



# **RESERVOIR STORAGE**

## June 2015

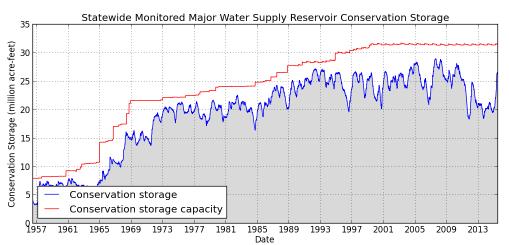
At the end of the month, total storage in 114 of the state's major water supply reservoirs was at 26.5 million acre-feet\*, or 84% of their total conservation storage capacity. This is 369,332 acre-feet more than a month ago and 5.24 million acre-feet more than the storage at this time last year.

Seventy-three (73) reservoirs held 100% of conservation storage capacity. Of them, 2 each in the Low Rolling and Upper Coast regions, 3 in South Central region, 1 in Southern region, 44 of 52 in the North Central region, and 21 of 22 in the East region. Seven (7) reservoirs remain below 10% full: Electra (0%), Palo Duro (2%), Abilene (3%), E.V. Spence (6%), Twin Buttes (7%), Champion Creek (7%), and Meredith (8%).

Total combined storage was greater than 70% in the Upper Coast (100%), East (100%), North Central (98%), South Central (87%), and Trans-Pecos (75%) regions. The regions with the lowest percentage storage were the High Plains (13%) and Edwards Plateau (45%). Storage declined in 2 regions and increased in 6 regions over the past month.

Elephant Butte reservoir held 344,071 acre-feet, or 17% of storage capacity. This is 55,852 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.

CONSERVATIO	ON STORAGE DATA	FOR SELECTED M	IAJOR TE	XAS RESERV	OIRS		
Name of Lake	Conservation	ion Conservation		Change since		Change since	
or Reservoir	Storage Capacity	Storage end of June		end of May 2015		end of June 2014	
	(acre-feet)	2015 (acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)	(%)
HIGH PLAINS							
Palo Duro Reservoir	61,066	1,295	2	-233	-0	-622	-1
Meredith, Lake (Texas)	500,000	64,482	13	14,329	3	56,157	11
Meredith, Lake (Texas &	779,556	64,482	8	14,329	2	56,157	7
Oklahoma)	46,450	7,208	16	1,100	2	3,611	8
MacKenzie Reservoir	29,880	10,542	35	63	0	10,367	35
White River Lake	637,396	83,527	35 13	15,259	2	69,513	35 11
	037,390	03,327	15	15,259	2	09,515	
	59,968	13,494	23	150	0	5,674	9
Greenbelt Lake	59,900	no data	20	150	0	5,074	9
*Electra, Lake	15,400	12,496	81	-1,919	-12		
N. Fork Buffalo Crk Reservoir	268,811	199,654	74	40,784	15	137,202	51
Kemp, Lake	26,768	26,768	100	40,784	0	23,971	90
Millers Creek Reservoir	94,808	94,808	100	0	0	37,243	39 39
Alan Henry Reservoir	94,808 51,570	94,808 47,268	92	-		37,243 41,084	39 80
Stamford, Lake				12,511	24		
J B Thomas, Lake	199,931 70,030	152,093	76	244 1,577	0	149,449	75
Fort Phantom Hill, Lake	•	30,555	44		2	3,062	4
Sweetwater, Lake	12,267	1,683	14	-9	-0	-442	-4
Colorado City, Lake	30,758	7,625	25	25	0	128	0
Champion Creek Reservoir	41,580	2,866	7	354	1	-161	-0
Abilene, Lake	7,900	266	3	no data	4	no data	05
Coleman, Lake	38,075	22,848	60	274	1	9,359	25
Hords Creek Lake	8,443	3,533	42	-94	-1	897	11
TOTAL	926,309	615,957	66	53,897	6	407,466	44
NORTH CENTRAL	04 444	04 444	400	0	0	40,400	<u></u>
Nocona, Lake (Farmers Crk)	21,444	21,444	100	0	0	13,422	63
Hubert H Moss Lake	24,058	24,025	100	-33	-0	3,890	16
Texoma, Lake (Texas)	1,258,113	1,258,113	100	0	0	211,911	17
Texoma, Lake (Texas & Oklahoma)	2,525,281	1,258,113	50	0	0	211,911	8
*Pat Mayse Lake	113,683	113,683	100	0	0	18,059	16
Kickapoo, Lake	86,345	86,345	100	0	0	63,444	73
Arrowhead, Lake	230,359	230,359	100	0	0	181,315	79
	11,027	11,016	100	-11	-0	2,411	22
Bonham, Lake Crook, Lake	9,195	9,133	99	-62	-1	157	2
Amon G Carter, Lake	19,266	19,266	100	0	0	10,961	
Ray Roberts, Lake	788,167	788,167	100	0	0	229,762	29
Jim Chapman Lake (Cooper)	260,332	260,332	100	0	0	121,352	47
Graham, Lake	45,288	45,288	100	0	0	25,452	56
*Lost Creek Reservoir	11,950	11,945	100	-5	-0	3,967	33
Bridgeport, Lake	366,236	366,236	100	0	0	214,375	59
Lewisville Lake	563,228	563,228	100	0	0	192,709	34
Lavon Lake	406,388	406,388	100	0	0	201,480	50
Hubbard Creek Reservoir	318,067	96,268	30	1,886	1	37,549	12
	523,873	523,873	100	7,650	1	193,495	37
Possum Kingdom Lake	6,760	6,760	100	0	0	2,975	44
*Mineral Wells, Lake	17,812	17,812	100	0	0	7,052	40
Weatherford, Lake	179,880	179,880	100	0	0	56,073	31
Eagle Mountain Lake	33,495	33,495	100	0	0	9,865	29
Worth, Lake	164,703	164,703	100	0	0	9,805 60,399	37
Grapevine Lake	452,040	452,040	100	0	0	150,333	33
Ray Hubbard, Lake	8,583	8,583	100	0	0	986	11
New Terrell City Lake	0,000	0,000	100	Ū	Ū	000	

