

Texas Water Development Board



WATER
Conditions

RESERVOIR STORAGE

November 2007

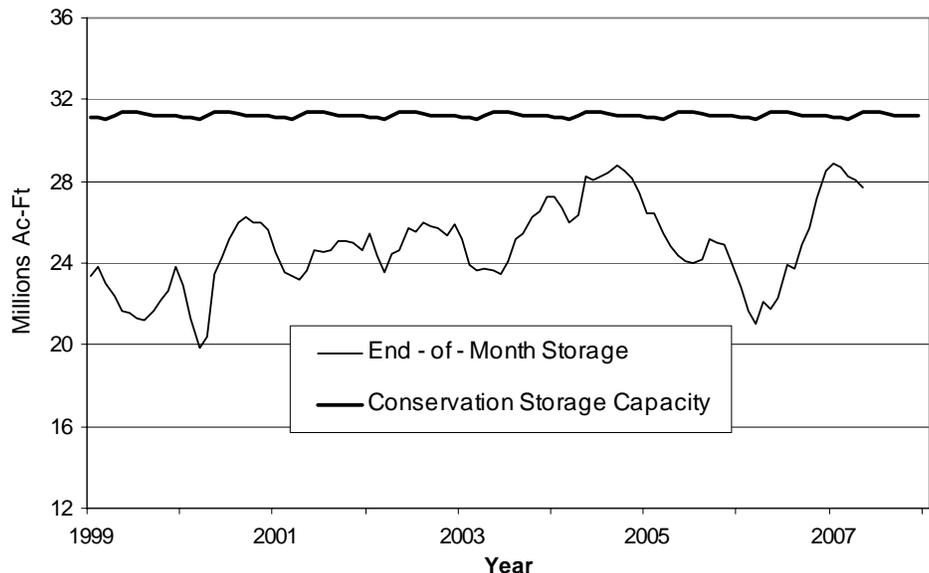
Near the end of November, the 109 reservoirs monitored for this report held 27.67 million acre-feet (only the water belonging to Texas in border reservoirs is counted) in conservation storage, or 89 percent of the conservation storage capacity of the state's 175 major water supply reservoirs.

Storage was at 100% in 13 reservoirs. Three regions, North Central (93%), South Central (99%), and Upper Coast (100%), had storage above 90% of capacity and two below 35% (Trans-Pecos 35%; High Plains 10%).

Regionally, storage decreased in six out of nine regions, but compared to this time last year, storage increased in seven regions and decreased in two regions. Statewide, storage decreased during the month by 0.28 million acre-feet (-0.9% of conservation storage capacity), but increased by 5.9 million acre-feet (19%) over the past 12 months.

Important changes in this report are described on page 6.

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS



Figures are based on end of the month data at 109 major reservoirs that represent 95 percent of the total conservation storage capacity of the 175 major water supply reservoirs in Texas. By definition, a major reservoir has a conservation storage capacity of 5,000 acre-feet or greater.

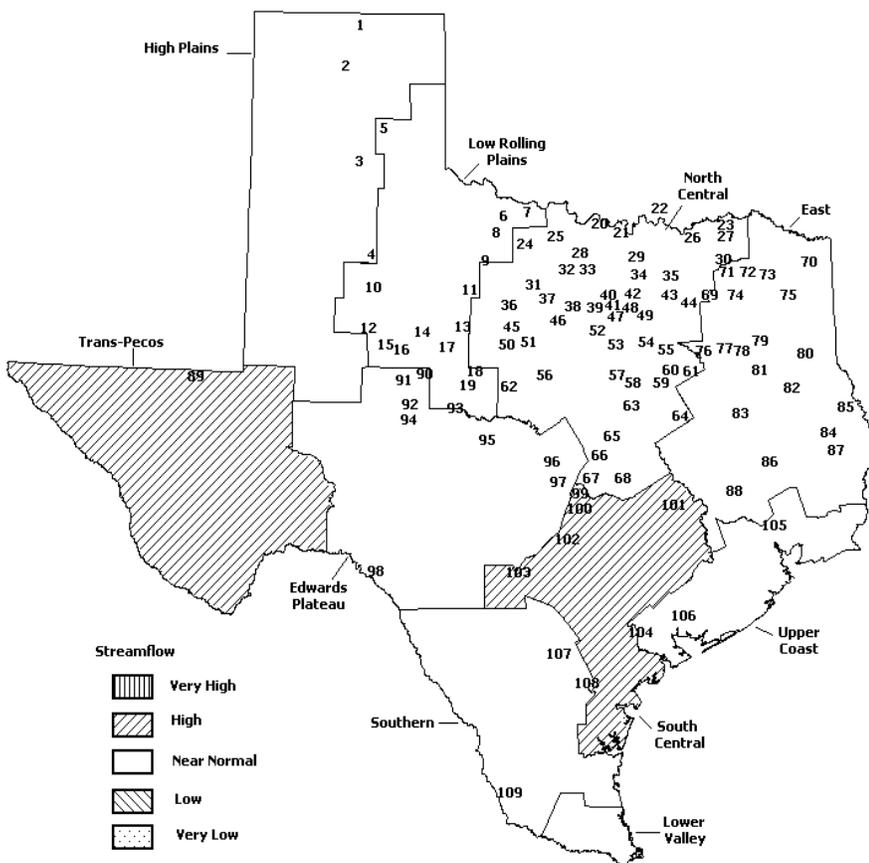
STREAMFLOW

Of 29 reporting index stations in November, computed 30-day mean flows were high (5% - 30%) at 8 stations, low (70% - 95%) at 7 stations, and near normal (30% - 70%) at the remaining 14 stations. Compared to October, flows have increased at 9 index stations and decreased at 20 stations.

On a regional basis, flows in November were high in the Trans-Pecos and South Central Regions but normal in all other regions. Streamflow in the Lower Valley Region is not monitored.

