

A Guide to the

# Georgian Bay Water Festival



Hosted by:  
Georgian Bay Biosphere  
Reserve Inc.  
Parry Sound High School  
Killbear Provincial Park

**What a Waste Activity (page 11)**



## Georgian Bay Water Festival

### **Background**

The Georgian Bay Water Festival began in 2008 with the support of Georgian Bay Biosphere Reserve (GBBR), Parry Sound High School (PSHS) and Killbear Provincial Park. Approximately 120 junior grade students (target Grade 5) participate each year in a variety of water conservation and ecology related activities. The festival helps students appreciate the value of freshwater for both wildlife and people and understand the importance of protecting this valuable resource.

The activities are led by over 30 senior level students. The organizing committee consists of a high school teacher, a student leader and several GBBR staff. This manual has been compiled to assist the organizing committee and to inform volunteers and participating teachers of their responsibilities.

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### Section 1: Activity Outlines

Water Conservation- Off I go to fetch a pail of water, Dripial Pursuit, and What a Waste!

Water Ecology- Wild Wetlands with Killbear Park Staff, Alien Invasion

Water Protection- Rolling in the River, No Water of a Duck's Back and Collective Mural Project

Technology- From the Bay and Back Again- Getting Clean Water into Our Homes

### From the Bay and Back Again

#### Materials:

- 12 cards identifying the parts of the system- Bay, pump, pipe, water treatment plant, home, water heater, shower, drain, sewer, sewage treatment plant, settling pond, evaporation/ rain.

#### Purpose:

- Students will learn how clean, treated water is delivered to homes.
- Students will learn how water is continually reused.

#### Activity:

- Intro the activity with the question: Have you ever thought of what happens before the tap is turned on and the water starts to flow?
- Each student gets a card with one of the above words on it
- Working together, the group has to put the water cycle together in the right order (it should be a circle in the end)
- After everyone is in the right spot, they must come up with a sound and action that represents their word.
- If group number is smaller than 12, have the high school student leaders take part or other adult volunteers.
- **After** reviewing key questions, get the students to raise their water bottles and propose a toast to water... add lines such as "here's to drinking a fine Georgian Bay vintage that passed through the gills of a Lake Sturgeon a thousand years ago. Here's to drinking water that was once part of a cloud over Lake Michigan in 2000. Here's to drinking water that I used to shower last year!" Whatever-- have some fun with this.

#### Key Questions/Discussion:

- How many of you have had a drink of water today? That water may have fallen from the sky as rain just last week, but the water itself has been around pretty much as long as the earth has! The earth has a limited amount of water. That water keeps going around in a cycle.
- Why do we treat the water from the Bay before drinking?

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- Need to ensure bacteria, etc. is removed.
- How many students are on municipal water? How many rely on water from their own wells?
  - Students may not always know this answer but kids in town and most of Nobel have water from the Parry Sound treatment plant. Others may have treated surface water or drilled groundwater wells. Encourage students that don't know to ask when they get home.
- What steps do you think are taken at the water treatment plant?
  - Basic steps include filtration and chlorination. Water is then pumped up to a water tower so it can be gravity fed to our homes.
- What happens at the sewage treatment plant?
  - Preliminary treatment screens "stuff" from the water. This is then taken to a landfill or incinerated. Secondary treatment involves the use of chemicals to ensure that the water leaving the plant is as clean as possible.
  - Each treatment uses energy so when we waste water we also waste energy. What are some things we can do to stop wasting water?
    - Shorter showers, tap off when brushing teeth, fix leaky faucets, don't water lawns all summer, don't wash a driveway, etc.

### Off I Go to Fetch a Pail of Water!

#### Materials:

1. two large plastic barrels
2. two smaller pails with handles
3. pylons to mark course
4. pictures from National Geographic Water Issue- April 2010  
<http://ngm.nationalgeographic.com/2010/04/water-slaves/johnson-photography>

#### Background:

*The story of Alyito:*

*Even at four in the morning, Alyito's feet know the path... she can run down the path by starlight and climb the steep mountain back up to her village with 50 lbs of water on her back. She will make the two hour walk three times that day to have enough water for her family and to water their garden. She has done this for 25 years. She dropped out at school at age 8 to help her mother carry water. Now her young daughter helps her. They live in a small village in Ethiopia.*

- Women and children in developing countries walk an average of 6km to get water for the family's daily needs. Almost ½ the people on earth do not have water piped into their home.
- About 1 billion people don't have access to clean, safe drinking water.
- The average Canadian uses ~ 330 litres of water per day. Millions of the poorest people in the world survive on less than 20 litres.
- It takes energy (and money!) to bring treated water to our homes and to remove/treat waste water.

