

Texas Water Conditions Report

January 2021

RAINFALL

Little to no rain [yellow, orange, and red shading, Figure 1(a)] fell over much of the Trans Pecos, western, southern, and eastern Edwards Plateau, northern and southern High Plains, central Low Rolling Plains, Lower Valley, Southern, northern North Central, western and central South Central, and southwestern Upper Coast climate divisions.

Some rainfall [light blue and dark blue shading, Figure 1(a)], was recorded over portions of central High Plains, northern and southern Low Rolling Plains, northern and central Edwards Plateau, central and southern North Central, northern and southern South Central, much of East Texas, and central and eastern Upper Coast climate divisions, reaching 9.28 inches in eastern portions of the state [dark blue shading, Figure 1(a)].

Monthly rainfall for January was below average [yellow and orange shading, Figure 1(b)], compared to historical data from 1981–2010, in much of Trans Pecos, northern and southern High Plains, central Low Rolling Plains, southern Edwards Plateau, southern Lower Valley, Upper Coast, southern East Texas, much of South Central, Southern, and northern and central North Central climate divisions. Above average rainfall [green and light blue shading, Figure 1(b)] occurred in portions of central and northern High Plains, northern and southern Low Rolling Plains, northcentral Edwards Plateau, southern South Central, northern East Texas, western North Central, and small portions of eastern Trans Pecos climate divisions.

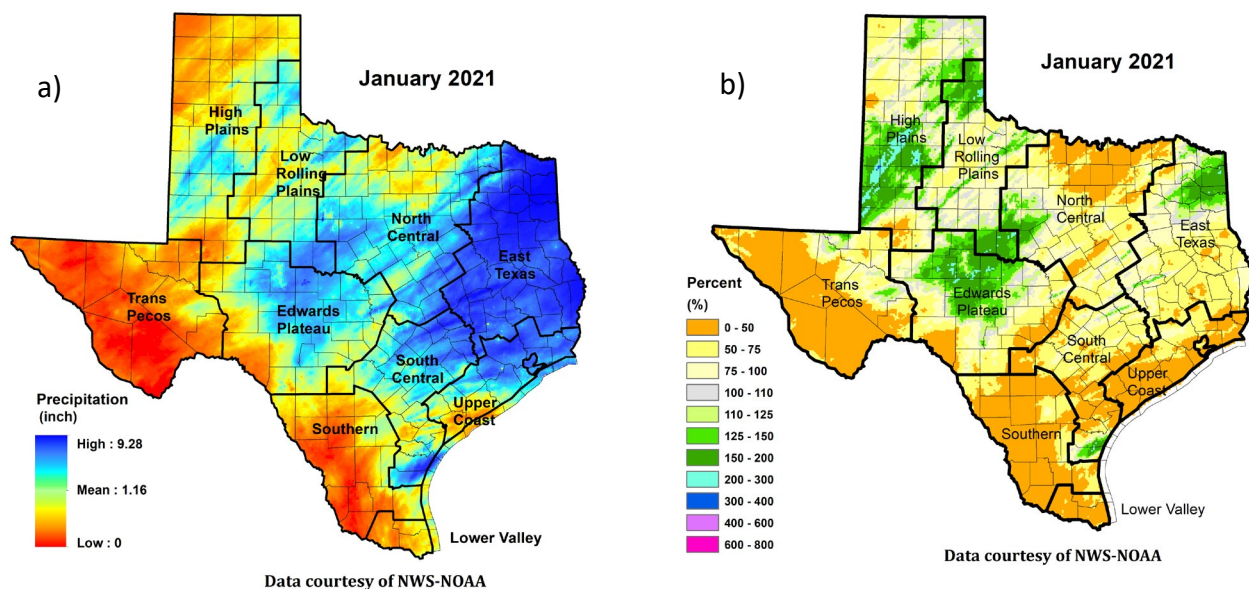


Figure 1: (a) Monthly accumulated rainfall and (b) Percent of normal rainfall

RESERVOIR STORAGE

At the end of January 2021, total conservation storage* in 118 of the state’s major water supply reservoirs plus Elephant Butte Reservoir in New Mexico was 25.8 million acre-feet or 80.3 percent of total conservation storage capacity (Figure 2). This is approximately 0.6 million acre-feet more than a month ago and approximately 0.3 million acre-feet less than at the end of January 2020.

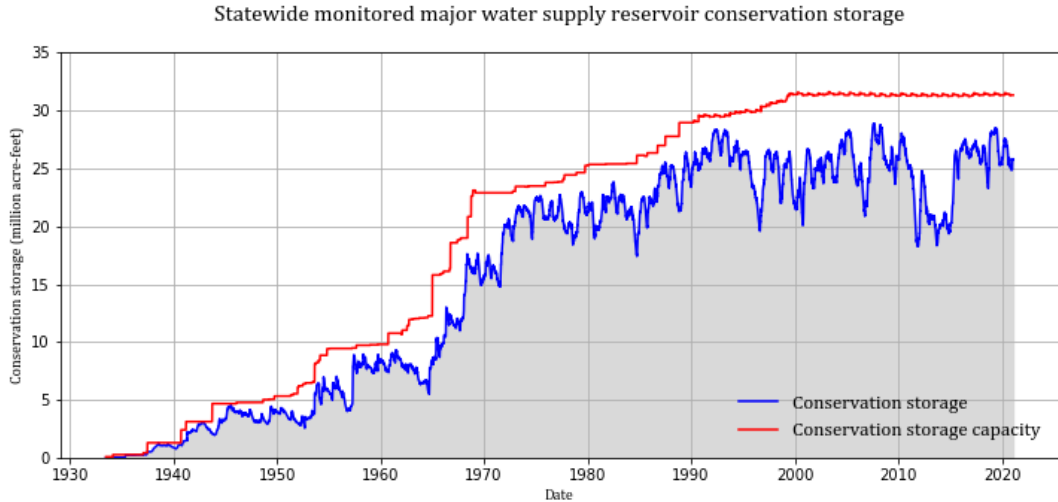


Figure 2: Statewide reservoir conservation storage

Out of 118 reservoirs in the state, 38 reservoirs held 100 percent of conservation storage capacity (Figure 3). Additionally, 34 were at or above 90 percent full. Eight reservoirs, E.V. Spence (22.3 percent full), Greenbelt (16.5 percent full), J.B. Thomas (13.6 percent full), Mackenzie (8.9 percent full), O. C. Fisher (6.3 percent full), Palo Duro Reservoir (1.5 percent full), Falcon (27.5 percent full), and White River (12.4 percent full) remained below 30 percent full. Elephant Butte Reservoir (located in New Mexico) was at 7.9 percent full.

