

# Minneapolis Water Works

## Monthly Plant Effluent Water Analysis for:

### December 2018

#### Physical and Chemical Water Quality

	<u>Plant Effluent Average Value</u>
Temperature, River Water Average (°C)	36.5
Total Organic Carbon (ppm* as C)	4.06
Total Dissolved Solids (ppm)	155
Turbidity (NTU)	0.05
Alkalinity-Total (ppm as CaCO <sub>3</sub> )	58
Ammonia Nitrogen (ppm as N)	0.84
Chlorine Residual (ppm Cl as Cl <sub>2</sub> )	4.0
Fluoride-F (ppm as F)	0.75
pH	8.91
Nitrate - NO <sub>3</sub> (ppm as N)	0.56
Nitrite - NO <sub>2</sub> (ppm as N)	<0.015
Phosphate-PO <sub>4</sub> (ppm as PO <sub>4</sub> )	0.836
Sulfate - SO <sub>4</sub> (ppm as SO <sub>4</sub> )	24.5
Total Hardness (grains per gallon) EDTA method	5.32
Total Hardness (ppm as CaCO <sub>3</sub> ) EDTA method	91

#### Chemical Water Quality - Inorganic Metals

<u>Chemical Element</u>	<u>Plant Effluent Average Value</u>
Aluminum-Al (ppm as Al)	0.01
Arsenic-As (ppm as As)	Not Detected
Cadmium-Cd (ppm as Cd)	Not Detected
Calcium-Ca (ppm as Ca)	33.8
Chloride-Cl (ppm as Cl)	28.3
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)	3.09
Manganese-Mn (ppm as Mn)	<0.01
Silica-Si (ppm as Si)	8.71
Sodium-Na (ppm as Na)	14.7
Zinc-Zn (ppm as Zn)	<0.01

\*ppm = parts per million