NOVEMBER STREAMFLOW CONDITIONS

Reservoirs Shown on Map



- | | |
|------------------------------------|-----------------------------------|
| 1. Palo Duro Reservoir | 56. Proctor Lake |
| 2. Meredith, Lake | 57. Whitney Lake |
| 3. MacKenzie Reservoir | 58. Aquilla Lake |
| 4. White River Lake | 59. Navarro Mills Lake |
| 5. Greenbelt Lake | 60. Halbert, Lake |
| 6. Electra, Lake | 61. Richland-Chambers Reservoir |
| 7. N. Fork Buffalo Creek Reservoir | 62. Lake Brownwood |
| 8. Kemp, Lake | 63. Waco Lake |
| 9. Miller's Creek Reservoir | 64. Limestone, Lake |
| 10. Alan Henry Reservoir | 65. Belton Lake |
| 11. Stamford, Lake | 66. Stillhouse Hollow Lake |
| 12. Lake J. B. Thomas | 67. Georgetown, Lake |
| 13. Fort Phantom Hill, Lake | 68. Granger Lake |
| 14. Sweetwater, Lake | 69. Tawakoni, Lake |
| 15. Colorado City, Lake | 70. Wright Patman Lake |
| 16. Champion Creek Reservoir | 71. Sulphur Springs, Lake |
| 17. Abilene, Lake | 72. Cypress Springs, Lake |
| 18. Coleman, Lake | 73. Bob Sandlin, Lake |
| 19. Hords Creek Lake | 74. Fork Reservoir, Lake |
| 20. Farmers Creek Reservoir | 75. O' the Pines, Lake |
| 21. Hubert H Moss Lake | 76. Cedar Creek Reservoir Trinity |
| 22. Texoma, Lake | 77. Athens, Lake |
| 23. Pat Mayse Lake | 78. Palestine, Lake |
| 24. Lake Kickapoo | 79. Tyler, Lake |
| 25. Lake Arrowhead | 80. Murvaul, Lake |
| 26. Bonham, Lake | 81. Jacksonville, Lake |
| 27. Crook, Lake | 82. Nacogdoches, Lake |
| 28. Amon G Carter, Lake | 83. Houston County Lake |
| 29. Ray Roberts, Lake | 84. Sam Rayburn Reservoir |
| 30. Jim Chapman Lake | 85. Toledo Bend Reservoir |
| 31. Graham, Lake | 86. Livingston, Lake |
| 32. Lost Creek Reservoir | 87. B. A. Steinhagen Lake |
| 33. Bridgeport Reservoir | 88. Conroe, Lake |
| 34. Lewisville Lake | 89. Red Bluff Reservoir |
| 35. Lavon Lake | 90. Oak Creek Reservoir |
| 36. Hubbard Creek Reservoir | 91. E. V. Spence Reservoir |
| 37. Possum Kingdom Lake | 92. O. C. Fisher Lake |
| 38. Mineral Wells, Lake | 93. O. H. Ivie Reservoir |
| 39. Weatherford, Lake | 94. Twin Buttes Reservoir |
| 40. Eagle Mountain Lake | 95. Vradly Creek Reservoir |
| 41. Worth, Lake | 96. Buchanan, Lake |
| 42. Grapevine Lake | 97. Lyndon B Johnson, Lake |
| 43. Lake Ray Hubbard | 98. Amistad Reservoir, Intl. |
| 44. New Terrell City Lake | 99. Travis, Lake |
| 45. Daniel, Lake | 100. Austin, Lake |
| 46. Palo Pinto, Lake | 101. Somerville Lake |
| 47. Benbrook Lake | 102. Canyon Lake |
| 48. Arlington, Lake | 103. Medina Lake |
| 49. Joe Pool Lake | 104. Coletto Creek Reservoir |
| 50. Cisco, Lake | 105. Lake Houston |
| 51. Leon, Lake | 106. Texana, Lake |
| 52. Lake Granbury | 107. Choke Canyon Reservoir |
| 53. Pat Cleburne, Lake | 108. Lake Corpus Christi |
| 54. Waxahacie, Lake | 109. Falcon Reservoir, Intl. |
| 55. Bardwell Lake | |