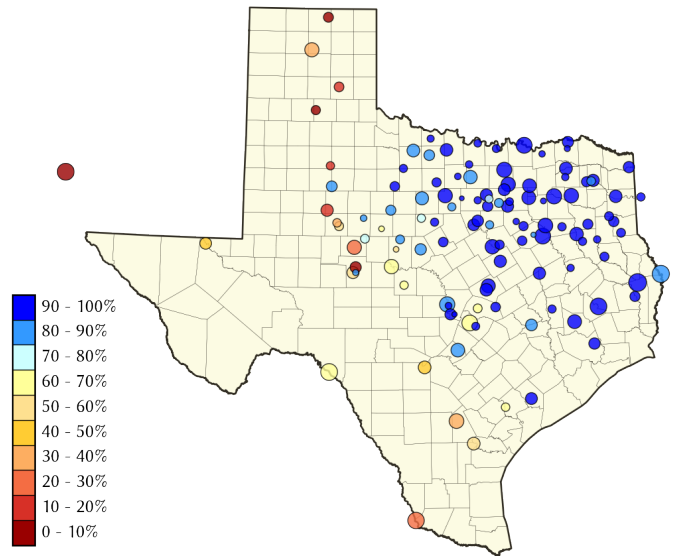


Figure 3: Reservoir conservation storage at end-January expressed as percent full (%)

*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 North Central (97.3 percent full), East Texas (95.3 percent full), and Upper Coast (99 percent full) climate divisions (Figure 4). Conservation storage in the Edwards Plateau (61.6 percent full), Low Rolling Plains (63.5), and South Central (69.7 percent full) climate divisions was abnormally low (Figure 4). The High Plains (29.3 percent full), and Southern (31.8 percent full) climate divisions had severely low storage, and the Trans Pecos (14.1 percent full) climate division had extremely low conservation storage (Figure 4).

Combined conservation storage by river basin or sub-basin showed normal to high (> 70 percent full, Figure 5) conservation storage in the Upper and Lower Red, Upper and Lower Trinity, Upper and Lower Brazos, Upper and Lower Sabine, Lower Colorado, Guadalupe, Lavaca, San Jacinto, Sulphur, Cypress, and Neches river basins. Conservation storage in the Upper Colorado, Lower Rio Grande, and San Antonio basins was moderately low (40–60 percent full). The Canadian and Nueces basins had severely low (20–40 percent full, Figure 5) storage. Conservation storage in the Upper/Mid Rio Grande river basin was extremely low (10–20 percent full, Figure 5).

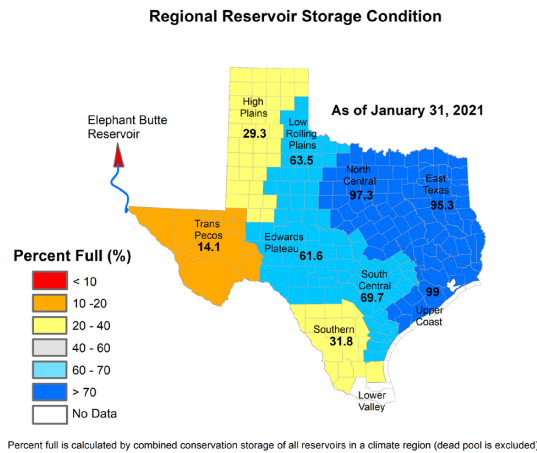


Figure 4: Reservoir Storage Index* by climate division at 1/31/2021

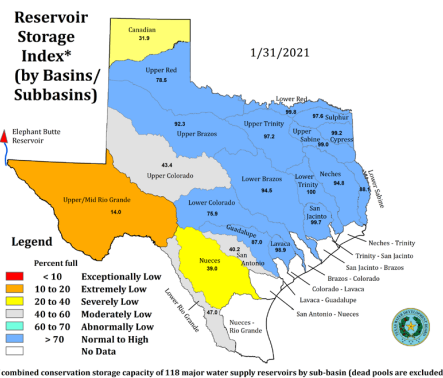


Figure 5: Reservoir Storage Index* by river basin/sub-basin at 1/31/2021

*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-January		Storage change from end-Dec 2020		Storage change from end-Jan 2020	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
Abilene, Lake	7,900	5,451	69.0	-83	-1.1	240	3.0
Alan Henry Reservoir	96,207	84,297	87.6	-597	0.0	-5,235	-5.4
*Amistad Reservoir (Texas & Mexico)	3,275,532	1,242,568	37.9	933	0.0	-440,727	-13.5
*Amistad Reservoir (Texas)	1,840,849	1,168,808	63.5	-8,548	0.0	-192,514	-10.5
Amon G Carter, Lake	19,266	18,088	93.9	-43	0.0	242	1.3
Aquilla Lake	43,243	40,394	93.4	1,003	2.3	5,172	12.0
Arlington, Lake	40,157	33,550	83.5	-36	0.0	-6,607	-16.5
Arrowhead, Lake	230,359	228,767	99.3	4,597	2.0	25,173	10.9
Athens, Lake	29,503	29,503	100.0	0	0.0	0	0.0
*Austin, Lake	23,972	22,880	95.4	-294	-1.2	261	1.1
B A Steinhagen Lake	69,186	63,698	92.1	-4,167	-6.0	-2,559	-3.7
Bardwell Lake	46,122	46,122	100.0	1,990	4.3	6,312	13.7
Belton Lake	435,225	429,300	98.6	5,521	1.3	29,168	6.7
Benbrook Lake	85,648	79,082	92.3	2,929	3.4	11,603	13.5
Bob Sandlin, Lake	192,417	192,417	100.0	4,244	2.2	0	0.0
Bonham, Lake	11,027	10,817	98.1	454	4.1	-210	-1.9
Brady Creek Reservoir	28,808	19,673	68.3	0	0.0	-4,980	-17.3
Bridgeport, Lake	366,236	323,175	88.2	2,669	0.7	8,751	2.4
*Brownwood, Lake	130,868	112,589	86.0	-187	0.0	5,027	3.8
Buchanan, Lake	860,607	719,534	83.6	412	0.0	-66,290	-7.7
Caddo, Lake	29,898	29,898	100.0	0	0.0	0	0
Canyon Lake	378,781	335,546	88.6	-1,520	0.0	-19,044	-5.0
Cedar Creek Reservoir in Trinity	644,686	644,686	100.0	18,782	2.9	64,210	10.0
Champion Creek Reservoir	41,580	24,400	58.7	12	0.0	-3,117	-7.5
Cherokee, Lake	40,094	40,094	100.0	0	0.0	0	0.0
Choke Canyon Reservoir	662,820	230,195	34.7	-3,822	0.0	-65,875	-9.9
*Cisco, Lake	29,003	23,018	79.4	-9	0.0	-2,196	-7.6
Coleman, Lake	38,075	32,734	86.0	103	0.3	-51	0.0
Colorado City, Lake	31,040	21,255	68.5	624	2.0	-1,384	-4.5
*Coletto Creek Reservoir	30,758	11,265	36.6	0	0.0	-2,453	-8.0
Conroe, Lake	410,988	410,988	100.0	13,502	3.3	33,920	8.3
Corpus Christi, Lake	256,062	129,083	50.4	-3,181	-1.2	-59,455	-23.2
Crook, Lake	9,195	8,986	97.7	-209	-2.3	-209	-2.3
Cypress Springs, Lake	66,756	66,756	100.0	0	0.0	0	0.0
E. V. Spence Reservoir	517,272	115,537	22.3	-1,063	0.0	-22,261	-4.3
Eagle Mountain Lake	179,880	166,874	92.8	2,982	1.7	-13,006	-7.2
Elephant Butte Reservoir (Texas)	852,491	67,195	7.9	12,471	1.5	-181,974	-21.3
Elephant Butte Reservoir (Total Storage)	1,985,900	155,545	7.8	28,869	1.5	-421,237	-21.2
*Falcon Reservoir (Texas & Mexico)	2,646,817	487,836	18.4	-40,520	-1.5	-82,666	-3.1
*Falcon Reservoir (Texas)	1,551,007	427,214	27.5	-43,476	-2.8	-66,805	-4.3
Fork Reservoir, Lake	605,061	588,831	97.3	31,644	5.2	24,160	4.0
Fort Phantom Hill, Lake	70,030	61,852	88.3	108	0.2	-937	-1.3
Georgetown, Lake	36,823	24,253	65.9	1,499	4.1	-1,698	-4.6
Gibbons Creek Reservoir	25,721	23,208	90.2	2,242	8.7	2,374	9.2
Graham, Lake	45,288	42,776	94.5	192	0.4	4,171	9.2
Granbury, Lake	132,949	132,949	100.0	0	0.0	326	0.2

