

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

SAMPLE COLLECTION DATE: February 1, 2017

LAB ID Nos.

1st QUARTER

February 6, 2017 (Site 3 & 6)

| PARAMETER | IEPA MCL | DETERMINED AS | STORET NUMBER | 17C0843 | 17C0844 | 17C0845 | 17C0951 | 17C0847 | 17C0848 | 17C0849 | 17C0952 | 17C0851 |
|-------------------------------|-------------|--------------------------|------------------|--------------------------------|---------|---------|-----------------|----------------------------------|---------|---------|-----------------|---------|
| | | | | SOUTH WATER PURIFICATION PLANT | | | | JARDINE WATER PURIFICATION PLANT | | | | |
| | | | | 1 | 2A | 2B | 3 | 4 | 5A | 5B | 6 | 7 |
| | | | | RAW LAKE | OUTLETS | | ***DISTRIBUTION | RAW LAKE | OUTLETS | | ***DISTRIBUTION | |
| | 73rd Street | 79th Street | SOUTH | | North | Central | Central | North | | | | |
| TEMPERATURE | | °C | 00010 | 4 | 3 | 4 | 9 | 2 | 3 | 3 | 8 | 8 |
| TURBIDITY | TT | N.T.U. | 82079 | 1.0 | 0.05 | 0.05 | 0.10 | 0.50 | 0.05 | 0.05 | 0.10 | 0.10 |
| THRESHOLD ODOR, STRAIGHT | *3 | T.O.N | 00086 | ND | 1 Cc | 1 Cc | 2 Cc | ND | 1 Cc | 1 Cc | 2 Cc | 1 Cc |
| THRESHOLD ODOR, DECHLORINATED | *3 | T.O.N. | | 1 M | 1 M | 1 M | 1 M | 1 M | 1 M | 1 M | 1 M | 1 M |
| COLOR | *15 | Pt.-Co. CU | 00080 | 8 | 1 | <1 | 2 | 3 | <1 | <1 | 2 | 4 |
| pH | *6.5-8.5 | STD. Units | 00040 | 8.10 | 7.74 | 7.74 | 7.91 | 8.09 | 7.73 | 7.82 | 7.80 | 7.86 |
| FREE CHLORINE RESIDUAL | | CL ₂ , mg/L | 50064 | ND | 1.30 | 1.31 | 1.00 | ND | 1.22 | 1.17 | 0.91 | 1.01 |
| SATURATION INDEX, LANGELIER | | UNITS +/- | | -0.07 | -0.68 | -0.66 | -0.32 | -0.28 | -0.81 | -0.80 | -0.44 | -0.40 |
| ALKALINITY, PHENOLPHTHALEIN | | 0 | 00415 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALKALINITY, TOTAL | | CaCO ₃ , mg/L | 00410 | 108 | 101 | 101 | 101 | 107 | 101 | 101 | 102 | 101 |
| CONDUCTIVITY | | uS/cm | | 290 | 291 | 294 | 296 | 294 | 292 | 295 | 299 | 296 |
