



## Section II: Water Politics

**Activity 1: Governments and Water.....p.2**

Students will complete this association activity to try and get familiar with the role and responsibility governments currently have towards water.

**Activity 2: Asking the Right Questions.....p.11**

Students are presented with a few different scenarios for which they need to come up with questions that would help them discover the information that is missing to understand how to achieve the established goals.

**Activity 3: The World Reaches for Water.....p.15**

Students and teachers will engage in this participatory scene or scripted play to better understand and explore global water realities and inequalities.

**Activity 4: Personal Reflection – Perspectives and Conflict.....p.19**

A reflection activity meant to get students to think about perspectives about water different than their own and how sometimes different perspectives and come into conflict.

**Activity 5: Dealing with Conflict.....p.22**

Students are asked to act out short scenario and explore various ways to resolve conflict.

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These lessons are designed to support high school teachers in integrating water issues into their curriculum. This resource was written by *Polaris Institute* project staff member, Daniel Cayley-Daoust, as a part of the Gr.10 Civics and Citizenship resource entitled *Water Perspectives: Conflict and Action*. Expertise and advice was provided by a local steering committee and volunteer resource reviewers. Special thanks to the following individuals for their support in making this resource possible: Rebecca McQuaid, Andy Kerr, Susan Brandum, Patricia Larkin (Nature Works Learning) and Paul Baines. Thanks to everyone else not named here, who have been supportive of this initiative. This project was sponsored by the [Ontario Trillium Foundation \(www.otf.ca\)](http://www.otf.ca).

A French translation of this resource will be made available in early 2015.

The Polaris Institute is an Ottawa-based non-governmental organization that has been in existence since 1997. Our main goal is to enable citizen movements to develop new methods, strategies and tools in order to bring about democratic social change. As a result, most of our past educational work has focused on helping students to develop the critical thinking and leadership skills necessary to bring about on-the-ground action.

We welcome any and all feedback on this educational resource.

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## Activity 1 - Governments and Water

**Learning Goals:** To start exploring the different facets of how different levels of government work and how they currently protect water in our communities.

### Curriculum Outcomes Targeted (Gr 10 Civics and Citizenship, 2013)

<b>Strand B – Civic Awareness</b> <u>B2. Governments in Canada:</u> explain, with reference to a range of issues of civic importance, the roles and responsibilities of various institutions, structures, and figures in Canadian governance	<u>B2.2</u> explain, with reference to issues of civic importance, the roles and responsibilities of different levels of government in Canada
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**Description:** This is an association activity where students will learn about water regulations and how our governments protect our water. In groups, students will learn about this and try and associate various situations or responsibilities to a specific level of government. After the activity, students will discuss these answers in a larger group.

**Time Required:** 45-60 minutes

### Materials & Preparation:

- **Materials:** Print out an information sheet and an Activity Sheet for every student
- **Activity:** Teacher can prepare for the activity by reading and understanding the Information Sheet (BLM 2.1), the Activity Sheet (BLM 2.2) and the Teacher Notes (BLM 2.3) to better answer questions from the students and to explain the activity

### Teaching Strategy:

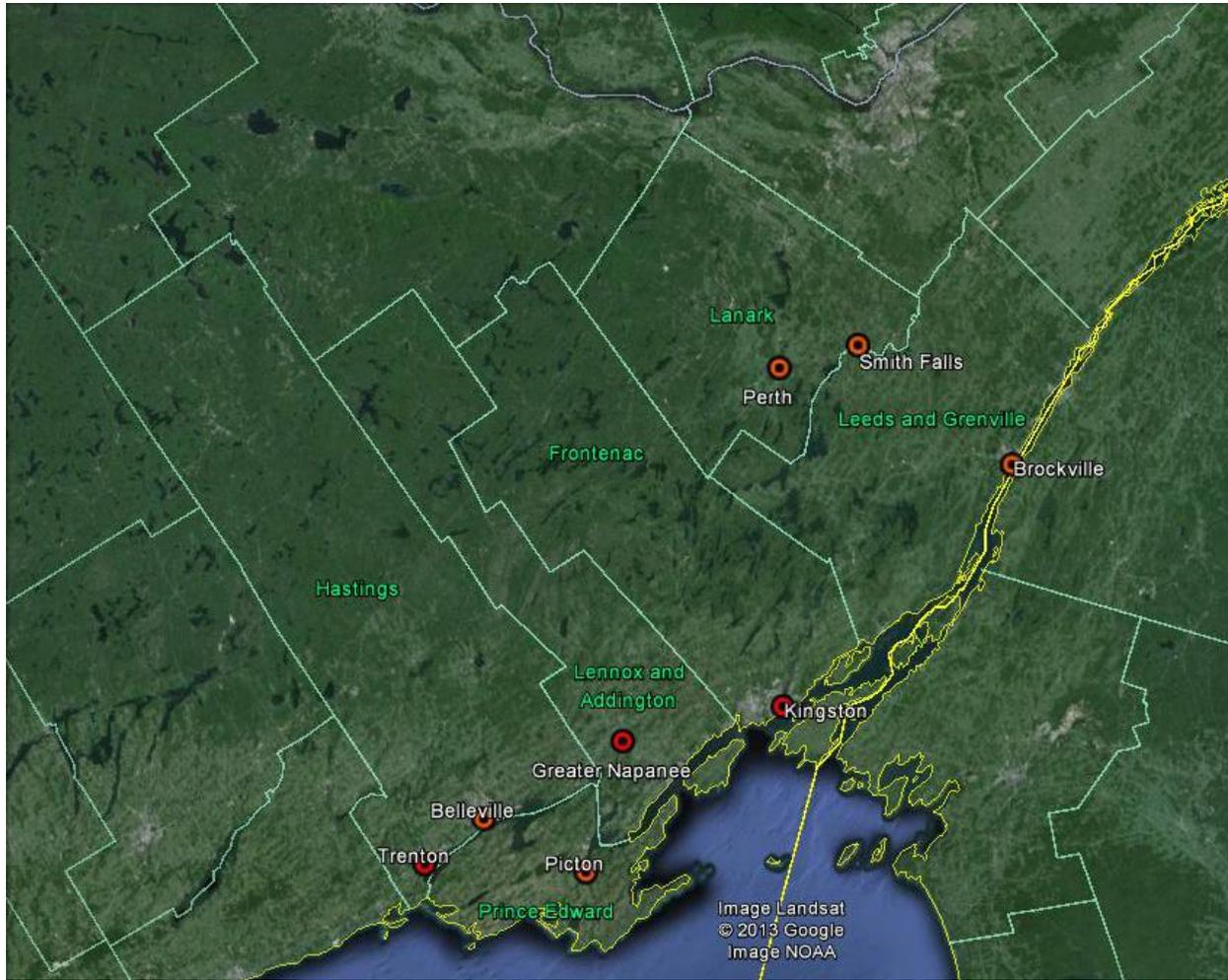
- Distribute the Information Sheet (BLM 2.1) and the Activity Sheet (BLM 2.2) to students
- Split class into groups of 2-4 people
- Explain the activity to the students:
  1. Individually or as a small group, read the Information Sheet (BLM 2.1) *(5-10 minutes)*
  2. Using the information sheet as a reference, fill in the Table in the Activity Sheet (BLM 2.2) by associating the proper responsibility to the proper category in the table that best explains “who” the responsible party is. Note that there can be more than one answer by question. Not all the answers are in the text. Some need to be deduced from similar examples. *(10-15 minutes)*
  3. Go over answers and discuss them in a larger group. (Teacher can use Teacher Notes in BLM 2.3 as a reference) We recommend that the teacher asks students to provide answers and briefly explain why that is the correct answer. Other students can chime in with other opinions, and then the teacher can confirm the answer and add comments as necessary. *(15-25 minutes)*

