

RESERVOIR STORAGE

May 2013

At the end of the month, total storage in 115 of the state's major water supply reservoirs was at 20.93 million acre-feet*, or 66% of their total conservation storage capacity. This is 183,344 acre-feet more than a month ago and 2.77 million acre-feet less than the storage at this time last year.

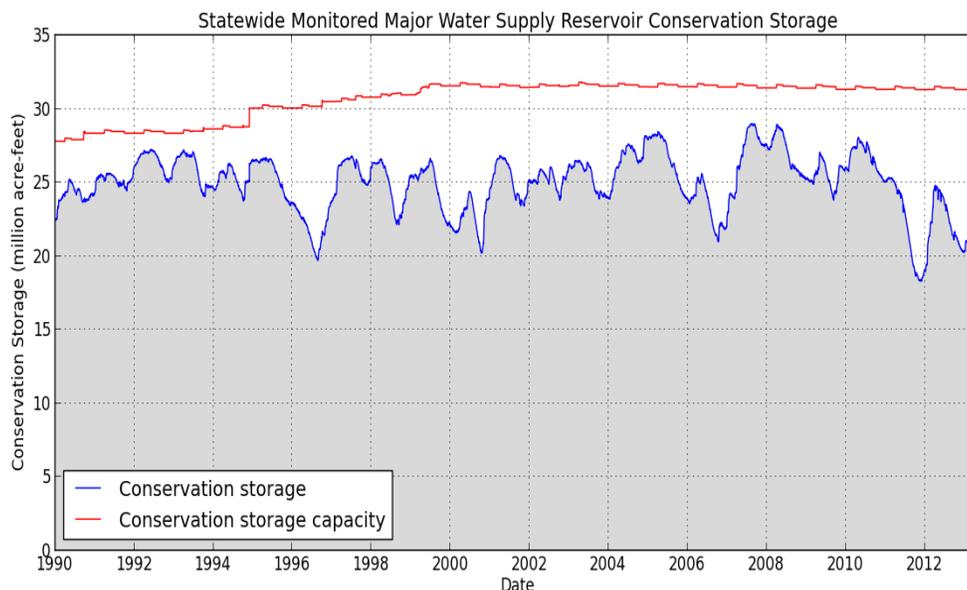
Eight reservoirs, most in the North Central and East regions, held 100% of conservation storage capacity. Twelve (12) reservoirs were below 10% full: Electra, J. B. Thomas and Meredith were effectively empty, Twin Buttes and White River were at 1%, Palo Duro and O. C. Fisher were at 2%, North Fork Buffalo Creek was at 3%, E.V. Spence and Medina were at 5%, Mackenzie was at 6%, and Champion Creek Reservoir was at 7% full.

Total combined storage was greater than 70% in the North Central (76%), Upper Coast (97%), and East (92%) regions. The regions with the lowest percentage storage were the High Plains (1%) and Trans-Pecos regions (18%). Storage over the last month declined in 5 regions and increased in 4 region.

Elephant Butte reservoir held 195,556 acre-feet, or 10% of storage capacity. This is 27,415 acft less than a month ago.

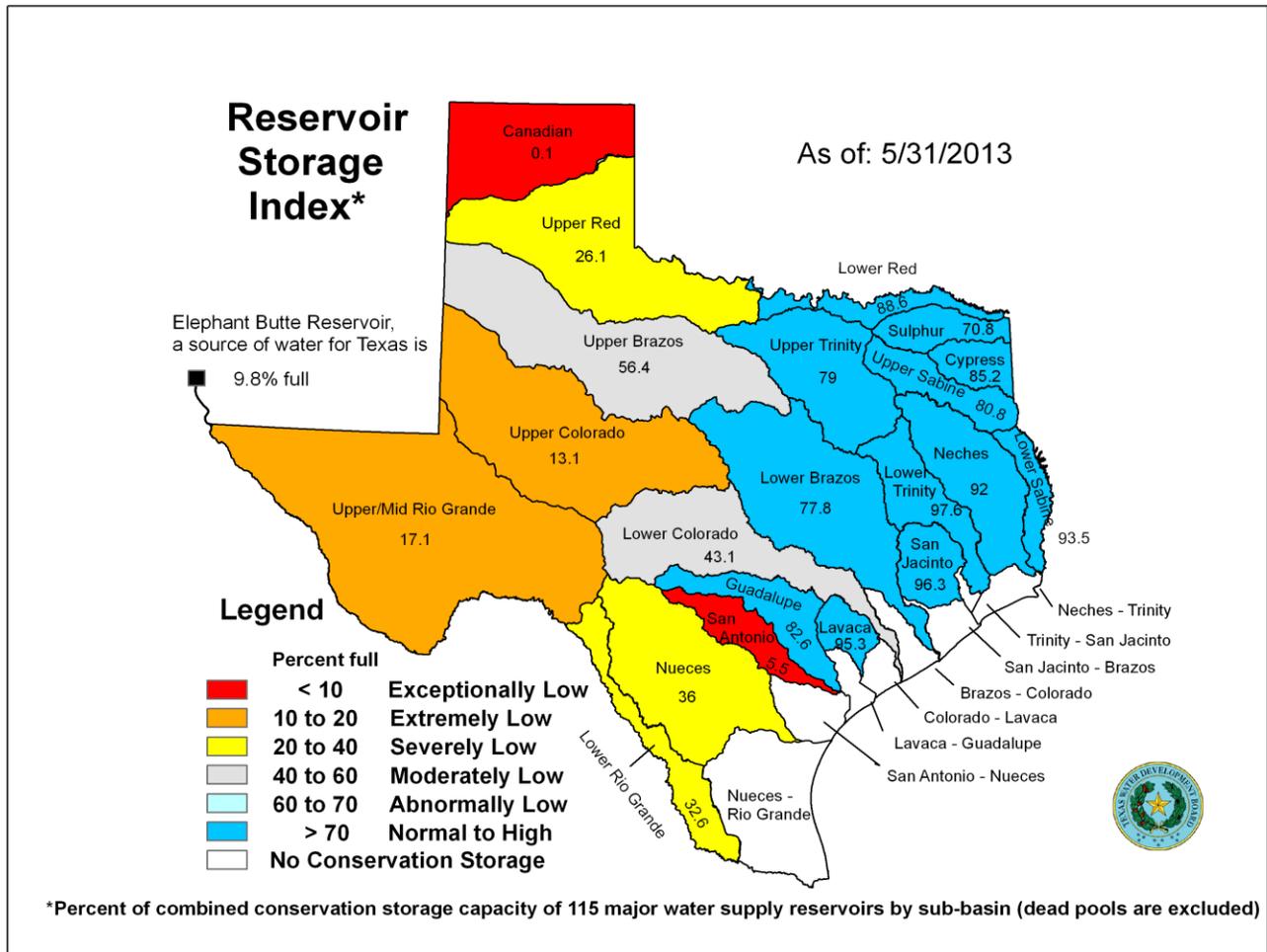
* Only the Texas share of storage in border reservoirs is counted.

