BRAZOS VALLEY GROUNDWATER CONSERVATION DISTRICT

2014 ANNUAL REPORT

TO

BVGCD BOARD OF DIRECTORS

ON

ATTAINMENT OF MANAGEMENT PLAN OBJECTIVES

1. <u>Implement Strategies Providing For the Most Efficient Use of Groundwater:</u>

1a. Objective – Require all existing and new non-exempt wells constructed within the boundaries of the District to be permitted by the District and operated in accordance with District Rules. In addition, the District will encourage all exempt wells constructed within the District boundaries to be registered with the District.

1a. Performance Standard – The number of exempt and permitted wells registered within the District will be reported annually in the District's Annual Report submitted to the Board of Directors of the District.

1a. Performance Measurement – A total of 100 new non-exempt wells were permitted during 2014. The District registered 253 exempt wells (45 in Brazos County, 81 in Robertson County, 127 oil and gas rig and fracturing supply) in both counties combined.

1b. Objective – Regulate the production of groundwater by permitting wells within the District's boundaries based on beneficial use and in accordance with District Rules. Each year the District will accept and process applications for the permitted use of groundwater in the District, in accordance with the permitting process established by District Rules. The District will regulate the production of groundwater from permitted wells by verification of pumpage volumes using meters, if meters are required under the District Rule and/or permit for the wells.

1b. Performance Standard –The number and type of applications made for the permitted use of groundwater in the District, the number and type of permits issued by the District, and the amount of groundwater permitted, will be included in the Annual Report given to the Board of Directors.

1b. Performance Measurement –

Number of applications for permitted use: 100

<u>Type of applications made/permits issued</u>

- **Agricultural Irrigation – 35/35**
- **Industrial – 63/63**
- **Municipal – 1/1**
- **Rural Public Water Supply – 1/1**
- **Steam Electric – 0/0**

2014 Permitted Water Production in Acre Feet by Aquifer/User Group

	Agicultural	Industrial	Municipal	Rural Water	Steam Electric	Transported	Total Permitted
BRA	3,038.00	500.00					3,538.00
Hooper							0.00
Simsboro			2,855.00				2,855.00
Calvert Bluff	90.00	58.01					148.01
Carizzo	90.00						90.00
Queen City	74.00	559.58					633.58
Sparta	377.50	2,837.50					3,215.00
Yegua-Jackson		1,213.32		125.815			1,339.135
Gulf Coast							0.00
	3,669.50	5,168.41	2,855.00	125.815	0.00	0.00	11,818.725

1b. Performance Standard – The actual annual pumpage from each metered well within the District will be reported annually and compared to the amount permitted for that well. This information will be included in the District's Annual Report submitted to the Board of Directors of the District.

1b. Performance Measurement – A spreadsheet detailing the 2014 actual water production, permitted allowance, and fees for each metered well in the District are shown below:

Name	Permit #	Permitted Amount	Water Prod. 2014 in ac/ft	Total Assessment
Brazos River Authority	BVHU-0246	5.30	2.06	$ 28.54
Brazos Valley Septic & Water	BVHU-0983/BVOP-0155	15.00	12.10	$ 167.59
Lake Limestone Water, Inc	BVHU-0302/BVOP-0134	40.75	15.62	$ 216.28
Lake Limestone Water, Inc	BVHU-0303/BVOP-0135	80.51	22.20	$ 307.46
Robertson County WSC	BVHU-0015/BVOP-0130	259.60	198.64	$ 2,750.84
Robertson County WSC	BVHU-0016/BVOP-0131	236.40	73.56	$ 1,018.66
Robertson County WSC	BVHU-0017/BVOP-0132	134.50	38.09	$ 527.50
Robertson County WSC	BVHU-0018	71.50	90.29	$ 1,250.34
Tri-County SUD	BVHU-0023	119.30	114.65	$ 1,587.76
Tri-County SUD	BVHU-0024	84.00	97.58	$ 1,351.29
Twin Creek WSC	BVHU-0019	63.31	48.41	$ 670.35
Twin Creek WSC	BVHU-0020	53.06	80.32	$ 1,112.36
Twin Creek WSC	BVHU-0021	96.07	31.94	$ 442.39
Twin Creek WSC	BVHU-0022	25.59	30.26	$ 419.05
Wellborn SUD	BVDO-0014/BVOP-0174	1935.00	121.10	$ 1,677.14
Wellborn SUD	BVHU-0058/BVOP-0136	1153.35	466.66	$ 6,462.65
Wickson Creek - Robertson	BVHU-0031	55.00	37.11	$ 513.90
Rural Robertson County		4428.24	1480.59	$ 20,504.10
Brazos Valley Water & Septic	BVHU-0980/BVOP0150	15.00	9.99	$ 138.36
Brazos Valley Water & Septic	BVHU-0981/BVOP-0153	5.00	3.74	$ 51.38
Brazos Valley Water & Septic	BVHU-0982/BVOP-0151	30.00	12.97	$ 179.60
Brazos Valley Water & Septic	BVHU-0984/BVOP-0152	26.00	14.67	$ 203.12
Brazos Valley Water & Septic	BVHU-0985/BVOP-0154	26.00	11.54	$ 159.83
Wellborn SUD	BVHU-0053	278.30	448.21	$ 6,207.10
Wellborn SUD	BVHU-0054	258.13	96.87	$ 1,341.54
Wellborn SUD	BVHU-0055	225.87	220.16	$ 3,048.95
Wellborn SUD	BVHU-0056	225.87	220.16	$ 3,048.95
Wellborn SUD	BVHU-0057	297.125	343.45	$ 4,756.36
Wellborn SUD	BVOP-0174	125.815	12.33	$ 170.81
Wickson Creek - Brazos	BVDO-0042	700.00	504.91	$ 6,992.33
Wickson Creek - Brazos	BVDO-0142	400.00	0.00	$ -
Wickson Creek - Brazos	BVHU-0027	518.00	360.91	$ 4,998.17
Wickson Creek - Brazos	BVHU-0028	72.00	6.10	$ 84.49
Wickson Creek - Brazos	BVHU-0029	335.00	236.22	$ 3,271.32
Wickson Creek - Brazos	BVHU-0030	591.00	480.57	$ 6,655.30
Wickson Creek - Brazos	BVOP-0048	500.00	311.87	$ 4,318.99
Rural Brazos County		4629.11	3294.67	$ 45,626.60

Name	Permit #	Permitted Amount	Water Prod. 2014 in ac/ft	Total Assessment
Bremond, City of	BVHU-0012/BVOP-0145	40.00	0.00	$ -
Bremond, City of	BVHU-0013/BVOP-0146	60.00	0.00	$ -
Bremond, City of	BVHU-0014/BVOP-0147	84.00	27.31	$ 378.17
Bremond, City of	BVHU-0015/BVOP-0148	123.00	48.66	$ 673.88
Bremond, City of	BVHU-0016/BVOP-0149	134.00	52.28	$ 723.99
Calvert, City of	BVOP-0010	100.00	0.00	$ -
Calvert, City of	BVOP-0011	182.00	50.05	$ 693.18
Calvert, City of	BVOP-0012	273.00	182.68	$ 2,529.82
Franklin, City of	BVDO-0054	126.00	269.72	$ 3,735.25
Franklin, City of	BVOP-0027	116.00	16.04	$ 222.11
Franklin, City of	BVOP-0028	116.00	0.00	$ -
Franklin, City of	BVOP-0029	116.00	0.10	$ 0.11
Hearne, City of	BVHU-0011	494.00	332.56	$ 4,605.52
Hearne, City of	BVHU-0012	577.00	228.20	$ 3,160.22
Hearne, City of	BVHU-0013	312.00	223.49	$ 3,095.07
Hearne, City of	BVHU-0014	474.00	126.27	$ 1,748.62
Municipal Robertson		3327.00	1557.36	$ 21,565.94
Bryan, City of	BVDO-0003	4838.00	851.33	$11,789.87
Bryan, City of	BVHU-0001	716.00	0.00	$ -
Bryan, City of	BVHU-0002	686.00	0.00	$ -
Bryan, City of	BVHU-0003	2286.54	0.00	$ -
Bryan, City of	BVHU-0004	1413.53	0.00	$ -
Bryan, City of	BVHU-0005	3020.04	2011.42	$27,855.54
Bryan, City of	BVHU-0006	3784.56	2382.79	$32,998.52
Bryan, City of	BVHU-0007	3492.51	2185.35	$30,264.32
Bryan, City of	BVHU-0008	3841.55	3023.60	$41,872.97
Bryan, City of	BVHU-0009	3297.04	2705.44	$37,466.81
Bryan, City of	BVHU-0010	3460.72	2387.27	$33,060.57
Bryan, City of	BVHU-0041	2703.70	0.00	$ -
College Station, City of	BVDO-0001	1290.00	238.95	$3,309.19
College Station, City of	BVDO-0002	1290.00	359.18	$ 4,974.14
College Station, City of	BVDO-0013	4839.00	3886.40	$ 53,821.54
College Station, City of	BVDO-0053	2390.00	1909.38	$ 26,442.38
College Station, City of	BVDO-0152	2855.00	0.00	$ -
College Station, City of	BVHU-0038	2423.00	1096.71	$ 15,187.98
College Station, City of	BVHU-0039	2386.00	1228.94	$ 17,019.23
College Station, City of	BVHU-0040	2381.00	1548.60	$ 21,446.09
College Station, City of	BVHU-0042	2726.00	1524.68	$ 21,114.86
College Station, City of	BVHU-0043	2792.00	1130.18	$ 15,651.59
Texas A&M University	BVHU-0450	789.68	492.57	$ 6,821.39
Texas A&M University	BVHU-0451	753.53	358.72	$ 4,967.84
Texas A&M University	BVHU-0452	235.43	224.68	$ 3,111.56
Texas A&M University	BVHU-0453	745.88	446.52	$ 6,183.76
Texas A&M University	BVHU-0454	2337.14	1047.36	$ 14,504.60
Texas A&M University	BVHU-0455	2864.00	1681.38	$ 23,284.95
Texas A&M University	BVHU-0456	2444.77	452.55	$ 6,267.28
Texas A&M University	BVOP-0003	185.00	110.61	$ 1,531.76
Texas A&M University	BVOP-0004	282.00	267.10	$ 3,699.00
Texas A&M University	BVOP-0005	523.00	67.98	$ 941.38
Municipal Brazos		70072.62	33619.69	$465,589.12

