Texas Water Development Board





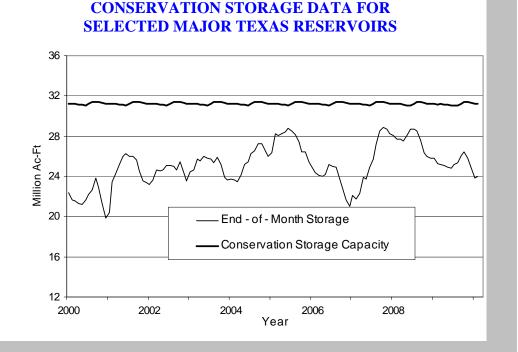
RESERVOIR STORAGE September 2009

Storage in the state's major reservoirs is stabilized in past month. Near the end of September, the 109 reservoirs monitored for this report held 23.98 million acre-feet* in conservation storage, or 77 percent of the conservation storage capacity of the state's major water supply reservoirs. This is slightly more than last month.

Storage was at 100% in fifteen reservoirs, almost all in the East and North Central Regions. On the other hand, there were still six lakes at or below 10% full, the same as last month: O C Fisher Lake was still effectively empty, Palo Duro Reservoir (1%) was nearly empty, Lake J. B. Thomas and Lake Meredith were both at 5%, E.V. Spence Reservoir was at 6%, and Lake Electra 9% full.

Only the East Region (91%) has storage at or above 90% of capacity; the High Plains (7%) and Trans-Pecos regions (22%) remained very low. Storage decreased in 7 out of 9 regions over the month. Since last year, storage increased slightly in the East and Trans-Pecos regions, and decreased everywhere else.

* Only the Texas share of storage in border reservoirs is counted.



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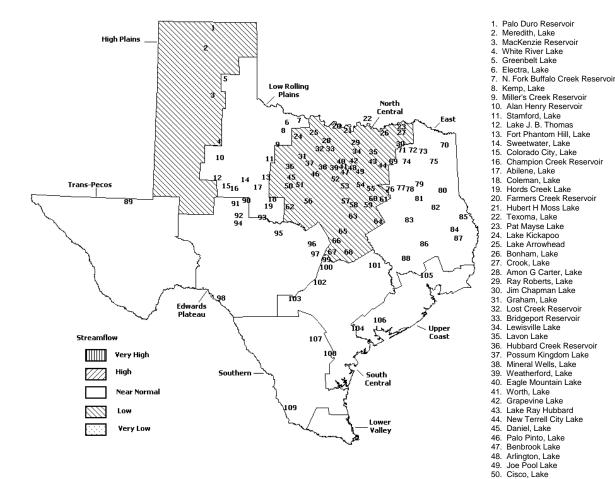
STREAMFLOW

Of 29 reporting index stations in September, computed 30-day mean flows were high (5% - 30%) at 6 stations, low (70% - 95%) at 13 stations, very low (>95%) at 1 station, and near normal (30% - 70%) at the remaining 9 stations. Compared to August, flows have increased at 18 index stations and decreased at 9 stations.

On a regional basis, flows in September were low in High Plains and North Central Regions, but normal everywhere else. Streamflow in the Lower Valley Region is not monitored.

SEPTEMBER STREAMFLOW CONDITIONS

Reservoirs Shown on Map



56. Proctor Lake Whitney Lake 57. Aquilla Lake 58. 59 Navarro Mills Lake 60. Halbert, Lake **Richland-Chambers Reservoir** 61. 62. Lake Brownwood 63. Waco Lake 64 Limestone Lake 65. Belton Lake Stillhouse Hollow Lake 66. 67. Georgetown, Lake 68. Granger Lake 69 Tawakoni, Lake 70. Wright Patman Lake Sulphur Springs, Lake 71. 72. Cypress Springs, Lake 73. Bob Sandlin, Lake 74. Fork Reservoir, Lake 75. O' the Pines, Lake Cedar Creek Reservoir Trinity 76. 77. Athens, Lake 78. Palestine, Lake Tyler, Lake 70 80. Murvaul, Lake Jacksonville, Lake 81. 82 Nacogdoches, Lake 83. Houston County Lake 84. Sam Rayburn Reservoir 85. Toledo Bend Reservoir 86. Livingston, Lake 87. B. A. Steinhagen Lake 88. Conroe, Lake Red Bluff Reservoir 89. 90 Oak Creek Reservoir 91. E. V. Spence Reservoir O. C. Fisher Lake 92. 93. O. H. Ivie Reservoir Twin Buttes Reservoir 95. Vrady Creek Reservoir 96. Buchanan, Lake 97. Lyndon B Johnson, Lake 98 Amistad Reservoir Intl 99. Travis, Lake 100. Austin, Lake 101. Somerville Lake Canyon Lake 102. 103 Medina Lake 104. Coleto Creek Reservoir 105. Lake Houston 106. Texana, Lake Choke Canyon Reservoir 107. 108. Lake Corpus Christi 109. Falcon Reservoir, Intl.

