

RESERVOIR STORAGE

August 2014

At the end of the month, total storage in 114 of the state's major water supply reservoirs was at 20.3 million acre-feet*, or 65% of their total conservation storage capacity. This is 742,812 acre-feet less than a month ago but 1.3 million acre-feet more than the storage at this time last year. Electra has been empty since the end of October, 2012.

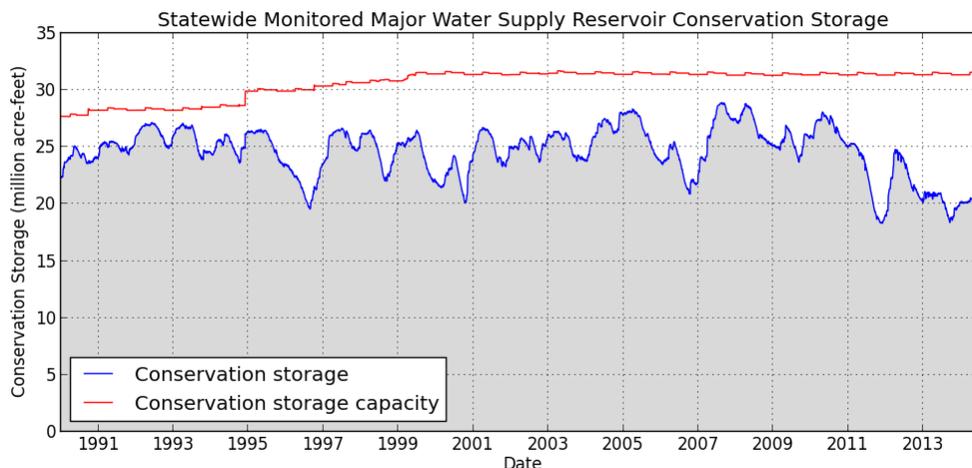
Two reservoirs, Mountain Creek Lake in the North Central region and Wright Patman Lake in the East region, held 100% of conservation storage capacity. Fourteen (14) reservoirs were below 10% full: Electra (0%), North Fork Buffalo Creek (1%), J. B. Thomas (1%), Palo Duro (2%), O. C. Fisher (2%), E.V. Spence (2%), Meredith (3%), Abilene (3%), White River (4%), Medina (4%), Twin Buttes (5%), Champion Creek (6%), Millers Creek (8%), and Mackenzie (8%).

Total combined storage was greater than 70% in the Upper Coast (92%) and East (94%) regions. The regions with the lowest percentage storage were the High Plains (5%) and Low Rolling Plains regions (21%). Storage declined in 7 regions and increased in 2 regions over the past month.

Elephant Butte reservoir held 153,617 acre-feet, or 8% of storage capacity. This is 18,950 acre-feet less 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 Aug		Change since end of Jul 2014		Change since end of Aug 2013	
		2014 (acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)	(%)
HIGH PLAINS							
Palo Duro Reservoir	61,066	1,508	2	-216	-0	-2,736	-4
Meredith, Lake (Texas)	500,000	22,983	5	2,420	0	22,983	5
Meredith, Lake (Texas & Oklahoma)	779,556	22,983	3	2,420	0	22,983	3
MacKenzie Reservoir	46,450	3,520	8	0	0	860	2
White River Lake	29,880	1,111	4	-104	-0	1,104	4
TOTAL	637,396	29,122	5	2,100	0	22,211	3
LOW ROLLING PLAINS							
Greenbelt Lake	59,968	7,842	13	197	0	-490	-1
*Electra, Lake	5,626	No Data					
N. Fork Buffalo Crk Reservoir	15,400	103	1	-48	-0	-177	-1
Kemp, Lake	268,811	71,556	27	278	0	880	0
Millers Creek Reservoir	26,768	2,257	8	-311	-1	-3,176	-12
Alan Henry Reservoir	94,808	53,451	56	-2,078	-2	-11,357	-12
Stamford, Lake	51,570	6,117	12	-894	-2	-3,622	-7
J B Thomas, Lake	199,931	1,850	1	-346	-0	-1,639	-1
Fort Phantom Hill, Lake	70,030	25,070	36	-1,841	-3	-9,136	-13
Sweetwater, Lake	12,267	1,843	15	-160	-1	-947	-8
Colorado City, Lake	30,758	7,220	23	-341	-1	-1,695	-6
Champion Creek Reservoir	41,580	2,558	6	-278	-1	No Data	
Abilene, Lake	7,900	267	3	1	0	-325	-4
Coleman, Lake	38,075	13,060	34	-653	-2	-3,579	-9
Hords Creek Lake	8,443	3,357	40	391	5	522	6
TOTAL	926,309	196,551	21	-6,083	-1	-26,899	-3
NORTH CENTRAL							
Nocona, Lake (Farmers Crk)	21,444	7,490	35	-266	-1	-2,149	-10
Hubert H Moss Lake	24,058	20,420	85	-168	-1	-337	-1
Texoma, Lake (Texas)	1,258,113	1,070,262	85	-8,855	-1	-183,749	-15
Texoma, Lake (Texas & Oklahoma)	2,525,281	1,070,262	42	-8,855	-0	-183,749	-7
*Pat Mayse Lake	113,683	92,852	82	-1,381	-1	3,032	3
Kickapoo, Lake	86,345	25,489	30	-1,548	-2	-5,410	-6
Arrowhead, Lake	230,359	47,365	21	-3,445	-1	-26,318	-11
Bonham, Lake	11,027	8,055	73	-262	-2	-1,337	-12
Crook, Lake	9,195	8,976	98	-219	-2	1,067	12
Amon G Carter, Lake	19,266	10,464	54	-528	-3	404	2
Ray Roberts, Lake	788,167	619,334	79	970	0	-10,982	-1
Jim Chapman Lake (Cooper)	260,332	114,340	44	-16,554	-6	18,522	7
Graham, Lake	45,288	19,206	42	-1,317	-3	-7,773	-17
*Lost Creek Reservoir	11,950	7,691	64	-155	-1	-1,464	-12
Bridgeport, Lake	366,236	147,490	40	-4,224	-1	-25,337	-7
Lewisville Lake	563,228	421,701	75	16,783	3	41,683	7
Lavon Lake	406,388	202,647	50	-1,553	-0	-16,843	-4
Hubbard Creek Reservoir	318,067	51,964	16	-4,385	-1	-40,142	-13
Possum Kingdom Lake	540,340	323,430	60	-7,171	-1	-56,014	-10
*Mineral Wells, Lake	6,760	3,584	53	-85	-1	-712	-11
Weatherford, Lake	17,812	10,514	59	305	2	-175	-1
Eagle Mountain Lake	179,880	113,853	63	-10,678	-6	-21,393	-12
Worth, Lake	33,495	22,663	68	230	1	-231	-1
Grapevine Lake	164,703	103,085	63	-4,659	-3	-10,549	-6
Ray Hubbard, Lake	452,040	285,714	63	-13,630	-3	-54,452	-12
New Terrell City Lake	8,583	7,152	83	-330	-4	1,342	16