Name	Permit #	Permitted Amount	Water Prod. 2014 in ac/ft	Total Assessment
Adams-Ethridge, Donna	BVDO-0207	150.00	150.00	$ 2,077.33
Calvert Country Club	BVOP-0050	0.25	0.17	$ 2.32
Calvert Country Club	BVOP-0051	7.52	2.48	$ 34.29
Calvert Country Club	BVOP-0052	35.12	5.46	$ 75.63
Calvert Country Club	BVOP-0053	35.11	10.07	$ 139.41
Circle X Land & Cattle (SynFuels)	BVDO-0039	40.00	1.52	$ 21.07
Coomer, Buddy	BVOP-0008	1.10	0.00	$ -
Corpora, Vence	BVDO-0082	40.00	0.00	$ -
Encana Oil & Gas	BVOP-0137	125.00	0.00	$ -
Encana Oil & Gas	BVOP-0138	125.00	0.00	$ -
Energy Transfer	BVDO-0038	3.30	0.21	$ 2.94
Franklin ISD	BVDO-0056	65.00	11.29	$ 156.33
Franklin ISD (Sports Field)	BVDO-0119	141.00	64.66	$ 895.44
Hawkwood Energy Operating, LLC	BVOP-0201	150.00	150.00	$ 2,077.30
Hawkwood Energy Operating, LLC	BVDO-0176	150.00	150.00	$ 2,077.30
Hawkwood Energy Operating, LLC	BVDO-0179	150.00	150.00	$ 2,077.33
Laredo Energy Operating	BVDO-0169	32.23	32.23	$ 446.25
Laredo Energy Operating	BVDO-0170	2.58	2.58	$ 35.70
Neff, Charles	BVDO-0032	32.20	0.00	$ -
Oakgrove Country Club	BVOP-0049	51.00	32.84	$ 454.79
Oak Grove Management Co., LLC	BVDO-0031**	537.00	408.70	$ 102.18
Oak Grove Management Co., LLC	BVOP-0020**	274.00	187.45	$ 46.86
Major Oak Power, LLC	BVHU-0044**	8.10	2.20	$ 30.49
Major Oak Power, LLC	BVHU-0045**	2887.00	1814.99	$ 453.75
Major Oak Power, LLC	BVHU-0046**	2508.00	1255.81	$ 313.95
Major Oak Power, LLC	BVHU-0047**	2116.00	1483.31	$ 370.83
Major Oak Power, LLC	BVOP-0144	300.00	0.00	$ 0.01
Rimrock Beefmasters, LLC	BVOP-0002	2.69	0.08	$ 1.06
Sanderson Farms, Inc. - Robertson	BVHU-0026/BVOP-0133	56.00	45.13	$ 624.97
Siegert, Paul	BVOP-0160	5.00	0.00	$ -
Skiles, Dr. Clifford	BVDO-0136	750.00	37.00	$ 512.40
Skiles, Dr. Clifford	BVDO-0137	750.00	0.00	$ -
Trammell's Running Creek RV Park	BVOP-0139	8.00	0.59	$ 8.15
Trend Gathering & Treating, LP	BVDO-0004	2.00	0.00	$ 0.01
Trend Gathering & Treating, LP	BVOP-0163	2.00	0.00	$ -
Waltrip, Blair	BVDO-0164	12.89	12.89	$ 178.50
Waltrip, Blair	BVDO-0165	12.89	0.00	$ 178.50
Watson, George	BVOP-0170	1.60	2.13	$ 29.49
Industrial Robertson		11569.58	6013.79	$ 13,424.58

Anadarko Petroleum	BVOP-0188	5.00	3.87	$ 69.25
Anadarko Petroleum	BVOP-0199	5.00	3.87	$ 69.25
Borski, Dorothy	BVOP-0172	56.00	7.14	$ 98.85
Briarcrest Country Club	BVHU-0069	154.60	116.31	$ 1,610.79
Brooks, James M	BVDO-0099	7.00	19.65	$ 272.07
Bryan Texas Utilities	BVHU-0154	177.44	90.94	$ 1,259.39
Capstone-CS, LLC	BVDO-0124	22.00	40.08	$ 555.02
Circle D Nurseries	BVDO-0028	1.34	0.95	$ 13.20
Crimson Energy	BVOP-0176	100.00	0.00	$ -
DeVore, Jason	BVDO-0021	5.00	0.00	$ -
Fortex Grass	BVDO-0019	1.00	0.49	$ 6.77
GLP Technologies	BVHU-0092	5.00	0.21	$ 2.97
Grid Raceplex Holdings, Ltd.	BVOP-0177	30.00	0.02	$ 0.26
Grid Raceplex Holdings, Ltd.	BVOP-0178	30.00	0.02	$ 0.30
Grid Raceplex Holdings, Ltd.	BVOP-0179	30.00	9.62	$ 133.20

Name	Permit #	Permitted Amount	Water Prod. 2014 in ac/ft	Total Assessment
Halcon Resources	BVDO-0162	35.00	35.00	$ 484.71
Halcon Resources	BVDO-0163	35.00	35.00	$ 484.70
Halcon Resources	BVDO-0166	35.00	35.00	$ 484.70
Halcon Resources	BVDO-0171	30.00	30.00	$ 415.46
Halcon Resources	BVDO-0175	30.00	30.00	$ 415.46
Halcon Resources	BVDO-0177	75.00	75.00	$ 1,038.65
Halcon Resources	BVDO-0180	70.00	70.00	$ 969.41
Halcon Resources	BVDO-0181	70.00	70.00	$ 969.41
Halcon Resources	BVDO-0182	70.00	70.00	$ 969.41
Halcon Resources	BVDO-0183	70.00	70.00	$ 969.41
Halcon Resources	BVOP-0190	70.00	70.00	$ 969.41
Halcon Resources	BVOP-0191	70.00	70.00	$ 969.41
Halcon Resources	BVOP-0192	70.00	70.00	$ 969.41
Halcon Resources	BVOP-0193	70.00	70.00	$ 969.41
Halcon Resources	BVOP-0194	70.00	70.00	$ 969.41
Halcon Resources	BVOP-0195	70.00	70.00	$ 969.41
Halcon Resources	BVOP-0196	70.00	70.00	$ 969.41
Halcon Resources	BVOP-0197	70.00	70.00	$ 969.41
Halcon Resources	BVOP-0198	70.00	70.00	$ 969.41
Halcon Resources	BVOP-0205	70.00	70.00	$ 969.41
Hawkwood Energy Operating, LLC	BVOP-0184	80.00	2.26	$ 31.27
Hawkwood Energy Operating, LLC	BVOP-0185	120.00	3.48	$ 48.19
Hawkwood Energy Operating, LLC	BVOP-0186	200.00	4.34	$ 60.16
Hawkwood Energy Operating, LLC	BVOP-0187	200.00	4.39	$ 60.77
Hawkwood Energy Operating, LLC	BVOP-0202	150.00	150.00	$ 2,077.30
Hawkwood Energy Operating, LLC	BVOP-0203	150.00	150.00	$ 2,077.30
Hawkwood Energy Operating, LLC	BVOP-0204	150.00	150.00	$ 2,077.30
Hawkwood Energy Operating, LLC	BVOP-0208	150.00	150.00	$ 2,077.33
Hawkwood Energy Operating, LLC	BVOP-0209	150.00	150.00	$ 2,077.33
Hawkwood Energy Operating, LLC	BVOP-0210	150.00	150.00	$ 2,077.33
Knife River Corporation	BVDO-0117	150.00	2.97	$ 41.19
Knife River Corporation	BVOP-0158	32.00	4.60	$ 63.75
Laredo Energy Operating	BVDO-0167	19.33	19.33	$ 267.75
Laredo Energy Operating	BVDO-0168	19.33	19.33	$ 267.75
Laredo Energy Operating	BVOP-0206	6.50	6.50	$ 89.25
Laredo Energy Operating	BVDO-0178	25.80	25.80	$ 357.00
Lonestar Operating, LLC	BVOP-0189	20.00	20.00	$ 276.98
Marlin Energy Resources, LLC	BVDO-0159	120.00	120.00	$ 1,561.84
Marlin Energy Resources, LLC	BVDO-0160	120.00	120.00	$ 1,561.84
Melvin Estate	BVOP-0182*	110.00	0.00	$ -
Millican United Methodist Church	BVDO-0143	5.00	1.05	$ 14.59
Miremont One Golf Course	BVOP-0024	78.85	48.57	$ 672.70
Miremont One Golf Course	BVOP-0025	224.28	186.09	$ 2,577.09
Miremont One Golf Course	BVOP-0026	432.74	175.79	$ 2,434.51
Opersteny, Steve	BVHU-0457	530.00	337.36	$ 4,671.95
Price, David	BVOP-0173	19.36	0.00	$ -
Sahara Reality Group	BVDO-0024	10.00	0.27	$ 3.76
Sanderson Farms, Inc. - Brazos	BVDO-0140	0.00	0.00	$ -
Sanderson Farms, Inc. - Brazos	BVHU-0025	2057.00	1141.87	$ 15,813.44
Sharp, John	BVDO-0156	200.00	0.00	$ -
Stripes, LLC	BVDO-0135	1.00	1.16	$ 16.03
Stylecraft Builders Inc.	BVDO-0081	5.00	2.09	$ 28.98
Industrial Brazos		7535.57	4660.42	$ 64,371.42

