



## 2019 RIVERS SURVEY MONITORING REPORT

| Survey Date: May 29, 2019 |            | Assiniboine River Sampling Locations |                            |                                   |                         | Red River Sampling Locations |                             |                        |                     |                     |                              |                       |
|---------------------------|------------|--------------------------------------|----------------------------|-----------------------------------|-------------------------|------------------------------|-----------------------------|------------------------|---------------------|---------------------|------------------------------|-----------------------|
| Parameter                 | Unit       | HEADINGLY BRIDGE (R1)                | WEST PERIMETER BRIDGE (R2) | ASSINIBOINE PARK FOOT BRIDGE (R3) | MAIN STREET BRIDGE (R4) | SOUTH FLOODWAY CONTROL (R5)  | SOUTH PERIMETER BRIDGE (R6) | FORT GARRY BRIDGE (R7) | NORWOOD BRIDGE (R8) | REDWOOD BRIDGE (R9) | NORTH PERIMETER BRIDGE (R10) | LOCKPORT BRIDGE (R11) |
| Sample Number             |            | 207812                               | 207814                     | 207811                            | 207813                  | 207815                       | 207821                      | 207816                 | 207819              | 207820              | 207818                       | 207817                |
| Temperature               | ° C        | 17.8                                 | 17.6                       | 17.4                              | 17.1                    | 16.0                         | 16.3                        | 16.4                   | 15.1                | 15.1                | 15.3                         | 14.8                  |
| Dissolved Oxygen          | mg/L       | 10.8                                 | 11.3                       | 10.7                              | 9.6                     | 9.1                          | 9.1                         | 9.1                    | 9.0                 | 9.1                 | 9.2                          | 9.5                   |
| Oxygen Saturation         | %          | 114                                  | 119                        | 112                               | 99                      | 92                           | 93                          | 93                     | 90                  | 90                  | 91                           | 94                    |
| Biochemical Oxygen Demand | mg/L       | <4                                   | <4                         | <4                                | <4                      | <4                           | <4                          | <4                     | <4                  | <4                  | <4                           | <4                    |
| pH                        | units      | 8.84                                 | 8.86                       | 8.88                              | 8.87                    | 8.29                         | 8.29                        | 8.26                   | 8.24                | 8.33                | 8.29                         | 8.26                  |
| Total Solids              | mg/L       | 724                                  | 714                        | 720                               | 814                     | 774                          | 758                         | 762                    | 744                 | 762                 | 708                          | 748                   |
| Total Suspended Solids    | mg/L       | 81                                   | 81                         | 86                                | 86                      | 178                          | 132                         | 160                    | 178                 | 162                 | 112                          | 173                   |
| Turbidity                 | n.t.u.     | 25                                   | 46                         | 47                                | 50                      | 82                           | 101                         | 92                     | 109                 | 108                 | 72                           | 102                   |
| Total Organic Carbon      | mg/L       | 13.1                                 | 13.0                       | 13.0                              | 12.7                    | 13.4                         | 12.9                        | 13.3                   | 13.5                | 13.0                | 12.8                         | 12.5                  |
| Chlorophyll a             | ug/L       | 50.7                                 | NR                         | 49.4                              | 40.1                    | 13.4                         | 13.4                        | 10.7                   | 12.0                | 14.7                | 14.7                         | 13.4                  |
| Ammonia Nitrogen          | mg/L N     | 0.031                                | 0.151                      | <0.003                            | <0.003                  | <0.003                       | <0.003                      | 0.078                  | 0.045               | 0.048               | 0.231                        | 0.221                 |
| Nitrate Nitrogen          | mg/L N     | <0.003                               | <0.003                     | <0.003                            | <0.003                  | 0.128                        | 0.131                       | 0.145                  | 0.144               | 0.124               | 0.130                        | 0.182                 |
| Total Nitrogen            | mg/L N     | 0.4                                  | 0.4                        | 0.4                               | 0.3                     | 0.4                          | 0.4                         | 0.5                    | 0.5                 | 0.5                 | 0.5                          | 0.8                   |
| Soluble Phosphorus        | mg/L P     | 0.11                                 | 0.12                       | 0.15                              | 0.08                    | 0.14                         | 0.13                        | 0.25                   | 0.12                | 0.14                | 0.13                         | 0.14                  |
| Total Phosphorus          | mg/L P     | 0.20                                 | 0.21                       | 0.20                              | 0.23                    | 0.23                         | 0.24                        | 0.26                   | 0.27                | 0.26                | 0.20                         | 0.28                  |
| Escherichia Coliform      | MPN/100 mL | <10                                  | 10                         | 20                                | 110                     | <10                          | 20                          | <10                    | 10                  | 10                  | 30                           | 50                    |
| Fecal Coliform            | MPN/100 mL | 20                                   | 10                         | 30                                | 90                      | 20                           | 10                          | 10                     | 20                  | 30                  | 10                           | 50                    |

Notes: NS - No Sample      NA - Not Analyzed      NR - No Result

Red River elevation at South Floodway control gates: 732.9 ft

Weather conditions during monitoring:

Wind Direction: NE

Wind Speed: 6.3 km/h

Cloud Coverage: 40%

Precipitation: 0 mm

Air Temperature: 27°C

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