Texas Water Conditions Report

March 2024

Water News:

On March 19, the Lower Colorado River Authority and Texas Water Development Board hosted a workshop *on Surface water evaporation monitoring and estimation: new developments and implications for reservoir operations and water planning. Collaborators from across Texas and beyond met to hear about the latest advancements and future goals in evaporation studies.*

RAINFALL

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

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

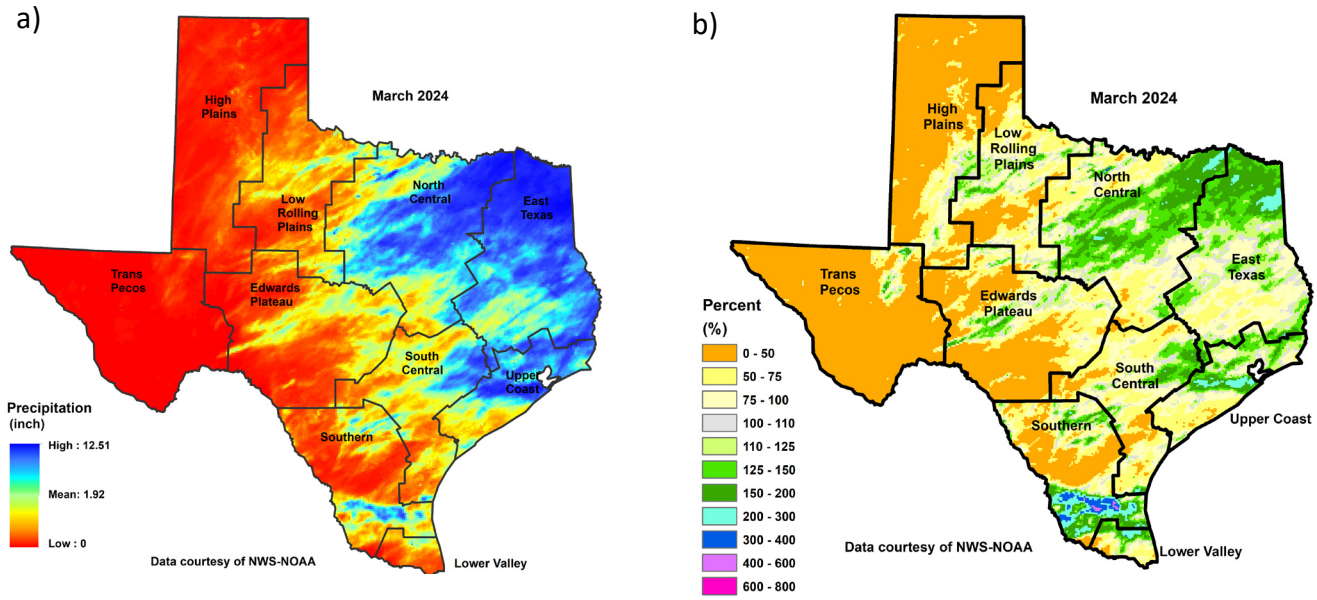

Figure 1: (a) Monthly accumulated rainfall, and (b) Percent of normal rainfall

RESERVOIR STORAGE

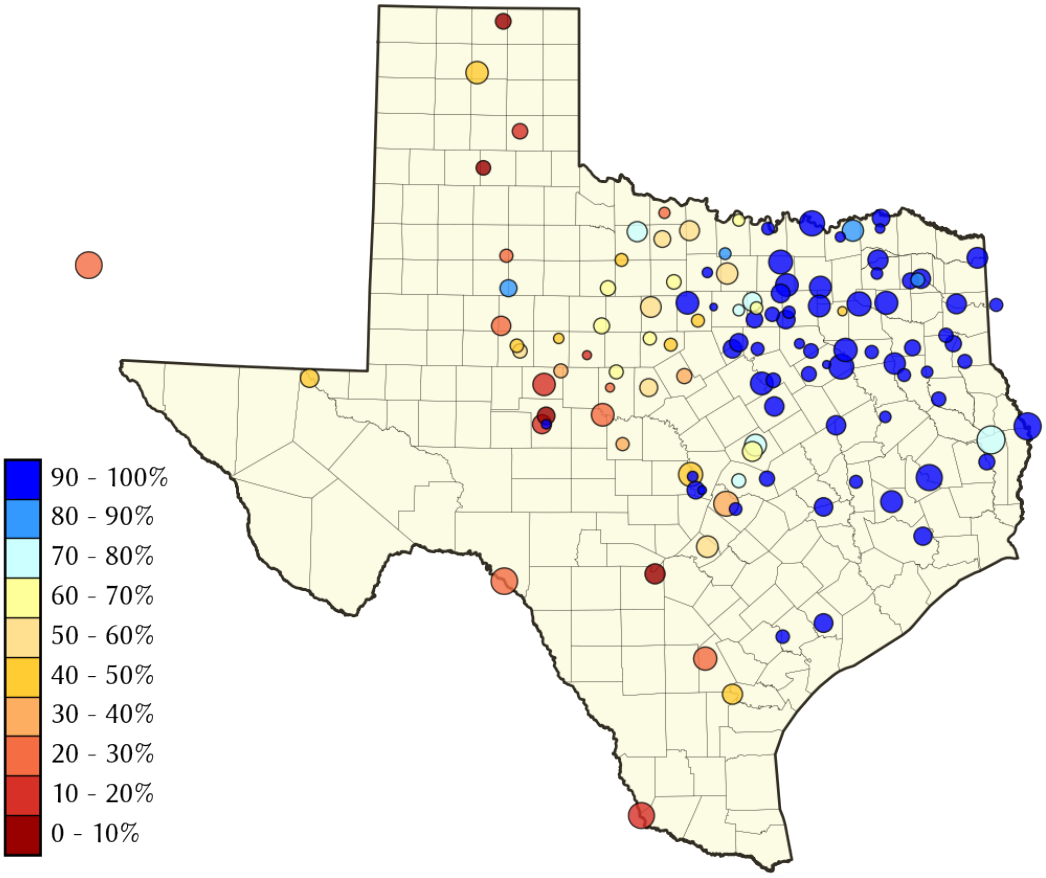

Figure 3. Reservoir conservation storage at end-March expressed as percent full (%)

Out of 119 reservoirs in the state, 46 reservoirs held 100 percent conservation storage capacity, and 20 reservoirs were at or above 90 percent full in March. Sixteen reservoirs remained at or below 30 percent full: Abilene (12.8 percent full), Amistad (28.2 percent full), Choke Canyon (23.6 percent full), E.V. Spence (15.3 percent full), Falcon (16.0 percent full), Greenbelt (11.1 percent full), Hords Creek (22.0 percent full), J.B. Thomas (20.4 percent full), Mackenzie (9.2 percent full), Medina Lake (2.9 percent full), North Fork Buffalo Creek Reservoir (29.1 percent full), O.C. Fisher (1.8 percent full), O.H. Ivie (26.7 percent full), Palo Duro Reservoir (3.6 percent full), Twin Buttes (14.4 percent full), and the White River Lake (23.3 percent full). Elephant Butte Reservoir (New Mexico) was 21.9 percent full (Figure 3).

