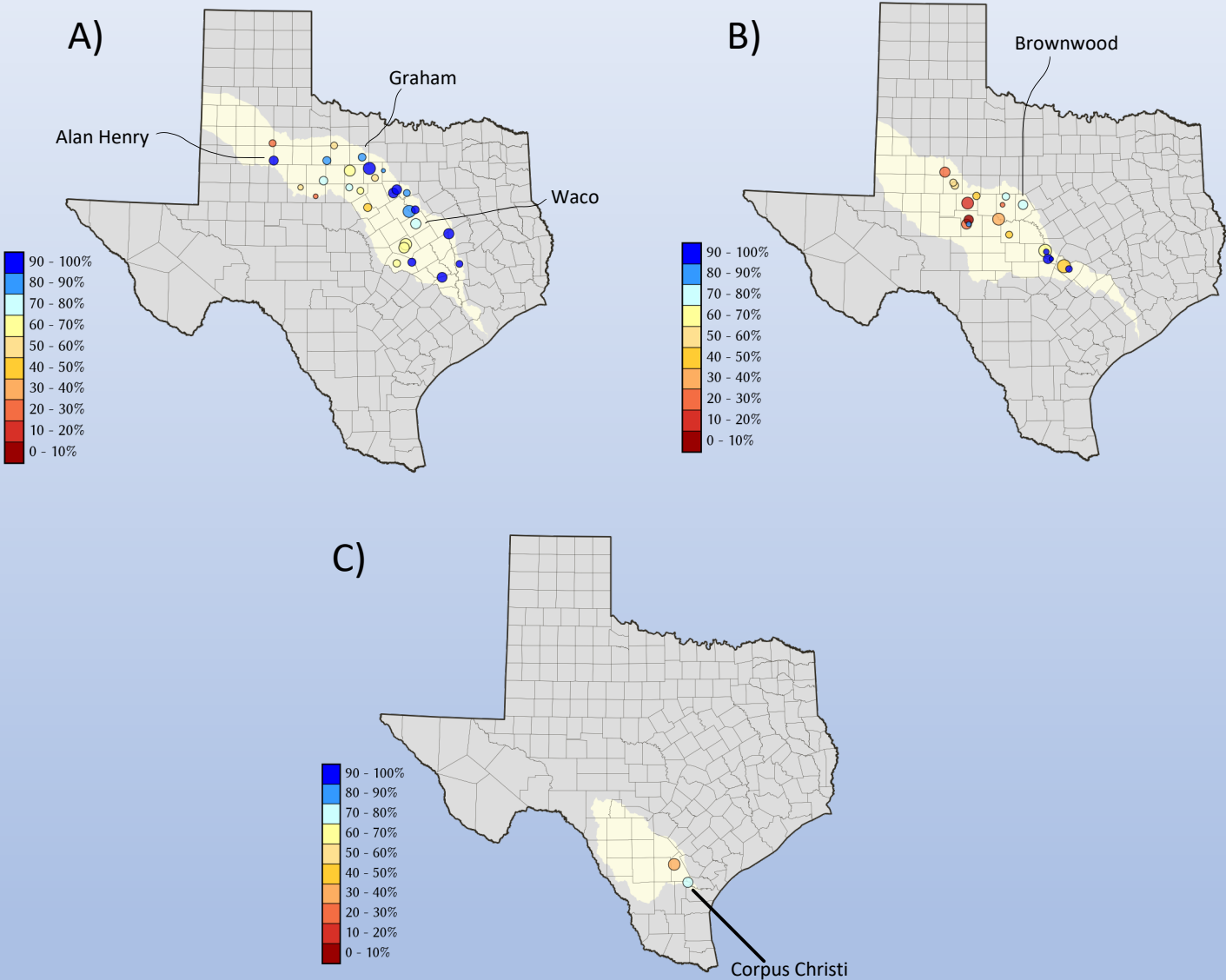


Texas Water Conditions Report

May 2023



Water News:

Several reservoirs had conservation storage increases of 10% or more from April to May. These included Lakes Alan Henry, Graham, and Waco in the Brazos river basin (Figure A)), Lake Brownwood in the Colorado river basin (Figure B)), and Lake Corpus Christi in the Nueces river basin (Figure C)).

RAINFALL

In May, much of the state received significant amounts of rainfall [light blue and dark blue shading, Figure 1(a)], particularly in West Texas, with accumulations reaching 15.7 inches. Little to no rain [yellow, orange, and red shading, Figure 1(a)] fell in the northern High Plains, areas of the Low Rolling Plains, small areas of southeastern Trans Pecos, portions of southern and western North Central, central and southern East Texas, areas of the Edwards Plateau, southern and northern Southern, northeastern and central South Central, and much of the Upper Coast climate divisions.

Compared to historical data from 1991–2020, much of the state received near average or above-average rainfall. Portions of the state that received below average rainfall or no rainfall [yellow and orange shading, Figure 1(b)] were northern and eastern East Texas, portions of the northern, western, eastern, and southern North Central, northwestern and southern regions of the South Central, central portions of the Southern, and the western portions of the Trans Pecos climate divisions.

200–300 percent of normal rainfall [light blue shading, Figure 1(b)] was seen in the High Plains, Low Rolling Plains, western North Central, Edwards Plateau, southern and eastern Trans Pecos, northern and southern Southern, central South Central, portions of central and western Upper Coast, portions of western and southern Lower Valley, and areas of central and southern East Texas climate divisions. The High Plains, Trans Pecos, western Edwards Plateau, northern and southern Southern, and central South Central climate divisions received 300–600 percent of normal rainfall [(dark blue, and light pink shading, Figure 1 (b)]. Areas of central the High Plains and the central and southern Trans Pecos received 600-800 percent of normal rainfall [dark pink shading, Figure 1 (b)].

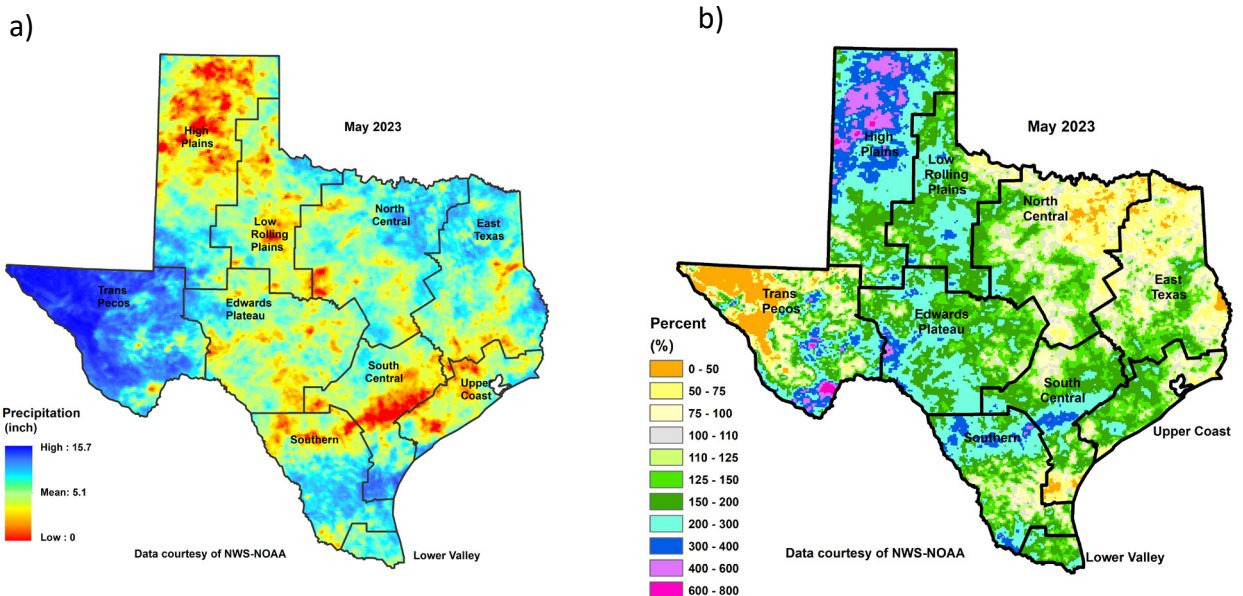


Figure 1: (a) Monthly accumulated rainfall, and (b) Percent of normal rainfall

DROUGHT

At the end of May, 60.05% of the state was in the D0 (abnormally dry) through D4 (exceptional drought) categories (**Figure 2**). That is a decrease of 13.17 % from the end of April.