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage		Conservation Storage		Change since Late October		Change since Late November	
		Capacity (acre-feet)	Late Nov. (acre- feet)	2007 (%)	2007 (acre- feet)	(%)	2006 (acre- feet)	(%)	
HIGH PLAINS									
Palo Duro Reservoir	1	60,897	918	1	-159	0	404	1	
Lake Meredith (Texas)	2	500,000	52,936	10	-2,597	-1	-14,688	-3	
Lake Meredith (Texas & Oklahoma)	(2)	779,556	52,936	6	-2,597	0	-14,688	-2	
MacKenzie Reservoir	3	46,429	7,473	16	-150	0	-464	-1	
White River Lake	4	29,880	1,652	5	-232	-1	-830	-3	
TOTAL		637,206	62,979	10	-3,138	0	-15,578	-2	
LOW ROLLING PLAINS									
Greenbelt Lake	5	59,500	21,600	36	-290	0	3,973	7	
*Electra, Lake	6	5,626	1,790	31	-77	-1	1,245	22	
N. Fork Buffalo Crk Reservoir	7	15,400	5,032	32	-203	-1	2,903	19	
Kemp, Lake	8	245,308	245,308	100	0	0	50,864	21	
Millers Creek Reservoir	9	27,888	23,721	85	-650	-2	4,187	15	
Alan Henry Reservoir	10	94,808	91,964	97	-990	-1	-2,629	-3	
Stamford, Lake	11	51,570	51,223	99	-347	-1	17,529	34	
J B Thomas, Lake	12	199,931	27,733	13	-1,888	-1	-3,975	-2	
Fort Phantom Hill, Lake	13	70,030	68,720	98	-886	-1	30,044	43	
Sweetwater, Lake	14	10,006	7,335	73	125	1	7,335	73	
Colorado City, Lake	15	31,793	27,573	86	-382	-1	4,288	13	
Champion Creek Reservoir	16	41,618	9,401	22	-80	0	5,131	12	
Abilene, Lake	17	6,099	5,701	93	-120	-2	3,130	51	
Coleman, Lake	18	38,076	35,501	93	-552	-1	7,355	19	
Hords Creek Lake	19	5,684	4,967	87	-164	-3	2,684	47	
TOTAL		903,337	627,569	69	-6,504	-1	134,064	15	
NORTH CENTRAL									
Farmers Creek Reservoir (Nocona)	20	21,445	19,669	91	-483	-2	5,187	24	
Hubert H Moss Lake	21	24,058	22,510	93	-208	-1	1,671	7	
Texoma, Lake (Texas)	22	1,315,070	1,220,562	92	-30,551	-2	50,321	4	
Texoma, Lake (Texas & Oklahoma)	(22)	2,630,141	2,441,125	92	-61,101	-2	100,643	4	
*Pat Mayse Lake	23	118,100	116,584	98	-162	0	34,934	30	
Kickapoo, Lake	24	85,825	63,155	73	-2,483	-3	9,817	11	
Arrowhead, Lake	25	235,997	211,400	89	-4,214	-2	50,055	21	
Bonham, Lake	26	11,026	9,791	88	-371	-3	1,421	13	
Crook, Lake	27	9,195	8,699	94	-82	-1	1,728	19	
Amon G Carter, Lake	28	19,903	18,524	93	-435	-2	7,239	36	
*Ray Roberts, Lake	29	798,758	791,476	99	-7,282	-1	201,043	25	
Jim Chapman Lake (Cooper)	30	295,787	288,600	97	-5,989	-2	206,515	70	
Graham, Lake	31	45,260	39,872	88	-1,026	-2	5,244	12	
*Lost Creek Reservoir	32	11,950	11,446	95	-138	-1	811	7	
Bridgeport, Lake	33	366,236	331,789	90	-8,141	-2	141,008	39	
*Lewisville Lake	34	543,988	525,998	96	-16,249	-3	228,402	42	
Lavon Lake	35	443,844	377,574	85	-20,986	-5	211,842	48	
Hubbard Creek Reservoir	36	318,067	284,985	89	-5,770	-2	137,510	43	
Possum Kingdom Lake	37	540,340	513,013	94	-1,945	0	12,998	2	
*Mineral Wells, Lake	38	7,065	6,337	89	48	1	1,571	22	
Weatherford, Lake	39	18,645	16,226	87	-495	-3	6,687	36	
Eagle Mountain Lake	40	182,500	163,700	89	-6,579	-4	49,177	27	
Worth, Lake	41	24,500	22,075	90	304	1	5,928	24	
Grapevine Lake	42	164,702	158,308	96	-4,996	-3	65,663	40	
Ray Hubbard, Lake	43	452,040	446,254	98	-4,959	-1	75,749	17	
New Terrell City Lake	44	8,583	8,303	96	-152	-2	4,746	55	
Daniel, Lake	45	9,435	8,228	87	-190	-2	8,003	85	
Palo Pinto, Lake	46	27,150	22,963	84	-874	-3	10,435	38	
Benbrook Lake	47	85,648	80,734	94	-525	-1	22,664	26	

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage		Change since Late October 2007 (acre- feet) (%)		Change since Late November 2006 (acre- feet) (%)		
			Late Nov. (acre- feet)	2007 (%)					
NORTH CENTRAL (Continue)									
Arlington, Lake	48	38,740	37,259	96	2,565	7	6,113	16	
Joe Pool Lake	49	142,861	132,673	92	-720	-1	3,024	2	
*Cisco, Lake	50	26,000	21,491	82	-277	-1	9,524	37	
Leon, Lake	51	26,421	25,088	94	-403	-2	7,758	29	
Granbury, Lake	52	128,046	119,398	93	-2,380	-2	2,996	2	
Pat Cleburne, Lake	53	25,730	24,377	94	-323	-1	1,856	7	
Waxahachie, Lake	54	10,779	9,642	89	116	1	78	1	
Bardwell Lake	55	46,122	45,100	97	-774	-2	6,519	14	
Proctor Lake	56	55,457	54,789	98	-668	-1	28,863	52	
Whitney, Lake	57	553,349	441,557	79	-15,970	-3	58,945	11	
Aquilla Lake	58	45,092	42,513	94	-877	-2	18,213	40	
Navarro Mills Lake	59	55,817	51,950	93	-826	-1	29,149	52	
*Halbert, Lake	60	6,033	4,840	80	-181	-3	3,234	54	
Richland-Chambers Reservoir	61	1,103,816	1,046,028	94	-21,209	-2	351,419	32	
*Brownwood, Lake	62	131,429	124,185	94	-1,844	-1	29,819	23	
Waco, Lake	62	198,943	198,943	100	0	0	80,725	41	
Limestone, Lake	64	208,015	188,449	90	-2,021	-1	13,957	7	
Belton Lake	65	435,225	435,225	100	0	0	81,132	19	
Stillhouse Hollow Lake	66	227,771	227,771	100	0	0	20,030	9	
Georgetown, Lake	67	36,823	36,543	99	-280	-1	20,809	57	
Granger Lake	68	52,525	52,525	100	0	0	6,600	13	
Tawakoni, Lake	69	888,126	818,042	92	-16,735	-2	313,930	35	
TOTAL		10,628,237	9,927,163	93	-187,740	-2	2,653,060	25	
EAST									
Wright Patman Lake	70	122,593	122,593	100	-12,656	-10	-12,656	-10	
*Sulphur Springs, Lake	71	17,838	15,883	89	-332	-2	1,885	11	
Cypress Springs, Lake	72	67,689	66,584	98	-415	-1	14,407	21	
Bob Sandlin, Lake	73	200,579	191,081	95	-5,245	-3	72,278	36	
Fork Reservoir, Lake	74	604,927	593,047	98	-6,336	-1	114,738	19	
O the Pines, Lake	75	238,933	238,933	100	0	0	60,201	25	
Cedar Creek Reservoir in Trinity	76	644,686	609,422	94	-8,901	-1	168,332	26	
Athens, Lake	77	29,435	29,291	99	90	0	7,222	25	
Palestine, Lake	78	370,907	364,387	98	-1,086	0	89,995	24	
Tyler, Lake	79	73,256	68,433	93	0	0	29,013	40	
Murvault, Lake	80	38,284	33,471	87	-322	-1	-718	-2	
Jacksonville, Lake	81	30,300	30,300	100	0	0	0	0	
Nacogdoches, Lake	82	39,521	35,356	89	-20	0	394	1	
Houston County Lake	83	17,113	16,808	98	394	2	-305	-2	
Sam Rayburn Reservoir	84	2,857,077	2,285,950	80	-48,188	-2	-341,905	-12	
Toledo Bend Reservoir (Texas)	85	2,236,450	1,873,170	83	0	0	198,404	9	
Toledo Bend Reservoir (TX & LA)	(85)	4,472,900	3,746,340	83	0	0	396,808	9	
*Livingston, Lake	86	1,741,867	1,741,867	100	0	0	7,338	0	
B A Steinhagen Lake	87	66,966	64,244	95	907	1	63,784	95	
Conroe, Lake	88	416,188	399,818	96	1,170	0	-15,006	-4	
TOTAL		9,814,609	8,780,638	89	-80,940	-1	457,400	5	
TRANS-PECOS									
Red Bluff Reservoir	89	289,670	102,415	35	14,798	5	-259	0	
TOTAL		289,670	102,415	35	14,798	5	-259	0	