#### Activity:

##### Team Relay

- Divide the group into two teams (try to balance teams with males and females). Each team is given a bucket and must start at the large barrels.
- Students race through an obstacle course down to the water's edge. They pass the water bucket to the high school volunteer who fills the bucket and hands it to the student. The student races back to the barrel and dumps it in (they can get assistance from their team mates). The next student heads down through the course and so on.
- The barrel is marked at various levels to depict water usage by region.
- Call the race when the water is filled to a level that you feel is appropriate for the energy level of the group.

#### Key Questions:

- Was it hard work to get the water to the barrel? Imagine having to do that every single day. Know picture having to walk 6 km carrying the water. Provide an example of the distance for the students e.g. to the park entrance gate and back.

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- Would the students drink the water from the barrels? Why not? We would need to treat it before drinking. The water could be contaminated with bacteria, e-coli, etc.
- What kind of problems can result from drinking contaminated water? This can lead to diarrhea, cholera outbreaks, etc. About 3.3 million people, mostly kids under 5, die from drinking dirty water each year.
- Look at the differences in water usage throughout the regions. Why do Canadians have some of the highest levels of water use?
  - o Viewed as plentiful so people don't see the need to conserve; it's easy to access.
- When you were carrying water from the Bay, what is the energy source to get the water to the destination?
  - o Their own physical energy which is renewable.
- When you fill your bath tub or have a shower- what is the energy source to get the water to the tap?
  - o Electrical pumps are get water into our homes. That electricity might be from a renewable sources, such as wind or even water (hydro) powered, or from non-renewable sources such as oil, coal or nuclear.
- If you and your family had to carry all the water you need for ~ 1km, would you use less water? What kind of changes would you make at home?

### Dripial Pursuit

#### Materials:

- Score board (easel with whiteboard)
- Blue marker for drawing droplets
- Question cards

Divide group into two teams for a friendly game of not so trivial water facts divided into two categories of Water Wasteful and Water Wise.

Award teams a “water droplet” for each correct answer. Need 10 droplets to fill the bucket.

**Note:** take the time to discuss questions that the students were unable to answer and add interesting “facts” the activity.

### Water wasteful???

1. How much water does the average Canadian uses each day?
  - a) **330 litres**
  - b) 20 litres
  - c) 100 litres
  - d) 5 gazillion gallons
2. In a typical house, in which room is most of our water used?
  - a) Bedroom
  - b) Bathroom**
  - c) Kitchen
  - d) Laundry
3. Name three ways that you can save water in the bathroom. (Turn off the tap when you are brushing your teeth, low flow shower heads, low flow toilets, any answer will do.)
4. True or false? The average bath uses 50 litres of water (**False** it uses 100!)
5. Cleaning is responsible for 5% of the water used in your house, Showers and baths are responsible for 35%, Kitchen and drinking is used for 10%, and Laundry is used for 20%. What percentage of water is used up by flushing the toilet, assuming it is the last main use of household water? (**30%**)
6. Name one method of saving water in the kitchen. (ex. Don't run the dishwasher if it is not full).

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7. What saves more energy...?
  - 1) Running the tap to get cold drinking water
  - 2) **Putting a jug of water in the fridge so it will be cold when you drink it**
8. True or false? By conserving water we are saving energy. (**true**, we are saving energy since pumping water usually involves electricity and treating waste water uses energy)
9. True or false? By conserving water we are saving money (**True**, we are saving money in energy)
10. True or false? The consumption of bottled water has risen significantly over the last few decades. **True**. Plus a *single plastic bottle uses over 5 times its volume in water during the manufacturing process and uses harmful chemicals such as benzene and ethylene oxide.*
11. Older models of toilets can use as much as 20 litres (5 gallons) of water each time you flush. **True**
12. How much water does a faucet waste, if it drips one drop per second for a year?
  - a) 100 litres
  - b) 1000 litres
  - c) **10,000 litres**
  - d) 100,000 litres

*10,000 litres of water in a year - or enough to fill 100 bath tubs!*

### Water Wise!

14. Approximately, how many people in the world do not have access to drinking water?
  - a) 1 million
  - b) 100 million
  - c) **1.1 billion**
  - d) 2.4 billion
  - UNESCO reports that 1.1 billion people have no access to drinking water and 2.4 billion don't have access to safe, treated water.
15. True or false? The water that flows into the storm drains is NOT treated and goes directly back into the river or bay. **True**.... so stuff from roadways are washed directly into the water. Bonus—name 3 pollutants that might wash off a road.
16. What is the largest fish species found in Georgian Bay? **Lake Sturgeon?**  
*The Ontario sturgeon record comes from Lake Superior – 310 lbs and 7'8" long! It is considered to be a threatened species. Muskellunge or Musky is the second largest fish found in the Bay.*



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17. According to a provincial survey, which fish is most sought by sport-fishermen in Ontario?

