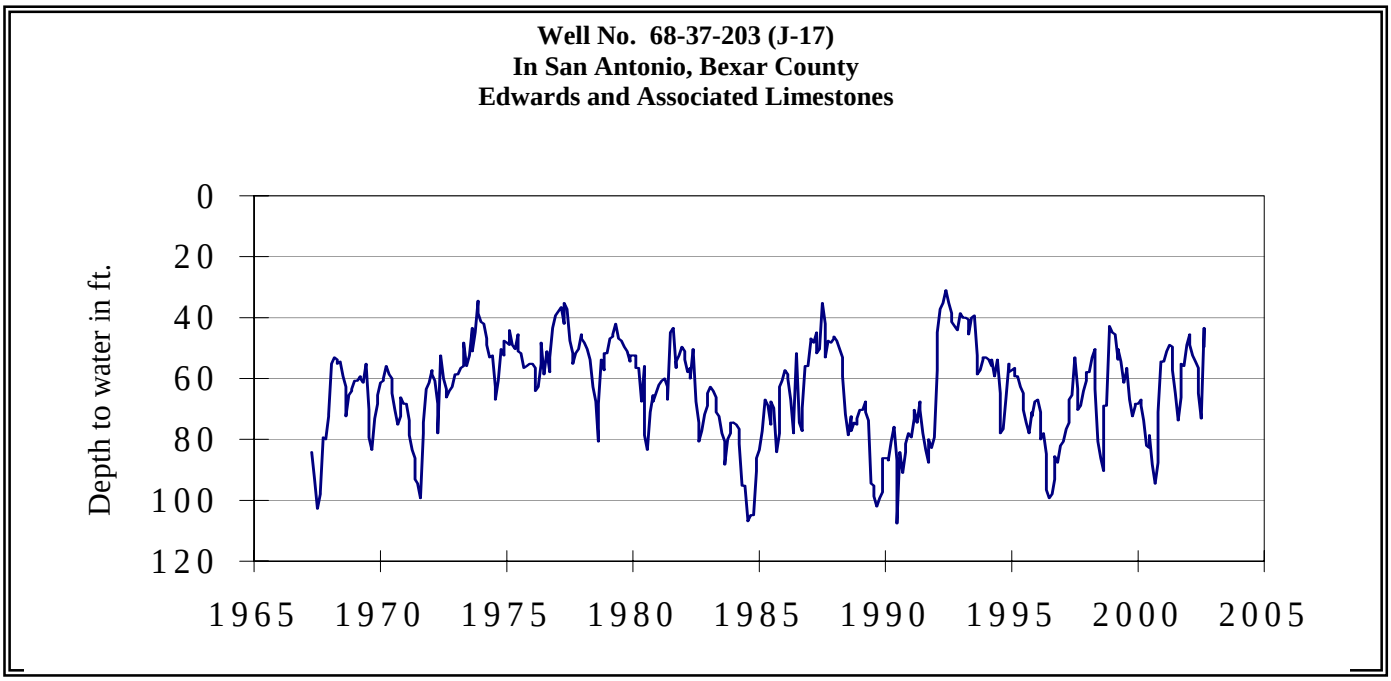
The late September water-level measurement in this Hosston Formation Trinity aquifer well, elevation 823 feet above sea level, was 452.09 feet below land surface. This measurement was 2.72 feet above last month's measurement, 5.05 feet below last year's measurement, and 160.09 feet below the initial measurement recorded in 1955.



The late September water-level measurement in this Hueco Bolson aquifer well, elevation 3,882 feet above sea level, was 287.05 feet below land surface. This was 0.69 feet above last month's measurement, 0.11 feet below last year's measurement, and 55.15 feet below the initial measurement recorded in 1964.