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of lake or reservoir	Storage capacity	Storage at end-January		Storage change from end-Dec 2020		Storage change from end-Jan 2020		
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)	
<i>Continued</i>								
Granger Lake	51,822	50,238	96.9	3,265	6.3	-1,584	-3.1	
Grapevine Lake	163,064	163,064	100.0	2,034	1.2	0	0.0	
Greenbelt Lake	59,968	9,867	16.5	12	0.0	-2,131	-3.6	
*Halbert, Lake	6,033	5,296	87.8	-639	-10.6	233	3.9	
Hords Creek Lake	8,109	4,340	53.5	-52	0.0	-1,931	-23.8	
Houston County Lake	17,113	17,113	100.0	0	0.0	0	0.0	
Houston, Lake	130,147	128,685	98.9	-1,462	-1.1	11,165	8.6	
Hubbard Creek Reservoir	313,298	276,627	88.3	-1,016	0.0	3,752	1.2	
Hubert H Moss Lake	24,058	23,864	99.2	525	2.2	-194	0.0	
Inks, Lake	13,962	12,982	93.0	142	1.0	5,099	36.5	
J. B. Thomas, Lake	199,931	27,185	13.6	-1,052	0.0	-21,447	-10.7	
Jacksonville, Lake	25,670	25,670	100.0	0	0.0	0	0.0	
Jim Chapman Lake (Cooper)	260,332	250,850	96.4	58,883	22.6	-519	0.0	
Joe Pool Lake	175,800	166,332	94.6	2,520	1.4	7,708	4.4	
Kemp, Lake	245,307	209,209	85.3	3,754	1.5	591	0.2	
Kickapoo, Lake	86,345	70,400	81.5	105	0.1	-941	-1.1	
Lavon Lake	406,388	406,388	100.0	38,935	9.6	35,329	8.7	
Leon, Lake	27,762	25,612	92.3	33	0.1	1,963	7.1	
Lewisville Lake	563,228	563,228	100.0	24,821	4.4	0	0.0	
Limestone, Lake	203,780	203,780	100.0	7,869	3.9	38,292	18.8	
*Livingston, Lake	1,741,867	1,741,867	100.0	0	0.0	0	0.0	
*Lost Creek Reservoir	11,950	11,438	95.7	214	1.8	-294	-2.5	
Lyndon B Johnson, Lake	115,249	111,187	96.5	490	0.4	24,810	21.5	
Mackenzie Reservoir	46,450	4,144	8.9	-27	0.0	-1,173	-2.5	
Marble Falls, Lake	6,901	6,901	100.0	87	1.3	65	0.9	
Martin, Lake	75,726	75,726	100.0	11,591	15.3	12,489	16.5	
Medina Lake	254,823	102,604	40.3	-3,639	-1.4	-92,810	-36.4	
Meredith, Lake	500,000	178,128	35.6	0	0.0	-31,364	-6.3	
Millers Creek Reservoir	26,768	26,768	100.0	0	0.0	3,527	13.2	
*Mineral Wells, Lake	5,273	5,273	100.0	0	0.0	107	2.0	
Monticello, Lake	34,740	30,411	87.5	1,460	4.2	511	1.5	
Mountain Creek, Lake	22,850	22,850	100.0	0	0.0	0	0.0	
Murvaul, Lake	38,285	38,285	100.0	377	1.0	514	1.3	
Nacogdoches, Lake	39,522	35,739	90.4	1,553	3.9	-1,645	-4.2	
Nasworthy	9,615	8,208	85.4	-98	-1.0	-49	0.0	
Navarro Mills Lake	49,827	49,827	100.0	1,728	3.5	11,411	22.9	
New Terrell City Lake	8,583	8,583	100.0	378	4.4	0	0.0	
Nocona, Lake (Farmers Crk)	21,444	20,070	93.6	195	0.9	169	0.8	
North Fork Buffalo Creek Reservoir	15,400	15,017	97.5	602	3.9	3,092	20.1	
O' the Pines, Lake	241,363	241,363	100.0	0	0.0	0	0.0	
O. C. Fisher Lake	115,742	7,295	6.3	14	0.0	-3,416	-3.0	
*O. H. Ivie Reservoir	554,340	338,191	61.0	2,207	0.4	-47,015	-8.5	
Oak Creek Reservoir	39,210	30,546	77.9	20	0.1	-4,028	-10.3	

