

BRAZOS VALLEY GROUNDWATER CONSERVATION DISTRICT



2019 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 23 new non-exempt wells were permitted during 2019. The District registered 946 exempt wells (795 in Brazos County, 125 in Robertson County, 26 oil and gas rig supply) in both counties combined. Totals for all existing wells ending 2019:

Domestic/Livestock (Exempt) – 2532

Gas & Oil (Exempt) – 1160

Historic Use (Permitted) – 623

Operating (Permitted) – 210

Drilling/Operating (Permitted) - 180

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: 23

Type of applications made/permits issued

- **Agricultural – 10/10**
- **Industrial – 9/9**
- **Multiple Use – Agricultural/Commercial/Industrial – 3/3**
- **Rural Public Water Supply – 1/1**
- **Municipal – 0/0**
- **Steam Electric – 0/0**

**2019 Permitted Water Production in Acre Feet by Aquifer/User Group
(New Permits Issued in 2019)**

	Agricultural	Industrial	Municipal	Rural Water	Steam Electric	Transported	Total Permitted
BRA	1,600.00	7.00	-	-	-	-	1,607.00
Hooper	-	-	-	-	-	-	0.00
Simsboro	15,438.00	-	-	1,848.00	-	-	17,286.00
Calvert Bluff	230.00	-	-	-	-	-	230.00
Carrizo	-	90.00	-	-	-	-	90.00
Queen City	150.00	7.00	-	-	-	-	157.00
Sparta	-	-	-	-	-	-	0.00
Yegua-Jackson	-	270.00	-	-	-	-	270.00
Gulf Coast	-	-	-	-	-	-	0.00
	17,418.00	374.00	0.00	1,848.00	0.00	0.00	19,640.00

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 2019 actual water production, permitted allowance, and fees for each metered well in the District are shown below:

DRAFT

Name	Permit #	Permitted Amount	Water Prod. 2019 in ac/ft	Total Assessment
Brazos River Authority	BVHU-0246	5.30	1.7772	\$ 26.78
Coomer, Melanie	BVOP-0008	1.10	0.2595	\$ 3.91
Lake Limestone Water, Inc	BVHU-0302/BVOP-0134	40.75	11.6750	\$ 175.95
Lake Limestone Water, Inc	BVHU-0303/BVOP-0135	80.51	27.0449	\$ 407.58
Nerro Supply	BVHU-0983/BVOP-0155	15.00	12.9025	\$ 194.45
Robertson County WSC	BVHU-0015/BVOP-0130	259.60	187.9509	\$ 2,832.53
Robertson County WSC	BVHU-0016/BVOP-0131	236.40	76.9125	\$ 1,159.12
Robertson County WSC	BVHU-0017	134.50	1.5206	\$ 22.92
Robertson County WSC	BVHU-0018/BVOP-0132	71.50	114.3299	\$ 1,723.02
Running Creek RV Park	BVOP-0139	8.00	1.0264	\$ 15.47
Tri-County SUD	BVDO-0188	145.51	59.6353	\$ 898.74
Tri-County SUD	BVHU-0023	119.30	67.4419	\$ 1,016.39
Tri-County SUD	BVHU-0024	84.00	45.0175	\$ 678.44
Twin Creek WSC	BVHU-0019	63.31	39.0086	\$ 587.88
Twin Creek WSC	BVHU-0020	53.06	36.3847	\$ 548.34
Twin Creek WSC	BVHU-0021	96.07	30.3912	\$ 458.01
Twin Creek WSC	BVHU-0022	25.59	39.1007	\$ 589.27
Wellborn SUD	BVDO-0014	1935.00	206.1924	\$ 3,107.44
Wellborn SUD	BVHU-0058/BVOP-0136	1153.35	526.8236	\$ 7,939.55
Wickson Creek - Robertson	BVHU-0031	55.00	34.1138	\$ 514.12
Rural Robertson County		4582.85	1519.5091	\$ 22,899.93
Brazos Valley Septic & Water	BVHU-0981/BVOP-0153	5.00	3.5776	\$ 53.92
ILP College Station, LLC	BVOP-0290	20.00	19.8355	\$ 298.93
Nerro Supply	BVHU-0980/BVOP-0150	15.00	12.6199	\$ 190.19
Nerro Supply	BVHU-0982/BVOP-0151	30.00	25.9342	\$ 390.84
Nerro Supply	BVHU-0984/BVOP-0152	26.00	19.5841	\$ 295.14
Nerro Supply	BVHU-0985/BVOP-0154	26.00	25.3837	\$ 382.55
Wellborn SUD	BVHU-0053	278.30	302.0399	\$ 4,551.93
Wellborn SUD	BVHU-0054	258.13	0.0000	\$ -
Wellborn SUD	BVHU-0055	225.87	199.1645	\$ 3,001.53
Wellborn SUD	BVHU-0056	225.87	219.7677	\$ 3,312.03
Wellborn SUD	BVHU-0057	297.125	267.8419	\$ 4,036.54
Wellborn SUD	BVOP-0174	125.815	0.0000	\$ -
Wheelock Express (Nasir Veerani)	BVDO-0196	1.00	0.4704	\$ 7.09
Wickson Creek - Brazos	BVDO-0042	700.00	306.4509	\$ 4,618.40
Wickson Creek - Brazos	BVDO-0142	400.00	317.1065	\$ 4,778.99
Wickson Creek - Brazos	BVDO-0261	1848.00	0.0000	\$ -
Wickson Creek - Brazos	BVHU-0027	518.00	621.2655	\$ 9,362.85
Wickson Creek - Brazos	BVHU-0028	72.00	0.0000	\$ -
Wickson Creek - Brazos	BVHU-0029	335.00	100.2268	\$ 1,510.48
Wickson Creek - Brazos	BVHU-0030	591.00	808.1899	\$ 12,179.91
Wickson Creek - Brazos	BVOP-0048	500.00	0.0000	\$ -
Rural Brazos County		6498.11	3249.4590	\$ 48,971.33