- a. Northern pike
- b. Lake trout
- c. Rainbow Trout
- d. Walleye**
- e. Smallmouth bass

18. Which of the following fish are found in Georgian Bay?

- a. lake trout
- b. rainbow trout
- c. Chinook salmon
- d. Coho salmon
- e. All of the above.**

**Bonus point-** which one of the above fish is native to the Bay. Answer- The lake trout. The rest are all introduced species.

19. Most of the earth's surface water is freshwater (meaning no salt) true or false? (False, it is mostly salty or frozen).

20. Water freezes at \_\_\_\_\_degrees Celsius. (0°C)

21. Water vaporizes at a \_\_\_\_\_degrees Celsius. (100°C)

22. What percentage of the earth's water is fresh? (less than 3%)

23. What is the source of energy for the water cycle?

- a) Rain
- b) wind
- c) sun**

24. What are possible sources of water contamination?

- a) Landfills
- b) septic tanks
- c) animal waste
- d) all of the above**

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25. What is the chemical symbol for water?  
a) CL  
b) **H<sub>2</sub>O**  
c) PB  
Bonus point... what does that stand for?
26. What is the name for a smaller stream that flows into a river?  
a) delta  
b) peninsula  
c) **tributary**
27. What is the process of when water is turned into a vapour?  
a) perspiration  
b) **evaporation**  
c) condensation
28. What is the process of when water vapour is turned into a liquid?  
a) perspiration  
b) evaporation  
c) **condensation**
29. What is the term to describe the area drained by rivers and their tributaries?  
a) **watershed**  
b) aquifer  
c) forest
30. What is water saturated land called where aquatic plants and animals live?  
a) aqueduct  
b) river  
c) **wetland**
31. Which of these is not a wetland?  
a) marsh  
b) swamp  
c) **lake**  
d) pond
32. The solid state of water is known as what? **Ice**
33. Can the average human survive without water for a few days or a few weeks? **Few days**
34. Nimbus, cumulus and stratus are types of what? **Clouds**
35. Does water cover more or less than 50% of the Earth's surface than land? **More- around 70%**

### What a Waste!

#### Materials:

- Two plastic barrels with 12 pre-drilled holes ~ ½ in. diameter. Each hole is labelled with examples of “water wasteful behaviours”, e.g. leaving the water running while brushing my teeth, showering for 10 minutes every day, dripping water faucet in my classroom.
- Two smaller plastic buckets with handles.

#### Activity:

- Position the barrels 10 metres from the water.
- Divide the group in two equal teams
- The students will race to fill their barrel. They will have to use fingers or hands to plug the holes.
- High school volunteers fill the bucket in the Bay and deliver it to the student waiting at water’s edge.
- Activity continues until an assigned line is met.
- Caution the students to jump back when they move their fingers from the hole (the water is under pressure).

#### Key Discussion Points:

- Have the students read out the “water wasteful” facts from the barrel. **Did everybody brush their teeth today? Did anyone turn off the tap while brushing?** How about showers? How many shower for less than five minutes? While it’s important to be clean, we can try to adopt actions that use less water.
- **Why do we want to save water?** All water that is piped to your home has to be treated to make it clean enough to drink even if we’re not drinking it, which is hard to do and costs a lot of money. Plus, we have to use chemicals to make this water clean and that’s not good for the environment. All water eventually ends up back out in the natural environment.
- **What are we going to do when we brush our teeth?** Turn off the tap! Be a water watcher, NOT a water waster!
- **How else can we save water?** When having a bath, fill the tub only half full. Fix leaks! A tap, leaking one drop per second, wastes more than 25 L per day, that’s 10 000 L per year. A leaking toilet can waste up to 200 000 L per year. That’s enough to fill in large swimming pool



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### **Water Festival Mural**

#### **Materials:**

- Permanent markers, white shower curtains x 5
- Each curtain is labelled with the title – Georgian Bay Water Festival
- Copy of the Lake Huron Watershed Charter

#### **Background:**

- The murals will be a collective art project completed by each group rotation. The murals will be sent out to each school after the festival and be used at Georgian Bay Biosphere Reserve events.
- Before the students start, share key messages from the Lake Huron Watershed Charter (i.e. importance of clean water, pledge to take action). By creating and signing the mural, the students are voicing their support for the charter.