51.

52

53

54.

Leon, Lake

55. Bardwell Lake

Lake Granbury

Pat Cleburne, Lake

Waxahacie, Lake

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake	No. Conservation		Conservati		Change sin		Change since		
or Reservoir	on Storage		Storage		Late Augus	st	Late Septem	lber	
	Map	Capacity	Late Sep.	2009	2009		2008		
		(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)	(%	
		HIGH PL	AINS						
Palo Duro Reservoir	1	60,897	558	1	-167	0	-236		
Meredith, Lake (Texas)	2	500,000	35,976	7	-4,026	-1	-14,708	-	
Meredith, Lake (Texas & Oklahoma)	(2)	779,556	35,976	5	-4,026	-1	-14,708	-	
MacKenzie Reservoir	3	46,429	6,079	13	-123	0	-118		
White River Lake	4	29,880	3,669	12	-285	-1	-3,079	-1	
TOTAL		637,206	46,282	7	-4,601	-1	-18,141	-	
		LOW ROLLING	PLATNS						
Greenbelt Lake	5	59,500	16,724	28	113	0	-1,990	_	
*Electra, Lake	6	5,626	480	9	-38	-1	-674	-1	
N. Fork Buffalo Crk Reservoir	7	15,400	4,214	27	-180	-1	-383	-	
Kemp, Lake	8	245,308	151,440	62	1,574	1	-36,112	-1	
Millers Creek Reservoir	9	27,888	13,160	47	-126	0	-5,025	-1	
Alan Henry Reservoir	10	94,808	89,137	94	-596	-1	-5,671	-	
Stamford, Lake	11	51,570	37,312	72	519	1	-2,691	-	
J B Thomas, Lake	12	199,931	10,918	5	-109	0	-10,675	-	
Fort Phantom Hill, Lake	13	70,030	49,192	70	-302	0	-18,411	-2	
Sweetwater, Lake	14	10,006	6,128	61	-19	0	-2,078	-2	
Colorado City, Lake	15	31,793	18,314	58	-330	-1	-4,667	-1	
Champion Creek Reservoir	16	41,618	7,990	19	-140	0	-1,338	-	
Abilene, Lake	17	6,099	2,118	35	-65	-1	-2,470	-4	
Coleman, Lake	18	38,076	22,670	60	-473	-1	-7,513	-2	
Hords Creek Lake	19	5,684	1,604	28	-49	-1	-1,742	-:	
TOTAL		903,337	431,401	48	-221	0	-101,440	-1	
		NORTH CE							
Nocona, Lake (Farmers Crk)	20	21,445	19,093	89	-139	-1	343		
Hubert H Moss Lake	20	24,058	22,166	92	-125	-1	0		
Texoma, Lake (Texas)	22	1,239,693	1,233,799	100	2,947	0	4,052		
Texoma, Lake (Texas & Oklahoma)	(22)	2,479,387	2,467,598	100	5,894	0	8,104		
*Pat Mayse Lake	23	118,100	118,100	100	234	0	6,114		
Kickapoo, Lake	24	85,825	43,831	51	3,520	4	-591		
Arrowhead, Lake	25	235,997	154,679	66	-1,144	0	-17,680		
Bonham, Lake	26	11,026	9,742	88	502	5	394		
Crook, Lake	27	9,195	9,081	99	413	4	83		
Amon G Carter, Lake	28	19,903	16,759	84	716	4	-939		
Ray Roberts, Lake	29	798,758	759,399	95	-5,701	-1	-8,265		
Jim Chapman Lake (Cooper)	30	260,332	233,949	90	6,680	3	27,896	-	
Graham, Lake	31	45,260	36,759	81	1,961	4	-6,500	-3	
*Lost Creek Reservoir	32	11,950	9,592	80	226	2	-1,347	-:	
Bridgeport, Lake	33	366,236	243,059	66	285	0	-66,641	-3	
Lewisville Lake	34	543,988	487,414	90	9,826	2	36,128		
Lavon Lake	35	443,844	388,888	88	6,311	1	23,822		
Hubbard Creek Reservoir	36	318,067	215,622	68	-3,838	-1	-60,967	-1	
Possum Kingdom Lake	37	540,340	462,448	86	-613	0	-45,057	-	
*Mineral Wells, Lake	38	7,065	5,560	79	5	0	5		
Weatherford, Lake	39	18,645	13,719	74	77	0	-213		
Eagle Mountain Lake	40	182,500	147,375	81	3,356	2	-7,571		
Worth, Lake	41	24,500	16,581	68	-124	-1	-1,725		
Grapevine Lake	42	164,702	149,894	91	5,687	3	15,355		
Ray Hubbard, Lake	43	452,040	449,353	99	22,801	5	11,742		
New Terrell City Lake	44	8,583	7,863	92	224	3	-50	-	
Daniel, Lake	45	9,435	4,509	48	-78	-1	-3,006	-3	
Palo Pinto, Lake	46	27,150	12,427	46	4,899	18	-6,136	-2	
Benbrook Lake	47	85,648	70,968	83	7,677	9	11,296	1	
Arlington, Lake	48	38,740	38,455	99	8,906	23	11,702	1	

