# BRAZOS VALLEY GROUNDWATER CONSERVATION DISTRICT



## **2021 ANNUAL REPORT**

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## **BVGCD BOARD OF DIRECTORS**

## ON

## ATTAINMENT OF MANAGEMENT PLAN OBJECTIVES

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

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

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

1a. Performance Measurement – A total of 14 new non-exempt wells were permitted during 2021. The District registered 494 exempt wells (335 in Brazos County, 152 in Robertson County, 7 oil and gas rig supply) in both counties combined. Totals for all existing wells ending 2021:

Domestic/Livestock (Exempt) – 3,803 Gas & Oil (Exempt) – 1,197 Historic Use (Permitted) – 619 Operating (Permitted) – 203 Drilling/Operating (Permitted) - 185 **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 (2021): 14

#### Type of applications made/permits issued

- Agricultural 8/8
- Industrial 3/3
- Multiple Use Agricultural/Commercial/Industrial 0/0
- Rural Public Water Supply 3/3
- Municipal 0/0
- Steam Electric 0/0

## 2021 Permitted Water Production in Acre Feet by Aquifer/User Group

## (New Permits Issued in 2021)

	Agricultural	Industrial	Municipal	Rural Water	Steam Electric	Transported	Total Permitted
BRA	70.00	-	-	-	-	-	70.00
Hooper	-	-	-		-	-	0.00
Simsboro	40.00	-	-	4,113.00	-	-	4,153.00
Calvert Bluff	-		·	-	-	-	0.00
Carrizo	25.00	-		-	-	-	25.00
Queen City	399.00	'	·	-	-	-	399.00
Sparta	832.30	500.00	-	125.00	-	-	1,457.30
Yegua- Jackson	-	-		-	-	-	0.00
Gulf Coast	-	-	-	-	-	-	0.00
	1,366.30	500.00	0.00	4,238.00	0.00	0.00	6,104.30

**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 2021 actual water production, permitted allowance, and fees for each metered well in the District are shown below:

		Permitted	Water Prod.	Total
Name	Permit #	Amount	2021 in ac/ft	Assessmen
Brazos River Authority	BVHU-0246	5.30	0.0789	\$1.1
Central Texas RV Park	BVOP-0139	8.00	0.8816	\$13.29
Coomer. Melanie	BVOP-0008	1.10	0.3335	\$5.0
Lake Limestone Water, Inc	BVHU-0302/BVOP-0134	40.75	15.6608	\$236.02
Lake Limestone Water, Inc	BVHU-0303/BVOP-0135	80.51	26.8147	\$404.1
Robertson County WSC	BVHU-0015/BVOP-0130	259.60	200.3471	\$3,019.3
Robertson County WSC	BVHU-0016/BVOP-0131	236.40	73.2203	\$1,103.4
Robertson County WSC	BVHU-0017	70.50	2.3124	\$34.8
Robertson County WSC	BVHU-0018/BVOP-0132	134.50	129.7182	\$1,954.9
Tri-County SUD	BVDO-0188	145.51	47.3683	\$713.8
Tri-County SUD	BVHU-0023	119.30	42.0653	\$633.9
Tri-County SUD	BVHU-0024	84.00	37.3852	\$563.42
Twin Creek WSC	BVHU-0019	63.31	32.1834	\$485.02
Twin Creek WSC	BVHU-0020	53.06	28.4486	\$428.74
Twin Creek WSC	BVHU-0021	96.07	33.6933	\$507.78
Twin Creek WSC	BVHU-0022	25.59	33.9971	\$512.3
Undine, LLC	BVHU-0983/BVOP-0155	15.00	10.3588	\$156.11
Watson, George	BV00-0170	1.60	0.0000	\$0.00
Wellborn SUD				\$3,335.0
Wellborn SUD		BVDO-0014         1935.00         221.2959           J-0058/BVOP-0136         1153.35         324.0193           BVDO-0284         1974.00         0.0000		\$4,883.17
Wellborn SUD				\$0.00
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Wellborn SUD	BVDO-0285	2139.00	0.0000	\$0.00
Wickson Creek - Robertson	BVHU-0031	55.00	41.1716	\$620.48
Rural Robertson County		8696.45	1301.35	\$19,612.20
Aggieland Parks, Inc.	BVDO-0279	125.00	0.00	\$0.00
Brazos Valley Septic & Water	BVHU-0981/BVOP-0153	5.00	3.6059	\$54.34
ILP College Station, LLC	BVOP-0290	20.00	3.9323	\$59.20
Nasir Veerani dba Wheelock Express	BVDO-0196	1.00	0.3041	\$4.58
Undine, LLC	BVHU-0980/BVOP-0150	15.00	13,4054	\$202.03
Undine, LLC	BVHU-0982/BVOP-0151	30.00	0.2382	\$3.5
Undine, LLC	BVHU-0984/BVOP-0152	26.00	26.6658	\$401.8
Undine, LLC	BVHU-0985/BVOP-0154	26.00	28.2861	\$426.29
Wellborn SUD	BVHU-0053	278.30	165.3240	\$2,491.5
Wellborn SUD	BVHU-0054	258.13	0.0000	\$0.0
Wellborn SUD	BVHU-0055	225.87	151.2534	\$2,279.48
Wellborn SUD	BVHU-0056	225.87	166.9003	\$2,515.29
Wellborn SUD	BVHU-0057	297.125	203.4098	\$3,065.5
Wellborn SUD	BVOP-0174	125.815	0.0000	\$0.00
Wickson Creek - Brazos	BVDO-0042	700.00	594.1090	\$8,953.5
Wickson Creek - Brazos	BVDO-0142	400.00	272.9644	\$4,113.74
Wickson Creek - Brazos	BVDO-0261	1848.00	0.0000	\$0.00
Wickson Creek - Brazos	BVHU-0027	518.00	478.3248	\$7,208.6
Wickson Creek - Brazos	BVHU-0028	72.00	0.0000	\$0.00
Wickson Creek - Brazos	BVHU-0029	335.00	103.2061	\$1,555.38
Wickson Creek - Brazos	BVHU-0030	591.00	600.3664	\$9,047.89
Wickson Creek - Brazos	BV0P-0048	500.00	0.0000	\$0.00
Rural Brazos County		6623.11	2812.30	\$42,383.01