CONSERVATIO	N STORAGE DATA	FOR SELECTED MA	JOR TE	EXAS RESERV	OIRS		
Name of Lake	Conservation	Conservation		Change since		Change since	
	Storage Capacity	Storage end of June		end of May 2		end of June	
	(acre-feet)	2015 (acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)	(%)
(North Central Continue)	00.007	00.005	00	400	0	00.007	77
Palo Pinto, Lake	26,827	26,395	98	-432	-2	20,667	77
Benbrook Lake	85,648	85,648	100	0	0	10,615	12
Arlington, Lake	40,188	39,651	99	-537	-1	1,676	4
Joe Pool Lake	175,358	175,358	100	0	0	2,140	1
*Cisco, Lake	25,895	16,495	64	-193	-1	3,066	12
Leon, Lake	26,476	26,442	100	-34	-0	7,028	27
Granbury, Lake	125,756	125,680	100	4,366	3	27,654	22
Pat Cleburne, Lake	26,008	26,008	100	0	0	5,238	20
Waxahachie, Lake	10,780	10,780	100	0	0	546	5
Bardwell Lake	46,122	46,122	100	0	0	250	1
Proctor Lake	55,457	55,457	100	0	0	33,664	61
Whitney, Lake	553,344	553,344	100	0	0	138,040	25
Aquilla Lake	44,460	44,460	100	0	0	0	0
Navarro Mills Lake	49,827	49,827	100	0	0	0	0
*Halbert, Lake	6,033	5,400	90	-268	-4	687	11
Richland-Chambers Reservoir	1,087,839	1,087,839	100	0	0	268,143	25
*Brownwood, Lake	128,839	126,210	98	4,365	3	57,786	45
Waco, Lake	189,567	189,567	100	0	0	0	0
Limestone, Lake	208,014	208,014	100	0	0	0	0
Belton Lake	435,225	435,225	100	0	0	92,826	21
Stillhouse Hollow Lake	227,771	227,771	100	0	0	51,079	22
Georgetown, Lake	36,823	36,823	100	0	0	16,518	45
Granger Lake	50,779	50,779	100	0	0	0	0
Tawakoni, Lake	871,685	871,685	100	0	0	296,553	34
Mountain Creek, Lake	22,850	22,850	100	0	0	0	0
Squaw Creek, Lake	151,250	151,250	100	0	0	0	0
TOTAL	10,629,113	10,393,462	98	16,692	0	3,047,570	29
EAST	221 406	221 406	100	0	0	0	0
Wright Patman Lake	231,496	231,496	100	0	0	0	0
*Sulphur Springs, Lake	17,747	17,747	100	0	0	110	1
Cypress Springs, Lake	66,756	66,756	100	0	0	33	0 4
Bob Sandlin, Lake	190,822	190,822	100	0	0	7,946	
Caddo, Lake	29,898	29,898	100	0	0	900	3
Martin, Lake	75,116	75,116	100	0	0	237	0
Monticello, Lake	34,740	34,740	100	0 0	0	508	1
Fork Reservoir, Lake	605,061 268,566	605,061	100	0	0	85,176 0	14 0
O the Pines, Lake		268,566 644,686	100 100	0	0 0	95,055	15
Cedar Creek Reservoir in Trinity	29,435	29,435	100	0	0	95,055	0
Athens, Lake	373,199	373,199	100	0	0	0	0
Palestine, Lake	73,161	73,161	100	0	0	0	0
Tyler, Lake	38,285	38,285	100	0	0	0	0
Murvaul, Lake	25,670	25,670	100	0	0	0	0
Jacksonville, Lake	39,522	39,325	100	-197	-0	820	2
Nacogdoches, Lake	17,113	17,113	100	-197	-0	0	0
Houston County Lake	2,857,077	2,857,077	100	0	0	0	0
Sam Rayburn Reservoir	2,245,752	2,242,404	100	-3,348	-0	56,421	3
Toledo Bend Reservoir (Texas)			50	-3,348	-0 -0	56,421	1
Toledo Bend Reservoir (TX & L/	A) 4,472,900 1,785,348	2,242,404	50 100	-3,348 0	-0 0	56,421 0	0
*Livingston, Lake	66,961	1,785,348 54,737	82	-11,172	-17	-9,402	-14
B A Steinhagen Lake	416,177	416,177	02 100	-11,172	-17	-9,402	-14
Conroe, Lake TOTAL	10,132,588	10,116,819	100	-18,065	-1	237,804	2
	10,102,000	10,110,010	100	10,000	·	201,004	2