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake	No.	Conservation	Conservation		Change since		Change since		
or Reservoir	on	Storage	Storage		Late August		Late September		
	Map	Capacity	Late Sep.	2009	2009		2008		
		(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)	(%)	
	NORT	H CENTRAL (C	Continue)						
Joe Pool Lake	49	142,861	142,861	100	7,307	5	14,076	10	
*Cisco, Lake	50	26,000	16,912	65	-43	0	-3,585	-14	
Leon, Lake	51	26,421	17,657	67	-164	-1	-5,282	-20	
Granbury, Lake	52	128,046	113,551	89	11,560	9	3,913	3	
Pat Cleburne, Lake	53	25,730	22,431	87	3,022	12	1,538	6	
Waxahachie, Lake	54	10,779	10,779	100	2,480	23	1,507	14	
Bardwell Lake	55	46,122	46,122	100	7,746	17	6,691	15	
Proctor Lake	56	55,457	26,887	48	-1,240	-2	-13,272	-24	
Whitney, Lake	57	553,349	343,279	62	18,498	3	-61,459	-11	
Aquilla Lake	58	45,092	44,223	98	7,001	16	7,027	16	
Navarro Mills Lake	59	55,817	55,691	100	9,803	18	8,889	16	
*Halbert, Lake	60	6,033	2,799	46	68	1	-1,247	-21	
Richland-Chambers Reservoir	61	1,103,816	1,001,060	91	78,234	7	5,643	1	
*Brownwood, Lake	62	131,429	90,890	69	-1,444	-1	-20,347	-15	
Waco, Lake	62	198,943	198,943	100	20,263	10	19,787	10	
Limestone, Lake	64	208,015	157,911	76	-6,343	-3	-37,550	-18	
Belton Lake	65	435,225	351,324	81	9,539	2	-73,061	-17	
Stillhouse Hollow Lake	66	227,771	220,010	97	15,987	7	3,628	2	
Georgetown, Lake	67	36,823	15,803	43	2,063	6	-1,390	-4	
Granger Lake	68	52,525	48,543	92	11,793	22	5,368	10	
Tawakoni, Lake	69	888,126	834,404	94	26,133	3	40,881	5	
TOTAL		10,517,405	9,143,164	87	297,754	3	-176,001	-2	
		EAS	ſ						
Wright Patman Lake	70	248,069	248,069	100	-14,261	-6	0	0	
*Sulphur Springs, Lake	71	17,838	17,838	100	0	0	2,761	15	
Cypress Springs, Lake	72	67,689	67,689	100	69	0	0	0	
Bob Sandlin, Lake	73	200,579	200,579	100	1,358	1	1,539	1	
Fork Reservoir, Lake	74	604,927	604,927	100	9,240	2	11,088	2	
O the Pines, Lake	75	238,933	238,933	100	-28,157	-12	0	0	
Cedar Creek Reservoir in Trinity	76	644,686	620,252	96	17,370	3	32,006	5	
Athens, Lake	77	29,435	28,359	96	449	2	413	1	
Palestine, Lake	78	370,907	359,605	97	11,281	3	-11,302	-3	
Tyler, Lake	79	73,256	65,183	89	-488	-1	-8,073	-11	
Murvaul, Lake	80	38,284	37,464	98	1,139	3	939	2	
Jacksonville, Lake	81	30,300	28,518	94	-134	0	-324	-1	
Nacogdoches, Lake	82	39,521	33,011	84	-790	-2	-3,799	-10	
Houston County Lake	83	17,113	15,242	89	319	2	-1,871	-11	
Sam Rayburn Reservoir	84	2,857,077	2,340,161	82	-95,626	-3	117,479	4	
Toledo Bend Reservoir (Texas)	85	2,236,450	1,937,748	87	2,474	0	52,559	2	
Toledo Bend Reservoir (TX & LA)	(85)	4,472,900	3,875,496	87	4,947	0	105,118	2	
*Livingston, Lake	86	1,741,867	1,741,867	100	6,867	0	4,867	0	
B A Steinhagen Lake	87	66,966	60,514	90	-3,831	-6	4,764	7	
Conroe, Lake	88	416,188	389,256	94	-2,047	0	-2,233	-1	
TOTAL		9,940,085	9,035,215	91	-94,768	-1	200,813	2	
		TRANS-P				-		-	
Red Bluff Reservoir	89	289,670	64,263	22	-737	0	3,036	1	
TOTAL		289,670	64,263	22	-737	0	3,036	1	

