May 23, 2012

To: Kent Myers

Re: Water and Drought Information

I have attached some information regarding the current rainfall and drought.

The following are a few quick items to note:

- The 42 year rainfall average at Lady Bird Johnson Park Weather Station (LBJPWS) is 30.13 inches
- The 2011 rainfall total was 12.53 inches
- 2011 rainfall is 4.92" lower than any year on record
- 2011 rainfall is 18" below average
- From October 1, 2010 until September 30, 2011 (12 months) it rained 6.74 inches at LBJPWS
- The current total rainfall for 2012 is 2.58" above average
- We are 22.55" below average since October 2010

I have attached the following:

- 42 year average rainfall numbers at LBJPWS (6 sheets)
- Texas Water Development Board well logs current to 5-22-12 (2 sheets)

Comments regarding data:

I have reviewed this data numerous times to try and ascertain why we are not seeing more appreciable recharge in the Ellenberger aquifer. The water available for recharge since October 2010 has been negligible until December 2011. From October of 2010 we experienced 14 consecutive months with rainfall below the 42 year average. During this period the greatest 30 day rainfall depth was 1.45 inches in March of 2011. Even though this is the greatest 30 day period, the rain for the month was received in multiple small showers. The overlying fact of all of this data is that we did not have sufficient rainfall to offset pumping.

The City of Fredericksburg
126 W. Main St. • Fredericksburg, Texas 78624-3708 • (830) 997-7521 • Fax (830) 997-1861

We have covered a period of 20 months from October 1, 2010 to today. We have received 27.51 inches of rain during this period. The 42 year average rainfall over this period of months is 50.22 inches. The deficit over this period is 22.70 inches.

I will continue to keep you informed of the condition of our well fields.

Please contact me with any questions, comments or to receive additional information.

Sincerely,

Craig A. Wallendorf, P.E., R.P.L.S.
Director of Public Works and Utilities
City of Fredericksburg, Texas

42 Year Rainfall
Lady Bird Johnson Park Weather Station

	1962-1969 7 year average	1970-1979 10 year average	1980-1989 10 year average	1990-1999 10 year average	2000-2012 10 year average	1962-2012 42 Year average
JANUARY	1.27	1.15	1.40	1.34	1.67	**1.37**
FEBRUARY	2.10	1.49	1.58	2.34	1.68	**1.84**
MARCH	0.97	1.33	1.46	2.56	2.88	**1.84**
APRIL	3.15	2.04	1.64	2.45	2.23	**2.30**
MAY	3.58	5.36	4.41	4.16	3.50	**4.20**
JUNE	2.53	3.57	4.88	3.49	2.71	**3.43**
JULY	1.10	2.14	2.27	1.09	3.30	**1.98**
AUGUST	2.24	4.77	1.61	1.45	2.58	**2.53**
SEPTEMBER	4.53	3.55	2.70	2.24	3.17	**3.24**
OCTOBER	2.14	2.35	4.51	2.99	3.35	**3.07**
NOVEMBER	2.68	2.35	2.90	2.49	2.15	**2.51**
DECEMBER	1.64	1.21	1.68	3.50	1.07	**1.82**
TOTAL	**27.93**	**31.30**	**31.03**	**30.10**	**30.29**	**30.13**

