

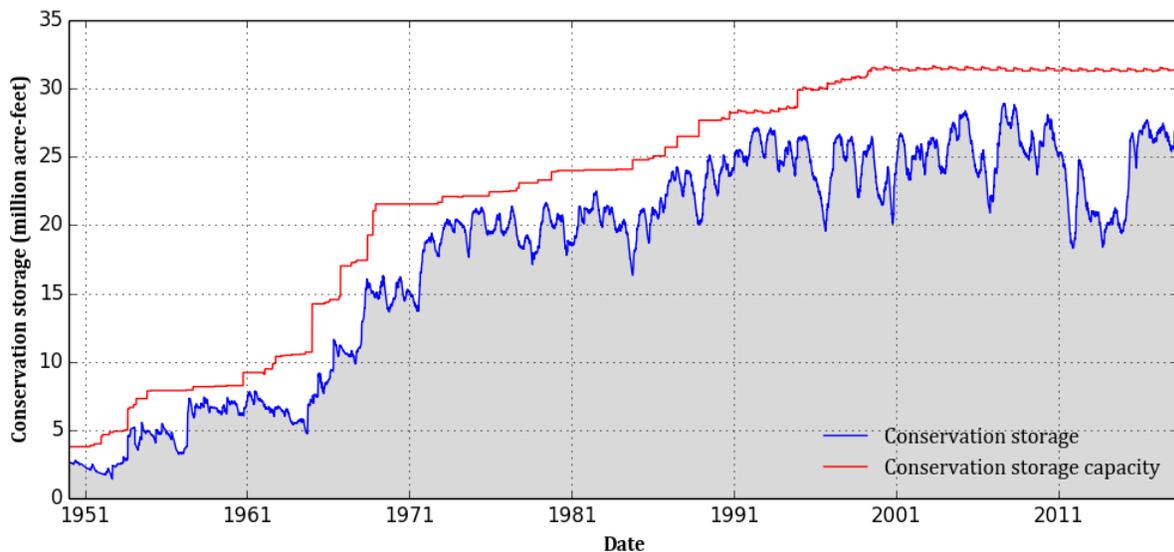
May 2018 RESERVOIR STORAGE*

At the end of May 2018, total conservation storage* in 117 of the state’s major water supply reservoirs plus Elephant Butte reservoir in New Mexico was 25.19 million acre-feet or 81 percent of total conservation storage capacity. This is approximately 0.69 million acre-feet less than a month ago and 1.45 million acre-feet less than storage at this time last year.

Nineteen (19) reservoirs held 100 percent of conservation storage capacity, primarily in the North Central (10 reservoirs) and East (8 reservoirs) regions. Three reservoirs, Palo Duro (1 percent), Twin Buttes (7 percent), and O. C. Fisher (9 percent) remained below 10 percent full.

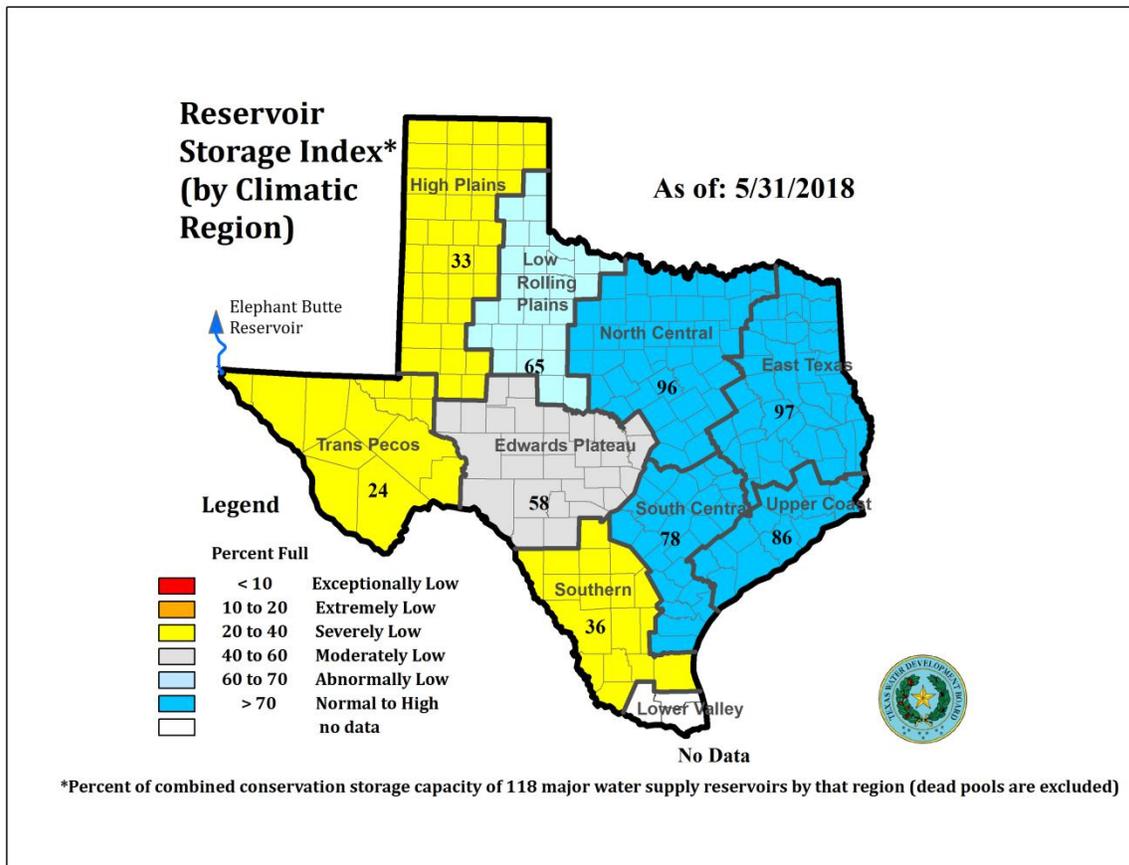
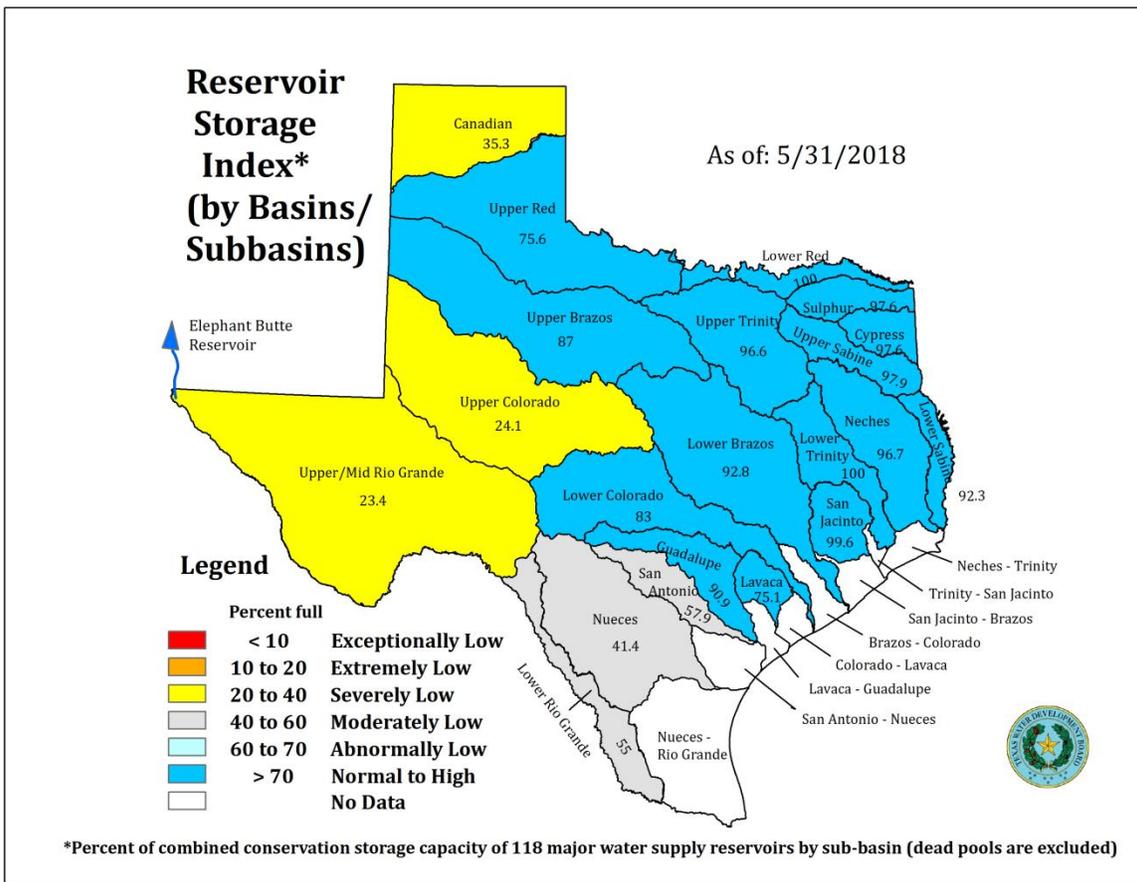
Total combined storage was at or above normal (storage ≥70 percent) in the East (97 percent), North Central (96 percent), Upper Coast (86 percent), and South Central (78 percent) regions. The High Plains (33 percent) and Trans-Pecos (24 percent) regions had the lowest percentage of storage. Overall, storage increased in one but decreased in eight regions over the past month.

