

RESERVOIR STORAGE

December 2015

At the end of the month, total storage in 114 of the state's major water supply reservoirs was at 26.74 million acre-feet*, or 86% of their total conservation storage capacity. This is 316,404 acre-feet more than a month ago and 7.13 million acre-feet more than the storage at this time last year.

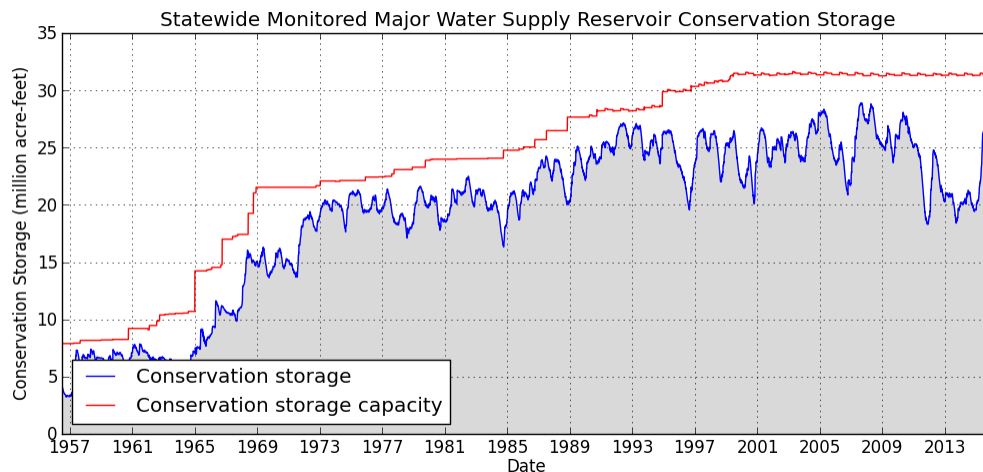
Seventy-two (72) reservoirs held 100% of conservation storage capacity, primarily in the North Central (46) and East (20) regions. Two (2) reservoirs remain below 10% full: Palo Duro (4%), Twin Buttes (5%).

Total combined storage was greater than 70% in the Upper Coast (100%), East (100%), North Central (98%), Trans-Pecos (91%), South Central (91%), and Low Rolling Plains (74%) regions. The regions with the lowest percentage storage were the High Plains (23%) and Southern (50%) regions. Storage increased in 8 regions and remained unchanged in 1 region over the past month.

Elephant Butte reservoir held 321,201 acre-feet, or 16% of storage capacity. This is 90,261 acre-feet more than a month ago.

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

CONSERVATION STORAGE DATA FOR



Figures are based on the end of the month data at 114 major reservoirs that represent 96 percent of the total conservation storage capacity of the 188 major water supply reservoirs in Texas. Major reservoirs are defined as having a conservation storage capacity of 5,000 acre-feet or greater.

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	Conservation Storage Capacity (acre-feet)	Conservation Storage end of Dec		Change since end of Nov 2015		Change since end of Dec 2014		
		2015 (acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)	(%)	
HIGH PLAINS								
Palo Duro Reservoir	61,066	2,220	4	no data		1,215	2	
Meredith, Lake (Texas)	500,000	127,596	26	2,617	1	102,482	20	
Meredith, Lake (Texas & Oklahoma)	779,556	127,596	16	2,617	0	102,482	13	
MacKenzie Reservoir	46,450	7,606	16	9	0	4,226	9	
White River Lake	29,880	9,935	33	0	0	8,701	29	
TOTAL	637,396	147,357	23	2,626	0	116,624	18	
LOW ROLLING PLAINS								
Greenbelt Lake	59,968	13,494	23	253	0	6,328	11	
N. Fork Buffalo Crk Reservoir	15,400	12,526	81	1,682	11	11,809	77	
Kemp, Lake	245,307	185,613	76	8,650	4	119,328	49	
Millers Creek Reservoir	26,768	25,462	95	1,817	7	23,209	87	
Alan Henry Reservoir	94,808	91,145	96	342	0	20,256	21	
Stamford, Lake	51,570	45,462	88	2,082	4	39,979	78	
J B Thomas, Lake	199,931	146,110	73	-1,560	-1	54,338	27	
Fort Phantom Hill, Lake	70,030	59,376	85	7,707	11	37,411	53	
Sweetwater, Lake	12,267	1,435	12	89	1	-220	-2	
Colorado City, Lake	30,758	8,756	28	-23	-0	2,038	7	
Champion Creek Reservoir	41,580	9,379	23	146	0	6,954	17	
Abilene, Lake	7,900	286	4	19	0	no data		
Coleman, Lake	38,075	28,093	74	2,208	6	15,768	41	
Hords Creek Lake	8,443	3,982	47	805	10	491	6	
TOTAL	902,805	631,119	70	24,217	3	337,689	37	
NORTH CENTRAL								
Nocona, Lake (Farmers Crk)	21,444	21,444	100	705	3	14,639	68	
Hubert H Moss Lake	24,058	24,058	100	0	0	4,156	17	
Texoma, Lake (Texas)	1,258,113	1,258,113	100	68,225	5	201,962	16	
Texoma, Lake (Texas & Oklahoma)	2,525,281	1,258,113	50	68,225	3	201,962	8	
*Pat Mayse Lake	113,683	113,683	100	7,952	7	no data		
Kickapoo, Lake	86,345	86,345	100	8,208	10	61,361	71	
Arrowhead, Lake	230,359	230,359	100	16,896	7	184,750	80	
Bonham, Lake	11,027	11,027	100	2,280	21	3,140	28	
Crook, Lake	9,195	9,195	100	1,367	15	261	3	
Amon G Carter, Lake	19,266	19,266	100	0	0	9,539	50	
Ray Roberts, Lake	788,167	788,167	100	0	0	204,782	26	
Jim Chapman Lake (Cooper)	260,332	260,332	100	0	0	176,861	68	
Graham, Lake	45,288	45,288	100	3,326	7	27,627	61	
*Lost Creek Reservoir	11,950	11,950	100	0	0	4,648	39	
Bridgeport, Lake	366,236	366,236	100	32,084	9	226,098	62	
Lewisville Lake	563,228	563,228	100	0	0	182,144	32	
Lavon Lake	406,388	406,388	100	56,241	14	217,860	54	
Hubbard Creek Reservoir	318,067	136,059	43	21,757	7	89,927	28	
Possum Kingdom Lake	523,873	520,122	99	-3,751	-1	185,831	35	
*Mineral Wells, Lake	6,760	6,760	100	0	0	3,402	50	
Weatherford, Lake	17,812	17,812	100	3,731	21	8,016	45	
Eagle Mountain Lake	179,880	179,880	100	11,259	6	79,085	44	
Worth, Lake	33,495	33,495	100	3,335	10	10,658	32	
Grapevine Lake	164,703	164,703	100	0	0	70,961	43	
Ray Hubbard, Lake	452,040	452,040	100	207	0	191,172	42	
New Terrell City Lake	8,583	8,583	100	0	0	2,000	23	

