

Texas Water Conditions Report

April 2020

RAINFALL

Little to no rain fell over the majority of the High Plains, Trans Pecos, Low Rolling Plains, and Lower Valley the north western portions of the North Central and Edwards Plateau, the western and southern portions of the Southern, and southern South Central climate divisions during the month of April [yellow, orange and red shading, Figure 1(a)]. Some rainfall [light blue shading, Figure 1(a)] was recorded over scattered areas of the northern High Plains, central Low Rolling Plains, scattered areas across northern and more concentrated in the southern portions of the North Central, scattered areas across central and southern Edwards Plateau, and northern Lower Valley climate divisions. High amounts of rainfall were recorded in northern South Central, and the majority of the Upper Coast and East Texas climate divisions with rainfall reaching 12.35 inches in the eastern portions of the state [dark blue shading, Figure 1(a)].

Monthly rainfall for April was below-average [yellow and orange shading, Figure 1(b)], compared to historical data from 1981–2010, in much of the state, including the majority of the High Plains, Trans Pecos, Low Rolling Plains, Edwards Plateau, North Central, and Lower Valley climate divisions.

Above average rainfall fell in small areas of eastern Trans Pecos, northern and southern High Plains, scattered across the Edwards Plateau with higher amounts in the southern portions of the North Central, northern portions of South Central, northern and central Southern, northern Lower Valley, portions of the Upper Coast and the majority of East Texas climate divisions [green and blue shading, Figure 1(b)]. Additionally, 4 to 6 times the average amount of rainfall fell over a very small patch in southern Edwards Plateau and Southern climate divisions.

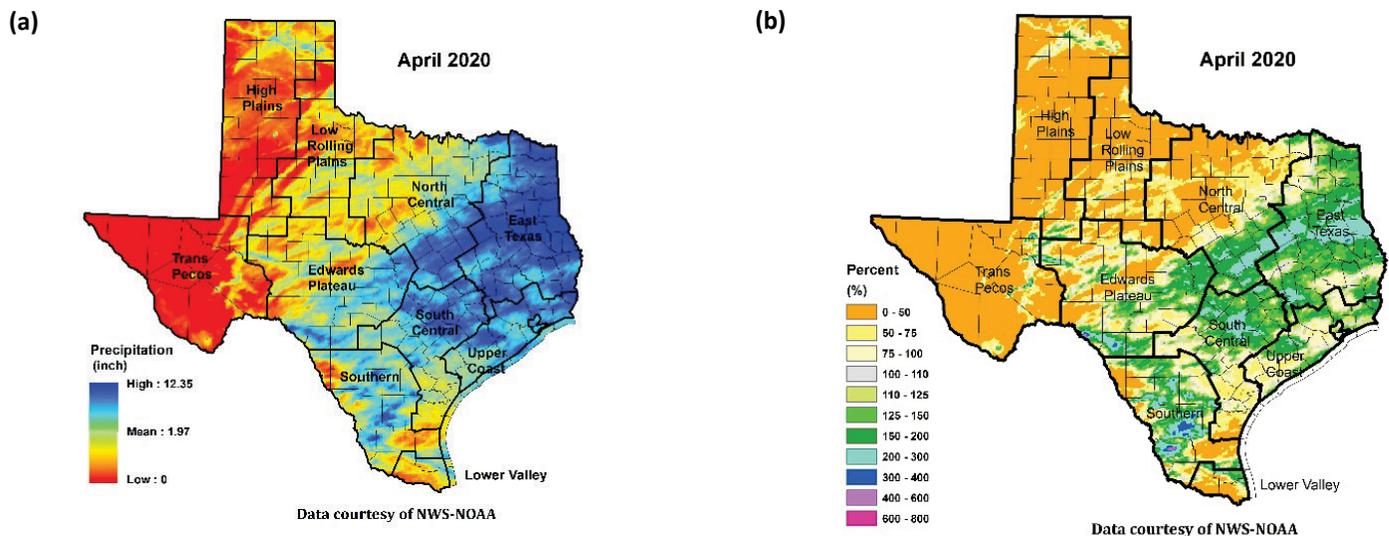


Figure 1: (a) Monthly accumulated rainfall, (b) Percent of normal rainfall

RESERVOIR STORAGE

At the end of April 2020, total conservation storage* in 118 of the state’s major water supply reservoirs plus Elephant Butte Reservoir in New Mexico was 27.6 million acre-feet or 85 percent of total conservation storage capacity (Figure 2). This is approximately .083 million acre-feet less than a month ago and approximately 0.73 million acre-feet less than the end of April 2019.

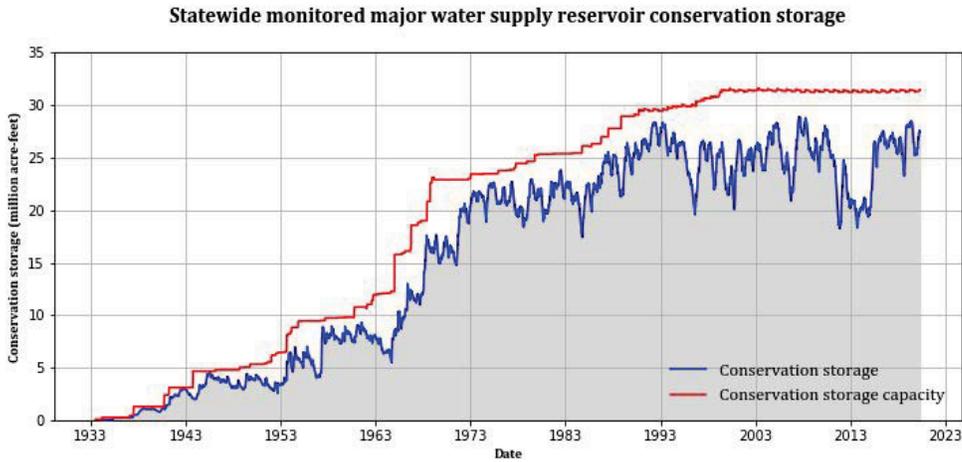


Figure 2: Statewide reservoir conservation storage

Out of 118 reservoirs in the state, 63 reservoirs held 100 percent of conservation storage capacity (Figure 3). Additionally, 26 were at or above 90 percent full. Eight reservoirs [E.V. Spence (27 percent full), Falcon (27 percent full), Greenbelt (20 percent full), J.B. Thomas (24 percent full), Mackenzie (11 percent full), O. C. Fisher (9 percent full), Palo Duro Reservoir (4 percent full), and White River (20 percent full)] remained below 30 percent full. Elephant Butte Reservoir (located in New Mexico) was at 26 percent full.