Rainfall 2000 to May 23, 2012

Lady Bird Johnson Park Weather Station

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	**2000-current** average
JANUARY	0.79	4.25	0.38	0.61	2.46	2.58	1.25	2.69	0.56	0.66	2.94	1.25	1.35	**1.67**
FEBRUARY	3.47	1.41	0.63	3.87	1.63	2.79	0.75	0.03	0.25	0.07	4.15	0.02	2.82	**1.68**
MARCH	0.89	3.29	0.91	1.35	2.60	4.05	1.29	8.33	1.95	3.85	3.34	1.35	4.21	**2.88**
APRIL	1.72	0.86	1.56	0.19	7.08	0.76	5.13	1.85	1.21	4.08	3.79	0.70	0.05	**2.23**
MAY	4.33	3.61	2.12	0.96	0.88	5.06	5.73	9.19	2.17	2.55	2.24	1.00	5.70	**3.50**
JUNE	2.53	0.63	5.01	4.83	6.08	0.04	1.34	7.72	0.90	0.80	2.46	0.15		**2.71**
JULY	0.39	0.35	13.79	6.19	1.72	2.19	0.58	7.43	2.05	0.56	4.21	0.19		**3.30**
AUGUST	0.04	5.60	0.56	2.60	3.47	2.85	0.31	8.05	4.75	2.58	0.05	0.05		**2.58**
SEPTEMBER	3.61	3.37	2.93	2.14	1.40	0.49	4.60	3.46	0.24	9.02	5.65	1.15		**3.17**
OCTOBER	4.80	3.69	7.53	2.54	5.45	2.01	2.84	0.55	2.98	6.53	0.10	1.13		**3.35**
NOVEMBER	5.86	5.29	1.05	0.97	4.61	1.61	0.13	1.19	0.12	2.98	0.03	1.97		**2.15**
DECEMBER	1.20	1.45	2.48	0.16	0.39	0.01	0.93	0.17	0.27	1.46	0.75	3.57		**1.07**
TOTAL	**29.63**	**33.80**	**38.95**	**26.41**	**37.77**	**24.44**	**24.88**	**50.66**	**17.45**	**35.14**	**30.80**	**12.53**	**14.13**	**30.29**

Rainfall 1990-1999

Lady Bird Johnson Park Weather Station

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	1990-1999 average
JANUARY	0.54	2.80	3.81	1.19	1.63	0.70	0.06	1.04	1.53	0.12	**1.34**
FEBRUARY	3.99	1.48	7.33	0.63	1.87	0.77	0.19	3.61	3.55	0.01	**2.34**
MARCH	1.69	0.76	4.79	1.97	2.58	2.43	1.11	3.72	3.23	3.28	**2.56**
APRIL	2.23	2.90	1.77	2.73	2.77	1.79	1.91	5.98	0.45	1.97	**2.45**
MAY	4.69	2.43	7.09	2.65	5.27	7.30	1.67	4.71	0.62	5.15	**4.16**
JUNE	0.20	5.68	4.75	0.95	1.34	4.68	1.92	9.37	2.27	3.77	**3.49**
JULY	5.12	1.25	0.75	0.00	0.09	0.81	1.18	0.12	0.47	1.14	**1.09**
AUGUST	4.02	0.00	0.99	0.00	0.03	2.67	2.23	0.81	3.72	0.01	**1.45**
SEPTEMBER	1.74	3.29	1.75	3.58	2.17	4.30	3.69	0.69	1.20	0.01	**2.24**
OCTOBER	3.26	2.61	0.15	2.47	4.70	0.47	5.24	2.93	6.49	1.53	**2.99**
NOVEMBER	2.42	2.61	5.25	2.14	2.44	1.46	3.41	1.52	3.63	0.02	**2.49**
DECEMBER	0.23	14.68	2.34	1.26	4.44	1.60	5.14	2.02	2.23	1.01	**3.50**
TOTAL	**30.13**	**40.49**	**40.77**	**19.57**	**29.33**	**28.98**	**27.75**	**36.52**	**29.39**	**18.02**	**30.10**

Rainfall 1980-1989

Lady Bird Johnson Park Weather Station

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1980-1989 average
JANUARY	0.59	1.23	0.50	1.27	2.32	1.44	0.61	1.05	0.35	4.62	**1.40**
FEBRUARY	0.87	1.21	0.64	3.00	0.15	2.25	1.08	3.23	0.56	2.76	**1.58**
MARCH	0.41	3.96	1.15	2.55	1.00	1.90	0.14	0.87	1.09	1.52	**1.46**
APRIL	2.63	4.18	4.43	0.06	0.25	1.11	1.18	1.35	0.73	0.44	**1.64**
MAY	5.81	2.98	3.74	3.85	1.86	3.37	6.75	4.58	6.37	4.78	**4.41**
JUNE	0.63	11.92	2.23	3.71	1.46	2.56	6.08	12.30	3.78	4.14	**4.88**
JULY	0.00	3.08	0.93	2.37	2.88	0.99	0.04	3.55	8.90	0.00	**2.27**
AUGUST	1.94	3.25	2.24	3.28	0.40	0.00	1.26	1.06	2.34	0.32	**1.61**
SEPTEMBER	6.75	2.25	2.72	1.30	0.09	1.77	8.16	1.98	1.05	0.90	**2.70**
OCTOBER	4.98	5.91	1.53	3.06	7.02	12.31	8.45	0.16	0.45	1.25	**4.51**
NOVEMBER	3.39	0.77	3.26	5.22	5.62	1.33	3.59	2.15	1.01	2.67	**2.90**
DECEMBER	0.69	0.29	1.90	0.07	4.11	1.92	4.59	1.95	1.26	0.00	**1.68**
TOTAL	**28.69**	**41.03**	**25.27**	**29.74**	**27.16**	**30.95**	**41.93**	**34.23**	**27.89**	**23.40**	**31.03**

