

Edmonton North Saskatchewan River Water Quality Data

School Program Fall Season 2018 RiverWatch Institute of Alberta

Award-winning RiverWatch School Programs engage Alberta's secondary students in authentic science. Students are provided the tools and instruction that help them answer the question **"How healthy is our river?"**. Using first-hand observations in the real world and data collection at water quality test sites located above and below a wastewater treatment plant (WWTP), students generate their own conclusions on river health.

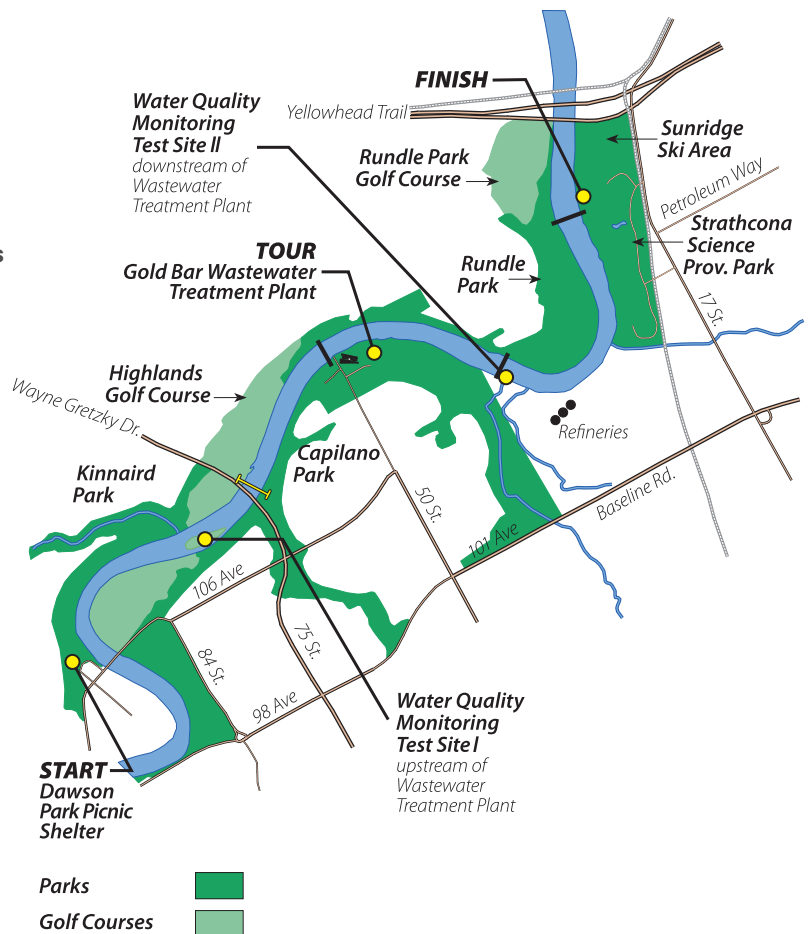
The combined effort of nearly 150,000 thousand students across Alberta for more than two decades has generated substantial water quality data regarding the health of our rivers. You can view a snapshot of data in the attached graphs generated by the RiverWatch online and responsive [graphing tool](#). This season's data suggests some water quality impact associated with wastewater treatment effluent.

Edmonton By-the-Numbers Fall Season 2018

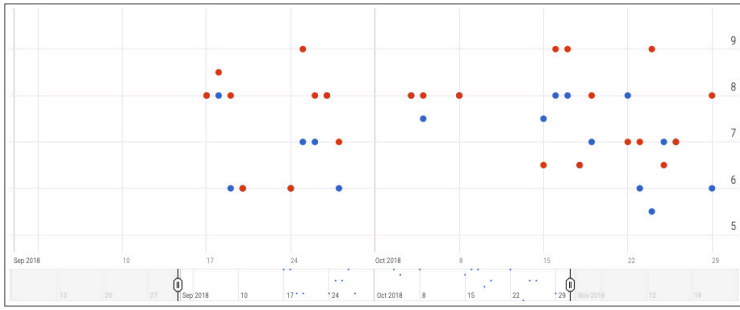
Number of Monitoring Days	23
Number of Schools	34
Number of Students	1,476
Number of Data Points	1,669