CONSERVATION STORAGE DATA FOR



Figures are based on the end of the month data at 115 major reservoirs that represent 96 percent of the total conservation storage capacity of the 188 major water supply reservoirs in Texas. Major reservoirs are defined as having a conservation storage capacity of 5,000 acre-feet or greater.

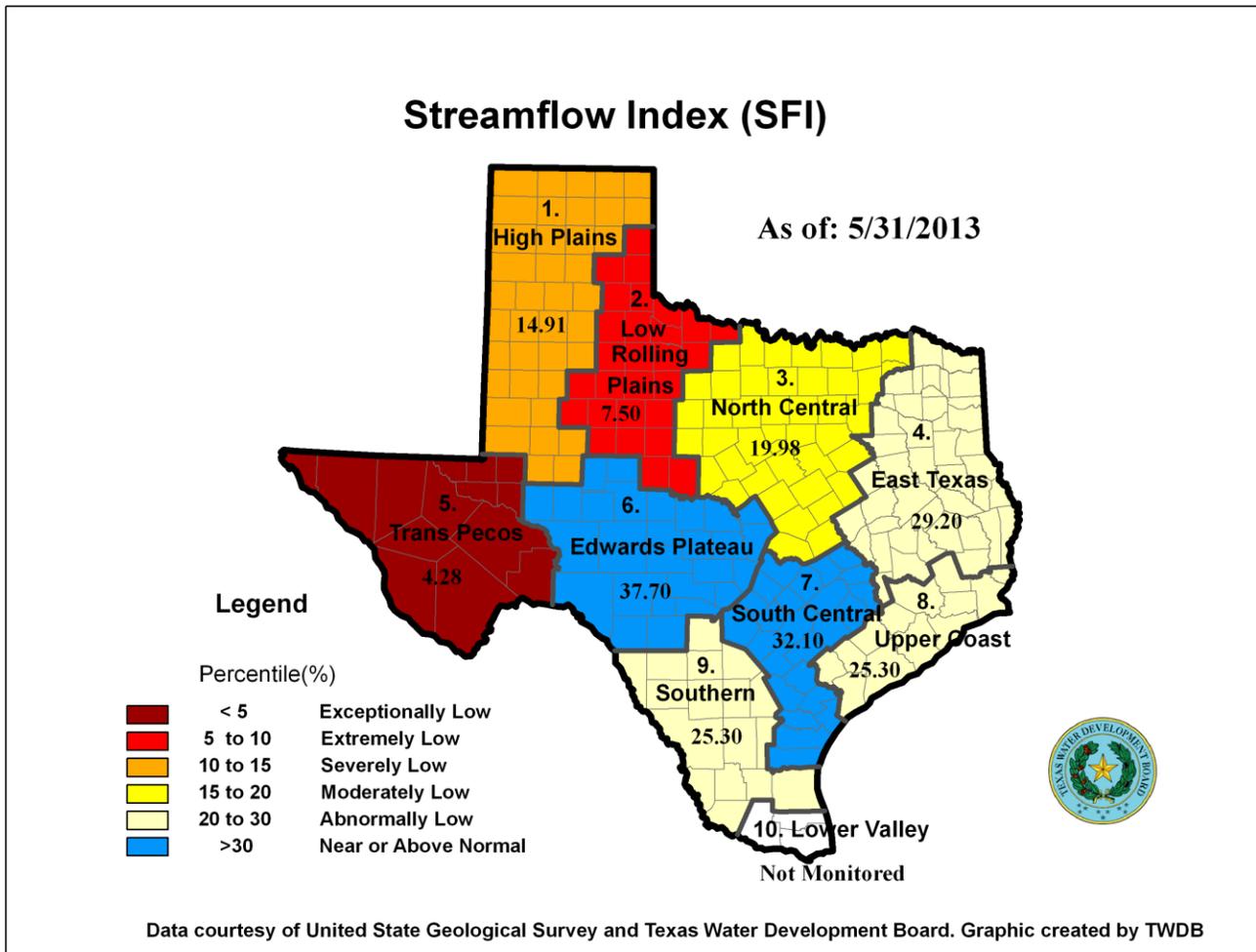
MAY RESERVOIR CONDITIONS



MAY STREAMFLOW CONDITIONS

Of 29 reporting index stations monitored this month, computed 30-day mean flows were exceptionally low (<5%) at 8 stations, extremely low (5-10%) at 3 stations, severely low (10-15%) at 4 stations, moderately low (15-20%) at 2 stations, abnormally low (20% - 30%) at 2 stations, and near normal (30% - 70%) at the remaining 10 stations. Compared to last month, flows have increased at 16 index stations and decreased at 11 stations.

On a regional basis, flows in this month were exceptionally low in Trans-Pecos region, extremely low in Low Rolling Plains region, severely low in High Plains region, moderately low in North Central region, abnormally low in East, Upper Coast, and Southern regions, and near normal or higher in Edwards Plateau and South Central regions. Streamflow in the Lower Valley region is not monitored.



CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	Conservation Storage Capacity (acre-feet)	Conservation Storage end of May 2013 (acre-feet)	(%)	Change since end of Apr 2013 (acre-feet)	(%)	Change since end of May 2012 (acre-feet)	(%)
HIGH PLAINS							
Palo Duro Reservoir	61,066	1,082	2	-175	-0	-2,288	-4
Meredith, Lake (Texas)	500,000	0	0	0	0	0	0
Meredith, Lake (Texas & Oklahoma)	779,556	0	0	0	0	0	0
MacKenzie Reservoir	46,450	2,769	6	-119	-0	-1,015	-2
White River Lake	29,880	295	1	-269	-1	-2,735	-9
TOTAL	637,396	4,146	1	-563	-0	-6,038	-1
LOW ROLLING PLAINS							
Greenbelt Lake	59,968	7,130	12	-169	-0	-3,013	-5
*Electra, Lake	5,626	0	0	0	0	-59	-1
N. Fork Buffalo Crk Reservoir	15,400	489	3	-163	-1	-1,525	-10
Kemp, Lake	268,811	54,272	20	-1,148	-0	-30,371	-11
Millers Creek Reservoir	26,768	5,743	21	-470	-2	-2,978	-11
Alan Henry Reservoir	94,808	64,377	68	-1,551	-2	-11,143	-12
Stamford, Lake	51,570	11,395	22	-408	-1	-10,995	-21
J B Thomas, Lake	199,931	435	0	-7	-0	-496	-0
Fort Phantom Hill, Lake	70,030	31,819	45	-1,285	-2	-4,106	-6
Sweetwater, Lake	12,267	3,195	26	-133	-1	-1,500	-12
Colorado City, Lake	30,758	9,575	31	-238	-1	24	0
Champion Creek Reservoir	41,580	3,079	7	-19	-0	-1,484	-4
Abilene, Lake	7,900	866	11	-139	-2	-1,638	-21
Coleman, Lake	38,075	16,047	42	-386	-1	772	2
Hords Creek Lake	8,443	2,646	31	-100	-1	127	2
TOTAL	931,935	211,068	23	-6,216	-1	-68,385	-7
NORTH CENTRAL							
Nocona, Lake (Farmers Crk)	21,444	10,721	50	377	2	-2,772	-13
Hubert H Moss Lake	24,058	21,792	91	672	3	-1,996	-8
Texoma, Lake (Texas)	1,258,113	1,186,038	94	73,803	6	-63,881	-5
Texoma, Lake (Texas & Oklahoma)	2,525,281	1,186,038	47	73,803	3	-63,881	-3
*Pat Mayse Lake	113,683	98,588	87	5,277	5	-14,701	-13
Kickapoo, Lake	85,825	32,322	38	-1,471	-2	-9,502	-11
Arrowhead, Lake	235,997	90,620	38	-1,170	-0	-34,828	-15
Bonham, Lake	11,027	10,942	99	1,745	16	995	9
Crook, Lake	9,195	9,133	99	1,011	11	396	4
Amon G Carter, Lake	19,266	11,358	59	-185	-1	-4,870	-25
Ray Roberts, Lake	788,167	674,815	86	-1,300	-0	419,886	53
Jim Chapman Lake (Cooper)	260,332	132,417	51	-3,327	-1	-111,741	-43
Graham, Lake	48,536	27,938	58	-1,046	-2	-11,673	-24
*Lost Creek Reservoir	11,950	9,789	82	-171	-1	-1,775	-15
Bridgeport, Lake	366,236	190,502	52	-10,970	-3	-111,579	-30
Lewisville Lake	563,228	438,965	78	-2,844	-1	-106,854	-19
Lavon Lake	406,388	272,785	67	7,985	2	-122,953	-30
Hubbard Creek Reservoir	318,027	81,612	26	-4,218	-1	-52,334	-16
Possum Kingdom Lake	540,340	382,292	71	-2,863	-1	-58,306	-11
*Mineral Wells, Lake	6,760	4,823	71	-132	-2	-1,734	-26
Weatherford, Lake	17,812	11,673	66	674	4	-4,756	-27
Eagle Mountain Lake	179,880	144,280	80	3,565	2	-23,508	-13
Worth, Lake	33,495	23,216	69	-832	-2	-4,528	-14
Grapevine Lake	164,703	129,557	79	-974	-1	-27,964	-17
Ray Hubbard, Lake	452,040	394,785	87	13,455	3	-44,452	-10
New Terrell City Lake	8,583	6,853	80	-47	-1	-1,730	-20
Daniel, Lake	9,515	3,549	37	-303	-3	-1,256	-13

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	Conservation Storage Capacity (acre-feet)	Conservation Storage end of May 2013 (acre-feet)	(%)	Change since end of Apr 2013 (acre-feet)	(%)	Change since end of May 2012 (acre-feet)	(%)
(NORTH CENTRAL CONTINUE)							
Palo Pinto, Lake	26,827	16,260	61	-1,134	-4	-9,573	-36
Benbrook Lake	85,648	77,869	91	3,072	4	551	1
Arlington, Lake	40,188	38,601	96	1,004	2	1,061	3
Joe Pool Lake	175,358	170,635	97	-295	-0	-2,952	-2
*Cisco, Lake	25,895	9,290	36	-251	-1	-1,634	-6
Leon, Lake	26,476	18,471	70	-563	-2	-3,907	-15
Granbury, Lake	128,046	82,160	64	-5,033	-4	-36,411	-28
Pat Cleburne, Lake	26,008	19,676	76	1,130	4	-5,290	-20
Waxahachie, Lake	10,780	9,593	89	25	0	-698	-6
Bardwell Lake	46,122	38,190	83	-1,087	-2	-7,870	-17
Proctor Lake	55,457	39,064	70	-379	-1	-13,393	-24
Whitney, Lake	553,344	382,736	69	1,135	0	-164,036	-30
Aquilla Lake	44,460	32,003	72	-50	-0	-11,663	-26
Navarro Mills Lake	49,827	46,536	93	45	0	-3,291	-7
*Halbert, Lake	6,033	4,578	76	-124	-2	-452	-7
Richland-Chambers Reservoir	1,087,839	845,142	78	-15,823	-1	-225,633	-21
*Brownwood, Lake	128,839	64,758	50	-2,317	-2	-6,674	-5
Waco, Lake	189,567	156,689	83	-2,238	-1	-31,119	-16
Limestone, Lake	208,014	161,925	78	-8,470	-4	-35,461	-17
Belton Lake	435,225	360,558	83	14,148	3	-74,667	-17
Stillhouse Hollow Lake	227,771	186,615	82	1,128	0	-32,254	-14
Georgetown, Lake	36,823	22,374	61	-199	-1	-12,424	-34
Granger Lake	50,779	50,779	100	0	0	0	0
Tawakoni, Lake	871,685	684,716	79	-1,632	-0	-166,794	-19
Mountain Creek, Lake	22,850	22,850	100	0	0	0	0
Squaw Creek, Lake	151,250	151,250	100	0	0	0	0
TOTAL	10,665,711	8,094,683	76	58,803	1	-1,243,000	-12
EAST							
Wright Patman Lake	310,382	267,837	86	39,531	13	-13,062	-4
*Sulphur Springs, Lake	17,747	15,357	87	296	2	-2,390	-13
Cypress Springs, Lake	66,756	62,019	93	343	1	-4,188	-6
Bob Sandlin, Lake	190,822	150,584	79	-777	-0	-17,504	-9
Caddo, Lake	29,898	29,898	100	0	0		
Martin, Lake	75,116	67,081	89	-579	-1	10,151	14
Monticello, Lake	34,740	34,740	100	0	0	0	0
Fork Reservoir, Lake	605,061	495,023	82	468	0	-60,178	-10
O the Pines, Lake	268,566	210,563	78	4,889	2	-1,314	-0
Cedar Creek Reservoir in Trinity	644,686	533,959	83	-9,137	-1	-94,511	-15
Athens, Lake	29,435	25,467	87	63	0	-1,348	-5
Palestine, Lake	373,199	371,004	99	3,064	1	1,971	1
Tyler, Lake	73,161	59,030	81	763	1	-2,836	-4
Murvaul, Lake	38,285	37,464	98	-821	-2	-821	-2
Jacksonville, Lake	25,670	25,531	99	-46	-0	116	0
Nacogdoches, Lake	39,522	37,468	95	-717	-2	4,214	11
Houston County Lake	17,113	16,753	98	-244	-1	128	1
Sam Rayburn Reservoir	2,857,077	2,608,253	91	-45,906	-2	-161,473	-6
Toledo Bend Reservoir (Texas)	2,245,752	2,099,468	93	-11,696	-1	42,983	2
Toledo Bend Reservoir (TX & LA)	4,472,900	2,099,468	47	-11,696	-0	42,983	1
*Livingston, Lake	1,785,348	1,785,348	100	0	0	0	0
B A Steinhagen Lake	66,961	61,173	91	-913	-1	-2,141	-3
Conroe, Lake	416,177	369,320	89	10,088	2	-545	-0
TOTAL	10,211,474	9,363,340	92	-11,331	-0	-302,748	-3