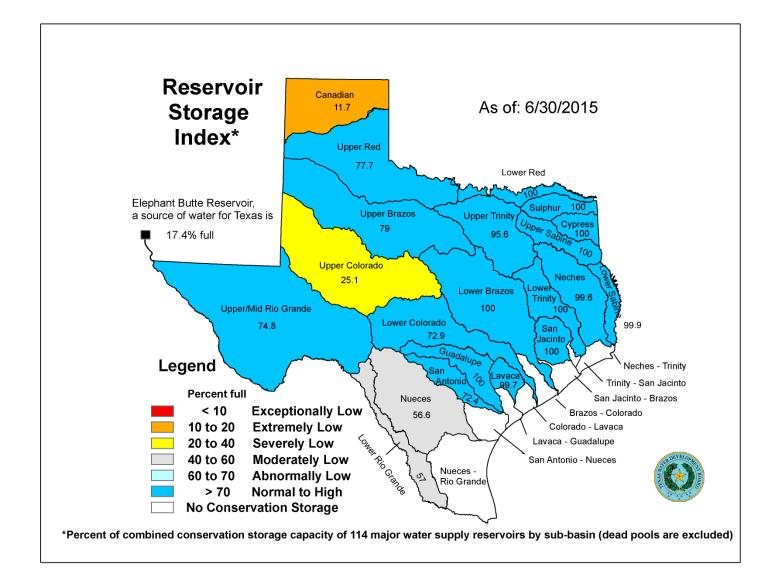
#### CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

