

BRAZOS VALLEY GROUNDWATER CONSERVATION DISTRICT



2018 ANNUAL REPORT

TO

BVGCD BOARD OF DIRECTORS

ON

ATTAINMENT OF MANAGEMENT PLAN OBJECTIVES

1. Implement Strategies Providing For the Most Efficient Use of Groundwater:

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 47 new non-exempt wells were permitted during 2018. The District registered 86 exempt wells (20 in Brazos County, 41 in Robertson County, 25 oil and gas rig supply) in both counties combined. Totals for all existing wells ending 2018:

Domestic/Livestock (Exempt) – 1586

Gas & Oil (Exempt) – 1117

Historic Use (Permitted) – 622

Operating (Permitted) – 220

Drilling/Operating (Permitted) - 163

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.

1b. Performance Standard –The number and type of applications made for permitted use of groundwater in the District, number and type of permits issued by the District, and 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: 47

Type of applications made/permits issued

- **Agricultural – 21/21**
- **Industrial – 25/25**
- **Municipal – 0/0**
- **Rural Public Water Supply – 1/1**
- **Steam Electric – 0/0**

**2018 Permitted Water Production in Acre Feet by Aquifer/User Group
(New Permits Issued in 2018)**

	Agricultural	Industrial	Municipal	Rural Water	Steam Electric	Transported	Total Permitted
BRA	600.00	64.45	-	-	-	-	664.45
Hooper	-	-	-	-	-	-	0.00
Simsboro	9,708.00	-	-	-	-	-	9,708.00
Calvert Bluff	108.00	9.00	-	-	-	-	117.00
Carrizo	-	72.00	-	-	-	-	72.00
Queen City	250.00	-	-	-	-	-	250.00
Sparta	345.00	509.00	-	-	-	-	854.00
Yegua-Jackson	100.00	812.95	-	20.00	-	-	932.95
Gulf Coast	-	-	-	-	-	-	0.00
	11,111.00	1,467.40	0.00	20.00	0.00	0.00	12,598.40

1b. Performance Standard – 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 2018 actual water production, permitted allowance, and fees for each metered well in the District are shown below:

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Name	Permit #	Permitted Amount	Water Prod. 2018 in ac/ft	Total Assessment
Brazos River Authority	BVHU-0246	5.30	1.6860	\$ 23.35
Coomer, Melanie	BVOP-0008	1.10	0.3537	\$ 4.90
Lake Limestone Water, Inc	BVHU-0302/BVOP-0134	40.75	11.3865	\$ 157.69
Lake Limestone Water, Inc	BVHU-0303/BVOP-0135	80.51	30.2512	\$ 418.94
Nerro Supply	BVHU-0983/BVOP-0155	15.00	17.1539	\$ 237.56
Robertson County WSC	BVHU-0015/BVOP-0130	259.60	164.0483	\$ 2,271.85
Robertson County WSC	BVHU-0016/BVOP-0131	236.40	71.7187	\$ 993.21
Robertson County WSC	BVHU-0017	134.50	3.4187	\$ 47.34
Robertson County WSC	BVHU-0018/BVOP-0132	71.50	118.6518	\$ 1,643.17
Running Creek RV Park	BVOP-0139	8.00	1.1405	\$ 15.79
Tri-County SUD	BVHU-0023	119.30	97.0465	\$ 1,343.96
Tri-County SUD	BVHU-0024	84.00	96.0623	\$ 1,330.33
Tri-County SUD	BVDO-0188	145.51	0.0000	\$ -
Twin Creek WSC	BVHU-0019	63.31	44.9500	\$ 622.50
Twin Creek WSC	BVHU-0020	53.06	38.1432	\$ 528.23
Twin Creek WSC	BVHU-0021	96.07	36.2742	\$ 502.35
Twin Creek WSC	BVHU-0022	25.59	28.3749	\$ 392.95
Watson, George	BVOP-0170	1.60	0.3723	\$ 5.16
Wellborn SUD	BVDO-0014	1935.00	156.5562	\$ 2,168.09
Wellborn SUD	BVHU-0058/BVOP-0136	1153.35	572.8508	\$ 7,933.22
Wickson Creek - Robertson	BVHU-0031	55.00	34.7794	\$ 481.65
Rural Robertson County		4584.45	1525.2191	\$ 21,122.25
Brazos Valley Septic & Water	BVHU-0981/BVOP-0153	5.00	3.2380	\$ 44.84
ILP College Station, LLC	BVOP-0290	20.00	19.6620	\$ 272.29
Nasir Veerani dba Wheelock Express	BVDO-0196	1.00	0.0779	\$ 1.08
Nerro Supply	BVHU-0980/BVOP-0150	15.00	12.8721	\$ 178.26
Nerro Supply	BVHU-0982/BVOP-0151	30.00	24.8494	\$ 344.13
Nerro Supply	BVHU-0984/BVOP-0152	26.00	23.4076	\$ 324.16
Nerro Supply	BVHU-0985/BVOP-0154	26.00	21.6370	\$ 299.64
Wellborn SUD	BVHU-0053	278.30	276.4730	\$ 3,828.78
Wellborn SUD	BVHU-0054	258.13	0.0000	\$ -
Wellborn SUD	BVHU-0055	225.87	179.8973	\$ 2,491.34
Wellborn SUD	BVHU-0056	225.87	198.5074	\$ 2,749.06
Wellborn SUD	BVHU-0057	297.125	241.9309	\$ 3,350.42
Wellborn SUD	BVOP-0174	125.815	0.0000	\$ -
Wickson Creek - Brazos	BVDO-0042	700.00	531.1744	\$ 7,356.06
Wickson Creek - Brazos	BVDO-0142	400.00	210.1219	\$ 2,909.91
Wickson Creek - Brazos	BVHU-0027	518.00	454.3917	\$ 6,292.72
Wickson Creek - Brazos	BVHU-0028	72.00	0.0000	\$ -
Wickson Creek - Brazos	BVHU-0029	335.00	80.9941	\$ 1,121.66
Wickson Creek - Brazos	BVHU-0030	591.00	565.9949	\$ 7,838.28
Wickson Creek - Brazos	BVOP-0048	500.00	264.5933	\$ 3,664.26
Rural Brazos County		4650.11	3109.8229	\$ 43,066.90

