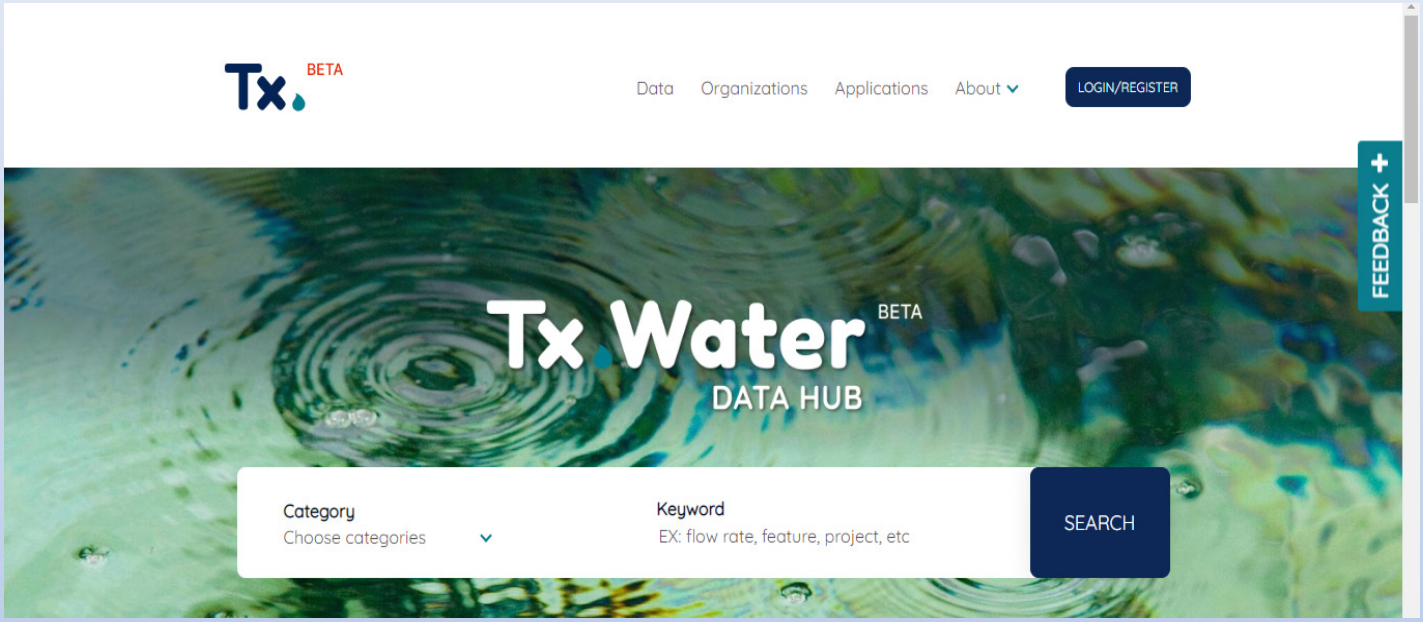
Texas Water Conditions Report

February 2023



Water News:

The Texas Water Development Board has launched the beta version of the Texas Water Data Hub which allows water data users and producers to easily access and share water-related data. Now is the time for testing the site and providing feedback. For more information visit our Texas Water Newsroom, https://texaswaternewsroom.org/.

RAINFALL

Little to no rain [yellow, orange, and red shading, Figure 1(a)] fell in the High Plains, western Low Rolling Plains, Trans Pecos, Edwards Plateau, Southern, Lower Valley, much of South Central, much of the Upper Coast, and portions of southern East Texas climate divisions. Some rainfall [light blue and dark blue shading, Figure 1(a)] was seen in eastern Low Rolling Plains, North Central, East Texas, northern South Central, and northeastern Upper Coast climate divisions, with accumulations reaching 9.34 inches.

Compared to historical data from 1991–2020, much of the state received below average rainfall [yellow and orange shading, Figure 1(b)]. Northern High Plains, northern and eastern Low Rolling Plains, northern East Texas, northwestern Edwards Plateau, and portions of the Trans Pecos climate divisions received 125–200 percent of normal rainfall [light green, dark green shading, Figure 1(b)]. 200–300 percent of normal rainfall [light blue shading, Figure 1(b)] was seen in the southern Trans Pecos, northern East Texas, and northeastern North Central climate divisions. The southern Trans Pecos climate division received 300–600 percent of normal rainfall [(dark blue shading, Figure 1 (b)].

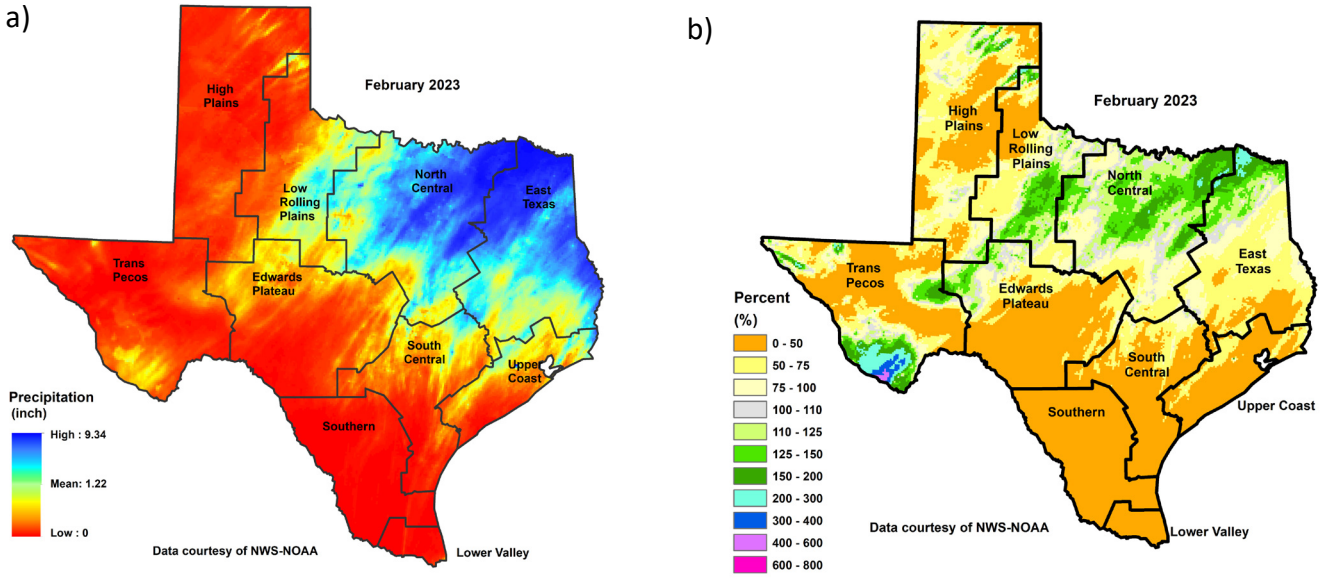
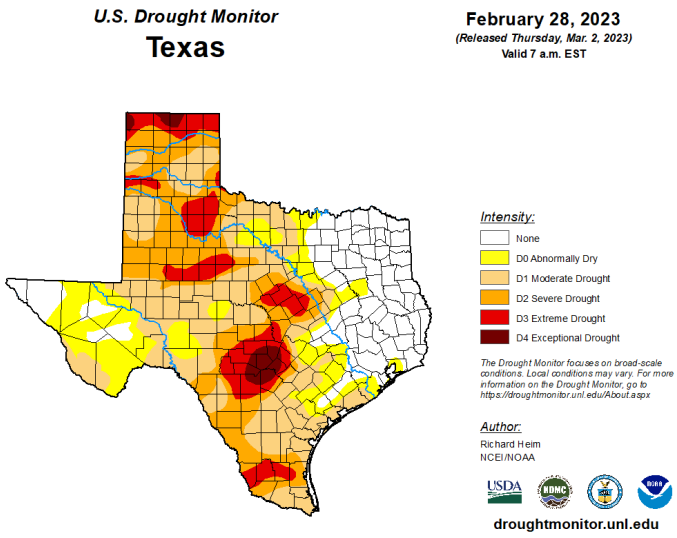


Figure 1: (a) Monthly accumulated rainfall, and (b) Percent of normal rainfall

DROUGHT

At the end of February, 78.15% of the state was in the D0 (abnormally dry) through D4 (exceptional drought) categories (**Figure 2**). That is a decrease of 2.31 % from the end of January.



Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2023-02-28	21.85	78.15	62.21	32.63	12.27	1.84

Figure 2. The percentage of drought in Texas according to the U.S. Drought Monitor map as of February 28, 2023.

RESERVOIR STORAGE

Out of 119 reservoirs in the state, 32 reservoirs held 100 percent conservation storage capacity (Figure 3). Additionally, 24 reservoirs were at or above 90 percent full. Ten reservoirs remained below 30 percent full: E.V. Spence (17.9 percent full), O. C. Fisher (3.0 percent full), J.B. Thomas (22.8 percent full), Falcon (13.3 percent full), Greenbelt (11.6 percent full), Mackenzie (6.1 percent full), Medina Lake (5.7 percent full), Palo Duro Reservoir (0.4 percent full), Twin Buttes (28.8 percent full), and the White River Lake (13.2 percent full). Elephant Butte Reservoir (New Mexico) was 14.6 percent full (Figure 3).

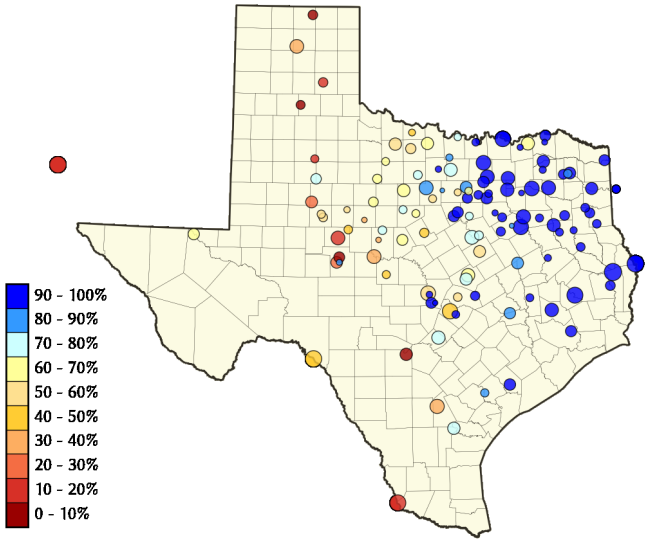


Figure 3. Reservoir conservation storage at end-February expressed as percent full (%)

Reservoir conservation storage by climate division was at or above normal [storage ≥70 percent full, Figure 4(a)] for East Texas (97.4 percent full), North Central (87.9 percent full), and the Upper Coast (99.2 percent full) climate divisions. Conservation storage was moderately low (Figure 4(a)) for the Low Rolling Plains (49.0 percent full), Edwards Plateau (43.5 percent full), and South Central (50.6 percent full) climate divisions. The High Plains (24.9 percent full), Southern (23.8 percent full), and the Trans Pecos (22.0 percent full) climate divisions had severely low conservation storage (Figure 4(a).

Combined conservation storage by river basin or sub-basin was exceptionally low (<10 percent full, red shading, Figure 4(b)) in the San Antonio river basin and severely low (20–40 percent full, brown shading, Figure 4(b)) in the Upper/Mid Rio Grande, Lower Rio Grande, Upper Colorado, and Canadian river basins. The Lower Colorado, Upper Red, and Nueces river basins had moderately low conservation storage (40–60 percent full, orange shading, Figure 4(b)). Normal to high conservation storage (>70 percent full, blue shading, Figure 4(b)) was observed in the Lower Red, Sulphur, Cypress, Upper and Lower Sabine, Upper and Lower Trinity, Upper and Lower Brazos, Neches, San Jacinto, Lavaca, and Guadalupe river basins.

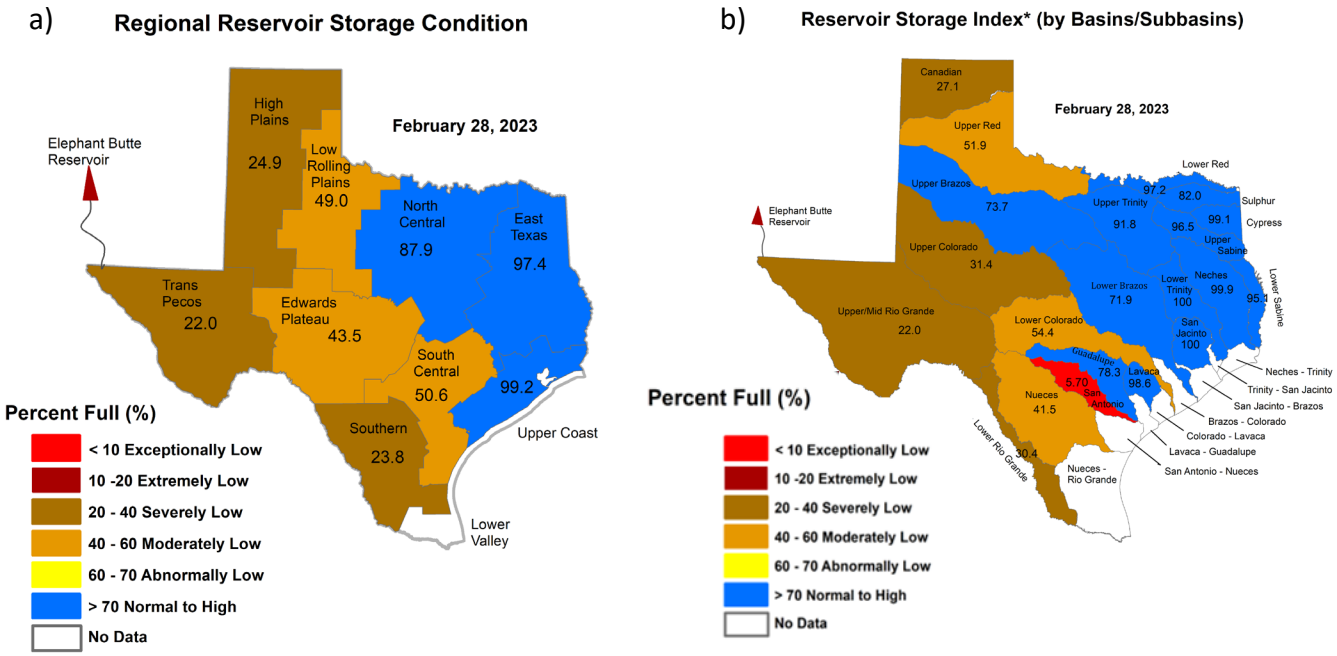


Figure 4: (a) Reservoir Storage Index* by climate division, and (b) Reservoir Storage Index* by basin/sub-basin.