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage		Change since Late October 2007 (acre- feet) (%)		Change since Late November 2006 (acre- feet) (%)		
			Late Nov. (acre- feet)	2007 (%)	2007 (acre- feet)	(%)	2006 (acre- feet)	(%)	
EDWARDS PLATEAU									
Oak Creek Reservoir	90	39,260	38,321	97	-183	0	31,391	80	
E V Spence Reservoir	91	517,272	76,649	14	-2,161	0	6,644	1	
O C Fisher Lake	92	79,483	0	0	0	0	0	0	
*O H Ivie Reservoir	93	554,335	371,988	67	-2,627	0	148,677	27	
Twin Buttes Reservoir	94	177,850	65,084	36	662	0	39,124	22	
Brady Creek Reservoir	95	29,110	15,908	54	-242	-1	2,918	10	
Buchanan, Lake	96	885,507	835,142	94	2,814	0	359,494	41	
Lyndon B Johnson, Lake	97	113,690	113,047	99	-257	0	-515	0	
*Amistad Reservoir (Texas)	98	1,840,849	2,251,000	122	-17,000	-1	369,000	20	
*Amistad Reservoir (TX & Mexico)	(98)	3,275,532	2,801,000	86	-13,000	0	213,000	7	
TOTAL		4,237,356	3,767,139	89	-18,994	0	956,734	23	
SOUTH CENTRAL									
Travis, Lake	99	1,113,902	1,100,567	98	-185	0	535,328	48	
*Austin, Lake	100	21,804	20,790	95	-257	-1	-243	-1	
Somerville Lake	101	147,104	147,104	100	5,655	4	960	1	
Canyon Lake	102	378,781	378,781	100	0	0	55,373	15	
Medina Lake	103	254,823	254,823	100	0	0	156,659	61	
*Coletto Creek Reservoir	104	31,040	31,016	99	-24	0	7,083	23	
TOTAL		1,947,454	1,933,081	99	5,189	0	755,161	39	
UPPER COAST									
Lake Houston	105	128,863	128,863	100	0	0	2,690	2	
Lake Texana	106	153,246	152,512	99	2,841	2	9,409	6	
TOTAL		282,109	281,375	100	2,841	1	12,099	4	
SOUTHERN									
Choke Canyon Reservoir	107	695,262	684,663	98	1,809	0	168,057	24	
Corpus Christi, Lake	108	256,961	254,250	98	-1,807	-1	155,821	61	
*Falcon Reservoir (Texas)	109	1,551,034	1,252,000	81	-6,000	0	649,000	42	
*Falcon Reservoir (TX & Mexico)	(109)	2,646,817	1,768,000	67	-12,000	0	724,000	27	
TOTAL		2,503,257	2,190,913	88	-5,998	0	972,878	39	
STATE TOTAL		31,243,235	27,673,272	89	-280,486	-1	5,925,559	19	

* Conservation volume is used as conservation storage capacity because the dead storage is unknown.

Note

Conservation storage capacity is the space available to store water above the lowest outlet and below the 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 the dead storage. Conservation storage percentage is based on the conservation storage capacity of the reservoir and the conservation storage in the reservoir on date shown. Percent change is given by $100 * (\text{current conservation storage} - \text{past conservation storage}) / \text{conservation storage capacity}$. Figures shown are for the Texas share of conservation storage in all reservoirs.

Important Changes in this Issue

Starting this issue, the Texas Water Condition Report has been expanded to include 109 major reservoirs in the state that represent 95 percent of the total conservation storage capacity of major Texas reservoirs, now calculated by including only the Texas share instead of the total content of border reservoirs. The graphs on pages 1 and 2 have been revised to accommodate this change. Also modified is the table for conservation storage data on pages 3 through 5.

This report now also reflects the seasonal changes in the conservation storage capacity of four Texas lakes: Texoma, Lake O' the Pines, Wright Patman, and Buchanan. The reviewers are advised that there may be occurrences where the reservoirs change in contents is dictated solely by the seasonal adjustment to capacity.

In the groundwater section, a map showing all monitoring well locations has been added.

Reservoir Page

The real time reservoir stage and estimated storage are available on TWDB website <http://wiid.twdb.state.tx.us/ims/resinfo/>. Viewers can find engineering information on Texas major reservoirs as well as daily lake elevations and corresponding estimated storage.