	onservation	Conservation Storage end of Ju	ne	Change since end of May 20		Change sind end of June	
	torage Capacity acre-feet)	2015 (acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)	(%)
TRANS-PECOS		2010 (0010 1001)	(70)		(70)		(70)
**Red Bluff Reservoir	151,110	113,068	75	-5,259	-3	33,962	22
TOTAL	151,110	113,068	75	-5,259	-3	33,962	22
EDWARDS PLATEAU	,	,		0,200	Ũ	00,002	
Oak Creek Reservoir	39,210	10,658	27	2,575	7	2,932	7
E V Spence Reservoir	517,272	30,367	6	5,245	1	18,832	4
O C Fisher Lake	119,445	16,934	14	1,566	1	14,678	12
*O H Ivie Reservoir	554,340	81,340	15	-786	-0	-26,206	-5
Twin Buttes Reservoir	182,454	12,735	7	1,802	1	-1,321	-1
Brady Creek Reservoir	28,808	8,338	29	-228	-1	-666	-2
Buchanan, Lake	816,904	442,314	<u>54</u>	42,068	5	100,314	12
Inks, Lake	13,962	12,975	93	83	1	83	1
Lyndon B Johnson, Lake	115,056	111,186	97	917	1	490	0
*Amistad Reservoir (Texas)	1,840,849	1,176,917	64	13,471	1	165,450	9
*Amistad Reservoir (TX & Mexico		1,176,917	36	13,471	0	165,450	5
	4,228,300	1,903,764	45	66,713	2	274,586	6
SOUTH CENTRAL	1,220,000	1,000,101	10	00,110	2	27 1,000	0
	1,113,348	938,152	84	92,036	8	520,962	47
Travis, Lake	23,972	23,579	98	436	2	668	3
*Austin, Lake	147,104	147,104	100	-100	0	0	0
Somerville Lake	378,781	378,781	100	0	0	64,614	17
Canyon Lake	254,823	184,505	72	47,986	0	172,515	68
Medina Lake	204,020	104,000	12	data	0	172,010	00
*Coleto Creek Reservoir	31,040	31,040	100	0	0	2,443	8
TOTAL	1,949,068	1,703,161	87	232,930	5	761,202	39
UPPER COAST							
Houston, Lake	120,686	120,686	100	0	0	0	0
Texana, Lake	159,566	159,106	100	0	0	-460	-0
TOTAL	280,252	279,792	100	0	0	-460	-0
SOUTHERN							
Choke Canyon Reservoir	695,262	282,254	41	38,852	6	69,382	10
Corpus Christi, Lake	256,961	256,961	100	9,261	4	76,112	30
*Falcon Reservoir (Texas)	1,551,007	755,276	49	48,176	3	259,641	17
*Falcon Reservoir (TX & Mexico)	2,646,817	755,276	29	48,176	2	259,641	10
TOTAL	2,503,230	1,294,491	52	96,289	4	405,135	16
				,			
STATE TOTAL	31,437,366	26,504,041	84	369,332	1	5,236,778	17
* Conservation volume is used as							
** Nov 11/27 2013 – 12/02 2014 c	data were not avail	able. End of Nov 201	3 storage	was estimated			
Elephant Butte Reservoir	1,973,358	344,071	17	-55,852	-3	115,278	6