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

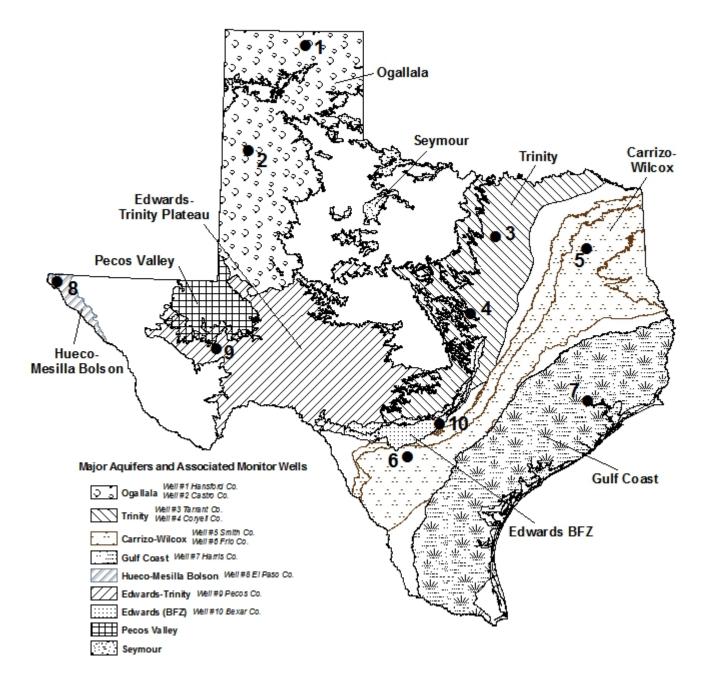
Name of Lake	No.	Conservation	Conservati	lon	Change since		Change since		
or Reservoir	on	Storage	Storage				Late September		
	Мар	Capacity	Late Sep.	2009	Late August 2009		2008		
	-	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)	(%)	
		EDWARDS P	LATEAU						
Oak Creek Reservoir	90	39,260	24,462	62	-598	-2	-8,177	-21	
E V Spence Reservoir	91	517,272	29,704	6	-2,684	-1	-31,241	-6	
0 C Fisher Lake	92	79,483	0	0	0	0	0	0	
*O H Ivie Reservoir	93	554,335	248,727	45	-3,019	-1	-77,939	-14	
Twin Buttes Reservoir	94	177,850	28,203	16	-837	0	-22,683	-13	
Brady Creek Reservoir	95	29,110	14,731	51	1,132	4	-1,222	-4	
Buchanan, Lake	96	824,519	356,459	43	-10,875	-1	-288,093	-35	
Lyndon B Johnson, Lake	97	113,690	111,440	98	707	1	-128	0	
*Amistad Reservoir (Texas)	98	1,840,849	1,752,000	95	-28,000	-2	-487,000	-26	
*Amistad Reservoir (TX & Mexico)	(98)	3,275,532	3,129,000	96	-49,000	-1	332,000	10	
TOTAL		4,176,368	2,565,726	61	-44,174	-1	-916,483	-22	
		SOUTH CE	NTRAL						
Travis, Lake	99	1,113,902	419,739	38	-16,232	-1	-324,201	-29	
*Austin, Lake	100	21,804	21,168	97	438	2	393	2	
Somerville Lake	101	147,104	118,000	80	9,718	7	-6,993	-5	
Canyon Lake	102	378,781	266,968	70	5,007	1	-42,793	-11	
Medina Lake	103	254,823	61,267	24	-3,720	-1	-107,972	-42	
*Coleto Creek Reservoir	104	31,040	23,329	75	669	2	-86	0	
TOTAL		1,947,454	910,471	47	-4,120	0	-481,652	-25	
		UPPER C	OAST						
Houston, Lake	105	128,863	128,863	100	0	0	0	0	
Texana, Lake	106	153,246	107,399	70	15,720	10	-25,131	-16	
