

**Water Quality Chemistry Services  
 2021 ADDITIONAL PHYSICAL, MINERAL, AND METAL CHARACTERISTICS**

PARAMETER	Units	CSD MDL	CITY OF SAN DIEGO TREATMENT PLANTS								
			ALVARADO			MIRAMAR			OTAY		
			MIN	AVG	MAX	MIN	AVG	MAX	MIN	AVG	MAX
Aggressive Index	---	---	12.1	<b>12.3</b>	12.4	12.2	<b>12.5</b>	12.6	11.9	<b>12.4</b>	12.6
Ammonia (as Nitrogen)	ppm	0.03	0.49	<b>0.57</b>	0.69	0.09	<b>0.50</b>	0.84	0.45	<b>0.55</b>	0.72
Bicarbonate	ppm	---	143	<b>156</b>	164	140	<b>154</b>	168	145	<b>159</b>	185
Bromide	ppm	0.1	ND	<b>ND</b>	0.1	ND	<b>ND</b>	0.1	ND	<b>0.10</b>	0.3
Calcium	ppm	5	52	<b>60</b>	66	53	<b>63</b>	69	50	<b>58</b>	66
Calcium Hardness	ppm	10	130	<b>150</b>	166	132	<b>157</b>	172	125	<b>145</b>	165
Carbonate	ppm	---	ND	<b>ND</b>	ND	ND	<b>0</b>	3.36	ND	<b>0.23</b>	2.80
Dissolved Organic Carbon (DOC)*	ppm	0.3	2.5	<b>2.8</b>	3.0	2.3	<b>2.5</b>	3.2	2.1	<b>3.0</b>	6.0
Magnesium	ppm	3	20.0	<b>24.1</b>	29.0	20.4	<b>23.3</b>	26.4	21.7	<b>25.2</b>	30.0
Non-Carb-Hardness	ppm	---	103	<b>127</b>	154	105	<b>129</b>	149	80.0	<b>123</b>	145
Total Phosphorus	ppb	12.5	14.0	<b>22.0</b>	34.0	ND	<b>20.0</b>	33.0	ND	<b>15.0</b>	29.0
Potassium	ppm	0.5	4	<b>5</b>	5	4.22	<b>5</b>	5	4	<b>5</b>	5
Ryzner Aggressive Index	---	---	6.8	<b>7.1</b>	7.5	6.6	<b>6.9</b>	7.2	6.7	<b>7.1</b>	7.5
Silica	ppm	0.625	7.01	<b>8.39</b>	10.8	6.07	<b>7.46</b>	8.63	3.67	<b>6.02</b>	8.31
SUVA*	L/mg-m	---	1.40	<b>1.50</b>	1.7	1.20	<b>1.20</b>	1.30	1.20	<b>1.40</b>	1.60
Total Nitrogen	ppm	0.156	0.7	<b>0.8</b>	1.1	0.6	<b>0.7</b>	1.2	0.7	<b>0.8</b>	1.3

\* Results from untreated water