

# Texas Water Development Board



**W**ater **Conditions**

## RESERVOIR STORAGE

March 2010

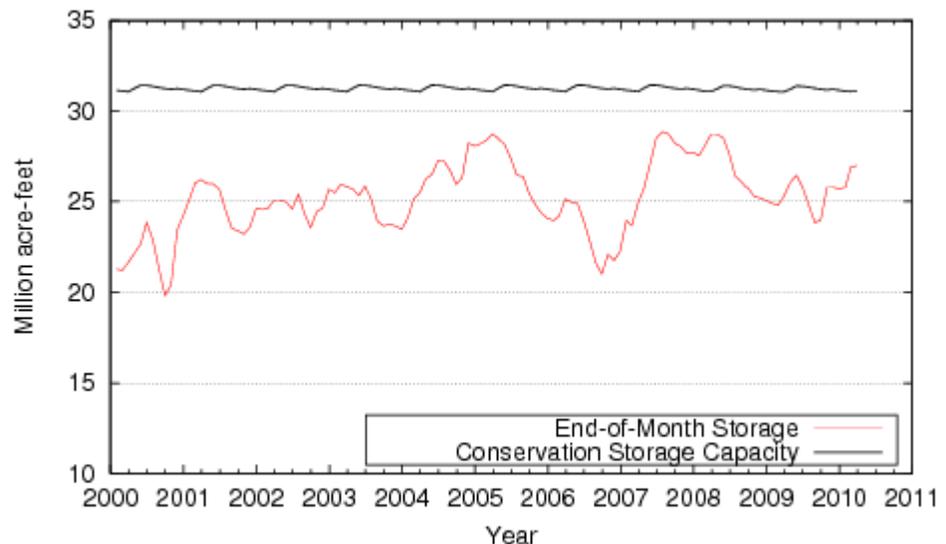
Total storage in the state's major 109 reservoirs remained at 87% full, with 27 million acre-feet in conservation storage\*.

Storage was at 100% in 55 reservoirs, two less than last month. Most reservoirs at 100% storage level were in the Upper Coast, East, South Central and North Central Regions. There were six lakes at or below 10% full, the same as last month: O. C. Fisher Lake and Palo Duro Reservoir were effectively empty, Lake Meredith (total) at 4%, Lake J. B. Thomas was at 5%, E.V. Spence Reservoir was at 4%, and White River Lake was 10% full.

Three regions had combined storage above 90%: Upper Coast 100%, East 99%, North Central 97%, and South Central 92%. The High Plains (6%) and Trans-Pecos regions (25%) remained very low. Storage increased in 6 regions, decreased in 2 regions, and remained unchanged in 2 regions over the month. Compared to last March, storage increased in 5 regions but decreased in 4 regions.

\* 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 95 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.