Name	Permit #	Permitted Amount	Water Prod. 2019 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	23.8330	\$ 359.18
Bremond, City of	BVHU-0415/BVOP-0148	123.00	46.0241	\$ 693.61
Bremond, City of	BVHU-0416/BVOP-0149	134.00	39.8833	\$ 601.07
Calvert, City of	BVOP-0010	100.00	0.0000	\$ -
Calvert, City of	BVOP-0011	182.00	49.8940	\$ 751.93
Calvert, City of	BVOP-0012	273.00	205.7750	\$ 3,101.15
Franklin, City of	BVDO-0054	126.00	222.9608	\$ 3,360.15
Franklin, City of	BVOP-0027	116.00	22.2764	\$ 335.72
Franklin, City of	BVOP-0028	116.00	0.3666	\$ 5.52
Franklin, City of	BVOP-0029	116.00	21.6338	\$ 326.03
Hearne, City of	BVHU-0011	494.00	282.0584	\$ 4,250.79
Hearne, City of	BVHU-0012	577.00	273.5606	\$ 4,122.72
Hearne, City of	BVHU-0013	312.00	112.1310	\$ 1,689.88
Hearne, City of	BVHU-0014	474.00	372.0115	\$ 5,606.44
Municipal Robertson		3327.00	1672.4085	\$ 25,204.21
Bryan, City of	BVDO-0003	4838.00	1993.1809	\$ 30,038.45
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	0.0000	\$ -
Bryan, City of	BVHU-0004	1413.53	0.0000	\$ -
Bryan, City of	BVHU-0005	3020.04	2151.5662	\$ 32,425.41
Bryan, City of	BVHU-0006	3784.56	1803.6771	\$ 27,182.51
Bryan, City of	BVHU-0007	3492.51	116.4673	\$ 1,755.23
Bryan, City of	BVHU-0008	3841.55	4460.2073	\$ 67,218.04
Bryan, City of	BVHU-0009	3297.04	1946.8745	\$ 29,340.58
Bryan, City of	BVHU-0010	3460.72	2193.3645	\$ 33,055.34
Bryan, City of	BVHU-0041	2703.70	0.0000	\$ -
College Station, City of	BVDO-0001	1290.00	58.6451	\$ 883.82
College Station, City of	BVDO-0002	1290.00	167.2027	\$ 2,519.85
College Station, City of	BVDO-0013	4839.00	2317.9015	\$ 34,932.19
College Station, City of	BVDO-0053	2390.00	2039.9085	\$ 30,742.66
College Station, City of	BVDO-0152	2855.00	0.0000	\$ -
College Station, City of	BVHU-0038	2423.00	1098.8567	\$ 16,560.44
College Station, City of	BVHU-0039	2386.00	1474.7357	\$ 22,225.16
College Station, City of	BVHU-0040	2381.00	2403.5983	\$ 36,223.69
College Station, City of	BVHU-0042	2726.00	2406.3494	\$ 36,265.15
College Station, City of	BVHU-0043	2792.00	2186.2410	\$ 32,947.98
Texas A&M University	BVHU-0450	789.68	380.1492	\$ 5,729.08
Texas A&M University	BVHU-0451	753.53	396.0798	\$ 5,969.16
Texas A&M University	BVHU-0452	235.43	218.6030	\$ 3,294.48
Texas A&M University	BVHU-0453	745.88	521.0572	\$ 7,852.65
Texas A&M University	BVHU-0454	2337.14	1293.2196	\$ 19,489.61
Texas A&M University	BVHU-0455	2864.00	1485.8816	\$ 22,393.14
Texas A&M University	BVHU-0456	2444.77	1203.2616	\$ 18,133.88
Texas A&M University	BVOP-0003	185.00	73.8166	\$ 1,112.46
Texas A&M University	BVOP-0004	282.00	266.9818	\$ 4,023.58
Texas A&M University	BVOP-0005	523.00	19.8183	\$ 298.67
Municipal Brazos		70072.62	34677.6454	\$ 522,613.23