### Rolling Down to the Bay

#### Purpose:

The students pretend to be water droplets rolling through a watershed and discover how water can become contaminated.

#### Materials Needed:

- 12 Velcro vests
- 5 blue tarps labelled to represent Bluewater Highway, Mr. Blue's house, Watertown, Fish River, The Bay (placed in that order).
- Coloured felt pieces and corresponding chart identifying the types of contaminants (garbage, oil, pharmaceuticals, feces, phosphates, heavy metals, road salt, fertilizer etc). These get scattered on the tarps.

#### Introduction:

- Explain to the students that they will each pretend to be a water drop falling on the ground. Water drops reach the ground through **precipitation**. Have each student put on a velcro vest to find what gets stuck to them as they travel down river to the Bay.

What are some forms of precipitation?

**A:** Rain, snow, hail.

We are going to trace the life of a water drop as it moves through a **watershed**. What is a watershed?

**A:** It is an area of land where all water drains to a certain point. For example, you live in the Georgian Bay/Lake Huron watershed, all of the water that falls on the ground drains into either the Bay or Lake Huron, which is part of the Great Lakes watershed, which flows down St. Lawrence to the ocean.

Can the students name some of the rivers in our area that flow into Georgian Bay?

**A:** French, Key, Pickerel, Magnetewan, Shawanaga, Seguin, Go Home, Severn + many smaller rivers.

- Explain to the students that they will be moving through different areas of a watershed where unfortunately, they may pick up different **contaminants**.
- Have the students drop down, one at a time, and roll over the tarps. When they are finished, with the vests still on, the students should hear explanations (given on the poster mounted on the display board) of the contaminants they have picked up. e.g., fertilizers (phosphates), mammal wastes (dog poop, leaky septic) from Mr. Blue's yard, gas, oil, heavy metals from the highway; spills from 2-stroke boat motors.



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### Key Questions:

What are some ways that we contribute to water pollution?

A: Homes (run-off from septic, lawns), industry, boats, ATV's used near water, runoff from roadways, animal feces....

What are some things we shouldn't pour into our drains or sewers at home and why?

A: Anything toxic, oils, etc. Things like baking soda and vinegar are great cleaners to use. If it's safe enough to eat—it's safe enough for the drain.

Why is it a bad idea to cut the lawn near a waterfront or use pesticides and fertilizers?

A: Grass doesn't slow runoff as well as shrubs and trees etc near shorelines. Plants can absorb some of the pollutants. Fertilizers can contribute to the growth of algae which removes oxygen from the water and causes other species of plants and animals to die.

What are some ways that we can reduce pollution from our cars?

A: walk or bike when we can, hybrid vehicles, which lower emissions greatly by using much less gasoline.

### No Water off a Duck's Back

#### Purpose:

Students observe feathers to see what it's like to try to clean oil from birds. This educates them about the hazards of commercial oil spills (such as from tankers) and local problems from oil that reaches natural waterways due to household sources

#### Materials:

1. Cooking oil, 9 shallow containers (labelled clear water, oily water, soapy water) and 3 spoons.
2. hand lens x 3; ~ 20 feathers (natural); liquid detergent solution (made with one part dishwashing liquid to 100 parts water)
3. 2 water buckets (for refilling shallow containers) and 1 bucket for disposal of oily/soapy water.
4. Laminated copy of Sideroads "Oily Hell- Parry Sound Harbour"
5. Lump of old bunker C oil from Nobel beach.

#### Background:

Oil spills along coasts affect many parts of the environment, both nonliving such as water, ocean bottom, and shoreline and living such as sea birds, marine mammals, and shellfish. Examples include damaging feathers of waterfowl, killing embryos when oil seeps into eggs, suffocating fish when gills are clogged, and killing marine and terrestrial animals by ingesting food and water contaminated by the oil. Oil-soaked animals may try to clean themselves and, in the process, often ingest oil that kills them.

In 1950, over 8 million litres of oil leaked into Parry Sound Harbour from large tanks located right next to the water.

\* Show the "blob" from Nobel beach -- 60 years later the oil is still there buried in sand.