Name	Permit #	Permitted Amount	Water Prod. 2018 in ac/ft	Total Assessment
Bremond, City of	BVHU-0412/BVOP-0145	40.00	0.0000	\$ -
Bremond, City of	BVHU-0413/BVOP-0146	60.00	0.0000	\$ -
Bremond, City of	BVHU-0414/BVOP-0147	84.00	19.1407	\$ 265.07
Bremond, City of	BVHU-0415/BVOP-0148	123.00	48.1999	\$ 667.50
Bremond, City of	BVHU-0416/BVOP-0149	134.00	41.4453	\$ 573.96
Calvert, City of	BVOP-0010	100.00	0.0000	\$ -
Calvert, City of	BVOP-0011	182.00	80.9971	\$ 1,121.70
Calvert, City of	BVOP-0012	273.00	139.6865	\$ 1,934.47
Franklin, City of	BVDO-0054	126.00	109.0498	\$ 1,510.19
Franklin, City of	BVOP-0027	116.00	58.6541	\$ 812.28
Franklin, City of	BVOP-0028	116.00	31.7191	\$ 439.27
Franklin, City of	BVOP-0029	116.00	58.9816	\$ 816.82
Hearne, City of	BVHU-0011	494.00	602.7479	\$ 8,347.26
Hearne, City of	BVHU-0012	577.00	230.1696	\$ 3,187.54
Hearne, City of	BVHU-0013	312.00	1.2429	\$ 17.21
Hearne, City of	BVHU-0014	474.00	116.2556	\$ 1,609.99
Municipal Robertson		3327.00	1538.2901	\$ 21,303.27
Bryan, City of	BVDO-0003	4838.00	1640.0441	\$ 22,712.43
Bryan, City of	BVHU-0001	716.00	0.0000	\$ -
Bryan, City of	BVHU-0002	686.00	0.0000	\$ -
Bryan, City of	BVHU-0003	2286.54	5.1680	\$ 71.57
Bryan, City of	BVHU-0004	1413.53	0.0000	\$ -
Bryan, City of	BVHU-0005	3020.04	1731.9327	\$ 23,984.96
Bryan, City of	BVHU-0006	3784.56	2503.2945	\$ 34,667.29
Bryan, City of	BVHU-0007	3492.51	1420.4376	\$ 19,671.17
Bryan, City of	BVHU-0008	3841.55	2304.1451	\$ 31,909.34
Bryan, City of	BVHU-0009	3297.04	1766.4208	\$ 24,462.57
Bryan, City of	BVHU-0010	3460.72	1780.9858	\$ 24,664.28
Bryan, City of	BVHU-0041	2703.70	0.0000	\$ -
College Station, City of	BVDO-0001	1290.00	98.1423	\$ 1,359.14
College Station, City of	BVDO-0002	1290.00	350.8583	\$ 4,858.92
College Station, City of	BVDO-0013	4839.00	1134.3598	\$ 15,709.37
College Station, City of	BVDO-0053	2390.00	1715.1944	\$ 23,753.16
College Station, City of	BVDO-0152	2855.00	0.0000	\$ -
College Station, City of	BVHU-0038	2423.00	1891.6011	\$ 26,196.15
College Station, City of	BVHU-0039	2386.00	1537.0146	\$ 21,285.60
College Station, City of	BVHU-0040	2381.00	2831.9710	\$ 39,219.02
College Station, City of	BVHU-0042	2726.00	1356.8581	\$ 18,790.68
College Station, City of	BVHU-0043	2792.00	2103.2048	\$ 29,126.58
Texas A&M University	BVHU-0450	789.68	443.5923	\$ 6,143.16
Texas A&M University	BVHU-0451	753.53	347.7755	\$ 4,816.23
Texas A&M University	BVHU-0452	235.43	212.1706	\$ 2,938.28
Texas A&M University	BVHU-0453	745.88	439.4217	\$ 6,085.41
Texas A&M University	BVHU-0454	2337.14	1271.6149	\$ 17,610.17
Texas A&M University	BVHU-0455	2864.00	1587.1978	\$ 21,980.57
Texas A&M University	BVHU-0456	2444.77	712.1997	\$ 9,863.02
Texas A&M University	BVOP-0003	185.00	103.9076	\$ 1,438.98
Texas A&M University	BVOP-0004	282.00	219.5368	\$ 3,040.29
Texas A&M University	BVOP-0005	523.00	48.3454	\$ 669.52
Municipal Brazos		70072.62	31557.3953	\$ 437,027.87

Name	Permit #	Permitted Amount	Water Prod. 2018 in ac/ft	Total Assessment
Aethon Energy	BVOP-0303	2.00	2.0000	\$ 27.70
Calvert Country Club	BVOP-0051	7.52	2.7552	\$ 38.16
Calvert Country Club	BVOP-0052	35.12	3.8995	\$ 54.00
Calvert Country Club	BVOP-0053	35.11	6.0895	\$ 84.33
Circle X Land & Cattle	BVHU-0435*	2800.00	269.7009	\$ 3,735.00
Circle X Land & Cattle (SynFuels)	BVDO-0039	40.00	0.0000	\$ -
Covey Park Operating, LLC	BVOP-0137	125.00	0.0000	\$ -
Covey Park Operating, LLC	BVOP-0138	125.00	0.0000	\$ -
Energy Transfer	BVDO-0038	3.30	0.0000	\$ -
Franklin ISD	BVDO-0056	65.00	14.2513	\$ 197.36
Franklin ISD (Sports Field)	BVDO-0119	141.00	29.1199	\$ 403.27
Neff, Charles	BVDO-0032	32.20	0.0000	\$ -
Oak Grove Country Club	BVOP-0049	51.00	24.0288	\$ 332.77
Major Oak Power, LLC	BVHU-0044	8.10	7.4298	\$ 102.89
Major Oak Power, LLC	BVOP-0144	300.00	0.0000	\$ -
Mason, Okey B.	BVOP-0307	7.00	7.0000	\$ 96.94
Sanderson Farms, Inc. - Robertson	BVHU-0026/BVOP-0133	56.00	38.3448	\$ 531.02
Siegert, Paul	BVOP-0160	5.00	0.0000	\$ -
Skiles, Dr. Clifford	BVDO-0136	750.00	42.0000	\$ 581.64
Sunoco Logistics	BVOP-0200	2.00	0.0000	\$ -
TreadStone Energy Partners Operating, LLC	BVDO-0243	20.00	20.0000	\$ 276.97
TreadStone Energy Partners Operating, LLC	BVOP-0311	45.00	45.0000	\$ 623.19
Union Pacific Railroad	BVOP-0230	150.00	4.2343	\$ 58.64
Union Pacific Railroad	BVOP-0231	150.00	6.2963	\$ 87.20
Union Pacific Railroad	BVOP-0232	150.00	0.0000	\$ -
Union Pacific Railroad	BVOP-0233	150.00	38.7429	\$ 536.54
Union Pacific Railroad	BVOP-0234	150.00	0.0000	\$ -
Union Pacific Railroad	BVOP-0235	150.00	6.6360	\$ 91.90
Union Pacific Railroad	BVOP-0236	150.00	0.0000	\$ -
Union Pacific Railroad	BVOP-0237	150.00	0.0000	\$ -
Union Pacific Railroad	BVOP-0238	150.00	31.0736	\$ 430.33
Union Pacific Railroad	BVOP-0264	150.00	0.0000	\$ -
Union Pacific Railroad	BVOP-0284	150.00	30.6894	\$ 425.01
Union Pacific Railroad	BVOP-0285	150.00	0.0000	\$ -
Wildhorse Resources	BVOP-0226	64.45	64.4500	\$ 892.55
Wildhorse Resources	BVOP-0256	150.00	150.0000	\$ 2,077.30
Wildhorse Resources	BVOP-0257	39.00	39.0000	\$ 540.10
XTO Energy	BVOP-0212	25.00	18.3076	\$ 253.54
XTO Energy	BVOP-0213	25.00	12.3689	\$ 171.29
XTO Energy	BVOP-0214	25.00	3.3419	\$ 46.28
XTO Energy	BVOP-0306	5.00	5.0000	\$ 69.24
XTO Energy	BVOP-0308	2.00	2.0000	\$ 27.70
Industrial Robertson		6790.80	923.7606	\$ 12,792.85

