

RESERVOIR STORAGE

September 2015

At the end of the month, total storage in 114* of the state's major water supply reservoirs was at 24.94 million acre-feet**, or 79% of their total conservation storage capacity. This is 879,138 acre-feet less than a month ago but 4.88 million acre-feet more than the storage at this time last year.

Eight (8) reservoirs held 100% of conservation storage capacity, primarily in the North Central (5) region. Four (4) reservoirs remain below 10% full: Palo Duro (3%), Abilene (3%), Twin Buttes (6%), E.V. Spence (7%).

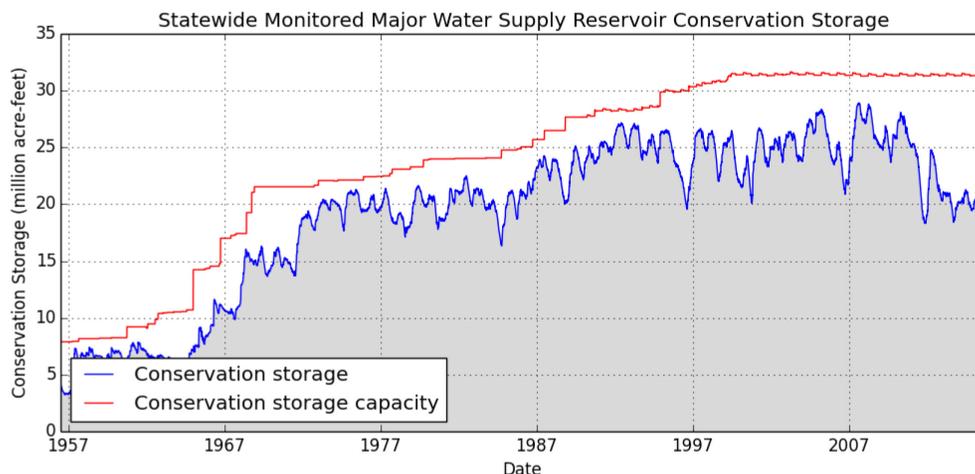
Total combined storage was greater than 70% in the Upper Coast (94%), East (92%), North Central (92%), Trans-Pecos (88%) and South Central (81%) regions. The regions with the lowest percentage storage were the High Plains (19%), Edwards Plateau (47%) and Southern (46%). Storage declined in 8 regions and increased in 1 region over the past month.

Elephant Butte reservoir held 168,339 acre-feet, or 9% of storage capacity. This is 18,232 acre-feet less than a month ago.

* Nasworthy Reservoir has been added and Lake Electra removed from our report beginning in August 2015.

** 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 Sept		Change since end of Aug 2015		Change since end of Sept 2014	
		2015 (acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)	(%)
HIGH PLAINS							
Palo Duro Reservoir	61,066	1,582	3	-257	-0	249	0
Meredith, Lake (Texas)	500,000	103,635	21	-1,961	-0	77,538	16
Meredith, Lake (Texas & Oklahoma)	779,556	103,635	13	-1,961	-0	77,538	10
MacKenzie Reservoir	46,450	7,585	16	-184	-0	4,099	9
White River Lake	29,880	9,962	33	-626	-2	8,080	27
TOTAL	637,396	122,764	19	-3,028	-0	89,966	14
LOW ROLLING PLAINS							
Greenbelt Lake	59,968	12,557	21	-487	-1	5,018	8
N. Fork Buffalo Crk Reservoir	15,400	10,910	71	-652	-4	10,849	70
Kemp, Lake	245,307	175,337	71	-17,390	-7	104,291	43
Millers Creek Reservoir	26,768	24,095	90	-1,174	-4	21,997	82
Alan Henry Reservoir	94,808	90,410	95	-2,191	-2	17,515	18
Stamford, Lake	51,570	43,975	85	-3,100	-6	37,913	74
J B Thomas, Lake	199,931	148,333	74	-4,186	-2	54,774	27
Fort Phantom Hill, Lake	70,030	42,702	61	-2,041	-3	18,961	27
Sweetwater, Lake	12,267	1,337	11	-134	-1	-426	-3
Colorado City, Lake	30,758	8,900	29	-493	-2	1,847	6
Champion Creek Reservoir	41,580	5,431	13	-331	-1	2,839	7
Abilene, Lake	7,900	266	3	-	0	-2	-0
Coleman, Lake	38,075	25,899	68	-1,077	-3	13,342	35
Hords Creek Lake	8,443	3,192	38	-143	-2	-57	-1
TOTAL	902,805	593,344	66	-33,399	-4	288,861	32
NORTH CENTRAL							
Nocona, Lake (Farmers Crk)	21,444	19,810	92	-718	-3	12,610	59
Hubert H Moss Lake	24,058	22,476	93	-493	-2	2,360	10
Texoma, Lake (Texas)	1,258,113	1,183,248	94	-74,865	-6	126,785	10
Texoma, Lake (Texas & Oklahoma)	2,525,281	1,183,248	47	-74,865	-3	126,785	5
*Pat Mayse Lake	113,683	107,326	94	-2,994	-3	6,951	6
Kickapoo, Lake	86,345	78,137	90	-3,533	-4	54,273	63
Arrowhead, Lake	230,359	214,297	93	-9,017	-4	168,850	73
Bonham, Lake	11,027	8,671	79	-663	-6	573	5
Crook, Lake	9,195	7,778	85	-222	-2	-1,281	-14
Amon G Carter, Lake	19,266	18,262	95	-715	-4	8,281	43
Ray Roberts, Lake	788,167	788,167	100	-	0	182,808	23
Jim Chapman Lake (Cooper)	260,332	228,246	88	-13,365	-5	128,613	49
Graham, Lake	45,288	39,917	88	-1,879	-4	21,753	48
*Lost Creek Reservoir	11,950	11,459	96	-264	-2	3,967	33
Bridgeport, Lake	366,236	323,954	88	-20,850	-6	180,912	49
Lewisville Lake	563,228	563,228	100	-	0	165,420	29
Lavon Lake	406,388	343,389	84	-29,275	-7	153,090	38
Hubbard Creek Reservoir	318,067	103,309	32	-5,521	-2	54,583	17
Possum Kingdom Lake	523,873	504,135	96	-13,385	-3	178,512	34
*Mineral Wells, Lake	6,760	6,152	91	-329	-5	2,731	40
Weatherford, Lake	17,812	14,373	81	-1,103	-6	4,730	27
Eagle Mountain Lake	179,880	163,809	91	-4,312	-2	62,009	34
Worth, Lake	33,495	29,009	87	-229	-1	6,518	19
Grapevine Lake	164,703	164,703	100	-	0	65,873	40
Ray Hubbard, Lake	452,040	399,990	88	-21,645	-5	132,987	29
New Terrell City Lake	8,583	7,670	89	-425	-5	926	11

