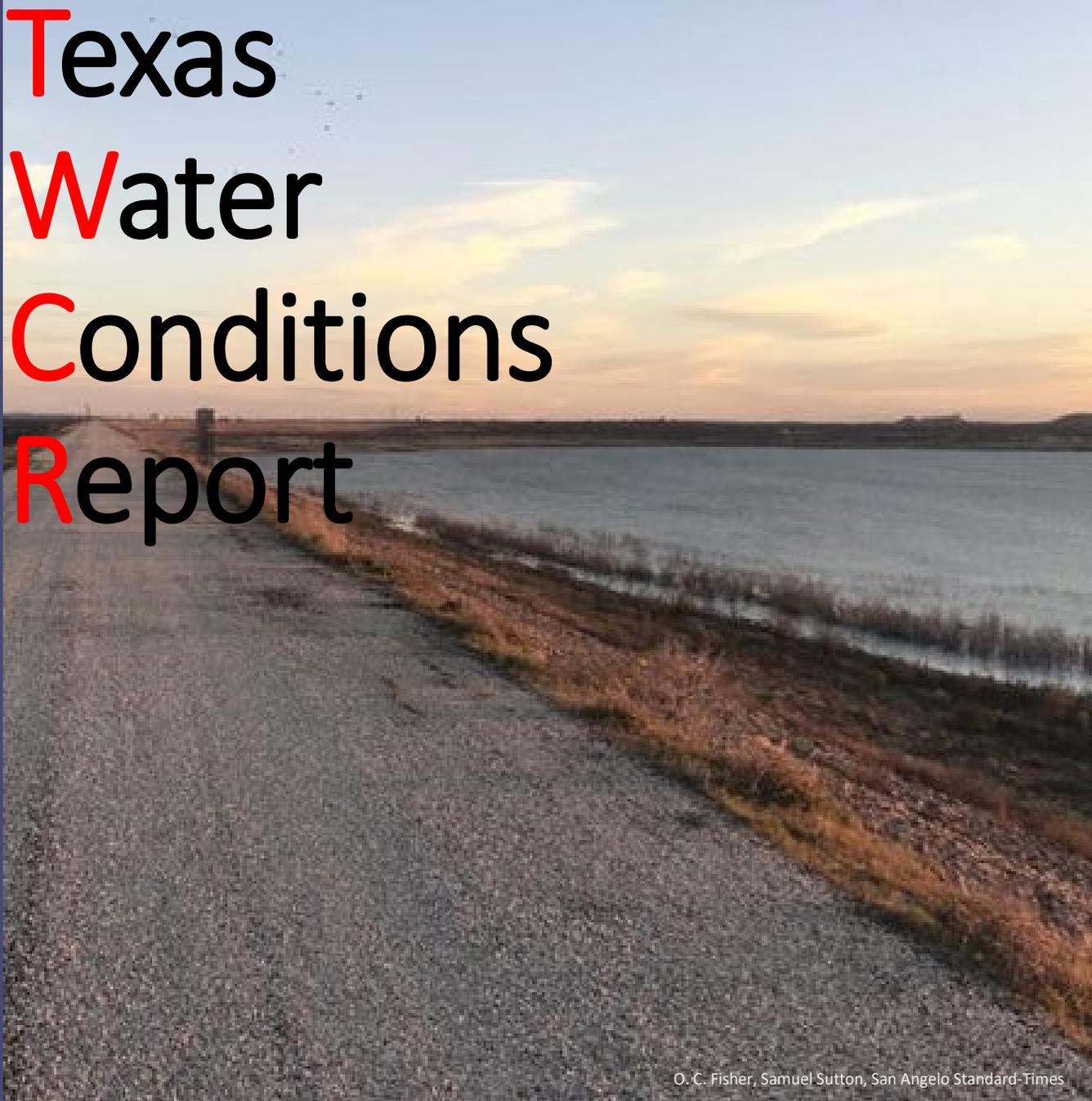


Texas Water Conditions Report

A photograph of a gravel path leading to a large body of water under a sunset sky. The path is in the foreground, leading towards the water. The sky is filled with soft, golden light from the setting sun, with some clouds. The water is calm and reflects the light. The overall mood is serene and somewhat somber due to the drought context.

O. C. Fisher, Samuel Sutton, San Angelo Standard-Times

January 2022

Water News:

There has been an uptick in the extent of Texas drought conditions, which now covers 96.79% of Texas with the extreme drought category (D3) expanding to cover ~22% of the land area. To learn more, read TWDB's Drought Outlook Blog: <https://waterdatafortexas.org/drought/drought-outlook>

RAINFALL

This month very little to no rain [yellow, orange, and red shading, Figure 1(a)] fell over most of the state, while southeastern portions of Texas received above average rainfall, reaching 13.99 inches in some areas [dark blue shading, Figure 1(a)]. Some rainfall [light blue and dark blue shading, Figure 1(a)] was recorded in southern North Central, eastern South Central, southeastern Southern, eastern Lower Valley, southern East Texas, and the Upper Coast climate divisions.

Monthly rainfall for January was below average, compared to historical data from 1991–2020, for most of the state [yellow and orange shading, Figure 1(b)]. Average rainfall [green shading, Figure 1(b)] was seen in southern North Central, northern and eastern South Central, southeastern Southern, Lower Valley, southern East Texas, and the Upper Coast climate divisions. Above average rainfall [light blue shading, Figure 1(b)] was seen in the southern East Texas, Upper Coast, southeastern Southern, and eastern Lower Valley climate divisions.

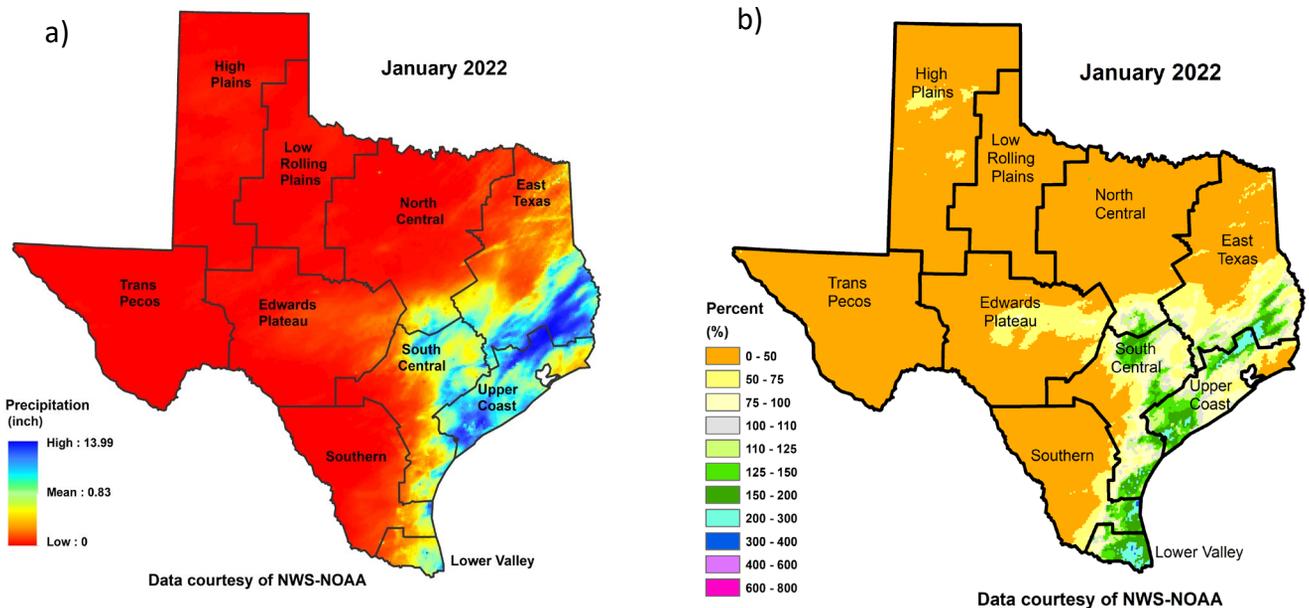


Figure 1: (a) Monthly accumulated rainfall and (b) Percent of normal rainfall

RESERVOIR STORAGE

At the end of January 2022, total conservation storage* in 122 of the state’s major water supply reservoirs was 24.5 million acre-feet or 76 percent of total conservation storage capacity (Figure 2). This is approximately 0.20 million-acre-feet less than a month ago and approximately 1.3 million acre-feet less than at the end of January 2021.