Statewide monitored major water supply reservoir conservation storage



*Storage is based on end of the month data in 117 major reservoirs that represent 96 percent of the total conservation storage capacity of 188 major water supply reservoirs in Texas plus Elephant Butte reservoir in New Mexico. Major reservoirs are defined as having a conservation storage capacity of 5,000 acre-feet or greater. Only the Texas share of storage in border reservoirs is counted.

MAY 2018 RESERVOIR CONDITIONS



*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	Conservation storage capacity		Conservation storage end of May 2018		Change since end of April 2018		Change since end of May 2017	
	(acre-feet)	(%)	(acre-feet)	(%)	(acre-feet)**	(%)	(acre-feet)**	(%)
HIGH PLAINS								
MacKenzie Reservoir	46,450		6,370	14	-137	-0	-616	-1
Meredith, Lake	500,000		197,448	39	-1,154	-0	74,044	15
Palo Duro Reservoir	61,066		545	1	134	0	-274	-0
White River Lake	29,880		4,900	16	33	0	-1,732	-6
TOTAL	637,396		209,263	33	-1,124	-0	71,422	11
LOW ROLLING PLAINS								
Abilene, Lake	7,900		3,723	47	-214	-3	-3,998	-51
Alan Henry Reservoir	94,808		79,552	84	3,242	3	-7,017	-7
Champion Creek Reservoir	41,580		19,075	46	505	1	-1,847	-4
Coleman, Lake	38,075		32,172	84	-784	-2	-5,687	-15
Colorado City, Lake	30,758		10,878	35	-533	-2	-3,738	-12
Fort Phantom Hill, Lake	70,030		57,968	83	-1,617	-2	-12,062	-17
Greenbelt Lake	59,968		14,160	24	-456	-1	-2,448	-4
Hords Creek Lake	8,443		4,930	58	-186	-2	-2,007	-24
J. B. Thomas, Lake	199,931		82,624	41	-3,217	-2	-33,894	-17
Kemp, Lake	245,307		206,502	84	1,510	1	-38,805	-16
Millers Creek Reservoir	26,768		22,060	82	-802	-3	-3,209	-12
North Fork Buffalo Creek Reservoir	15,400		12,556	82	2,068	13	120	1
Stamford, Lake	51,570		41,897	81	-2,078	-4	-3,706	-7
Sweetwater, Lake	12,267		2,098	17	-137	-1	-850	-7
TOTAL	902,805		590,195	65	-2,699	-0	-119,148	-13
NORTH CENTRAL								
Amon G Carter, Lake	19,266		19,266	100	0	0	56	0
Aquilla Lake	43,243		42,353	98	-736	-2	-890	-2
Arlington, Lake	40,188		36,749	91	-1,890	-5	1,106	3
Arrowhead, Lake	230,359		205,220	89	-2,453	-1	-9,774	-4
Bardwell Lake	46,122		45,684	99	-438	-1	-438	-1
Belton Lake	435,225		411,675	95	3,522	1	-23,550	-5
Benbrook Lake	85,648		80,620	94	-5,028	-6	13,392	16
Bonham, Lake	11,027		10,921	99	146	1	2,841	26
Bridgeport, Lake	366,236		352,240	96	-1,035	-0	-10,043	-3
*Brownwood, Lake	128,839		100,177	78	-1,537	-1	-28,662	-22
*Cisco, Lake	29,003		22,964	79	-447	-2	-2,566	-9
Crook, Lake	9,195		9,091	99	0	0	32	0
Eagle Mountain Lake	179,880		172,643	96	-7,065	-4	169	0
Georgetown, Lake	36,823		24,453	66	516	1	-9,798	-27
Graham, Lake	45,288		41,986	93	-694	-2	-1,248	-3
Granbury, Lake	132,949		126,371	95	-3,178	-2	-3,098	-2
Granger Lake	51,822		51,822	100	0	0	0	0
Grapevine Lake	164,703		161,722	98	-2,981	-2	-1,881	-1
*Halbert, Lake	6,033		5,263	87	-121	-2	157	3
Hubbard Creek Reservoir	318,067		259,662	82	-4,984	-2	-46,411	-15
Hubert H Moss Lake	24,058		23,681	98	-32	-0	75	0
Jim Chapman Lake (Cooper)	260,332		248,262	95	-7,820	-3	45,905	18
Joe Pool Lake	175,358		174,030	99	-295	-0	2,362	1
Kickapoo, Lake	86,345		72,026	83	790	1	-2,452	-3
Lavon Lake	406,388		398,597	98	-7,791	-2	13,632	3
Leon, Lake	27,762		21,986	79	-817	-3	-1,245	-4
Lewisville Lake	563,228		544,491	97	-9,325	-2	-5,052	-1
Limestone, Lake	203,780		186,864	92	-5,165	-3	-16,916	-8
*Lost Creek Reservoir	11,950		11,824	99	13	0	168	1
*Mineral Wells, Lake	5,273		4,948	94	-163	-3	-154	-3
Mountain Creek, Lake	22,850		22,850	100	0	0	0	0