*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-February 2023		Storage change from end-Jan 2023		Storage change from end-Feb 2022	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
Abilene, Lake	7,900	2,516	31.8	-90	-1.1	-3,115	-39.4
Alan Henry Reservoir	96,207	70,115	72.9	-693	0.0	-13,711	-14.3
*Amistad Reservoir (Texas & Mexico)	3,275,532	1,458,971	44.5	-46,451	-1.4	358,410	10.9
*Amistad Reservoir (Texas)	1,840,849	827,285	44.9	-43,634	-2.4	-57,702	-3.1
Amon G Carter, Lake	19,266	16,390	85.1	202	1.0	-1,975	-10.3
Aquilla Lake	43,243	30,068	69.5	2,152	5.0	-7,767	-18.0
Arlington, Lake	40,157	40,157	100.0	978	2.4	6,571	16.4
Arrowhead, Lake	230,359	150,563	65.4	227	0.1	-43,956	-19.1
Athens, Lake	29,503	29,503	100.0	0	0.0	0	0.0
*Austin, Lake	23,972	22,818	95.2	-62	0.0	-16	0.0
B A Steinhagen Lake	69,186	67,158	97.1	-2,028	-2.9	3,947	5.7
Bardwell Lake	43,856	43,856	100.0	0	0.0	1,855	4.2
Belton Lake	432,631	280,863	64.9	-658	0.0	-115,259	-26.6
Benbrook Lake	85,648	82,634	96.5	12,387	14.5	18,040	21.1
Bob Sandlin, Lake	192,417	192,417	100.0	1,951	1.0	11,131	5.8
Bois d'Arc Lake	367,609	231,363	62.9	51,164	13.9	134,152	36.5
Bonham, Lake	11,027	10,963	99.4	302	2.7	3,051	27.7
Brady Creek Reservoir	28,808	12,566	43.6	-120	0.0	-3,626	-12.6
Bridgeport, Lake	372,183	271,066	72.8	715	0.2	-51,811	-13.9
*Brownwood, Lake	130,868	79,232	60.5	-200	0.0	-38,205	-29.2
Buchanan, Lake	866,694	507,245	58.5	-6,814	0.0	-252,260	-29.1
Caddo, Lake	29,898	29,898	100.0	0	0.0	0	0
Canyon Lake	378,781	293,854	77.6	-3,347	0.0	-77,968	-20.6
Cedar Creek Reservoir in Trinity	644,686	624,303	96.8	78,836	12.2	29,939	4.6
Champion Creek Reservoir	41,580	24,656	59.3	-101	0.0	-3,904	-9.4
Cherokee, Lake	40,094	40,094	100.0	0	0.0	0	0.0
Choke Canyon Reservoir	662,820	202,589	30.6	-2,780	0.0	-74,304	-11.2
*Cisco, Lake	29,003	20,510	70.7	-107	0.0	-4,413	-15.2
Coleman, Lake	38,075	28,614	75.2	-175	0.0	-6,270	-16.5
Colorado City, Lake	31,040	27,377	88.2	-49	0.0	-1,998	-6.4
*Coleto Creek Reservoir	30,758	16,762	54.5	-165	0.0	-5,449	-17.7
Conroe, Lake	417,577	417,577	100.0	0	0.0	10,271	2.5
Corpus Christi, Lake	256,062	179,098	69.9	-7,185	-2.8	-9,614	-3.8
Crook, Lake	9,195	9,101	99.0	-52	0.0	868	9.4
Cypress Springs, Lake	66,756	66,756	100.0	1,671	2.5	6,755	10.1
E. V. Spence Reservoir	517,272	92,542	17.9	-1,154	0.0	-32,337	-6.3
Eagle Mountain Lake	179,880	150,279	83.5	4,964	2.8	-6,966	-3.9
Elephant Butte Reservoir (Texas)	852,491	124,057	14.6	11,288	1.3	30,143	3.5
Elephant Butte Reservoir (Total Storage)	1,985,900	287,169	14.5	26,129	1.3	69,775	3.5
*Falcon Reservoir (Texas & Mexico)	2,646,817	453,303	17.1	-3,374	0.0	23,707	0.9
*Falcon Reservoir (Texas)	1,551,007	206,763	13.3	-5,272	0.0	-155,090	-10.0
Fork Reservoir, Lake	605,061	548,530	90.7	69,766	11.5	96,556	16.0
Fort Phantom Hill, Lake	70,030	46,418	66.3	89	0.1	-18,312	-26.1
Georgetown, Lake	38,005	22,517	59.2	1017	2.6	-7,693	-20.2
Gibbons Creek Reservoir	25,721	23,255	90.4	-189	0.0	2,222	8.6
Graham, Lake	45,288	34,624	76.5	-107	0.0	-3,503	-7.7
Granbury, Lake	132,949	120,949	91.0	5,977	4.5	-10,698	-8.0

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of lake or reservoir	Storage capacity	Storage at end-February 2023		Storage change from end-Jan 2023		Storage change from end-Feb 2022	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
Continued							
Granger Lake	51,822	51,822	100.0	532	1.0	0	0.0
Grapevine Lake	163,064	163,064	100.0	0	0.0	7,806	4.8
Greenbelt Lake	59,968	6,985	11.6	-43	0.0	-2,645	-4.4
*Halbert, Lake	6,033	5,307	88.0	-321	-5.3	88	1.5
Hords Creek Lake	8,109	2,461	30.3	-12	0.0	-892	-11.0
Houston County Lake	17,113	17,113	100.0	0	0.0	0	0.0
Houston, Lake	132,318	132,318	100.0	0	0.0	1,370	1.0
Hubbard Creek Reservoir	313,298	206,969	66.1	-834	0.0	-61,760	-19.7
Hubert H Moss Lake	24,058	21,844	90.8	745	3.1	-1,559	-6.5
Inks, Lake	13,729	13,100	95.4	-31	0.0	-277	-2.0
J. B. Thomas, Lake	199,931	45,659	22.8	-1,212	0.0	-30,467	-15.2
Jacksonville, Lake	25,670	25,670	100.0	0	0.0	0	0.0
Jim Chapman Lake (Cooper)	260,332	260,332	100.0	38,328	14.7	68,678	26.4
Joe Pool Lake	175,800	175,800	100.0	0	0.0	13,500	7.7
Kemp, Lake	245,307	137,358	56.0	1,451	0.6	-67,865	-27.7
Kickapoo, Lake	86,345	50,610	58.6	594	0.7	-12,964	-15.0
Lavon Lake	409,757	409,757	100.0	20,807	5.1	76,780	18.7
Leon, Lake	27,762	16,662	60.0	-62	0.0	-6,847	-24.7
Lewisville Lake	563,228	563,228	100.0	46,255	8.2	45,996	8.2
Limestone, Lake	203,780	168,721	82.8	23,243	11.4	-27,312	-13.4
*Livingston, Lake	1,603,504	1,603,504	100.0	0	0.0	0	0.0
*Lost Creek Reservoir	11,950	10,963	91.7	432	3.6	-496	-4.2
Lyndon B Johnson, Lake	112,778	110,853	98.3	449	0.4	-384	0.0
Mackenzie Reservoir	46,450	2,841	6.1	-17	0.0	-632	-1.4
Marble Falls, Lake	7,597	7,209	94.9	42	0.6	54	0.7
Martin, Lake	75,726	75,726	100.0	49	0.1	11,049	14.6
Medina Lake	254,823	14,544	5.7	-685	0.0	-48,060	-18.9
Meredith, Lake	500,000	152,231	30.4	391	0.1	-18,770	-3.8
Millers Creek Reservoir	26,768	16,144	60.3	85	0.3	-6,343	-23.7
*Mineral Wells, Lake	5,273	4,156	78.8	47	0.9	-873	-16.6
Monticello, Lake	34,740	30,009	86.4	757	2.2	2,510	7.2
Mountain Creek, Lake	22,850	22,850	100.0	0	0.0	0	0.0
Murvaul, Lake	38,285	38,285	100.0	0	0.0	0	0.0
Nacogdoches, Lake	39,522	38,848	98.3	854	2.2	4,465	11.3
Nasworthy	9,615	8,257	85.9	61	0.6	-450	-4.7
Navarro Mills Lake	49,827	48,424	97.2	11,743	23.6	5,130	10.3
New Terrell City Lake	8,583	8,566	99.8	437	5.1	961	11.2
Nocona, Lake (Farmers Crk)	21,444	15,998	74.6	152	0.7	-2,421	-11.3
North Fork Buffalo Creek Reservoir	15,400	6,755	43.9	-94	0.0	-5,213	-33.9
O' the Pines, Lake	241,363	241,363	100.0	0	0.0	8,559	3.5
O. C. Fisher Lake	115,742	3,488	3.0	-47	0.0	-3,356	-2.9
*O. H. Ivie Reservoir	554,340	214,714	38.7	-2,291	0.0	-78,829	-14.2
Oak Creek Reservoir	39,210	18,600	47.4	-128	0.0	-7,790	-19.9