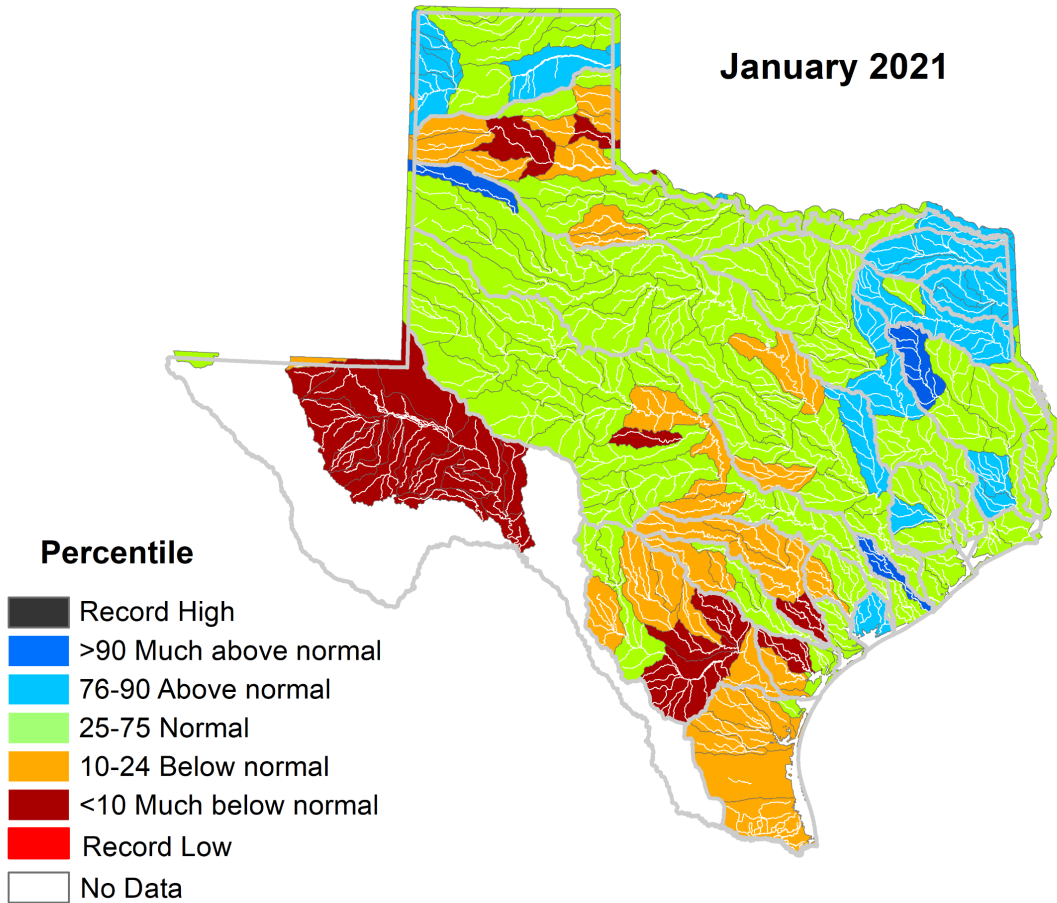
CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of lake or reservoir	Storage capacity	Storage at end-January		Storage change from end-Dec 2020		Storage change from end-Jan 2020	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
<i>Continued</i>							
Palestine, Lake	367,303	367,303	100.0	0	0.0	8,261	2.2
Palo Duro Reservoir	61,066	922	1.5	-80	0.0	-2,121	-3.5
Palo Pinto, Lake	26,766	23,253	86.9	-106	0.0	3,427	12.8
Pat Cleburne, Lake	26,008	22,084	84.9	179	0.7	-313	-1.2
*Pat Mayse Lake	113,683	113,683	100.0	0	0.0	0	0.0
Possum Kingdom Lake	538,139	531,543	98.8	3,538	0.7	1,064	0.2
Proctor Lake	54,762	52,977	96.7	951	1.7	12,758	23.3
Ray Hubbard, Lake	439,559	439,559	100.0	27,930	6.4	40,498	9.2
Ray Roberts, Lake	788,167	775,469	98.4	13,676	1.7	-12,698	-1.6
Red Bluff Reservoir	151,110	73,918	48.9	2,125	1.4	-24,290	-16.1
Richland-Chambers Reservoir	1,087,839	1,087,839	100.0	49,946	4.6	144,425	13.3
Sam Rayburn Reservoir	2,857,077	2,686,843	94.0	254,426	8.9	-97,369	-3.4
Somerville Lake	150,293	127,837	85.1	4,645	3.1	-20,771	-13.8
Squaw Creek, Lake	151,250	151,250	100.0	253	0.2	1,482	1.0
Stamford, Lake	51,570	51,570	100.0	0	0.0	5,495	10.7
Stillhouse Hollow Lake	227,771	227,771	100.0	0	0.0	22,028	9.7
Striker, Lake	16,934	16,934	100.0	0	0.0	0	0.0
Sweetwater, Lake	12,267	10,042	81.9	16	0.1	-2,046	-16.7
*Sulphur Springs, Lake	17,747	17,747	100.0	5,283	29.8	1,313	7.4
Tawakoni, Lake	871,685	871,685	100.0	52,177	6.0	28,877	3.3
Texana, Lake	159,566	157,915	99.0	-1,651	-1.0	41,824	26.2
Texoma, Lake (Texas & Oklahoma)	2,487,601	2,498,365	100.0	56,192	2.3	62,895	2.5
Texoma, Lake (Texas)	1,243,801	1,243,801	100.0	22,715	1.8	26,067	2.1
Toledo Bend Reservoir (Texas & Louisiana)	4,472,900	3,946,178	88.2	50,969	1.1	222,544	5.0
Toledo Bend Reservoir (Texas)	2,236,450	1,971,039	88.1	25,485	1.1	111,272	5.0
Travis, Lake	1,113,348	750,108	67.4	-562	0.0	-175,640	-15.8
Twin Buttes Reservoir	182,454	99,119	54.3	1,530	0.8	-19,017	-10.4
Tyler, Lake	72,073	72,073	100.0	0	0.0	4,153	5.8
Waco, Lake	189,418	184,432	97.4	6,485	3.4	35,596	18.8
Waxahachie, Lake	10,780	10,259	95.2	979	9.1	-120	-1.1
Weatherford, Lake	17,812	16,160	90.7	247	1.4	-1,609	-9.0
White River Lake	29,880	3,696	12.4	98	0.3	-1,790	-6.0
Whitney, Lake	553,344	504,207	91.1	8,561	1.5	67,644	12.2
Worth, Lake	24,419	17,803	72.9	-993	-4.1	-897	-3.7
Wright Patman Lake	122,593	122,593	100.0	0	0.0	0	0.0
STATEWIDE TOTAL							
STATEWIDE TOTAL	32,168,837	25,842,323	80.3	674,427	2.1	-349,961	-1.1

STREAMFLOW CONDITIONS

Much of the state had near normal streamflow (25–75th percentile, green shading in Figure 6) in January 2021. Above normal streamflow (76–90th percentile, light blue shading in Figure 6) was seen in the Canadian, Lower Red, Sulphur, Cypress, Upper Sabine, Upper Trinity, San Jacinto, Lower Neches and Colorado-Lavaca river basins. Much above normal streamflow (>90 percentile, dark blue shading in Figure 6) was seen in the Upper Brazos, Neches, and Brazos-Colorado river basins.

Below normal streamflow (10–24th percentile, orange shading in Figure 6) was recorded in the Upper Red, Lower Brazos, Lower Colorado, Guadalupe, Lavaca, San Antonio, San Antonio-Nueces, Nueces, Nueces-Rio Grande river basins. Some watersheds in the Upper Red, Upper Colorado, Lower Guadalupe, San Antonio-Nueces, Lower Nueces, and Upper Rio Grande river basins had much below normal streamflow (less than the 10th percentile, dark brown shading in Figure 6).