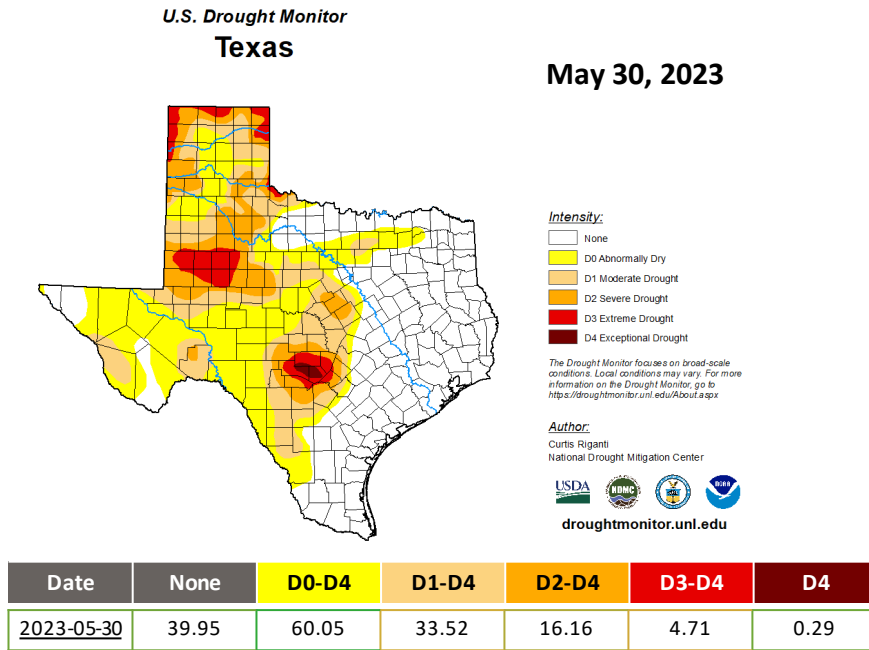


Figure 2. The percentage of drought in Texas according to the U.S. Drought Monitor map as of May 30, 2023.

RESERVOIR STORAGE

Out of 119 reservoirs in the state, 29 reservoirs held 100 percent conservation storage capacity (Figure 3). Additionally, 31 reservoirs were at or above 90 percent full. Thirteen reservoirs remained below 30 percent full: Abilene (26.6 percent full), Hords Creek (29.7 percent full), New Terrell City (25.4 percent full), E.V. Spence (17.6 percent full), O. C. Fisher (2.8 percent full), J.B. Thomas (21.5 percent full), Falcon (22.3 percent full), Greenbelt (11.8 percent full), Mackenzie (9.5 percent full), Medina Lake (5.2 percent full), Palo Duro Reservoir (5.4 percent full), Twin Buttes (27.6 percent full), and the White River Lake (18.7 percent full). Elephant Butte Reservoir (New Mexico) was 26.3 percent full (Figure 3).

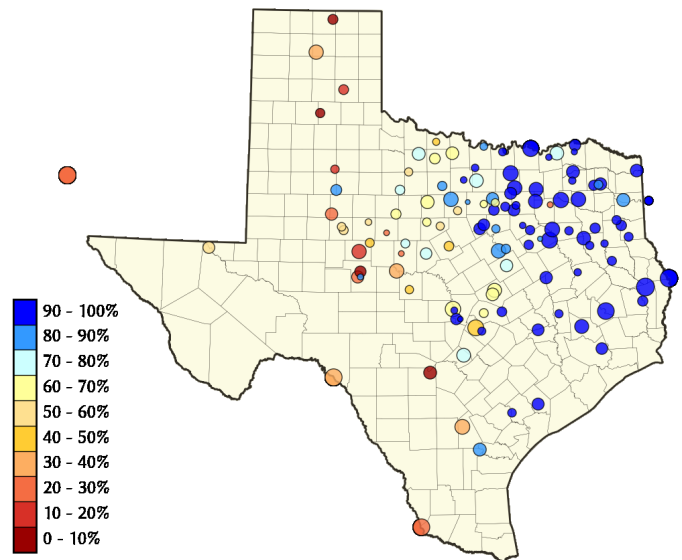


Figure 3. Reservoir conservation storage at end-May expressed as percent full (%)

Reservoir conservation storage by climate division was at or above normal [storage ≥ 70 percent full, Figure 4(a)] for East Texas (98.0 percent full), North Central (90.1 percent full), and the Upper Coast (99.6 percent full) climate divisions. Conservation storage was moderately low (Figure 4(a)) for the Low Rolling Plains (55.4 percent full), Edwards Plateau (40.7 percent full) and South Central (51.7 percent full) climate divisions. The High Plains (28.1 percent full), Southern (31.3 percent full), and the Trans Pecos (30.8 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 Nueces and Lower Colorado river basins had moderately low conservation storage (40–60 percent full, orange shading, Figure 4(b)). The Upper Red 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, San Jacinto, Lavaca, and Guadalupe river basins.

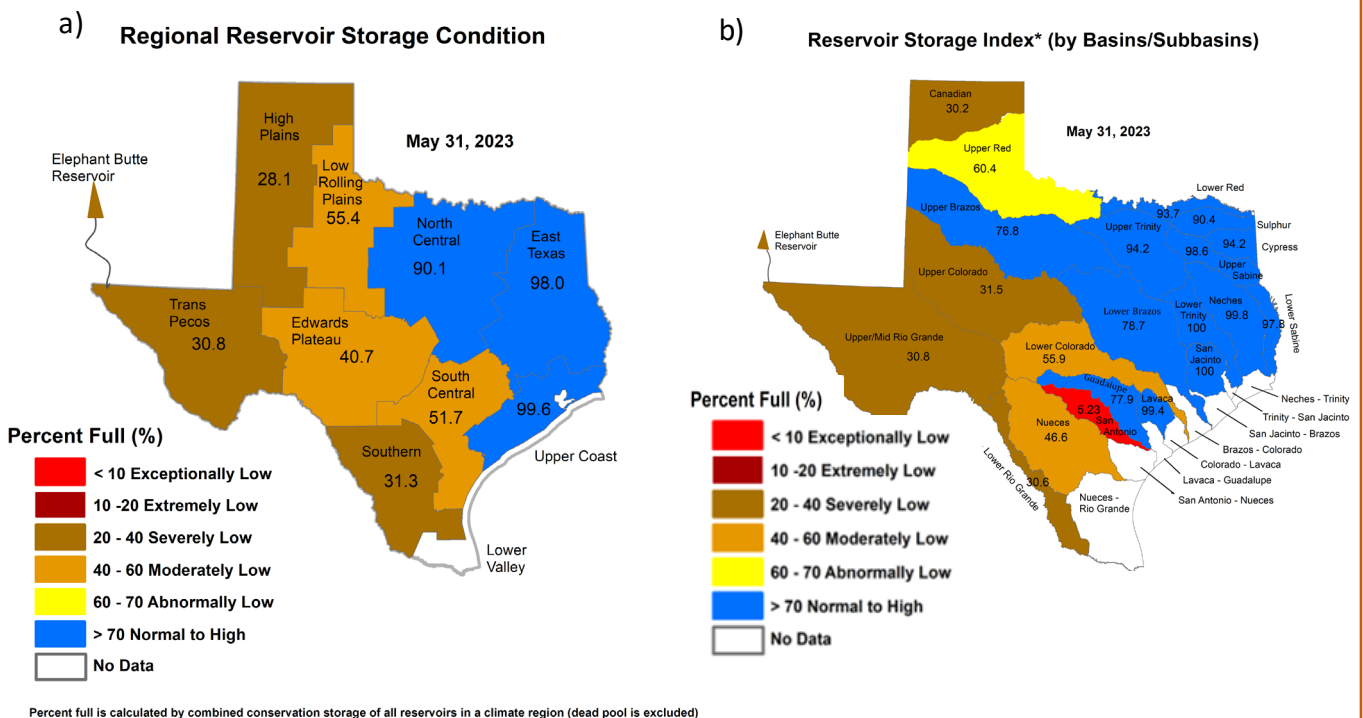


Figure 4: (a) Reservoir Storage Index* by climate division, and (b) Reservoir Storage Index* by basin/sub-basin.