Name	Permit #	Permitted Amount	Water Prod. 2019 in ac/ft	Total Assessment
Calvert Country Club	BVOP-0051	7.52	0.8008	\$ 12.07
Calvert Country Club	BVOP-0052	35.12	2.0892	\$ 31.49
Calvert Country Club	BVOP-0053	35.11	0.0000	\$ -
Circle X Land & Cattle (SynFuels)	BVDO-0039	40.00	0.0000	\$ -
Comstock Resources	BVOP-0137	125.00	0.0000	\$ -
Comstock Resources	BVOP-0138	125.00	0.0000	\$ -
Energy Transfer - Franklin	BVDO-0038	3.30	0.0000	\$ -
Energy Transfer - Hearne	BVOP-0200	2.00	0.0000	\$ -
Franklin ISD	BVDO-0056	65.00	1.0427	\$ 15.71
Franklin ISD (Sports Field)	BVDO-0119	141.00	22.9011	\$ 345.13
Major Oak Power, LLC	BVHU-0044	8.10	1.1479	\$ 17.30
Major Oak Power, LLC	BVOP-0144	300.00	0.0015	\$ 0.02
Neff, Charles	BVDO-0032	32.20	0.0000	\$ -
Oak Grove Country Club	BVOP-0049	51.00	22.3106	\$ 336.23
Sanderson Farms, Inc. - Robertson	BVHU-0026/BVOP-0133	56.00	38.8638	\$ 585.70
Sanderson Farms, Inc. - Robertson	BVDO-0269	0.00	0.0009	\$ 0.01
Siegert, Paul	BVOP-0160	5.00	0.0000	\$ -
Skiles, Dr. Clifford	BVDO-0136	750.00	24.0000	\$ 361.69
TreadStone Energy Partners Operating, LLC	BVDO-0252	20.00	20.0000	\$ 301.41
TreadStone Energy Partners Operating, LLC	BVDO-0253	20.00	20.0000	\$ 301.41
TreadStone Energy Partners Operating, LLC	BVDO-0257	50.00	50.0000	\$ 753.53
Union Pacific Railroad	BVOP-0230	150.00	0.0000	\$ -
Union Pacific Railroad	BVOP-0231	150.00	12.1783	\$ 183.53
Union Pacific Railroad	BVOP-0232	150.00	0.0000	\$ -
Union Pacific Railroad	BVOP-0233	150.00	0.0000	\$ -
Union Pacific Railroad	BVOP-0234	150.00	0.0000	\$ -
Union Pacific Railroad	BVOP-0235	150.00	48.3980	\$ 729.39
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	0.0031	\$ 0.05
Union Pacific Railroad	BVOP-0264	150.00	0.0000	\$ -
Union Pacific Railroad	BVOP-0284	150.00	0.0000	\$ -
Union Pacific Railroad	BVOP-0285	150.00	0.0000	\$ -
Watson, George	BVOP-0170	1.60	0.8970	\$ 13.52
Wildhorse Resources	BVOP-0226	64.45	38.7099	\$ 583.38
XTO Energy	BVOP-0212	25.00	9.8735	\$ 148.80
XTO Energy	BVOP-0213	25.00	9.6530	\$ 145.48
XTO Energy	BVOP-0214	25.00	0.7683	\$ 11.58
Industrial Robertson		3812.40	323.6396	\$ 4,877.45