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of lake or reservoir	Conservation storage capacity	Conservation storage end of May 2018		Change since end of April 2018		Change since end of May 2017	
	(acre-feet)	(acre-feet)	(%)	(acre-feet)**	(%)	(acre-feet)**	(%)
<i>(North Central continued)</i>							
Navarro Mills Lake	49,827	49,827	100	330	1	142	0
New Terrell City Lake	8,583	8,583	100	0	0	0	0
Nocona, Lake (Farmers Crk)	21,444	21,418	100	-26	-0	134	1
Palo Pinto, Lake	26,766	22,538	84	-948	-4	-2,009	-8
Pat Cleburne, Lake	26,008	25,711	99	-282	-1	683	3
*Pat Mayse Lake	113,683	113,683	100	0	0	0	0
Possum Kingdom Lake	538,139	517,320	96	1,388	0	-18,673	-3
Proctor Lake	54,762	42,334	77	-1,108	-2	-12,428	-23
Ray Hubbard, Lake	439,559	428,206	97	-4,096	-1	1,834	0
Ray Roberts, Lake	788,167	785,050	100	-3,117	-0	3,672	0
Richland-Chambers Reservoir		no data		-301,933	-38	-291,255	-37
Squaw Creek, Lake	151,250	151,250	100	0	0	0	0
Stillhouse Hollow Lake	227,771	199,337	88	-1,154	-1	-28,434	-12
Tawakoni, Lake	871,685	860,270	99	-8,827	-1	64,062	7
Texoma, Lake (Texas)	1,258,113	1,258,113	100	48,015	4	0	0
Texoma, Lake (Texas & Oklahoma)	2,525,281	2,678,694	100	258,492	10	-44,554	-2
Waco, Lake	189,418	184,113	97	4,359	2	-5,305	-3
Waxahachie, Lake	10,780	10,658	99	-51	-0	121	1
Weatherford, Lake	17,812	16,922	95	-457	-3	221	1
Whitney, Lake	553,344	516,139	93	7,062	1	18,420	3
Worth, Lake	33,495	29,830	89	-264	-1	-363	-1
TOTAL	9,547,846	9,131,743	96	-320,117	-3	-353,461	-4
EAST							
Athens, Lake	29,503	29,429	100	-74	-0	-74	-0
B A Steinhagen Lake	66,961	61,882	92	-3,400	-5	2,814	4
Bob Sandlin, Lake	190,822	190,822	100	0	0	0	0
Caddo, Lake	29,898	29,898	100	0	0	0	0
Cedar Creek Reservoir in Trinity	644,686	636,865	99	-2,598	-0	-3,249	-1
Cherokee, Lake	40,094	40,074	100	-20	-0	-20	-0
Conroe, Lake	410,988	408,688	99	-2,108	-1	-2,300	-1
Cypress Springs, Lake	66,756	66,368	99	-291	-0	-388	-1
Fork Reservoir, Lake	605,061	584,708	97	-7,752	-1	-20,353	-3
Houston County Lake	17,113	16,920	99	-193	-1	-193	-1
Jacksonville, Lake	25,670	25,670	100	0	0	0	0
*Livingston, Lake	1,785,348	1,785,348	100	0	0	0	0
Martin, Lake	75,726	73,759	97	-1,571	-2	-1,819	-2
Monticello, Lake	34,740	29,683	85	-271	-1	-4,307	-12
Murvaul, Lake	38,285	37,192	97	-1,093	-3	-1,093	-3
Nacogdoches, Lake	39,522	37,594	95	-911	-2	-1,928	-5
O' the Pines, Lake	268,566	254,777	95	13,414	5	-13,789	-5
Palestine, Lake	367,303	361,325	98	-5,978	-2	-5,978	-2
Sam Rayburn Reservoir	2,857,077	2,757,499	97	-99,578	-3	-39,000	-1
Striker, Lake	16,934	16,932	100	-2	-0	-2	-0
*Sulphur Springs, Lake	17,747	15,620	88	-486	-3	148	1
Toledo Bend Reservoir (Texas)	2,236,450	2,064,572	92	-76,655	-3	-171,878	-8
Toledo Bend Reservoir (Texas & Louisiana)	4,472,900	4,133,244	92	-153,310	-3	-359,592	-8
Tyler, Lake	72,073	71,462	99	-611	-1	-611	-1
Wright Patman Lake	310,382	310,382	100	0	0	18,071	6
TOTAL	10,247,705	9,907,469	97	-190,178	-2	-245,949	-2

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of lake or reservoir	Conservation storage capacity (acre-feet)	Conservation storage end of May 2018		Change since end of April 2018		Change since end of May 2017	
		(acre-feet)	(%)	(acre-feet)**	(%)	(acre-feet)**	(%)
TRANS-PECOS							
Elephant Butte Reservoir (Texas)	852,491	146,821	17	-24,090	-3	-69,560	-8
Elephant Butte Reservoir (Texas & New Mexico)	1,973,358	339,863	17	-55,763	-3	-161,018	-8
Red Bluff Reservoir	151,110	95,903	63	-12,848	-9	-25,281	-17
TOTAL	1,003,601	242,724	24	-36,938	-4	-94,841	-9
EDWARDS PLATEAU							
*Amistad Reservoir (Texas)	1,840,849	1,348,756	73	78,980	4	-100,729	-5
*Amistad Reservoir (Texas & Mexico)	3,275,532	1,734,346	53	-111,916	-3	127,061	4
Brady Creek Reservoir	28,808	15,295	53	171	1	-3,154	-11
Buchanan, Lake	816,904	754,982	92	-13,978	-2	-53,468	-7
E. V. Spence Reservoir	517,272	57,843	11	-2,098	-0	-17,652	-3
Inks, Lake	13,962	12,952	93	60	0	157	1
Lyndon B Johnson, Lake	115,249	110,636	96	427	0	244	0
Marble Falls, Lake	6,901	6,836	99	54	1	11	0
Nasworthy	9,615	7,576	79	-460	-5	-534	-6
Oak Creek Reservoir	39,210	17,726	45	-360	-1	-5,205	-13
O. C. Fisher Lake	119,445	10,693	9	-136	-0	-5,320	-4
*O. H. Ivie Reservoir	554,340	94,796	17	-2,744	-0	-41,229	-7
Twin Buttes Reservoir	182,454	12,786	7	2,255	1	-10,168	-6
TOTAL	4,245,009	2,450,877	58	62,171	1	-237,047	-6
SOUTH CENTRAL							
*Austin, Lake	23,972	22,757	95	107	0	123	1
Canyon Lake	378,781	347,459	92	-1,559	-0	-29,595	-8
*Coledo Creek Reservoir	31,040	24,967	80	-1,751	-6	-3,508	-11
Medina Lake	254,823	147,494	58	-1,746	-1	-79,896	-31
Somerville Lake	147,104	145,589	99	-1,515	-1	-1,515	-1
Travis, Lake	1,113,348	834,909	75	-41,460	-4	-243,874	-22
TOTAL	1,949,068	1,523,175	78	-47,924	-2	-358,265	-18
UPPER COAST							
Houston, Lake	120,686	120,686	100	0	0	0	0
Texana, Lake	159,566	119,766	75	-8,295	-5	-35,236	-22
TOTAL	280,252	240,452	86	-8,295	-3	-35,236	-13
SOUTHERN							
Choke Canyon Reservoir	662,820	180,837	27	-3,896	-1	-67,733	-10
Corpus Christi, Lake	256,062	199,666	78	-15,490	-6	-24,617	-10
*Falcon Reservoir (Texas)	1,551,007	516,015	33	-122,673	-8	12,634	1
*Falcon Reservoir (Texas & Mexico)	2,646,817	665,496	25	-131,591	-5	-32,682	-1
TOTAL	2,469,889	896,518	36	-142,059	-6	-79,716	-3
STATEWIDE TOTAL							
STATEWIDE TOTAL	31,283,571	25,192,416	81	-687,163	-2	-1,452,241	-5

