

## CWSF 2007 - Truro, Nova Scotia



### Graeme Byer

#### Go With the Flow Phase II

**Division:** Health Sciences / None

**Category:** Junior

**Region:** Edmonton

**City:** Edmonton, AB

**School:**

**Abstract:** This project aimed to develop a solution for bridge pier scouring. Concrete pier models were placed in a mock riverbed with a solid waterbreak, a perforated waterbreak or no waterbreak. Based on erosion patterns in the sand, the perforated waterbreak worked best. It protected the pier, but limited erosion of the riverbed beside the waterbreak. These findings have implications for pier protection and restoration.

#### Biography

Graeme Byer is an active, 14-year-old teen, currently in the eighth grade. He homeschools through the Centre for Learning @ Home. Curling, snowboarding and swimming are among his favourite athletic activities. Also, he plays both piano and guitar. Reading, science, and computers interest him greatly. He also collects coins, shells, and loves the works of J.R.R. Tolkien. In future years, he aspires to attend university and become a civil engineer, as structures (particularly bridges, dams, etc.), forces and physics fascinate him. He has participated in the Edmonton Regional Science Fair twice, winning the junior engineering category both times. He attended the 2006 Canada Wide Science Fair, presenting the first phase of his project entitled "Go With the Flow".

#### Awards

#### Value

Honourable Mention - Engineering - Junior Sponsor: Youth Science Foundation Canada	\$100
<b>Total</b>	<b>\$100</b>