Texas Water Conditions Report

January 2024

Water News:

Discover the current state of drought, historical comparisons of temperature and rainfall, and what to expect in the coming months with our Texas Water Newsroom, monthly Water and Weather segment.
https://texaswaternewsroom.org/videos/water_and_weather_january_2024.html.

RAINFALL

In January, little to no rainfall [yellow, orange, and red shading, Figure 1(a)] was received in the Trans Pecos, High Plains, much of the Low Rolling Plains, Edwards Plateau, much of the Southern, Lower Valley, central North Central, and portions of southern South Central climate divisions. Whereas, above average to high amounts of rainfall [light and dark blue shading, Figure 1(a)] were seen on the eastern border of the Edwards Plateau, eastern and western North Central, South Central, East Texas, and the Upper Coast climate divisions.

Compared to historical data from 1991–2020, the Trans Pecos, southern High Plains, much of the Edwards Plateau, western Southern, and areas of the Lower Valley climate divisions received 0–75 percent of normal rainfall [yellow, orange shading, Figure 1(b)]. 125–200 percent of normal rainfall [green shading, Figure 1(b)] was received in the northern High Plains, Low Rolling Plains, central and eastern North Central, northwestern and portions of southern East Texas, portions of eastern Southern, areas of southern South Central, and the southwestern Upper Coast climate divisions. 200–400 percent of normal rainfall [light to dark blue shading, Figure 1(b)] was received in northern High Plains, northern and eastern Low Rolling Plains, western and southern North Central, northern and eastern Southern, much of South Central, much of East Texas, and the Upper Coast climate divisions. The northern South Central and southwestern East Texas received 400-600 percent of normal rainfall [light purple, Figure 1(b)].

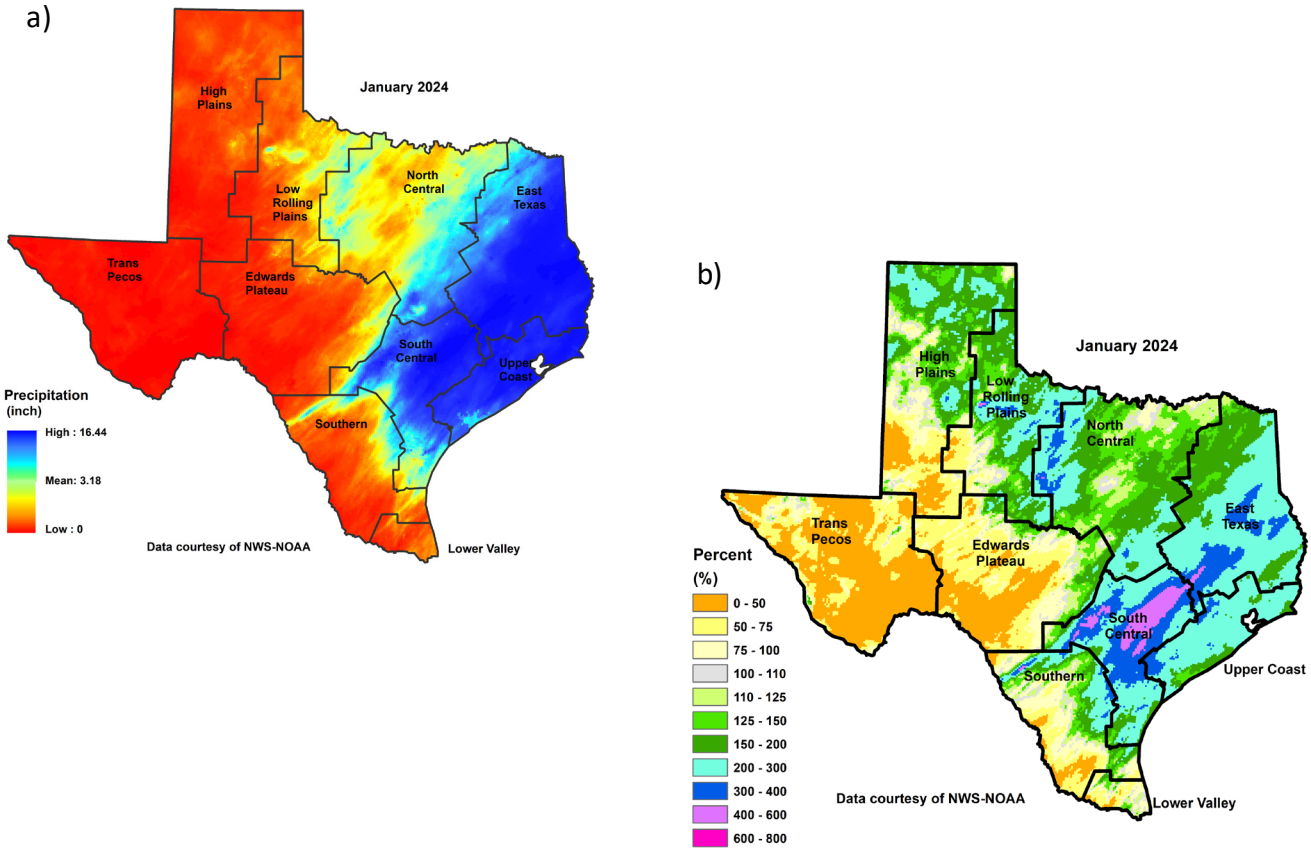
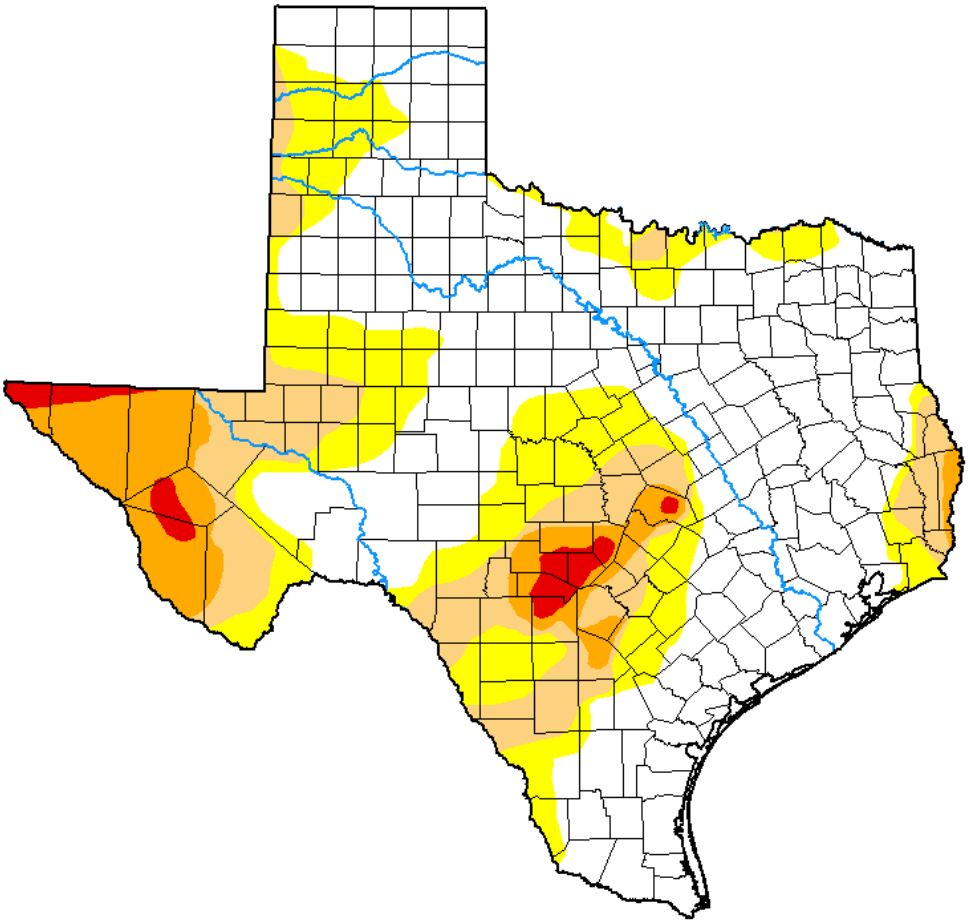


Figure 1: (a) Monthly accumulated rainfall, and (b) Percent of normal rainfall

DROUGHT

At the end of January 56.93% of the state was in the D0 (abnormally dry) through D3 (exceptional drought) categories (**Figure 2**). That is a decrease of 2.85% from the end of December.



Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
2024-01-30	56.93	43.07	22.75	9.68	1.92	0.00

Figure 2. The percentage of drought in Texas according to the U.S. Drought Monitor map as of January 30, 2024.

RESERVOIR STORAGE

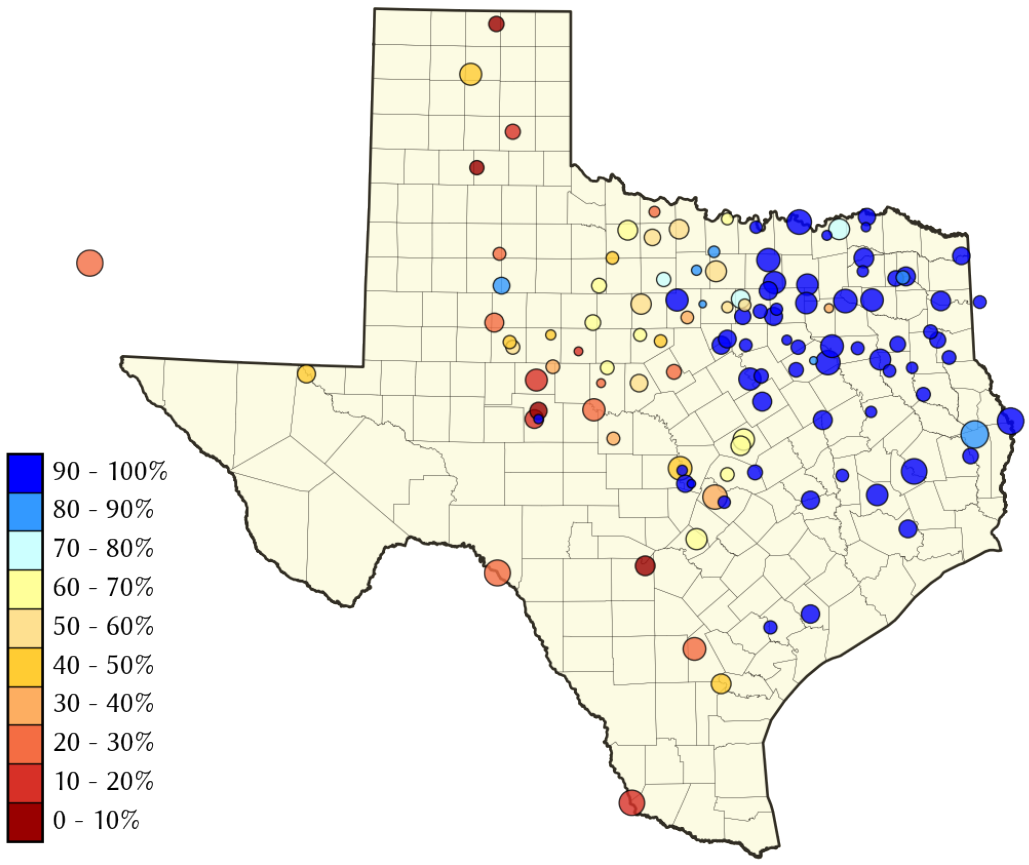


Figure 3. Reservoir conservation storage at end-January expressed as percent full (%)

Out of 119 reservoirs in the state, 31 reservoirs held 100 percent conservation storage capacity, and 30 reservoirs were at or above 90 percent full in December. Seventeen reservoirs remained below 30 percent full: Abilene (14.9 percent full), Amistad (24.6 percent full), Choke Canyon (24.5 percent full), E.V. Spence (16.1 percent full), Falcon (17.8 percent full), Greenbelt (11.2 percent full), Hords Creek (22.3 percent full), J.B. Thomas (21.7 percent full), Mackenzie (9.4 percent full), Medina Lake (3.3 percent full), North Fork Buffalo Creek Reservoir (28.5 percent full), O.C. Fisher (2.0 percent full), O.H. Ivie (27.7 percent full), Palo Duro Reservoir (4.5 percent full), Proctor (27.7 percent full), Twin Buttes (15.3 percent full), and the White River Lake (24.0 percent full). Elephant Butte Reservoir (New Mexico) was 25.1 percent full (Figure 3).

Reservoir conservation storage by climate division was at or above normal (Figure 4(a)) for East Texas (94.3 percent full), North Central (89.9 percent full), and the Upper Coast (99.8 percent full) climate divisions. Conservation storage was moderately low (Figure 4(a)) for the Low Rolling Plains (52.2 percent full), and South Central (43.9 percent full) climate divisions. The High Plains (36.9 percent full), Edwards Plateau (29.8 percent full), the Trans Pecos (27.6 percent full), and the Southern (22.6 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, Nueces, Upper Colorado, and Canadian river basins. The Upper Red, and Lower Colorado river basins had moderately low conservation storage [40–60 percent full, orange shading, Figure 4(b)]. The Guadalupe river basin had abnormally low conservation storage [60-70 percent full, yellow 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, Lavaca, and San Jacinto river basins.

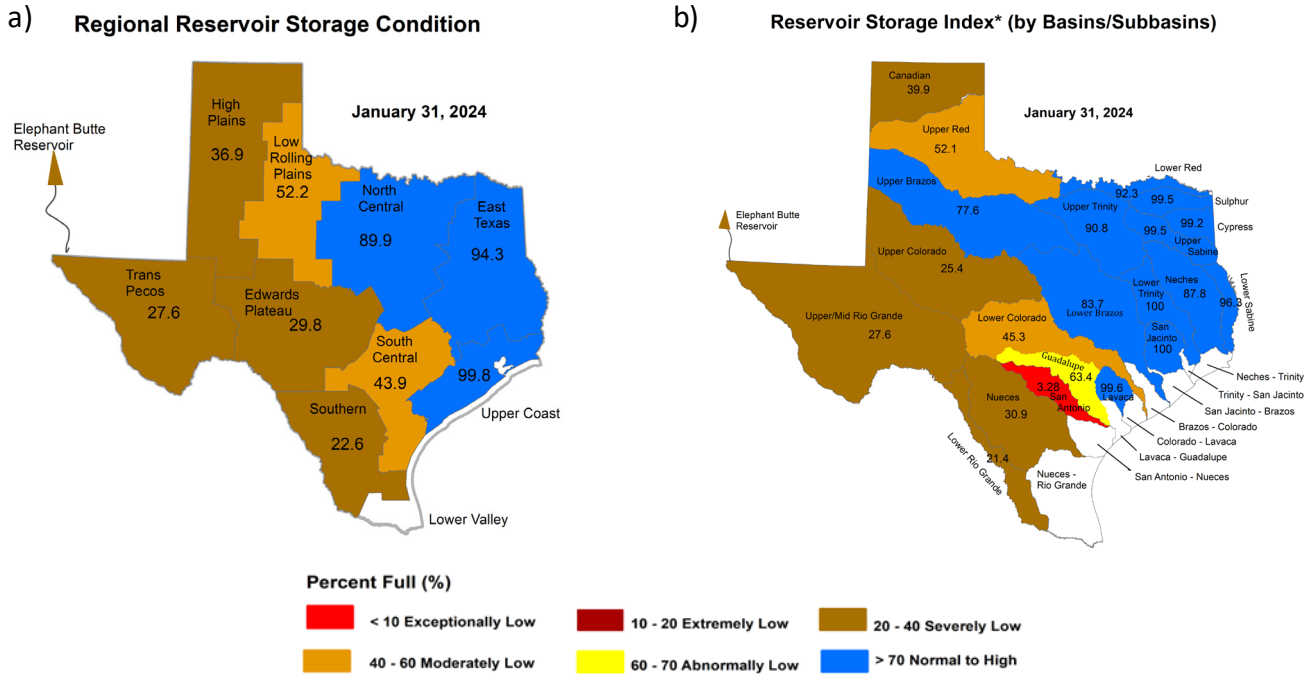


Figure 4: (a) Reservoir Storage Index* by climate division, and (b) Reservoir Storage Index* by basin/sub-basin.