*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-May 2023		Storage change from end-Apr 2023		Storage change from end-May 2022	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
Abilene, Lake	7,900	2,105	26.6	-25	0.0	-2,524	-31.9
Alan Henry Reservoir	96,207	77,707	80.8	9,602	10.0	-864	0.0
*Amistad Reservoir (Texas & Mexico)	3,275,532	1,069,112	32.6	65,550	2.0	213,668	6.5
*Amistad Reservoir (Texas)	1,840,849	692,369	37.6	67,808	3.7	-5,408	0.0
Amon G Carter, Lake	19,266	19,266	100.0	464	2.4	0	0.0
Aquilla Lake	43,243	37,666	87.1	2,444	5.7	1,769	4.1
Arlington, Lake	40,157	37,640	93.7	-1,253	-3.1	1,392	3.5
Arrowhead, Lake	230,359	157,214	68.2	5,403	2.3	-32,338	-14.0
Athens, Lake	29,503	29,503	100.0	0	0.0	0	0.0
*Austin, Lake	23,972	22,926	95.6	-93	0.0	-155	0.0
B A Steinhagen Lake	69,186	65,860	95.2	1,578	2.3	496	0.7
Bardwell Lake	43,856	43,856	100.0	0	0.0	754	1.7
Belton Lake	432,631	293,847	67.9	11,384	2.6	-86,257	-19.9
Benbrook Lake	85,648	85,648	100.0	0	0.0	12,257	14.3
Bob Sandlin, Lake	192,417	190,909	99.2	-1,152	0.0	2,472	1.3
Bois d'Arc Lake	367,609	289,284	78.7	4,252	1.2	141,896	38.6
Bonham, Lake	11,027	10,953	99.3	42	0.4	-74	0.0
Brady Creek Reservoir	28,808	12,241	42.5	306	1.1	-2,440	-8.5
Bridgeport, Lake	372,183	281,962	75.8	5,952	1.6	-56,167	-15.1
*Brownwood, Lake	130,868	98,247	75.1	22,362	17.1	-7,912	-6.0
Buchanan, Lake	822,207	516,403	62.8	20,925	2.5	-183,593	-22.3
Caddo, Lake	29,898	29,898	100.0	0	0.0	0	0.0
Canyon Lake	378,781	288,261	76.1	-480	0.0	-72,279	-19.1
Cedar Creek Reservoir in Trinity	644,686	641,091	99.4	-3,595	0.0	48,899	7.6
Champion Creek Reservoir	41,580	23,664	56.9	-125	0.0	-3,272	-7.9
Cherokee, Lake	40,094	40,094	100.0	0	0.0	0	0.0
Choke Canyon Reservoir	662,820	216,326	32.6	10,830	1.6	-38,467	-5.8
*Cisco, Lake	29,003	20,108	69.3	87	0.3	-3,564	-12.3
Coleman, Lake	38,075	28,440	74.7	488	1.3	-4,430	-11.6
Colorado City, Lake	31,040	31,040	100.0	2,204	7.1	5,108	16.5
*Coletto Creek Reservoir	30,758	17,433	56.7	1,558	5.1	-2,735	-8.9
Conroe, Lake	417,577	417,577	100.0	0	0.0	1,788	0.4
Corpus Christi, Lake	256,062	212,390	82.9	26,107	10.2	59,148	23.1
Crook, Lake	9,195	9,018	98.1	-177	-1.9	-41	0.0
Cypress Springs, Lake	66,756	66,756	100.0	0	0.0	4,830	7.2
E. V. Spence Reservoir	517,272	91,204	17.6	2,835	0.5	-25,004	-4.8
Eagle Mountain Lake	179,880	154,642	86.0	3,639	2.0	-7,518	-4.2
Elephant Butte Reservoir (Texas)	852,491	224,151	26.3	42,806	5.0	114,330	13.4
Elephant Butte Reservoir (Total Storage)	1,960,900	518,869	26.5	99,089	5.1	264,653	13.5
*Falcon Reservoir (Texas & Mexico)	2,646,817	639,913	24.2	35,414	1.3	161,129	6.1
*Falcon Reservoir (Texas)	1,551,007	346,319	22.3	-11,946	0.0	26,609	1.7
Fork Reservoir, Lake	605,061	583,938	96.5	4,351	0.7	116,848	19.3
Fort Phantom Hill, Lake	70,030	48,335	69.0	3,940	5.6	-8,855	-12.6
Georgetown, Lake	38,005	25,250	66.4	1,087	2.9	-2,335	-6.1
Gibbons Creek Reservoir	25,721	23,420	91.1	-1,414	-5.5	630	2.4
Graham, Lake	45,288	39,824	87.9	5,855	12.9	-2,281	-5.0
Granbury, Lake	132,949	121,636	91.5	4,003	3.0	-8,073	-6.1

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of lake or reservoir	Storage capacity	Storage at end-May 2023		Storage change from end-Apr 2023		Storage change from end-May 2022	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
<i>Continued</i>							
Granger Lake	51,822	51,822	100.0	0	0.0	0	0.0
Grapevine Lake	163,064	163,064	100.0	0	0.0	0	0.0
Greenbelt Lake	59,968	7,098	11.8	299	0.5	-2,094	-3.5
*Halbert, Lake	6,033	5,263	87.2	-44	0.0	-11	0.0
Hords Creek Lake	8,109	2,407	29.7	41	0.5	-624	-7.7
Houston County Lake	17,113	17,113	100.0	0	0.0	13	0.1
Houston, Lake	132,318	132,318	100.0	0	0.0	0	0.0
Hubbard Creek Reservoir	313,298	197,830	63.1	-2,087	0.0	-55,959	-17.9
Hubert H Moss Lake	24,058	23,842	99.1	-32	0.0	-183	0.0
Inks, Lake	13,729	13,092	95.4	126	0.9	47	0.3
J. B. Thomas, Lake	199,931	42,918	21.5	445	0.2	-22,954	-11.5
Jacksonville, Lake	25,670	25,670	100.0	0	0.0	0	0.0
Jim Chapman Lake (Cooper)	260,332	259,442	99.7	-890	0.0	32,350	12.4
Joe Pool Lake	149,629	149,629	100.0	0	0.0	13,883	9.3
Kemp, Lake	245,307	182,415	74.4	22,487	9.2	-596	0.0
Kickapoo, Lake	86,345	55,840	64.7	3,115	3.6	-5,936	-6.9
Lavon Lake	409,757	393,605	96.1	-12,858	-3.1	-16,152	-3.9
Leon, Lake	27,762	15,854	57.1	-157	0.0	-5,453	-19.6
Lewisville Lake	563,228	555,959	98.7	-5,919	-1.1	-7,269	-1.3
Limestone, Lake	203,780	202,664	99.5	-1,116	0.0	4,554	2.2
*Livingston, Lake	1,603,504	1,603,504	100.0	0	0.0	0	0.0
*Lost Creek Reservoir	11,950	11,786	98.6	4	0.0	218	1.8
Lyndon B Johnson, Lake	112,778	111,493	98.9	0	0.0	448	0.4
Mackenzie Reservoir	46,450	4,427	9.5	1,724	3.7	1,166	2.5
Marble Falls, Lake	7,597	7,221	95.1	36	0.5	-36	0.0
Martin, Lake	75,726	75,578	99.8	-148	0.0	986	1.3
Medina Lake	254,823	13,336	5.2	200	0.1	-28,686	-11.3
Meredith, Lake	500,000	166,201	33.2	18,247	3.6	3,417	0.7
Millers Creek Reservoir	26,768	15,664	58.5	-225	0.0	-4,785	-17.9
*Mineral Wells, Lake	5,273	4,266	80.9	186	3.5	-1,007	-19.1
Monticello, Lake	34,740	29,306	84.4	-251	0.0	444	1.3
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	377	1.0
Nacogdoches, Lake	39,522	38,870	98.4	-652	-1.6	834	2.1
Nasworthy	9,615	8,159	84.9	86	0.9	-49	0.0
Navarro Mills Lake	49,827	49,827	100.0	0	0.0	3,610	7.2
New Terrell City Lake	8,583	2,177	25.4	-1,361	-15.9	-5,725	-66.7
Nocona, Lake (Farmers Crk)	21,444	17,906	83.5	456	2.1	-1,069	-5.0
North Fork Buffalo Creek Reservoir	15,400	6,652	43.2	36	0.2	-3,550	-23.1
O' the Pines, Lake	268,566	241,716	90.0	353	0.1	-14,878	-5.5
O. C. Fisher Lake	115,742	3,239	2.8	162	0.1	-2,462	-2.1
*O. H. Ivie Reservoir	554,340	206,260	37.2	4,271	0.8	-64,304	-11.6
Oak Creek Reservoir	39,210	17,239	44.0	-181	0.0	-6,677	-17.0

