SURFACE WATER MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER

Summary Page

PUBLIC WATER SYSTEM NAME:	Webb County Water Utility	PLANT NAME OR NUMBER:	Rio Bravo
PWS ID No.:	2400022	I certify that I am familiar with the information contained in this report and that, to the best of my knowledge, the information is true, complete, and accurate.	
Plant ID No.:	20831	Operator's Signature:	
Report for the Month of:	August 2018	Certificate No. & Grade: WS0012772, B	Date: September 10, 2018

TREATMENT PLANT PERFORMANCE

Total number of turbidity readings:	150	Number of 4-hour periods when plant was off-line:	36
Number of readings above 0.10 NTU:	1	Number of 4-hour periods when plant was on-line but turbidity data was not collected:	0
Number of readings above 0.3 NTU:	0		
Number of readings above 0.5 NTU:	0	Number of days when plant was on-line but individual filter turbidity data was not collected:	0
Number of readings above 1.0 NTU:	0		
Maximum allowable turbidity level:	0.3	Number of days with readings above 1.0 NTU:	0 (2)
Percentage of readings above this limit:	0.0 % (1)	Number of days with readings above 5.0 NTU:	0 (3)

Bin Class: 2 Crypto Credit Required: 4.0 (7A) Crypto Credit Achieved: 4.5 (7B) Bin 3&4 Credits: 1.0 (7C)

Watershed Protection:	0.0	Conventional Treatment:	3.0	Second Stage Filtration:	0.0
Bank Filtration:	0.0	Enhanced Filter Performance:	0.5	UV:	1.0
Presedimentation with Coagulation:	0.0	Bag and Cartridge Filtration:	0.0	Ozone, Chlorine Dioxide:	0.0
Two-Stage Lime Softening:	0.0	Membrane Filtration:	0.0	Perform. Demonstration:	0.0

Number of days with low inactivation (including UV) for no more than 4.0 consecutive hours:	0	Average log inactivation (including UV) for Giardia:	9.58
		Average log inactivation) (including UV) for viruses:	176.21
Number of days with low inactivation (including UV) for more than 4.0 consecutive hours:	0 (4)	Number of days when profiling data was not collected:	0
		Number of days when CT data was not collected:	0

Minimum disinfectant residual required leaving the plant:		0.5 mg/L, measured as Total Chlorine	
Number of days with a low residual for no more than 4.0 consecutive hours:	0	Minimum pH in the last disinfection zone:	6.49
		Number of days with pH below 7.0 in the last disinfection zone:	16.00
Number of days with a low residual for more than 4.0 consecutive hours:	0 (5)	Number of days when disinfectant residual leaving the plant was not properly monitored:	0

DISTRIBUTION SYSTEM

Minimum disinfectant residual required in distribution system:		0.5 mg/L, measured as Total Chlorine	
Total number of readings this month:	47 (at least 31 required) (8)		
Average disinfectant residual value:	2.23	Percentage of readings with a low residual this month:	0.0 % (6A)
Number of readings with a low residual:	0		
Number of readings with no detectable residual:	0	Percentage of readings with a low residual last month:	0.0 % (6B)

ADDITIONAL REPORTS & WORKSHEETS

The Page 1 Addendum (Public Notices) is not required because there were no treatment technique or monitoring/reporting violations reported.

Additional report(s) for individual filter monitoring required:	◉ NONE	○ Filter Profile	○ Filter Assessment	○ CPE
Additional report(s) for individual filter monitoring submitted:	◉ NONE	○ Filter Profile (9)	○ Filter Assessment (10)	○ CPE (11)

No additional IFE Reports are required this month.

P.2-Turbidity Data	P.3-Filter Data	P.4&5-Disinfection Data	P.6-TOCMOR	P.7-TOC ACC
Alternate Technol.	UV–CDA	UV–Sensor Data	UV–UVT Analyzer	

STATISTICAL ANALYSIS OF TURBIDITY DATA

Settled Water Stastical Summary	Maximum turbidity reading:	9.43 NTU	Average turbidity value:	3.69 NTU
	Minimum turbidity reading:	0.30 NTU	Standard deviation:	2.024 NTU
	95th percentile value:	8.39 NTU		
IFE Stastical Summary	Maximum IFE turbidity reading:	0.00 NTU	Average IFE turbidity value:	0.01 NTU
	Minimum IFEturbidity reading:	0.30 NTU	Standard deviation:	0.099 NTU
	95th percentile IFE value:	0.05 NTU		
CFE Stastical Summary	Maximum CFE turbidity reading:	0.11 NTU	Average CFE turbidity value:	0.08 NTU
	Minimum CFE turbidity reading:	0.03 NTU	Standard deviation:	0.018 NTU
	95th percentile CFE value:	0.10 NTU		

STATISTICAL ANALYSIS OF pH DATA

Last Zone pH Stastical Summary	Maximum pH reading:	7.52 pH	Average pH value:	7.01 pH
	Minimum pH reading:	6.49 pH	Standard deviation:	0.207 pH
	95th percentile value:	7.39 pH		

SURFACE WATER MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

Turbidity Data Page

PUBLIC WATER SYSTEM NAME: Webb County Water Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Connections:** 1,951

