Geoffrey F. Bruce Fellowship
in Canadian Freshwater Policy

Indigenous & Settler Perspectives on Environmental Risks and Rewards on Toronto Island & Surrounding Waters

Water Quality Issues in Toronto Harbour

POLICY BRIEF

by
Miranda Black
Bruce Fellow 2020-21

Introduction

Water quantity and quality changes impact localities in very different ways. For example, degradation and pollution of water quality can have devastating and disproportional impacts on Indigenous communities. Academic research has documented the unique impact of floods and flood risk on Toronto Island (Ketchabaw, M., 2012; Oulahen, G, 2021). However, these risks can impact communities differently as residents on Toronto Island and Indigenous Peoples who see this land as their traditional territory have different values and priorities. This research adds to the current understanding of the social reproduction of risk and environmental rewards on Toronto Island (Oulahen, G. 2021). This study seeks to examine the unique environmental risks and rewards (benefits) are for Toronto Island Residents and Indigenous Peoples.

Several Indigenous resources document the sacredness of Toronto Island as a ceremonial site (Smith, D.B, 2013; MCFN, 2017). However, academic resources about Indigenous land use on Toronto Island have so far been written from a settler perspective (Gibson, 1984; Freeman, V., 2010). One non-Indigenous academic, Jon Johnson, has used qualitative methods to document Indigenous relationships to land in Toronto, where participants explained the value that the Toronto Island offered them (Johnson, J., 2013; Johnson, J., 2016). Since there are differences in relationships to land and water from an Indigenous perspective, this research intends to build a bridge between traditional knowledge and understanding land and water use (Artelle, K., et al, 2018; McGregor, D., 2004; Simpson, L., 2014).

This research also examines Indigenous relationships to the waters surrounding Lake Ontario, as these water resources have been used for generations to gather provisions and as a trade route. A handful of Indigenous academics have researched and written about the importance of the Great Lakes Watershed, including Lake Ontario, but not specifically the waters surrounding Toronto Island (Arsenault, R., et al, 2018; Corbiere, A. 2020; Kozich, A, et al, 2018; McGregor, D., 2012).

For this study, qualitative interviews seek to inform the public and policy makers about the use of the land and water around Toronto Island from a "Two Eyed Seeing" approach. Two Eyed Seeing is a term coined to explain informing environmental management from both an Indigenous and Western standpoint (Abu and Reed, 2018; Arsenault, R., et al, 2018; Moorman, L., et al, 2021). By using this approach, the research intends to enhance the current academic understandings of the social construction of risk, risk management, and assessment of risk from different perspectives, especially Indigenous perspectives (Mercer, L., et al, 2010; Oulahen, et al, 2018; Throngs, G., 2019).

Policy & Governance Problem

There are many contributing factors that make visiting and living on Toronto Island difficult for Indigenous Peoples, many of which are directly tied to the Indian Act. In 1848 the Mississauga of the Credit First Nation (MCFN) were removed from their traditional territory and moved to Six Nations on the Grand River. Having limited access to the island, which was a ceremonial and healing space, has left their community unable to access the island as costs of travel have exponentially increased. Along with this their ability to camp overnight to hold ceremony has been infringed upon due to regulations that make camping on the island illegal. Since the Toronto Purchase of 2010 there has been increased

awareness of the Mississauga of the Credit First Nation (MCFN) as rightsholders of the island and the settler community has welcomed them to join the Toronto Island and Mississauga of the Credit Friendship Committee. However, the impact of colonial infrastructure, such as the combined sewers that overflow into the Toronto Harbour and increased use of road salt, impacts traditional plants, fishing, and water quality. Through interviews with Toronto locals, including five Indigenous Peoples, five Toronto Island residents, and two water quality experts, I have found out that many wetlands have been shown to have low water quality, whereas the beaches that attract tourism have higher water quality. These wetlands are an important feature for Indigenous Peoples as they have a wealth of traditional plants and fish species that Indigenous Peoples once relied on as a source of food and well-being.

One water quality expert has noted that there is an ongoing citizen science project led by Toronto Island residents that test water quality on Algonquin, Wards Islands, and other sites regularly used by Toronto Island residents. Beaches are also regularly tested by the City of Toronto as these sites are regularly used for local tourism. However, sites used for Indigenous Peoples are rarely tested. This includes Snake Island where Indigenous Peoples have been in conversation with the City of Toronto to take back this space, which would give Indigenous Peoples a place to hold ceremony and overnight camp. More recently the NGO *Swim, Drink, Fish* has tested the quality of water near Snake Island but monitoring reports have not been published since 2019 (Swim, Drink, Fish, 2019).