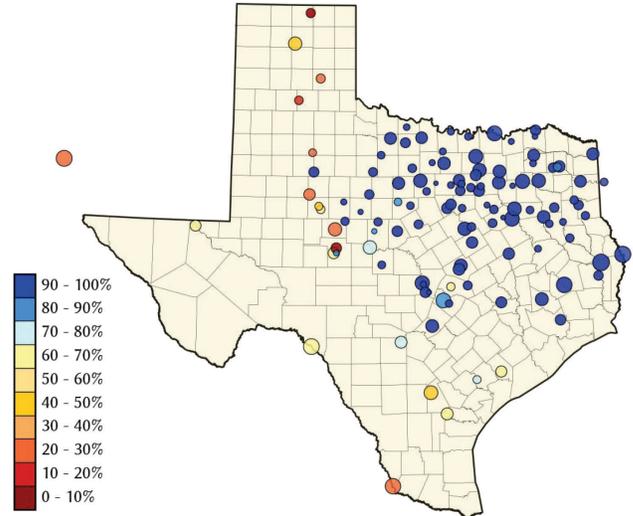


Figure 3: Reservoir conservation storage at end-April expressed as percent full (%)

*Storage is based on end of the month data in 118 major reservoirs that represent 96 percent of the total conservation storage capacity of 188 major water supply reservoirs in Texas plus Elephant Butte Reservoir in New Mexico. Major reservoirs are defined as having a conservation storage capacity of 5,000 acre-feet or greater. Only the Texas share of storage in border reservoirs is counted.

Total regionally combined conservation storage was at or above-normal (storage ≥ 70 percent full) in the Low Rolling Plains (73.9 percent full), North Central (99.1 percent full), South Central (87.4 percent full), East Texas (99.7 percent full), and Upper Coast (87.1 percent full) climate divisions (Figure 4).

Conservation storage in the and Edwards Plateau (67.6 percent full) climate divisions was abnormally low (Figure 4). The High Plains (35 percent full), Southern (35.8 percent full), and Trans Pecos (32.1 percent full) climate divisions had severely low conservation storage (Figure 4).

Combined conservation storage by river basin or sub-basin showed that the Upper and Lower Red, Upper and Lower Brazos, Guadalupe, Lavaca, San Antonio, Upper and Lower Trinity, San Jacinto, Upper and Lower Sabine, Neches, Sulphur, and Cypress was normal to high (>70 percent full). The conservation storage in the Upper Colorado, Nueces, and Lower Rio Grande was moderately low. In the Canadian and Upper/Mid Rio Grande sub-basins storage conservation was severely low (20-40 percent full, Figure 5).

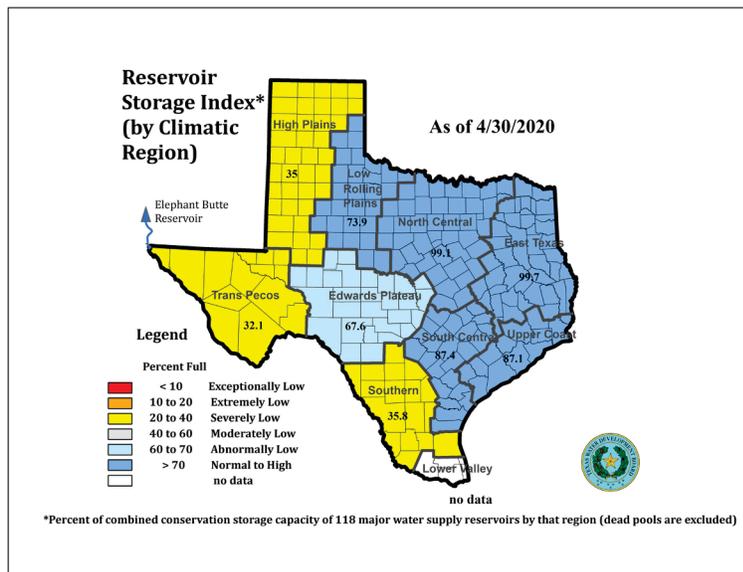


Figure 4: Reservoir Storage Index* by climate division at 4/30/2020

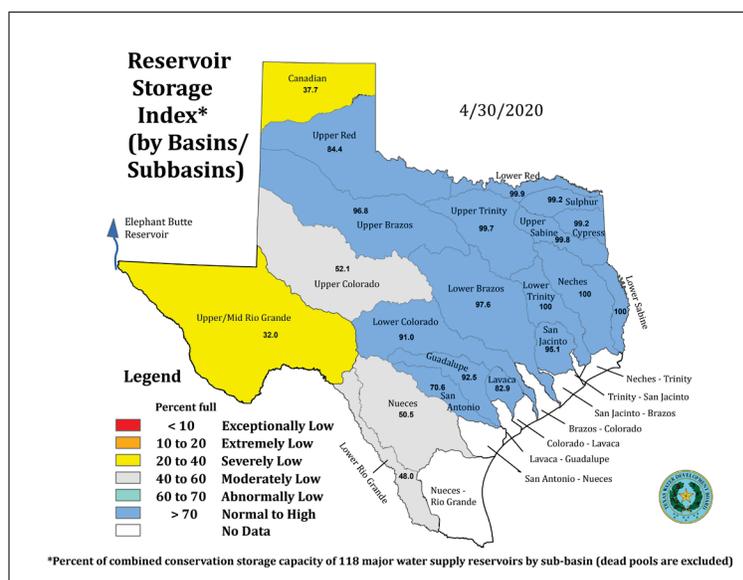


Figure 5: Reservoir Storage Index* by river basin/sub-basin at 4/30/2020

*Reservoir Storage Index is defined as the percent full of conservation storage capacity.

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of lake or reservoir	Storage capacity	Storage at end-April		Storage change from end-Mar 2020		Storage change from end-Apr 2019	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
Abilene, Lake	7,900	7,456	94	296	4	-444	-6
Alan Henry Reservoir	96,207	94,044	98	-910	0	3,800	4
*Amistad Reservoir (Texas & Mexico)	3,275,532	1,261,981	39	-83,320	-3	-519,309	-16
*Amistad Reservoir (Texas)	1,840,849	1,208,862	66	-22,444	-1	-198,341	-11
Amon G Carter, Lake	19,266	19,266	100	0	0	0	0
Aquilla Lake	43,243	43,243	100	0	0	0	0
Arlington, Lake	40,157	36,079	90	-4,078	-10	-4,078	-10
Arrowhead, Lake	230,359	219,202	95	-4,112	-2	-11,157	-5
Athens, Lake	29,503	29,503	100	0	0	0	0
*Austin, Lake	23,972	22,972	96	384	2	0	0
B A Steinhagen Lake	69,186	69,186	100	5,488	8	5,488	8
Bardwell Lake	46,122	46,122	100	0	0	0	0
Belton Lake	435,225	435,225	100	0	0	0	0
Benbrook Lake	85,648	85,648	100	0	0	0	0
Bob Sandlin, Lake	192,417	192,417	100	0	0	0	0
Bonham, Lake	11,027	10,848	98	-179	-2	-179	-2
Brady Creek Reservoir	28,808	26,000	90	-331	-1	-2,808	-10
Bridgeport, Lake	366,236	366,236	100	0	0	0	0
*Brownwood, Lake	130,868	123,585	94	-2,445	-2	-7,283	-6
Buchanan, Lake	860,607	816,254	95	4,988	1	868	0
Caddo, Lake	29,898	29,898	100	0	0	no data	
Canyon Lake	378,781	356,408	94	475	0	-22,373	-6
Cedar Creek Reservoir in Trinity	644,686	644,686	100	0	0	0	0
Champion Creek Reservoir	41,580	27,394	66	-362	0	-798	-2
Cherokee, Lake	40,094	40,094	100	0	0	0	0
Choke Canyon Reservoir	662,820	288,604	44	-3,960	0	-72,904	-11
*Cisco, Lake	29,003	25,609	88	-359	-1	366	1
Coleman, Lake	38,075	37,031	97	-161	0	-1,044	-3
Colorado City, Lake	31,040	22,704	73	-1,320	-4	-8,289	-27
*Coletto Creek Reservoir	30,758	13,503	44	-274	0	-1,398	-5
Conroe, Lake	410,988	395,042	96	-4,897	-1	0	0
Corpus Christi, Lake	256,062	175,226	68	-3,195	-1	-80,441	-31
Crook, Lake	9,195	9,195	100	0	0	0	0
Cypress Springs, Lake	66,756	66,756	100	0	0	0	0
E. V. Spence Reservoir	517,272	139,189	27	-1,850	0	-2,557	0
Eagle Mountain Lake	179,880	179,880	100	0	0	0	0
Elephant Butte Reservoir (Texas)	852,491	222,377	26	-21,772	-3	87,834	10
Elephant Butte Reservoir (Total Storage)	1,973,358	514,762	26	-50,397	-3	203,320	10
*Falcon Reservoir (Texas & Mexico)	2,646,817	457,438	17	-133,129	-5	-470,161	-18
*Falcon Reservoir (Texas)	1,551,007	419,404	27	-18,501	-1	-309,216	-20
Fork Reservoir, Lake	605,061	602,942	100	-2,119	0	-2,119	0
Fort Phantom Hill, Lake	70,030	70,030	100	0	0	0	0
Georgetown, Lake	36,823	26,801	73	1,366	4	-10,022	-27
Graham, Lake	45,288	44,672	99	-616	-1	-616	-1
Granbury, Lake	132,949	132,297	100	0	0	894	1