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS							
Name of lake or reservoir	Storage capacity	Storage at end-February 2023		Storage change from end-Jan 2023		Storage change from end-Feb 2022	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
Continued							
Palestine, Lake	367,303	367,303	100.0	0	0.0	0	0.0
Palo Duro Reservoir	61,066	214	0.4	1	0.0	-162	0.0
Palo Pinto, Lake	26,766	14,964	55.9	119	0.4	-10,483	-39.2
Pat Cleburne, Lake	26,008	19,407	74.6	4,021	15.5	-70	0.0
*Pat Mayse Lake	113,683	113,683	100.0	0	0.0	13,782	12.1
Possum Kingdom Lake	538,139	440,997	81.9	1,023	0.2	-72,165	-13.4
Proctor Lake	54,762	22,915	41.8	165	0.3	-24,413	-44.6
Ray Hubbard, Lake	439,559	439,559	100.0	0	0.0	39,107	8.9
Ray Roberts, Lake	788,167	770,708	97.8	20,247	2.6	3,072	0.4
Red Bluff Reservoir	151,110	97,533	64.5	-394	0.0	-15,015	-9.9
Richland-Chambers Reservoir	1,087,839	977,110	89.8	76,104	7.0	-18,863	-1.7
Sam Rayburn Reservoir	2,857,077	2,857,077	100.0	286,983	10.0	378,138	13.2
Somerville Lake	150,293	124,320	82.7	17,067	11.4	-25,973	-17.3
Squaw Creek, Lake	151,250	151,250	100.0	0	0.0	2,046	1.4
Stamford, Lake	51,570	31,595	61.3	-106	0.0	-11,922	-23.1
Stillhouse Hollow Lake	229,796	161,850	70.4	-1,021	0.0	-48,978	-21.3
Striker, Lake	16,934	16,934	100.0	0	0.0	21	0.1
Sweetwater, Lake	12,267	7,250	59.1	-33	0.0	-2,504	-20.4
*Sulphur Springs, Lake	17,747	15,966	90.0	-414	-2.3	5,920	33.4
Tawakoni, Lake	871,685	871,685	100.0	35,367	4.0	84,214	9.7
Texana, Lake	158,975	156,827	98.6	-2,148	-1.4	-611	0.0
Texoma, Lake (Texas & Oklahoma)	2,487,601	2,425,789	97.5	1,490	0.1	11,916	0.5
Texoma, Lake (Texas)	1,243,801	1,212,894	97.5	745	0.1	5,958	0.5
Toledo Bend Reservoir (Texas & Louisiana)	4,472,900	4,258,590	95.2	107,038	2.4	234,106	5.2
Toledo Bend Reservoir (Texas)	2,236,450	2,127,245	95.1	53,519	2.4	117,053	5.2
Travis, Lake	1,098,044	498,813	45.4	3,162	0.3	-260,255	-23.7
Twin Buttes Reservoir	182,454	52,557	28.8	32	0.0	-40,947	-22.4
Tyler, Lake	72,073	72,073	100.0	4,288	5.9	0	0.0
Waco, Lake	189,418	108,851	57.5	4,103	2.2	-49,175	-26.0
Waxahachie, Lake	11,060	11,060	100.0	972	8.8	2,246	20.3
Weatherford, Lake	17,812	10,356	58.1	-27	0.0	-4,164	-23.4
White River Lake	29,880	3,939	13.2	-132	0.0	-1,457	-4.9
Whitney, Lake	564,808	438,869	77.7	11,358	2.0	-74,936	-13.3
Worth, Lake	24,419	15,458	63.3	122	0.5	-3,597	-14.7
Wright Patman Lake	122,593	122,593	100.0	0	0.0	0	0.0
STATEWIDE TOTAL							
STATEWIDE TOTAL	**32,414,434**	**23,822,864**	**73.5**	**789,120**	**2.4**	**-767,608**	**-2.4**

*Total volume below elevation of conservation pool top is used as the 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.

SOIL MOISTURE

At the end of February 2023, root zone soil moisture was low [yellow, orange, Figure 5(a)] in some portion of each of the climate divisions. Areas of more severe dryness [brown shading, Figure 5(a)] were the High Plains, Trans Pecos, Low rolling Plains, Southern, and areas of northern and southern South Central, northern Lower Valley, southwestern Upper Coast, and western East Texas climate divisions. Average to slightly above average soil moisture [green shading, Figure 5(a)] was seen in the North Central, South Central, the Upper Coast, and East Texas climate divisions. Areas of higher soil moisture [blue shading, Figure 5 (a)] was seen in northeastern North Central, northern East Texas, and the eastern Upper Coast climate divisions.

Compared to conditions at the end of January 2023, soil moisture decreased [red shading in Figure 5(b)] across much of the state, apart from in northwestern East Texas, and much of the North Central climate divisions where soil moisture increased [blue shading in Figure 5(b)].

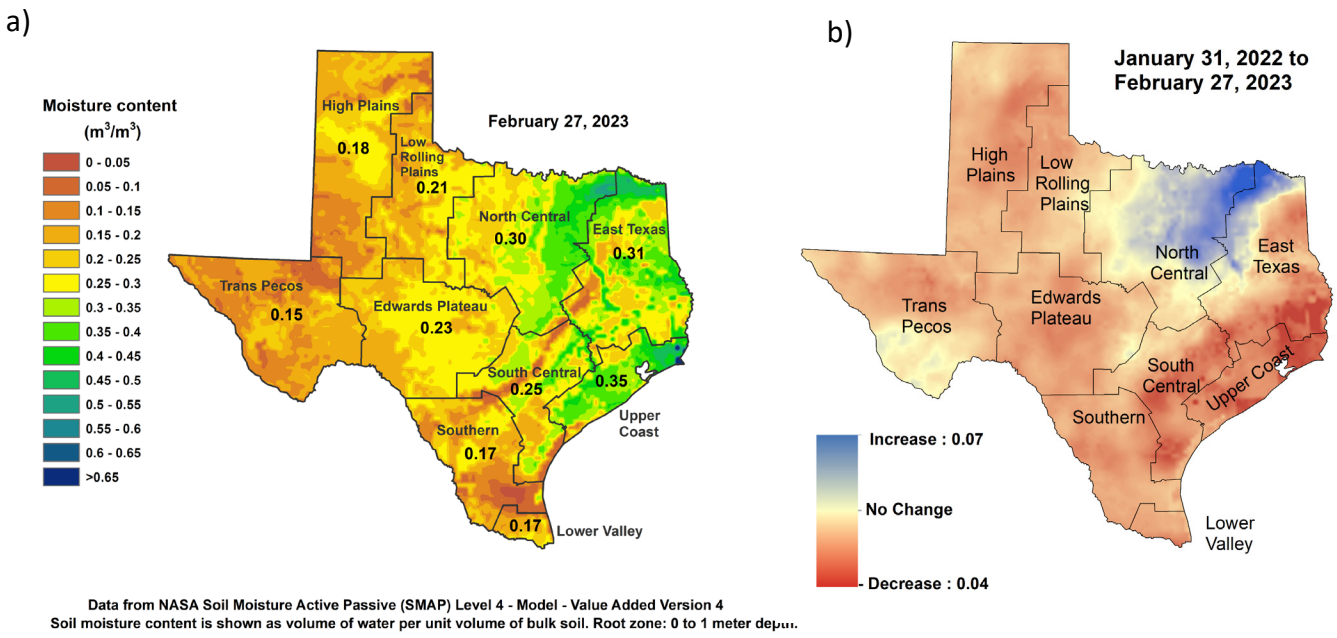


Figure 5: (a) Root zone soil moisture conditions in February 2023 and (b) the difference in root zone soil moisture between end-January 2023 and end-February 2023