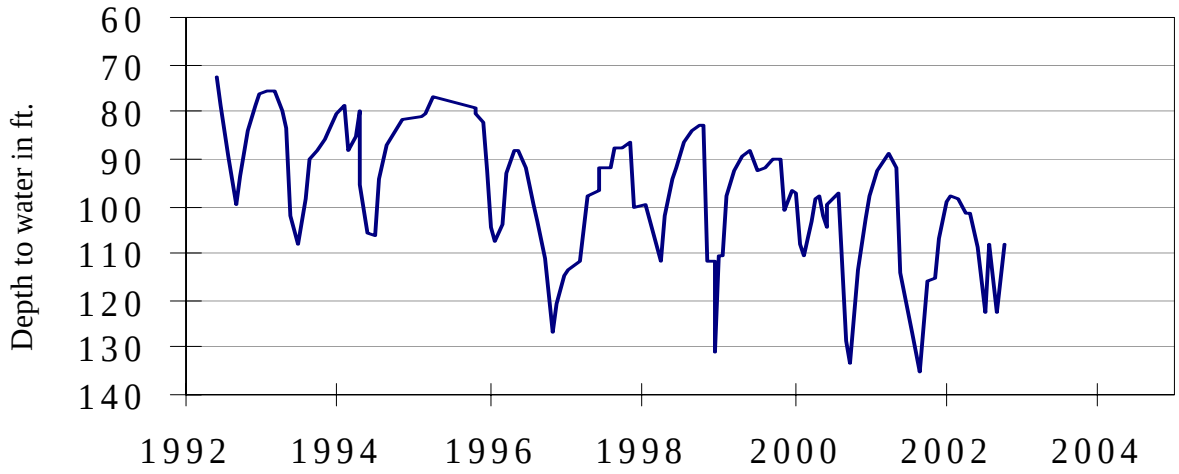


The late September water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 231.30 feet below land surface. This was 1.36 feet above last month's measurement, 15.69 feet above last year's measurement, and 128.07 feet below the initial measurement recorded in 1947.



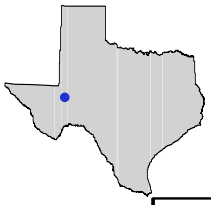
The late September water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 43.62 feet below land surface. This was 6.01 feet above last month's measurement, 11.51 feet above last year's measurement, and 16.00 feet above the initial measurement recorded in 1962.

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



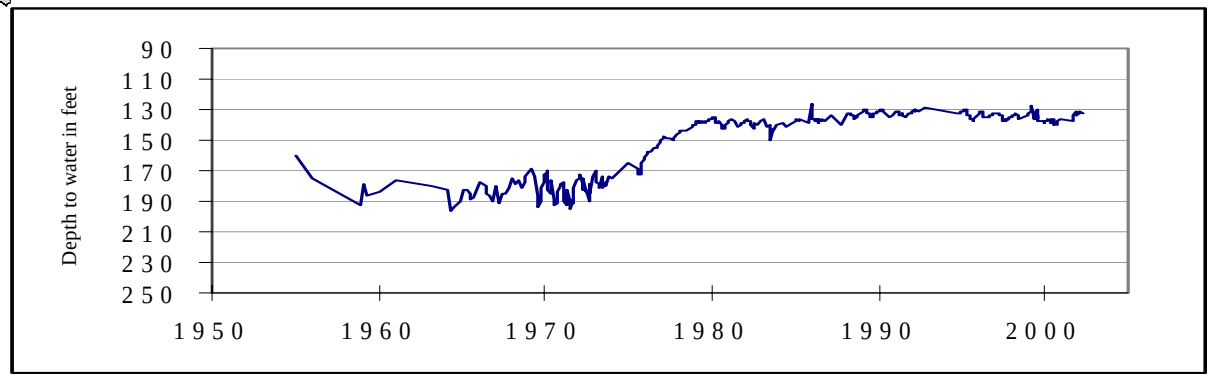
The late September water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 108.10 feet below land surface. This measurement was 14.52 feet above last month's measurement, 7.73 feet above last year's measurement, and 26.85 feet below the initial measurement recorded 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. 4644501
Reeves County



This 627 ft. deep recorder well, located approximately 6 miles south of Pecos, at an elevation of 2,642 feet above sea level, was completed in the Cenozoic Pecos Alluvium aquifer. The graph illustrates a rise in the water level as a result of decreased irrigation pumpage which began to moderate in the mid 1970s.

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