Texas Water Development Board

WATER Conditions

RESERVOIR STORAGE

October 2011

At the end of October, total storage in 109 of the state's major reservoirs was at 18.4 million acre-feet*, or 59% of the total conservation storage capacity, a record low since 1990. This is 0.40 million acre-feet less than a month ago.

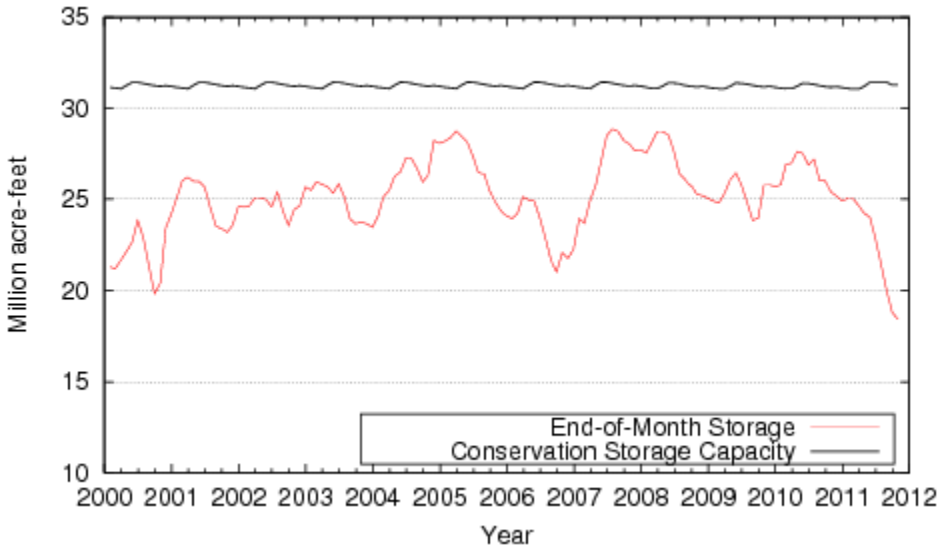
No reservoirs held 100% of their capacity. Ten reservoirs were at or below 10% full: E.V. Spence, O. C. Fisher, Twin Buttes, Hords Creek Lake, and Meredith were effectively empty, Electra and J. B. Thomas were at 1% full, Red Bluff was 3%, Palo Duro was 7%, and Mackenzie was 9% full.

All regions were under 70% in combined storage, with North Central (68%) and East (64%) being the highest and the High Plains (2%) and Trans-Pecos regions (3%) being the lowest. Storage declined in all regions except the Upper Coast over the last month, and in all regions over the last year.

Elephant Butte reservoir held 207,500 acre-feet, or 11.0% of storage capacity. This is 6,500 acre-ft more than a month ago.

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

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS



Figures are based on the end of the month data at 109 major reservoirs that represent 96 percent of the total conservation storage capacity of the 175 major water supply reservoirs in Texas. Reservoirs with a conservation storage capacity of 5,000 acre-feet or greater are included.