Name	Permit #	Permitted Amount	Water Prod. 2018 in ac/ft	Total Assessment
1980 Phillips Group, LLC	BVHU-0069	154.60	108.8141	\$ 1,506.93
7-Eleven Corporation	BVDO-0135	1.00	0.0000	\$ -
A&M Church of Christ	BVOP-0299	26.00	0.0000	\$ -
BCS Mission Ranch, LP	BVDO-0239	88.00	3.6413	\$ 50.43
BCS Mission Ranch, LP	BVDO-0294	45.00	1.0006	\$ 13.86
Biocorridor Property Owners Association	BVOP-0301	69.35	2.8260	\$ 39.14
Borski, Dorothy	BVOP-0172	56.00	0.0000	\$ -
Brooks, James M. (GEO 3)	BVDO-0099	20.00	16.9428	\$ 234.64
Brownstone Reserve	BVDO-0222	2.00	1.3455	\$ 18.63
Bryan Texas Utilities	BVHU-0154	177.44	55.5336	\$ 769.07
C-3 College Station, LLC	BVDO-0201	22.00	9.0455	\$ 125.27
C&E Production, LLC	BVDO-0199	2.00	0.0000	\$ -
City of College Station	BVDO-0226	5.00	1.6112	\$ 22.31
Creek Meadow Partners	BVDO-0005	50.00	0.0000	\$ -
Creek Meadow Partners	BVDO-0207	25.00	0.0000	\$ -
Circle D Nurseries	BVDO-0028	1.34	0.5410	\$ 7.49
Cotrone, Charles	BVOP-0278	100.00	7.6555	\$ 106.02
Cotrone, Charles	BVOP-0279	100.00	0.0000	\$ -
Grid Raceplex Holdings, Ltd.	BVOP-0177	30.00	0.0000	\$ -
Grid Raceplex Holdings, Ltd.	BVOP-0178	30.00	0.0000	\$ -
Grid Raceplex Holdings, Ltd.	BVOP-0179	30.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVDO-0157	70.00	3.9760	\$ 55.06
Hawkwood Energy Operating, LLC	BVDO-0159	120.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVDO-0160	120.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVDO-0162	35.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVDO-0163	35.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVDO-0166	35.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVDO-0180	70.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVDO-0182	70.00	23.6091	\$ 326.95
Hawkwood Energy Operating, LLC	BVDO-0183	70.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVDO-0212	150.00	13.9420	\$ 193.08
Hawkwood Energy Operating, LLC	BVDO-0213	150.00	9.9340	\$ 137.57
Hawkwood Energy Operating, LLC	BVDO-0218	150.00	79.1916	\$ 297.36
Hawkwood Energy Operating, LLC	BVDO-0219	150.00	144.2355	\$ 502.81
Hawkwood Energy Operating, LLC	BVDO-0223	150.00	159.6487	\$ 133.62
Hawkwood Energy Operating, LLC	BVDO-0224	150.00	108.2950	\$ -
Hawkwood Energy Operating, LLC	BVDO-0231	150.00	0.0000	\$ 2,077.30
Hawkwood Energy Operating, LLC	BVOP-0176	100.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0184	80.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0185	120.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0186	200.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0187	200.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0194	70.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0195	70.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0196	70.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0197	70.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0198	70.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0205	70.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0269	150.00	22.2617	\$ 308.29
Hawkwood Energy Operating, LLC	BVOP-0270	150.00	22.4397	\$ 310.76
Hawkwood Energy Operating, LLC	BVOP-0271	150.00	17.2840	\$ 239.36
Hawkwood Energy Operating, LLC	BVOP-0272	150.00	14.5987	\$ 202.17
Hawkwood Energy Operating, LLC	BVOP-0291	120.00	3.0689	\$ 1,661.84
Hawkwood Energy Operating, LLC	BVOP-0292	120.00	3.0689	\$ 1,661.84
Hawkwood Energy Operating, LLC	BVOP-0304	40.00	26.5267	\$ 553.95
Hawkwood Energy Operating, LLC	BVOP-0305	40.00	20.0653	\$ 553.95
Hawkwood Energy Operating, LLC	BVOP-0309	60.00	20.1813	\$ 830.92
Hawkwood Energy Operating, LLC	BVOP-0310	60.00	15.6759	\$ 830.92
Hill Ranch	BVOP-0218	150.00	0.0000	\$ -
Homestead U	BVDO-0124	22.00	0.0000	\$ -
Indian Lake Homeowners Association	BVOP-0300	96.00	0.0000	\$ -
Knife River Corporation	BVDO-0117	150.00	26.3901	\$ 365.47
Knife River Corporation	BVOP-0158	32.00	5.6832	\$ 78.70
Knife River Corporation	BVOP-0277	150.00	0.0181	\$ 0.25