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	Conservation Storage Capacity (acre-feet)	Conservation Storage end of Dec		Change since end of Nov 2015		Change since end of Dec 2014		
		2015 (acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)	(%)	
(North Central Continue)								
Palo Pinto, Lake	26,766	26,766	100	0	0	24,379	91	
Benbrook Lake	85,648	85,648	100	0	0	26,829	31	
Arlington, Lake	40,188	40,188	100	0	0	12,725	32	
Joe Pool Lake	175,358	175,358	100	0	0	14,790	8	
*Cisco, Lake	25,895	20,064	77	422	2	8,219	32	
Leon, Lake	26,476	26,476	100	0	0	10,251	39	
Granbury, Lake	125,756	121,986	97	-975	-1	55,188	44	
Pat Cleburne, Lake	26,008	26,008	100	0	0	8,992	35	
Waxahachie, Lake	10,780	10,780	100	0	0	2,398	22	
Bardwell Lake	46,122	46,122	100	0	0	7,961	17	
Proctor Lake	55,457	55,457	100	0	0	39,153	71	
Whitney, Lake	553,344	553,344	100	0	0	199,400	36	
Aquilla Lake	43,243	43,243	100	0	0	8,101	19	
Navarro Mills Lake	49,827	49,827	100	0	0	9,561	19	
*Halbert, Lake	6,033	5,634	93	-249	-4	1,246	21	
Richland-Chambers Reservoir	1,087,839	1,087,839	100	0	0	412,540	38	
*Brownwood, Lake	128,839	128,839	100	0	0	66,189	51	
Waco, Lake	189,418	189,418	100	0	0	26,451	14	
Limestone, Lake	208,014	208,014	100	0	0	27,577	13	
Belton Lake	435,225	435,225	100	0	0	137,313	32	
Stillhouse Hollow Lake	227,771	227,771	100	0	0	77,710	34	
Georgetown, Lake	36,823	36,823	100	0	0	13,579	37	
Granger Lake	50,779	50,779	100	0	0	0	0	
Tawakoni, Lake	871,685	871,685	100	0	0	381,814	44	
Mountain Creek, Lake	22,850	22,850	100	0	0	0	0	
Squaw Creek, Lake	151,250	151,250	100	0	0	2,109	1	
TOTAL	10,627,686	10,431,927	98	301,245	0	3,735,355	36	
EAST								
Wright Patman Lake	122,593	122,593	100	0	0	0	0	
*Sulphur Springs, Lake	17,747	15,620	88	-2,127	-12	-165	-1	
Cypress Springs, Lake	66,756	66,756	100	0	0	1,127	2	
Bob Sandlin, Lake	190,822	190,822	100	0	0	22,896	12	
Caddo, Lake	29,898	29,898	100	180	1	no data		
Martin, Lake	75,726	75,627	100	-99	-0	7,921	10	
Monticello, Lake	34,740	34,740	100	0	0	306	1	
Fork Reservoir, Lake	605,061	605,061	100	0	0	180,806	30	
O the Pines, Lake	241,363	241,363	100	0	0	10,630	4	
Cedar Creek Reservoir in Trinity	644,686	644,686	100	0	0	186,506	29	
Athens, Lake	29,503	29,503	100	0	0	2,740	9	
Palestine, Lake	373,199	373,199	100	0	0	12,663	3	
Tyler, Lake	72,073	72,073	100	0	0	2,006	3	
Murvaul, Lake	38,285	38,285	100	0	0	0	0	
Jacksonville, Lake	25,670	25,670	100	679	3	0	0	
Nacogdoches, Lake	39,522	39,522	100	0	0	889	2	
Houston County Lake	17,113	17,113	100	0	0	0	0	
Sam Rayburn Reservoir	2,857,077	2,857,077	100	136,092	5	308,072	11	
Toledo Bend Reservoir (Texas)	2,236,450	2,236,450	100	62,938	3	301,580	13	
Toledo Bend Reservoir (TX & LA)	4,472,900	2,236,450	50	62,938	1	301,580	7	
*Livingston, Lake	1,785,348	1,785,348	100	0	0	0	0	
B A Steinhagen Lake	66,961	53,676	80	-2,936	-4	-529	-1	
Conroe, Lake	410,988	410,988	100	5,355	1	959	0	
TOTAL	9,981,581	9,966,070	100	200,082	2	1,038,407	10	