Statewide monitored major water supply reservoir conservation storage

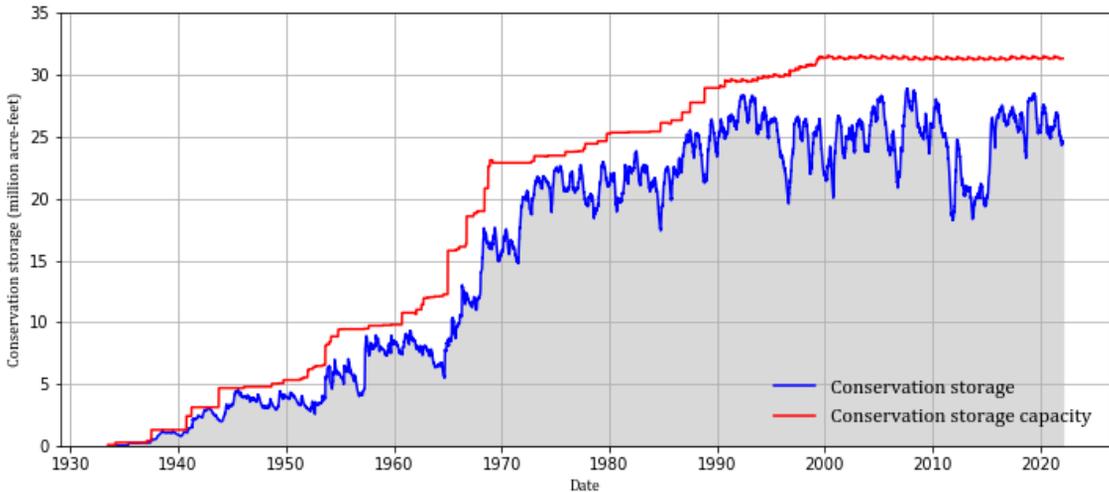


Figure 2: Statewide reservoir conservation storage

Out of 122 reservoirs in the state, 13 reservoirs held 100 percent of conservation storage capacity (Figure 3). Additionally, 41 were at or above 90 percent full. Eight reservoirs remained below 30 percent full: E.V. Spence (24 percent full), Greenbelt (16 percent full), Mackenzie (8 percent full), O. C. Fisher (6 percent full), Palo Duro Reservoir (1 percent full), Falcon (23 percent full), Medina Lake (25 percent full), and White River (19 percent full). Elephant Butte Reservoir (located in New Mexico) was 10 percent full.

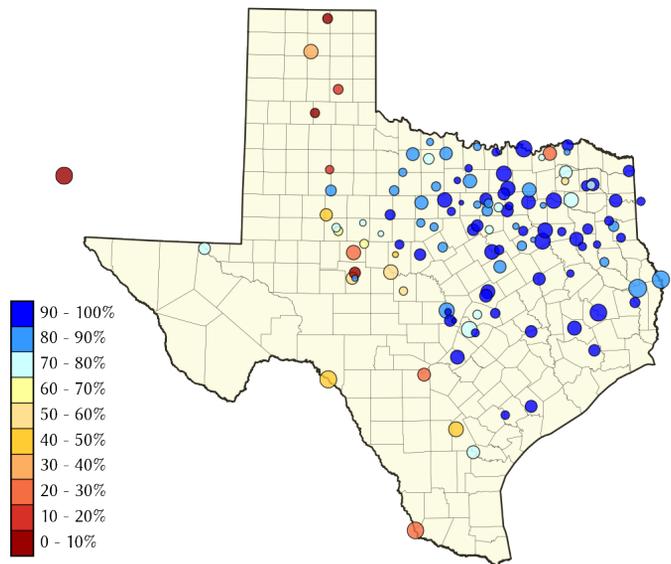


Figure 3: Reservoir conservation storage at end-January expressed as percent full (%)

*Storage is based on end of the month data in 122 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 East Texas (89.7 percent full), North Central (90.5 percent full), South Central (72.5 percent full), and Upper Coast (96.5 percent full) climate divisions (Figure 4). The conservation storage for the Low Rolling Plains (69.3 percent full) climate division was abnormally low (Figure 4). The Edwards Plateau climate division had moderately low conservation storage (54.8 percent full, Figure 4). The High Plains (28.4 percent full) and Southern (33.8 percent full) climate divisions had severely low conservation storage, and the Trans Pecos climate division (19.6 percent full) had extremely low conservation storage (Figure 4).