Reservoir conservation storage by climate division was at or above normal (Figure 4(a)) for East Texas (91.3 percent full), North Central (90.7 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 (53.0 percent full), and South Central (43.9 percent full) climate divisions. The High Plains (36.7 percent full), Edwards Plateau (31.2 percent full), the Trans Pecos (24.8 percent full), and Southern (20.9 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 Canadian, Upper/Mid Rio Grande, Lower Rio Grande, Nueces, and Upper Colorado 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.

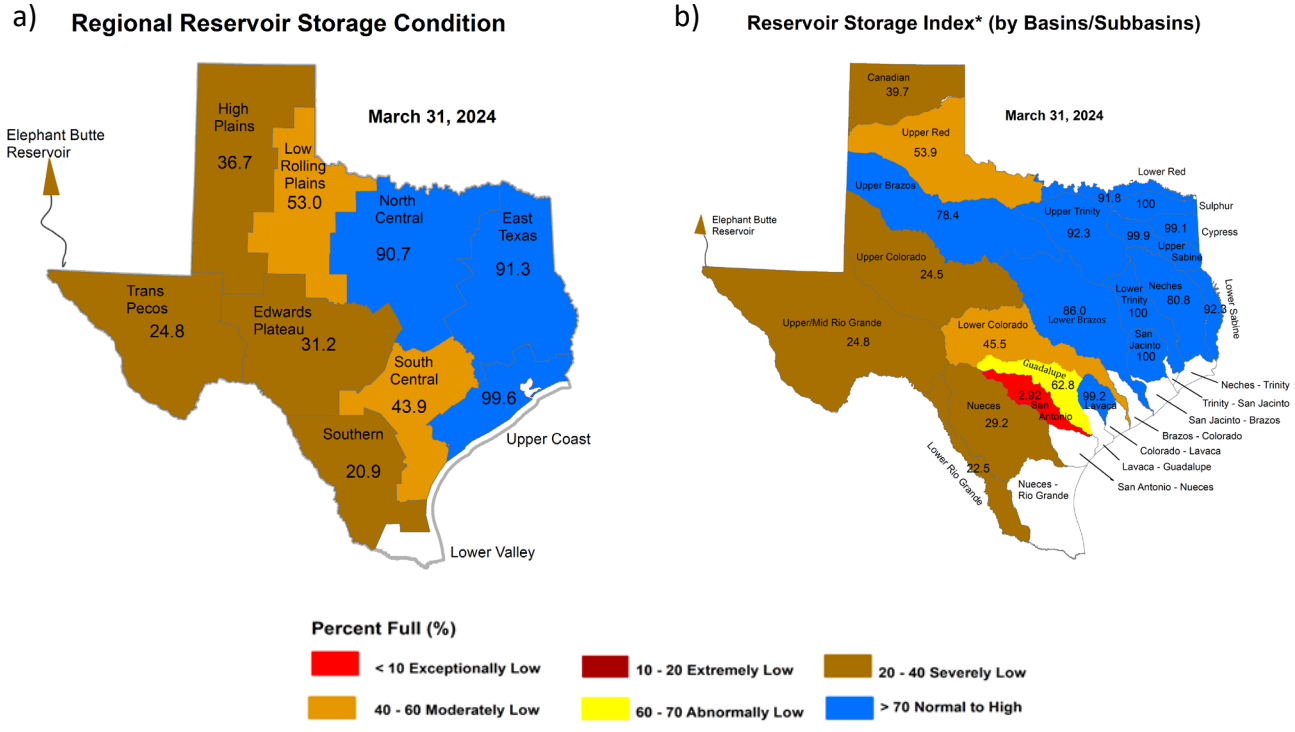

Figure 4: (a) Reservoir Storage Index* by climate division, and (b) Reservoir Storage Index* by basin/sub-basin.

*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-March 2024		Storage change from end-Feb 2024		Storage change from end-Mar 2023	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
Abilene, Lake	7,900	1,013	12.8	-84	-1.1	-1,337	-16.9
Alan Henry Reservoir	96,207	84,272	87.6	-847	0.0	14,931	15.5
*Amistad Reservoir (Texas & Mexico)	3,275,532	666,093	20.3	-8,574	0.0	-676,704	-20.7
*Amistad Reservoir (Texas)	1,813,408	511,539	28.2	27,062	1.5	-217,939	-12.0
Amon G Carter, Lake	19,266	16,486	85.6	457	2.4	-2,724	-14.1
Aquilla Lake	43,243	43,243	100.0	62	0.1	12,287	28.4
Arlington, Lake	40,157	40,157	100.0	289	0.7	135	0.3
Arrowhead, Lake	230,359	127,726	55.4	-1,438	0.0	-27,059	-11.7
Athens, Lake	29,503	29,503	100.0	0	0.0	0	0.0
*Austin, Lake	23,972	22,911	95.6	77	0.3	16	0.1
B A Steinhagen Lake	69,186	64,675	93.5	2,235	3.2	1,075	1.6
Bardwell Lake	43,856	43,856	100.0	0	0.0	0	0.0
Belton Lake	432,631	304,735	70.4	7,774	1.8	27,511	6.4
Benbrook Lake	85,648	85,648	100.0	0	0.0	0	0.0
Bob Sandlin, Lake	192,417	192,417	100.0	0	0.0	622	0.3
Bois d'Arc Lake	367,609	296,724	80.7	34,088	9.3	21,260	5.8
Bonham, Lake	11,027	11,027	100.0	179	1.6	106	1.0
Brady Creek Reservoir	28,808	10,488	36.4	61	0.2	-1,841	-6.4
Bridgeport, Lake	372,183	212,464	57.1	2,937	0.8	-65,625	-17.6
*Brownwood, Lake	130,868	77,990	59.6	984	0.8	-446	0.0
Buchanan, Lake	866,694	402,404	46.4	8,775	1.0	-96,969	-11.2
Caddo, Lake	29,898	29,898	100.0	0	0.0	0	0.0
Canyon Lake	378,781	226,451	59.8	-2,003	0.0	-62,909	-16.6
Cedar Creek Reservoir in Trinity	644,686	644,686	100.0	6,200	1.0	1,962	0.3
Champion Creek Reservoir	41,580	23,654	56.9	-303	0.0	-640	-1.5
Cherokee, Lake	40,094	40,094	100.0	0	0.0	0	0.0
Choke Canyon Reservoir	662,820	156,563	23.6	-3,572	0.0	-41,277	-6.2
*Cisco, Lake	29,003	17,717	61.1	9	0.0	-2,632	-9.1
Coleman, Lake	38,075	23,027	60.5	-97	-0.2	-5,508	-14.5
Colorado City, Lake	31,040	31,040	100.0	0	0.0	4,078	13.1
*Coleto Creek Reservoir	30,758	14,228	46.3	-265	0.0	-2,145	-7.0
Conroe, Lake	417,577	417,577	100.0	0	0.0	1,192	0.3
Corpus Christi, Lake	256,062	112,380	43.9	-7,008	-2.7	-55,727	-21.8
Crook, Lake	9,195	9,195	100.0	250	2.7	0	0.0
Cypress Springs, Lake	66,756	66,756	100.0	0	0.0	0	0.0
E. V. Spence Reservoir	517,272	79,387	15.3	-2,296	0.0	-11,294	-2.2
Eagle Mountain Lake	185,087	147,675	79.8	14,209	7.7	-13,540	-7.3
Elephant Butte Reservoir (Texas)	852,491	187,104	21.9	-28,186	-3.3	44,593	5.2
Elephant Butte Reservoir (Total Storage)	1,985,900	433,110	21.8	-65,245	-3.3	103,225	5.2
*Falcon Reservoir (Texas & Mexico)	2,646,817	685,021	25.9	40,725	1.5	382,116	14.4
*Falcon Reservoir (Texas)	1,562,367	250,162	16.0	-6,188	0.0	90,538	5.8
Fork Reservoir, Lake	605,061	605,061	100.0	7,120	1.2	40,390	6.7
Fort Phantom Hill, Lake	70,030	46,864	66.9	-268	0.0	890	1.3
Georgetown, Lake	38,005	28,532	75.1	1,460	3.8	5,458	14.4
Gibbons Creek Reservoir	25,721	24,358	94.7	124	0.5	521	2.0
Graham, Lake	45,288	31,697	70.0	-543	-1.2	-3,290	-7.3
Granbury, Lake	132,949	132,704	99.8	733	0.6	10,685	8.0