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	Conservation Storage Capacity (acre-feet)	Conservation Storage end of Dec		Change since end of Nov 2015		Change since end of Dec 2014		
		2015 (acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)	(%)	
TRANS-PECOS								
Red Bluff Reservoir	151,110	137,120	91	2,282	2	5,601	4	
TOTAL	151,110	137,120	91	2,282	2	5,601	4	
EDWARDS PLATEAU								
Oak Creek Reservoir	39,210	12,413	32	1,919	5	6,461	16	
E V Spence Reservoir	517,272	50,700	10	3,132	1	39,636	8	
O C Fisher Lake	115,742	19,412	17	487	0	18,668	16	
*O H Ivie Reservoir	554,340	70,591	13	-373	-0	-11,535	-2	
Twin Buttes Reservoir	182,454	9,433	5	797	0	3,966	2	
Nasworthy	9,615	7,769	81	145	2	288	3	
Brady Creek Reservoir	28,808	10,575	37	322	1	2,773	10	
Buchanan, Lake	860,607	687,784	80	67,304	8	394,436	46	
Inks, Lake	13,962	12,915	93	23	0	68	0	
Lyndon B Johnson, Lake	115,249	110,514	96	-122	-0	-183	-0	
*Amistad Reservoir (Texas)	1,840,849	1,228,739	67	27,589	1	67,748	4	
*Amistad Reservoir (TX & Mexico)	3,275,532	1,228,739	38	27,589	1	67,748	2	
TOTAL	4,278,108	2,220,845	52	101,223	2	522,326	12	
SOUTH CENTRAL								
Travis, Lake	1,113,348	1,032,010	93	57,418	5	672,617	60	
*Austin, Lake	23,972	23,127	96	278	1	416	2	
Somerville Lake	147,104	147,104	100	0	0	1,299	1	
Canyon Lake	378,781	378,781	100	0	0	92,779	24	
Medina Lake	254,823	162,403	64	2,098	1	154,096	60	
*Coletto Creek Reservoir	31,040	28,304	91	146	0	no data		
TOTAL	1,949,068	1,771,729	91	59,940	3	921,207	47	
UPPER COAST								
Houston, Lake	120,686	120,686	100	0	0	0	0	
Texana, Lake	159,566	159,566	100	0	0	30,000	19	
TOTAL	280,252	280,252	100	0	0	30,000	11	
SOUTHERN								
Choke Canyon Reservoir	695,262	235,276	34	-5,211	-1	61,290	9	
Corpus Christi, Lake	256,961	213,542	83	-4,344	-2	89,364	35	
*Falcon Reservoir (Texas)	1,551,007	814,339	53	41,889	3	347,426	22	
*Falcon Reservoir (TX & Mexico)	2,646,817	814,339	31	41,889	2	347,426	13	
TOTAL	2,503,230	1,263,157	50	32,334	1	498,080	20	
STATE TOTAL	31,146,533	26,735,070	86	316,404	1	7,127,399	23	

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

Elephant Butte Reservoir	1,973,358	321,201	16	90,261	5	65,439	3
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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)/conservation storage capacity. Figures shown are for the Texas share of conservation storage in all reservoirs.

DECEMBER RESERVOIR CONDITIONS

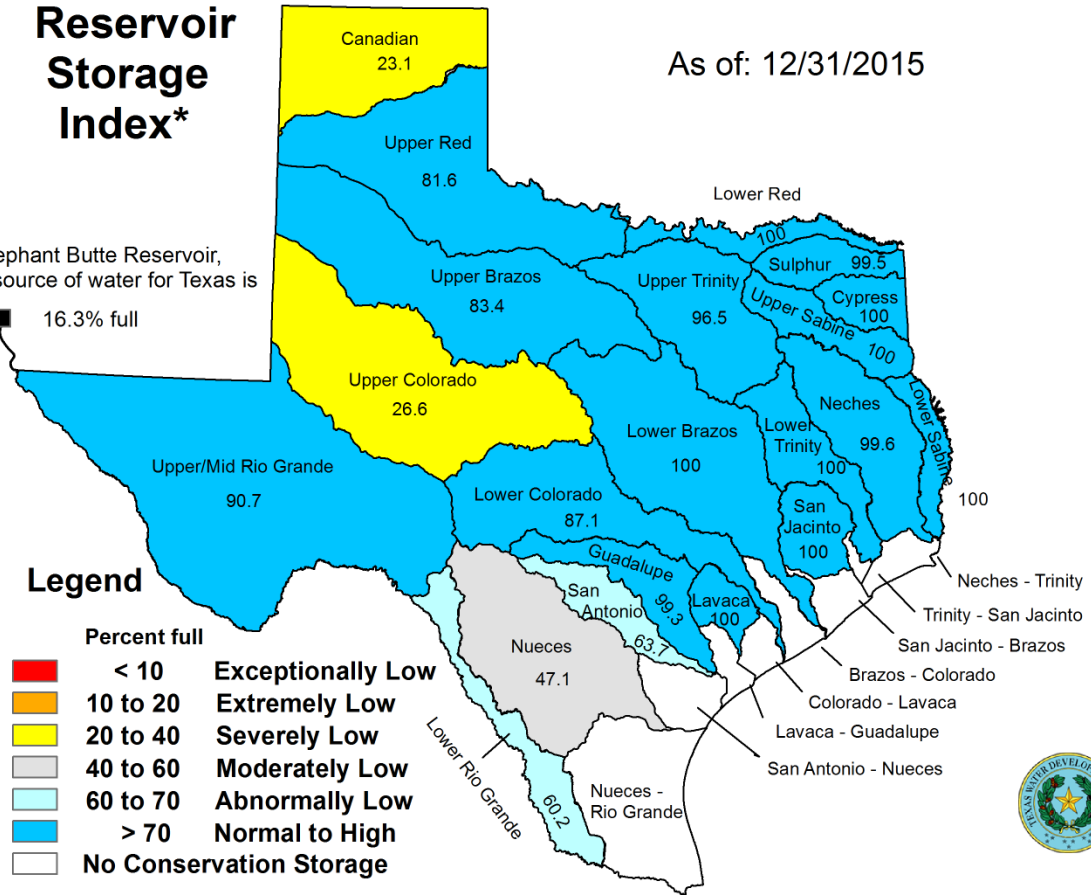
As of: 12/31/2015

Reservoir Storage Index*

Elephant Butte Reservoir, a source of water for Texas is 16.3% full

Legend

Percent full	Reservoir Storage Index
< 10	Exceptionally Low
10 to 20	Extremely Low
20 to 40	Severely Low
40 to 60	Moderately Low
60 to 70	Abnormally Low
> 70	Normal to High
No Conservation Storage	



