Texas Water Development Board

WATER Conditions

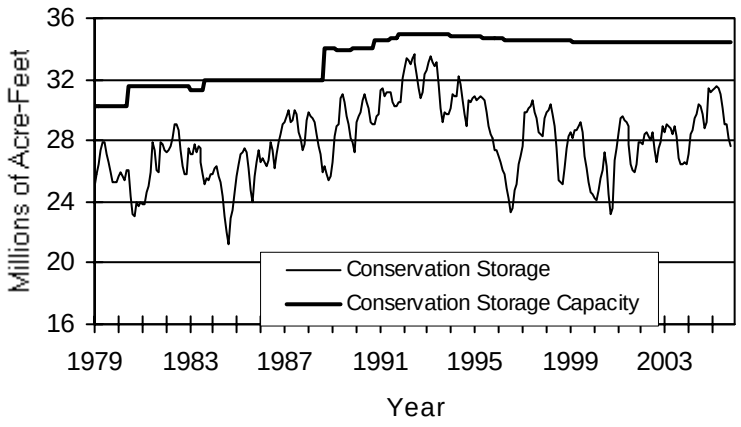
RESERVOIR STORAGE

October 2005

Near the end of October, the 77 reservoirs monitored for this report held 27.59 million acre-feet in conservation storage, or 80 percent of the conservation storage capacity of the state's major reservoirs. Storage decreased during the month by 0.6 million acre-feet (-2% of conservation storage capacity). Compared to last year, storage decreased by 1.66 million acre-feet (-5%).

Storage was near capacity in the Upper Coast Region (93%) and Edwards Plateau Region (90%), but lower than one-third of capacity in the High Plains Region (27%) and Trans-Pecos Region (30%). Storage was at 100% in 7 reservoirs, and the Texas share of Amistad remained above its capacity, at 133%. Compared to this time last year, the storage increased in four regions with the greatest increase in the Low Rolling Plains Region (23%), and decreased in five regions with the sharpest decrease in the South Central Region (-15%).

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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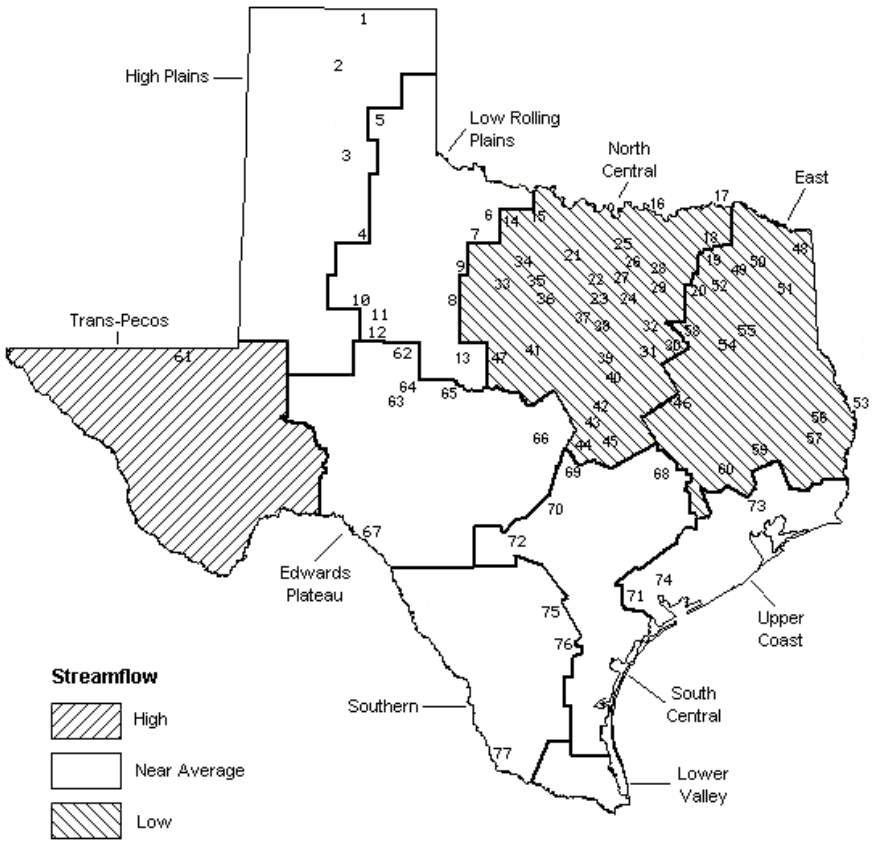
STREAMFLOW

Of 29 reporting index stations in October, computed 30-day mean flows were high (5% - 30%) at 3 stations, low (70% - 95%) at 9 stations, and near normal (30% - 70% exceedance) at the remaining 17 stations. Compared to September, flows have increased at 19 index stations and decreased at 10 stations.