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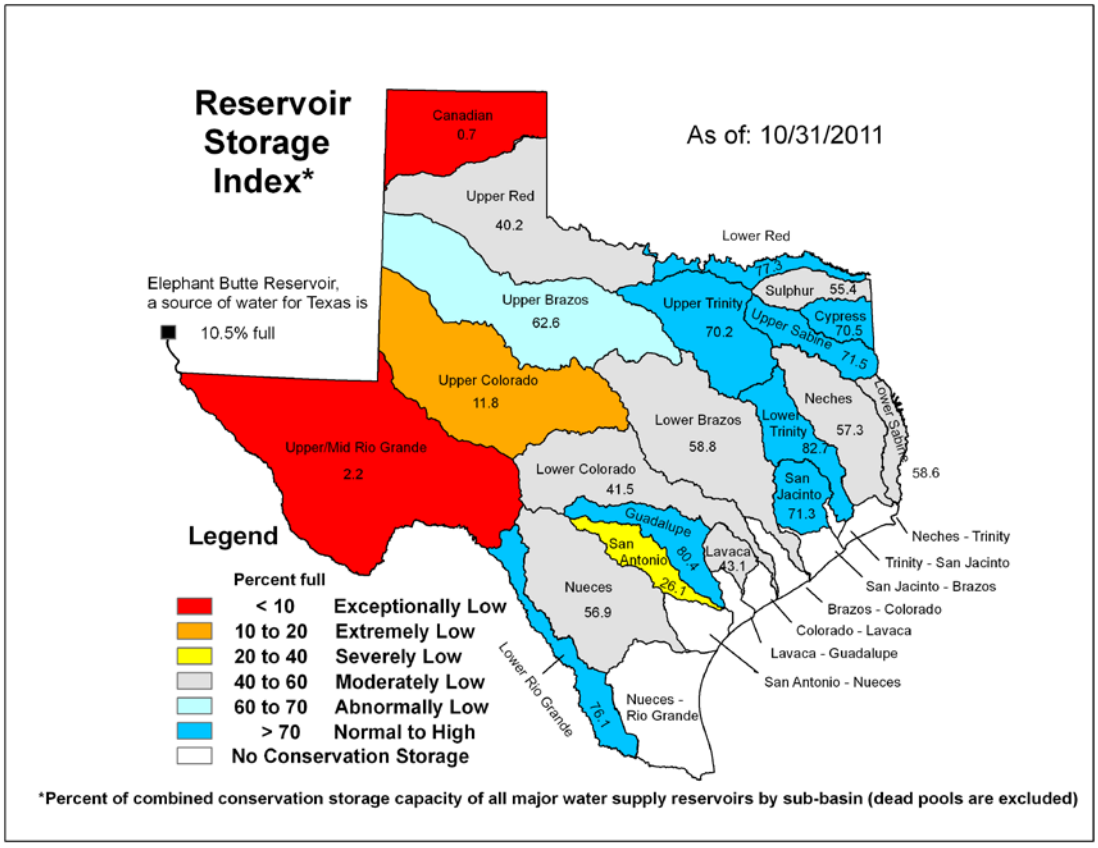
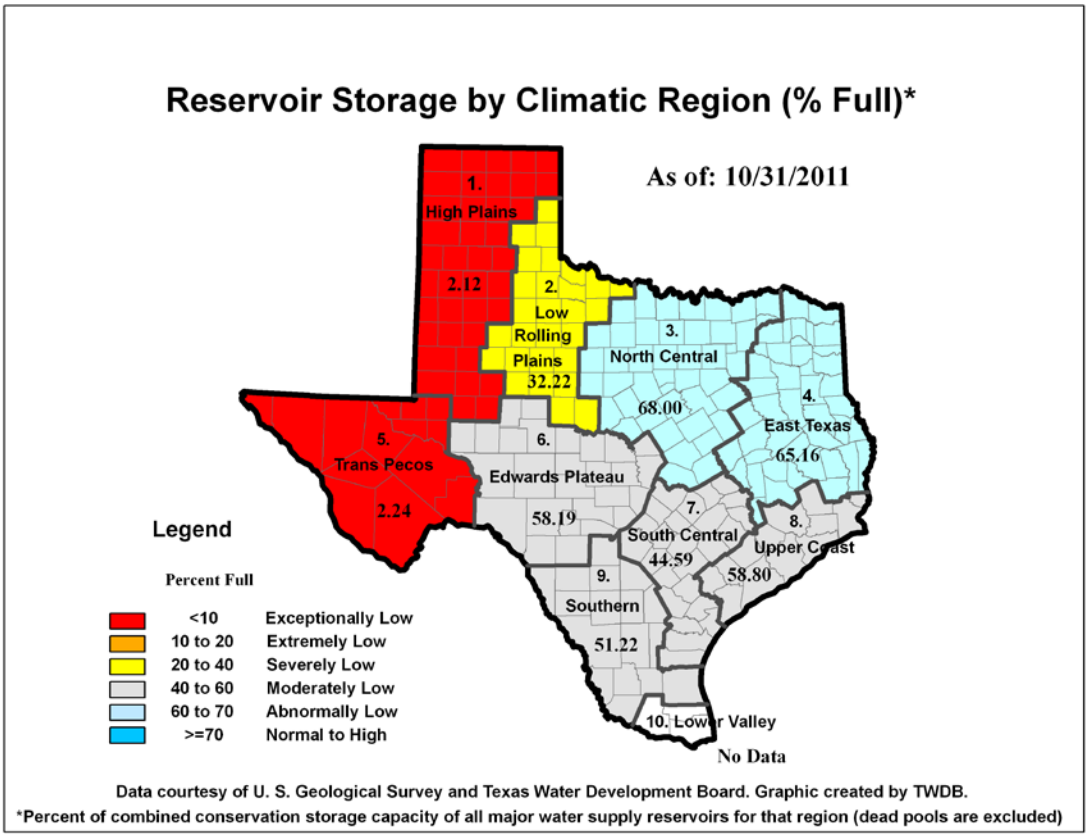
OCTOBER RESERVOIR CONDITION



*Percent of combined conservation storage capacity of all major water supply reservoirs by sub-basin (dead pools are excluded)



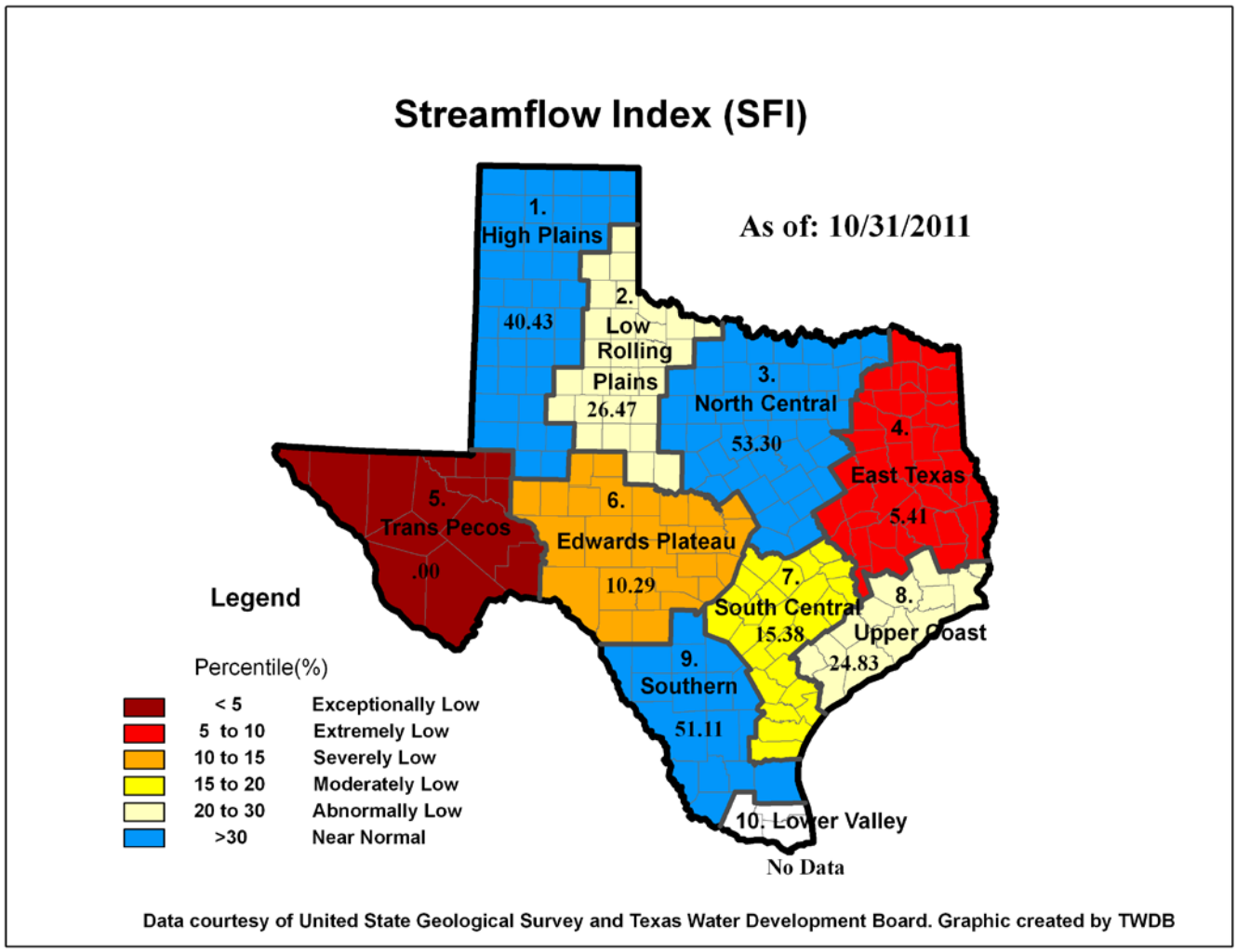
Data courtesy of U. S. Geological Survey and Texas Water Development Board. Graphic created by TWDB.