North Saskatchewan River Water Quality Data Comparisons Fall Season September – October 2018 Median Values

Parameter	Above WWTP (a.m.)	Below WWTP (p.m.)
Dissolved Oxygen mg/L	7	8
Water Temperature °C	5.2	9.0
Turbidity NTU	10	10
pH	7.9	7.5
Ammonia Nitrogen mg/L	0.24	0.25
Phosphate mg/L	0.03	0.03
Stonefly Nymph m ²	1	0
Mayfly Nymph m ²	2	0
Caddisfly Larva m ²	0	0
Crane fly Larva m ²	1	2
Midge Larva m ²	0	0
Blackfly Larva m ²	0	0



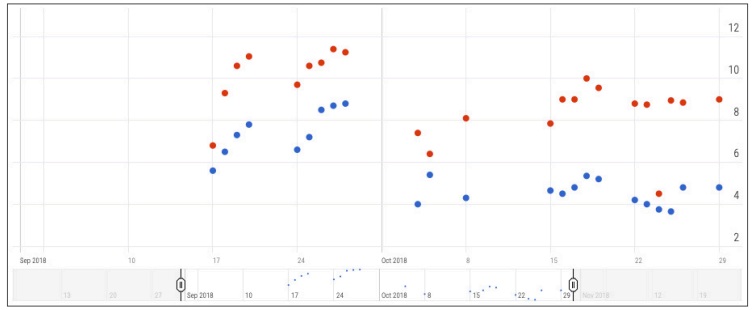
Dissolved Oxygen (mg/L)



● North Saskatchewan River at Gretzky Gravel Bar (Upstream) ● North Saskatchewan River at Gold Bar Creek (Downstream)

Median 7 8

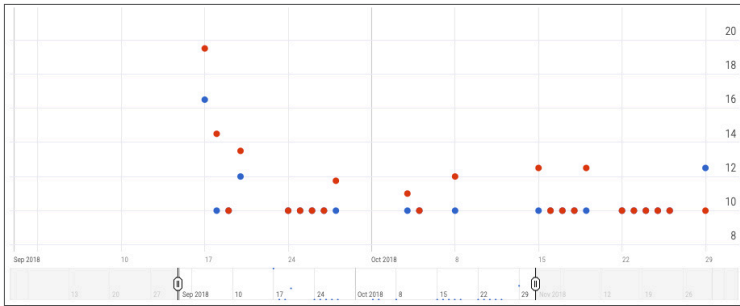
Water Temperature (°C)



● North Saskatchewan River at Gretzky Gravel Bar (Upstream) ● North Saskatchewan River at Gold Bar Creek (Downstream)

Median 5.2 9

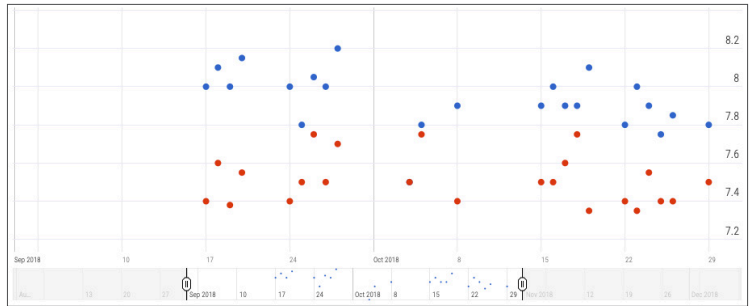
Turbidity (NTU)



● North Saskatchewan River at Gretzky Gravel Bar (Upstream) ● North Saskatchewan River at Gold Bar Creek (Downstream)