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	Conservation Storage Capacity (acre-feet)	Conservation Storage end of Sept 2015 (acre-feet)	(%)	Change since end of Aug 2015 (acre-feet)	(%)	Change since end of Sept 2014 (acre-feet)	(%)
(North Central Continue)							
Palo Pinto, Lake	26,766	22,622	85	-1,755	-7	19,157	72
Benbrook Lake	85,648	61,299	72	-10,705	-12	1,865	2
Arlington, Lake	40,188	30,393	76	-419	-1	3,582	9
Joe Pool Lake	175,358	172,332	98	-3,026	-2	8,458	5
*Cisco, Lake	25,895	17,671	68	-619	-2	5,447	21
Leon, Lake	26,476	23,762	90	-1,154	-4	6,922	26
Granbury, Lake	125,756	121,016	96	-4,436	-4	46,100	37
Pat Cleburne, Lake	26,008	21,534	83	-1,419	-5	3,517	14
Waxahachie, Lake	10,780	8,924	83	-154	-1	1,097	10
Bardwell Lake	46,122	42,815	93	-2,495	-5	2,232	5
Proctor Lake	55,457	51,796	93	no data		34,810	63
Whitney, Lake	553,344	498,966	90	-25,406	-5	132,648	24
Aquilla Lake	44,460	38,810	87	-2,164	-5	-1,000	-2
Navarro Mills Lake	49,827	45,220	91	-3,065	-6	2,413	5
*Halbert, Lake	6,033	4,871	81	-122	-2	1,031	17
Richland-Chambers Reservoir	1,087,839	1,042,502	96	-35,933	-3	322,245	30
*Brownwood, Lake	128,839	117,677	91	-4,733	-4	55,570	43
Waco, Lake	189,418	171,421	90	-8,175	-4	3,983	2
Limestone, Lake	208,014	173,438	83	-10,848	-5	-13,200	-6
Belton Lake	435,225	425,455	98	-9,770	-2	115,366	27
Stillhouse Hollow Lake	227,771	220,000	97	-3,990	-2	59,216	26
Georgetown, Lake	36,823	26,107	71	-4,505	-12	6,392	17
Granger Lake	50,779	50,409	99	-370	-1	-370	-1
Tawakoni, Lake	871,685	824,852	95	-19,041	-2	308,662	35
Mountain Creek, Lake	22,850	22,850	100	23	0	114	0
Squaw Creek, Lake	151,250	151,250	100	-	0	3,047	2
TOTAL	10,628,903	9,739,507	92	-360,083	-3	2,854,138	27
EAST							
Wright Patman Lake	231,496	227,442	98	-4,054	-2	-4,054	-2
*Sulphur Springs, Lake	17,747	14,831	84	-789	-4	-987	-6
Cypress Springs, Lake	66,756	61,613	92	-1,096	-2	-3,216	-5
Bob Sandlin, Lake	190,822	175,778	92	-3,405	-2	6,230	3
Caddo, Lake	29,898	29,718	99	-180	-1	no data	
Martin, Lake	75,116	64,657	86	-4,171	-6	-1,847	-2
Monticello, Lake	34,740	34,091	98	-161	-0	-526	-2
Fork Reservoir, Lake	605,061	554,705	92	-19,287	-3	90,568	15
O the Pines, Lake	268,566	253,147	94	-13,188	-5	12,841	5
Cedar Creek Reservoir in Trinity	644,686	583,239	90	-22,681	-4	100,608	16
Athens, Lake	29,503	26,780	91	-926	-3	168	1
Palestine, Lake	373,199	337,166	90	-13,868	-4	-13,009	-3
Tyler, Lake	72,073	62,893	87	-3,147	-4	-3,636	-5
Murvaul, Lake	38,285	33,139	87	-1,706	-4	-2,672	-7
Jacksonville, Lake	25,670	23,797	93	-604	-2	-762	-3
Nacogdoches, Lake	39,522	34,049	86	-1,528	-4	-2,239	-6
Houston County Lake	17,113	15,237	89	-456	-3	-1,465	-9
Sam Rayburn Reservoir	2,857,077	2,681,357	94	-140,900	-5	63,531	2
Toledo Bend Reservoir (Texas)	2,236,450	1,914,820	86	-127,710	-6	-141,316	-6
Toledo Bend Reservoir (TX & LA)	4,472,900	1,914,820	43	-127,710	-3	-141,316	-3
*Livingston, Lake	1,785,348	1,785,348	100	-	0	52,584	3
B A Steinhagen Lake	66,961	61,173	91	-3,277	-5	101	0
Conroe, Lake	416,177	387,136	93	-7,106	-2	-18,995	-5
TOTAL	10,122,266	9,362,116	92	-370,240	-4	131,907	1