## (BLM 2.1) – INFORMATION SHEET: Our governments and our water

### Water Regulations and Current Government Responsibility for Six Counties in Eastern Ontario

August 2014 by Daniel Cayley-Daoust and Wesley Petite, Polaris Institute

**Target Geographical Area:** Counties of Frontenac, Hastings, Lanark, Leeds and Grenville, and Lennox and Addington, Prince Edward; in the province of Ontario, Canada



As members of a community we interact with water often and in various ways, from using it to drink, grow food, for recreation or to manufacture products and produce energy. We also know that our actions can have a negative impact on our water through pollution and its overuse or abuse. Governments have implemented rules and regulations to protect or treat the water that was or will be used, often because of the historic need to have access to water for certain tasks and to have clean water for our communities. Regulations often try to mitigate and discourage negligent or accidental abuses caused by the activities of individuals or corporations, and can provide guidelines to follow to protect water or prevent pollution.

There is a shared responsibility for water protection (surface and groundwater) in Canada where the process of regulation is split between the federal, provincial and municipal levels of government, meaning that the laws and policies of each of these levels of government will determine how water will be protected and who will protect it. First Nations water management falls under federal responsibility,

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***Provincial Statutes  
Currently Protecting  
Water in Ontario***

- *Ontario Water Resources Act*
- *Clean Water Act*
- *Environmental Assessment Act*
- *Water Opportunities and  
Water Conservation Act*
- *Safe Drinking Water Act*
- *Environmental Bill of Rights*
- *Drainage Act*
- *The Nutrient Management Act*
- *Pesticides Act*
- *Ontario Regulation 63/09*
- *The Great Lakes Strategy*
- *Provincial Policy Statement*
- *Ontario Regulation 387/04*
- *Conservation Authorities Act*

but may be shared with First Nation governments under self-governance agreements. The federal government also has the responsibility for water protection in federal parks and for the territories of Nunavut and Northwest Territories, as well as for boundary waters, meaning waterways that cross borders with other countries as well as inter-provincial waterways. An example is Lake Ontario which needs be protected collaboratively between Ontario, New York State, Canada and the US, and all the States that are upstream of Lake Ontario. This can obviously prove to be quite a challenge. To this effect, the International Joint Commission was created in 1909 to foster Canada- US collaboration for the integrated management of the Great lakes and the St-Lawrence water system.

For logistical and practical reasons the responsibility of applying obligations set out in federal legislation is often delegated to the provinces. In turn, provinces will usually hand down many responsibilities such as permits to take large quantities of water, drinking water and wastewater management, to municipalities and cities within their own territories.<sup>i</sup> However, provincial governments will most often retain some of those responsibilities in rural communities, especially for the more complex and costly responsibilities. For example, this is the case for permits to take large quantities of water.

The Province of Ontario has many water regulations, policy commitments, and statutes as listed on the previous page. Ontario also has a groundwater monitoring program with wells across Ontario that is used to gather information on water quality and quantity.<sup>ii</sup> Both environmental enforcement (i.e. giving fines or other types of punishment to people and entities that pollute land, water and air) and finding a way to mitigate and clean up the pollution are the responsibility of the federal government when it involves federal laws and regulations, and the provincial government when it involves provincial laws and regulations.

Along with federal and provincial statutes and regulations governing water issues, there are also local policies and initiatives undertaken by municipalities, conservation authorities and privately owned conservation efforts. Within the province of Ontario there are 36 Conservation Authorities that monitor some of the province's main waterways and catchment areas (watersheds). Conservation Authorities can also own conservation areas in their region.<sup>iii</sup> The specific conservation authorities in the area under study are the Mississippi Valley Conservation Authority, Quinte Conservation Authority, Rideau Valley

Conservation Authority, Cataraqui Region Conservation Authority, Lower Trent Conservation, and Crowe Valley Conservation Authority.