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

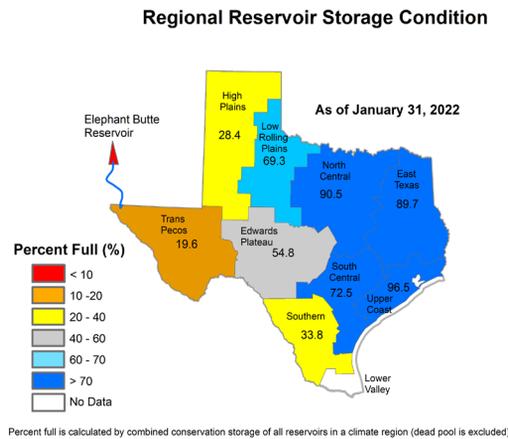


Figure 4: Reservoir Storage Index* by climate division at 1/31/2022

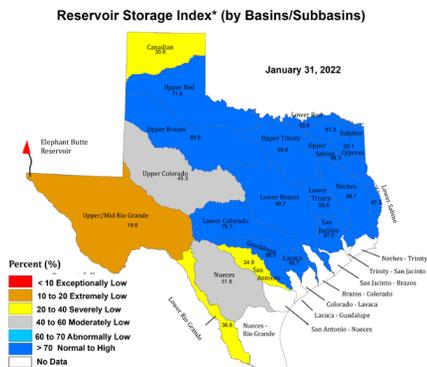


Figure 5: Reservoir Storage Index* by river basin/sub-basin at 1/31/2022

*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 2022		Storage change from end-Dec 2021		Storage change from end-Jan 2021	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
Abilene, Lake	7,900	5,733	73	-263	-3	282	4
Alan Henry Reservoir	96,207	85,044	88	-1,489	-2	524	1
*Amistad Reservoir (Texas & Mexico)	3,275,532	1,101,191	34	-10,959	0	-141,377	-4
*Amistad Reservoir (Texas)	1,840,849	889,236	48	-13,778	0	-279,572	-15
Amon G Carter, Lake	19,266	18,525	96	-423	-2	437	2
Aquilla Lake	43,243	38,291	89	-1,100	-3	-2,103	-5
Arlington, Lake	40,157	28,825	72	-2,867	-7	-4,725	-12
Arrowhead, Lake	230,359	195,442	85	-3,585	-2	-33,325	-14
Athens, Lake	29,503	29,503	100	0	0	0	0
*Austin, Lake	23,972	22,988	96	277	1	108	0
B A Steinhagen Lake	69,186	64,577	93	-196	0	782	1
Bardwell Lake	46,122	44,070	96	-1,053	-2	-2,052	-4
Belton Lake	435,225	401,751	92	-6,168	-1	-27,429	-6
Benbrook Lake	85,648	66,416	78	-5,195	-6	-12,666	-15
Bob Sandlin, Lake	192,417	178,446	93	-1,805	0	-13,971	-7
Bonham, Lake	11,027	7,912	72	-423	-4	-2,968	-27
Brady Creek Reservoir	28,808	16,244	56	-342	-1	-3,429	-12
Bridgeport, Lake	366,236	319,730	87	-7,573	-2	-3,222	0
*Brownwood, Lake	130,868	118,588	91	-2,581	-2	5,563	4
Buchanan, Lake	860,607	754,982	88	-2,744	0	35,448	4
Caddo, Lake	29,898	29,898	100	0	0	no data	
Canyon Lake	378,781	371,578	98	-5,230	-1	36,032	10
Cedar Creek Reservoir in Trinity	644,686	582,625	90	-12,672	-2	-62,061	-10
Champion Creek Reservoir	41,580	28,752	69	-320	0	4,352	10
Cherokee, Lake	40,094	40,094	100	686	2	0	0
Choke Canyon Reservoir	662,820	282,168	43	-7,858	-1	51,973	8
*Cisco, Lake	29,003	24,979	86	-358	-1	1,997	7
Coleman, Lake	38,075	35,166	92	-618	-2	2,432	6
Colorado City, Lake	31,040	30,079	97	-656	-2	8,824	28
*Coletto Creek Reservoir	30,758	22,442	73	-394	-1	11,177	36
Conroe, Lake	410,988	395,042	96	2,811	1	-15,946	-4
Corpus Christi, Lake	256,062	194,325	76	no data		65,242	25
Crook, Lake	9,195	7,939	86	-111	-1	-1,183	-13
Cypress Springs, Lake	66,756	60,464	91	-651	0	-6,292	-9
E. V. Spence Reservoir	517,272	126,297	24	-2,687	0	10,760	2
Eagle Mountain Lake	179,880	160,680	89	-3,294	-2	-5,612	-3
Elephant Butte Reservoir (Texas)	852,491	84,248	10	11,897	1	17,053	2
Elephant Butte Reservoir (Total Storage)	1,985,900	195,019	10	27,539	1	39,474	2
*Falcon Reservoir (Texas & Mexico)	2,646,817	426,706	16	21,121	1	-61,130	-2
*Falcon Reservoir (Texas)	1,551,007	359,423	23	24,105	2	-67,791	-4
Fork Reservoir, Lake	605,061	451,079	75	-9,437	-2	-137,752	-23
Fort Phantom Hill, Lake	70,030	64,841	93	-1,007	-1	2,989	4
Georgetown, Lake	36,823	28,547	78	1,083	3	4,294	12
Gibbons Creek Reservoir	25,721	22,015	86	-226	0	-1,193	-5
Graham, Lake	45,288	38,400	85	-847	-2	-4,304	-10
Granbury, Lake	132,949	127,477	96	-1,192	0	-5,472	-4

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of lake or reservoir	Storage capacity	Storage at end-January 2022		Storage change from end-Dec 2021		Storage change from end-Jan 2021	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
<i>Continued</i>							
Granger Lake	51,822	51,822	100	0	0	1,705	3
Grapevine Lake	163,064	153,184	94	-2,834	-2	-9,880	-6
Greenbelt Lake	59,968	9,717	16	-107	0	-150	0
*Halbert, Lake	6,033	5,009	83	-216	-4	-298	-5
Hords Creek Lake	8,109	3,400	42	-96	-1	-924	-11
Houston County Lake	17,113	17,113	100	0	0	0	0
Houston, Lake	130,147	130,147	100	0	0	1,462	1
Hubbard Creek Reservoir	313,298	270,725	86	-5,902	-2	-5,467	-2
Hubert H Moss Lake	24,058	22,559	94	-231	0	-1,305	-5
Inks, Lake	13,962	12,810	92	-142	-1	-172	-1
J. B. Thomas, Lake	199,931	77,833	39	-2,421	-1	50,496	25
Jacksonville, Lake	25,670	25,670	100	0	0	0	0
Jim Chapman Lake (Cooper)	260,332	193,373	74	-13,283	-5	-57,477	-22
Joe Pool Lake	175,800	163,092	93	-3,816	-2	-3,240	-2
Kemp, Lake	245,307	205,339	84	-2,570	-1	-3,870	-2
Kickapoo, Lake	86,345	63,967	74	-1,487	-2	-6,433	-7
Lavon Lake	406,388	325,855	80	-5,770	-1	-80,533	-20
Leon, Lake	27,762	23,665	85	-631	-2	-1,947	-7
Lewisville Lake	563,228	509,486	90	-11,118	-2	-53,742	-10
Limestone, Lake	203,780	182,823	90	-1,778	0	-20,957	-10
*Livingston, Lake	1,741,867	1,736,136	100	-5,731	0	-5,731	0
*Lost Creek Reservoir	11,950	11,443	96	-159	-1	5	0
Lyndon B Johnson, Lake	115,249	110,881	96	0	0	-306	0
Mackenzie Reservoir	46,450	3,524	8	-40	0	-618	-1
Marble Falls, Lake	6,901	6,831	99	11	0	-70	-1
Martin, Lake	75,726	63,013	83	-2,027	-3	-12,713	-17
Medina Lake	254,823	63,546	25	-2,453	0	-39,058	-15
Meredith, Lake	500,000	171,818	34	-1,297	0	-6,862	-1
Millers Creek Reservoir	26,768	22,664	85	-536	-2	-4,104	-15
*Mineral Wells, Lake	5,273	5,006	95	-119	-2	-267	-5
Monticello, Lake	34,740	26,882	77	-347	0	-3,529	-10
Mountain Creek, Lake	22,850	22,850	100	0	0	0	0
Murvault, Lake	38,285	37,091	97	-135	0	-1,194	-3
Nacogdoches, Lake	39,522	34,147	86	-571	-1	-1,612	-4
Nasworthy	9,615	8,707	91	-38	0	499	5
Navarro Mills Lake	49,827	43,072	86	-1,473	-3	-6,755	-14
New Terrell City Lake	8,583	7,531	88	-123	-1	-1,052	-12
Nocona, Lake (Farmers Crk)	21,444	18,519	86	-469	-2	-1,538	-7
North Fork Buffalo Creek Reservoir	15,400	12,069	78	-293	-2	-2,948	-19
O' the Pines, Lake	241,363	225,259	93	-9,800	-4	-16,104	-7
O. C. Fisher Lake	115,742	6,924	6	-193	0	-414	0
*O. H. Ivie Reservoir	554,340	297,818	54	-4,812	0	-40,373	-7
Oak Creek Reservoir	39,210	26,463	67	-499	-1	-3,982	-10