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	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
Continued							
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	6,663	11.1	-70	0.0	-209	0.0
*Halbert, Lake	6,033	5,545	91.9	112	1.9	326	5.4
Hords Creek Lake	8,109	1,780	22.0	-10	0.0	-662	-8.2
Houston County Lake	17,113	17,113	100.0	0	0.0	0	0.0
Houston, Lake	132,318	132,318	100.0	457	0.3	0	0.0
Hubbard Creek Reservoir	313,298	159,625	50.9	-504	0.0	-46,158	-14.7
Hubert H Moss Lake	24,058	23,874	99.2	43	0.2	-184	0.0
Inks, Lake	13,729	13,029	94.9	-31	0.0	-31	0.0
J. B. Thomas, Lake	199,931	40,804	20.4	-1,638	0.0	-3,525	-1.8
Jacksonville, Lake	25,670	25,670	100.0	0	0.0	0	0.0
Jim Chapman Lake (Cooper)	258,723	258,723	100.0	0	0.0	0	0.0
Joe Pool Lake	149,629	149,629	100.0	0	0.0	0	0.0
Kemp, Lake	245,307	178,698	72.8	3,836	1.6	26,522	10.8
Kickapoo, Lake	86,345	47,072	54.5	-776	0.0	-6,664	-7.7
Lavon Lake	409,757	409,757	100.0	0	0.0	0	0.0
Leon, Lake	27,762	13,287	47.9	22	0.1	-3,152	-11.4
Lewisville Lake	563,228	563,228	100.0	2,429	0.4	0	0.0
Limestone, Lake	203,780	203,780	100.0	0	0.0	34,499	16.9
*Livingston, Lake	1,603,504	1,603,504	100.0	0	0.0	0	0.0
*Lost Creek Reservoir	11,950	10,949	91.6	117	1.0	-892	-7.5
Lyndon B Johnson, Lake	112,778	110,981	98.4	128	0.1	-64	0.0
Mackenzie Reservoir	46,450	4,272	9.2	-67	0.0	1,507	3.2
Marble Falls, Lake	7,597	7,215	95.0	24	0.3	-18	0.0
Martin, Lake	75,726	75,627	99.9	-99	0.0	148	0.2
Medina Lake	254,823	7,455	2.9	-482	0.0	-6,116	-2.4
Meredith, Lake	500,000	220,791	44.2	-1,295	0.0	70,250	14.1
Millers Creek Reservoir	26,768	12,737	47.6	-299	-1.1	-3,971	-14.8
*Mineral Wells, Lake	5,273	5,273	100.0	583	11.1	1,054	20.0
Monticello, Lake	34,740	30,136	86.7	54	0.2	633	1.8
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	39,522	100.0	414	1.0	609	1.5
Nasworthy	9,615	8,923	92.8	-12	0.0	752	7.8
Navarro Mills Lake	49,827	49,827	100.0	0	0.0	424	0.9
New Terrell City Lake	8,583	3,991	46.5	1,541	18.0	306	3.6
Nocona, Lake (Farmers Crk)	21,444	14,248	66.4	-44	0.0	-3,399	-15.9
North Fork Buffalo Creek Reservoir	15,400	4,481	29.1	15	0.1	-2,511	-16.3
O' the Pines, Lake	241,363	241,363	100.0	0	0.0	0	0.0
O. C. Fisher Lake	115,742	2,089	1.8	-131	0.0	-1,239	-1.1
*O. H. Ivie Reservoir	554,340	148,263	26.7	-2,054	0.0	-61,241	-11.0
Oak Creek Reservoir	39,210	12,793	32.6	-239	0.0	-5,305	-13.5