In recent history there has been a shift in the regulation of freshwater resources in province of Ontario. Prior to the 2006 Clean Water Act, the main focus was on treatment methods to ensure high quality potable water for residential and commercial use. Given the costs associated with this approach and the benefits of having a cleaner environment overall, the focus of water policy has become the protection of the *source* of our drinking water be it a well for groundwater (water found in aquifers in the earth, or “underground”) or rivers and lakes (surface water). Water source protection is now an official provincial policy. This represents a shift from a treatment and remediation approach towards one that is more community-based and focuses on pollution prevention.

Ontario’s Clean Water Act requires an assessment of the threats to water quality and the actions to be taken in order to remedy and reduce risk of contamination to municipal drinking water supplies. Source protection areas and regions<sup>iv</sup> were established to this effect and each area/region has a source water protection committee which develops a source protection plan. This science driven approach emphasises local and public participation.<sup>v</sup> There are five source protection areas/regions that pertain to the six counties profiled here. The three primary regions are the Rideau Mississippi Region, the Quinte Region and the Cataraqui Area, and the counties also peripherally touch the Raisin-South Nation and Trent Conservation Coalition source protection regions.<sup>vi</sup>

### **A few examples...**

There are many angles and complexities involved in managing, regulating and protecting water. Even a seemingly simple action like deciding if a public beach should remain open can be quite complex. Often this decision will have to do with the quality of water and the presence of various pollutants such as E. coli bacteria. Who makes this decision depends on the location of the beach. For example, if the beach is in a provincial park, it will be provincial responsibility, if it is in a federal park, it will be federal responsibility. If it is in a city, it will be the city’s responsibility. Public beaches in rural towns or municipalities are their responsibility. Then you also have private beaches and lakes with cottages that are often monitored by local groups, private companies or the provincial government. In addition, a separate regulator will establish what represents a reasonable and healthy amount of e-coli in the water. Often these parameters are set by the federal government, namely Health Canada, but are monitored by the authority that is closest to the situation.

Similarly, for something like drinking water, the limits for the amount of certain contaminants in your water and guidelines for how water is managed are jointly set by the federal, provincial and territorial governments and then enforced by the authority closest to the water. In cities and towns with public water systems and water treatment plants, it is their direct responsibility to test according to federal and provincial guidelines and make sure the water is safe. Similarly, private property owners in rural areas are also responsible for doing the same thing with the water that they take from wells.

*Note: Policies and regulations change over time.*

## Understanding regulations and its limitations

Understanding how governments and policies work is a complicated task. Regulations, norms, policies, etc., exist for all sorts of things such as air pollution, labour practices (such as maximum hours of work, parental leave, safety at work, minimum wage), universal health care, driving or education (curriculum, mandatory schooling, etc.). Governments set regulations and policies for water because water is in part viewed as a “public trust” that needs to be protected or preserved for generations to come. A “Public Trust” can also be understood as ‘Commons,’ or something no one can own, that is inherited, shared or passed on. Therefore these regulations are meant to establish practices, limits or norms that need to be respected to either prevent problems or to avoid pollution. While regulations have many uses in our society, they also have many limitations.

- 1) A regulation is a very political concept because governments are responsible for establishing them meaning that regulations can change based on the government of the day. From one country to another there can be very stark differences on the types and strength of regulations that are in place, and the same goes for different provinces or municipalities within a country. In some cases this has meant that companies leave one country for another where they will not be controlled by as many regulations.
- 2) In theory, regulations are supposed to be in the public interest, or be what is best for the whole of society and for the common good. However, regulations, and the people who create them, bureaucrats (government workers) and politicians, can be influenced and pressured by private interests such as corporations who have the time, money and incentive to do so.
- 3) The access to adequate resources to implement a regulation is important. It is one thing to have a great regulation on paper, but if you do not provide the resources to make it a reality, whether it is to hire inspectors, restore habitat or buy equipment, it will not have the desired effect.
- 4) Regulations need to be written with very specific language to avoid being interpreted in different ways by competing interests, but this can also mean that it is difficult to adapt to special or new situations that were unpredicted or did not exist when the regulations were drafted.
- 5) Conflicting jurisdictions or difficulty collaborating between jurisdictions can also add complications to the application and the efficiency of a regulation. If, for example, an issue arises and the Provincial regulator says it is the federal government’s responsibility to address it, but the federal government refuses to recognize that responsibility or chooses to address an issue differently than the province wants it to, it can lead to conflict, legal action, or simply inaction and a continuation of a problem that needs to be addressed. While all governments should be working together to protect water in our communities, sometimes conflicting priorities or lack of money can prevent this.
- 6) Finally, regulations can be advantageous for some people while being disadvantageous for others. For example, if you compare the interests of a large company and that of a community where the company operates, interests may diverge when it comes to how much a regulation should protect the water in their community, and the role that regulations play in preventing pollution. On one side, the more the costs are higher, the least likely the company will be interested in changing regulations, while the community

wants to ensure it stays healthy. Sometimes these interests can work alongside each other, sometimes they can't. This is when you see conflict emerge.

Obviously, if these limitations result in the failure to protect water sources, the people living in the area will be the first to feel the impact. Collectively monitoring the quality of the water in your community, or fighting to change a regulation that is bad for the community are important examples of ways to counter the limitations of regulations and ensure our communities are healthy.

## **(BLM 2.2) – ACTIVITY SHEET: Who is responsible for water?**

**Question:** Who is responsible for...

**Task:** Associate the number of each water responsibility (see below) to the appropriate category below according to who is supposed to take action. A number can be associated to more than one category.

