# Minneapolis Water Works
# Monthly Plant Effluent Water Analysis for:
## July 2022

## Physical and Chemical Water Quality

| | Plant Effluent Average Value |
|---|---|
| Temperature, River Water Average (°C) | 27 |
| Total Organic Carbon (ppm* as C) | 5.17 |
| Total Dissolved Solids (ppm) | 149 |
| Turbidity (NTU) | 0.05 |
| Alkalinity-Total (ppm as $CaCO_3$) | 58 |
| Ammonia Nitrogen (ppm as N) | 0.91 |
| Total Chloramine Residual (ppm as NH2Cl) | 3.8 |
| Fluoride-F (ppm as F) | 0.75 |
| pH | 9.04 |
| Nitrate - $NO_3$ (ppm as N) | 0.45 |
| Nitrite - $NO_2$ (ppm as N) | <0.015 |
| Phosphate-$PO_4$ (ppm as $PO_4$) | 0.85 |
| Sulfate - $SO_4$ (ppm as $SO_4$) | 23.1 |
| Total Hardness (grains per gallon) EDTA method | 5.03 |
| Total Hardness (ppm as $CaCO_3$) EDTA method | 86 |

## Chemical Water Quality - Inorganic Metals

| Chemical Element | Plant Effluent Average Value |
|---|---|
| Aluminum-Al (ppm as Al) | 0.13 |
| Arsenic-As (ppm as As) | Not Detected |
| Cadmium-Cd (ppm as Cd) | Not Detected |
| Calcium-Ca (ppm as Ca) | 32.9 |
| Chloride-Cl (ppm as Cl) | 19.5 |
| 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) | 1.17 |
| Manganese-Mn (ppm as Mn) | <0.01 |
| Sillca-Si (ppm as $SiO_2$) | 11.1 |
| Sodium-Na (ppm as Na) | 13.2 |
| Zinc-Zn (ppm as Zn) | <0.01 |

*ppm = parts per million