*Percent of combined conservation storage capacity of all major water supply reservoirs for that region (dead pools are excluded)

OCTOBER STREAMFLOW CONDITION

Of 29 reporting index stations in October, computed 30-day mean flows were exceptionally low (<5% rank) at 6 stations, extremely low (5%-10%) at 6 stations, severely low (10-15%) at 3 stations, moderately low (15%-20%) at 1 station, abnormally low (20%-30%) at 1 station, and near normal (30% - 70%) at the remaining 12 stations. Compared to September, flows have increased at 21 index stations and decreased at 3 stations.

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



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.

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late Oct. 2011 (acre-feet)	(%)	Change since Late Sep. 2011 (acre-feet)	(%)	Change since Late Oct. 2010 (acre-feet)	(%)
HIGH PLAINS								
Palo Duro Reservoir	1	60,897	4,206	7	-443	-1	-12,118	-20
Meredith, Lake (Texas)	2	500,000	0	0	0	0	-6,191	-1
Meredith, Lake (Texas & Oklahoma)	(2)	779,556	0	0	0	0	-6,191	-1
MacKenzie Reservoir	3	46,429	4,395	9	-63	0	-1,914	-4
White River Lake	4	29,880	4,868	16	-257	-1	-5,953	-20
TOTAL		637,206	13,469	2	-763	0	-26,176	-4
LOW ROLLING PLAINS								
Greenbelt Lake	5	59,500	10,904	18	-376	-1	-5,535	-9
*Electra, Lake	6	5,626	31	1	6	0	-428	-8
N. Fork Buffalo Crk Reservoir	7	15,400	2,554	17	60	0	-4,006	-26
Kemp, Lake	8	245,308	85,738	35	-4,088	-2	-159,570	-65
Millers Creek Reservoir	9	27,888	10,719	38	-167	-1	-9,556	-34
Alan Henry Reservoir	10	94,808	75,850	80	-1,186	-1	-16,272	-17
Stamford, Lake	11	51,570	27,734	54	-942	-2	-23,836	-46
J B Thomas, Lake	12	199,931	2,624	1	-503	0	-9,922	-5
Fort Phantom Hill, Lake	13	70,030	38,513	55	919	1	-24,533	-35
Sweetwater, Lake	14	10,006	3,201	32	-115	-1	-2,675	-27
Colorado City, Lake	15	31,793	10,209	32	-188	-1	-5,202	-16
Champion Creek Reservoir	16	41,618	5,032	12	307	1	-2,066	-5
Abilene, Lake	17	6,099	1,867	31	-118	-2	-3,389	-56
Coleman, Lake	18	38,076	15,670	41	522	1	-6,598	-17
Hords Creek Lake	19	5,684	0	0	0	0	-576	-10
TOTAL		903,337	290,646	32	-5,869	-1	-274,164	-30
NORTH CENTRAL								
Nocona, Lake (Farmers Crk)	20	21,445	13,201	62	21	0	-5,993	-28
Hubert H Moss Lake	21	24,058	20,384	85	-188	-1	-3,236	-13
Texoma, Lake (Texas)	22	1,334,295	1,021,937	77	1,208	0	-224,018	-17
Texoma, Lake (Texas & Oklahoma)	(22)	2,668,590	2,043,874	77	2,416	0	-448,037	-17
*Pat Mayse Lake	23	117,844	97,122	82	-2,882	-2	-8,428	-7
Kickapoo, Lake	24	85,825	45,565	53	2,129	2	-29,550	-34
Arrowhead, Lake	25	235,997	130,049	55	4,269	2	-72,620	-31
Bonham, Lake	26	11,026	7,049	64	-311	-3	-2,949	-27
Crook, Lake	27	9,195	6,018	65	-522	-6	-1,703	-19
Amon G Carter, Lake	28	19,903	12,689	64	238	1	-5,676	-29
Ray Roberts, Lake	29	798,758	668,724	84	-10,836	-1	-113,475	-14
Jim Chapman Lake (Cooper)	30	260,332	85,259	33	-16,050	-6	-84,864	-33
Graham, Lake	31	45,260	35,760	79	5,544	12	-8,060	-18
*Lost Creek Reservoir	32	11,950	9,284	78	85	1	-2,030	-17
Bridgeport, Lake	33	366,236	237,104	65	13,959	4	-110,798	-30
Lewisville Lake	34	563,228	398,567	71	-10,454	-2	-147,861	-26
Lavon Lake	35	443,844	216,441	49	-13,597	-3	-117,766	-27
Hubbard Creek Reservoir	36	318,067	144,167	45	3,859	1	-57,763	-18
Possum Kingdom Lake	37	540,340	385,817	71	3,876	1	-135,138	-25
*Mineral Wells, Lake	38	7,065	5,148	73	612	9	-1,588	-22
Weatherford, Lake	39	17,789	10,835	61	219	1	-4,740	-27
Eagle Mountain Lake	40	179,880	131,253	73	610	0	-38,874	-22
Worth, Lake	41	24,500	14,583	60	-1,161	-5	-3,885	-16
Grapevine Lake	42	164,702	133,773	81	-4,358	-3	-27,732	-17
Ray Hubbard, Lake	43	452,040	334,977	74	-1,985	0	-51,916	-11
New Terrell City Lake	44	8,583	5,429	63	-192	-2	-1,606	-19
Daniel, Lake	45	9,435	3,434	36	1,324	14	-1,782	-19
Palo Pinto, Lake	46	26,827	19,812	74	3,739	14	-5,160	-19
Benbrook Lake	47	85,648	39,599	46	5,143	6	-35,844	-42
Arlington, Lake	48	40,156	25,982	65	3,232	8	-11,038	-27

