

# CWSF 2015 - Fredericton, New Brunswick



## Ted Stuart

### Biochar Filtration of Phosphorous

**Challenge:** Environment

**Category:** Intermediate

**Region:** Simcoe County

**City:** Ravenna, ON

**School:** Pretty River Academy

**Abstract:** A process was developed to convert wood into fertilizer, by experimentally filtering and storing residual phosphorus from a contaminated water source. A key component of this process was the production substance from wood known as "biochar," through pyrolysis. It was experimentally determined that implementing a radial flow filter (containing biochar as media) would be a sustainable, cost-effective solution to preventing eutrophication.

#### Biography

Ted is a 16 year old grade 10 Student at Pretty River Academy in Collingwood Ontario. This year Ted was elected Vice President of his student council, and is a member of a local concert band. Ted is an avid outdoors-man and enjoys fishing, hunting, and hiking whenever possible. Rugby is another passion, as Ted has been a 10 year member (longest serving member) of the Georgian Bay Titans Rugby Club. Ted has a drive to learn and discover new things, and when he can he spends his free time researching how things work or about historic events.

#### 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