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS							
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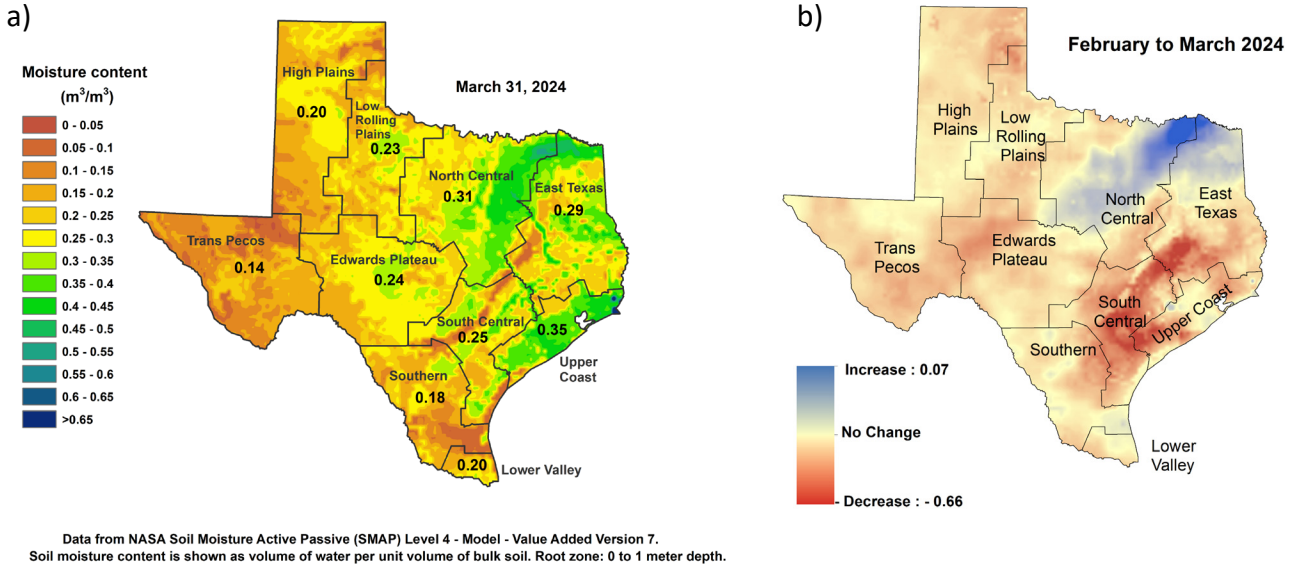
	(acre-feet)	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)
Continued							
Palestine, Lake	367,303	367,303	100.0	0	0.0	0	0.0
Palo Duro Reservoir	61,066	2,172	3.6	-288	0.0	1,964	3.2
Palo Pinto, Lake	26,766	10,732	40.1	1,269	4.7	-3,561	-13.3
Pat Cleburne, Lake	26,008	26,008	100.0	0	0.0	5,121	19.7
*Pat Mayse Lake	113,683	113,683	100.0	3,641	3.2	0	0.0
Possum Kingdom Lake	538,139	535,458	99.5	3,560	0.7	85,985	16.0
Proctor Lake	54,762	16,626	30.4	1,644	3.0	-5,677	-10.4
Ray Hubbard, Lake	439,559	439,559	100.0	0	0.0	835	0.2
Ray Roberts, Lake	788,167	778,842	98.8	2,250	0.3	-9,325	-1.2
Red Bluff Reservoir	151,110	62,586	41.4	-265	0.0	-26,459	-17.5
Richland-Chambers Reservoir	1,099,417	1,099,417	100.0	0	0.0	78,527	7.1
Sam Rayburn Reservoir	2,857,077	2,196,275	76.9	-431,142	-15.1	-660,802	-23.1
Somerville Lake	150,293	150,293	100.0	0	0.0	27,101	18.0
Squaw Creek, Lake	151,250	151,187	100.0	538	0.4	-63	0.0
Stamford, Lake	51,570	35,769	69.4	-911	-1.7	-593	-1.1
Stillhouse Hollow Lake	229,796	139,336	60.6	-1,029	0.0	-19,388	-8.4
Striker, Lake	16,878	16,508	97.8	-370	-2.2	-116	0.0
Sweetwater, Lake	12,267	5,619	45.8	-96	0.0	-1,528	-12.5
*Sulphur Springs, Lake	17,747	17,747	100.0	0	0.0	0	0.0
Tawakoni, Lake	871,685	871,685	100.0	0	0.0	0	0.0
Texana, Lake	158,975	157,847	99.3	205	0.1	8,746	5.5
Texoma, Lake (Texas & Oklahoma)	2,487,601	2,351,480	94.5	-46,594	-1.9	-78,033	-3.1
Texoma, Lake (Texas)	1,243,801	1,175,740	94.5	-23,296	-1.9	-39,016	-3.1
Toledo Bend Reservoir (Texas & Louisiana)	4,472,900	4,133,244	92.4	-158,583	-3.5	92,370	2.1
Toledo Bend Reservoir (Texas)	2,236,450	2,064,572	92.3	-79,292	-3.5	46,185	2.1
Travis, Lake	1,098,044	413,435	37.7	-7,588	0.0	-75,621	-6.9
Twin Buttes Reservoir	182,454	26,323	14.4	-1,088	0.0	-25,092	-13.8
Tyler, Lake	72,073	72,073	100.0	0	0.0	0	0.0
Waco, Lake	189,418	189,418	100.0	324	0.2	78,573	41.5
Waxahachie, Lake	11,060	11,060	100.0	0	0.0	0	0.0
Weatherford, Lake	17,812	12,702	71.3	2,101	11.8	2,415	13.6
White River Lake	29,880	6,966	23.3	-653	-2.2	3,263	10.9
Whitney, Lake	564,808	564,808	100.0	0	0.0	119,988	21.2
Worth, Lake	24,419	14,852	60.8	358	1.5	-1,036	-4.2
Wright Patman Lake	122,593	122,593	100.0	0	0.0	0	0.0
STATEWIDE TOTAL							
STATEWIDE TOTAL	**32,387,302**	**22,936,338**	**70.8**	**-465,109**	**-1.4**	**-752,537**	**-2.3**

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

Compared to conditions at the end of February 2024, soil moisture increased [blue shading in Figure 5(b)] in the North Central and northern East Texas climate divisions. Soil moisture decreased [red shading in Figure 5(b)] most noticeably in the South Central, southwestern portions of East Texas, and the western Upper Coast 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 March 2024 and (b) the difference in root zone soil moisture between end-February 2024 and end-March 2024.

STREAMFLOW CONDITIONS

Normal streamflow (25–75th percentile, green shading, Figure 6) was recorded in parts of the Panhandle, Northern, Eastern, and Central regions of Texas this month. Above normal streamflow (76–90th percentile, light blue shading, Figure 6) was seen in the Lower Sulphur, Upper Sabine, Trinity (Upper Trinity, East Fork Trinity, and Cedar watersheds), Brazos (North Bosque watershed), Trinity-San Jacinto, and Brazos-Colorado (San Bernard watershed) river basins. Much above normal streamflow (>90th percentile, dark blue shading, Figure 6) was seen in the Sulphur Headwater and the San Jacinto-Brazos river basins.

Much below normal (<10th percentile, dark red shading, Figure 6) was seen in the Upper Red (Blue-China watershed), Pecos, Colorado (middle Colorado-Elm and Pedernales watersheds), Nueces (Hondo and Upper Frio watersheds), Nueces-Rio Grande (San Fernando watershed), San Antonio (Medina watershed), and Upper and Middle Guadalupe river basins. Record lows (bright red shading, Figure 6) were recorded in the Pecos (Delaware watershed) and Middle Colorado river basins.