Categories:

A. <u>Individuals/families/communities</u>
B. <u>Municipality, City or County</u>
C. <u>Provincial government</u>
D. <u>Federal government</u>
E. <u>Other Countries</u>

### **Water Responsibilities**

- 1) Ensuring that the water at a city public beach is safe to swim in?
- 2) Setting norms and limits for levels of contaminants that are acceptable for swimming or for drinking?
- 3) Testing, treating and distributing safe drinking water through a public water treatment and distribution system (cities, some towns)?
- 4) Testing and ensuring private wells are safe to drink from?
- 5) Giving fines to people and companies for polluting land or water?
- 6) Establishing guidelines for agriculture to avoid impacts of fertilizers, manure or pesticides on water resources?
- 7) Treating, collecting and disposing of wastewater in a setting with individual septic tanks (often rural)?
- 8) Treating, collecting and disposing of wastewater in a setting with a community collection and treatment system (city or other)?
- 9) Determining how much fish we can take from a lake?
- 10) Monitoring the health (water quality, life, etc.) of rivers and lakes within a province?
- 11) Monitoring the health (water quality, life, etc.) of rivers and lakes that cross provincial boundaries?
- 12) Monitoring the health (water quality, life, etc.) of rivers and lakes that cross country boundaries?
- 13) Regulating and monitoring pipeline safety of large pipelines that span more than one province?
- 14) Cleaning up abandoned mines?
- 15) First Nation's drinking water?

**Note:** This activity is adapted mostly to the province of Ontario and Canada. Policies and how responsibilities for water are attributed vary between provinces, between municipalities and between countries.

## **(BLM 2.3) – TEACHER NOTES: Who is responsible for water?**

ANSWER SHEET:

A. Individuals/families/communities --- 4, 7
B. Municipality, city or county --- 1, 3, 8
C. Provincial or territory government --- 2, 5, 6, 9, 10, 11, 12, 14
D. Federal government --- 2, 5, 6, 10, 11, 12, 13, 15
E. Other countries --- 12

TEACHER HELP for answers to questions.

- 1) Ensuring that the water at a city public beach is safe to swim in?
  - Cities are responsible for conducting regular testing of waters at public beaches.
- 2) Setting norms and limits for levels of contaminants that are acceptable for swimming or for drinking?
  - The federal government in collaboration with provinces and territories have had jointly established drinking water guidelines since 1968.
- 3) Testing, treating and distributing safe drinking water through a public water treatment and distribution system (cities, some towns)?
  - Cities are responsible for conducting daily testing of drinking water for municipal drinking water systems.
- 4) Testing and ensuring private wells are safe to drink from?
  - Owners are responsible for regularly testing the water from their well and ensuring it is safe to drink.
- 5) Giving fines to people and companies for polluting land or water?
  - It is the responsibility of the federal government when it involves federal laws and regulations, and the provincial government when it involved provincial laws and regulations.
- 6) Establishing guidelines for agriculture to avoid impacts of fertilizers, manure or pesticides on water resources?
  - This is also divided between the federal and provincial governments.
- 7) Treating, collecting and disposing of wastewater in a setting with individual septic tanks (often rural)?
  - Similar to the question about wells, it is the owner that is responsible to make sure the septic tank doesn't leak and to dispose of the effluents properly.
- 8) Treating, collecting and disposing of wastewater in a setting with a community collection and treatment system (city or other)?
  - Cities are responsible for collecting and treating wastewater before it is returned to a local lake or river.
- 9) Determining how much fish we can take from a lake?
  - The provincial and territorial governments are responsible for managing recreational fishing in freshwater (except for Salmon in BC). Note: the Federal government is responsible for most marine species (oceans).
- 10) Monitoring the health (water quality, life, etc.) of rivers and lakes within a province?
  - Provincial responsibility, with the federal government responsible for some navigable waterways
- 11) Monitoring the health (water quality, life, etc.) of rivers and lakes that cross provincial boundaries?
  - Federal and provincial management
- 12) Monitoring the health (water quality, life, etc.) of rivers and lakes that cross country boundaries?
  - Federal, provincial and other countries need to collaborate because they can all have impacts independently on water quality and water quantity.

13) Regulating and monitoring pipeline for large pipelines that span more than one province?

- This would be the National Energy Board, a federal agency. Provinces have their own agencies for smaller pipelines.

14) Cleaning up abandoned mines?

- Provinces are responsible for cleaning up old mines that are still polluting the land with mine tailings but have been abandoned by companies, sometimes a long time ago. There are over 10,000 abandoned mines in Canada.

15) First Nation's drinking water?

- The Federal government is responsible for this, sometimes jointly with First Nation communities under specific agreements.

## Activity 2 - Asking the Right Questions

**Learning Goals:** Learn how to ask the right questions to properly analyse a situation or a problem as part of the inquiry-based process.

### Curriculum Outcomes Targeted (Gr 10 Civics and Citizenship, 2013)

<p><b>Strand A – Political Inquiry and Skill Development</b> <i>A1.Political Inquiry:</i> use the political inquiry process and the concepts of political thinking when investigating issues, events, and developments of civic importance</p>	<p><u>A1.1</u> formulate different types of questions to guide investigations into issues, events, and/or developments of civic importance</p>
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**Description:** This activity focuses on formulating questions around a few different scenarios. Objectives are proposed to the student based on the problem or scenario. The student’s task would simply be to find questions that should be asked to properly address the situation and explore different types of questions to use.

**Time Required:** 60 minutes

### Materials & Preparation:

- **Materials:** Put scenarios up on the board, project them onto a wall, or print them out for each group.
- **Activity:** (Optional) consider adapting or creating scenarios that are relevant to the local geographical reality. For example you could come up with a fictional scenario about a local lake or river, or you could write a real scenario that happened in the community related to water. Doing so can help students feel more connected to the activity and motivate the learning.
  - Adaptation to known realities: Simply replace the names of the river, lake, municipal council or high school with one that is relevant to the reality of the students’ life. Ex: name of high school you teach at, municipality you live in, river nearest to the school, etc.