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of lake or reservoir	Storage capacity	Storage at end-May 2023		Storage change from end-Apr 2023		Storage change from end-May 2022	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
<i>Continued</i>							
Palentine, Lake	367,303	367,303	100.0	0	0.0	2,537	0.7
Palo Duro Reservoir	61,066	3,268	5.4	3,063	5.0	2,993	4.9
Palo Pinto, Lake	26,766	14,442	54.0	1,183	4.4	-8,854	-33.1
Pat Cleburne, Lake	26,008	21,757	83.7	1,176	4.5	3,632	14.0
*Pat Mayse Lake	113,683	113,683	100.0	0	0.0	0	0.0
Possum Kingdom Lake	538,139	471,200	87.6	26,364	4.9	-32,877	-6.1
Proctor Lake	54,762	24,694	45.1	3,773	6.9	-16,037	-29.3
Ray Hubbard, Lake	439,559	436,432	99.3	-3,127	0.0	-2,083	0.0
Ray Roberts, Lake	788,167	788,167	100.0	0	0.0	0	0.0
Red Bluff Reservoir	151,110	85,154	56.4	-2,137	-1.4	-19,353	-12.8
Richland-Chambers Reservoir	1,087,839	1,081,422	99.4	55,221	5.1	92,435	8.5
Sam Rayburn Reservoir	2,857,077	2,857,077	100.0	0	0.0	117,310	4.1
Somerville Lake	150,293	150,293	100.0	0	0.0	2,579	1.7
Squaw Creek, Lake	151,250	151,250	100.0	0	0.0	474	0.3
Stamford, Lake	51,570	39,292	76.2	4,804	9.3	-42	0.0
Stillhouse Hollow Lake	229,796	159,106	69.2	48	0.0	-42,820	-18.6
Striker, Lake	16,934	16,934	100.0	40	0.2	0	0.0
Sweetwater, Lake	12,267	6,966	56.8	-8	0.0	-2,051	-16.7
*Sulphur Springs, Lake	17,747	17,747	100.0	0	0.0	4,313	24.3
Tawakoni, Lake	871,685	871,315	100.0	-370	0.0	50,028	5.7
Texana, Lake	158,975	158,051	99.4	-924	0.0	21,441	13.5
Texoma, Lake (Texas & Oklahoma)	2,487,601	2,318,741	93.2	-15,823	0.0	-179,624	-7.2
Texoma, Lake (Texas)	1,243,801	1,159,370	93.2	-7,912	0.0	-84,431	-6.8
Toledo Bend Reservoir (Texas & Louisiana)	4,472,900	4,382,383	98.0	-59,492	-1.3	48,645	1.1
Toledo Bend Reservoir (Texas)	2,236,450	2,189,142	97.9	-29,746	-1.3	24,323	1.1
Travis, Lake	1,098,044	495,967	45.2	13,446	1.2	-167,683	-15.3
Twin Buttes Reservoir	182,454	50,419	27.6	1,673	0.9	-32,420	-17.8
Tyler, Lake	72,073	72,073	100.0	0	0.0	330	0.5
Waco, Lake	189,418	135,427	71.5	23,262	12.3	-11,886	-6.3
Waxahachie, Lake	11,060	10,682	96.6	-378	-3.4	1,175	10.6
Weatherford, Lake	17,812	11,366	63.8	1,253	7.0	-1,872	-10.5
White River Lake	29,880	5,583	18.7	2,118	7.1	555	1.9
Whitney, Lake	564,808	466,468	82.6	14,345	2.5	-38,122	-6.7
Worth, Lake	24,419	16,477	67.5	31	0.1	-1,645	-6.7
Wright Patman Lake	310,382	298,272	96.1	-12,109	-3.9	5,632	1.8
STATEWIDE TOTAL							
STATEWIDE TOTAL	32,558,768	24,607,027	75.6	363,494	1.1	-337,891	-1.0

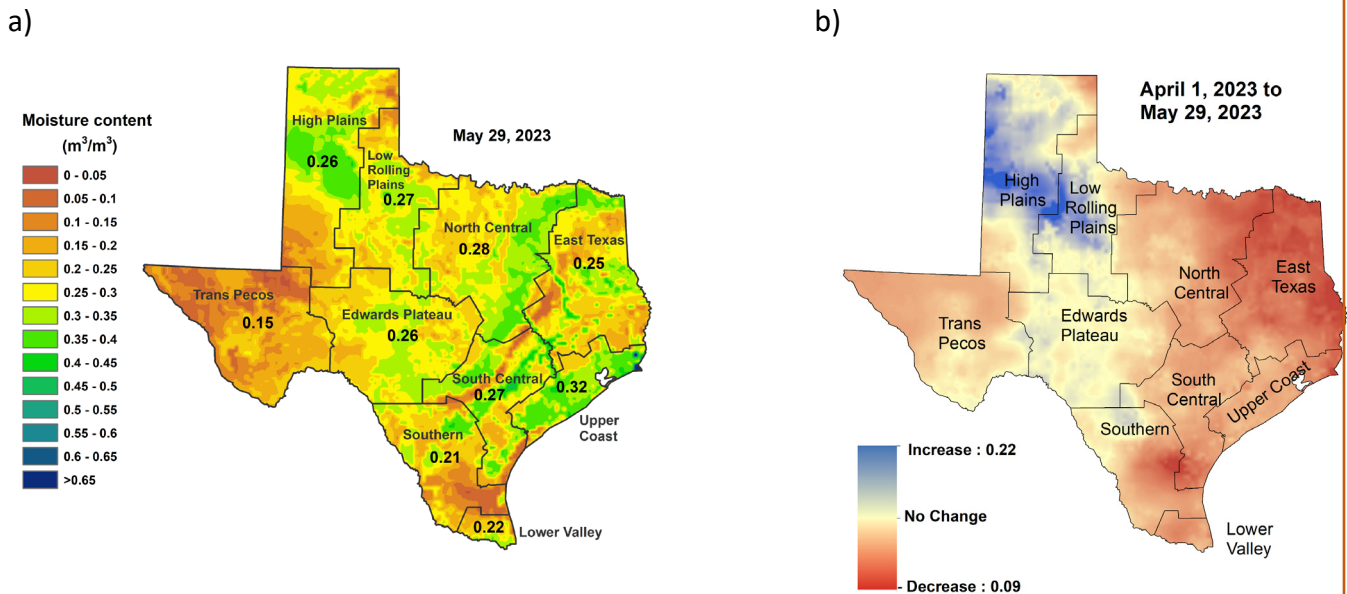
*Total volume below elevation of conservation pool top is used as the conservation storage capacity, because the dead pool storage is unknown.