		Permitted	Water Prod.	Total
Name	Permit #	Amount	2021 in ac/ft	Assessment
Bremond, City of	BVHU-0412/BVOP-0145	40.00	0.0000	\$0.00
Bremond, City of	BVHU-0413/BVOP-0146	60.00	0.0000	\$0.00
Bremond, City of	BVHU-0414/BVOP-0147	84.00	31.4223	\$473.55
Bremond, City of	BVHU-0415/BVOP-0148	123.00	58.0572	\$874.96
Bremond, City of	BVHU-0416/BVOP-0149	134.00	48.7738	\$735.05
Calvert, City of	BV00-0416/BV00-0149 BV00-0010	100.00	0.0000	\$0.00
Calvert, City of	BVOP-0010	182.00	0.1442	\$0.00
Calvert, City of	BVOP-0011	273.00	199.0603	\$2.17
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Franklin, City of	BVDO-0054	126.00 116.00	6.0000	\$3,806.37
Franklin, City of	BVOP-0027			\$90.42
Franklin, City of	BVOP-0028	116.00	27.8440	\$419.63
Franklin, City of	BVOP-0029	116.00	2.9418	\$44.33
Hearne, City of	BVHU-0011	494.00	218.4373	\$3,291.98
Hearne, City of	BVHU-0012	577.00	107.1977	\$1,615.53
Hearne, City of	BVHU-0013	312.00	0.9544	\$14.38
Hearne, City of	BVHU-0014	474.00	473.0414	\$7,129.02
Municipal Robertson		3327.00	1426.44	\$21,497.38
Bryan, City of	BVDO-0003	4838.00	671.1135	\$10,114.09
Bryan, City of	BVHU-0001	716.00	0.0000	\$0.00
Bryan, City of	BVHU-0002	686.00	0.0000	\$0.00
Bryan, City of				\$812.15
Bryan, City of				\$0.00
Bryan, City of		BVHU-0003         2286.54         53.8897           BVHU-0004         1413.53         0.0000           BVHU-0005         3020.04         1378.8971           BVHU-0006         3784.56         1045.9811           BVHU-0007         3492.51         3631.6752		\$20,780.82
Bryan, City of				\$15,763.57
Bryan, City of				\$54,731.56
Bryan, City of	BVHU-0008	3841.55	3899.9972	\$58,775.33
Bryan, City of	BVHU-0009	3297.04	1841.9769	\$27,759.71
Bryan, City of	BVHU-0010	3460.72	1281.6993	\$19,315.99
Bryan, City of	BVH0-0010 BVHU-0041	2703.70	0.0000	\$19,315.99
College Station, City of	BVDO-0001	1290.00	47.8936	\$721.79
College Station, City of	BVDO-0002	1290.00	316.6854	\$4,772.64
College Station, City of	BVDO-0013	4839.00	2339.6266	\$35,259.60
College Station, City of	BVDO-0053	2390.00	2116.6318	\$31,898.93
College Station, City of	BVDO-0152	2855.00	1805.3901	\$27,208.33
College Station, City of	BVHU-0038	2423.00	1027.3445	\$15,482.71
College Station, City of	BVHU-0039	2386.00	1117.0407	\$16,834.48
College Station, City of	BVHU-0040	2381.00	1639.6265	\$24,710.17
College Station, City of	BVHU-0042	2726.00	2297.9851	\$34,632.03
College Station, City of	BVHU-0043	2792.00	1755.6776	\$26,459.13
Texas A&M University	BVHU-0450	789.68	0.0000	\$0.00
Texas A&M University	BVHU-0451	753.53	624.5554	\$9,412.43
Texas A&M University	BVHU-0452	235.43	222.4023	\$3,351.74
Texas A&M University	BVHU-0453	745.88	609.6713	\$9,188.12
Texas A&M University	BVHU-0454	2337.14	1144.2162	\$17,244.03
Texas A&M University	BVHU-0455	2864.00	1487.8211	\$22,422.37
Texas A&M University	BVHU-0456	2444.77	1233.9229	\$18,595.97
Texas A&M University	BVOP-0003	185.00	109.3908	\$1,648.59
Texas A&M University	BVOP-0004	282.00	132.3436	\$1,994.50
Texas A&M University	BVOP-0005	523.00	33.0547	\$498.15
Municipal Brazos		70072.62	33866.51	\$510,388.92

