



**YOUTH BOTTLING-OUT & TAPPING-INTO  
PUBLIC WATER SYSTEMS**

**Making the Change While  
Making the Grade:**

**A Teacher's Guide to Incorporating the Issue of Bottled  
Water into the Ontario Secondary School Curriculum.**

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For: The Polaris Institute  
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### **Polaris Institute**

The Polaris Institute is an organization dedicated to developing tools and strategies for civic action on major public policy issues, including energy security, water rights and trade. **Re-Fresh!** - a Polaris Institute project and part of the *Inside the Bottle* campaign - is geared towards fostering youth awareness and activism on bottled water and related water justice issues in their schools and communities.

Recognizing that youth are and continue to be actively engaged in struggles for social and environmental justice, and using a participatory learning and research model, Re-Fresh! seeks to encourage a critical analysis of bottled water corporations and their role in public policy making, as well as a consciousness of how global and local water issues are connected.

*Re-Fresh! receives financial support from the Ontario Trillium Foundation. The Ontario Trillium Foundation is an agency of the Government of Ontario.*

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The future of environmental solutions ultimately rests with students. Today's students will shape the world of tomorrow. More than ever, it is vitally important that our education system not only prepare students academically but also provide them with the skills, perspectives, and practices they will need to meet the social and environmental challenges of the future.

– Ontario Ministry of Education, *Acting Today, Shaping Tomorrow* (2009), p.8



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## 3) Tackling the Issue and Taking Action (p.10)

Utilizing one inquiry topic as an example, the curriculum will outline how the material can effectively be taught to a classroom of secondary students. The curriculum will also outline how to transform the topic from merely an in-class learning environment into a full-school educational campaign.

## 4) Sample Inquiry Topics and Actions (p.15)

In a similar fashion to the sample inquiry questions identified within the Ontario Secondary School course-specific curricula; this curriculum will provide sample topics of inquiry which can be applied to a vast variety of Ontario Secondary School subjects and courses.

## 5) Additional Resources (Appendices A, B, C) (p.22)

The curriculum will lastly lay out additional resources which can be utilized within the classroom and school.



# Incorporating the Topic into the Ontario Curriculum

Recognizing the need to examine environmental education within Ontario schools, the Ministry of Education's Curriculum Council published a report in June of 2007 entitled *Shaping Our Schools, Shaping Our Future*. This report focused on analyzing the needs for environmental education within elementary and secondary schools, and researching successful teaching and learning approaches to the topic. The report additionally generated thirty-two recommendations which the government is currently moving forward on.

In response to this report, *Acting Today, Shaping Tomorrow – A Policy Framework for Environmental Education in Ontario Schools* was published in 2009. This framework, which was developed through research and consultation with education stake holders, was created to “offer school boards and schools an approach to environmental education that recognizes the needs of all Ontario students and promotes environmental responsibility in the operations of all levels of the education system.” (p.7)

*Acting Today, Shaping Tomorrow* sets out three goals which are organized around the themes of *teaching and learning, student engagement and community connections, and environmental leadership*. The goals are as follows:

Teaching and Learning:

**By the end of Grade 12, students will acquire knowledge, skills, and perspectives that foster understanding of their fundamental connections to each other, to the world around them, and to all living things.**

Student Engagement and Community Connections:

**Increase student engagement by fostering active participation in environmental projects and building links between schools and communities.**

Environmental Leadership:

**Increase the capacity of system leaders to implement evidence-based environmental education programming, practices, and operations.**

These goals are further broken down into strategies. These strategies outline the necessary steps for action which will be required by Ministry of Education, School Boards, and Schools in order to achieve the specified objectives.