Name	Permit #	Permitted Amount	Water Prod. 2014 in ac/ft	Total Assessment
Anderson Estate	BVHU-1070	600.00	6.94	$ 0.87
Anderson Estate	BVHU-1071	600.00	11.86	$ 1.48
Brien, James & Ellen	BVDO-0134	542.00	91.57	$ 11.45
Burnett, David	BVDO-0009	242.00	123.84	$ 15.48
Circle X Camp Cooley Ranch, Ltd.	BVDO-0017	110.00	0.00	$ -
Circle X Camp Cooley Ranch, Ltd.	BVDO-0025	110.00	0.00	$ -
Circle X Camp Cooley Ranch, Ltd.	BVDO-0026	110.00	1.26	$ 0.16
Circle X Camp Cooley Ranch, Ltd.	BVDO-0027	110.00	0.00	$ -
Circle X Camp Cooley Ranch, Ltd.	BVOP-0001	110.00	26.73	$ 3.34
Carpenter, Dale	BVDO-0100	117.00	0.00	$ -
Carpenter, Dale	BVDO-0125	115.00	0.00	$ -
Circle X Land & Cattle	BVHU-0433*	280.00	4.75	$ 0.59
Circle X Land & Cattle	BVHU-0433*	280.00	0.00	$ -
Circle X Land & Cattle	BVHU-0433*	2800.00	107.20	$ 13.40
Circle X Land & Cattle	BVHU-0433*	56.00	0.00	$ -
Circle X Land & Cattle	BVHU-0438*	56.00	0.00	$ -
Circle X Land & Cattle	BVHU-0439	56.00	0.00	$ -
Conn, Larry	BVDO-0018	35.00	4.77	$ 0.60
Conn, Larry	BVDO-0046	35.00	4.77	$ 0.60
Conn, Larry	BVOP-0094	35.00	4.77	$ 0.59
Connatser, William	BVDO-0098	100.00	1.10	$ 0.14
Corpora, Vence	BVDO-0055	600.00	263.71	$ 32.96
Corpora, Ryan, Sloat	BVDO-0090	600.00	607.70	$ 75.96
Corpora, Ryan, Sloat	BVDO-0091	700.00	235.98	$ 29.50
Epps, Frank N	BVOP-0047	30.00	0.72	$ 0.09
Fazzino, Lee	BVHU-1025	560.00	79.70	$ 9.96
Gregurek, Edward L.	BVDO-0037	26.00	4.88	$ 0.61
Liere Dairy	BVDO-0118	720.00	28.49	$ 3.56
Liere Dairy	BVHU-1101	254.00	0.00	$ -
Liere Dairy	BVHU-1102	720.00	304.99	$ 38.12
Lockhart, Bart	BVHU-0142	160.00	160.00	$ 20.00
Mackey, Willis	BVDO-0103	20.00	0.00	$ -
Neal, Murray	BVDO-0102	24.00	2.05	$ 0.26
Philipello, Nathan	BVDO-0147	30.00	0.00	$ -
Philipello, Nathan	BVDO-0148	30.00	2.28	$ 0.29
Philipello, Nathan	BVDO-0149	30.00	3.11	$ 0.39
Rampy, Ty	BVOP-0017	125.00	125.00	$ 15.63
Rampy, Ty	BVOP-0018	125.00	125.00	$ 15.63
Reistino, Maria & Melissa	BVDO-0092	894.00	290.62	$ 36.33
Rolke Ranch	BVHU-0143	45.00	0.00	$ -
Rolke Ranch	BVHU-0144	15.00	0.00	$ -
Rolke Ranch	BVHU-0145	30.00	0.00	$ -
Rolke Ranch	BVHU-0146	45.00	0.00	$ -
Skiles, Clifford III (Trey)	BVDO-0108	1400.00	793.00	$ 99.13
Skiles Family Partnership, C.A.	BVHU-1058	20770.00	19492.00	$ 2,436.55
Smitherman, Robert	BVDO-0172	30.00	0.00	$ -
Smitherman, Robert	BVDO-0173	30.00	0.00	$ -
Smitherman, Robert	BVDO-0174	30.00	0.00	$ -
Watson, Richard	BVDO-0115	54.50	51.41	$ 6.43
Wright, Larry	BVOP-0156	100.00	15.21	$ 1.90
Agricultural - Robertson		34696.50	22975.41	$ 2,872.00

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A&F Farms (Dobrovolny, Jason)	BVOP-0119	30.00	0.00	$ -
A&F Farms (Dobrovolny, Jason)	BVOP-0120	30.00	0.00	$ -
A&F Farms (Dobrovolny, Jason)	BVOP-0121	40.00	0.00	$ -
A&F Farms (Dobrovolny, Jason)	BVOP-0122	40.00	0.00	$ -
A&F Farms (Dobrovolny, Jason)	BVOP-0123	40.00	0.00	$ -
Brien, Jeff	BVDO-0113	120.00	0.00	$ -
Carrabba Brothers	BVDO-0153	74.00	0.00	$ -
Carrabba Brothers	BVOP-0165	56.67	0.00	$ -
Carrabba Brothers	BVOP-0166	56.67	0.00	$ -
Carrabba Brothers	BVOP-0167	56.66	0.00	$ -
Circle X Land & Cattle*	BVHU-0437	56.00	0.00	$ -
Dawson, Daniel	BVDO-0052	19.00	14.97	$ 1.87
Forsthoff, Robert G.	BVHU-0502	20.00	0.00	$ -
Forsthoff, Robert G.	BVHU-0503	20.00	0.00	$ -
Forsthoff, Robert G.	BVHU-0504	20.00	0.00	$ -
Greenwood, Kyle	BVDO-0123	60.00	4.37	$ 0.55
Inguran, LLC dba Sexing Technology	BVDO-0126	280.00	60.91	$ 7.61
Lampe, Michael	BVHU-0153	22.40	4.60	$ 0.58
Lampe, Michael	BVHU-0154	22.40	4.60	$ 0.57
McGuire, Charles	BVDO-0122	100.00	29.79	$ 3.72
Melvin Estate	BVOP-0183*	165.00	0.00	$ -
Messina Hoff Winery	BVDO-0075	80.00	9.21	$ 1.15
Messina Hoff Winery	BVHU-0077A	4.30	0.00	$ -
Paull, Marcella	BVDO-0146	40.00	0.00	$ -
Ruffino, Preston J. III	BVOP-0159	111.00	0.00	$ -
Scasta, Robert Lee	BVOP-0157	60.00	0.00	$ -
Wall, Jim	BVDO-0151*	200.00	136.34	$ 17.04
Wall, Jerry	BVOP-0164*	150.00	11.74	$ 1.47
Agricultural - Brazos		1974.10	276.53	$ 34.56
Grand Total		138232.72	73878.46	$ 633,988.32
* Duel use permits				
** Steam Electric permits				
Exceeded permitted production/not aggregated				

1c. Objective – Conduct ongoing monitoring of the aquifers underlying the District and the current groundwater production within the District, and then assess the available groundwater that can be produced from each aquifer within the District after sufficient data are collected and evaluated. Using this data and information developed for GMA-12 the District will re-evaluate availability goals as necessary and will permit wells in accordance with the appropriate production goals.

1c. Performance Standard – The District will conduct the appropriate studies to identify the issues and criteria needed to address groundwater management needs within the District's boundaries. Groundwater availability goals will take into consideration the GMA-12 planning and research of the hydro-geologic and geologic characteristics of the aquifers, which may include, but not necessarily be limited to, the amount of water use, water quality, and water level declines.

1c. Performance Measurement – 164 wells are now being monitored across the District encompassing all aquifers. Of that number, 87 lie over the Carrizo-Wilcox group, 77 over the Brazos River Alluvium, Queen City, Sparta, and Yegua-Jackson. The total number of readings for all monitoring wells was 1,344. A comparison with previous years shows the well monitoring program remains robust and the most effective method to ascertain aquifer levels in relationship to the desired future conditions.

- **2013 – 166 wells in the network – 1,278 measurements**
- **2012 – 151 wells in the network – 816 measurements**
- **2011 – 114 wells in the network – 404 measurements**

During the May, 2014 board meeting, the Districts' hydrologist, John Seifert, updated the Board on the comparison of average static water levels within the aquifers and the Desired Future Condition (DFC) of the particular aquifer. The report indicated positive relationship between average water levels within the aquifers and the DFC's. The presentation is attached to the Annual Report.