| BROMIDE | | Br, mg/L | 71870 | 0.058 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| CHLORIDE | *250 | Cl, mg/L | 00940 | 12.9 | 14.0 | 14.2 | 14.3 | 12.8 | 14.1 | 14.4 | 14.3 | 14.3 |
| FLUORIDE | 4 | F, mg/L | 00951 | 0.12 | 0.68 | 0.69 | 0.65 | 0.12 | 0.68 | 0.69 | 0.69 | 0.69 |
| SULFATE | *250 | SO ₄ , mg/L | 00945 | 23.0 | 28.3 | 25.6 | 25.7 | 22.1 | 25.9 | 25.7 | 25.6 | 25.7 |
| HARDNESS | | CaCO ₃ , mg/L | 00900 | 135 | 134 | 136 | 134 | 134 | 139 | 135 | 135 | 140 |
| CALCIUM | | Ca, mg/L | 00916 | 36.4 | 36.0 | 36.1 | 36.2 | 36.1 | 36.0 | 35.9 | 36.4 | 35.7 |
| MAGNESIUM | | Mg, mg/L | 00927 | 12.0 | 12.0 | 12.0 | 12.1 | 12.0 | 12.0 | 12.0 | 12.0 | 11.8 |
| POTASSIUM | | K, mg/L | 00937 | 1.29 | 1.27 | 1.29 | 1.30 | 1.27 | 1.27 | 1.27 | 1.30 | 1.29 |
| SODIUM | | Na, mg/L | 00006 | 7.99 | 8.19 | 8.27 | 8.33 | 7.91 | 8.35 | 8.33 | 8.50 | 8.26 |
| SOLIDS, TOTAL DISSOLVED | *500 | TDS, mg/L | 00150 | 152 | 155 | 154 | H | 138 | 152 | 151 | H | H |
| SOLIDS, TOTAL | | Tot. Sol., mg/L | 00500 | 163 | R | 163 | H | 202 | 157 | 157 | H | H |
| TOTAL ORGANIC CARBON | | TOC, mg/L | 00680 | 1.69 | 1.50 | 1.51 | 1.52 | 1.70 | 1.47 | 1.48 | 1.51 | 1.51 |
| OXYGEN DEMAND, CHEMICAL | | O, mg/L | 00335 | 12.4 | 12.2 | 8.68 | 10.5 | 9.50 | 7.81 | 10.3 | 9.85 | 9.77 |
| NITROGEN, AMMONIA | | N, mg/L | 00610 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| NITROGEN, NITRATE | 10 | N, mg/L | 00620 | 0.269 | 0.264 | 0.220 | 0.326 | 0.276 | 0.273 | 0.276 | 0.353 | H |
| NITROGEN, NITRITE | 1 | N, mg/L | 00615 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | H |
| ORTHOPHOSPHATE | | PO ₄ , mg/L | 00660 | <0.06 | 0.429 | 0.516 | 0.521 | <0.06 | 0.520 | 0.524 | 0.529 | 0.536 |
| PHOSPHATE, TOTAL | | PO ₄ , mg/L | 00650 | <0.06 | 1.06 | 1.38 | 1.38 | <0.06 | 1.32 | 1.31 | 0.877 | 1.39 |
| CYANIDE, TOTAL | 200 | CN, ug/L | 00720 | <12 | <12 | <12 | <12 | <12 | <12 | <12 | <12 | H |
| RADIOACTIVITY, GROSS ALPHA | 15 | pCi/L | 01501 | <9 | <9 | <9 | <9 | <9 | <9 | <9 | <9 | <9 |
| RADIOACTIVITY, GROSS BETA | 50 | pCi/L | 03501 | 11 | 13 | 13 | <7 | <7 | 10 | 8 | 12 | 10 |

