2022 San Francisco Public Utilities Commission (SFPUC) - Water Quality Monitoring Data for Treated Water

No.	PARAMETERS [1]	Unit	Alameda East		SVWTP Effluent		HTWTP Effluent		CS2 Baden [2]		GSR-FSCP [3]		GSR-MYCP [3]		Sunset Reservoir Outlets [4]		Distribution System [5]		Transmission System [6]	
			Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average
	Volatile Organic Chemicals (VOCs)																			
1	1,1,1-Trichloroethane	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
2	1,1,2,2-Tetrachloroethane	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
3	1,1,2-Trichloro-1,2,2-Trifluoroethane	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
4	1,1,2-Trichloroethane	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
5	1,1-Dichloroethane	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
6	1,1-Dichloroethylene	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
7	1,2,4-Trichlorobenzene	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
8	1,2-Dichlorobenzene	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
9	1,2-Dichloroethane	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
10	1,2-Dichloropropane	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
11	1,3-Dichloropropene	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
12	1,4-Dichlorobenzene	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
13	Benzene	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
14	Carbon Tetrachloride	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
15	Monochlorobenzene	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
16	cis-1,2-Dichloroethylene	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
17	Ethylbenzene	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
18	Methyl Tert-Butyl Ether	ppb	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND				
19	Methylene Chloride	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
20	Styrene	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
21	Tetrachloroethylene	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
22	Toluene	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
23	trans-1,2-Dichloroethylene	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
24	Trichloroethylene	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
25	Trichlorofluoromethane	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
26	Vinyl Chloride	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
27	Xylenes	ppb	ND	ND	ND	ND	ND	ND							ND	ND				
	Inorganic Chemicals																			
28	Antimony	ppb	ND	ND	ND	ND	ND	ND												
29	Arsenic	ppb	ND	ND	ND	ND	ND	ND												
30	Barium	ppb	ND	ND	ND	ND	ND	ND												
31	Beryllium	ppb	ND	ND	ND	ND	ND	ND												
32	Cadmium	ppb	ND	ND	ND	ND	ND	ND												
33	Chromium, Hexavalent	ppb	0.22	0.22			0.27	0.27							0.02 - 0.32	0.12				
34	Chromium, Total	ppb	ND	ND	ND	ND	ND	ND												
35	Fluoride	ppm	0.7	0.7	0.4 - 0.8	0.6	0.5 - 0.7	0.7							0.6 - 0.8	0.7	0.6 - 0.8	0.7	0.4 - 0.9	0.7
36	Lead	ppb	ND	ND	ND	ND	ND	ND												
37	Mercury	ppb	ND	ND	ND	ND	ND	ND												
38	Nickel	ppb	ND	ND	ND	ND	ND	ND												
39	Nitrate as N	ppm	ND	ND	ND	ND	ND	ND							ND	ND	ND	ND	ND	ND
40	Nitrite as N	ppm	ND	ND	ND	ND	ND	ND	ND	ND							ND - 0.4	ND	ND	ND
41	Perchlorate	ppb	ND	ND	ND	ND	ND	ND												
42	Selenium	ppb	ND	ND	ND	ND	ND	ND												
43	Strontium	ppb	16	16	159	159	61	61												
44	Thallium	ppb	ND	ND	ND	ND	ND	ND												
	Secondary Maximum Contaminant Levels																			
45	Aluminum	ppb	ND	ND	ND - 75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
46	Chloride	ppm	<3 - 4.5	<3	9.3 - 12	10	14 - 15	14	3.9 - 14	6.2	15	15	4	4	5.2 - 14	8.6				
47	Color	Units	5	5	<5	<5	<5	<5	5	5	<5	<5	5	5	<5	<5				
48	Copper	ppb	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
49	Methylene Blue Active Substance (Foaming Agent)	ppm	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.1	<0.1				
50	Iron	ppb	24	24	<6 - 7	<6	<6 - 39	11	25	25	<6	<6	28	28	11 - 48	25				
51	Manganese	ppb	2.4	2.4	<2 - 4.1	<2	<2 - 7.5	<2	2.5	2.5	<2	<2	2.7	2.7	<2 - 6	<2				
52	Odor-Threshold	Units	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1				
53	Silver	ppb	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1				
54	Specific Conductance	µS/cm	34 - 53	38	200 - 366	248	162 - 189	172	49 - 195	80	171	171	49	49	66 - 329	105				
55	Sulfate	ppm	1.1	1.1	29	29	15	15	1.2	1.2	15	15	1.2	1.2	5.7	5.7				
56	Thiobencarb	ppb									ND	ND	ND	ND	ND	ND				
57	Total Dissolved Solids	ppm	<20	<20	104	104	78	78	22	22	78	78	24	24	27 - 93	49				
58	Turbidity	NTU	0.1 - 2	0.2	<0.05 - 0.4	<0.05	<0.05 - 0.3	0.1	0.1 - 0.9	0.2	0.1	0.1	0.2	0.2	0.1 - 0.5	0.2				
59	Zinc	ppb	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2				
	Water Quality Parameters																			