*Reservoir Storage Index is defined as the percent full of conservation storage capacity.
Percent full is calculated as the combined conservation storage of all reservoirs in a climate region or a basin/subbasin, excluding dead pool storage.

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS							
Name of lake or reservoir	Storage capacity	Storage at end-January 2024		Storage change from end-Dec 2023		Storage change from end-Jan 2023	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
Abilene, Lake	7,900	1,179	14.9	-66	0.0	-1,427	-18.1
Alan Henry Reservoir	96,207	86,101	89.5	-1,147	-1.2	15,293	15.9
*Amistad Reservoir (Texas & Mexico)	3,275,532	831,357	25.4	-59,932	-1.8	-674,065	-20.6
*Amistad Reservoir (Texas)	1,813,408	446,835	24.6	-34,152	-1.9	-424,084	-23.4
Amon G Carter, Lake	19,266	16,055	83.3	78	0.4	-133	0.0
Aquilla Lake	43,243	43,243	100.0	3,057	7.1	15,327	35.4
Arlington, Lake	40,157	40,157	100.0	0	0.0	997	2.5
Arrowhead, Lake	230,359	128,854	55.9	4,875	2.1	-21,482	-9.3
Athens, Lake	29,503	29,117	98.7	1,481	5.0	-386	-1.3
*Austin, Lake	23,972	23,174	96.7	140	0.6	294	1.2
B A Steinhagen Lake	69,186	69,186	100.0	3,029	4.4	0	0.0
Bardwell Lake	43,856	43,856	100.0	0	0.0	0	0.0
Belton Lake	432,631	278,898	64.5	12,352	2.9	-2,623	0.0
Benbrook Lake	85,648	79,152	92.4	4,287	5.0	8,937	10.4
Bob Sandlin, Lake	192,417	192,417	100.0	8,008	4.2	1,951	1.0
Bois d'Arc Lake	367,609	262,236	71.3	4,944	1.3	82,037	22.3
Bonham, Lake	11,027	11,027	100.0	827	7.5	366	3.3
Brady Creek Reservoir	28,808	10,453	36.3	-113	0.0	-2,233	-7.8
Bridgeport, Lake	372,183	208,730	56.1	-709	0.0	-61,621	-16.6
*Brownwood, Lake	130,868	77,990	59.6	394	0.3	-1,442	-1.1
Buchanan, Lake	866,694	393,629	45.4	2,527	0.3	-120,430	-13.9
Caddo, Lake	29,898	29,898	100.0	0	0.0	0	0.0
Canyon Lake	378,781	228,809	60.4	118	0.0	-68,392	-18.1
Cedar Creek Reservoir in Trinity	644,686	644,686	100.0	29,616	4.6	99,219	15.4
Champion Creek Reservoir	41,580	24,131	58.0	-163	0.0	-626	-1.5
Cherokee, Lake	40,094	40,094	100.0	8,252	20.6	0	0.0
Choke Canyon Reservoir	662,820	162,542	24.5	549	0.1	-42,827	-6.5
*Cisco, Lake	29,003	17,680	61.0	0	0.0	-2,937	-10.1
Coleman, Lake	38,075	23,263	61.1	-153	-0.4	-5,526	-14.5
Colorado City, Lake	31,040	31,040	100.0	7,344	23.7	3,639	11.7
*Coleto Creek Reservoir	30,758	14,657	47.7	-142	0.0	-2,270	-7.4
Conroe, Lake	417,577	417,577	100.0	13,793	3.3	0	0.0
Corpus Christi, Lake	256,062	121,735	47.5	1,384	0.5	-64,203	-25.1
Crook, Lake	9,195	9,143	99.4	746	8.1	-10	0.0
Cypress Springs, Lake	66,756	66,756	100.0	291	0.4	1,671	2.5
E. V. Spence Reservoir	517,272	83,504	16.1	-1,747	0.0	-10,192	-2.0
Eagle Mountain Lake	185,087	133,923	72.4	1,369	0.7	-15,116	-8.2
Elephant Butte Reservoir (Texas)	852,491	214,239	25.1	12,996	1.5	101,470	11.9
Elephant Butte Reservoir (Total Storage)	1,985,900	495,924	25.0	30,083	1.5	234,884	11.8
*Falcon Reservoir (Texas & Mexico)	2,646,817	489,621	18.5	22,268	0.8	32,944	1.2
*Falcon Reservoir (Texas)	1,562,367	278,266	17.8	16,413	1.1	66,231	4.2
Fork Reservoir, Lake	605,061	600,040	99.2	40,365	6.7	121,276	20.0
Fort Phantom Hill, Lake	70,030	48,154	68.8	121	0.2	1,825	2.6
Georgetown, Lake	38,005	23,718	62.4	3,688	9.7	2,283	6.0
Gibbons Creek Reservoir	25,721	23,911	93.0	5,589	21.7	467	1.8
Graham, Lake	45,288	32,260	71.2	843	1.9	-2,471	-5.5
Granbury, Lake	132,949	130,918	98.5	-972	0.0	15,946	12.0

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS							
Name of lake or reservoir	Storage capacity	Storage at end-January 2024		Storage change from end-Dec 2023		Storage change from end-Jan 2023	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
Continued							
Granger Lake	51,822	51,822	100.0	3,723	7.2	572	1.1
Grapevine Lake	163,064	163,064	100.0	0	0.0	0	0.0
Greenbelt Lake	59,968	6,687	11.2	83	0.1	-341	0.0
*Halbert, Lake	6,033	4,860	80.6	723	12.0	-768	-12.7
Hords Creek Lake	8,109	1,808	22.3	-5	0.0	-667	-8.2
Houston County Lake	17,113	17,113	100.0	1,593	9.3	0	0.0
Houston, Lake	132,318	132,318	100.0	0	0.0	0	0.0
Hubbard Creek Reservoir	313,298	160,940	51.4	608	0.2	-46,863	-15.0
Hubert H Moss Lake	24,058	23,499	97.7	435	1.8	2,400	10.0
Inks, Lake	13,729	12,959	94.4	-46	0.0	-172	-1.3
J. B. Thomas, Lake	199,931	43,302	21.7	-801	0.0	-3,569	-1.8
Jacksonville, Lake	25,670	25,670	100.0	1,807	7.0	0	0.0
Jim Chapman Lake (Cooper)	258,723	258,723	100.0	28,743	11.1	39,207	15.2
Joe Pool Lake	149,629	149,629	100.0	0	0.0	0	0.0
Kemp, Lake	245,307	165,142	67.3	3,906	1.6	29,235	11.9
Kickapoo, Lake	86,345	47,072	54.5	3,219	3.7	-2,944	-3.4
Lavon Lake	409,757	398,892	97.3	28,222	6.9	9,942	2.4
Leon, Lake	27,762	13,439	48.4	-55	0.0	-3,285	-11.8
Lewisville Lake	563,228	539,462	95.8	17,818	3.2	22,489	4.0
Limestone, Lake	203,780	198,232	97.3	41,082	20.2	52,754	25.9
*Livingston, Lake	1,603,504	1,603,504	100.0	0	0.0	0	0.0
*Lost Creek Reservoir	11,950	10,477	87.7	-14	0.0	-54	0.0
Lyndon B Johnson, Lake	112,778	110,917	98.3	257	0.2	513	0.5
Mackenzie Reservoir	46,450	4,358	9.4	-25	0.0	1,500	3.2
Marble Falls, Lake	7,597	7,263	95.6	-12	0.0	96	1.3
Martin, Lake	75,726	73,613	97.2	19,651	26.0	-2,064	-2.7
Medina Lake	254,823	8,354	3.3	-188	0.0	-6,875	-2.7
Meredith, Lake	500,000	221,480	44.3	1,034	0.2	69,640	13.9
Millers Creek Reservoir	26,768	12,014	44.9	-54	0.0	-4,017	-15.0
*Mineral Wells, Lake	5,273	4,511	85.5	91	1.7	393	7.5
Monticello, Lake	34,740	30,522	87.9	2,529	7.3	1,270	3.7
Mountain Creek, Lake	22,850	22,850	100.0	0	0.0	0	0.0
Murvaul, Lake	38,285	38,285	100.0	5,341	14.0	0	0.0
Nacogdoches, Lake	39,522	39,522	100.0	7,664	19.4	1,528	3.9
Nasworthy	9,615	9,012	93.7	166	1.7	816	8.5
Navarro Mills Lake	49,827	49,827	100.0	2,144	4.3	13,146	26.4
New Terrell City Lake	8,583	3,192	37.2	718	8.4	-4,945	-57.6
Nocona, Lake (Farmers Crk)	21,444	14,447	67.4	23	0.1	-1,399	-6.5
North Fork Buffalo Creek Reservoir	15,400	4,382	28.5	-35	0.0	-2,467	-16.0
O' the Pines, Lake	241,363	241,363	100.0	0	0.0	0	0.0
O. C. Fisher Lake	115,742	2,347	2.0	-46	0.0	-1,188	-1.0
*O. H. Ivie Reservoir	554,340	153,766	27.7	-2,189	0.0	-63,239	-11.4
Oak Creek Reservoir	39,210	13,147	33.5	-107	0.0	-5,581	-14.2