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

OCTOBER 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 Oct. 2005 (acre-feet)	(%)	Change since Late September 2005 (acre-feet)	(%)	Change since Late October 2004 (acre-feet)	(%)
HIGH PLAINS								
Palo Duro Reservoir	1	60,900	2,290	4	-90	0	-2,200	-4
Lake Meredith (Texas)	2	500,000	155,640	31	-5,820	-1	-350	0
Lake Meredith (Texas and Oklahoma)	(2)	779,560	155,640	20	-5,820	-1	-350	0
MacKenzie Reservoir	3	46,250	10,050	22	-140	0	1,210	3
White River Lake	4	31,850	6,780	21	-300	-1	-210	-1
TOTAL		639,000	174,760	27	-6,350	-1	-1,550	0
LOW ROLLING PLAINS								
Greenbelt Reservoir	5	58,200	22,240	38	-600	-1	-10	0
Lake Kemp	6	319,600	286,640	90	3,440	1	99,710	31
Miller's Creek Reservoir	7	27,890	27,890	100	0	0	13,470	48
Fort Phantom Hill Reservoir	8	70,030	52,120	74	-1,300	-2	5,670	8
Lake Stamford	9	52,700	52,700	100	0	0	23,350	44
Lake J. B. Thomas	10	202,300	64,550	32	-1,170	-1	35,030	17
Lake Colorado City	11	30,800	29,190	95	-40	0	6,040	20
Champion Creek Reservoir	12	41,600	5,810	14	20	0	1,380	3
Hords Creek Lake	13	8,600	7,120	83	-180	-2	3,780	44
TOTAL		811,720	548,260	68	170	0	188,420	23
NORTH CENTRAL								
Lake Kickapoo	14	106,000	98,760	93	430	0	33,960	32
Lake Arrowhead	15	262,100	236,790	90	27,950	11	88,000	34
Lake Texoma	16	2,722,300	2,486,430	91	-11,960	0	67,120	2
Pat Mayse Lake	17	124,500	98,860	79	-3,720	-3	-10,460	-8
Cooper Lake	18	273,000	168,800	62	-16,360	-6	9,060	3
Lake Sulphur Springs	19	17,710	12,340	70	-410	-2	-3,360	-19
Lake Tawakoni	20	936,200	665,800	71	-30,500	-3	-179,100	-19
Bridgeport Reservoir	21	374,830	266,900	71	-11,600	-3	-54,200	-14
Eagle Mountain Reservoir	22	178,380	141,600	79	-2,500	-1	-20,300	-11
Benbrook Lake	23	88,200	50,020	57	-2,660	-3	-26,180	-30
Joe Pool Lake	24	175,800	156,420	89	-4,000	-2	-19,380	-11
Ray Roberts Lake	25	798,760	726,560	91	-17,650	-2	-67,130	-8
Lewisville Lake	26	555,000	479,600	86	-29,620	-5	-75,400	-14
Grapevine Lake	27	187,700	144,800	77	-6,200	-3	-35,520	-19
Lavon Lake	28	443,800	297,590	67	-25,850	-6	-94,010	-21
Lake Ray Hubbard	29	413,420	351,000	85	-9,800	-2	-21,500	-5
Richland-Chambers Creek Lake	30	1,103,820	983,900	89	-34,100	-3	-119,920	-11
Navarro Mills Lake	31	55,810	42,950	77	-2,390	-4	-12,860	-23
Bardwell Lake	32	53,580	38,320	72	-2,260	-4	-9,600	-18
Hubbard Creek Reservoir	33	317,800	192,020	60	-2,800	-1	71,340	22
Lake Graham	34	45,000	45,000	100	8,470	19	15,230	34
Possum Kingdom Lake	35	551,820	515,380	93	-8,020	-1	-25,620	-5
Lake Palo Pinto	36	27,650	17,320	63	-1,410	-5	-3,540	-13
Lake Granbury	37	135,680	133,610	98	-390	0	710	1
Lake Pat Cleburne	38	25,300	19,760	78	-770	-3	-4,200	-17
Whitney Lake	39	622,800	561,640	90	-31,150	-5	12,930	2
Waco Lake	40	144,500	144,500	100	0	0	0	0
Proctor Lake	41	55,590	39,150	70	-3,070	-6	-15,990	-29
Belton Lake	42	434,500	419,210	96	-10,090	-2	-15,290	-4
Stillhouse Hollow Lake	43	226,060	223,580	99	-1,660	-1	-2,480	-1
Lake Georgetown	44	37,010	27,820	75	-2,000	-5	-3,680	-10
Granger Lake	45	54,280	54,010	100	-270	0	-270	0
Lake Limestone	46	215,750	179,910	83	-7,190	-3	-27,190	-13
Lake Brownwood	47	143,400	125,210	87	-2,930	-2	-6,290	-4
TOTAL		11,908,050	10,145,560	85	-246,480	-2	-555,120	-5