Large oil spills account for just one way oil can pollute the environment. Many people who work on their own vehicles dispose of their waste oil improperly. They pour waste oil into storm drains, into sewers, or on the ground. Many people are surprised to learn that they and their neighbours can account for more oil pollution than large industries. Vehicles can also leak oil and this runs off from paved surfaces into our waterways.

#### Activity:

- Divide the group into three teams. Each team needs a 3 shallow pans partially filled with water, a spoon, a hand magnifying lens and a feather.
- Have the students examine a feather with a hand lens and talk about their observations.

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- Next, have the students dip the feather in clear water for 1 minute, examine it again with a hand lens, and share their observations, and compare them to the original observations.

**A:** They are very similar when wet with clean water to when they are dry. The down is fluffy, the pattern on the rest of the feather is still symmetrical and there are air pockets between the fibres. These air pockets help ducks float and stay insulated when they are in the water. The air pockets also help when the bird is flying.

- Add 1 teaspoon (5 millilitres) of oil to the water of the labelled container. Observe the interaction of oil and water. How far does the oil spread? One litre of oil can contaminate up to 2 million litres of water. The spill in Parry Sound Harbour was over 8 million litres.
- Place the feather in oil for 1 minute; then examine it with a hand lens and share their observations.

What happens to the feathers now? Is the down fluffy? Is the pattern uniform? Are there still air pockets between the fibres? What does this do to the duck?

**A:** The duck would not be able to stay warm, have a hard time floating or flying, or gathering food. If they can't fly, they also can't migrate.

What will happen to the duck if it ingests the toxic oil?

**A:** It is possible that the duck will get poisoned and possibly die. It is also possible that duck will survive, accumulate these poisons and pass them on to predators and distribute these chemicals throughout the food chain (**bioaccumulation**). Natural processes such as migratory and feeding behaviours may also become impacted (if the students can't come up with all of these answers, ask leading questions to encourage them to think about possible scenarios).

- Add 2 teaspoons of soap to the 3<sup>rd</sup> container. Have the students try to clean the feather. Examine it with a hand lens, and compare with previous observations. Discuss any changes in the feather after exposure to oil and then to detergents.

Discuss possible effects on other wildlife species, on humans, and on the environment.



### Alien Invasion

#### Materials Needed:

- Large photo of phragmites
- Wetland species cards

#### Background:

Phragmites, also known as common reed, is an alien invader in our wetlands. It is believed to have come to North America in the ballast water of ships in the 1800's and since has spread throughout the continent. It is now found here on the eastern Georgian Bay.

Like another alien invader, the beautiful purple loosestrife, phragmites has often been planted as an ornamental plant. It has a large, feather-like plume that is 15-30cm long and the plant grows up to 5 metres in height.

A single plant can produce over 2000 seeds, but is most often spread through the rhizomes of a parent plant creating dense interwoven roots. The plant is so successful at reproducing itself that it crowds out native plant life and destroys natural habitat of local species of wildlife.

#### Activity:

This game is based on the well-known game “Hand Shake Murder.” Have everyone sit down in a circle. The objective is to uncover the alien invader.

**Intro:** There is an alien in our midst that is a threat to our biodiversity. To maintain the health our wetland community, the alien invader must be uncovered so that it can be eradicated.

Question: What is an Alien invasion – *the introduction of a species that is not native and spreads rapidly – can threaten the amount of biodiversity by out-competing native species, thereby destroying important habitat for many species of plants and animals.*

#### Game Instructions:

1. Hand out “Wetland Species” cards, one card per student, asking students not to show them to each other for now. Involve group leaders or other adults as well to make the game more challenging. Each card represents a species found in a healthy wetland – except one, the ALIEN INVADER (**note what student that card was given to**). Some of the species are Species at Risk that depend completely on wetland habitat for the survival of their species.
2. Have everyone in the circle close their eyes. The leader walks around the circle and taps the student with the Common Reed card on the shoulder – this indicates to the student that he/she is the ALIEN INVADER.

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3. Once the alien invader is chosen, students get up and start shaking hands. When they shake hands they show each other their card, say “Hi, I am a \_\_\_\_\_ (whatever species is on the card), and then shake hands.
4. The only difference between the ALIEN INVADER and the rest of the wetland species is in the student’s handshake. When the ALIEN INVADER shakes hands, the student slips one finger and tickles the palm of the other student.
5. After being “tickled” by the ALIEN INVADER, the student must shake hands with four more students before dramatically dropping to the floor in an exciting fake death, representing a loss of that species from the wetland.
6. After each loss of species, the game stops, and the other students have a chance to guess who the ALIEN INVADER is by pointing. If the student is wrong, then she too drops to the floor in a dramatic death. None of the students that have already been tickled may guess, as they already know who the identity of ALIEN INVADER. Game continues until ALIEN INVADER has been identified or everyone else is dead.