#### 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.

# JUNE RESERVOIR CONDITIONS

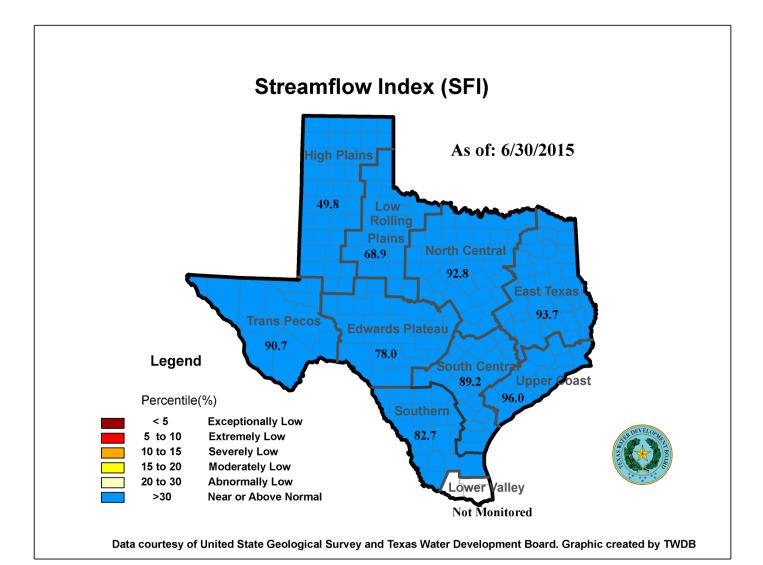


# JUNE STREAMFLOW CONDITIONS

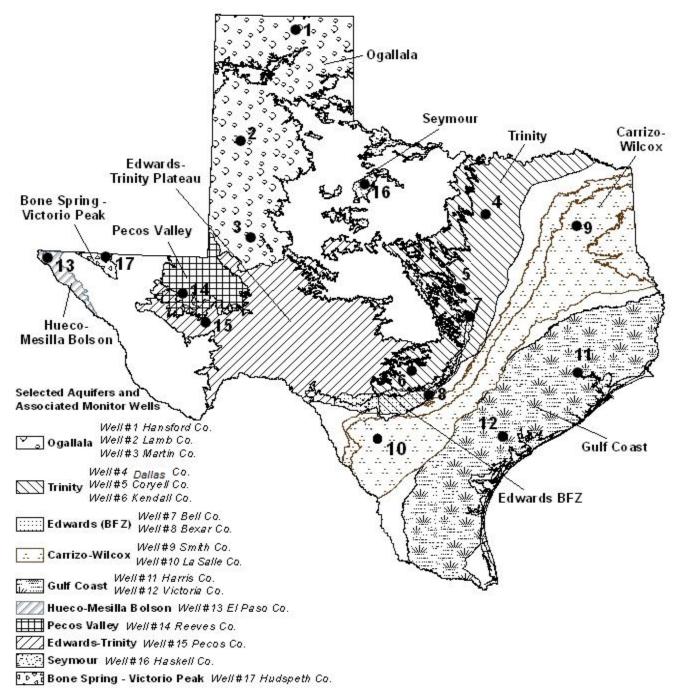
Of 29 reporting index stations monitored this month, computed 30-day mean flows status are presented below:

Flow Status	Number of Stations
Normal to High (>30%)	28
Abnormally Low (20-30%)	0
Moderately Low (15-20%)	0
Severely Low (10-15%)	1
Extremely Low (5-10%)	0
Exceptionally Low (<5%)	0

