

Minneapolis Water Works

Monthly Plant Effluent Water Analysis for: July 2016

Physical and Chemical Water Quality

	<u>Plant Effluent Average Value</u>
Temperature, River Water Average (°C)	26
Total Organic Carbon (ppm* as C)	6.02
Total Dissolved Solids (ppm)	194
Turbidity (NTU)	0.09
Alkalinity-Total (ppm as CaCO ₃)	38
Ammonia Nitrogen (ppm as N)	0.92
Chlorine Residual (ppm Cl as Cl ₂)	3.8
Fluoride-F (ppm as F)	0.68
pH	9.03
Nitrate - NO ₃ (ppm as N)	1.18
Nitrite - NO ₂ (ppm as N)	< 0.015
Phosphate-PO ₄ (ppm as PO ₄)	0.87
Sulfate - SO ₄ (ppm as SO ₄)	27
Total Hardness (grains per gallon) EDTA method	4.9
Total Hardness (ppm as CaCO ₃) EDTA method	84

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)	33.0
Chloride-Cl (ppm as Cl)	22.5
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)	1.00
Manganese-Mn (ppm as Mn)	<0.01
Silica-Si (ppm as Si)	9.18
Sodium-Na (ppm as Na)	9.61
Zinc-Zn (ppm as Zn)	Not Detected

*ppm = parts per million