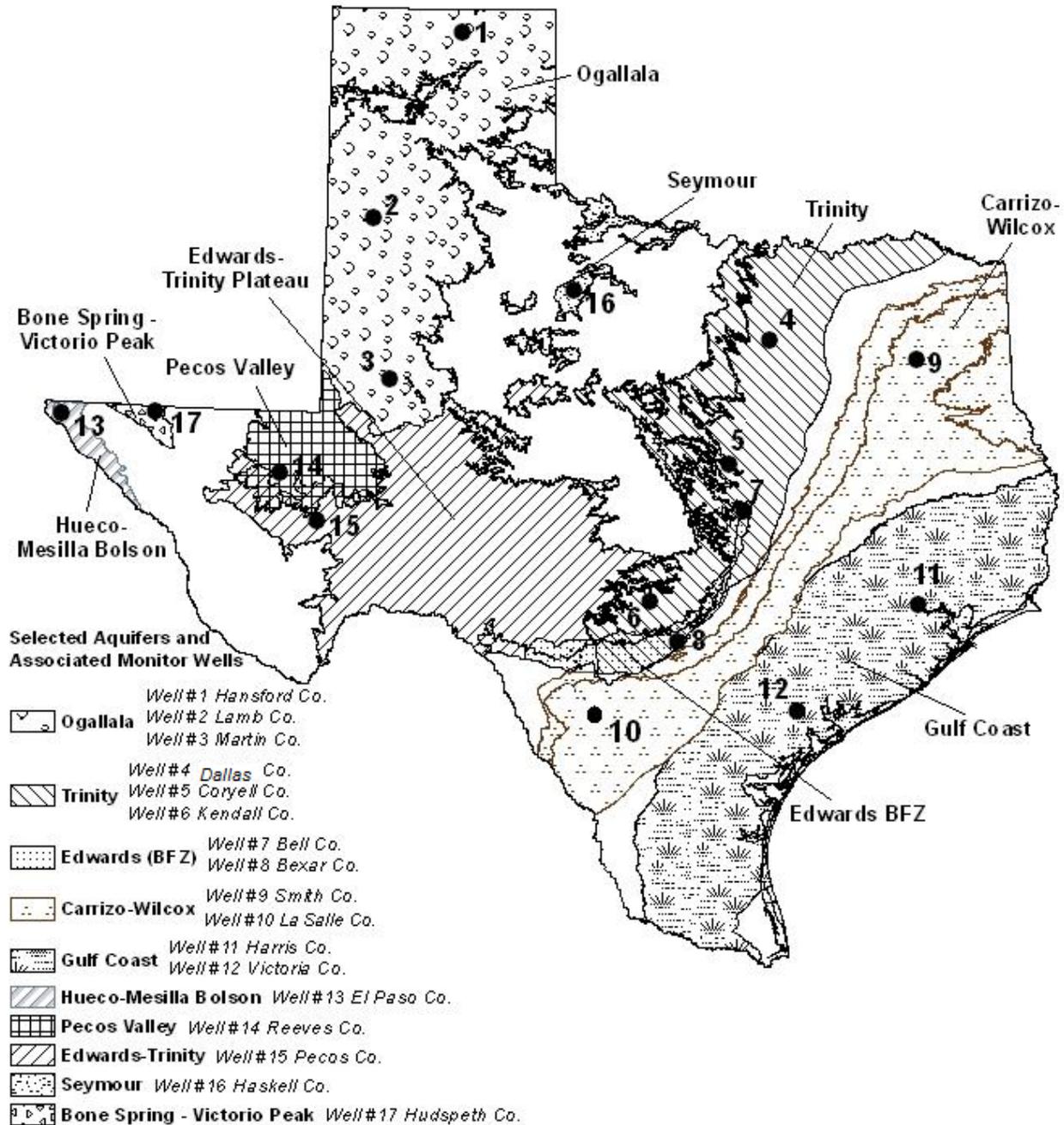
CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	Conservation Storage Capacity (acre-feet)	Conservation Storage end of May 2013 (acre-feet)	(%)	Change since end of Apr 2013 (acre-feet)	(%)	Change since end of May 2012 (acre-feet)	(%)
TRANS-PECOS							
Red Bluff Reservoir	149,179	26,119	18	-1,618	-1	2,707	2
TOTAL	149,179	26,119	18	-1,618	-1	2,707	2
EDWARDS PLATEAU							
Oak Creek Reservoir	39,210	10,061	26	-311	-1	-3,377	-9
E V Spence Reservoir	517,272	27,170	5	2,171	0	25,318	5
O C Fisher Lake	119,445	1,807	2			441	0
*O H Ivie Reservoir	554,340	105,523	19	-1,640	-0	14,002	3
Twin Buttes Reservoir	182,454	2,595	1	427	0	-2,552	-1
Brady Creek Reservoir	28,808	7,030	24	20	0	-1,317	-5
Buchanan, Lake	816,703	343,948	42	-4,271	-1	-99,710	-12
Inks, Lake	13,999	12,964	93	30	0	97	1
Lyndon B Johnson, Lake	108,496	108,496	100	0	0	0	0
*Amistad Reservoir (Texas)	1,840,849	677,914	37	30,913	2	-586,716	-32
*Amistad Reservoir (TX & Mexico)	3,275,532	677,914	21	30,913	1	-586,716	-18
TOTAL	4,221,576	1,297,508	31	27,339	1	-653,814	-15
SOUTH CENTRAL							
Travis, Lake	1,098,947	410,669	37	-1,363	-0	-138,986	-13
*Austin, Lake	24,032	23,465	98	651	3	681	3
Somerville Lake	147,104	124,973	85	-203	-0	-22,131	-15
Canyon Lake	378,781	309,687	82	6,285	2	-33,357	-9
Medina Lake	254,884	13,911	5	-172	-0	-44,749	-18
*Coletto Creek Reservoir	31,040	28,622	92	2,897	9	1,294	4
TOTAL	1,934,788	911,327	47	8,095	0	-237,248	-12
UPPER COAST							
Houston, Lake	102,876	102,876	100	0	0	1,576	2
Texana, Lake	159,566	152,206	95	-3,976	-2	1,434	1
TOTAL	262,442	255,082	97	-3,976	-2	3,010	1
SOUTHERN							
Choke Canyon Reservoir	695,262	282,098	41	-4,529	-1	-126,846	-18
Corpus Christi, Lake	256,961	60,412	24	18,800	7	-30,623	-12
*Falcon Reservoir (Texas)	1,551,007	427,987	28	98,540	6	-110,401	-7
*Falcon Reservoir (TX & Mexico)	2,646,817	427,987	16	98,540	4	-110,401	-4
TOTAL	2,503,230	770,497	31	112,811	5	-267,870	-11
STATE TOTAL							
	31,517,731	20,933,770	66	183,344	1	-2,773,386	-9
* Conservation volume is used as conservation storage capacity because the dead storage is unknown.							
Elephant Butte Reservoir	1,973,358	195,556	10	-27,415	-1	-171,938	-9