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage Late Oct. 2011 (acre-feet)	(%)	Change since Late Sep. 2011 (acre-feet)	(%)	Change since Late Oct. 2010 (acre-feet)	(%)
NORTH CENTRAL (Continue)								
Joe Pool Lake	49	142,861	119,421	84	546	0	-22,333	-16
*Cisco, Lake	50	26,000	11,237	43	206	1	-3,652	-14
Leon, Lake	51	26,421	11,868	45	1,007	4	-5,415	-20
Granbury, Lake	52	128,046	99,567	78	18,026	14	-24,854	-19
Pat Cleburne, Lake	53	26,008	17,532	67	313	1	-7,604	-29
Waxahachie, Lake	54	10,779	7,126	66	-606	-6	-2,033	-19
Bardwell Lake	55	46,122	31,562	68	-1,735	-4	-13,848	-30
Proctor Lake	56	55,457	27,507	50	8,669	16	-7,316	-13
Whitney, Lake	57	553,349	280,147	51	671	0	-172,459	-31
Aquilla Lake	58	44,460	30,236	68	24	0	-13,554	-30
Navarro Mills Lake	59	49,826	31,411	63	-1,913	-4	-15,953	-32
*Halbert, Lake	60	6,033	2,667	44	86	1	-1,103	-18
Richland-Chambers Reservoir	61	1,087,839	770,766	71	-31,072	-3	-253,023	-23
*Brownwood, Lake	62	131,429	53,424	41	3,374	3	-30,408	-23
Waco, Lake	62	198,943	149,804	75	4,015	2	-45,888	-23
Limestone, Lake	64	208,015	107,852	52	-8,158	-4	-66,985	-32
Belton Lake	65	435,225	309,020	71	-4,457	-1	-95,194	-22
Stillhouse Hollow Lake	66	227,771	146,001	64	4,942	2	-81,003	-36
Georgetown, Lake	67	36,823	12,741	35	-496	-1	-24,082	-65
Granger Lake	68	50,779	32,220	63	-1,734	-3	-10,669	-21
Tawakoni, Lake	69	888,126	646,304	73	-21,373	-2	-136,812	-15
TOTAL		10,604,540	7,158,375	68	-42,134	0	-2,350,281	-22
EAST								
Wright Patman Lake	70	307,973	185,762	60	-16,660	-5	50,513	16
*Sulphur Springs, Lake	71	17,838	8,602	48	-276	-2	-2,158	-12
Cypress Springs, Lake	72	66,756	53,889	81	-1,050	-2	-8,576	-13
Bob Sandlin, Lake	73	200,579	129,382	65	-2,987	-1	-42,725	-21
Fork Reservoir, Lake	74	604,927	425,124	70	-13,684	-2	-107,322	-18
O the Pines, Lake	75	267,672	172,601	64	-11,094	-4	-63,711	-24
Cedar Creek Reservoir in Trinity	76	644,686	427,243	66	-18,343	-3	-138,410	-21
Athens, Lake	77	29,435	20,995	71	-607	-2	-5,247	-18
Palestine, Lake	78	370,907	245,465	66	-9,092	-2	-78,550	-21
Tyler, Lake	79	73,256	42,024	57	-2,774	-4	-21,916	-30
Murvaul, Lake	80	38,284	23,309	61	-871	-2	-7,553	-20
Jacksonville, Lake	81	25,670	19,940	78	-324	-1	-2,903	-11
Nacogdoches, Lake	82	39,521	18,554	47	-1,180	-3	-11,339	-29
Houston County Lake	83	17,113	12,273	72	-552	-3	-2,736	-16
Sam Rayburn Reservoir	84	2,857,077	1,583,197	55	-66,740	-2	-408,054	-14
Toledo Bend Reservoir (Texas)	85	2,236,450	1,310,318	59	-52,272	-2	-283,323	-13
Toledo Bend Reservoir (TX & LA)	(85)	4,472,900	2,620,637	59	-104,544	-2	-566,645	-13
*Livingston, Lake	86	1,741,867	1,438,000	83	-25,000	-1	-303,867	-17
B A Steinhagen Lake	87	66,966	54,788	82	-4,114	-6	-6,533	-10
Conroe, Lake	88	416,188	288,884	69	-20,365	-5	-95,720	-23
TOTAL		10,023,165	6,460,350	64	-247,985	-2	-1,540,130	-15
TRANS-PECOS								
Red Bluff Reservoir	89	130,170	3,567	3	-223	0	-48,501	-37
TOTAL		130,170	3,567	3	-223	0	-48,501	-37

CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

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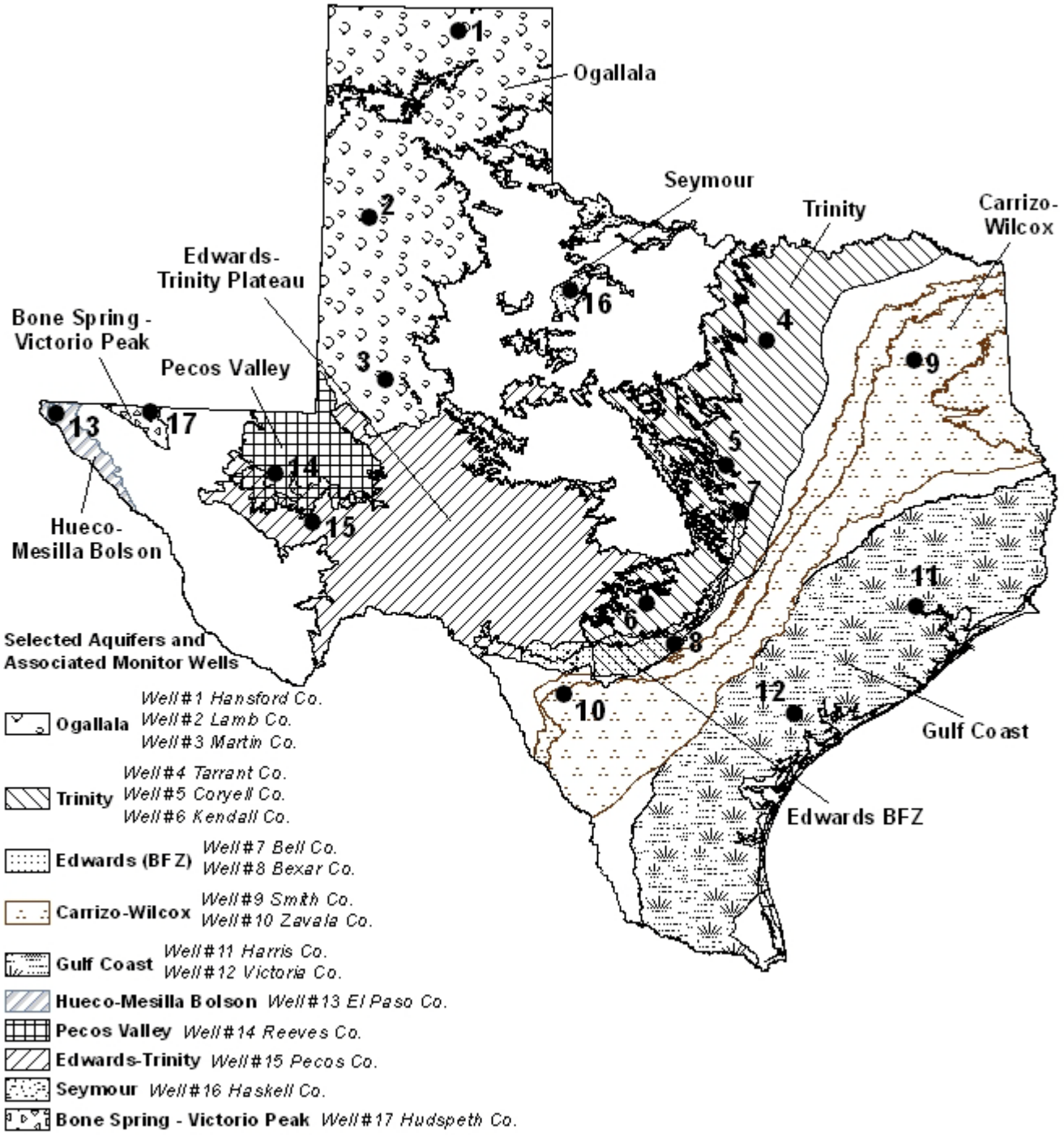
EDWARDS PLATEAU								
Oak Creek Reservoir	90	39,260	15,235	39	-357	-1	-8,729	-22
E V Spence Reservoir	91	517,272	2,323	0	-39	0	-17,515	-3
O C Fisher Lake	92	79,483	0	0	0	0	0	0
*O H Ivie Reservoir	93	554,335	108,861	20	-5,287	-1	-82,876	-15
Twin Buttes Reservoir	94	177,850	0	0	-975	-1	-21,123	-12
Brady Creek Reservoir	95	29,110	7,314	25	-311	-1	-6,596	-23
Buchanan, Lake	96	875,610	341,330	39	9,217	1	-332,240	-38
Lyndon B Johnson, Lake	97	113,323	112,108	99	-425	0	547	0
*Amistad Reservoir (Texas)	98	1,840,849	1,569,000	85	-25,000	-1	-272,000	-15
*Amistad Reservoir (TX & Mexico)	(98)	3,275,532	2,828,000	86	-32,000	-1	-447,532	-14
TOTAL		4,227,092	2,156,171	51	-23,177	-1	-740,532	-18
SOUTH CENTRAL								
Travis, Lake	99	1,113,255	392,956	35	-17,848	-2	-513,967	-46
*Austin, Lake	100	21,804	20,805	95	256	1	-257	-1
Somerville Lake	101	147,104	57,276	39	-3,321	-2	-73,987	-50
Canyon Lake	102	378,781	305,120	81	-7,248	-2	-71,370	-19
Medina Lake	103	254,823	66,547	26	-6,458	-3	-116,404	-46
*Coleto Creek Reservoir	104	31,040	24,483	79	1,391	4	-5,923	-19
TOTAL		1,946,807	867,187	45	-33,228	-2	-781,908	-40
UPPER COAST								
Houston, Lake	105	128,863	104,700	81	17,510	14	-22,700	-18
Texana, Lake	106	153,246	66,792	44	-2,954	-2	-73,823	-48
TOTAL		282,109	171,492	61	14,556	5	-96,523	-34
SOUTHERN								
Choke Canyon Reservoir	107	695,262	441,221	63	-4,794	-1	-138,715	-20
Corpus Christi, Lake	108	256,961	102,251	40	-7,283	-3	-139,172	-54
*Falcon Reservoir (Texas)	109	1,551,034	740,000	48	-50,000	-3	-873,000	-56
*Falcon Reservoir (TX & Mexico)	(109)	2,646,817	1,173,000	44	-53,000	-2	-1,473,817	-56
TOTAL		2,503,257	1,283,472	51	-62,077	-2	-1,150,887	-46
STATE TOTAL		31,257,683	18,404,729	59	-400,900	-1	-7,009,102	-22