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	Conservation Storage Capacity (acre-feet)	Conservation Storage end of Aug 2014 (acre-feet)	(%)	Change since end of Jul 2014 (acre-feet)	(%)	Change since end of Aug 2013 (acre-feet)	(%)
(North Central Continue)							
Palo Pinto, Lake	26,827	4,149	15	-866	-3	-7,498	-28
Benbrook Lake	85,648	59,699	70	-9,586	-11	-2,019	-2
Arlington, Lake	40,188	30,866	77	-1,849	-5	1,883	5
Joe Pool Lake	175,358	168,495	96	-295	-0	7,998	5
*Cisco, Lake	25,895	12,579	49	-424	-2	-3,199	-12
Leon, Lake	26,476	17,579	66	-937	-4	-6,183	-23
Granbury, Lake	128,046	82,361	64	-9,522	-7	2,675	2
Pat Cleburne, Lake	26,008	19,001	73	-889	-3	2,432	9
Waxahachie, Lake	10,780	8,709	81	-684	-6	578	5
Bardwell Lake	46,122	42,177	91	-1,801	-4	9,457	21
Proctor Lake	55,457	17,885	32	-1,864	-2	-11,625	-21
Whitney, Lake	553,344	383,222	69	-18,901	-3	42,833	8
Aquilla Lake	44,460	41,593	94	-2,867	-6	14,343	32
Navarro Mills Lake	49,827	44,949	90	-3,382	-7	7,764	16
*Halbert, Lake	6,033	3,917	65	-360	-6	111	2
Richland-Chambers Reservoir	1,087,839	751,549	69	-36,217	-3	24,418	2
*Brownwood, Lake	128,839	64,376	50	-680	-1	-15,147	-12
Waco, Lake	189,567	176,070	93	-9,642	-5	40,852	22
Limestone, Lake	208,014	194,135	93	-10,066	-5	61,342	29
Belton Lake	435,225	319,205	73	-17,541	-4	10,604	2
Stillhouse Hollow Lake	227,771	164,911	72	-6,988	-3	-10,305	-5
Georgetown, Lake	36,823	19,619	53	-1,052	-3	1,364	4
Granger Lake	50,779	49,437	97	-1,342	-3	4,431	9
Tawakoni, Lake	871,685	538,207	62	-18,395	-2	-63,959	-7
Mountain Creek, Lake	22,850	22,850	100	0	0	1,149	5
Squaw Creek, Lake	151,250	148,765	98	-752	-0	-2,485	-2
TOTAL	10,592,413	7,132,046	67	-196,241	-2	-263,371	-2
EAST							
Wright Patman Lake	231,496	231,496	100	0	0	0	0
*Sulphur Springs, Lake	17,747	16,434	93	-875	-5	2,168	12
Cypress Springs, Lake	66,756	65,021	97	-1,735	-3	7,526	11
Bob Sandlin, Lake	190,822	174,293	91	-7,235	-4	41,466	22
Caddo, Lake	29,898	21,282	71	-6,542	-22	5,422	18
Martin, Lake	75,116	70,920	94	-3,017	-4	14,677	20
Monticello, Lake	34,740	33,175	95	568	2	-1,565	-5
Fork Reservoir, Lake	605,061	487,093	81	-23,017	-4	23,636	4
O the Pines, Lake	268,566	251,703	94	-10,566	-4	76,131	28
Cedar Creek Reservoir in Trinity	644,686	504,503	78	-22,734	-4	42,578	7
Athens, Lake	29,435	27,672	94	-1,191	-4	4,975	17
Palestine, Lake	373,199	358,586	96	-9,573	-3	20,785	6
Tyler, Lake	73,161	68,508	94	-3,240	-4	17,388	24
Murvaul, Lake	38,285	36,887	96	-1,192	-3	3,096	8
Jacksonville, Lake	25,670	25,139	98	-484	-2	772	3
Nacogdoches, Lake	39,522	37,405	95	-1,078	-3	3,804	10
Houston County Lake	17,113	16,308	95	-766	-4	1,751	10
Sam Rayburn Reservoir	2,857,077	2,746,409	96	-110,668	-4	513,449	18
Toledo Bend Reservoir (Texas)	2,245,752	2,132,776	95	-63,616	-3	254,440	11
Toledo Bend Reservoir (TX & LA)	4,472,900	2,132,776	48	-63,616	-1	254,440	6
*Livingston, Lake	1,785,348	1,758,631	99	-26,717	-1	101,975	6
B A Steinhagen Lake	66,961	61,274	92	-416	0	-1,435	-2
Conroe, Lake	416,177	404,772	97	-11,405	-3	53,172	13
TOTAL	10,065,627	9,530,287	95	-305,083	-3	2,883,579	29