STREAMFLOW CONDITIONS

Normal streamflow (25–75th percentile, green shading, Figure 6) was recorded in parts of the Panhandle, Trans Pecos (Lower Pecos-Red Bluff Reservoir watershed), Central, East, and coastal regions of Texas this month. Above normal (76–90th percentile, light blue shading, Figure 6) streamflow was seen in the Sulphur, Cypress, Upper Sabine, Upper Neches, Lower Neches (Village watershed), Lower Trinity, San Jacinto (Spring watershed), and Brazos-Colorado (San Bernard watershed) river basins. Much above normal stream flow (>90th percentile, dark blue shading, Figure 6) was seen in Sulphur (White Oak Bayou) river basin.

Below normal streamflow (10–24th percentile, orange shading, Figure 6) was recorded in the Canadian, Upper and Lower Red (Lake Texoma watershed), Upper Trinity, Middle Brazos, Upper and Lower Colorado (Lavaca watershed), Upper San Antonio, Nueces, Nueces-Rio Grande, and the Pecos (Toyha watershed) river basins.

Much below normal stream flow (< 10th percentile, dark red shading, Figure 6) was seen in the Pecos, Upper Red (Northern Salt Folk Red and Northern Witchita watersheds), Upper Brazos (Salt Folk Brazos), Upper Colorado, Guadalupe, Nueces, and San Antonio-Nueces (Mission watershed) river basins. A record low (bright red shading, Figure 6) was seen in the Nueces (Lower Frio watershed) river basin.

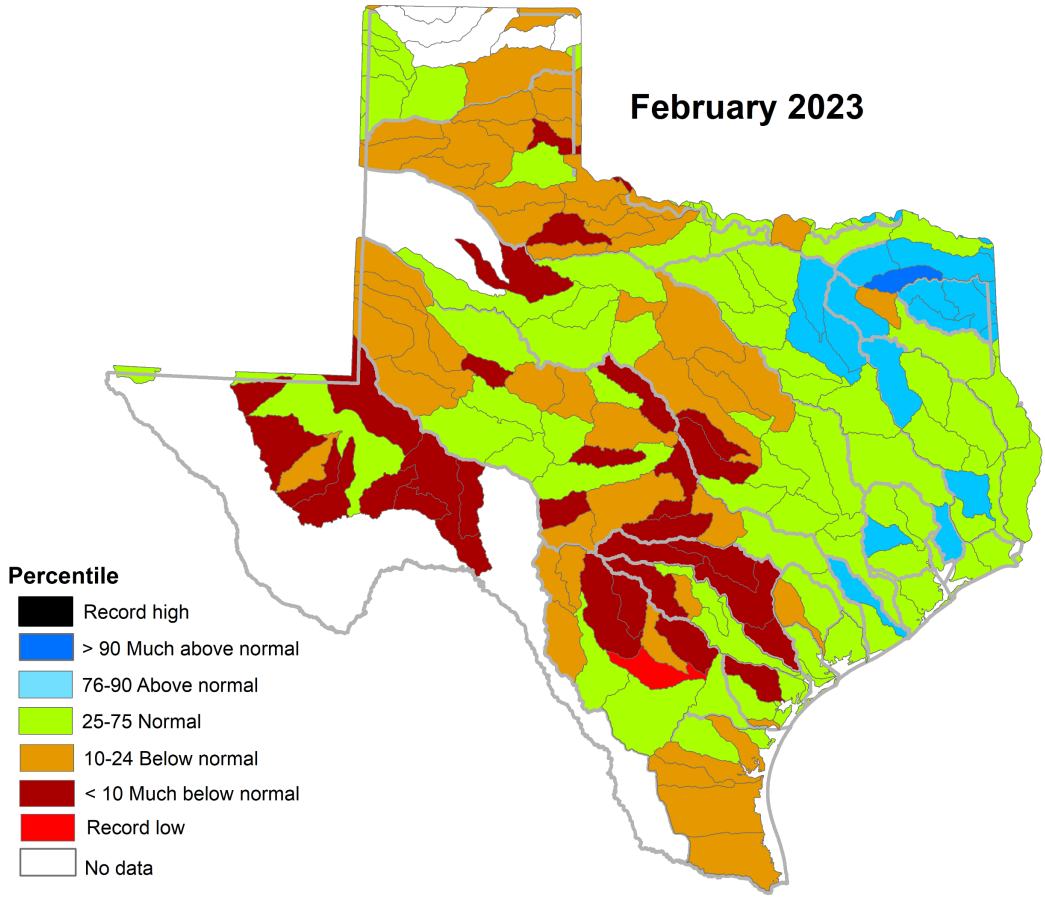
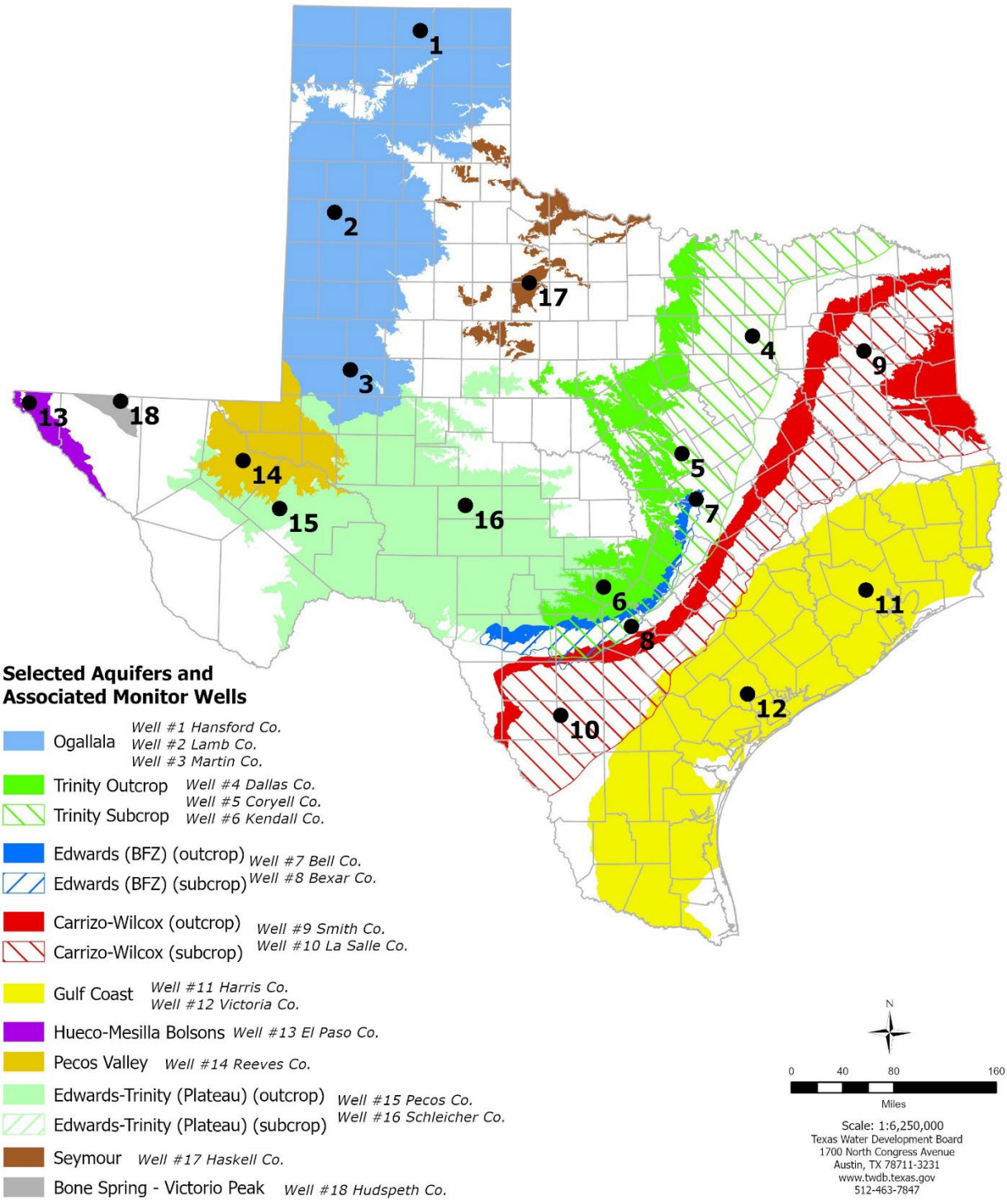