### Follow up questions

1. What species was the ALIEN INVADER? How many people have seen this plant? *Often found in the ditches along Hwy. 400*
2. What happens to native species when an ALIEN INVADER enters a habitat, like a wetland?
3. What is the best chance that native species have for survival in the event of an ALIEN INVADER in their habitat? (hint – early detection).
4. What does biological diversity mean? *When a habitat is very diverse with a variety of different species, it is much healthier and more stable. Diverse habitats can support a greater number of species.*



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### List of Wetland Species Cards

#### Plants

Common Reed  
Arrowhead  
Pickerel Weed

#### Mammals

Mink  
Beaver  
Moose

#### Fish

Largemouth Bass  
Northern Pike  
Pumpkinseed

#### Birds

Least Bittern \*  
Green-winged Teal

#### Insects

Dragonfly

#### Reptiles and Amphibians

Bullfrog  
Blanding's Turtle\*  
Spotted Turtle\*

\*at-risk species



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### Wild Wetlands

This activity is conducted by Killbear Park staff.

- Key concepts covered include an overview of freshwater resources, the importance of wetlands (water purification and retention, wildlife habitat and adaptations of wetland species)
- It will include a trip to a nearby wetland and an examination of wetland species (contained in aquariums).

### Section Two: Teachers' Water Festival Planner

#### Introduction

Water covers 75 per cent of the planet, and also makes up about 75 per cent of a person's body weight. Water is essential for all life on Earth. Without it, nothing lives and nothing grows.

The amount of moisture on Earth has not changed. The water the dinosaurs drank millions of years ago is the same water that falls as rain today. Less than one percent is readily available. The remaining 99 percent is salty or locked up in ice.

Did you know that Canada is one of the highest water users per capita in the world? Managing Canada's water resources, which represents about seven per cent of the world's renewable freshwater, is everyone's responsibility.

#### Why a Water Festival?

It brings students together to spend fun day learning about water ecology and conservation. Students learn about the actions they can take at home and at school to conserve water and help protect water quality.

#### Goal:

Junior level students in the Georgian Bay Biosphere Reserve appreciate the value of freshwater for both wildlife and people and understand the importance of protecting this valuable resource.

This Guide is designed:

- ✚ to help you organize for the Water Festival Day at Killbear Provincial Park.
- ✚ to suggest ways to prepare your students so they not only have fun, but get the most learning possible from the day.
- ✚ offer ideas for further study back at school.

#### Getting Ready for the Festival:

- ✚ Each student group will be accompanied by two high school student volunteers. You can identify these volunteers by their blue coloured T-shirts and crazy hats. Their responsibility is to guide the groups to the various activity sites according to the schedule. **Please Note: Teachers are responsible for student behaviour. Please accompany groups to the activity stations – perhaps with students that might require assistance. Do take the time to tour each activity with your students so that you can follow-up with their experiences.** Please ensure that students requiring medical

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attention (administering medication, bee allergy, epilepsy, special physical needs, etc.) be supervised by a responsible adult.

- ✚ Encourage everyone to bring **“litterless” lunches and snacks**. There will be no place on site to purchase lunches or snacks. Encourage students to bring **reusable water bottles**. Water taps are available on site to fill up their bottles.
- ✚ Closed toe shoes (running shoes), appropriate clothing for the predicted weather conditions (sunscreen and sunhats.) are necessary. It is a good idea for students to have extra clothing with them. They may get a little wet during some of the games. **THEY WILL NOT BE IN THE WATER.**

### On the Day of the Festival:

- ✚ Please ensure that everyone is prepared and dressed for the weather. If the weather doesn't cooperate, the rain date is May \_\_\_\_ You will be notified at the school by 3pm the day before the festival if it will be delayed until the rain date
- ✚ Please have students ready to load and depart the school at the assigned time. Ideally, your bus will arrive at Killbear Day Use Beach by 9:40. Buses will be staying at the park, so belongings can be left on the bus (extra clothes, backpacks, etc.).
- ✚ Upon your arrival at Killbear Provincial Park, please have all students remain on the bus until you receive instructions for the day from the high school student volunteers.
- ✚ Everybody will receive a blank name tags. Please bring a few markers to help this process. Your students will be placed in groups of approximately 12 students from other schools. Please take a name tag for yourself and adult volunteers from your school. Include your name and school on the tag.
- ✚ **Lunch is scheduled at noon.** All activities will stop during this time. During lunch the management of students are the teachers' and adult supervisors' responsibility.
- ✚ Remind your students about the importance of being careful around the water.