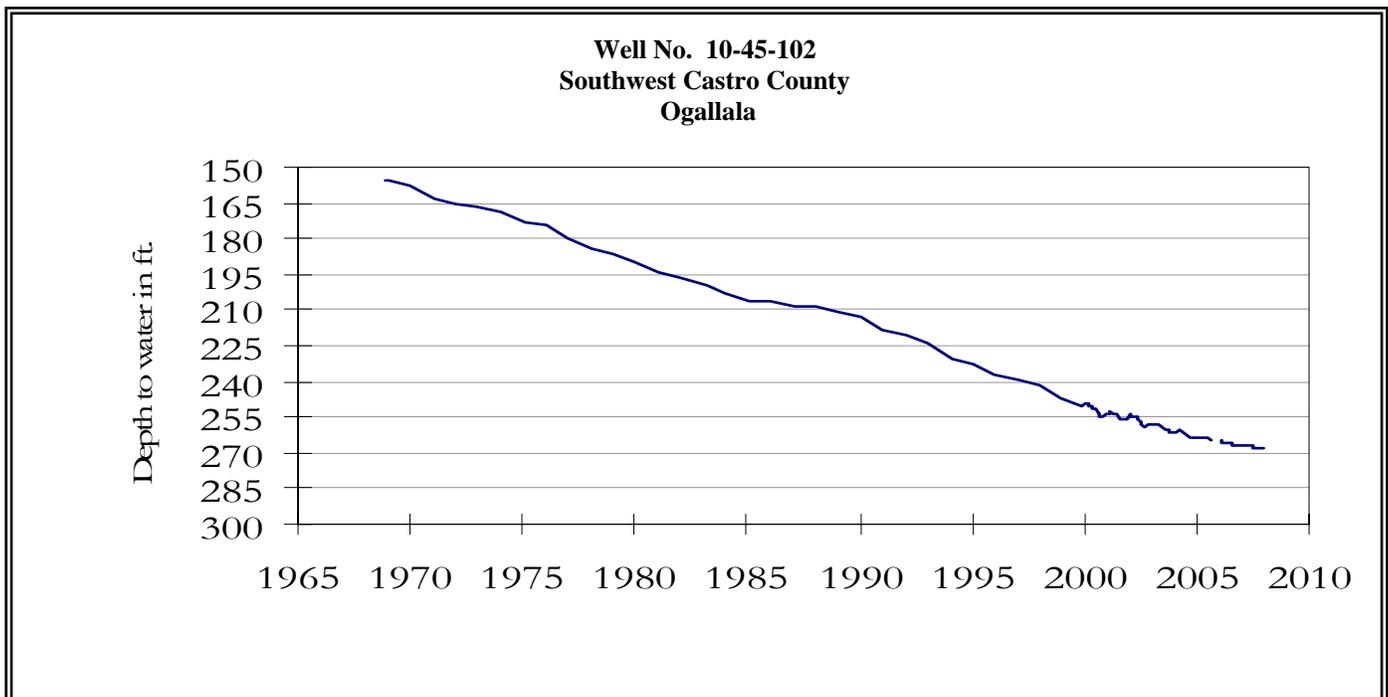
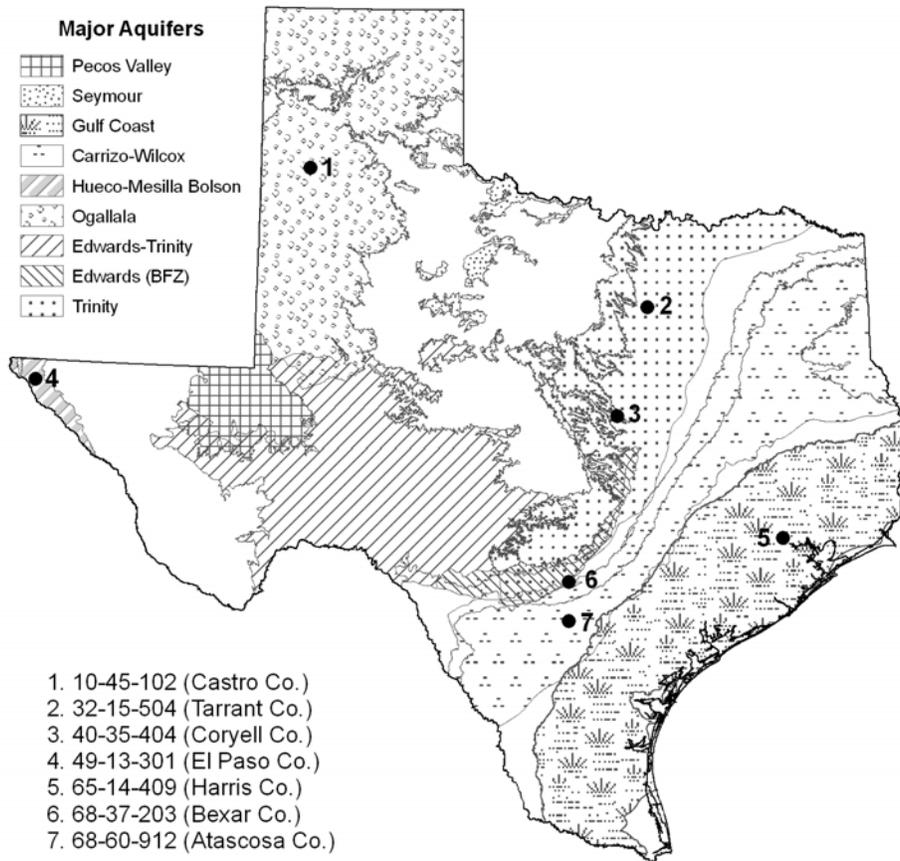
Hydrographic Survey Program Page

In November 2007, the Hydrographic Survey Team published their survey results for Inks Lake. The survey crew recently finished data collection on Lake Lewisville, and is currently collecting data on Richland-Chambers and Squaw Creek Reservoirs. For more information about the Hydrographic Survey Program, please visit us online at: <http://www.twdb.state.tx.us/assistance/lakesurveys/volumetricindex.asp> Click on "Completed Surveys/Data" to download our published reports.