Name	Permit #	Permitted Amount	Water Prod. 2019 in ac/ft	Total Assessment
1980 Phillips Group, LLC	BVHU-0069	154.60	106.9445	\$ 1,611.72
7-Eleven Corporation	BVDO-0135	1.00	0.0007	\$ 0.01
A&M Church of Christ	BVOP-0299	26.00	1.4119	\$ 21.28
Asset Campus Living	BVDO-0124	22.00	0.0000	\$ -
Biocorridor Property Owners Association	BVOP-0301	69.35	3.2558	\$ 49.07
Brooks, James M. (GEO 3)	BVDO-0099	20.00	14.5343	\$ 219.04
Brownstone Reserve	BVDO-0222	2.00	1.8767	\$ 28.28
Bryan Texas Utilities	BVHU-0154	177.44	62.1751	\$ 937.02
C-3 College Station, LLC	BVDO-0201	22.00	2.6703	\$ 40.24
C&E Production, LLC	BVDO-0199	2.00	0.0000	\$ -
Creek Meadow Homeowners Association	BVDO-0005	50.00	0.0000	\$ -
Circle D Nurseries	BVDO-0028	1.34	0.4151	\$ 6.26
College Station Town Center, Inc.	BVDO-0271	60.00	0.0000	\$ -
College Station Town Center, Inc.	BVDO-0272	60.00	0.0000	\$ -
Cotrone, Charles	BVOP-0278	100.00	39.0646	\$ 588.73
Cotrone, Charles	BVOP-0279	100.00	6.0690	\$ 91.46
Hawkwood Energy Operating, LLC	BVDO-0157	70.00	0.0000	\$ -
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	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVDO-0183	70.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVDO-0212	150.00	129.6055	\$ 1,953.23
Hawkwood Energy Operating, LLC	BVDO-0213	150.00	146.6029	\$ 2,209.39
Hawkwood Energy Operating, LLC	BVDO-0218	150.00	40.2964	\$ 607.29
Hawkwood Energy Operating, LLC	BVDO-0219	150.00	66.6124	\$ 1,003.89
Hawkwood Energy Operating, LLC	BVDO-0223	150.00	197.5517	\$ 2,977.22
Hawkwood Energy Operating, LLC	BVDO-0224	150.00	170.9218	\$ 2,575.90
Hawkwood Energy Operating, LLC	BVDO-0231	150.00	0.0000	\$ -
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	70.1144	\$ 1,056.67
Hawkwood Energy Operating, LLC	BVOP-0270	150.00	74.3638	\$ 1,120.71
Hawkwood Energy Operating, LLC	BVOP-0271	150.00	67.9897	\$ 1,024.65
Hawkwood Energy Operating, LLC	BVOP-0272	150.00	61.6160	\$ 928.59
Hawkwood Energy Operating, LLC	BVOP-0291	120.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0292	120.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0304	40.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0305	40.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0309	60.00	0.0000	\$ -
Hawkwood Energy Operating, LLC	BVOP-0310	60.00	0.0000	\$ -
Hill Ranch	BVOP-0218	150.00	0.0000	\$ -
Indian Lake Homeowners Association	BVOP-0300	96.00	0.0000	\$ -
Knife River Corporation	BVDO-0117	150.00	4.7276	\$ 71.25
Knife River Corporation	BVOP-0158	32.00	5.3792	\$ 81.07
Knife River Corporation	BVOP-0277	150.00	5.0081	\$ 75.48

Melvin Estate	BVOP-0182*	110.00	0.0000	\$	-
Miremont One Golf Course	BVOP-0024	78.85	79.1313	\$	1,192.56
Miremont One Golf Course	BVOP-0025	224.28	258.3715	\$	3,893.82
Miremont One Golf Course	BVOP-0026	432.74	121.5304	\$	1,831.54
Mission Ranch	BVDO-0239	88.00	31.0352	\$	467.72
Mission Ranch	BVOP-0294	45.00	0.0000	\$	-
Moreau Family Investments	BVOP-0293	2.00	2.0000	\$	30.14
OGC CNO JV, LLC	BVDO-0260	150.00	0.0508	\$	0.77
Operstény, Steve	BVHU-0457	530.00	0.0184	\$	0.28
Price, David	BVOP-0173	19.36	0.0000	\$	-
Pyhrr, Walter (Fortex Grass)	BVDO-0019	1.00	0.4848	\$	7.31
Sahara Reality Group	BVDO-0024	10.00	0.0002	\$	0.00
Sanderson Farms, Inc. - Brazos	BVDO-0140	0.00	0.0000	\$	-
Sanderson Farms, Inc. - Brazos	BVHU-0025	2057.00	1398.4214	\$	21,075.06
Smith, Carey D.	BVDO-0215	25.00	5.9974	\$	90.38
Smith, Carey D.	BVOP-0297	58.00	1.6637	\$	25.07
Smith, Carey D.	BVOP-0298	30.60	5.4295	\$	81.83
Stylecraft Builders Inc.	BVDO-0081	5.00	18.2950	\$	275.72
Traditions Club Bryan, LP	BVOP-0302	129.00	0.0000	\$	-
Wildhorse Resources	BVOP-0312	7.00	7.0000	\$	105.49
Wildhorse Resources	BVOP-0313	7.00	7.0000	\$	105.49
Industrial Brazos		9290.56	3215.6371	\$	48,250.62