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

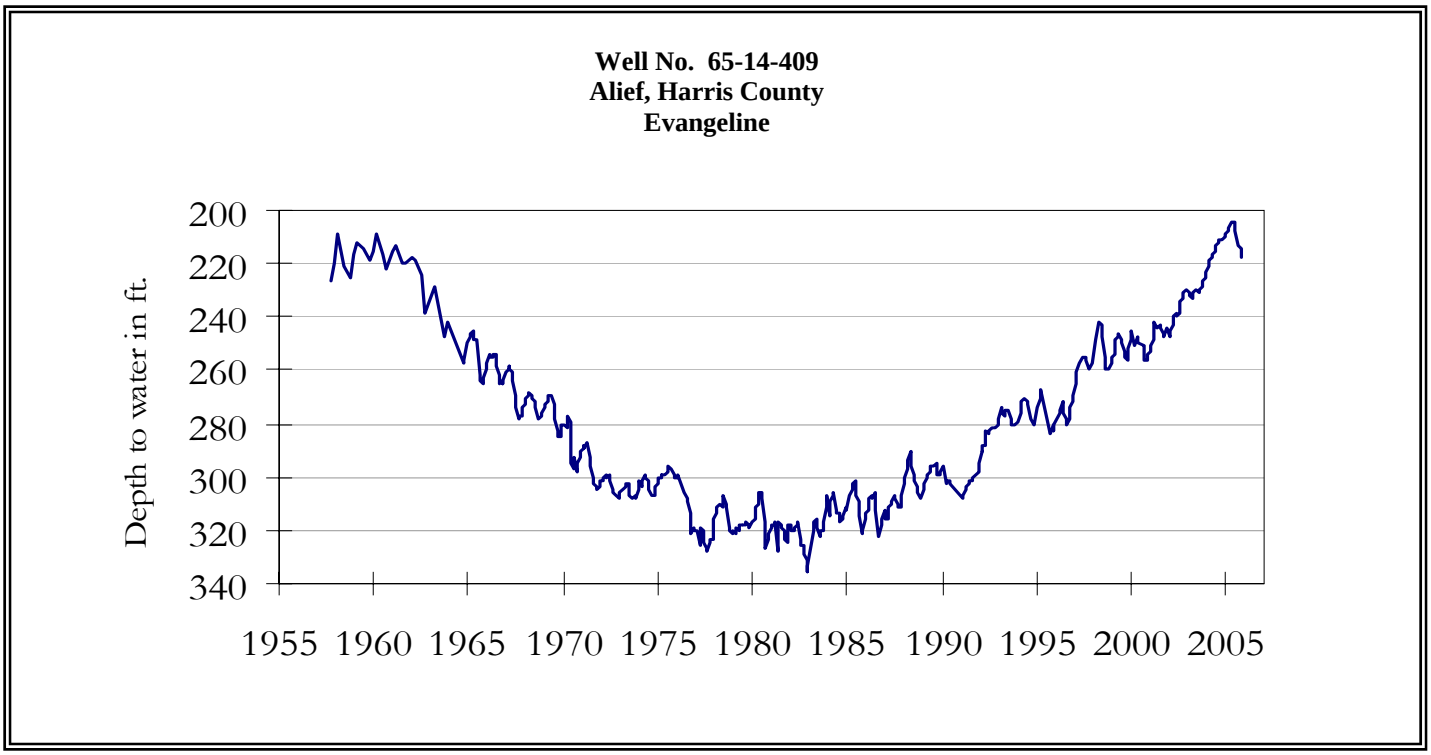
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late Oct. 2005 (acre-feet)	(%)	Change since Late September 2005 (acre-feet)	(%)	Change since Late October 2004 (acre-feet)	(%)
EAST								
Wright Patman Lake	48	142,700	142,700	100	0	0	0	0
Lake Cypress Springs	49	66,800	58,740	88	-1,520	-2	-4,730	-7
Lake Bob Sandlin	50	202,300	162,900	81	-7,300	-4	-28,700	-14
Lake O' the Pines	51	252,000	190,710	76	-8,970	-4	-53,570	-21
Lake Fork Reservoir	52	635,200	584,500	92	-14,100	-2	-50,700	-8
Toledo Bend Reservoir	53	4,472,900	3,098,000	69	-56,000	-1	-784,000	-18
Lake Palestine	54	411,300	348,050	85	-11,320	-3	-46,930	-11
Lake Tyler	55	73,700	62,640	85	-3,040	-4	-11,060	-15
Sam Rayburn Reservoir	56	2,876,300	2,420,500	84	-123,210	-4	-87,360	-3
B. A. Steinhagen Lake	57	94,200	45,050	48	-8,360	-9	-43,100	-46
Cedar Creek Reservoir	58	637,050	537,500	84	-17,000	-3	-67,800	-11
Lake Livingston	59	1,750,000	1,425,000	81	-13,000	-1	-325,000	-19
Lake Conroe	60	429,900	345,200	80	-22,400	-5	-43,700	-10
TOTAL		12,044,350	9,421,490	78	-286,220	-2	-1,546,650	-13
TRANS-PECOS								
Red Bluff Reservoir	61	307,000	92,700	30	1,200	0	2,830	1
TOTAL		307,000	92,700	30	1,200	0	2,830	1
EDWARDS PLATEAU								
E. V. Spence Reservoir	62	488,760	98,880	20	-900	0	57,100	12