### Teaching Strategy:

1. Select Scenarios (See BLM 2.4) to be used or (*OPTIONAL*) come up with a locally (real or fictional) adapted scenarios. Provide scenarios to students (paper, projected on wall, written on chalkboard).
2. Split classroom into small groups of 2-4 students (*Alternative:* Get students to do 1-2 scenarios alone, then the last two in small groups)
3. Explain the task to the students:
  - For each scenario, your group will “play” the role described under it, so try as much as possible to put yourself in the shoes of that person.
  - For each scenario you will need to come up with questions that you would need the answers to for the described objective.
  - You will answer the questions one at a time (Note: teacher can reveal questions one at a time to keep students focused on the one)

- Between each question, share and discuss as a larger classroom.
- Teacher will read the scenarios to the whole class before you start answering.

4. Activity

- One scenario at a time, give small groups of students approximately 5 minutes each scenario to come up with as many questions as possible, preferably different kinds of questions.
- Between each scenario, come back to the larger group (without separating small groups) and ask each small group to share 2-3 examples of questions.
- Write a few of them on the board or screen and discuss what kind of questions they did ask and what questions they didn't ask.
- Teacher guidance: For the first scenario, leave it open ended test run to establish what kinds of questions they will come up with without guidance. After the first scenario introduce some reflections and suggestions on types of questions they should come up with (see BLM 2.5) based on what kinds of questions they come up with for the first scenario.

## (BLM 2.4) ACTIVITY SHEET - Asking the Right Questions

### Scenarios

- I. A large black viscous and oily film is discovered in a local river.

Student perspective: Journalist that is writing a news article on the situation.

- II. A student that is part of the local social justice or environmental club wants to start organizing a campaign to end the sales of bottled water at his high school.

Student perspective: Students that are part of this club and interested on planning this campaign.

- III. Your municipal council is considering a resolution or motion to limit the quantity of water a private company or an individual can use to 10 million litres of water per day from local water sources.

Student Perspective: Municipal councillor that needs to decide if they'll vote for or against the proposal.

- IV. A company wants to build a new factory that produces paints and solvents along the shores of a lake.

Student perspective: Concerned community member that lives on the shores of that lake. (How do we determine if factory is good? bad? or...?)

## **(BLM 2.5) TEACHER NOTES – Asking the Right Questions**

Depending on the scenario chosen for the class, some of the elements in the teacher guideline may or may not apply.

Teacher guideline:

**Hints or guiding concepts** *(depending on the scenario, this could or could not be relevant)*

- Questions that will serve to EVALUATE
- Remember VIRTUAL WATER
- Remember UPSTREAM & DOWNSTREAM
- EXPAND GEOGRAPHY: Look farther away, not only in the immediate reality of the issue
- The connection behind the connection: DIRECT or INDIRECT elements
- TRAVEL IN TIME: Past, present, future implications
- Look for CREATIVE angles of looking at issue
- Create ALTERNATIVE conclusions or interpretations
- What if some of your assumptions are wrong or incomplete? CHALLENGE ASSUMPTIONS.
- Where does government fit into this scenario? Where does the community fit? Who has what responsibility?
- WHO could this impact? HOW could this impact those people?

### **Types of questions**

- CLARIFICATION – related to specific aspects of immediate event or scenario
- WHY? – Origins, cause
- WHAT NOW? – Potential consequences, next steps, results
- HOW? – strategy, plan, process
- COMPARISON? – similarities, differences, history
- WHO? – who is responsible, decision-makers, jurisdiction, targets, stakeholders, those affected, etc.
- WHEN? – Timeline of events or actions, past & future

## Activity 3 - The World Reaches for Water

**Learning Goals:** To understand what factors influence access to water locally and globally

**Curriculum Outcomes Targeted (Gr 10 Civics and Citizenship, 2013)**

<b>Strand B – Civic Awareness</b> <i>B3. Rights and Responsibilities:</i> analyse key rights and responsibilities associated with citizenship, in both the Canadian and global context, and some ways in which these rights are protected	<b>B3.4</b> analyse rights and responsibilities of citizenship within a global context, including those related to international conventions, laws, and/or institutions
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**Description:** The teacher narrates a scene with some participation from the class to illustrate some global water realities and gets students to reflect on concepts related to access to water and sanitation, water pollution and the link between access to water and economic disparities. This is an interactive activity.

**Time Required:** 30 minutes

**Materials & Preparation:**

- **Materials:**
  - *Money symbol:* Green \$ signs (Can be made out of coloured construction paper and drawn using a marker of another color so others can see from afar)
  - *Water symbol:* 9 glasses of water or reusable water bottles or blue water drops made of semi-rigid paper (you can also have drawings of a glass or container of water or a tap – AVOID bottled water – something that can represent access to clean drinking water)
  - *Sanitation symbol:* 6 rolls of toilet paper – taped or packaged to avoid having students roll it out and play with it (or drawings of toilets or other representation of sanitation)
- **Activity:** Read script to make sure you understand how the activity works and familiarize yourself with the script. Teachers will be responsible for the narration.

Teacher needs to familiarize self with script (to narrate) and statistics, and prepare props (colored cardboard and/or objects).

**Teaching Strategy:**

1. Read script from (BLM 2.6).
2. After the script is done, get students to return to their seats and do a debrief
3. Debrief
  - Explain that the activity was a generalization of how wealth is separated around the world and how easy it is to access water around the world. It is important to understand that there are many other factors that influence how this works between countries, within a country and between different communities.
  - Ask students to share what they learned during this activity? About accessing water, who has the most money, Sanitation, etc?
4. Notes for teachers

- During the narration, several questions are asked to students to prompt basic reflection on the statistics that you've presented. You don't need to spend very much time on each question and you don't need to get them to find all the best answers to the questions. A few good answers are good before continuing script.
- The activity is meant as an introduction to factors that influence people's ability to access good quality water infrastructure. It is meant to awaken some surface understanding of some of these issues, the inequalities of wealth and water use, and global water issues related to access and sanitation, by using a statistical, interactive and visual activity.
- The interactive part of the activity is meant to illustrate explicitly how inequalities work both regarding money and regarding ability to access water.
- Definition of Global South: roughly 133 countries with a human development index below .8. Mostly located in the southern hemisphere
- Definition of Virtual Water: also known as water footprint, virtual water content of a product or good is the volume of water used in its production (think food and beverages). Virtual water is water that is taken out of a water system or watershed into another one. O