DRAFT

Name	Permit #	Permitted Amount	Water Prod. 2019 in ac/ft	Total Assessment
Anderson Estate	BVHU-1070	600.00	0.0000	\$ -
Anderson Estate	BVHU-1071	600.00	4.4500	\$ 0.83
Brien, James & Ellen	BVDO-0134	542.00	126.2620	\$ 23.67
Bui & Nguyen Poultry, LLC	BVDO-0227	30.00	13.1943	\$ 2.47
Bumpurs, Jacob	BVDO-0234	10.00	10.4856	\$ 1.97
Bumpurs, Jacob	BVDO-0235	10.00	2.6444	\$ 0.50
Bumpurs, Jacob	BVDO-0236	10.00	2.1317	\$ 0.40
Burnett, David	BVDO-0009	242.00	0.0000	\$ -
Carpenter, Dale	BVDO-0100	117.00	77.0291	\$ 14.44
Carpenter, Dale	BVDO-0241	50.00	0.0000	\$ -
Carpenter, Dale	BVDO-0242	50.00	0.0000	\$ -
Carpenter, Dale	BVDO-0251	95.00	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	62.4979	\$ 11.72
Circle X Land & Cattle	BVHU-0433*	280.00	0.0000	\$ -
Circle X Land & Cattle	BVHU-0434*	280.00	0.0000	\$ -
Circle X Land & Cattle	BVHU-0435*	2800.00	3.3758	\$ 0.63
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	11.2256	\$ 2.10
Conn, Larry	BVDO-0046	35.00	9.2067	\$ 1.73
Conn, Larry	BVDO-0147	30.00	0.5518	\$ 0.10
Conn, Larry	BVDO-0148	30.00	0.0024	\$ 0.00
Conn, Larry	BVDO-0149	30.00	16.6310	\$ 3.12
Conn, Larry	BVOP-0094	35.00	0.0000	\$ -
Dang, Andy	BVDO-0264	30.00	0.0000	\$ -
Dang, Andy	BVDO-0265	30.00	0.0000	\$ -
Dang, Andy	BVDO-0266	30.00	0.0000	\$ -
Dang, Andy	BVDO-0267	30.00	0.0000	\$ -
Dover, Danny	BVOP-0295	150.00	38.9639	\$ 7.31
Dover, Danny	BVOP-0296	100.00	28.4901	\$ 5.34
Epps, Frank N	BVOP-0047	30.00	0.0000	\$ -
Fagan, James	BVDO-0098	100.00	0.0000	\$ -
Fazzino, Lee	BVHU-1025	560.00	40.8810	\$ 7.67
Gregurek, Edward L.	BVDO-0037	26.00	0.0000	\$ -
Hajduk, Ken	BVDO-0246	48.00	0.0000	\$ -
Liere Dairy	BVDO-0118	720.00	55.2734	\$ 10.36
Liere Dairy	BVHU-1101	254.00	215.4113	\$ 40.39
Liere Dairy	BVHU-1102	720.00	72.8094	\$ 13.65
Lockhart, Bart	BVHU-0142	160.00	5.5918	\$ 1.05
Mackey, Willis	BVDO-0103	20.00	0.1094	\$ 0.02
María L. Reistino Estate	BVDO-0092	894.00	197.8765	\$ 37.10
NV Poultry, LLC	BVDO-0184	35.00	3.2038	\$ 0.60
NV Poultry, LLC	BVDO-0185	35.00	0.0307	\$ 0.01
Neal, Murray	BVDO-0102	24.00	0.0000	\$ -
PA Poultry Farm	BVDO-0244	10.00	1.2701	\$ 0.24
PA Poultry Farm	BVDO-0245	10.00	4.0516	\$ 0.76
Phan, Andrew	BVDO-0268	50.00	0.0000	\$ -
Philipello, Nathan	BVDO-0262	30.00	1.2189	\$ 0.23
Philipello, Nathan	BVDO-0263	30.00	2.1438	\$ 0.40
Rampy, Ty	BVOP-0017	125.00	125.0000	\$ 23.44
Rampy, Ty	BVOP-0018	125.00	125.0000	\$ 23.44
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-Sloat	BVDO-0055*	600.00	247.7728	\$ 46.46
Ryan-Sloat	BVDO-0090*	600.00	213.1860	\$ 39.97
Ryan-Sloat	BVDO-0091*	700.00	16.5645	\$ 3.11
Skiles, Clifford III (Trey)	BVDO-0108	1400.00	438.0000	\$ 82.13
Skiles Family Partnership, C.A.	BVHU-1058/BVDO-0111*	20770.00	5853.0000	\$ 1,097.44
Skiles Family Partnership, C.A.	BVDO-0254*	4839.00	0.0000	\$ -