Groundwater Management Area 12 (GMA-12) DFCs were adopted in April, 2010 and will be re-evaluated and adopted not later than May, 2016. GMA-12 is currently meeting on a regular basis to establish DFCs for each of the aquifers managed by the respective districts represented. The BVGCD database of readings being developed will be used to measure how well the current Groundwater Availability Model (GAM) predicts the drawdown of the aquifers. It will also help improve prediction of the modeled available groundwater, if in fact, drawdown levels are not what the model has predicted. Assessment of the past two years of monitoring well data compared to the GAM projected drawdown of the aquifers indicates the aquifers are responding more favorably than the GAM estimates. This is a positive development, but no assessment can be made at this time as to how relative the model is in predicting the drawdown as it relates to the DFC's of the regulated aquifers.

The groundwater districts (Brazos Valley, Lost Pines, Post Oak Savannah, Mid East Texas, Fayette County) will be jointly involved in an update to the GAM used in developing the DFCs. All hydrologists for the GMA-12 districts were instructed to analyze the current model, data developed within the respective water districts, and determine if an update of the model is warranted and costs associated with the update. That meeting occurred December 9, 2013 resulting in GMA-12 instructing the hydrologists to contact the Texas Water Development Board (TWDB) about updating the model and a possible partnering with TWDB on the update. In November, 2014, TWDB published a Request for Qualifications (RFQ) for the aforementioned GAM update. Work on the update should begin in 2015 but will not be available for use in the formulation of the 2016 DFCs.

The Board declared the Brazos River Alluvium relevant for this round of DFC determination. The Alluvium was declared non-relevant but self-regulating in 2010 leading to no designation of a DFC. With relevancy declared, a DFC will be required to be set for the aquifer.

The TWDB is currently working to establish a GAM for the Brazos River Alluvium. It is not known at this time when to expect the completed product, but once completed, it should facilitate a more accurate determination of future DFCs for the aquifer.

Water quality is being addressed in the Brazos River Alluvium aquifer as it relates to agricultural irrigation. Farmers in the river bottom of both Brazos and Robertson counties have been experiencing higher than normal salinity issues in irrigation water since the drought began in the fall of 2011. Water samples were taken in mid-September, 2013 from six wells ranging from northern Robertson to northern Brazos counties. This coincided with the last irrigation of the year having been done on the respective crop. Samples were again taken from the same wells in mid-December. Water analysis was run on all samples to determine any factors that might limit irrigation efficiency (TDS, EC, Cl, Na, SAR). Two additional samples were taken during 2014 from each of these wells (just prior to irrigation beginning and at peak watering). The project was conducted to try and determine if water quality from a particular well changes during the irrigation season and, if so, what changes and how much. Results from the testing seem to indicate little or no change in water quality at any time during the year. Water quality within a particular well varied little, either positively or negatively, during the one -year study period.

1c. Performance Standard – A progress report on the work of the District regarding the groundwater availability will be written annually, as substantial additional data are developed. The progress report will be included in the annual report to the District Board of Directors.

1c. Performance Measurement – The Brazos Valley Groundwater Conservation District (BVGCD) has inventoried pumping of permit holders for several years and that effort continues. Obtaining accurate data regarding the quantity of groundwater pumped is an important effort with data collected on a monthly or annual basis.

Water-level data are collected from a water-level monitoring network to evaluate water-level changes that occur through the year or over a number of years in response to changes in groundwater pumping. The data will continue to be collected and utilized as overall groundwater availability within the BVGCD is evaluated. Data being collected will be utilized in current round of GMA-12 planning scheduled to be completed by May, 2016. At that time, revised estimates of groundwater availability will be developed based on the review of the groundwater pumping and well water-level data being collected and evaluated. Results from the BVGCD's efforts also will provide data for the Texas Water Development Board (TWDB) regional groundwater availability model used as a water resources planning tool.

From 2007 through 2014, GMA-12, composed of five groundwater districts, participated in the process of developing desired future conditions (DFCs). During that time the BVGCD was enhancing its inventory of groundwater pumping and also initiating a program of water-level monitoring to provide data for continuing evaluation of groundwater resources. The collection of water-level monitoring data by the BVGCD began during the latter part of 2010, with data before that time for a limited number of wells collected by the TWDB.

As part of the GMA-12 effort, estimates of Modeled Available Groundwater (MAG) were developed by the TWDB in the latter part of 2010 based on the DFCs. The estimates of MAG within the BVGCD are given in Table 1. The Brazos Alluvium Aquifer was declared non-relevant and self-regulating during the 2010 round of DFC determination. The Board declared the Alluvium relevant for the 2016 DFC planning process.

Table 1. Estimates of Groundwater Availability

Aquifer	Modeled Available Groundwater, ac-ft/yr
Carrizo	5,496
Queen City	1,100
Simsboro	96,185
Calvert Bluff	1,755
Hooper	316
Sparta	9,000
Yegua-Jackson	6,100

Table 2. Metered Groundwater Pumping, ac-ft/yr

Aquifer	2012	2013	2014
Carrizo	1,056.30	806.43	852.28
Queen City	105.78	64.40	496.57
Simsboro	53,498.77	64,106.92	62,946.34
Calvert Bluff	124.99	81.77	183.50
Hooper	714.21	794.24	1,065.07
Sparta	3,099.50	3,402.06	5,358.33
Yegua-Jackson	1,418.33	1,438.37	2,533.23

Water-Level Monitoring Data for 2011-2014

As groundwater pumping occurs within the BVGCD, water levels are measured in wells screening the aquifers to evaluate their response to continuing pumping. The TWDB has had a program of measuring water levels in certain wells within the BVGCD for decades. With that program, water levels were measured in about 21 wells on an annual basis. Beginning in 2009, the BVGCD also began measuring water levels in 5 additional wells screening sands of the Simsboro Aquifer.

The BVGCD expanded its water-level measuring program in the latter part of 2010 to include an additional 34 wells. The water-level was measured at least once in each of the wells and for some of the wells at least two times during the year. This water-level monitoring effort was in addition to the 21 wells that are a part of the TWDB water-level measuring network.

In 2011, the well water-level monitoring program was expanded further with water levels measured in additional wells that screened sands of the various aquifers providing water within the BVGCD. 114 wells were monitored at least once during the course of the year. Monitoring was done across all aquifers with most having at least 2 monitoring wells.

During 2012, 151 wells were monitored in the network. Several of these wells were not monitored during 2012 because steel tape measurements were ceased. This was in response to a report of possible damage done to one well.

The well monitoring program grew to 166 wells covering all eight of the relevant District aquifers during 2013. A minimum of two monitor wells are used in each of the aquifers. The City of Bryan Well #18 has been equipped with a well bubbling unit which allows the District and the city continuous to receive static water level measurements in real time.

In 2014, the well monitoring network was comprised of 164 wells covering all eight aquifers in the District. At least two wells were measured in each of these aquifers. Hydrographs were presented at each Board meeting reflecting an average of water level measurements taken each month.

Board members at each permit hearing and board meeting are provided a table listing the modeled available groundwater assessed for each aquifer, the amount of water permitted in each aquifer or aquifer subdivision, and the amount of water pumped from each aquifer during 2011, 2012, and 2013.

2. Implement Strategies to Control and Prevent Waste of Groundwater:

2a. Objective – Apply a water use fee to the permitted use of groundwater in the District to encourage conservation-oriented use of the groundwater resources to eliminate or reduce waste.

2a. Performance Standard – Each year the District will apply a water use fee to the non-exempt permitted use of groundwater produced within the District pursuant to District rules. The amount of fees generated and the amount of water produced for each type of permitted use will be a part of the Annual Report presented to the District Board of Directors.

2a. Performance Measurement – In 2014, the District generated a total of $645,466.55 through water production fees. The amount generated and actual water productions for each permit type are listed below.

Type of Permit	Fees Generated	Water Used
Agricultural (metered)	$2,906.56	23,251.94 ac ft.
Agricultural (non-metered)	$11,478.23	*91,825.86 ac ft.
Industrial	$76,477.94	5,521.75 ac ft.
Municipal Water Supply	$487,155.06	35,177.05 ac ft.
Rural Water Supply	$66,130.70	4,760.76 ac ft.
Steam Electric	$1,318.06	5,152.46 ac ft.
Water Transported	$0.00	0.00 ac ft.
Total Fees Generated	**$645,466.55**	

*Unmetered agricultural irrigation permits are charged fees for the full permitted amount. No metered production is reported in the Brazos River Alluvium Aquifer.

2b. Objective – Evaluate District rules annually to determine whether any amendments are necessary to decrease the amount of waste within the District.

2b. Performance Standard – The District will include a discussion of the annual evaluation of the District rules, and the determination of whether any amendments to the rules are necessary to prevent the waste of groundwater in the Annual Report of the District provided to the Board of Directors.

2b. Performance Measurement – The Board of Directors made three amendments to the rules during 2014. On August 14, 2014 the Board adopted a rule relating to the permitting of all water wells other than domestic/livestock and wells used for oil and gas rig supply. A new 1-year renewable permit was adopted allowing the General Manager to issue permits up to 150 acre feet/year after meeting all requirements for permitted wells. These permits will be issued without a permit hearing. The Board is to receive a written report of the permits issued during the previous month at following Board meeting. One other rule change was adopted clarifying the meaning of "conveyance" contained in all District issued permits.

The Board also adopted a well plugging protocol which extends to all wells in all aquifers. TDLR plugging rules were adopted for all aquifers except the Brazos River Alluvium. The District received a variance from TDLR allowing the District to apply a more stringent protocol to alluvial wells. The variance is valid for five years and renewable if the protocol is still deemed necessary.

2c. Objective – Provide information to the public and the schools within the District on the wise use of water to eliminate and reduce wasteful practices.