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



## JUNE 2015 GROUNDWATER LEVELS IN OBSERVATION WELLS



### June, 2015

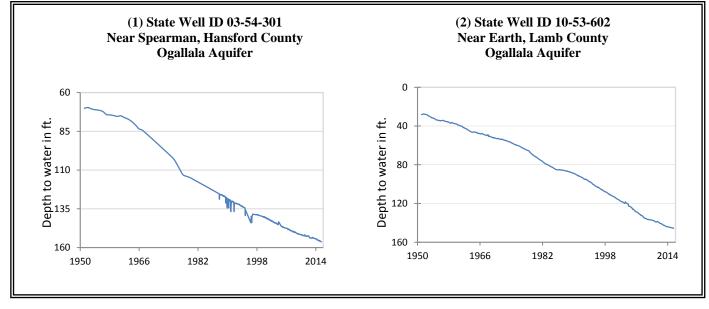
Water level measurements were available for all of the seventeen key monitoring wells in the state. Water levels rose in eight of the monitoring wells since the beginning of June, ranging from 0.02 feet in the Coryell County Trinity Aquifer well to 14.58 feet in the LaSalle County Carrizo-Wilcox Aquifer well. Water levels declined in nine monitoring wells, ranging from 0.17 feet in the Hansford County Ogallala Aquifer well to 5.11 feet in the Reeves County Pecos Valley Aquifer well. The J-17 well in San Antonio recorded a water level of 60.7 feet below land surface or 670.3 feet above mean sea level. No restrictions are currently in place for the San Antonio portion of the Edwards BFZ, with water levels at 30.3, 20.3, and 10.3 feet above Stages III, II, and I critical management levels, respectively, in that segment of the Edwards Aquifer.

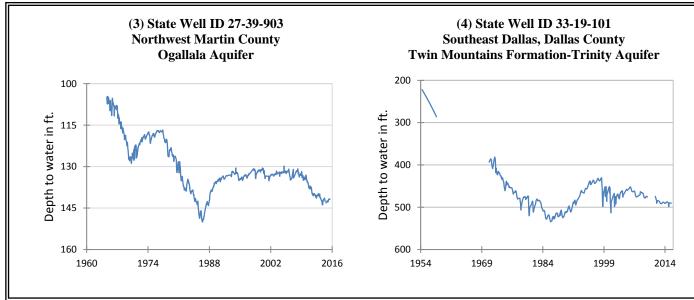
\*IDs used in this publication on the aquifer map to indicate the monitoring well location (IDs 1 - 17) are different than the TWDB's six- or seven-digit state well "identification" number.

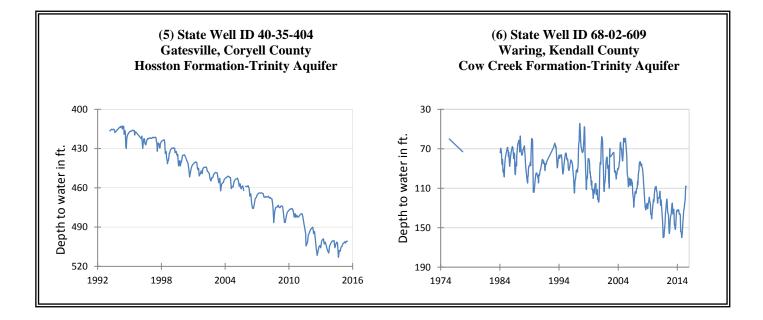
Monitoring Well	June	May	month change	year change	historical change	first measured
(1) Hansford 0354301	156.34	156.17	-0.17	-1.29	-86.22	1951
(2) Lamb 1053602	145.64	145.41	-0.23	-1.26	-117.49	1951
(3) Martin 2739903	141.73	141.89	0.16	NA	-36.84	1964
(4) Dallas 3319101	490.43	489.7	-0.73	-3.2	-268.43	1954
(5) Coryell 4035404	500.85	500.87	0.02	0.72	-208.85	1955
(6) Kendall 6802609	108.3	108.06	-0.24	28.78	-48.3	1975
(7) Bell 5804816	120.05	121.3	1.25	5.83	3.08	2008
(8) Bexar 6837203	60.7	68.21	7.51	30.21	-14.06	1932
(9) Smith 3430907	433.06	432.62	-0.44	4.87	-67.06	1987
(10) La Salle 7738103	482.96	497.54	14.58	8.06	-229.89	2003
(11) Harris 6514409	185.51	186.14	0.63	7.09	-50.01*	1956
(12) Victoria 8017502	35.53	35.22	-0.31	0.02	-1.53	1958
(13) El Paso 4913301	295.58	297.12	1.54	0.32	-63.68	1967
(14) Reeves 4644501	161.83	156.72	-5.11	-0.31	-69.74	1952
(15) Pecos 5216802	212.1	211.42	-0.68	20.4	34.78	1976
(16) Haskell 2135748	48.37	48.6	0.23	0.42	-7.04	2002
(17) Hudspeth 4807516	147.82	145.48	-2.34	2.67	-43.9	1964