* Federal/State Secondary MCLs

** Action Level

***Distribution samples are composited. TT - Treatment Technique ND - not detected

Nitrate-N, Nitrite-N were collected on 2/6/17

H - Holding Time Exceeded

R - Data rejected

Nitrate-N & Cyanide did not meet LFM QC Criteria

For Solids, constant weight not attained within 0.5 mg (Samples collected on 3/27/17)

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

SAMPLE COLLECTION DATE: February 1, 2017 LAB ID Nos. 1st QUARTER

| PARAMETER | February 6, 2017 (Site 3 & 6) | | | 17C0843 | | | | 17C0844 | | | | 17C0845 | | | | 17C0951 | | | | 17C0847 | | | | 17C0848 | | | | 17C0849 | | | | 17C0952 | | | | 17C0851 | | | |
|------------|--------------------------------|---------------|---------------|----------|-------------|-------------|-------|-----------------|----------|---------|---------|---------|-----------------|----------------------------------|--|---------|--|--|--|---------|--|--|--|---------|--|--|--|---------|--|--|--|---------|--|--|--|---------|--|--|--|
| | SOUTH WATER PURIFICATION PLANT | | | | | | | | | | | | | JARDINE WATER PURIFICATION PLANT | | | | | | | | | | | | | | | | | | | | | | | | | |
| | IEPA MCL | DETERMINED AS | STORET NUMBER | RAW LAKE | OUTLETS | | | ***DISTRIBUTION | RAW LAKE | OUTLETS | | | ***DISTRIBUTION | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | 73rd Street | 79th Street | South | | | North | Central | Central | | North | | | | | | | | | | | | | | | | | | | | | | | | | |
| ALUMINUM | *50-200 | Al, µg/L | 01105 | 16.6 | 41.9 | 43.4 | 38.4 | 8.02 | 43.4 | 44.5 | 42.3 | 40.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ANTIMONY | 6 | Sb, µg/L | 01268 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ARSENIC | 10 | As, µg/L | 01002 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BARIUM | 2000 | Ba, µg/L | 01007 | 19.6 | 18.9 | 18.9 | 18.3 | 19.8 | 18.9 | 18.8 | 18.3 | 18.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BERYLLIUM | 4 | Be, µg/L | 01012 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BORON | | B, µg/L | 01022 | 23.8 | 23.7 | 24.0 | 23.8 | 23.6 | 23.6 | 23.6 | 23.9 | 23.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CADMIUM | 5 | Cd, µg/L | 01027 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHROMIUM | 100 | Cr, µg/L | 01034 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COBALT | | Co, µg/L | 01037 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COPPER | **1300 | Cu, µg/L | 01042 | <1 | <1 | <1 | 1.20 | <1 | <1 | <1 | <1 | 1.39 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IRON | *300 | Fe, µg/L | 00031 | 19.8 | <5 | <5 | 11.4 | 11.3 | <5 | <5 | 5.22 | 9.44 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LEAD | **15.0 | Pb, µg/L | 01051 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LITHIUM | | Li, µg/L | 01132 | 2.86 | 2.78 | 2.76 | 2.88 | 2.80 | 2.84 | 2.78 | 2.80 | 2.73 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MANGANESE | *50 | Mn, µg/L | 01055 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MERCURY | 2 | Hg, µg/L | 71900 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MOLYBDENUM | | Mo, µg/L | 01062 | 1.04 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NICKEL | | Ni, µg/L | 01067 | 1.84 | 2.09 | 2.08 | 2.16 | 2.09 | 2.07 | 2.16 | 2.14 | 2.13 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SELENIUM | 50 | Se, µg/L | 01147 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SILICON | | Si, µg/L | 01142 | 1044 | 1157 | 1150 | 1118 | 1026 | 1163 | 1163 | 1170 | 1156 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SILVER | *100 | Ag, µg/L | 01077 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STRONTIUM | | Sr, µg/L | 01082 | 117 | 115 | 116 | 116 | 117 | 117 | 116 | 117 | 115 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| THALLIUM | 2 | Tl, µg/L | 01059 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TITANIUM | | Ti, µg/L | 01152 | <1 | 1.13 | 1.28 | 1.19 | <1 | 1.28 | 1.29 | 1.24 | 1.23 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VANADIUM | | V, µg/L | 00985 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZINC | *5000 | Zn, µg/L | 01092 | <7 | <7 | <7 | 16.6 | <7 | <7 | <7 | 29.8 | 26.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* Federal/State Secondary MCLs ** Action Level ***Distribution samples are composited. TT - Treatment Technique

Lithium - LFM did not meet QC Criteria

As, Sr, V, Al (Site #1) - LFM did not meet QC Criteria

Ranesh Datta
 CHIEF WATER CHEMIST

Hansa Laksh
 DIRECTOR OF LABORATORIES

AnneMarie Pritz
 MANAGER OF WATER QUALITY

Ad
 DEPUTY COMMISSIONER

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

SAMPLE COLLECTION DATE: April 25, 2017
 April 26 & 27, 2017 (Site #3)