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	Conservation Storage Capacity (acre-feet)	Conservation Storage end of Sept 2015 (acre-feet)	(%)	Change since end of Aug 2015 (acre-feet)	(%)	Change since end of Sept 2014 (acre-feet)	(%)
TRANS-PECOS							
**Red Bluff Reservoir	151,110	132,902	88	23,060	15	-18,208	-12
TOTAL	151,110	132,902	88	23,060	15	-18,208	-12
EDWARDS PLATEAU							
Oak Creek Reservoir	39,210	9,936	25	-666	-2	3,468	9
E V Spence Reservoir	517,272	36,015	7	-2,202	-0	21,142	4
O C Fisher Lake	115,742	11,359	10	-1,487	-1	10,274	9
*O H Ivie Reservoir	554,340	75,617	14	-6,728	-1	-16,836	-3
Twin Buttes Reservoir	182,454	10,077	6	-1,250	-1	2,141	1
Nasworthy	9,615	7,612	79	-571	-6	-	-
Brady Creek Reservoir	28,808	9,194	32	-602	-2	913	3
Buchanan, Lake	816,904	572,824	70	-14,252	-2	278,166	34
Inks, Lake	13,962	13,013	93	-37	-0	113	1
Lyndon B Johnson, Lake	115,249	110,697	96	183	0	914	1
*Amistad Reservoir (Texas)	1,840,849	1,132,579	62	-19,793	-1	32,574	2
*Amistad Reservoir (TX & Mexico)	3,275,532	1,132,579	35	-19,793	-1	32,574	1
TOTAL	4,224,790	1,981,311	47	-44,940	-1	335,225	8
SOUTH CENTRAL							
Travis, Lake	1,113,348	858,542	77	-28,710	-3	487,313	44
*Austin, Lake	23,972	22,818	95	46	0	-124	-1
Somerville Lake	147,104	146,454	100	-650	-0	6,854	5
Canyon Lake	378,781	357,597	94	-12,762	-3	62,142	16
Medina Lake	254,823	168,946	66	-12,806	-5	159,413	63
*Coletto Creek Reservoir	31,040	27,719	89	-1,070	-3	5,576	18
TOTAL	1,949,068	1,582,076	81	-55,952	-3	721,174	37
UPPER COAST							
Houston, Lake	120,686	120,686	100	-	0	-	0
Texana, Lake	159,566	141,863	89	-2,095	-1	7,485	5
TOTAL	280,252	262,549	94	-2,095	-1	7,485	3
SOUTHERN							
Choke Canyon Reservoir	695,262	246,203	35	-9,841	-1	58,518	8
Corpus Christi, Lake	256,961	217,886	85	-12,293	-5	82,269	32
*Falcon Reservoir (Texas)	1,551,007	695,859	45	-10,327	-1	328,666	21
*Falcon Reservoir (TX & Mexico)	2,646,817	695,859	26	-10,327	-0	328,666	12
TOTAL	2,503,230	1,159,948	46	-32,461	-1	469,453	19
STATE TOTAL	31,399,820	24,936,517	79	-879,138	-3	4,880,001	16

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

** Nov 11/27 2013 – 12/02 2014 data were not available. End of Nov 2013 storage was estimated.

Elephant Butte Reservoir	1,973,358	168,339	9	-18,232	-1	-3,620	-0
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Note:

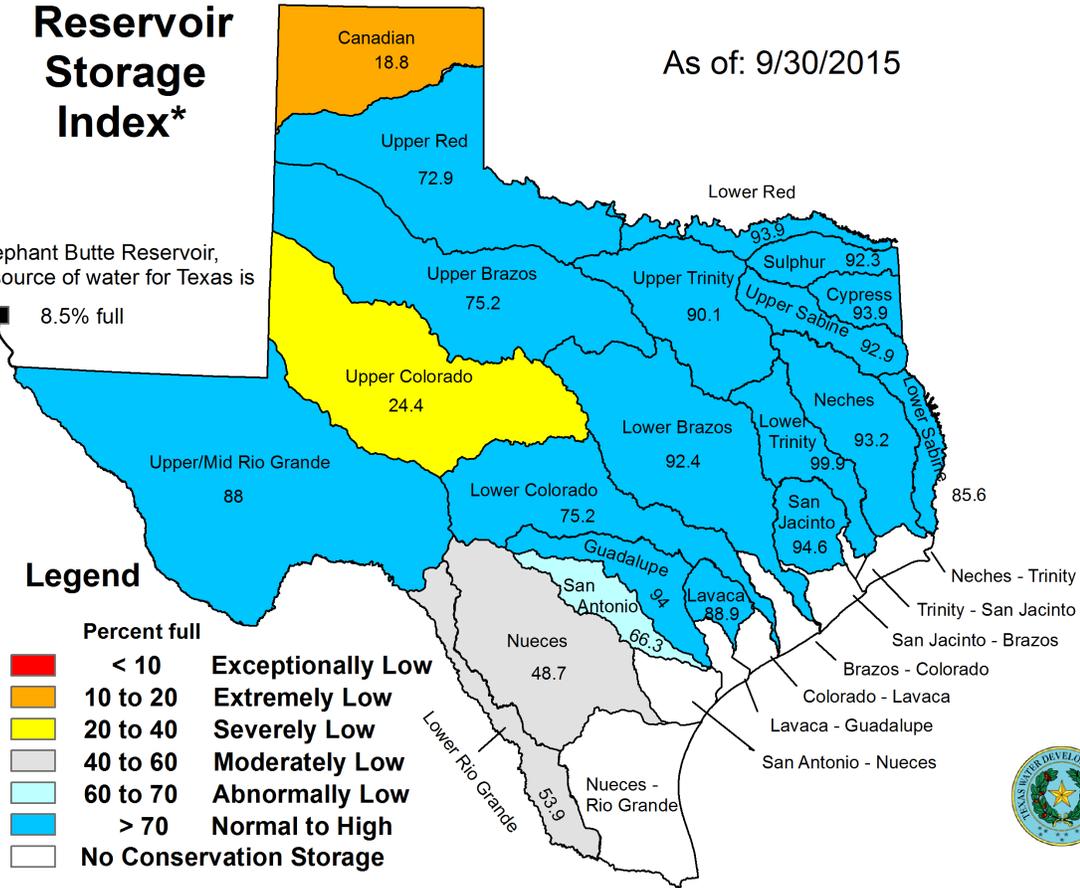
Conservation storage capacity is the space available to store water above the lowest outlet and below the top of conservation pool, or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included is any water in flood control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