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of lake or reservoir	Storage capacity		Storage at end-April			Storage change from end-Mar 2020		Storage change from end-Apr 2019	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)		
<i>Continued</i>									
Granger Lake	51,822	51,822	100	0	0	0	0		
Grapevine Lake	163,064	163,064	100	0	0	0	0		
Greenbelt Lake	59,968	12,077	20	-336	0	-680	-1		
*Halbert, Lake	6,033	5,395	89	-290	-5	-94	-2		
Hords Creek Lake	8,109	6,301	78	-222	-3	1,067	13		
Houston County Lake	17,113	17,113	100	0	0	0	0		
Houston, Lake	130,147	119,882	92	-4,469	-3	-10,265	-8		
Hubbard Creek Reservoir	313,298	307,837	98	-3,269	-1	-5,461	-2		
Hubert H Moss Lake	24,058	23,939	100	-119	0	-119	0		
Inks, Lake	13,962	12,840	92	-173	-1	-52	0		
J. B. Thomas, Lake	199,931	48,700	24	-1,996	0	-18,959	-9		
Jacksonville, Lake	25,670	25,670	100	0	0	0	0		
Jim Chapman Lake (Cooper)	260,332	260,332	100	0	0	0	0		
Joe Pool Lake	175,800	175,800	100	0	0	0	0		
Kemp, Lake	245,307	245,307	100	0	0	0	0		
Kickapoo, Lake	86,345	80,482	93	-2,615	-3	-5,863	-7		
Lavon Lake	406,388	406,388	100	0	0	0	0		
Leon, Lake	27,762	27,170	98	-575	-2	-592	-2		
Lewisville Lake	563,228	563,228	100	0	0	0	0		
Limestone, Lake	203,780	203,780	100	0	0	0	0		
*Livingston, Lake	1,741,867	1,741,867	100	0	0	0	0		
*Lost Creek Reservoir	11,950	11,912	100	-38	0	-38	0		
Lyndon B Johnson, Lake	115,249	110,636	96	1,034	1	974	1		
Mackenzie Reservoir	46,450	5,136	11	-119	0	-480	-1		
Marble Falls, Lake	6,901	6,836	99	5	0	27	0		
Martin, Lake	75,726	75,726	100	889	1	0	0		
Medina Lake	254,823	180,062	71	-5,600	-2	-69,992	-27		
Meredith, Lake	500,000	209,417	42	-1,797	0	15,556	3		
Millers Creek Reservoir	26,768	26,768	100	0	0	0	0		
*Mineral Wells, Lake	5,273	5,273	100	0	0	0	0		
Monticello, Lake	34,740	30,246	87	-535	-2	-480	-1		
Mountain Creek, Lake	22,850	22,850	100	0	0	0	0		
Murvaul, Lake	38,285	38,285	100	0	0	0	0		
Nacogdoches, Lake	39,522	39,522	100	132	0	371	1		
Nasworthy	9,615	8,233	86	-198	-2	-273	-3		
Navarro Mills Lake	49,827	49,827	100	0	0	0	0		
New Terrell City Lake	8,583	8,583	100	0	0	0	0		
Nocona, Lake (Farmers Crk)	21,444	21,444	100	0	0	0	0		
North Fork Buffalo Creek Reservoir	15,400	15,143	98	-257	-2	-257	-2		
O' the Pines, Lake	241,363	241,363	100	0	0	0	0		
O. C. Fisher Lake	115,742	10,455	9	-322	0	-3,800	-3		
*O. H. Ivie Reservoir	554,340	398,427	72	-1,384	0	78,853	14		
Oak Creek Reservoir	39,210	36,791	94	-171	0	-2,419	-6		

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of lake or reservoir	Storage capacity		Storage at end-April		Storage change from end-Mar 2020		Storage change from end-Apr 2019	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)	
<i>Continued</i>								
Palestine, Lake	367,303	367,303	100	0	0	0	0	
Palo Duro Reservoir	61,066	2,257	4	-305	0	1,981	3	
Palo Pinto, Lake	26,766	25,943	97	-714	-3	-823	-3	
Pat Cleburne, Lake	26,008	26,008	100	0	0	0	0	
*Pat Mayse Lake	113,683	113,683	100	0	0	0	0	
Possum Kingdom Lake	538,139	532,608	99	-1,957	0	-4,457	0	
Proctor Lake	54,762	54,762	100	0	0	0	0	
Ray Hubbard, Lake	439,559	439,559	100	0	0	1,671	0	
Ray Roberts, Lake	788,167	788,167	100	0	0	0	0	
Red Bluff Reservoir	151,110	99,501	66	-2,641	-2	619	0	
Richland-Chambers Reservoir	1,087,839	1,087,839	100	0	0	0	0	
Sam Rayburn Reservoir	2,857,077	2,857,077	100	0	0	0	0	
Somerville Lake	150,293	150,293	100	0	0	0	0	
Squaw Creek, Lake	151,250	151,250	100	0	0	0	0	
Stamford, Lake	51,570	51,570	100	0	0	0	0	
Stillhouse Hollow Lake	227,771	227,771	100	10,090	4	0	0	
Striker, Lake	16,934	16,934	100	0	0	2	0	
Sweetwater, Lake	12,267	12,267	100	0	0	0	0	
*Sulphur Springs, Lake	17,747	13,597	77	-4,150	-23	-905	-5	
Tawakoni, Lake	871,685	871,685	100	0	0	0	0	
Texana, Lake	159,566	132,343	83	21,998	14	-18,608	-12	
Texoma, Lake (Texas & Oklahoma)	2,487,601	2,526,038	100	-496,740	-20	-51,183	-2	
Texoma, Lake (Texas)	1,243,801	1,243,801	100	0	0	0	0	
Toledo Bend Reservoir (Texas & Louisiana)	4,472,900	4,582,186	100	23,357	1	354,737	8	
Toledo Bend Reservoir (Texas)	2,236,450	2,236,450	100	0	0	124,776	6	
Travis, Lake	1,113,348	973,725	87	14,490	1	-139,623	-13	
Twin Buttes Reservoir	182,454	123,996	68	0	0	197	0	
Tyler, Lake	72,073	72,073	100	0	0	0	0	
Waco, Lake	189,418	189,418	100	0	0	0	0	
Waxahachie, Lake	10,780	10,780	100	0	0	0	0	
Weatherford, Lake	17,812	17,736	100	-76	0	-76	0	
White River Lake	29,880	5,977	20	-339	-1	800	3	
Whitney, Lake	553,344	517,001	93	-36,343	-7	-36,343	-7	
Worth, Lake	24,419	23,058	94	-1,361	-6	-1,361	-6	
Wright Patman Lake	310,382	310,382	100	187,789	61	0	0	
STATEWIDE TOTAL								
STATEWIDE TOTAL	32,330,905	27,620,633	85	83,168	0	-731,943	-2	