Melvin Estate	BVOP-0182*	110.00	0.0000	\$	-
Miremont One Golf Course	BVOP-0024	78.85	79.1423	\$	1,096.02
Miremont One Golf Course	BVOP-0025	224.28	243.4867	\$	3,371.97
Miremont One Golf Course	BVOP-0026	432.74	188.4730	\$	2,610.10
Moreau Family Investments	BVOP-0293	1.00	0.0000	\$	-
Opersteny, Steve	BVHU-0457	530.00	0.0000	\$	-
Price, David	BVOP-0173	19.36	0.0000	\$	-
Pyhrr, Walter (Fortex Grass)	BVDO-0019	1.00	0.5670	\$	7.85
Sahara Reality Group	BVDO-0024	10.00	0.0019	\$	0.03
Sanderson Farms, Inc. - Brazos	BVDO-0140	0.00	398.7160	\$	5,521.69
Sanderson Farms, Inc. - Brazos	BVHU-0025	2057.00	934.9519	\$	12,947.84
Smith, Carey D.	BVDO-0215	25.00	7.0876	\$	98.15
Smith, Carey D.	BVOP-0297	58.00	0.1618	\$	2.24
Smith, Carey D.	BVOP-0298	30.60	0.0006	\$	0.01
Stylecraft Builders Inc.	BVDO-0081	5.00	0.4373	\$	6.06
Traditions Club Bryan, LP	BVOP-0302	129.00	4.6812	\$	64.83
Wall, Jim	BVDO-0150*	200.00	50.2414	\$	695.78
Wall, Jim*	BVDO-0151	150.00	0.0000	\$	-
Industrial Brazos		9531.56	2857.00	\$	40,638.51

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Name	Permit #	Permitted Amount	Water Prod. 2018 in ac/ft	Total Assessment
Anderson Estate	BVHU-1070	600.00	0.0000	\$ -
Anderson Estate	BVHU-1071	600.00	2.7000	\$ -
Brien, James & Ellen	BVDO-0134	542.00	147.0600	\$ 18.38
Bui & Nguyen Poultry, LLC	BVDO-0227	30.00	12.0511	\$ 1.51
Bumpurs, Jacob	BVDO-0234	10.00	0.0028	\$ 0.00
Bumpurs, Jacob	BVDO-0235	10.00	0.0451	\$ 0.01
Bumpurs, Jacob	BVDO-0236	10.00	1.1835	\$ 0.15
Burnett, David	BVDO-0009	242.00	0.0000	\$ -
Carpenter, Dale	BVDO-0100	117.00	45.2016	\$ 5.65
Carpenter, Dale	BVDO-0241	50.00	0.0000	\$ -
Carpenter, Dale	BVDO-0242	50.00	0.0000	\$ -
Circle X Camp Cooley Ranch, Ltd.	BVDO-0017	110.00	0.0000	\$ -
Circle X Camp Cooley Ranch, Ltd.	BVDO-0025	110.00	0.0000	\$ -
Circle X Camp Cooley Ranch, Ltd.	BVDO-0026	110.00	0.0000	\$ -
Circle X Camp Cooley Ranch, Ltd.	BVDO-0027	110.00	0.0000	\$ -
Circle X Camp Cooley Ranch, Ltd.	BVDO-0248*	3226.00	0.0000	\$ -
Circle X Camp Cooley Ranch, Ltd.	BVDO-0249*	3226.00	0.0000	\$ -
Circle X Camp Cooley Ranch, Ltd.	BVDO-0250*	3226.00	0.0000	\$ -
Circle X Camp Cooley Ranch, Ltd.	BVOP-0001	110.00	0.1277	\$ 0.02
Circle X Land & Cattle	BVHU-0433*	280.00	2.1103	\$ 0.26
Circle X Land & Cattle	BVHU-0434*	280.00	0.0000	\$ -
Circle X Land & Cattle	BVHU-0435*	2800.00	47.5943	\$ 5.95
Circle X Land & Cattle	BVHU-0436*	56.00	0.0000	\$ -
Circle X Land & Cattle	BVHU-0438*	56.00	0.0000	\$ -
Circle X Land & Cattle	BVHU-0439*	56.00	0.0000	\$ -
Conn, Larry	BVDO-0018	35.00	0.0000	\$ -
Conn, Larry	BVDO-0046	35.00	11.2256	\$ 1.40
Conn, Larry	BVDO-0147	30.00	0.0000	\$ -
Conn, Larry	BVDO-0148	30.00	13.7396	\$ 1.72
Conn, Larry	BVDO-0149	30.00	0.1756	\$ 0.02
Conn, Larry	BVOP-0094	35.00	0.0000	\$ -
Dover, Danny	BVOP-0295	150.00	13.9330	\$ 1.74
Dover, Danny	BVOP-0296	100.00	14.2680	\$ 1.78
Epps, Frank N	BVOP-0047	30.00	0.1167	\$ 0.01
Fagan, James	BVDO-0098	100.00	5.2716	\$ 0.66
Fazzino, Lee	BVHU-1025	560.00	45.0970	\$ 5.64
Gregurek, Edward L.	BVDO-0037	26.00	0.0000	\$ -
Hajduk, Ken	BVDO-0246	48.00	0.0000	\$ -
Liere Dairy	BVDO-0118	720.00	57.4913	\$ 7.19
Liere Dairy	BVHU-1101	254.00	243.3566	\$ 30.42
Liere Dairy	BVHU-1102	720.00	61.3777	\$ 7.67
Lockhart, Bart	BVHU-0142	160.00	3.4502	\$ 0.43
Mackey, Willis	BVDO-0103	20.00	0.1438	\$ 0.02
Neal, Murray	BVDO-0102	24.00	0.0084	\$ 0.00
NV Poultry, LLC	BVDO-0184	35.00	6.4603	\$ 0.81
NV Poultry, LLC	BVDO-0185	35.00	0.0009	\$ 0.00
PA Poultry Farm	BVDO-0244	10.00	0.1810	\$ 0.02
PA Poultry Farm	BVDO-0245	10.00	1.9119	\$ 0.24
Rampy, Ty	BVOP-0017	125.00	125.0000	\$ 15.63
Rampy, Ty	BVOP-0018	125.00	125.0000	\$ 15.63
Reistino, Maria & Melissa	BVDO-0092	894.00	330.8320	\$ 41.35
Rolke Ranch	BVHU-0143	45.00	0.0000	\$ -
Rolke Ranch	BVHU-0144	15.00	0.0000	\$ -
Rolke Ranch	BVHU-0145	30.00	0.0000	\$ -
Rolke Ranch	BVHU-0146	45.00	0.0000	\$ -
Ryan/Corpora-Sloat	BVDO-0055*	600.00	233.5178	\$ 29.19
Ryan/Corpora-Sloat	BVDO-0090*	600.00	356.5040	\$ 44.56
Ryan/Corpora-Sloat	BVDO-0091*	700.00	112.8040	\$ 14.10
Skiles, Clifford III (Trey)	BVDO-0108	1400.00	1301.0000	\$ 162.63
Skiles Family Partnership, C.A.	BVHU-1058/BVDO-0111*	20770.00	12157.0000	\$ 1,519.63
Smitherman, Robert	BVDO-0172	30.00	0.0000	\$ -
Smitherman, Robert	BVDO-0173	30.00	0.0000	\$ -
Smitherman, Robert	BVDO-0174	30.00	0.0000	\$ -
Smitherman, Robert	BVDO-0214	30.00	13.4324	\$ 1.68