Month: August **Year:** 2018 **Population:** 6,829

PERFORMANCE DATA

Date	Raw Water Pumpage (MGD)	Treated Water Pumpage (MGD)	RAW WATER ANALYSES NTU	RAW WATER ANALYSES Alk.	SETTLED WATER TURBIDITY (Optional Data) Basin No. 1	2	3	4	5	6	FINISHED WATER QUALITY Combined Filter Effluent Turbidity NTU1	NTU2	NTU3	NTU4	NTU5	NTU6	Lowest Residual	Time*
1	1.512	1.120	15	120	0.9	4.5					0.09	0.08	0.08	0.10	0.09	0.10	2.5	
2	1.446	0.884	23	120	3.0	3.5					0.10	0.11	0.10	0.08	0.07	0.09	2.9	
3	1.319	0.827	26	120	3.0	3.6					0.08	X	0.07	0.07	0.06	0.05	3.0	
4	1.290	0.799	13	120	3.5	2.8					0.05	X	0.05	0.05	0.04	0.04	2.5	
5	1.143	0.734	18	120	2.9	2.9					0.05	0.05	0.05	0.04	0.04	0.05	3.0	
6	1.154	0.734	17	100	3.0	2.7					X	X	0.05	0.05	0.07	0.08	2.8	
7	1.266	0.780	27	100	2.8	2.8					0.08	X	0.08	0.07	0.08	0.09	2.8	
8	1.152	0.813	31	120	3.1	3.0					0.09	X	X	0.08	0.09	0.10	1.3	
9	1.196	0.799	37	100	2.9	3.2					0.10	X	X	0.09	0.09	0.10	1.3	
10	1.153	0.789	59	100	4.7	3.5					0.10	X	X	0.07	0.08	0.09	2.6	
11	1.314	0.739	16	100	4.3	2.8					0.10	X	0.09	0.07	0.07	0.03	2.5	
12	1.032	0.632	16	100	5.1	2.3					X	X	0.05	0.07	0.08	0.08	1.7	
13	1.093	0.735	15	120	4.5	1.0					X	X	0.09	0.07	0.09	0.08	1.5	
14	1.258	0.777	21	120	4.4	1.4					0.08	X	0.09	0.09	0.09	0.10	2.2	
15	1.204	0.785	22	120	9.3	2.1					0.10	X	0.10	0.10	0.10	0.09	3.9	
16	1.281	0.797	21	120	8.2	2.7					0.09	X	0.08	0.08	0.08	0.09	2.2	
17	1.222	0.795	29	100	4.5	2.4					0.09	X	0.09	0.08	0.07	0.06	3.8	
18	1.352	0.769	33	100	8.4	3.9					0.07	0.07	X	0.08	0.07	0.05	3.2	
19	1.282	0.822	35	100	9.4	3.6					0.05	X	0.04	0.05	0.07	0.07	2.9	
20	1.280	0.785	38	100	8.0	5.7					0.08	X	0.08	0.08	0.09	0.09	2.4	
21	1.235	0.803	9	100	4.8	8.2					0.10	X	0.10	0.10	0.10	0.10	1.7	
22	1.474	0.795	10	120	4.4	3.2					0.10	0.10	0.10	0.10	0.10	0.10	2.0	
23	1.363	0.826	14	140	3.2	3.8					0.09	X	0.10	0.10	0.09	0.08	1.1	
24	1.200	0.802	16	120	3.1	3.6					0.08	X	0.09	0.08	0.08	0.07	2.4	
25	1.206	0.837	17	120	3.0	8.4					0.07	X	0.05	0.04	0.05	0.05	2.2	
26	1.240	0.802	10	120	3.1	1.9					0.05	X	X	0.08	0.05	0.07	1.8	
27	1.302	0.789	14	120	3.2	1.2					0.07	X	0.08	0.09	0.10	0.10	1.5	
28	1.178	0.758	20	100	3.5	0.3					0.10	X	0.09	0.10	X	0.10	1.4	
29	1.197	0.777	30	100	2.4	2.0					0.10	X	X	0.10	0.10	0.10	1.3	
30	1.205	0.777	30	120	3.1	1.6					0.09	X	0.08	0.07	0.07	0.07	1.1	
31	1.305	0.743	33	120	2.8	1.3					0.08	X	0.08	0.08	0.09	0.09	0.9	
Total	38.854	24.624		Max	9.4	8.4												
Avg	1.253	0.794		Avg	4.3	3.1												
Max	1.512	1.120		95th %	8.9	6.9												
Min	1.032	0.632		Min	0.9	0.3												
				95th percentile based on data from all basins						8.4								

NOTE: ONLY use the "Time*" column to show the length of time that the disinfectant residual entering the distribution system fell below the acceptable level.

SUBMITTED BY: Tomas Sanchez Jr. **Certificate No. and Grade:** WS0012772, B **Date:** September 10, 2018

SURFACE WATER MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

Filter Data Page

PUBLIC WATER SYSTEM NAME: Webb County Water Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 Plant ID No.: 20831 Month: August Year: 2018

PERFORMANCE DATA

INDIVIDUAL FILTER TURBIDITY

Date	Filter No. 1		Filter No. 2		Filter No. 3		Filter No. 4		Filter No. 5		Filter No. 6		Filter No. 7		Filter No. 8		Filter No. 9		Filter No. 10	
	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs
1	0.08		0.09		0.19		0.07													
2	0.08		0.09		0.25		0.07													
3	0.07		0.17		0.21		0.06													
4	0.08		0.14		0.12		0.06													
5	0.07		0.12		0.18		0.06													
6	0.13		0.14		0.13		0.16													
7	0.06		0.09		0.09		0.06													
8	0.07		0.09		0.08		0.06													
9	0.07		0.01		0.08		0.06													
10	0.07		0.18		0.15		0.07													
11	0.07		0.12		0.15		0.09													
12	0.06		0.01		0.09		0.09													
13	0.07		0.13		0.11		0.08													
14	0.06		0.08		0.07		0.05													
15	0.06		0.14		0.07		0.05													
16	0.06		0.12		0.15		0.05													
17	0.18		0.10		0.14		0.07													
18	0.11		0.20		0.08		0.05													
19	0.08		0.13		0.08		0.05													
20	0.06		0.12		0.08		0.05													
21	0.06		0.15		0.12		0.08													
22	0.08		0.09		0.15		0.08													
23	0.09		0.12		0.13		0.12													
24	0.06		0.14		0.16		0.06													
25	0.06		0.16		0.11		0.07													
26	0.06		0.16		0.09		0.17													
27	0.06		0.10		0.09		0.07													
28	0.06		0.08		0.11		0.08													
29	0.06		0.14		0.11		0.07													
30	0.06		0.30		0.08		0.06													
31	0.06		0.14		0.17		0.10													

SUMMARY & COMPLIANCE ACTIONS

Criteria	Filter No. 1	2	3	4	5	6	7	8	9	10	Plant
Number of days with event(s) above 0.5 NTU at 4.0 hrs this month											
Number of days with event(s) above 1.0 NTU this month	0	0	0	0							
Number of days with event(s) above 1.0 NTU last month	0	0	0	0							
Number of days with event(s) above 1.0 NTU two months ago	0	0	0	0							
Total number of days with event(s) above 1.0 NTU in three months	0	0	0	0							
Number of events above 2.0 NTU this month											0
Number of events above 2.0 NTU last month											0
Does the filter/plant have an approved Corrective Action Plan?	N	N	N	N							N
Is the plant required to submit a Filter Profile Report?	N	N	N	N							
Is the plant required to submit a Filter Assessment Report?	N	N	N	N							
Is the plant required to submit a Request for Compliance CPE?											N