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	Conservation Storage Capacity (acre-feet)	Conservation Storage end of Aug 2014 (acre-feet)	(%)	Change since end of Jul 2014 (acre-feet)	(%)	Change since end of Aug 2013 (acre-feet)	(%)
TRANS-PECOS							
Red Bluff Reservoir	151,110	77,781	51	387	0	51,204	34
TOTAL	151,110	77,781	51	387	0	51,204	34
EDWARDS PLATEAU							
Oak Creek Reservoir	39,210	6,738	17	-471	-1	-2,297	-6
E V Spence Reservoir	517,272	7,793	2	-1,699	-0	-19,053	-4
O C Fisher Lake	119,445	1,909	2	-1,003	-1	997	1
*O H Ivie Reservoir	554,340	95,482	17	-6,714	-1	2,389	0
Twin Buttes Reservoir	182,454	9,433	5	-2,443	-1	9,433	5
Brady Creek Reservoir	28,808	8,541	30	-438	-2	-259	-1
Buchanan, Lake	816,904	307,428	38	-23,976	-3	11,340	1
Inks, Lake	13,962	12,915	93	-37	-0	83	1
Lyndon B Johnson, Lake	115,056	110,696	96	183	0	-490	-0
*Amistad Reservoir (Texas)	1,840,849	983,300	53	-5,489	-0	237,365	13
*Amistad Reservoir (TX & Mexico)	3,275,532	983,300	30	-5,489	-0	237,365	7
TOTAL	4,228,300	1,544,235	37	-42,087	-1	239,508	6
SOUTH CENTRAL							
Travis, Lake	1,113,348	366,299	33	-32,781	-3	25,177	2
*Austin, Lake	23,972	22,726	95	-16	-0	-62	-0
Somerville Lake	147,104	139,388	95	-7,499	-5	54,930	37
Canyon Lake	378,781	298,393	79	-9,070	-2	5,233	1
Medina Lake	254,823	10,176	4	-945	-0	-1,247	-0
*Coletto Creek Reservoir	31,040	23,524	76	-2,592	-8	-151	-0
TOTAL	1,949,068	860,506	44	-52,903	-3	83,880	4
UPPER COAST							
Houston, Lake	120,686	119,471	99	-1,215	-1	1,608	1
Texana, Lake	159,566	139,263	87	-11,598	-7	12,284	8
TOTAL	280,252	258,734	92	-12,813	-5	13,892	5
SOUTHERN							
Choke Canyon Reservoir	695,262	191,603	28	-11,571	-2	-62,995	-9
Corpus Christi, Lake	256,961	140,704	55	-14,788	-6	78,725	31
*Falcon Reservoir (Texas)	1,551,007	333,952	22	-80,462	-5	34,404	2
*Falcon Reservoir (TX & Mexico)	2,646,817	333,952	13	-80,462	-3	34,404	1
TOTAL	2,503,230	666,259	27	-106,821	-4	50,134	2
STATE TOTAL	31,471,264	20,299,844	65	-742,812	-2	1,325,444	4
* Conservation volume is used as conservation storage capacity because the dead storage is unknown.							
** No reading available. Last valid reading was near empty. Percentage estimated assuming current storage is zero.							
Elephant Butte Reservoir	1,973,358	153,617	8	18,950	1	62,821	3

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.

AUGUST RESERVOIR CONDITIONS

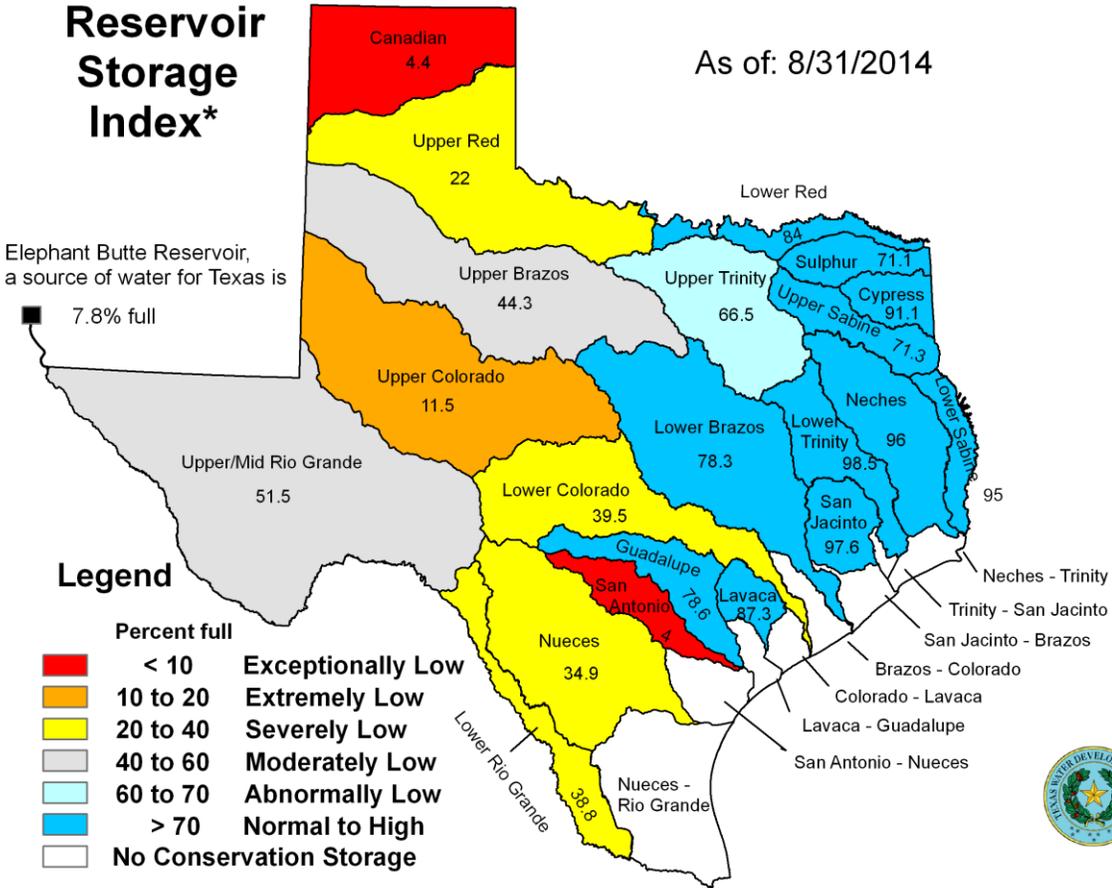
As of: 8/31/2014

Reservoir Storage Index*

Elephant Butte Reservoir, a source of water for Texas is 7.8% full

Legend

Percent full	Exceptional Status
< 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	