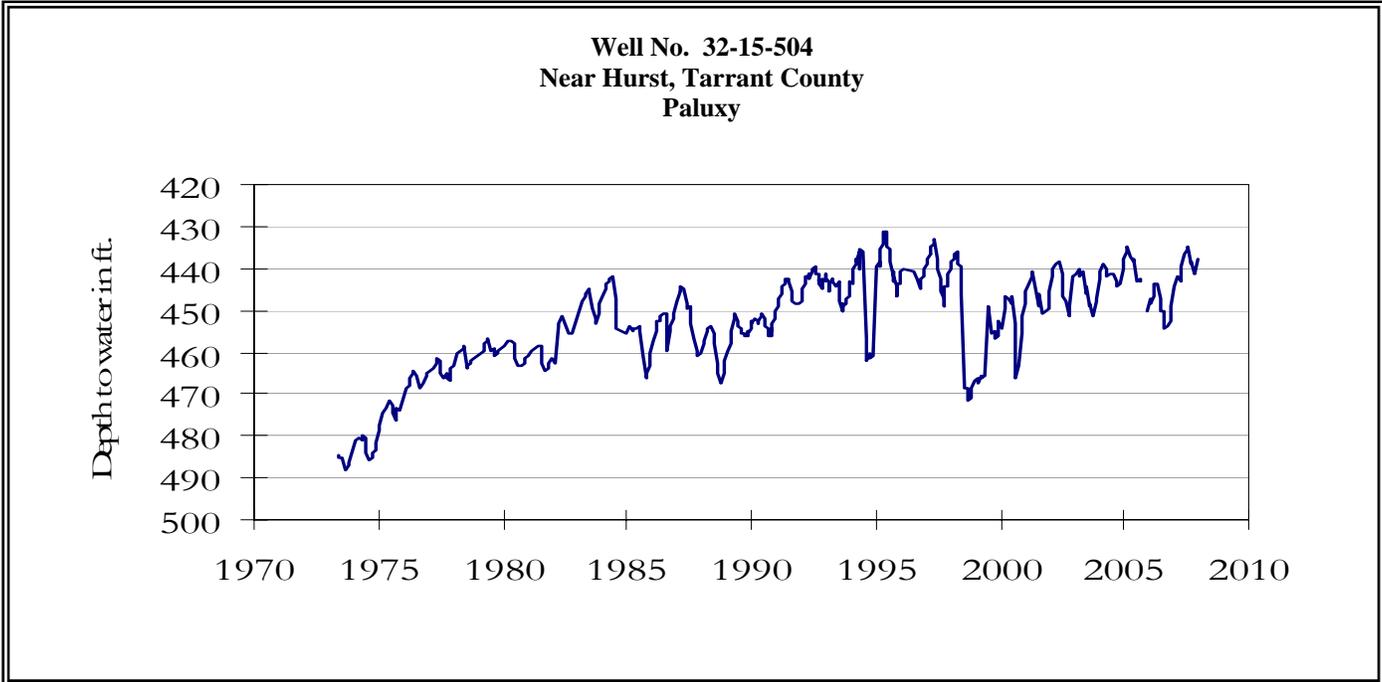
Evaporation Data Page

The TWDB maintains a web page that provides estimated monthly water surface evaporation at <http://hyper20.twdb.state.tx.us/Evaporation/evap.html>.

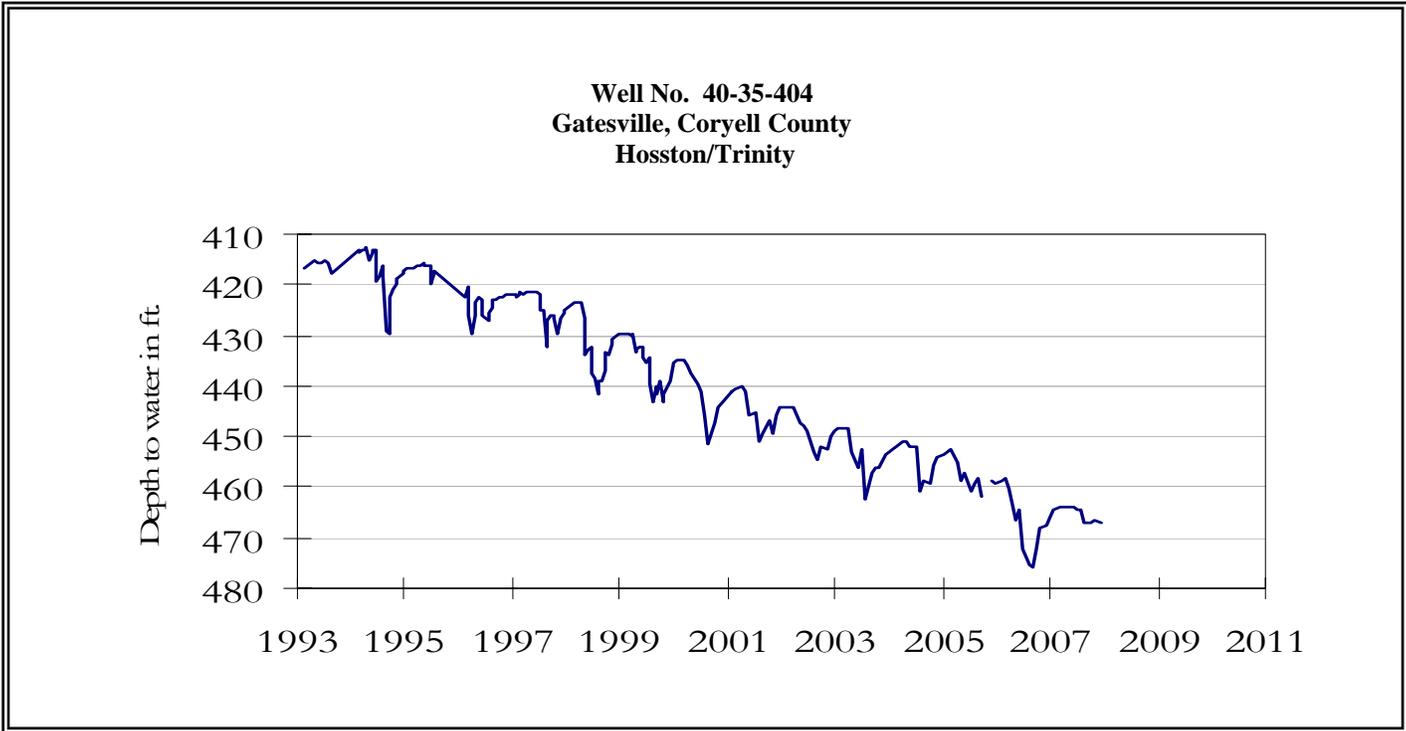
NOVEMBER GROUNDWATER LEVELS IN OBSERVATION WELLS



The late November water-level measurement in this Ogallala Aquifer well, elevation 3,816 feet above sea level, was 268.36 feet below land surface. This measurement was 0.23 feet below last month's measurement, 1.22 feet below last year's measurement, and 112.36 feet below the initial measurement recorded in 1968. No water level measurements were recorded for September through December 2005.