LAB ID Nos. 2nd QUARTER

| PARAMETER | IEPA MCL | DETERMINED AS | STORET NUMBER | 17C2917 | 17C2918 | 17C2919 | 17C2920 | 17C2921 | 17C2922 | 17C2923 | 17C2924 | 17C2925 |
|-------------------------------|-------------|--------------------------|------------------|--------------------------------|---------|---------|-----------------|----------------------------------|---------|---------|-----------------|---------|
| | | | | SOUTH WATER PURIFICATION PLANT | | | | JARDINE WATER PURIFICATION PLANT | | | | |
| | | | | 1 | 2A | 2B | 3 | 4 | 5A | 5B | 6 | 7 |
| | | | | RAW LAKE | OUTLETS | | ***DISTRIBUTION | RAW LAKE | OUTLETS | | ***DISTRIBUTION | |
| | 73rd Street | 79th Street | SOUTH | | North | Central | Central | North | | | | |
| TEMPERATURE | | °C | 00010 | 13 | 12 | 13 | 12 | 12 | 12 | 12 | 12 | 13 |
| TURBIDITY | TT | N.T.U. | 82079 | 1.10 | 0.05 | 0.05 | 0.10 | 1.40 | 0.05 | 0.05 | 0.10 | 0.10 |
| THRESHOLD ODOR, STRAIGHT | *3 | T.O.N | 00086 | 1 M | 2 Cc | 2 Cc | 1 Cc | 1 M | 2 Cc | 2 Cc | 1 Cc | 1 Cc |
| THRESHOLD ODOR, DECHLORINATED | *3 | T.O.N. | | 1 M | 1 M | 1 M | 1 M | 1 M | 1 M | 1 M | 1 M | 1 M |
| COLOR | *15 | Pt.-Co. CU | 00080 | 9 | 0 | 1 | 0 | 11 | 1 | 3 | 1 | 0 |
| pH | *6.5-8.5 | STD. Units | 00040 | 8.2 | 7.7 | 7.8 | 7.9 | 8.2 | 7.8 | 7.8 | 7.9 | 7.9 |
| FREE CHLORINE RESIDUAL | | CL ₂ , mg/L | 50064 | ND | 1.25 | 1.23 | 0.88 | ND | 1.19 | 1.15 | 0.88 | 0.90 |
| SATURATION INDEX, LANGELIER | | UNITS +/- | | 0.18 | -0.50 | -0.44 | -0.22 | 0.07 | -0.59 | -0.60 | -0.25 | -0.21 |
| ALKALINITY, PHENOLPHTHALEIN | | 0 | 00415 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALKALINITY, TOTAL | | CaCO ₃ , mg/L | 00410 | 112 | 106 | 105 | 105 | 109 | 102 | 102 | 103 | 103 |
| CONDUCTIVITY | | uS/cm | | 333 | 326 | 341 | 323 | 309 | 315 | 315 | 322 | 321 |
| BROMIDE | | Br, mg/L | 71870 | 0.634 | <0.1 | <0.1 | 0.134 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| CHLORIDE | *250 | Cl, mg/L | 00940 | 19.6 | 21.0 | 21.1 | 20.4 | 14.9 | 16.5 | 16.6 | 17.8 | 17.9 |
| FLUORIDE | 4 | F, mg/L | 00951 | 0.13 | 0.69 | 0.71 | 0.70 | 0.13 | 0.76 | 0.76 | 0.77 | 0.77 |
| SULFATE | *250 | SO ₄ , mg/L | 00945 | 22.8 | 26.0 | 26.2 | 26.3 | 22.1 | 25.9 | 26.2 | 26.2 | 25.8 |
| HARDNESS | | CaCO ₃ , mg/L | 00900 | 138 | 140 | 143 | 136 | 140 | 140 | 138 | 131 | 141 |
| CALCIUM | | Ca, mg/L | 00916 | 37.1 | 37.5 | 37.2 | 37.2 | 36.8 | 36.3 | 36.4 | 36.5 | 36.6 |
| MAGNESIUM | | Mg, mg/L | 00927 | 13.1 | 13.2 | 13.2 | 13.0 | 12.8 | 12.6 | 12.6 | 12.7 | 12.8 |
| POTASSIUM | | K, mg/L | 00937 | 1.18 | 1.22 | 1.19 | 1.20 | 1.15 | 1.13 | 1.14 | 1.15 | 1.17 |
| SODIUM | | Na, mg/L | 00006 | 11.8 | 12.6 | 12.6 | 12.2 | 9.23 | 9.93 | 10.0 | 10.8 | 10.9 |
| SOLIDS, TOTAL DISSOLVED | *500 | TDS, mg/L | 00150 | 170 | 161 | 151 | 135 | 159 | 166 | 165 | 183 | 167 |
| SOLIDS, TOTAL | | Tot. Sol., mg/L | 00500 | 175 | 183 | 171 | 165 | 162 | R | 188 | 187 | 178 |
| TOTAL ORGANIC CARBON | | TOC, mg/L | 00680 | 1.77 | 1.65 | 1.60 | 1.61 | 1.68 | 1.51 | 1.50 | 1.53 | 1.57 |
| OXYGEN DEMAND, CHEMICAL | | O, mg/L | 00335 | 11.6 | 14.7 | 13.1 | 12.5 | 13.4 | 11.6 | 12.5 | 11.8 | 13.0 |
| NITROGEN, AMMONIA | | N, mg/L | 00610 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| NITROGEN, NITRATE | 10 | N, mg/L | 00620 | 0.496 | 0.376 | 0.389 | 0.332 | 0.383 | 0.318 | 0.318 | 0.329 | 0.395 |
| NITROGEN, NITRITE | 1 | N, mg/L | 00615 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| ORTHOPHOSPHATE | | PO ₄ , mg/L | 00660 | 0.019 | 0.463 | 0.464 | 0.460 | 0.034 | 0.519 | 0.529 | 0.544 | 0.539 |
| PHOSPHATE, TOTAL | | PO ₄ , mg/L | 00650 | 1.27 | 1.25 | 1.26 | 0.96 | 1.42 | 1.42 | 1.46 | 1.49 | 1.57 |
| CYANIDE, TOTAL | 200 | CN, ug/L | 00720 | <12 | <12 | <12 | <12 | <12 | <12 | <12 | <12 | <12 |
| RADIOACTIVITY, GROSS ALPHA | 15 | pCi/L | 01501 | <9 | <9 | <9 | <9 | <9 | <9 | <9 | <9 | <9 |
| RADIOACTIVITY, GROSS BETA | 50 | pCi/L | 03501 | 10 | 12 | 10 | 9 | 8 | 12 | 9 | 10 | 8 |