Skiles Family Partnership, C.A.	BVDO-0255*	5322.00	0.0000	\$	-
Skiles Family Partnership, C.A.	BVDO-0256*	5322.00	0.0000	\$	-
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	16.8859	\$	3.17
Tran, James Le	BVDO-0208	30.00	6.8171	\$	1.28
Tran, James Le	BVDO-0209	30.00	4.7632	\$	0.89
Tran, James Le	BVDO-0210	30.00	22.6121	\$	4.24
Turner, Tom	BVDO-0247	40.00	42.5911	\$	7.99
VMM Ranch 333, LLC	BVDO-0270	150.00	0.0000	\$	-
Watson, Richard	BVDO-0115	54.50	24.1132	\$	4.52
Wilson, Wayne or Linda*	BVOP-0223	140.00	0.0000	\$	-
Wright, Larry	BVOP-0156	100.00	14.1169	\$	2.65
Agricultural - Robertson		61065.50	8157.4368	\$	1,529.52

DRAFT

Name	Permit #	Permitted Amount	Water Prod. 2019 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	0.0000	\$ -
Carrabba Brothers	BVDO-0153	74.00	6.4637	\$ 1.21
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	13.8535	\$ 2.60
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	1.1888	\$ 0.22
Inguran, LLC dba Sexing Technology	BVDO-0126	280.00	0.0000	\$ -
Lampe, Michael	BVHU-0152	22.40	6.1378	\$ 1.15
Lampe, Michael	BVHU-0153	22.40	6.1378	\$ 1.15
Lampe, Michael	BVOP-0275	22.40	6.1378	\$ 1.15
Lampe, Michael	BVOP-0276	22.40	7.6722	\$ 1.44
McGuire, Charles	BVDO-0122	100.00	1.6180	\$ 0.30
Melvin Estate	BVOP-0183*	165.00	0.0000	\$ -
Messina Hoff Winery	BVDO-0075	80.00	3.6827	\$ 0.69
Messina Hoff Winery	BVHU-0077A	4.30	2.5779	\$ 0.48
Paull, Marcella	BVDO-0146	40.00	4.6816	\$ 0.88
Relyea, Tim	BVOP-0274	40.00	25.0566	\$ 4.70
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	0.0015	\$ 0.00
Smith, Carey D.	BVDO-0240	100.00	0.0000	\$ -
Wall, Jerry	BVOP-0164*	100.00	0.5337	\$ 0.10
Wall, Jim	BVDO-0150*	200.00	0.0000	\$ -
Agricultural - Brazos		2308.90	85.7436	\$ 16.08

Name	Permit #	Permitted Amount	Water Prod. 2019 in ac/ft	Total Assessment
Oak Grove Management Co., LLC	BVDO-0031**	537.00	295.8407	\$ 87.01
Oak Grove Management Co., LLC	BVOP-0020**	274.00	6.1923	\$ 1.82
Major Oak Power, LLC	BVHU-0045**	2887.00	1322.6475	\$ 388.99
Major Oak Power, LLC	BVHU-0046**	2508.00	1658.5341	\$ 487.77
Major Oak Power, LLC	BVHU-0047**	2116.00	1942.1024	\$ 571.17
Steam Electric - Robertson		8322.00	5225.3170	\$ 1,536.77
Grand Total		169279.94	58126.7961	\$ 675,899.12
Less Fees Collected in 2019				\$ 1,567.33
Net 2019 Fee Total (to be collected in 2020)				\$ 674,331.79
* Dual or multi-use permits				
** Steam Electric permits				
Fees Collected in 2019				

DRAFT

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 – **161 wells are now being monitored across the District encompassing all aquifers. Of that number, 100 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 during 2019 was 324. 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. The District moved away from monthly to quarterly measurements in 2016 on the advice of the District’s hydro-geologist.**

- **2019 – 161 wells in the network | 324 measurements**
- **2018 – 158 wells in the network | 357 measurements**
- **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**

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 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.

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 to improve the prediction tool. 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.

DFC planning for 2021 began in early 2019. The newly updated approved GAM is being used for all aquifers except the Brazos River Alluvium and Yegua-Jackson aquifers. The latter have independently approved GAMs which will be sourced for DFC determination.

The Board declared the Brazos River Alluvium relevant for the 2021 round of DFC planning and mirrors the 2016 DFC planning round. With relevancy declared, a DFC will again be determined and adopted as required by statute.

The Yegua-Jackson Aquifer has historically been broken down to two separate aquifers and each received a corresponding DFC. BVGCD board members have approved the combination of the two aquifer layers which will result in one DFC. This will mimic our GMA 12 partners' expression of Yegua-Jackson DFCs.

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. 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 current 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 2019, GMA 12, composed of five groundwater districts, participated in the process of developing desired future conditions (DFCs). During that time, the BVGCD has been enhancing its inventory of groundwater pumping and initiated a robust 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 in late 2017 by the TWDB based on the adopted DFCs.