Tran, James Le	BVDO-0208	30.00	0.8928	\$	0.11
Tran, James Le	BVDO-0209	30.00	14.7634	\$	1.85
Tran, James Le	BVDO-0210	30.00	15.9608	\$	2.00
Turner, Tom	BVDO-0247	40.00	0.0000	\$	-
Watson, Richard	BVDO-0115	54.50	***	\$	-
Wilson, Wayne or Linda*	BVOP-0223	140.00	0.0000	\$	-
Wright, Larry	BVOP-0156	100.00	14.1514	\$	1.77
Agricultural - Robertson		45107.50	15537.1442	\$	1,941.81

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Name	Permit #	Permitted Amount	Water Prod. 2018 in ac/ft	Total Assessment
A&F Farms (Dobrovolny, Jason)	BVOP-0119	30.00	0.0000	\$ -
A&F Farms (Dobrovolny, Jason)	BVOP-0120	30.00	0.0000	\$ -
A&F Farms (Dobrovolny, Jason)	BVOP-0121	40.00	0.0000	\$ -
A&F Farms (Dobrovolny, Jason)	BVOP-0122	40.00	0.0000	\$ -
A&F Farms (Dobrovolny, Jason)	BVOP-0123	40.00	0.0000	\$ -
Brien, Jeff	BVDO-0113	120.00	11.5600	\$ 1.45
Carrabba Brothers	BVDO-0153	74.00	5.8379	\$ 0.73
Carrabba Brothers	BVOP-0165	56.67	0.0000	\$ -
Carrabba Brothers	BVOP-0166	56.67	0.0000	\$ -
Carrabba Brothers	BVOP-0167	56.66	0.0000	\$ -
Circle X Land & Cattle	BVHU-0437*	56.00	0.0000	\$ -
Dawson, Daniel	BVDO-0052	19.00	7.3550	\$ 0.92
Forsthoff, Robert G.	BVHU-0502	20.00	0.0000	\$ -
Forsthoff, Robert G.	BVHU-0503	20.00	0.0000	\$ -
Forsthoff, Robert G.	BVHU-0504	20.00	0.0000	\$ -
Greenwood, Kyle	BVDO-0123	60.00	1.2306	\$ 0.15
Inguran, LLC dba Sexing Technology	BVDO-0126	280.00	0.0000	\$ -
Lampe, Michael	BVHU-0152	22.40	6.1378	\$ 0.77
Lampe, Michael	BVHU-0153	22.40	6.1378	\$ 0.77
Lampe, Michael	BVOP-0275	22.40	6.1378	\$ 0.77
Lampe, Michael	BVOP-0276	22.40	7.6722	\$ 0.96
McGuire, Charles	BVDO-0122	100.00	7.3400	\$ 0.92
Melvin Estate	BVOP-0183*	165.00	0.0000	\$ -
Messina Hoff Winery	BVDO-0075	80.00	4.4192	\$ 0.55
Messina Hoff Winery	BVHU-0077A	4.30	1.8413	\$ 0.23
Paull, Marcella	BVDO-0146	40.00	10.1144	\$ 1.26
Relyea, Tim	BVOP-0274	40.00	45.1788	\$ 5.65
Ruffino, Preston J. III	BVOP-0159	111.00	0.0000	\$ -
Scasta, Robert Lee	BVOP-0157	60.00	0.0000	\$ -
Sharp, John	BVDO-0156*	200.00	0.0000	\$ -
Smith, Carey D.	BVDO-0240	150.00	0.0000	\$ -
Wall, Jerry	BVOP-0164*	100.00	4.2560	\$ 0.53
Agricultural - Brazos		2158.90	125.2188	\$ 15.65

Name	Permit #	Permitted Amount	Water Prod. 2018 in ac/ft	Total Assessment
Oak Grove Management Co., LLC	BVDO-0031**	537.00	343.1514	\$ 85.79
Oak Grove Management Co., LLC	BVOP-0020**	274.00	41.5999	\$ 10.40
Major Oak Power, LLC	BVHU-0045**	2887.00	1350.4086	\$ 337.60
Major Oak Power, LLC	BVHU-0046**	2508.00	1959.5705	\$ 489.89
Major Oak Power, LLC	BVHU-0047**	2116.00	1514.0662	\$ 378.52
Steam Electric - Robertson		8322.00	5208.7966	\$ 1,302.20
Grand Total		154544.94	62382.6478	\$ 579,211.32
* Duel use permits				
** Steam Electric permits				
*** Refused to provide water production data				

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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 – **158 wells are now being monitored across the District encompassing all aquifers. Of that number, 97 lie over the Carrizo-Wilcox group, 61 over the Brazos River Alluvium, Queen City, Sparta, and Yegua-Jackson. The total number of readings for all monitoring wells was 357. 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. It should be noted the District moved away from monthly to quarterly measurements in 2016 on the advice of the District’s hydro-geologist.**

- **2017 - 158 wells in the network – 524 measurements**
- **2016 – 149 wells in the network – 517 measurements**
- **2015 – 180 wells in the network – 1,048 measurements**
- **2014 – 166 wells in the network – 1,344 measurements**
- **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**

Groundwater Management Area 12 (GMA 12) Desired Future Conditions (DFCs) for each of the managed aquifers were adopted on September 20, 2017. This was the culmination of work commenced in early 2013 during which GMA 12 representatives re-evaluated of the DFCs as required by statute. The re-evaluated proposed DFCs were required to be adopted not later than May, 2016. GMA 12 representatives met the deadline adopting the proposed DFCs in April, 2016. Several groundwater availability model runs were performed during the GMA 12 planning process to assess current and predicted future impact of production from each of the aquifers.