SUBMITTED BY: Tomas Sanchez Jr. Certificate No. and Grade: WS0012772, B Date: September 10, 2018

SURFACE WATER MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

Disinfection Data Page

PUBLIC WATER SYSTEM NAME: Webb County Water Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** August **Year:** 2018

DISINFECTION PROCESS PARAMETERS

APPROVED CT STUDY PARAMETERS						PERFORMANCE STANDARDS	
	Disinfection Zones					Log Inactivations	
Parameters	D1A	D1B	D2	D3	D4	Giardia lamblia Cysts	Viruses
Flow Rate (MGD)	1.250	1.250	0.625	1.250		0.5	2.0
T_{10} (minutes)	7.9	7.9	21.0	50.4			

PERFORMANCE DATA

DISINFECTION PROCESS DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time=
1	FCL D1A	1.2	0.756	28.4	7.6				
	FCL D1B	1.0	0.756	28.8	7.2				
	FCL D2	0.8	0.378	28.9	7.1	5.03	108.74	10.05	
	CLA D3	3.2	0.756	28.7	7.2			(G)	
	D4								
2	FCL D1A	1.5	0.720	27.5	7.1				
	FCL D1B	1.5	0.720	27.4	7.1				
	FCL D2	1.2	0.360	27.7	7.1	6.89	160.76	13.77	
	CLA D3	3.6	0.720	27.0	7.2			(G)	
	D4								
3	FCL D1A	1.6	0.711	26.1	6.8				
	FCL D1B	1.6	0.711	26.3	6.8				
	FCL D2	1.8	0.355	24.7	6.8	8.30	186.82	16.60	
	CLA D3	3.7	0.711	27.3	6.7			(G)	
	D4								
4	FCL D1A	1.6	0.745	29.5	7.1				
	FCL D1B	1.9	0.745	29.9	7.1				
	FCL D2	1.8	0.372	28.9	7.1	9.23	241.50	18.46	
	CLA D3	3.6	0.745	30.9	6.9			(G)	
	D4								
5	FCL D1A	1.7	0.746	28.0	7.2				
	FCL D1B	1.7	0.746	27.7	7.1				
	FCL D2	1.7	0.373	28.1	7.1	8.62	214.65	17.24	
	CLA D3	3.9	0.746	28.6	6.8			(G)	
	D4								
6	FCL D1A	1.8	0.765	26.6	7.3				
	FCL D1B	1.4	0.765	27.6	7.2				
	FCL D2	1.1	0.382	25.6	7.1	5.60	128.30	11.19	
	CLA D3	3.4	0.765	26.8	7.0			(G)	
	D4								
7	FCL D1A	1.4	0.758	27.4	7.3				
	FCL D1B	1.1	0.758	27.5	7.2				
	FCL D2	1.7	0.379	26.1	7.2	6.86	168.76	13.72	
	CLA D3	3.9	0.758	28.2	7.0			(G)	
	D4								
8	FCL D1A	1.5	0.758	27.8	7.3				
	FCL D1B	1.3	0.758	27.5	7.2				
	FCL D2	1.7	0.379	26.9	7.2	7.24	181.23	14.49	
	CLA D3	3.9	0.758	28.1	7.0			(G)	
	D4								

PERFORMANCE DATA

DISINFECTION PROCESS DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time=
9	FCL D1A	1.6	0.740	27.3	7.3				
	FCL D1B	1.5	0.740	27.6	7.2				
	FCL D2	1.9	0.370	27.8	7.1	8.52	221.76	17.05	
	CLA D3	3.5	0.740	27.5	7.1			(G)	
	D4								
10	FCL D1A	2.0	0.729	29.7	7.5				
	FCL D1B	1.9	0.729	30.2	7.3				
	FCL D2	1.1	0.364	28.0	7.3	6.66	183.03	13.33	
	CLA D3	2.8	0.729	28.6	7.4			(G)	
	D4								
11	FCL D1A	2.0	0.738	29.2	7.5				
	FCL D1B	1.7	0.738	29.6	7.3				
	FCL D2	1.2	0.369	28.4	7.2	7.03	181.45	14.06	
	CLA D3	3.3	0.738	28.6	7.5			(G)	
	D4								
12	FCL D1A	1.9	0.740	28.4	7.5				
	FCL D1B	1.8	0.740	28.8	7.4				
	FCL D2	1.8	0.370	28.0	7.4	7.86	229.13	15.72	
	CLA D3	2.6	0.740	28.3	7.3			(G)	
	D4								
13	FCL D1A	1.7	0.752	29.3	7.2				
	FCL D1B	1.8	0.752	29.7	7.0				
	FCL D2	1.6	0.376	29.3	7.1	8.53	222.87	17.06	
	CLA D3	3.0	0.752	31.0	6.9			(G)	
	D4								
14	FCL D1A	1.5	0.751	27.2	7.0				
	FCL D1B	1.0	0.751	26.8	7.0				
	FCL D2	1.6	0.375	25.8	7.0	6.52	154.77	13.04	
	CLA D3	2.9	0.751	26.9	7.0			(G)	
	D4								
15	FCL D1A	1.1	0.761	27.3	6.9				
	FCL D1B	1.3	0.761	27.4	6.9				
	FCL D2	1.7	0.380	26.7	7.0	7.91	179.94	15.82	
	CLA D3	4.5	0.761	27.7	7.0			(G)	
	D4								
16	FCL D1A	1.2	0.740	27.9	7.0				
	FCL D1B	1.4	0.740	27.2	6.9				
	FCL D2	1.6	0.370	27.3	6.9	8.16	183.40	16.32	
	CLA D3	4.3	0.740	28.1	6.9			(G)	
	D4								

NOTE: = ONLY use the "Time=" column to show the length of time that the total inactivation ratio was less than 1.00.