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The Festival can be a "stand-alone" event, or it can be the focal point for a variety of related lessons and classroom activities before and/or after Festival Day.

A few suggestions:

- ✚ Invite a local water expert from the community to talk to your class. Have the students prepare and interview the guest.
- ✚ Have students prepare a Water Cycle chart and explain the terms evaporation, condensation, ground water, precipitation, etc.
- ✚ Use a video camera to have groups of students organize a video-team and prepare a video about some aspect of water.
- ✚ Study water legends and teachings from Aboriginal cultures.
- ✚ Create posters and displays throughout the school with tips on how to conserve water.
- ✚ Have students study the source of their water supply. Investigate any possible sources of contaminants to the water.
- ✚ Read the Lake Huron Charter and sign together as a class ([www.lakehuroncommunityaction.ca](http://www.lakehuroncommunityaction.ca))
- ✚ Have students view the web site [waterlife.nfb.ca](http://waterlife.nfb.ca)
- ✚ **Follow up questions for your students after the water festival:**
  - Why is water so important to life?
  - How do trees, plants, animals, people, soils, and water depend on each other?
  - How do our actions affect water quality?
  - Do you live in a water wise house? Check how much your family uses and compare to the Canadian average. Go to the web site [www.goblue.zerofootprint.net](http://www.goblue.zerofootprint.net) for a quick one minute calculation chart.



## Georgian Bay Water Festival

### Water Festival Survey

*We appreciate your feedback! Help us improve future water festivals by taking a few minutes to complete this survey.*

Which activities were most effective in teaching your students about water? Why?  
Which were not effective and why?

Do you have any suggestions for new activities?

Will you be able to use and extend on what your students learned during the Festival in your curriculum? If so, how?

What suggestions do you have for improving the Water Festival next year?

Overall Rating \_\_\_\_\_

*(6= Wonderful, 5= Really Good, 4= Good, 3= OK, 2= Needs work, 1= Give it up)*

Additional comments and suggestions:



### Section 4: Preparation Schedule

Month	Action	Responsibility
January	Organizing committee formed	GBBR Staff and High School Liaison Teacher
	Book date with PSHS, GBBR and Killbear	High School Liaison Teacher
	Determine budget available to host event. Initiate any fundraising needed	GBBR Staff
February	Recruit student leaders/volunteers (target of 40)	High School Liaison Leader
March	Send initial invite to elementary schools	High School Student Leader
April (First Week)	Follow-up with RSVP schools (send information package with pre-visit activities)	High School Student Leader and Liaison Teacher
April (Third Week)	Solicit additional schools to target of ~120 students	High School Student Leader and Liaison Teacher
	Permission Forms for all student leaders/volunteers	High School Student Leader and Liaison Teacher
May (First Week)	Meeting with student leaders- activities assigned, instructions reviewed, students review resources for teaching.	GBBR Staff and Liaison Teacher
	Book buses/Confirm scheduling with schools for pick up.	GBBR Staff
	Resources purchased/inspected (replaced if necessary) Obtain megaphone Label name tags (assign letters)	GBBR Staff and Liaison Teacher
Second Week	Follow-up meeting with student leaders (session on how to debrief lessons)	GBBR Staff and Liaison Teacher
	Reward for litterless lunch purchased	GBBR Staff
	Arrange media coverage	GBBR Staff

## Georgian Bay Water Festival

Third Week	Final meeting with volunteers	High School Student Leader and Liaison Teacher
<b>W Day</b>	<b>Engage 120 Gr. 5 students</b>	<b>All hands on deck!</b>
Fourth Week	Evaluation meeting with volunteers/organizers	GBBR Staff and Liaison Teacher
	Evaluation to Gr. 5 teachers and students attending	GBBR Staff
	Thank you to key people	GBBR Staff
	Resources stored	High School Student Leader and Liaison Teacher
	Pay bills to bus company and park.	GBBR Staff
	Brief report to be added to guide	GBBR Staff
	Adapt manual based on evals	