The current 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	2019
Carrizo	852.28	665.50	761.72	630.11	825.25	992.40
Queen City	496.57	189.78	99.62	237.46	146.54	400.88
Simsboro	62,946.34	56,638.46	54,237.29	53,325.82	54,551.38	50,528.07
Calvert Bluff	183.50	160.07	132.32	271.98	130.27	176.89
Hooper	1,065.07	1,084.25	909.16	756.18	809.07	699.98
Sparta	5,358.33	4,122.06	4,152.91	4,241.37	4,499.56	3,869.64
Yegua-Jackson	2,533.23	1,664.27	1,565.41	1,509.54	1,183.12	1,278.11

Water-Level Monitoring Data for 2009-2019

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. By 2016, the water level measuring effort has blossomed to 158 wells covering all managed 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 retired 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.

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**

2019 was a challenging year to obtain multiple measurements on each well. Most of 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 gathered in mid-June on many of the wells. Due to very dry conditions August-September, 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. Fall measurements of Brazos River Alluvium well were obtained in late December 2019 and will be transmitted to farmers in the District in January 2020. A total of 324 measurements were obtained during 2019.

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 2018.

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 2019, water production within the District generated total fees of \$693,091.24 of which \$691,523.91 will be collected during FY 2020. Fees generated and collected during FY 2019 amounted to \$1,567.33. The amount generated and actual water production for each permit type are listed below.

<u>Type of Permit</u>	<u>Fees Generated</u>	<u>Water Used</u>
Agricultural (metered)	\$1,545.60	8,243.18ac ft.
Agricultural (non-metered)	\$17,192.11	*91,691.25 ac ft.
Industrial	\$53,128.07	3,539.28 ac ft.
Municipal Water Supply	\$547,817.44	36,350.05 ac ft.
Rural Water Supply	\$71,871.25	4,768.97 ac ft.
Steam Electric	\$1,536.77	5,225.32ac ft.
Water Transported	\$0.00	0.00 ac ft.
Fees Generated (2019)	\$693,091.24	
Fees Collected during FY 2019	\$1,567.33	
Fees for FY 2020 collection	\$691,523.91	

*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 Rules committee met June 24, 2019 to review the entire set of rules and determine if revisions needed to be considered. Several items were identified and suggested as rule changes/amendments:

- Clarify the spacing requirement for all new non-exempt wells in each of the Districts' aquifers - Rule 6.1(b)(2)
- Amend Rule 7.1(c) to clarify:
 1. Contiguous acreage assigned to a well bears a reasonable reflection of the cone of depression impact.
 2. Memorialize that acreage assigned to the well based on the scientific formula described in the rules will be in a circle around the well.
 3. Existing permits seeking to increase annual production amount must meet the production acreage rule.
- Clarify that each well on an application for multiple wells will be assigned an individual operating permit detailing production rate and total maximum annual production - Rule 8.4(a)
- Updated “Standards of Completion” for water wells to reflect wording in 30 Texas Administrative Code Chapter 290 and 16 Texas Administrative Code Chapter 76 - Rule 12.3

The suggested amendments to the District Rules were presented to the Board July 11, 2019 for the review and approval of language to be considered at a Rules Hearing. During a Public Rules Hearing held September 12, 2019, 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 15 Bryan ISD, 10 College Station ISD and St. Joseph Catholic School 4th grade classes. The curriculum includes sections covering water conservation and the ways to wisely use water. Approximately 2,600 were exposed to the water curriculum in 2019.

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 7,689 students were exposed to the 45-70 minute teaching sessions. This included presentations to 4th, 5th, and 7th 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 surrounding county ISDs were taught the importance of water conservation during the Brazos County Texas AgriLife Extension Service 2-day “Pizza Ranch” event held during September, 2019. 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 Day” 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 Robertson County Fairgrounds focused 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 years’ field day was held on October 22, 2018 with approximately 250 students attending the field day.

2019 was the inaugural year to conduct a water field day for a Brazos County Intermediate school. The field day included six fifteen minute sessions discussing water conservation on the Oakwood Intermediate School campus in College Station, Texas. The District partnered with Texas A&M University Utilities and The City of College Station Wastewater Department to host the event. 400 5th grade students also toured the Texas A&M water cooling plant learning the importance of water to every functioning aspect of Texas A&M from potable water supply to creating electricity for the campus. Students then toured the

City of College Station wastewater treatment plant learning about the treatment process and how microbial action occurs. This highly successful activity will be repeated in 2020 with a different intermediate school.

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.

A new pilot project was approved to purchase and install Rachio irrigation controllers on high-end water user systems. The controllers will monitor the BVWaterSmart weather station closest to the cooperater remotely shutting the system off when enough moisture has been received. The effort removes the human factor from the watering equation and should allow the District to determine cost-savings to the cooperater and water conserved.