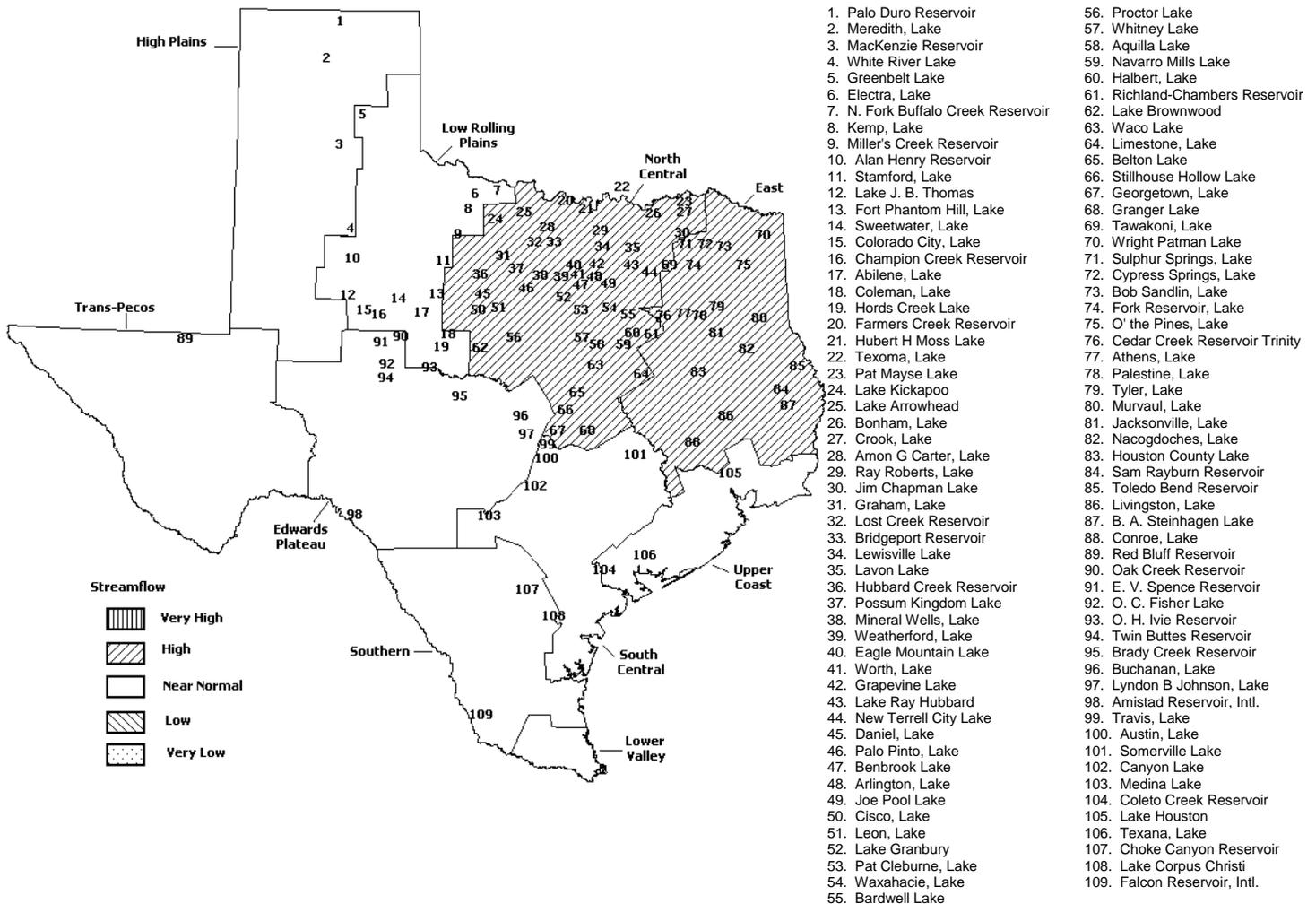
# STREAMFLOW

Of 29 reporting index stations in March, computed 30-day mean flows were high (5% - 30%) at 11 stations, low (70% - 95%) at 2 stations, and near normal (30% - 70%) at the remaining 16 stations. Compared to February, flows have increased at 3 index stations and decreased at 26 stations.

On a regional basis, flows in March were high in the North Central and East regions, and near normal everywhere else. Streamflow in the Lower Valley Region is not monitored.

## MARCH STREAMFLOW CONDITIONS

Reservoirs Shown on Map



## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage		Change since Late February 2010		Change since Late March 2009		
			Late Mar. (acre-feet)	2010 (%)	(acre-feet)	(%)	(acre-feet)	(%)	
<b>HIGH PLAINS</b>									
Palo Duro Reservoir	1	60,897	260	0	-22	0	-514	-1	
Meredith, Lake (Texas)	2	500,000	32,146	6	1,416	0	-25,994	-5	
Meredith, Lake (Texas & Oklahoma)	(2)	779,556	32,146	4	1,416	0	-25,994	-3	
MacKenzie Reservoir	3	46,429	5,691	12	-10	0	102	0	
White River Lake	4	29,880	2,872	10	-65	0	-3,313	-11	
TOTAL		637,206	40,969	6	1,319	0	-29,719	-5	
<b>LOW ROLLING PLAINS</b>									
Greenbelt Lake	5	59,500	15,952	27	202	0	-2,498	-4	
*Electra, Lake	6	5,626	626	11	-30	-1	-182	-3	
N. Fork Buffalo Crk Reservoir	7	15,400	5,777	38	-145	-1	2,106	14	
Kemp, Lake	8	245,308	197,721	81	8,552	3	44,790	18	
Millers Creek Reservoir	9	27,888	15,494	56	824	3	330	1	
Alan Henry Reservoir	10	94,808	86,446	91	1,438	2	-5,098	-5	
Stamford, Lake	11	51,570	45,078	87	2,453	5	12,113	23	
J B Thomas, Lake	12	199,931	9,762	5	-309	0	-5,091	-3	
Fort Phantom Hill, Lake	13	70,030	52,777	75	-129	0	-6,529	-9	
Sweetwater, Lake	14	10,006	6,206	62	181	2	-1,064	-11	
Colorado City, Lake	15	31,793	17,487	55	-211	-1	-3,853	-12	
Champion Creek Reservoir	16	41,618	7,730	19	-68	0	-1,183	-3	
