

# **Last in Line for Clean Drinking Water**

**Canada's attempt to utilize  
"comparability"  
to address drinking water on First Nations reserves**



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## ***Abstract***

Above all, it is time to listen to First Nations communities, leaders and organizations to hear what they have to say about drinking water quality on reserves. The Government of Canada, through Indigenous and Northern Affairs Canada utilizes a comparability policy that determines First Nations community drinking water requirements based upon non-First Nations towns and villages that are nearby. Given the centuries of colonization, degradation from residential school, as well as the current crises involving not just drinking water-related gastro-intestinal and skin diseases but loss of life due to youth suicide in northern communities, a new approach towards drinking water quality and community wellness must be implemented. High on the list would be enacting regulations to protect drinking water quality on reserves. Incorporating First Nations' perspectives is the crucial part of the puzzle that is missing. Through a review of legislative and policy documents, First Nations submissions and position papers and information elicited from key interviews with topic experts, this paper hopes to pull apart the flawed concept of comparability and instead invite the Government of Canada to join with their partners, First Nations, and develop the kinds of drinking water strategies that will bring meaningful change to reserves and restore the human rights of First Nations living in this land base now called Canada.

## **Foreword**

What began as a desire to research the drinking water crisis on First Nations reserves has pushed me towards understanding that it is a complex and little understood situation, especially by the federal government. When first starting my Masters of Environmental Studies program I developed what I thought was a good Plan of Study that encompassed: Funding mechanisms for on-reserve drinking water; the regulation of drinking water quality for First Nations, focusing on the province of Ontario; and, Traditional Environmental Knowledge and its relationship with water. In my naïveté, I assumed that I would be able to master all three areas and also write about them in depth, in my final paper. Through the process of attending classes and developing and expanding that kernel of knowledge pertaining to drinking water quality, I now realize the complexity of drinking water quality on reserves – there are many aspects and avenues that must be examined.

My initial and primary choice of investigation, reviewing the implementation of the *Safe Drinking Water for First Nations Act, 2013*, completely stalled. Being an "enabling" Act, the purpose behind this legislation is to enact regulations that will drive water quality standards to protect human health. Unfortunately the consultation process with First Nations, and with other impacted organizations, is taking much longer than expected and there simply are no regulations to review for a major paper. However I have learned a lot about the differences between federal drinking water guidelines and Ontario provincial legislation, whereby the former has a voluntary component and the latter has compliance legislated. It is because of this intense investigation that I now fully realize the great need for regulations to accompany the *Safe Drinking Water for First Nations Act*. I also spread my wings a bit and researched

municipal, provincial and federal jurisdictions as applicable to the provision of drinking water so I was still able to “bend” my Plan of Study component definition a bit to do some good work on researching the regulating of drinking water quality.

Traditional Environmental Knowledge (TEK) is, I believe, a crucial component that must be included alongside the processes that address drinking water quality on reserves. Long before the first Europeans came to the shores of what is now Canada and relied upon the goodwill of First Nations peoples to help them survive the winters, there were vibrant and sustainable societies already in existence, with their own diverse concepts of spirituality and ethos. These societies had a keen and specific understanding of their responsibility for all of nature, including water. Although the settler society tends to take credit for developing clean water strategies and sustainable development, the first environmental stewards of this land were Indigenous peoples and we as Canadians should be thanking them for that stewardship. While I was not able to focus on TEK within this paper due to length constraints, I certainly have started to appreciate the need for alternative worldviews when it comes to solving problems with water. Who better to consult than those who were most integrated within nature and whose spiritual practices embraced full responsibility for the environment?

Researching funding mechanisms, the third component in my Plan of Study, led to my current investigation of comparability. While this paper does not include the full range of my academic explorations such as my examination of parliamentary funding processes including main estimates, INAC’s program alignment architecture and national priority framework, the

information I garnered will always be useful and has allowed me to see the structural hindrances behind the funding delays for First Nations reserves.

While writing this paper, many remote communities in northern Ontario have suffered from not only contaminated water but from dire social issues that have resulted in a crisis of youth suicide. Pikangikum First Nation, Neskantaga First Nation and Attawapiskat First Nation have all gone through emergencies that would test any community, never mind one that has some of the poorest quality housing in Canada, unreliable energy sources, lack of educational opportunities and part-time healthcare alongside not having potable water. The new government under Prime Minister Justin Trudeau appears to be taking the living and social conditions of First Nations communities very seriously. Only time will tell if the types of changes that are needed, will come through quickly enough. Certainly a change to the federal government's comparability stance is needed and also a more thoughtful policy process should be instituted. Consulting with First Nations communities is the first step towards these goals.

Through interviews with topic experts, I learned more about drinking water quality on reserves than from any book or journal that I may have picked up. Most of these individuals have many years of experience living and dealing with water quality and small budgets. I almost felt like giving a couple of them a microphone, so important were the messages they were sharing! I eventually hope to be able to join in and share my own insights, as my knowledge continues to build.

The United Nations Special Rapporteur on the rights for Indigenous Peoples visited Canada in 2013. He reminded Canadians that Canada has been “a leader on the world stage in the promotion of human rights since the creation of the United Nations in 1945” (Anaya, J., 2013). He also praised Canada for providing “constitutional protection...over the last 30 years” regarding Indigenous Rights (Anaya, J. 2013). It certainly is time for Canada to step forth and reclaim their status as a caring and humane society that protects the rights and freedoms of vulnerable communities. Drinking water quality on reserves must be urgently addressed and there is no time like the present to move forward and together with First Nations full consent and input, provide the kind of drinking water that every human being deserves.

## **Acknowledgements**

There are many people who have helped me through this process of writing my Major Paper. At the very top is my supervisor, Professor Deborah McGregor who encouraged me and gave the critical feedback that I needed to push forward with this paper. Deborah understands well the issues surrounding drinking water quality as well as the other dynamics that compose First Nations communities. She would constantly remind me not to make assumptions, not to think that every First Nations community struggles with poor quality drinking water or if they do, not in the same ways, since communities are unique. I had to balance my perspective when writing and it was through Deborah's commentary that I was able to achieve some objectivity. I am also thankful for the areas of further research suggested by Deborah as they led me to places I would not have travelled.

I also would like to thank my advisor, Professor Dayna N. Scott. Dayna's straightforward approach helped me to organize myself in the early stages of researching my paper and she had a way of cutting to the chase that was extremely helpful. Dayna's course *Environmental Law and Justice* and Professor Shin Imai's *Indigenous Law* made a huge difference in how I contextualized issues connected to First Nations. Two other professors made a deep impact on me; Professor Ali Harris and Professor Jin Haritaworn, both of whom offered innovative and incredibly interesting topics to discuss during each class. I should also mention that the only traditionally science-based course offered at Environmental Studies under Professor Greg Thiemann, allowed me to engage in a once-in-a-lifetime conversation I never thought I would have - a live-time connection with onsite polar bear researchers in Canada's north. All of these professors pushed me to master subjects that I at first thought difficult and later came to



embrace. My appreciation and comprehension of social justice issues has definitely been enhanced during my class time at the Faculty of Environmental Studies.

I would also like to express my gratitude to Rosa Orlandini, of the York University Map Library. Rosa spent hours developing and reshaping the data sets from the *Statistics Canada Highlight Tables* so that I would have a group of amazing maps on Google Earth that plot out the communities I am discussing. Rosa went way beyond the call and her contribution means a lot to me. I must also mention: Josephine Campanelli Zimmerman and Peggy McGrath of OSAS who were generous and patient; Professor and Associate Dean Leesa Fawcett, whose kindness, support and tenacity rubbed off on me in the best possible way; Graduate Program Director, Professor Liette Gilbert, who graciously gave me the wiggle room to finish my paper and Professor Ravi de Costa, who saw me through the very first steps of my time at FES.

Having to support myself, I eventually had to return to work fulltime. Two co-workers who always supported me are Charleen Kong and Aneesah Luqman, both of whom preceded me in the FES Masters program. Thanks so much you two, your pep talks were so needed! I also had very supportive bosses in the late stages of my paper and would very much like to acknowledge both Carol's and Gillian's great support. I especially would like to reach out to my fellow students at MES who attended classes with me: Thanks for making those classes a valuable experience - class discussions are only as good as the people who speak up and we certainly had some fun and insightful times. Thanks as well to all of the participants that I interviewed. The interviewees were exceedingly generous with their time and gave me the kind of detailed and cogent information that only those who are involved in the industry, can provide.

Most of all, there is one person who has been there all my life, encouraging me and setting a high example herself and that is my mother, Lois de Shield. Without her emotional, psychological and deeply loving support, I simply would not have been able to finish this paper. I cannot imagine how I could have accomplished this research and pushed through the endless writing and edits, without her reassuring words. I am extremely lucky to have a mother who believes so deeply in her daughter.

## TABLE OF CONTENTS

Abstract	iii
Foreword	iv
Acknowledgements	viii
Table of Contents	xi
Dedication	xv
<b>CHAPTER I – Introduction</b>	<b>1</b>
1.1 Background and overview.....	1
1.2 Comparability as policy – Introduction.....	4
1.3 Research goal.....	9
1.4 Research objectives.....	9
1.5 Research approach.....	10
1.6 Outline.....	12
1.7 The literature gap.....	14
1.8 Moving forward.....	15
1.9 Summary – Chapter 1.....	16
<b>CHAPTER II – Drinking water quality is linked to the colonial past</b>	<b>17</b>
2.1 Comparability as policy – History.....	17
2.1.1 Memoranda to Cabinet.....	17
2.1.2 White Paper/Red Paper.....	19
2.1.3 Auditor General 1995 report, Chapter 23.....	21
2.2 Trauma and community.....	23
2.2.1 Social capital.....	23
2.2.2 Colonization – Indian Act.....	26
2.2.3 Historical trauma.....	27
2.2.4 Missing and Murdered Indigenous women and girls.....	28
2.2.5 Suicide.....	30
2.2.6 Snapshot of Disparities.....	32
2.2.7 An attempt to move forward?.....	33
2.2.8 Federal government's bias.....	34
2.3 Summary – Chapter II.....	35
<b>CHAPTER III – Examining water quality in a contemporary context</b>	<b>36</b>
3.1 The drinking water crisis.....	36
3.1.1 Introduction.....	36
3.1.2 Walkerton, Ontario and drinking regulations.....	37
3.1.3 Kashechewan First Nation (northern Ontario).....	39
3.1.3.(i) Jurisdictional confusion and voluntary guidelines.....	40
3.2 New policies and investigations.....	42
3.2.1 Plans of Actions – Where the change started.....	42
3.2.2 Expert Panel and financial capacity.....	44
3.3 Drinking water assessments.....	47

3.3.1 National Assessments, First Nations Water & Wastewater Systems	47
3.3.1.(i) Types of water systems.....	50
3.3.1.(ii) Risk assessment.....	52
3.3.1.(iii) Ontario results.....	53
3.3.2 Alternative responses to the assessment.....	63
3.3.3 First Nations response.....	65
3.4 Summary – Chapter III.....	66
<b>CHAPTER IV – What is the drinking water problem on reserves?</b>	<b>67</b>
4.1 Overview.....	67
4.2 Drinking Water Advisories (DWAs).....	67
4.2.2 How does drinking water become contaminated?.....	68
4.2.3 Small systems.....	69
4.2.4 First Nations participation.....	70
4.2.5 Community-based water monitoring program (CBWM).....	70
4.3 Managing data.....	72
4.4 Daily life with no potable water.....	75
4.4.1 Case Study: Neskantaga First Nation.....	76
4.4.2 Case Study: Six Nations of the Grand River First Nation.....	79
4.4.3 Bottled water is no solution.....	81
4.4.4 Case Study: Marten Falls First Nation.....	81
4.5 Health risks in remote communities.....	83
4.6 Moving past government lethargy.....	85
4.7 Summary – Chapter IV.....	87
<b>Chapter V – Comparability model: A poor excuse for government inaction</b>	<b>89</b>
5.1 Introduction.....	89
5.1.1 Fiduciary duty.....	92
5.1.2 Jurisdictional complexities: Division of powers.....	93
5.1.2.(i) Federal jurisdiction.....	93
5.1.2.(ii) Provincial jurisdiction.....	94
5.2 Comparability – Similar size.....	96
5.2.1 Effect of size on community services.....	96
5.2.2 First Nations reserves defined.....	98
5.2.3 Statistics Canada – Classifications.....	98
5.2.3.(i) First Nations reserves.....	98
5.2.3.(ii) Non-First Nations communities.....	101
5.2.4 First Nations reserves – Population.....	102
5.2.4.(i) Canada.....	102
5.2.4.(ii) Ontario.....	103
5.2.5 Non-First Nations communities – Population.....	104
5.2.5.(i) Ontario.....	104
5.2.6 Fluctuations of population.....	105
5.3 Comparability – Similar location.....	106
5.3.1 Remote northern communities.....	106

5.3.1.(i) Access to services and supplies is difficult.....	107
5.3.1.(ii) No small northern communities except First Nations.....	108
5.3.2 Fuel costs and fuel access.....	115
5.3.2.(i) User fees.....	116
5.4 Comparability – Legislation.....	117
5.4.1 Introduction.....	117
5.4.2 Municipalities - Ontario.....	117
5.4.3 Legislation governing water quality – Ontario Government.....	119
5.4.3.(i) Legislative history.....	120
5.4.3.(ii) <i>Ontario Safe Drinking Water Act, 2002</i> .....	123
5.4.3.(iii) Enacted Drinking Water Quality Regulations.....	124
5.4.3.(iv) Standards.....	125
5.4.3.(v) Chief Drinking Water Inspector.....	126
5.4.4. Guidelines concerning water quality – Federal Government.....	128
5.4.4.(i) Source water but not drinking water protection.....	128
5.4.4.(ii) Guidelines are not enforceable regulations.....	129
5.4.4.(iii) Federal drinking water history.....	131
5.4.4.(iv) Thirty years and little to show.....	135
5.4.5 First Nations drinking water legislation.....	136
5.4.5.(i) No regulations in sight.....	136
5.4.5.(ii) Regulatory development has stalled.....	136
5.5. Comparability – Jurisdiction.....	140
5.5.1 Non-First Nations – Federal jurisdiction.....	140
5.5.2 Non-First Nations - Ontario jurisdiction.....	141
5.5.3 Ontario supports its non-Indigenous communities.....	144
5.5.4 First Nations jurisdiction.....	145
5.6 Comparability – Funding/economic opportunity.....	147
5.6.1 Case Study: Township of Gillies, Ontario.....	147
5.6.1.(i) A vibrant community.....	148
5.6.1.(ii) Township revenues – Property taxes and grants..	149
5.6.1.(iii) A good quality of life despite limited infrastructure	150
5.6.2 Case Study, revenue:	
United Townships of Head, Clara & Maria.....	151
5.6.2.(i) Township revenues – Earmarked user fees.....	152
5.6.3 Case Study, revenue:	
Municipality of Gordon/Barrie Island.....	152
5.6.3.(i) Levies and the issuance of debt.....	153
5.6.4 First Nations funding – a world of difference.....	154
5.6.4.(i) Deplorable water quality.....	154
5.6.4.(ii) Breaking down the numbers.....	154
5.6.4.(iii) Federal funding for First Nations.....	158
5.6.4.(iv) First Nations Infrastructure Investment Plan.....	159
5.6.4.(iv).a. Capital Facilities and Maintenance Program	159
5.6.4.(v) Federal sustainable development strategy.....	160
5.6.5. An important “shopping list” for Justin Trudeau.....	161

5.6.5.(i) Infrastructure planning.....	161
5.6.5.(ii) Another reminder regarding capacity.....	162
5.6.5.(iii) Reduced life spans of facilities.....	163
5.6.6 Funding alternatives.....	164
5.6.6.(i) Public-private partnerships – P3s.....	164
5.6.5.(ii) Own-source revenue and economic opportunities	166
5.6.7 Summary – Chapter V.....	167
<b>Chapter VI – Conclusion – Willingness to embrace change</b>	<b>169</b>
6.1 Introduction.....	169
6.2 Safety through legislation.....	170
6.3 Financial capacity is a start.....	171
6.4 "Closing the Gap".....	174
6.5 Willingness to embrace change.....	176
6.6 Taking a 180 degree turn.....	177
<b>Reference list.....</b>	<b>183</b>



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This paper is dedicated to my mother, who, through her own example and steadfast convictions; taught me to be curious, allowed me to be rebellious but eventually, utterly convinced me that addressing social inequities is a worthy lifetime commitment.

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Image source: Gfibre.

## CHAPTER I

### Introduction

#### 1.1 Background and overview

Access to potable drinking water is an expectation that residents in an economically developed country such as Canada take for granted. Canada's vast number of lakes and broad river networks give the appearance of endless freshwater supplies leading many Canadians to mistakenly believe that our drinking water supply is abundant and unlimited (Noga & Wolbring, 2013 /Bakker, 2009/Sprague, 2007/Boyd, 2011). Clean drinking water must be supported by a federal government commitment that supports provincial and territorial government priorities for not only source water protection but most importantly, for the maintenance of local water system infrastructure through long-term, dedicated funding (Infrastructure Canada, 2016, July /Traverse, 2014).

Under recently elected Prime Minister Justin Trudeau<sup>1</sup>, Budget 2016<sup>2</sup> shows a marked increase in the funding for drinking and wastewater major infrastructure, particularly for a long

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<sup>1</sup> Prime Minister Justin Trudeau is Canada's 23rd Prime Minister and was elected to office on October 19, 2015. He is the son of former Prime Minister Pierre Elliot Trudeau. Prime Minister of Canada Justin Trudeau. (n/d). *Prime Minister Justin Trudeau*. Retrieved August 6, 2016: <http://pm.gc.ca/eng/prime-minister-justin-trudeau>.

<sup>2</sup> Budget 2016 has introduced the Clean Water and Wastewater Fund (CWWF) to rehabilitate water and wastewater systems, as well as planning for system upgrades. Project funding will be up to 50%, (Northwest Territories up to 75%) and managed through funding agreements between Canada and the applicable province or territory. Local municipalities will apply to their respective province or territory for funding. Infrastructure Canada. (2016). *CWWF Program Overview*. Retrieved August 6, 2016: <http://www.infrastructure.gc.ca/plan/cwwf/cwwf-program-programme-eng.html>



neglected group: First Nations peoples<sup>3</sup>. This is a dramatic departure from the previous Conservative government lead by Stephen Harper. Canada's federal Budget 2016 has pledged a five-year, \$1.8 billion (an average of \$360 million per year<sup>4</sup>) funding envelope to "support clean drinking water and the treatment of wastewater on reserve"<sup>5</sup>. This amount more than doubles the previous Conservative government's commitment of \$330 million<sup>6</sup> renewed every two years (\$165 per year on average) but the question remains whether an injection of funding alone is going to improve drinking water quality<sup>7</sup> in First Nations communities.

For many decades, Indigenous peoples in Canada have not been included in the overall government vision of drinking water quality (Boyd, D.R., 2011/ White et al, 2012). Many Indigenous peoples of this land base that is now called Canada are living with drinking water quality similar to conditions in countries with a far less developed economy (AFN, 2016, March

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<sup>3</sup> First Nations is a term used in Canada to denote the peoples who historically have been called "Indian". Kesler, L., *Aboriginal Identity and Terminology*. (2009). University of British Columbia, Indigenous Foundations. Retrieved from <http://indigenousfoundations.arts.ubc.ca/home/identity/aboriginal-identity-terminology.html>.