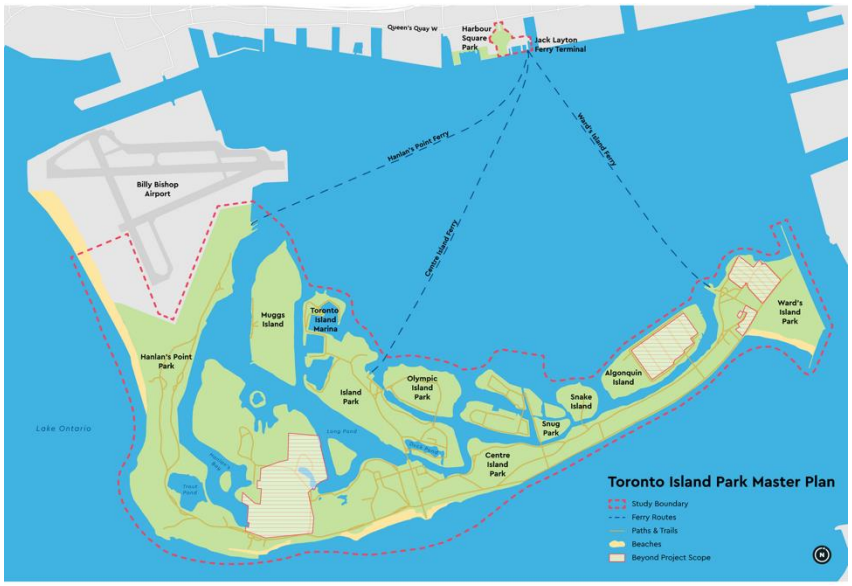

Figure 1: Map of Toronto Island from the Toronto Island Master Plan

Policy Recommendations

There are 84 total outfalls from combined sewers into the Toronto Harbour. All sites are in downtown Toronto and many of them are near the north side of Toronto Island.

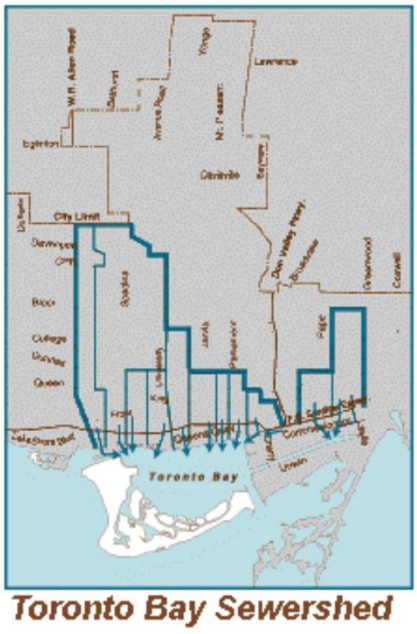

Figure 2: Combined sewer map. All outflows are highlighted in blue. As you can see on this map, there are numerous outflows located in the Toronto Harbour basin that are close to the north side of Toronto Island.

During interviews I was told by water quality experts that the north side of the island has historically had lower water quality than the south side. One of the main contributing factors are the location of the outflows from the sewer system. In addition to water quality issues, in recent years Toronto has seen increases in precipitation which has led to flooding on Toronto Island. According to this water quality expert, citizen run water quality monitoring projects took a hiatus when flooding occurred. Therefore, data during the floods is inconclusive. However, according to this water quality expert, there is a high likelihood that water quality surrounding Toronto Island would decrease exponentially during flooding events and then gradually increase due to the way that water flows around the island. In response to the high outflow of sewage waste in Lake Ontario, water quality monitoring project *Lake Ontario Waterkeeper* lists this as a main concern for water quality in Lake Ontario, especially around the Toronto Harbour (Lake Ontario Waterkeeper, 2019).

What I have learned from the research to date is that there is a great need to change and improve the combined sewers to sanitary sewer systems in Toronto. This is a long standing issue as Toronto has been a designated Area of Concern in the Great Lakes since 1987 and has not been delisted despite almost 35 years of environmental and water quality improvement efforts.

Although the City of Toronto has launched a $30B project to halt the stormwater overflow to Lake Ontario, the completion date of this project is 2024 (Brown, D., 2019). With increased flooding due to higher precipitation rates and overdevelopment in the Lake Ontario, there must be strong and immediate action; taking another two years to complete the project (along with the possibility of extended construction dates) does not solve the chronic pollution problems associated with sewer run-off into Lake Ontario and near Toronto Island.

There is also a need for increased water monitoring on the north side of Toronto Island, including Snake Island. Regularly testing of these sites would create awareness of the combined sewer issues, along with providing Indigenous Peoples with resources to protect wetland health for future generations. Increased water quality in the wetlands could increase the availability of local wild plants, including cattails that are a traditional food for the Anishinaabe.

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