Note:

Conservation storage capacity is the space available to store water above the lowest outlet and below the top of conservation pool, 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 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*(current conservation storage - past conservation storage)/conservation storage capacity. Figures shown are for the Texas share of conservation storage in all reservoirs.

MAY 2013 GROUNDWATER LEVELS IN OBSERVATION WELLS



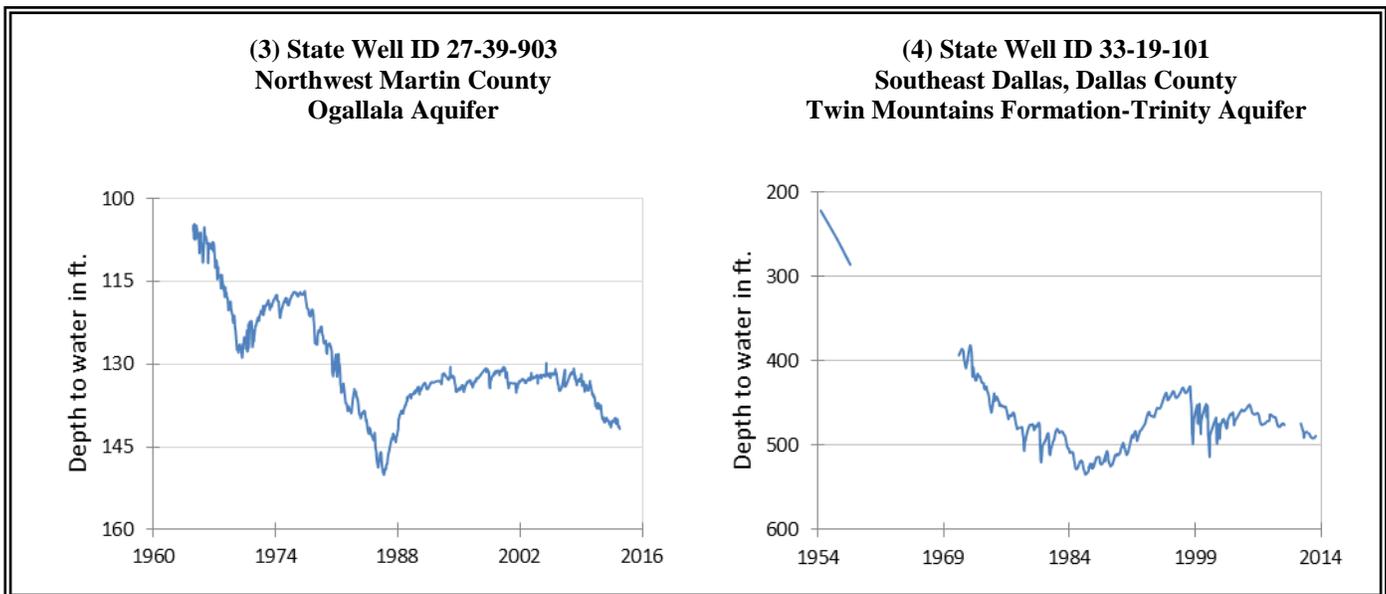
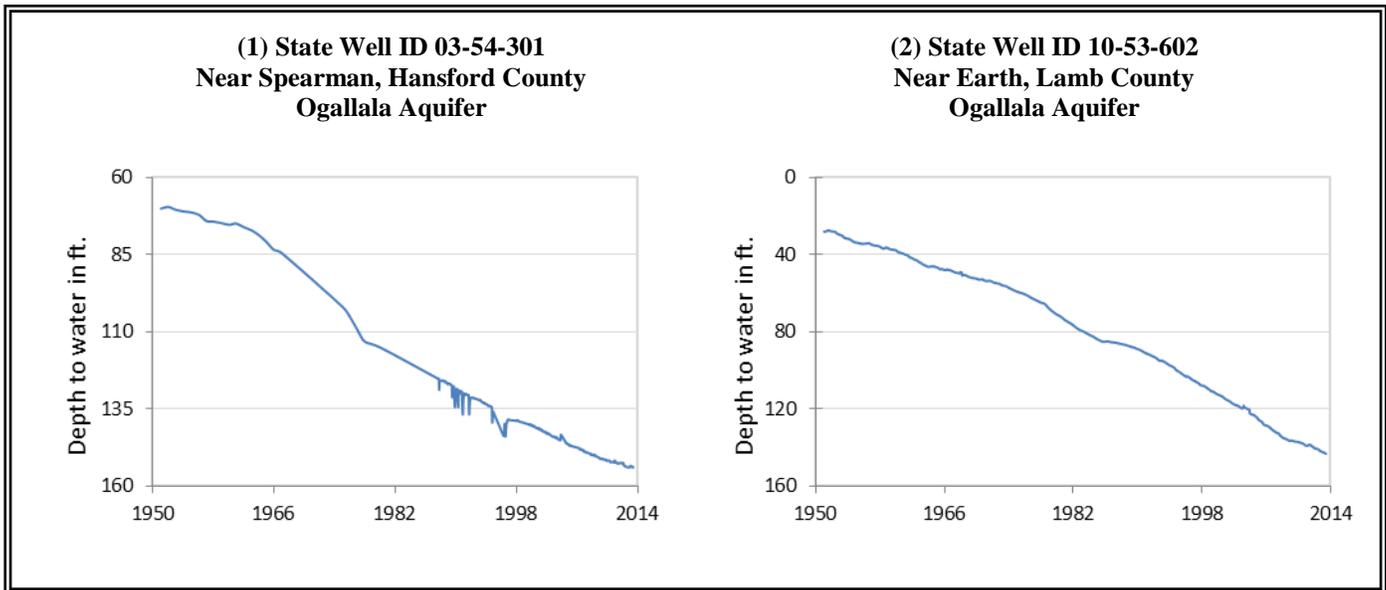
May, 2013