		Permitted	Water Prod.	Total
Name	Permit #	Amount	2021 in ac/ft	Assessment
BBL Operating	BVDO-0278	25.00	25.00	\$376.77
Calvert Country Club	BVOP-0051	7.52	0.5263	\$7.93
Calvert Country Club	BVOP-0052	35.12	1.8569	\$27.98
Calvert Country Club	BVOP-0053	35.11	0.2912	\$4.39
Circle X Land & Cattle (SynFuels)	BVDO-0039	40.00	0.0000	\$0.00
Comstock Resources	BVOP-0137	125.00	0.0000	\$0.00
Comstock Resources	BVOP-0138	125.00	0.0000	\$0.00
Energy Transfer - Franklin	BVDO-0038	3.30	0.0000	\$0.00
Energy Transfer - Hearne	BVOP-0200	2.00	0.0000	\$0.00
Franklin ISD	BVDO-0056	65.00	0.0001	\$0.00
Franklin ISD (The Ranch)	BVDO-0119	141.00	11.5870	\$174.62
Hawkwood Energy Operating, LLC	BVOP-0309	60.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0310	60.00	0.0000	\$0.00
Major Oak Power, LLC	BVHU-0044 8.10 1.5029		\$22.65	
Major Oak Power, LLC	BVOP-0144			\$7.03
Neff, Charles	BVDO-0032			\$0.00
Oak Grove Country Club	BVOP-0049	51.00	27.4144	\$413.15
Sanderson Farms, Inc Robertson	BVHU-0026/BVOP-0133	56.00	0.0000	\$0.00
Sanderson Farms, Inc Robertson	BVDO-0269	0.00	37.4220	\$563.97
Siegert, Paul	BVOP-0160	5.00	0.0000	\$0.00
Union Pacific Railroad	BVOP-0230	150.00	0.0000	\$0.00
Union Pacific Railroad	BVOP-0231	150.00	0.0000	\$0.00
Union Pacific Railroad	BVOP-0232	150.00	0.0000	\$0.00
Union Pacific Railroad	BVOP-0233	150.00	0.0000	\$0.00
Union Pacific Railroad	BVOP-0234	150.00	0.0000	\$0.00
Union Pacific Railroad	BVOP-0235	150.00	0.0000	\$0.00
Union Pacific Railroad	BVOP-0236	150.00	0.0000	\$0.00
Union Pacific Railroad	BVOP-0237	150.00	0.0000	\$0.00
Union Pacific Railroad	BVOP-0238	150.00	0.0000	\$0.00
Union Pacific Railroad	BVOP-0264	150.00	0.0000	\$0.00
Union Pacific Railroad	BVOP-0284	150.00	0.0000	\$0.00
Union Pacific Railroad	BVOP-0285	150.00	0.0000	\$0.00
UW Brazos Valley Farm, LLC	BVDO-0136	750.00	11.0000	\$165.78
XTO Energy	BVOP-0212	25.00	2.4949	\$37.60
XTO Energy	BVOP-0213	25.00	5.0950	\$76.78
XTO Energy	BVOP-0214	25.00	3.0031	\$45.26

Industrial Robertson

3801.35 127.66 \$1,923.92

		Permitted	Water Prod.	Total
Name	Permit #	Amount	2021 in ac/ft	Assessment
1980 Phillips Group, LLC	BVHU-0069	154.60	76.9126	\$1,159.12
7-Eleven Corporation	BVDO-0135	1.00	0.0000	\$0.00
A&M Church of Christ	BVOP-0299	26.00	0.8827	\$13.30
BC Siena Homeowners Association	BVDO-0081	5.00	16.9967	\$256.15
BCS Mission Ranch, LP	BVDO-0239	88.00	11.8075	\$177.95
BCS Mission Ranch, LP	BVOP-0294	45.00	0.0000	\$0.00
Biocorridor Property Owners Association	BVOP-0301	69.35	0.0006	\$0.01
Brooks, James M. (GEO 3)	BVDO-0099	20.00	16.5682	\$249.69
Brownstone Reserve	BVDO-0222	2.00	0.0000	\$0.00
Bryan Texas Utilities	BVHU-0154	177.44	63.4179	\$955.75
C3 - College Station, LLC	BVDO-0201	22.00	0.0007	\$0.01
CRQ Ventures, LLC	BVDO-0275	200.00	4.2253	\$63.68
City of Bryan	BVDO-0286	250.00 250.00	0.0000	\$0.00
City of Bryan College Station Town Center, Inc.	BVDO-0287 BVDO-0271	60.00	0.0000	\$0.00
College Station Town Center, Inc.	BVDO-0271 BVDO-0272	60.00	0.0000	\$0.00
Columbus Pacific Properties	BVDO-0272 BVDO-0124	22.00	0.0001	\$0.00
Cotrone, Charles	BVD0-0124 BVOP-0278	100.00	11.7945	\$177.75
Cotrone, Charles	BVOP-0278 BVOP-0279	100.00	0.0001	\$0.00
Hawkwood Energy Operating, LLC	BVD0-0157	70.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVDO-0159	120.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVDO-0160	120.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVDO-0162	35.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVDO-0163	35.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVDO-0166	35.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVDO-0182	70.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVDO-0183	70.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVDO-0212	150.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVDO-0213	150.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVDO-0218	150.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVDO-0219	150.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVDO-0223	150.00	38.6680	\$582.75
Hawkwood Energy Operating, LLC	BVDO-0224	150.00	38.6680	\$582.75
Hawkwood Energy Operating, LLC	BVDO-0231	150.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0176	100.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0184 BVOP-0185	80.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC Hawkwood Energy Operating, LLC	BVOP-0185 BVOP-0186	200.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0180 BVOP-0187	200.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0194	70.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0195	70.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0196	70.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0197	70.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0198	70.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0205	70.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0269	150.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0270	150.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0271	150.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0272	150.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0291	120.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0292	120.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0304	40.00	0.0000	\$0.00
Hawkwood Energy Operating, LLC	BVOP-0305	40.00	0.0000	\$0.00
Indian Lake Homeowners Association	BVOP-0300	96.00	0.0000	\$0.00
Knife River Corporation	BVDO-0117	150.00	0.0000	\$0.00
Knife River Corporation	BVOP-0158	32.00	10.1779	\$153.39
Knife River Corporation	BVOP-0277	150.00	2.7770	\$41.85
Melvin Estate Miramont One Colf Course	BVOP-0182*	110.00	0.0000	\$0.00
Miremont One Golf Course Miremont One Golf Course	BVOP-0024	78.85	83.9037	\$1,264.48
Miremont One Golf Course	BVOP-0025 BVOP-0026	224.28 432.74	201.6980 127.7025	\$3,039.71 \$1,924.55
OGC CNO JV, LLC	BVDP-0026	432.74	0.4815	\$1,924.55 \$7.26
Opersteny, Steve	BVHU-0457	530.00	0.0000	\$7.26
Price, David	BV0P-0173	19.36	0.0000	\$0.00
Pyhrr, Walter (Fortex Grass)	BVDO-0019	1.00	0.4604	\$6.94