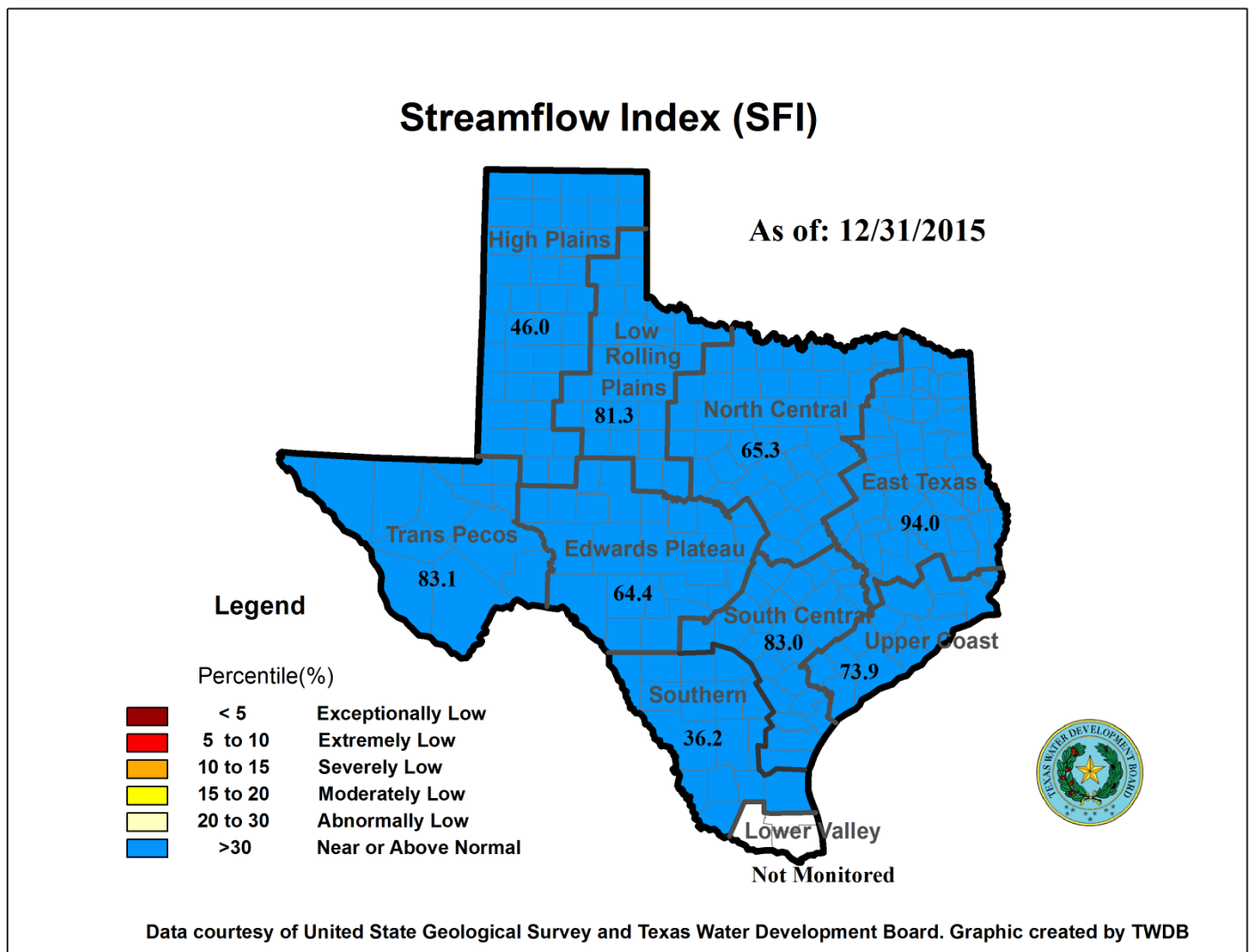
*Percent of combined conservation storage capacity of 114 major water supply reservoirs by sub-basin (dead pools are excluded)

DECEMBER STREAMFLOW CONDITIONS

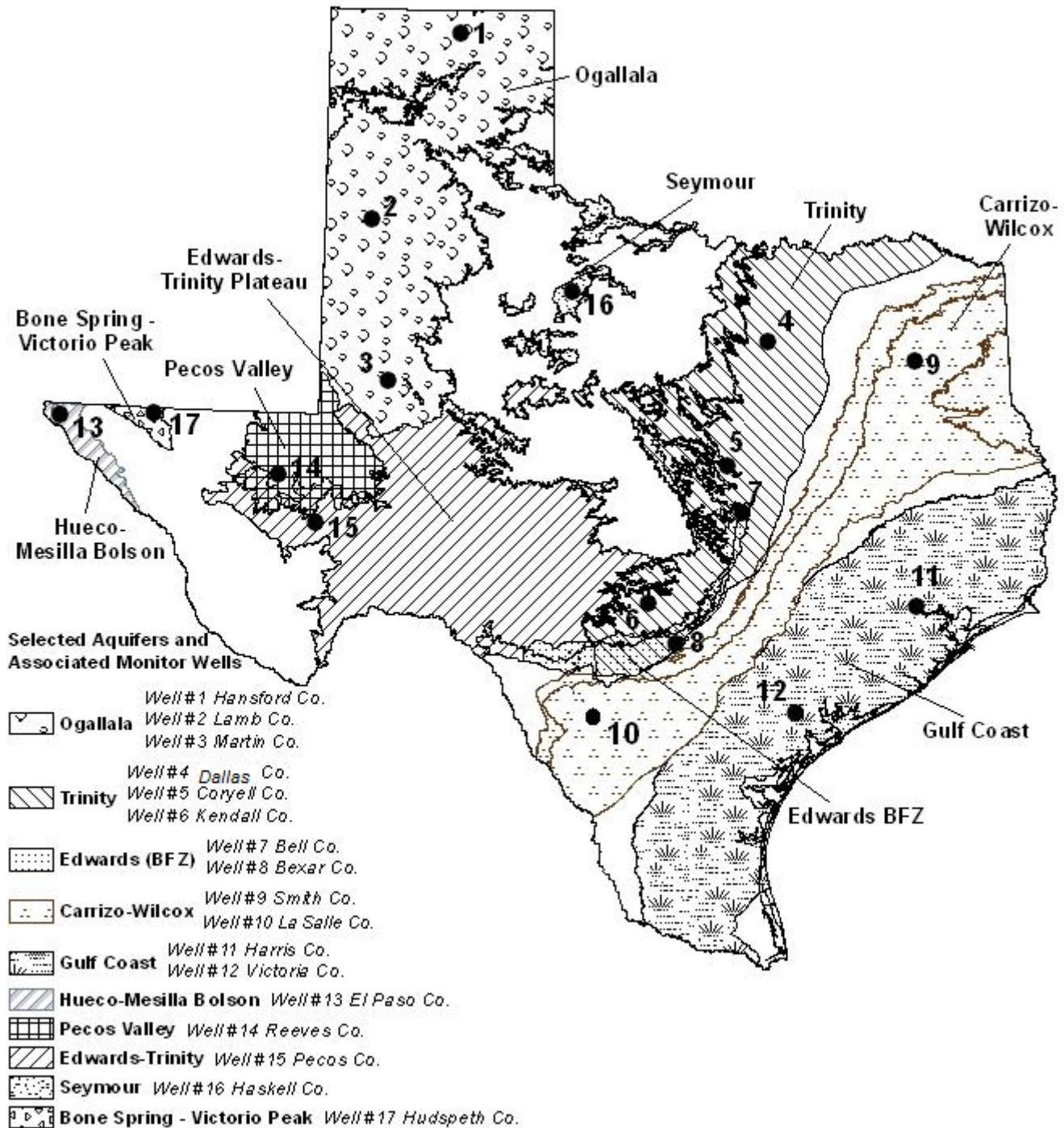
The computed 30-day mean flow status for 29 reporting index stations monitored this month is presented below:

Flow Status	Number of Stations
Normal to High (>30%)	26
Abnormally Low (20-30%)	0
Moderately Low (15-20%)	0
Severely Low (10-15%)	1
Extremely Low (5-10%)	0
Exceptionally Low (<5%)	2

Flows went up at 17 index stations and down at 9 stations. On a regional basis, flows in this month at index stations were near or above normal in all 9 regions. Streamflow in the Lower Valley region is not monitored.



DECEMBER 2015 GROUNDWATER LEVELS IN OBSERVATION WELLS



December, 2015

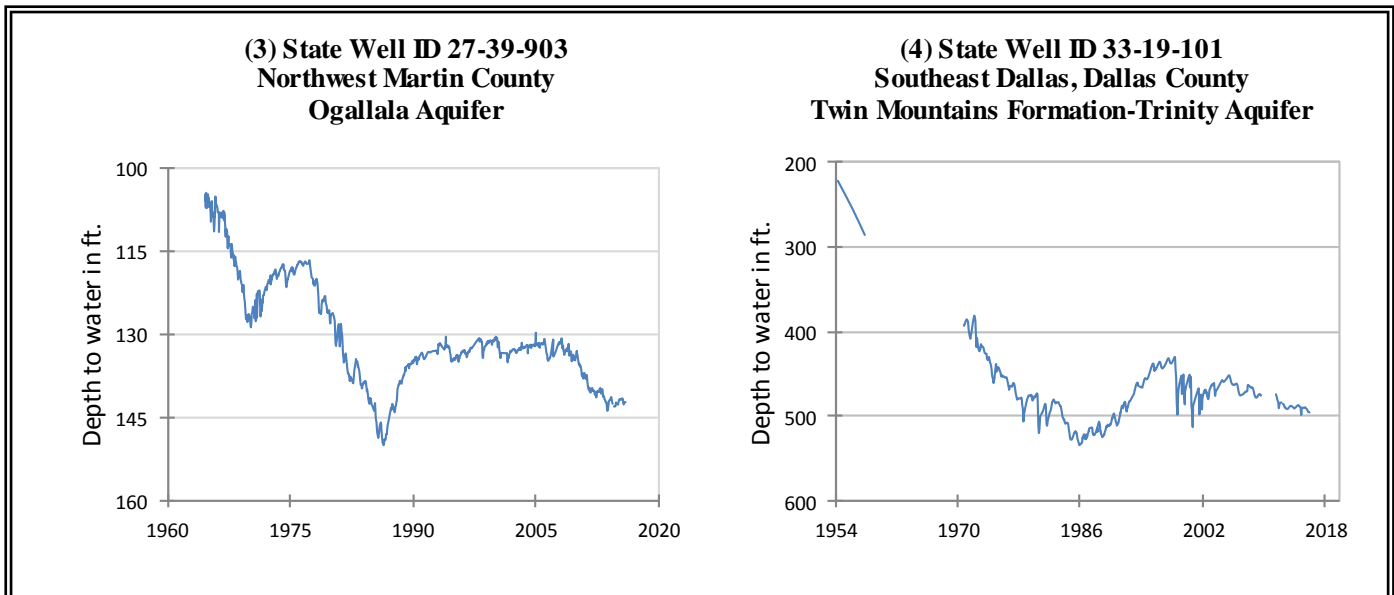
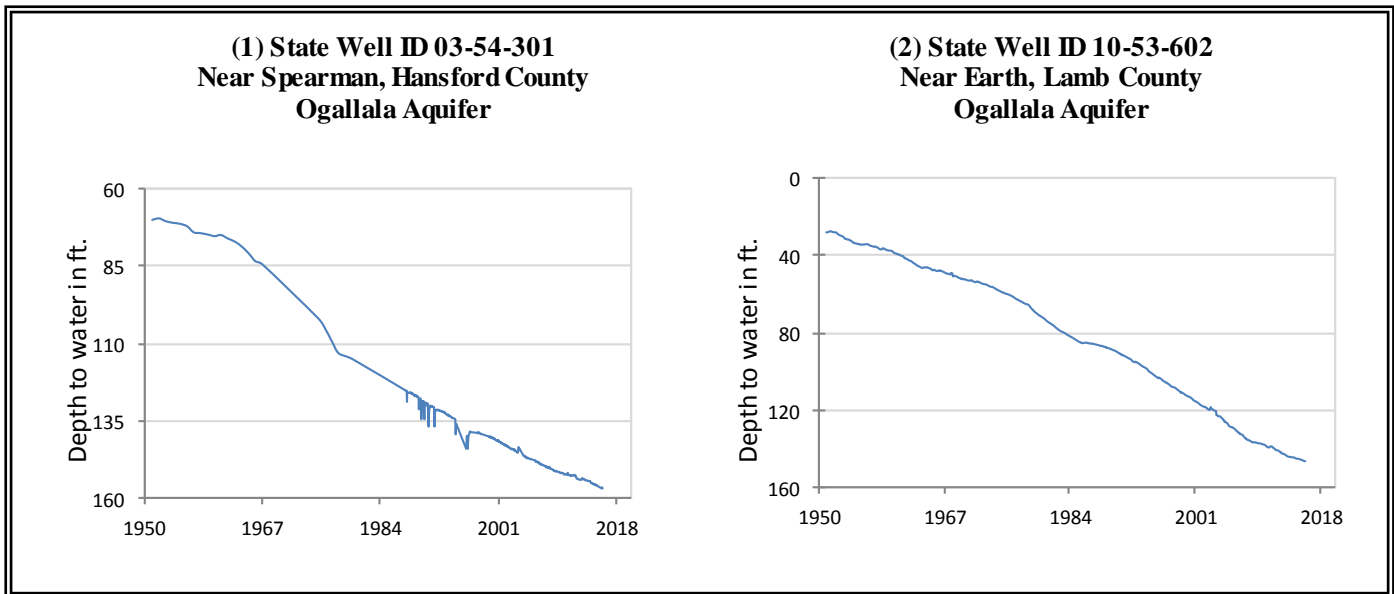
Water-level measurements were available for all of the seventeen key monitoring wells in the state. Water levels rose in thirteen of the monitoring wells since the beginning of December, ranging from 0.08 feet in the El Paso County Hueco-Mesilla Bolson Aquifer well to 8.74 feet in the Pecos County Edwards-Trinity (Plateau) Aquifer well. Water levels declined in three monitoring wells, ranging from 0.04 feet in the Lamb County Ogallala Aquifer well to 4.05 feet in the LaSalle County Carrizo-Wilcox Aquifer well. Water levels remained constant in the Martin County Ogallala Aquifer at 142.32 feet. The J-17 well in San Antonio recorded a water level of 64.11 feet below land surface or 666.89 feet above mean sea level. There are no restrictions currently in place for the San Antonio portion of the Edwards BFZ, with water levels at 7.11 feet above Stage I critical management levels, in that segment of the Edwards Aquifer.