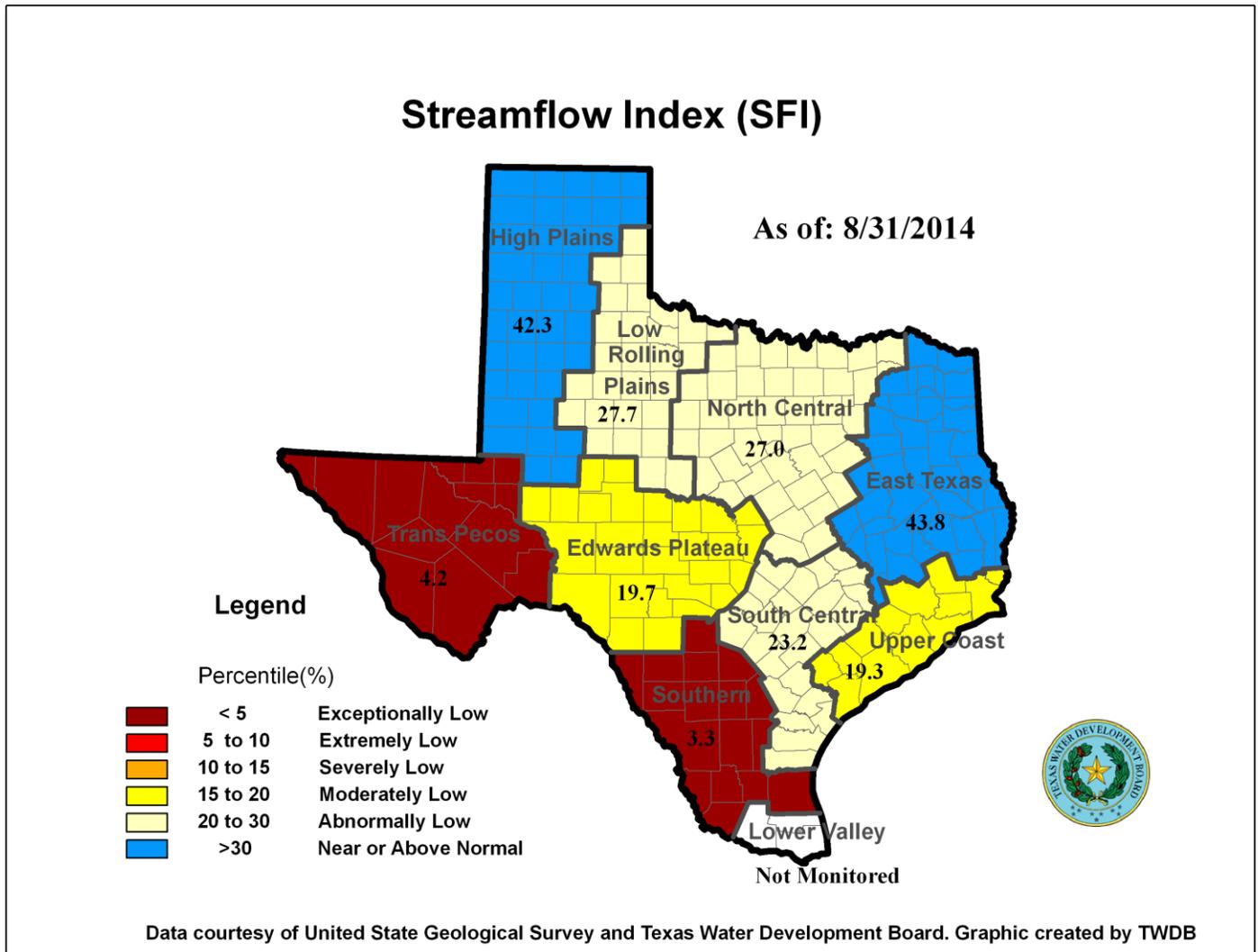


*Percent of combined conservation storage capacity of 114 major water supply reservoirs by sub-basin (dead pools are excluded)