BVDO-0024	10.00	0.0050	\$0.08
BVDO-0140	0.00	0.0000	\$0.00
BVHU-0025	2057.00	1363.9884	\$20,556.14
BVDO-0215	25.00	8.2190	\$123.87
BVOP-0297	58.00	0.0514	\$0.77
BVOP-0298	30.60	5.7756	\$87.04
BVOP-0302	129.00	0.1690	\$2.55
	9581.22	2085.35	\$31,427.53
	BVDO-0140 BVHU-0025 BVDO-0215 BVOP-0297 BVOP-0298	BVDO-0140         0.00           BVHU-0025         2057.00           BVDO-0215         25.00           BVOP-0297         58.00           BVOP-0298         30.60           BVOP-0302         129.00	BVDO-0140         0.00         0.0000           BVHU-0025         2057.00         1363.9884           BVDO-0215         25.00         8.2190           BVOP-0297         58.00         0.0514           BVOP-0298         30.60         5.7756           BVOP-0302         129.00         0.1690

•		Permitted	Water Prod.	Total
Name	Permit #	Amount	2021 in ac/ft	Assessment
10786 Vaughn Agricultural, LLC	BVHU-1070	600.00	4.0766	\$0.76
10787 Vaughn Agricultural, LLC	BVHU-1071	600.00	5.1200	\$0.96
Brien, James & Ellen	BVDO-0134	542.00	0.0000	\$0.00
Bumpurs, Jacob	BVDO-0234	10.00	5.3170	\$1.00
Bumpurs, Jacob	BVDO-0235	10.00	4.9811	\$0.93
Bumpurs, Jacob	BVDO-0236	10.00	3.2471	\$0.61
Burnett, David	BVDO-0009	242.00	49.0295	\$9.19
Carpenter, Dale	BVDO-0100	117.00	23.5691	\$4.42
Carpenter, Dale	BVDO-0241	50.00	0.0000	\$0.00
Carpenter, Dale	BVDO-0242	50.00	0.0000	\$0.00
Carpenter, Dale	BVDO-0251	95.00	0.0000	\$0.00
Carpenter, Dale	BVDO-0277	120.00	0.0000	\$0.00
Circle X Camp Cooley Ranch, Ltd.	BVDO-0017	110.00	0.0000	\$0.00
Circle X Camp Cooley Ranch, Ltd.	BVDO-0025	110.00	0.0000	\$0.00
Circle X Camp Cooley Ranch, Ltd.	BVDO-0026	110.00	0.0000	\$0.00
Circle X Camp Cooley Ranch, Ltd.	BVDO-0027	110.00	0.0000	\$0.00
Circle X Camp Cooley Ranch, Ltd.	BVDO-0248* BVDO-0249*	3226.00 3226.00	0.0000	\$0.00
Circle X Camp Cooley Ranch, Ltd. Circle X Camp Cooley Ranch, Ltd.	BVDO-0249"	3226.00	0.0000	\$0.00
Circle X Camp Cooley Ranch, Ltd.	BVD0-0250*	110.00	0.0000	\$0.00
Circle X Land & Cattle	BVHU-0433*	280.00	0.0000	\$0.00
Circle X Land & Cattle	BVHU-0434*	280.00	0.0000	\$0.00
Circle X Land & Cattle	BVHU-0435*	2800.00	213.0000	\$39.94
Circle X Land & Cattle	BVHU-0436*	56.00	0.0000	\$0.00
Circle X Land & Cattle	BVHU-0438*	56.00	0.0000	\$0.00
Circle X Land & Cattle	BVHU-0439*	56.00	0.0000	\$0.00
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 30.00 35.00 30.00 30.00 30.00 30.00	0.0000 13.1648 7.2433 0.0000 7.5000 7.5000 7.5000	\$0.00 \$2.47 \$1.36 \$0.00 \$1.41 \$1.41 \$1.41
Conn, Larry	BVDO-0148			
Conn, Larry	BVDO-0149			
Conn, Larry	BVOP-0094			