* Conservation volume is used as conservation storage capacity, because the dead storage is unknown.

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

Note:

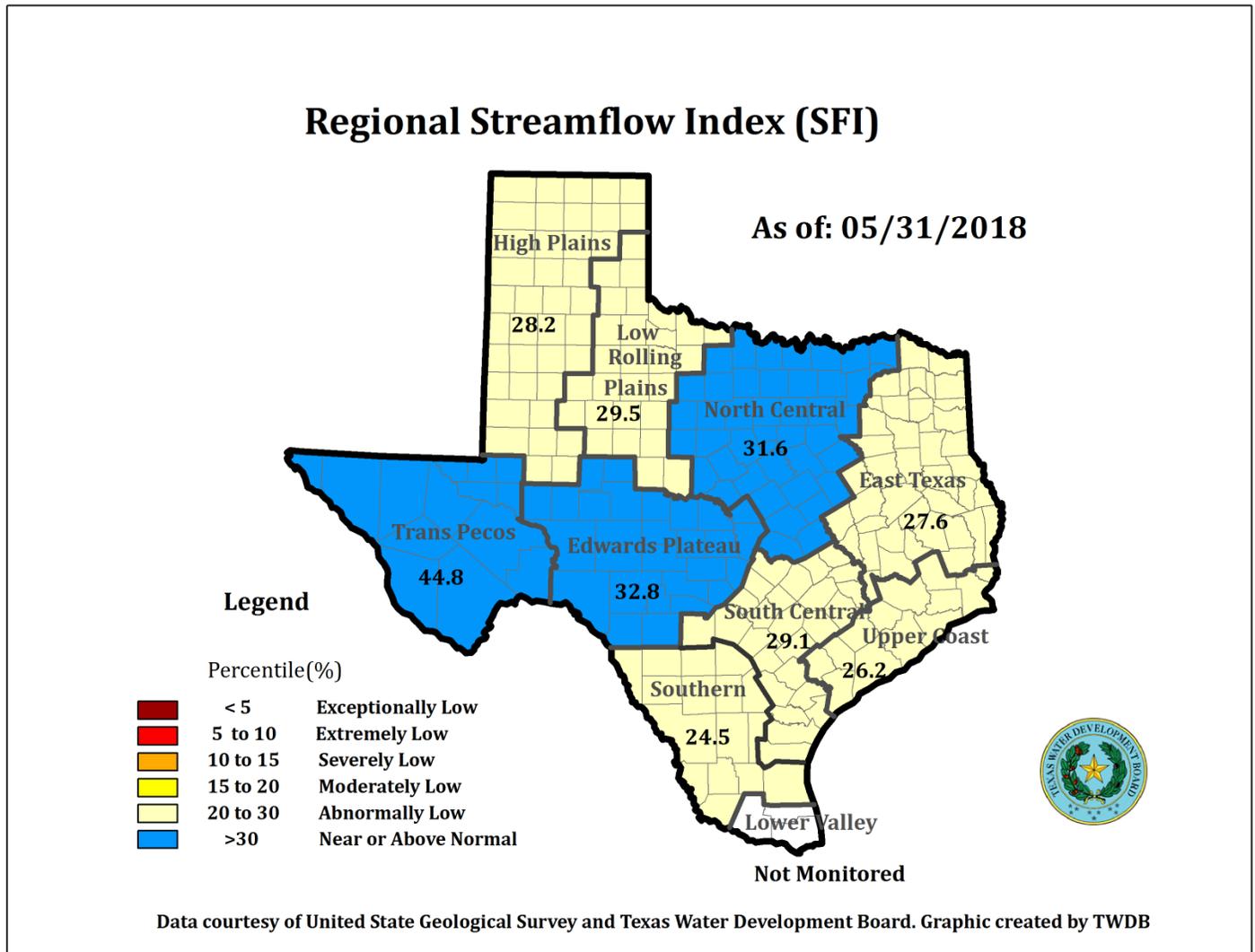
Conservation storage capacity is the space available to store water above the lowest outlet and below the top of conservation pool (some may have seasonal variations), or normal maximum operating level. Conservation storage refers to the volume of water held within the conservation storage space. Not included is any water in flood control storage (above the top of conservation pool or normal maximum operating level) or any water in the dead pool storage. Conservation storage percentage is based on the conservation storage capacity of the reservoir and the conservation storage in the reservoir on date shown. Percent change is given by $100 * (\text{current conservation storage} - \text{past conservation storage}) / \text{conservation storage capacity}$.

MAY 2018 STREAMFLOW CONDITIONS

The computed 30-day mean flow status for 29 reporting index stations monitored this month is presented below. Mean flow increased at four index stations, decreased at 24 stations, and remained unchanged at one station.