TOTAL		282,109	236,262	84	15,720	6	-25,131	-9	
		SOUTH	ERN						
Choke Canyon Reservoir	107	695,262	485,975	70	10,038	1	-115,334	-17	
Corpus Christi, Lake	108	256,961	73,278	29	-1,535	-1	-126,390	-49	
*Falcon Reservoir (Texas)	109	1,551,034	987,000	64	-34,000	-2	-28,000	-2	
*Falcon Reservoir (TX & Mexico)	(109)	2,646,817	1,710,000	65	-13,000	0	307,000	12	
TOTAL		2,503,257	1,546,253	62	-25,497	-1	-269,724	-11	
STATE TOTAL		31,196,891	23,979,037	77	139,356	0	-1,784,723	-6	

* Total Conservation volume is used as conservation storage capacity because the dead storage volume 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*(current conservation storage - past conservation storage in all reservoirs.

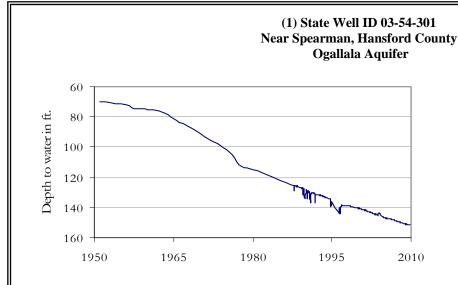
GROUNDWATER LEVELS IN OBSERVATION WELLS



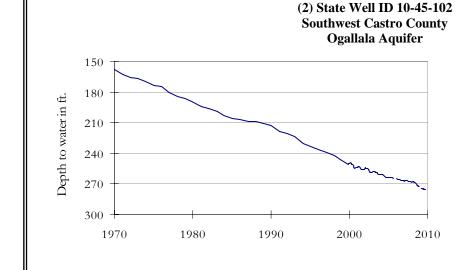
September, 2009

Water level measurements were available for nine out of the ten key monitoring wells. Water levels rose in seven of the ten monitoring wells since the beginning of September, ranging from 0.06 feet in the Tarrant County Trinity well to 37.24 feet in the Frio County Carrizo-Wilcox well. Water levels declined in two monitoring wells, ranging from 0.37 feet in the Castro County Ogallala well to 0.79 feet in the Pecos County Edwards-Trinity Plateau well. The J-17 well in San Antonio recorded a water level of 79.33 feet below land surface, 8.76 feet above last month's measurement. This water level is 1.67 feet above the Stage 2 critical management level. Stage 1 drought restrictions are currently in place.