STREAMFLOW CONDITIONS

Much of the state had near normal (25- 75th percentile, green shading in Figure 6) streamflow for April 2020. Some sub-watersheds in the Canadian, Mid and Lower Red, Upper and Mid Brazos, Upper and Mid Colorado, Mid and Lower Trinity, Upper Sabine, Sulphur and Neches river basins had above normal streamflow (76–90th percentile, light blue shading in Figure 6). A few river basins had much above normal streamflow conditions (>90 percentile, dark blue shading in Figure 6), including the Upper and Mid Colorado, Upper and Mid Brazos, Mid and Lower Red, Upper Trinity, Upper Sabine and Sulphur river basins. Record highs (black shading in Figure 6) were found in the Upper and Mid Brazos river basin. Several sub-watersheds in the Upper Rio Grande, Upper Nueces, Trinity-San Jacinto, Guadalupe, Lavaca, Lavaca-Guadalupe, San Antonio-Nueces, Colorado-Lavaca, and Lower Neches river basins had below normal (10–24th percentile, orange shading in Figure 6) streamflow. Some sub-watersheds had much below normal (less than the 10th percentile, dark brown shading in Figure 6) streamflow. These include the Upper Colorado, Lower Nueces, and the San Jacinto-Nueces river basins.

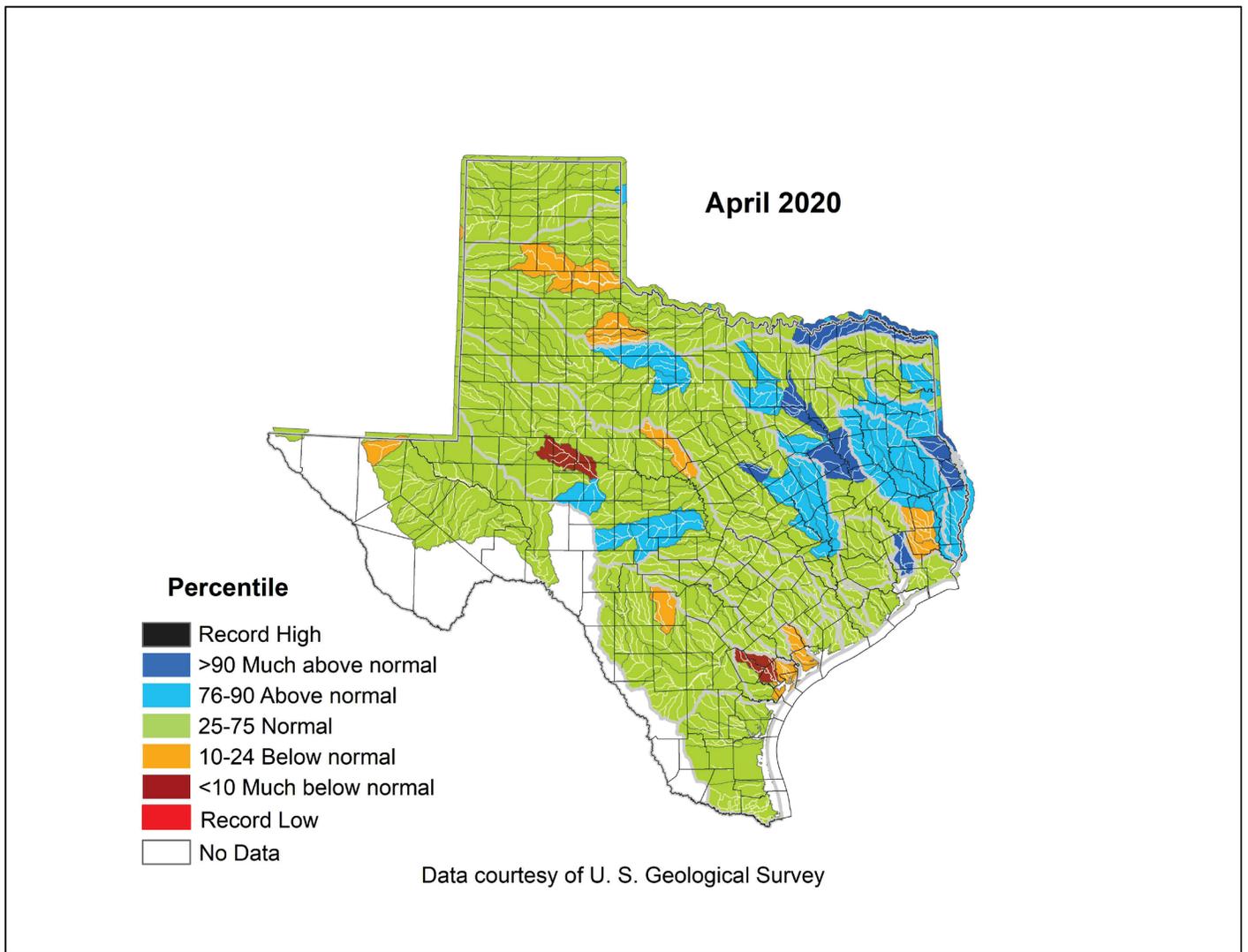


Figure 6: Runoff percentiles by the U.S. Geological Survey's Hydrologic Unit Code

SOIL MOISTURE CONDITIONS

Root zone soil moisture at the end of April 2020 [Figure 7(a)] was moderate [> 0.20 cubic meters of water per bulk cubic meter soil (m^3/m^3)] in much of the state. There were areas of low soil moisture [< 0.15 cubic meters of water per bulk cubic meter soil (m^3/m^3)] in the majority of the Trans Pecos, in the northern and southern High Plains, portions of the Low Rolling Plains, northern and southern areas of the Southern, northwest across to the northeast South Central, small portions of southwest East Texas, and portions of the Lower Valley climate divisions.