Streamflow Status	Number of Stations
Near or Above Normal (>30%)	13
Abnormally Low (20-30%)	4
Moderately Low (15-20%)	2
Severely Low (10-15%)	4
Extremely Low (5-10%)	5
Exceptionally Low (<5%)	1

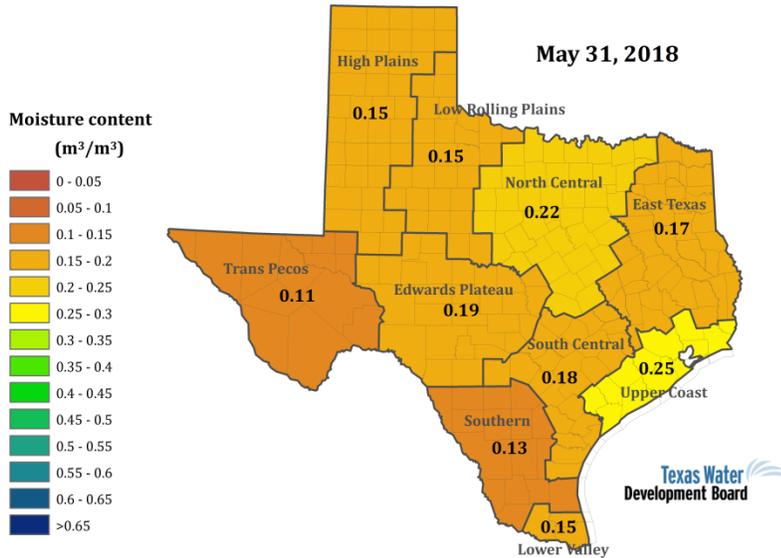
On a regional basis, as shown below, stream flows were abnormally low in all except the Trans-Pecos, Edwards Plateau and North Central regions where flows were near or above normal. Streamflow in the Lower Valley region is not monitored.



*Streamflow Index is defined as the percentile flow that exceeds a given percent of observed flows.

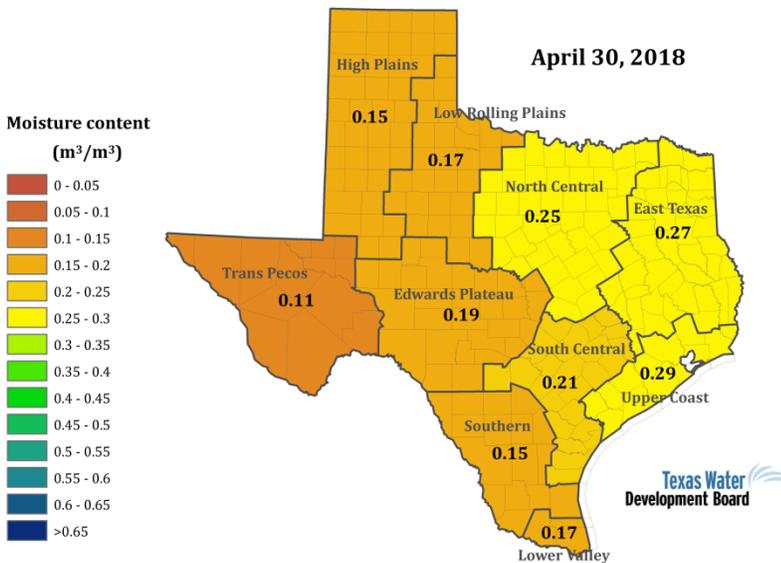
MAY 2018 SOIL MOISTURE CONDITIONS

Soil Moisture Condition



Data from NASA Soil Moisture Active Passive (SMAP) Level 4 - Model - Value Added Version 2
Soil moisture content is shown as volume of water per unit volume of bulk soil. Root zone: 0 to 1 meter depth.

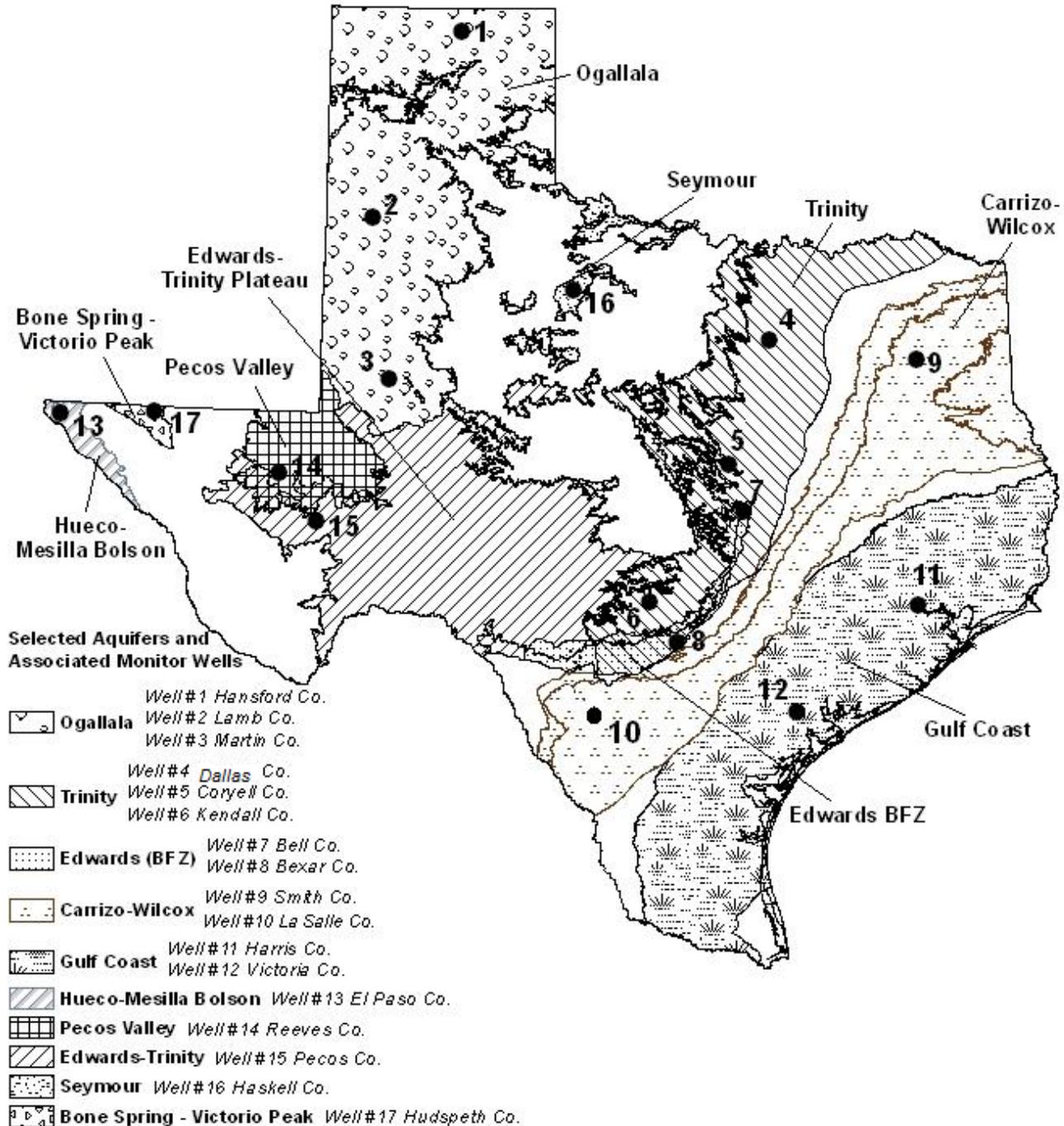
Soil Moisture Condition



Data from NASA Soil Moisture Active Passive (SMAP) Level 4 - Model - Value Added Version 2
Soil moisture content is shown as volume of water per unit volume of bulk soil. Root zone: 0 to 1 meter depth.