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

OCTOBER 2011 GROUNDWATER LEVELS IN OBSERVATION WELLS



October, 2011

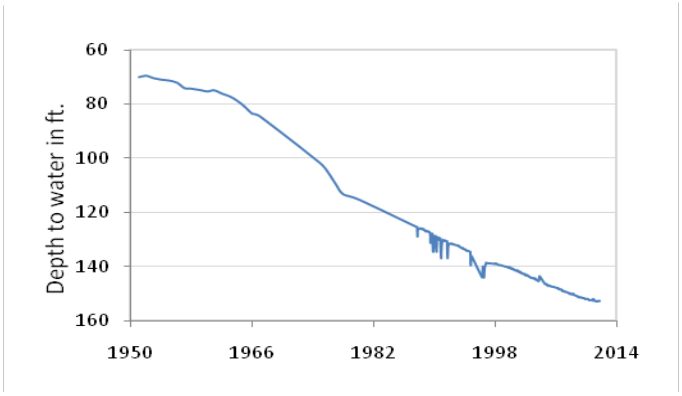
Water level measurements were available for sixteen of seventeen key monitoring wells in the state. Water levels rose in ten of the monitoring wells since the beginning of October, ranging from 0.05 feet in the El Paso County Hueco-Mesilla Bolson Aquifer well to 8.98 feet in the Pecos County Edwards-Trinity Aquifer well. Water levels declined in the remaining six monitoring wells, ranging from 0.12 feet in the Hansford County Ogallala Aquifer to 3.93 feet in the Smith County Edwards Aquifer well. The J-17 well in San Antonio recorded a water level of 82.71 feet below land surface. This water level is 1.71 feet below the Stage II critical management level in that segment of the Edwards Aquifer. Stage II restrictions were triggered on June 1, 2011 by the Edwards Aquifer Authority. after the 10 day average of water levels fell below 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.**

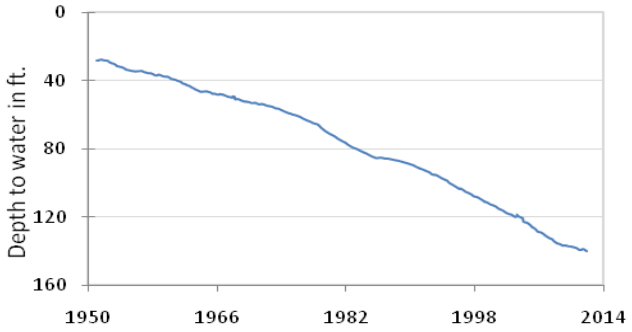
Monitoring Well	Oct 2011	Sep 2011	Month Change	Year Change	Historical Change
(1) Hansford 0354301	152.55	152.43	-0.12	-0.49	-82.43
(2) Lamb 1053602	139.85	139.56	-0.29	-1.02	-111.7
(3) Martin 2739903	139.9	140.53	0.63	-1.84	-35.01
(4) Tarrant 3215504	460.26	458.85	-1.41	-11.03	-82.26
(5) Coryell 4035404	495.91	501.79	5.88	-13.47	-203.91
(6) Kendall 6802609	151.02	158.64	7.62	-31.06	-91.02
(7) Bell 5804816	126.12	126.4	0.28	-5.43	-2.99
(8) Bexar 6837203	82.71	88.4	5.69	-27.36	-36.07
(9) Smith 3430907	438.70	438.84	-3.93	-3.47	-72.7
(10)Zavala 7702509	N/A	364.7	N/A	N/A	-0.43
(11) Harris 6514409	209.75	207.93	-1.82	-11.08	-74.25
(12) Victoria 8017502	40.62	39.31	-1.31	-7.86	-6.62
(13) El Paso 4913301	290.57	290.62	0.05	0.68	-58.67
(14) Reeves 4644501	153.46	155.03	1.57	-6.16	-61.37
(15) Pecos 5216802	230.56	239.54	8.98	-25.68	16.32
(16) Haskell 2135748	46.53	46.87	0.34	-2.14	-5.2
(17) Hudspeth 4807516	144.9	150.1	5.2	-4.28	-40.98

OCTOBER GROUNDWATER LEVELS IN OBSERVATION WELLS

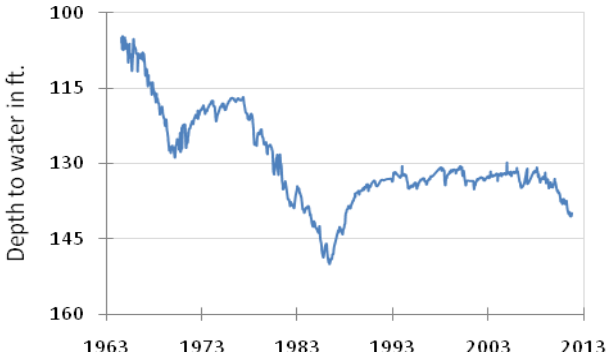
(1) State Well ID 03-54-301
Near Spearman, Hansford County
Ogallala Aquifer



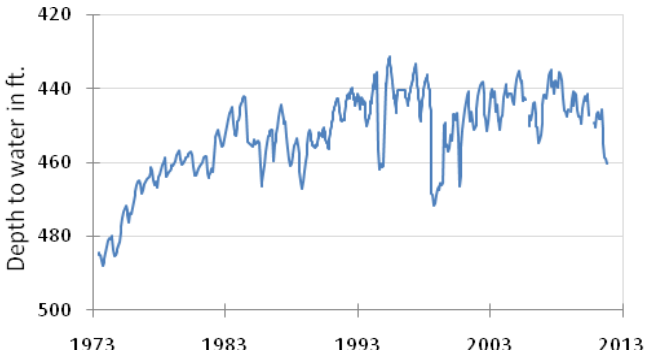
(2) State Well ID 10-53-602
Near Earth, Lamb County
Ogallala Aquifer