Rainfall 1970-1979

Lady Bird Johnson Park Weather Station

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1970-1979 average
JANUARY	0.79	0.06	1.22	2.62	1.45	0.97	0.12	1.68	0.96	1.63	**1.15**
FEBRUARY	1.81	0.11	0.26	2.50	0.34	3.83	0.36	0.79	2.52	2.41	**1.49**
MARCH	2.41	0.81	0.55	1.59	1.49	0.19	1.04	1.85	0.22	3.15	**1.33**
APRIL	0.13	0.03	0.81	2.22	1.05	2.01	4.27	6.69	0.93	2.26	**2.04**
MAY	9.24	3.29	9.41	1.67	5.78	12.02	3.97	1.58	3.57	3.07	**5.36**
JUNE	1.67	1.69	4.09	9.28	0.71	2.16	3.36	1.84	3.77	7.09	**3.57**
JULY	1.24	1.87	1.53	5.64	0.32	1.93	7.51	0.02	0.82	0.49	**2.14**
AUGUST	0.93	10.33	4.33	0.21	6.38	1.01	2.11	2.29	15.63	4.45	**4.77**
SEPTEMBER	2.73	2.26	1.83	2.11	9.78	1.95	4.79	2.86	6.66	0.49	**3.55**
OCTOBER	1.16	7.72	3.63	4.42	1.26	0.49	1.93	1.73	1.02	0.17	**2.35**
NOVEMBER	0.00	0.50	1.87	0.60	7.08	2.69	3.05	3.38	2.85	1.44	**2.35**
DECEMBER	0.24	1.61	0.36	0.18	2.24	1.45	1.67	0.17	1.49	2.69	**1.21**
TOTAL	**22.35**	**30.28**	**29.89**	**33.04**	**37.88**	**30.70**	**34.18**	**24.88**	**40.44**	**29.34**	**31.30**