Abilene, Lake	17	6,099	3,995	66	821	13	749	12	
Coleman, Lake	18	38,076	25,107	66	1,182	3	-1,991	-5	
Hords Creek Lake	19	5,684	1,399	25	-30	-1	-1,177	-21	
TOTAL		903,337	491,557	54	14,731	2	31,422	3	
<b>NORTH CENTRAL</b>									
Nocona, Lake (Farmers Crk)	20	21,445	21,445	100	0	0	5,136	24	
Hubert H Moss Lake	21	24,058	24,058	100	0	0	3,090	13	
Texoma, Lake (Texas)	22	1,185,688	1,185,688	100	0	0	0	0	
Texoma, Lake (Texas & Oklahoma)	(22)	2,371,376	2,371,376	100	0	0	0	0	
*Pat Mayse Lake	23	118,100	118,100	100	0	0	3,790	3	
Kickapoo, Lake	24	85,825	59,417	69	2,725	3	22,274	26	
Arrowhead, Lake	25	235,997	169,301	72	3,801	2	20,687	9	
Bonham, Lake	26	11,026	11,015	100	-11	0	3,071	28	
Crook, Lake	27	9,195	9,195	100	0	0	145	2	
Amon G Carter, Lake	28	19,903	19,903	100	0	0	4,346	22	
Ray Roberts, Lake	29	798,758	798,758	100	0	0	86,395	11	
Jim Chapman Lake (Cooper)	30	260,332	260,332	100	0	0	96,668	37	
Graham, Lake	31	45,260	43,063	95	576	1	4,089	9	
*Lost Creek Reservoir	32	11,950	11,950	100	0	0	1,811	15	
Bridgeport, Lake	33	366,236	349,504	95	17,603	5	87,048	24	
Lewisville Lake	34	543,988	543,988	100	0	0	109,364	20	
Lavon Lake	35	443,844	443,844	100	0	0	68,964	16	
Hubbard Creek Reservoir	36	318,067	216,341	68	479	0	-32,599	-10	
Poosum Kingdom Lake	37	540,340	516,579	96	-3,242	-1	31,268	6	
*Mineral Wells, Lake	38	7,065	7,065	100	0	0	1,991	28	
Weatherford, Lake	39	18,645	18,645	100	12	0	6,516	35	
Eagle Mountain Lake	40	182,500	182,500	100	0	0	37,947	21	
Worth, Lake	41	24,500	24,500	100	0	0	7,671	31	
Grapevine Lake	42	164,702	164,702	100	0	0	46,962	29	
Ray Hubbard, Lake	43	452,040	451,420	100	-620	0	23,230	5	
New Terrell City Lake	44	8,583	8,583	100	0	0	888	10	
Daniel, Lake	45	9,435	4,290	45	-73	-1	-1,801	-19	
Palo Pinto, Lake	46	27,150	27,150	100	0	0	14,221	52	
Benbrook Lake	47	85,648	85,648	100	0	0	17,471	20	
Arlington, Lake	48	38,740	38,740	100	95	0	6,178	16	

