

# CWSF 2018 - Ottawa, Ontario



## Saige Niemi

### Removing Microplastics from Tap Water Starts with Sewage Treatment Plants

**Challenge:** Environment

**Category:** Intermediate

**Region:** Northwestern Ontario

**City:** Thunder Bay, ON

**School:** St. Ignatius S.S.

**Abstract:** I studied the microfiber removal efficiencies of the Thunder Bay's Water Pollution Control Plant and its Secondary BAF (Biological Aerated Filtration) and DAF (Dissolved Air Flootation) treatment processes. This is important because the water that leaves the plant is enter the Great Lakes which are key sources of our fresh water.

#### Biography

I am from St. Ignatius high school which is in Thunder Bay, On. During my free time I spend training for track and field with Lakehead University. On top of that I have a huge interest in chemistry but more in specifically biochemistry. Both of these are key areas in which I'd like to explore when I'm older. Some notable achievements I've received is becoming a CWSF Finalist, as well as becoming a back-to-back SSSAA XC running champion. Moving on, I got my inspiration for this project from my mom, she always picked me up from school talking about our local sewage treatment. So with that I gained the idea of doing my project on the plant. Now further along the line I would like to branch off into what microfibres can do to our health. As well as possibly discovering a microbe that is capable of diminishing plastic but is safe to include in the plants processes. Now, some advice I would like to offer is do not procrastinate and if you put your heart into your project you will go places.

#### Awards

#### Value

Excellence Award - Intermediate - Silver Medal Sponsor: Youth Science Canada	
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
Total	\$2 000