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of lake or reservoir	Storage capacity	Storage at end-January 2022		Storage change from end-Dec 2021		Storage change from end-Jan 2021	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
<i>Continued</i>							
Palestine, Lake	367,303	364,996	99	919	0	-2,307	0
Palo Duro Reservoir	61,066	401	1	-29	0	-521	0
Palo Pinto, Lake	26,766	25,254	94	-624	-2	2,085	8
Pat Cleburne, Lake	26,008	19,933	77	-808	-3	-2,121	-8
*Pat Mayse Lake	113,683	100,059	88	-2,170	-2	-13,624	-12
Possum Kingdom Lake	538,139	512,645	95	-6,241	-1	-18,898	-4
Proctor Lake	54,762	46,458	85	-913	-2	-6,246	-11
Ray Hubbard, Lake	439,559	399,061	91	-11,166	-3	-40,498	-9
Ray Roberts, Lake	788,167	759,574	96	-7,226	0	-15,895	-2
Red Bluff Reservoir	151,110	112,743	75	1,082	1	38,729	26
Richland-Chambers Reservoir	1,087,839	988,166	91	-7,395	0	-99,673	-9
Sam Rayburn Reservoir	2,857,077	2,477,899	87	-2,080	0	-208,944	-7
Somerville Lake	150,293	150,293	100	0	0	22,456	15
Squaw Creek, Lake	151,250	151,250	100	0	0	0	0
Stamford, Lake	51,570	43,791	85	-1,203	-2	-7,779	-15
Stillhouse Hollow Lake	227,771	210,461	92	-4,918	-2	-17,310	-8
Striker, Lake	16,934	16,934	100	2	0	0	0
Sweetwater, Lake	12,267	9,732	79	-94	0	-310	-3
*Sulphur Springs, Lake	17,747	9,791	55	-255	-1	-7,956	-45
Tawakoni, Lake	871,685	783,640	90	-17,835	-2	-88,045	-10
Texana, Lake	159,566	149,522	94	-7,115	-4	-8,393	-5
Texoma, Lake (Texas & Oklahoma)	2,487,601	2,408,827	97	-2,867	0	-90,307	-4
Texoma, Lake (Texas)	1,243,801	1,204,413	97	-1,433	0	-39,388	-3
Toledo Bend Reservoir (Texas & Louisiana)	4,472,900	3,918,810	88	69,071	2	-30,790	0
Toledo Bend Reservoir (Texas)	2,236,450	1,957,355	88	34,535	2	-15,395	0
Travis, Lake	1,113,348	777,729	70	-14,393	-1	27,621	2
Twin Buttes Reservoir	182,454	93,971	52	-676	0	-5,148	-3
Tyler, Lake	72,073	71,696	99	608	1	-377	0
Waco, Lake	189,418	159,442	84	-5,792	-3	-24,990	-13
Waxahachie, Lake	10,780	8,582	80	-168	-2	-1,709	-16
Weatherford, Lake	17,812	14,520	82	-336	-2	-1,619	-9
White River Lake	29,880	5,583	19	-231	0	1,887	6
Whitney, Lake	553,344	502,523	91	-3,585	0	-1,684	0
Worth, Lake	24,419	17,707	73	-1,704	-7	-96	0
Wright Patman Lake	122,593	122,593	100	0	0	0	0
STATEWIDE TOTAL							
STATEWIDE TOTAL	32,168,837	24,533,361	76	-203,034	-0.6	-1,310,405	-4

*Total volume below elevation of conservation pool top is used as conservation storage capacity, because the dead pool storage is unknown.

**Monthly and yearly changes do not include reservoirs that did not have data in the last month or last year, respectively.

STREAMFLOW CONDITIONS

Parts of the state had near normal streamflow in January 2022 (25–75th percentile, green shading, Figure 6). Below normal streamflow (10–24th percentile, orange shading in Figure 6) was recorded in the Upper and Lower Red, Upper and Lower Brazos, Upper and Lower Colorado, Upper and Lower Trinity, Cypress, Upper and Lower Sabine, Neches, San Antonio, Guadalupe, Lavaca-Guadalupe, San Jacinto-Brazos, Lavaca, Nueces, and Nueces-Rio Grande river basins. Much below normal stream flow (< 10th percentile, dark red shading in Figure 6) was seen in the Canadian, Upper and Lower Red, Upper and Lower Brazos, Upper Trinity, Sulphur, Cypress, Neches, San Antonio, Nueces, Lower Colorado, and Pecos river basins. Record lows (bright red shading in Figure 6) were seen in the Upper Colorado and Sulphur river basins.

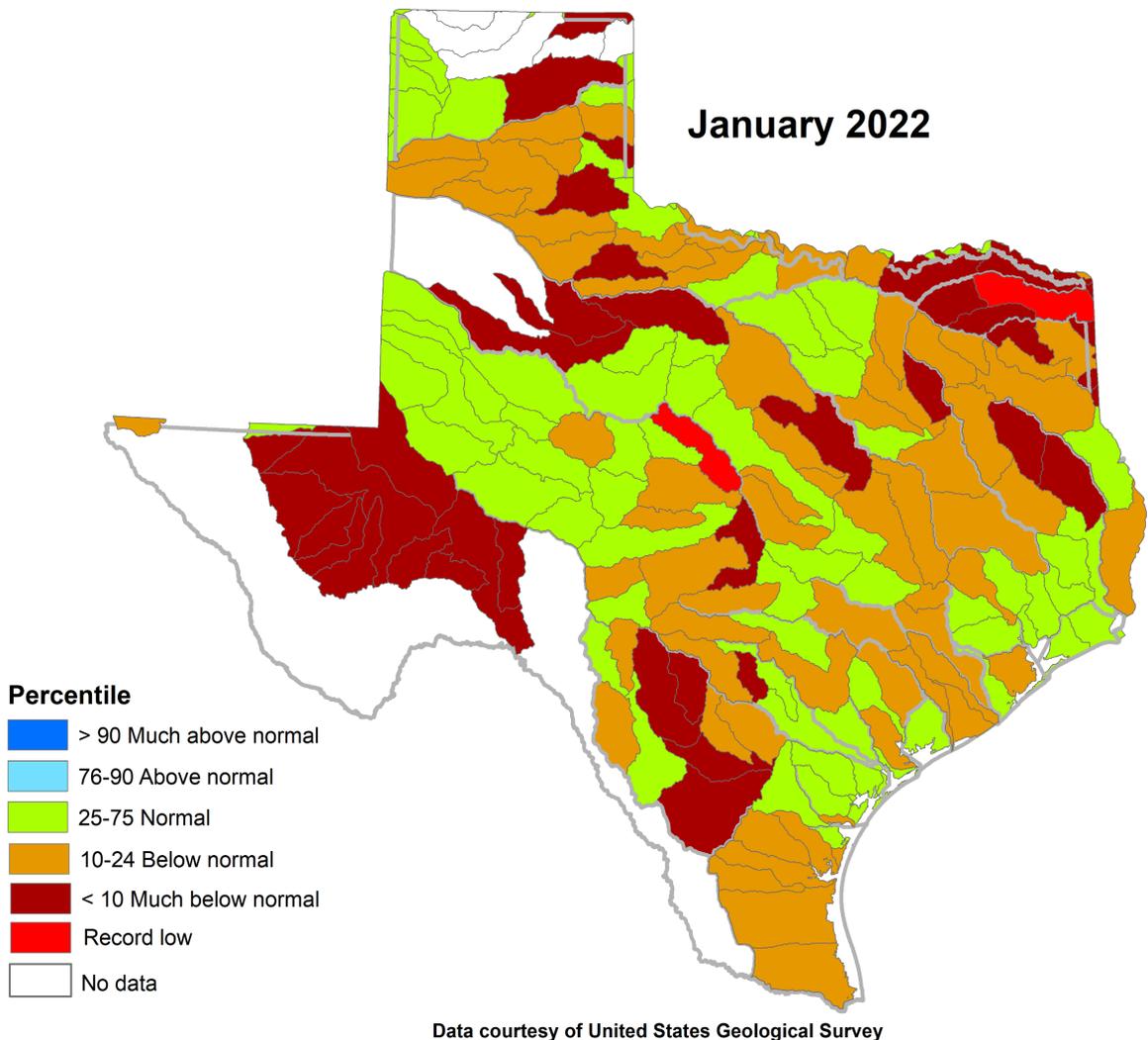
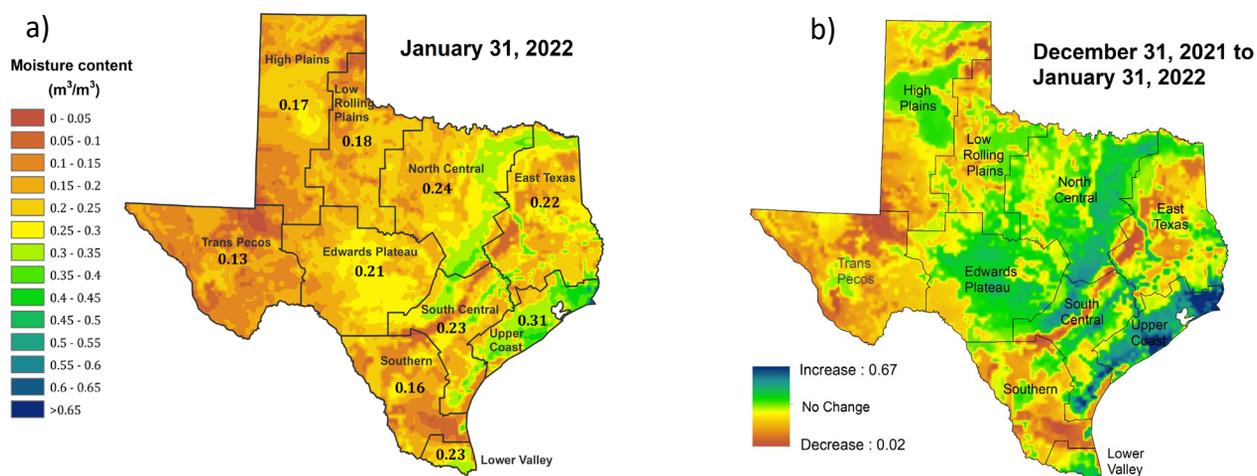