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage		Change since Late February 2010		Change since Late March 2009		
			Late Mar. (acre-feet)	2010 (%)	(acre-feet)	(%)	(acre-feet)	(%)	
<b>NORTH CENTRAL (Continue)</b>									
Joe Pool Lake	49	142,861	142,861	100	0	0	11,629	8	
*Cisco, Lake	50	26,000	16,682	64	-58	0	-2,060	-8	
Leon, Lake	51	26,421	19,262	73	654	2	-1,023	-4	
Granbury, Lake	52	128,046	124,270	97	-755	-1	5,676	4	
Pat Cleburne, Lake	53	25,730	25,730	100	0	0	5,367	21	
Waxahachie, Lake	54	10,779	10,779	100	0	0	831	8	
Bardwell Lake	55	46,122	46,122	100	0	0	6,311	14	
Proctor Lake	56	55,457	49,640	90	7,112	13	14,718	27	
Whitney, Lake	57	553,349	542,597	98	22,908	4	176,725	32	
Aquilla Lake	58	45,092	45,092	100	0	0	2,199	5	
Navarro Mills Lake	59	55,817	55,817	100	0	0	734	1	
*Halbert, Lake	60	6,033	5,456	90	66	1	2,068	34	
Richland-Chambers Reservoir	61	1,103,816	1,103,816	100	0	0	179,036	16	
*Brownwood, Lake	62	131,429	93,884	71	374	0	-5,466	-4	
Waco, Lake	62	198,943	198,943	100	0	0	6,252	3	
Limestone, Lake	64	208,015	207,771	100	0	0	21,936	11	
Belton Lake	65	435,225	413,456	95	-21,769	-5	4,115	1	
Stillhouse Hollow Lake	66	227,771	227,771	100	0	0	32,785	14	
Georgetown, Lake	67	36,823	36,823	100	0	0	18,407	50	
Granger Lake	68	52,525	44,176	84	-4,765	-9	4,253	8	
Tawakoni, Lake	69	888,126	888,126	100	0	0	152,770	17	
TOTAL		10,463,400	10,114,798	97	25,112	0	1,314,084	13	
<b>EAST</b>									
Wright Patman Lake	70	122,593	122,593	100	0	0	0	0	
*Sulphur Springs, Lake	71	17,838	17,345	97	-493	-3	-493	-3	
Cypress Springs, Lake	72	67,689	67,689	100	0	0	0	0	
Bob Sandlin, Lake	73	200,579	200,579	100	0	0	0	0	
Fork Reservoir, Lake	74	604,927	604,927	100	0	0	3,696	1	
O the Pines, Lake	75	238,933	238,933	100	0	0	0	0	
Cedar Creek Reservoir in Trinity	76	644,686	644,686	100	0	0	29,578	5	
Athens, Lake	77	29,435	29,435	100	0	0	0	0	
Palestine, Lake	78	370,907	370,907	100	0	0	0	0	
Tyler, Lake	79	73,256	73,256	100	0	0	0	0	
Murvaul, Lake	80	38,284	38,284	100	0	0	0	0	
Jacksonville, Lake	81	30,300	30,300	100	0	0	0	0	
Nacogdoches, Lake	82	39,521	39,221	99	-300	-1	-300	-1	
Houston County Lake	83	17,113	17,113	100	0	0	0	0	
Sam Rayburn Reservoir	84	2,857,077	2,857,077	100	0	0	433,645	15	
Toledo Bend Reservoir (Texas)	85	2,236,450	2,113,711	95	-96,751	-4	-47,464	-2	
Toledo Bend Reservoir (TX & LA)	(85)	4,472,900	4,227,423	95	-193,502	-4	-94,928	-2	
*Livingston, Lake	86	1,741,867	1,741,867	100	0	0	0	0	
B A Steinhagen Lake	87	66,966	59,506	89	8,388	13	7,601	11	
Conroe, Lake	88	416,188	415,798	100	-390	0	14,616	4	
TOTAL		9,814,609	9,683,227	99	-89,546	-1	440,879	4	
<b>TRANS-PECOS</b>									
Red Bluff Reservoir	89	289,670	72,204	25	-683	0	-6,119	-2	
TOTAL		289,670	72,204	25	-683	0	-6,119	-2	