*IDs used in this publication on the aquifer map to indicate the monitoring well location (IDs 1 - 17) are different than the TWDB's six- or seven-digit state well "identification" number.

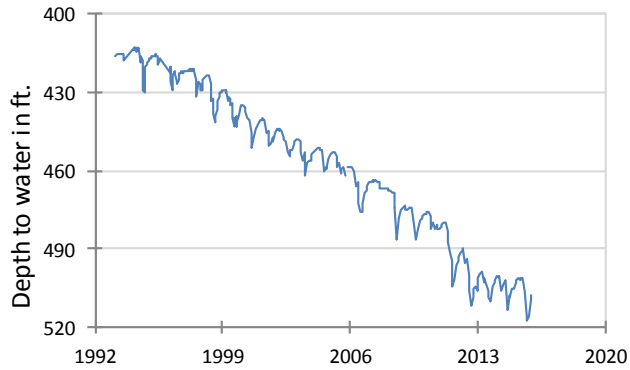
Monitoring Well	December	November	month change	year change	historical change	first measured
(1) Hansford 0354301	156.77	156.40	0.37	-1.01	-86.65	1951
(2) Lamb 1053602	146.29	146.25	-0.04	-1.27	-118.14	1951
(3) Martin 2739903	142.32	142.32	0	NA	-37.43	1964
(4) Dallas 3319101	495.87	495.23	-0.64	-5.21	-273.87	1954
(5) Coryell 4035404	507.72	509.45	1.73	-2.84	-215.72	1955
(6) Kendall 6802609	122.57	130.03	7.46	18.04	-62.57	1975
(7) Bell 5804816	119.34	120.65	1.31	6.44	3.79	2008
(8) Bexar 6837203	64.11	68.01	3.9	33.09	-17.47	1932
(9) Smith 3430907	434.55	436.74	2.19	1.1	-68.55	1987
(10) La Salle 7738103	472.14	468.09	-4.05	38.44	-219.07	2003
(11) Harris 6514409	189.37	189.81	0.44	1.87	-53.87*	1956
(12) Victoria 8017502	35.14	37.74	2.6	2.8	-1.14	1958
(13) El Paso 4913301	295.65	295.73	0.08	0.17	-63.75	1964
(14) Reeves 4644501	154.46	156.22	1.76	-0.47	-62.37	1952
(15) Pecos 5216802	193.38	202.12	8.74	7.52	53.5	1976
(16) Haskell 2135748	47.13	47.48	0.35	1.72	-4.13	2002
(17) Hudspeth 4807516	138.06	141.25	3.19	-1.02	-34.14	1966

*change since the original measurement of 135.5 feet below land surface in 1947 (measurement not shown on the hydrograph)

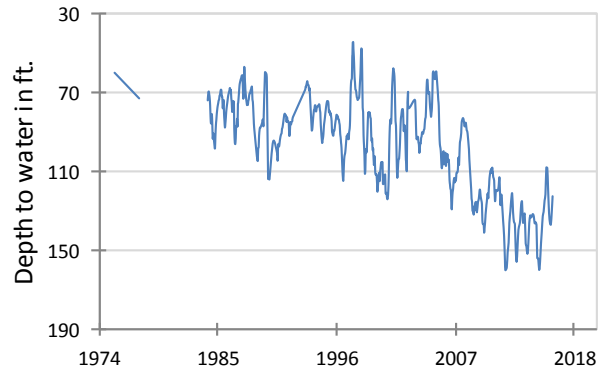
DECEMBER GROUNDWATER LEVELS IN OBSERVATION WELLS



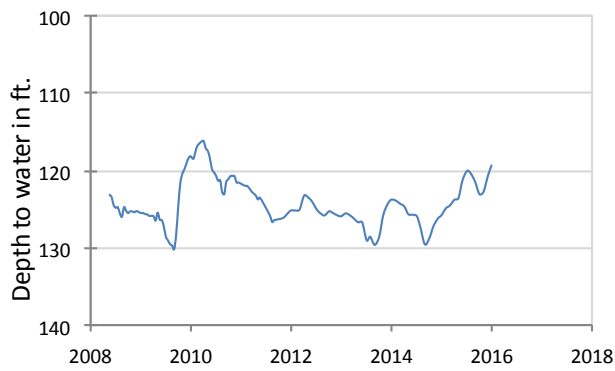
**(5) State Well ID 40-35-404
Gatesville, Coryell County
Hosston Formation-Trinity Aquifer**



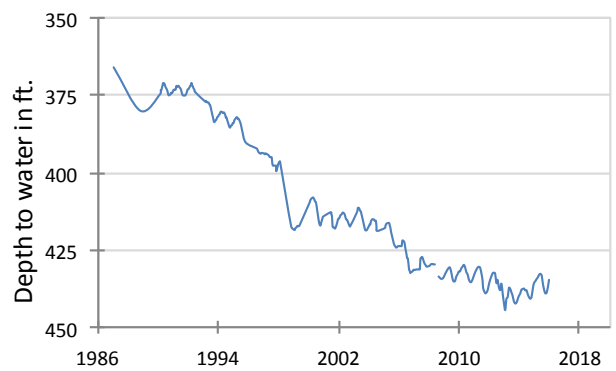
**(6) State Well ID 68-02-609
Waring, Kendall County
Cow Creek Formation-Trinity Aquifer**