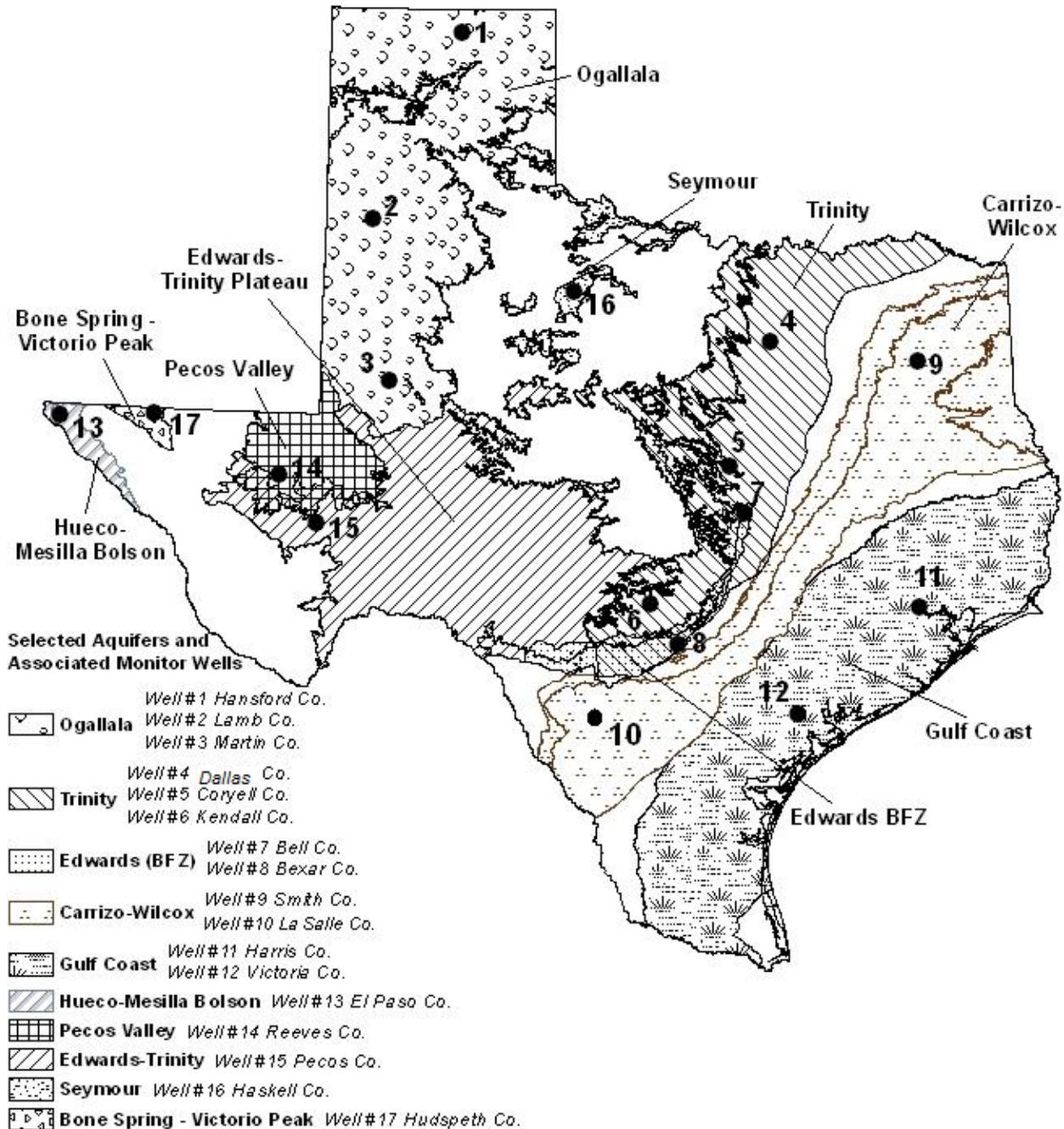
AUGUST STREAMFLOW CONDITIONS

Of 29 reporting index stations monitored this month, computed 30-day mean flows were exceptionally low (<5%) at 8 stations, extremely low (5-10%) at 3 stations, severely low (10-15%) at 0 station, moderately low (15-20%) at 1 station, abnormally low (20-30%) at 6 stations, and near normal (30% - 70%) at the remaining 11 stations. Compared to last month, flows have increased at 4 index stations and decreased at 22 stations.

On a regional basis, flows in this month at index stations were exceptionally low in the Trans-Pecos region and Southern regions, moderately low in Edwards Plateau and Upper Coast regions, abnormally low in Low Rolling Plains, North Central, and South Central regions, but near or above normal in all other regions. Streamflow in the Lower Valley region is not monitored.



AUGUST 2014 GROUNDWATER LEVELS IN OBSERVATION WELLS



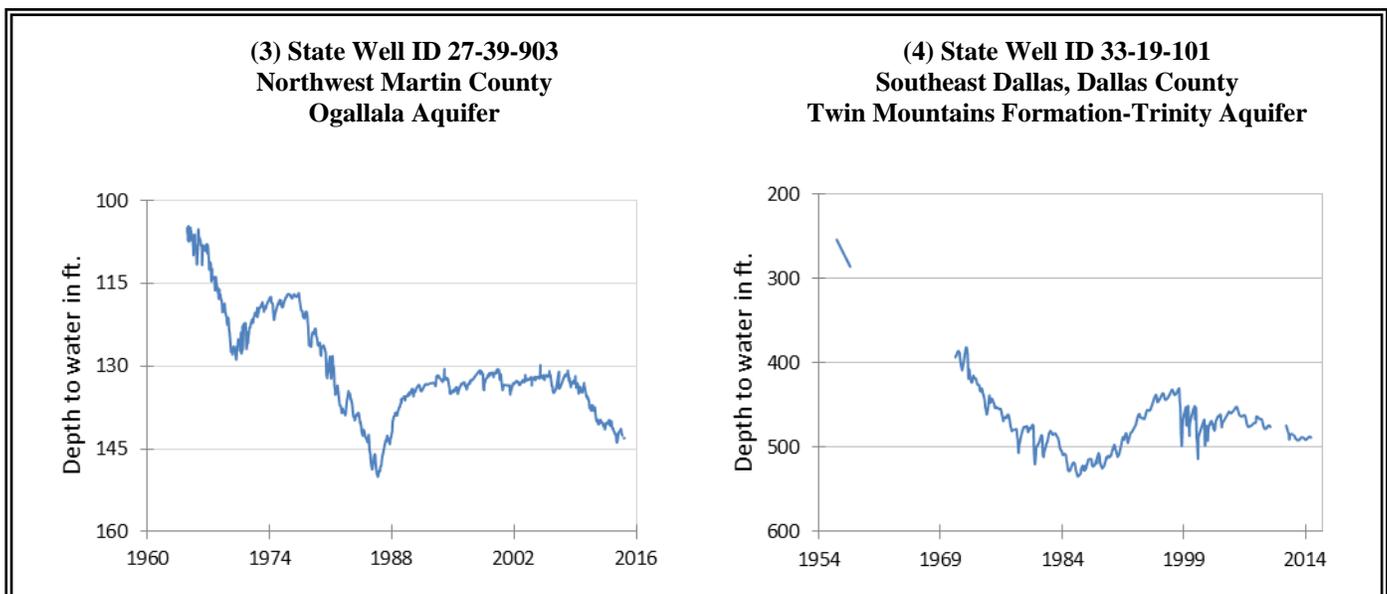
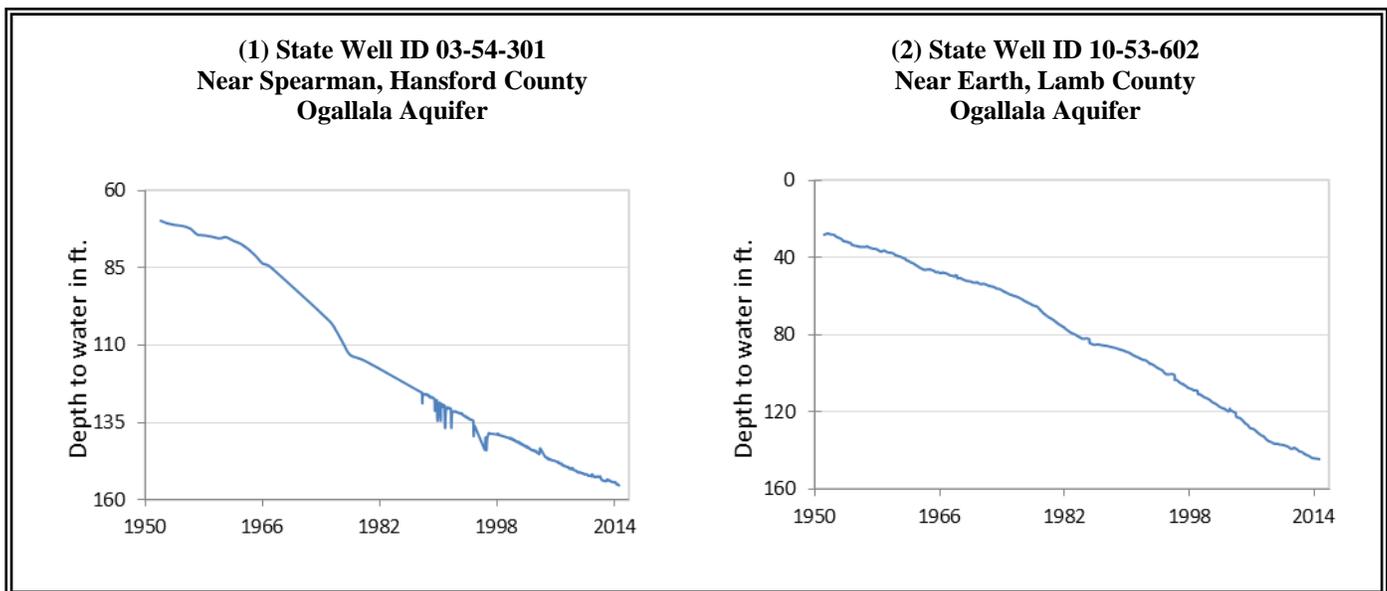
August, 2014

