

Minneapolis Water Works

Monthly Plant Effluent Water Analysis for: December 2022

Physical and Chemical Water Quality

	<u>Plant Effluent Average Value</u>
Temperature, River Water Average (°C)	2.5
Total Organic Carbon (ppm* as C)	3.83
Total Dissolved Solids (ppm)	160
Turbidity (NTU)	0.05
Alkalinity-Total (ppm as CaCO ₃)	63
Ammonia Nitrogen (ppm as N)	0.86
Total Chloramine Residual (ppm as NH ₂ Cl)	3.8
Fluoride-F (ppm as F)	0.83
pH	9.05
Nitrate - NO ₃ (ppm as N)	1.13
Nitrite - NO ₂ (ppm as N)	<0.015
Phosphate-PO ₄ (ppm as PO ₄)	0.83
Sulfate - SO ₄ (ppm as SO ₄)	28.1
Total Hardness (grains per gallon) EDTA method	5.55
Total Hardness (ppm as CaCO ₃) EDTA method	95

Chemical Water Quality - Inorganic Metals

<u>Chemical Element</u>	<u>Plant Effluent Average Value</u>
Aluminum-Al (ppm as Al)	0.02
Arsenic-As (ppm as As)	Not Detected
Cadmium-Cd (ppm as Cd)	Not Detected
Calcium-Ca (ppm as Ca)	32.7
Chloride-Cl (ppm as Cl)	31.9
Chromium (ppm as Cr)	<0.01
Copper-Cu (ppm as Cu)	<0.01
Iron-Fe (ppm as Fe)	Not Detected
Lead-Pb (ppm as Pb)	Not Detected
Magnesium-Mg (ppm as Mg)	3.7
Manganese-Mn (ppm as Mn)	<0.01
Silica-Si (ppm as SiO ₂)	11.4
Sodium-Na (ppm as Na)	19.5
Zinc-Zn (ppm as Zn)	<0.01

*ppm = parts per million