With a focus on the actions required for schools, it is evident as to how the topic of bottled water can be incorporated into the Ontario Secondary School Curriculum. By allowing students the opportunity to be educated on the topic, and providing them with the tools to create positive change, the following requirements of the *Acting Today, Shaping Tomorrow* framework can be effectively satisfied:

### **Actions for Schools**

- Provide opportunities for students to acquire knowledge and skills related to environmental education in all subject areas, and encourage them to apply their knowledge and skills to environmental issues through action-based projects.
- Develop learning opportunities that will help students understand the underlying causes, the multiple dimensions, and the dynamic nature of environmental issues.
- Engage student leaders in the design and delivery of environmental education at the school level.
- Encourage students to enrich their learning by using information technology to access resources, connect with others, and create e-communities that focus on environmental issues.
- Encourage action research that promotes partnerships and the innovative implementation of environmental education concepts and principles.
- Create opportunities for students to address environmental issues in their homes, in their local communities, or at the global level.
- Encourage students to plan environmental education activities for all students.
- Encourage all students to participate in environmental education activities on school grounds.
- Enrich and complement students' classroom learning by organizing out-of-classroom experiences and activities.
- Encourage staff to develop knowledge and skills related to environmental education and responsible environmental practices and encourage mentoring opportunities.



# Incorporating the Topic into Ontario Secondary School Courses

At first glance, the topic of bottled water may appear to be simplistic; however, in actuality it is a complex issue which contains numerous subtopics. These subtopics, which all are interesting in their own right, will serve as the key to effectively incorporating the topic of bottled water into the Ontario Secondary School Curriculum.

The following are examples of subtopics contained within the overall issues of bottled water:

- governments and water policy
- water justice and the rights to water
- community impacts both local and global
- environmental impacts both local and global
- water sourcing and alternatives
- corporate imaging and “greenwashing”
- ethical business practices of water bottling companies
- health hazards associated with production and consumption

Each of these subtopics will allow students to explore areas of the bottled water topic while still satisfying the specific subject requirements outlined by the particular course curriculum.

Using samples from the Grade 9 Academic Geography (CGC1D) course curriculum as a model, the following will illustrate example areas where the subtopics can be incorporated.

## **Geography of Canada, Grade 9, Academic (CGC1D)**

This course explores Canada’s distinct and changing character and the geographic systems and relationships that shape it. Students will investigate the interactions of natural and human systems within Canada, as well as Canada’s economic, cultural, and environmental connections to other countries. Students will use a variety of geotechnologies and inquiry and communication methods to analyze and evaluate geographic issues and present their findings.



## ***OVERALL EXPECTATIONS PER TOPIC***

### **Geographic Foundations: Space and Systems**

By the end of this course, students will:

- describe the components and patterns of Canada's spatial organization;
- **demonstrate an understanding of the regional diversity of Canada's natural and human systems;**
- analyze local and regional factors that affect Canada's natural and human systems.

*Example Inquiry Question: Exploring the population dynamics and distribution of water resources within Canada, is bottled water an effective way to provide clean drinking water to Canadians?*

### **Human-Environment Interactions**

By the end of this course students will:

- explain the relationship of Canada's renewable and non-renewable resources to the Canadian economy
- **analyze the ways in which natural systems interact with human systems and make predictions about the outcomes of these interactions;**
- evaluate various ways of ensuring resource sustainability in Canada

*Example Inquiry Question: Explore the effect that water bottles and water bottling plants have on the environment. Compare your findings with the practices of your municipal water system and the tap water it produces. In your opinion, which industry should Canadians utilize to ensure a sustainable future?*

### **Global Connections**

By the end of this course, students will:

- describe how Canada's diverse geography affects its economic, cultural, and environmental links to other countries;
- **analyze connections between Canada and other countries;**
- report on global issues that affect Canadians.

*Example Inquiry Question: Water is a resource which is required by all human beings for life. Explore how we Canadians access, use and value our water supply. Next, identify a country from the global south and explore how they access, use and value their water supply. Compare and contrast your answers.*



## Understanding and Managing Change

By the end of this course, students will:

- explain how natural and human systems change over time and from place to place;
- predict how current or anticipated changes in the geography of Canada will affect the country's future economic, social, and environmental well-being;
- explain how global economic and environmental factors affect individual choices.