**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 May 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 in the northeastern and southern High Plains, much of the Trans Pecos, northern Low Rolling Plains, southern Southern, 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 central and northern High Plains, northern and eastern Low Rolling Plains, central and eastern North Central, central Edwards Plateau, scattered across portions of East Texas, northern and southern portions of South Central, southern Lower Valley, and much of the Upper Coast climate divisions. An area of higher soil moisture [blue shading, Figure 5 (a)] was seen in a small area of eastern Upper Coast climate division.

Compared to conditions at the end of April 2023, soil moisture decreased [red shading in Figure 5(b)] across much of the state, particularly in North Central, South Central, Southern, Lower Valley, Upper Coast, and East Texas climate divisions. Soil moisture increased [blue shading in Figure 5(b)] most significantly in the High Plains, and central Low Rolling Plains 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 5: (a) Root zone soil moisture conditions in May 2023 and (b) the difference in root zone soil moisture between end-April 2023 and end-May 2023.

STREAMFLOW CONDITIONS

Normal streamflow (25–75th percentile, green shading, Figure 6) was recorded in parts of the Panhandle, Central, Eastern, Southern, and coastal regions of Texas this month.

Above normal (76–90th percentile, light blue shading, Figure 6) streamflow was seen in the Canadian, Upper and Lower Brazos (Yegua and San Bernard watersheds), San Jacinto, San Jacinto-Brazos, Trinity-San Jacinto, Neches-Trinity, Neches, Upper Colorado (Middle Concho watershed) Lavaca, Lavaca-Colorado, Lavaca-Guadalupe, Lower Guadalupe, Lower San Antonio, Nueces (Atascosa watershed), and San Antonio-Nueces (Aransas Bay watershed) river basins.

Much above normal (> 90th percentile, dark blue shading, Figure 6) streamflow was seen in the Upper Red, and Lavaca river basins.

Below normal streamflow (10–24th percentile, orange shading, Figure 6) was recorded in Upper and Lower Red, Upper West Fork Trinity, Mid-Brazos, Upper and Mid-Colorado, Pecos, Nueces (Nueces Headwaters and San Miguel watersheds), and Nueces-Rio Grande (San Fernando watershed) river basins.

Much below normal stream flow (< 10th percentile, dark red shading, Figure 6) was seen in the Upper Red (Blue-China watershed), Pecos, Upper Colorado (North Concho watershed), Middle Colorado, Mid-Brazos (Lampasas watershed), and Guadalupe river basins.

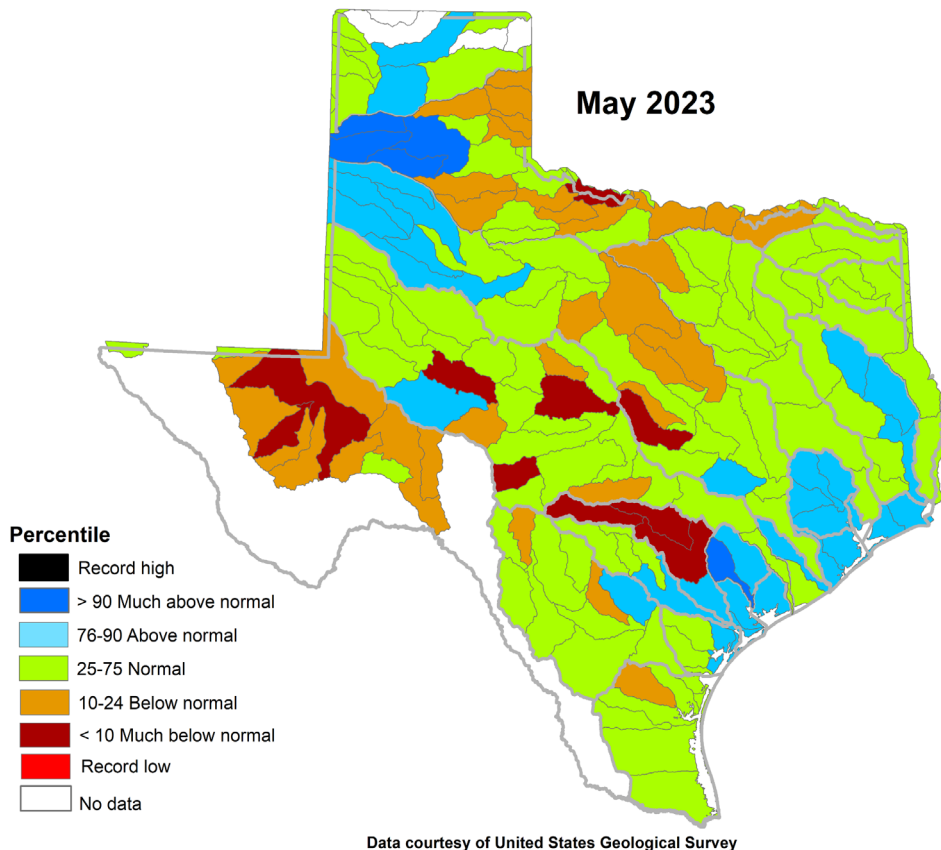
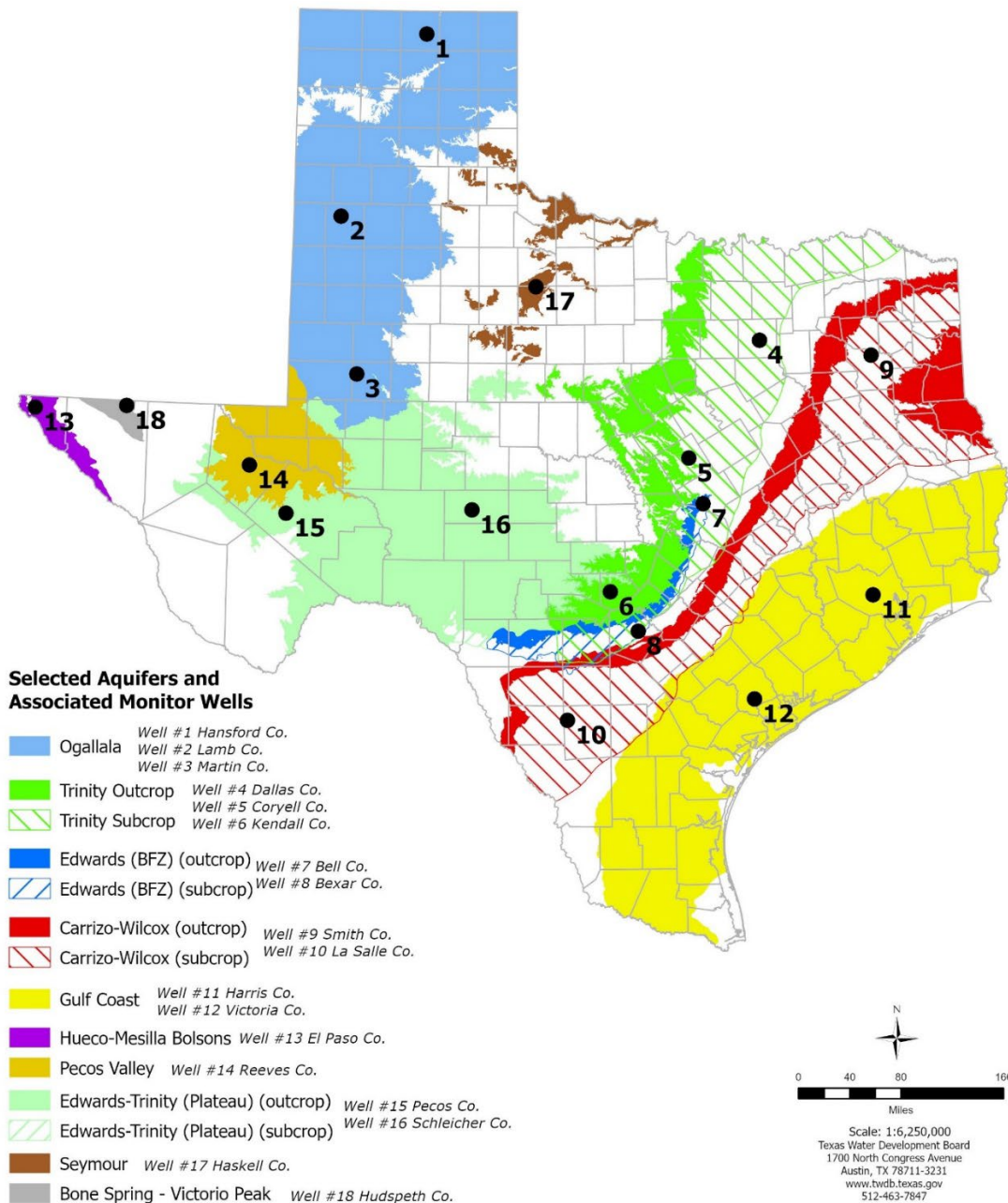