In other climate divisions, root zone soil moisture was high [< 0.3 cubic meters of water per bulk cubic meter soil (m^3/m^3)]. These divisions include the central Edwards Plateau, eastern Low Rolling Plains, portions of western, southern, and eastern North Central, northern, central and scattered areas of southern East Texas, and across the Upper Coast climate division.

Compared to conditions at the end of April 2020, soil moisture content increased [green to blue shading in Figure 7(b)] in northeastern Trans Pecos, scattered areas in northern and southern High Plains, southern Edwards Plateau, scattered patches across the Low Rolling Plains, southern North Central, the majority of the Southern, South Central, Lower Valley, Upper Coast and East Texas climate divisions.

Soil moisture content decreased [yellow, orange, and brown shading in Figure 7(b)] in the central and northeast High Plains and the majority of the Low Rolling Plains climate divisions. The greatest decreases in soil moisture occurred in the northwest Edwards Plateau and northern and central North Central climate divisions.

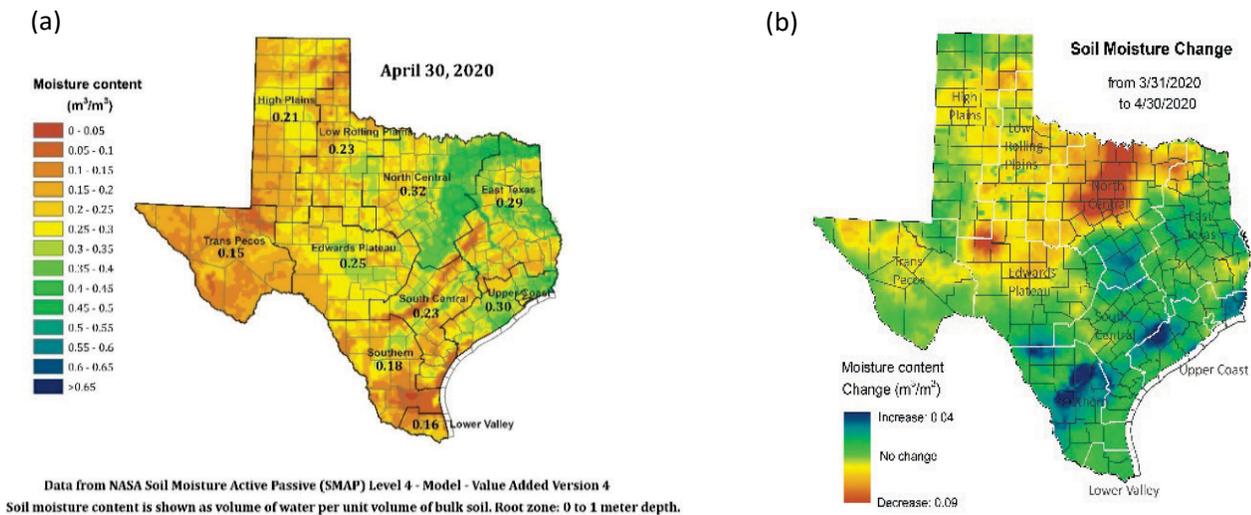
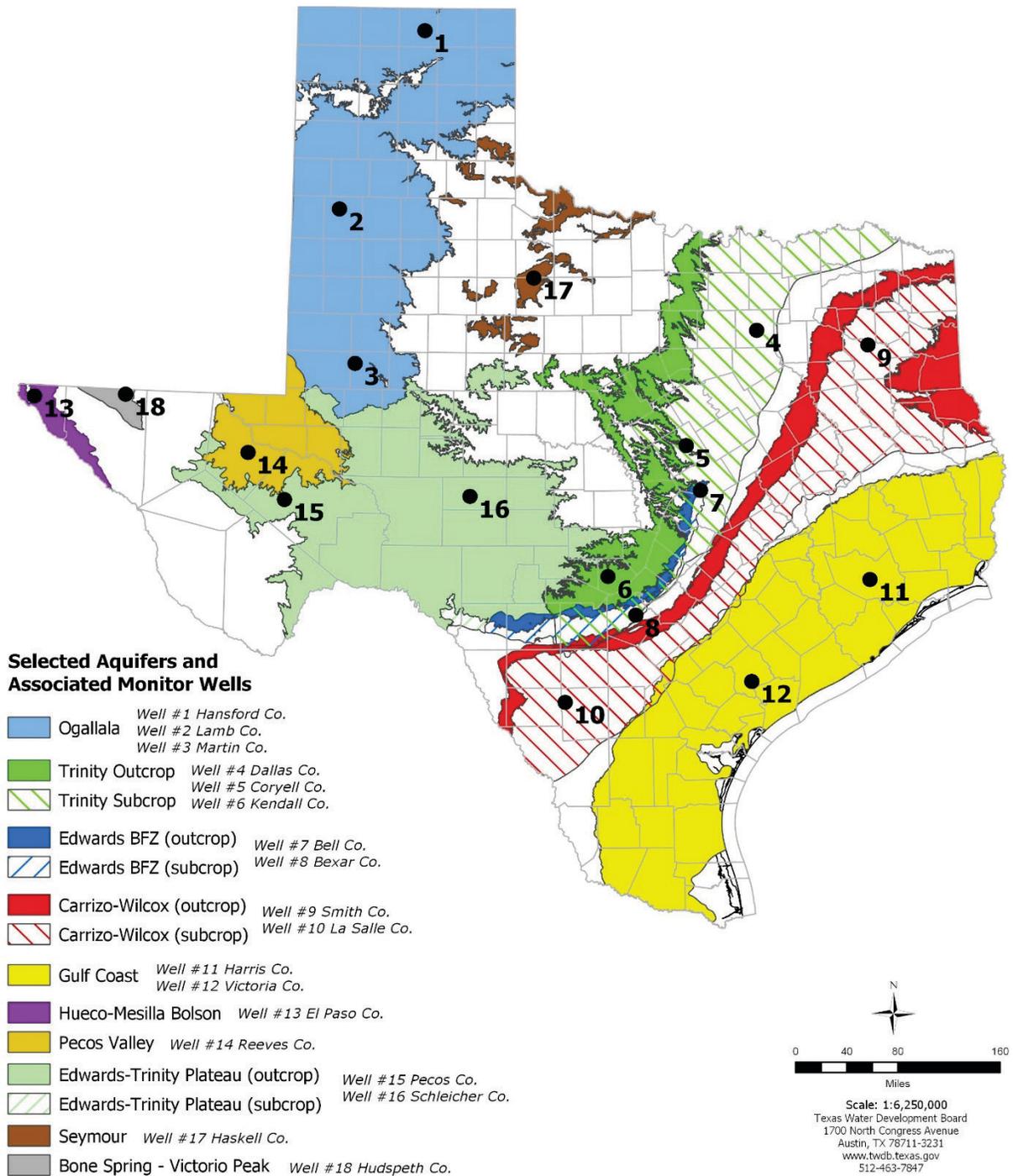


Figure 7: Root zone soil moisture conditions on April, 2020(a) and the difference in root zone soil moisture between end-March 2020 and end-April 2020 (b)



April 2020 GROUNDWATER LEVELS IN OBSERVATION WELLS

Water-level measurements were available for 17 key monitoring wells in the state. Water levels rose in 8 monitoring wells since the beginning of April, ranging from an increase of 0.15 feet in the Haskell County Seymour Aquifer well (#17 on map) to 14.22 feet in the La Salle County Carrizo-Wilcox Aquifer (#10 on map). Water levels declined in 8 monitoring wells, ranging from a decline of -0.09 feet in the Smith County Carrizo-Wilcox Aquifer well (#9 on map) to -8.21 feet in the Pecos County Edwards-Trinity Plateau Aquifer well (#15 on map). Water levels remained at 150.91 feet below land surface in the Lamb County Ogallala Aquifer well (#2 on map). The J-17 well (#8 on map) in San Antonio recorded a water level of 64.50 feet below land surface or 666.50 feet above mean sea level. Water levels are 6.50 feet above the Stage 1 critical management level for the San Antonio portion of the Edwards (Balcones Fault Zone) Aquifer.