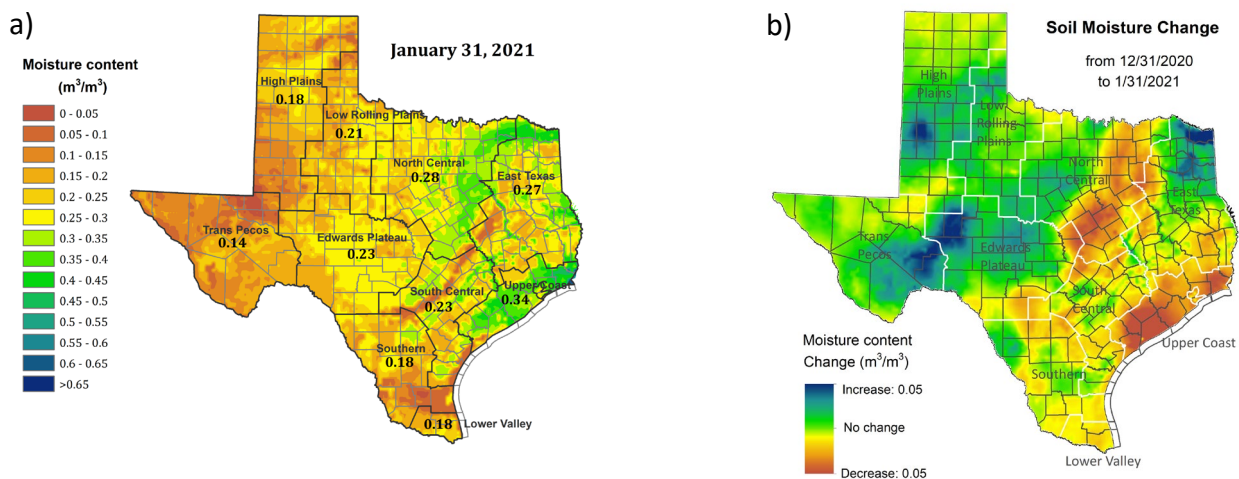
Data courtesy of U. S. Geological Survey

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

SOIL MOISTURE

Root zone soil moisture at the end of January 2021 [Figure 7(a)] was moderate [> 0.20 cubic meters of water per bulk cubic meter soil (m^3/m^3)] in portions of the Trans Pecos, High Plains, Low Rolling Plains, Edwards Plateau, central and western North Central, areas of East Texas, central South Central, Southern, Lower Valley, and northern Upper Coast climate divisions. There were areas of low soil moisture [< 0.15 cubic meters of water per bulk cubic meter soil (m^3/m^3)] in portions of the Trans Pecos, High Plains, Low Rolling Plains, Southern, southern and north central to northeastern South Central, northern Lower Valley, and southwestern East Texas climate divisions. Soil moisture was high [> 0.3 cubic meters of water per bulk cubic meter soil (m^3/m^3)] in areas of central and eastern North Central, northern and southern South Central, scattered areas across East Texas, a small area of northeastern Southern, and the Upper Coast climate divisions [Figure 7(a)].

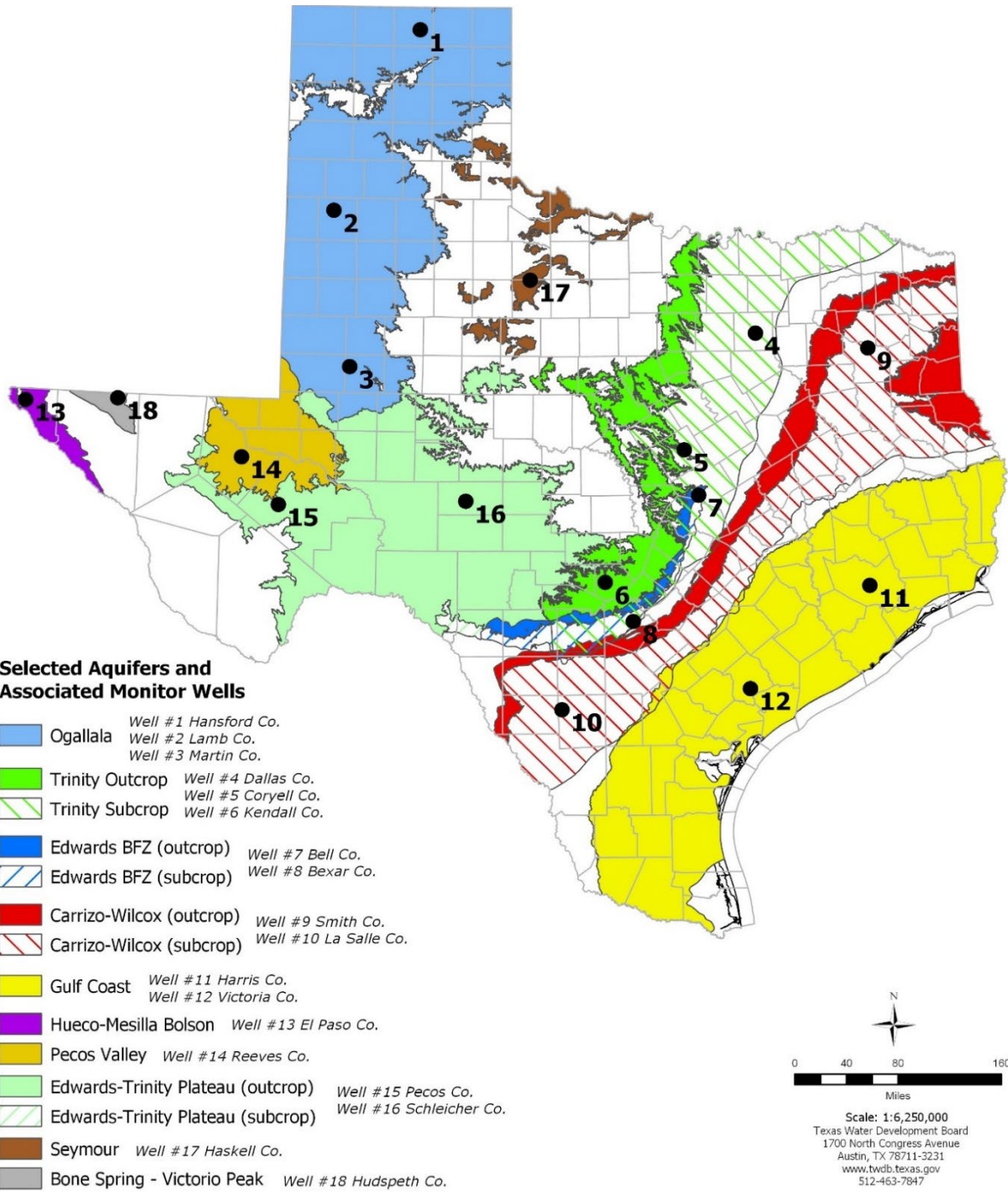
Compared to conditions at the end of December 2020, soil moisture content increased [green to blue shading in Figure 7(b)] in much of the Trans Pecos, High Plains, Low Rolling Plains, Edwards Plateau, central and northwestern Southern, portions of northern and southern South Central, western North Central, and north central and southeastern East Texas climate divisions. Soil moisture content decreased [yellow, orange, and brown shading in Figure 7(b)] in the northeastern corner of the Trans Pecos, areas of northern High Plains, northeastern Low Rolling Plains, southern Edwards Plateau, northeastern and southern Southern, Lower Valley, eastern North Central, much of South Central, western and southern East Texas, and much of the Upper Coast climate divisions.



Data from NASA Soil Moisture Active Passive (SMAP) Level 4 - Model - Value Added Version 4

Soil moisture content is shown as volume of water per unit volume of bulk soil. Root zone: 0 to 1 meter depth.

