CWSF 2018 - Ottawa, Ontario

Jacob Bowman

Effects of road salt on brook trout and aquatic invertebrates in Harper Creek

Challenge: Environment
Category: Intermediate
Region: Peterborough
City: Peterborough, ON
School: Holy Cross S.S.

Abstract: Salt is a de-icer, but can be carried into watercourses. I used 3 experiments to test whether salt reduces brook trout habitat quality by affecting aquatic invertebrates. I found that in a lotic system, high salinity reduces invertebrates. Invertebrates are a major food source for trout, so lower populations could stress these sensitive fish. Salt use should be carefully managed to protect aquatic ecosystems.

Biography

My name is Jacob and I am a Grade 10 student at Holy Cross Secondary School in Peterborough, Ontario. I am an avid fly fisherman and I am very interested in fish, wildlife, and the natural world. This interest prompted me to investigate a local trout stream that is under threat from urban development. I have been studying the Harper Creek system in Peterborough for the past 4 years, because this interesting network of creeks contains one of the last urban brook trout populations in southern Ontario. I have had success at the Peterborough Regional Science Fair presenting the results of my studies during the last 4 years. Since I began my research, the city of Peterborough has begun various development projects in the proximity of Harper creek. Some of the proposed projects, such as a casino and associated road expansion, would have devastating effects on the local aquatic ecosystem. I have decided to continue my long term research and assess the impacts of human development on Harper Creek and its inhabitants.

Awards	Value
Excellence Award - Intermediate - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - $1000 Entrance Scholarship Sponsor: Western University	$1 000
Total	$1 000

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