Water level measurements were available for all of the seventeen key monitoring wells in the state. Water levels rose in one of the monitoring wells since the beginning of August with a 0.06 foot increase in the Martin County Ogallala Aquifer well. Water levels declined in sixteen monitoring wells, ranging from 0.02 feet in the Hansford County Ogallala Aquifer well to 11.26 feet in the Coryell County Hosston Formation -Trinity Aquifer well. The J-17 well in San Antonio recorded a water level of 105 feet below land surface or 626 feet above mean sea level. This water level is 14 feet below the Stage III critical management level in that segment of the Edwards Aquifer. Stage III restrictions were declared by the EAA when the ten-day average fell below the 640-foot elevation, or 91 feet below land surface.

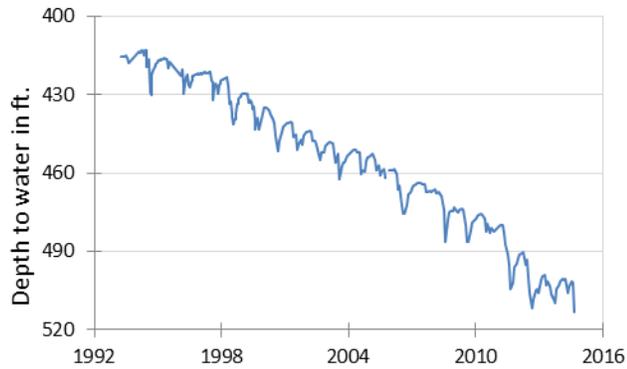
* ID is used in this publication to differentiate between the monitoring well number (1 - 17) as displayed on the aquifer map and the TWDB's six- or seven-digit state well "identification" number.

Monitoring Well	August	July	month change	year change	historical change	first measured
(1) Hansford 0354301	155.34	155.32	-0.02	-1.2	-85.22	1951
(2) Lamb 1053602	144.7	144.55	-0.15	-0.84	-116.55	1951
(3) Martin 2739903	143.01	143.07	0.06	-0.7	-38.12	1964
(4) Dallas 3319101	488.5	487.31	-1.19	-0.29	-266.5	1954
(5) Coryell 4035404	513.14	501.88	-11.26	-4.81	-221.14	1955
(6) Kendall 6802609	154.12	153.85	-0.27	-2.36	-94.12	1975
(7) Bell 5804816	129.52	127.28	-2.24	0.07	-6.39	2008
(8) Bexar 6837203	105	97.2	-7.8	-7.8	-58.36	1932
(9) Smith 3430907	440.13	439.11	-1.02	1.4	-74.13	1987
(10) La Salle 7738103	510.24	503.02	-7.22	-22.53	-257.17	2003
(11) Harris 6514409	194.8	193.95	-0.85	1.75	-59.3	1956
(12) Victoria 8017502	37.23	36.95	-0.28	0.3	-3.23	1958
(13) El Paso 4913301	295	294.48	-0.52	0.25	-63.1	1967
(14) Reeves 4644501	166.61	164.04	-2.57	-8.66	-74.52	1952
(15) Pecos 5216802	247.58	241.94	-5.64	-8.81	-0.7	1976
(16) Haskell 2135748	49.51	49.09	-0.42	-0.72	-8.18	2002
(17) Hudspeth 4807516	149.8	148.73	-1.07	1.28	-45.88	1964

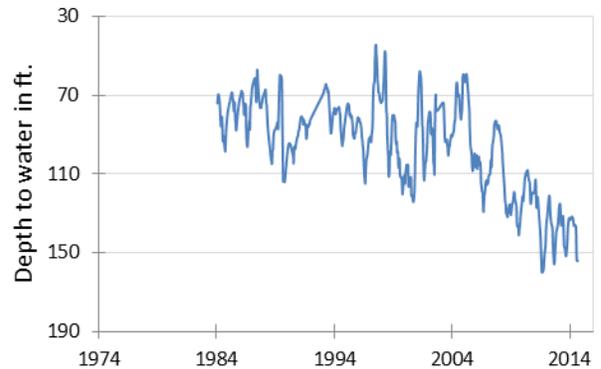
AUGUST GROUNDWATER LEVELS IN OBSERVATION WELLS



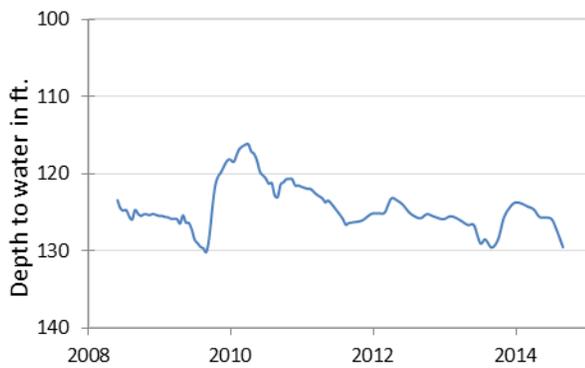
**(5) State Well ID 40-35-404
Gatesville, Coryell County
Hosston Formation-Trinity Aquifer**