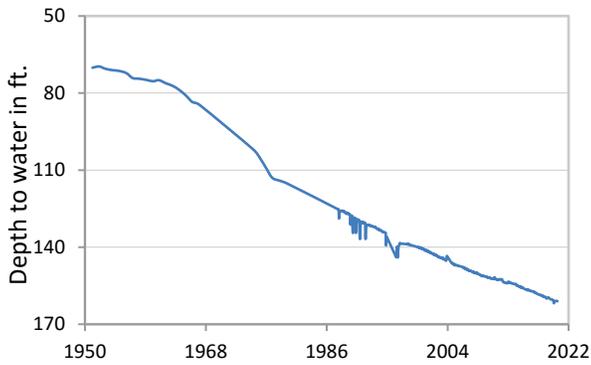
*Well numbers used in this publication on the aquifer map to indicate the monitoring well location (numbers 1 - 17) are different than the TWDB's seven-digit state well number.

Monitoring Well	April	March	Month Change	Year Change	Historical Change	First Measured
(1) Hansford 0354301	161.06	160.90	-0.16	-0.78	-90.94	1951
(2) Lamb 1053602	150.91	150.91	0.00	-0.85	-122.74	1951
(3) Martin 2739903	143.51	143.89	0.38	-0.04	-38.62	1964
(4) Dallas 3319101	NA	494.01	NA	NA	NA	1954
(5) Coryell 4035404	527.37	527.78	0.41	-3.26	-235.37	1955
(6) Kendall 6802609	138.03	138.20	0.17	-20.28	-78.03	1975
(7) Bell 5804816	122.96	123.04	0.08	-2.94	0.55	2008
(8) Bexar 6837203	64.50	59.90	-4.60	-14.30	-17.86	1932
(9) Smith 3430907	433.44	433.35	-0.09	-0.53	-133.44	1977
(10) La Salle 7738103	516.17	530.39	14.22	-21.50	-263.10	2003
(11) Harris 6514409	188.57	189.56	0.99	1.50	-53.07*	1947**
(12) Victoria 8017502	30.68	31.38	0.70	3.86	3.32	1958
(13) El Paso 4913301	296.01	295.81	-0.20	0.86	-64.11	1964
(14) Reeves 4644501	165.07	161.22	-3.85	-1.69	-72.98	1952
(15) Pecos 5216802	195.14	186.93	-8.21	3.35	51.74	1976
(16) Schleicher 5512134	288.79	284.04	-4.75	-16.61	13.11	2003
(17) Haskell 2135748	43.60	43.75	0.15	1.59	-0.60	2002
(18) Hudspeth 4807516	145.89	139.85	-6.04	1.82	-41.97	1966

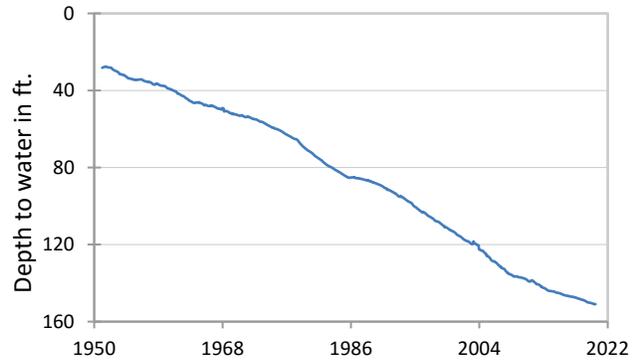
*Change since the original measurement of 135.5 feet below land surface in 1947 (**measurement not shown on the hydrograph)

April 2020 OBSERVATION WELL HYDROGRAPHS

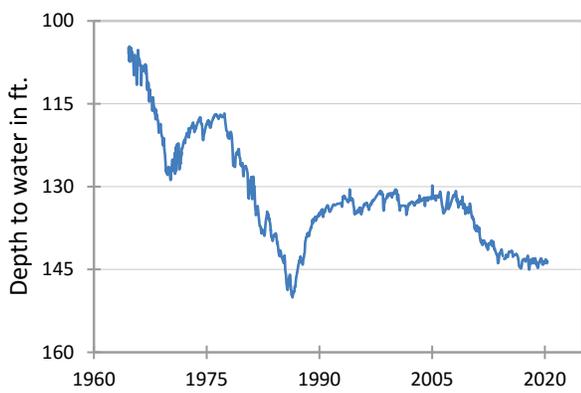
**(1) State Well #03-54-301
Near Spearman, Hansford County
Ogallala Aquifer**



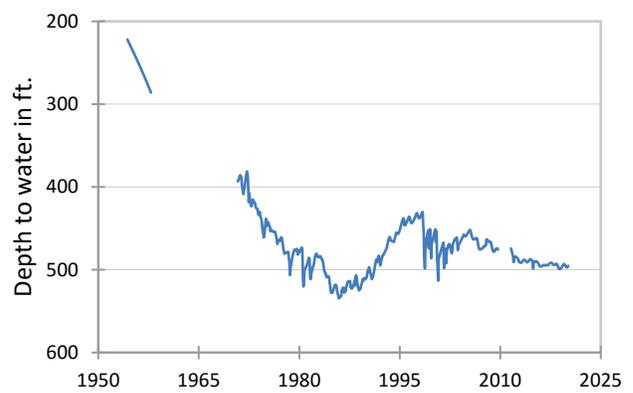
**(2) State Well #10-53-602
Near Earth, Lamb County
Ogallala Aquifer**



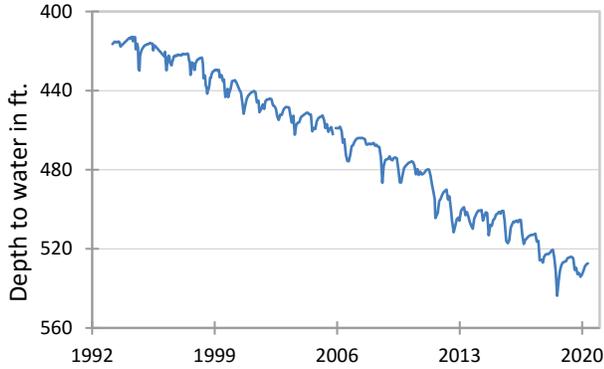
**(3) State Well #27-39-903
Northwest Martin County
Ogallala Aquifer**