## CONSERVATION STORAGE DATA FOR SELECTED MAJOR TEXAS RESERVOIRS

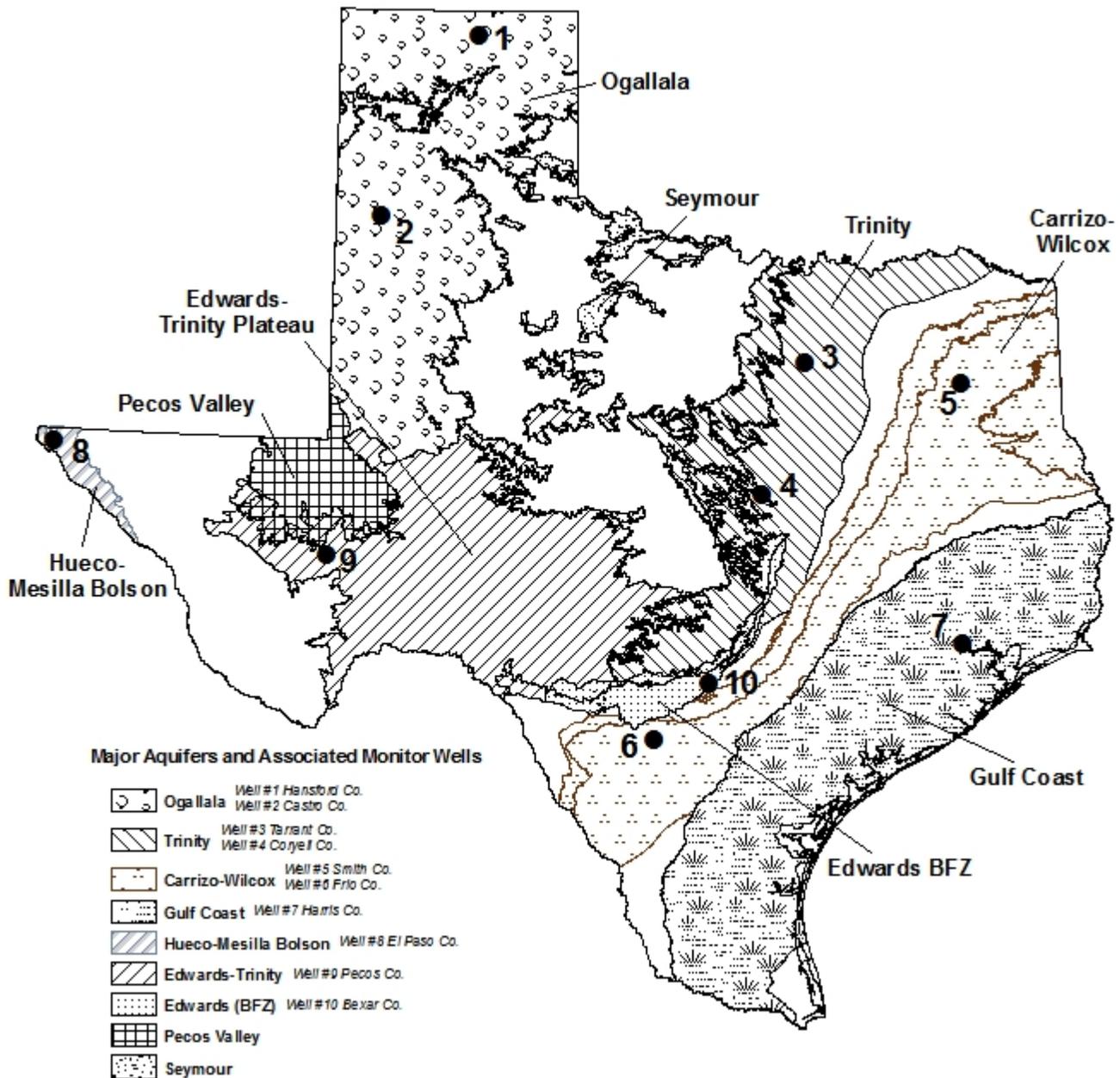
Name of Lake or Reservoir	No. on Map	Conservation Storage Capacity (acre-feet)	Conservation Storage		Change since Late February 2010		Change since Late March 2009		
			Late Mar. (acre-feet)	2010 (%)	(acre-feet)	(%)	(acre-feet)	(%)	
<b>EDWARDS PLATEAU</b>									
Oak Creek Reservoir	90	39,260	24,330	62	382	1	-4,669	-12	
E V Spence Reservoir	91	517,272	22,997	4	-1,557	0	-24,923	-5	
O C Fisher Lake	92	79,483	0	0	0	0	0	0	
*O H Ivie Reservoir	93	554,335	240,123	43	-1,194	0	-53,055	-10	
Twin Buttes Reservoir	94	177,850	35,628	20	2,052	1	-9,553	-5	
Brady Creek Reservoir	95	29,110	17,318	59	455	2	3,483	12	
Buchanan, Lake	96	875,610	631,041	72	38,943	4	66,488	8	
Lyndon B Johnson, Lake	97	113,690	112,018	99	64	0	1,285	1	
*Amistad Reservoir (Texas)	98	1,840,849	1,724,000	94	-11,000	-1	-158,000	-9	
*Amistad Reservoir (TX & Mexico)	(98)	3,275,532	3,110,000	95	-57,000	-2	-165,532	-5	
TOTAL		4,227,459	2,807,455	66	28,145	1	-178,944	-4	
<b>SOUTH CENTRAL</b>									
Travis, Lake	99	1,113,902	1,113,902	100	73,269	7	423,619	38	
*Austin, Lake	100	21,804	21,123	97	61	0	76	0	
Somerville Lake	101	147,104	147,104	100	0	0	32,814	22	
Canyon Lake	102	378,781	378,781	100	0	0	89,138	24	
Medina Lake	103	254,823	104,991	41	9,635	4	-19,846	-8	
*Coleto Creek Reservoir	104	31,040	31,040	100	0	0	7,085	23	
TOTAL		1,947,454	1,796,941	92	82,965	4	532,886	27	
<b>UPPER COAST</b>									
Houston, Lake	105	128,863	128,863	100	0	0	0	0	
Texana, Lake	106	153,246	153,246	100	0	0	60,799	40	
TOTAL		282,109	282,109	100	0	0	60,799	22	
<b>SOUTHERN</b>									
Choke Canyon Reservoir	107	695,262	483,675	70	-6,483	-1	-59,493	-9	
Corpus Christi, Lake	108	256,961	154,875	60	-4,911	-2	5,066	2	
*Falcon Reservoir (Texas)	109	1,551,034	1,062,000	68	23,000	1	-470,000	-30	
*Falcon Reservoir (TX & Mexico)	(109)	2,646,817	1,869,000	71	100,000	4	-777,817	-29	
TOTAL		2,503,257	1,700,550	68	11,606	0	-524,427	-21	
<b>STATE TOTAL</b>		31,068,501	26,989,810	87	73,649	0	1,640,861	5	

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

### 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  $100 * (\text{current conservation storage} - \text{past conservation storage}) / \text{conservation storage capacity}$ . Figures shown are for the Texas share of conservation storage in all reservoirs.