Terms such as Aboriginal have also been used to encompass First Nations, Metis and Inuit peoples, all of whom are part of the Indigenous populations residing in Canada. Indigenous peoples, as defined by Jose R. Martinez Cobo, the then *Special Rapporteur of the Sub-Commission on Prevention of Discrimination and Protection of Minorities* of the United Nations, is as follows:

"Indigenous communities, peoples and nations are those which, having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing in those territories, or parts of them."

Martinez-Cobo, J. (1986/7). *Study of the Problem of Discrimination against Indigenous Populations*. UN Doc. E/CN.4/Sub.2.

<sup>4</sup> Budget 2016's five-year funding program, which starts in 2016-2017, is back-end loaded in that the largest funding contribution will occur at the end of the five years. (2016, personal interview.)

<sup>5</sup> Funding starts in 2016-2017. Monitoring for drinking water quality on reserve was also included in Budget 2016 with \$141.7 million spread over five years. Budget 2016. (2016). *Chapter 3: A better future for Indigenous peoples*. Retrieved August 6, 2016: <http://www.budget.gc.ca/2016/docs/plan/ch3-en.html>

<sup>6</sup> The last two-year program funding under the First Nations Water and Wastewater Plan was for \$323 million. AANDC. (2014). *Budget 2014: 3.4 Supporting families and communities*. Retrieved <http://www.budget.gc.ca/2014/docs/plan/ch3-4-eng.html>

<sup>7</sup> The focus of this paper is on drinking water only but may touch upon wastewater systems.

/Alec, 2015/Barlow, 2015) that include: Contaminated and/or no piped water into their homes (National Assessment, 2011); over 100 drinking water advisories affecting their communities nationwide, some lasting for over 20 years (Health Canada, 2016/Porter, 2016, Apr.16); inadequate and/or failing water treatment plants (National Assessment, 2011), and crippling intestinal diseases and rashes (Human Rights Watch, 2016, June). These conditions point to not just faulty drinking water systems due to lack of funding but communities that are not being given the tools to better their lives.

However the lack of funding is a major challenge, for example; First Nations communities are expected to pay 20% of the operation and maintenance costs (O&M) of their water systems (INAC, 2012, 2015) and must cover any overages from initial plant and distribution system construction estimates (personal interview, 2015). First Nations lack the sources of funding that municipalities rely upon for water systems- a tax base. This often puts communities in a situation where they do not have the funds to look after other crucial services such as health care, housing and education (personal interviews, 2015, 2016). As this shortfall continues year after year, a community can become especially vulnerable to unexpected or emergency situations. Federal government funding policies and mechanisms are only starting to provide the necessary funding – including a removal of the 2% funding cap - that will address the dire circumstances that many First Nations residents are facing in their communities (AFN, 2016, March 22). Long-term systemic changes to how funding is generated will be necessary, if potable water on reserves is to be given the priority it warrants.

## 1.2 Comparability as policy – Introduction

Canada's federal government, acting through their federal ministry Indigenous and Northern Affairs Canada (INAC)<sup>8</sup>, believes the solution to drinking water quality is one of comparability: Their primary goal is to provide drinking water quality on reserves comparable to similar non-Indigenous communities. The *2015-2016 Report on Plans and Priorities*, an annual document that details INAC's departmental objectives, discusses the horizontal initiative<sup>9</sup> *First Nations Water and Wastewater Action Plan (FNWWAP)* which commenced April 1, 2008 and recently ended in March 31, 2016:

The prime objective of the FNWWAP is to support First Nation(s) communities on reserves in bringing their drinking water and wastewater services to a level and quality of service comparable to those enjoyed by other Canadians living in communities of similar size and location.

INAC, 2015, March, 2015-2016 Report on Plans and Priorities.

Although the FNWWAP has now sunsetted<sup>10</sup>, the ensuring of drinking water “(at) a level and quality of service comparable to...other Canadians living in communities of similar size and location” is reinforced by the *Water and Wastewater Policy and Level of Service Standards* (LOSS, 2011), the corporate manual system that directs INAC in funding disbursements for First Nations:

This directive states the policy of Aboriginal Affairs and Northern Development Canada (AANDC) on funding to support First Nations in delivering potable water and wastewater services on

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<sup>8</sup> Indigenous and Northern Affairs Canada (INAC) was previous called Aboriginal Affairs and Northern Development (AANDC) and previously to that, Indian and Northern Affairs Canada (INAC). These departmental name changes reflect changes in federal leadership, which can involve a change of departmental names.

<sup>9</sup> When two or more federal department or organizations partner to formally establish a funding agreement, they are part of an “horizontal initiative”. Treasury Board of Canada Secretariat. (2015), Nov. 30. Retrieved August 6, 2016: <https://www.tbs-sct.gc.ca/hidb-bdih/home-accueil-eng.aspx>

<sup>10</sup> The Capital Facilities and Maintenance Program (CFM), under the First Nations Infrastructure Investment Plan (FNIIP) has, in essence, replaced the FNWWAP.

reserves. The related levels of service standard... determined on a national basis, are the levels of service that AANDC is prepared to financially support to assist First Nations in providing community services comparable to the levels of service that would generally be available in non-native communities of similar size and circumstances.

INAC, 2011 Aug., Water and Wastewater Policy and Level of Services Standards <sup>11</sup>(Corporate Manual Systems)

If the language used in these examples can be correctly interpreted, the federal government intends to make a serious commitment towards improving drinking water quality on First Nations reserves. However the interpretation of these policy statements is where the problem of comparability lies: In order to attain a “level and quality of service comparable to those enjoyed by other Canadians”, as indicated in the FNWWAP example, the first supposition should be “Who determines those ‘level(s) and quality of service’ ”? Secondly, where are these “comparable” non-First Nations communities? In the parts of Canada where there are towns and villages near to reserves, those communities, with their differing cultures and historical backgrounds, view water very differently from First Nations.

Non-Indigenous communities should not be the standard by which First Nations are judged in terms of access to clean drinking water. The Government of Canada’s is assuming, through their comparability statement, that once reserves achieve the same standards “as their non-Indigenous neighbours”, the drinking water problems on reserve will no longer exist. This assumption is erroneous. The interconnectedness of First Nations regarding their historical, legal and cultural relationship to water cannot be siphoned off from their need for clean drinking water. First Nations paradigms are not being included in the federal government’s

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<sup>11</sup> The most current version of the Water and Wastewater Policy and Level of Services Standards (Corporate Manual Systems) is August of 2011. Retrieved June 4, 2016: <https://www.aadnc-aandc.gc.ca/eng/1312228309105/1312228630065>

drinking water policies. The Assembly of First Nations' (AFN, n/d) *National Water Declaration* discusses "Indigenous Knowledge Systems":

Our own Indigenous knowledge systems are the foundation of our Nations. Our knowledge systems inform our relationship with water as an element, a spiritual entity, a resource and a source of life. We care, protect and honour those relationships through our customs, traditions and practices.

Assembly of First Nations, n/d, *National Water Declaration*.

While First Nations are expected to understand the government's Eurocentric basis of comparison, there seems to be no reciprocity that allows First Nations' worldview to be understood and included in the very policies that affect them. The federal government's reductionist thinking is dangerous and has already put many First Nations' lives at risk.

Input from First Nations communities should be considered when deciding what the appropriate quality of service will be and how that water service will operate in the community. As well, the federal government must recognize that First Nations communities are not homogenous and that "one top-down approach will not address the (drinking water) issue" (Bharadway in Gulli, 2015). Solutions will most likely be dependent not only upon geography but on community preferences in terms of accessing water. It should be kept in mind that how water is viewed from community to community may differ due to culture, traditions and spirituality as well as both customary law and federal law.

Regarding the Level of Service Standards, what does "community services comparable to...non-native communities of similar size and circumstances" really mean in this context? Similar size may refer to the population of a community or it could refer to the geographic land base, or it

could be just population density. Assuming that population is the basis of this comparison, Statistics Canada's census, the main government tool to record population in Canada, has inherent biases against First Nations and does not take into account the flexibility of reserve populations, with residents leaving and returning to their community throughout the year (personal interview, 2016).

Aside from qualifiers such as size and location, the premise of "similar circumstances" introduces a long list of potential areas that could and should be considered for comparison between some First Nations and non-First Nations communities in addition to drinking water, including:

- Timely access to appropriate healthcare
- Access to nutritious food
- Access to traditional foods
- Local education for all levels of students
- Properly constructed, long-term housing
- High-speed broadband
- Public buildings for community activities
- Reliable primary and back-up energy sources
- Ability to engage in sustainable and "green" energy technology
- Street lighting on all major roads
- Year-round access to other communities by road

Unfortunately, considerations of time and overall paper length will not allow a deep examination of the above-noted areas but they are important features that would impact the quality of life in any community. For more information on these topics see reports such as: *On-Reserve Housing and Infrastructure: Recommendations for Change*, from the Standing Senate Committee on Aboriginal Peoples (2015); *First Nations Regional Health Survey (RHS) 2008/10*, by the First Nations Information Governance Centre (2012); the *Energy Policy*, Haudenosaunee Confederacy (n/d); *Fuel cell systems for remote communities: The first step towards a*

*renewable-hydrogen economy in Canada*, by Jaimilla Motay under the auspices of the Professional Engineers Ontario (2016); and McMahon et al in *Digital Divides and the 'First Mile': Framing First Nations Broadband Development in Canada* (2011). It is hoped that the Government of Canada, working with First Nations Chiefs, Councils and appropriate organizations, is also going to address the lack of these community services in the future.

In terms of similar circumstances, the areas of comparison that will be discussed in this paper are those that relate and/or affect drinking water infrastructure and associated financial capacity. While this makes an assumption that all reserve communities would prefer to have treated tap water, much of the literature from both the Government of Canada and from First Nations representatives, discusses permanent solutions that involve assets such as water treatment plants. Admittedly, providing “treated” water is only one part of the equation in terms of addressing the drinking water crisis on First Nations reserves but only this more limited focus will be addressed in this paper. Well water, spring water and the ingestion of water directly from other local water sources may be discussed peripherally but will not be the main subject of this paper. The important topic of source water protection for reserves also cannot be included in this paper as it is a huge topic that deserves its own separate discussion. It is hoped that a more comprehensive examination of water quality, looking at these other areas, will be done in the future by this author.

### **1.3 Research Goal**

This major research paper, through a review of the literature and key informant interviews, critically examines the assumption outlined in federal government budget announcements and policy documents that the goal of addressing access to potable water in First Nations lies in achieving “comparable...levels of service that would generally be available in non-native communities of similar size and circumstances” (AANDC, 2015). I suggest that achieving comparability with non-Native communities of similar size and circumstance is a flawed premise. I further posit that First Nations history and present circumstance is materially different from all other communities and their “circumstance” is derived from distinct and exclusive origins.

### **1.4 Research Objectives**

This paper is going to take a journey that will examine the current drinking water crisis on many First Nations reserves utilizing the following main criteria:

- a) the underlying causes of poor drinking water quality including financial capacity<sup>12</sup>
- b) the Government of Canada’s response via the “comparable communities” lens.

With these two overarching areas guiding the proposed argument on drinking water quality, this paper will further break down comparability into six distinct sub-topics, the last four being an examination of "similar circumstances" and the first two echoing the government's own parameters of "size" and "location".

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<sup>12</sup> Not every First Nations reserve is struggling to provide clean water. In fact there are communities doing very well and this paper should not be taken as a statement that all First Nations communities are poor, or that their leadership lacks the desire and ability to lead successful, vibrant communities.



The four sub-topics have been added because in order for First Nations reserves to be financially stable with drinking water systems that are appropriate for their individual communities, size and location are not aspects of comparability that will improve conditions. It is important to have a more robust investigation, for not only is a lot of “financial...support (and) assist(ance)” going to be required to level the playing field but also;

- i) enforceable drinking water regulations must be enacted;
- ii) the removal of jurisdictional inequities must be addressed;
- ii) funding must be increased to realistic levels to increase financial capacity; and,
- iii) economic opportunities and own-source revenue will have to be encouraged.

A discussion about community comparability without involving these additional four areas, is unlikely to ever produce tangible results.

### ***1.5 Research Approach***

Through a documentary analysis of financial statements and asset management reports, a small sampling of towns and reserves with under 1000 residents will be examined in terms of: i. how they handle drinking water in their community; and, ii. their ability to operate and maintain the asset through its normal life cycle, specifically in terms of infrastructure funding. Wastewater systems will not be part of this study, although since they are so closely linked to a water treatment plant, wastewater may be mentioned, in context. Regarding known drinking water failures, four case studies will be employed to give a broader description of the effects of poor quality water.

Personal semi-structured interviews and two water treatment plant tours were conducted with topic experts including individuals from: Indigenous and Northern Affairs Canada; water treatment plant administrators, both on and off reserve; First Nations political, financial and technical advisory organizations; non-First Nations technical and government statistical organizations; and non-First Nations advocacy organizations. The information was used to gain an overall picture of the drinking water situation on reserves. Fifteen interviews in total were conducted with a set of open-ended questions usually sent ahead for the interviewee to read. Semi-structured interviews allowed probing questions to be answered and permitted flexibility in answers.

In this paper, I examined, federal and provincial government policy documents and legislation, budget announcements, journal articles, government websites, special commission/inquiries, toolkits, PowerPoint presentations from conferences, Senate and House of Commons committee meetings, *Hansard*, key information interviews as well as documents produced by advocacy organizations such as the Institute on Governance, David Suzuki Foundation, Council of Canadians and Federation of Canadian Municipalities.

First Nations perspectives are obtained through a review of First Nations organizations' publically available media releases, policy documents, position papers, Senate and House committee submissions, Panels, United Nations presentations, responses and submissions to government, *Hansard*, community blogs, community websites, journal articles and key informant interviews.

The government documents provided a basis for their policy expectations and limitations which were then reviewed in respect to the First Nations policy responses. A very literal interpretation was taken from their policies, e.g. size and location and applied to sample locations within the province of Ontario. A comparison of both legislation and jurisdiction was achieved through in-depth reviewing of municipal, provincial and federal policy websites.

### **1.6 Outline**

Coming next is Chapter II which starts off by identifying the foundational documents that employ the comparability model. Starting in 1977 with Pierre Trudeau's Memoranda to Cabinet, the government's stance is explained and attempts are made to decipher the rationale behind comparing very different groups of communities. Colonization, historical trauma and their effects on social capital are discussed with specific areas highlighted such as youth suicide and Missing and Murdered Indigenous Women and Girls. This chapter will attempt to show that the historical record of First Nations communities cannot be dismissed.

Chapter III brings the water quality issues into a more modern context. Two water quality crises, Kashechewan First Nation and Walkerton, Ontario are introduced and the differing provincial and federal responses explained. The commencement of federal programs to improve water quality on reserves is explained and how they led to consultations and reports focusing on funding, such as the Expert Panel on Safe Water for First Nations. The National Assessment of First Nations Water and Wastewater Systems in 2011 is investigated with some surprising points of view added at the end of the review. This chapter explains government

responses to well-known water quality tragedies and what changes occurred as a result of those events.

Understanding the drinking water problems on reserves is the focus of Chapter IV. The merits of drinking water advisories are discussed as they have not lessened over the decades. Case studies of Neskantaga First Nation, Six Nations of the Grand River First Nation and Martin Falls First Nation are presented. The chapter ends describing the health effects of contaminated water. Chapter IV's intention is to show the reader what the realities of long-term denial of service actually means.

Chapter V is an intensive investigation into the comparability model by examining size, location, legislation, jurisdiction, funding and economic development. This is the largest chapter in the paper and it is a step-by-step detailed guide as to why First Nations reserves and non-First Nations communities will never be comparable. Some remote communities have only other reserves near them while provincially tiered jurisdictions allow for the sharing of municipal services, a process of which First Nations communities will never be able to take advantage. A review of legislation indicates that voluntary guidelines are the only thing standing between First Nations communities and drinking water safety. Funding that is given to First Nations only keeps them at par since they have been so far behind the rest of Canada, while strategies for developing the economy and bringing in more revenue are often tied to land ownership. There are many issues that make First Nations communities very different from any other type of community in Canada. This chapter tries to explain some of these differences.

Chapter VI is the conclusion of the paper and asks whether or not there could be other ways of addressing the water quality problems that reserves often face and the steps the federal government should be taking in order to move forward with the necessary changes.

### **1.7 The literature gap**

While much has been written about drinking water quality on First Nations reserves, there is a gap in the literature regarding comparability and how it is (mis)understood by the Government of Canada. In particular, trying to compare communities whose histories have had dramatically different outcomes - where one group was under the yoke of colonization, taken away from their cultures and traditional economic activities; and the other group was free to develop and refine their economic base at the expense of the of the disenfranchised group - means the potential for economic stability has been very unequal.

The Government of Canada needs to re-think their role as paternalistic policy enforcer and allow new strategies to emerge from networks that in the past, were not considered. For example, if more reserve communities could generate monies through own-source revenue, work together with private industry on mutually beneficial projects, obtain auxiliary funding through provincial government sources without being penalized and receive realistic amounts through mandated federal government funding, they would have the stability necessary for the long-term operation and maintenance of their drinking water infrastructure. First Nations should be able to live in a manner that embraces and "*recognizes the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights*" (2010, United Nations, 64/292).

## 1.8 Moving forward

The Government of Canada has placed a heavy burden on First Nations communities for a very long time. It is hoped that a discussion regarding comparability will help to show that the government has only been adding to the burden by not listening to what First Nations communities have to say about their drinking water. The comparability model is an ineffective tool for measuring and determining water quality on First Nations reserves and should not serve as the basis for evaluating the success of government interventions in this area. By reviewing the government's comparability policy and its shortcomings, perhaps developing alternative solutions to drinking water quality on First Nations reserves will be seen in a more positive light.

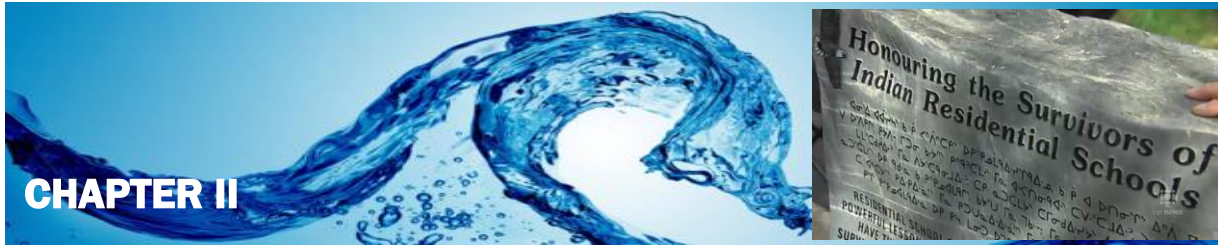
Lastly, the government also needs to recognize that clean drinking water requires an ongoing investment from them for decades to come, not just in dollars but in understanding the vast differences and inequities that their own federal policies have caused. Eventually self-governance for First Nations will usher in a different era for many more communities<sup>13</sup> but right now, a better understanding of what reserves need in terms of drinking water systems will not come from more government studies but from the people who live in the communities themselves.