Water level measurements were available for all seventeen key monitoring wells in the state. Water levels rose in six of the monitoring wells since the beginning of May, ranging from 0.35 feet in the Haskell County Seymour Aquifer wells to 8.2 feet in the Bexar County Edwards Aquifer well. Water levels declined in ten monitoring wells, ranging from 0.16 feet in the Victoria County Gulf Coast Aquifer well to 8.83 feet in the La Salle County Carrizo Wilcox Aquifer well. Water levels remained constant in the Bell County Edwards Aquifer well. The J-17 well in San Antonio recorded a water level of 74.8 feet below land surface or 656.2 feet above mean sea level. This water level is 3.8 feet below the Stage I critical management level in that segment of the Edwards Aquifer. Stage II restrictions were declared by the EAA when the ten-day average fell below the 650-foot elevation, or 81 feet below land surface.

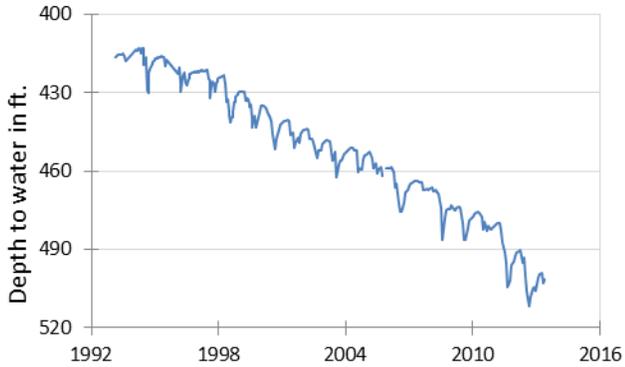
* ID is used in this publication to differentiate between the monitoring well number (1 - 17) as displayed on the aquifer map and the TWDB's six- or seven-digit state well "identification" number.

Monitoring Well	May	April	month change	year change	historical change	first measured
(1) Hansford 0354301	153.98	153.6	-0.3	-0.18	-83.86	1951
(2) Lamb 1053602	143.31	143.06	-0.43	-2.34	-115.16	1951
(3) Martin 2739903	141.73	141.20	-0.53	-0.28	-36.84	1964
(4) Dallas 3319101	488.83	489.83	1.0	NA	-266.83	1954
(5) Coryell 4035404	501.42	502.99	-2.4	-8.01	-209.42	1993
(6) Kendall 6802609	131.42	132.27	0.85	4.02	-71.42	1975
(7) Bell 5804816	126.67	126.67	0.0	-2.67	-3.54	2008
(8) Bexar 6837203	74.8	83	8.2	6.08	-28.16	1932
(9) Smith 3430907	437.41	437.12	-0.29	-4.94	-71.41	1987
(10) La Salle 7738103	468.82	459.99	-8.83	-62.18	-215.75	2003
(11) Harris 6514409	193.11	194.23	1.12	6.98	-57.61	1956
(12) Victoria 8017502	34.45	34.29	-0.16	1.6	-0.45	1958
(13) El Paso 4913301	294.25	293.73	-0.52	-1.4	-62.35	1967
(14) Reeves 4644501	154.52	154.96	0.44	-4.07	-62.43	1952
(15) Pecos 5216802	214.02	210.94	-3.08	-3.05	32.86	1976
(16) Haskell 2135748	48.17	48.52	0.35	-1.5	-6.84	2002
(17) Hudspeth 4807516	145.04	141.37	-3.67	-0.59	-41.12	1964

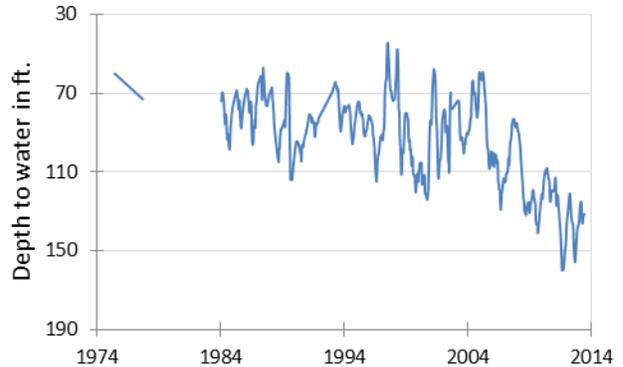
MAY GROUNDWATER LEVELS IN OBSERVATION WELLS



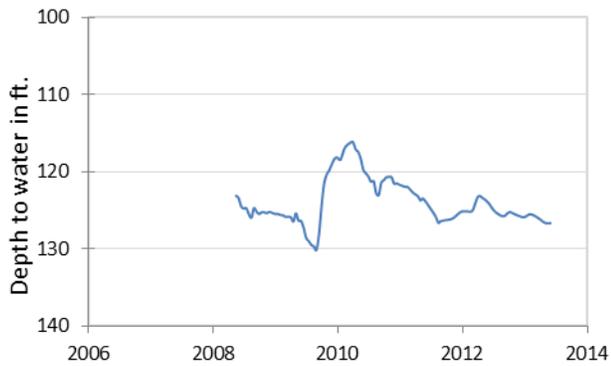
**(5) State Well ID 40-35-404
Gatesville, Coryell County
Hosston Formation-Trinity Aquifer**



