



2020 RIVERS SURVEY MONITORING REPORT

| Survey Date: August 27, 2020 | | 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 | | 326153 | 326157 | 326148 | 326155 | 326161 | 326168 | 326163 | 326166 | 326167 | 326165 | 326164 |
| Temperature | ° C | 21.9 | 22.0 | 21.4 | 22.2 | 22.7 | 22.9 | 23.4 | 22.6 | 22.3 | 21.7 | 21.8 |
| Dissolved Oxygen | mg/L | 8.6 | 8.3 | 8.0 | 7.7 | 6.9 | 6.9 | 6.9 | 7.0 | 6.9 | 6.8 | 8.5 |
| Oxygen Saturation | % | 98 | 95 | 91 | 88 | 80 | 80 | 81 | 81 | 79 | 77 | 97 |
| Biochemical Oxygen Demand | mg/L | <4 | <4 | <4 | <4 | <4 | <4 | <4 | <4 | <4 | <4 | <4 |
| pH | units | 8.62 | 8.64 | 8.61 | 8.62 | 7.87 | 7.87 | 7.87 | 7.84 | 7.92 | 7.86 | 7.88 |
| Total Solids | mg/L | 716 | 698 | 702 | 630 | 582 | 576 | 580 | 584 | 574 | 568 | 620 |
| Total Suspended Solids | mg/L | 106 | 95 | 91 | 47 | 152 | 143 | 139 | 169 | 170 | 166 | 166 |
| Turbidity | n.t.u. | 64 | 59 | 59 | 33 | 104 | 94 | 101 | 109 | 108 | 107 | 147 |
| Total Organic Carbon | mg/L | 15.3 | 13.1 | 13.3 | 13.1 | 11.5 | 12.0 | 11.8 | 11.8 | 12.3 | 10.8 | 12.2 |
| Chlorophyll a | ug/L | 37.4 | 26.7 | 24.0 | 22.7 | 4.0 | 4.0 | 4.0 | 2.7 | 4.0 | 2.7 | 2.7 |
| Ammonia Nitrogen | mg/L N | <0.003 | <0.003 | <0.003 | <0.003 | 0.005 | 0.009 | 0.096 | 0.235 | 0.041 | 0.145 | 0.191 |
| Nitrate Nitrogen | mg/L N | <0.003 | <0.003 | <0.003 | <0.003 | 0.515 | 0.536 | 0.554 | 0.607 | 0.593 | 0.631 | 0.711 |
| Total Nitrogen | mg/L N | 1.0 | 0.8 | 0.9 | 0.9 | 1.3 | 1.2 | 1.1 | 1.3 | 1.3 | 1.3 | 1.5 |
| Soluble Phosphorus | mg/L P | 0.08 | 0.08 | 0.09 | 0.08 | 0.23 | 0.23 | 0.24 | 0.24 | 0.23 | 0.24 | 0.26 |
| Total Phosphorus | mg/L P | 0.24 | 0.21 | 0.23 | 0.20 | 0.36 | 0.33 | 0.32 | 0.35 | 0.35 | 0.37 | 0.41 |
| Escherichia Coliform | MPN/100 mL | 50 | 40 | 120 | 80 | 10 | 30 | 40 | 20 | 30 | 50 | 200 |
| Fecal Coliform | MPN/100 mL | 50 | 40 | 150 | 50 | <10 | <10 | <10 | <10 | 60 | 110 | 280 |

Notes: ns - no sample na - not analyzed nr - no result

Red River elevation at South Floodway control gates: 735.3 ft

Weather conditions during monitoring:

Wind Direction: South East (SE)

Wind Speed: 9 km/h

Cloud Coverage: 70%

Precipitation: <0.1 mm

Air Temperature: 21°C

Compiled By: H. Demchenko
Compliance Reporting Technician

Approved By: B. Bradford
Analytical Services Branch Head

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