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<sup>13</sup> Twenty-two self-government agreements have been signed affecting 36 "Aboriginal" communities across Canada. Indigenous and Northern Affairs Canada. (2015). *Fact sheet: Aboriginal self-government*. Retrieved August 6, 2016: [www.aadnc-aandc.gc.ca/eng/1100100016293/1100100016294](http://www.aadnc-aandc.gc.ca/eng/1100100016293/1100100016294)

## **1.9 Summary – Chapter I**

First Nations reserves have a long-standing drinking water quality crisis that the federal government of Canada addresses through a comparability policy stance offering a one-size-fits-all solution. While appropriate water infrastructure funding is a crucial component of fixing water quality, the federal government does not extend their parameters to include the lack of enforceable regulations, jurisdictional inequities and the lack of opportunity for economic development. In addition, the government sees drinking water quality as an isolated issue that is not connected to other community services and issues. The comparability model presumes that First Nations water traditions and customs - which predate Eurocentric standards by thousands of years – are not an important aspect of the drinking water quality solution. This presumption needs to change.



## Drinking water quality is linked to the colonial past

### 2.1 Comparability as policy – History

Comparability as policy has been developed over many decades through the issuance of federal position papers that have guided the federal government's decision to use an ill-equipped approach towards drinking water quality on reserves. After almost 50 years of rejection by First Nations, the government has not yet learned to re-visit their comparability policy.

#### 2.1.1 Memoranda to Cabinet

It is hard to compare communities when the true basis of that comparison is unknown and harder still when the definitions of what makes a community healthy are ambiguous. Former Prime Minister Pierre Trudeau<sup>14</sup> submitted a Memoranda to Cabinet in 1977<sup>15</sup> that has shaped subsequent federal policy regarding the standard of living on reserves. This appears to be the first instance of the comparability model as intended policy, to improve conditions on reserves and:

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<sup>14</sup> Pierre Elliot Trudeau (1919-2000) was Canada's 15th Prime Minister. His terms of office spanned April 20, 1968 to June 3, 1979 and March 3, 1980 to June 30, 1984. Library and Archives Canada. Retrieved July 16, 2016: <http://www.bac-lac.gc.ca/eng/discover/politics-government/prime-ministers/pmportrait/pages/item.aspx?PersonId=15>

<sup>15</sup> A full citation is not available for this memoranda as it is currently part of a group of 5,000 Conclusion documents being catalogued at Library and Archives Canada. Staff at the Archives suggested the following citation: Library and Archives Canada. (1977). Privy Council Office fonds, Cabinet Documents series R165-1344-E, Conclusion document # unknown.



...provide Indian homes and communities with the physical infrastructure that meets commonly accepted health and safety standards, is similar to that available in neighbouring, non-Indian communities or comparable locations, and is operated and maintained according to sound management practices.

Prime Minister Pierre Trudeau, 1977, Memoranda to Cabinet.

No details are provided on how this specific strategy would be accomplished,<sup>16</sup> nor is recognition given that in some cases, there are no “non-Indian” communities located near reserves. What is clear however is that “comparability” is a one-way street called “Western Point-of-View”: The parameters as cited by then Prime Minister Pierre Trudeau focus not only on “neighbouring, non-Indian communities or comparable locations” but dismissively define expectations with respect to “physical infrastructure...(that) is operated and maintained according to sound management practices”. If a community were a business, perhaps this model would make sense. However communities are living, breathing entities that experience growth very differently from a business. In addition, “commonly accepted health and safety standards” does not explain exactly which standards are being accepted and by whom. Certainly Traditional Ecological Knowledge (TEK) brings a drinking water worldview on health and safety that could be "commonly accepted" by many reserve residents. McGregor (2012) summarizes a "key message" regarding water being "part of a holistic system":

When one considers water, one must consider all that water supports and all that supports water. Therefore, a focus on just drinking water is misguided. It is not in keeping with traditional principles of holism and the interdependence of all living things. One must also consider, for example, the plants that water nourishes, the fish that live in water, the medicines that grow in or around water, and the animals that drink water.

McGregor, 2012, Traditional Knowledge: Considerations for Protecting Water in Ontario.

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<sup>16</sup> This area is beyond the scope of this paper.

However, Indigenous holistic understandings of water do not appear to be what the federal government of Canada has had in mind regarding the drinking water quality crisis on reserves.

### *2.1.2 White Paper, Red Paper*

The impetus behind Prime Minister Pierre Trudeau's Memoranda may be found in previous policies that highlight the Government of Canada's view of First Nations peoples. Eight years earlier in 1969, a major policy paper was introduced in Parliament that demonstrates the Government of Canada's lack of understanding in terms of who First Nations peoples are, their place in what is now Canada and their definition of what constitutes a healthy community. Then Minister of the Department of Indian Affairs and Northern Development (DIAND), Jean Cretien submitted to Parliament the *Statement of the Government of Canada on Indian Policy* (1969), now known as the "White Paper". The policy proposed that "the course of history must be changed" through the repealing of the *Indian Act*; the devolution of responsibility to the provinces and First Nations communities themselves; the reserve system rejected in favour of private land ownership; and the dissolution of the Department of Indian Affairs and Northern Development within five years (DIAND, 1969).

The White Paper, with an amazing lack of insight after a full year of consultation with First Nations across Canada, attempts to define an "Indian":

...too often, to be an Indian is to be without...a job, a good house, or running water (and) without knowledge, training or technical skill and, above all, without those feelings of dignity and self-confidence that a man must have if he is to walk with his head held high.

Cretien, J., 1969, *Statement of the Government of Canada on Indian Policy* (White Paper).

The Government of Canada believed that through additional consultations with organizations such as the National Indian Brotherhood<sup>17</sup>, provincial associations, band councils, as well as the appointment of a special Commissioner, the process of “open(ing) the doors of opportunity” could begin (White Paper, 1969).

This racist and paternalistic document is emblematic of how the federal government continues to hold close their ideals of colonial assimilation. The White Paper indicates how Pierre Trudeau's government believed that “in many situations, the problems of Indians are similar to those faced by their non-Indian neighbours” and that the problems of “regional disparities” could be overcome not in “isolation...but within the context of regional development plans involving all the people” (White Paper, 1969). The White Paper is perhaps the true origins of the comparability model where simplistic geographic comparisons and ambitious solutions ignore real living conditions on reserves. DIAND was completely unable to recognize that policies based upon what they, the government determined a First Nations community to be, were the major complicating factor.

The response from First Nations was dramatic and swift. Dr. Harold Cardinal, then leader of the Indian Chiefs of Alberta, penned the response entitled *Citizens Plus*, later to be called the “Red Paper”, in June of 1970. The Red Paper challenges the government’s assumptions in the White Paper, that “Indians” wanted their treaties ended; their lands subject to provincial taxes; their

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<sup>17</sup> The National Indian Brotherhood later evolved into the Assembly of First Nations.

Indian status removed; and their “tribes” receiving differential treatments based upon “economic status” (Cardinal, 1970).

A long portion of the Red Paper response focuses upon the need for appropriate educational opportunities for “Indian” children and how the educational system should be improved. Health care and economic development were also areas that were focused upon while the problem of poverty and its associated issues - which for some communities seems not to have changed in the 46 years since the Red Paper was written - were delineated:

...unemployment, overcrowded and deteriorating housing, crime, alcohol, and drug abuse, sub-standard preventive medicine, apathy, frustration...destruction of the family and community units and total alienation from society.

Indian Chiefs of Alberta, 1970, Citizens Plus (Red Paper).

The report gives further context to this statement by explaining that these symptoms, in general, apply to “all reserves and peoples as a whole” but in the “dominant society”, such conditions are “isolated pockets” (Red Paper, 1970). The connection of the White Paper and the Red Paper to conditions on reserves today is that there is a long, systemic history of the Government of Canada wearing “blindness”, so as to block out the uniqueness of First Nations peoples, and despite vigorous responses such as Harold Cardinal's, this period extends well into the modern era.

### *2.1.3 Auditor General 1995 report, Chapter 23*

In 1995, the Auditor General released the results of an audit that examined the Department of Indian Affairs and Northern Development's (DIAND) management of both capital assets and maintenance on reserve in the *November 1995, Chapter 23: Indian and Northern Affairs*

*Canada, On-Reserve Capital Facilities and Maintenance* report. Even this far back, there was clear language that discussed the devolving of responsibility and DIANDS' lack of regard for capacity:

23-13

The responsibility to deliver capital projects was transferred without due consideration of the communities' capacities to assume it.

Auditor General of Canada, 1995, Chapter 23: Indian and Northern Affairs Canada:  
On-Reserve Capital Facilities and Maintenance.

The Auditor General's (AG) recommendation also refers to the Level of Service Standards (LOSS) and the lack of an appropriate comparison for comparability. The AG's comments show there was an awareness that a credible basis of comparison was missing. This is a crucial exhortation that successive federal ministries responsible for First Nations drinking water quality have not heeded. How can you compare communities when you do not have a basis for that comparison?

23-23

However, we were not able to find any departmental document that establishes its Level of Service Standards or any other basis as the benchmark against which to measure the achievement of parity with other Canadian communities.

Without establishing a basis for comparison, the Department will not be in a position to report whether conditions in First Nation communities are becoming comparable with other Canadian communities, even if the LOSS standards have been met.

Auditor General of Canada, 1995, Chapter 23: Indian and Northern Affairs Canada:  
On-Reserve Capital Facilities and Maintenance.

While the Auditor General still does not deem First Nations' input and perspective as a necessary component, this report should have been the start of a sea change in terms of the comparability model. It was not.

## 2.2 Trauma and community

There are many reasons why a community can or cannot successfully move forward and be self-sufficient in terms that are meaningful to them. Before embarking upon a comparison of "similar circumstances" between First Nations reserves and non-First Nations communities, there are two co-joined topics that are often ignored by the federal government but need to be addressed to understand why the very basis of the comparability model is flawed. These areas are historical trauma and its effects on social capital.

### 2.2.1 Social capital

Focusing only on drinking water quality ignores the idea of community wellbeing and the social capital that is engendered within each unique community. Kitchen *et al* (2012) reference data from the Canadian Community Health Survey (2007/08) and define an associated component of social capital as being the "sense of belonging to a local community". The authors then determined that social capital is "a set of conditions present in society, either organized or informal, which have the potential to tie people and communities together socially" (Kitchen *et al*, 2012). Interestingly the Health Survey did not include First Nations reserves,<sup>18</sup> which is a statement of government exclusion in of itself, however studies of First Nations communities and their social capital were evaluated by Mignone (2005) who stated that social capital "is a resource composed of a variety of elements, most notably social networks, social norms and values, trust, and shared resources". Mignone further explains that social capital involves resources within a community that "collectively support" community members (2005). Putnam

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<sup>18</sup> It also did not include Canadian Armed Forces Bases.

(2001) echoes Mignone stating that there is value in networks and their “associated norms of reciprocity”.

There is general consensus that the social capital of many First Nations communities was completely crushed through a history of colonialism and intentional degradation (TRC, 2015/Angus, 2015/Anaya, 2014/Fontaine, 2013/McLaughlin, 2015). The First Nations Regional Health Survey (RHS, 2002/3) describes how colonization destroyed the “collectivities that functioned to achieve balance” within First Nations cultures. First Nations communities therefore have a double burden to overcome to find their former balance: Externally they are trying to obtain the financial capacity to improve their communities which over time, has necessitated negotiating with a patronizing and oppressive government. Internally they are struggling to decolonize and reclaim their rightful status, which can be a painful and arduous process. Aquash (2011) discusses how community development is multi-layered, requiring “ongoing processes of communication, healing and organization”. Alfred (2009) talks about identity and the “national consciousness” and “foundations” of First Nations peoples being damaged and eroded:

It is...the weakening of our collective sense of community that present(s) the most significant threat to our continuing existence as new generations of our people emerge and grapple with new realities in the struggle to survive culturally, politically and spiritually.

Alfred, T., 2009, First Nation Perspectives on Political Identity.

Looking again at the language of the current federal government in terms of “providing... services comparable to the levels ...available in non-native communities of similar size and circumstances” (INAC), the question should be asked: Are there “non-native” communities that

have similar circumstances that can be used as a comparative model?<sup>19</sup> Comparing First Nations communities with non-Indigenous communities ignores the dynamics that create any community in the first place; the development of identity, culture and traditions later rooted in generations passing on their specific and detailed history and skills. This passing on of knowledge ensures the uniqueness of each community and is an important aspect of community stability and growth.

Community resilience is a critical component of moving forward and is based not only upon good drinking water infrastructure, healthcare or education but the healing of the community as a whole. Defining social capital in First Nations communities is complex, involves deeply inter-related issues that are evolving and mostly likely will be misunderstood by most people outside of First Nations culture. Social capital has not provided confirmation of the use of comparability as a viable drinking water policy. Unfortunately the concept of similar communities, First Nations and non-First Nations, still does not appear to be possible. A more detailed look at colonial policies and an evaluation of the current on-reserve situation, will push the comparability model even further away.

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<sup>19</sup> The *Design Guidelines for First Nations Water Works* (2010) regarding water systems, does state that “new processes and equipment” should be tested in “comparable installations” but this is as close to defining comparability that is seen within the federal government. Again, no definition of comparable was given or where these comparable installations are located.



### 2.2.2 Colonization – Indian Act

If a high percentage of First Nations peoples do not have access to the same quality of drinking water as the rest of Canadians but in fact have far more contaminated drinking water (National Assessment, 2011) than most other non-Indigenous communities, how did this situation arise? First Nations hold a unique position in Canadian society that in general terms - since the immigration of the Europeans - has not allowed them to build communities with stable, long-term infrastructures. Their political, economic and cultural independence has been forcibly co-opted into Eurocentric structures. Through a narrative emanating from 18<sup>th</sup> and 19<sup>th</sup> century British colonialism, responsibility for First Nations peoples in Canada falls under the jurisdiction of the federal government as mandated by an often-amended law originally implemented in 1876 called “*An Act respecting Indians*” (AANDC, 2011/ Justice Laws, 2015).

Commonly referred to as the *Indian Act, 1985*, this draconian piece of legislation is currently seen by First Nations as a hindrance to progress, ignoring both treaty rights and the need for First Nations governments to “drive solutions in ways that respect and implement their rights, responsibilities and decision-making” (AFN-Atleo, S., 2012). Ontario Regional Chief Isadore Day boldly states that the *Act* “still remains an oppressive, racist piece of legislation that continues to inflict irreparable damage upon our Peoples” (Chiefs of Ontario, 2016, April 12). Even the federal government has admitted in 2011 that the *Act* has been a tool that allowed them to:

...Intervene in a wide variety (of) issues and to make sweeping policy decisions across the board such as determining who was an Indian, managing Indian lands, resources and moneys, controlling the access to intoxicants and promoting "civilisation".

INAC, 2011, A History of Indian and Northern Affairs Canada.

### 2.2.3 Historical trauma

In the final summary report of The Truth and Reconciliation Commission (TRC), *Honouring the Truth, Reconciling for the Future* (2015), the devastating damage of government policies is explained. The TRC points to “cultural genocide” as being the tool used by the Canadian government to wreak havoc:

States that engage in cultural genocide set out to destroy the political and social institutions of the targeted group. Land is seized, and populations are forcibly transferred and their movement is restricted. Languages are banned. Spiritual leaders are persecuted, spiritual practices are forbidden, and objects of spiritual value are confiscated and destroyed. And, most significantly.... families are disrupted to prevent the transmission of cultural values and identity from one generation to the next.

TRC, 2015, Final Report: Honouring the Truth, Reconciling for the Future.

The reasons that the Canadian government engaged in these inhumane practices of cultural genocide are ones of greed and selfishness: “Divest(ing) itself of its legal and financial obligations to Aboriginal people” was fueled by the desire to negate treaties negotiated so as to take control over First Nations lands and resources (TRC, 2015).

James Anaya, the former United Nations Special Rapporteur on the Rights of Indigenous Peoples, travelled to Canada for nine days in October 2013 to visit several Indigenous communities and leaders, to investigate conditions for Indigenous peoples and also to meet with government officials (Anaya, 2013). Anaya presented his findings to the Human Rights Council in his *Report of the Special Rapporteur on the Rights of Indigenous Peoples* in July 2014. The Rapporteur discusses how more than half of First Nations reserve communities have medium to high risk drinking water systems and that many homes need major repairs to both plumbing and electrical wiring, (United Nations, 2014); these are repairs that affect the ability

to have indoor drinking water. However, Anaya discusses not only critical infrastructure that is lacking but the history of human rights violations that have impacted First Nations communities including:

- Forced assimilation, in particular residential schools
- Exclusion from participation in legal processes such as voting, jury duty and access to the courts as well as lawyers
- The removal of “aboriginal identity and membership”

Prior to his formal 2014 report to the United Nations, in October of 2013 Anaya voiced his concerns regarding the results of his visit in a *Statement upon conclusion of the visit to Canada* (Anaya, 2013). He spoke of communities with substandard housing stock that was old, deteriorated, mould-infested and overcrowded resulting in both physical and social health consequences including " high rates of tuberculosis... family violence, unemployment, and unwanted displacement to urban centres" (Anaya, 2013.) Anaya also mentioned how one Chief said the community members with university degrees in areas such as nursing, teaching and engineering – expertise desperately needed – could not bring their new skills back to the community since there was nowhere for them to live (2013.).

#### *2.2.4 Missing and Murdered Indigenous women and girls (MMIWG)*

Anaya also mentions the important issue of missing and murdered Indigenous women and girls that the federal government simply refused to acknowledge. Successive federal governments have been neglecting the plight of them women and girls for years until Prime Minister Justin Trudeau finally consented to a national inquiry into 174 females that have simply disappeared (RCMP, 2015), with families having no idea where there are, and 1,017 victims of homicide

(RCMP, 2014). The National Inquiry into Missing and Murdered Indigenous Women and Girls (MMIWG) will be “independent from the federal government”<sup>20</sup> and will be led by Chief Commissioner Judge Marion Buller, the first female First Nations judge in the province of British Columbia (Government of Canada, 2016, Aug./Tunney, C. 2016, Aug).

During the announcement of the inquiry, the Minister of Status of Women, Patty Hajdu states what should have been said long ago (Wherry, 2016, Aug.):

We cannot move forward until we face and recognize and put a stop to this ongoing tragedy. Until that time, our entire country will live under its shadow and the consequences of our inaction.

Hajdu, P., 2016.



**Figure 1. 'How Much Was Forgotten' by Ruth Cuthand.  
Source: Government of Canada, MMIWG, 2016.**

The government adopted the iconography of the red dress<sup>21</sup>, for the MMIWG. Ruth Cuthand’s painting “How Much Was Forgotten”, is a strong visual and emotional message regarding forgotten women and violence.