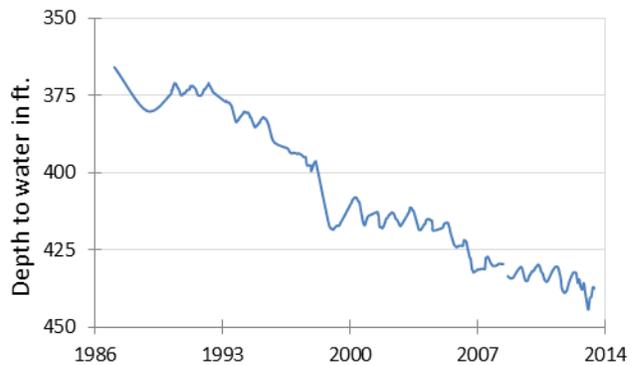
**(6) State Well ID 68-02-609
Waring, Kendall County
Cow Creek Formation-Trinity Aquifer**



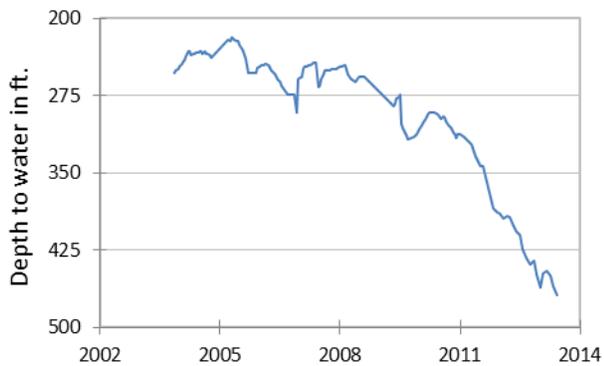
**(7) State Well ID 58-04-816
Near Salado, Bell County
Edwards (BFZ) Aquifer**



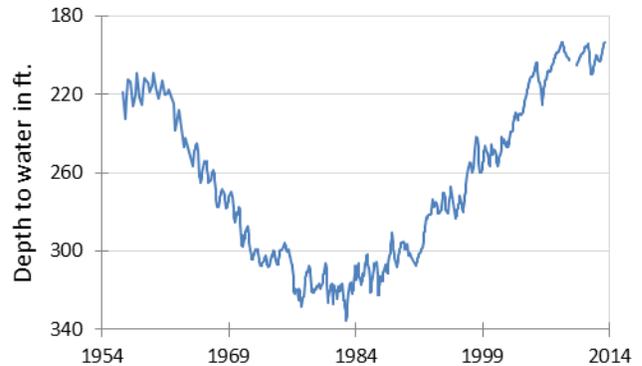
**(9) State Well ID 34-30-907
Red Springs, Smith County
Carrizo-Wilcox Aquifer**



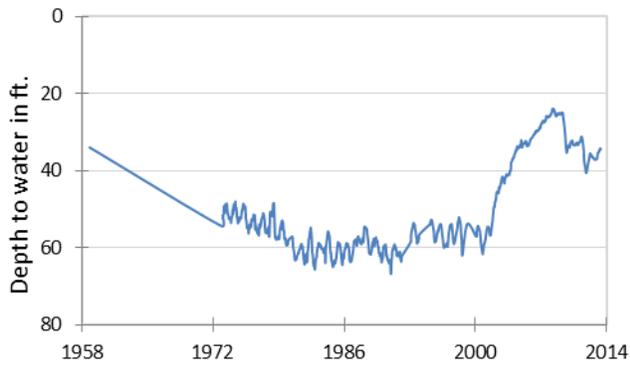
**(10) State Well ID 77-38-103
Near Cotulla, La Salle County
Carrizo-Wilcox Aquifer**



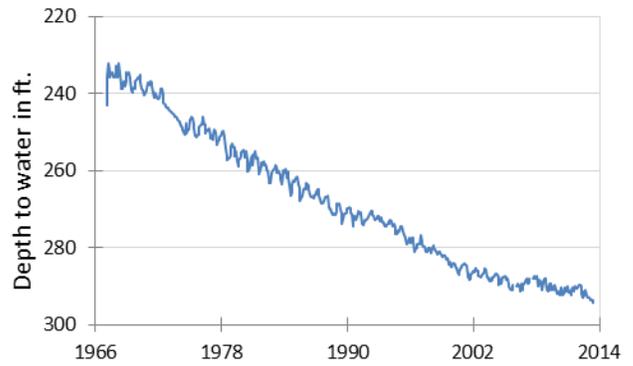
**(11) State Well ID 65-14-409
Alief, Harris County
Evangeline Formation-Gulf Coast Aquifer**



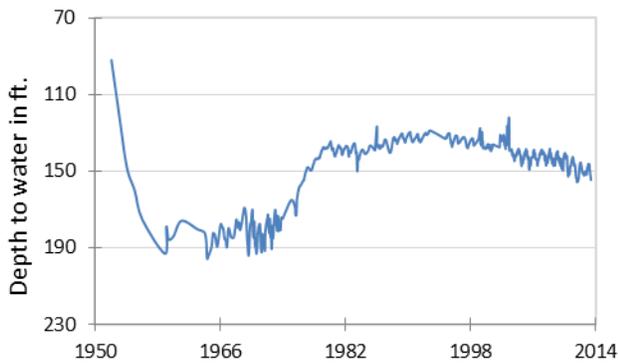
(12) State Well ID 80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



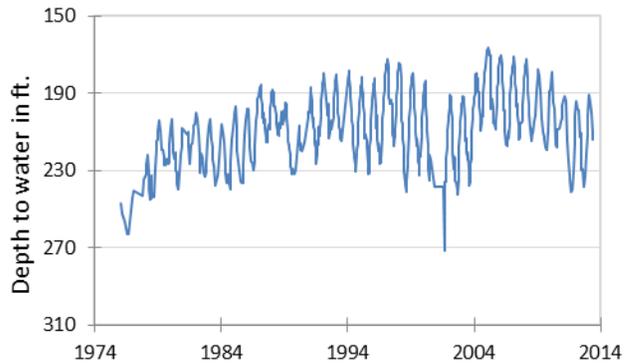
(13) State Well ID 49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolson Aquifer