SUBMITTED BY: Tomas Sanchez Jr. **Certificate No. and Grade:** WS0012772, B **Date:** September 10, 2018

SURFACE WATER MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES
OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)
Disinfection Data Page (cont.)

PUBLIC WATER SYSTEM NAME: Webb County Water Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 Plant ID No.: 20831 Month: August Year: 2018

DISINFECTION PROCESS PARAMETERS

APPROVED CT STUDY PARAMETERS						PERFORMANCE STANDARDS	
	Disinfection Zones					Log Inactivations	
Parameters	D1A	D1B	D2	D3	D4	Giardia lamblia Cysts	Virus
Flow Rate (MGD)	1.25	1.25	0.63	1.25		0.5	2.0
T_{10} (minutes)	7.90	7.90	21.00	50.40			

PERFORMANCE DATA

DISINFECTION PROCESS DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time=
17	FCL *D1A*	1.9	0.725	28.3	7.2				
	FCL *D1B*	2.0	0.725	27.6	7.2				
	FCL *D2*	1.9	0.362	26.9	7.0	9.29	234.84	18.58	
	CLA *D3*	4.3	0.725	29.2	7.0			(G)	
	D4								
18	FCL *D1A*	1.2	0.745	28.1	7.2				
	FCL *D1B*	1.2	0.745	28.0	7.1				
	FCL *D2*	1.3	0.372	26.2	7.1	6.53	151.05	13.06	
	CLA *D3*	3.7	0.745	27.7	7.0			(G)	
	D4								
19	FCL *D1A*	1.6	0.744	29.2	7.2				
	FCL *D1B*	1.3	0.744	29.3	7.0				
	FCL *D2*	1.4	0.372	27.3	7.1	7.45	177.95	14.90	
	CLA *D3*	3.5	0.744	28.6	7.0			(G)	
	D4								
20	FCL *D1A*	1.6	0.754	30.1	7.4				
	FCL *D1B*	1.3	0.754	30.3	7.1				
	FCL *D2*	1.0	0.377	27.7	7.2	6.00	142.89	12.01	
	CLA *D3*	3.0	0.754	27.8	7.1			(G)	
	D4								
21	FCL *D1A*	1.0	0.758	27.0	7.2				
	FCL *D1B*	0.8	0.758	27.3	7.1				
	FCL *D2*	1.1	0.379	27.4	7.2	5.27	124.01	10.53	
	CLA *D3*	2.9	0.758	27.5	7.1			(G)	
	D4								
22	FCL *D1A*	1.3	0.763	28.8	6.7				
	FCL *D1B*	1.0	0.763	29.1	6.1				
	FCL *D2*	0.6	0.381	27.6	6.7	5.12	91.45	10.24	
	CLA *D3*	2.7	0.763	28.6	6.5			(G)	
	D4								
23	FCL *D1A*	1.0	0.750	28.9	7.2				
	FCL *D1B*	1.0	0.750	29.2	7.2				
	FCL *D2*	1.3	0.375	28.8	7.3	6.24	164.88	12.48	
	CLA *D3*	2.1	0.750	29.1	7.0			(G)	
	D4								
24	FCL *D1A*	0.9	0.740	28.9	7.0				
	FCL *D1B*	1.1	0.740	29.2	6.8				
	FCL *D2*	1.4	0.370	27.5	6.2	8.48	160.73	16.96	
	CLA *D3*	3.6	0.740	28.9	6.9			(G)	
	D4								

PERFORMANCE DATA

DISINFECTION PROCESS DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time=
25	FCL *D1A*	1.2	0.740	28.5	7.7				
	FCL *D1B*	1.1	0.740	28.6	7.7				
	FCL *D2*	1.4	0.370	28.1	6.5	8.42	175.52	16.84	
	CLA *D3*	4.2	0.740	29.0	7.1			(G)	
	D4								
26	FCL *D1A*	1.4	0.762	20.9	6.9				
	FCL *D1B*	1.5	0.762	28.4	6.5				
	FCL *D2*	1.6	0.381	28.1	6.8	7.68	172.86	15.37	
	CLA *D3*	3.2	0.762	28.6	6.9			(G)	
	D4								
27	FCL *D1A*	1.3	0.759	28.5	7.1				
	FCL *D1B*	1.5	0.759	28.5	6.9				
	FCL *D2*	1.5	0.379	27.4	7.0	7.55	180.42	15.11	
	CLA *D3*	3.3	0.759	29.1	6.9			(G)	
	D4								
28	FCL *D1A*	1.3	0.770	26.8	7.1				
	FCL *D1B*	1.1	0.770	26.9	7.1				
	FCL *D2*	1.6	0.385	27.1	7.0	7.66	171.82	15.32	
	CLA *D3*	5.0	0.770	26.7	7.1			(G)	
	D4								
29	FCL *D1A*	1.4	0.784	26.8	7.1				
	FCL *D1B*	1.3	0.784	27.1	7.1				
	FCL *D2*	1.7	0.392	26.9	7.1	7.07	175.98	14.14	
	CLA *D3*	3.0	0.784	26.9	7.1			(G)	
	D4								
30	FCL *D1A*	1.3	0.762	26.2	7.0				
	FCL *D1B*	1.2	0.762	27.2	7.0				
	FCL *D2*	1.4	0.381	27.0	7.1	6.89	159.17	13.78	
	CLA *D3*	4.1	0.762	26.9	7.2			(G)	
	D4								
31	FCL *D1A*	1.7	0.757	28.5	7.3				
	FCL *D1B*	1.6	0.757	28.4	7.1				
	FCL *D2*	2.0	0.378	27.7	7.0	8.91	231.39	17.82	
	CLA *D3*	3.0	0.757	28.3	6.9			(G)	
	D4								

	Giardia Log	Virus Log	Inact. Ratio
Max	9.29	241.50	18.58
Min	5.03	91.45	10.05
Avg	7.34	176.20	14.68
SD	1.17	35.70	2.34

NOTE: = ONLY use the "Time=" column to show the length of time that the total inactivation ratio was less than 1.00.