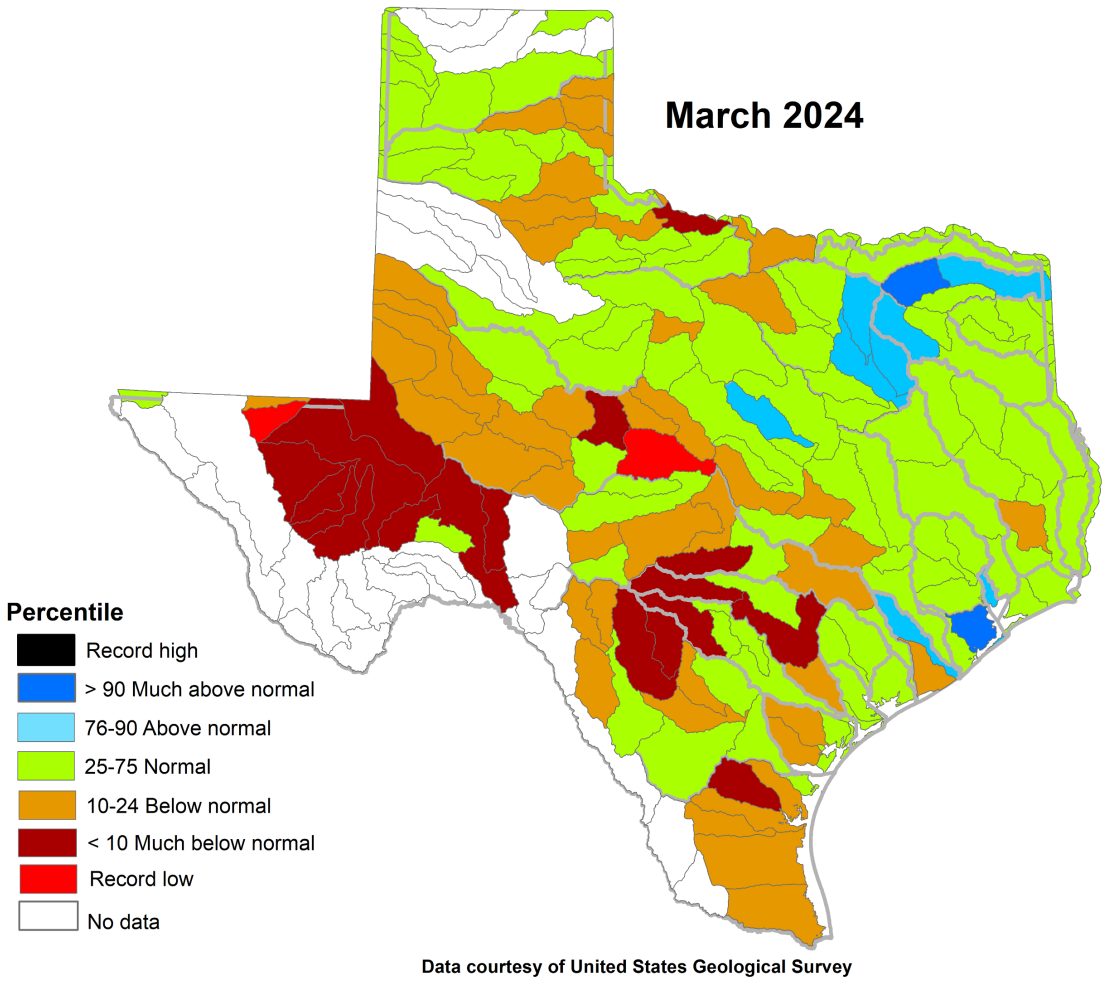
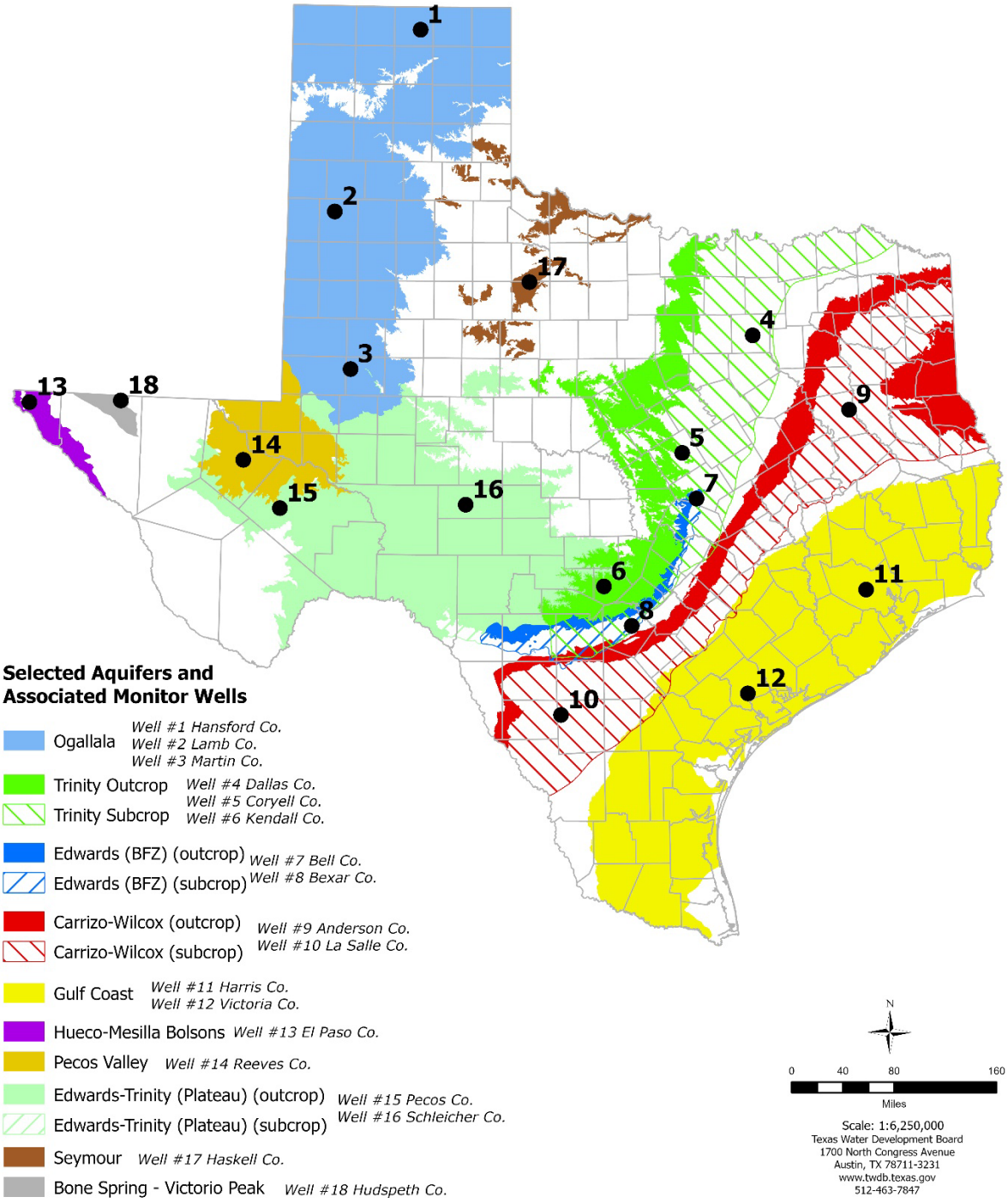


Figure 6: Runoff percentiles by the U.S. Geological Survey's Hydrologic Unit Code