* Federal/State Secondary MCLs ** Action Level ***Distribution samples are composited. TT - Treatment Technique ND - not detected
 pH/Alk not tested within 15 minutes of sample collection H - Holding Time Exceeded R - Data rejected
 Site #3 was not preserved for COD For Solids, did not meet precision criteria of 0.5 mg

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

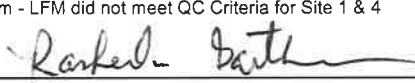
SAMPLE COLLECTION DATE: April 25, 2017

LAB ID Nos. 17C2917 17C2918 17C2919 17C2920 17C2921 17C2922 17C2923 17C2924 17C2925 2nd QUARTER

| PARAMETER | IEPA MCL | DETERMINED AS | STORET NUMBER | SOUTH WATER PURIFICATION PLANT | | | | JARDINE WATER PURIFICATION PLANT | | | | |
|------------|----------|---------------|---------------|--------------------------------|-------------|-------------|-----------------|----------------------------------|---------|---------|-----------------|-------|
| | | | | RAW LAKE | OUTLETS | | ***DISTRIBUTION | RAW LAKE | OUTLETS | | ***DISTRIBUTION | |
| | | | | | 73rd Street | 79th Street | South | | North | Central | Central | North |
| ALUMINUM | *50-200 | Al, µg/L | 01105 | 40.0 | 67.6 | 60.3 | 28.3 | 104 | 57.5 | 58.8 | 36.0 | 29.4 |
| ANTIMONY | 6 | Sb, µg/L | 01268 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| ARSENIC | 10 | As, µg/L | 01002 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| BARIUM | 2000 | Ba, µg/L | 01007 | 20.9 | 19.7 | 19.7 | 19.9 | 20.8 | 19.2 | 19.1 | 19.3 | 19.3 |
| BERYLLIUM | 4 | Be, µg/L | 01012 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| BORON | | B, µg/L | 01022 | 23.9 | 23 | 22.8 | 22.8 | 23.7 | 21.8 | 21.7 | 21.8 | 22.0 |
| CADMIUM | 5 | Cd, µg/L | 01027 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| CHROMIUM | 100 | Cr, µg/L | 01034 | <1 | <1 | 2.7 | <1 | <1 | <1 | <1 | <1 | <1 |
| COBALT | | Co, µg/L | 01037 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| COPPER | **1300 | Cu, µg/L | 01042 | <1 | <1 | <1 | 1.09 | 1.46 | <1 | 3.08 | <1 | 1.29 |
| IRON | *300 | Fe, µg/L | 00031 | 26.4 | <2 | <2 | 9.10 | 103 | <2 | <2 | 5.48 | 6.13 |
| LEAD | **15.0 | Pb, µg/L | 01051 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| LITHIUM | | Li, µg/L | 01132 | 2.98 | 2.95 | 2.94 | 3.02 | 3.06 | 2.85 | 2.85 | 2.85 | 2.87 |
| MANGANESE | *50 | Mn, µg/L | 01055 | <1 | <1 | <1 | <1 | 1.38 | <1 | <1 | <1 | <1 |
| MERCURY | 2 | Hg, µg/L | 71900 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| MOLYBDENUM | | Mo, µg/L | 01062 | 1.10 | 1.12 | 1.08 | 1.50 | 1.05 | <1 | <1 | 1.02 | 1.02 |
| NICKEL | | Ni, µg/L | 01067 | 1.91 | 1.77 | 1.72 | 1.95 | 1.86 | 1.60 | 1.63 | 1.71 | 1.79 |
| SELENIUM | 50 | Se, µg/L | 01147 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| SILICON | | Si, µg/L | 01142 | 1043 | 1162 | 1150 | 1145 | 1176 | 1141 | 1136 | 1121 | 1125 |
| SILVER | *100 | Ag, µg/L | 01077 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| STRONTIUM | | Sr, µg/L | 01082 | 130 | 126 | 124 | 121 | 124 | 120 | 116 | 121 | 120 |
| THALLIUM | 2 | Tl, µg/L | 01059 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| TITANIUM | | Ti, µg/L | 01152 | <1 | <1 | <1 | <1 | 2.81 | 1.07 | 1.08 | 1.08 | 1.06 |
| VANADIUM | | V, µg/L | 00985 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| ZINC | *5000 | Zn, µg/L | 01092 | 2.70 | 1.55 | 1.25 | 12.0 | 3.43 | <1 | <1 | 16.9 | 14.4 |