Figure 6: Runoff percentiles by the U.S. Geological Survey's Hydrologic Unit Code



MAY 2023 GROUNDWATER LEVELS IN MONITORING WELLS

Water-level measurements were available for 17 key monitoring wells in the state. The recorder in one well (#9 on map) was offline during the reporting period and changes were not available for wells offline during the previous period. Water levels rose in 9 monitoring wells since the beginning of May, ranging from an increase of 0.08 feet in the Martin County Ogallala Aquifer well (#3 on map) to 6.10 feet in the Bexar County Edwards (Balcones Fault Zone) Aquifer well (#8 on map). Water levels declined in 6 monitoring wells, ranging from a decline of -0.03 feet in the Hansford County Ogallala Aquifer well (#1 on map) to -8.29 feet in the Pecos County Edwards-Trinity (Plateau) Aquifer well (#15 on map). The J-17 well (#8 on map) in San Antonio recorded a water level of 83.20 feet below land surface or 647.80 feet above mean sea level. Water levels are 2.20 feet below the Stage 2 critical management level for the San Antonio portion of the Edwards (Balcones Fault Zone) Aquifer. The Edwards Aquifer Authority moved from Stage 3 to Stage 2 water restrictions effective May 15, 2023, 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	May (depth to water, feet)	April (depth to water, feet)	Month Change	Year Change	Historical Change*	First Measured (year)
(1) Hansford 0354301	164.27	164.24	-0.03	-2.02	-94.15	1951
(2) Lamb 1053602	153.97	153.90	-0.07	-1.14	-125.80	1951
(3) Martin 2739903	145.88	145.96	0.08	-1.11	-40.99	1964
(4) Dallas 3319101	503.24	503.72	0.48	-8.14	-281.24	1954
(5) Coryell 4035404	542.25	543.24	0.99	-6.21	-250.25	1955**
(6) Kendall 6802609	149.87	151.85	1.98	NA	-89.87	1975
(7) Bell 5804816	124.47	124.94	0.47	-0.06	-0.96	2008
(8) Bexar 6837203	83.20	89.30	6.10	3.40	-36.56	1932
(9) Smith 3430907	NA	440.39	NA	NA	-140.39	1977**
(10) La Salle 7738103	533.63	NA	NA	-23.47	-280.56	2003
(11) Harris 6514409	188.77	NA	NA	-6.26	-53.27*	1947**
(12) Victoria 8017502	31.92	32.28	0.36	0.91	2.08	1958**
(13) El Paso 4913301	299.66	300.28	0.62	0.18	-67.76	1964**
(14) Reeves 4644501	156.22	156.03	-0.19	2.43	-64.13	1952
(15) Pecos 5216802	208.28	199.99	-8.29	12.28	38.60	1976
(16) Schleicher 5512134	306.09	305.58	-0.51	8.18	-4.19	2003
(17) Haskell 2135748	46.50	46.96	0.46	-0.25	-3.50	2002
(18) Hudspeth 4807516	155.99	151.44	-4.55	-2.43	-52.07	1966

* Change since the original measurement taken on the date indicated in the last column. The historical change shown for recorder well #9 is based off the most recent water level records from April 2023.

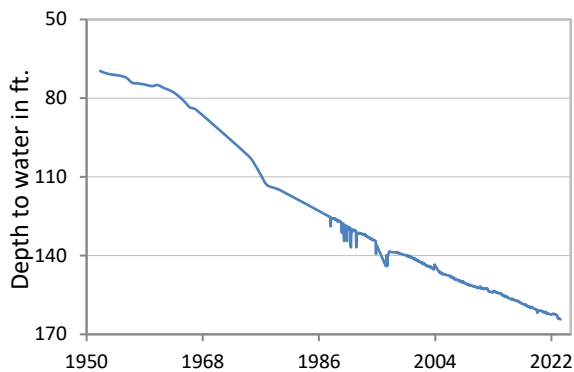
** Measurement not shown on the hydrograph.

NA (not available)

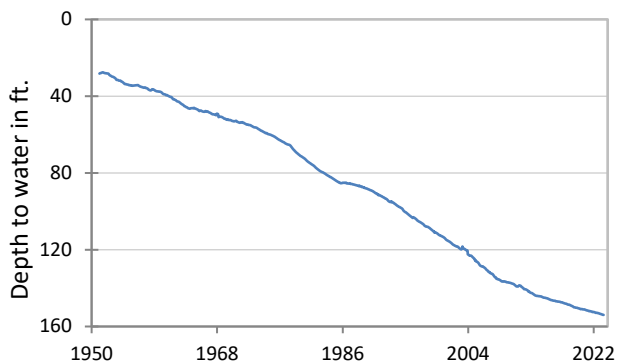
All data are provisional and subject to revision

MAY 2023 MONITORING WELL HYDROGRAPHS

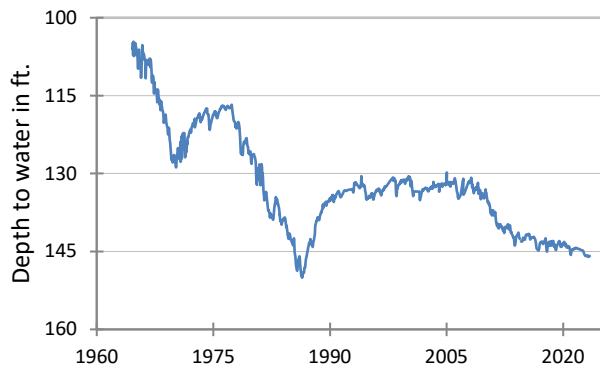
**(1) State Well #03-54-301
Near Spearman, Hansford County
Ogallala Aquifer**



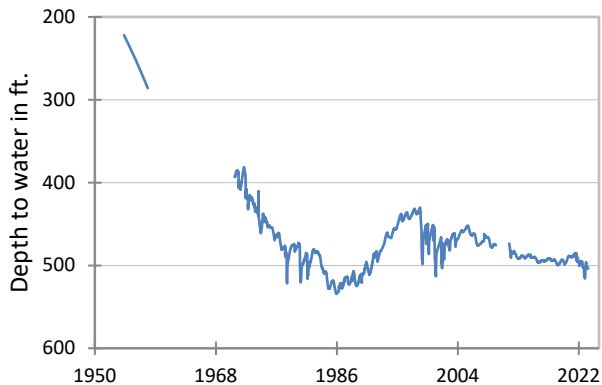
**(2) State Well #10-53-602
Near Earth, Lamb County
Ogallala Aquifer**