MARCH 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 #14 on map) were offline or the well experienced issues during the reporting period. Water levels rose in ten monitoring wells since the beginning of March, with an increase of 0.06 feet in the Hansford County Ogallala Aquifer well (#1 on map) to 2.18 feet in the Kendall County Trinity Aquifer well (#6 on map). Water levels declined in six monitoring wells, ranging from a decline of -0.09 feet in the Lamb County Ogallala Aquifer well (#2 on map) to -4.30 feet in the Bexar County Edwards (BFZ) Aquifer well (#8 on map). The J-17 well (#8 on map) in San Antonio recorded a water level of 91.20 feet below land surface or 639.80 feet above mean sea level. Water levels are 0.20 feet below the Stage 3 critical management levels for the San Antonio portion of the Edwards (Balcones Fault Zone) Aquifer. The Edwards Aquifer Authority declared Stage 3 water restrictions effective April 3, 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	March (depth to water, feet)	February (depth to water, feet)	Month Change	Year Change	Historical Change*	First Measured (year)
(1) Hansford 0354301	165.11	165.17	0.06	-1.21	-94.99	1951
(2) Lamb 1053602	154.85	154.76	-0.09	-1.01	-126.68	1951
(3) Martin 2739903	NA	NA	NA	NA	-41.32	1964
(4) Dallas 3319101	502.74	503.37	0.63	-7.01	-280.74	1954
(5) Coryell 4035404	545.87	546.06	0.19	-3.23	-253.87	1955**
(6) Kendall 6802609	151.31	153.49	2.18	2.08	-91.31	1975
(7) Bell 5804816	123.02	124.57	1.55	2.09	0.49	2008
(8) Bexar 6837203	91.20	86.90	-4.30	3.80	-44.56	1932
(9) Anderson 3813106	238.55	238.81	0.26	-2.38	-93.55	1965**
(10) La Salle 7738103	527.63	523.87	-3.76	12.84	-274.56	2003
(11) Harris 6514409	196.68	197.74	1.06	-5.90	-61.18*	1947**
(12) Victoria 8017502	32.23	33.13	0.90	1.46	1.77	1958**
(13) El Paso 4913301	297.91	298.80	0.89	1.68	-66.01	1964**
(14) Reeves 4644501	NA	150.14	NA	NA	-58.05	1952
(15) Pecos 5216802	204.22	201.20	-3.02	-8.14	42.66	1976
(16) Schleicher 5512134	315.66	314.81	-0.85	-2.57	-13.76	2003
(17) Haskell 2135748	46.64	46.73	0.09	-0.24	-3.64	2002
(18) Hudspeth 4807516	147.23	146.43	-0.80	0.93	-43.31	1966

***Change since the original measurement taken on the date indicated in the last column. The historical changes shown for recorder wells #3 and #14 are based off the most recent water level records from December 2023 and February 2024, respectively.**

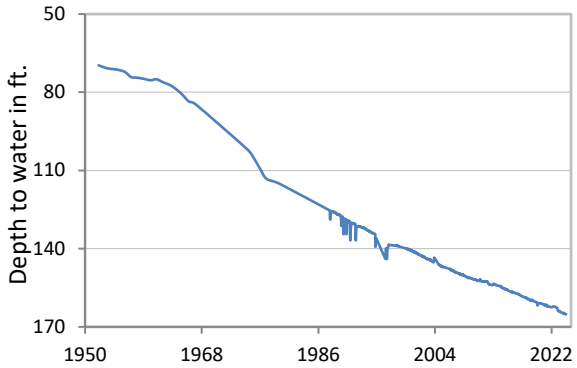
Recorder well #9 was changed to a location in Anderson County due to ongoing issues with the previous recorder well in Smith County.

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

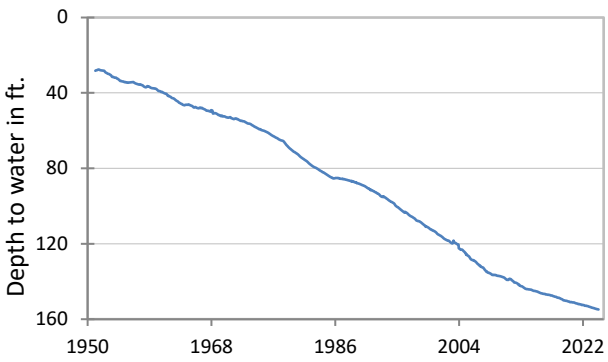
NA (not available). All data are provisional and subject to revision.

MARCH 2024 MONITORING WELL HYDROGRAPHS

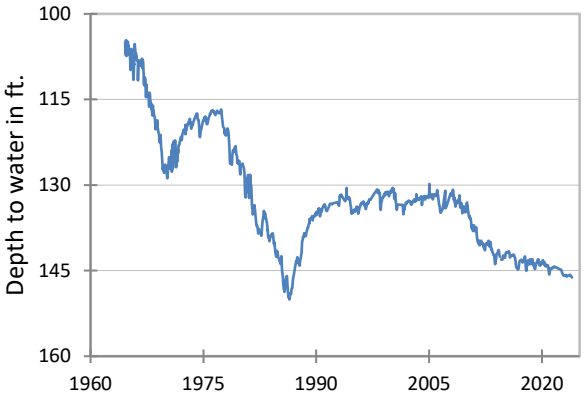
(1) State Well #03-54-301
Near Spearman, Hansford County
Ogallala Aquifer



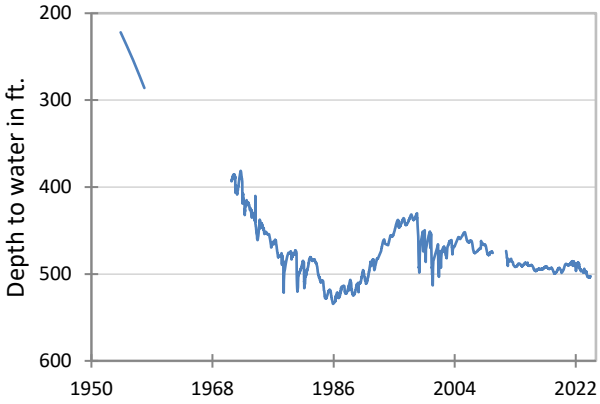
(2) State Well #10-53-602
Near Ea rth, Lam b County
Ogallala Aquifer



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

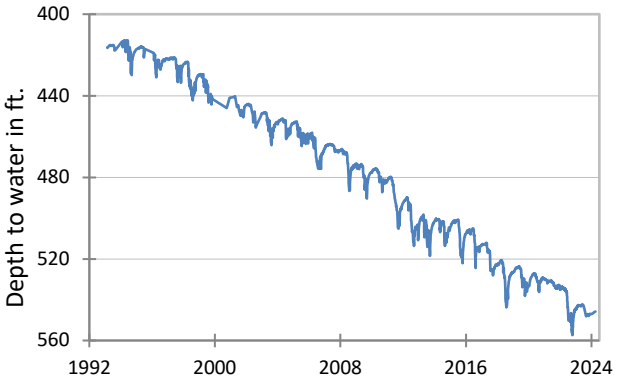


(4) State Well #33-19-101
Southeast Dallas, Dallas County
Twin Mountains Formation-Trinity Aquifer

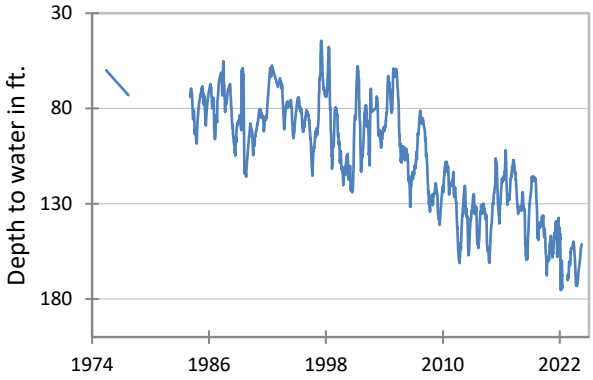


*** Recorder well #3 has been offline since December 2023 and did not record data.**

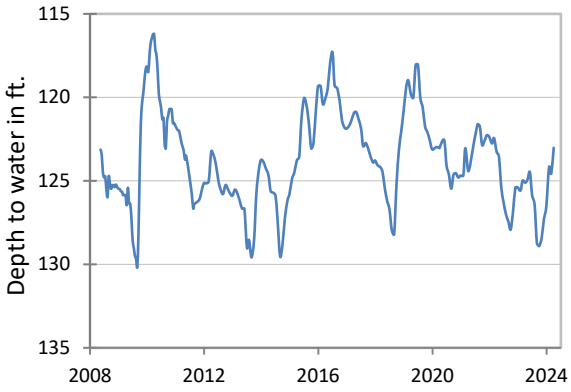
(5) State Well #40-35-404
Gatesville, Coryell County
Hosston Formation-Trinity Aquifer