Rainfall 1962-1969

Lady Bird Johnson Park Weather Station

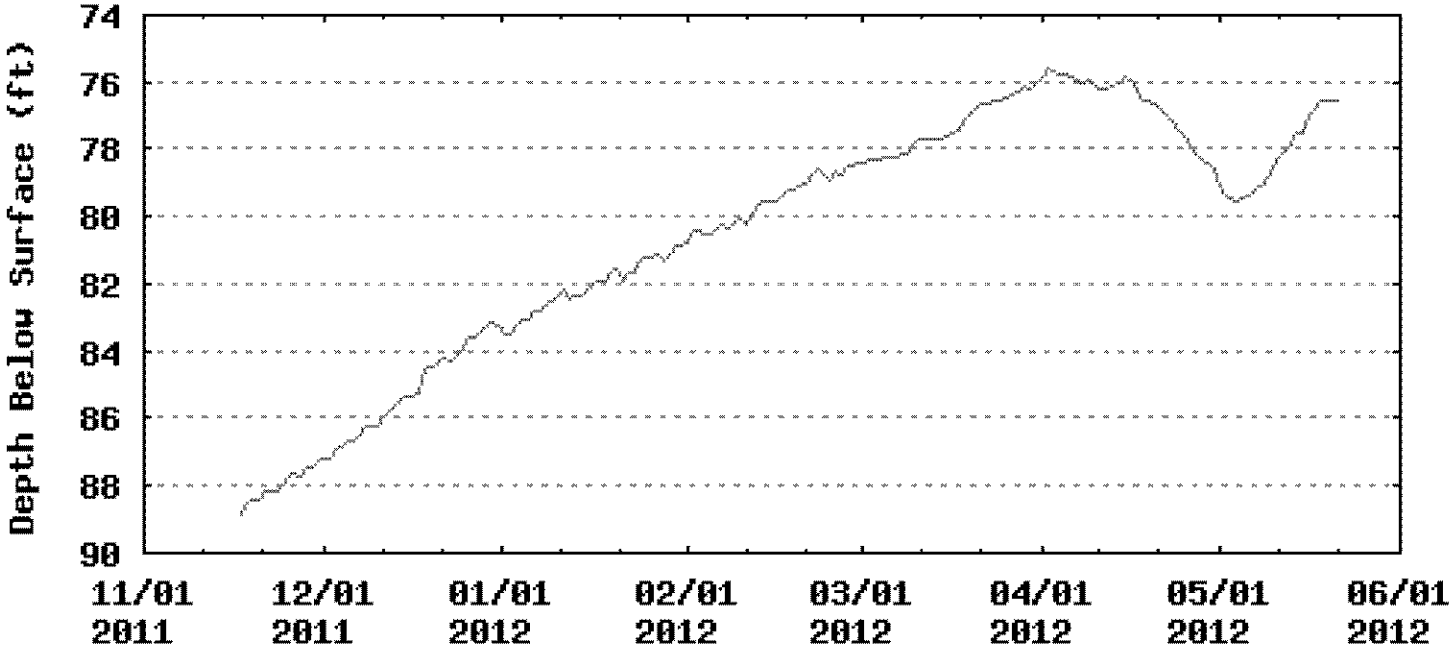
	1962	1963	1964	1965	1966	1967	1968	1969	1960-1969 Average
JANUARY	0.25	0.11	0.39	0.46	1.30	0.24	7.00	0.37	**1.27**
FEBRUARY	0.39	1.27	3.69	5.90	1.26	0.61	1.33	2.38	**2.10**
MARCH	0.74	0.05	1.76	0.51	0.42	0.31	2.04	1.95	**0.97**
APRIL	3.90	1.59	1.61	3.65	3.91	1.08	3.13	6.34	**3.15**
MAY	4.56	2.70	1.05	7.04	2.82	4.12	4.04	2.33	**3.58**
JUNE	2.57	0.99	1.07	7.94	1.31	0.20	2.36	3.77	**2.53**
JULY	0.74	0.04	0.72	2.88	0.12	0.85	3.15	0.27	**1.10**
AUGUST	0.54	2.10	1.09	0.40	6.27	1.16	0.35	5.99	**2.24**
SEPTEMBER	1.31	3.16	4.93	5.34	6.19	8.34	3.69	3.28	**4.53**
OCTOBER	1.39	0.00	1.48	2.74	0.72	2.47	0.37	7.95	**2.14**
NOVEMBER	2.30	4.23	2.09	1.86	0.00	4.59	1.28	5.07	**2.68**
DECEMBER	1.61	1.92	0.81	3.74	0.00	0.81	2.77	1.49	**1.64**
TOTAL	**20.30**	**18.16**	**20.69**	**42.46**	**24.32**	**24.78**	**31.51**	**41.19**	**27.93**

