GEOG101B Canada’s National Water Pollution

With all the issues that Canada is currently facing, water pollution is perhaps one of the most serious problems. Some major issues are the ongoing pollution of the Athabasca River from the Alberta Oil Sands, and the eutrophication of Canada’s lakes, and the potential oil spills from careless oil companies could be disastrous for the Canadian Arctic. Although Canada is known for having some of the cleanest water in the world, if the water pollution in Canada is not kept in check, the lives of millions could potentially be affected.

An extremely important issue pertaining to water pollution in Canada is the Athabasca River within Jasper National Park. Since the late 1980s, this river has been ravaged by a few sources of pollution, namely the Alberta Oil Sands, and nearby pulp mills. The Alberta Oil Sands have dumped a great amount of pollutants into the environment for decades. The Athabasca River, which is the oil sands “main water source” have been severely affected by the pollutants, such as arsenic, copper, cadmium, lead, mercury, nickel, silver and zinc ,contrary to what the popular media have been saying (Wingrove, 2010). RAMP (Regional Aquatic Monitoring Programme) and the government have been hiding many environmental hazards from the public. In an ongoing study started in 2010, scientists have discovered many mutated fish, particularly fish with 3 eyes. Although no direct correlation has been made between the water pollution and the mutation, the author of the article is biased against the claims made by RAMP. The government and RAMP have debated heavily with scientists over whether or not the source of pollution is natural or from industrial pollutants. Although there is a staggering amount of proof that shows the oil sands are the main cause of pollution, the government/RAMP maintain their stance that it is natural. However, the pollutants from the oil sands are not the only factors that affect Canada’s water supply.

The lakes in Canada are also greatly affected by water pollution. Lake Winnipeg is one of the lakes are affected by eutrophication. Eutrophication is a process in which nutrients, which include Fertilizers and Human/Animal waste, are overloaded into the water source. As a result, the bacteria and wildlife in the water grow and multiply rapidly, which form blue-green algae on the surface of the lake (Macdonald, 2009). The main cause of this is farmer’s building waterways which allow the dirty water, waste and fertilizers run into the lake. What once was a $100-million dollar tourism industry has been greatly reduced in terms of bringing in money. Aquatic ecologist, Eva Pip, states that “when all that organic material dies, it sinks to the bottom, where bacteria go on an eating binge, using up all the available oxygen.” As a result, the lake becomes an “algal swamp” (Macdonald, 2009). Despite the government spending nearly $2-billion dollars on reversing the eutrophication, the results only show that the alga is reduced only by 23%. Despite the future looking bleak for Lake Winnipeg, Switzerland has managed to make most of its lakes algae-free.



An ongoing concern in Canada is the drilling for oil in the Canadian Arctic. Although no spills have happened in the Canadian Arctic yet, there is a large chance that a spill might occur. A famous oil spill that is constantly referred to is the Exxon Valdez oil spill that happened in 1989. Although an oil spill of that magnitude is not likely to occur, even a small oil spill in the Canadian Arctic would be disastrous, as the oil would get under the ice floes. There are a number of issues that surround the potential oil spill. Although there have not been any incidences of oil spills in the arctic, the Canadian Coast Guard and the oil companies involved have not tested its readiness for oil removal in the event of an oil spill since 2000 (CBC, 2011). Another concern is 84% of the time, it would be impossible to send an emergency oil spill crew to the site of the spill due to weather conditions (CBC, 2011). So, if an oil spill does eventually happen, there is a large chance that a team would not be able to respond quickly, resulting in more damages to the environment. Because the Canadian Arctic is covered in ice 2266% of the time, it is hard for the cleanup crew to navigate. Another problem for the cleanup crew to manage is that tactics used to manage other oil spills cannot be applied to an oil spill in the Canadian Arctic. This is because most of the time, there are high winds, darkness and waves present. Sending a crew in during such a time would no doubt prove to be fatal. The oil companies are only allowed to drill in relatively shallow waters in the arctic. However, the oil companies are starting to want the government to allow them to venture deeper into the arctic to find more oil sources. If the government allow this to happen, there could possibly be dire consequences. For example, cleaning up an oil spill in the “relatively shallow” waters of the arctic is already proven to be difficult. The possibility of an oil spill further out in the arctic would be even harder to clean up. Also, the oil would affect the entire Canadian Arctic ecosystem. For example, sea mammals require oxygen, so they would need to pass through the oil to get it. As a result, they are blinded and eventually die (Spilltechnology, 2008). In addition, oil spill cleanup crews that come into contact with the oil, even if they are wearing protective gear, could have several health detriments develop.



Currently, many of these issues surrounding our water supply are still ongoing, with no end in the foreseeable future. However, with newer technologies being developed, the Alberta Oil Sands might possibly become more clean, leading to less pollutants being taken in by the Athabasca, the reversing of the blue-green algae in Lake Winnipeg and more spill-proof preventative technologies/measures.

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