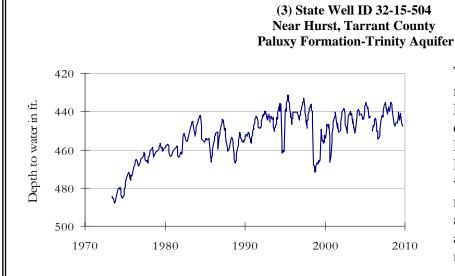
SEPTEMBER GROUNDWATER LEVELS IN OBSERVATION WELLS



The late September water level measurement in this Ogallala Aquifer well, elevation 2,962 feet above sea level, was 151.39 feet below land surface. This measurement was 0.11 feet above last month's measurement, 0.70 feet below last year's measurement, and 81.27 feet below the initial measurement recorded in 1951.

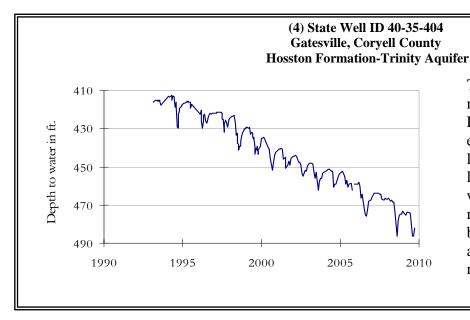


The late September water level measurement in this Ogallala Aquifer well, elevation 3,816 feet above sea level, was 275.73 feet below land surface. This measurement was 0.37 feet below last month's measurement, 3.92 feet below last year's measurement, and 119.73 feet below the initial measurement recorded in 1968.

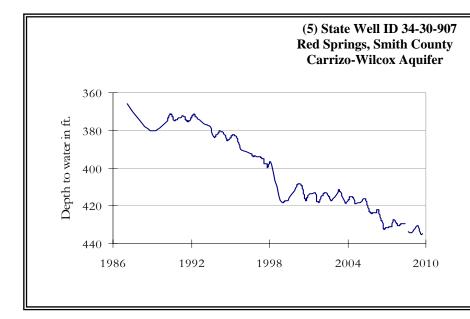


Near Hurst, Tarrant County

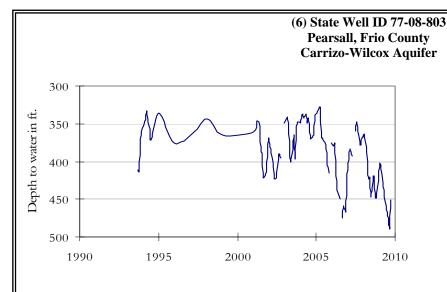
The late September water level measurement in this Paluxy Formation Trinity Aquifer well, elevation 535 feet above sea level, was 447.61 feet below land surface. This measurement 0.06 feet above last was month's measurement, 0.08 feet above last year's measurement, and 69.61 feet below the initial measurement recorded in 1955.



The late September water level measurement in this Hosston Formation Trinity Aquifer well, elevation 823 feet above sea level, was 482.17 feet below land surface. This water level was 4.30 feet above last month's measurement, 7.00 feet below last year's measurement, and 190.17 feet below the initial measurement recorded in 1955.

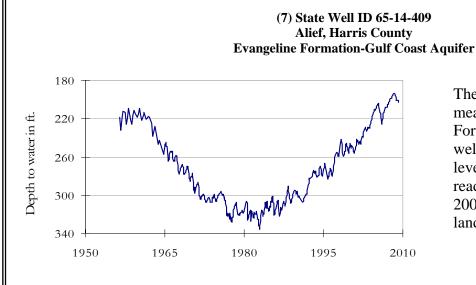


The late September water level measurement in this Carrizo-Wilcox Aquifer well, elevation 555 feet above sea level, was 434.93 feet below land surface. This water level was 0.14 feet above last month's measurement, 0.98 feet below last year's measurement, and 68.93 feet below the initial measurement recorded in 1987.