Figure 7: Root zone soil moisture conditions in January 2021 (a) and the difference in root zone soil moisture between end-December 2020 and end-January 2021 (b)



January 2021 GROUNDWATER LEVELS IN MONITORING WELLS

Water-level measurements were available for 16 key monitoring wells in the state. Water levels rose in 13 monitoring wells since the beginning of January, ranging from an increase of 0.20 feet in the Bell County Edwards (Balcones Fault Zone) Aquifer well (#7 on map) to 5.51 feet in the Pecos County Edwards-Trinity (Plateau) Aquifer well (#15 on map). Water levels declined in 2 monitoring wells, ranging from a decline of -0.04 feet in the Lamb County Ogallala Aquifer well (#2 on map) to -0.36 feet in the Coryell County Trinity Aquifer well (#5 on map). The J-17 well (#8 on map) in San Antonio recorded a water level of 65.70 feet below land surface or 665.30 feet above mean sea level. Water levels are 5.30 feet above the Stage I critical management level for the San Antonio portion of the Edwards (Balcones Fault Zone) Aquifer.

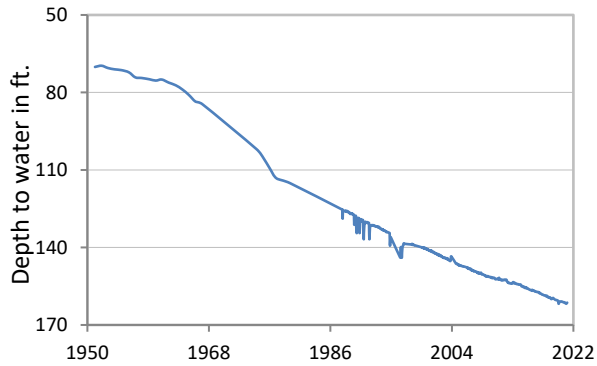
*Well numbers used in this publication on the aquifer map to indicate the monitoring well location (numbers 1 - 18) are different than the TWDB's seven-digit state well number.

Monitoring Well	January	December	Month Change	Year Change	Historical Change	First Measured
(1) Hansford 0354301	161.37	161.67	0.30	NA	-91.25	1951
(2) Lamb 1053602	151.63	151.59	-0.04	-0.71	-123.46	1951
(3) Martin 2739903	144.68	145.67	0.99	-1.44	-39.79	1964
(4) Dallas 3319101	488.97	489.67	0.70	7.39	-266.97	1954
(5) Coryell 4035404	529.97	529.61	-0.36	0.94	-237.97*	1955**
(6) Kendall 6802609	146.85	150.51	3.66	-5.01	-86.85	1975
(7) Bell 5804816	124.48	124.68	0.20	-1.44	-0.97	2008
(8) Bexar 6837203	65.70	68.10	2.40	-7.70	-19.06	1932
(9) Smith 3430907	435.34	436.78	1.44	0.21	-135.34*	1977**
(10) La Salle 7738103	511.89	513.30	1.41	NA	-258.82	2003
(11) Harris 6514409	187.46	188.18	0.72	4.22	-51.96*	1947**
(12) Victoria 8017502	32.75	34.36	1.61	-0.19	1.25*	1958**
(13) El Paso 4913301	296.16	296.54	0.38	-0.36	-64.26*	1964**
(14) Reeves 4644501	NA	NA	NA	NA	NA	1952
(15) Pecos 5216802	191.99	197.50	5.51	-8.67	54.89	1976
(16) Schleicher 5512134	288.96	NA	NA	-6.92	12.94	2003
(17) Haskell 2135748	NA	44.53	NA	NA	NA	2002
(18) Hudspeth 4807516	144.82	147.63	2.81	-4.83	-40.90	1966

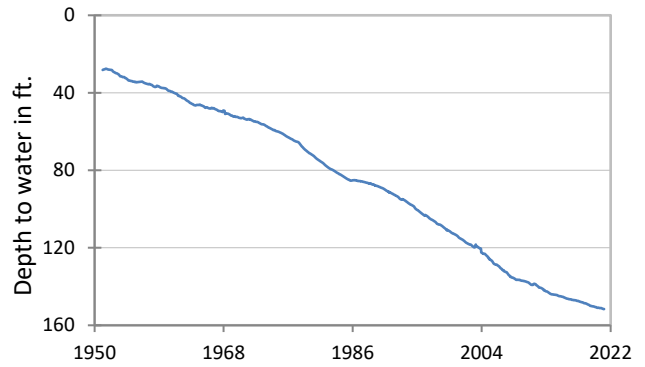
*Change since the original measurement taken on the date indicated in the last column (**measurement not shown on the hydrograph)

January 2021 MONITORING WELL HYDROGRAPHS

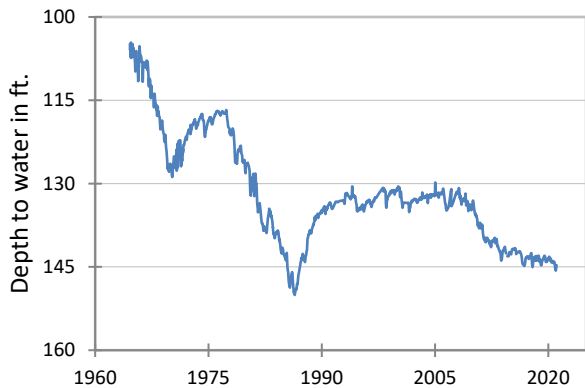
(1) State Well #03-54-301
Near Spearman, Hansford County
Ogallala Aquifer



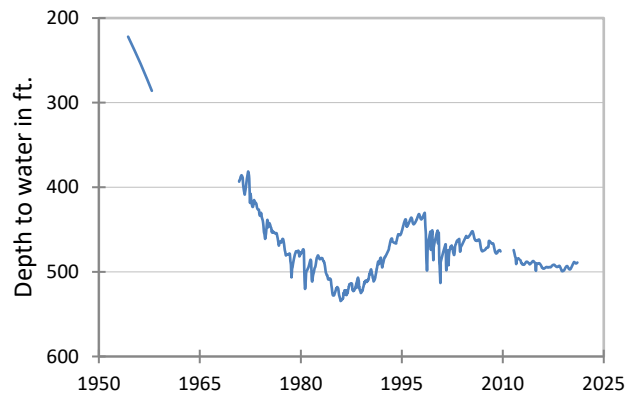
(2) State Well #10-53-602
Near Earth, Lamb County
Ogallala Aquifer



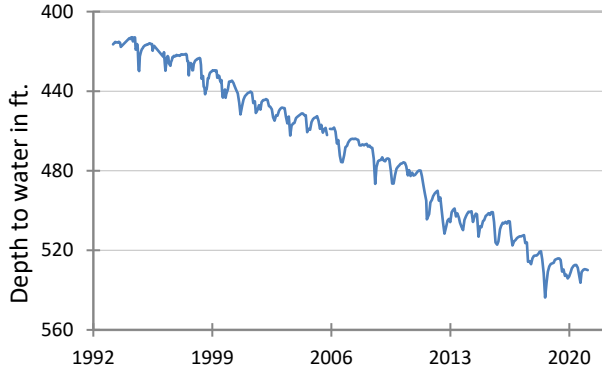
(3) State Well #27-39-903
Northwest Martin County
Ogallala Aquifer