2c. Performance Standard – The District will include a page on the Districts web-site devoted to the wise use of water and providing tips to help eliminate and reduce wasteful use of groundwater annually. The District will provide information to local school Districts including providing book covers to encourage wise use of water.

2c. Performance Measurement – A major reconstruction of the District website was launched early in December, 2012. The website became fully live on January 9, 2013 the board wanted to put more emphasis on conservation education. Two pages within the "Education" tab do just that. One page is dedicated solely to water conservation tips for the home and homeowner landscape. The other is "Just for Kids", an area that targets water conservation education at elementary school students.

The Palmer Drought Severity Index and the latest U.S. Drought Monitor is displayed, and refreshed weekly on the homepage. News articles relating to water and conservation are also easily accessed from the homepage. Visitors can download an application for a $25 rebate on the purchase of a rain barrel for conservation purposes using one of the tabs. Well owners also have access to information relating to the cost share well plugging program bolstered by the District is 2014. The District now shares in the cost of plugging the well at a level of 75% of the total cost up to $1000/well.

The "Major Rivers" water curriculum was distributed to all 4th and 5th students in Robertson County. This includes Mumford, Hearne, Calvert, Franklin, and Bremond ISD's. This same curriculum was distribute to 5 of the 15 Bryan ISD 4th grade classes, 5 of the eight College Station ISD 4th grade classes, and every College Station ISD 5th grade class. The curriculum includes sections covering

water conservation and the ways to wisely use water. A total of approximately 2,300 were exposed to the water curriculum in 2013.

Many of the above mentioned school districts were also provided in-class demonstrations of aquifer characteristics, the water cycle and its importance to the aquifers, and instruction on water conservation and its effect on the longevity of District aquifers. Approximately 3,200 students were exposed to the 45-minute teaching session. This included approximately 900 7th grade students in College Station and Frankin ISD's.

1400 4th grade students from Bryan, College Station, and Caldwell ISDs were taught the importance of water conservation during the Brazos County Texas AgriLife Extension Service "Pizza Ranch" event held during September, 2014. The District was asked to be a part of the event and to focus on the importance of water and the conservation of the natural resource. This will be a yearly activity for the District.

The District organized and conducted a "Water Conservation Field Days" for all the 5th grade students in Robertson County school districts. This included Hearne, Mumford, Calvert, Bremond, and Franklin ISD's. The event, held at the Franklin Community Park October 24, 2014 focused on the importance of water, water quality, how aquifers work, and water conservation. The students rotated through ten 15-minute sessions teaching the above mentioned subject matter. A total of approximately 250 students attended the field day. Thank you letters and cards were sent from some of the Independent School District's teachers and students thanking the Brazos Valley Groundwater Conservation District for educating them on water conservation and the use of the model aquifer.

The distribution of book covers to area school districts was discontinued in 2011. A poll of schools receiving the book covers indicated they were not using them

because the curriculum is now in digital form. What books are used usually do not go home with the student. This portion of the performance standard should be modified.

3. Implement Strategies to Address Conjunctive Surface Water Management Issues:

3a. Objective – Encourage the use of surface water supplies where available, to meet the needs of specific user groups within the District.

3a. Performance Standard – The District will participate in the Region G - Regional Water Planning process by attending at least one RWPG meeting annually and will encourage the development of surface water supplies where appropriate. This activity will be noted in the Annual Report presented to the District Board of Directors.

3a. Performance Measurement – The District is actively engaged in the Regional G Water Planning process during 2014. The General Manager (GM) attended the February 26th, April 2nd, May 7th, June 4th, September 3rd, and November 5th meetings.

4. <u>Implement Strategies to Address Natural Resource Issues which Impact the Use and Availability of groundwater, and which are impacted by the Use of Groundwater:</u>

4a. Objective – Determine if there are any natural spring flows within the District that may be impacted by increased groundwater pumping.

4a. Performance Standard – Annually monitor water levels in at least 2 wells near natural spring flows, if found, for potential impact from groundwater production. Prepare an annual assessment statement and include in annual report to the District Board of Directors.

4a. Performance Measurement – An active search for flowing springs within the District is an ongoing effort. During 2012, three naturally flowing springs were identified initially identified in mid-November on the Mose Moody Heirs/Lafayette Moody Heirs property just north of Hearne, Texas in Robertson County. The springs were identified as water of Carrizo origin by the District hydrologist. Three Carrizo monitoring wells were identified and static water level measurement taken throughout the year to note the effect, if any, of pumping on spring flow.

Assessment of the Moody Springs: The Carrizo aquifer is a very lightly pumped zone in Robertson County. To date, there has been no perceived effect of pumping as it relates to spring flow. It has been noted that spring flows increase after periods of heavy precipitation and decreases during periods of extended dry periods but always returns to normal flow levels.

Current Status: During the late spring of 2014, the property on which the springs manifested to leased. The lessee asked that the District neither check spring flows nor the two monitoring wells on the Moody

property. The District respected the wishes of both the property owners and the lessee.

A fourth spring was identified just north of Franklin, Texas on property owned by Franklin ISD. The Carrizo spring at the Franklin Community Park was identified and classified in October, 2013. District staff is currently trying to locate monitoring wells in close proximity to the spring for monitoring purposes.

5. Implement Strategies to Address Drought Conditions:

5a. Objective – A District staff member will download at least one Palmer Drought Severity Index (PDSI) map monthly. The Palmer Drought Severity Index map will be used to monitor drought conditions and will be used by the Board to determine trigger conditions provided by the District's Drought Contingency Plan.

5a. Performance Standard –The District will make an assessment of drought conditions in the District and will prepare an annual briefing to the Board of Directors.

5a. Performance Measurement – District staff provided multiple drought assessment documents to the Board members at all 11 regular Board meetings. These included the most recent Palmer Drought Severity Index, Crop Moisture Index, U.S. Drought Monitor for Texas, and U.S. Seasonal Drought Outlook. Board members also are shown maps at each board meeting addressing current departure from normal precipitation. These slides show the 30-day, 90-day, and yearly departure from the norm. There was no regular Board meeting held during December, 2014.

5b. Objective – Require 100 percent of water permittees that are required by the State of Texas to have drought contingency plans, to submit those plans to the District or follow the District's plan when applying for a permit for well production from the District.

5b. Performance Standard – Review 100 percent of the drought contingency plans submitted as a result of permit requirements, whenever a severe drought condition is reached as determined by the Palmer Drought Severity Index (PDSI). The number of drought contingency plans required to be submitted by water permittees to the District as part of the well permitting process and the number of drought contingency plans actually submitted to the District will be reports in the annual report to the District Board of Directors.

5b. Performance Measurement – Although 2011 was the hottest and driest 12-month period since records have been kept in Texas, drought level condition that would trigger drought contingency plans to be reviewed were never reached. The aquifers underlying the District are very prolific and remained hardy even under the harsh conditions during 2011.

100 permit applications were received during 2014 requiring a drought contingency plan. Two of these permits were from entities that already had approved drought contingency plan on file with the District. These permits were submitted by a rural water supply and municipality. Both drought contingency plans were subjected to review. This procedure is done regardless of existing drought conditions. 98 applications were received that agreed to abide by the District Water Conservation Plan (DWCP) revised and adopted December 2, 2010.

All applicants for permitted wells are required to sign the application attesting to the submission of their either their own drought contingency plan or the agreement to abide by the District plan.

5c. Objective – Develop a District drought contingency plan. The target goal for developing the plan is December, 2010. The drought contingency plan will be reviewed for effectiveness and needed updates once annually.

5c. Performance Standard – A report summarizing the findings of the annual review of the District drought contingency plan will be included in the annual report of the District Board of Directors.

5c. Performance Measurement – A District Drought Contingency Plan was developed and adopted November 4, 2010. The DDCP was reviewed by the Education/Conservation Committee on September 29, 2014. Following the annual review, the committee reported to the entire Board on October 9, 2014 there were no recommended amendments. This document will be annually reviewed by a subcommittee during October of each year. A report will be presented to the board by the committee regarding any recommendations for updates, changes, or additions needed.

6. Implement Strategies to Promote Water Conservation:

6a. Objective - Require 100 percent of the water applicants requesting a permit for water production within the District to submit a water conservation plan, unless one is already on file with the District at the time of the permit application, or agree to comply with the District's adopted Water Conservation guidelines.

6a. Performance Standard – Review 100 percent of the water conservation plans submitted as a result of permit requirements to ensure compliance with permit conditions. The number of water conservation plans required to be submitted by water permittees to the District that year as part of the well permitting process and the number of water conservation plans actually submitted to the District will be reported in the Annual Report to the District Board of Directors. If the a water permittee chooses to agree to follow the District's adopted Water Conservation guidelines in lieu of submitting a Water Conservation Plan, then that number will be indicated in the annual report to the District Board of Directors.

6a. Performance Measurement - 100 permit applications were received during 2014. Two applicants submitted a Water Conservation Plan. The remaining 98 agreed to abide by the District Water Conservation Plan revised and adopted December 2, 2010.

- **Plans requiring Water Conservation Plans - 100**
- **Water Conservation Plans submitted – 2**
- **Water Conservation Plans reviewed – 2**
- **Applicants to abide by the District Water Conservation Plan – 98**

6b. Objective – Develop a system for measurement and evaluation of groundwater supplies.