Figure 6: Runoff percentiles by the U.S. Geological Survey's Hydrologic Unit Code



FEBRUARY 2023 GROUNDWATER LEVELS IN MONITORING WELLS

Water-level measurements were available for 16 key monitoring wells in the state. The recorders in two wells (#10 and #15 on map) were offline during the reporting period. Water levels rose in 10 monitoring wells since the beginning of February, ranging from an increase of 0.12 feet in the Martin County Ogallala Aquifer well (#3 on map) and Hudspeth County Bone Spring-Victorio Peak Aquifer well (#18 on map) to 5.48 feet in the Kendall County Trinity Aquifer well (#6 on map). Water levels declined in six monitoring wells, ranging from a decline of -0.07 feet in the Lamb County Ogallala Aquifer well (#2 on map) to -6.51 feet in the Dallas County Trinity Aquifer well (#4 on map). The J-17 well (#8 on map) in San Antonio recorded a water level of 94.70 feet below land surface or 636.30 feet above mean sea level. Water levels are 3.70 feet below the Stage 3 critical management level for the San Antonio portion of the Edwards (Balcones Fault Zone) Aquifer. Stage 3 water restrictions have been in effect since June 13, 2022.

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

Monitoring Well	February (depth to water, feet)	January (depth to water, feet)	Month Change	Year Change	Historical Change*	First Measured (year)
(1) Hansford 0354301	163.92	164.06	0.14	-1.33	-93.80	1951
(2) Lamb 1053602	153.67	153.60	-0.07	-1.07	-125.50	1951
(3) Martin 2739903	145.76	145.88	0.12	-1.15	-40.87	1964
(4) Dallas 3319101	503.16	496.65	-6.51	-6.94	-281.16	1954
(5) Coryell 4035404	542.80	543.84	1.04	-8.58	-250.80	1955**
(6) Kendall 6802609	153.69	159.17	5.48	8.25	-93.69	1975
(7) Bell 5804816	124.99	125.58	0.59	-2.51	-1.48	2008
(8) Bexar 6837203	94.70	94.00	-0.70	-25.60	-48.06	1932
(9) Smith 3430907	442.32	441.96	-0.36	-4.65	-142.32	1977**
(10) La Salle 7738103	NA	534.07	NA	NA	-281.00	2003
(11) Harris 6514409	191.87	193.05	1.18	-7.70	-56.37*	1947**
(12) Victoria 8017502	33.51	34.30	0.79	-1.50	0.49	1958**
(13) El Paso 4913301	299.48	299.88	0.40	-0.72	-67.58	1964**
(14) Reeves 4644501	155.92	151.55	-4.37	NA	-63.83	1952
(15) Pecos 5216802	NA	188.12	NA	NA	58.76	1976
(16) Schleicher 5512134	310.43	310.18	-0.25	-4.90	-8.53	2003
(17) Haskell 2135748	46.21	46.35	0.14	-1.49	-3.21	2002
(18) Hudspeth 4807516	144.38	144.50	0.12	-3.25	-40.46	1966

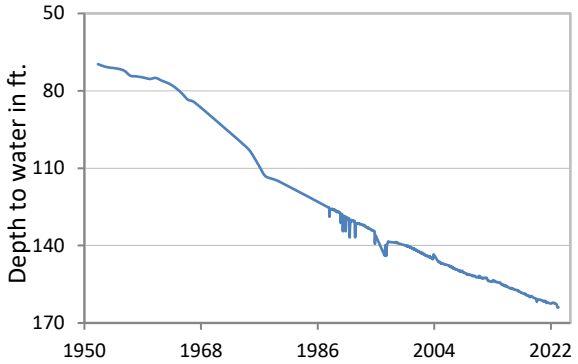
*** Change since the original measurement taken on the date indicated in the last column. The historical changes shown for recorder wells #10 and #15 are based off the most recent water level records from January 2023.**

**** Measurement not shown on the hydrograph.**

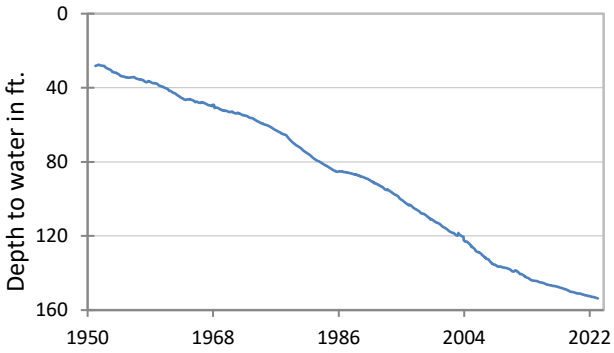
NA (not available)
All data are provisional and subject to revision

FEBRUARY 2023 MONITORING WELL HYDROGRAPHS

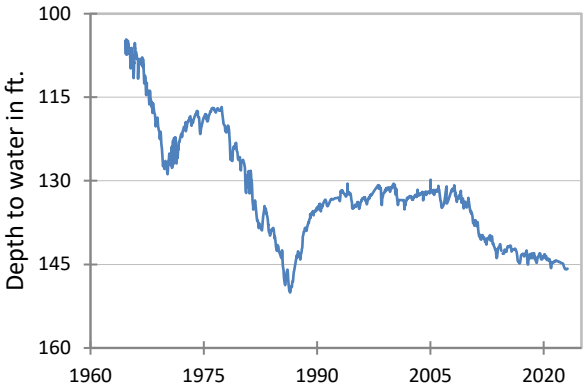
(1) State Well #03-54-301
Near Spearman, Hansford County
Ogallala Aquifer



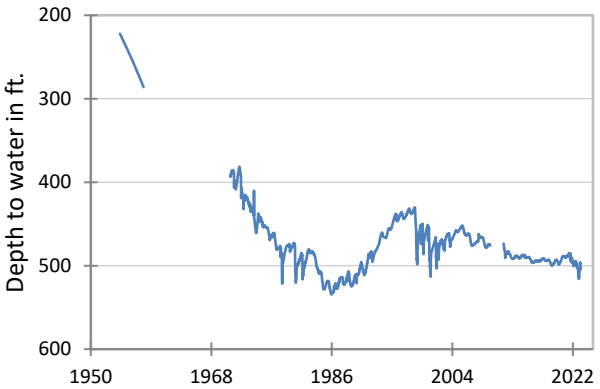
(2) State Well #10-53-602
Near Earth, Lamb County
Ogallala Aquifer