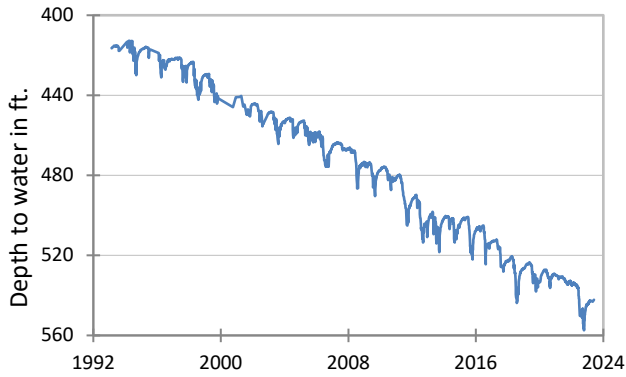
**(3) State Well #27-39-903
Northwest Martin County
Ogallala Aquifer**



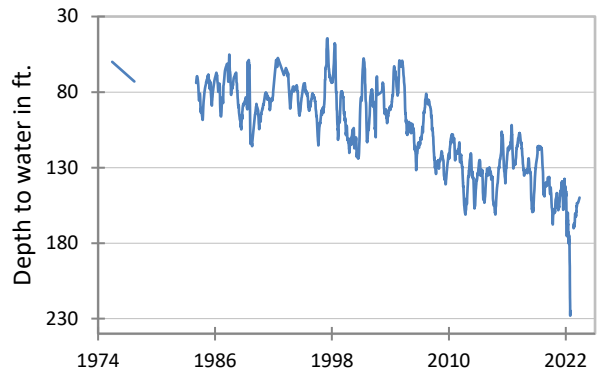
**(4) State Well #33-19-101
Southeast Dallas, Dallas County
Twin Mountains Formation-Trinity Aquifer**



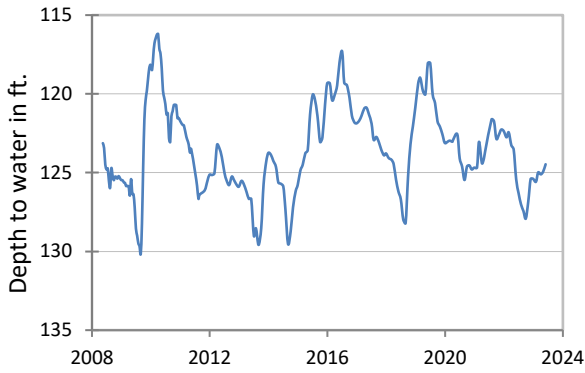
**(5) State Well #40-35-404
Gatesville, Coryell County
Hosston Formation-Trinity Aquifer**



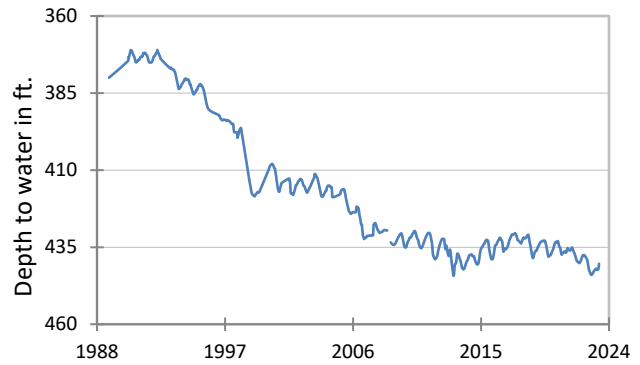
**(6) State Well #68-02-609
Waring, Kendall County
Travis Peak Formation-Trinity Aquifer**



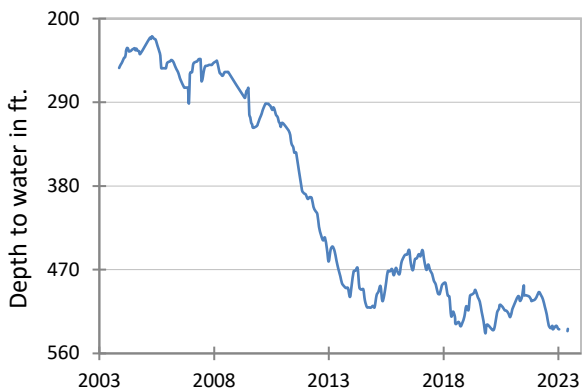
**(7) State Well #58-04-816
Near Salado, Bell County
Edwards (Balcones Fault Zone) Aquifer**



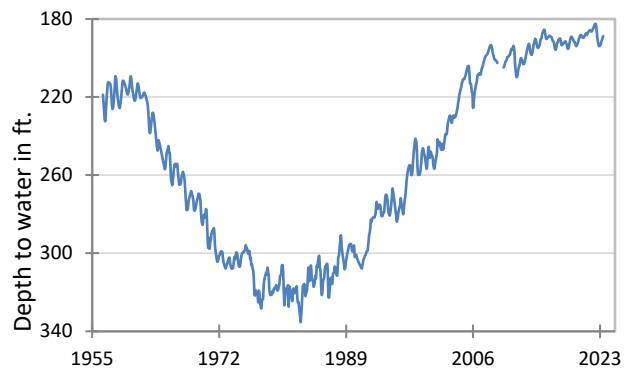
*** (9) State Well #34-30-907
Red Springs, Smith County
Carrizo-Wilcox Aquifer**



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

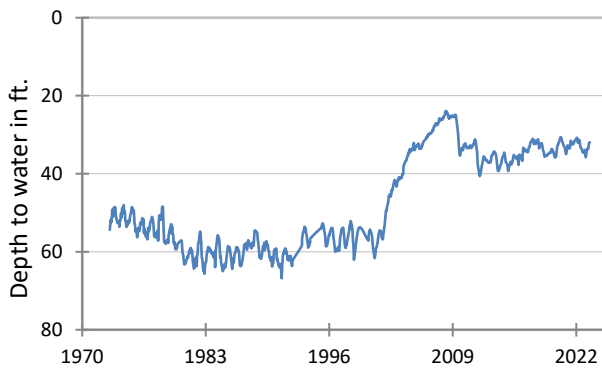


**(11) State Well #65-14-409
North Houston, Harris County
Evangeline Formation-Gulf Coast Aquifer**

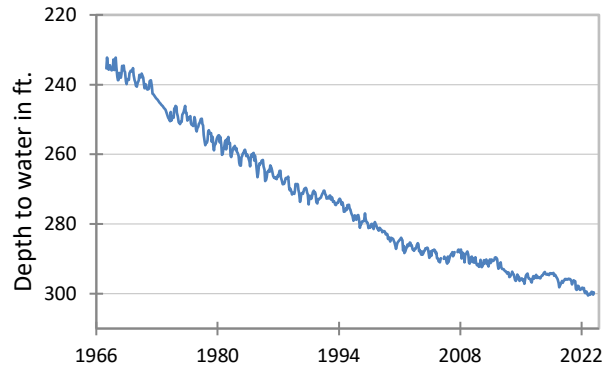


*Recorder well #9 was offline in May 2023 and did not record data.

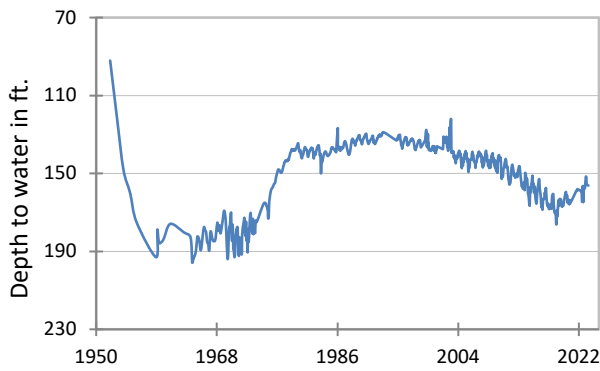
(12) State Well #80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



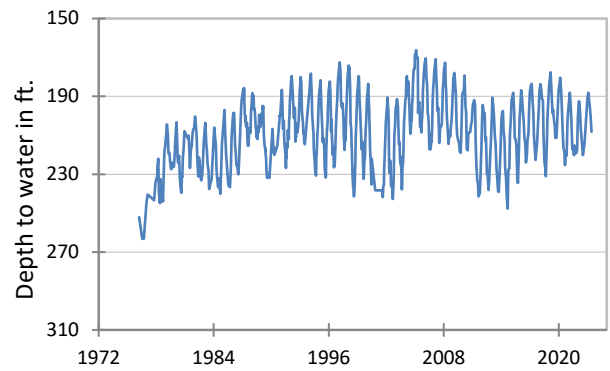
(13) State Well #49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolsons Aquifer