During the DFC planning process, it became increasingly clear that a need for an improvement to the groundwater availability model was warranted. The BVGCD database of readings was used to assist in verifying how well the current Groundwater Availability Model (GAM) predicts the drawdown of the aquifers. Assessment of the past five years of monitoring well data compared to the GAM projected drawdown of the aquifers indicated the aquifers are responding more favorably than the GAM estimates. This speaks to the need for a more accurate prediction tool.

On December 9, 2013 GMA 12 members instructed the hydrologists to contact the Texas Water Development Board (TWDB) about updating the model and partnering with TWDB on the update. In November, 2014, TWDB published a Request for Qualifications (RFQ) for the aforementioned GAM update. Work on the GAM update was approved by the Board of the TWDB Board and began in 2017. The updated GMA was completed in July, 2018 and submitted to TWDB for review and approval. Final approval of the GAM occurred in December, 2018. The approval came just ahead of the new 2021 round of DFC planning.

BVGCD committed \$130,000.00 to the improvement of the Central Queen City-Sparta/Carrizo-Wilcox Groundwater Availability Model (GAM). The update focused on better definition of faulting and fault impacts, surface/groundwater

interaction along the Brazos and Colorado River basins, and improved definition of interaction between aquifers. This was a joint effort involving financial or in-kind service from Post Oak Savannah GCD, Mid-East Texas, GCD, Lost Pines GCD, Texas Water Development Board (TWDB), and others.

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 was determined and adopted as required by statute.

In December, 2016, the TWDB completed work on a groundwater availability model (GAM) for the Brazos River Alluvium. The newly developed model should aid in a more accurate determination of future DFCs for the aquifer.

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. 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 throughout 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 has been and will continue to be utilized in the GMA 12 regional water planning effort. During the upcoming DFC planning process, 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 2017, 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 initiating a program of water-level monitoring to provide data for continued 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 2017 based on the

DFCs. The 2017 estimates of MAG within the BVGCD are given in Table 1. The Board declared the Alluvium relevant for the 2017 DFC planning process.

Table 1. Estimates of Groundwater Availability

Aquifer	Modeled Available Groundwater, ac-ft/yr
Carrizo	5,494
Queen City	1,200
Simsboro	96,198
Calvert Bluff	1,757
Hooper	2,000
Sparta	9,019
Yegua-Jackson	6,854
Brazos River Alluvium	137,351

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

Aquifer	2014	2015	2016	2017	2018
Carrizo	852.28	665.50	761.72	630.11	825.25
Queen City	496.57	189.78	99.62	237.46	146.54
Simsboro	62,946.34	56,638.46	54,237.29	53,325.82	54,551.38
Calvert Bluff	183.50	160.07	132.32	271.98	130.27
Hooper	1,065.07	1,084.25	909.16	756.18	809.07
Sparta	5,358.33	4,122.06	4,152.91	4,241.37	4,499.56
Yegua-Jackson	2,533.23	1,664.27	1,565.41	1,509.54	1,183.12

Water-Level Monitoring Data for 2009-2018

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 continued to grow during 2013, 2014 and 2015 from 164 to 179 wells measuring water levels in all eight of the relevant District aquifers. During 2015, the monitoring wells network emphasis was adding wells in the unconfined portions of the aquifers. A high level of importance was placed on locating unconfined wells in the Hooper and Simsboro aquifers. Several were also located in both the Calvert Bluff and Queen City aquifers. District staff continues to search for wells, both confined and unconfined, in the Sparta and Carrizo aquifers. Some wells were taken out of the monitoring network do to their close proximity to other monitoring wells in the same aquifer with more historical measurement data.

Measurement of water levels in monitoring wells took a significant turn during 2016. A rigid measurement protocol was developed and adopted by the Board of Directors in August, 2016 placing strong emphasis on quality of data collected. Wells with storied

historical data were given preferential placement in the data collection program. Multiple wells in close proximity and screening the same aquifer were evaluated with some being deleted from the network. Others were deleted because of the inability to meet the strict protocol established by the Board. Newly identified wells this historical data were evaluated and incorporated into the program. 149 wells were measured quarterly during 2016.

Several improvements to the well measurement network were made beginning mid-2016 and throughout 2017. The improvements included:

- Removal of wells with little or no historical measurements
- Removal of wells that were difficult to obtain consistently accurate measurements
- Addition of new wells with areal distribution more properly suited to long-term measuring across the District and within aquifers.
- Reconciliation of the screened geologic zone for each of the wells being measured

By the end of 2017, measurement data was being gathered from 158 wells distributed throughout the 8 aquifers underlying the District.

2018 was a challenging year to obtain multiple measurements on each well. Most of all the wells were measured in late March and early April to obtain the winter water level when aquifer recovery is the highest. Spring measurements were attempted in mid-June but due to very dry weather many of the monitoring wells were pumping and could not be shut down for measurement. District staff obtained as many measurements as possible during this period. Summer measurements were taken in late August and September with the same scenario in play, hot and dry. Once again, measurements were taken when possible. Fall measurements fared better as pumping slowed. A total of 357 measurements were obtained during 2018.

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 2009 through 2017.

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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 2018, the District generated a gross total of \$590,682.29 through water production fees. Rebates to Public Water Supply permit holders were given at a rate of \$0.01/1000 gallons applying to the first 100,000,000 gallons produced. The net total water production fees generated for 2018 was **\$580,120.14**. The amount generated and actual water production for each permit type is listed below.