# GROUNDWATER LEVELS IN OBSERVATION WELLS

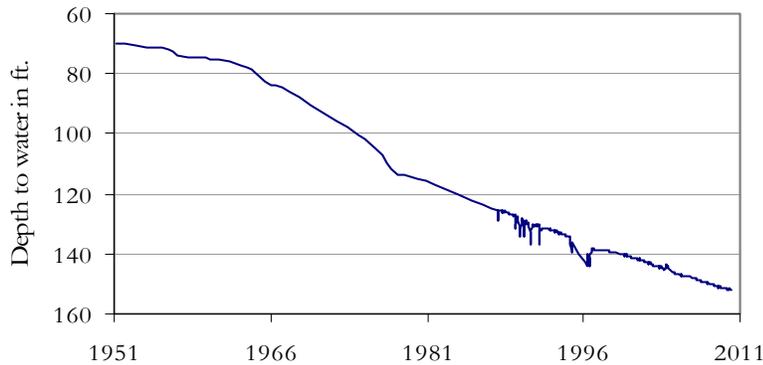


March, 2010

Water level measurements were available for all ten key monitoring wells. Water levels rose in five of the ten monitoring wells since the beginning of March, ranging from 0.01 feet in the Hansford County Ogallala well to 0.58 feet in the Smith County Carrizo-Wilcox well. Water levels declined in the remaining monitoring wells, ranging from 1.21 feet in the Harris County Gulf Coast well to 14.73 feet in the Frio County Carrizo-Wilcox well. The J-17 well in San Antonio recorded a water level of 52.99 feet below land surface, 3.87 feet below last month's measurement. This water level is 18.01 feet above the Stage 1 critical management level.

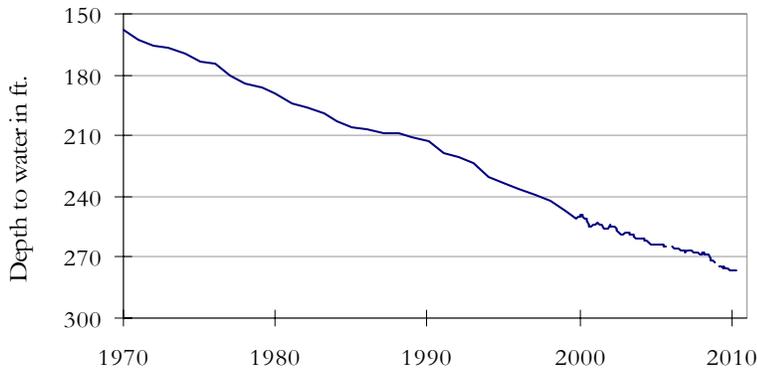
# MARCH GROUNDWATER LEVELS IN OBSERVATION WELLS

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



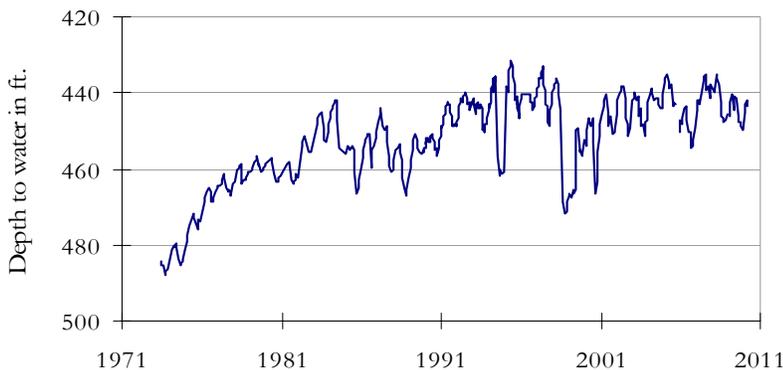
The late March water level measurement in this Ogallala Aquifer well, elevation 2,962 feet above sea level, was 151.75 feet below land surface. This measurement was 0.01 feet above last month's measurement, 0.52 feet below last year's measurement, and 81.63 feet below the initial measurement recorded in 1951.

**(2) State Well ID 10-45-102  
Southwest Castro County  
Ogallala Aquifer**



The late March water level measurement in this Ogallala Aquifer well, elevation 3,816 feet above sea level, was 276.62 feet below land surface. This measurement was 0.01 feet above last month's measurement, 2.10 feet below last year's measurement, and 120.62 feet below the initial measurement recorded in 1968.

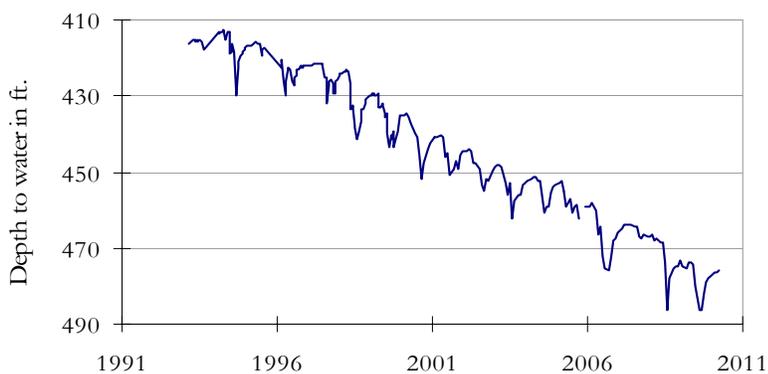
**(3) State Well ID 32-15-504  
Near Hurst, Tarrant County  
Paluxy Formation-Trinity Aquifer**



The late March water level measurement in this Paluxy Formation Trinity Aquifer well, elevation 535 feet above sea level, was 443.30 feet below land surface. This measurement was 1.37 feet below last month's measurement, 2.74 feet below last year's measurement, and 65.30 feet below the initial measurement recorded in 1955.