SEPTEMBER RESERVOIR CONDITIONS

As of: 9/30/2015

Reservoir Storage Index*

Elephant Butte Reservoir, a source of water for Texas is 8.5% full



Legend

Percent full	Condition
< 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	



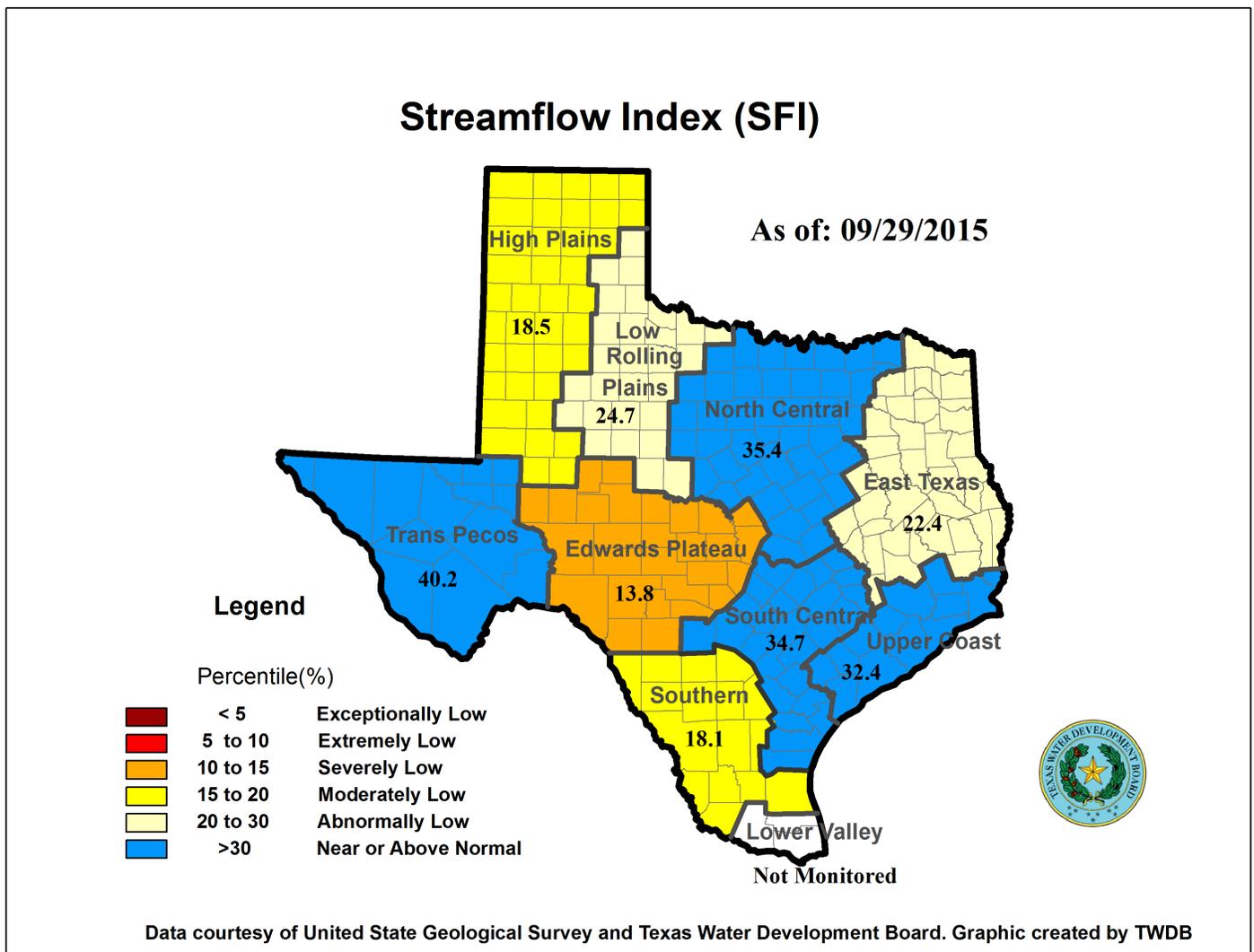
*Percent of combined conservation storage capacity of 114 major water supply reservoirs by sub-basin (dead pools are excluded)

SEPTEMBER STREAMFLOW CONDITIONS

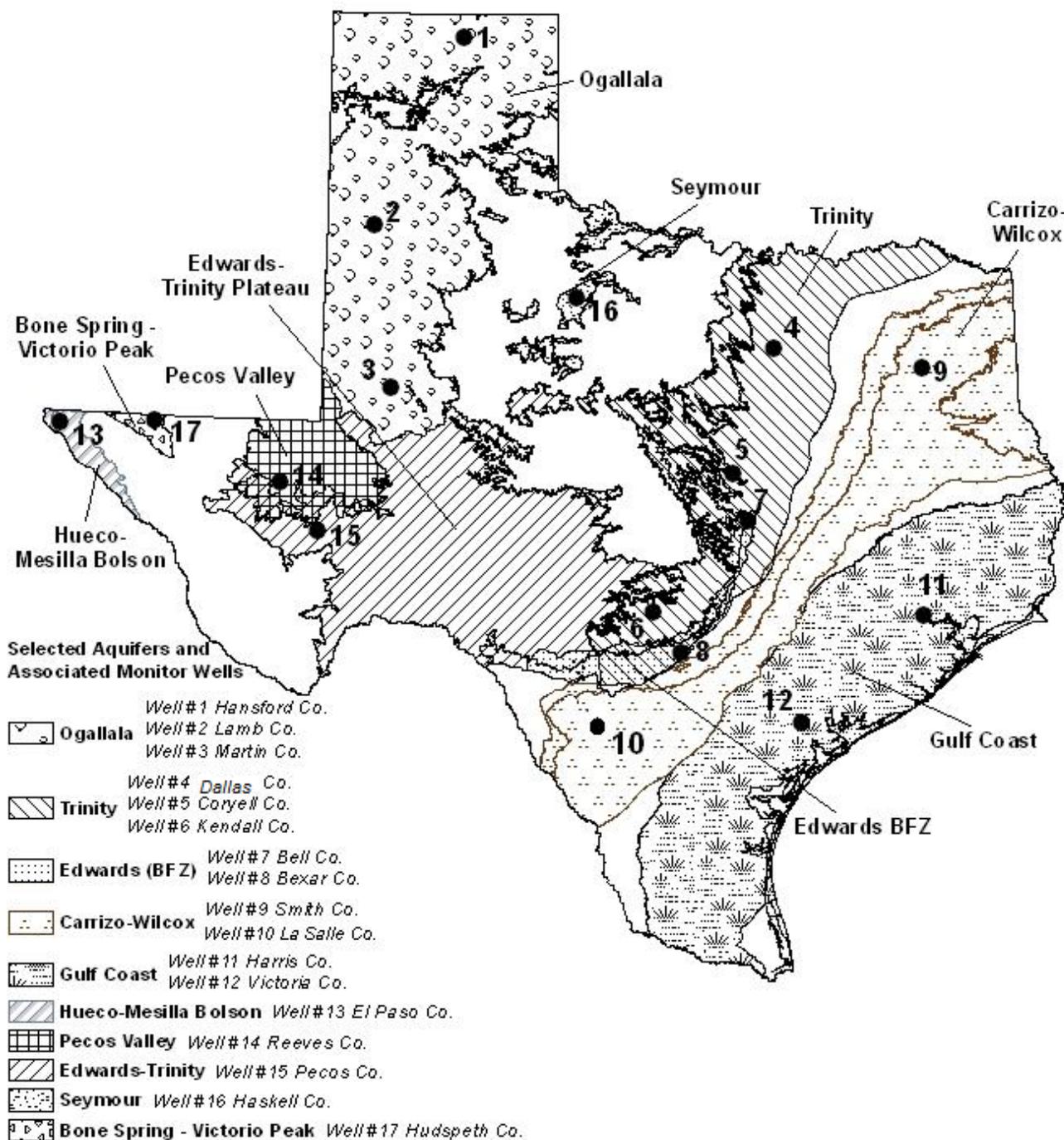
The computed 30-day mean flow status for 29 reporting index stations monitored this month is presented below:

Flow Status	Number of Stations
Normal to High (>30%)	10
Abnormally Low (20-30%)	9
Moderately Low (15-20%)	2
Severely Low (10-15%)	3
Extremely Low (5-10%)	3
Exceptionally Low (<5%)	2

Compared with last month, flows increased at 4 index stations but decreased at 25 index stations. On a regional basis, flows in this month at index stations were severely low in 1 region, moderately low in 2 regions, abnormally low in 2 regions, and near or above normal in 4 regions. Streamflow in the Lower Valley region is not monitored.



SEPTEMBER 2015 GROUNDWATER LEVELS IN OBSERVATION WELLS



September, 2015

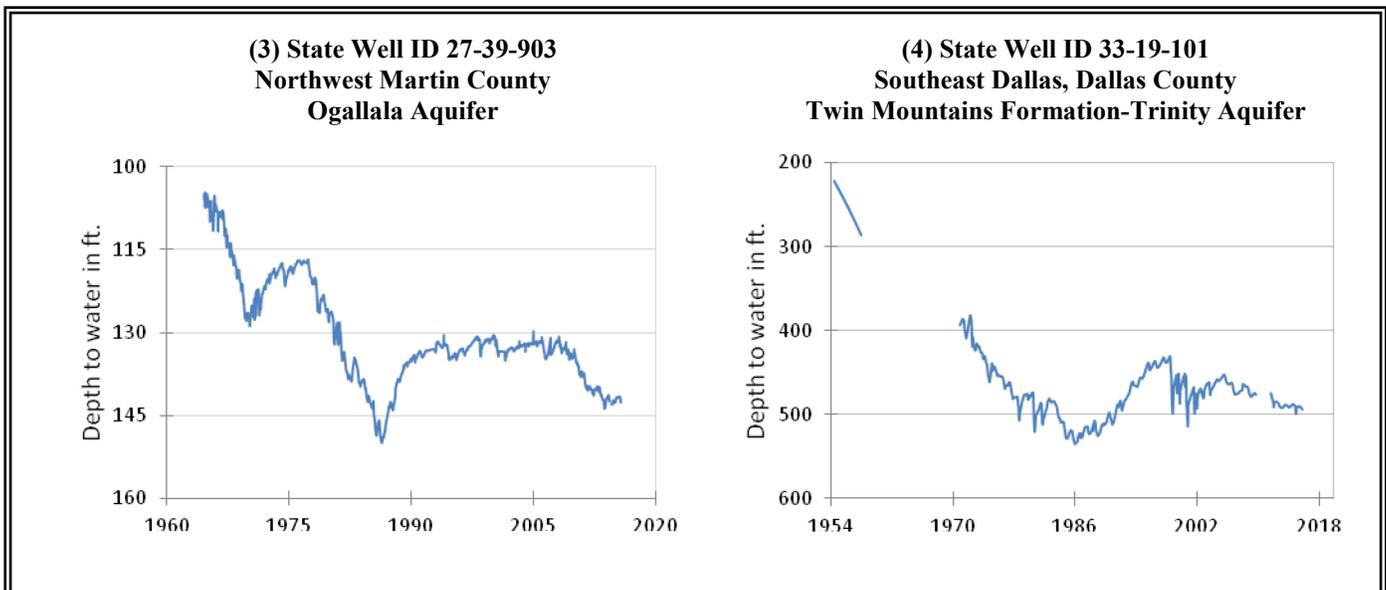
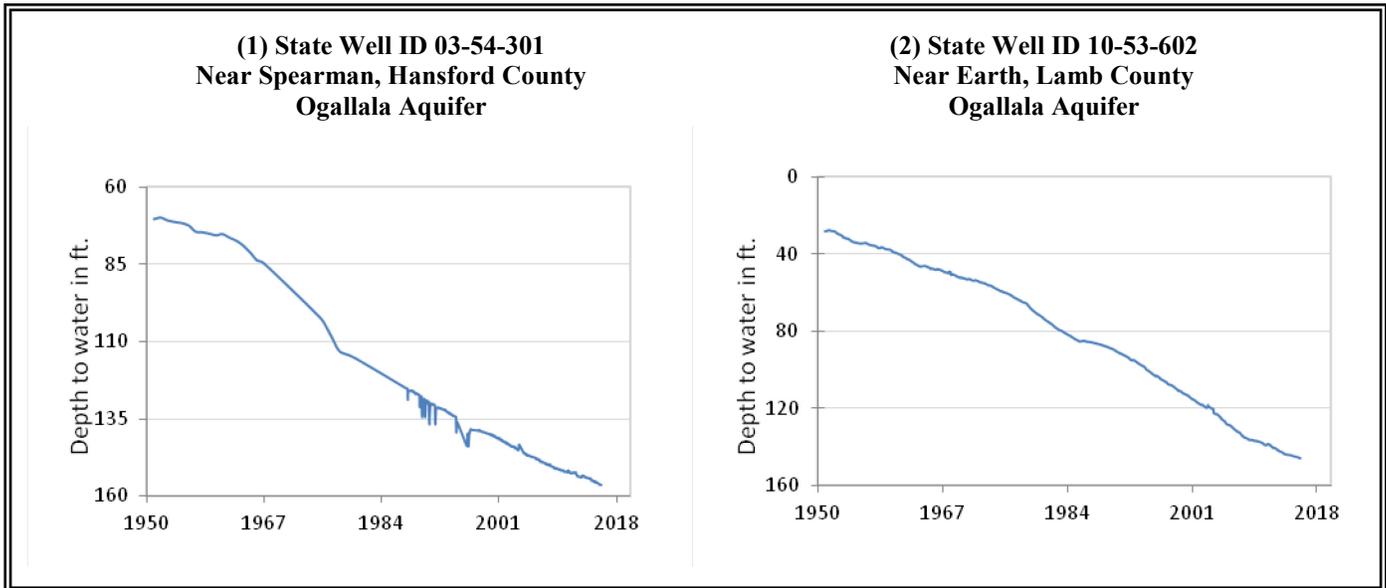
Water level measurements were available for sixteen of the seventeen key monitoring wells in the state. Water levels rose in four of the monitoring wells since the beginning of September, ranging from 0.09 feet in the Bexar County Edwards (BFZ) Aquifer well to 3.55 feet in the Reeves County Pecos Valley Aquifer well. Water levels declined in twelve monitoring wells, ranging from 0.09 feet in the Victoria County Gulf Coast Aquifer well to 5.27 feet in the Kendall County Cow Creek Formation - Trinity Aquifer well. The J-17 well in San Antonio recorded a water level of 84.31 feet below land surface or 646.69 feet above mean sea level. Stage II restrictions are currently in place for the San Antonio portion of the Edwards BFZ, with water levels at 3.31 feet below Stage II 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.