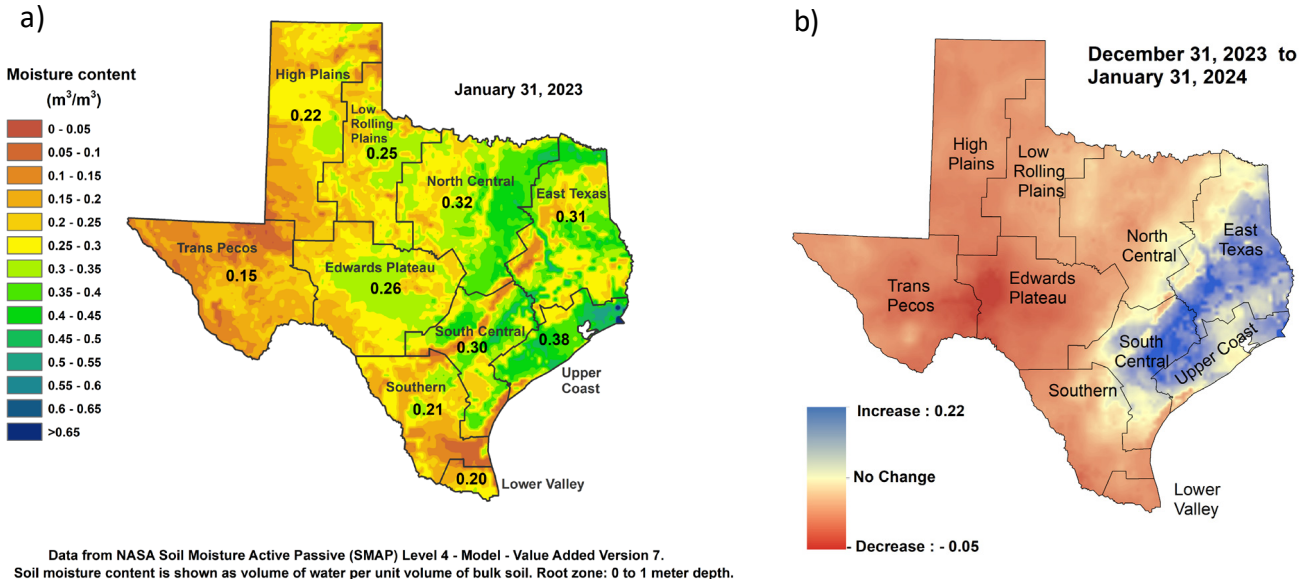
CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS							
Name of lake or reservoir	Storage capacity	Storage at end-January 2024		Storage change from end-Dec 2023		Storage change from end-Jan 2023	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
Continued							
Palestine, Lake	367,303	359,498	97.9	36,843	10.0	-7,805	-2.1
Palo Duro Reservoir	61,066	2,719	4.5	-239	0.0	2,508	4.1
Palo Pinto, Lake	26,766	9,652	36.1	38	0.1	-5,193	-19.4
Pat Cleburne, Lake	26,008	26,008	100.0	0	0.0	10,622	40.8
*Pat Mayse Lake	113,683	107,216	94.3	4,027	3.5	-6,467	-5.7
Possum Kingdom Lake	538,139	523,255	97.2	8,190	1.5	83,427	15.5
Proctor Lake	54,762	15,171	27.7	189	0.3	-7,579	-13.8
Ray Hubbard, Lake	439,559	438,515	99.8	14,988	3.4	-1,044	0.0
Ray Roberts, Lake	788,167	764,572	97.0	0	0.0	14,111	1.8
Red Bluff Reservoir	151,110	62,851	41.6	1,989	1.3	-35,019	-23.2
Richland-Chambers Reservoir	1,099,417	1,099,417	100.0	81,495	7.4	190,871	17.4
Sam Rayburn Reservoir	2,857,077	2,443,746	85.5	337,854	11.8	-120,011	-4.2
Somerville Lake	150,293	142,422	94.8	52,981	35.3	35,169	23.4
Squaw Creek, Lake	151,250	151,250	100.0	0	0.0	0	0.0
Stamford, Lake	51,570	35,494	68.8	-375	-0.7	3,793	7.4
Stillhouse Hollow Lake	229,796	138,483	60.3	2,362	1.0	-24,388	-10.6
Striker, Lake	16,878	16,877	100.0	2,369	14.0	-1	0.0
Sweetwater, Lake	12,267	5,771	47.0	-53	0.0	-1,512	-12.3
*Sulphur Springs, Lake	17,747	16,070	90.6	-1,677	-9.4	-310	-1.7
Tawakoni, Lake	871,685	871,685	100.0	8,114	0.9	34,287	3.9
Texana, Lake	158,975	158,460	99.7	47,416	29.8	-515	0.0
Texoma, Lake (Texas & Oklahoma)	2,487,601	2,454,089	98.7	69,635	2.8	29,790	1.2
Texoma, Lake (Texas)	1,243,801	1,227,044	98.7	34,818	2.8	14,895	1.2
Toledo Bend Reservoir (Texas & Louisiana)	4,472,900	4,314,598	96.5	535,319	12.0	163,046	3.6
Toledo Bend Reservoir (Texas)	2,236,450	2,155,249	96.4	267,659	12.0	81,523	3.6
Travis, Lake	1,098,044	417,920	38.1	4,950	0.5	-77,731	-7.1
Twin Buttes Reservoir	182,454	27,890	15.3	-397	0.0	-24,571	-13.5
Tyler, Lake	72,073	70,715	98.1	11,088	15.4	2,930	4.1
Waco, Lake	189,418	189,418	100.0	1,294	0.7	83,271	44.0
Waxahachie, Lake	11,060	9,949	90.0	1,660	15.0	-139	-1.3
Weatherford, Lake	17,812	10,628	59.7	-35	0.0	245	1.4
White River Lake	29,880	7,184	24.0	-865	-2.9	3,113	10.4
Whitney, Lake	564,808	564,808	100.0	0	0.0	137,297	24.3
Worth, Lake	24,419	14,346	58.7	-747	-3.1	-990	-4.1
Wright Patman Lake	122,593	122,593	100.0	0	0.0	0	0.0
STATEWIDE TOTAL							
STATEWIDE TOTAL	**32,387,302**	**23,143,895**	**71.5**	**1,234,579**	**3.8**	**168,648**	**0.5**

*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 January 2024, root zone soil moisture was low [yellow, orange, Figure 5(a)] in the Trans Pecos, much of the High Plains, Southern, portions of the Edwards Plateau, Lower Valley, western North Central, areas of South Central, and portions of East Texas climate divisions. Areas of more severe dryness [brown shading, Figure 5(a)] were seen in northeastern Trans Pecos, northeastern and southern High Plains, southern Southern, portions of northern South Central, and western East Texas climate divisions. Average soil moisture [green shading, Figure 5(a)] was seen in the eastern High Plains, central Low Rolling Plains, central Edwards Plateau, North Central, South Central, East Texas, and the Upper Coast climate divisions. Above average soil moisture [blue shading, Figure 5(a)] was seen in the eastern Upper Coast climate division.