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			Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average
60	Alkalinity as $CaCO_3$, Total	ppm	7.1 - 14	9.6	46 - 138	72	38 - 47	42	12 - 53	20					15 - 46	25	11 - 68	27	7.1 - 166	39
61	Bromide	ppb	<50	<50	<50	<50	<50	<50							<50	<50				
62	Calcium as Ca	ppm	3.2	3.2	15	15	9.9	9.9	3.3	3.3										
63	Hardness as $CaCO_3$, Total	ppm	7.5 - 11	8.9	46 - 131	73	35 - 40	38	8.2 - 50	17					14 - 44	22				
64	Magnesium	ppm	0.2	0.2	4.2	4.2	4.2	4.2	0.2	0.2										
65	pH	-	7.2 - 9.4	8.2	8.0 - 9.1	8.7	8.6 - 9.3	9.0	8.7 - 9.5	9.3					8.7 - 9.5	9.1	7.5 - 9.7	9.2	6.9 - 9.6	9
66	Phosphate, Ortho	ppm	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3												
67	Potassium	ppm	0.3	0.3	1.0	1.0	0.8	0.8												
68	Silica	ppm	5.9	5.9	5.7	5.7	5	5												
69	Sodium	ppm	3.5	3.5	21	21	19	19	5.5	5.5										
70	Temperature	°F	48 - 68	53	40 - 66	56	40 - 71	61	40 - 59	54	63	63	58 - 65	62	51 - 60	56				
71	Total Organic Carbon	ppm	1.3 - 2.0	1.6	1.3 - 3.9	2.2	1.8 - 2.7	2.1												
72	UV254	Abs/cm			0.02 - 0.05	0.03	0.03 - 0.04	0.04												
	Disinfectant Residuals, Disinfection Byproducts																			
73	Bromate	ppb			ND	ND	ND - 1.9	1.1												
74	Chlorine Residual, Total	ppm			2.5 - 3.6	3.4	2.3 - 3.6	3.4	2.8 - 3.5	3.2	3.3	3.3			0.7 - 3.3	2.7	<0.1 - 3.5	2.7	2.1 - 3.6	3.3
75	Chlorite	ppb					ND	ND												
76	Five Haloacetic Acids	ppb	21 - 43	26	ND - 24	11	ND - 25	ND	ND - 40	24							6.7 - 47	22	ND - 43	18
77	Total Trihalomethanes	ppb	31 - 56	42	13 - 42	27	9.5 - 18	13	9.2 - 60	41							11 - 54	32	9 - 60	33
	Microorganisms																			
78	*Cryptosporidium,* Total [7]	#/L	<0.01 - 0.02	<0.01	<0.01	<0.01	<0.01	<0.01									<0.01	<0.01		
79	*Escherichia coli*	P/A	A	A	A	A	A	A	A	A					A	A	A	A	A	A
80	*Giardia,* Total [7]	#/L	0 - 0.04	0.012	0	0	0	0									0 - 0.02	0.002		
81	Total Coliform	P/A	A	A	A	A	1P - 289A	A	A	A					A	A	A	A	2P - 1997A	A
	Radionuclides																			
82	Uranium	pCi/L			ND	ND														
	Algae, Algal Toxins, Taste and Odor Related Contaminants																			
83	2,4,6-Trichloroanisole	ppt			<3 - 3.4	<3	<3	<3												
84	Algal Toxins - Anatoxin-α	ppb					<0.03	<0.03												
85	Algal Toxins - Cylindrospermopsin	ppb					<0.09	<0.09												
86	Algal Toxins - Saxitoxin	ppb					<0.022	<0.022												
87	Algal Toxins - Total Microcystins	ppb			<0.15	<0.15	<0.15	<0.15												
88	Geosmin	ppt			<3	<3	<3	<3												
89	Methylisoborneol (MIB)	ppt			<3	<3	<3	<3												
	Other Constituents																			
90	Ammonia as N, Free	ppm			0 - 0.09	0.01	0 - 0.02	0	0 - 0.1	0.01							0 - 0.35	0.06	0 - 0.21	0.005
91	Ammonia as N, Total	ppm	<0.03	<0.03	<0.03 - 0.13	0.07	<0.03 - 0.08	0.04	0.05 - 0.06	0.06							0.06 - 0.15	0.08	<0.03 - 0.13	0.05
92	Boron	ppb	28	28	105	105	35	35												
93	Chlorate	ppb	45	45	67 - 650	279	91 - 160	116	73	73										
94	Dissolved Organic Carbon	ppm	1.3 - 1.9	1.6																
95	N-nitroso-diethylamine (NDEA)	ppt	<2	<2			<2	<2	<2	<2							<2	<2	<2	<2
96	N-nitroso-dimethylamine (NDMA)	ppt	<2	<2			<2	<2	<2	<2							<2	<2	<2	<2
97	N-nitroso-di-n-butylamine (NDBA)	ppt	<2	<2			<2	<2	<2	<2							<2 - 2.6	<2	<2	<2
98	N-nitroso-di-n-propylamine (NDPA)	ppt	<2	<2			<2	<2	<2	<2							<2	<2	<2	<2
99	N-nitroso-methylethylamine (NMEA)	ppt	<2	<2			<2	<2	<2	<2							<2	<2	<2	<2
100	N-nitroso-pyrrolidine (NPYR)	ppt	<2	<2			<2	<2	<2	<2							<2	<2	<2	<2