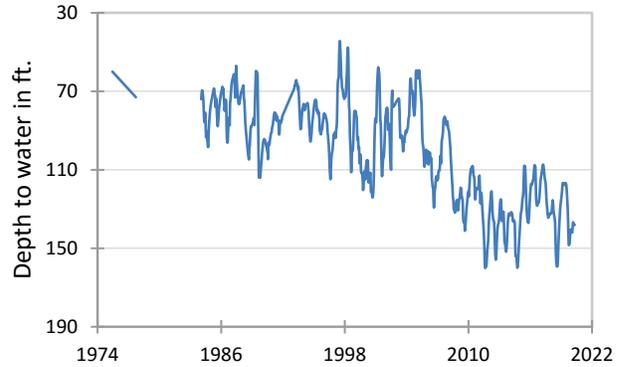
**(4) State Well #33-19-101
Southeast Dallas, Dallas County
Twin Mountains Formation-Trinity Aquifer**



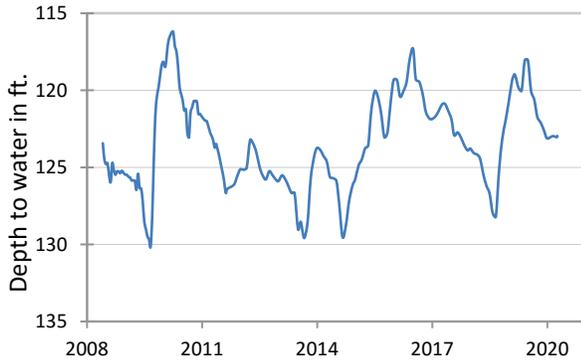
(5) State Well #40-35-404
Gatesville, Coryell County
Hosston Formation-Trinity Aquifer



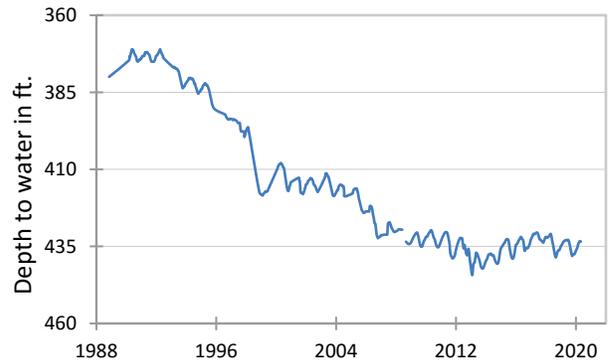
(6) State Well #68-02-609
Waring, Kendall County
Cow Creek Formation-Trinity Aquifer



(7) State Well #58-04-816
Near Salado, Bell County
Edwards (Balcones Fault Zone) Aquifer



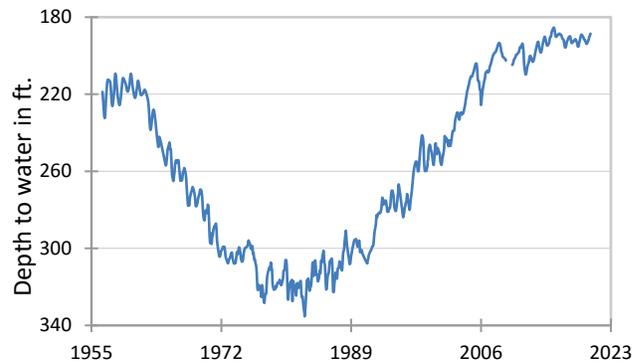
(9) State Well #34-30-907
Red Springs, Smith County
Carrizo-Wilcox Aquifer



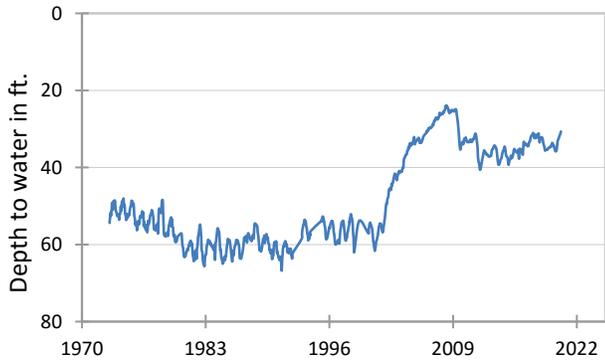
(10) State Well #77-38-103
Near Cotulla, La Salle County
Carrizo-Wilcox Aquifer



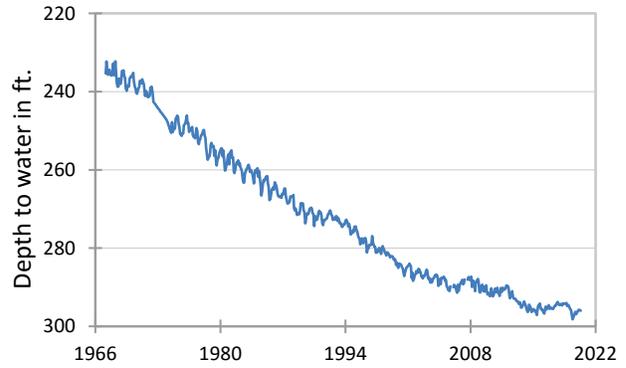
(11) State Well #65-14-409
Alief, Harris County
Evangeline Formation-Gulf Coast Aquifer



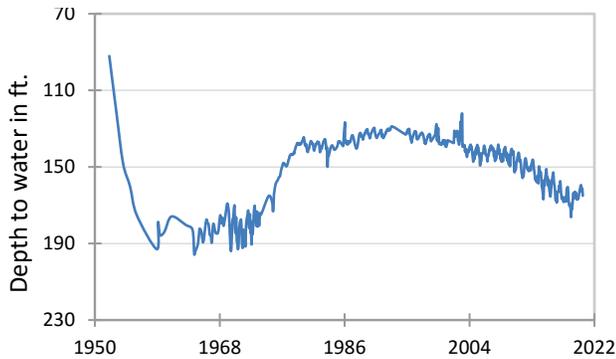
(12) State Well #80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



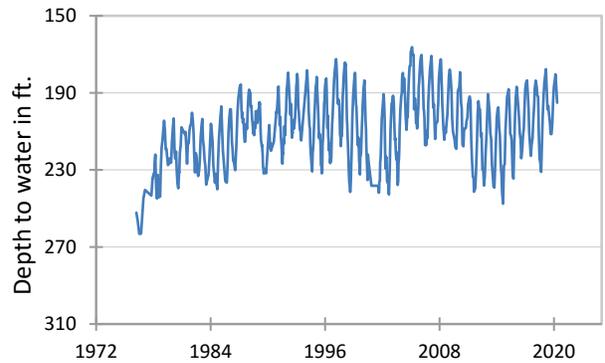
(13) State Well #49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolson Aquifer