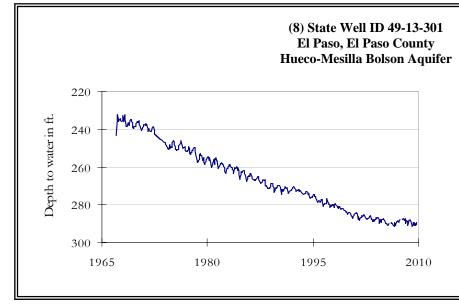


The late September water level measurement in this Carrizo-Wilcox Aquifer well, elevation 652 feet above sea level, was 450.42 feet below land surface. This was 37.24 feet above last month's measurement, 3.34 feet below last year's measurement, and 170.42 feet below the initial measurement recorded in 1963.

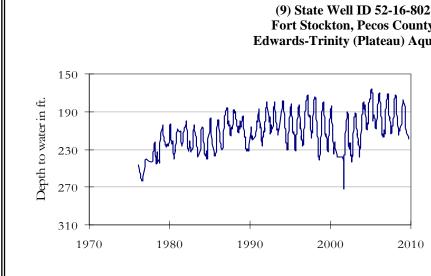
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The late September water level measurement in this Evangeline Formation Gulf Coast Aquifer well, elevation 66 feet above sea level was not available. The last reading available, in March 2009, was 202.54 feet below land surface.

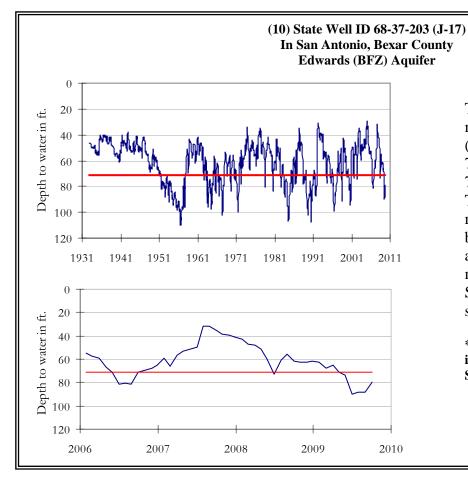


The late September water level measurement in this Hueco-Mesilla Bolson Aquifer well, elevation 3,882 feet above sea level, was 289.52 feet below land surface. This water level was 1.16 feet above last month's measurement, 1.39 feet below last year's measurement, and 57.62 feet below the initial measurement in 1964.



Fort Stockton, Pecos County **Edwards-Trinity (Plateau) Aquifer**

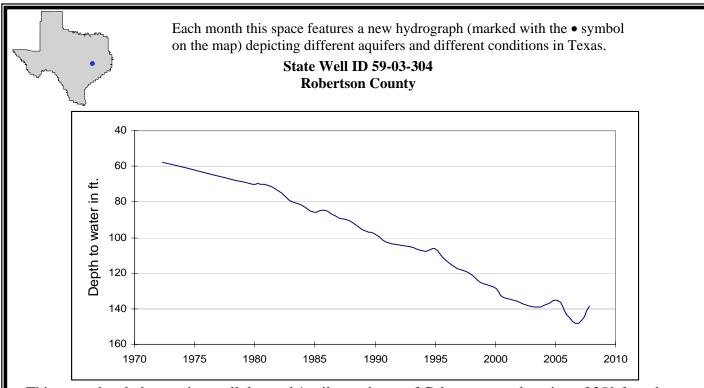
The late September water level measurement in this Edwards-Trinity Plateau Aquifer well, elevation 3,199 feet above sea level, was 219.04 feet below land surface. This water level 0.79 feet below last was month's measurement. 14.24 feet below last year's measurement, and 27.84 feet above the initial measurement in 1976.



The late September water level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 79.33 feet below land surface. This was 8.76 feet above last month's measurement, 17.33 feet below last year's measurement, and 32.69 feet below the initial measurement recorded in 1932. Stage 1 drought restrictions are still in place.

*** Water levels below the red line indicate Edwards Aquifer Authority Stage 1 drought restrictions. ***

Hydrograph of the Month



This water level observation well, located 1 mile southeast of Calvert, at an elevation of 359 feet above sea level, was completed in the Carrizo-Wilcox Aquifer. Water level declines have occurred in the Winter Garden area due to irrigation pumping, and in the northeast portion of the aquifer due to municipal pumping.

TEXAS WATER DEVELOPMENT BOARD 1700 N. CONGRESS AVE. P.O. BOX 13231 AUSTIN TX 78711-3231