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<sup>20</sup> A separate office and website have not yet been established. Government of Canada, 2016, Aug. 3). Accessed on August 6, 2016: <http://www.aadnc-aandc.gc.ca/eng/1448633299414/1448633350146>

<sup>21</sup> Using red dresses to signify the trauma of missing and murdered women and girls originated with Metis artist Jaime Black’s 2010 exhibit, the REDress Project. Government of Canada. (2016). MMIWG. Accessed on August 6, 2016: <http://www.aadnc-aandc.gc.ca/eng/1448633299414/1448633350146>

### 2.2.5 Suicide

Across Canada, many communities are now dealing with an epidemic of youth suicides. In Ontario, reserves such as Attawapiskat First Nation, Pikangikum First Nation, Neskantaga First Nation, Fort Hope First Nation and La Loche First Nation are putting their children on suicide watches and/or declaring a state of emergency (Blaze-Baum, K., Curry, B. 2016, Apr. 11/ Patriquin, M., 2012/Porter, 2016, Apr. 16/Hill, A. 2015, May 15/Kielland, N., Simeone, T. 2014, Jan. 6). Suicide rates for First Nations males between 15-24 years of age is 126 per 100,000 compared to 24 per 100,000 for non-Aboriginals in the same age bracket (Health Canada, 2010). This is almost a 500% difference in suicide rates between the two groups. First Nations females are lower than their male counterparts at 35 per 100,000 females but they are 700% higher than the non-Aboriginal females whose suicide rates are 5 per 100,000. It is important to recognize that the on-reserve median age is 23.8 years (Statistics Canada, 2011) and that purely on a population data basis, youth suicide could decimate small reserve communities.

To give a better idea of how high these suicide rates are, looking at the three largest cities in Ontario and their current populations, the number of suicides that would equal the First Nations percentages emphasizes what would be appalling statistics<sup>22</sup>:

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<sup>22</sup> Suicide is a terrible tragedy whether it happens in a First Nations community or a non-First Nations community. The comparisons have been shown here because there is such a large disparity between the two groups.

<b>City</b>	<b>Population 2011 Census</b>	<b>Extrapolated Suicides – Rate of First Nations Male Youth</b>	<b>Extrapolated Suicides - Rate of Non-Aboriginal Male Youth</b>	<b>Difference</b>
<b>Toronto</b>	2,615,060  (rounded off to 2,600,000)	3276	624 =	<b>19% of First Nations male youth rate</b>
<b>Hamilton</b>	519,949  (rounded off to 520,000)	655	125 =	<b>20% of First Nations male youth rate</b>
<b>Ottawa</b>	813,391  (rounded off to 800,000)	1008	192 =	<b>19% of First Nations male youth rate</b>

**Figure 2. Suicide rates of male youth, First Nations and non-First Nations,  
Source: Based upon population statistics from Statistics Canada, 2011.**

The Centre for Suicide Prevention issued a *Suicide Prevention Resource Toolkit for Aboriginal, Inuit, Metis and First Nations*, (2013). The introduction includes two important statements, one of which discourages the assumption that all “Aboriginal” communities have high rates of suicide (Centre for Suicide Prevention, 2013). Making assumptions and stereotypical statements can lead governments and the public down the wrong path, even when suicide rates are as high as indicated. The second statement references Kirmayer ‘s comprehensive study entitled *Suicide among Aboriginal People in Canada* (2007) which points to suicides being relatively rare until the arrival of the Europeans:

The epidemics of contagious diseases brought over by European colonizers that decimated the Aboriginal population may have provoked many suicides through the utter despair felt by individuals who had lost their families and communities.

Kirmayer, 2007, *Suicide among Aboriginal People in Canada*.

### 2.2.6 Snapshot of Disparities

Galway (2016), discusses the range of indicators that affect First Nations reserve and non-First Nations populations through a chart, entitled a “snapshot of disparities”. For First Nations on and off reserve, crowded housing conditions; life expectancy; and prevalence of type 2 diabetes are all much higher than non-First Nations individuals (Galway, 2016). On-reserve populations show higher unemployment and lower levels of education attained (Galway, 2016). Charts like this can be misconstrued with negative assumptions about community capabilities and motivations. However they do give an indication of the quality of life for residents on many reserves. A partial chart from Galway is reproduced here comparing on-reserve populations with non-First Nations Canadians, with median income replacing household income:

Indicator	First Nations People	All Canadians
Unemployment rate (Statistics Canada)	25% (2006)	6.6% (2006)
Adults (age 20-24) did not complete high school (Statistics Canada)	61% (2006)	13% (2006)
Median income (age 25-54) (Statistics Canada)	\$14,000 (2005)	\$32,029 - \$66,535 (2005)

**Figure 3. Income, education and unemployment rates**  
Sources: Galway, 2016 and Statistics Canada, 2011

### 2.2.7 An attempt to move forward?

Broadly speaking, there are indications that the federal government is recognizing their participation in the traumas perpetrated against First Nations in Canada or at least trying to rectify both the funding for infrastructure and the lack of enforceable legislation. There are some beginning steps including:

- Former Prime Minister Harper's "apology" in the House of Commons to the former students who attended Indian Residential Schools. Their forceful removal from their homes and communities to educational facilities far away from their families led to physical, emotional and sexual abuse.
- Truth and Reconciliation Commission
- *Safe Drinking Water for First Nations Act, 2013*
- National Inquiry into Missing and Murdered Indigenous Women and Girls

However there is much more work to be done to dispel decades of aggression and violence.

Alfred (2009) situates the problem as properly belonging to the colonizers:

As is typical in all colonial societies, First Nations today are characterized as entrenched dependencies, in physical, psychological and financial terms, on the very people and institutions that have caused the near erasure of our existence and who have come to dominate us.

Alfred, T., 2009, Colonialism and State Dependency.

Alfred also references Kirmayer and Valaskakis (2009) explaining how Canada's federal government is tied to a backward-looking view of "Aboriginal cultures", focusing on the past with a commitment "for the well-being of these cultures in the present and future" being provided only for the "assimilated Indian" (Kirmayer, Valaskakis, 2009). Trying to make First Nations the same as non-First Nations communities through comparability, can be construed as a version of assimilation. This is not a road INAC should be considering.



It is within this backdrop of cultural and political dominance that federal interactions with First Nations still exist, including those that involve drinking water systems within First Nations communities. It is impossible to look only at drinking water quality and think that providing potable water is going to fix a community. Equally important is that safe drinking water will only be achieved when the federal government takes a serious look at funding for not only drinking water but for all other types infrastructure that a community requires including; health, culture, emergency services, housing, education, transportation, energy and most importantly social infrastructure.

### *2.2.8 Federal government's bias*

For the federal government to assume communities that have gone through deep and multiple traumas will be the same as communities that have not, is not only naïve but indicates a lack of understanding regarding how the impacts of historical policy could be different from their own interpretations. It shows a lack of recognition that there could be other narratives beyond postcolonial binaries. Historical trauma and its effect on social capital are the first aspects of comparability that the Government of Canada has consistently overlooked.

This inability on the federal government's part, to not see how parts of a community affect each other and also affect the quality of life, is in direct contrast to their own infrastructure program, Canada 150 Community Infrastructure Program, (FedDev Ontario, 2016, May) aimed mainly at the non-Indigenous population in Canada. Canada 150 was part of Budget 2016 where over the span of two years, \$150 million was dedicated to "renovate, expand or improve existing community and cultural infrastructure" (FedDev Ontario, 2016, May). The initiative also

focuses on “projects that support the government’s priorities to ensure a better future for Indigenous peoples” (FedDev Ontario, 2016, May). Canada 150 is a program under the new federal administration of Prime Minister Justin Trudeau. Time will be required to assess whether or not his government will see the strange juxtaposition of priorities his predecessors have left.

### **2.3 Summary – Chapter II**

Historically, federal government policy towards First Nations peoples unleashed a horrendous vision of subjugation and genocide. Policy documents such as the White Paper, even though not implemented, set the stage for successive administrations to continue colonization and assimilation through the forcible removal of children to residential schools. With the destruction of social capital, communities fell into avenues of despair including high levels of youth suicide, especially on isolated reserves. Missing and murdered women and girls were not acknowledged and community economic, health and education needs ignored.

However drinking water is the focus of this paper and understanding how the federal government reacts to drinking water crises and how those events are applicable to First Nations reserves and non-First Nations communities, will emphasize the impact of historical trauma and its effects today. Drinking water quality as seen through the federal government’s comparability model will be examined in much more detail. Water still has not been addressed properly and First Nations communities are still suffering from the effects of contaminated drinking water. A review of the current water quality situation will give a more up-to-date context.



## CHAPTER III

### Examining drinking water quality in the contemporary context

#### 3.1 The drinking water crisis

##### 3.1.1 Introduction

In the modern era Canada has had to learn how to handle drinking water crises as both human error and nature contribute to contaminated water. Legislative policies were developed, Plans of Action implemented, Expert Panels and Inquiries were assembled to deal with consequences that affected hundreds and in some cases thousands of people. For First Nations, it was a slow process moving through government bureaucracy to finally reach a National Assessment that inventoried the water systems on a majority of reserves in Canada. Perceptions of drinking water quality in Canada came into the public eye with two major events in Ontario, one in a small town and one on an isolated reserve in the northern part of the province. The contamination in Walkerton's drinking water system caused deaths and resulted in new provincial legislation. As the crisis in Kashechewan First Nation unfolded, for 10 days neither the provincial nor federal government acted, leaving community members with *E. coli* tainted water until an evacuation was ordered. These two events led to an expert panel and a national assessment of water systems being assembled to look at drinking water quality on First Nations

reserves and also led to policy decisions that changed the landscape of drinking water quality for non-Indigenous Ontarians but produced little tangible improvements for First Nations communities.

### *3.1.2 Walkerton, Ontario and drinking water regulations*

Drinking water contamination in Canada was brought to the forefront of public attention in May of 2000 when the town of Walkerton, Ontario's drinking water system was contaminated with the *Escherichia coli* (*E. coli*) bacteria, causing the death of seven people and extreme illness in more than 2,300 other residents (O'Connor, I & II, 2002). Due to the severe consequences of this contamination, the Ontario Ministry of the Attorney General established an inquiry to investigate how such a tragedy could occur and what steps needed to be taken towards prevention of similar events in the future (O'Connor, I & II, 2002).

The inquiry was chaired by Justice Dennis O'Connor, who after a comprehensive investigation, cited that the main reasons for the failures in Walkerton were related to the lack of continuous monitors, low operator training and expertise, and oversights in the approvals and inspections programs of the Ontario Ministry of the Environment (O'Connor, I & II, 2002). Many of these same problems exist on First Nations reserves and Justice O'Connor dedicated an entire chapter (Chapter 15) of Part II of the Inquiry report on Indigenous communities. O'Connor's comments emphasize a crucial issue on First Nations reserves at that time: A total lack of legislative controls (O'Connor, I & II, 2002). The Justice discusses how the *Ontario Water Resources Act*,

Drinking Water Protection Regulation 459/00<sup>23</sup>, developed in response to the Walkerton crisis, was never extended to First Nations reserves as they were deemed federal lands (O'Connor, II, 2002). Ontario now had higher drinking water standards than those which applied on reserves, which relied upon the federal *Guidelines for Canadian Drinking Water Quality* (Boyd, 2006). O'Connor further explains that INAC policy states that the construction and designing of all new or upgraded systems must meet the more stringent of the Guidelines or provincial standards (O'Connor, 2002).

O'Connor continues with his review of First Nations reserves stating that INAC placed all responsibility in terms of compliance with the federal *Guidelines for Canadian Drinking Water Quality* (1996), squarely onto the reserves themselves (O'Connor, 2002). This compliance is linked to infrastructure capacity and regulatory oversight that often does not exist. Justice O'Connor's comments pointedly decries the Government of Canada's shirking of duties (O'Connor, 2002):

...There are no legally enforceable federal or provincial standards relating to drinking water on First Nations reserves. First Nations band councils have the responsibility for ensuring that water facilities are designed, constructed, and maintained, and operated within the more stringent of the federal or provincial standards. Contracts and funding arrangements may require compliance with these standards. However, absent a band bylaw conferring authority on Health Canada or its officers, who are asked to provide assistance on water quality and surveillance programs, the system must work by goodwill and cooperation.

Justice O'Connor, 2002, Report of the Walkerton Inquiry, Part II, Chapter 15.

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<sup>23</sup> This regulation has been replaced by O. Reg. 170/00 CHECK #

A national inquiry with a high profile judge acting as commissioner was not the result that Kashechewan First Nation experienced after their drinking water quality crisis. On the community level, not much changed. After being evacuated to motels in the towns nearest to the reserve and a clean-up, the residents were returned to exactly the same conditions.

### *3.1.3 Kashechewan First Nation (northern Ontario)*

October, 2005 brought another pivotal event to the attention of the Canadian and international public when the residents of Kashechewan First Nations were airlifted out of their reserve due to drinking water contaminated with *E. coli* (CBC News, 2006, Nov.). A Canadian Forces DART water purification unit, normally utilized in foreign countries such as Sri Lanka and Kashmir was sent to the community (CBC News, 2006, Nov.). Then Assembly of First Nations National Chief Phil Fontaine lambasted the federal government for ignoring the long-term boil water advisory in not only Kashechewan but across Canada (Petten, 2005):

...We must map out a comprehensive plan to address this issue on a national basis because this situation occurs in far too many First Nations communities in Canada.

It is absolutely appalling and completely unacceptable that the federal government allows these conditions to fester and plague a community, while boasting of a federal surplus.

Fontaine. P. in Petten, 2005, Water Quality a Problem.

Amazingly, the community has been flooded several times since that event, often more than once a year. In 2014, almost 2000 residents, or basically the entire community minus some councillors, were evacuated (CTV News, 2014, May 13). In 2015 the evacuations continued with 600 children and elders becoming the first wave of evacuees in April (CBC News, 2015, Apr. 22). Yet again in 2016, the evacuations continue, tearing the community apart and disrupting

schools as another State of Emergency was declared by the Chief and Council (CBC News, 2016, Apr. 28). A review of Public Safety Canada’s Canadian Disaster Database shows that Kashechewan has been evacuated many times with residents sent to the towns of Kapuskasing, Wawa, Sudbury, Cochrane, Timmins and Moosonee , among others (Public Safety Canada, n/d). A partial list of evacuations is below with Attawapiskat added for 2004:

2012	Kashechewan and Fort Albany	Evacuees: 269	Cost: \$6,700.000
2006	Kashechewan	Evacuees: 1100	Cost unknown
2005	Kashechewan	Evacuees: 1100	Cost unknown
2005	Kashechewan	Evacuees: 200	Cost unknown
2004	Attawapiskat	Evacuees: 1700	Cost: \$5,700.000

With close to six million and seven million dollars being spent on a single evacuation for each community, there surely must be a better use for those funds spent each year. One is left wondering how many times these communities have to be evacuated before it become clear that serious, systemic changes regarding the improvement of these reserves, must be discussed. It is also no coincidence that these two communities also have high suicide rates.

### *3.1.3.(i) Jurisdictional confusion and voluntary guidelines*

One of the main issues that deepened the crisis was that both the province and the federal government were pointing to each other as being responsible for dealing with the emergency (Howlett, K., 2005). Eventually, after intense international media scrutiny and pressure from the Canadian public, the Ontario government declared a State of Emergency and airlifted the residents out of the community (Public Safety Canada, n/d). The lack of clarity regarding jurisdiction slowed down the rescue process, especially since it was later determined that there was a 1992 Emergency Preparedness Agreement which should have given the province the

green light to immediately assist the community (Mutimer, D., 2012). One is left asking how it is possible that no one in either level of government fulfilled the obligations stated in the Preparedness Agreement. The inability of the community itself to ask non-First Nations communities for help because of conflicting jurisdictions, as well as being sizeable distances away, speaks to deep inadequacies within the jurisdictional structures of INAC.

These two events, Walkerton and Kashechewan have had very different outcomes illustrating the difference between having enforceable legislation and having voluntary guidelines.

Walkerton spurred the Ontario government on to pass the *Safe Drinking Water Act, 2002* and the *Clean Water Act, 2006*. Ontario was able to enact and enforce new legislative standards, hold an inquiry with disciplinary consequences for those directly involved in the event and even develop a state-of-the-art water quality educational and training facility, the Walkerton Clean Water Centre and agency (WCWC, 2011). The federal government on the other hand, made no changes at all to its drinking water regime, having no legislative authority to fall back upon since the *Guidelines for Canadian Drinking Water* have no ingredients to force compliance.

Community	New Enforceable Standards	Disciplinary Consequences	Educational Water Centre & Agency	Comprehensive Public Inquiry
Ontario (Walkerton)	Yes	Yes	Yes	Yes
First Nations (Kashechewan)	No	No	No	No

Figure 4. Comparison of drinking water standards; Ontario vs. First Nations

Justice O'Connor had hoped for new enforceable standards for First Nations and voiced his concerns in Recommendation 89 of the Walkerton Inquiry Report, Part II (2002):



I encourage First Nations and the federal government to formally adopt drinking water standards, applicable to reserves, that are as stringent as, or more stringent than, the standards adopted by the provincial government.

Justice O'Connor, 2002, Walkerton Inquiry Report, Part II.

## **3.2 New policies and investigations**

### *3.2.1 Plan of Action - Where the change started*

After the tragedies of Walkerton, Ontario and Kashechewan First Nation, the Government of Canada realized that contaminated drinking water could result not only in serious illnesses but even death. Justice O'Connor's two-part Walkerton report, along with the recommendations made in the report by the Commissioner of the Environment and Sustainable Development (2005) under the Auditor General, created the right atmosphere for the creation of a new national water strategy to address drinking water quality on reserves. It was called the "Plan of Action for Drinking Water in First Nations Communities" (AANDC, 2010):

#### March, 2006 – Plan of Action

Minister of Indian Affairs and Northern Development (INAC) Jim Prentice<sup>24</sup>, along with Assembly of First Nations (AFN) National Chief Phil Fontaine launched a Plan of Action to "address drinking water concerns in First Nations communities" (AANDC, 2013). Included in the Plan:

- *Protocol for Safe Drinking Water for First Nations Communities* which contained standards for the design, construction and operation of the water treatment plant
- Training for plant operators
- Panel of experts to "advise on the appropriate regulatory framework"
- 21 Communities with high risk systems given priority and "remedial plans"

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<sup>24</sup> The full title was Minister of Indian Affairs and Northern Development and Federal Interlocutor for Metis and Non-Status Indians.

#### May, 2006 – Creation of the Expert Panel on Safe Drinking Water

AANDC, the AFN, Health Canada and Environment Canada announces that they are creating the Expert Panel to assist them in moving forward with a drinking water regulatory framework. The Panel will hold hearings across Canada with First Nations communities and other organizations and levels of government and release a report of their findings.

#### January, 2007 – Plan of Action, 1<sup>st</sup> Progress Report

The first of four Progress Reports identifying the actions taken by the Government of Canada in regards to drinking water on reserves.

#### March, 2007 – Plan of Action, 2<sup>nd</sup> Progress Report

*Water is a Treasure* released as a school activity kit for children on First Nations reserves, from kindergarten to grade six. By 2008, more than 10,000 copies had been released to “schools nationwide,...Band Councils and Departments of Education”. The purpose of the kit was to increase awareness in First Nations children regarding “clean and reliable drinking water” and also to encourage the idea of the water sector being a potential career choice for children.

#### January, 2008 – Plan of Action, 3<sup>rd</sup> Progress Report

Priority communities that had received assistance were listed and 30 – 40 additional circuit rider (water plant technician) trainers were going to be hired. Collaborating with Health Canada, INAC and First Nations, the *Procedure for Addressing Drinking Water Advisories in First Nations Communities South of 60* ◦ was developed.