\* ID is used in this publication to differentiate between the monitoring well number (1 - 10) as displayed on the aquifer map and the TWDB's six- or seven-digit state well "identification" number.

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



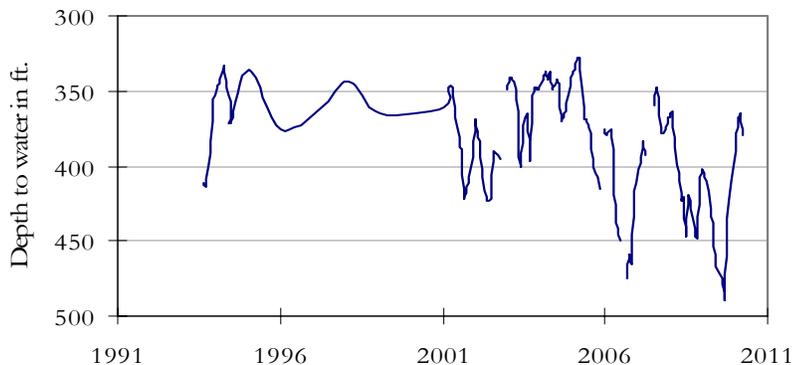
The late March water level measurement in this Hosston Formation Trinity Aquifer well, elevation 823 feet above sea level, was 475.76 feet below land surface. This water level was 0.53 feet above last month's measurement, 1.81 feet below last year's measurement, and 183.76 feet below the initial measurement recorded in 1955.

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



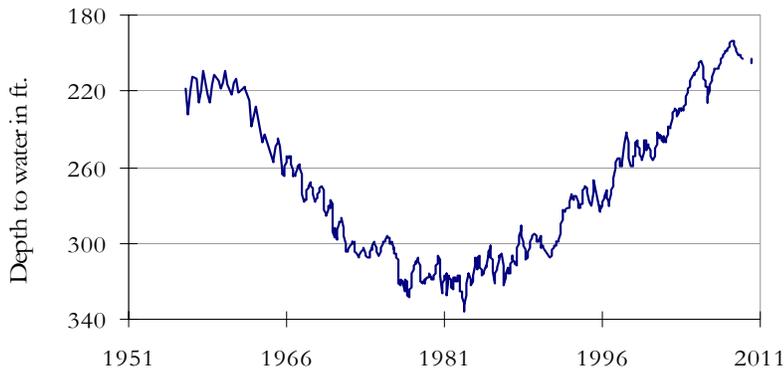
The late March water level measurement in this Carrizo-Wilcox Aquifer well, elevation 555 feet above sea level, was 430.30 feet below land surface. This water level was 0.58 feet above last month's measurement, 0.95 feet above last year's measurement, and 64.30 feet below the initial measurement recorded in 1987.

**(6) State Well ID 77-08-803  
Pearsall, Frio County  
Carrizo-Wilcox Aquifer**



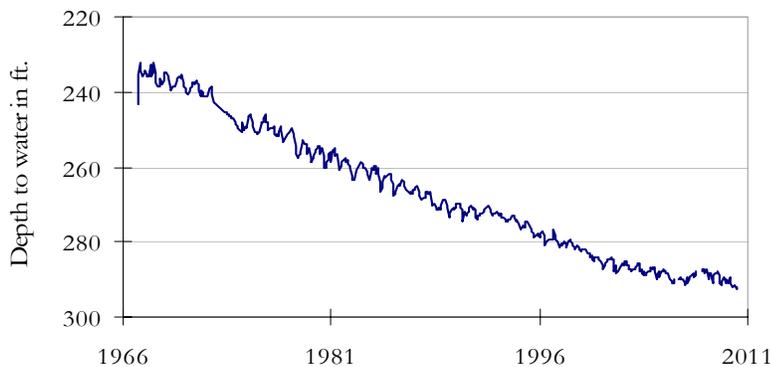
The late March water level measurement in this Carrizo-Wilcox Aquifer well, elevation 652 feet above sea level, was 379.93 feet below land surface. This was 14.73 feet below last month's measurement, 48.29 feet above last year's measurement, and 99.93 feet below the initial measurement recorded in 1963.

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



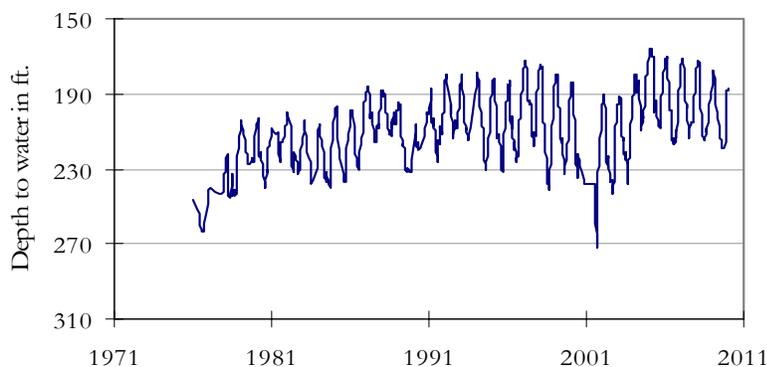
The late March water level measurement in this Evangeline Formation Gulf Coast Aquifer well, elevation 66 feet above sea level, was 204.66 feet below land surface. This was 1.21 feet below last month's measurement, 2.12 feet below last year's measurement, and 69.16 feet below the initial measurement recorded in 1947.