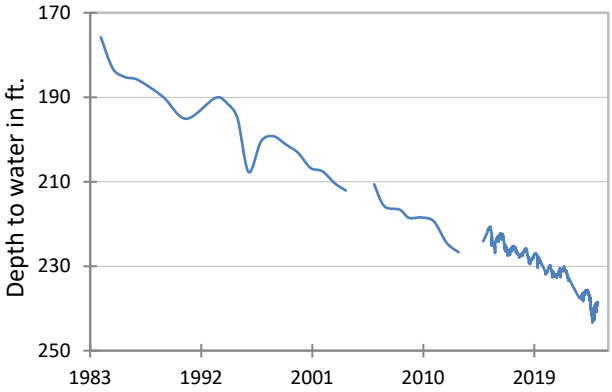
(6) State Well #68-02-609
Waring, Kendall County
Travis Peak Formation-Trinity Aquifer



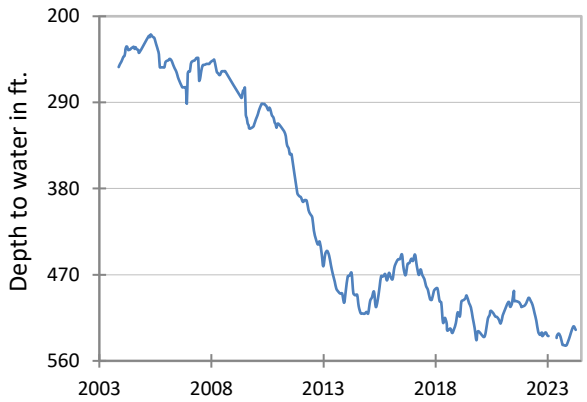
(7) State Well #58-04-816
Near Salado, Bell County
Edwards (Balcones Fault Zone) Aquifer



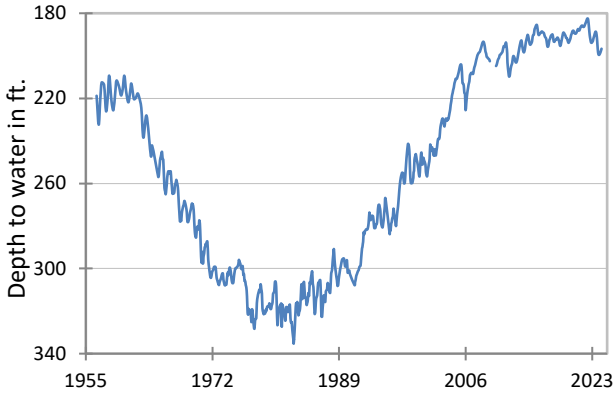
(9) State Well #38-13-106
Neches, Anderson County
Carrizo-Wilcox Aquifer



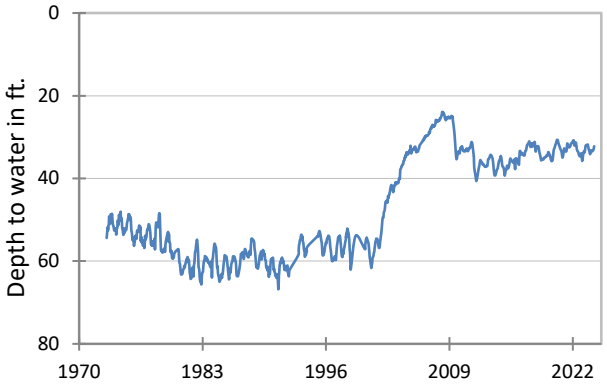
(10) State Well #77-38-103
Near Cotulla, La Salle County
Carrizo-Wilcox Aquifer



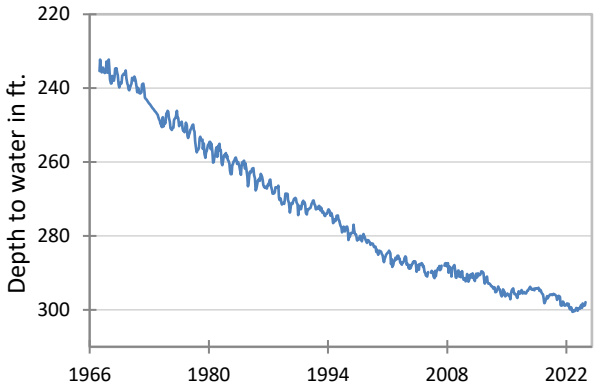
(11) State Well #65-14-409
North Houston, Harris County
Evangeline Formation-Gulf Coast Aquifer



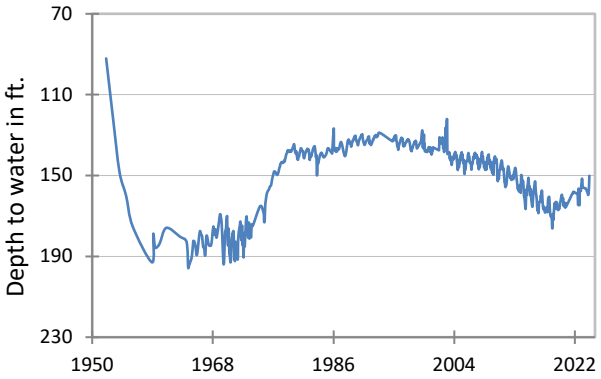
(12) State Well #80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



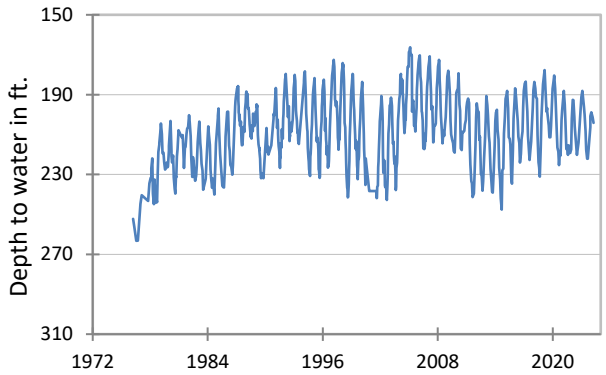
(13) State Well #49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolsons Aquifer