Median 10 10

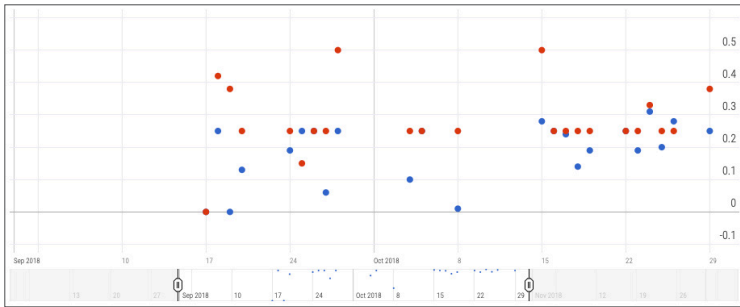
pH



● North Saskatchewan River at Gretzky Gravel Bar (Upstream) ● North Saskatchewan River at Gold Bar Creek (Downstream)

Median 7.9 7.5

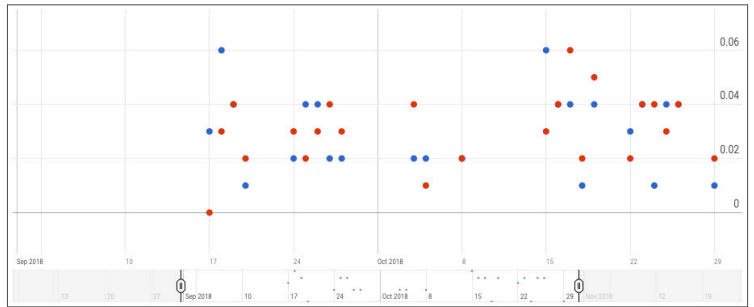
Ammonia Nitrogen (mg/L)



● North Saskatchewan River at Gretzky Gravel Bar (Upstream) ● North Saskatchewan River at Gold Bar Creek (Downstream)

Median 0.24 0.25

Phosphorus (mg/L)

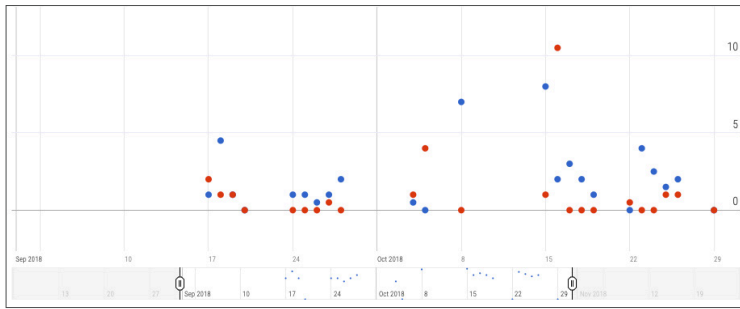


● North Saskatchewan River at Gretzky Gravel Bar (Upstream) ● North Saskatchewan River at Gold Bar Creek (Downstream)

Median 0.03 0.03

Pollution Sensitive:

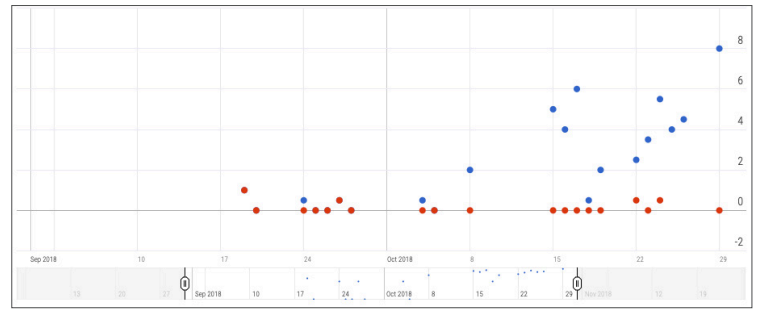
Mayfly Nymph (m²)



● North Saskatchewan River at Gretzky Gravel Bar (Upstream) ● North Saskatchewan River at Gold Bar Creek (Downstream)

Median 1 0

Stonefly Nymph (m²)