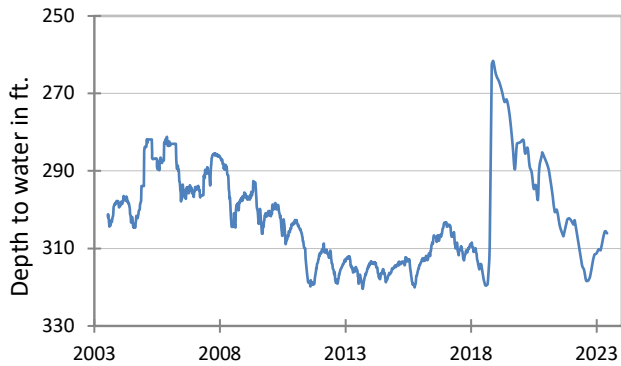
(14) State Well #46-44-501
Near Pecos, Reeves County
Pecos Valley Aquifer



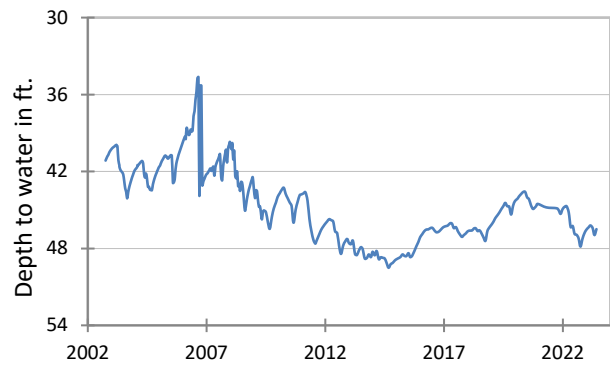
(15) State Well #52-16-802
Fort Stockton, Pecos County
Edwards-Trinity (Plateau) Aquifer



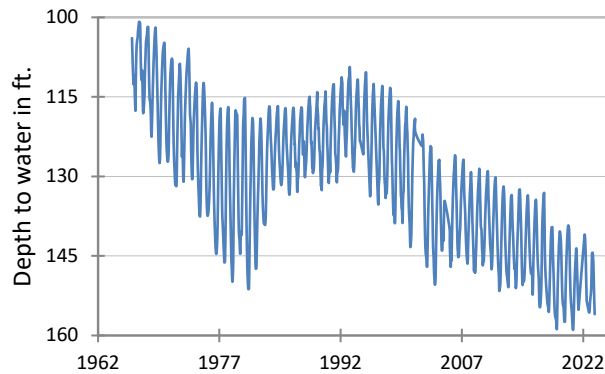
(16) State Well #55-12-134
Eldorado, Schleicher County
Edwards-Trinity (Plateau) Aquifer



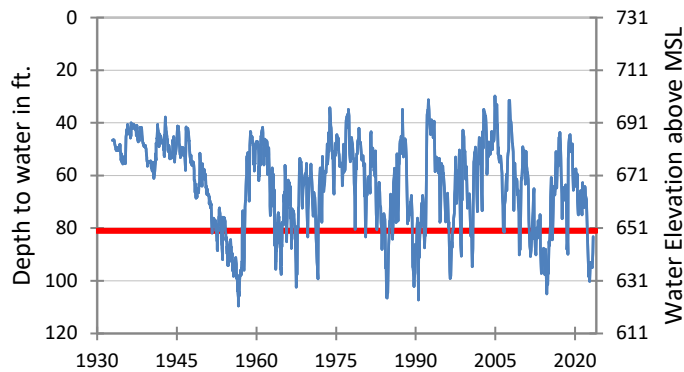
(17) State Well #21-35-748
Near O'Brien, Haskell County
Seymour Aquifer



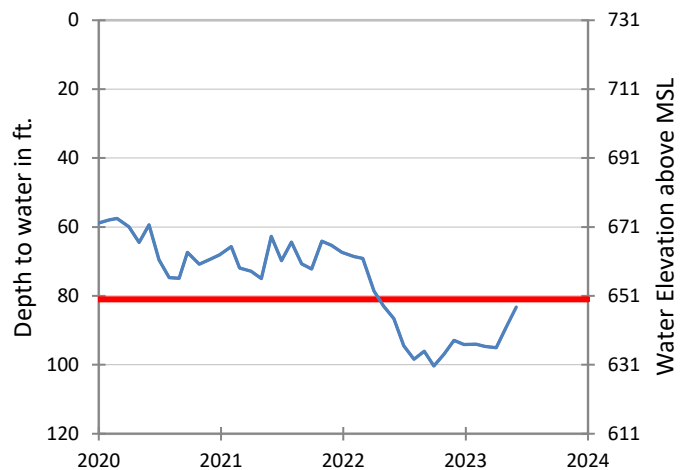
**(18) State Well #48-07-516
Dell City, Hudspeth County
Bone Spring-Victorio Peak Aquifer**



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

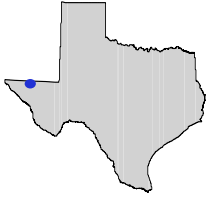


The late May water-level measurement in this Edwards (Balcones Fault Zone) Aquifer well, located at an elevation of 731 feet above mean sea level, was 83.20 feet below land surface, or 647.80 feet above mean sea level. This was 6.10 feet above last month's measurement, 3.40 feet above last year's measurement, and 36.56 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. In May 2023, the aquifer remained below the Stage 2 critical management level. The Edwards Aquifer Authority declared Stage 2 water restrictions effective May 15, 2023, as a result of well J-17 water levels and area spring flow levels.

HYDROGRAPH OF THE MONTH



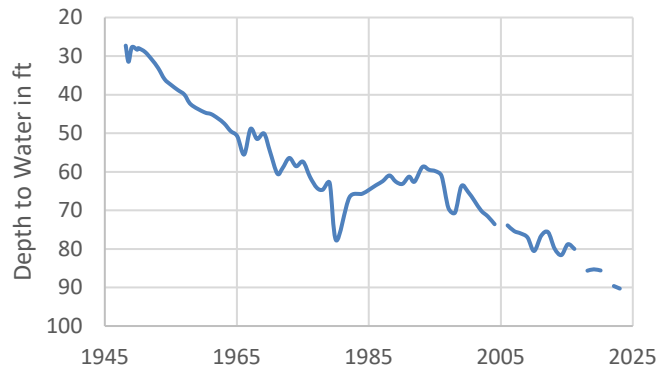
Each month this space features a new hydrograph (marked with the • symbol on the map) depicting different aquifers and their conditions in Texas.

The Bone Spring-Victorio Peak Aquifer is a minor aquifer located in northern Hudspeth County. Water occurs in dissolution features and along voids and fractures in the Permian Bone Spring and Victorio Peak limestones. The aquifer naturally discharges to surface water and is not in direct contact with other aquifers.

Water is generally slightly saline, with total dissolved solids of 1,000 to 3,000 milligrams per liter. In the Dell Valley area, total dissolved solids increase to 3,000 to 10,000 milligrams per liter. Since the late 1940s, pumping has been the principle means of discharge for the aquifer. Water level declines are most likely due to pumping for irrigation.

Bone Spring-Victorio Peak Aquifer

Well #48-07-606, 250 feet deep
Irrigation, Hudspeth County



The USGS initially observed a water level measurement of 27.29 feet below land surface in March 1948. Since then, the USGS and the TWDB have taken near-annual water level measurements, with the TWDB taking over measurements permanently in 1969. The period of record reveals an overall steady decline in water level of about 63 feet over 75 years (or approximately 0.84 feet per year), with a period of recovery occurring from approximately 1982 to 1994.



Far away (left), and close-up (right) images of well #48-07-606.