Soil moisture at the end of May 2018 (*top image*), as compared to that at the end of April 2018 (*bottom image*), decreased in seven out of the ten regions, ranging from -12 to -37 percent, with greatest decreases in East Texas region. Moisture condition remained unchanged in High Plains, Trans-Pecos, and Edwards Plateau regions.

May 2018 GROUNDWATER LEVELS IN OBSERVATION WELLS



Water-level measurements were available for all 17 key monitoring wells in the state. Water levels rose in 3 monitoring wells since the beginning of May, ranging from an increase of 0.30 feet in the Martin County Ogallala Aquifer well (#3 on map) to 5.01 feet in the La Salle County Carrizo-Wilcox Aquifer well (#10 on map). Water levels declined in 14 monitoring wells, ranging from a decline of 0.08 feet in the Hansford County Ogallala Aquifer well (#1 on map) to 18.40 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 76.81 feet below land surface or 654.19 feet above mean sea level. Water levels declined 5.81 feet below the Stage I critical management level for the San Antonio portion of the Edwards (Balcones Fault Zone) Aquifer. Consequently, drought restrictions have been in effect since May 21st.

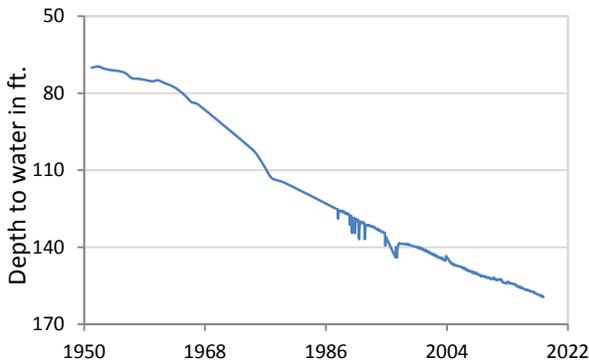
*IDs used in this publication on the aquifer map to indicate the monitoring well location (IDs 1 - 17) are different than the TWDB's six- or seven-digit state well identification number.

Monitoring Well	May	April	Month Change	Year Change	Historical Change	First Measured
(1) Hansford 0354301	159.28	159.20	-0.08	-1.01	-89.16	1951
(2) Lamb 1053602	148.66	148.56	-0.10	-1.25	-120.49	1951
(3) Martin 2739903	143.03	143.33	0.30	0.55	-38.14	1964
(4) Dallas 3319101	492.79	493.10	0.31	-0.62	-270.79	1954
(5) Coryell 4035404	524.60	522.43	-2.17	-8.26	-232.60	1955
(6) Kendall 6802609	136.70	133.47	-3.23	-22.24	-76.70	1975
(7) Bell 5804816	126.19	125.44	-0.75	-4.89	-2.68	2008
(8) Bexar 6837203	76.81	69.61	-7.20	-16.90	-30.17	1932
(9) Smith 3430907	433.06	431.00	-2.06	-2.55	-133.06	1977
(10) La Salle 7738103	514.99	520.00	5.01	-44.42	-261.92	2003
(11) Harris 6514409	191.78	191.42	-0.36	-0.81	-56.28*	1947**
(12) Victoria 8017502	32.62	32.17	-0.45	-1.59	1.38	1958
(13) El Paso 4913301	294.16	294.15	-0.01	0.61	-62.26	1964
(14) Reeves 4644501	170.35	169.12	-1.23	-4.84	-78.26	1952
(15) Pecos 5216802	210.42	192.02	-18.40	0.11	36.46	1976
(16) Haskell 2135748	46.65	46.43	-0.22	-0.23	-3.65	2002
(17) Hudspeth 4807516	153.12	148.49	-4.63	NA	-49.20	1966

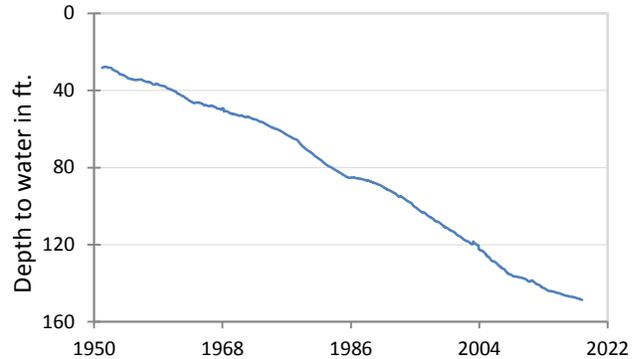
*Change since the original measurement of 135.5 feet below land surface in 1947 (**measurement not shown on the hydrograph)

May 2018 GROUNDWATER LEVELS IN OBSERVATION WELLS

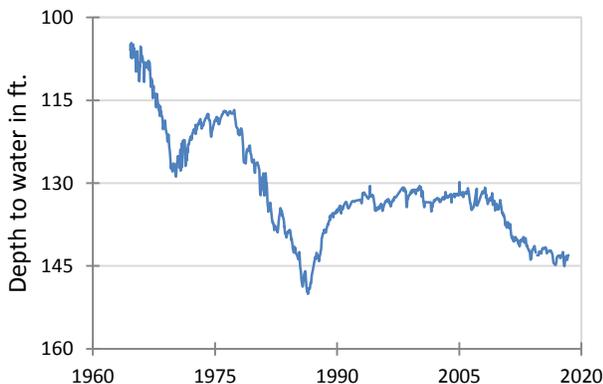
(1) State Well ID 03-54-301
Near Spearman, Hansford County
Ogallala Aquifer



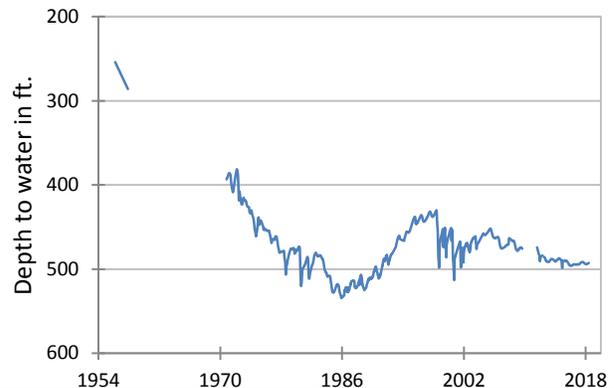
(2) State Well ID 10-53-602
Near Earth, Lamb County
Ogallala Aquifer



