The $10 Million George Barley Water Prize
Widespread Water Crisis

Nutrient pollution is impacting lakes and rivers around the globe.

China

Bangladesh
Around the World

Lake Victoria, 2006

Lake Winnipeg, 2000

Barwon-Darling River, 1992

Lake Taihu, 1998
Phosphorus is a Nutrient

- Essential for life, non toxic.
- When P is in excess, it becomes a pollutant.

Health Impacts
Economic Impacts
Ecological Impacts
Where is P coming from?

- **Urban areas** – wastewater and stormwater (P and N)
- **Farms** – over fertilization (P and N)
- **Dairies** – Manure (P and N)
In Florida
Lake Okeechobee

Measured Total Phosphorus Loads to the Lake (mtons)

Total Maximum Daily Load

Florida
Ecological Impacts

- Imbalance in the food web
- Oxygen depletion
- Flora and fauna changes
Current Solutions
- Cost prohibitive
- Land intensive
- Legislative Challenges

GBWP Solutions
- Radically cost-effective
- Tested through size requirements
- Technological breakthrough

The Vision
The George Barley Water Prize seeks to incentivize the private sector to develop breakthrough technology that removes excess phosphorus from freshwater in a cost-effective manner.
• Winning technology has to be resilient and work under variable conditions – in different freshwater bodies and in different climates.

• To win the $10 million grand prize, the technology must reduce water phosphorus level to 10 micrograms per liter, and the applied technology must be cost-effective.

• A 4-year competition, concluding in Fall 2020 with Grand Challenge Award.

• 3 stages where technologies will be tested in a lab environment and at a pilot scale. These phases mimic the natural stages of technology development. At the end of each stage, there will be an event to highlight the work, with sub-prizes awarded ranging from $5,000 to $200,000 to the most successful ideas by a panel of esteemed judges. A total of $1.2 million in sub-prizes.

• An independent and highly respected group of partners, judges and experts have been engaged to design, advise, and operate the competition.
Prize Timeline & Structure
78 Applicants from the US
8 Applicants from Canada
12 Applicants from Asia & Oceania
   China, Japan, Indonesia, India, Australia, Israel
6 Applicants from Europe
   Germany, Belgium, Netherlands, Ireland, Sweden

104 total applicants
Where We Are Now
Stage 3 (Pilot Phase)

The Pilot Phase will be hosted from February 20th through May 2018 in Bradford West Gwillimbury, Ontario. The Top 10 teams from Stage 2 will compete in this field test.