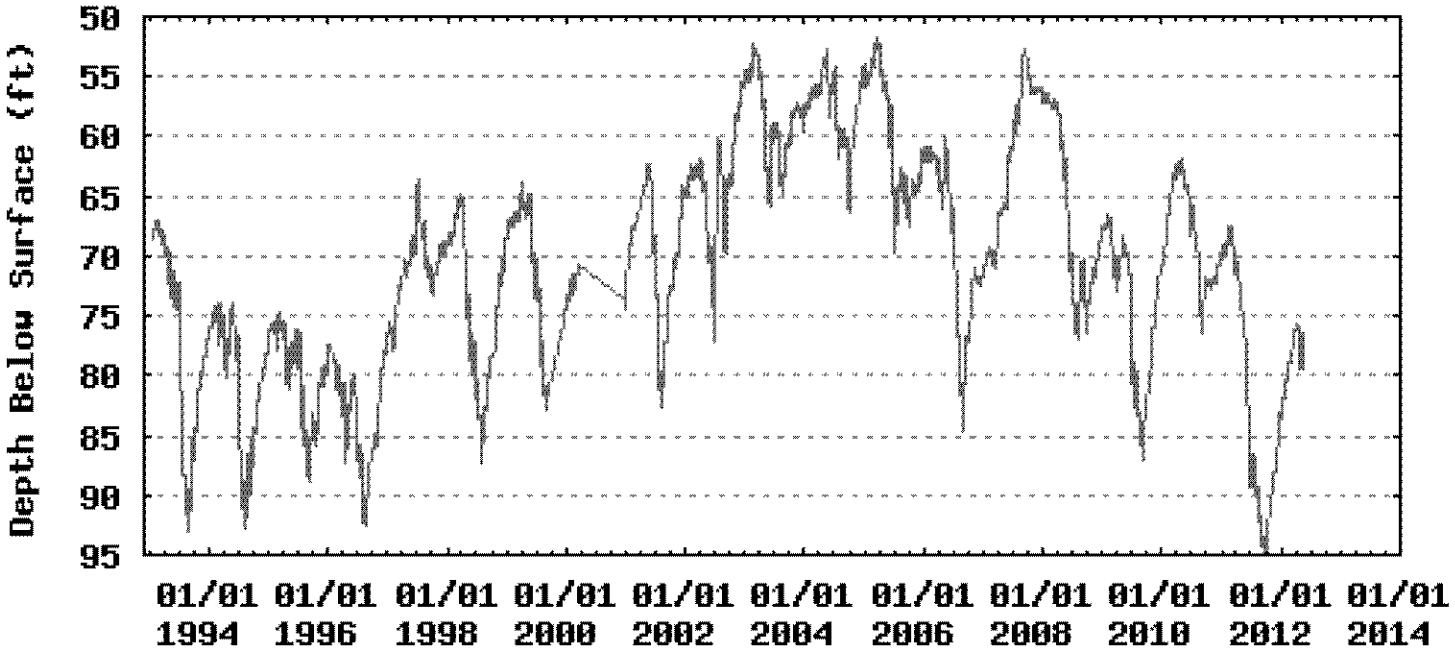
Data: Texas Water Development Board Updated: 05-22-2012 14:03

Graphics: Texas Water Dev. Bd. Last Reading: 5-21-2012, 76.55 ft

NOTE: Graphs show only highest daily water level (daily minimum depth)