*Example Inquiry Question: Analyze the positive and negative effects that the production of plastic water bottles will have on the environment. Be sure to touch upon the product manufacturing, transportation to market, and post-consumption phases of production.*



# Tackling the Issue and Taking Action

## Considerations to Take When Tackling the Issues:

***Pre-existing Knowledge.*** Although a fairly recent idea, the topic of bottled water is often surrounded with a great deal of pre-existing knowledge. Students will most likely enter the classroom having pre-established feelings, interpretations, and ideas surrounding the product itself since many will be currently utilizing it as a drinking source. When exploring the topic a teacher should be sensitive to the fact that students may be uncomfortable in exploring an alternate view point on the subject – one that may not match the image they take from media sources. The teacher should address the corporate image of bottled water and discuss the truths and falsities associated without invoking fear. Although this topic aims to be enlightening, it is not intended to be scary.

***Environmental Connections.*** Creating connections between students and their environment can be a very powerful tool in creating change. Although it is possible to learn about the topics through literature, many students may find it more beneficial and more impactful to physically visit and personally identify with their water sources. Field trips to lakes, bottling plants, water treatment plants, wells, etc, can add great depth to the course and act as great ways to engage students.

***Addressing Broad Topics.*** The subtopics found within the overall topic of bottled water can still be broad; thus, a teacher should be mindful when assigning projects and tasks. For many inquiry topics and questions, it might prove beneficial to have students work in groups or be assigned specific topics which they can later share with the group.

***Respecting Student Diversity.*** Realizing that all students are individuals with different learning styles, teachers are encouraged to incorporate various learning techniques into their lesson plans. Appealing to the needs of Visual, Auditory, Read-Write, and Kinesthetic learners can help enhance lesson plans while ensuring all students can fully engage with one, or some, aspects of the topic.

## Why Take Action?

Why not?! Taking action on bottled water can have numerous benefits for all parties within the school and community. Whether it be taking action to create more sustainable environments or to address water justice issues, positive change can be had and great benefits can be seen. Additionally, taking action can provide students with much more enriching experiences.

Students will have the opportunity to:



- develop and enhance their communication skills
- practice leadership within their school and community
- transfer the in-class subject matter into real-world experiences
- feel a sense of empowerment by working to create positive change

## How to Take Action

### 1. Transform In-Class Projects to Out-of-Class Actions

Many inquiry questions which form the basis for in-class projects and assignments can easily be transformed into out-of-class actions. Since educating others is a great tool in spreading awareness and creating change, and students will already be compiling educational materials in-class, there exists great potential to transfer the efforts. Allow students to make the change while making the grade.

Although transforming in-class to projects to out-of-class actions can be the simplest way to create an action, they are not the only way. Students and teachers should never feel limited in with their options since the possibilities for action can be endless. It just takes a little creativity.

### 2. Create a Bottled Water Free Zone

*What's a bottled water free zone?*

A bottled water free classroom, for instance, would mean that bottled water is not distributed or used in the classroom and that efforts are made to raise awareness about the impacts of bottled water, aim to remove bottled water from vending machines, and also to promote alternatives and support for public water systems: using glasses and pitchers of tap water, encouraging the school to install and maintain water fountains, reusable stainless steel bottles that you can fill with tap water. (Polaris Institute, 2009)

*Strategies to implement a bottled water free zone:*

- Have students and staff educate fellow students and staff on the issue to raise awareness and gain support.
- As a class, present the class findings to the principal and/or upper school administration and ask for their support.
- Work with the student council to pass a resolution to ban bottled water.



## **Example Lesson Plans and Courses of Action**

Reverting back to example of Grade 9 Academic Geography, the following is an example of the ways in which a teacher may address an inquiry question and take action.