During the period these Plan of Actions were introduced, funding for First Nations Infrastructure was increased but still not to levels that would make a real difference. The Plans also started the discussions in the Senate and the House of Commons on drinking water legislation.

### *3.2.2 Expert Panel and financial capacity*

In June of 2006 the Department of Indian Affairs and Northern Development (DIAND) created the Expert Panel on Safe Drinking Water for First Nations. The panel's mandate included a series of public hearings and presentations held across Canada as well as written submissions from "interested parties" discussing a variety of water quality issues including:

- Exactly what should be regulated
- Legal frameworks
- Standards to be implemented
- Roles of the various levels of government

Those who participated in the consultation process included 39 individual First Nations; 31 tribal, technical and political First Nations organizations; INAC, Health Canada and Environment Canada and provincial ministries; and, private sector associations and organizations (Expert Panel, 2006). The resultant summary document from the Expert Panel stated that the lack of a regulatory framework for drinking and wastewater on reserves had led to a confusing mix of government policies, and contribution (funding) agreements that lacked definitive roles and responsibilities. The Panel also focused in on the resource gap between the funding that First Nations receive and what they need in order to have a functioning community. The issue of comparability is also mentioned here:

We therefore see it as a precondition to moving forward on any of the viable (regulatory) options that the federal government must finally close the resource gap. It must provide, over a reasonable period, the funding needed to ensure that the quality of First Nations water and wastewater is at least as good as that in similar communities and that systems are properly run and maintained.

INAC, 2006, Report of the Expert Panel on Safe Drinking Water for First Nations.

Financial capacity has been a core issue for reserves for many years. Although the federal government has dedicated billions of dollars through water system programming, the problems of contaminated drinking water and access to drinking water still exist. The First Nations Water and Wastewater Action Plan ran from April 1, 2008 to March 31, 2016. During that period the total allocated funding was \$3,096,118 (INAC, 2015, Mar. 31) but still the drinking water quality problems persist.

Former Regional Chief Angus Toulouse of the Chief of Ontario, when interviewed by TVO's Steve Aiken on "The Agenda" (2012) points out what is wrong with the federal funding regimes, stating that the billions of dollars given to First Nations communities has been used mainly to "catch up" to mainstream Canada and also for water technician training. Chief Toulouse also stressed that the water quality on Ontario's reserves is "deplorable" citing the huge capacity gap between First Nations reserves and the rest of Canada (The Agenda, 2012). The Expert Panel backs up Chief Toulouse's stance and tackles comparability head on explaining the federal government's lack of funding:

The federal government has never provided enough funding to First Nations to ensure that the quantity and quality of their water systems was comparable to that of off-reserve communities.

INAC, 2006, Report of the Expert Panel on Safe Drinking Water for First Nations.

The Panel report also diffuses the idea of comparable communities in terms of size and location explaining the difficulty in finding non-First Nations communities that compare to the “smallest and most remote reserves”. Here the Panel makes a distinction in terms of comparability urging the government to accept the premise that “comparable in quality, not in cost” is more realistic.

The Expert Panel further discusses how the federal government grossly under-estimated costs for water systems stating that their “estimates...turned out to be one-third to one-half of what was actually needed”. Given that the funding is based upon five-year capital plans, each successive year will increase the “gap between what was spent and what was needed” (Expert Panel, 2006). The under-estimation of asset costs has not changed and a technical expert advises that INAC funding often covers only 50% of capital costs, leaving the Chief and Councillors to find a financial solution on their own (personal interview, 2016).

Other critical issues mentioned by the Expert Panel related to financial capacity and funding:

- Coming up with O & M costs is a “serious hardship”
- The least expensive water treatment plant to build may end up being the most expensive to operate
- Concerns regarding the devolution of responsibilities, e.g. water quality monitoring

An important insight during the Panel discussions was by Lee Ahenakew of 4sight Consulting and brings forth the importance of debt financing:

First Nations in Canada need a funding mechanism which will enable them to access debt financing through a First Nations-owned utility company. This ownership structure is used elsewhere because governments simply cannot afford to pay 20 years of water and wastewater infrastructure all at one time and we’ve seen that the Department of Indian Affairs can’t pay for theirs either. INAC, 2006, Report of the Expert Panel on Safe Drinking Water for First Nations.

Alternative funding sources and mechanisms for infrastructure are often used by municipal governments (Brittain, 2002). Aside from debt financing, which allows communities to borrow funds without giving up ownership of the capital facility, municipalities can pull monies from their reserve funds and transfer funding from operating to capital accounts.

### 3.3 Drinking water assessments

#### 3.3.1 National Assessment of First Nations Water and Wastewater Systems

The consultation that generated reports such as the *Expert Panel* may have helped the federal government to realize that there were issues specific to water quality on reserves they were not understanding. Through the First Nations Water and Wastewater Action Plan and a recommendation from the Senate Standing Committee on Aboriginal Peoples, the Government of Canada commissioned an assessment, through but independent of AANDC (now INAC), that would examine the water and wastewater systems of First Nations reserves in Canada (National Assessment, 2011). The purpose of this extensive assessment would:

...define the current deficiencies and the operational needs of water and wastewater systems, identify the long-term water and wastewater needs of each community and recommend sustainable, long-term infrastructure development strategies for the next ten years.

National Assessment of First Nations Water and Wastewater Systems, 2011.

Neegan Burnside Ltd., the environmental consultants chosen to conduct the assessment summarized in their Statement of Qualification and Limitations for Ontario - one of 8 regional reports – that the material collected is “to allow for high level budgetary and risk planning to be completed by the Client (AANDC) on a national level” (2011, National Assessment). Neegan Burnside also stated that the report would identify “possible solution(s) and preliminary costs associated with (said) solutions” (2011, National Assessment). Clearly this report was to be a

tool to better understand First Nations communities and their water and wastewater needs. In addition, it was to assist the government in obtaining a realistic picture of just how much money would be required to actually fix current problems and maintain water quality for the future. However before the Neegan Burnside assessment, two other major drinking water investigations of water system conditions were conducted by the federal government in 1995 and 2001 bringing the total to three national assessments.

### *1995*

The 1995 National Assessment of Drinking Water and Sewage Treatment in First Nations Communities was jointly held by Health Canada and Indian and Northern Affairs Canada (Auditor General, 2005). The report found that health and safety risks were very evident with 25 percent of water systems unable to produce potable water (Auditor General, 2005). This was an unacceptable figure that should have caused immediate corrective action by the federal government. The next assessment would be extremely robust and would leave no doubts in anyone's mind as to the state of drinking water systems on reserve; they were in trouble.

### *2001*

The 2001 National Assessment of Water and Wastewater Systems in First Nations Communities summary report was issued in May of 2003 (INAC). The assessment looked at 740 "community water systems" in 691 First Nations communities with 281 or 29 percent registered as high risk with water quality potentially being negatively impacted (INAC, 2003). It should be noted that the terminology has now shifted from systems being unable to produce potable water, to "high risk", a change that may not better reflect a reserve's water quality condition. The ten

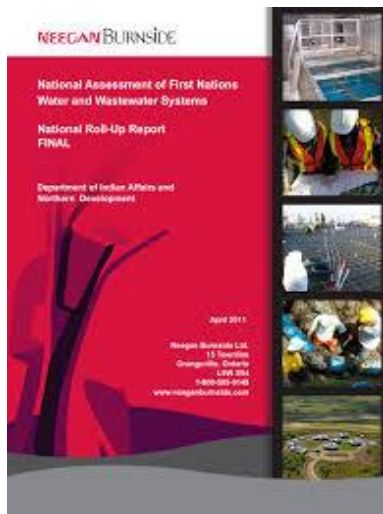
recommendations of the 2001 Assessment included a full range of water quality impacts including:

- “develop(ing) and implement(ing) regional action plans to address deficiencies”
- source water protection,
- emergency response plans
- training strategies

Also included was the suggestion for the development of a “nationwide database” that would provide a repository for water and wastewater system information (INAC, 2003). This does not appear to have been done post-assessment but would have provided much needed tracking of systems. The next assessment would be started eight years later and while extensive, seemed to miss the mark in terms of follow-up.

## 2011

In January 2011 a comprehensive report, the *National Assessment of First Nations Water and*



*Wastewater Systems* examined 571 of 587 First Nations across Canada during 2009 and 2010 (National Roll-Up Report, 2011)<sup>25</sup>.

The National Assessment is a crucial document that should be examined in order to understand how the federal government

**Figure 5. National Assessment Roll-up Report. Source: AANDC**

<sup>25</sup> Indian and Northern Affairs Canada. (2011). *National Assessment of First Nations Water and Wastewater Systems: National Roll-Up Report, Final*. This report was commissioned by the federal department of Aboriginal Affairs and Northern Development who in turn contracted the engineering firm of Neegan Burnside Inc. to conduct the assessments during 2009 and 2010.



perceives their responsibility towards First Nations communities and their water quality. One national report was generated and eight regional reports (National Roll-Up Report, 2011). There were also confidential community reports for each of the 571 individual communities<sup>26</sup> that were visited by Neegan Burnside.

### *3.3.1.(i) Types of water systems*

On a national level there were 11 First Nations that used individual water supplies but the remaining 560 First Nations comprised a total of 807 water systems. Unlike larger cities, many communities have more than one water system type. For example, a water treatment plant pulling water from a lake could be used in conjunction with some residents using wells (personal interview, 2016). Or the treated water from the plant could be piped through to a water station or stop (personal interview, 2015.). In addition, the Band Office and/or Health Clinic may have a different system than other parts of the reserve (Health Canada, 2016). There could also be separate systems for the police station, a business centre, a trailer park attached to the reserve and these could be semi-public or “non-transient” which basically is a non-community public water system used by, for example, a school, daycare or factory (Health Canada, 2016/Canadian Water Network, 2015/ Maine Department of Human Health, 2013). While the scope of this paper is focused on piped drinking water systems it should be understood that combinations of piped, trucked and well water are not uncommon on reserves

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<sup>26</sup> There were four First Nations that did not want to participate and 12 First Nations who at that time did not have active infrastructure. Indian and Northern Affairs Canada. (2011). *National Assessment of First Nations Water and Wastewater Systems: National Roll-Up Report, Final*.

and this patchwork of water access systems must also be considered when developing solutions for drinking water quality (personal interview, 2016).

The type of delivery service Canada-wide is identified early in the report:

**Drinking Water Systems**

<b>Water delivery</b>	<b>Percentage (%) of homes</b>	<b>Actual # of homes</b>
Piped	72	81,026
Truck	13.5	15,451
Individual wells	13	14,479
<i>No water service</i>	1.5	1,880

**Figure 6. Types of water systems on First Nations reserves, Canada**  
**Source: INAC, 2011, National Assessment of First Nation Water and Wastewater Systems**

There were fewer wastewater systems, with a total of 532 representing 418 First Nations. This leaves 153 First Nations using individual septic systems (National Assessment, 2011)

**Wastewater Systems**

<b>Wastewater system</b>	<b>Percentage (%) of homes</b>	<b>Actual # of homes</b>
Piped	54	61,395
Truck haul	8	8,861
Individual septic systems	36	40,803
<i>No wastewater service</i>	2	1,777

**Figure 7. Wastewater systems on First Nations reserves**  
**Sources: INAC, 2011, National Assessment of First Nations Water and Wastewater Systems**

In both water and wastewater systems, there were almost 1,880 homes that had neither drinking water nor wastewater services. This is unacceptable and is shocking that even in 2009/2010 such conditions existed. It is also indicative that how wastewater is handled is almost as important as the issues related to drinking water. Wastewater produced by any community has to be regulated as well and also safely stored (personal interview, 2016).

### *3.3.1.(ii) Risk Assessment*

In a summary of the National Assessment found on INAC's website, the report is described as:

...a rigorous and comprehensive assessment of water and wastewater systems...enabling First Nations and the Department to focus resources on priorities and improv(ing) the provision of safe drinking water in First Nations communities.

INAC, 2016.

INAC is very much focused on "risk assessment". The "fact sheet" posted online "Understanding the Results of the National Assessment" (2011, Aug.), actually boasts about the in-depth risk assessment ratings used:

No other municipality, province or territory in Canada measures risk as comprehensively as the Department does, with the department's risk assessment methodology taking into account an extensive set of factors that could lead to problems with water and wastewater systems.

INAC, 2011.

Therefore a brief examination of the risk assessment factors will be done at this point. Indian and Northern Affairs Canada (INAC) used risk-assessment categories of low, medium or high with associated numerical rankings for each water system examined:

Risk Level	Ranking	Criteria
Low	1.0 – 4.0	Operating with “minor deficiencies”  Meeting <i>Guidelines for Canadian Drinking Water Quality</i> parameters
Medium	4.1 – 7.0	Deficiencies that “pose a medium risk” to the health of consumers  No immediate action required but system corrections should be made in the future
High	7.1 – 10.0	Major deficiencies are present  Drinking water advisories may be issued  Immediate corrective action must be taken

**Figure 8. Risk Levels and Criteria**

**Source: INAC, 2011, National Assessment of First Nations Water and Wastewater Systems**

The rankings were devised to describe a water system (or wastewater system) that was evaluated using the following five aspects:

- System design (30%)
- Operation and maintenance (30%)
- Operator training and certification (20%)
- Reporting/record keeping (10%)
- Water source and “wastewater effluent receiver) (10%)

It is notable that community financial capacity was not a part of the evaluation.

**3.3.1.(iii) Ontario results**

While there were 158 water systems in Ontario, they were encompassed within 120 water and wastewater “assets” (National Assessment, 2011). Only one community in Ontario was not assessed. The systems were further broken down into how they received their water with surface water being the most common source of raw water intake, as the following statistics from the National Assessment indicate:

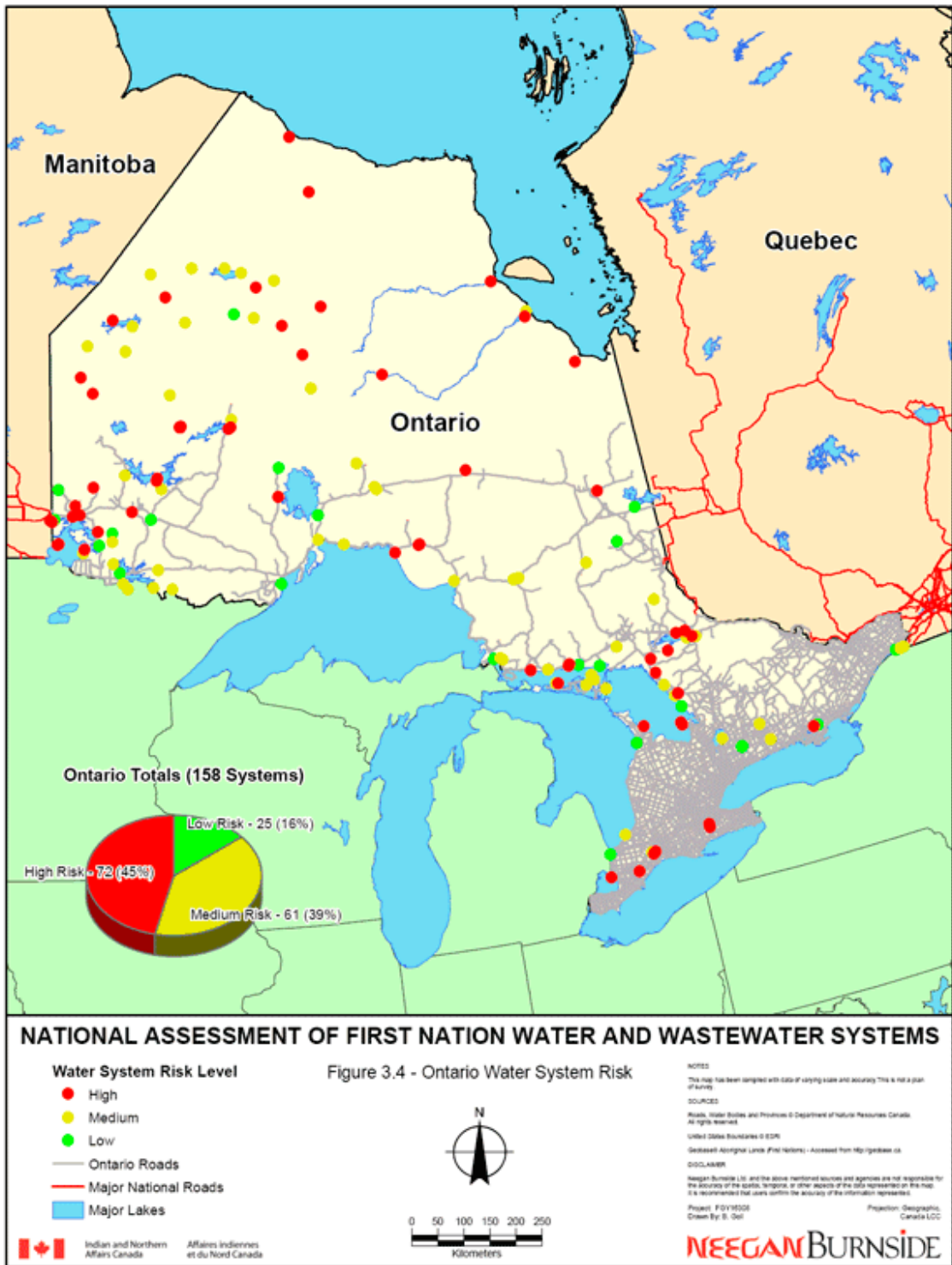
Ontario - Water Source Type for Treatment Plant			
Municipal Type Agreement (MTA)	Groundwater	Groundwater directly under the influence of surface water (GUDI)	Surface water
12 (or 8%)	39 (or 25%)	13 (or 8%)	94 (or 59%)

**Figure 9. Water source type for treatment plants on reserve, Ontario**  
**Source: INAC, 2011, National Assessment of First Nation Water and Wastewater Systems**

In addition to the above breakdown, in terms of the distribution systems (pipes, valves, service connections) that accompany a treatment plant, three were under a Municipal Type Agreement (MTA) and the remaining 155 distribution systems were maintained by the individual First Nation. In Ontario, of the 158 First Nations systems that were inspected the results showed many water systems, no matter the raw water source, had unacceptable risk levels (National Assessment, 2011).

High Risk	72
Medium Risk	61
Low Risk	25

The geographical spread of low to high risk water systems is quite apparent when viewing the map in figure 10 with the high risk systems located throughout the province, in remote locations or close to the more populated urban centres of southern Ontario. This reinforces the need for individualized solutions for drinking water quality on reserves.