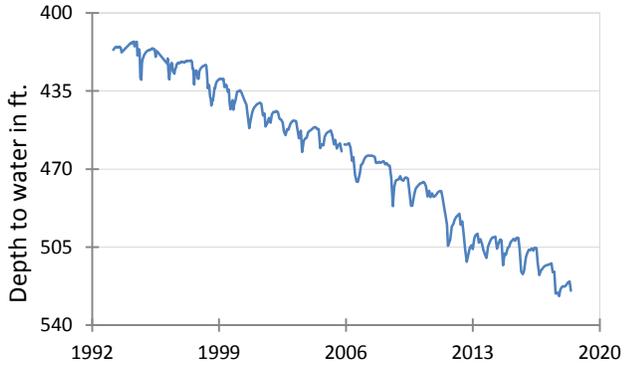
(3) State Well ID 27-39-903
Northwest Martin County
Ogallala Aquifer



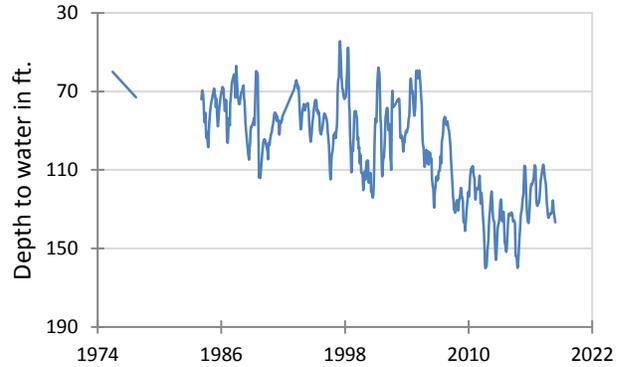
(4) State Well ID 33-19-101
Southeast Dallas, Dallas County
Twin Mountains Formation-Trinity Aquifer



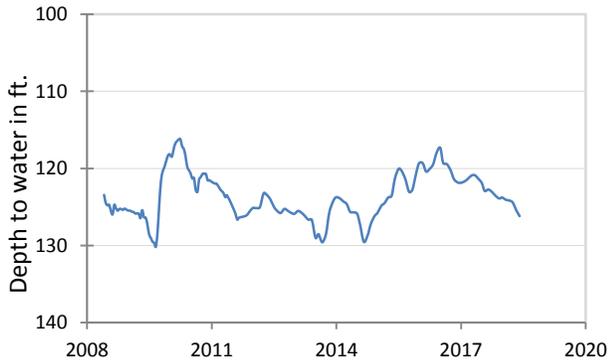
**(5) State Well ID 40-35-404
Gatesville, Coryell County
Hosston Formation-Trinity Aquifer**



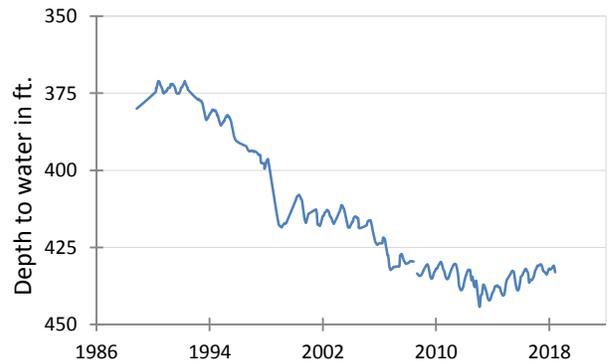
**(6) State Well ID 68-02-609
Waring, Kendall County
Cow Creek Formation-Trinity Aquifer**



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



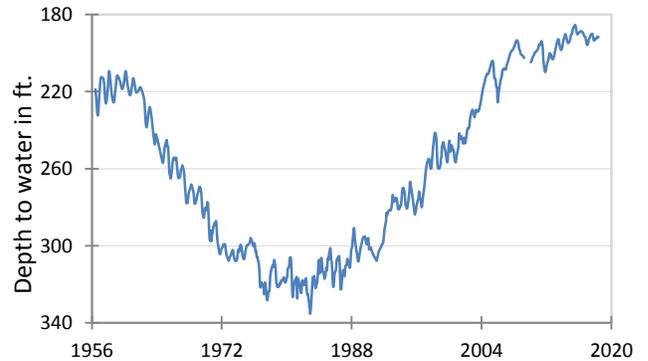
**(9) State Well ID 34-30-907
Red Springs, Smith County
Carrizo-Wilcox Aquifer**



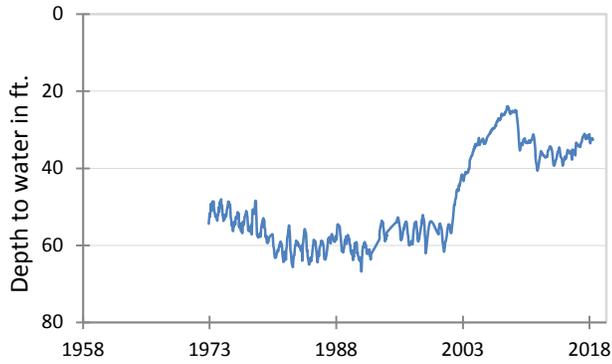
**(10) State Well ID 77-38-103
Near Cotulla, La Salle County
Carrizo-Wilcox Aquifer**



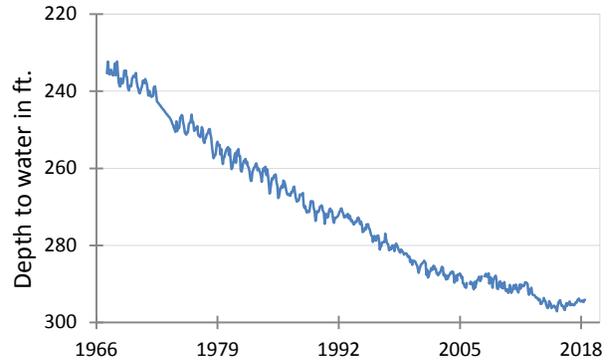
**(11) State Well ID 65-14-409
Alief, Harris County
Evangeline Formation-Gulf Coast Aquifer**



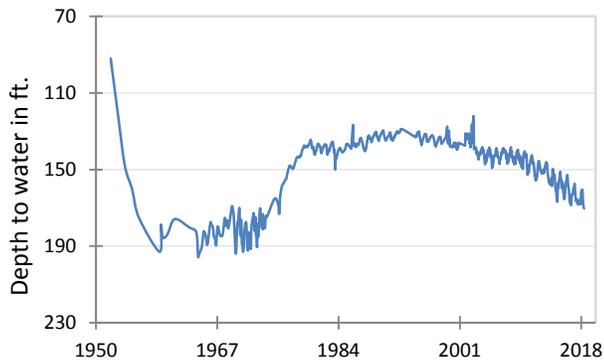
(12) State Well ID 80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



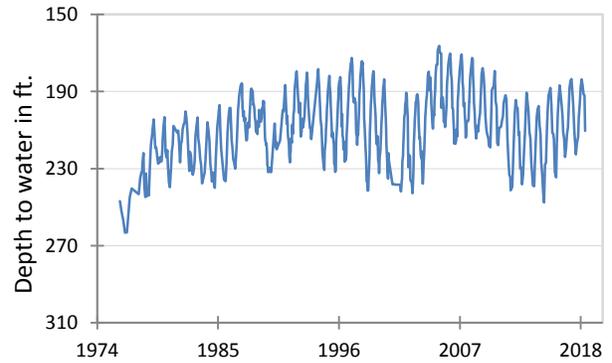
(13) State Well ID 49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolson Aquifer