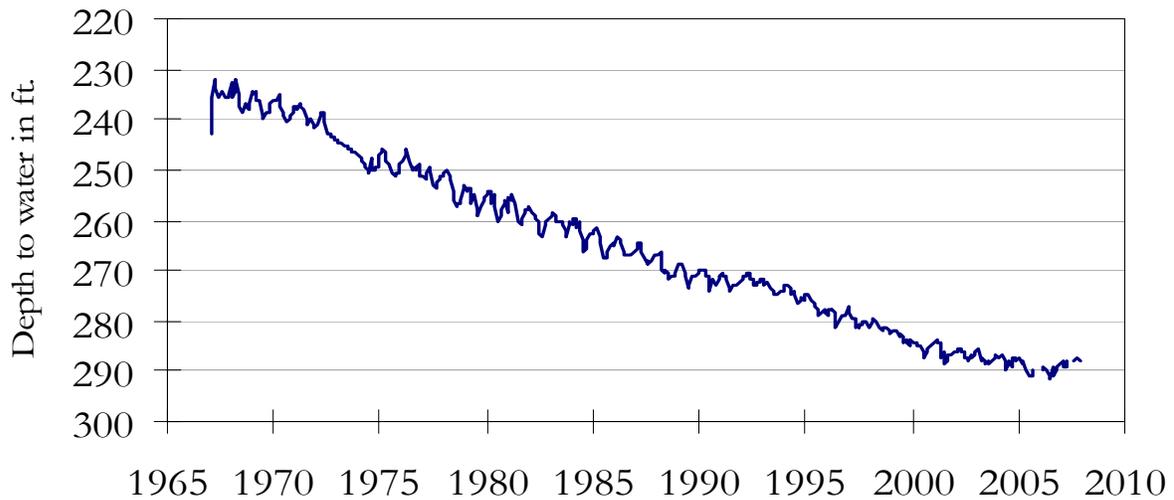


The late November water-level measurement in this Paluxy Formation Trinity Aquifer well, elevation 535 feet above sea level, was 437.86 feet below land surface. This measurement was 3.62 feet above last month's measurement, 11.20 feet above last year's measurement, and 59.86 feet below the initial measurement recorded in 1953. No water level measurements were recorded for September or October 2005.



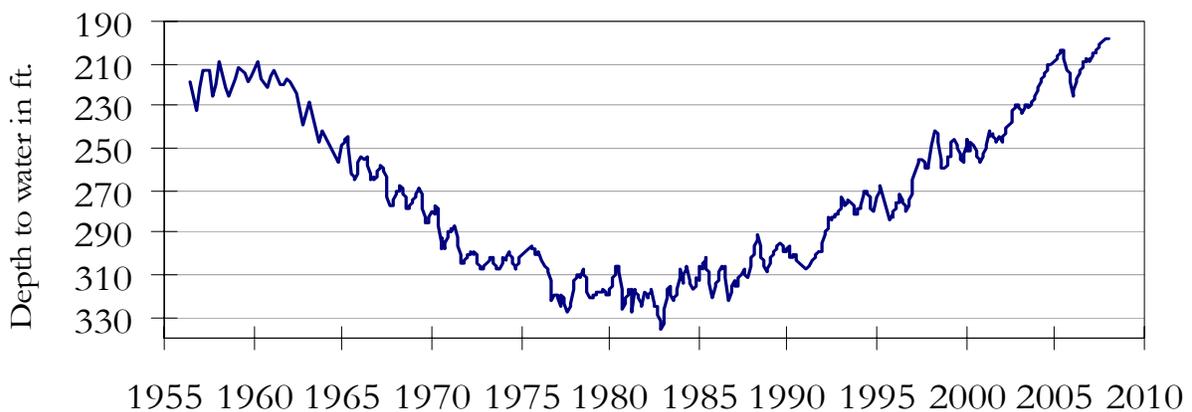
The late November water-level measurement in this Hosston Formation Trinity Aquifer well, elevation 823 feet above sea level, was 467.20 feet below land surface. This water level was 0.48 feet below last month's measurement, 0.24 feet above last year's measurement, and 175.20 feet below the initial measurement recorded in 1955. No water level measurement was recorded for October 2005.

**Well No. 49-13-301
El Paso, El Paso County
Bolson Deposits**



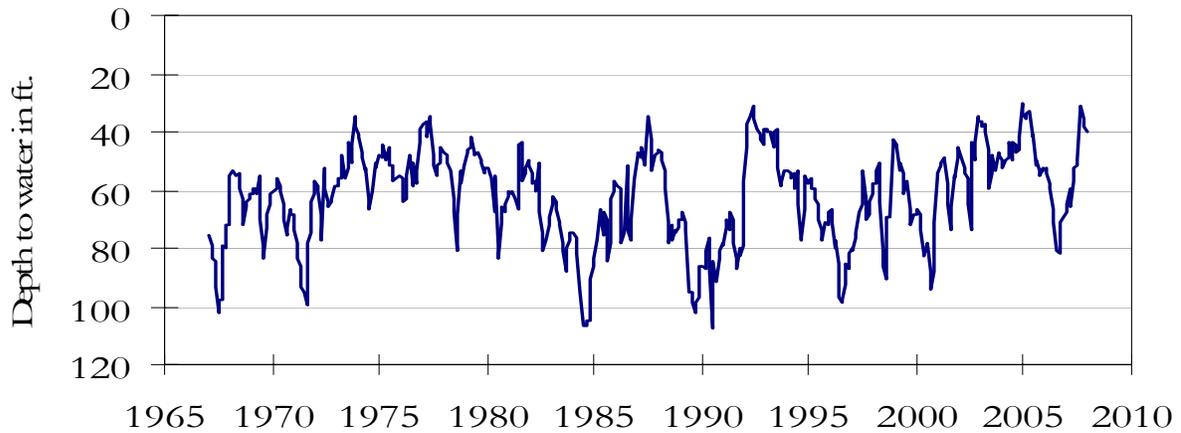
The late November water-level measurement in this Hueco Bolson Aquifer well, elevation 3,882 feet above sea level, was 288.18 feet below land surface. This water level was 0.80 feet below last month's measurement, 0.56 feet above last year's measurement, and 56.28 feet below the initial measurement in 1964. No water level measurements were recorded for May through July 2007, and October or December 2005.