SUBMITTED BY: Tomas Sanchez Jr. Certificate No. and Grade: WS0012772, B Date: September 10, 2018

MONTHLY TOTAL ORGANIC CARBON REMOVAL REPORT (TOCMOR)

FOR SURFACE WATER OR GROUND WATER UNDER THE INFLUENCE OF SURFACE WATER SYSTEMS

PUBLIC WATER SYSTEM NAME: Webb County Water Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022

Plant ID No.: 20831

Month: August

Year: 2018

Type of treatment: [X] Conventional [ ] Unconventional explain:

Note: Systems are required to run one TOC Sample Set every month. Additional space is provided for those systems that do additional sampling

Test No.	Test Date	Monthly TOC Sample Set			Actual % TOC Removed	Step 1 Required % Removal	Step 1 Removal Ratio	Optional data		INDIVIDUAL SAMPLE COMPLIANCE REMOVAL RATIO
		Raw Alkalinity	Raw TOC	Treated TOC				Step 2 Required % Removal	Step 2 Removal Ratio	
		Enter the Sample Set results			calculated	calculated from matrix	calculated			calculated
1	8/7	100	3.48	2.85	18.1	25	0.72			0.72
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
Avg		100.00	3.48	2.85	18.10		0.72			0.72
Max		100.00	3.48	2.85	18.10		0.72			0.72
Min		100.00	3.48	2.85	18.10		0.72			0.72

TOTAL ORGANIC CARBON (TOC) REMOVAL SUMMARY

TOC Summary					Monthly Compliance Ratio
Raw Water Alkalinity	Raw Water TOC	Treated Water TOC	TOC % Removal	ACC # used	
100	3.48	2.85	18.1	NA	0.72

I certify that I am familiar with the information contained in this report and that, to the best of my knowledge, the information is true, complete, and accurate.

Operator's Signature:

Certificate No. and Grade: WS0012772, B

Date: September 10, 2018

Submit the report by the 10th of the month following the reporting period to:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
WATER SUPPLY DIVISION/PUBLIC DRINKING WATER SECTION (MC-155)
P.O. BOX 13087, AUSTIN, TEXAS 78711-3087

UV MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER

UV Calculated Dose Approach Reactors

PUBLIC WATER SYSTEM NAME: Webb County Water Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** August **Year:** 2018

VALIDATED OPERATIONAL CONDITIONS

VALIDATED PARAMETERS						PERFORMANCE REQUIREMENTS	
Parameters	Reactor Number					Crypto Log Inactivation	Required UV Dose (mJ/cm^2)
	UVCD1	UVCD2	UVCD3	UVCD4	UVCD5		
Max Validated Flow Rate (MGD)	5.080	5.080	5.080			1.0	2.50
Min Validated UVT (%)	69.20	69.20	69.20				

PERFORMANCE DATA

Date	Reactor	Total Product. (MG)	Max. Flow Rate (MGD)	Min UV Trans. (%)	Minimum Meas'd UV Dose (mJ/cm^2)	Sensor CF	Adjusted Minimum UV Dose (mJ/cm^2)	Total Off-Spec Product. (MG)	Consec. Off-Spec Hours (hr)
	OPERATIONAL DATA								
1	1	0.518	0.617	87.30	2.57	1.00	2.57	0.000	0.25
	2	0.683	0.836	87.30	0.00	1.00	0.00	0.007	
	3	X	X	X	X	X	X	X	
	4								
	5								
2	1	0.513	0.765	87.70	27.75	1.00	27.75	0.000	0.000
	2	0.637	0.986	87.70	23.60	1.00	23.60	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
3	1	0.454	0.578	91.60	33.23	1.00	33.23	0.000	0.000
	2	0.561	0.741	91.60	2.76	1.00	2.76	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
4	1	0.455	0.629	87.70	35.67	1.00	35.67	0.000	0.25
	2	0.578	0.811	87.70	0.00	1.00	0.00	0.008	
	3	X	X	X	X	X	X	X	
	4								
	5								
5	1	0.405	0.616	90.30	26.93	1.00	26.93	0.000	0.25
	2	0.539	0.887	90.30	2.01	1.00	2.01	0.007	
	3	X	X	X	X	X	X	X	
	4								
	5								
6	1	0.419	0.633	88.20	34.67	1.00	34.67	0.000	0.000
	2	0.587	0.860	88.20	25.75	1.00	25.75	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
7	1	0.435	0.616	85.60	16.13	1.00	16.13	0.000	0.000
	2	0.596	0.846	85.60	24.94	1.00	24.94	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
8	1	0.398	0.594	87.10	35.87	1.00	35.87	0.000	0.000
	2	0.555	0.831	87.10	26.24	1.00	26.24	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								

PERFORMANCE DATA

Date	Reactor	Total Product. (MG)	Max. Flow Rate (MGD)	Min UV Trans. (%)	Minimum Meas'd UV Dose (mJ/cm^2)	Sensor CF	Adjusted Minimum UV Dose (mJ/cm^2)	Total Off-Spec Product. (MG)	Consec. Off-Spec Hours (hr)
	OPERATIONAL DATA								
9	1	0.411	0.573	87.00	28.29	1.00	28.29	0.000	0.25
	2	0.560	0.805	87.00	0.00	1.00	0.00	0.017	
	3	X	X	X	X	X	X	X	
	4								
	5								
10	1	0.414	0.572	78.60	37.19	1.00	37.19	0.000	0.000
	2	0.564	0.788	78.60	3.02	1.00	3.02	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
11	1	0.436	0.793	80.80	0.00	1.00	0.00	0.002	0.50
	2	0.612	1.077	80.80	0.00	1.00	0.00	0.004	
	3	X	X	X	X	X	X	X	
	4								
	5								
12	1	0.527	1.500	80.00	0.00	1.00	0.00	0.008	1.00
	2	0.347	0.832	80.00	23.77	1.00	23.77	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
13	1	0.471	1.330	81.50	15.70	1.00	15.70	0.000	0.000
	2	0.458	0.895	81.50	23.77	1.00	23.77	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
14	1	0.420	0.593	83.40	4.47	1.00	4.47	0.000	0.000
	2	0.581	0.854	83.40	24.31	1.00	24.31	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
15	1	0.427	0.640	83.70	24.19	1.00	24.19	0.000	0.000
	2	0.594	0.920	83.70	24.31	1.00	24.31	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
16	1	0.427	0.644	84.50	34.42	1.00	34.42	0.000	0.000
	2	0.595	0.900	84.50	23.92	1.00	23.92	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B **Date:** September 10, 2018

UV MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

UV Calculated Dose Approach Reactors (cont.)