Figure 6: Runoff percentiles by the U.S. Geological Survey’s Hydrologic Unit Code

SOIL MOISTURE

Root zone soil moisture at the end of January 2022 [Figure 7(a)] was moderate [> 0.20 cubic meters of water per bulk cubic meter soil (m^3/m^3)] in areas across the state. Low soil moisture [< 0.15 cubic meters of water per bulk cubic meter soil (m^3/m^3)] was seen in portions of the High Plains, Low Rolling Plains, Trans Pecos, Edwards Plateau, Southern, Lower Valley, East Texas, North Central, southwestern Upper Coast, South Central and particularly dry in the northwest stretching across the climate division to the northeast. Average soil moisture [0.3 cubic meters of water per bulk cubic meter soil (m^3/m^3)] was seen in eastern North Central, northern and southern South Central, southeastern Southern, southeastern Lower Valley, areas of East Texas, and most of the Upper Coast climate divisions.

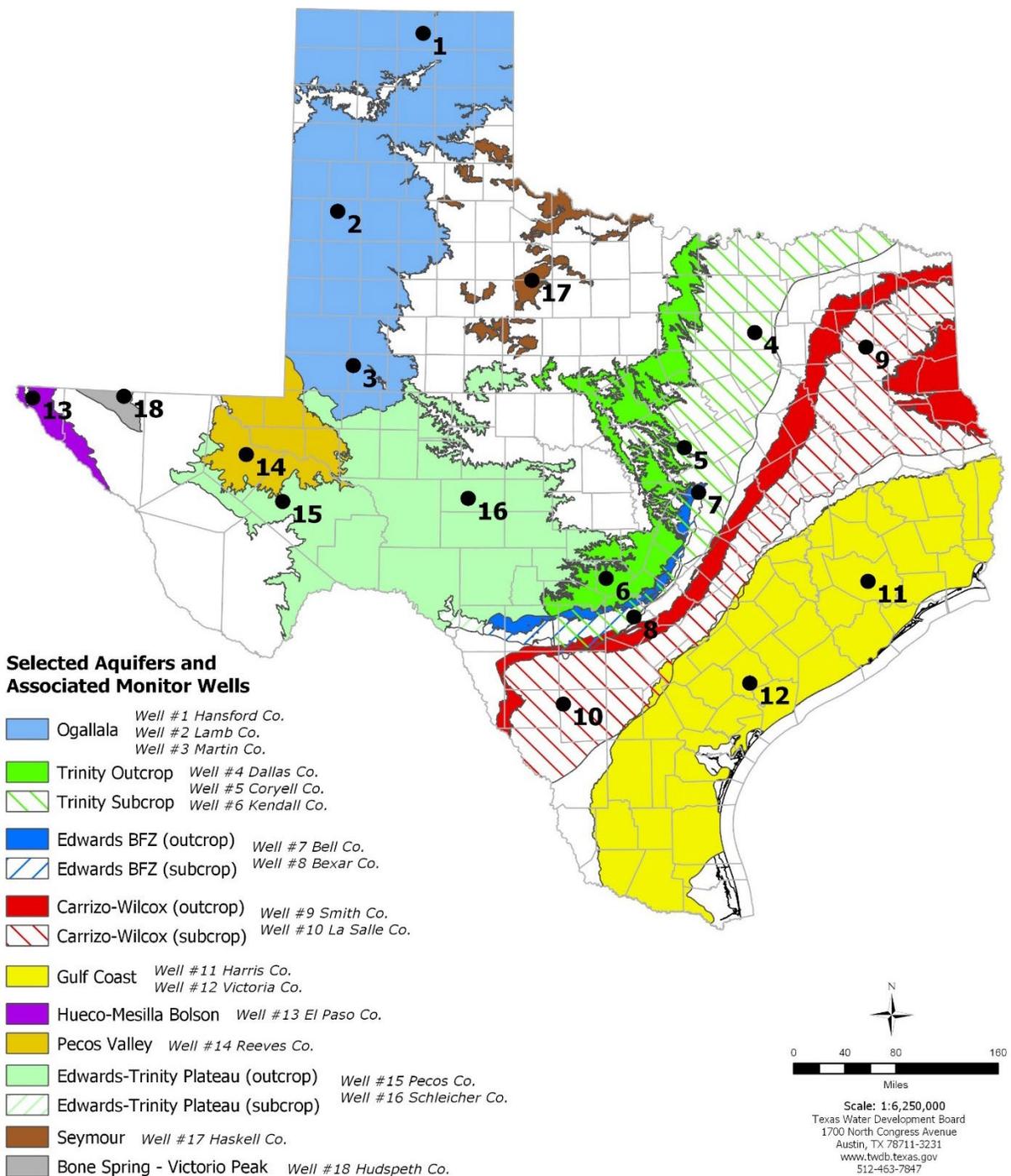
Compared to conditions at the end of December 2021, soil moisture content increased [green to blue shading in Figure 7(b)] in portions of the Trans Pecos, northern High Plains, Low Rolling Plains, Edwards Plateau, portions of Southern, eastern Lower Valley, North Central, South Central, Upper Coast, and portions of East Texas climate divisions. Soil moisture content decreased [yellow, orange, and brown shading in Figure 7(b)] in the High Plains, most of Trans Pecos, areas of the Low Rolling Plains, portions of western and northeastern Edwards Plateau, areas of North Central, most of Southern, portions of South Central, portions of Lower Valley, East Texas, and northern and western 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: (a) Root zone soil moisture conditions in January 2022 and (b) the difference in root zone soil moisture between end-December 2021 and end-January 2022