The BVWaterSmart project was initially funded for three years, evaluated for effectiveness during the budgeting process and was funded for another year (2020). The website associated with the project received 637,000 visits from 25,200 individual users primarily between April and September, 2019. This mirrors the typical lawn irrigation season in the District.

The District had a presence at both the BCS Home & Garden Show encouraging homeowners to adopt water conservation techniques and sign into BVWaterSmart. The booth was manned February 8th-9th, 2019, and was the 7th year for the District to participate.

Others presentations given during 2019 included:

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 2019. The General Manager attended the May 22, 2019 and November 20, 2019 meetings.**

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 2019.

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 2019. These included the most recent Palmer Drought Severity Index, Crop Moisture Index, U.S. Drought Monitor for Texas, and U.S. Seasonal Drought Outlook.

DRAFT

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 – **Twenty-three (23) permit applications were received during 2019 requiring a drought contingency plan. Twenty-two (22) of the applications agreed to abide by the District Water Conservation Plan (DWCP) revised and adopted August 8, 2018. One (1) permit was received in 2019 requiring a review of an existing drought contingency plan. The existing plan was reviewed prior to permit approval.**

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 June 27, 2019. Following the annual review, the committee reported to the entire Board on July 11, 2019 there were no recommended revisions. 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 - **23 permit applications were received during 2019. One (1) water conservation plan was received as a result of permitting requirements. Twenty-one (21) 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. One (1) applicant had a current water conservation plan on file.**

- **Plans requiring Water Conservation Plans - 23**
- **Water conservation plans submitted – 1**
- **Water conservation plans reviewed – 1**
- **Applicants abiding by the District Water Conservation Plan – 22**
- **Applicants abiding by formerly submitted water conservation plan -1**

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, 161 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 324 readings were taken during 2019.

Aquifer	Readings	# Monitor Wells
Hooper	28	17
Simsboro	82	58
Calvert Bluff	39	17
Carrizo	14	8
Queen City	11	5
Sparta	51	24
Yegua Jackson	17	9
Brazos River Alluvium	74	23
Total	324	161

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 – The General Manager met with the Robertson County Natural Resources Conservation Service (NRCS) Office Manager September 25, 2019 to determine what, if any, grant funding programs are 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. A follow up email conversation detailed the NRCS guidelines and cost-sharing agreement.

Cost-share funding is available to agricultural producers seeking to install pivot irrigation remote control equipment on existing or new pivot systems. This grant program dovetails with the BVGCD effort to do the same. It is envisioned agricultural producers can equip new remote controls devices at little to no cost when accessing both programs.

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 December 4, 2019 indicated there would be grant money available during 2020. Districts are required to submit a proposal if a District project is identified. The District's effort to remunerate producers with existing remote control technology and those seeking to install new equipment is an established TWDB grant fundable project.

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, 2019 to review the current grants and to consider continuing to funding the existing programs. 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 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 December 5, 2019 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 BVWaterSmart for a pilot project aimed at high-end landscape water users by eliminating the human factor. This project will study the effect of allowing the network to shutdown irrigation during rain events. Cooperators will receive wireless irrigation controller and installation with the agreement the District has access to information obtained for three (3) years. The pilot was funded with \$9,000 for purchase of the equipment, installation, and upgrade of software in the BVWaterSmart system.

Grant contracts associated with water well plugging continued during 2019. There were 5 entities that signed grant contracts with the District to engage in

the plugging of nine water wells. Each of these contracts was fulfilled during 2019 with a total expenditure of \$8,443.57.

DRAFT

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 the District hydrologist 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 – 2018” once it became available in 2019. 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 2019.

The District Manager met with TCEQ Hazardous Waste Division staff and nine other groundwater district managers May 10, 2019 to discuss TCEQ’s responsibility and response to a report concerning Coal Combustible Residuals (CCRs) and their effect on groundwater. The concern is centered around disposal of CCRs at coal mining operation associated with electrical production and the contamination of near surface groundwater. The District will play a

support role to TCEQ as rules are created to enforce disposal and possible cleanup of CCRs.

DRAFT

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.

DRAFT

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 7,689 4th, 5th, and 7th 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.

Beginning in 2019, board members and the public have access to water level data in both numeric and visual form. A hydrograph reflecting the data on each monitored well appears on the website portal when the data file is accessed. The Board now has access to the data year round rather than once per year.

During the May 9, 2019 Board meeting, John Seifert gave a presentation summarizing the data obtained from each of the wells monitored in all aquifers managed by the District and District DFC compliance. 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 2019 detailed water production (updated each February) for 2009-2018. Total permitted water production is done monthly and is current the day of the board meeting.