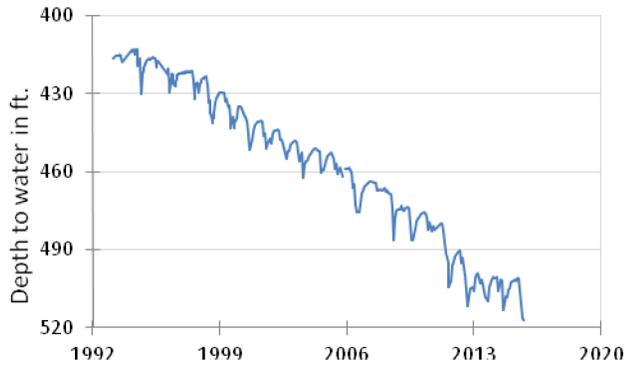
Monitoring Well	September	August	month change	year change	historical change	first measured
(1) Hansford 0354301	156.57	156.43	-0.14	-1.33	-86.45	1951
(2) Lamb 1053602	146.01	145.88	-0.13	-1.16	-117.86	1951
(3) Martin 2739903	142.7	141.76	-0.94	0.36	-37.81	1964
(4) Dallas 3319101	493.55	492.17	-1.38	-4.59	-271.55	1954
(5) Coryell 4035404	517.12	516.02	-1.1	-9.24	-225.12	1955
(6) Kendall 6802609	136.11	130.84	-5.27	23.84	-76.11	1975
(7) Bell 5804816	123.05	121.39	-1.66	5.68	0.08	2008
(8) Bexar 6837203	84.31	84.4	0.09	16.09	-37.67	1932
(9) Smith 3430907	438.94	437.69	-1.25	1.71	-72.94	1987
(10) La Salle 7738103	469.27	471.85	2.58	41.19	-216.2	2003
(11) Harris 6514409	189.73	187.43	-2.3	4.82	-54.23*	1956
(12) Victoria 8017502	36.15	36.06	-0.09	1.69	-2.15	1958
(13) El Paso 4913301	294.18	294.46	0.28	1.0	-62.28	1964
(14) Reeves 4644501	161.96	165.51	3.55	-4.85	-69.87	1952
(15) Pecos 5216802	234.53	231.81	-2.72	-6.71	12.35	1976
(16) Haskell 2135748	NA	48.56	NA	NA	NA	2002
(17) Hudspeth 4807516	152.3	147.55	-4.75	-4.13	-48.38	1966

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

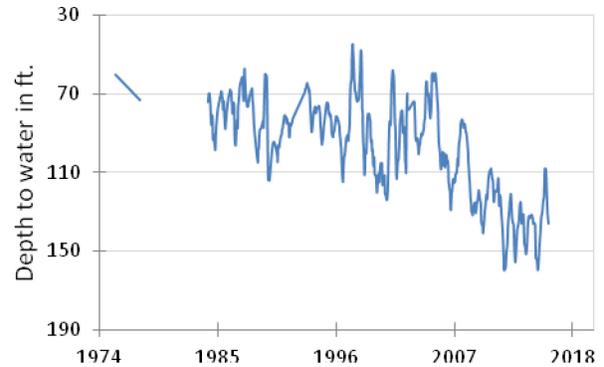
SEPTEMBER GROUNDWATER LEVELS IN OBSERVATION WELLS



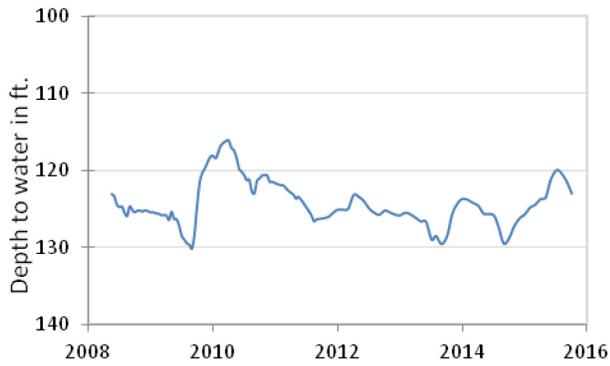
**(5) State Well ID 40-35-404
Gatesville, Coryell County
Hosston Formation-Trinity Aquifer**