Dang, Andy	BVDO-0264			
Dang, Andy	BVDO-0265			
Dang, Andy	BVDO-0266			
Dang, Andy	BVDO-0267	30.00	7.5000	\$1.41
Dover, Danny	BVOP-0295	150.00	0.0000	\$0.00
Dover, Danny	BVOP-0296	100.00	0.0000	\$0.00
Epps, Frank N	BVOP-0047	30.00	0.1043	\$0.02
Fagan, James	BVDO-0098	100.00	0.0000	\$0.00
Fazzino, Lee Jr.	BVHU-1025	560.00 35.00	0.0000 0.0014	\$0.00
Dalat Poultry Farm, LLC Gregurek, Edward L.	BVDO-0185 BVDO-0037	26.00	0.0000	\$0.00
Liere Dairy	BVD0-0037 BVD0-0118	720.00	9.8060	\$1.84
Liere Dairy	BVHU-1101	254.00	85.1613	\$15.97
Liere Dairy	BVHU-1102	720.00	46.0333	\$8.63
Lockhart, Bart	BVHU-0142	160.00	4.2427	\$0.80
Mackey, Willis	BVDO-0103	20.00	0.0091	\$0.00
Mancuso, Vince	BVOP-0315	399.00	0.0000	\$0.00
Michael Jimmy /Farm, LLC	BVDO-0288	30.00	0.0000	\$0.00
Michael Jimmy /Farm, LLC	BVDO-0289	30.00	0.0000	\$0.00
Neal, Murray	BVDO-0102	24.00	0.0813	\$0.02
Phan, Andrew	BVDO-0268	50.00	0.0000	\$0.00
Philipello, Nathan	BVDO-0262	30.00	10.6544	\$2.00
Philipello, Nathan	BVDO-0263	30.00	19.6362	\$3.68
Quinn & Son Poultry, LLC	BVDO-0244	10.00	1.6720	\$0.31
Quinn & Son Poultry, LLC	BVDO-0245	10.00	0.0000	\$0.00
Rampy, Ty	BVOP-0017	125.00	125.0000	\$23.44
Rampy, Ty	BVOP-0018	125.00	125.0000	\$23.44
Reistino, Maria L. Estate	BVDO-0092	894.00	160.8960	\$30.17
Rolke Ranch	BVHU-0143	45.00	0.0000	\$0.00
Rolke Ranch	BVHU-0144	15.00	0.0000	\$0.00
Rolke Ranch	BVHU-0145	30.00	0.0000	\$0.00

Rolke Ranch	BVHU-0146	45.00	0.0000	\$0.00
Ryan/Sloat	BVDO-0055*	600.00	112.7816	\$21.15
Ryan/Sloat	BVDO-0090*	600.00	179.9845	\$33.75
Ryan/Sloat	BVDO-0091*	700.00	8.5890	\$1.61
Skiles, Clifford III (Trey)	BVDO-0108	1400.00	0.0000	\$0.00
Smitherman, Robert	BVDO-0172	30.00	0.0000	\$0.00
Smitherman, Robert	BVDO-0173	30.00	0.0000	\$0.00
Smitherman, Robert	BVDO-0174	30.00	0.0001	\$0.00
Smitherman, Robert	BVDO-0214	30.00	15.8381	\$2.97
Stratta, Joe A.*	BVDO-0276	218.00	0.0000	\$0.00
Tran, James Le	BVDO-0208	30.00	10.0359	\$1.88
Tran, James Le	BVDO-0209	30.00	9.9693	\$1.87
Tran, James Le	BVDO-0210	30.00	6.9020	\$1.29
Turner, Tom	BVDO-0247	40.00	30.0114	\$5.63
UW Brazos Valley Farm, LLC	BVHU-1058/BVDO-0111*	20770.00	8871.0000	\$1,663.31
UW Brazos Valley Farm, LLC	BVDO-0254*	4839.00	0.0000	\$0.00
UW Brazos Valley Farm, LLC	BVDO-0255*	5322.00	0.0000	\$0.00
UW Brazos Valley Farm, LLC	BVDO-0256*	5322.00	0.0000	\$0.00
VLI Poultry Farm, LLC	BVDO-0227	30.00	14.0053	\$2.63
Watson, Richard	BVDO-0115	54.50	54.5000	\$10.22
Wilson, Wayne or Linda*	BVOP-0223	140.00	0.0000	\$0.00
Wright, Larry	BVOP-0156	100.00	6.4381	\$1.21
Agricultural - Robertson		61629.50	10037.53	\$1,882.04