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



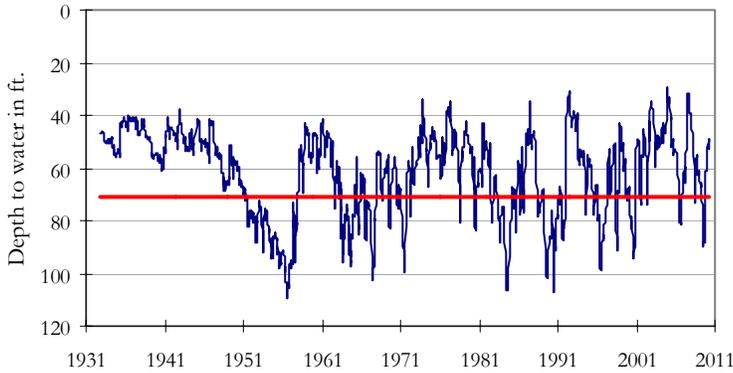
The late March water level measurement in this Hueco-Mesilla Bolson Aquifer well, elevation 3,882 feet above sea level, was 292.10 feet below land surface. This water level was 0.22 feet above last month's measurement, 2.65 feet below last year's measurement, and 60.20 feet below the initial measurement recorded in 1964.

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



The late March water level measurement in this Edwards-Trinity Plateau Aquifer well, elevation 3,199 feet above sea level was 194.97 feet below land surface. This water level was 5.56 feet below last year's measurement, and 51.91 feet above the initial measurement recorded in 1976.

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



The late March water level measurement in this Edwards (BFZ) Aquifer well, elevation 731 feet above sea level, was 52.99 feet below land surface. This was 3.87 feet below last month's measurement, 12.46 feet above last year's measurement, and 6.35 feet below the initial measurement recorded in 1932.



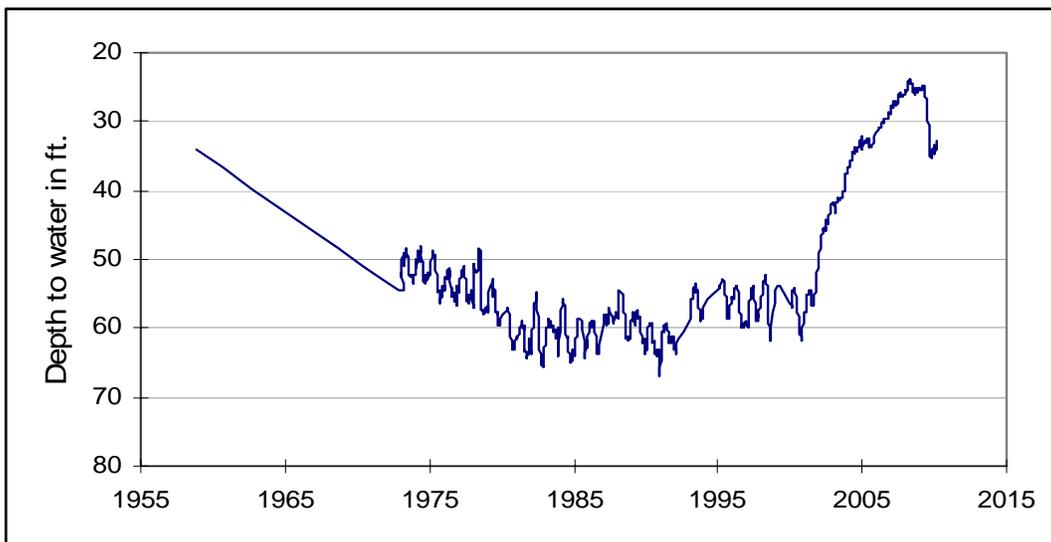
**\*\*\* Water levels below the red line indicate Edwards Aquifer Authority Stage 1 drought restrictions. \*\*\***

***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.

**State Well ID 80-173-502  
Victoria County**



This satellite telemetry equipped recorder well, located 4 miles northwest of Bloomington, at an elevation of 68 feet above sea level, was completed in the Gulf Coast Aquifer. Water levels have risen steadily since 2001, although a recent drop in water levels has been observed due to the extreme drought impacting the area in 2009 as surface water rights were limited due to low flow conditions on the Guadalupe River.

*TEXAS WATER DEVELOPMENT BOARD  
1700 N. CONGRESS AVE.  
P.O. BOX 13231  
AUSTIN TX 78711-3231*