PUBLIC WATER SYSTEM NAME: Webb County Water Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** August **Year:** 2018

TRUE

VALIDATED OPERATIONAL CONDITIONS

VALIDATED PARAMETERS						PERFORMANCE REQUIREMENTS	
Parameters	Reactor Number					Crypto Log Inactivation	Required UV Dose (mJ/cm²)
	UVCD1	UVCD2	UVCD3	UVCD4	UVCD5		
Max Validated Flow Rate (MGD)	5.080	5.080	5.080			1.0	2.50
Min Validated UVT (%)	69.20	69.20	69.20				

PERFORMANCE DATA

Date	Reactor	Total Product. (MG)	Max. Flow Rate (MGD)	Min UV Trans. (%)	Minimum Meas'd UV Dose (mJ/cm²)	Sensor CF	Adjusted Minimum UV Dose (mJ/cm²)	Total Off-Spec Product. (MG)	Consec. Off-Spec Hours (hr)
	OPERATIONAL DATA								
17	1	0.419	0.567	82.40	38.25	1.00	38.25	0.000	0.000
	2	0.575	0.782	82.40	17.29	1.00	17.29	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
18	1	0.467	0.701	87.40	31.76	1.00	31.76	0.000	0.25
	2	0.649	0.930	87.40	0.00	1.00	0.00	0.008	
	3	X	X	X	X	X	X	X	
	4								
	5								
19	1	0.462	0.698	83.50	23.01	1.00	23.01	0.000	0.000
	2	0.642	0.960	83.50	4.26	1.00	4.26	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
20	1	0.455	0.639	86.90	34.23	1.00	34.23	0.000	0.000
	2	0.637	0.907	86.90	24.90	1.00	24.90	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
21	1	0.386	0.612	79.50	0.00	1.00	0.00	0.002	0.25
	2	0.540	0.865	79.50	0.00	1.00	0.00	0.003	
	3	X	X	X	X	X	X	X	
	4								
	5								
22	1	0.496	0.629	84.80	10.52	1.00	10.52	0.000	0.000
	2	0.697	0.874	84.80	27.38	1.00	27.38	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
23	1	0.446	0.605	86.60	0.00	1.00	0.00	0.003	0.25
	2	0.625	0.862	86.60	0.00	1.00	0.00	0.004	
	3	X	X	X	X	X	X	X	
	4								
	5								
24	1	0.434	0.596	85.80	25.89	1.00	25.89	0.000	0.000
	2	0.607	0.852	85.80	9.50	1.00	9.50	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								

PERFORMANCE DATA

Date	Reactor	Total Product. (MG)	Max. Flow Rate (MGD)	Min UV Trans. (%)	Minimum Meas'd UV Dose (mJ/cm²)	Sensor CF	Adjusted Minimum UV Dose (mJ/cm²)	Total Off-Spec Product. (MG)	Consec. Off-Spec Hours (hr)
	OPERATIONAL DATA								
25	1	0.428	0.613	81.20	35.54	1.00	35.54	0.000	0.000
	2	0.600	0.840	81.20	26.87	1.00	26.87	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
26	1	0.427	0.702	86.60	0.00	1.00	0.00	0.003	1.00
	2	0.596	0.955	86.60	0.00	1.00	0.00	0.006	
	3	X	X	X	X	X	X	X	
	4								
	5								
27	1	0.467	0.632	79.50	0.00	1.00	0.00	0.005	0.50
	2	0.655	0.880	79.50	0.00	1.00	0.00	0.008	
	3	X	X	X	X	X	X	X	
	4								
	5								
28	1	0.402	0.702	88.80	38.01	1.00	38.01	0.000	0.000
	2	0.570	1.011	88.80	14.28	1.00	14.28	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
29	1	0.431	0.616	91.60	0.00	1.00	0.00	0.001	0.50
	2	0.608	0.883	91.60	0.00	1.00	0.00	0.020	
	3	X	X	X	X	X	X	X	
	4								
	5								
30	1	0.432	0.624	93.40	44.49	1.00	44.49	0.000	0.25
	2	0.606	0.871	93.40	0.00	1.00	0.00	0.002	
	3	X	X	X	X	X	X	X	
	4								
	5								
31	1	0.024	0.637	87.60	37.75	1.00	37.75	0.000	0.000
	2	0.642	0.860	87.60	19.64	1.00	19.64	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B **Date:** September 10, 2018

UV MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

UV Calculated Dose Approach - Daily Minimum Inactivation Summary Page

PUBLIC WATER SYSTEM NAME: Webb County Water Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** August **Year:** 2018

DAILY MINIMUM INACTIVATION

Reactor Range	SUMMARY DATA					Reactor Range	SUMMARY DATA				
	Date	Min Dose (mJ/cm²)	Inactivation Credit Achieved: Giardia Log	Virus Log	Crypto Log		Date	Min Dose (mJ/cm²)	Min Inactivation: Giardia Log	Virus Log	Crypto Log
1 to 3	1	0.00*	1.00	0.00	1.00	1 to 3	9	0.00*	1.00	0.00	1.00
	2	23.60	4.00	0.03	1.00		10	3.02	1.51	0.00	1.00
	3	2.76	1.39	0.00	1.00		11	0.00*	1.00	0.00	1.00
	4	0.00*	1.00	0.00	1.00		12	0.00*	1.00	0.00	1.00
	5	2.01*	1.00	0.00	1.00		13	15.70	3.55	0.00	1.00
	6	25.75	4.00	0.10	1.00		14	4.47	1.89	0.00	1.00
	7	16.13	3.58	0.00	1.00		15	24.19	4.00	0.05	1.00
	8	26.24	4.00	0.12	1.00		16	23.92	4.00	0.04	1.00