JANUARY 2022 GROUNDWATER LEVELS IN MONITORING WELLS

Water-level measurements were available for 15 key monitoring wells in the state. Recorders in 3 wells (#1, #14, and #18 on map) were offline during the reporting period. Water levels rose in 10 monitoring wells since the beginning of January, ranging from an increase of 0.02 feet in the Martin County Ogallala Aquifer well (#3 on map) to 9.37 feet in the Pecos County Edwards-Trinity Plateau Aquifer well (#15 on map). Water levels declined in 5 monitoring wells, ranging from a decline of -0.07 feet in the Lamb County Ogallala Aquifer well (#2 on map) to -17.78 feet in the Kendall County Trinity Aquifer well (#6 on map). The J-17 well (#8 on map) in San Antonio recorded a water level of 68.60 feet below land surface or 662.40 feet above mean sea level. Water levels are 2.40 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 (depth to water, feet)	December (depth to water, feet)	Month Change	Year Change	Historical Change*	First Measured (year)
(1) Hansford 0354301	NA	162.49	NA	NA	-92.37	1951
(2) Lamb 1053602	152.53	152.46	-0.07	-0.90	-124.36	1951
(3) Martin 2739903	144.54	144.56	0.02	0.14	-39.65	1964
(4) Dallas 3319101	496.84	495.53	-1.31	-7.87	-274.84	1954
(5) Coryell 4035404	534.30	534.72	0.42	-4.33	-242.30	1955**
(6) Kendall 6802609	165.93	148.15	-17.78	-19.08	-105.93	1975
(7) Bell 5804816	121.42	121.82	0.40	3.06	2.09	2008
(8) Bexar 6837203	68.60	67.40	-1.20	-2.90	-21.96	1932
(9) Smith 3430907	438.51	439.69	1.18	-3.17	-138.51	1977**
(10) La Salle 7738103	497.22	501.81	4.59	14.67	-244.15	2003
(11) Harris 6514409	184.76	185.63	0.87	2.70	-49.26	1947**
(12) Victoria 8017502	30.78	31.12	0.34	1.97	3.22	1958**
(13) El Paso 4913301	298.29	298.14	-0.15	-2.13	-66.39	1964**
(14) Reeves 4644501	NA	NA	NA	NA	-65.93	1952
(15) Pecos 5216802	192.65	202.02	9.37	-0.66	54.23	1976
(16) Schleicher 5512134	278.28	279.24	0.96	10.68	23.62	2003
(17) Haskell 2135748	44.74	44.93	0.19	-0.05	-1.74	2002
(18) Hudspeth 4807516	NA	NA	NA	NA	-50.79	1966

* Change since the original measurement taken on the date indicated in the last column. The historical changes shown for recorder wells #1, #14, and #18 are based off the most recent water level records from December, October, and June 2021, respectively.

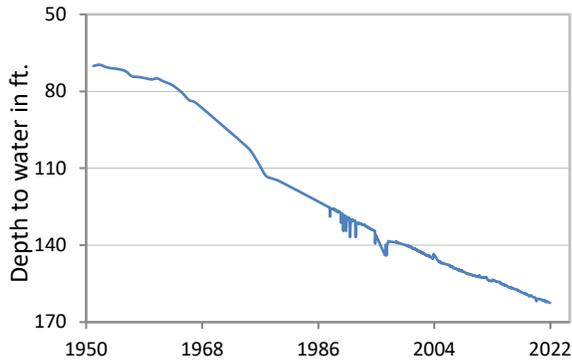
** Measurement not shown on the hydrograph.

NA (not available)

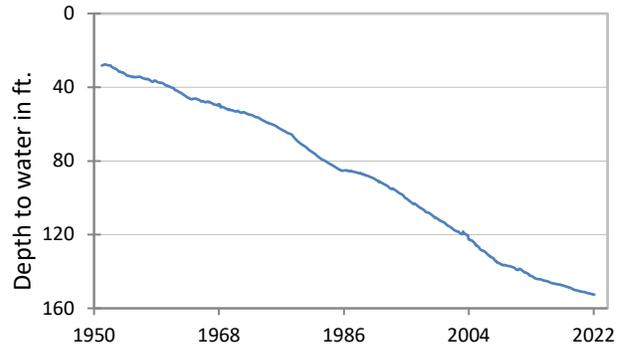
All data are provisional and subject to revision

JANUARY 2022 MONITORING WELL HYDROGRAPHS

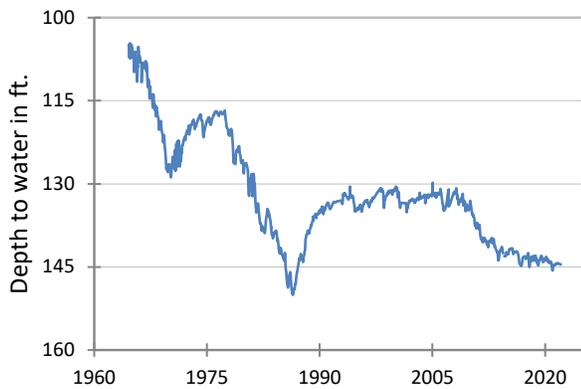
***(1) State Well #03-54-301
Near Spearman, Hansford County
Ogallala Aquifer**



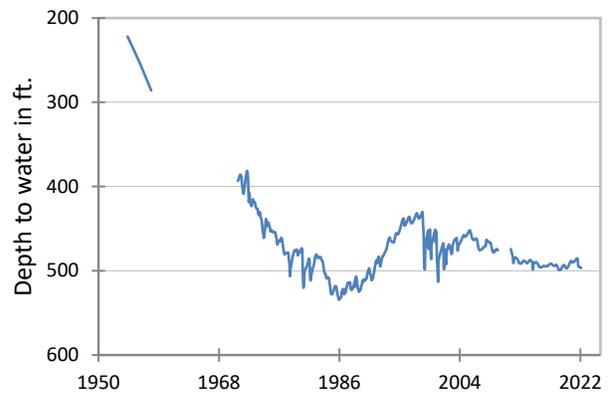
**(2) State Well #10-53-602
Near Earth, Lamb County
Ogallala Aquifer**



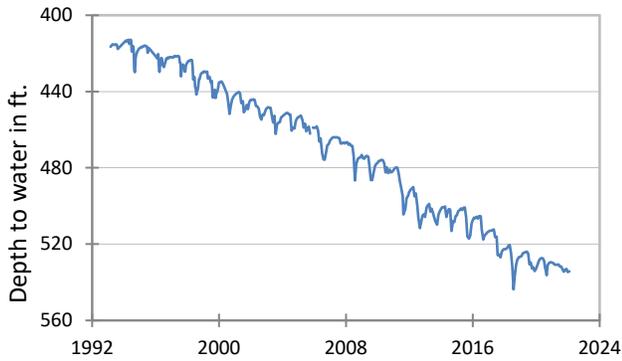
**(3) State Well #27-39-903
Northwest Martin County
Ogallala Aquifer**