		Permitted	Water Prod.	Total Assessment
Name	Permit #	Amount	2021 in ac/ft	
Carrabba Brothers	BVOP-0165	56.67	0.0000	\$0.00
Carrabba Brothers	BVOP-0166	56.67	0.0000	\$0.00
Carrabba Brothers	BVOP-0167	56.66	0.0000	\$0.00
Circle X Land & Cattle	BVHU-0437*	56.00	0.0000	\$0.00
Cumberland, Miles & William	BVDO-0153	74.00	0.0000	\$0.00
Dawson, Daniel	BVDO-0052	19.00	14.0847	\$2.64
Forsthoff, Robert G.	BVHU-0502	20.00	0.0000	\$0.00
Forsthoff, Robert G.	BVHU-0503	20.00	0.0000	\$0.00
Forsthoff, Robert G.	BVHU-0504	20.00	0.0000	\$0.00
Greenwood, Kyle	BVDO-0123	60.00	0.0281	\$0.01
Inguran, LLC dba Sexing Technology	BVDO-0126	280.00	0.0000	\$0.00
JFB Holdings, LLC	BVDO-0113	120.00	0.0000	\$0.00
Lampe, Michael	BVHU-0152	22.40	6.1378 6.1378 6.1378	\$1.15 \$1.15 \$1.15 \$1.15
Lampe, Michael	BVHU-0153	22.40		
Lampe, Michael	BVOP-0275	22.40		
Lampe, Michael	BVOP-0276	22.40	6.1378	\$1.15
McGuire, Charles	BVDO-0122	100.00 165.00 80.00	3.9815	\$0.75
Melvin Estate	BVOP-0183*		0.0000	\$0.00
Messina Hoff Winery	BVDO-0075		2.3138	\$0.43
Messina Hoff Winery	BVHU-0077A	4.30	1.8763	\$0.35
Midwest Poultry Services, LP	BVDO-0280	242.00	0.0000	\$0.00
Midwest Poultry Services, LP	BVDO-0281	242.00	0.0000	\$0.00
Midwest Poultry Services, LP	BVDO-0282	161.30	0.0000	\$0.00
Midwest Poultry Services, LP	BVOP-0316	187.00	9.7170	\$1.82
Paull, Marcella	BVDO-0146	40.00	6.7956	\$1.27
Relyea, Tim	BVOP-0274	40.00	17.4438	\$3.27
Ruffino, Preston J. III	BVOP-0159	111.00	0.0000	\$0.00
Scasta, Robert Lee	BVOP-0157	60.00	0.0000	\$0.00
Sharp, John	BVDO-0156*	200.00	0.0015	\$0.00
Smith, Carey D.	BVDO-0240	100.00	0.0000	\$0.00
Wall, Jerry	BVOP-0164*	100.00	0.0695	\$0.01
Wall, Jim	BVDO-0150*	200.00	0.0000	\$0.00
Agricultural - Brazos		2961.20	80.86	\$15.16

		Permitted	Water Prod.	Total
Name	Permit #	Amount	2021 in ac/ft	Assessment
Oak Grove Management Co., LLC	BVDO-0031**	537.00	362.8502	\$106.71
Oak Grove Management Co., LLC	BVOP-0020**	274.00	287.9935	\$84.70
Major Oak Power, LLC	BVHU-0045**	2887.00	1478.2393	\$434.75
Major Oak Power, LLC	BVHU-0046**	2508.00	1988.2796	\$584.75
Major Oak Power, LLC	BVHU-0047**	2116.00	1326.1380	\$390.02
Steam Electric - Robertson		8322.00	5443.50	\$1,600.93

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 – 167 wells are now being monitored across the District encompassing all aquifers. Of that number, 101 lie over the Carrizo-Wilcox group, 66 over the Brazos River Alluvium, Queen City, Sparta, and Yegua-Jackson. The total number of readings for all monitoring wells during 2021 was 416. 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.

- 2021 167 wells in the network | 416 measurements
- 2020 167 wells in the network | 511 measurements
- 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

GMA 12 members agreed the GAM used during the 2016 planning cycle was in need of an update. Updating of the groundwater availability model began in 2017, was completed in July 2018, and submitted to TWDB for review and approval. Final approval of the GAM occurred in December 2018.

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 inkind 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 was 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.

The Gulf Coast Aquifer occurs in the very southern part of Brazos County under about 1.3 percent of the Brazos Valley Groundwater Conservation District area that encompasses Brazos and Robertson counties. The aquifer provides small amounts of water to a limited number of wells no greater than 250 feet deep. Its contribution to the overall groundwater supply within the Brazos Valley Groundwater Conservation District is de minimis. This aquifer has been declared non-relevant for the 2021 DFC planning process.

**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 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 was 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 2021, 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 2016 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 2016 DFC planning process.