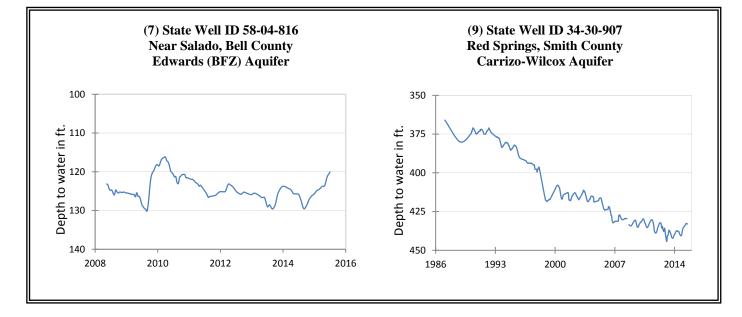
\*change since the original measurement of 135.5 feet below land surface in 1947 (measurement not shown on the hydrograph)

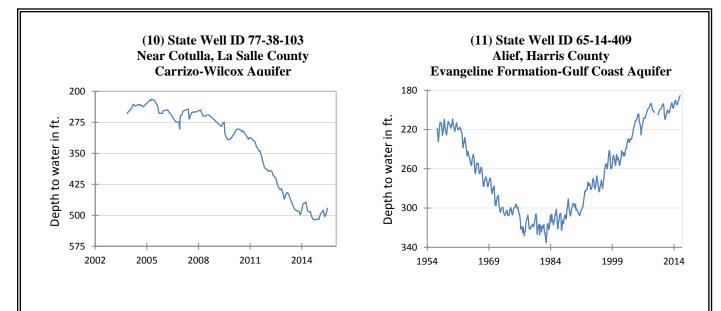
## JUNE GROUNDWATER LEVELS IN OBSERVATION WELLS

