

## CWSF 2011 - Toronto, Ontario



### Tophy David, Matthew Hall-Stevenson

#### Differential Toxicity of the Three Lower Mainlands' Treated Effluent on Water

**Challenge:** Environment

**Category:** Intermediate

**Region:** Greater Vancouver

**City:** Vancouver, BC

**School:** Vancouver Technical Secondary

**Abstract:** In Vancouver, there are five main water sewage treatment plants. This study aims to determine the acute toxicity of the three bodies of water feeding from three water treatment plants: Lion's Gate, Lulu Island and Iona Island. The study utilized 24- and 48-hour static acute lethality test on *D. magna*. Samples from Iona Island showed the most toxicity and lack of effect from Lion's Gate.

#### Biographies

**Tophy** - I am 16 years old and currently attending at a French Immersion Program in grade 10 at Vancouver Technical Secondary School. I am currently working on the Duke Of Edinburgh silver award and on the Principal's list. I enjoy playing club soccer and volleyball. I have been participating in the Greater Vancouver Regional Science Fair since grade 8 and this will be my first Canada wide Science Fair. In addition, my hobbies are reading, individual research according to my interest, sports, piano and keeping a social life as well. My plans for the future are to become a successful Pediatric Oncologist.

**Matthew** - I was born and raised in an interesting ethnic area of Vancouver, BC, where I live with my parents and a sister. I attend my neighbourhood public high school where I participate in many activities, from Science Fairs (3) and music, to most school sports. I also play soccer and volleyball at the club level in Vancouver, and I hope to be able to continue to play at the post secondary level. My post secondary plans at this time include either medicine or engineering.

Youth Science Canada  
PO Box 297  
Pickering ON L1V 2R4  
[www.youthscience.ca](http://www.youthscience.ca) / [info@youthscience.ca](mailto:info@youthscience.ca)  
416-341-0040