Twin Buttes Reservoir	63	177,800	45,660	26	1,420	1	40,600	23
O.C. Fisher Lake	64	119,200	14,920	13	-460	0	13,250	11
O. H. Ivie Reservoir	65	554,340	297,200	54	-1,500	0	129,900	23
Lake Buchanan	66	896,980	778,740	87	-8,300	-1	-89,610	-10
Amistad Reservoir (Texas)	67	1,771,030	2,355,000	133	-13,000	-1	312,000	18
Amistad Reservoir (Texas and Mexico)	(67)	3,151,300	2,785,000	88	17,000	1	325,000	10
TOTAL		4,008,110	3,590,400	90	-22,740	-1	463,240	12
SOUTH CENTRAL								
Somerville Lake	68	155,060	128,960	83	-6,730	-4	-26,100	-17
Lake Travis	69	1,144,100	914,900	80	-52,700	-5	-201,100	-18
Canyon Lake	70	385,600	365,740	95	-3,550	-1	-19,860	-5
Coleto Creek Reservoir	71	35,060	27,430	78	-480	-1	-2,810	-8
Medina Lake	72	254,000	212,200	84	-10,700	-4	-41,800	-16
TOTAL		1,973,820	1,649,230	84	-74,160	-4	-291,670	-15
UPPER COAST								
Lake Houston	73	128,860	128,860	100	60	0	9,360	7
Lake Texana	74	157,900	138,040	87	5,140	3	-15,690	-10
TOTAL		286,760	266,900	93	5,200	2	-6,330	-2
SOUTHERN								
Choke Canyon Reservoir	75	695,260	634,000	91	-10,000	-1	-56,000	-8
Lake Corpus Christi	76	241,240	160,400	66	-9,400	-4	-79,500	-33
Falcon Reservoir (Texas)	77	1,555,120	907,000	58	46,000	3	226,000	15
Falcon Reservoir (Texas and Mexico)	(77)	2,653,290	1,496,000	56	134,000	5	-255,000	-10
TOTAL		2,491,620	1,701,400	68	26,600	1	90,500	4
STATE TOTAL		34,470,430	27,590,700	80	-602,780	-2	-1,656,330	-5

Note:

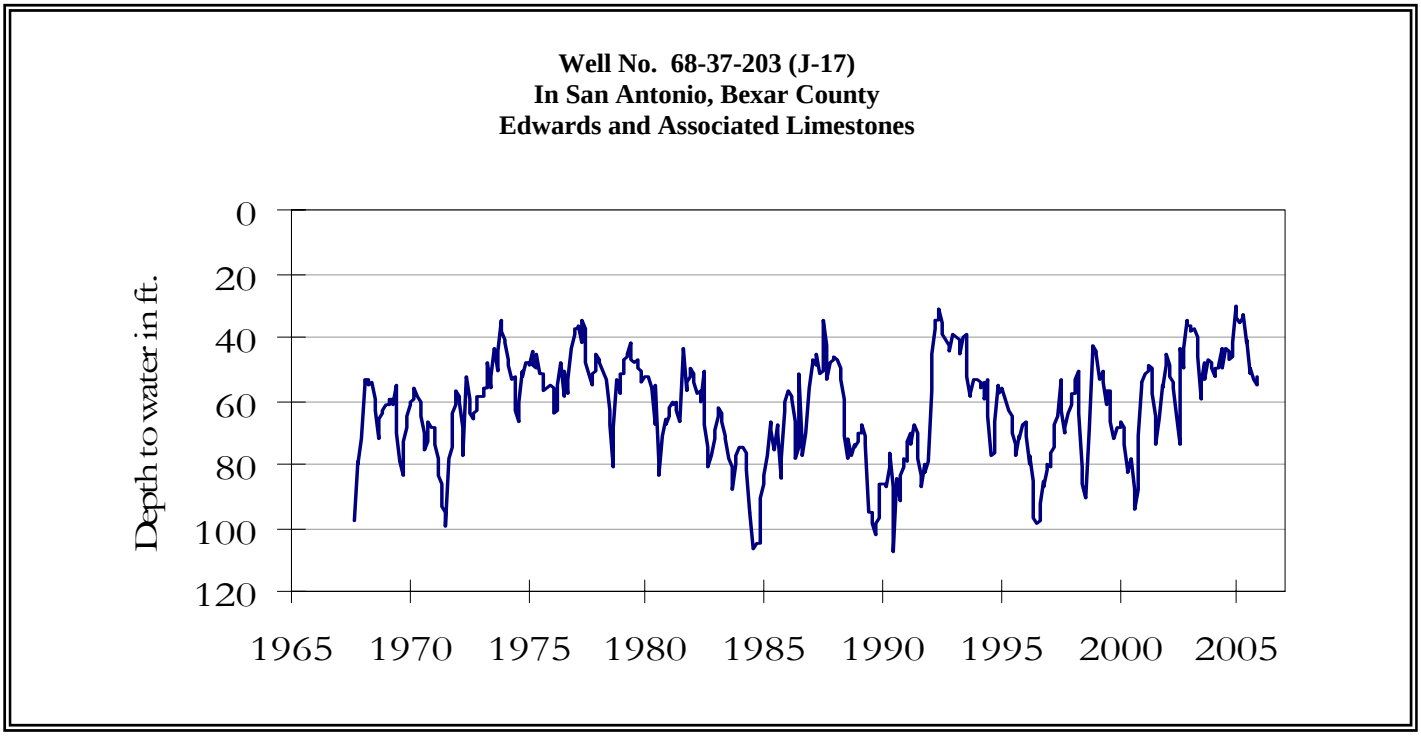
Conservation storage capacity is the space available to store water above the level of invert of lowest outlet works and below the level of top of conservation pool or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included 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.