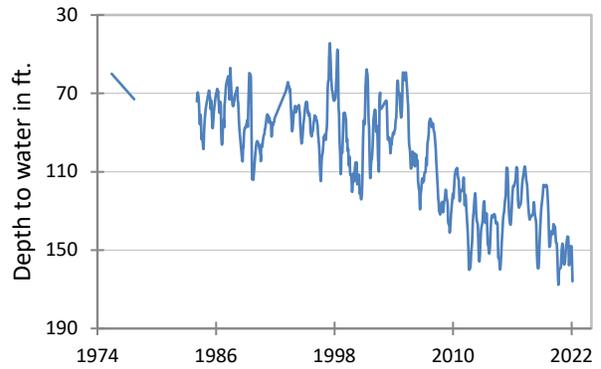
**(4) State Well #33-19-101
Southeast Dallas, Dallas County
Twin Mountains Formation-Trinity Aquifer**



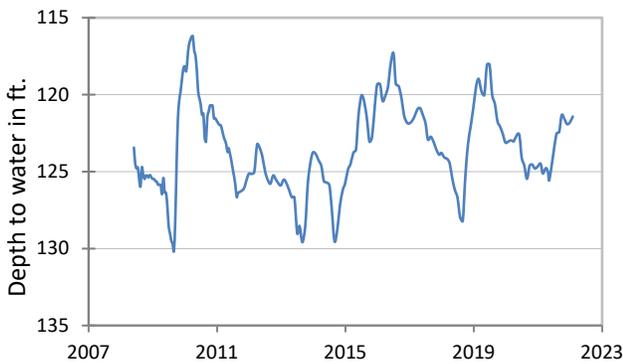
(5) State Well #40-35-404
Gatesville, Coryell County
Hosston Formation-Trinity Aquifer



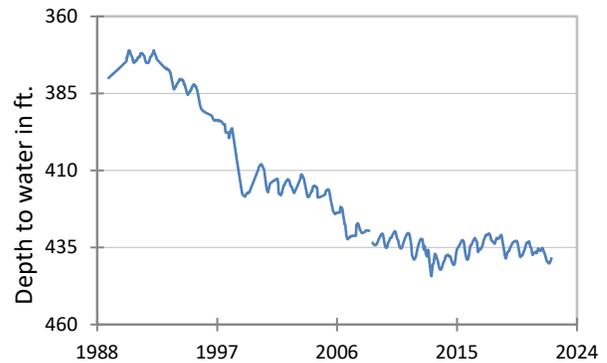
(6) State Well #68-02-609
Waring, Kendall County
Travis Peak Formation-Trinity Aquifer



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



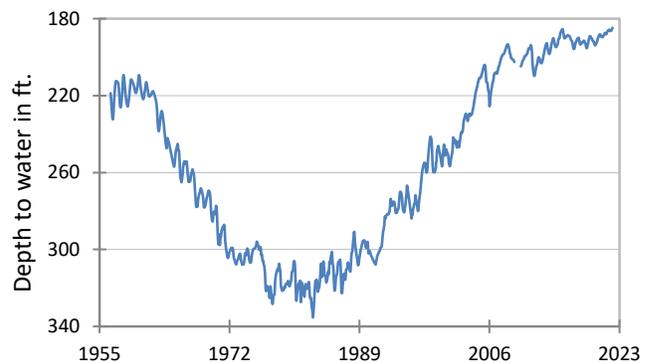
(9) State Well #34-30-907
Red Springs, Smith County
Carrizo-Wilcox Aquifer



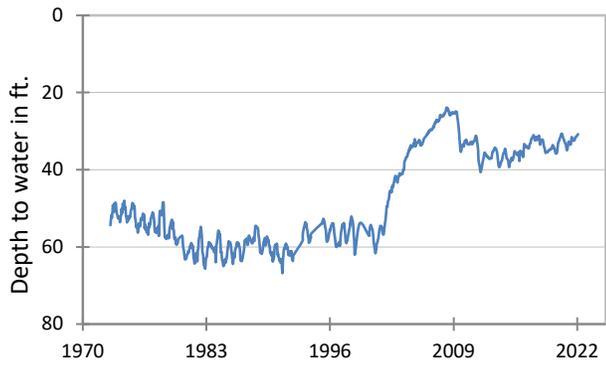
(10) State Well #77-38-103
Near Cotulla, La Salle County
Carrizo-Wilcox Aquifer



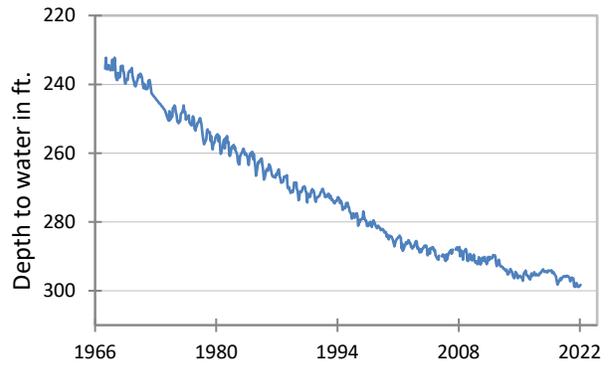
(11) State Well #65-14-409
North Houston, Harris County
Evangeline Formation-Gulf Coast Aquifer



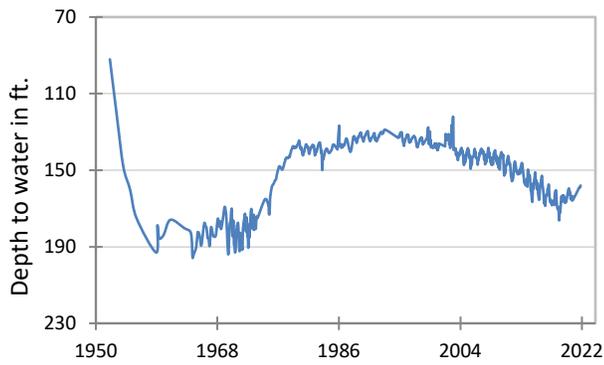
(12) State Well #80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



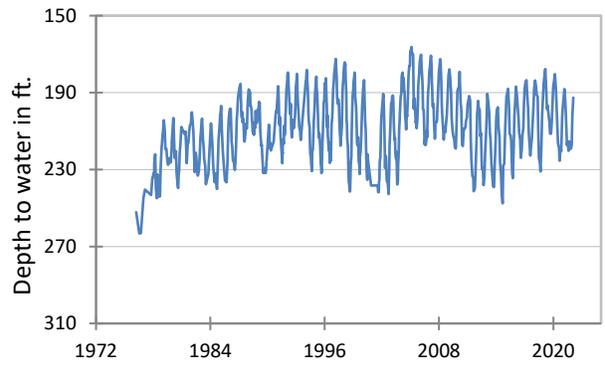
(13) State Well #49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolsons Aquifer



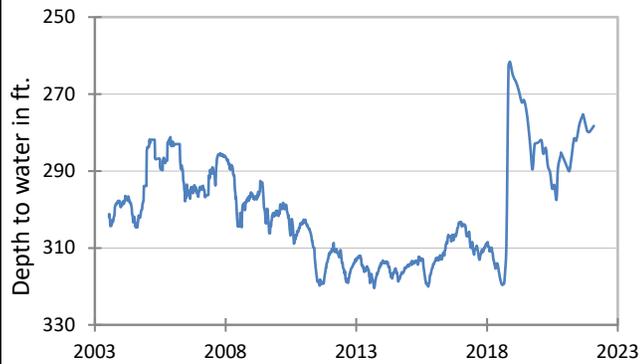
***(14) State Well #46-44-501**
Near Pecos, Reeves County
Pecos Valley Aquifer