6b. Performance Standard – Water level monitoring wells will be identified for and the Brazos River Alluvium, the Yegua-Jackson, Sparta, Queen City, Carrizo, Calvert Bluff, Simsboro and Hooper aquifers at least 2 wells per aquifer will be monitored on an annual basis to track changes in static water levels.

6b. Performance Measurement – At this time 164 wells are being monitored. The Brazos River Alluvium, Simsboro, Hooper, Sparta, Yegua Jackson, Queen City, Carrizo, and Calvert Bluff aquifers all have at least 2 monitoring wells. The District staff is working to cultivate monitoring wells in all of the aquifers. A total of 1,344 readings have been taken during 2014. A report on well monitoring was given each month during the Board of Directors meeting. Below is a listing of monitored readings by aquifer.

Aquifer	Readings	# Monitor Wells
Hooper	**136**	**17**
Simsboro	**515**	**59**
Calvert Bluff	**30**	**5**
Carrizo	**35**	**6**
Queen City	**61**	**7**
Sparta	**160**	**20**
Yegua Jackson	**67**	**11**
Brazos River Alluvium	**340**	**38**
Total	**1,344**	**164**

6c. Objective – Assist in obtaining grant funds for the implementation of water conservation methods. Work with the appropriate state and federal agencies to facilitate bringing grant funds to various groups within the District boundaries to develop and implement water conservation methods. The District will meet with at least one state or federal agency annually in order to discuss bringing water conservation methods grant funds into the District.

6c. Performance Standard – The number of meetings held annually with at least one state or federal agency and the number of grants for water conservation methods applied for and obtained will be included in the annual report to the District Board of Directors.

6c. Performance Measurement –A meeting was held with Natural Resources Conservation Service to determine if any grant money was available and, if so, what categories would be eligible. This was done to facilitate bringing grant funds into the District for development of implementation of water conservation methods. This meeting was held in Franklin August 18, 2014. A discussion was held about grant money available for the purchase of a flow metering device that would assist farmers with knowing flow rate of non-metered wells in the Brazos River alluvium. Also discussed was cost share funding that might become available for underground pivot systems. Local farmers are directed to Natural Resources Conservation Service (NRCS) if the district is aware of their need.

District staff (Alan/Cynthia) attended a TWDB webinar February 18, 2014 concerning agricultural grant money available to groundwater conservation districts and projects eligible for grant consideration. The General Manager, District's attorney, Board member Bill Harris, and College Station representative David Coleman met with TWDB staff on June 8, 2014 to discuss the City of College Station proposed Aquifer Storage & Recovery project and its ability to be eligible for SWIFT funding.

7. Implement Strategies to Protect Water Quality:

7a. Objective - Develop baseline water quality data and a system for continued evaluation of groundwater quality.

7a. Performance Standard – Develop general understanding of water quality within aquifers in the District based on TCEQ and TWDB data. Coordinate with TCEQ on water quality issues.

7a. Performance Measurement – The District initiated a water quality testing effort in September, 2013 to assess whether or not the water quality in Brazos River Alluvium wells deteriorates from commencement of pumping in the early growing season to the last watering in August or September. Six wells were identified spanning both counties and samples pulled at various times during 2013 and 2014.

It became apparent that pumping during the growing season and recharging during the winter did not change the water quality profile. Total Dissolvable Solids, conductivity, pH, and the minerals tested remain very constant and at times moved in a negative direction.

Long term water quality reports taken by the TWDB over many years have been compiled by LBG-Guyton and made available to the directors. The material will be summarized for Board member use. The data will also be incorporated into the District website accessible to the general public.

7b. Objective – Require all water permittees that are required by the TCEQ to have well vulnerability studies prior to constructing a well, to provide evidence of the study to the District prior to construction of a well within the District.

7b. Performance Standard – Review all vulnerability studies submitted as a result of permit requirements to help ensure water quality protection.

7b. Performance Measurement – There were no wells submitted for permitting or construction that required well vulnerability studies. No well vulnerability studies were reviewed.

7c. Objective – Provide information to the public and the schools within the District on the importance of protecting water quality.

7c. Performance Standard – The District will include a page on the Districts web-site devoted to water quality issues and will provide information to water permittees on wellhead protection programs.

7c. Performance Measurement – A water quality page was added to the District website during the major reconstruction throughout the month of December, 2012. The website became fully functional on January 9, 2013. Several pages deal with water quality protection including a well plugging page and well head protection through proper capping of unused wells.

All new wells drilled or existing wells within the District that were registered or permitted (excluding rig supply and fracturing supply wells) were provided two brochures addressing protection of the wellhead and proper well construction.

Approximately 3,200 4^{th}, 5^{th}, and 7^{th} grade students in the College Station, Bryan, and all Robertson County ISDs were taught about protecting aquifers from contaminants and the importance of protecting the wellhead. This was done in conjunction with a teaching session that included aquifer characteristics, the water cycle, and water conservation.

Subject: Status of DFCs

Alan,

Attached are some maps showing artesian head change data for the Simsboro, Carrizo, Queen City, Sparta and Yegua-Jackson aquifers. The DFCs for the Simsboro, Carrizo, Queen City and Sparta aquifers extend from 2000 to December 2059. The DFC for the Yegua-Jackson aquifer extends from 2010 to 2060. Comments regarding the maps and data follow.

Simsboro Aquifer

The data show that there has been a modest amount of artesian head decline since 2000. Many of the observation wells are also pumped wells and that influences the static water levels that are measured and then the amount of artesian head decline that is calculated from those measurements. In Brazos County, Wells 59-14-706 and 59-21-409 probably are more representative of the actual artesian head decline in the aquifer. The data from pumped wells are a good example why the old College Station Well 4 would be a good observation well, as it is essentially not pumped.

In Robertson County the amount of artesian head decline is influenced by the increase in pumping for agriculture in the area west of Hearne. Even with that pumping, the head decline in Well 59-03-437 is a good indicator of aquifer artesian head change as that well is pumped on a limited basis. At this time do not have a good explanation for the amount of artesian head decline in Well 39-61-501. Static water levels should continue to be measured in that well.

The DFC is an average of 270 feet of artesian head decline occurring by 2060. If we take the average for the 12 wells measured, the artesian head decline is about 39 feet for the period 2000 through about the beginning of 2013. On an area-wide basis the average head decline would be less as there are areas in the east part of Brazos County and central and south parts of Brazos County where observation data are not available.

Carrizo Aquifer

The map showing data for the Carrizo aquifer is limited to two wells located very near each other. Static water levels in 2000 were estimated and it and the subsequent data are a very local indicator of the artesian head decline. Well 39-21-402 is pumped a reasonable amount of time and in 2010 the well's pumping averaged about 600,000 gallons per day. The static water levels in that well represent a very local response to pumping. Again, the DFC is set as an average and there is a large amount of area in Robertson and Brazos Counties where there is very limited pumping from the Carrizo. Additional observation wells in the Carrizo would be beneficial, but it is not an aquifer of first choice for wells.

Queen City Aquifer

The data for the Queen City aquifer, which is limited to two wells, shows a modest amount of artesian head decline since 2000. Again, the wells are limited in the areal extent and the DFC is based on an county-wide average amount of artesian head decline. Based on the data, I would suggest modifying the amount of Queen City aquifer pumping in the current GMA 12 effort and increasing the DFC.

Sparta Aquifer

The amount of artesian head decline measured in the two wells is very limited. Additional wells have been added to the observation network since 2000 that are providing data for other areas of the District. The DFC for the Sparta aquifer could be adjusted with the current round of GMA planning based on estimates of future pumping from the Sparta aquifer as it is pumped for various uses over a larger geographic area than in 2000.

Yegua-Jackson Aquifer

The accompanying map provides water-level data for four wells in Brazos County and one well in Grimes County. The Yegua-Jackson aquifer has a reasonably low aquifer transmissive capability or transmissivity so when there is pumping at a well, that pumping causes more artesian head decline. This is evident in Wells 59-30-2aa and 59-30-4aa. There has been some, but less water-level decline in Wells 59-15-706 and 59-22-601. I do not see an issue with the amount of artesian head decline that has occurred as it represents points where water levels are measured and the wells are generally pumped. As is occurring, expanding the observation network to other areas of principally Brazos County would help in the DFC monitoring.

As part of the current GMA 12 planning and realizing the increased popularity of the Yegua-Jackson aquifer as a water source, consideration could be given to increasing the estimates of future pumping and possibly the magnitude of the DFCs.

In general, for the five aquifers, the magnitude of the artesian head declines appears reasonable. I do not see an issue of being concerned in reaching a DFC early. As a positive step forward the amount of water-level data that is being collected as of 2011 is significantly greater than the amount that was collected in 2010 and before. The monitoring efforts expanded greatly in 2012 and helps in evaluating the aquifers' response and that response as germane to the DFCs review.

If you have any questions concerning any of the above or enclosed, please do not hesitate to contact us.