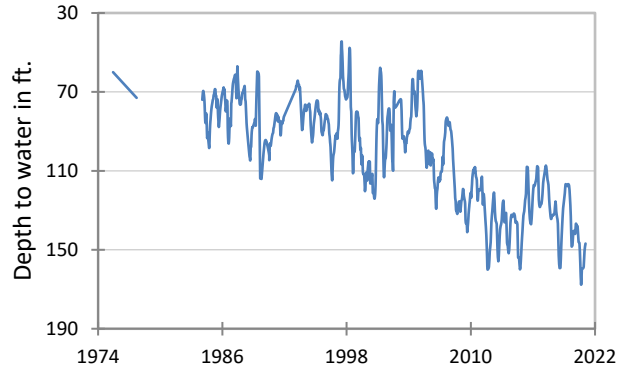
(4) State Well #33-19-101
Southeast Dallas, Dallas County
Twin Mountains Formation-Trinity Aquifer



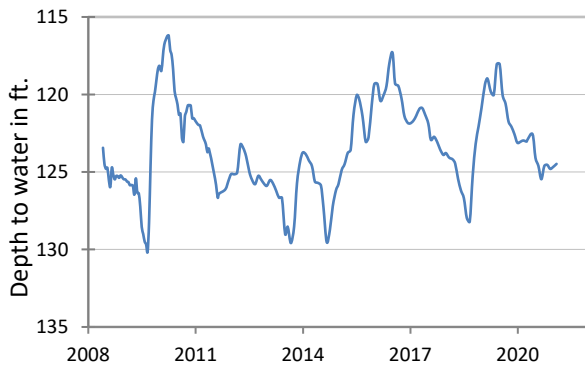
(5) State Well #40-35-404
Gatesville, Coryell County
Hosston Formation-Trinity Aquifer



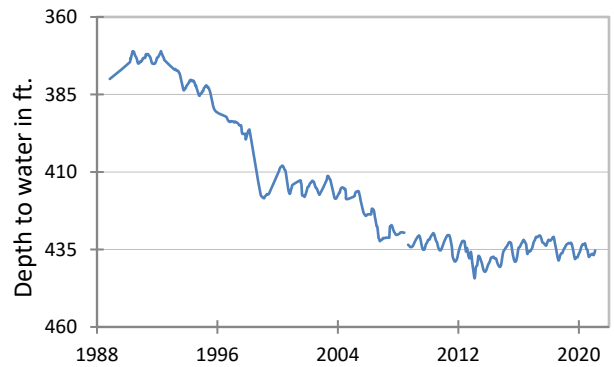
(6) State Well #68-02-609
Waring, Kendall County
Travis Peak Formation-Trinity Aquifer



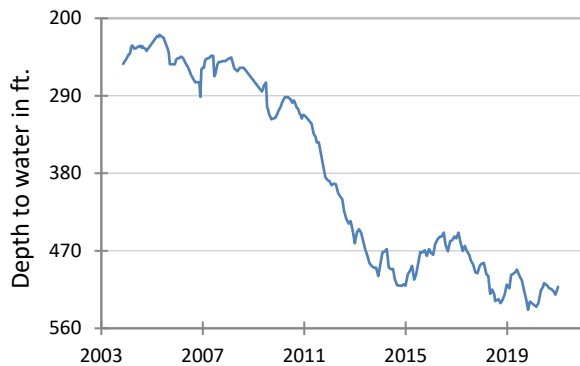
(7) State Well #58-04-816
Near Salado, Bell County
Edwards (Balcones Fault Zone) Aquifer



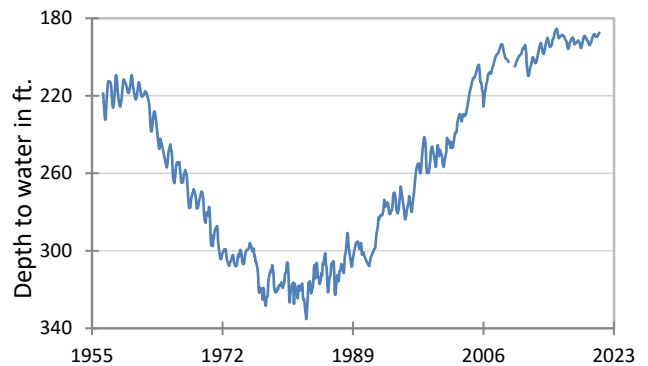
(9) State Well #34-30-907
Red Springs, Smith County
Carrizo-Wilcox Aquifer



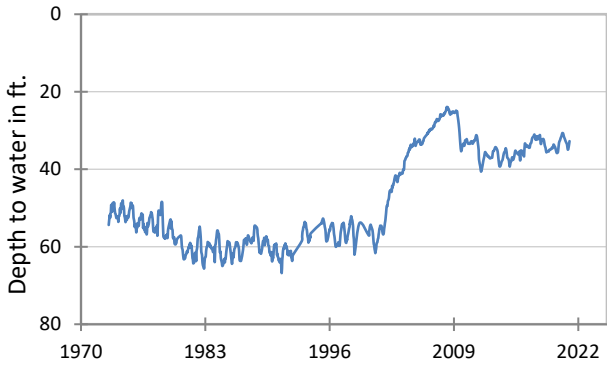
(10) State Well #77-38-103
Near Cotulla, La Salle County
Carrizo-Wilcox Aquifer



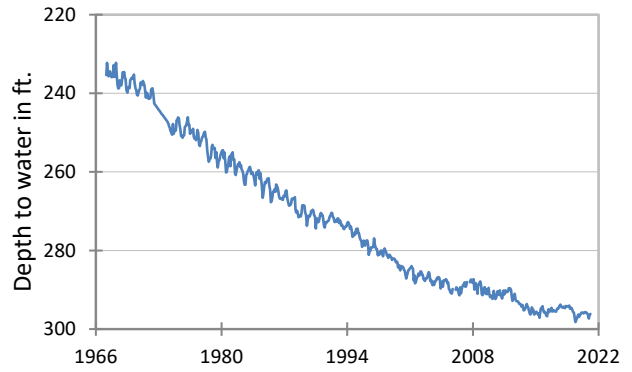
(11) State Well #65-14-409
North Houston, Harris County
Evangeline Formation-Gulf Coast Aquifer



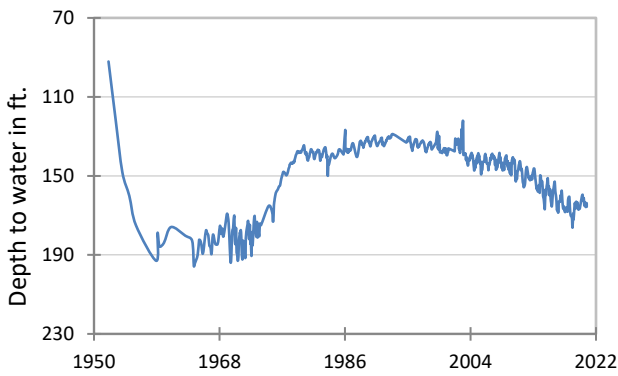
(12) State Well #80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