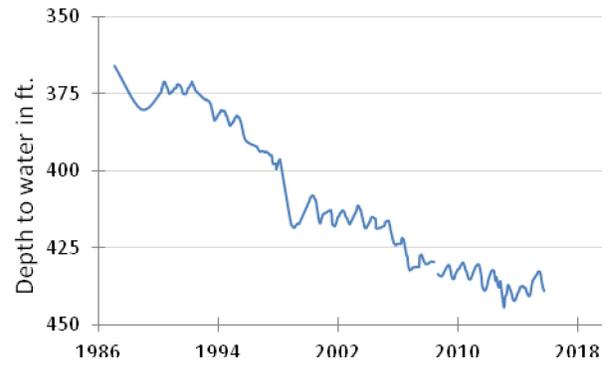
**(6) State Well ID 68-02-609
Waring, Kendall County
Cow Creek Formation-Trinity Aquifer**



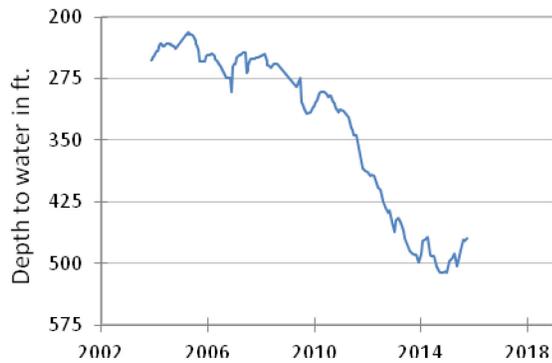
**(7) State Well ID 58-04-816
Near Salado, Bell County
Edwards (BFZ) Aquifer**



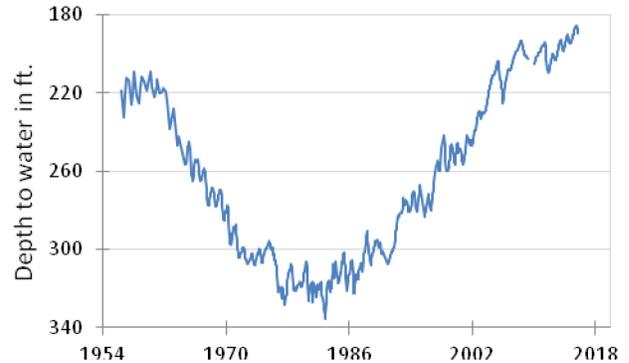
**(9) State Well ID 34-30-907
Red Springs, Smith County
Carrizo-Wilcox Aquifer**



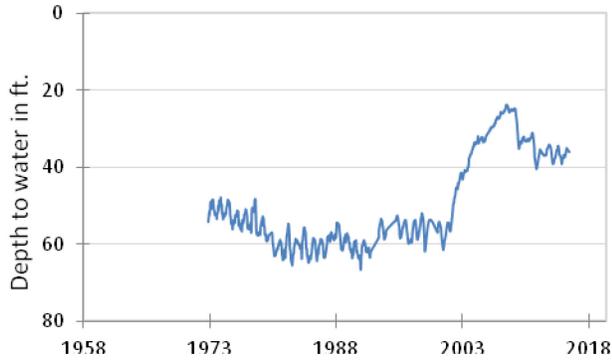
**(10) State Well ID 77-38-103
Near Cotulla, La Salle County
Carrizo-Wilcox Aquifer**



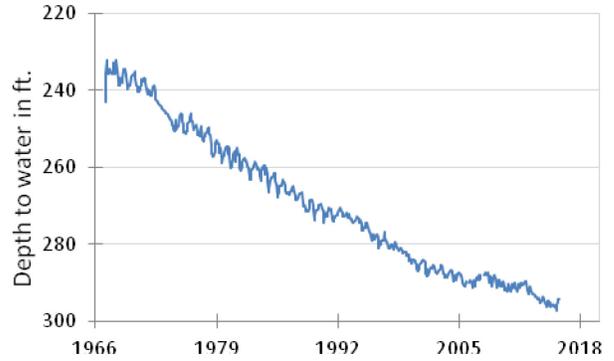
**(11) State Well ID 65-14-409
Alief, Harris County
Evangeline Formation-Gulf Coast Aquifer**



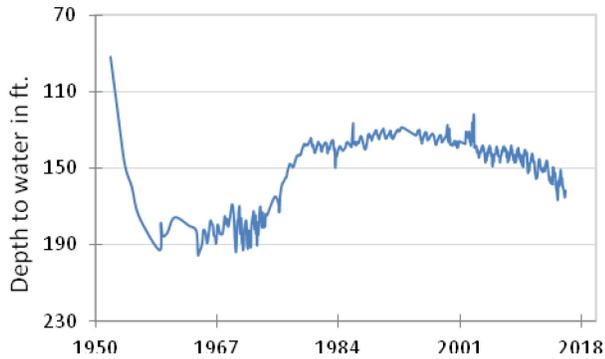
(12) State Well ID 80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



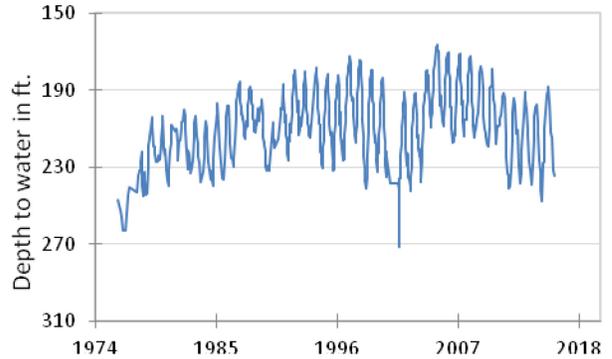
(13) State Well ID 49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolson Aquifer



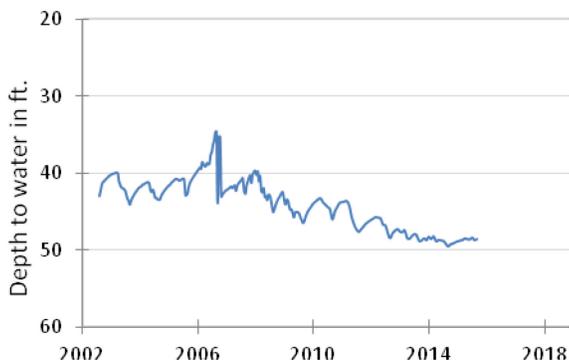
(14) State Well ID 46-44-501
Near Pecos, Reeves County
Pecos Valley Aquifer