* Federal/State Secondary MCLs ** Action Level ***Distribution samples are composited. TT - Treatment Technique

Lithium - LFM did not meet QC Criteria for Site 1 & 4


 CHIEF WATER CHEMIST


 DIRECTOR OF LABORATORIES


 MANAGER OF WATER QUALITY


 DEPUTY COMMISSIONER

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

SAMPLE COLLECTION DATE: August 29, 2017

LAB ID Nos.

3rd QUARTER

| PARAMETER | IEPA MCL | DETERMINED AS | STORET NUMBER | 17C5667 | 17C5668 | 17C5669 | 17C5670 | 17C5671 | 17C5672 | 17C5673 | 17C5674 | 17C2925 | | | |
|-------------------------------|-------------|--------------------------|------------------|--------------------------------|---------|---------|-----------------|----------------------------------|---------|---------|-----------------|---------|--|--|--|
| | | | | SOUTH WATER PURIFICATION PLANT | | | | JARDINE WATER PURIFICATION PLANT | | | | | | | |
| | | | | 1 | 2A | 2B | 3 | 4 | 5A | 5B | 6 | 7 | | | |
| | | | | RAW LAKE | OUTLETS | | ***DISTRIBUTION | RAW LAKE | OUTLETS | | ***DISTRIBUTION | | | | |
| | 73rd Street | 79th Street | SOUTH | | North | Central | Central | North | | | | | | | |
| TEMPERATURE | | °C | 00010 | 22 | 23 | 23 | 23 | 20 | 22 | 22 | 23 | 25 | | | |
| TURBIDITY | TT | N.T.U. | 82079 | 0.50 | 0.05 | 0.10 | 0.15 | 0.40 | 0.05 | 0.05 | 0.10 | 0.10 | | | |
| THRESHOLD ODOR, STRAIGHT | *3 | T.O.N | 00086 | 2 M | 2 M | 2 M | 2 M | 3 M | 2 M | 2 M | 2 M | 2 M | | | |
| THRESHOLD ODOR, DECHLORINATED | *3 | T.O.N. | | 2 M | 2 M | 2 M | 2 M | 3 M | 2 M | 2 M | 2 M | 2 M | | | |
| COLOR | *15 | Pt.-Co. CU | 00080 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | |
| pH | *6.5-8.5 | STD. Units | 00040 | 8.4 | 7.9 | 7.9 | 7.9 | 8.3 | 7.9 | 7.9 | 8.0 | 8.0 | | | |
| FREE CHLORINE RESIDUAL | | CL ₂ , mg/L | 50064 | -- | 1.41 | 1.42 | 0.80 | -- | 1.18 | 1.14 | 0.94 | 0.94 | | | |
| SATURATION INDEX, LANGELIER | | UNITS +/- | | 0.43 | -0.27 | -0.28 | -0.03 | 0.33 | -0.29 | -0.28 | 0.10 | 0.11 | | | |
| ALKALINITY, PHENOLPHTHALEIN | | 0 | 00415 | 1.65 | 0 | 0 | 0 | 1.40 | 0 | 0 | 0 | 0 | | | |
| ALKALINITY, TOTAL | | CaCO ₃ , mg/L | 00410 | 107 | 101 | 101 | 101 | 107 | 102 | 102 | 102 | 102 | | | |
| CONDUCTIVITY | | uS/cm | | 303 | 306 | 305 | 297 | 298 | 306 | 306 | 303 | 306 | | | |
| BROMIDE | | Br, mg/L | 71870 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | | | |
| CHLORIDE | *250 | Cl, mg/L | 00940 | 13.3 | 14.7 | 14.7 | 14.9 | 11.9 | 14.5 | 14.5 | 14.7 | 14.6 | | | |
| FLUORIDE | 4 | F, mg/L | 00951 | 0.16 | 0.59 | 0.61 | 0.61 | 0.15 | 0.59 | 0.62 | 0.64 | 0.66 | | | |
| SULFATE | *250 | SO ₄ , mg/L | 00945 | 21.6 | 24.3 | 24.2 | 24.3 | 19.9 | 23.8 | 23.8 | 23.5 | 23.8 | | | |
| HARDNESS | | CaCO ₃ , mg/L | 00900 | 139 | 145 | 138 | 139 | 138 | 133 | 139 | 141 | 134 | | | |
| CALCIUM | | Ca, mg/L | 00916 | 34.0 | 34.0 | 34.0 | 33.9 | 34.1 | 34.3 | 34.3 | 33.9 | 34.0 | | | |
| MAGNESIUM | | Mg, mg/L | 00927 | 11.8 | 11.9 | 11.9 | 11.8 | 11.7 | 11.7 | 11.8 | 11.7 | 11.7 | | | |
| POTASSIUM | | K, mg/L | 00937 | 1.35 | 1.39 | 1.38 | 1.33 | 1.28 | 1.33 | 1.32 | 1.30 | 1.30 | | | |
| SODIUM | | Na, mg/L | 00006 | 8.19 | 8.57 | 8.48 | 8.52 | 7.80 | 8.27 | 8.31 | 8.28 | 8.24 | | | |
| SOLIDS, TOTAL DISSOLVED | *500 | TDS, mg/L | 00150 | R | R | R | R | R | R | R | R | R | | | |
| SOLIDS, TOTAL | | Tot. Sol., mg/L | 00500 | 147 | 137 | 141 | 135 | 136 | 144 | 110 | 140 | 144 | | | |
| TOTAL ORGANIC CARBON | | TOC, mg/L | 00680 | 1.83 | 1.82 | 1.78 | 1.81 | 1.83 | 1.79 | 1.82 | 1.82 | 1.23 | | | |
| OXYGEN DEMAND, CHEMICAL | | O, mg/L | 00335 | 4.2 | 2.8 | 3.3 | 3.8 | 3.1 | 3.8 | 5.1 | 8.3 | 4.3 | | | |
| NITROGEN, AMMONIA | | N, mg/L | 00610 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | | | |
| NITROGEN, NITRATE | 10 | N, mg/L | 00620 | 0.316 | 0.283 | 0.272 | H | 0.292 | 0.281 | 0.280 | H | H | | | |
| NITROGEN, NITRITE | 1 | N, mg/L | 00615 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | | | |
| ORTHOPHOSPHATE | | PO ₄ , mg/L | 00660 | <0.03 | 0.408 | 0.405 | 0.551 | <0.03 | 0.536 | 0.536 | 0.557 | 0.568 | | | |
| PHOSPHATE, TOTAL | | PO ₄ , mg/L | 00650 | 0.044 | 0.828 | 0.784 | 0.998 | 0.072 | 1.09 | 1.04 | 1.11 | 1.09 | | | |
| CYANIDE, TOTAL | 200 | CN, ug/L | 00720 | <12 | <12 | <12 | <12 | <12 | <12 | <12 | <12 | <12 | | | |

* Federal/State Secondary MCLs

** Action Level

***Distribution samples are composited. TT - Treatment Technique ND - not detected

Nitrate samples collected on 8/8/17

H - Holding Time Exceeded

R - Data rejected

COMPREHENSIVE CHEMICAL ANALYSIS
CITY OF CHICAGO - DEPARTMENT OF WATER MANAGEMENT - BUREAU OF WATER SUPPLY
WATER QUALITY DIVISION-WATER PURIFICATION LABORATORIES
 LABORATORY ACCREDITATION NUMBER: 100228