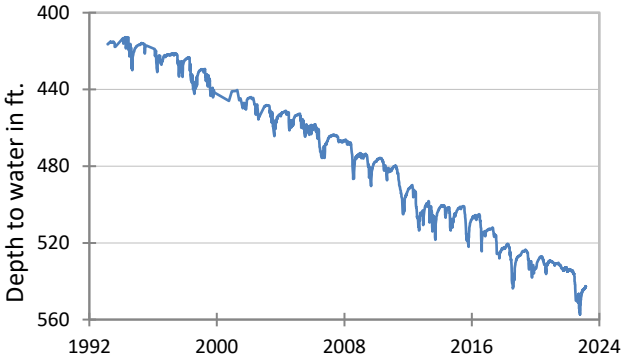
(3) State Well #27-39-903
Northwest Martin County
Ogallala Aquifer



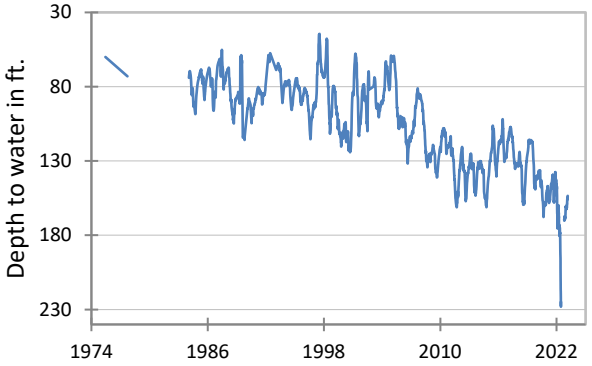
(4) State Well #33-19-101
Southeast Dallas, Dallas County
Twin Mountains Formation-Trinity Aquifer



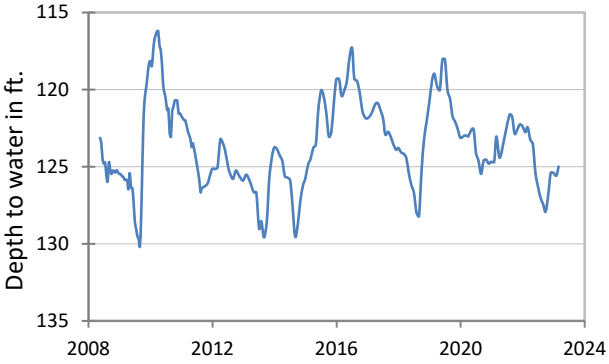
(5) State Well #40-35-404
Gatesville, Coryell County
Hosston Formation-Trinity Aquifer



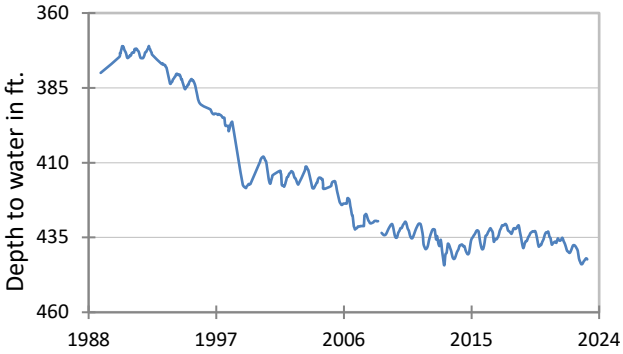
(6) State Well #68-02-609
Waring, Kendall County
Travis Peak Formation-Trinity Aquifer



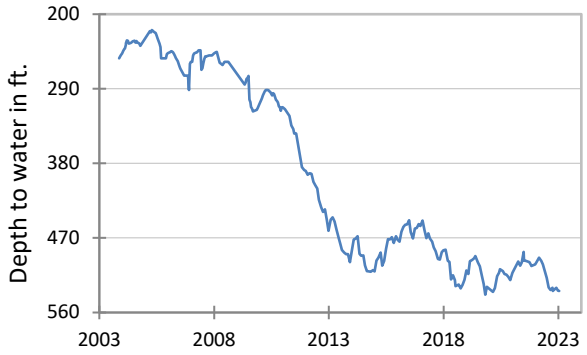
(7) State Well #58-04-816
Near Salado, Bell County
Edwards (Balcones Fault Zone) Aquifer



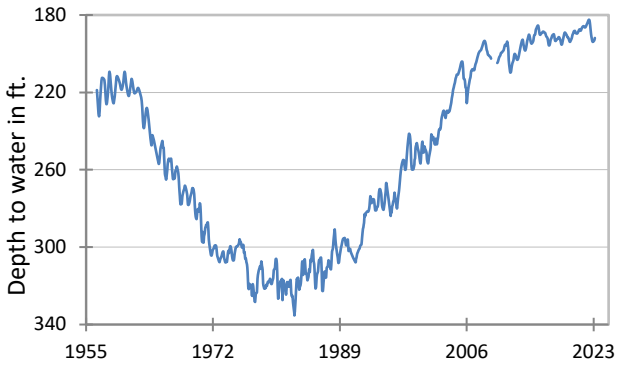
(9) State Well #34-30-907
Red Springs, Smith County
Carrizo-Wilcox Aquifer



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

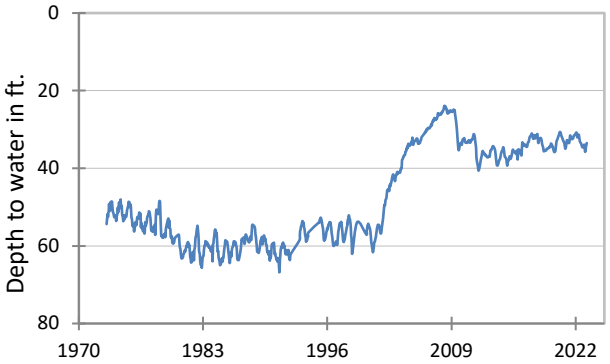


(11) State Well #65-14-409
North Houston, Harris County
Evangeline Formation-Gulf Coast Aquifer

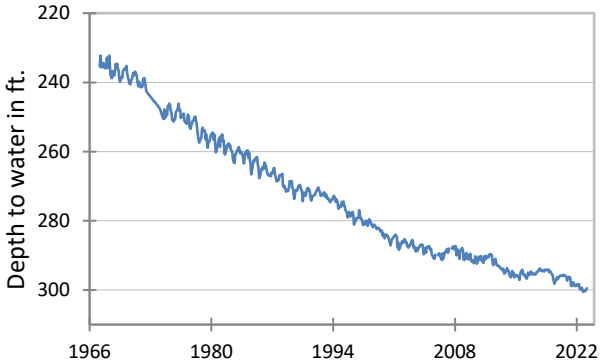


***Recorder wells #10 was offline in February 2023 and did not record data.**

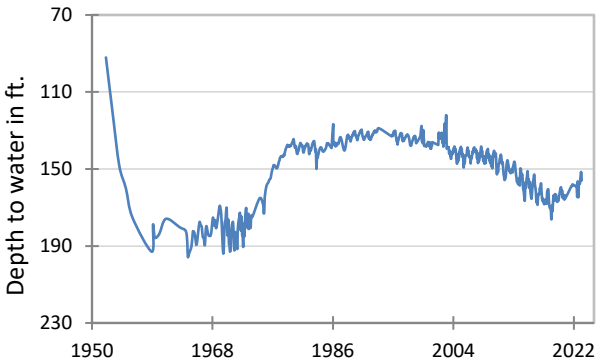
(12) State Well #80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



