

Water Quality at the Cathance River

By Julia Nadeau and Kaite West



Researchers Julia and Kaite, cleaning supplies

Results:

The color levels of the water didn't follow any specific trend, or have a relationship with any of the abiotic factors observed, yet it stayed within a normal range for water. The pH of the water was also constant at six. So, it was a little on the acidic side, yet still a healthy level. Turbidity, Nitrate, and Nitrite levels were all zero over the six week testing period, which is normal and very healthy. Either, they have no relationship with the abiotic factors observed, or the water was simply free of turbidity, nitrate, nitrite. The general trend of the dissolved oxygen levels was usually increasing, which was not surprising because at this time of year the water was getting colder. All dissolved oxygen levels remained at a healthy level. There was no general trend in the alkalinity data, thus meaning that no conclusion was drawn other than the river water had some buffering capacity. All other data was in a healthy range for the river.



The Testing Site and Cathance River



Julia Observing the River



Kaite Observing Water Level

Procedure:

The researchers brought all equipment down to the Cathance River bank just upstream of Barnes Leap, and tested the water quality with the following tests: alkalinity, oxygen, water temperature, turbidity, Nitrite, Nitrate, pH, color, silicon, water speed, water depth, conductivity, and rainfall. The tests were run once a week for six weeks.

Testing Dates:	09/11/09	09/18/09	09/25/09	10/02/09	10/16/09	10/23/09
Alkalinity (ppm):	45 ppm	22 ppm	28 ppm	30 ppm	20 ppm	39 ppm
Oxygen (ppm):	6.7 ppm	5.4 ppm	7.4 ppm	8.75 ppm	7 ppm	8.2 ppm
Water Temperature (Celsius):	15 degrees Celsius	12 degrees Celsius	13 degrees Celsius	12 degrees Celsius	6 degrees Celsius	6 degrees Celsius
Turbidity (NTU):	0 NTU	0 NTU	0 NTU	0 NTU	0 NTU	0 NTU
Nitrate (ppm):	0 ppm	0 ppm	0 ppm	0 ppm	0 ppm	0 ppm
Nitrite (ppm):	0 ppm	0 ppm	0 ppm	0 ppm	0 ppm	0 ppm
pH:	6	6	6	6	6	6
Color (PCU):	/	95 PCU	63 PCU	92 PCU	60 PCU	98 PCU
Silicon (ml/L):	/	11 ml/L	12 ml/L	13 ml/L	9 ml/L	11 ml/L
Water Speed (s/30 cm):	27 s/30 cm	No Detectable Movement	3.35 s/30 cm	2.82 s/30 cm	3.88 s/30 cm	6 s/30 cm
Water Depth (cm):	37 cm	27 cm	27 cm	42 cm	53 cm	53 cm
Conductivity (us):	/	/	/	130 us	/	110 us
Rainfall (cm):	0.0254 cm	0.0508 cm	0.1524 cm	7.0104 cm	0.9906 cm	4.9784 cm

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