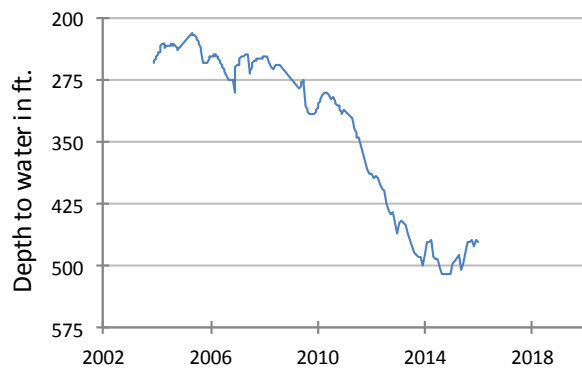
**(7) State Well ID 58-04-816
Near Salado, Bell County
Edwards (BFZ) Aquifer**



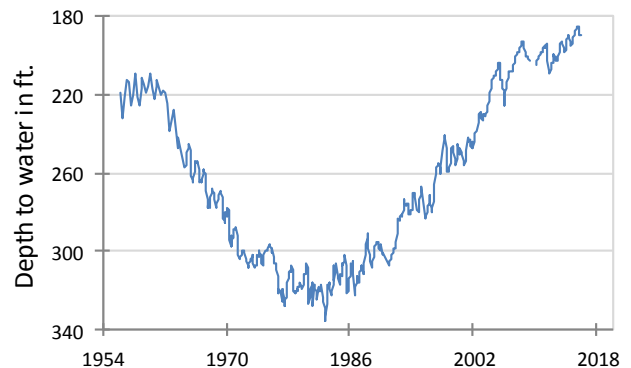
**(9) State Well ID 34-30-907
Red Springs, Smith County
Carrizo-Wilcox Aquifer**



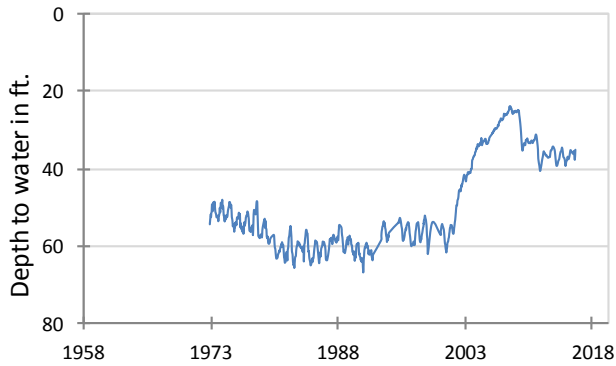
**(10) State Well ID 77-38-103
Near Cotulla, La Salle County
Carrizo-Wilcox Aquifer**



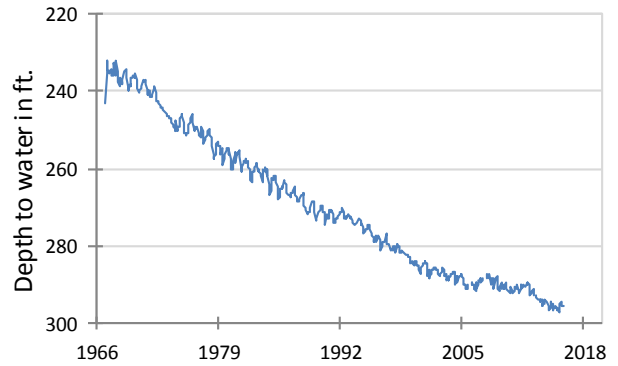
**(11) State Well ID 65-14-409
Alief, Harris County
Evangeline Formation-Gulf Coast Aquifer**



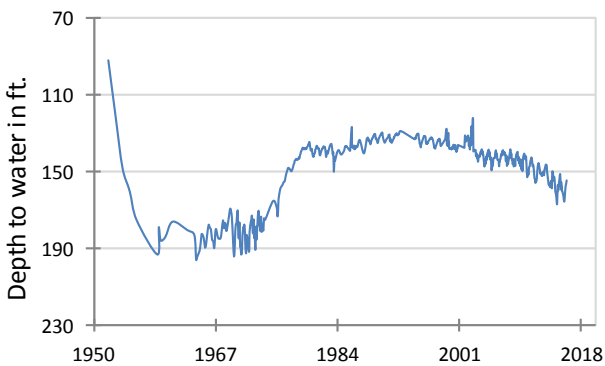
(12) State Well ID 80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



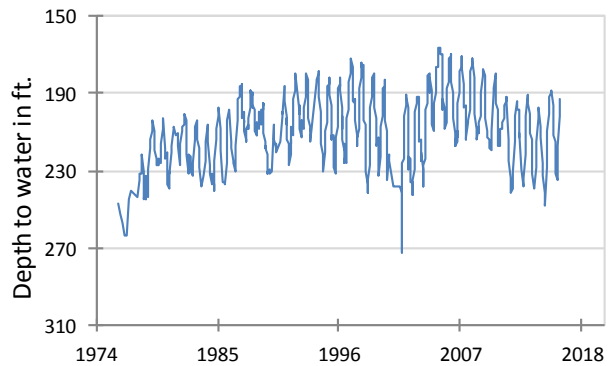
(13) State Well ID 49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolson Aquifer



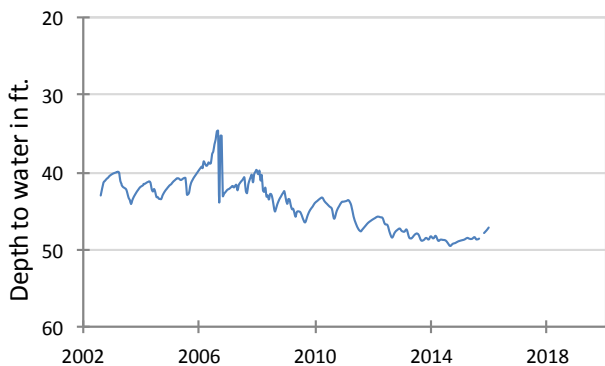
(14) State Well ID 46-44-501
Near Pecos, Reeves County
Pecos Valley Aquifer