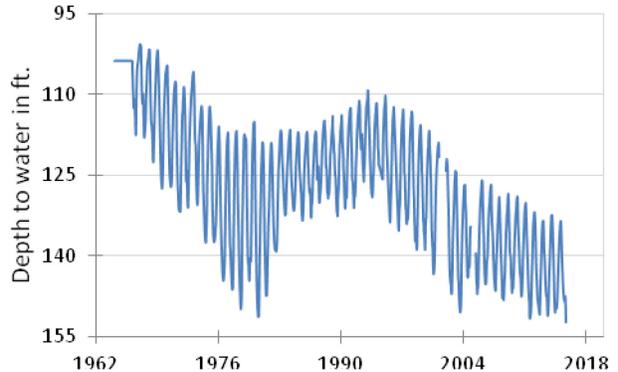
(15) State Well ID 52-16-802
Fort Stockton, Pecos County
Edwards-Trinity (Plateau) Aquifer



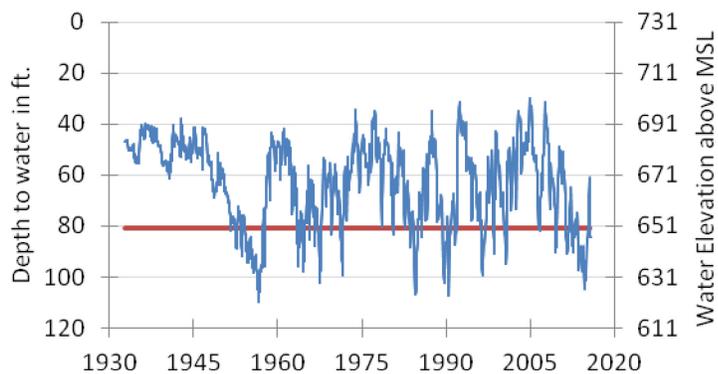
(16) State Well ID 21-35-748
Near O'Brien, Haskell County
Seymour Aquifer



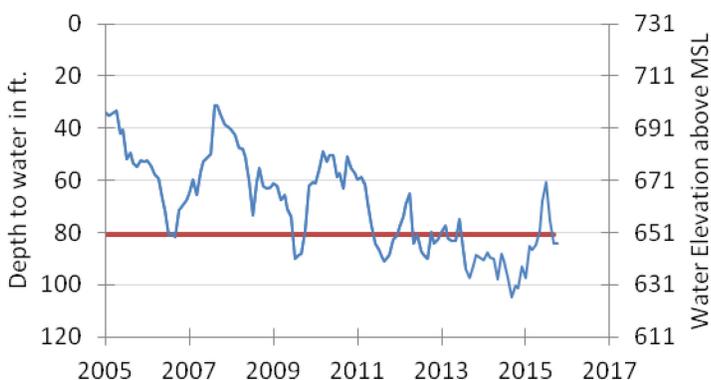
(17) State Well ID 48-07-516
Dell City, Hudspeth County
Bone Spring - Victorio Peak Aquifer



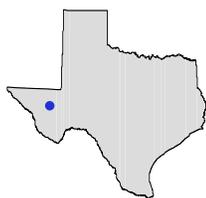
**(8) State Well ID 68-37-203 (J-17)
In San Antonio, Bexar County
Edwards (BFZ) Aquifer**



The late September water-level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above mean sea level, was 84.31 feet below land surface, or 646.69 feet above mean sea level. This was 0.09 feet above last month's measurement, 16.09 feet above last year's measurement, and 37.67 feet below the initial measurement recorded in 1932.



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



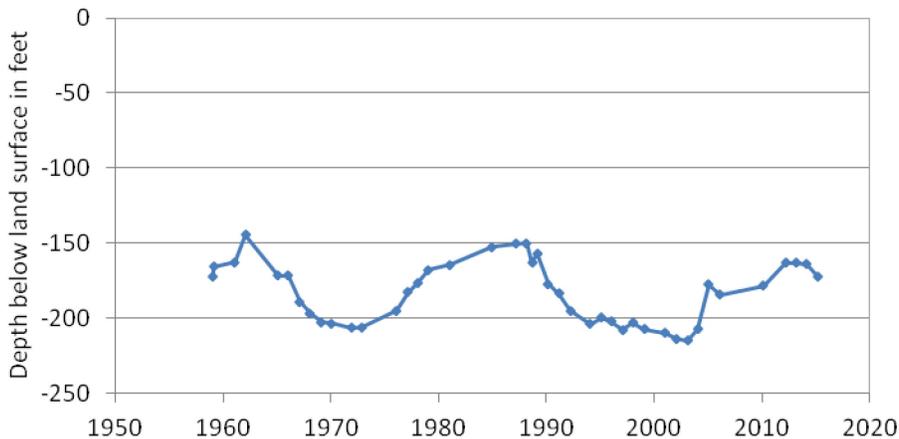
HYDROGRAPH OF THE MONTH

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

Edwards-Trinity (Plateau) Aquifer

Well #4661201, 350 feet deep
unused, eastern Reeves County

The Edwards-Trinity Aquifer is a major aquifer extending across much of the southwestern part of Texas. The water-bearing units are composed predominantly of limestone and dolomite of the Edwards Group and sands of the Trinity Group. Although maximum saturated thickness of the aquifer is greater than 800 feet, freshwater saturated thickness averages 433 feet. Water quality ranges from fresh to slightly saline, with total dissolved solids ranging from 100 to 3,000 milligrams per liter, and water is characterized as hard within the Edwards Group. More than two-thirds of the groundwater is used for irrigation, while the remainder is used for municipal and livestock supplies. Water levels have remained relatively stable because recharge has generally kept pace with the low amounts of pumping over the extent of the aquifer.



Despite relatively greater water-level fluctuations—in excess of 50 feet—than experienced by many Edwards-Trinity (Plateau) Aquifer wells, the most recent measurement in this well, at 172 feet below land surface in 2015, is actually 0.5 feet higher than its original measurement in 1959. These fluctuations primarily reflect this well's former use as an irrigation well and its continued proximity to pumping wells, in addition to periods characterized by decreased rainfall (recharge).

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