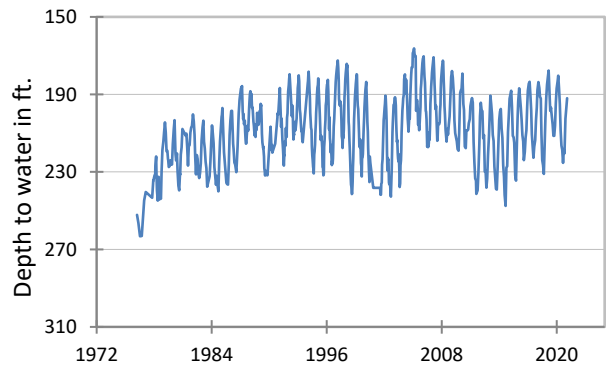
(13) State Well #49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolsons Aquifer



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



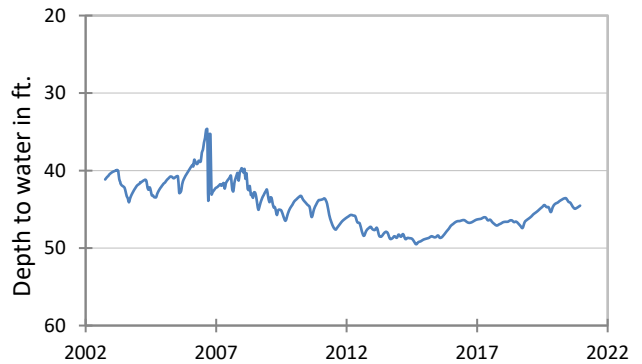
(15) State Well #52-16-802
Fort Stockton, Pecos County
Edwards-Trinity (Plateau) Aquifer



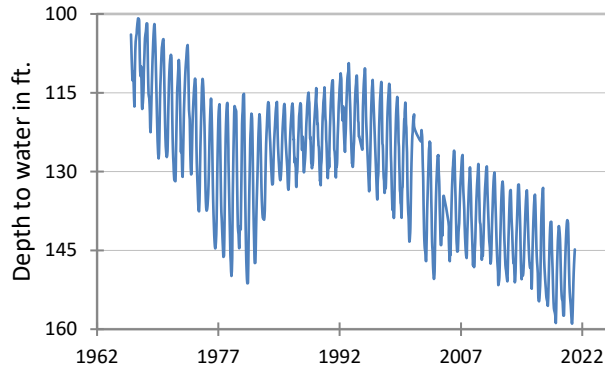
(16) State Well #55-12-134
Eldorado, Schleicher County
Edwards-Trinity (Plateau) Aquifer



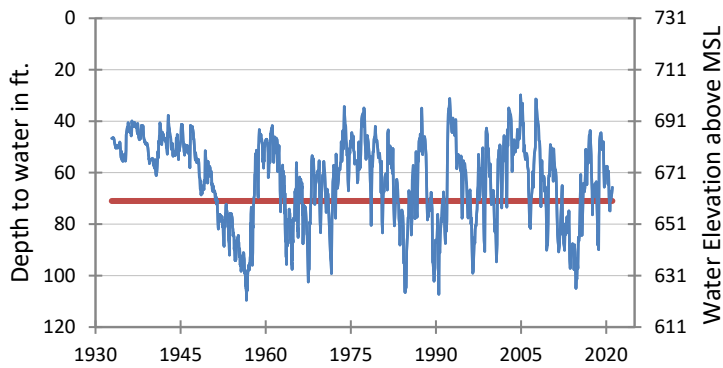
(17) State Well #21-35-748
Near O'Brien, Haskell County
Seymour Aquifer



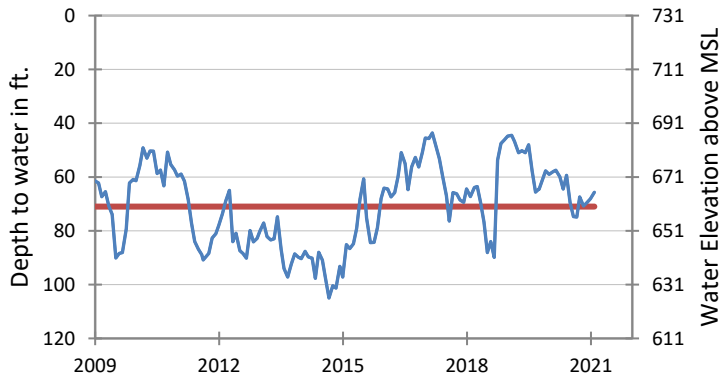
**(18) State Well #48-07-516
Dell City, Hudspeth County
Bone Spring - Victorio Peak Aquifer**



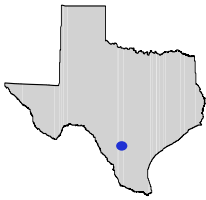
**(8) State Well #68-37-203 (J-17)
San Antonio, Bexar County
Edwards (Balcones Fault Zone) Aquifer**



The late January water-level measurement in this Edwards (Balcones Fault Zone) Aquifer well, elevation 731 feet above mean sea level, was 65.70 feet below land surface, or 665.30 feet above mean sea level. This was 2.40 feet above last month's measurement, 7.70 feet below last year's measurement, and 19.06 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.



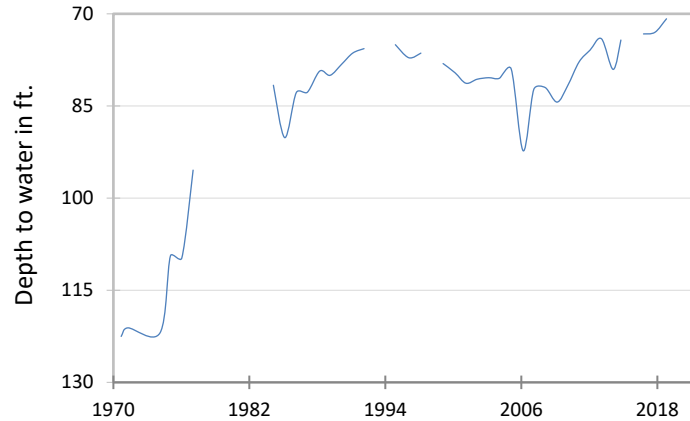
HYDROGRAPH OF THE MONTH

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

The 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 a 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.

Sparta Aquifer

Well #77-22-801, 252 feet deep
domestic, La Salle County



The initial water-level by the Texas Water Development Board was measured in September 1970 at 122.52 feet below land surface. The period from 1970 to 1977 depicts rapid recharge followed by a seven-year data gap. Since 1984, water levels have fluctuated irregularly within a range of 21 feet. Overall, the hydrograph shows an increasing trend in water level roughly equal to 1.08 ft/yr.



Far away (left), and close-up (right) images of well #77-22-801.