Compared to conditions at the end of January 2024, soil moisture increased [blue shading in Figure 5(b)] in the South Central, Upper Coast, and East Texas climate divisions. Soil moisture decreased [red shading in Figure 5(b)] in the Trans Pecos, High Plains, Low Rolling Plains, Edwards Plateau, Southern, Lower Valley, and North Central climate divisions.



Data from NASA Soil Moisture Active Passive (SMAP) Level 4 - Model - Value Added Version 7.
Soil moisture content is shown as volume of water per unit volume of bulk soil. Root zone: 0 to 1 meter depth.

Figure 5: (a) Root zone soil moisture conditions in January 2024 and (b) the difference in root zone soil moisture between end-December 2023 and end-January 2024.

STREAMFLOW CONDITIONS

Normal streamflow (25–75th percentile, green shading, Figure 6) was recorded in parts of the Panhandle, Northern, Eastern, Central, and Southern regions of Texas this month. Above normal streamflow (76–90th percentile, light blue shading, Figure 6) was seen in the Canadian (Middle Canadian-Spring watershed), and Brazos (Running Water Draw, Middle Brazos- Millers, Bosque, and Lower Brazos watersheds), Lower Colorado, Neches, Brazos-Colorado (San Bernard watershed), San Antonio, San Antonio-Nueces (Mission watershed), Nueces-Rio Grande (San Fernando watershed), San Jacinto (Spring watershed), Sulphur (White Oak Bayou watershed), and Trinity (Lower West Fork Trinity and Upper Trinity watersheds) river basins. Much above normal streamflow (>90th percentile, dark blue shading, Figure 6) was seen in the Canadian (Lower Beaver watershed), Lavaca, Colorado-Lavaca, Lavaca-Guadalupe, San Antonio-Nueces (Aransas watershed), San Jacinto, San Jacinto-Brazos, Trinity-San Jacinto, and the Neches-Trinity river basins.

Areas of the Pecos, Nueces (Upper Frio, Hondo, Middle Nueces watersheds), Upper Red (Lower Prairie Dog Town Fork Red watershed), Upper Brazos (Double Mountain Fork Brazos), Upper and Middle Colorado, and Upper Guadalupe river basins had much below normal streamflow.

The San Jacinto (West Fork San Jacinto watershed) river basin had a record high [black shading, Figure 6], whereas the Pecos river basin (Toyah watershed) had a record low [bright red shading, Figure 6] in January.

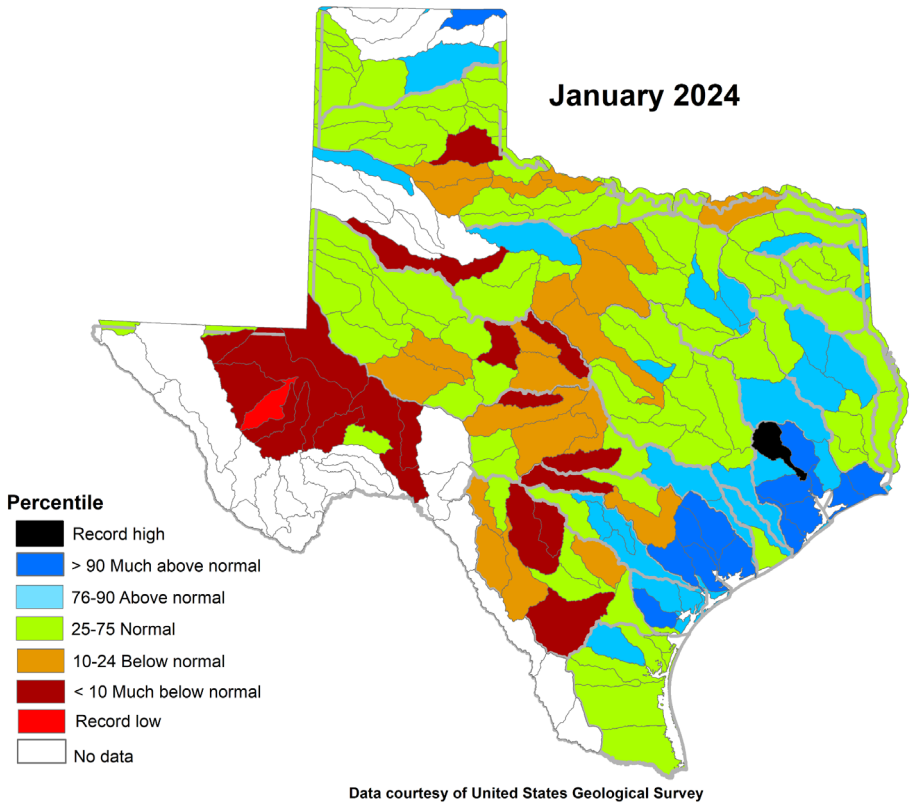
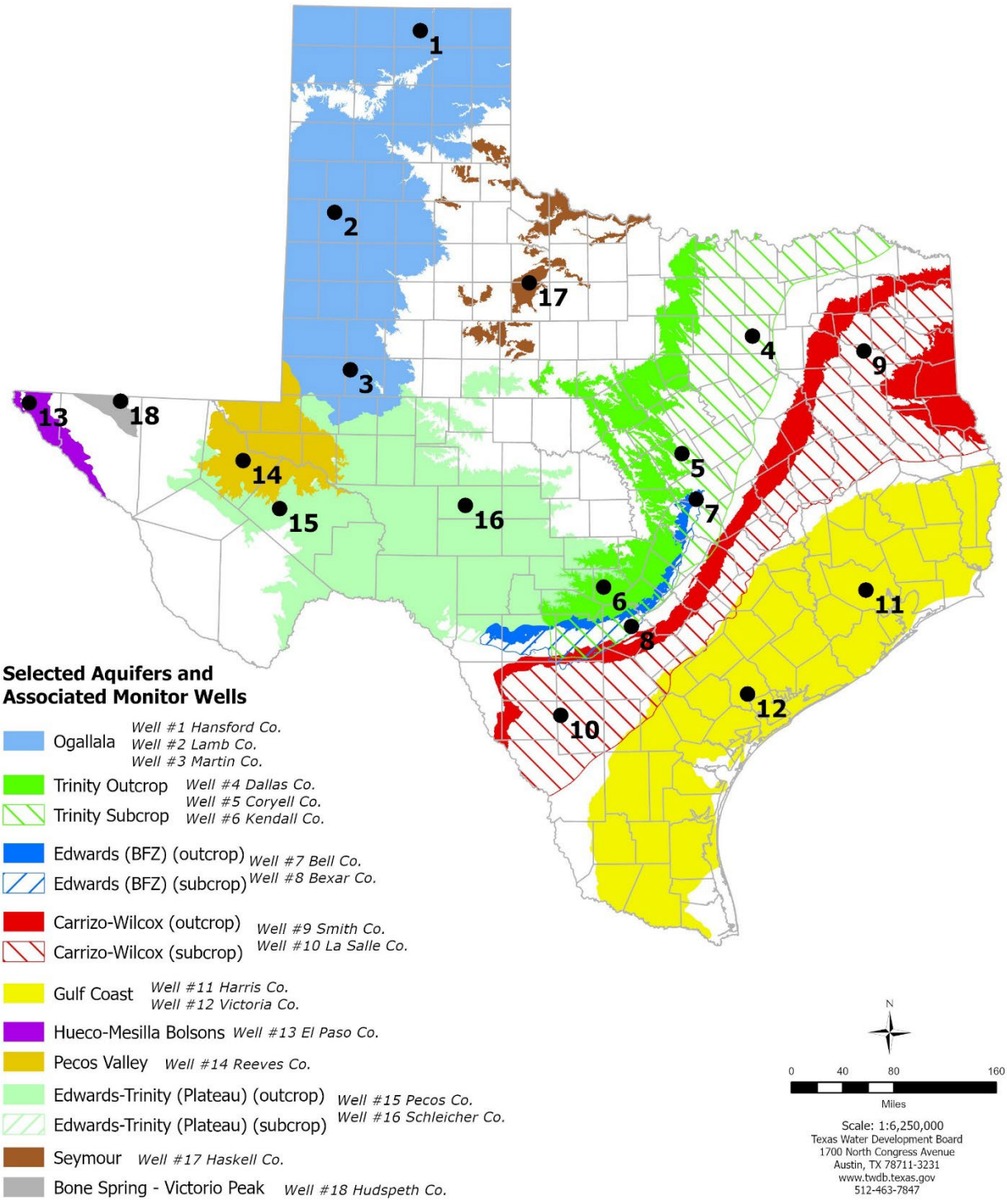