<u>Type of Permit</u>	<u>Fees Generated</u>	<u>Water Used</u>
Agricultural (metered)	\$1,957.46	15,662.36 ac ft.
Agricultural (non-metered)	\$11,470.97	*91,958.35 ac ft.
Industrial	\$53,431.36	3,780.76 ac ft.
Municipal Water Supply	\$458,331.14	33,095.69 ac ft.
Rural Water Supply	\$64,189.16	4,635.04 ac ft.
Steam Electric	\$1,302.20	5,208.80 ac ft.
Water Transported	\$0.00	0.00 ac ft.
Total Fees Generated (2018)	\$590,682.29	
Total Fees to Be Collected**	\$580,120.14	

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

** - 9 Rural Water Supply entities received at total of \$4,646.56 in rebates.

** - 7 Municipal Water Supply entities received at total of \$5,915.59 in rebates.

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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 Rules committee met on September 19, 2018 to review the entire set of rules to determine if revisions needed to be considered. Several items were identified and suggested as rule changes/amendments:

- Definition of “contiguous acreage” in the word “railway” – Rule 1.1(8)
- Definition of “monitoring well” to more accurately reflect conditions on the ground – Rule 1.1(27)
- Updating methods of service by the District – Rule 1.6
- Deleting non-applicable language under “Permitting Goals” – Rule 7.1(b)
- Inserting language in Rule 7.2(d)(1)(F) making it consistent with other parts of the rule.
- Amended “Exclusions and Exemptions” adding a new category of exempt well – Rule 8.1(b)
- Amended “Operating Permit Term and Renewal” adding one (1) year permits – Rule 8.5(b)
- Added Rule 8.10 (entire section) addressing Aquifer Storage & Recovery projects
- Deleted irrelevant language from Rule 9.2 – “Applications, Registration, and Other Fees”
- Amended “Transport Application” condensing and deleting language because of rule amendments made in 2017 – Rule 10.3

During a Public Rules Hearing held November 8, 2018, the board approved the rule amendments listed above.

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 District’s website devoted to the wise use of water and providing tips to help eliminate and reduce wasteful use of groundwater. The District will provide information to local school districts including Texas Education Agency approved water curriculum and in-school presentations to encourage wise use of water and understanding of the significance of aquifers to District residents.

2c. Performance Measurement – One page is dedicated solely to water conservation tips for the home and homeowner landscape. The page also contains a hyperlink directing visitors to the District sponsored BVWaterSmart irrigation network website to obtain weekly site specific watering recommendations. 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. The District now shares in the cost of plugging the well at a level of 75% of the total cost up to \$1,000/well.

The “Major Rivers” water curriculum was distributed to all 4th grade students in Robertson County. This includes Mumford, Hearne, Calvert, Franklin, and Bremond ISD’s. This same curriculum was distributed to all 15 Bryan ISD 4th

grade classes, all 9 College Station ISD 4th grade classes. St. Joseph's Catholic School. The curriculum includes sections covering water conservation and the ways to wisely use water. A total of approximately 2,620 were exposed to the water curriculum in 2018.

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 6,556 students were exposed to the 45-70 minute teaching sessions. This included presentations to 4th, 5th, 7th, and 8th grade classes. District staff now conducts laboratory sessions addressing water quality to all 7th grade students in the entire District.

1,600 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 2-day "Pizza Ranch" event held during September, 2018. 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 is a yearly activity for the District.

The District annually organizes and conducts 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 focuses on the importance of water, water quality, how aquifers work, and water conservation. The students rotate through ten 15-minute sessions teaching the above mentioned subject matter. This year's field day was held on October 23, 2018 with approximately 275 students attending the field day.

The District has implemented the BVWaterSmart Irrigation Network in 2015 for use by homeowners in the District offering irrigation rates throughout the lawn growing season. This effort is a partnership between the City of Bryan,

City of College Station, Wickson Creek SUD, and Wellborn SUD using funds awarded by the District for the purchase of weather stations, wireless rain gauges, establishment of a website, and a contract to gather information for homeowner use. The District has an ongoing commitment to maintain funding for both the website and necessary maintenance to the equipment.

The project is initially funded for three years, evaluated for effectiveness during the budgeting process and was funded for another year (2019). The website associated with the project received almost 200,000 visits between March and September.

The District had a presence at both the BCS Home & Garden Show and Earth Day events to push the service to homeowners. The booth was manned February 10th-11th, 2018, and was the 6th year for the District to participate.

Partnering with the Texas Farm Bureau, District staff was asked to train science teachers on effective methods of teaching about aquifers, groundwater, and conservation. On July 19, 2018, 15 teachers ranging from elementary to high school were presented new methods and approaches for use in the classroom.

Others presentations given during 2018 included:

Tri-County Winter Crops Meeting | 90 attended | 1-29-18 | BRA water levels
“Sages” church group | 30 attended | 5-17-18 | Accomplishing District mission
Bryan Rotary Club | 75 attended | 5-23-18 | Accomplishing District mission
Ag Producers | 40 attended | 7-19-18 | Protection of Brazos River Alluvium
Texas Christmas Tree Growers | 80 attended | 8-25-18 | GCD importance
Geol. 410 (TAMU) | 35 students | 11-12-18 | Aquifers/GCD mission

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 BGRWPG 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 was actively engaged in the Regional G Water Planning process during 2018. The General Manager attended the February 7th, May 9th, and August 22nd meetings.**

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

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. District staff continues to search for and attempt to identify possible springs within the District boundaries. No new springs were identified during 2018.

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 brief the District Board at each regularly scheduled Board meeting.

5a. Performance Measurement – District staff provided multiple drought assessment documents to the Board members at each of the 12 regular Board meetings in 2018. These included the most recent Palmer Drought Severity Index, Crop Moisture Index, U.S. Drought Monitor for Texas, and U.S. Seasonal Drought Outlook.

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5b. Objective – Require 100 percent of entities that are mandated 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 from the District for water production.

5b. Performance Standard – Review 100 percent of the drought contingency plans submitted as a result of permitting, whenever permit applications for water production are received. The number of drought contingency plans required to be submitted by permitted entities to the District as part of the well permitting process and the number of drought contingency plans actually submitted to the District will be described in the Annual Report to the District Board.

5b. Performance Measurement – 47 permit applications were received during 2018 requiring a drought contingency plan, and each was in agreement to abide by the District Water Conservation Plan (DWCP) revised and adopted August 8, 2018. No permits were received in 2018 requiring a review of an existing drought contingency plan.

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

5c. Objective – The District 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 Plan was amended on November 8, 2012. The DDCP was reviewed by the Education/Conservation Committee on August 6, 2018. Following the annual review, the committee reported to the entire Board on August 9, 2018 there were no recommended amendments. This document is reviewed annually by the committee and a committee report is presented to the Board 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 Plan.

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 permittee chooses to agree to follow the District's adopted Water Conservation Plan in lieu of submitting a water conservation plan, then that number will be indicated in the Annual Report to the District Board.