**Figure 10. Ontario: Low, Medium and High Risk Systems**  
 Source: INAC, 2011, National Assessment of First Nation Water and Wastewater Systems

Risk is also shown to be based upon the size and classification of water system:

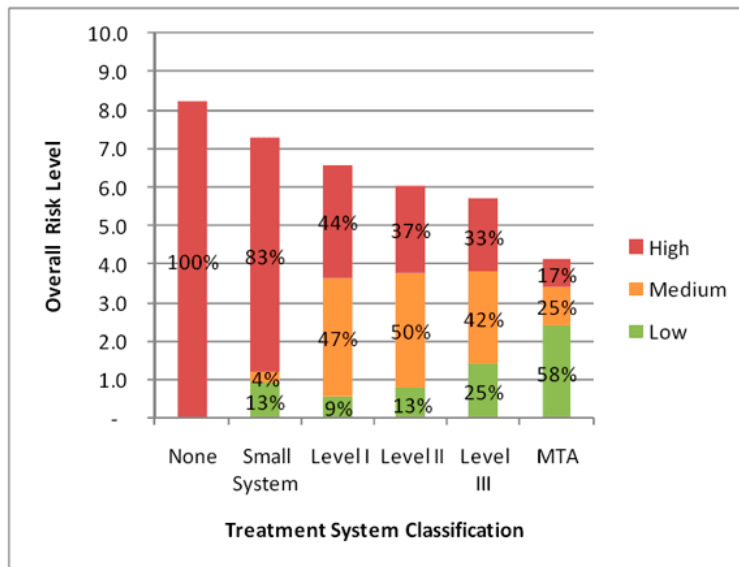


Figure 11. Treatment system classification, Ontario

Source: INAC, 2011, National Assessment of First Nation Water and Wastewater Systems

The operation of the water system also seems to be a key aspect of water quality with “key drivers” indicating a wide range of system and operational failures:

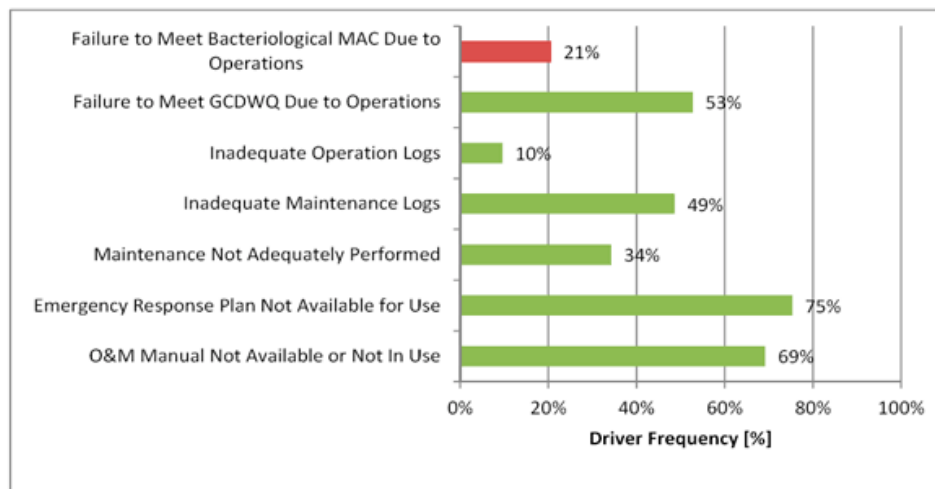


Figure 12. Operations Risk Drivers, Ontario

Source: INAC, 2011, National Assessment of First Nation Water and Wastewater Systems

Looking at the operations risk drivers, it should be noted that the 2001 assessment included one additional category, “operational equipment dysfunctions” that was not carried through to the 2011 assessment. Equipment dysfunctions are often the cause of the most frequent water treatment plant problems on reserves (personal interviews, 2015) and yet that category has been deleted from the 2011 assessment. The missing category text has been included here, so as to understand how it might have a role in an assessment:

Operational Equipment Dysfunctions, 2001 assessment:

- Recurring operational problems with automatic control systems
- Operational problems with the chlorine pump and well pump
- Lack of backup equipment and power supply; and
- The absence of replacement parts/supplies

The 2011 assessment does discuss the need for “redundancy of equipment” and references both INAC drinking water protocols and the Ontario Ministry of Environment’s (MOE) *Design*

*Guidelines for Drinking Water Systems:*

The design of water treatment plants should be based on the premise that failure of any single component must not prevent the drinking-water system from satisfying all applicable regulatory requirements and other site specific treated water quality and quantity criteria, while operating at design flows.

Ontario Ministry of the Environment, 2008,  
Design Guidelines for Drinking Water Systems(3.35).

Since equipment redundancy is such an important aspect of drinking water delivery and stability and is strongly related to equipment dysfunctions, it is strange that the equipment category as relating to dysfunctions, has been deleted from the later assessment.



At this point it would be helpful to look at the 2011 National Assessment’s estimated construction costs for the necessary system upgrades and corrections to meet three specific drinking water quality standards: i. The federal government drinking water guidelines; ii. the provincial government water regulations; and iii. the 2006 *Protocol for Safe Drinking Water in First Nations Communities*, a document specifically written by INAC for First Nations communities so as to provide higher standards in all aspects of drinking water from design and construction, O&M to water monitoring (INAC, 2006/INAC, 2011):

Description	Protocol - Estimated Cost	Federal - Estimated Cost	Provincial - Estimated Cost
Building	\$14,121,700	\$1,514,500	\$8,842,800
Distribution	\$6,065,000	\$1,066,000	\$2,160,000
Equipment	\$2,370,600	\$2,300,500	\$2,301,800
Additional Fire Pumps	\$2,231,000	\$140,000	\$2,181,000
Monitoring Equipment	\$2,047,200	\$1,695,700	\$2,047,200
Source	\$5,826,350	\$1,191,800	\$5,790,850
Storage & Pumping	\$32,985,500	\$32,036,500	\$32,876,500
Treatment	\$109,353,600	\$94,187,110	\$102,798,110
Standby Power	\$7,423,000	\$490,000	\$7,423,000
Engineering & Contingencies	\$45,687,500	\$33,744,050	\$41,686,500
<b>Construction Total Estimate</b>	<b>\$228,111,450</b>	<b>\$168,366,160</b>	<b>\$208,107,760</b>

**Figure 13. Estimate of Total Construction Costs for Water Systems on First Nations Reserves in Ontario.**  
**Source: Chart taken from the National Assessment of First Nations Water and Wastewater Systems – Ontario Regional Roll-up Report, 2011.**

Up until 2016, the dedicated funding for on reserve drinking water across Canada was on average, \$165 million a year. All three of the estimates in figure 13 are for the province of Ontario only and are more than the annual allocation of INAC drinking water funding for all of Canada. The total estimated amount for construction costs that include every province and territory is \$782,891,650 (INAC, 2011). This amount is far beyond any annual funding that INAC has provided.

However the upgrading and construction costs are not the only ones that must be considered.

Non-construction costs and O & M costs also require funding:

Description	Protocol - Estimated Cost	Federal - Estimated Cost	Provincial - Estimated Cost
Training	\$1,740,000	\$1,740,000	\$1,740,000
GUDI Studies	\$1,456,000	\$0	\$1,456,000
Plans/Documentation	\$8,824,000	\$6,739,000	\$8,804,000
Studies	\$1,558,000	\$980,000	\$1,455,000
<b>Non-Construction Total Estimate</b>	<b>\$13,578,000</b>	<b>\$9,459,000</b>	<b>\$13,455,000</b>

**Figure 14. Estimate of Non-Construction and O & M Costs on First Nations Reserves in Ontario.**  
**Source: Chart taken from the National Assessment of First Nations Water and Wastewater Systems – Ontario Regional Roll-up Report, 2011.**

Additional costs relating to equipment calibration for water monitoring, increased sampling to meet higher protocols, reservoir cleaning and the salary for a backup water operator add even more to the funding requirements:

Description	Estimated Cost
Sampling	\$2,503,550
Operations	\$562,500
Operator	\$970,000
<b>Water O&amp;M Total Estimated Cost</b>	<b>\$4,036,050</b>

**Figure 15. Estimate of Additional Annual O&M Costs for Water on First Nations Reserves.**  
Source: Chart taken from the National Assessment of First Nations Water and Wastewater Systems – Ontario Regional Roll-up Report, 2011.



**Figure 16. Inside a water treatment plant.**  
Source: INAC, Maintenance Management Plan for Drinking Water and Wastewater in First Nations Communities, 2014.

For the province of Ontario, all of these costs necessary to; bring reserves up to INAC's own drinking water protocol, to pay for O&M and to allow for operator training, water quality studies and back-up employee salaries comes to a total of approximately \$245 million. Yet future servicing costs for houses on reserves has not even been mentioned. If and when First Nations communities are given the appropriate level of housing they require then those houses, in addition to the ones already built, will require new connections and annual servicing (INAC, 2011). The 2011 Assessment National Roll-up Report provides the following estimates of those costs:

Region	Current Population	Current Homes	Forecast Homes	Population Forecast	Upgrade To Protocol	Average Per Lot Upgrades to Protocol (Current Homes)
Atlantic	25,856	6,838	9,278	33,460	\$31,145,500	\$4,600
Quebec	54,667	14,535	18,932	67,825	\$15,705,600	\$1,100
Ontario	93,559	23,732	32,179	121,078	\$241,689,500	\$10,200
Manitoba	88,478	15,661	22,627	115,946	\$56,950,000	\$3,600
Saskatchewan	70,696	14,248	21,525	97,779	\$148,444,800	\$10,400
Alberta	74,411	14,503	20,969	98,877	\$110,253,800	\$7,600
British Columbia	71,125	21,505	29,261	92,792	\$231,479,600	\$10,800
Northwest Territories	314	117	235	716	\$35,000	\$300
Yukon	5,215	1,697	2,096	6,192	\$10,560,500	\$6,200
<b>Total</b>	<b>484,321</b>	<b>112,836</b>	<b>157,102</b>	<b>634,665</b>	<b>\$846,264,300</b>	

**Figure 17. Future Servicing Costs for Drinking Water on First Nations Reserves, Canada.**  
**Source: Chart taken from the National Assessment of First Nations Water and Wastewater Systems – National Roll-up Report, 2011.**

The future servicing costs shown here do not include the amounts that the National Assessment estimated would be necessary in the future to allow their "recommended" level of servicing and also O & M.

	Recommended Servicing	Recommended O & M
<b>Ontario</b>	\$700,000,000	\$51,100,000
<b>Canada</b>	\$2,660,000,000	\$253,000,000

**Figure 18. Future Recommended Levels of Servicing and O & M for First Nations Reserves.**  
**Source: National Assessment of First Nations Water and Wastewater Systems – National Roll-up Report, 2011.**

The amount of funding that would be required to bring First Nations reserves in Ontario up to the drinking water standards that INAC advises is so large, it is hard to grasp. The chart below tabulates the totals but does not include the "recommended" costs from figure 18.

<b>Construction Total Estimate</b>	<b>\$228,111,450</b>
<b>Non-Construction Total Estimate</b>	<b>\$13,578,000</b>
<b>Water O&amp;M Total Estimated Cost</b>	<b>\$4,036,050</b>
<b>Future Servicing Costs</b>	<b>\$241,689,500</b>
<b>TOTAL:</b>	<b>\$487,415,000</b>

**Figure 19. Total funding required (in millions) for drinking water improvement in Ontario reserves.**  
**Source: National Assessment of First Nations Water and Wastewater Systems – Ontario Regional Roll-up Report, 2011.**

The province of Ontario alone would require almost half a billion dollars in order to give First Nations in that province clean drinking water. Prime Minister Justin Trudeau's Budget 2016 just promised \$1.8 billion over five years for the entire country. The amount of funding that it will take in order to effect change across Canada is much more than any government to date will ever designate in their budgets. This incredible deficit is due to the consistent underfunding of

First Nations water infrastructure on reserves, decade after decade. The health and safety of First Nations is at risk but in terms of financial solutions, it will be a very long-term process to correct this situation.

### *3.3.2 Alternative Responses to the Assessment*

The National Assessment does have those who question whether it is ethical to conduct surveys when the need for improvement is already well-known. Shum et al, whose case study *First Nations Drinking Water Policies* from the *Ethics Casebook in Population and Public Health* (2012), states that the federal government had three options it could have exercised:

i. The government could have used their resources to immediately provide improvements in communities with known high risk water systems, thereby giving assistance much more quickly;

or,

ii. The government could have done a comprehensive survey which could find communities that were unaware of their high risk system;

or,

iii. The government could have done both; i.e. fix known problems and conduct a national assessment. This would be the costlier choice. The authors felt that the federal government had missed an opportunity to exercise justice:

The guiding value in such an exercise is justice. A just decision requires a decision maker to weigh the competing interests of communities...while also considering the financial implications of each option.

Shum, Atkinson & Kaposy, 2012, *Ethics Casebook in Population and Public Health*.

INAC decided to follow the second example, conduct the survey and find new communities with drinking water problems but then make those who already knew they had a problem, wait. A second example of ethics cited was that the communities should have been informed of their high risk systems prior to the results coming out two years later (Shum et al, 2012). The manner in which communities were prioritized to be targeted first, was another ethical decision the authors felt the government would need to make based upon which communities most needed the funding (Shum et al, 2012).

Hnidan (2015) questions the categorization that “small, remote systems...are more likely to be high risk” and queries whether labels are being put on smaller communities “defining them as the site of risk while freeing other (more urban, accessible) communities of that risk”. Hnidan’s analysis continues by suggesting that the National Assessment is pushing urban ideals over smaller communities:

By positing a smaller community as a dangerous way to live, the National Assessment leads one to believe that large social organizations are ideal. The stereotypical traditional First Nations “tribe” is risky, and the colonial industrialized city is safe.

Hnidan, T., 2015, Treating Water: Engineering and the Denial of Indigenous Water Rights

These arguments have merit. Regarding Shum et al, it is interesting to think about the consequences of making communities wait for water infrastructure improvements. Certainly communities that have had boil water advisories for 10, 15 or even 20 years understand the strangeness of hearing about a drinking water survey that is going to tell you what you already are quite aware of; your drinking water is not fit for human consumption. The ethical decision made by INAC to make communities wait does not show the ministry in the most positive light

and their commitment to providing "safe, clean drinking water in all First Nations communities" as stated in the 2011 National Assessment introduction would benefit from a genuine explanation of purpose. As well, there is nothing ethical in making residents wait for two years to hear whether or not their water system problems are going to be addressed. Hnidan presents a cogent argument which is, why is small seen as dangerous. What is the rationale behind this categorization when it was known going into the National Assessment that all of the systems were going to be small, with few exceptions.

### *3.3.3 First Nations response*

First Nations organizations reacted to the data from the National Assessment with dismay. Former Chiefs of Ontario Regional Chief, Angus Toulouse, in writing to then AANDC Minister, John Duncan stated that the level of high and medium risk treatment plants was "unacceptable" and "legislative standards alone" would not make the health risks disappear (2011, Aug.). Toulouse referenced the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), Article 21:

Indigenous people have the right, without discrimination to the improvement of their economic and social conditions, including, inter alia, in the areas of education, employment... housing, sanitation (and) health.

Toulouse, A., 2011, Letter to Minister Duncan.

The Assembly of First Nations former National Chief Shawn A-in-chut Atleo was also outraged over the National Assessment results stating that the "quality of drinking water in First Nation communities is even worse than anticipated" (AFN, 2011, July). Atleo also raises UNDRIP and the basic human right to sanitation: "First Nations must be fully engaged in a way that recognizes our rights and responsibilities to ensure the safety of our people" (AFN, 2011, July).



### **3.4 Summary – Chapter III**

Two crises pushed Canada's federal and provincial governments towards improved drinking water quality; Kashechewan First Nations and Walkerton, Ontario. For non-First Nations Ontarians, new drinking water legislation was implemented within two years of the tragedy. However First Nations communities, even after the Expert Panel in 2006, still were waiting for enforceable regulations. The National Assessment showed deep problems with reserve water systems and First Nations leaders, rightly so, were calling upon the government to recognize their human rights.

It is time to become better acquainted with the drinking water situation on reserves. Living with contaminated drinking water is a daily occurrence for many communities and as to why this is still occurring; there are no plausible answers to be found.



## CHAPTER IV

Image sources: Global News, 2015. Bgfons, 2016. CBC News, 2015.

# What is the drinking water problem on reserves?

## 4.1 Overview

Living with poor drinking water quality is not a situation that should be occurring anywhere in Canada. Health Canada's drinking advisory program focuses on “preventative measures” but drinking water advisories have now become a reactive rather than proactive tool that is the norm on many First Nations reserves. Looking at the northwestern communities of Neskantaga First Nation and Martin Falls First Nation as well as the southern community of Six Nations of the Grand River, differing levels of daily drinking water requirements alongside the trials of living without an everyday necessity, are described. Health risks arising from the lack of access to clean water are then explained while some First Nations residents resort to making presentations at the United Nations to demand what will not be given to them at home.

## 4.2 Drinking water advisories

Drinking Water Advisories (DWA) are the main tool that Health Canada implements in order to warn the public about water hazards. Protection of public health is the impetus behind the issuance of a DWA as a “preventive measure” (Health Canada, 2016). DWAs are also quoted

often in the media and has led to a public perception that if the advisories are not issued, the problem does not exist. There are three types of drinking water advisories (ECCC, 2016):

Drinking Water Advisories		
<b>Boil Water</b>	Boil Water Advisory – BWA	Boil Water Order - BWO
<b>Do Not Consume or Do Not Drink</b>	Do Not Consume Advisory – DNCA Do Not Drink Advisory - DNDA	Do Not Consume Order – DNCO Do Not Drink Order - DNDO
<b>Do Not Use</b>	Do Not Use Advisory – DNUA	Do Not Use Order - DNUO

Figure 20. Drinking Water Advisories. Sources: ECCC, 2016 and Health Canada, 2016.

Of the three types, boil water advisories are the most common advisory issued across Canada (ECCC, 2016).

#### 4.2.2 How does drinking water become contaminated?

Drinking water coming from a water treatment plant becomes contaminated in a number of ways, some of which are more avoidable than others. While source and groundwater contamination can contribute towards the issuance of a DWA, this paper will be looking at contamination introduced after the water enters the water treatment plant and distribution system. The following are examples of contamination causes:

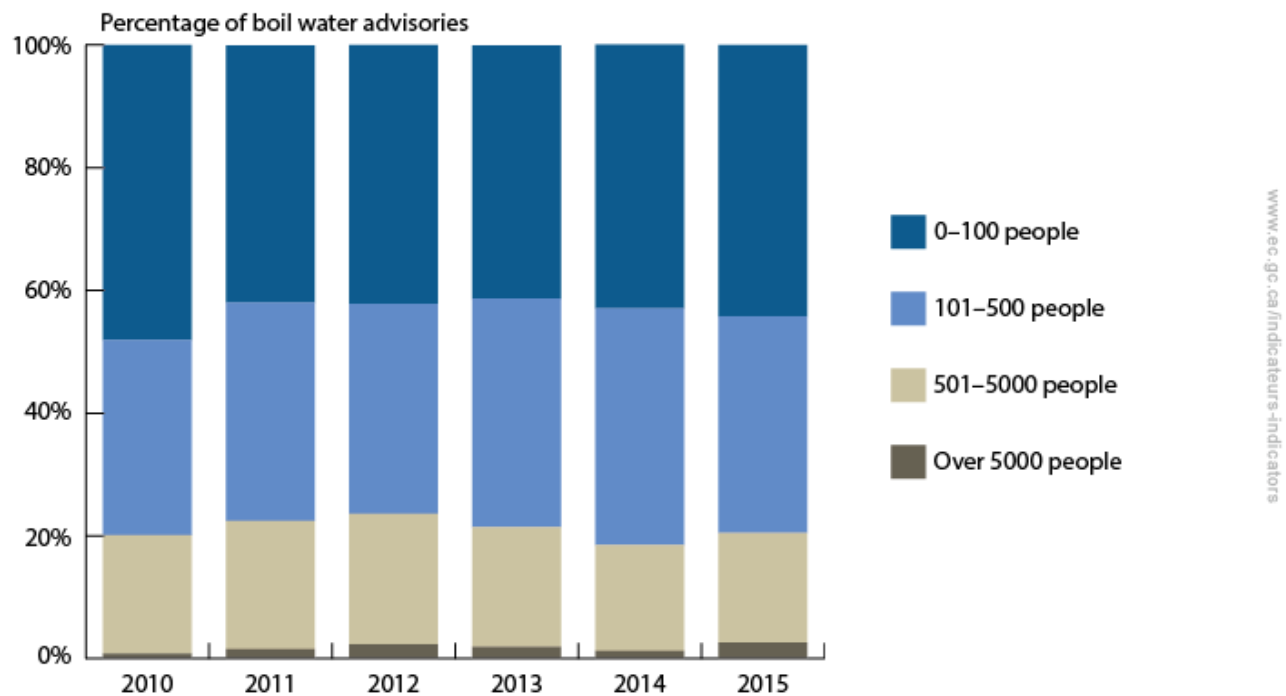
- water main break
- leaks in delivery system (low or sudden drop of water pressure in pipes)
- equipment failure
- elevated water turbidity
- maintenance work on water system
- over-chlorination of water
- inadequate water filtration
- inadequate monitoring and testing of water quality

Environment and Climate Change Canada, 2016, April.