***Example Inquiry Question:** Water is a resource which is required by all human beings for life. Explore how we Canadians access, use and value our water supply. Next, identify a country from the global south and explore how they access, use and value their water supply. Compare and contrast your answers.*

### **Sample Activities To Address Inquiry Question**

#### **Explore Pre-Existing Knowledge**

**Activity Goal:** Allow the teacher to gain a sense of where students are in terms of thinking, and gain a starting point to move forward from.

**Activity:** In an open classroom discussion, have students express their feelings, beliefs, and knowledge surrounding the inquiry question.

**Materials Needed:** Writing materials and writing surface.

#### **Canada's Access to Water**

**Activity Goal:** Provide students with an opportunity to physically identify where their water is sourced from while creating personal connections to their local environment.

**Activity:** Based on the resources available, the class will visit all, or one, of the environments in which their water is sourced (water bottling facility, lake, water treatment plant, well, etc.). While visiting those environments, students will partake in activities and be asked self-reflective questions which will be aimed at fostering a personal connection.

**Materials Needed:** Transportation, permission of students/parents, any other requirements outlined by the school.



### **Canada's Water Usage**

**Activity Goal:** Allow students to comprehend the quantity of water in which an average Canadian uses within a specific timeframe.

**Activity:** Students will calculate the amount of water they use on a daily/weekly/monthly basis through activities such as drinking, bathing, cleaning, etc. Students can then compare results to notice and identify trends.

**Materials Needed:** Worksheet and writing materials.

### **Water as a Canadian Value**

**Activity Goal:** Help students to understand the ways in which Canadians view and understand water.

**Activity:** Students will be asked to either perform a survey or an interview with fellow students or community members to ask them about their views and perceptions of water. Questions can include, the safety of their residential water, the availability of their residential water, the amount of water they think they use in a day, etc.

**Materials Needed:** Survey/interview sheets and writing materials.

### **Global Perspectives on Water**

**Activity Goal:** Allow students to learn about a different culture's perspective on water while enhancing research and presentation skills.

**Activity:** Teachers will assign students (either individually or in groups) a country to be studied. Countries will range from the wealthy, such as the USA, to the developing, such as China. Students will research the access each country has to water, the usage of each country, and gain a sense of the value that each country places on water. Students will then present their findings to the rest of the class.

**Materials Needed:** Varies depending on the group/individual/teacher.



### **Class Decisions and Plan of Action**

**Activity Goal:** As a class, create conclusions based on the material learned and strategize an action plan to educate others on what was learned.

**Activity:** Teacher will facilitate a classroom discussion which will ask students to reflect on the material that they have learned. The teacher will also ask how students now feel on the topic of bottled water (knowing what they now know) and ask them to evaluate the need for it within their schools/community. After creating a class decision, the class will be asked to brainstorm ways they could educate others about their findings and take action. Does the class want to create a bottled water free zone? How would the class go about implanting that?

**Materials Needed:** Writing surface and writing materials.

### ***Sample Out-Of-Class Actions***

#### **Expanding Off of the Class Project:**

**Activity Goal:** To use the project undertaken in the classroom and transform it to an out-of-class educational activity.

**Activity:** Have students present their countries to the school in a tradeshow format. Each student will set up a booth with their researched country and use their researched material to educate peers. A Canada booth can also be created exploring the data the class as a whole has gathered.

**Materials Needed:** Varies depending on the group/school/teacher.

#### **Utilizing an Alternate Action:**

**Activity Goal:** Create an action which is different from the assignment undertaken in class, while still utilizing the material learned.

**Activity:** Create a visual display using various items (gym mats, garbage cans, etc) where students can visibly compare usages of water in other countries. The display can also outline how many water bottles the counties use, or the percentage of water used that comes from a bottled source.

**Materials Needed:** Anything that students can get their hands on or have permission to use!

#### **NOTE:**

**The option to create a bottled water free zone is always available and encouraged!**



# Sample Inquiry Topics and Actions

## Arts and Fashion

### Possible Actions

#### Dance

Construct and perform a dance to illustrate the concerns of water sourcing and the water bottle industry. Different styles of dance can be used to illustrate the effects the industry has on cultures worldwide. Use these dances as educational tools to educate students and staff.