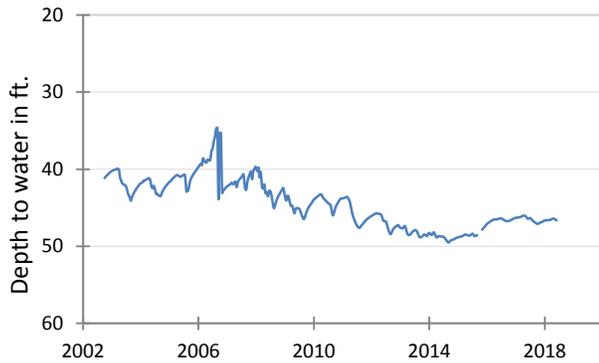
(14) State Well ID 46-44-501
Near Pecos, Reeves County
Pecos Valley Aquifer



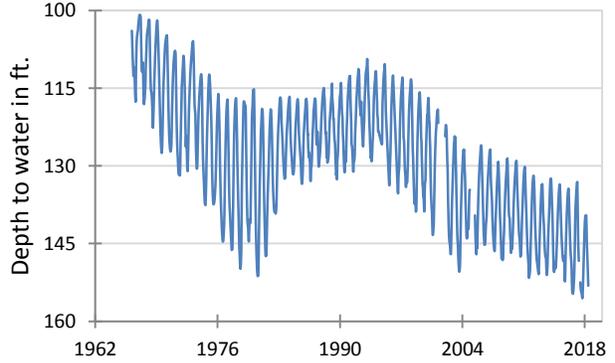
(15) State Well ID 52-16-802
Fort Stockton, Pecos County
Edwards-Trinity (Plateau) Aquifer



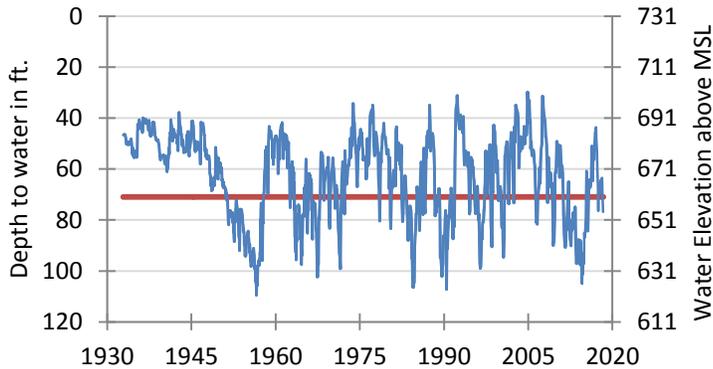
(16) State Well ID 21-35-748
Near O'Brien, Haskell County
Seymour Aquifer



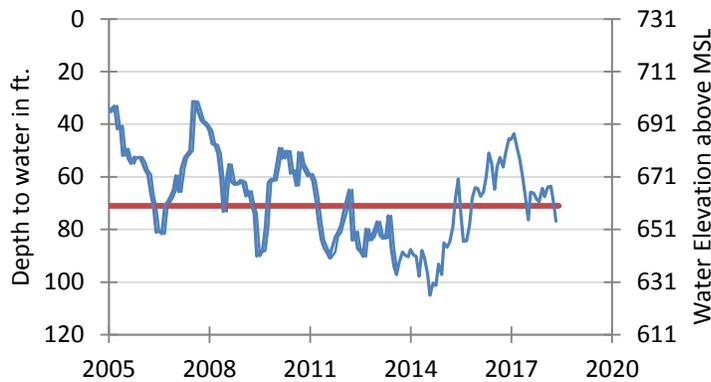
(17) State Well ID 48-07-516
Dell City, Hudspeth County
Bone Spring - Victorio Peak Aquifer



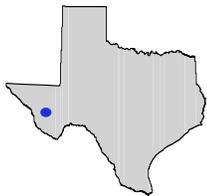
**(8) State Well ID 68-37-203 (J-17)
In San Antonio, Bexar County
Edwards (Balcones Fault Zone) Aquifer**



The late May water-level measurement in this Edwards (Balcones Fault Zone) Aquifer well, elevation 731 feet above mean sea level, was 76.81 feet below land surface, or 654.19 feet above mean sea level. This was 7.20 feet below last month's measurement, 16.90 feet below last year's measurement and 30.17 feet below the initial measurement recorded in 1932.



Water levels below the red line indicate periods in which Edwards Aquifer Authority Stage I drought restrictions are in effect.



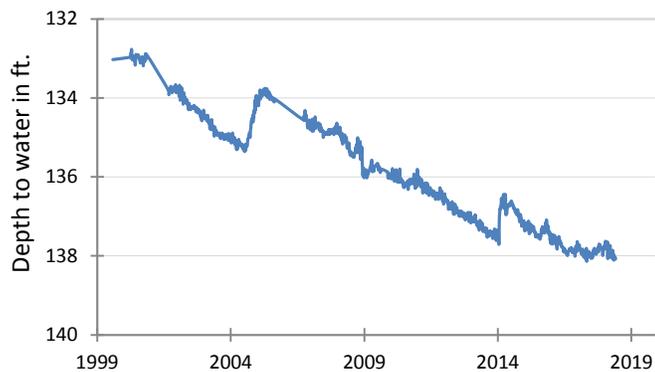
HYDROGRAPH OF THE MONTH

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

The Igneous Aquifer is a minor aquifer located in Far West Texas. The aquifer consists of volcanic rocks made of a complex series of welded pyroclastic rock, lava, volcanoclastic sediments. It includes more than 40 different named units as much as 6,000 feet thick in total. Freshwater saturated thickness averages about 1,800 feet. The best water-bearing zones are found in igneous rocks with primary porosity and permeability, such as vesicular basalts, interflow zones in lava successions, sandstone, conglomerate, and breccia. Although water in the aquifer is fresh and contains less than 1,000 milligrams per liter of total dissolved solids, elevated levels of silica and fluoride have been found in water from some wells, reflecting the igneous origin of the rock. Water is primarily used to meet municipal needs for the cities of Alpine, Fort Davis, and Marfa, as well as some agricultural needs. There have been no significant water-level declines in wells measured by the TWDB throughout the aquifer.

Igneous Aquifer

Well #5225209, 392 feet deep
unused, Jeff Davis County



The initial water-level measurement in this well was taken by the TWDB in August of 1999 at 133.03 feet below land surface. TWDB installed an automatic water-level recorder in this well in March of 2000 and has since collected near-weekly measurements. The period of record reveals a gradual decline of just over five feet in 18 years with the lowest water level of 138.14 feet below land surface measured in April of 2017.