Sincerely,

John Seifert
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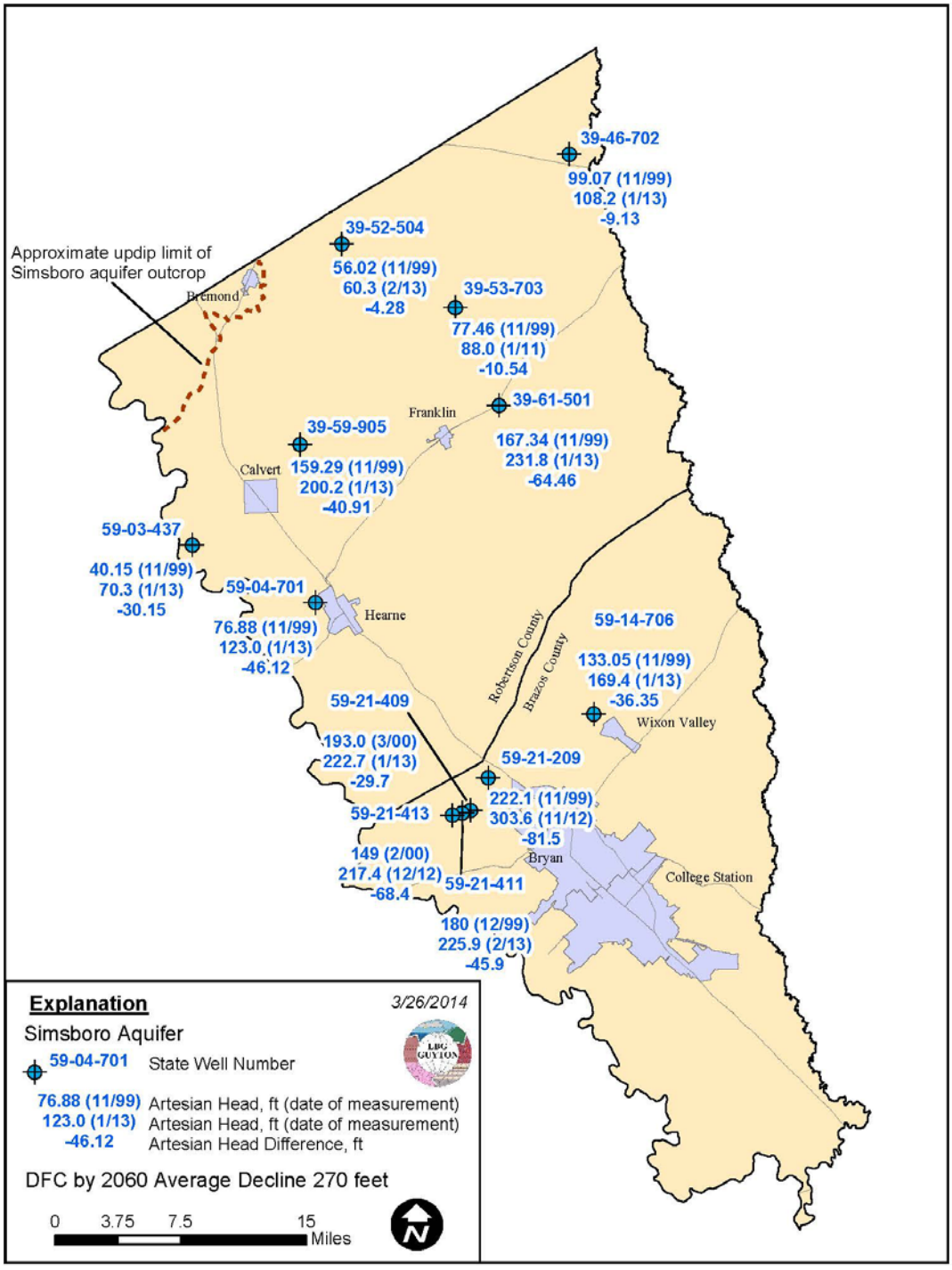
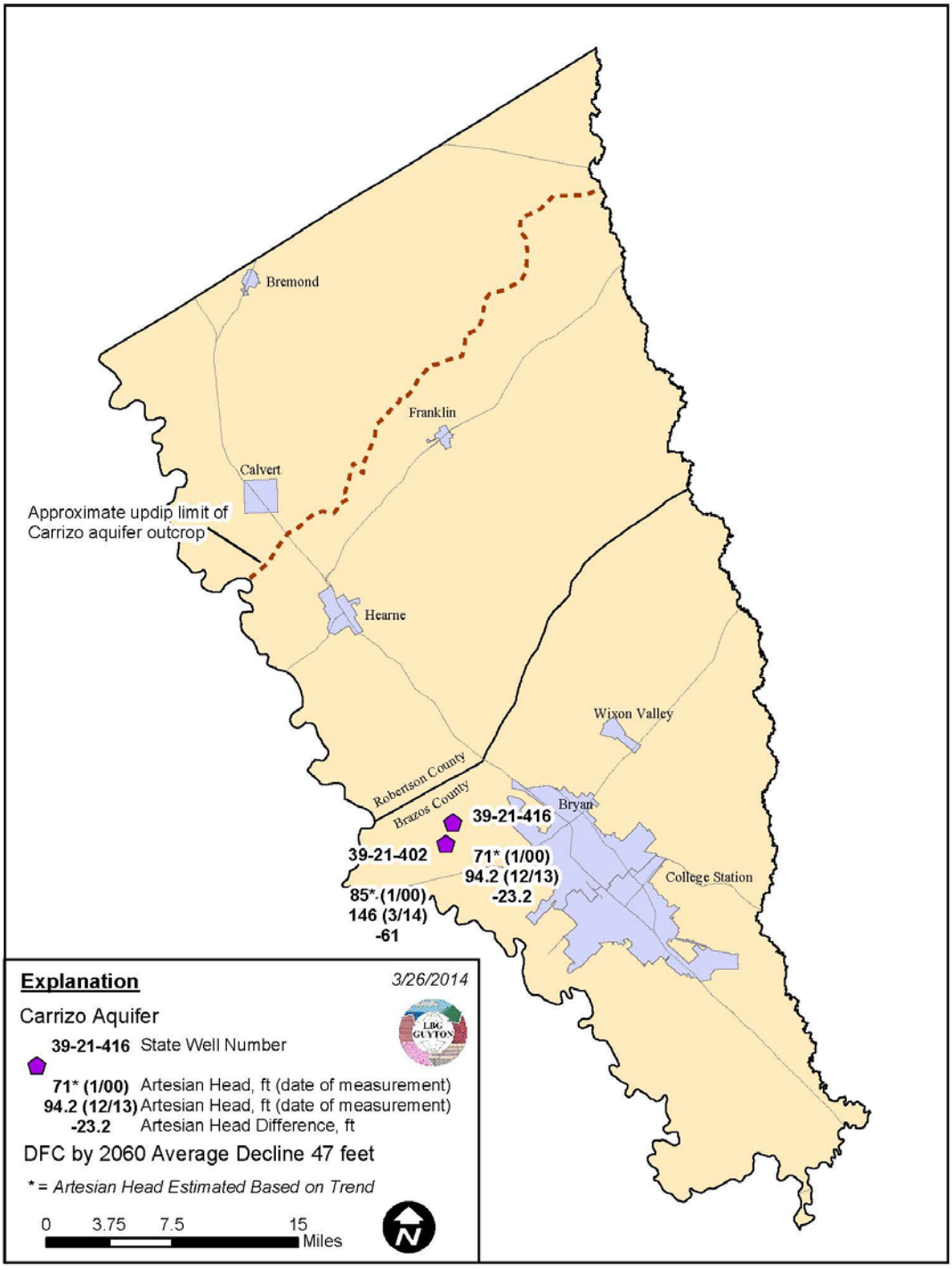
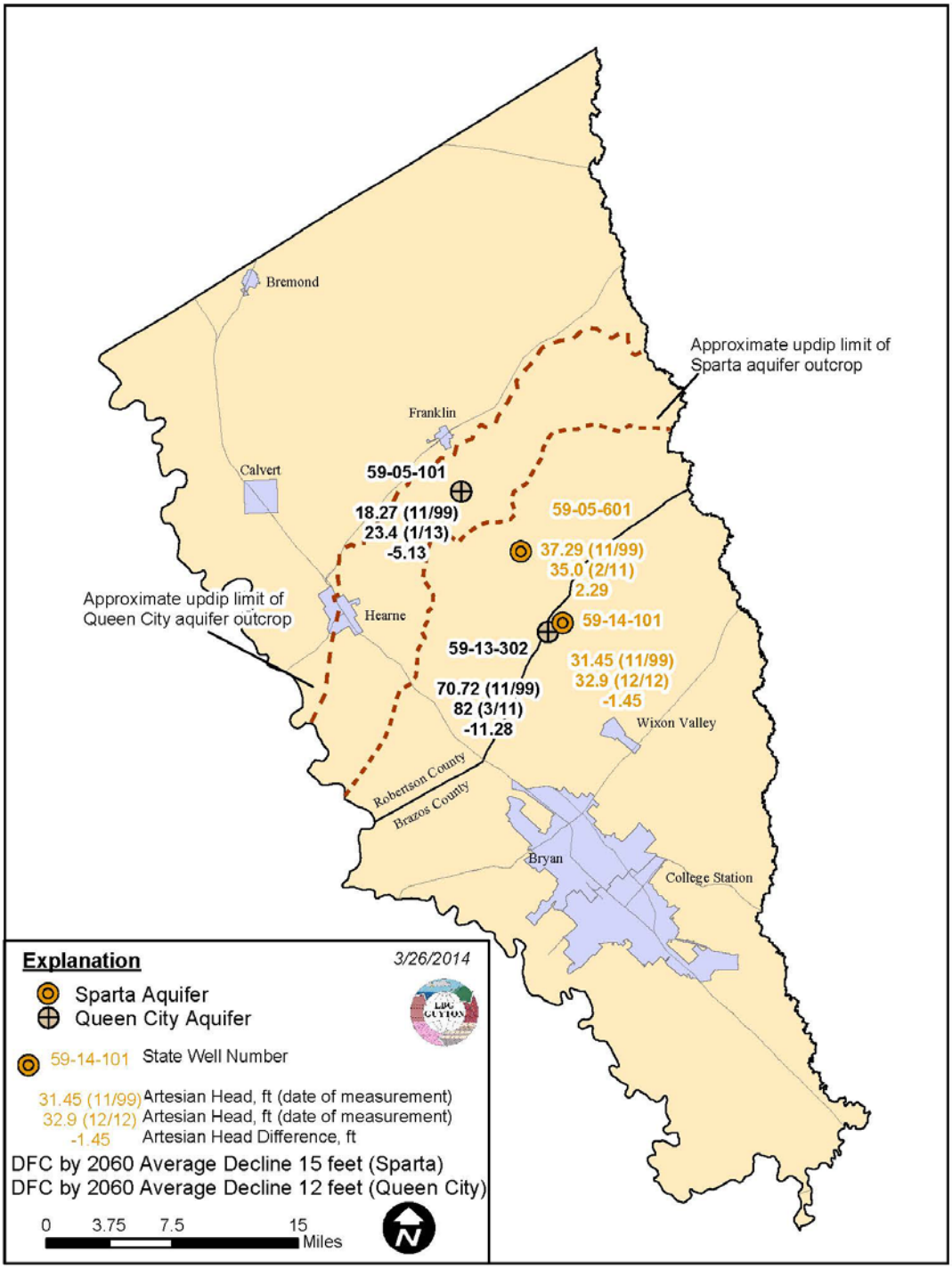
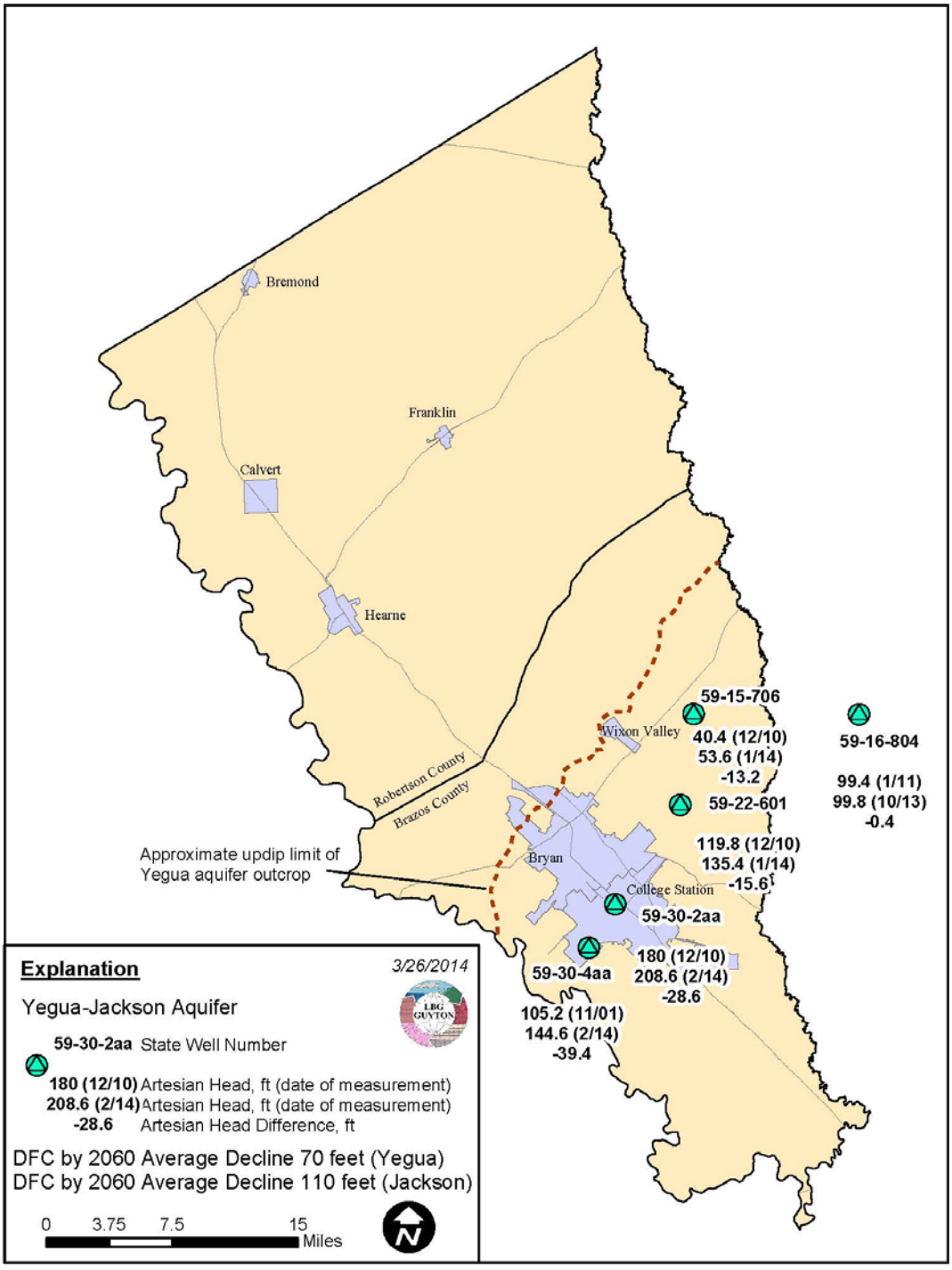
713-468-8600