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 1. Estimates of Groundwater Availability

Aquifer	2016	2017	2018	2019	2020	2021
Carrizo	761.72	630.11	825.25	992.40	1,061.68	955.61
Queen City	99.62	237.46	146.54	400.88	102.62	45.30
Simsboro	54,237.29	53,325.82	54,551.38	50,528.07	53,163.83	51,127.64
<b>Calvert Bluff</b>	132.32	271.98	130.27	176.89	230.45	242.33
Hooper	909.16	756.18	809.07	699.98	745.86	918.22
Sparta	4,152.91	4,241.37	4,499.56	3,869.64	3,389.46	3,161.20
Yegua-	1,565.41	1,509.54	1,183.12	1,278.11	1,253.18	948.24
Jackson						
Brazos River	24.18	35.50	55.34	74.53	66.82	32.97
Alluvium						

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

## Water-Level Monitoring Data for 2009-2021

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 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

2021 was a very successful year in obtaining multiple measurements on the vast majority of monitoring wells. Most of the wells were measured in late March and early April to obtain the winter water level when aquifer recovery is the highest. Late spring measurements were gathered in mid-June on many of the wells. The late August-early September saw a few additional wells running due to very dry conditions. District staff obtained as many measurements as possible during this period. Fall measurements of Brazos River Alluvium well were obtained in late December 2021 and will be transmitted to farmers in the District in January 2022. The late fall measurements were collected in mid-December. A total of 416 measurements were obtained during 2021.

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 2020.

#### 2. <u>Implement Strategies to Control and Prevent Waste of Groundwater:</u>

**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 2021, water production within the District generated total fees of \$648,369.08. The amount generated and actual water production for each permit type is listed below.

<b>Type of Permit</b>	Fees Generated	Water Used
Agricultural (metered)	\$1,944.08	10,398.40 ac ft.
Agricultural (non-metered)	\$17,591.11	*93,819.25 ac ft.
Industrial	\$33,351.45	2,213.01 ac ft.
Municipal Water Supply	\$531,886.30	35,292.95 ac ft.
Rural Water Supply	\$61,995.21	4,113.65 ac ft.
Steam Electric	\$1,600.93	5,443.50 ac ft.
Water Transported	\$0.00	0.00 ac ft.
Fees Generated (2021)	\$648,369.08	

\*Unmetered agricultural irrigation permits are charged fees for the full permitted amount. The only metered production reported in the Brazos River Alluvium Aquifer is from wells permitted for other than agricultural use. **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 July 23, 2021 to review the entire set of rules and determine if revisions needed to be considered. The committee was satisfied that no revisions needed to be made to the Rules at this time. This recommendation was made to the Board on August 12, 2021 with the Board accepting the committee recommendation.

The Rules Committee met again on October 27, 2021 to begin discussions on the current district permitting protocol and possible revisions. The committee decided to return the issue to the Board for further guidance and explanation.

**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 "TWDB Kids website", 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 several 4<sup>th</sup> grade students in both Brazos and Robertson counties.. The curriculum includes sections covering water conservation and the ways to wisely use water. Approximately 750 were exposed to the water curriculum in 2021. Distribution totals were greatly reduced in 2021 due to the ongoing COVID 19 pandemic and the availability of the curriculum to teachers in an online version.

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 4,900 students were exposed, both virtually and in-person, to the 45-70 minute teaching sessions. This included presentations to 4<sup>th</sup>, 5<sup>th</sup>, and 7<sup>th</sup> grade classes. District staff conducts laboratory sessions addressing water quality to all 7<sup>th</sup> grade students in the entire District. This number is significantly less than 2019 but larger than 2020 due to the COVID-19 concerns. The 2020-2021 school year was done virtually while the 2021-2022 year began with virtual teaching but moved to in-person in early November 2021.

4<sup>th</sup> 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 "Pizza Ranch" event held during October 14, 2021. The District exposed 531 students on the importance of water and the conservation of the natural resource. This is a yearly activity for the District and once again an in-person activity. The pandemic continued to play a significant role as indicated by a much reduced attendance.

The District annually organizes and conducts a "Water Conservation Field Day" for all the 5<sup>th</sup> grade students in Robertson County school districts. This includes Hearne, Mumford, Calvert, Bremond, and Franklin ISD's. The event was scheduled for October 19, 2021 but was postponed until May 2022 with the hope that the pandemic will have waned.

The scheduled Water Field Day for Pecan Trail Intermediate School was also cancelled due to the COVID-19 outbreak. It was to be held in mid-September, 2021. The District partnered with Texas A&M University Utilities and The City of College Station Wastewater Department to host the event the event in 2019. This activity has also been rescheduled of the last week of May 2022. 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 cooperator 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 cooperator and water conserved. Ten cooperators were identified and units installed in early 2022.

The website associated the BVWaterSmart project received 238,501 visits from 15,399 individual users primarily between April and September, 2021. 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 13<sup>th</sup>-14<sup>th</sup>, 2021, and was the 8<sup>th</sup> year for the District to participate. Other presentations given during 2021:

Tri-County AgriLife Winter Crops Meeting – January 27, 2021 (70) Austin's Colony Homeowner's Association – September 14, 2021 (virtual) 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 2021. The General Manager or District Staff attended the June 23, 2021 (virtual) and September 29, 2021 (Inperson) meetings.

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

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

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

4a. Performance Measurement – An active search for flowing springs within the District is an ongoing effort. District staff continues to search for and attempt to identify possible springs within the District boundaries. No new springs were identified during 2021.

## 5. <u>Implement Strategies to Address Drought Conditions:</u>

**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 11 Regular Board meetings in 2021. These included the most recent Palmer Drought Severity Index, Crop Moisture Index, U.S. Drought Monitor for Texas, and U.S. Seasonal Drought Outlook. The General Manager continued to email these same drought maps to the directors on a weekly basis. **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 – Eight (8) permit applications were received during 2021 requiring a drought contingency plan. Seven of the applicants (twelve (12) permits) of the applications agreed to abide by the District Water Conservation Plan (DWCP) revised and adopted August 8, 2018. The two remaining permits, relating to one (1) applicant, provided their own approved drought contingency plan.

