

Pine Creek Water Quality Data

Open Water Sampling Season 2019



> A west-facing view of the mouth of Pine Creek before its confluence with the Bow River in Calgary, Alberta

CreekWatch is a program of the non-profit RiverWatch Institute of Alberta, specializing in community-based environmental monitoring and award-winning science education for twenty-five years. This 2019 Report shares our findings with the public, governments, and water quality professionals to collaboratively work towards the base-line monitoring and improvement of our urban creeks in Alberta.

This annual CreekWatch Report examines the state of Calgary’s Pine Creek based on the water quality data collected with the assistance of community-based environmental monitoring groups and water quality technicians. You can view a snapshot of data in the attached graphs generated by the RiverWatch online and responsive [graphing tool](#). Thank you to all of our dedicated volunteers and funders who have made this sampling season possible – we couldn’t have done it without you!

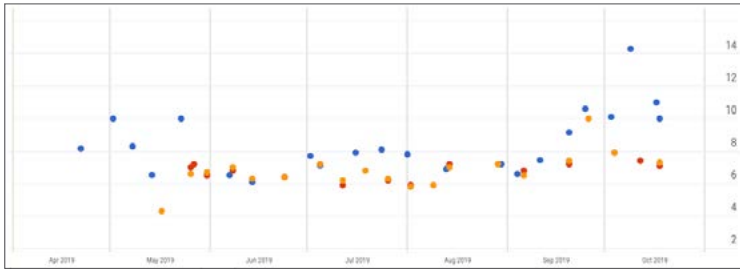
Pine Creek By-the-Numbers April – October 2019

Parameter	North Pine Creek	South Pine Creek	Pine Creek at Mouth
Number of Sampling Events	14	19	22
Number of Data Points	98	132	253
Number of Stormwater Outfalls	–	–	2

Pine Creek Water Quality Data April – October 2019 Median Values

Parameter	Median Values		
	North Pine Creek	South Pine Creek	Pine Creek at Mouth
Dissolved Oxygen (mg/L)	6.9	6.7	8.0
Water Temperature (°C)	10	10	12
Turbidity (NTU)	10	10	12
pH	8.6	8.7	8.0
Ammonia Nitrogen (mg/L)	0.25	0.25	0.25
Phosphate (mg/L)	0.02	0.04	0.05
Chloride (mg/L)	10	11	75

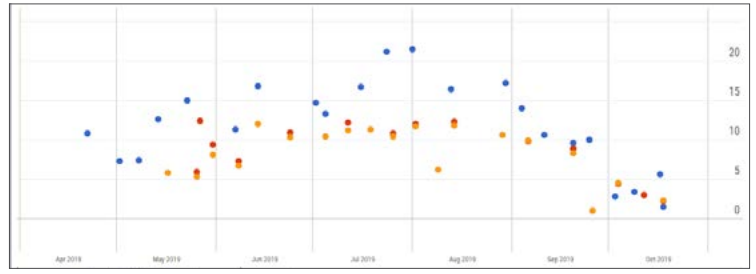
Dissolved Oxygen (mg/L)



Median Pine Creek at Mouth: **8.0** North Pine Creek: **6.9** South Pine Creek: **6.7**

Dissolved oxygen concentrations are measured using either a YSI probe or a Hach kit with a drop-by-drop titration to show a change in water color until totally clear. Dissolved oxygen is tested during daylight while macrophyte and algae photosynthesis is underway and generating oxygen.

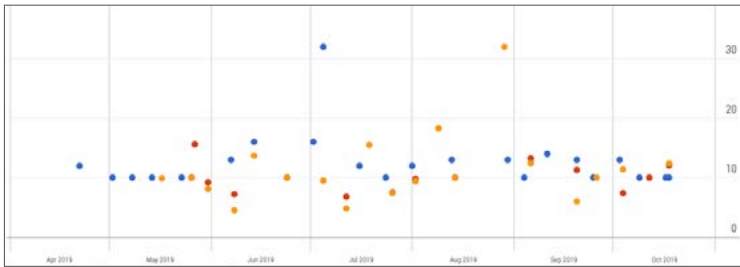
Water Temperature (°C)



Median Pine Creek at Mouth: **12** North Pine Creek: **10** South Pine Creek: **10**

Water temperatures are measured using a thermometer placed in flowing, shallow water near shore.

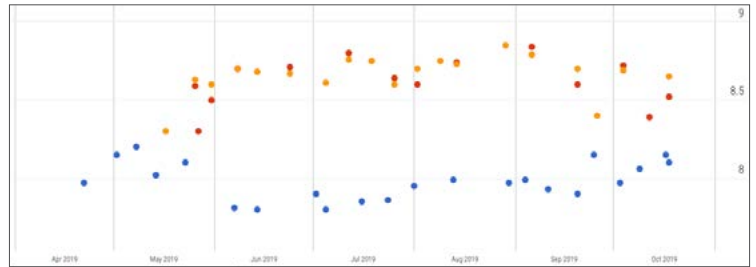
Turbidity (NTU)



Median Pine Creek at Mouth: **12** North Pine Creek: **10** South Pine Creek: **10**

Turbidity is measured by slowly pouring water into a graduated cylinder marked with "Nephelometric Turbidity Units" or NTU's.

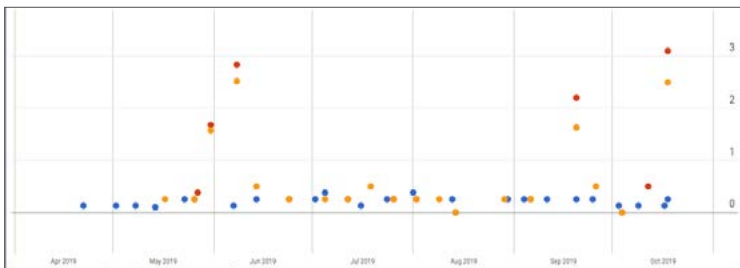
pH



Median Pine Creek at Mouth: **8.0** North Pine Creek: **8.6** South Pine Creek: **8.7**

Creek pH is measured using Hach kits that compare a change in water color.

Ammonia Nitrogen (mg/L)



Median Pine Creek at Mouth: **0.25** North Pine Creek: **0.25** South Pine Creek: **0.25**

Ammonia nitrogen concentrations are measured by dipping Hach test strips into water and noting the color change.

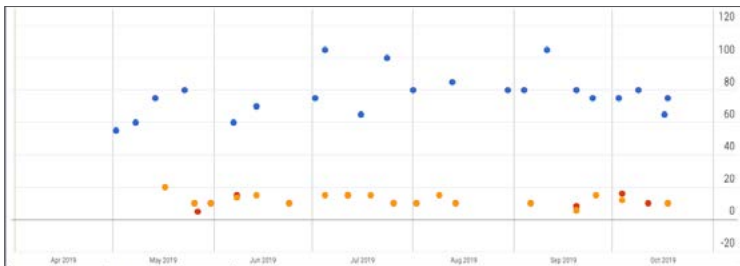
Phosphorus (mg/L)



Median Pine Creek at Mouth: **0.05** North Pine Creek: **0.02** South Pine Creek: **0.04**

Orthophosphate concentrations are measured with Hach kits that compare a change in water color.

Chloride (mg/L)



Median Pine Creek at Mouth: **75** North Pine Creek: **10** South Pine Creek: **11**

Chloride concentrations are measured using Hach kits with a drop-by-drop titration to show a change in water color from yellow to orange.

To review data with our online graphing tool, visit riverwatch.ab.ca/science/data