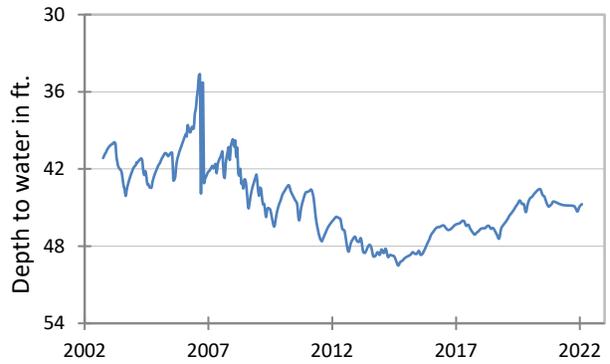
(15) State Well #52-16-802
Fort Stockton, Pecos County
Edwards-Trinity (Plateau) Aquifer



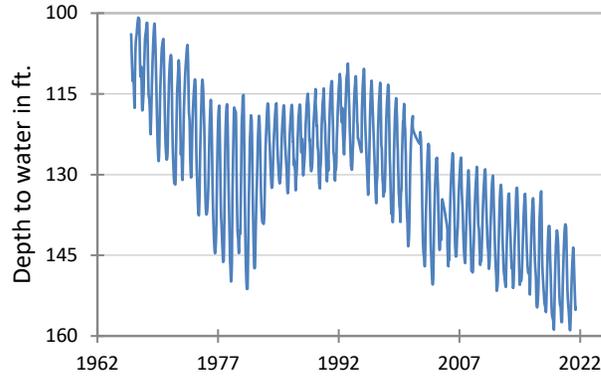
(16) State Well #55-12-134
Eldorado, Schleicher County
Edwards-Trinity (Plateau) Aquifer



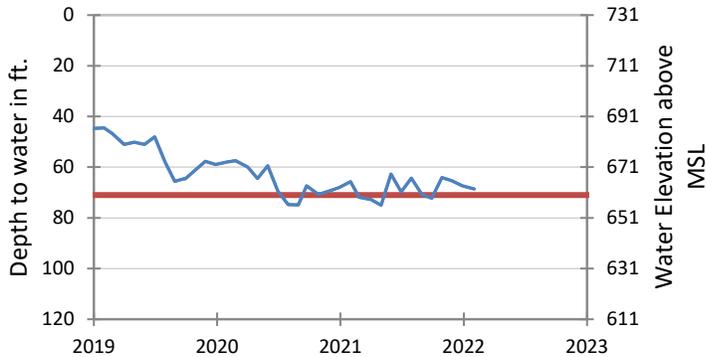
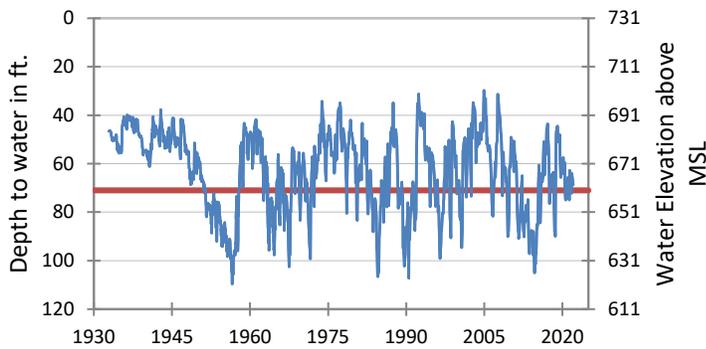
(17) State Well #21-35-748
Near O'Brien, Haskell County
Seymour Aquifer



***(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**

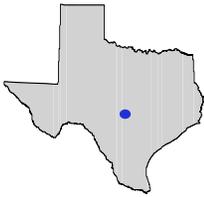


The late January water-level measurement in this Edwards (Balcones Fault Zone) Aquifer well, located at an elevation of 731 feet above mean sea level, was 68.60 feet below land surface, or 662.40 feet above mean sea level. This was 1.20 feet below last month's measurement, 2.90 feet below last year's measurement and 21.96 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. In January 2022, Stage 1 drought restrictions were not in effect because the aquifer remained above the Stage 1 critical management level.

*Recorder wells #1, #14, and #18 were offline in January 2022 and did not record data.

HYDROGRAPH OF THE MONTH

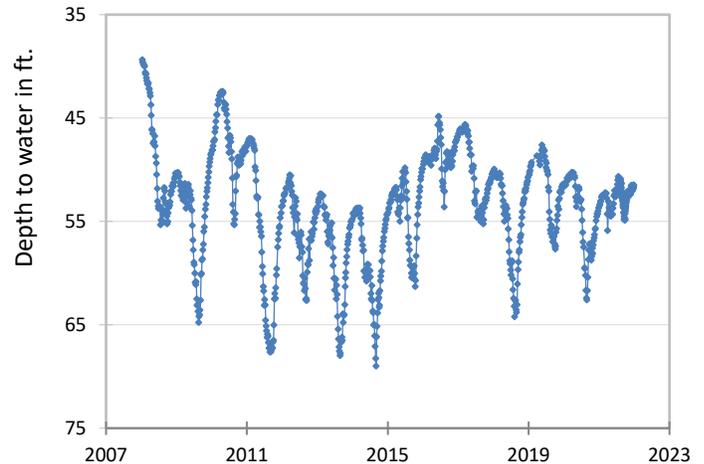


Each month this space features a new hydrograph (marked with the ● symbol on the map) depicting different aquifers and their conditions in Texas.

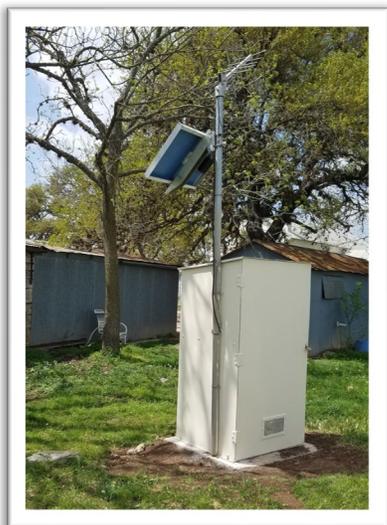
The Ellenburger-San Saba Aquifer is a minor aquifer that is found in parts of 16 counties located in the Llano Uplift area of Central Texas. The aquifer is made up of the Tanyard, Gorman, and Honeycut formations of the Ellenburger Group and the San Saba Limestone Member of the Wilberns Formation. The aquifer consists of a sequence of limestone and dolomite that crop out in a circular pattern around the Llano Uplift and dip radially into the subsurface away from the center of the uplift to depths of approximately 3,000 feet. Regional block faulting has significantly compartmentalized the aquifer. The maximum thickness of the aquifer is about 2,700 feet. Water is held in fractures, cavities, and solution channels and is commonly under confined conditions. The Ellenburger-San Saba is highly permeable in places, as indicated by wells that yield as much as 1,000 gallons per minute and springs that flow from the aquifer, maintaining the base flow of streams in the area. Water produced from the aquifer is generally very good and usually has less than 1,000 milligrams per liter of total dissolved solids. Most of the groundwater is used for municipal purposes, and the remainder for irrigation and livestock.

Ellenburger-San Saba Aquifer

Well #57-51-407, 228 feet deep
unused, Gillespie County



In January 2008 the Texas Water Development Board installed an automatic water-level recorder in this unused well. The initial measurement of 39.36 feet below land surface on January 10 is the highest level on record. The recorder continues to take hourly measurements (available online) and daily measurements (in the groundwater database). The period of record reveals seasonal fluctuations in water level that are likely attributed to pumping for irrigation. Water levels generally remained between 45 and 65 feet below land surface during the period of record.



Far away (left), and close-up (right) images of well #57-51-407.