#### Dramatic Arts

Interpret and illustrate the issues surrounding bottled water through theatrical performance. Through arranged performances to “flash mob” style presentations, students can use drama to educate their fellow students and staff.

#### Fashion

Design clothing pieces which reflect interpretations and feelings towards the bottled water industry. Display pieces throughout the school or hold an event to educate fellow students and staff.

#### Media Arts

Create traditional and digital media art pieces which address the topic of water and the bottled water industry. This can be showcased through various mediums to educate fellow students and staff.

#### Visual Arts

Create representational, abstract, or symbolic artworks that convey the issues and ideas surrounding the bottled water industry. Display images within the school or at an event to educate fellow students and staff.



## Business Studies

### Sample Issues/Inquiry Questions

- In regards to bottled water, do corporations such as Nestle, Danone, PepsiCo, and Coca Cola utilize ethical practices and social responsibility in their operations? Explore the operations of these companies and explain the importance incorporating ethical and socially responsible practices.
- Describe the local, national, and global impacts that companies such as Nestle, Danone, PepsiCo and Coca Cola have had/are having in regards to their water bottling operations.
- Perform a product comparison between a plastic water bottle and a stainless steel reusable container. Which product is more cost-effective, sustainable, and user-friendly?
- What's really inside the bottle? Explore the topic of water sourcing and "greenwashing" to determine whether the product matches its image.
- Analyze the marketing strategies utilized by bottled water companies (such as Nestle, PepsiCo, Coca-Cola, and Danone). Are they effective? How does their marketing influence the consumers and competition?
- Explore the exclusivity contracts that companies such as Coca-Cola and PepsiCo have within Canadian schools. After evaluating the pros and cons, determine whether an exclusivity contract is appropriate for your school.

### Possible Actions

Develop and implement a marketing plan within the school which promotes the sale/usage of reusable water bottles.

Have students develop and implement a venture plan for the selling of reusable water bottles within their school.

Hold an event in which addresses the topic of bottled water (such as showing the film FLOW), and have students analyze the resources required, create a promotional plan, and execute the event



## Canadian and World Issues [Geography, Civics, Economics, Law, Politics]

### Civics, Law, Politics

#### Sample Issues/Inquiry Questions

- Is water a mere commodity or a human right? Using the attached case studies (see Appendix B), determine whether water privatization is a violation of human rights.
- Who should control the usage and distribution of water if at all? Discuss this question in terms of the levels of Canadian government, Canadian laws, and International laws and relations.
- Does buying bottled water classify you as a “global citizen”? Why or why not?
- Identify and describe the legislature which has been put in place to protect the safety of our drinking water and the procedures which would be required to amend one of those laws.
- How would your school, municipality, provincial, and national levels of government go about banning bottled water? How can the people be involved in these processes and what impact can they have?
- Several Aboriginal communities within Canada today do not have access to clean water. Are there rights being impinged? What steps need to be taken to address this problem?
- Companies such as PepsiCo and Coca-Cola create water bottling plants within communities and deplete their municipal tap water in order to create their product. Should these companies be held criminally responsible?
- Does Canada have laws in place to ensure all Canadians have access to clean drinking water? Do international laws exist?
- Do national and international water bottling plants impinge on the rights of the citizens with which they are neighbors with? Why or why not? If so, what can be done?
- Explain the topic of ‘water justice’ and identify where it can be seen. What can be done about it?

#### Possible Actions

Engage in a classroom/school debate on issues such as whether water should or should not be privatized.

After reviewing their rights, have students organize and participate in a peaceful protest which addresses one of the issues surrounding the bottled water industry. Examples can include (but are not limited to) water privatization (water as a human right and not a commodity), or targeting the impacts a specific water bottle company is creating.