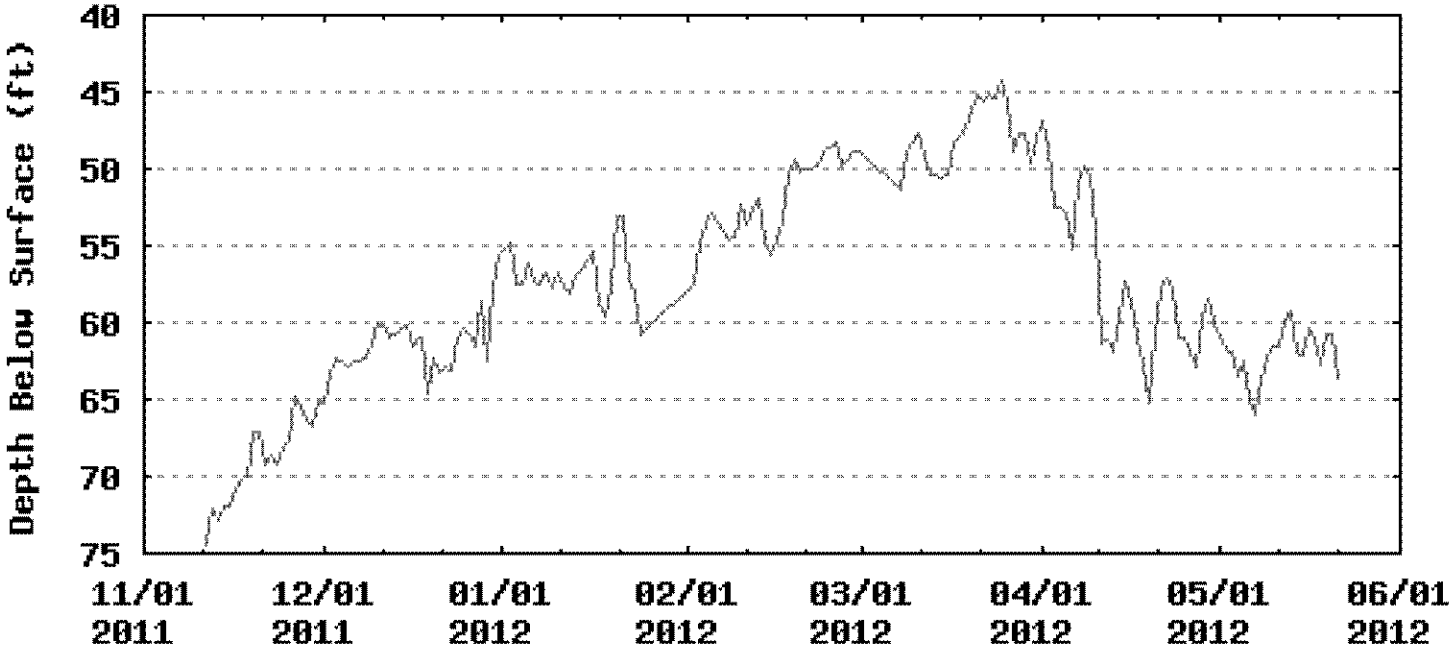
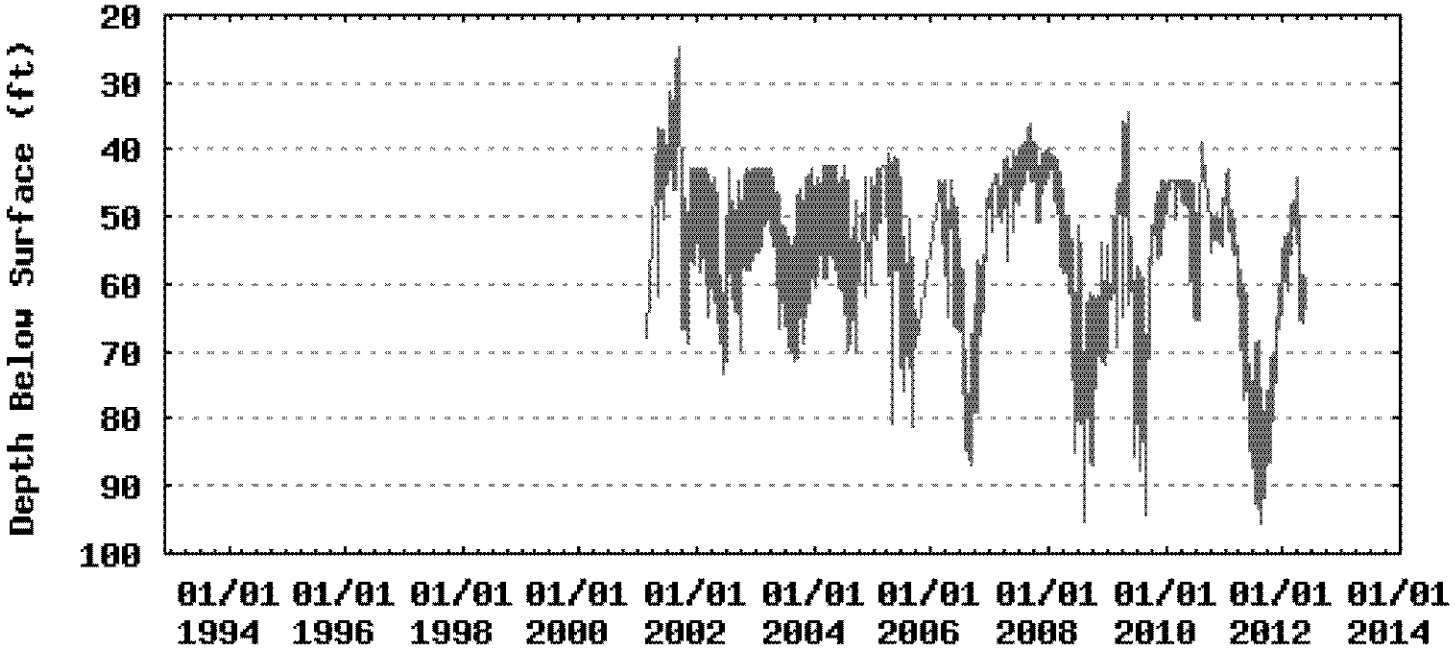
Gillespie County - Well Number: 5750108





Data: Texas Water Development Board Updated: 05-22-2012 14:03

Graphics: Texas Water Dev. Bd. Last Reading: 5-21-2012, 63.61 ft

NOTE: Graphs show only highest daily water level (daily minimum depth)

Gillespie County - Well Number: 5750324