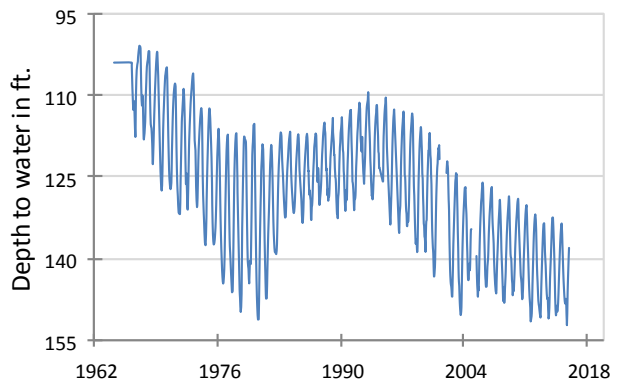
(15) State Well ID 52-16-802
Fort Stockton, Pecos County
Edwards-Trinity (Plateau) Aquifer



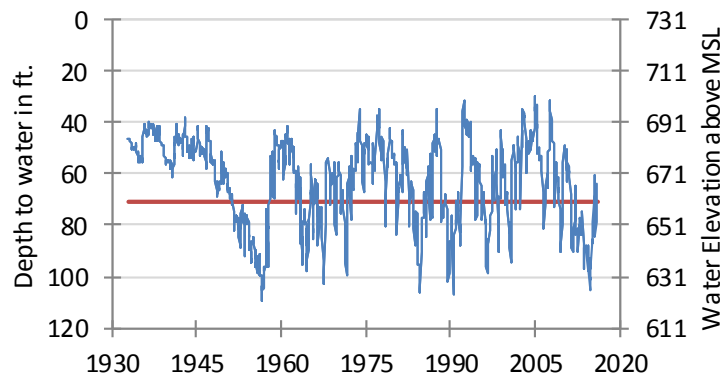
(16) State Well ID 21-35-748
Near O'Brien, Haskell County
Seymour Aquifer



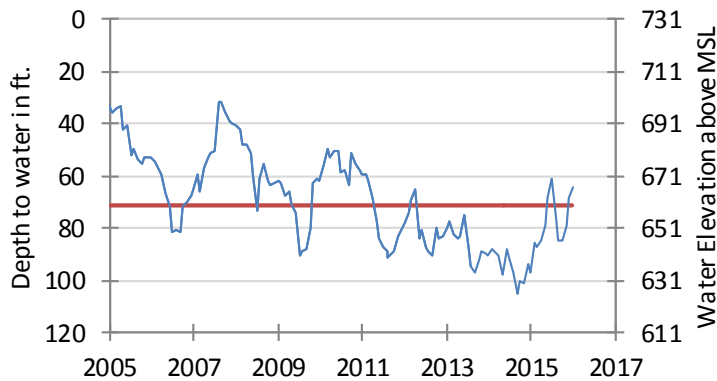
(17) State Well ID 48-07-516
Dell City, Hudspeth County
Bone Spring - Victorio Peak Aquifer



**(8) State Well ID 68-37-203 (J-17)
In San Antonio, Bexar County
Edwards (BFZ) Aquifer**

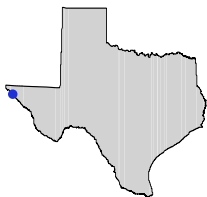


The late December water-level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above mean sea level, was 64.11 feet below land surface, or 666.89 feet above mean sea level. This was 3.9 feet above last month's measurement, 33.09 feet above last year's measurement, and 17.47 feet below the initial measurement recorded in 1932.



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

HYDROGRAPH OF THE MONTH

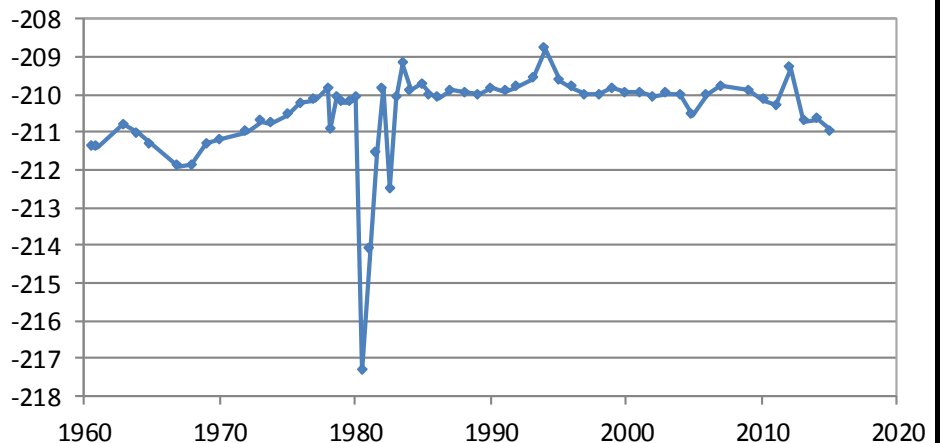


Each month this space features a new hydrograph (marked with the • symbol on the map) depicting different aquifers and different conditions in Texas.

Hueco-Mesilla Bolson Aquifer

Well # 4940104, 400 feet deep
unused, southern El Paso County

The Hueco-Mesilla Bolson Aquifer, located east and west of the Franklin Mountains in far West Texas, is recognized as a major aquifer. The aquifer is composed of basin-fill deposits of silt, sand, gravel, and clay in two basins, or bolsons: the Hueco Bolson, which has a maximum thickness of 9,000 feet, and the Mesilla Bolson, which has a maximum thickness of 2,000 feet. Although the Hueco and Mesilla bolsons share similar geology, very little water travels between them. The upper portion of the Hueco Bolson contains fresh to slightly saline water, ranging from less than 1,000 to 3,000 milligrams per liter of total dissolved solids. The Mesilla Bolson also contains fresh to saline water, ranging from less than 1,000 to 10,000 or more milligrams per liter of total dissolved solids. Its salinity typically increases to the south and in the shallower parts of the aquifer. In both aquifers, water-level declines have contributed to higher salinity.



The initial measurement of 211.4 feet below land surface was observed by the USGS in 1960. The well was continually measured by the USGS until the TWDB took over consistent measuring in 1978. Although there was a relatively sharp decline in the water level in 1980 with a few subsequent years of slight decline—possibly due to localized nearby pumping—the water level has since recovered and remained within a range of 2.19 feet since 1983.

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