### 4.2.3 Small Systems

Environment and Climate Change Canada collects advisory data from local “public health or regulatory authorities” (2016). Most DWAs are issued for small water systems indicating that size is a factor regarding the conditions that cause a health advisories (ECCC, 2016).

Environment and Climate Change Canada, whose statistics include First Nations reserves reports that 79% of boil water advisories that were issued in 2015, were for “drinking water systems serving 500 people or less” (ECCC, 2016).



**Figure 21. Boil water advisories in Canada, by community size from 2010 to 2015.**  
Source: Environment and Climate Change Canada. 2016, April.

ECCC also reports that small communities face “unique challenges” that limit their operational capacity (2016). The example of a broken water main is given:

...A broken water main in a larger city is isolated and repaired quickly by well-equipped staff with no need for a boil water advisory. The same issue in a village may take longer to fix and may result in the need for a boil water advisory to be issued while repairs are arranged and completed.

Environment and Climate Change Canada, 2016, Drinking Water Advisories in Canada.

These same challenges certainly would be present in a First Nations reserve. Broken water mains actually, often from freezing, constitute at least 50% of the DWAs issued, making drinking water “infrastructure dependent” (personal interview, 2016).

#### *4.2.4 First Nations’ participation*

Health Canada - First Nations and Inuit Health, collaborates with Indigenous and Northern Affairs Canada to assist First Nations south of 60 degrees parallel, in providing safe drinking water for community members (Health Canada, 2016). The individual First Nation Chief and Council, with Health Canada’s assistance through its Environmental Public Health Program, are responsible for the water system’s day-to-day operation and the testing of water samples is included under this responsibility (Health Canada, 2016). When an “immediate threat to the health and safety of the community is identified”, all responsibility falls upon the Chief and his/her Councillors (Health Canada, 2016). They must decide what actions must be taken for the protection of the community’s residents (Health Canada, 2016). Most Chiefs and Councillors are not trained health experts and putting the ultimate responsibility for these decisions on the reserve's management is questionable, at the very least.

#### *4.2.5 Community-based water monitoring program*

Health Canada funds and trains Community-Based Drinking Water Quality Monitors (CBWM) under their Community-Based Water Monitor program (Health Canada, 2016). The CBWMs will test for bacteriological contamination at tap using field and *E.coli* alert kits (Health Canada, 2016/personal interview, 2016). Health Canada also employs Environmental Health Officers (EHOs) who then have the responsibility of drinking water monitoring (Health Canada, 2016):

If the Environmental Health Officer's review and interpretation of drinking water quality results indicate that drinking water is not safe, the Environmental Health Officer immediately communicates recommendation(s) (such as a "boil water" advisory) to the Chief and Council for their action.

Health Canada assists First Nations with follow-up sampling and investigation to help identify the source of the problem and provides recommendation(s) on how to rectify it to Chief and Council.

Health Canada-First Nations and Inuit Health, 2016, Drinking Water and Wastewater.

The CBWMs are a good step forward, employing local residents but they sometimes run out of kits, which lessens the frequency of water monitoring (personal interview, 2016). Also, for those reserves that are in remote locations, it is difficult to get samples to a laboratory in a timely fashion so that the results are valid (personal interview, 2016). EHOs require more training than CBWMs and must obtain an environmental health or science bachelors degree as well as becoming certified under the Canadian Institute of Public Health Inspectors (Health Canada, 2009). EHOs may also be employed by and report to Tribal Councils (Health Canada, 2016) although Health Canada pays their salaries (personal interview, 2016). However water



testing by qualified individuals requires sending employees for specified training, which may be difficult for some communities.

**Figure 22. Water Advisory Tool Kit for First Nations. Source: Health Canada**

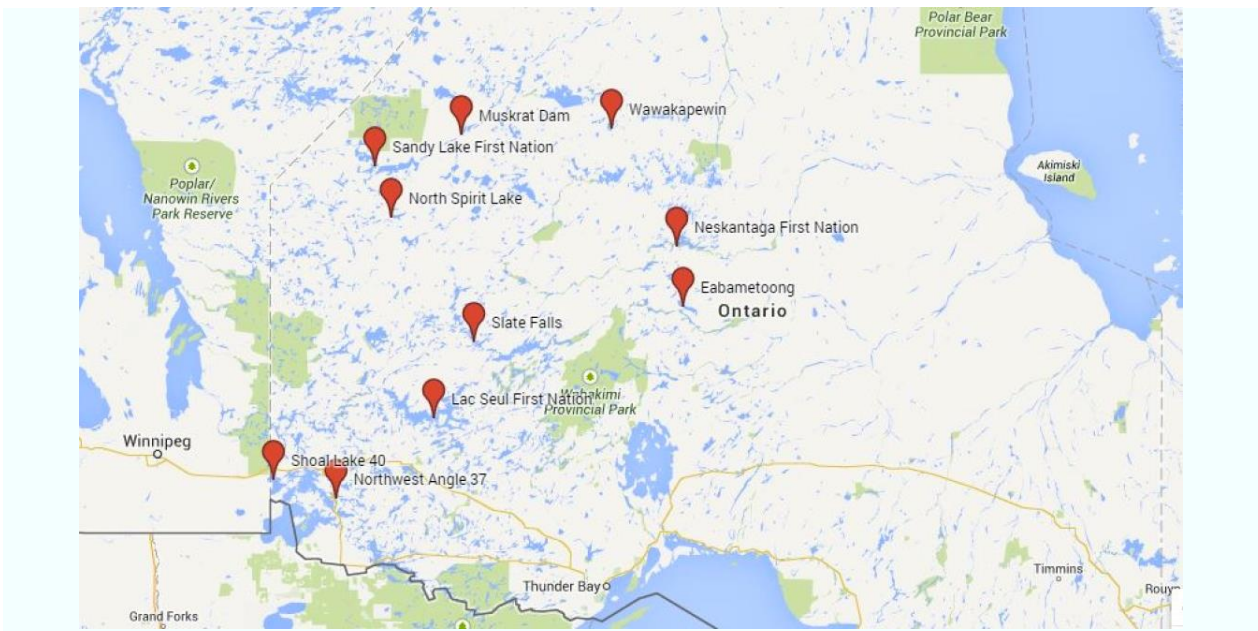
Health Canada provides a *Water Advisory Tool Kit for First Nations* that provides advisory posters to be posted in the community, print advertisements for community newsletter, door hangers and public service announcements that can be broadcast over the local radio (Health

Canada, 2016). After reviewing Health Canada's website, it does not appear that these advertisements are available in any languages but French and English.

### **4.3 Managing Data**

Environment and Climate Change Canada, through the Canadian Network for Public Health Intelligence Drinking Water Advisories (CNPHIDWA) application, is able to compile aggregate DWA data on small community water supplies from all parties who provide information, including First Nations (personal interview, 2016). The information is confidential and is never released to the public but to those who participate, the platform allows them to notify the appropriate agencies and other stakeholders while coordinating how they wish to manage the water issue (personal interview, 2016).

Since there are so many potential causes of contaminated water, it is critical to implement a monitoring system that is robust, can reliably disseminate information and has access to a wide range of users. While the CNPHIDWA application appears to be a valuable system, it is web-based and some of the remote communities do not have strong enough broadband to access it. Health Canada's information is also online but there is no repository on Health Canada's website that will allow historical tracking of DWA issuance. The information provided is only the most recently collected which normally is posted three or four times a year (Health Canada, 2016). There are private organizations such as watertoday.ca or the Council of Canadians, that are attempting to collate statistical information but no government sources are available for historical First Nations data only.



**Figure 23. Top Ten First Nations Communities with Boil Water Advisories over 10 Years, CBC News, 2014, Sept.**

Information concerning DWAs for the non-Indigenous population is found within Environment and Climate Change Canada, not Health Canada. It is not clear why this separation exists and emails to Health Canada regarding this separation and other DWA topics, did not elicit any response. Phone calls to Health Canada’s general inquiry number never progressed beyond the initial call centre employee, even though queries were forwarded to senior staff several times.

It is worrying that Health Canada does not appear to measure water quality on reserves other than by the issuance of Drinking Water Advisories (DWA). Environmental and Climate Change Canada has their new data application, the Canadian Network for Public Health Intelligence Drinking Water Advisories but nothing has been developed solely for First Nations. One has to ask if a DWA really is a meaningful way to measure water quality since the number of DWAs



have not really gone down over the years, especially since the statistics for British Columbia are no longer included.

Health Canada First Nations Drinking Water Advisories*	Number of Advisories**	Number of Communities
May 2016	126	84
January 2016	135	86
May 2015	127	88
September 2014	138	97
April 2014	139	94

**Figure 24. First Nations Drinking Water Advisories**

**Source: Health Canada-First Nations and Inuit Health**

\* Statistics for British Columbia are no longer included as of October 1, 2013.

\*\* These statistics were collected by the author of this paper, visiting Health Canada's website over time.

As of May 31, 2016 there were 126 DWAs across Canada (excluding British Columbia) that affected 84 First Nations communities (Health Canada, 2016). This figure is almost the same one for May of 2015. While the numbers may slightly vary, the DWAs still exceed 100 and the communities affected always are over 80. As figure 16 indicates, there are some communities that have had boil water advisories for more than 10 years, (Porter, J., 2014). The Neskantaga First Nation's public water system holds the record from February 1, 1995; Twenty-one years on a boil water advisory without it being revoked (Health Canada, 2016). Shoal Lake No. 40 is close behind with the BWA being issued on February 18, 1997 (Health Canada, 2016.). Perhaps not every community member would like to drink water from the tap but for those that do, these lengths of time are unconscionable.

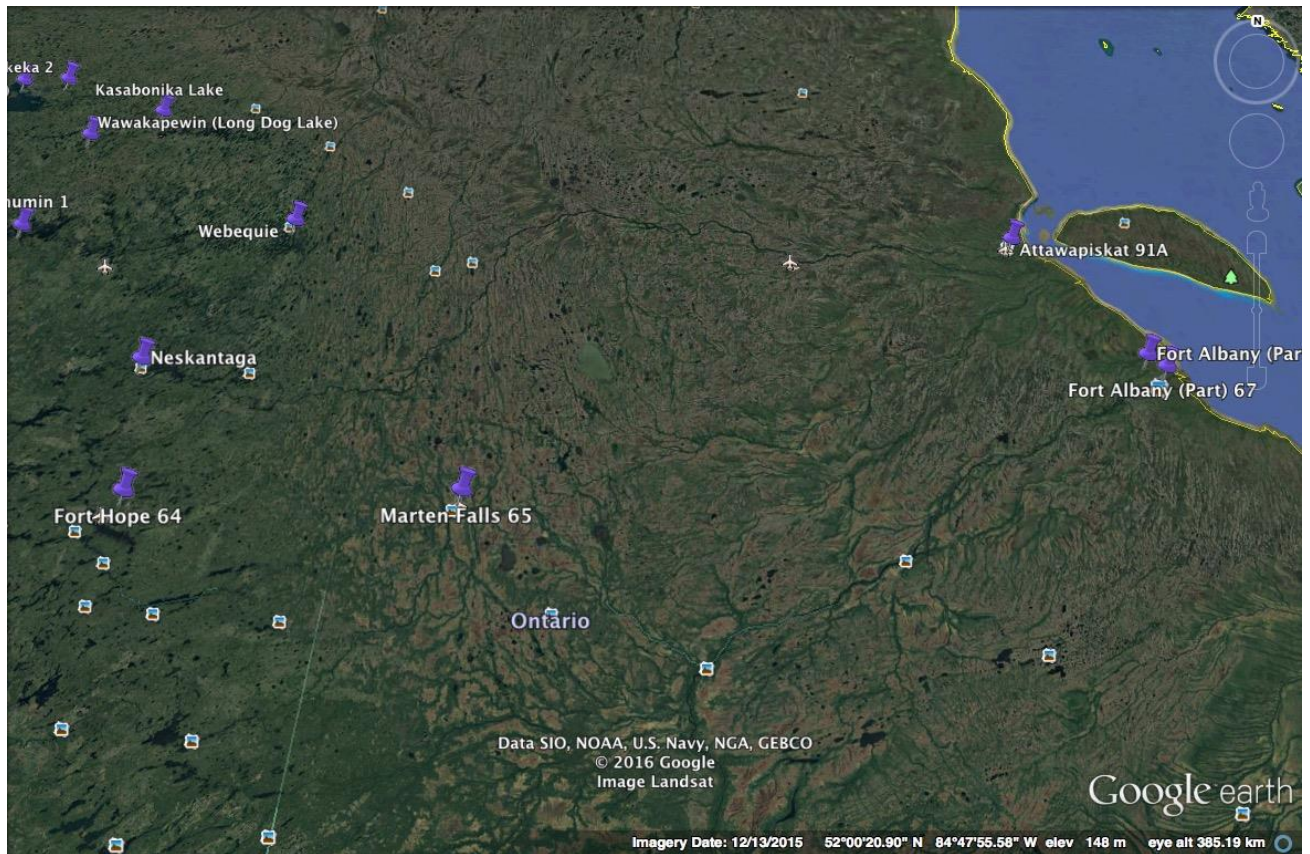
It should be mentioned that the communities included are only those recognized by Health Canada and Indigenous and Northern Affairs Canada. There could be many more communities that have poor water quality and are not reported through Health Canada including those with no water systems at all (personal interview, 2016).

Lastly, Health Canada explains that a DWA in a First Nations reserve does not always apply to the entire community but could “affect as little as one building”. This language is problematic since many reserves only have treated drinking water within the main community buildings, which might also include a health care clinic. If that one building is also where residents go for health treatments and its water system is under a DWA, then the entire community is without health care. That one building could also be located in such a way that requires all other water distribution pipes to be shut down. The fact that Health Canada would post this *proviso* on their website not only indicates a lack of sensitivity but also shows that they do not understand the dynamics of the drinking water system in the communities that are dependent upon their assistance.

#### **4.4 Daily life with no potable water**

It would be helpful to look at the lived realities of remote northern Ontario communities who live with potable water challenges on a daily basis. In the map below, at least seven of the communities are currently under a Boil Water Advisory (Health Canada, 2016, June). A focus on Neskantaga First Nation will illustrate some of the issues.

#### 4.4.1 Case Study: Neskantaga First Nation



**Figure 25. Northern Ontario reserves, Georgian Bay.**  
Source: York University, Map Library. R. Orlandini.

What would be a 30-hour drive from Ottawa, if driving were possible, is the small fly-in community of Neskantaga First Nation. With a population of 421, Neskantaga is almost 500 kilometres northeast of Thunder Bay in a remote sector of the northern Ontario landscape (Neskantaga First Nation, 2013) that is also home to a well-known potential mining area, the Ring of Fire. To travel there by plane costs more than it would to travel to Europe, making emergency trips a financial hardship for families (personal interview, 2016). A typical scenario on the reserve involves the continual boiling of water. A news article describes a young mother standing at her stove to boil water, an activity she repeats every day to reduce bacteria so that

her family can drink it (CBC, Oct 14, 2015). The tap water in Neskantaga First Nation has been contaminated for many years: Health Canada's website states that the Neskantaga Public Water System has been under a Boil Water Advisory (BWA) since February 1, 1995 and the Advisory has not been revoked since that date (Health Canada, 2016).

The local water system was not constructed properly, has neither the proper piping infrastructure nor the required residential hook-ups in place and therefore cannot provide water directly to homes (personal interview, 2015). Try to imagine a similar situation lastly over 21 years in any other non-Indigenous community in Canada.

**Figure 26. Neskantaga resident pulling water bottles home from the water treatment plant**

**Source: Laberge, M., CBC News, 2015, Oct. 14**



Many Canadians believe that having a water treatment plant located within a community should be the end of drinking water problems. In the case of Neskantaga, without a car or skidoo to help transport the heavy containers full of water, many residents cannot access the clean water from the treatment plant (Laberge, M., 2015). Ironically, the boil water advisory is still needed, even with a water treatment plant on site.



In April of 2016, Carolyn Bennett, Minister of Indigenous and Northern Affairs, visited Neskantaga First Nation with a pledge that a water treatment plant would be built (Jerome, 2016, April). Just before she arrived, INAC announced that they would be funding \$411,000 to be put towards the design phase of the project in budget year 2016-2017 (Jerome, S., 2016/Thompson, J. 2016).

**Figure 27. Neskantaga First Nation water treatment plant filling station. Source: The Chronicle Journal, 2016.**

From design phase until the “shovels are in the ground” can take up to two years (personal interview, 2015). Additional funding of \$363,000 was dedicated at the end of December in 2015 to repair the old water treatment plant installed in 1993 (Porter, J., 2015, Dec.). It should be noted that only two years later in 1995, the plant was not functioning properly and the boil water advisory was instituted (Porter, J., 2015, Dec).