## (BLM 2.6) TEACHER NOTES – The World Reaches for Water

### Script:

- 1) "I need 10 volunteers for this activity."
  - Choose 10 people and hand them each one Money Sign and one Water Sign and line them up in front of the class; the one on the left will eventually be the person who represents the richest 10% and the person on the right will eventually represent the poorest 10%; you can choose students who don't mind being the centre of attention for these roles to avoid discomfort.
- 2) "You 10 represent the world's population and the water that is used in the world."
- 3) "One of the most important recent achievements has been the recognition in July 2010 by the United Nations General Assembly of the human right to water and sanitation. The Assembly recognized the right of every human being to have access to **sufficient** water for personal and domestic uses (between 50 and 100 litres of water per person per day), which must be **safe, acceptable** and **affordable** (water costs should not exceed **3 per cent** of household income), and be **physically accessible** (the water source has to be within 1,000 metres of the home and collection time should not exceed 30 minutes)."
  - Ask: "What do we use water for on a daily basis?" (below are some statistics you can share)
    - Toilet uses between 6 and 9 litres per flush
    - Shower uses between 3.5 and 7 litres per minute
    - Canadians currently use an average of 329 litres of water per person, per day — second only to the United States in the developed world, and more than twice as much as Europeans.
  - "How different would your lives be if you had to spend 30 minutes one or several times a day to collect water?" (Note that it would affect your ability to go to school and for your family to take care of other household and daily needs or activities.)
- 4) "Now let's take a look at the state of water and sanitation. According to the UN, 748 million people, or 11 per cent of the global population, remain without access to a safe and accessible source of drinking water. – The first 9 people in the line (from the left) get to keep their Water Symbol. The person on the right has to give up their Water Symbol. The person without a Water Symbol represents that 11% (1 out of 10 approximately) that doesn't have access to a reliable source of water."
  - "What are some ways that prevent water from being safe to drink?" (Look for answers like: lack of adequate infrastructure, low availability of water, polluted water, not enough money to build infrastructure, water costs too much, etc.)
  - "Where do most people who lack access to clean water live? What parts of the world?" (Look for African countries, excluding South Africa and northern Africa, as well as Yemen, Afghanistan, Papua New Guinea, etc... The poorer areas of many of the Global South countries, or even many First Nation communities in Canada.)
- 5) "According to the World Health Organization, only 62% of the world has improved sanitation facilities (facilities that separate excrements from human contact). – The first 6 people in line (from the left) can take a roll of toilet paper (or chosen symbol). The remaining 4 people represent the close to 40% (4 out of 10) of people who don't have access to improved sanitation facilities." After

they are done you can also add the following statistic: "It is also true that more people have a mobile phone than a toilet."

- "What are some consequences of poor water sanitation?" (Get them to identify that it would increase health impacts and water borne diseases)
  - After they give a few answers, you can add: "More than 3.4 million people die each year from water, sanitation, and hygiene-related causes. Nearly all deaths, 99 percent, occur in the developing world."
- 6) "But who uses the most water? A mere 12 percent of the world's population uses approximately 85 percent of its water. – So let's rearrange the water here to represent this proportion." - The 4<sup>th</sup> to 9<sup>th</sup> person should hand over their Water Symbol to the 1<sup>st</sup> one and touch the water signs of the 2<sup>nd</sup> or 3<sup>rd</sup> person in line – they have to share that water. The 10<sup>th</sup> person (last on the right) is still without any water.
- 7) "Generally, the way you are set up represents who uses water the most and also how easily people can access water. Many people have to share or ration their water or travel further for their water."
- 8) "Why do some people use more water than others?" (Get them to talk about lifestyle and water use, as well as factors that influence access to water such as ability to pay or availability. If answers aren't forthcoming, ask: "What main factors influence how easy or hard it will be to access water?" - - Get students to identify geographic availability, combined with demand and pressure on water resources, and ability to pay or money as the two main ones. In areas where water is limited, sometimes poorer communities have to compete with corporations who can pay more to access the same source of water, which can cause problems. Other factors or answers will not necessarily be wrong.)
- 9) "Which parts of the world use the most water? Who are some of the biggest users of water?" (Get students to identify that North America, Europe and so called "developed" countries use most of the water along with many large industries.)
- 10) Finish with:
- "The richest 10% of adults accounted for 85% of the world total wealth. In contrast, the poorest half of the world adult population owned barely 1% of global wealth. – So let's rearrange the wealth here to represent this proportion." – The 4<sup>th</sup> to 10<sup>th</sup> person should hand over their \$ sign to the 1<sup>st</sup> one and touch one of the \$ signs of the 2<sup>nd</sup> or 3<sup>rd</sup> person in line. They have to share what is left of the money.
    - "Where do we find most of the money in the world?" (Get students to identify that you find most of it in so called "developed" countries, in North America, Europe and a few of the richest people in the global south, as well as with large companies.)
    - "How does the money that an individual or a community has influence their ability to get clean drinking water in the global south or the so-called developing world?" (Get students to identify that a person with enough money can dig a personal well, buy a water treatment device, but in many countries only a very small % of people can do that on their own, and it can represent very large amounts of their income, meaning they would have to sacrifice income they need for food, education, housing, and transportation. Therefore, collectively-owned or publicly-owned water distribution systems are still the most cost effective and safe method to gain access to water. In places where this is not available, people with the least money have the most difficult time accessing clean drinking water.)

## Activity 4 - Personal Reflection – Perspectives and conflict

**Learning Goals:** Explore your own relationship to water, how it might differ from someone else’s, and how this can lead to conflict.