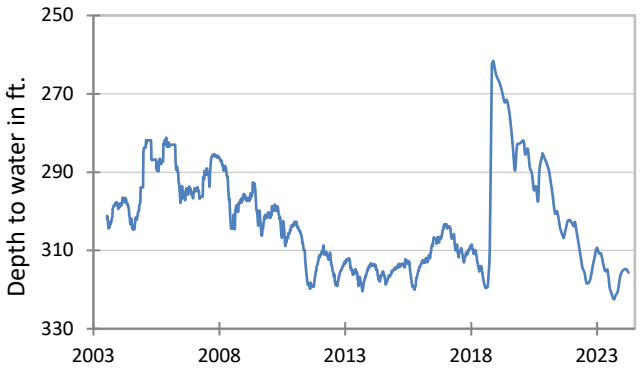
***(14) State Well #46-44-501**
Near Pecos, Reeves County
Pecos Valley Aquifer



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



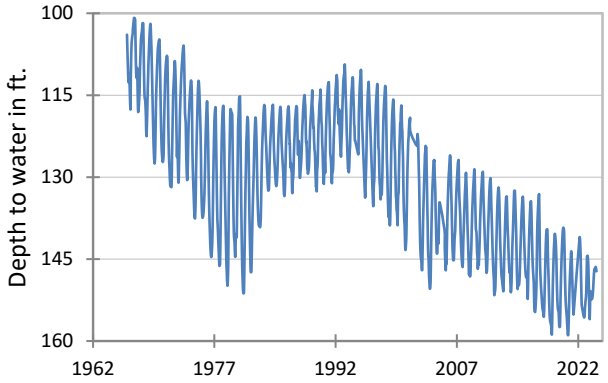
(16) State Well #55-12-134
Eldorado, Schleicher County
Edwards-Trinity (Plateau) Aquifer



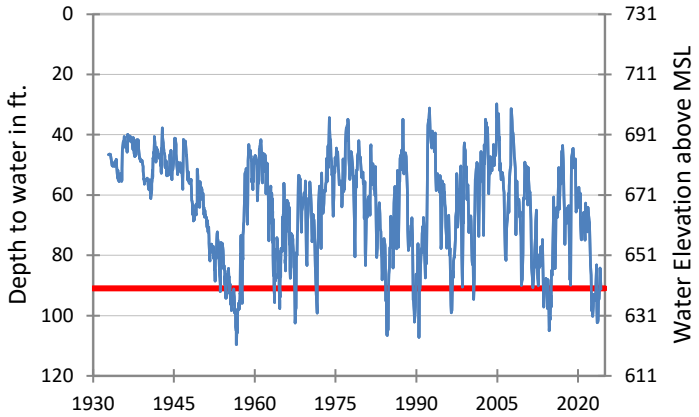
(17) State Well #21-35-748
Near O'Brien, Haskell County
Seymour Aquifer

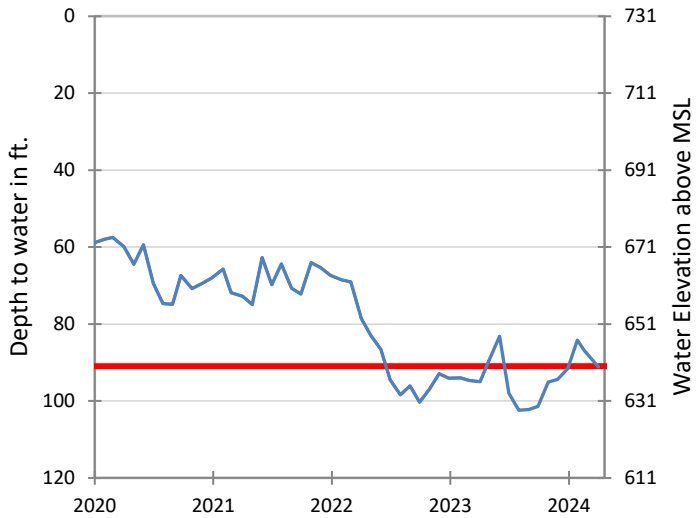
***Recorder well #14 experienced issues during March 2024 and no data are reported.**

(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

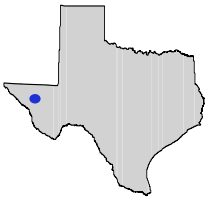




The late March water level measurement in this Edwards (Balcones Fault Zone) Aquifer well, located at an elevation of 731 feet above mean sea level, was 91.20 feet below land surface, or 639.80 feet above mean sea level. This was 4.30 feet below last month's measurement, 3.80 feet above last year's measurement, and 44.56 feet below the initial measurement recorded in 1932.

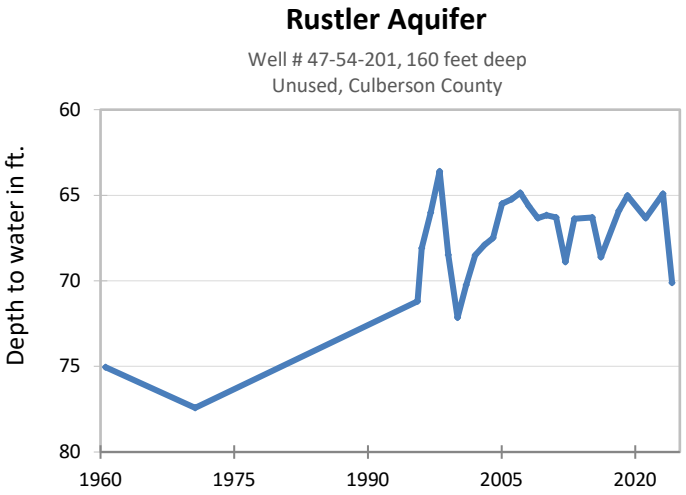
Water levels below the red line indicate periods in which Edwards Aquifer Authority Stage 3 drought restrictions are in effect. The Edwards Aquifer Authority declared an increase from Stage 2 to Stage 3 Critical Period Management permit reductions as of April 3, 2024, as a result of well J-17 water levels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

The Rustler Aquifer is a minor aquifer located in Brewster, Culberson, Jeff Davis, Loving, Pecos, Reeves, and Ward counties. The aquifer consists of carbonates and evaporates of the Rustler Formation, which is the youngest unit of the late Permian Ochoan Series. The Rustler Formation is 250 to 670 feet thick and extends downdip into the subsurface toward the center of the Delaware Basin to the east. It becomes thinner along the eastern margin of the Delaware Basin and across the Central Basin Platform and Val Verde Basin. There it conformably overlies the Salado Formation. Groundwater occurs in partly dissolved dolomite, limestone, and gypsum. Most of the water production comes from fractures and solution openings in the upper part of the formation. Although some parts of the aquifer produce freshwater containing less than 1,000 milligrams per liter of total dissolved solids, the water is generally slightly to moderately saline and contains total dissolved solids ranging between 1,000 and 4,600 milligrams per liter. The water is primarily for irrigation, livestock, and water-flooding operations in oil-producing areas.



The initial measurement of 75.05 feet below land surface was recorded by the USGS in July of 1960. A decade later, the Texas Water Development Board recorded a water level of 77.42 feet below land surface and began collecting near-annual measurements in 1995. The period of record reveals an increasing trend in water levels from the 1960 through the 1990s. From then on, water levels fluctuate between around 65 feet and 70 feet from land surface. These variations are likely attributed to changes in water use patterns and local area pumping.

Photo of well #47-54-201 general setting (left) and well head (right)

1. Peter G. George, Pl
https://www.twdb