DAILY MINIMUM INACTIVATION

Reactor Range	SUMMARY DATA					Reactor Range	SUMMARY DATA				
	Date	Min Dose (mJ/cm²)	Min Inactivation: Giardia Log	Virus Log	Crypto Log		Date	Min Dose (mJ/cm²)	Min Inactivation: Giardia Log	Virus Log	Crypto Log
1 to 3	17	17.29	3.66	0.00	1.00	1 to 3	25	26.87	4.00	0.14	1.00
	18	0.00*	1.00	0.00	1.00		26	0.00*	1.00	0.00	1.00
	19	4.26	1.85	0.00	1.00		27	0.00*	1.00	0.00	1.00
	20	24.90	4.00	0.07	1.00		28	14.28	3.41	0.00	1.00
	21	0.00*	1.00	0.00	1.00		29	0.00*	1.00	0.00	1.00
	22	10.52	2.93	0.00	1.00		30	0.00*	1.00	0.00	1.00
	23	0.00*	1.00	0.00	1.00		31	19.64	3.83	0.00	1.00
	24	9.50	2.77	0.00	1.00						

Total volume of water treated by all CDA reactors:	31.60	MG
Total volume of off-spec water produced by all CDA reactors:	0.12	MG
Percentage of off-spec water produced by all CDA reactors:	0.37	%
Crypto Log-Inactivation Credit for treatment by CDA reactors:	1.00	log

Treated water pumpage and total production by all UV reactors differ by more than 15% on these days: (August, 2018) 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 22, 23, 26, 28, 31

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B **Date:** September 10, 2018

UV MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

UV Sensor Calibration for Calculated Dose Reactors

PUBLIC WATER SYSTEM NAME: Webb County Water Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831

Month: August **Year:** 2018

CALIBRATION DATA

UV Sensor Calibration Report for Calculated Dose Reactors

CDA Reactor Number	Calibration Date and Data	Duty Sensor	Duty Sensor Serial #	Ref Sensor Serial #	Duty Sensor Reading (mJ/cm²)	Ref Sensor Reading (mJ/cm²)	Cal Ratio	Duty Sensor Replaced?	Calculated Sensor CF
UVCD No. 1	Previous Month's Sensor CF	1	92	38	66.40	67.60	0.98	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	8/1/18	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 2	Previous Month's Sensor CF	1	44	38	62.70	69.20	0.91	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	8/1/18	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 3	Previous Month's Sensor CF	1	X	X	ND	ND	nd		off-line
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	8/1/18	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 4	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 5	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							

CALIBRATION DATA

UV Sensor Calibration Report for Calculated Dose Reactors

CDA Reactor Number	Calibration Date	Duty Sensor	Duty Sensor Serial #	Ref Sensor Serial #	Duty Sensor Reading (mJ/cm²)	Ref Sensor Reading (mJ/cm²)	Cal Ratio	Duty Sensor Replaced?	Calculated Sensor CF
UVCD No. 6	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 7	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 8	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 9	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 10	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B

Date: September 10, 2018

UV MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

UV Sensor Calibration for Calculated Dose Reactors (cont.)

PUBLIC WATER SYSTEM NAME: Webb County Water Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** August **Year:** 2018

CALIBRATION DATA

UV Sensor Calibration Report for Calculated Dose Reactors

CDA Reactor Number	Calibration Date	Duty Sensor	Duty Sensor Serial #	Ref Sensor Serial #	Duty Sensor Reading (mJ/cm²)	Ref Sensor Reading (mJ/cm²)	Cal Ratio	Duty Sensor Replaced?	Calculated Sensor CF
UVCD No. 11	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 12	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 13	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 14	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 15	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							

CALIBRATION DATA

UV Sensor Calibration Report for Calculated Dose Reactors

CDA Reactor Number	Calibration Date	Duty Sensor	Duty Sensor Serial #	Ref Sensor Serial #	Duty Sensor Reading (mJ/cm²)	Ref Sensor Reading (mJ/cm²)	Cal Ratio	Duty Sensor Replaced?	Calculated Sensor CF
UVCD No. 16	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 17	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 18	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 19	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 20	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							

SUBMITTED BY: Tomas Sanchez Jr

Certificate No. and Grade: WS0012772, B **Date:** September 10, 2018

UV MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES
OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

UVT Analyzer Calibration

PUBLIC WATER SYSTEM NAME: Webb County Water Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022

Plant ID 20831

Month: August

Year: 2018

#VALUE!

CALIBRATION DATA

Benchtop UVT Analyzer Serial Number: P0108955

UVT Analyzer Number	Week	Calibration Date	On-line UVT Analyzer Serial #	On-line Reading (% UVT)	Grab Sample Reading (% UVT)	Difference (% UVT)	Recalibration Performed? (if Diff > 2%)	Other Action Taken
UVT No. 1	1	8/1/18	78713	96.40	93.80	2.60	YES	NA
	2	8/6/18	78713	93.30	90.40	2.90	YES	NA
	3	8/13/18	78713	88.90	90.60	1.70	NA	NA
	4	8/20/18	78713	90.00	91.20	1.20	NA	NA
	5	8/27/18	78713	89.90	93.00	3.10	YES	NA
UVT No. 2	1							
	2							
	3							
	4							
	5							
UVT No. 3	1							
	2							
	3							
	4							
	5							
UVT No. 4	1							
	2							
	3							
	4							
	5							
UVT No. 5	1							
	2							
	3							
	4							
	5							
UVT No. 6	1							
	2							
	3							
	4							
	5							
UVT No. 7	1							
	2							
	3							
	4							
	5							
UVT No. 8	1							
	2							
	3							
	4							
	5							
UVT No. 9	1							
	2							
	3							
	4							
	5							
UVT No. 10	1							
	2							
	3							
	4							
	5							

CALIBRATION DATA

Benchtop UVT Analyzer Serial Number: P0108955

UVT Analyzer Number	Week	Calibration Date	On-line UVT Analyzer Serial #	On-line Reading (% UVT)	Grab Sample Reading (% UVT)	Difference (% UVT)	Recalibration Performed? (if Diff > 2%)	Other Action Taken
UVT No. 11	1							
	2							
	3							
	4							
	5							
UVT No. 12	1							
	2							
	3							
	4							
	5							
UVT No. 13	1							
	2							
	3							
	4							
	5							
UVT No. 14	1							
	2							
	3							
	4							
	5							
UVT No. 15	1							
	2							
	3							
	4							
	5							
UVT No. 16	1							
	2							
	3							
	4							
	5							
UVT No. 17	1							
	2							
	3							
	4							
	5							
UVT No. 18	1							
	2							
	3							
	4							
	5							
UVT No. 19	1							
	2							
	3							
	4							
	5							
UVT No. 20	1							
	2							
	3							
	4							
	5							