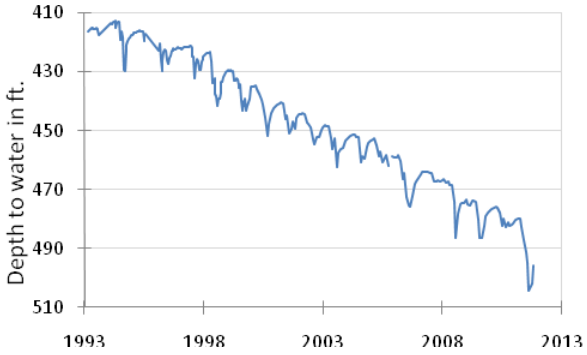
(3) State Well ID 27-39-903
Northwest Martin County
Ogallala Aquifer



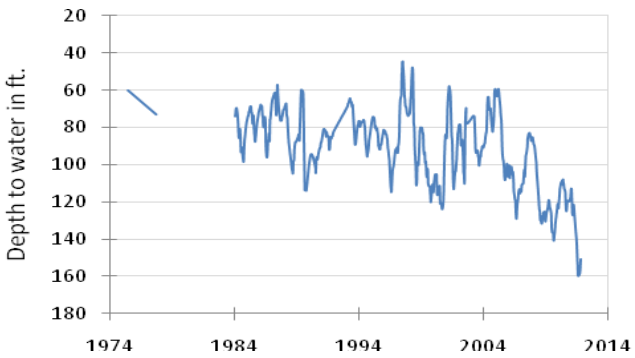
(4) State Well ID 32-15-504
Near Hurst, Tarrant County
Paluxy Formation-Trinity Aquifer



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

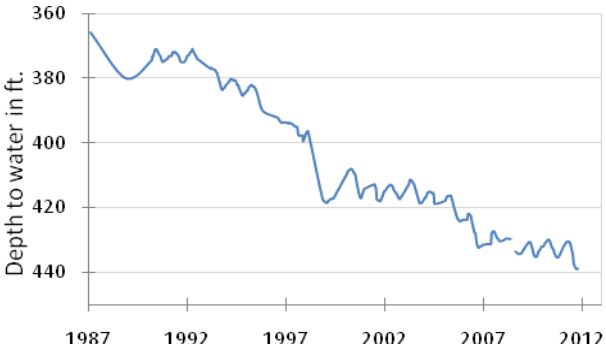


(6) State Well ID 68-02-609
Waring, Kendall County
Cow Creek Formation-Trinity Aquifer



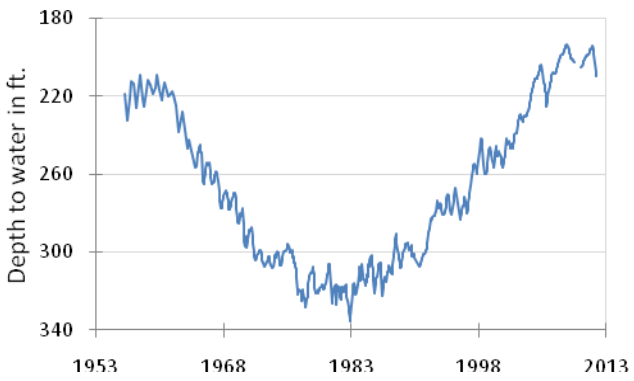
(7) State Well ID 58-04-816
Near Salado, Bell County
Edwards (BFZ) Aquifer

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

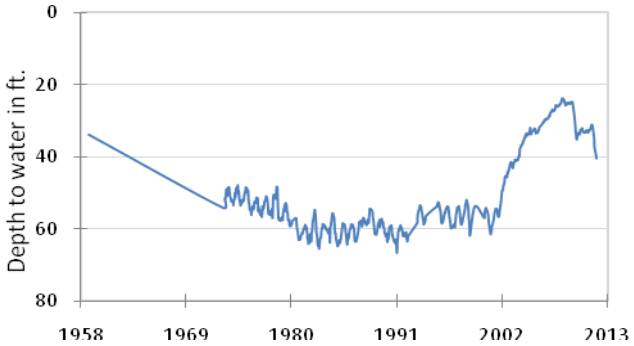


(10) State Well ID 77-02-509
La Pryor, Zavala County
Carrizo-Wilcox Aquifer

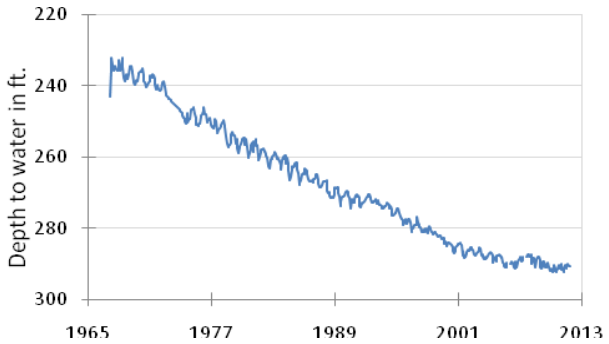
(11) State Well ID 65-14-409
Alief, Harris County
Evangeline Formation-Gulf Coast Aquifer



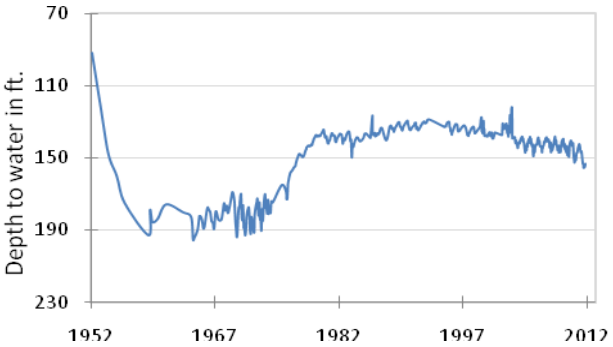
(12) State Well ID 80-17-502
Near Bloomington, Victoria County
Lissie Formation-Gulf Coast Aquifer