## Georgian Bay Water Festival

### Water Festival Schedule 2011

5 stations (each station has two activity areas) 30 minutes each. approximately 12 elementary kids per group

#### **9 am buses arrive at schools**

9:15 buses depart

9:45 to 10 am buses arrive/ unload at Killbear

10am to 10:15 Intro (High School Student Leader)

10:15 - 10:45 Station 1

10:50-11:20 Station 2

11:25 – 11:55 Station 3

12:00- 12:30 Lunch

12:30- 1:00 Station 4

1:05-1:35 Station 5

1:35-1:40 Pick up/clean up

1:40- 1:50 Conclusion- High School Student Leader

**2:00 hop on buses**

GROUP	10:15-10:45	10:45- 11:20	11:25 –11:55	12:00- 12:30	12:30- 1:00	1:05-1:35	1:35-1:50
<b>A &amp; B</b> <i>(each activity runs 15 minutes and switch)</i>	<b>Technology</b> From the Bay and Back Again- DRAMA  <u>Activity 2-</u> Dripial Pursuit	<b>Water Conservation</b> <u>Activity 1</u> -Off I go to fetch a pail of water  <u>Activity 2-</u> What a Waste!	<b>Water Ecology</b> Wild Wetlands with Killbear Staff	<b>LUNCH</b>	<b>Water Protection</b> Rolling in the River  <u>Activity 2</u> Collective Mural	<b>Water Protection</b> No Water off a Duck's Back  <u>Activity 2</u> Alien Invader	GROUP UP
<b>C &amp; D</b> <i>(each activity runs 15 minutes and switch)</i>	<b>Water Conservation</b>  <u>Activity 1</u> -Off I go to fetch a pail of water  <u>Activity 2-</u> What a Waste!	<b>Water Ecology</b> Wild Wetlands with Killbear Staff	<b>Water Protection</b> Rolling in the River  <u>Activity 2</u> Collective Mural	<b>LUNCH</b>	<b>Water Protection</b> No Water of a Duck's Back  <u>Activity 2</u> Alien Invader	<b>Technology</b> From the Bay and Back Again- DRAMA  <u>Activity 2-</u> Dripial Pursuit	GROUP UP
<b>E &amp; F</b> <i>(each activity runs 15 minutes and switch)</i>	<b>Water Ecology</b> Wild Wetlands with Killbear Staff	<b>Water Protection</b> Rolling in the River  <u>Activity 2</u> Collective Mural	<b>Water Protection</b> No Water of a Duck's Back  <u>Activity 2</u> Alien Invader	<b>LUNCH</b>	<b>Technology</b> From the Bay and Back Again- DRAMA  <u>Activity 2-</u> Dripial Pursuit	<b>Water Conservation</b> <u>Activity 1</u> -Off I go to fetch a pail of water  <u>Activity 2-</u> What a Waste!	GROUP UP

## Georgian Bay Water Festival

GROUP	10:15-10:45	10:45- 11:20	11:25 –11:55	12:00- 12:30	12:30- 1:00	1:05-1:35	1:35-1:50
<b>G &amp; H</b>  <i>(each activity runs 15 minutes and switch)</i>	<b>Water Protection</b>  Rolling in the River  <u>Activity 2</u>  Collective Mural	<b>Water Protection</b>  No Water of a Duck’s Back  <u>Activity 2</u>  Alien Invader	<b>Technology</b>  From the Bay and Back Again- DRAMA  <u>Activity 2-</u> Dripial Pursuit	<b>LUNCH</b>	<b>Water Conservation</b>  <u>Activity 1</u> -Off I go to fetch a pail of water  <u>Activity 2-</u>  What a Waste!	<b>Water Ecology</b>  Wild Wetlands with Killbear Staff	<b>GROUP UP</b>
<b>I &amp; J</b>  <i>(each activity runs 15 minutes and switch)</i>	<b>Water Protection</b>  No Water of a Duck’s Back  <u>Activity 2</u>  Alien Invader	<b>Technology</b>  From the Bay and Back Again- DRAMA  <u>Activity 2-</u> Dripial Pursuit	<b>Water Conservation</b>  <u>Activity 1</u> -Off I go to fetch a pail of water  <u>Activity 2-</u>  What a Waste!	<b>LUNCH</b>	<b>Water Ecology</b>  Wild Wetlands with Killbear Staff	<b>Water Protection</b>  Rolling in the River  <u>Activity 2</u>  Collective Mural	<b>GROUP UP</b>