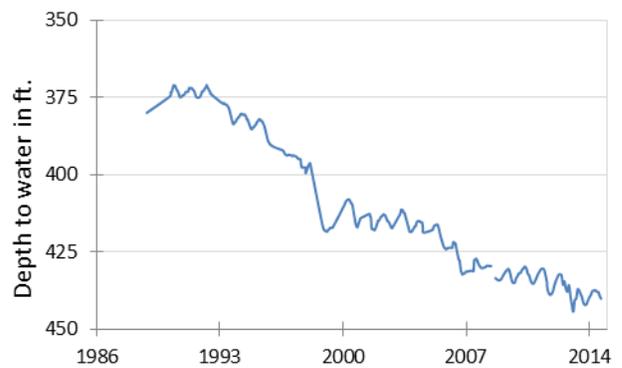
**(6) State Well ID 68-02-609
Waring, Kendall County
Cow Creek Formation-Trinity Aquifer**



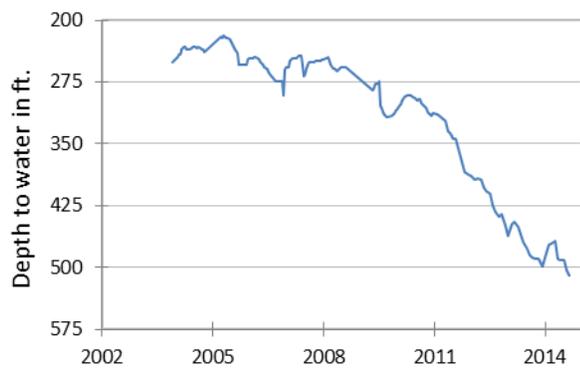
**(7) State Well ID 58-04-816
Near Salado, Bell County
Edwards (BFZ) Aquifer**



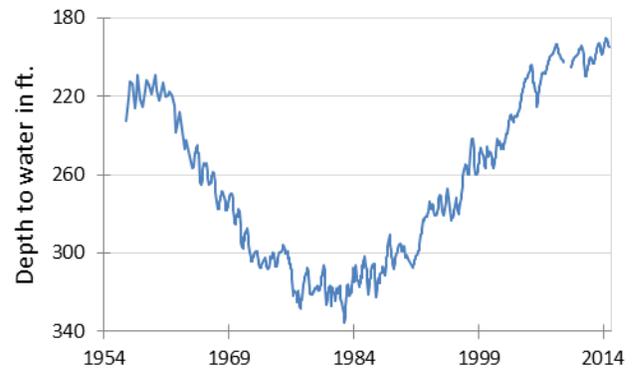
**(9) State Well ID 34-30-907
Red Springs, Smith County
Carrizo-Wilcox Aquifer**



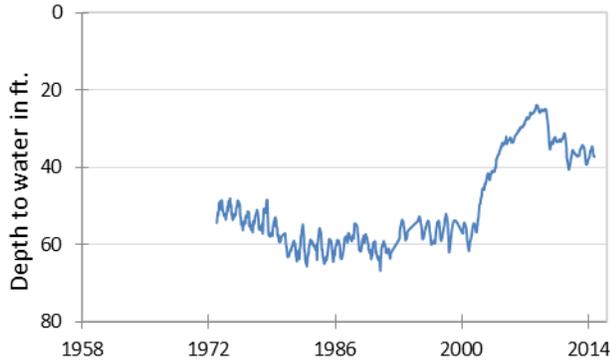
**(10) State Well ID 77-38-103
Near Cotulla, La Salle County
Carrizo-Wilcox Aquifer**



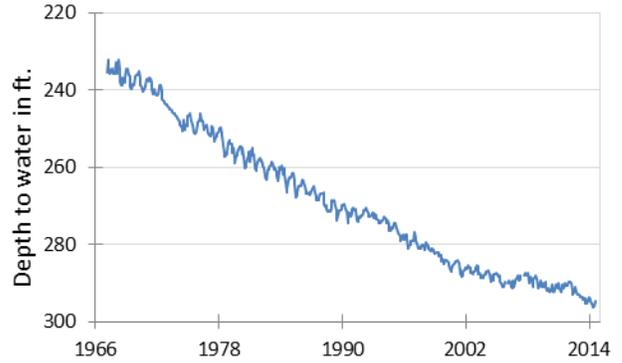
**(11) State Well ID 65-14-409
Alief, Harris County
Evangeline Formation-Gulf Coast Aquifer**



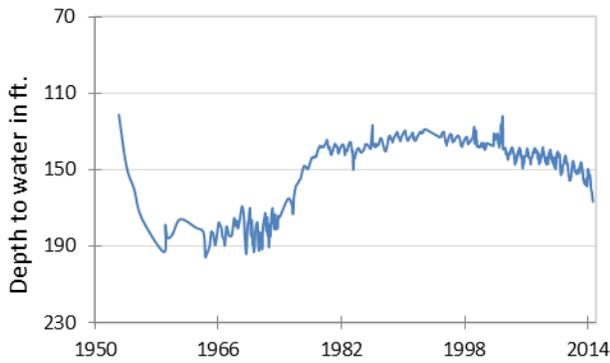
(12) State Well ID 80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



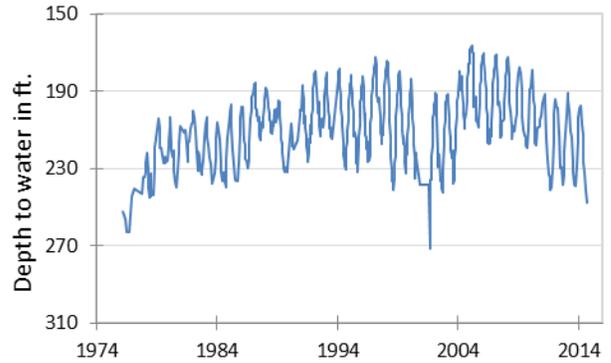
(13) State Well ID 49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolson Aquifer



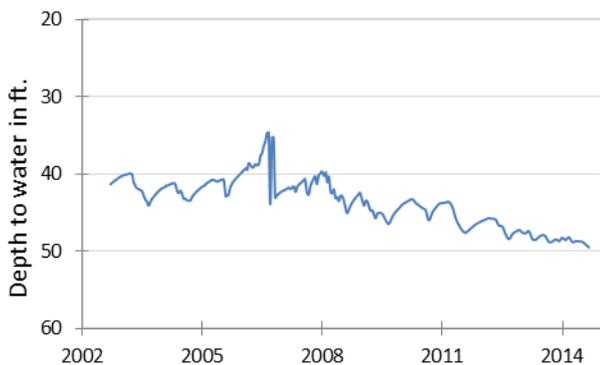
(14) State Well ID 46-44-501
Near Pecos, Reeves County
Pecos Valley Aquifer