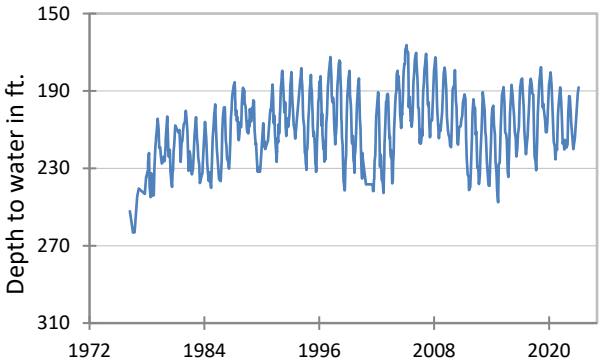
(13) State Well #49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolsons Aquifer



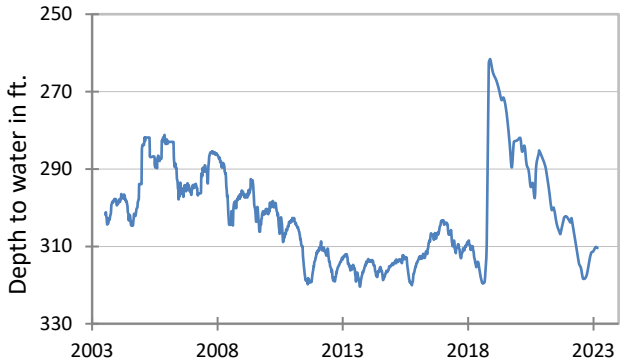
(14) State Well #46-44-501
Near Pecos, Reeves County
Pecos Valley Aquifer



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



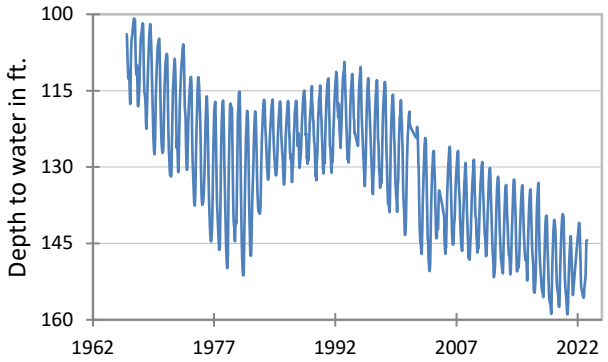
(16) State Well #55-12-134
Eldorado, Schleicher County
Edwards-Trinity (Plateau) Aquifer



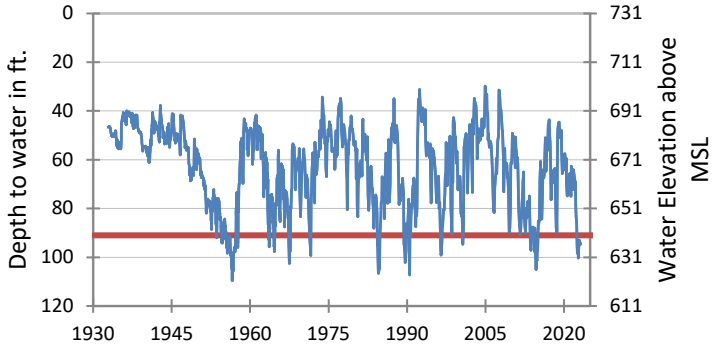
(17) State Well #21-35-748
Near O'Brien, Haskell County
Seymour Aquifer

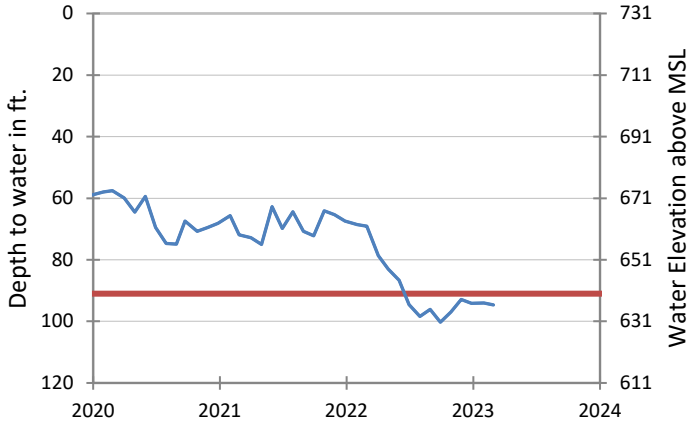
***Recorder wells #15 was offline in February 2023 and did not record data.**

(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

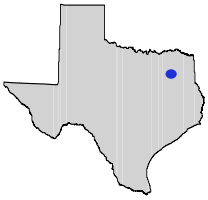




The late February water-level measurement in this Edwards (Balcones Fault Zone) Aquifer well, located at an elevation of 731 feet above mean sea level, was 94.70 feet below land surface, or 636.30 feet above mean sea level. This was 0.70 feet below last month's measurement, 25.60 feet below last year's measurement, and 48.06 feet below the initial measurement recorded in 1932.

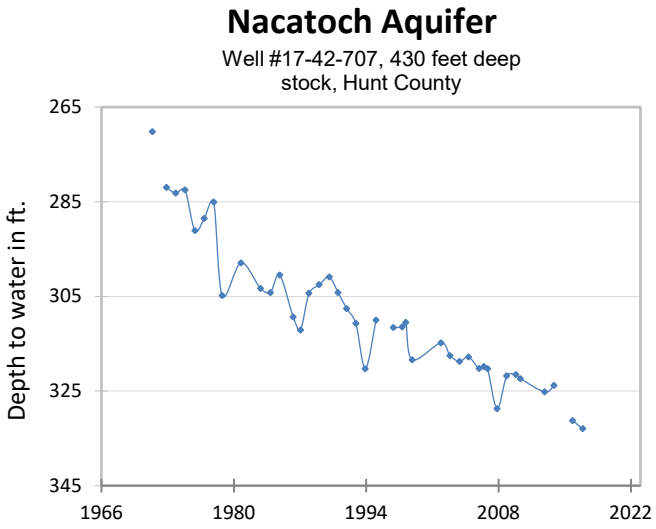
Water levels below the red line indicate periods in which Edwards Aquifer Authority Stage 3 drought restrictions are in effect. In February 2023, Stage 3 drought restrictions were in effect because the aquifer remained below the Stage 3 critical management level.

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 Nacatoch Aquifer is a minor aquifer that occurs in a narrow band across northeast Texas. The aquifer consists of the Nacatoch Sand, which is composed of sequences of sandstone separated by impermeable layers of mudstone or clay. These sandstones are marine in origin, coarsen upward, and are laterally discontinuous. The number of sand layers varies throughout the aquifer's extent, and the thickness of individual sand units ranges from more than 100 feet in the north to less than 20 feet to the south. The thickness of intervening mudstone units similarly ranges from more than 100 feet to only a few feet. Freshwater saturated thickness averages about 50 feet. The aquifer also includes a hydraulically connected cover of alluvium that is as much as 80 feet thick along major drainages. Groundwater in this aquifer is usually under artesian conditions except in shallow wells where the Nacatoch Formation crops out and water table conditions exist. The Mexia-Talco Fault Zone generally delineates the subsurface limit of the aquifer. Groundwater in the aquifer is typically alkaline, high in sodium bicarbonate, and soft. Total dissolved solids are significantly higher down-dip, south of the Mexia-Talco Fault Zone, where the water contains between 1,000 and 3,000 milligrams per liter of total dissolved solids. Water from the aquifer is extensively used for domestic and livestock purposes.



In state well number 17-42-707, the TWDB recorded an initial measurement of 270.19 feet below land surface in May 1971. Since then, the TWDB has continued to take near-annual measurements in the stock well. The period of record reveals fluctuations in water levels that decline at a rate roughly equal to -1.38 feet per year. Prior to 2001, fluctuations in water levels are more pronounced. This may suggest nearby pumping was greater and more variable before 2001.

Far away (left), and close-up (right) images of well #17-42-707.