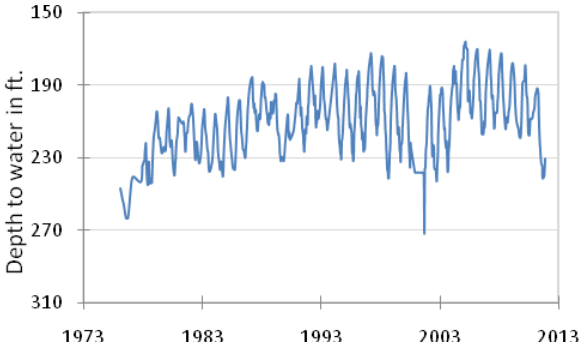
(13) State Well ID 49-13-301
El Paso, El Paso County
Hueco-Mesilla Bolson Aquifer



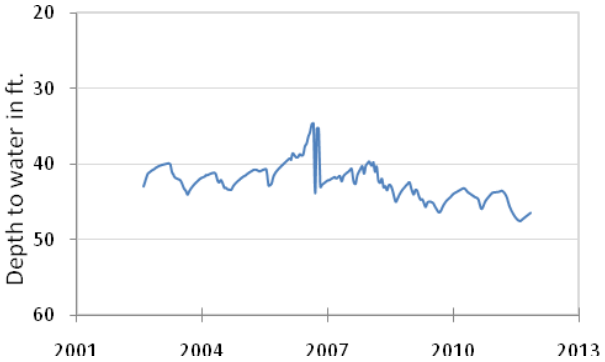
(14) State Well ID 46-44-501
Near Pecos, Reeves County
Pecos Valley Aquifer



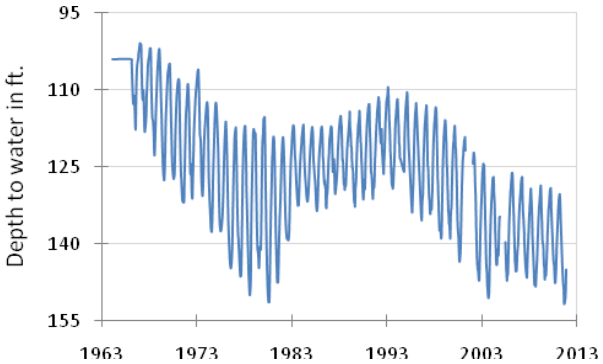
(15) State Well ID 52-16-802
Fort Stockton, Pecos County
Edwards-Trinity (Plateau) Aquifer



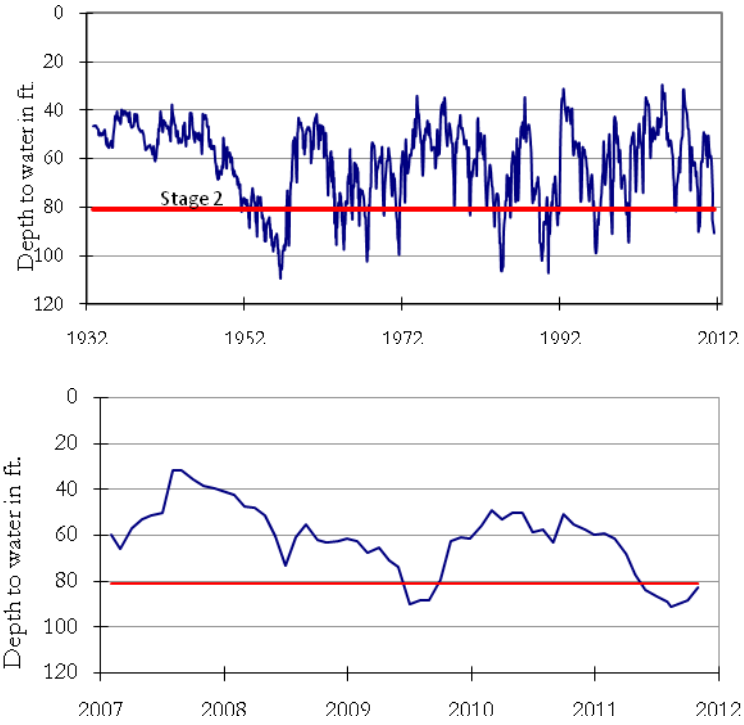
(16) State Well ID 21-35-748
Near O'Brien, Haskell County
Seymour Aquifer



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



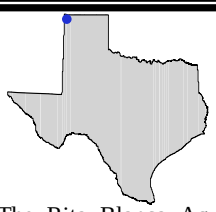
(8) State Well ID 68-37-203 (J-17)
In San Antonio, Bexar County
Edwards (BFZ) Aquifer



The late October water level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 82.71 feet below land surface. This was 5.69 feet above last month's measurement, 27.36 feet below last year's measurement, and 36.07 feet below the initial measurement recorded in 1932.

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

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.

Rita Blanca Aquifer

The Rita Blanca Aquifer, a minor aquifer, underlies the Ogallala Aquifer in the northwest corner of the Texas Panhandle. The aquifer is comprised of the Romeroville, the Mesa Rica, and the Lytle Sandstone formations of Cretaceous age, and equivalents of the Morrison Formation and the Exeter Sandstone of Jurassic age. These formations are mostly of fine- to medium-grained sandstone, with some shale, clay, conglomerate, and limestone. The units of the Rita Blanca were deposited in the near shore, deltaic environment along the edge of the interior seaway during a time when global ocean levers were high and the seas covered large portions of the continent. In places, the Rita Blanca Aquifer is hydraulically connected to the Ogallala Aquifer and the underlying Dockum Aquifer. Water in the aquifer is usually fresh, containing less than 1,000 milligrams per liter of total dissolved solids, but very hard. The Rita Blanca aquifer has very limited extent in Texas although it stretches north to Colorado. Consequently, very little production is drawn from the Rita Blanca, and only one town, Texline, TX depends on it for water supply.