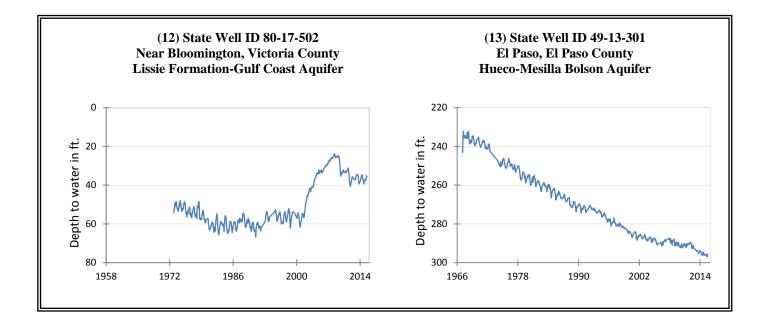


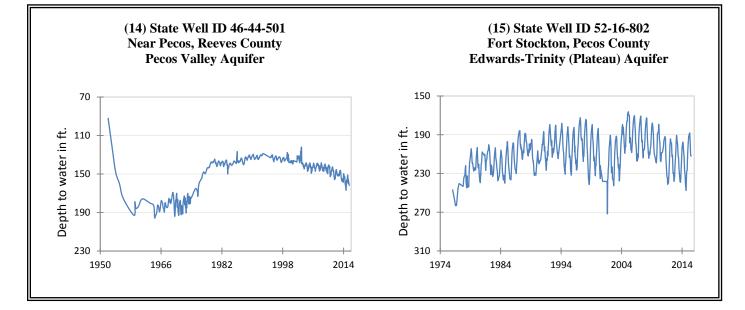


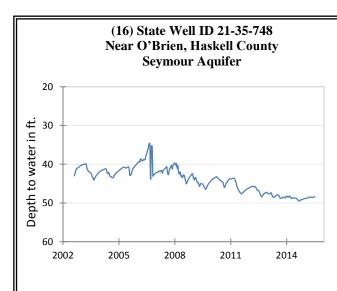




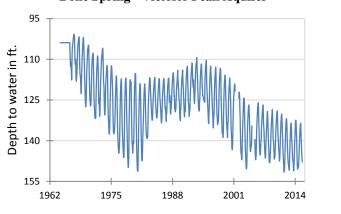


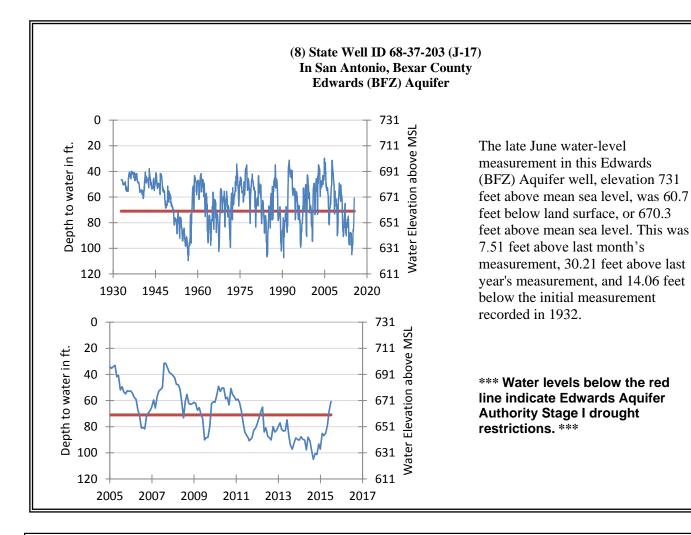




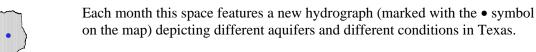


(17) State Well ID 48-07-516 Dell City, Hudspeth County Bone Spring - Victorio Peak Aquifer

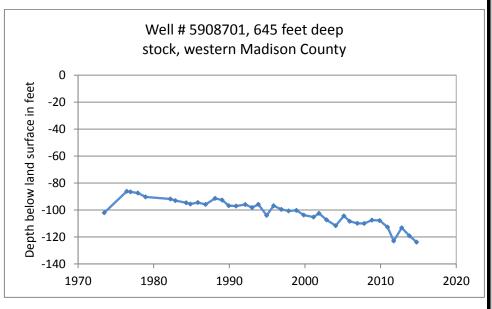




# HYDROGRAPH OF THE MONTH



The Sparta Aquifer is a minor aquifer extending across East and South Texas, parallel to the Gulf of Mexico coastline and about 100 miles inland. Water is contained within a part of the Claiborne Group known as the Sparta Formation, a sand-rich unit interbedded with silt and clay layers. The thickness of the formation changes gradually from more than 700 feet at the Sabine River to about 200 feet in South Texas. with freshwater saturated thickness averaging about 120 feet. In outcrop areas and for a few miles in the subsurface, the water is usually fresh, with an average concentration of 300 milligrams per liter of total dissolved solids; however, water quality deteriorates with depth. Excess iron concentrations are common throughout the aquifer. Water from the aquifer is predominantly used for domestic and livestock purposes.



The initial measurement in this livestock well of 102 feet below land surface was reported in 1973 by the well driller and TWDB has measured the water level consistently since 1976. The period of record reveals a gradual decline with the lowest water level of 123.8 feet below land surface measured most recently in October of 2014.

**Sparta Aquifer** 

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