**Well No. 65-14-409
Alief, Harris County
Evangeline**



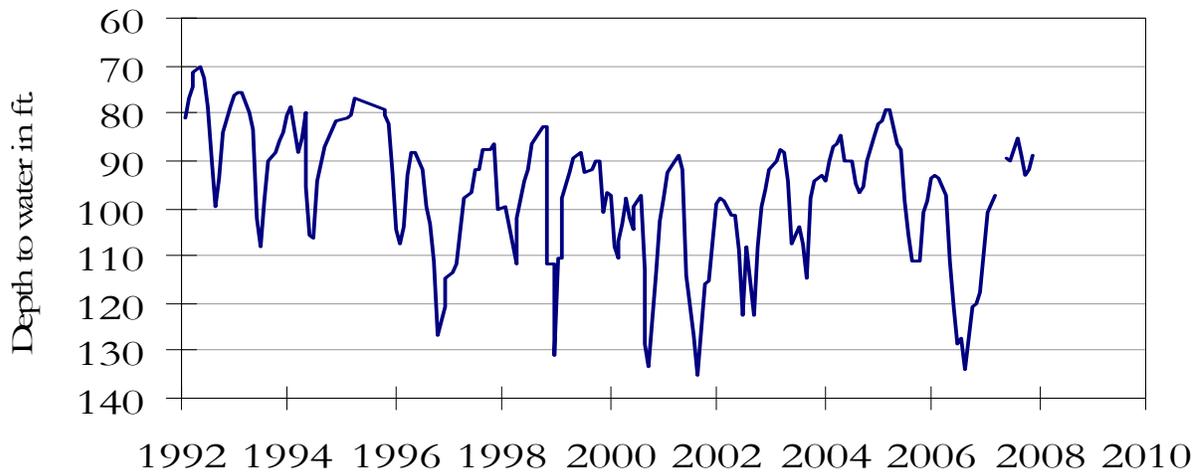
The late November water-level measurement in this Evangeline Formation Gulf Coast Aquifer well, elevation 66 feet above sea level, was 197.98 feet below land surface. This was 0.41 feet above last month's measurement, 9.94 feet above last year's measurement, and 62.48 feet below the initial measurement recorded in 1947.

**Well No. 68-37-203 (J-17)
In San Antonio, Bexar County
Edwards and Associated Limestones**



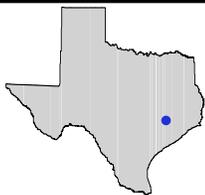
The late November water-level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 39.57 feet below land surface. This was 0.97 feet below last month's measurement, 27.93 feet above last year's measurement, and 7.07 feet above the initial measurement recorded in 1962.

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



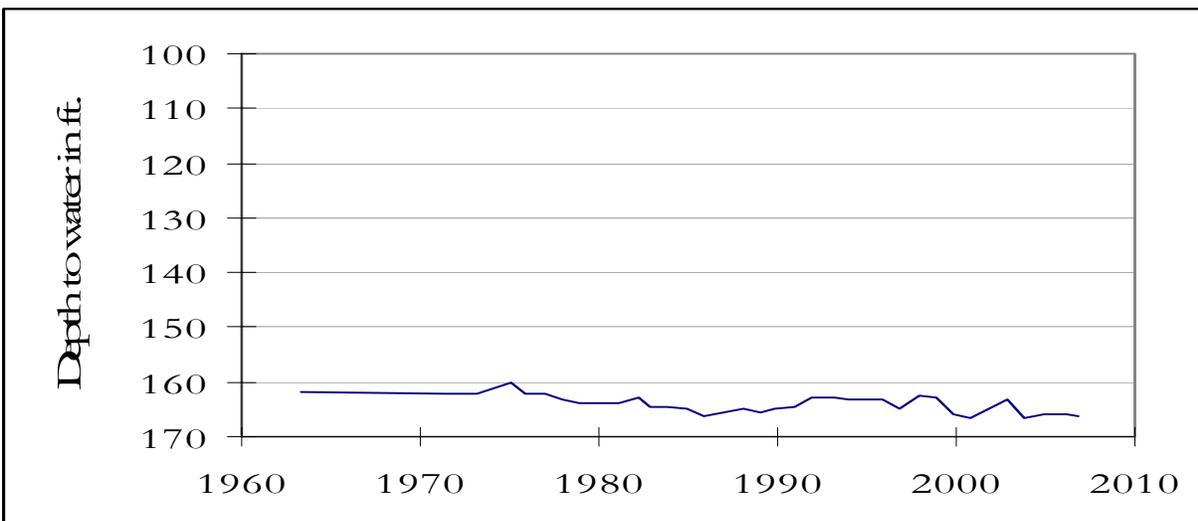
The late November water-level measurement in this Carrizo Aquifer well, elevation 446 feet above sea level, was 89.16 feet below land surface. This measurement was 3.00 feet above last month's measurement, 28.60 feet above last year's measurement, and 53.80 feet below the initial measurement recorded in 1965. No water level measurements were recorded for March and April 2007.

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 38-44-503 Houston County



This water level observation well, located 5 miles west of Crockett, at an elevation of 374 feet ASL, was completed in the Sparta Aquifer. Significant water level declines have not occurred within this aquifer.

November 2007

Water level measurements were available for all seven key monitoring wells. Water levels declined in four of the seven monitoring wells since the beginning of November, ranging from 0.23 feet in the Castro Co. Ogallala well to 0.97 feet in the Bexar Co. Edwards well. Water levels rose in the remaining monitoring wells, ranging from 0.41 feet in the Harris Co. Evangeline well to 3.62 feet in the Tarrant Co. Trinity well. The J-17 well recorded a water level of 39.57 feet below land surface, 0.97 feet below last month's measurement. This water level is 40.43 feet above the Stage 1 critical management level.

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