Figure 6: Runoff percentiles by the U.S. Geological Survey's Hydrologic Unit Code



JANUARY 2024 GROUNDWATER LEVELS IN MONITORING WELLS

Water level measurements were available for 16 key monitoring wells in the state. The recorders in two wells (#3 and #9 on map) were offline or the well experienced issues during the reporting period. Water levels rose in thirteen monitoring wells since the beginning of January, with an increase of 0.01 feet in the Hansford County Ogallala Aquifer well (#1 on map) to 7.40 feet in the Bexar County Edwards (BFZ) Aquifer well (#8 on map). Water levels declined in three monitoring wells, ranging from -0.06 feet in the Lamb County Ogallala Aquifer well (#2 on map) to -2.61 feet in the Reeves County Pecos Valley Aquifer well (#14 on map). The J-17 well (#8 on map) in San Antonio recorded a water level of 84.20 feet below land surface or 646.80 feet above mean sea level. Water levels are 3.20 feet below the Stage 2 critical management levels for the San Antonio portion of the Edwards (Balcones Fault Zone) Aquifer. The Edwards Aquifer Authority declared Stage 2 water restrictions effective January 25, 2024, as a result of well J-17 water levels and area spring flow levels.

*** 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	January (depth to water, feet)	December (depth to water, feet)	Month Change	Year Change	Historical Change*	First Measured (year)
(1) Hansford 0354301	165.01	165.02	0.01	-0.95	-94.89	1951
(2) Lamb 1053602	154.70	154.64	-0.06	-1.10	-126.53	1951
(3) Martin 2739903	NA	146.21	*NA*	*NA*	-41.32	1964
(4) Dallas 3319101	503.71	503.84	0.13	-7.03	-281.71	1954
(5) Coryell 4035404	546.80	547.01	0.21	-2.96	-254.80	1955**
(6) Kendall 6802609	158.66	163.03	4.37	0.51	-98.66	1975
(7) Bell 5804816	124.17	126.55	2.38	1.41	-0.66	2008
(8) Bexar 6837203	84.20	91.60	7.40	9.80	-37.56	1932
(9) Smith 3430907	NA	NA	*NA*	*NA*	-140.39	1977**
(10) La Salle 7738103	527.16	534.32	7.16	10.93	-274.09	2003
(11) Harris 6514409	198.54	199.28	0.74	-5.49	-63.04*	1947**
(12) Victoria 8017502	33.35	33.49	0.14	0.95	0.65	1958**
(13) El Paso 4913301	298.84	298.58	-0.26	1.04	-66.94	1964**
(14) Reeves 4644501	166.87	164.26	-2.61	-15.32	-74.78	1952
(15) Pecos 5216802	198.80	200.80	2.00	-10.98	48.08	1976
(16) Schleicher 5512134	314.84	315.39	0.55	-4.16	-12.94	2003
(17) Haskell 2135748	46.79	46.87	0.08	-0.44	-3.79	2002
(18) Hudspeth 4807516	146.69	146.90	0.21	-3.01	-42.77	1966

***Change since the original measurement taken on the date indicated in the last column. The historical changes shown for recorder wells #3 and #9 are based off the most recent water level records from December 2023 and April 2023, respectively.**

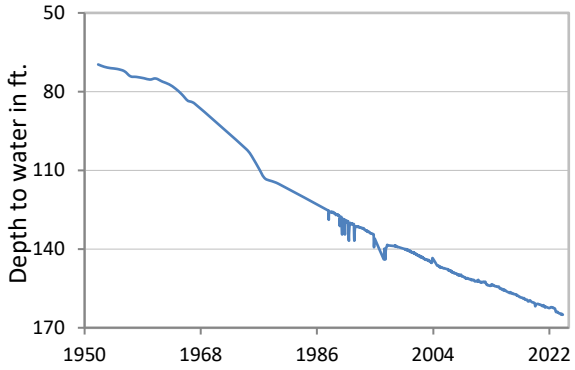
**** Measurement not shown on the hydrograph.**

NA (not available)

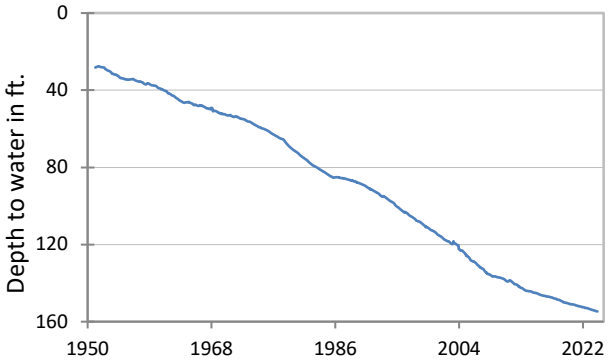
All data are provisional and subject to revision.

JANUARY 2024 MONITORING WELL HYDROGRAPHS

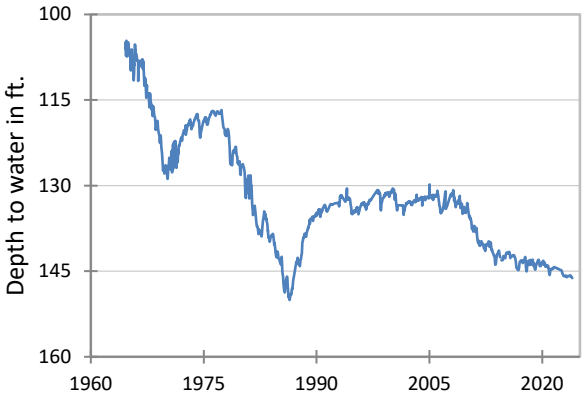
(1) State Well #03-54-301
Near Spearman, Hansford County
Ogallala Aquifer



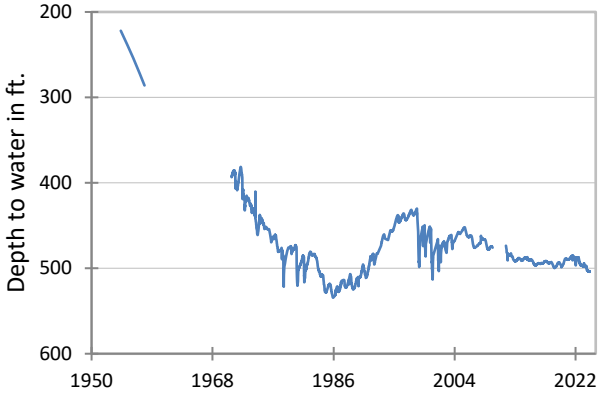
(2) State Well #10-53-602
Near Earth, Lamb County
Ogallala Aquifer



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

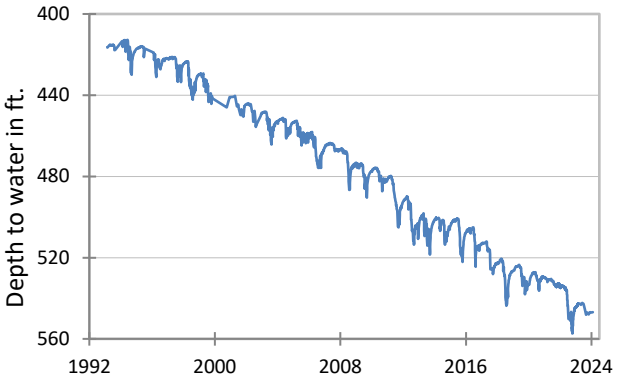


(4) State Well #33-19-101
Southeast Dallas, Dallas County
Twin Mountains Formation-Trinity Aquifer