SUBMITTED BY: Tomas Sanchez Jr

Certificate No. and Grade: WS0012772, B

Date: September 10, 2018

SURFACE WATER MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES

OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

LT2ESWTR Summary Page

PUBLIC WATER SYSTEM NAME: Webb County Water Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 Plant ID No.: 20831 Month: August Year: 2018

Note: Indicate the treatment processes in each train. (see comment)	TREATMENT TECHNOLOGIES																
	PRETREATMENT CREDITS				FILTRATION TECHNOLOGY CREDITS						ENHANCED PERFORMANCE CREDITS		DISINFECTION TECHNOLOGY CREDITS			OTHER TREATMENT CREDITS	
	Riverbank Filtration	Presed. with Coagul.	Two-stage Lime Softening	Conventional Sedimentation or Clarification	Conventional Granular Media Filters	Bag or Cartridge Filtration	Two-Stage Filtration	Membrane Filtration (PBT)	Membrane Filtration (QBT)	Membrane Filtration (MBT)	Enhanced CFE Perform.	Optimized IFE Perform.	Crypto Chemical Disinfect.	UV Disinfect. (ISA)	UV Disinfect. (CDA)	Watershed Protection	Perform. Demon.
Overall	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE
Train 1				TRUE	TRUE						TRUE	FALSE			TRUE		
Train 2																	
Train 3																	
Train 4																	
Train 5																	
1					2.50										1.00		
2					2.50										1.00		
3					2.50										1.00		
4					2.50										1.00		
5					2.50										1.00		
6					2.50										1.00		
7					2.50										1.00		
8					2.50										1.00		
9					2.50										1.00		
10					2.50										1.00		
11					2.50										1.00		
12					2.50										1.00		
13					2.50										1.00		
14					2.50										1.00		
15					2.50										1.00		
16				0.50	2.50						0.50				1.00		
17					2.50										1.00		
18					2.50										1.00		
19					2.50										1.00		
20					2.50										1.00		
21					2.50										1.00		
22					2.50										1.00		
23					2.50										1.00		
24					2.50										1.00		
25					2.50										1.00		
26					2.50										1.00		
27					2.50										1.00		
28					2.50										1.00		
29					2.50										1.00		
30					2.50										1.00		
31					2.50										1.00		
MIN				0.5	2.5						0.5				1.00		

SURFACE WATER MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES

OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

LT2ESWTR Summary Page (cont)

PUBLIC WATER SYSTEM NAME: Webb County Water Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** August **Year:** 2018

	GIARDIA AND CRYPTOSPORIDIUM TREATMENT CREDITS												GIARDIA INACTIVATION CREDITS						VIRAL INACTIVATION CREDITS					
	Total Daily Credit By Train						Total Daily Bin 3 & 4 Credit by Train						Total Daily Inactivation Credit By Train						Total Daily Inactivation Credit by Train					
Overall																								
Train 1	TRUE						TRUE						TRUE						TRUE					
Train 2		FALSE						FALSE						FALSE						FALSE				
Train 3			FALSE						FALSE						FALSE						FALSE			
Train 4				FALSE						FALSE						FALSE						FALSE		
Train 5					FALSE	Minimum					FALSE	Minimum					FALSE	Minimum					FALSE	Minimum
1	4.50					4.50	1.00					1.00	6.03					6.03	108.74					108.74
2	4.50					4.50	1.00					1.00	9.03					9.03	160.80					160.80
3	4.50					4.50	1.00					1.00	9.69					9.69	186.82					186.82
4	4.50					4.50	1.00					1.00	10.23					10.23	241.50					241.50
5	4.50					4.50	1.00					1.00	9.62					9.62	214.65					214.65
6	4.50					4.50	1.00					1.00	9.60					9.60	128.40					128.40
7	4.50					4.50	1.00					1.00	10.44					10.44	168.76					168.76
8	4.50					4.50	1.00					1.00	11.24					11.24	181.34					181.34
9	4.50					4.50	1.00					1.00	9.52					9.52	221.76					221.76
10	4.50					4.50	1.00					1.00	8.17					8.17	183.03					183.03
11	4.50					4.50	1.00					1.00	8.03					8.03	181.45					181.45
12	4.50					4.50	1.00					1.00	8.86					8.86	229.13					229.13
13	4.50					4.50	1.00					1.00	12.08					12.08	222.87					222.87
14	4.50					4.50	1.00					1.00	8.41					8.41	154.77					154.77
15	4.50					4.50	1.00					1.00	11.91					11.91	179.99					179.99
16	4.50					4.50	1.00					1.00	12.16					12.16	183.44					183.44
17	4.50					4.50	1.00					1.00	12.95					12.95	234.84					234.84
18	4.50					4.50	1.00					1.00	7.53					7.53	151.05					151.05
19	4.50					4.50	1.00					1.00	9.31					9.31	177.95					177.95
20	4.50					4.50	1.00					1.00	10.00					10.00	142.96					142.96
21	4.50					4.50	1.00					1.00	6.27					6.27	124.01					124.01
22	4.50					4.50	1.00					1.00	8.05					8.05	91.45					91.45
23	4.50					4.50	1.00					1.00	7.24					7.24	164.88					164.88
24	4.50					4.50	1.00					1.00	11.25					11.25	160.73					160.73
25	4.50					4.50	1.00					1.00	12.42					12.42	175.65					175.65
26	4.50					4.50	1.00					1.00	8.68					8.68	172.86					172.86
27	4.50					4.50	1.00					1.00	8.55					8.55	180.42					180.42
28	4.50					4.50	1.00					1.00	11.07					11.07	171.82					171.82
29	4.50					4.50	1.00					1.00	8.07					8.07	175.98					175.98
30	4.50					4.50	1.00					1.00	7.89					7.89	159.17					159.17
31	4.50					4.50	1.00					1.00	12.74					12.74	231.39					231.39
MIN	4.50					4.50	1.00					1.00	6.03					6.03	91.45					91.45
AVG	4.50					4.50	1.00					1.00	9.58					9.58	176.21					176.21
MAX	4.50					4.50	1.00					1.00	12.95					12.95	241.50					241.50