Notes:

1) Monitoring results showing no detections in the above table are reported as "Non-detected (ND)" if State's regulatory Detection Limits for Purposes of Reporting exist. Otherwise, the non-detects are shown as less than ("<") the corresponding laboratory reporting limits.
2) CS2 at Baden is a representative point-of-entry to the San Francisco Water System, which supplies drinking water to the City of San Francisco.
3) Compliance monitoring locations for treated water associated with GSR F Street Well and GSR Millbrae Yard Well are at FSCP and MYCP, respectively.
4) Compliance monitoring locations for treated water associated with San Francisco local wells are at Sunset Reservoir Outlets (SSO).
5) Distribution system refers to the complex network of water pipelines within the City of San Francisco.
6) Transmission system refers to the SFPUC's extensive network of water delivery pipelines located in the Bay Area but outside of the City of San Francisco. It also includes the GSR well system's compliance points.
7) Monitoring results of *Cryptosporidium* -total and *Giardia* -total reported for Alameda East were from the upstream location at Tesla Portal.

Contaminant in pink highlight has no existing drinking water standard
Contaminant in blue highlight includes both compliance and operational monitoring results
Contaminant in yellow highlight does not include results at customer taps
Un-highlighted contaminant has an existing drinking water standard

Keys:

" < "	= Less than the reporting limit	ND	= Non-Detected
pCi/L	= picoCuries per Liter	NTU	= Nephelometric Turbidity Unit
µS/cm	= MicroSiemens/Centimeter	P/A	= Presence/Absence
Abs/cm	= Absorbance per centimeter	ppb	= part per billion
GSR	= Regional Groundwater Storage and Recovery Project, which is designed to supply groundwater to the system in the northern San Mateo County during dry years.	ppm	= part per million
		ppt	= part per trillion
°F	= Fahrenheit	CS2	= Crystal Springs Pipeline #2
FSCP	= Treated Water Compliance Point for F Street Well Station	HTWTP	= Harry Tracy Water Treatment Plant
MYCP	= Treated Water Compliance Point for Millbrae Yard Well	SVWTP	= Sunol Valley Water Treatment Plant