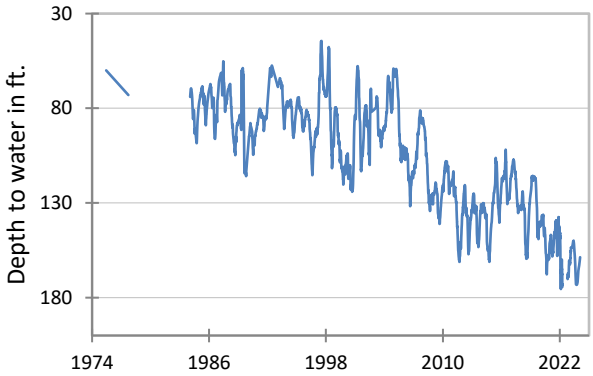


*** Recorder well #3 has been offline since December 2023 and did not record data.**

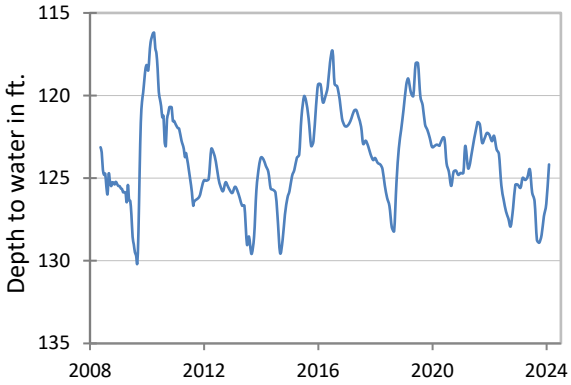
(5) State Well #40-35-404
Gatesville, Coryell County
Hosston Formation-Trinity Aquifer



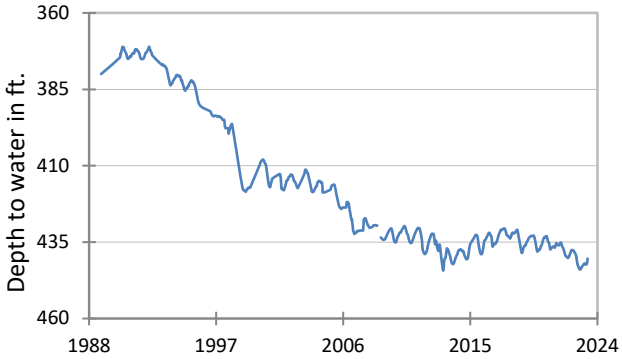
(6) State Well #68-02-609
Waring, Kendall County
Travis Peak Formation-Trinity Aquifer



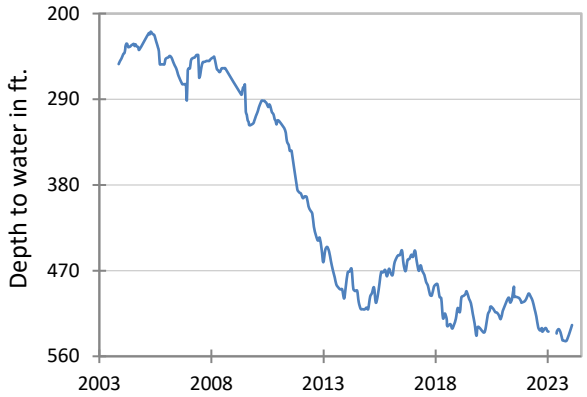
(7) State Well #58-04-816
Near Salado, Bell County
Edwards (Balcones Fault Zone) Aquifer



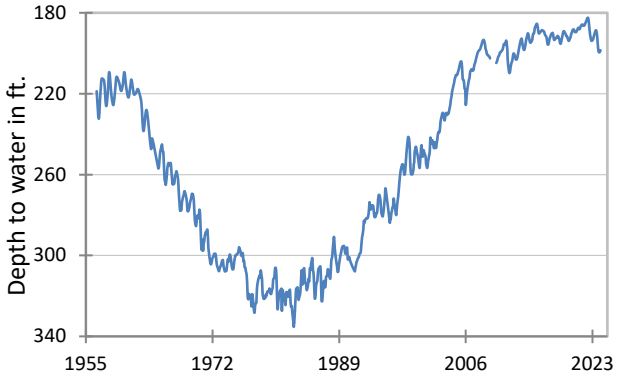
***(9) State Well #34-30-907**
Red Springs, Smith County
Carrizo-Wilcox Aquifer



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

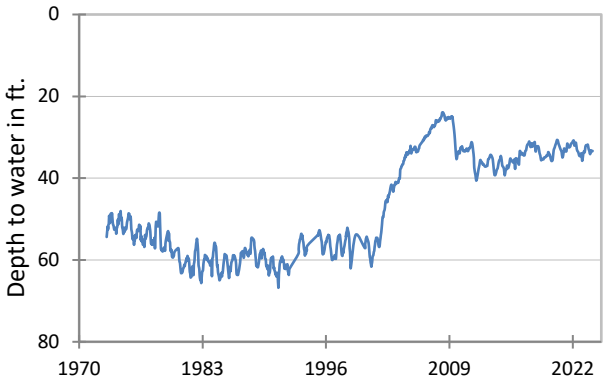


(11) State Well #65-14-409
North Houston, Harris County
Evangeline Formation-Gulf Coast Aquifer

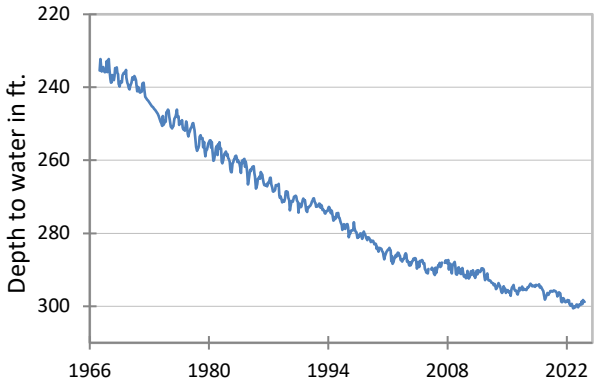


*** Recorder well #9 has been offline or the well has experienced issues since May 2023.**

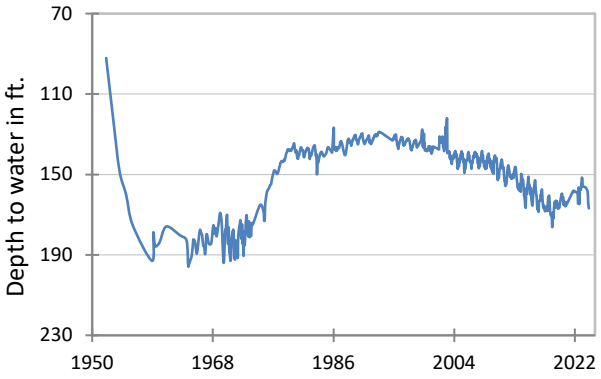
(12) State Well #80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



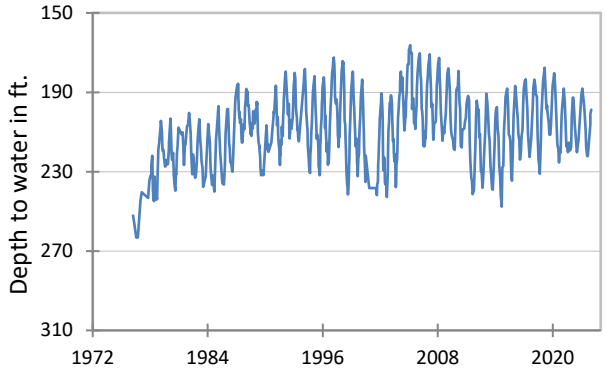
(13) State Well #49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolsons Aquifer