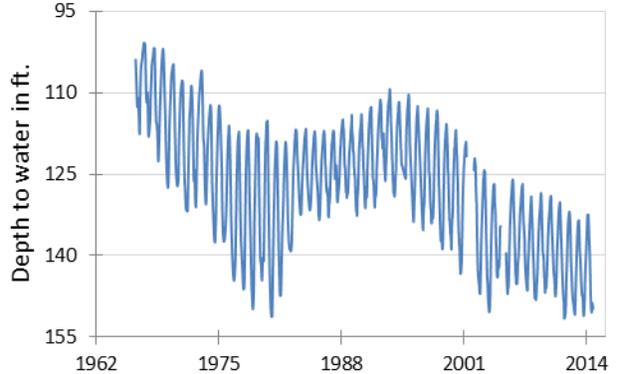
(15) State Well ID 52-16-802
Fort Stockton, Pecos County
Edwards-Trinity (Plateau) Aquifer



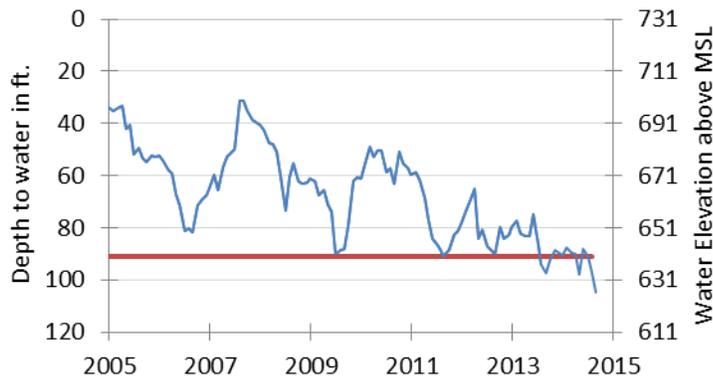
(16) State Well ID 21-35-748
Near O'Brien, Haskell County
Seymour Aquifer



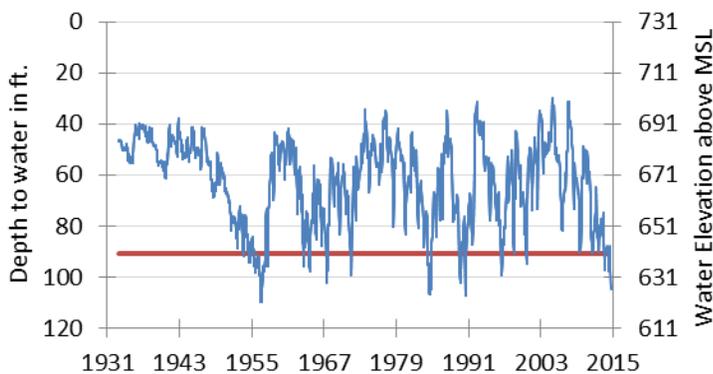
(17) State Well ID 48-07-516
Dell City, Hudspeth County
Bone Spring - Victorio Peak Aquifer



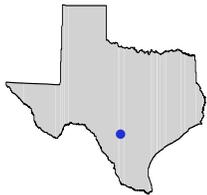
**(8) State Well ID 68-37-203 (J-17)
In San Antonio, Bexar County
Edwards (BFZ) Aquifer**



The late August water level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above mean sea level, was 105 feet below land surface, or 626 feet above mean sea level. This was 7.8 feet below last month's measurement, 7.8 feet below last year's measurement, and 58.36 feet below the initial measurement recorded in 1932.



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



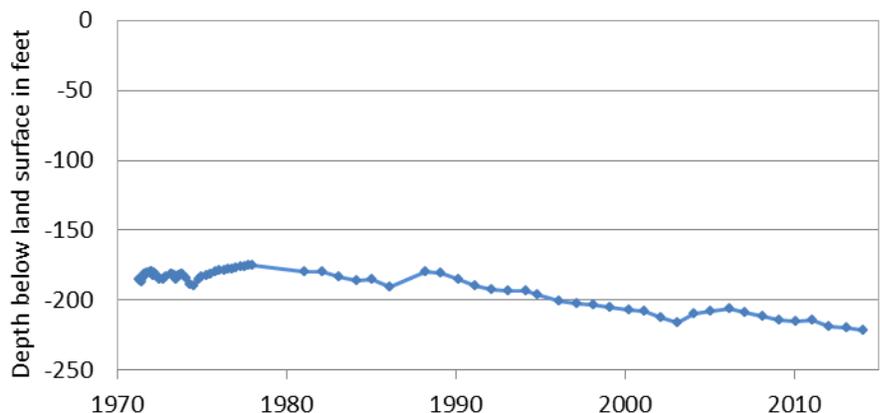
HYDROGRAPH OF THE MONTH

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

Carrizo(-Wilcox) Aquifer

The Carrizo-Wilcox Aquifer is a major aquifer extending from the Louisiana border to the border of Mexico adjacent to and northwest of the Gulf Coast Aquifer. It consists of the Wilcox group and the overlying Carrizo Formation of the Claiborne Group. The aquifer is primarily composed of sand locally interbedded with gravel, silt, clay, and lignite. The groundwater, although hard, is generally fresh and typically contains less than 500 milligrams per liter of total dissolved solids in the outcrop, whereas softer groundwater with total dissolved solids of more than 1,000 milligrams per liter occurs in the subsurface. Throughout the aquifer, irrigation accounts for slightly more than half the water pumped, particularly in the southwest portion (Wintergarden area), and pumping for municipal supply accounts for another 40 percent. In the past five years, pumping for rig supply has locally affected groundwater levels in areas with more oil and gas drilling activity.

**Well # 6961525, 283 feet deep
unused, northeast Zavala County**



Drilled as an observation well by the TWDB in 1971, this well has 76 water level measurements to date. The water level remained relatively unchanged since 1971, although a gradual decline has occurred since the early 1990s.

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