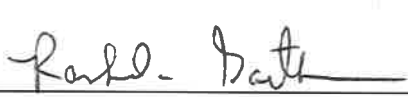
SAMPLE COLLECTION DATE: August 29, 2017 LAB ID Nos. 3rd QUARTER
 February 6, 2017 (Site 3 & 6) 17C0843 17C0844 17C0845 17C0951 17C0847 17C0848 17C0849 17C0952 17C0851


| PARAMETER | IEPA MCL | DETERMINED AS | STORET NUMBER | SOUTH WATER PURIFICATION PLANT | | | | JARDINE WATER PURIFICATION PLANT | | | | |
|------------|----------|---------------|---------------|--------------------------------|-------------|-------------|-----------------|----------------------------------|---------|-------|-----------------|---------|
| | | | | RAW LAKE | OUTLETS | | ***DISTRIBUTION | RAW LAKE | OUTLETS | | ***DISTRIBUTION | |
| | | | | | 73rd Street | 79th Street | | | South | North | | Central |
| ALUMINUM | *50-200 | Al, µg/L | 01105 | 14.1 | 200 | 193 | 181 | 13.6 | 182 | 188 | 190 | 182 |
| ANTIMONY | 6 | Sb, µg/L | 01268 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| ARSENIC | 10 | As, µg/L | 01002 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| BARIIUM | 2000 | Ba, µg/L | 01007 | 19.4 | 19.0 | 18.9 | 19.0 | 19.4 | 18.8 | 19.3 | 18.7 | 19.0 |
| BERYLLIUM | 4 | Be, µg/L | 01012 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| BORON | | B, µg/L | 01022 | 25.4 | 24.9 | 25.1 | 25.0 | 24.3 | 24.1 | 24.7 | 24.4 | 24.6 |
| CADMIUM | 5 | Cd, µg/L | 01027 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| CHROMIUM | 100 | Cr, µg/L | 01034 | <1 | <1 | 2.7 | <1 | <1 | <1 | <1 | <1 | <1 |
| COBALT | | Co, µg/L | 01037 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| COPPER | **1300 | Cu, µg/L | 01042 | 1.99 | <1 | <1 | 1.29 | <1 | <1 | <1 | <1 | 1.14 |
| IRON | *300 | Fe, µg/L | 00031 | 7.21 | <1 | <1 | 1.95 | 7.21 | <1 | <1 | <1 | 2.93 |
| LEAD | **15.0 | Pb, µg/L | 01051 | <1 | <1 | <1 | <1 | <1 | <1 | 1.80 | <1 | <1 |
| LITHIUM | | Li, µg/L | 01132 | 1.60 | 1.58 | 1.60 | 1.60 | 1.46 | 1.49 | 1.50 | 1.46 | 1.46 |
| MANGANESE | *50 | Mn, µg/L | 01055 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MERCURY | 2 | Hg, µg/L | 71900 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| MOLYBDENUM | | Mo, µg/L | 01062 | <1 | 1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| NICKEL | | Ni, µg/L | 01067 | 1.11 | 1.15 | 1.12 | 1.21 | 1.24 | 1.18 | 1.19 | 1.34 | 1.22 |
| SELENIUM | 50 | Se, µg/L | 01147 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| SILICON | | Si, µg/L | 01142 | 711 | 769 | 779 | 776 | 828 | 857 | 861 | 830 | 823 |
| SILVER | *100 | Ag, µg/L | 01077 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| STRONTIUM | | Sr, µg/L | 01082 | 112 | 112 | 109 | 111 | 111 | 109 | 113 | 108 | 109 |
| THALLIUM | 2 | Tl, µg/L | 01059 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| TITANIUM | | Ti, µg/L | 01152 | <1 | 1.32 | <1 | 1.14 | <1 | 1.32 | 1.27 | 1.18 | 1.22 |
| VANADIUM | | V, µg/L | 00985 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| ZINC | *5000 | Zn, µg/L | 01092 | <1 | <1 | <1 | 11.7 | <1 | <1 | <1 | 14.8 | 7.44 |


* Federal/State Secondary MCLs

** Action Level

***Distribution samples are composited. TT - Treatment Technique


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