OCTOBER GROUND WATER LEVELS IN OBSERVATION WELLS

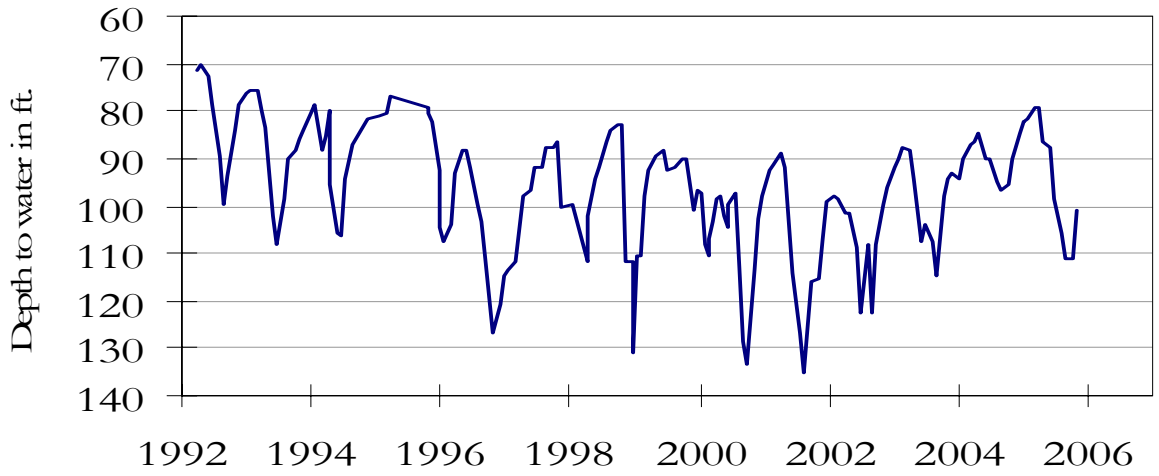


The late October water-level measurement in this Evangeline Formation Gulf Coast aquifer well, elevation 66 feet above sea level, was 217.50 feet below land surface. This was 3.40 feet below last month's measurement, 6.84 feet below last year's measurement, and 82.00 feet below the initial measurement recorded in 1947.



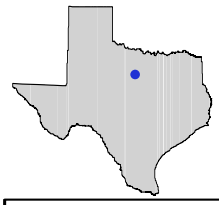
The late October water-level measurement in this Edwards (BFZ) aquifer well, elevation 731 feet above sea level, was 52.55 feet below land surface. This was 2.35 feet above last month's measurement, 10.80 feet below last year's measurement, and 5.91 feet below the initial measurement recorded in 1962.

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



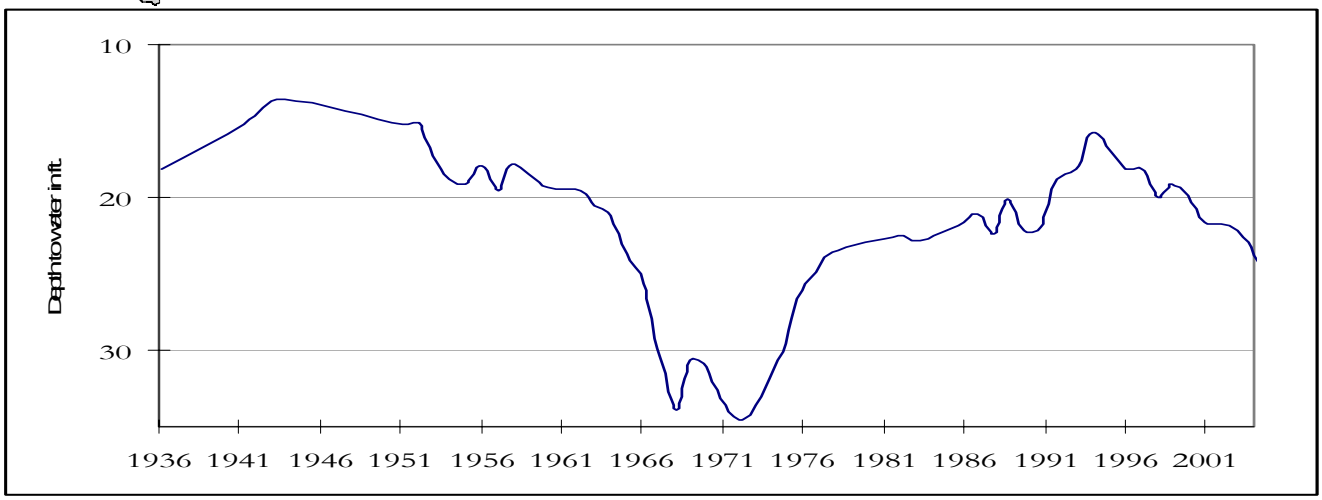
The late October water-level measurement in this Carrizo aquifer well, elevation 446 feet above sea level, was 100.85 feet below land surface. This measurement was 10.08 feet above last month's measurement, 10.59 feet below last year's measurement, and 65.49 feet below the initial measurement recorded 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. 13-60-611
Foard County



This water level observation well, located 10 miles east of Crowell, at an elevation of 1312 feet ASL, was completed in the Seymour aquifer. Although currently unused, the well provided water for domestic use in the late sixties through early seventies. However, levels have since rebounded to within ten feet of the original level of 18 feet below land surface in 1936.

October, 2005

Water level measurements were not available for four of the seven key monitoring wells. Water levels rose in two of the monitoring wells since the beginning of October, ranging from 2.35 feet in the Bexar Co. J-17 well to 10.08 feet in the Atascosa Co. Carrizo well. The water level declined 3.4 feet in the Harris Co. Evangeline well. The J-17 well recorded a water level of 52.55 feet below land surface. This water level is approximately twenty-seven (27) feet above the Stage 1 critical management criteria.

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