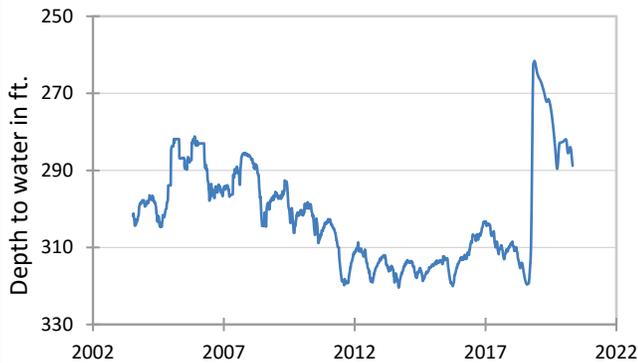
(14) State Well #46-44-501
Near Pecos, Reeves County
Pecos Valley Aquifer



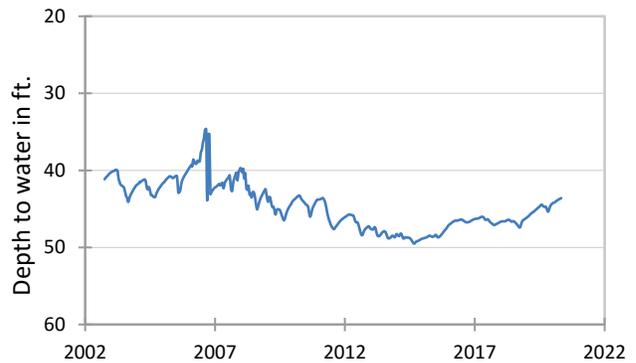
(15) State Well #52-16-802
Fort Stockton, Pecos County
Edwards-Trinity (Plateau) Aquifer



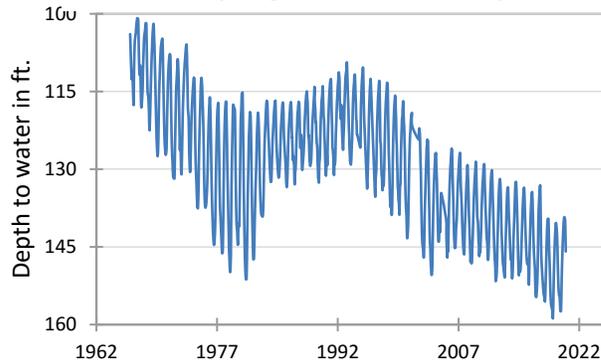
(16) State Well #55-12-134
Eldorado, Schleicher County
Trinity Aquifer



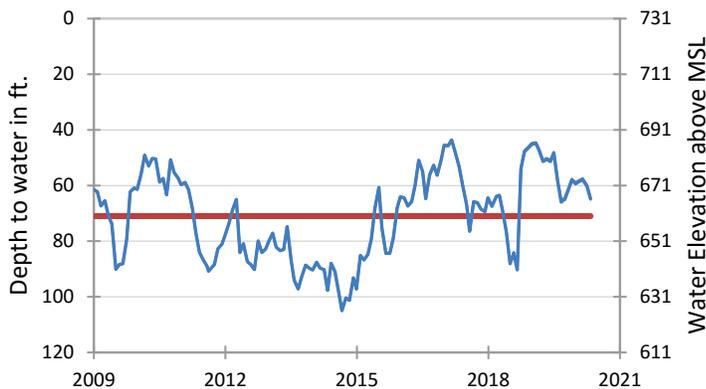
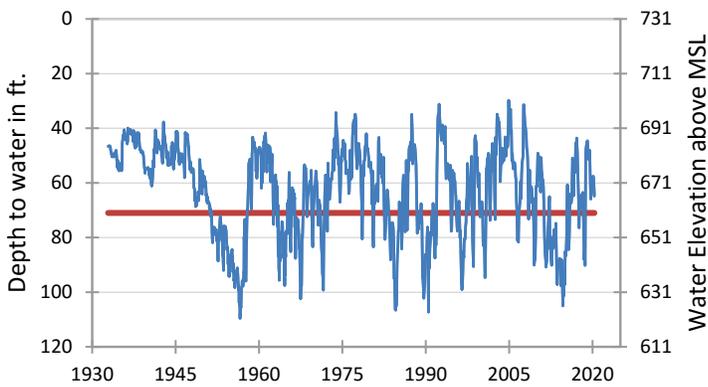
(17) State Well #21-35-748
Near O'Brien, Haskell County
Seymour Aquifer



**(18) State Well #48-07-516
Dell City, Hudspeth County
Bone Spring - Victorio Peak Aquifer**

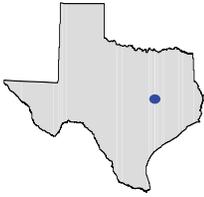


**(8) State Well #68-37-203 (J-17)
San Antonio, Bexar County
Edwards (Balcones Fault Zone) Aquifer**



The late April water-level measurement in this Edwards (Balcones Fault Zone) Aquifer well, elevation 731 feet above mean sea level, was 64.50 feet below land surface, or 666.50 feet above mean sea level. This was 4.60 feet below last month's measurement, 14.30 feet below last year's measurement and 17.86 feet below the initial measurement recorded in 1932.

Water levels below the red line indicate periods in which Edwards Aquifer Authority Stage 1 drought restrictions are in effect.

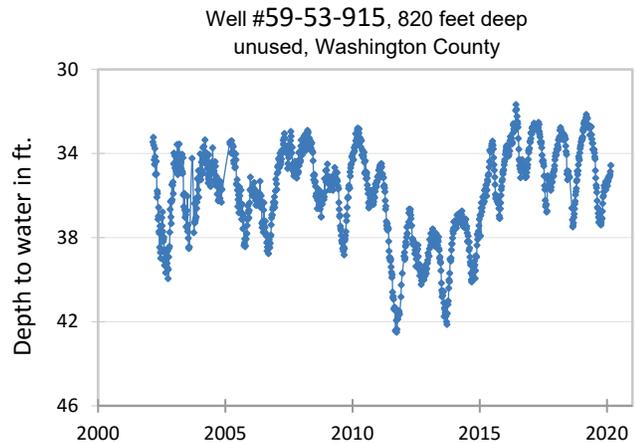


HYDROGRAPH OF THE MONTH

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

The Gulf Coast Aquifer is a major aquifer paralleling the Gulf of Mexico coastline from the Louisiana border to the border of Mexico. It consists of several aquifers, including the Jasper, Evangeline, and Chicot aquifers, which are composed of discontinuous sand, silt, clay, and gravel beds. Freshwater saturated thickness averages about 1,000 feet. Water quality varies with depth and locality: it is generally good in the central and northeastern parts of the aquifer, where the water contains less than 500 milligrams per liter of total dissolved solids, but declines to the south, where it typically contains 1,000 to more than 10,000 milligrams per liter of total dissolved solids and where productivity of the aquifer decreases. High levels of radionuclides, thought mainly to be naturally occurring, are found in some wells in Harris County in the outcrop and in South Texas. Water level declines of as much as 350 feet have led to land subsidence in Harris, Galveston, Fort Bend, Jasper, and Wharton Counties.

Gulf Coast Aquifer



The initial measurement of 33.46 feet below land surface was recorded by a TWDB automatic water-level recorder in February of 2002. The recorder continues to take hourly measurements that are displayed online while near-weekly measurements are stored in the groundwater database. The period of record reveals seasonal fluctuations in water level that are likely attributed to nearby pumping for irrigation.



Far away (left), and close-up (right) images of well #59-53-915.