Choosing a topic which pertains to the bottled water industry, have students apply the techniques of democratic participation. This can include having students create and circulate a petition, lobbying a school official or politician, writing letters to the editor, or public speaking to various community members and groups.

## Economics

### Sample Issues/Inquiry Questions

- Document the journey of a water bottle from start to finish. Describe all the costs required (including production, labor, and transport). Evaluate whether this method is a cost-efficient and effective way for Canadians to obtain clean drinking water.
- Explain how the privatization of water can affect Canada's economy and its people's access to water. Additionally, how can water privatization affect the people and economy of countries from the global south?
- Explain the concept of "stewardship" as it applies to Canadians buying bottled water.

### Possible Actions

Develop a cost analysis which outlines the cost of water within the student's home, school, Canada and the world. Explain the cost-effectiveness of bottled water in relation to the average Canadian student/citizen's income.

## Geography

### Sample Issues/Inquiry Questions

- Explain how the human activity of creating, distributing and using drinking water affects, or is affected by the environment. Additionally, how does bottled water play into this equation?
- Identify the role of government in regulating and preserving Canada's available drinking water (both tap and bottled).
- Research ways we can improve the balance between Canada's water reserves and our usage as Canadians. Will watersheds work? What are pros and cons to using this alternative water sourcing method?
- Analyze how the production and transportation to market of bottled water affect natural ecosystems and human societies in North America
- Exploring the population dynamics and water resources within Canada, is bottled water an effective way to provide clean drinking water to Canadians?
- Can bottling water be considered a sustainable practice within the resource-based industry? Why or why not?



- Using geotechnologies and research, where can we predict to see water depletion within North American and International communities within the next 10 years.
- Describe the relationship between tourism and the bottled water industry. How do they influence each other?
- Analyze how different areas, both nationally and internationally, access, use and value water.
- Evaluate the short-term and long-term economic, social, and environmental effects with coincide with large-scale water sourcing by companies.
- Explore how inequities in water distribution have contributed, and are currently contributing, to conflicts both nationally and internationally.
- Explain the concept of ‘outsourcing’ and how it relates to water bottling plants in the global south.

### **Possible Actions**

Create an educational brochure/pamphlet/display which outlines the information gathered. Present these materials to students, staff, and upper administration.

Design and construct your own version of a watershed on school property. What benefits could it have to your school?

### **English**

#### **Sample Issues/Inquiry Questions**

- How does the bottled water industry portray their product to the public? How do their ads affect the way people perceive both bottled water and tap water?
- Have the subject of bottled water and water in general, to be the topic of article, poem, and creative writing pieces.

### **Possible Actions**

Have students create and deliver a “Taste Test” (similar to that of the Pepsi taste challenge) between tap and bottled water for their fellow students and staff. Have students communicate to their fellow peers how the imaging and messaging can affect their choices and interpretations.

Have students share their writing pieces with their fellow students to help educate them on the issues pertaining to the bottled water industry.



## Health and Physical Education, Food and Nutrition

### Sample Issues/Inquiry Questions

- Explore the concept of water as it relates to personal health. Is bottled water the cleanest and healthiest way to consume water?
- What environmental and social factors play a role in the safety of our drinking water?
- What minerals and chemicals pose health hazards should they be in your water? Explore the potential for plastic water bottles to leach chemicals into drinking water and the dangers this could have persons of all ages.

### Possible Actions

Identify the locations of water fountains within the school. Compare that to the location of vending machines. What do you notice? After identifying the fountains and machines, try to incorporate them into an educational campaign. This could be as simple as creating and posting stickers (which compare the health hazards associated with bottled and tap water) on the fountains and machines to provide students with information before they consume.

## Science

### Sample Issues/Inquiry Questions

- How does the bottled water industry affect terrestrial and aquatic ecosystems? Explain how the industry affects the sustainability of these ecosystems.
- What chemical substances can be removed from drinking water by household water purification systems? How do these systems compare to municipal purification systems and bottled water?
- What is the environmental impact of the production, use, and disposal of plastic water bottles? This question can be taken from several points of view including a Chemistry perspective.
- Many water bottling companies overexploit the available water resources of a community. Describe the effects that mass overconsumption of water can have on the environment and the individuals within.