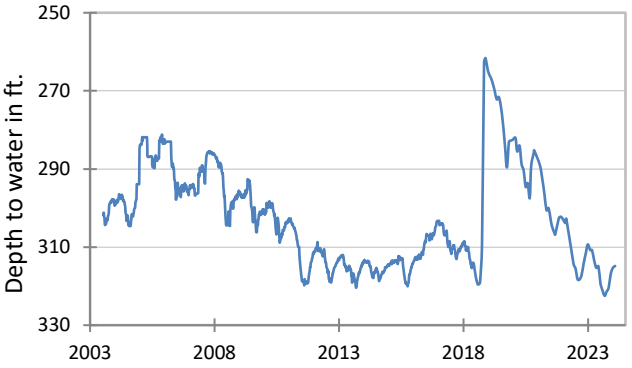
(14) State Well #46-44-501
Near Pecos, Reeves County
Pecos Valley Aquifer



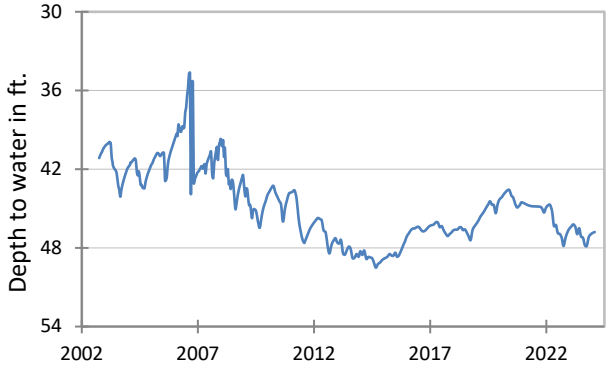
***(15) State Well #52-16-802**
Fort Stockton, Pecos County
Edwards-Trinity (Plateau) Aquifer



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

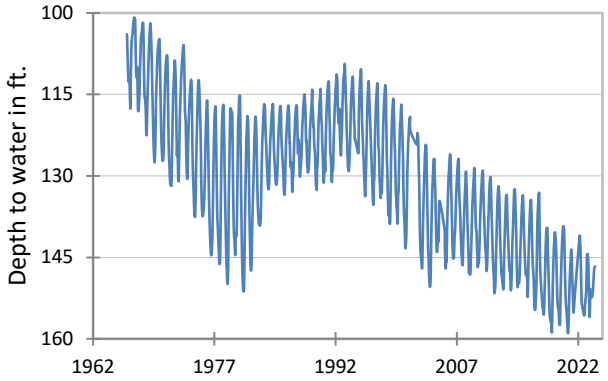


(17) State Well #21-35-748
Near O'Brien, Haskell County
Seymour Aquifer

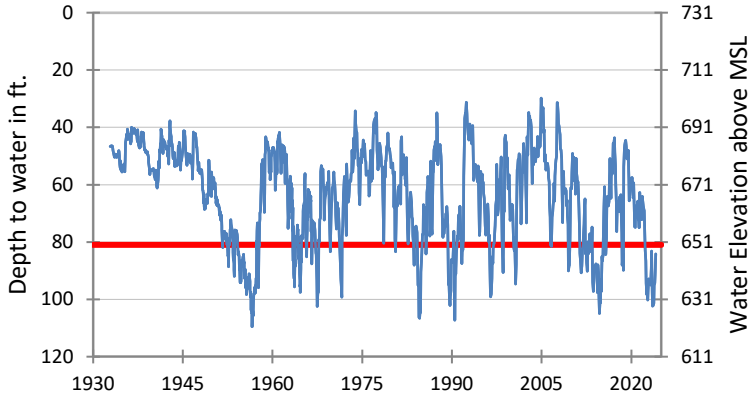


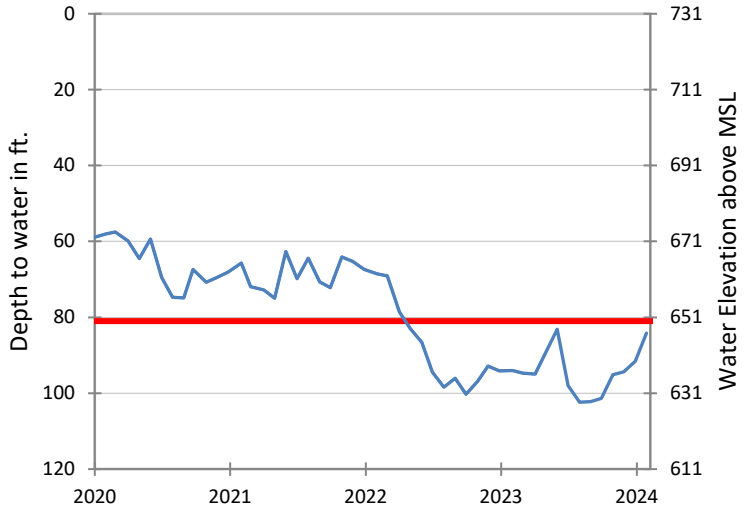
*** Recorder well #15 is currently offline. Manual measurements are reported for December 2023 and Janaury 2024.**

(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

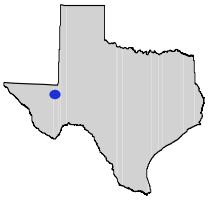




The late January water level measurement in this Edwards (Balcones Fault Zone) Aquifer well, located at an elevation of 731 feet above mean sea level, was 84.20 feet below land surface, or 646.8 feet above mean sea level. This was 7.40 feet above last month's measurement, 9.80 feet above last year's measurement, and 37.56 feet below the initial measurement recorded in 1932.

Water levels below the red line indicate periods in which Edwards Aquifer Authority Stage 2 drought restrictions are in effect. The Edwards Aquifer Authority declared a decrease from Stage 3 to Stage 2 Critical Period Management permit reductions as of January 25, 2024, as a result of well J-17 water levels and area spring flow levels.

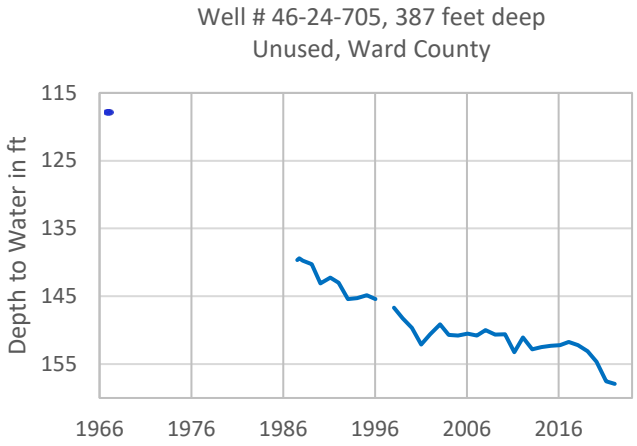
HYDROGRAPH OF THE MONTH



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

Pecos Valley Aquifer

The Pecos Valley Aquifer is a major aquifer located in West Texas. Water bearing sediments include alluvial and windblown deposits in the Pecos River Valley. These sediments fill several structural basins, the largest of which are the Pecos Trough in the west and Monument Draw Trough in the east. Thickness of the alluvial fill reaches 1,500 feet, and freshwater saturated thickness averages 250 feet. The water quality is highly variable with the water being typically hard, and generally better in the Monument Draw Trough than in the Pecos Trough. Total dissolved solids in groundwater from the Monument Draw Trough are usually less than 1,000 milligrams per liter. The aquifer is characterized by high levels of chloride and sulfate in excess of secondary drinking water standards, resulting from previous oil field activities. In addition, naturally occurring arsenic and radionuclides occur in excess of primary drinking water standards. More than 80 percent of groundwater pumped from the aquifer is used for irrigation, and the rest is withdrawn for municipal supplies, industrial use, and power generation.[1]



The initial water level measurement of 118.31 feet below land surface was recorded by the USGS in 1967. TWDB staff have returned almost every year since 1987 to collect water level measurements. For the entire period of record, the hydrograph shows an overall declining trend. In 2011, the well was decommissioned as a public supply and left unused. From about 2011 to 2017, water levels remained relatively constant and even trend slightly upwards. However, water levels continue to decline since 2017. This is likely due to other pumping in the area.

Photo of well #46-24-705 general setting and measuring point

1. Peter G. George, Ph.D., P.G., Robert E. Mace, Ph.D., P.G., Rima Petrossian, P.G. *Aquifers of Texas: Report 380.*; 2011. https://www.twdb.texas.gov/groundwater/aquifer/minors/pecosvalley.asp