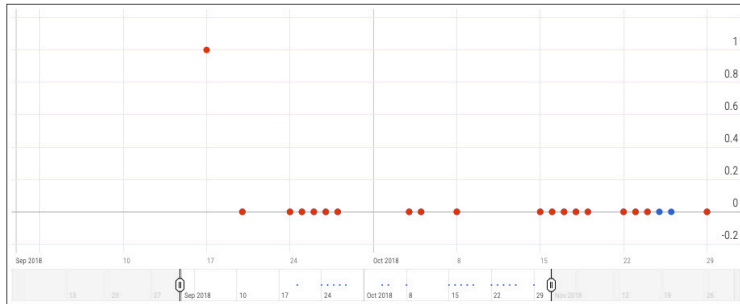


● North Saskatchewan River at Gretzky Gravel Bar (Upstream) ● North Saskatchewan River at Gold Bar Creek (Downstream)

Median 2 0

Moderately Pollution Tolerant:

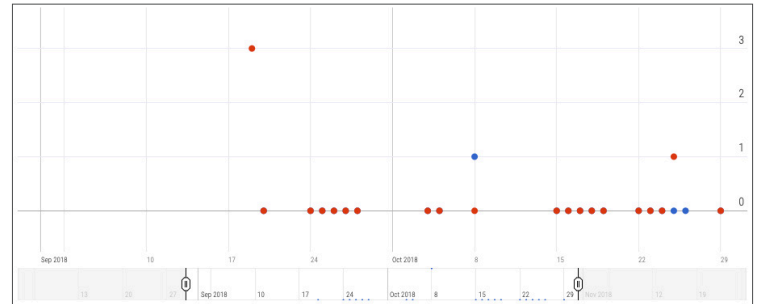
Cranefly Larva (m²)



● North Saskatchewan River at Gretzky Gravel Bar (Upstream) ● North Saskatchewan River at Gold Bar Creek (Downstream)

Median 1 2

Caddisfly Larva (m²)

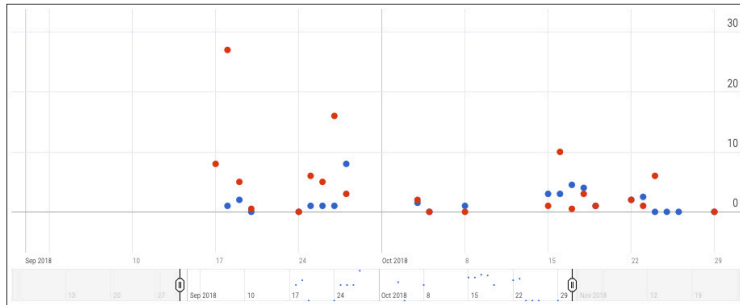


● North Saskatchewan River at Gretzky Gravel Bar (Upstream) ● North Saskatchewan River at Gold Bar Creek (Downstream)

Median 0 0

Pollution Tolerant:

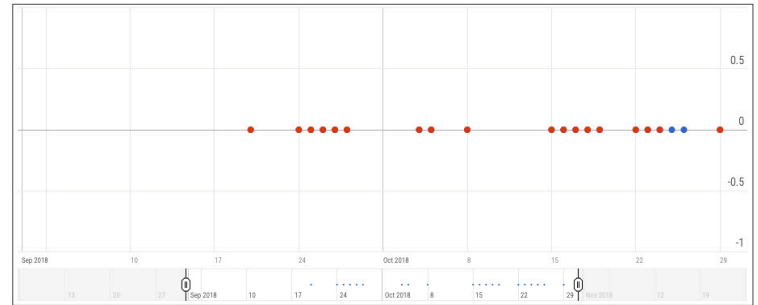
Midge Larva (m²)



● North Saskatchewan River at Gretzky Gravel Bar (Upstream) ● North Saskatchewan River at Gold Bar Creek (Downstream)

Median 0 0

Blackfly Larva (m²)



● North Saskatchewan River at Gretzky Gravel Bar (Upstream) ● North Saskatchewan River at Gold Bar Creek (Downstream)

Median 0 0