### Possible Actions

Create and conduct an experiment which tests the various water sources within the school (tap, filtered, bottled, etc.). Do you notice any differences between the sources? Create an interactive display which showcases the lifecycle of a water bottle. What chemicals and processes are involved? What effects does this have on the ecosystem?



# References

## References

**Acting Today, Shaping Tomorrow**

<http://www.edu.gov.on.ca/curriculumcouncil/ShapeTomorrow.pdf>

**Polaris Institute**

[www.polarisinstitute.org](http://www.polarisinstitute.org)

**Re-Fresh!**

[www.insidethebottle.org](http://www.insidethebottle.org)

**Shaping Our Schools, Shaping Our Future**

<http://www.edu.gov.on.ca/curriculumcouncil/shapingschools.pdf>

**Tapped Out: The World Water Crisis**

<http://www.osstf.on.ca/Default.aspx?DN=494a552d-685a-418a-913e-e3eab3a71a1e>



# Appendix A:

## Additional Resources

Charity: Water

<http://www.charitywater.org/>

Environment Canada

<http://www.ec.gc.ca/default.asp?lang=en&n=76d556b9-1>

FLOW (For the Love of Water): The Documentary

<http://www.flowthefilm.com/about>

Ministry of the Environment

<http://www.ene.gov.on.ca/en/water/index.php>

Food and Water Watch

<http://www.foodandwaterwatch.org/>

Water.Org

<http://water.org/>

World Water Wars

<http://www.worldwaterwars.com/>

An extensive list of resources can be found at the FLOW website on the Take Action page: <http://www.flowthefilm.com/takeaction>



# Appendix B: Case Studies

Additional case studies and information can be found at:  
<http://www.worldwaterwars.com/>

## Bolivia

“The Bolivian water revolt has had an enormous impact on the global fight for water rights. Many people feel that if some of the planet’s poorest and disenfranchised people could stand up to the World Bank and Bechtel, so can all of us. The personal stories of heroism and struggle of the Bolivian people are very powerful and have been recited over and over all around the world.”

*-Maude Barlow, Council of Canadians*

In the late 1990’s WB required Bolivia to privatize it’s water system to continue to receive aid - in return they would provide US \$14 million loan to expand and upgrade the water system. In 1999 Bolivia turned water supply over to Aguas del Tunari (owned by engineering company Bechtel). Thus started La Guerra de agua – The Water War!

Why?

- Water prices had increased on avg 50% and up to 300%
- WB forbid city to subsidize the cost of water to ensure profits
- Water cost some people up to 1/3 of their income
- Violation of people’s economic/political and civil rights
- Denies people the universal right to water

How?

- Staged street protests – government sent over 1,200 police to break up protests (Feb. 2000)
- Government offered temporary price roll backs
- Demand for contract to be cancelled and water be controlled by the public sector, lead to shutting down the streets in April 2000, demanding that Bechtel leave the country
- Government declared Martial law and sent more police and armed forces, lead to numerous people being injured and killed including a 17 year old school boy, Victor Hugo Daza
- April 10th, 2000 – Bechtel officials fled the country and water returned to public sector control
- Legal aftermath



- A year and a half after ‘la Guerra del agua’, Aguas del Tunari filed legal action against the government claiming its losses and a portion of projected lost profits, which far exceeded the actual expended costs during their project
- They eventually dropped their case in early 2006

For more information on this issue, please visit the following:

After the Water Wars in Bolivia: The Struggle for a "Social-Public" Alternative:  
<http://upside-down-world.org/main/content/view/1255/31/>

Bechtel's Water Wars:  
<http://www.corpwatch.org/article.php?id=6670>

## Nigeria

“We consider the river a natural resource that should be left clean...”  
 - *Biobele Ademe, farmer and fisherwoman from the Niger Delta*

“We are denied even the rainwater by the oil companies”  
 - *Stella Ogbel, farmer from the Niger Delta*

Video: <http://www.poisonfire.org/poison-fire-movie>

Nigerian government is not providing clean water to citizens. Why is this? Mainly it is due to the fact that the National Agency for Foods Drugs Administration and Control is unable to monitor the water producers in the country - meaning that companies are not necessarily accountable to anyone but themselves.