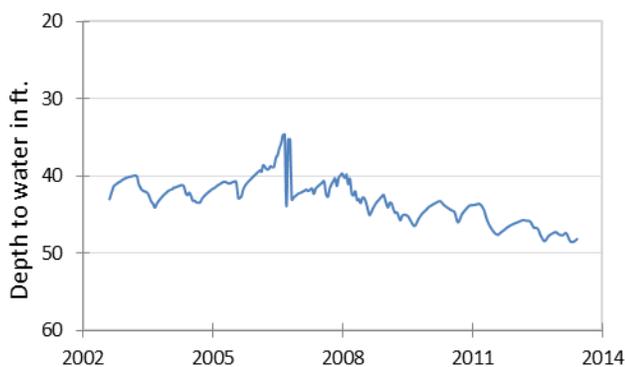
(14) State Well ID 46-44-501
Near Pecos, Reeves County
Pecos Valley Aquifer



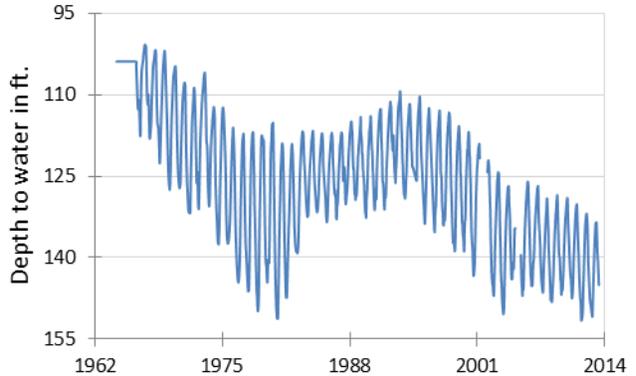
(15) State Well ID 52-16-802
Fort Stockton, Pecos County
Edwards-Trinity (Plateau) Aquifer



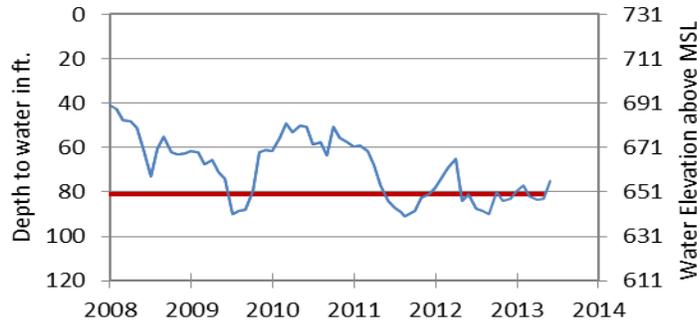
(16) State Well ID 21-35-748
Near O'Brien, Haskell County
Seymour Aquifer



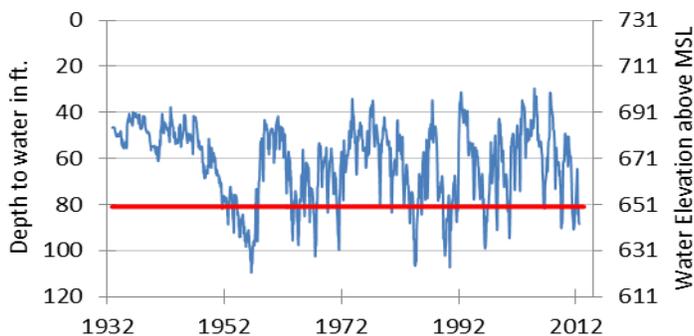
(17) State Well ID 48-07-516
Dell City, Hudspeth County
Bone Spring - Victorio Peak Aquifer



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



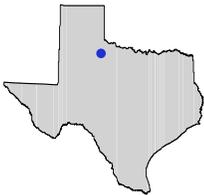
The late May water level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above mean sea level, was 74.8 feet below land surface, or 656.2 feet above mean sea level. This was 8.2 feet above last month's measurement, 6.08 feet above last year's measurement, and 28.16 feet below the initial measurement recorded in 1932.



***** Water levels below the red line indicate Edwards Aquifer Authority Stage II drought restrictions. *****

1st Qtr 2nd Qtr 3rd Qtr 4th Qtr

HYDROGRAPH OF THE MONTH

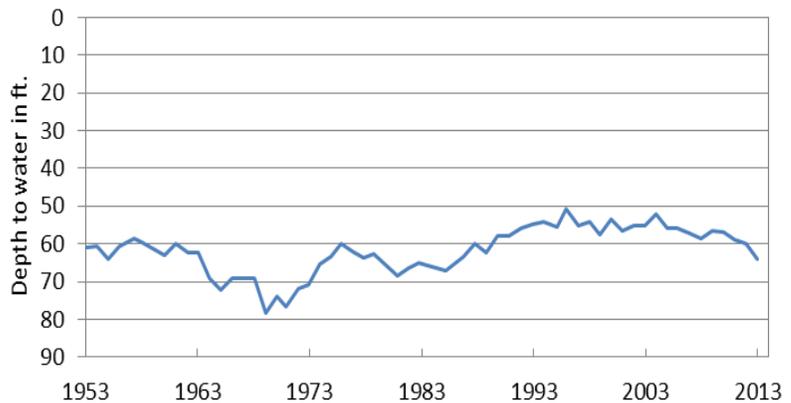


Each month this space features a new hydrograph (marked with the • symbol on the map) depicting different aquifers and different conditions in Texas.

Blaine Aquifer

The Blaine Aquifer is a minor aquifer located at the east end of the High Plains in North Texas. It is composed of red, silty shale, gypsum, anhydrite, salt, and dolomite, deposited in shallow seas at the end of the Permian circa 265 million years ago. At the time, Texas was part of the supercontinent Pangaea and was located just north of the equator with a mountain range bounding it to the south and most of its area below sea level. The climate was extremely hot and dry, similar to that of the Persian Gulf today. The high rates of evaporation in the shallow sea caused the precipitation of the gypsum and dolomite-rich salts that compose the Blaine Formation. Groundwater occurs primarily in solution channels and caverns within the beds of anhydrite and gypsum that contribute to the overall poor quality of the water. Most wells contain moderately saline water, with total dissolved solids primarily between 3,000 to 10,000 milligrams per liter, exceeding secondary drinking water standards for Texas. Water from the Blaine Aquifer is used for livestock and to irrigate highly salt-tolerant crops.

**Well # 13-42-402
Hardeman County TX**



This unused well in northwest Hardeman County, at an elevation of 1,548 feet above mean sea level, was drilled in 1948 and has been measured every year since 1953. Overall, the water level is at nearly the same depth as it was when first measured, although it experienced a decline of almost 20 feet in the early sixties and a decline of 12 feet since 2003. The concentration of total dissolved solids in surrounding wells exceeds 2,500 milligrams/liter.

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