### Curriculum Outcomes Targeted (Gr.10 Civics and Citizenship, 2013)

<p><b>Strand B – Civic Awareness</b>  <u>B1. Civic Issues, Democratic Values:</u> describe beliefs and values associated with democratic citizenship in Canada, and explain how they are related to civic action and to one’s position on civic issues</p>	<p><u>B1.1</u> describe some civic issues of local, national, and/or global significance and compare the perspectives of different groups on selected issues</p>
<p><b>Strand C – Civic Engagement and Action</b>  <u>C2. Inclusion and Participation:</u> assess ways in which people express their perspectives on issues of civic importance and how various perspectives, beliefs, and values are recognized and represented in communities in Canada</p>	<p><u>C2.1</u> analyse ways in which various beliefs, values, and perspectives are represented in their communities</p>

**Description:** The activity is made to get students to reflect individually on larger questions related to water and their lives by writing down some thoughts (OPTIONAL: through artistic expression).

**Time Required:** 30-60 minutes

#### Materials & Preparation:

- Materials:
  - Students need paper and pen, or craft materials/art supplies if they choose to do an artistic visual representation (if teacher chooses this route).
  - Print or project questions from BLM 2.7 or an adaptation of those questions

#### Teaching Strategy:

1. Note: this activity is meant to monitor the progression of a student’s reflection on water and their relationship to it.
2. The teacher will explain the tasks of the activity
  - *Activity – 3 options* – Putting the reflection on paper (3 options, choice of the student OR teacher can choose one) – The reflection should address some (a few) or all of the guiding questions from BLM 2.7. Distribute question or project questions on the board when appropriate.
    - A. The student can choose to write one page of text that explores their relationship to water
  - *Wrap-Up* - Sharing the reflection with classmates (3 options, class can vote or teacher can decide) -- suggested that the teacher chooses one or two questions.
    - A. Everyone shares their reflection by briefly sharing their work in front of the class

- B. The class is split in small groups of about 5 people and each person in the group shares their reflection each their turn
- C. A few volunteers share their work in front of the class
- OPTIONAL – Artistic expression.
  - A. Use questions 1,4,6 or 7 and ask students to do one of the following:
    - The student can write a one page poem accompanied by a short text that talks about what the poem is about.
    - The student can make a visual representation accompanied by a short reflection and contextualization or explanation. Students must be conscious of time constraints (i.e. needs to be simple).
  - B. Share result with classmates (see part 2 above)

### **(BLM 2.7) - Questions for Personal Reflection**

1. Is water important in your life? Explain why?
2. Give a few reasons why or examples where someone might disagree with you.
3. Do you know anyone who takes their water from well water? Do you know someone who takes their water from municipal water systems? Do you know someone who lives on a first nation reserve with an active boil water advisory? Do you know someone who lives in another country and in a house where they can't drink the water from their tap?
4. What parts of your life would change if you didn't have running water at home?
5. Why could it be useful to understand how governments deal with water in your community?
6. Give an example or imagine a situation where two people come into conflict over water. Explain who the actors are (those who are involved), what the conflict is and possible outcomes.
7. Give an example or imagine a situation where a corporation and a community come into conflict over water. Explain who the actors are (those who are involved), what the conflict is and possible outcomes.

## Activity 5 - Dealing with conflict

**Learning Goals:** Explore how we individually deal with interpersonal conflict and how do we deal with conflict collectively in our society.

### Curriculum Outcomes Targeted (Gr 10 Civics and Citizenship, 2013)

<p><b>Strand C</b> – Civic Engagement and Action  <u>C2. Inclusion and Participation:</u>          assess ways in which people express their perspectives on issues of civic importance and how various perspectives, beliefs, and values are recognized and represented in communities in Canada</p>	<p><u>C2.1</u> analyse ways in which various beliefs, values, and perspectives are represented in their communities</p>
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**Description:** This activity uses simplified scenarios to get students to try and act out various ways people react to certain scenarios. Students will also reflect and discuss different ways people use to resolve conflict and differences in our society.

**Time Required:** 30-60 minutes

#### Materials & Preparation:

- Materials:
  - Print or project scenarios from BLM 2.8, an adaptation of those questions or new questions.
- Activity:
  - Choose the way to conduct the activity by either pairing students or having volunteers act out in front of the class (see below)
  - Teacher to read guiding questions and get familiar with activity to better facilitate the discussion.

#### Teaching Strategy:

1. Three options for activity
  - a. *Option 1* – Pair students up two-by-two. Have them stand up in front of each other. Have students act out the first scenario for two minutes, then have students reverse roles and re-do the scenario. Take a moment to get class to give their impressions (see below for possible guiding question for teachers). Then repeat for scenarios 2 and 3. Between each 4 minute set, discuss how each participant was feeling, and how the situation set the stage for the type of interaction they were going to have. (see BLM 2.9 for guiding questions for teachers)
  - b. *Option 2* – Have two volunteer students act out the scenario for about two minutes before having them reverse roles for the same scenario. Get the whole class to discuss what they saw (see BLM 2.9 for guiding questions for teachers). Repeat for scenarios 2 and 3.
  - c. *Option 3* – Have two volunteer students act out the scenario for about one or two minutes. Allow other students to replace one of the volunteers to offer alternative

arguments or approaches. After nobody new wants to intervene or after 5-10 minutes, interrupt the scenario and get the whole class to discuss what they saw (see BLM 2.9 for guiding questions for teachers). Repeat for scenarios 2 and 3.

- d. NOTES:
  - i. When showing questions, ask students if they have questions for clarification about certain words or roles before asking them to act out the scenario.
  - ii. Also, remember that much of this is improvisation and is not meant to be fully factual or realistic. It is meant to get students to try and embody a position that might not be there and choose an approach with which to interact with someone else.
2. Brief group discussion on types of conflict resolution and the factors that influence how we deal with conflict.
  - a. Process:
    - i. In a large group, teacher poses question (, then asks student to generate ideas that you write down on the board as you go along. Discuss some of the answers (see guiding questions for group discussion). Once you are done (5-10 minutes max) go to the next question.