Shell has been drilling for oil in the Niger Delta since 1956 as well as flaring excess natural gas into the air, water and land of local villagers and townspeople. This has led to numerous health concerns as well as restricted all aspects of daily life in the region, most notably:

1. Fishing
2. Bathing/swimming
3. Drinking water – now forced to purchase water or travel long distances
4. Collecting rain water

Additional information:

- 1956 – Shell drills their first oil well in the Niger Delta – today they are the worlds 8th biggest oil exporter
- 5,000 major oil spills in the Delta in 50 years – 1.5 millions tons has been spilled
- Every day 2 million barrels are extracted
- Gas flaring in Nigeria produces as much GHG as 18 million cars
- Gas flares cause respiratory diseases and affects all natural environments, all foods and water sources are tainted by the gas burn offs



## Wellington Water Watchers battle Nestle...

The Guelph, Cambridge, Kitchener and Waterloo regions have been identified as areas of key growth under the Places to Grow Act; which will increase groundwater demand from the Grand River Watershed.

Nestle is permitted to draw water from Aberfoyle and Hillsburgh, Ontario, both of which are part of Wellington county. They are able to extract 3.6 million litres/day from Aberfoyle and 1.1 million litres/day from Hillsburgh. In 2007 this permit expired, but appears to have since been renewed indefinitely.

Things to Consider:

- Wellington Water Watchers, a local NGO helped facilitate 8,200 letters being sent to the government against the renewal of the contract with Nestle
- Access to public drinking water needs did not come before the needs of the private sector.
- In terms of bulk water taking fees, the private sector is currently only charged 1 cent per 3,000 litres.



# Appendix C: Evaluation Forms

## Student Feedback Form:

Student's Name: \_\_\_\_\_ School Name: \_\_\_\_\_

School Location: \_\_\_\_\_ Course Code: \_\_\_\_\_

Please check the box which best represents your answer.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Disagree
I am able to describe issues surrounding bottled water.					
I understand how bottled water relates to my course.					
I can see how bottled water affects me and my community.					
Knowing what I know now, I can make an informed decision when selecting consumable water options.					
I feel confident in my ability to raise awareness about bottled water in my school.					
I felt that the actions of my class had an impact within my school.					
I enjoyed having the topic of bottled water incorporated into my class.					

**What are your thoughts about bottled water and the bottled water industry after learning about it in class?**

**How did you feel when taking action and raising awareness in your classroom/school?  
Would you do it again? Is there anything you would do differently?**



# Teacher Feedback Form

Teacher's Name: \_\_\_\_\_ School Name: \_\_\_\_\_

School Location: \_\_\_\_\_ Course Code: \_\_\_\_\_

**Why did you decide to utilize this curriculum?**

Please check the box which best represents your answer.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
This curriculum was easy to follow and contained all the resources I required.					
This issue satisfied my course requirements and was effectively incorporated into my classroom.					
My students enjoyed exploring the topic of bottled water.					
Knowing what I know now, I can make informed decisions when selecting consumable water options.					
I feel confident in my ability to aid my students in synthesizing educational campaigns and projects.					
I felt that the actions of my class had an impact within my school.					
After teaching this topic, I can see the benefit to incorporating current environmental issues into my courses.					

**What did you like about this curriculum?**

**What did you dislike about this curriculum?**

**Did you face any challenges when incorporating this topic into your classroom?**

**What bottled water issue did you tackle?**

**What actions did your class take and what were the outcomes?**

**Additional Comments/Feedback:**