39-46-702
99.07 (11/99)
108.2 (1/13)
-9.13
39-52-504
56.02 (11/99)
60.3 (2/13)
-4.28
Approximate updip limit of
Simsboro aquifer outcrop
Bremond
39-53-703
77.46 (11/99)
88.0 (1/11)
-10.54
39-61-501
Franklin
167.34 (11/99)
231.8 (1/13)
-64.46
39-59-905
159.29 (11/99)
200.2 (1/13)
-40.91
Calvert
59-03-437
40.15 (11/99)
70.3 (1/13)
-30.15
59-04-701
Hearne
76.88 (11/99)
123.0 (1/13)
-46.12
Robertson County
Brazos County
59-14-706
133.05 (11/99)
169.4 (1/13)
-36.35
Wixon Valley
59-21-409
193.0 (3/00)
222.7 (1/13)
-29.7
59-21-209
222.1 (11/99)
303.6 (11/12)
-81.5
59-21-413
149 (2/00)
217.4 (12/12)
-68.4
59-21-411
Bryan
College Station
180 (12/99)
225.9 (2/13)
-45.9
Explanation
3/26/2014
Simsboro Aquifer
59-04-701 State Well Number
76.88 (11/99) Artesian Head, ft (date of measurement)
123.0 (1/13) Artesian Head, ft (date of measurement)
-46.12 Artesian Head Difference, ft
DFC by 2060 Average Decline 270 feet
0 3.75 7.5 15
Miles
LBG GUYTON


Bremond
Franklin
Calvert
Approximate updip limit of
Carrizo aquifer outcrop
Hearne
Wixon Valley
Robertson County
Brazos County
Bryan
College Station
39-21-416
39-21-402
71* (1/00)
94.2 (12/13)
-23.2
85*.(1/00)
146 (3/14)
-61
Explanation
3/26/2014
Carrizo Aquifer
39-21-416 State Well Number
71* (1/00) Artesian Head, ft (date of measurement)
94.2 (12/13) Artesian Head, ft (date of measurement)
-23.2 Artesian Head Difference, ft
DFC by 2060 Average Decline 47 feet
* = Artesian Head Estimated Based on Trend
0 3.75 7.5 15
Miles
N


Bremond
Franklin
Calvert
Hearne
Wixon Valley
Bryan
College Station
Robertson County
Brazos County
Approximate updip limit of Sparta aquifer outcrop
Approximate updip limit of Queen City aquifer outcrop
59-05-101
18.27 (11/99)
23.4 (1/13)
-5.13
59-05-601
37.29 (11/99)
35.0 (2/11)
2.29
59-14-101
59-13-302
31.45 (11/99)
32.9 (12/12)
-1.45
70.72 (11/99)
82 (3/11)
-11.28
Explanation
3/26/2014
Sparta Aquifer
Queen City Aquifer
59-14-101 State Well Number
31.45 (11/99) Artesian Head, ft (date of measurement)
32.9 (12/12) Artesian Head, ft (date of measurement)
-1.45 Artesian Head Difference, ft
DFC by 2060 Average Decline 15 feet (Sparta)
DFC by 2060 Average Decline 12 feet (Queen City)
0 3.75 7.5 15 Miles
N


Bremond
Franklin
Calvert
Hearne
Robertson County
Brazos County
Approximate updip limit of
Yegua aquifer outcrop
Wixon Valley
Bryan
College Station
59-15-706
40.4 (12/10)
53.6 (1/14)
-13.2
59-16-804
99.4 (1/11)
99.8 (10/13)
-0.4
59-22-601
119.8 (12/10)
135.4 (1/14)
-15.6
59-30-2aa
180 (12/10)
208.6 (2/14)
-28.6
59-30-4aa
105.2 (11/01)
144.6 (2/14)
-39.4
Explanation
3/26/2014
Yegua-Jackson Aquifer
59-30-2aa State Well Number
180 (12/10) Artesian Head, ft (date of measurement)
208.6 (2/14) Artesian Head, ft (date of measurement)
-28.6 Artesian Head Difference, ft
DFC by 2060 Average Decline 70 feet (Yegua)
DFC by 2060 Average Decline 110 feet (Jackson)
0 3.75 7.5 15
Miles
N