6a. Performance Measurement - **47 permit applications were received during 2018. No water conservation plans were received as a result of permitting requirements. All applicants agreed to abide by the District Water Conservation Plan revised and adopted December 2, 2010 and amended August 9, 2018 updating statistical information and modeled available groundwater estimates.**

- **Plans requiring Water Conservation Plans - 47**
- **Water Conservation Plans submitted – 0**
- **Water Conservation Plans reviewed – 0**
- **Applicants to abide by the District Water Conservation Plan – 47**

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

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

6b. Performance Measurement – At this time 158 wells are in the monitoring network. 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 357 readings were taken during 2018. A report on well monitoring was given quarterly during the Board of Directors meeting. Below is a listing of monitored readings by aquifer.

Aquifer	Readings	# Monitor Wells
Hooper	34	17
Simsboro	116	55
Calvert Bluff	39	17
Carrizo	14	8
Queen City	9	4
Sparta	57	25
Yegua Jackson	15	9
Brazos River Alluvium	73	23
Total	357	158

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. Work with local entities to help 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 – 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 fund opportunities into the District for development of implementation of water conservation methods. The General Manager met with both the Robertson County Soil & Water Conservation District and Brazos County Soil & Water Conservation District August 22, 2018 during work sessions held in Bryan, Texas and Franklin, Texas.

Grant funding to research poor quality water being used by irrigators was approved for use during the 2018 fiscal year and awarded to two entities; (1) Robertson County Soil & Water Conservation District, and (2) Brazos County Soil & Water Conservation District. NRCS staff would take up to 100 water samples from Brazos River Alluvium wells throughout the District and two soil samples from fields supplied by those wells. The objective is to determine if there are soil amendments available that would increase the infiltration rate of the soil supplied by poor quality containing elevated total dissolved solids, primarily sodium. \$8,200 was made available to the two districts for sampling which was to begin in the spring of 2018.

The NRCS reached out to find agricultural producers willing to cooperate on the project with little or no response. Due to the poor response, the districts opted not to follow through on the project and did not use any of the grant money available.

The General Manager corresponded by email to Cameron Turner, TWDB, concerning agricultural grant money available to groundwater conservation districts and projects eligible for grant consideration. The email communication on February 6, 2018 indicated there would be grant money available during 2018. Districts are required to submit a proposal if a District project is identified.

6c. Performance Standard – Once annually, the District will conduct a meeting to address potential District grant funding for water conservation projects. Following proposal submission, applications will be reviewed for possible District Board approval. The number of water conservation projects submitted and the number of projects approved for grant funding by the District will be reported in the Annual Report to the District Board.

The Grant Committee met on September 9, 2018 to review the current grants and to consider continuing to funding the existing programs. The Board determined during 2016 that grant proposals would be brought directly to the full Board for consideration on an individual basis. The committee will vet any proposals before presentation to the full Board with a recommendation. The committee continues to oversee and obtain updated information on ongoing grant projects. Periodic reports are be given to the full board on an as needed basis.

The District renewed a commitment to continue grant obligations to The City of College Station, Wickson SUD, and Wellborn SUD regarding the BVWaterSmart Irrigation Network and its ongoing operations. This grant received approval during the November 8, 2018 Board meeting. The City of

Bryan is also a partner in the program providing a weather station and wireless rain gauge locations but chose not to receive any grant funds.

The Board added additional grant funds to the BVWaterSmart project to update the cellular connection from all current weather stations and wireless rain gauge locations. This is being done in order for data transfer to be immediate, in real time, and efficient. The additional funding amounts to \$12,500 in a one-time action.

Grant contracts associated with water well plugging continued during 2018. There were 13 entities that signed grant contracts with the District to engage in the plugging of a 21 water wells. Each of these contracts was fulfilled during 2018 with a total expenditure of \$20,096.14.

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. 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. Future plans are to incorporate the data into the District website and accessible to the general public.

District staff reviewed the TCEQ “Groundwater Monitoring and Contamination Report – 2017” once it became available in 2018. Sites having a “reportable event” contact TCEQ for their assessment and follow up. TCEQ is the primary enforcement agency regarding the collection of data, assessment of possible contamination, and remediation of the contamination, if necessary.

Water samples are accepted at the District Office in an effort to help facilitate water sampling. Samples are delivered to the Texas A&M University Soil, Forage, and Water Laboratories. Copies of the results are obtained by the District for future reference. No water samples were gathered by District staff for analysis during 2018.

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.

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7c. Objective – Provide information to the general 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 is included on the District website. 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 6,556 4th, 5th, 7th, and 8th 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.

8. Implement Strategies to Assess Adopted Desired Future Conditions

8a. Objective – At least once every three years, the District will evaluate well water level monitoring data and determine whether the change in water levels is in general conformance with the DFCs adopted by the District. The District will estimate total annual groundwater production for each aquifer based on the water use reports, estimated exempted use and other relevant information, and compare these production estimates to the MAGs.

8a. Performance Standard – At least once every three years, the General Manager will report to the District the water level data obtained from the monitoring wells in each aquifer, the average artesian head change for each aquifer calculated from the water levels of the monitoring wells in each aquifer, a comparison of the average artesian head change for each aquifer with the DFCs for each aquifer, and the District progress in conforming with the DFCs.

During the April 10, 2018 Board meeting, John Seifert gave a presentation summarizing the data obtained from each of the wells monitored in all aquifers managed by the District. The presentation included the average head change in each of the aquifers calculated from data obtained from monitoring wells within each respective aquifer, and how the artesian head calculated compared with the DFC established for each aquifer. Board members were also directed to the District website to view water level measurements obtained from all of the monitoring wells in the District. A complete history of measurements exists on website groundwater map and is available for public consumption.

The presentation clearly indicated that the water production within the District is having a lesser effect than the current groundwater availability model predicts. The District is currently expanding the well monitoring effort in several of the minor aquifers that are not as heavily used but need more monitoring data. Unconfined wells are also being developed in each of the aquifers for incorporation into the average artesian reduction calculations.

8a. Performance Standard – At least once every year, the General Manager will report to the District Board the total permitted groundwater production and the estimated annual groundwater production for each aquifer and compare these amounts to the MAGs.

During each Permit Hearing, Board members are provided an informational sheet detailing the MAG, total permitted (to date) water production, and annual water production for the past year for each aquifer. The sheet for 2018 detailed water production (updated each February) for 2009-2017. Total permitted water production is done monthly and is current the day of the board meeting.

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