(BLM 2.8) – Short Scenarios

**SCENARIO #1 – Well Water Contamination**

**STUDENT #1**

Student is a farmer who is convinced that his well water has been contaminated by a nearby dump site. The farmer is pretty much set in his desires to see those responsible punished and full reparation for the fact that his family has been getting sick and animals on his farm too.

*POSITION:* uncompromising, angry

**STUDENT #2**

Student is a politician that is not convinced that the dump site is responsible and doesn't want to confirm this until he sees more scientific and medical proof that everything is connected. He doesn't want the city to spend too much money, but is ready to make some minor compromises.

*POSITION:* compromising, within certain boundaries

**SCENARIO:**

Politician goes to meet farmer at his home to try and reassure them and find a solution.

## **SCENARIO #2 – A citizen group requests municipality do more to protect river**

### **STUDENT #1**

Student is a representative of an environmental group. The group has clear demands to get the municipality to better protect the river, but they are willing to compromise. The representative's personal position is a little different and he doesn't think that they should not be compromising on this position and demand concrete investment and involvement of municipality in protecting the river. He is mandated to represent the group, but is obviously conflicted...

*POSITION:* compromising, with conflicting personal position

### **STUDENT #2**

Student is a municipal councillor. Councillor wants to be reassuring and sound hopeful, but is not ready to invest money into this project at this time. He still wants to look good because he is shooting for his re-election. He hopes he can sweet-talk his way out of it and get the group to do all the work.

*POSITION:* Firm, but friendly

### **SCENARIO:**

A meeting is held at the politician's office to discuss what the group wants.

**SCENARIO #3 – A forest and its streams are threatened by residential development**

**STUDENT #1**

Student is a representative of a residents/environmental group that want to protect a nearby forest they have been using for generations. A lot of them spend a lot of time in them either for leisure, connecting with nature, to collect plants for tea, observe wildlife, etc. They are uncompromising that no development should happen in this pristine and biodiverse forest.

*POSITION:* Uncompromizing

**STUDENT #2**

Student is the lead developer, president of a residential development company. He is convinced that his project is what is best for this neighborhood and that progress should not be stopped by these protesters. He recently acquired all the land and has done all his due diligence with regards to environmental evaluation. It is his right to develop his land.

*POSITION:* Uncompromizing

**SCENARIO:**

Environmental group was holding a relatively quiet protest outside the developer's office during which the president of the development company invites a representative to come into the office and talk about what they want.

## **(BLM 2.9) – Guiding questions for Scenarios (Teachers)**

*Guiding questions* - Things to point out during discussion (if they aren't mentioned)

- Was it hard to embody the positions of these characters? Why?
- Did they have their minds made up at the beginning of the interaction?
- Was the conflict resolved?
- Did the conflict erupt before, during or after the scenario?
- The location of the meeting set the tone for the exchange
- The personal VS group position (for some of them)

Other notes and tips:

- Avoid discussing content, focus on approach.
- Let the students use their imaginations to think outside the box and improvise.

**(BLM 2.10) - Activity Questions for group discussion for conflict resolution**

1. What factors can influence how conflict and differences are dealt with?
2. What are different methods we use in our society to solve or deal with conflict or differences? (individuals, groups, institutions like countries or government or corporations)

## **(BLM 2.11) - Guiding questions for conflict resolution discussion** **(Teachers)**

Teacher Tips to help students find answers to questions from BLM 2.10.

1- Factors that can influence how conflict is dealt with

- How open we are to other's perspectives and lived experiences
- How open we are to making a compromise
- Privilege and lived experience, or desire to maintain these
- Temperament
- Patience
- Decision-making processes and conflict resolution mechanisms
- Values, ideology and priorities (compassion, love, greed, hate, etc.)
- Perceived or real threats
- Individual/personal VS collective issues
- Veracity of facts

2- Methods of dealing with conflict (not necessarily all effective or positive)

- Diplomacy
- Lawsuits
- Compromise
- Discussion/clarification/communication
- Intimidation or manipulation
- Violence/war (imposing an agenda or authority on someone else or other communities)
- Social exclusion or marginalization (hateful messages, ignoring, exclusion from certain situations, etc.)
- Voting
- Group healing (when facing a common trauma or a common situation for example)

Note: These lists are not exhaustive.

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<sup>i</sup> Environment Canada Website, Share Responsibility section, retrieved from <http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=035F6173-1> on June 25<sup>th</sup> 2013.

<sup>ii</sup> Ministry of the Environment Groundwater Monitoring Network:  
<http://www.ene.gov.on.ca/environment/en/mapping/groundwater/index.htm>

<sup>iii</sup> Conservation Ontario's Conservation Area Guide: <http://ontarioconservationareas.ca/download-a-guide>

<sup>iv</sup> Southern Ontario Source water protection areas:  
[http://www.ene.gov.on.ca/stdprodconsume/groups/lr/@ene/@subject/documents/nativedocs/stdprod\\_102597.pdf](http://www.ene.gov.on.ca/stdprodconsume/groups/lr/@ene/@subject/documents/nativedocs/stdprod_102597.pdf)

<sup>v</sup> Ministry of the Environment website, retrieved from

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[http://www.ene.gov.on.ca/environment/en/legislation/clean\\_water\\_act/index.htm](http://www.ene.gov.on.ca/environment/en/legislation/clean_water_act/index.htm) on June 25th 2013.

<sup>vi</sup> Conservation Ontario, "Source Protection Areas & Region", 2009, [http://www.conservation-ontario.on.ca/images/SWP/SPPBoundaryMap\\_South\\_.pdf](http://www.conservation-ontario.on.ca/images/SWP/SPPBoundaryMap_South_.pdf)