All applicants for permitted wells not submitting an approved drought contingency plan 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 (DDCP) was developed and originally adopted November 4, 2010. The Plan was amended on November 8, 2012. The DDCP was reviewed and re-adopted with no revisions by the Board of Directors September 9, 2021. This document is normally reviewed annually by the Education/conservation Committee and a committee report is presented to the Board regarding any recommendations for updates, changes, or additions needed.

#### 6. <u>Implement Strategies to Promote Water Conservation:</u>

**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 – Eight (8) permit applications were received during 2021 requesting fourteen (14) permits. One (1) water conservation plan was received and associated with two (2) requested permits. The submitted plan was reviewed prior to the application being declared administratively complete. Seven (7) applicants requesting twelve (12) permits agreed to abide by the District Water Conservation Plan revised and adopted December 2, 2010, amended August 9, 2018, and September 9, 2021 updating statistical & demographic information.

- Applications requiring Water Conservation Plans 1 (two permits)
- Water conservation plans submitted 1
- Water conservation plans reviewed 1
- Applicants abiding by the District Water Conservation Plan 7 (12 permits)

**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, 167 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. District staff is working to cultivate monitoring wells in all of the aquifers. A total of 416 readings were taken during 2021.

Aquifer	Readings	# Monitor
		Wells
Hooper	43	19
Simsboro	137	59
Calvert Bluff	41	15
Carrizo	20	8
Queen City	27	10
Sparta	58	24
Yegua Jackson	19	9
Brazos River Alluvium	71	23
Total	416	167

**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 corresponded with the Robertson/Brazos County Natural Resources Conservation Service (NRCS) Zone 4 Conservation Engineer Kevin LaStrapes November 15, 2021 and December 8, 2021 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 and implementation of water conservation methods and averting groundwater contamination.

The NRCS has determined that agricultural producers can be eligible to receive funding from the agency as well as receiving grant funds from the District in regard to the decommissioning of water wells. This could greatly enhance the desire of producers who wish to plug old water wells but are unwilling to spend a substantial amount of money to accomplish the task. A follow up meeting in February 2022 will detail the NRCS guidelines and cost-sharing opportunities.

Cost-share funding on existing remote control agricultural pivot irrigation systems was completed during 2021 with a total of 57 systems remunerated at \$300/system over the past two years. Grant funding continues to be available to agricultural producers seeking to install pivot irrigation remote control equipment on new systems. NRCS provides some assistance for this type program which dovetails with the BVGCD effort to do the same.

The General Manager corresponded by email on November 15, 2021 with Kyla Peterson, TWDB Agricultural Water Conservation Program lead, concerning agricultural grant money available to groundwater conservation districts and projects eligible for grant consideration. An email communication November 15, 2021 indicated there would be grant money available during 2022. The General Manager also attended a webinar December 14, 2021 addressing the application process for fundings, eligible projects, and tips on submitting the project application. The District's effort to remunerate producers seeking to install new remote control agricultural irrigation technology 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 August 19, 2021 to review the current grants and to consider continuing to fund the existing programs. Grant proposals would be brought directly to the full Board for consideration on an individual basis. The committee vets all 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 November 11. 2021 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.

Grant contracts associated with water well plugging continued during 2021. There were twelve (11) entities that signed grant contracts with the District to engage in the plugging of eleven (15) water wells. Each of these contracts was fulfilled during 2021 with a total expenditure of \$14,167.48. The well plugging grant program has been extended for FY2022.

Grant funds were committed for remuneration to agricultural producers who installed remote control agricultural pivot access devices prior to January 1, 2020. Each existing device is eligible for one-time \$300 remuneration to cover the cost of the yearly application subscription. Thirty-seven (37) devices were remunerated during 2021 completing the grant programs. Total grant expenditures for 2021 was \$11,100. The grant funding for this program will not be extended to FY2022 as all eligible systems identified have been remunerated.

Grant funds (cost-share) in the amount of \$10,000 were committed to agricultural producers who installed new remote control agricultural pivot access devices on or after January 1, 2020. Each installed device is eligible for a one-time grant. The District will cover 50% of total cost of equipment, installation, and application subscription not to exceed \$1,000/device. Five (5) new devices were installed during 2021. Total grant expenditures for the partnering program was \$4,862.51. The grant program was reauthorized for FY2022.

#### 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 – 2020" once it became available in 2021. 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 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 2021. **7b. Objective** – Require all water permittees that are required by the TCEQ to have well vulnerability studies prior to constructing a well, to provide evidence of the study to the District prior to construction of a well within the District.

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

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

**7c. Objective** – Provide information to the 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 website 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 4,900 4<sup>th</sup>, 5<sup>th</sup>, and 7<sup>th</sup> 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. <u>Implement Strategies to Assess Adopted Desired Future Conditions</u>

**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, 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 April 8, 2021 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. In early November 2021, every static water level measurement taken during the preceding fourteen (14) months along with the hydrograph associated with the well was emailed to each of the current directors. The measurements were also made available to the public on the District website homepage.

**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 2021 detailed water production (updated each February) for 2009-2020. Total permitted water production is done monthly and is current the day of the board meeting.