At the same time that Minister Bennett was visiting the community it still was under a State of Emergency due to high youth suicide. In January 2016, yet another life was lost, a 14-year-old girl (Porter, J., 2016, Apr 16). Neskantaga Chief Wayne Moonias explains that their situation is still dire:

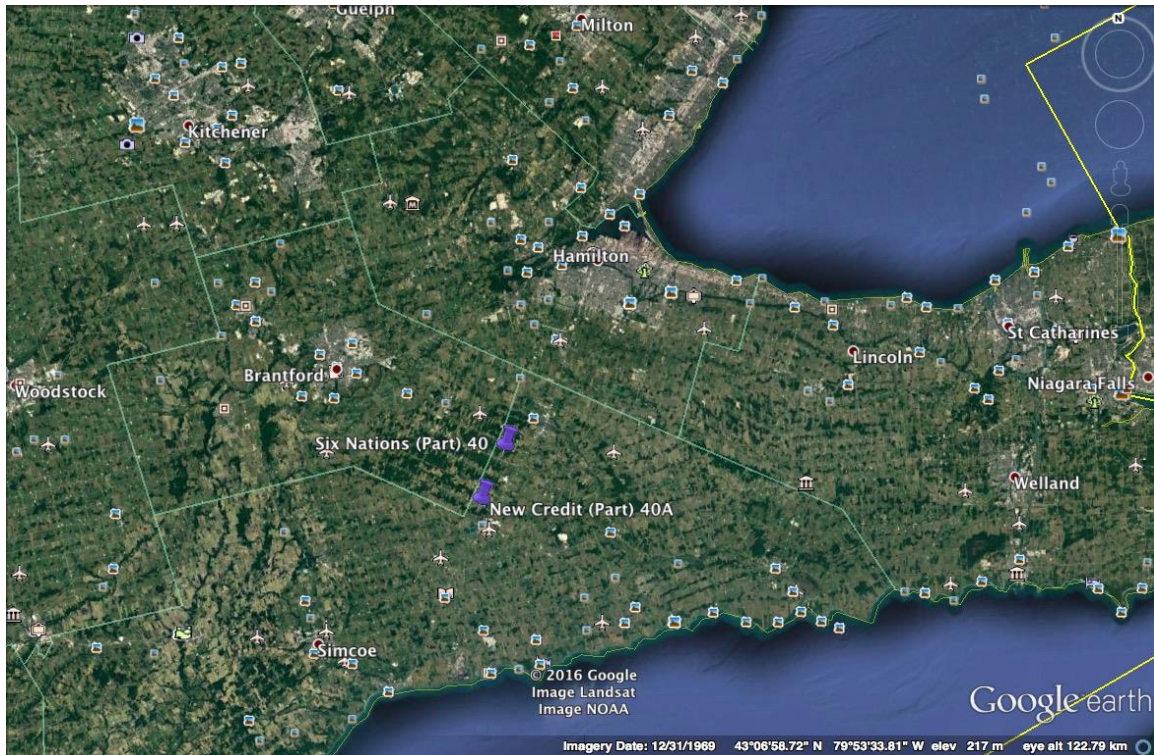
We have not lifted that state of emergency to this day, because of the fact the (living) conditions still remain the same.

Moonias, W., 2016.



The combination of poor drinking water quality and youth suicide is something that is not experienced anywhere else in Canada, except on First Nations reserves.

#### 4.4.2 Case Study: Six Nations of the Grand River First Nation



**Figure 28. Six Nations of the Grand River, Lake Erie and Lake Ontario**  
Source: York University, Map Library. R. Orlandini.

Looking at another, larger and much more prosperous community, Six Nations of the Grand River, there are still water quality issues related to how the water gets to homes and businesses. Located close to the southern Ontario cities of Brantford and Caledonia, Six Nations of the Grand River is the largest First Nations community in Canada with a population of 26,503 people (Six Nations, 2013). Approximately half of the total population live on-reserve and up to another 3,000 enter the community to work (personal interview, 2015).

Travelling through Six Nations, the community looks much like any other small town in Ontario. Being close to Brantford and Caledonia brings in visitors who often cross the reserve on their way to work and then back home. Yet the municipal infrastructure a small town would have is not there. Six Nations has 121 kilometres of roads on the reserve but only 9% of the roads have a water distribution system (personal interview, 2015). Without pipes branching out through a community, there is no water distribution and certainly economic activities are lessened. Digging up roads and putting in pipes is expensive and time-consuming but the community is slowly adding more distribution lines to their system (personal interview, 2015). Additional funding would certainly help to expedite this process.

While there are 500 water connections, both commercial and residential, this still means that only 1500 people are directly connected to the drinking water system (personal interview, 2015). The rest of the community is dependent upon water fill stations. A water fill station is accessed by a key card, much like a hotel room. The resident then can put water into containers, or a truck could fill up their tank for delivery to homes that have cisterns (personal interview, 2015). Thunder Bay uses water fill stations for their rural residents, an example of



which is shown:

**Figure 29. Example of a water fill station.**  
**Source: City of Thunder Bay.**

However the size of the water mains should not be forgotten since the reserve has mostly 6" ductile iron, pipes that are not large enough for the current

usage and should be replaced in any case to modernize the water system (personal interview, 2015). The new Six Nations water treatment plant, which opened in January 2014 cost \$41.4 million. INAC contributed \$26 million but the \$15 million left was up to the reserve to fund (personal interview, 2015). The community leveraged a loan for the \$15 million but it has left them in a very precarious financial position. Even though the community is not under a boil water advisory, they still have ongoing water quality and water access problems.

#### *4.4.3 Bottled water is no solution*

A typical federal government response to boil water advisories in remote communities has been to fly in bottled water, certainly not a long-lasting solution. Neskantaga's Chief Wayne Moonias, has expressed his frustration regarding the decades old temporary fixes that the Government of Canada has instituted in place of a proper water system:

We're over 20 years already where our people haven't been able to get the water they need to drink from their taps or to bathe themselves without getting any rashes.

Our accountant estimates that at least a million dollars has been spent on bottled water. Yet the government says they don't have any money.

Moonias, W., in Porter, J., CBC News, 2015, May 29.

#### *4.4.4 Case Study: Marten Falls First Nation*

**Figure 30. Marten Falls First Nation.**  
Source: Knet First Nations Communities, n/d.

Marten Falls First Nation, under a BWA since 2005, is another community that has received over \$2.5 million worth of bottled water for the past 11 years (Murray,





2015). At a cost of \$10,000 per weekly flight from Thunder Bay, this seems a very expensive way to address the water quality problem (Murray, 2015) and certainly has contributed to the Marten Falls landfill being full of plastic bottles (personal interview, 2016). The rationing of water for reserve residents does not constitute assistance when the bottled water has become the permanent solution. Marten Falls has water and sewer infrastructure that includes 95% of residents having a piped distribution system directly to their homes (Marten Falls First Nation Community Profile, n/d). However that system has not allowed the delivery of clean drinking water due to a broken water filter that has been difficult to fix (Martin Falls First Nations Community Profile, n/d/personal interview, 2016). The fly-in community depends upon the winter road, barges and float planes for transport (Martin Falls First Nations Community Profile, n/d ).



**Figure 31. Flying in bottled water. Marten Falls First Nation. Source: Netnewsledger, 2015, Feb.**

Neskantaga First Nations and Marten Falls First Nation are but two of more than 100 communities that are suffering needlessly, due to the INAC's inability to effectively

understand and work with First Nations communities to improve water quality on reserve. This impasse exists in spite of billions of dollars being provided for the building and maintenance of water system infrastructure on reserves. Canada's reputation as a prosperous country certainly does not include many First Nations communities where real solutions to provide sustainable, clean drinking water are nowhere in sight.

#### 4.5 Health risks in remote communities

There are acute and chronic health effects associated with long-term access to untreated water and those most at risk from these infections are the very young and the elderly (RHS, 2008/10).



**Figure 32. Water straight from the tap. Little Saskatchewan First Nation. Source: The Star. Oct. 2010.**

Residents consuming substandard, bacterial or chemical-laden water suffer from a variety of rashes and intestinal problems. The most common rash, impetigo, is highly

contagious and is easily passed on via towels, linens and clothing (Canadian Pediatric Society, 2016). Ironically, an important aspect of the cleansing process required as part of the healing regime is the thorough washing of the hands which is of course, hindered by the lack of clean water that caused the rash in the first place. Cramps and diarrhea due to the infectious intestinal disease *shigellosis* are also an acute health hazard and the transmission is exacerbated by the close contact found in large group housing (Mayo Clinic, 2016). Again, the necessary good hygiene regime is hampered by the lack of access to clean water.

**Figure 33. Young child with impetigo rash. Source: S. White. 2005.**



The chlorine added to the water in an attempt to control bacteria ends up exacerbating *shigellosis* (AFN, 2008). An important escalation is the development of community-acquired methicillin-resistant *Staphylococcus aureus* (CA-MRSA), a staph infection resistant to many antibiotics. MRSA, a soft skin and soft tissue infection, is usually associated with hospitals and nursing homes (Vancouver Health Authority, 2008) but has moved to the more remote First Nations communities in northern Saskatchewan, southern Manitoba and northwestern Ontario (Muileboom, J. *et al*, 2013).

These health problems would eventually negatively affect any family or neighbourhood, not just small remote First Nations communities. Given the isolation of some of these communities and the lack of timely access to adequate health care that would also provide early diagnosis



(NCCAH, 2011), a community-based disease has serious consequences. The Government of Canada's inaction seems reminiscent of the systemic racist policies enacted earlier in the century

**Figure 34. Impetigo rash. Kashechewan First Nation.**

**Source: Epoch Times, 2005**

such as the forced removal of young children to be placed in residential school. The effects of that draconian educational policy are still being felt today and contribute to a wide range of problems on small, northern reserves.

The lack of health care on and off reserves was extensively addressed in the Truth and

Reconciliation Commission's (TRC, 2015) recommendations:

We call upon the federal, provincial, territorial, and Aboriginal governments to acknowledge that the current state of Aboriginal health in Canada is a direct result of previous Canadian government policies, including residential schools, and to recognize and implement the health-care rights of Aboriginal people as identified in international law, constitution law, and under the Treaties.

TRC, 2015.

The TRC also called upon the government to “recognize the value of Aboriginal healing practices”, involving “Aboriginal healers” and “Elders” should they be requested (2012). Health care solutions are essential in order to help a community thrive and having clean drinking water is only part of the picture. It is not credible that the Canadian government believes there are “comparable” communities within the non-First Nations population.

#### **4.6 Moving past government lethargy**

There are some residents from these remote communities that are tired of waiting for the Government of Canada to do their job. Representatives from three First Nations from northwestern Ontario; Neskantaga, Shoal Lake 40 and Grassy Narrows, went to Geneva, Switzerland and made presentations<sup>27</sup> on February 22, 2016, the opening day of the United Nations Committee on Economic, Social and Cultural Rights' 57<sup>th</sup> session (United Nations Human Rights Office, 2016). Highlights from Indigenous participants and NGOs shown below indicate the serious allegations against Canada (United Nations Human Rights Office, 2016):

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<sup>27</sup> There were 17 non-governmental organizations who made presentations and submitted reports. Office of the High Commissioner. 2016, Feb. Accessed on July 25, 2016 at <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=17077&LangID=E>

*Grassy Narrows First Nation* discussed the effects of the mercury dumping in their waters stating that the “basic human right of access to water was very low on the scale of the authorities”.

*Human Rights Watch* emphasized how Canada “was failing to live up to its treaty obligations on the right to water and sanitation” and that “settlers’ communities received all the services while indigenous communities regularly had their rights denied”.

The *Indigenous Bar Association (IBA)* stated that “systemic racism within government institutions affected the realization of indigenous peoples’ rights” and that among the issues the indigenous community in Canada had to negotiate were “lower physical and mental health outcomes, lack of access to drinking water and sanitation (and) inadequate housing and overcrowding. The IBA also pointed to the “significantly lower socio-economic status” of indigenous people.

Amnesty International’s written submission at the United Nations committee on Economic, Social and Cultural Rights included a recommendation that (CESCR, 2016, Mar. 7):

(Canada) collaborate with First Nations to ensure that all First Nations communities have access to clean drinking water and adequate sanitation, including through provision of adequate sustained funding for such services.

Amnesty International, 2016.

Should a community be forced to appeal to the United Nations since their own country will not

listen to their health concerns? Canada's disgraceful behavior regarding drinking water quality on First Nations reserves is on display for all the world to see but Health Canada still believes in DWAs as viable preventative measures.

#### **4.7 Summary – Chapter IV**

Living under a drinking water advisory for over 20 years is inhumane and should never be occurring in Canada. The old adage, “out of sight, out of mind” obviously applies since until the media started to report upon communities such as Kashechewan, First Nations were allowed to continue living in the worst conditions possible; their voices were not heard. The continuation of colonial policies, this time a policy of inaction, shames all Canadians. Do we really reside in a country that would allow the peoples who had experienced the horrors of residential school to now live much like those in countries with no water infrastructure at all? If boiling water for fourteen people in one house - which is not only time-consuming but also signals an extreme need for housing – is acceptable then our definitions of the norm need to change (personal interview, 2015).

All water treatment plants should be working towards an ongoing State of Good Repair (personal interview, 2016). A State of Good Repair means that a plant is functioning as it is meant to operate and that repairs, upgrades and preventative maintenance are all part of the operating model (personal interview, 2016). Water treatment plants should also be embracing “value engineering” which allows employees to examine the functioning of the plant through a review of operational costs and possible options (personal interview, 2016). As well, the

redundancy principle, whereby there are back-ups not only in supplies but in equipment, would alleviate many drinking water health concerns. Finally, when something does break down, there needs to be someone nearby that can fix it. Having not only trained and licensed operators but experienced millwrights to make parts, electrical engineers familiar with equipment instrumentation and calibration is the type of specialization that small water treatment plants do not have available (personal interview, 2016). In the opinion of an agency well-versed in assisting First Nations communities, relying upon INAC engineers means that a First Nations reserve often is not getting the most competent assistance (personal interview, 2016). In addition, the State of Good Repair, value engineering and the redundancy principle are not standard operational features on most First Nations reserves. These are crucial operating parameters that non-First Nations communities are already utilizing and must be included in the future for First Nations reserves to ensure their drinking water safety.

Keeping the realities of reserve life in mind, the government of Canada's policy of comparability can now be examined. Comparing size and location between First Nations and non-First Nations communities will be located at first, then legislation, jurisdiction and funding will be examined. This chapter is where the comparability model will be seen as a deeply flawed policy for drinking water quality.





## CHAPTER V

### Comparability model: A poor excuse for government inaction

#### 5.1 Introduction

The Government of Canada would like First Nations to believe that there are communities near to where they live, that have a quality of life that could and should be emulated on reserves.

After centuries of contact with the varied First Nations communities in this country now called Canada, the federal government has determined that all First Nations need is to have public services similar to non-Indigenous communities and their health care problems will vanish.

Trying to compare two different community groups will never be an easy exercise.

Comparability can reduce multifaceted communities down to isolated issues without taking into account the distinctions that makes them unique. To have a federal government of a country as rich as Canada using a comparability model to define drinking water quality on reserves, is a poor excuse for government inaction.

Through the amount of serious consultation with First Nations leadership, organizations and community members that the government has already had, INAC should have realized by now how to approach the drinking water issue. The government should feel uneasy presenting a comparison between two such disparate types of communities as a solution to the complexities



of drinking water on reserves. Meanwhile, there have been no significant steps towards fixing a situation that no other group of people in Canada is forced to endure. This is a sad indictment of how Canada's federal government has misunderstood First Nations peoples since the day of first contact. Surely, if drinking water quality problems on reserves could be reduced to such simplistic terms, First Nations peoples themselves would have employed this type of causal reductionism.

This chapter starts first with an examination of fiduciary duty so as to place the federal government's obligations front and centre. Fiduciary duty is the responsibility and legal obligation to offer the "highest standard of care" while protecting and acting in the "best interests" of a beneficiary (Duhaime's Law Dictionary, n/d). There is also a "reasonable expectation" that the fiduciary will act appropriately (Duhaime's Law Dictionary, n/d).

The government has failed in their duty to protect First Nations, especially in terms of providing safe drinking water but it may be forgotten that a fiduciary is a legally-bound position of trust which makes Canada's failure contrary to law.

Then the jurisdictional complexities of the *Constitution Act* and the *Indian Act*, as they interact with provincial laws of general application are discussed. The Federal government has had jurisdiction over First Nations, Inuit and Metis peoples since the *Constitution Act* of 1867 and its revision of 1982. Almost every aspect of "Status Indians" lives is mandated by the federal *Indian Act*, while for other Canadians it is the province that has the authority and jurisdiction over matters such as education, public land and resources, health care, property rights and civil rights (University of Ottawa, n/d). The unique jurisdictional situation that Canada has placed First

Nations in should have automatically allowed the federal government to understand that comparability with non-First Nations communities was not possible.

Next the actual parameters of comparison will be discussed including population size and location with communities in the province of Ontario providing case studies. While seemingly a straightforward means of comparison, size and location are more ambiguous than they would seem. The main aspects of comparability that should have been considered by INAC are then examined and they are: Legislation, jurisdiction and funding/economic opportunity. Looking at legislation will clearly show that there are huge differences between First Nations and non-First Nations communities with one having enforceable laws and the other left struggling with voluntary guidelines. Jurisdiction will allow the reader to understand that the freedom to thrive and develop is only as good as the networks and sharing of responsibilities between levels of government.

At the end of the chapter, funding and economic opportunities are introduced and their relationship with jurisdiction explained. Much of the revenue non-First Nations communities earn is based on owning their land and property. This paper provides a comprehensive investigation of the Government of Canada's comparability model and will hopefully empower the reader's ability to see that First Nations reserves and non-First Nations communities are very different and cannot ever be successfully compared, especially in light of providing crucial services such as potable drinking water. After reviewing these sections, comparability will be seen for what it is, a flawed model that should be abandoned.

Before starting the critical examination regarding the idea of comparability, there are two related concepts that illustrate the unique context of First Nations in Canada. These concepts are: a) Fiduciary duty and; b) Jurisdictional complexities.

### 5.1.1 Fiduciary Duty

Mandated by the *Indian Act*, the *Constitution Act (1982)*, and other statutes, the federal government, through the department of Indigenous and Northern Affairs Canada (formerly Aboriginal Affairs and Northern Development Canada - AANDC), has fiduciary duty towards First Nations, Inuit and Metis residents (Morellato, 1999). The government is therefore supposed to act in the best interests of Indigenous peoples and this would include providing clean drinking water in their communities.

The concept of “fiduciary duty” is an important one and should be clarified. Justice Dickson, through the Supreme Court of Canada provides a legal definition of “fiduciary” within

*Guerin v R*, (1984) 2 S.C.R 335 (Hurley, M.C., 2002):

...Parliament has conferred upon the Crown a discretion to decide for itself where the Indians’ best interests lie. Where by statute, agreement, or perhaps by unilateral undertaking, one party has an obligation to act for the benefit of another, and that obligation carries with it a discretionary power, that party thus empowered becomes a fiduciary...

Justice Dickson, 1984, *Guerin v R*.

Constitutional recognition of the Crown’s fiduciary obligations is provided in section 35 of the *Constitution Act, 1982* within *R. v. Sparrow* (1990) 1 S.C.R. 1075 (Indigenous Foundations, 2009):

The government is required to bear the burden of justifying any legislation which has some negative effect on any aboriginal right protected under section 35(1).

*R. v. Sparrow*, 1990.

The government of Canada is therefore both legally and duty-bound to enact legislation that would assist First Nations communities with their on-reserve drinking water quality. This obligation has been known and understood for decades but has been ignored. In essence this means that the federal government has failed in their fiduciary duty towards First Nations peoples. It is also important to realize that the fiduciary duty towards First Nations peoples is “not simply a common law duty” applicable to government administrators, it is a *sui generis* duty backed by the Canadian constitution (Morellato, 1999) that has not been upheld by the federal government.

### *5.1.2 Jurisdictional Complexities: Division of powers*

#### *5.1.2.(i) Federal jurisdiction*

The government of Canada’s jurisdiction over First Nations peoples emanates from the

*Constitution Act, 1867*, subsection 91(24), which states that:

**91.** It shall be lawful for the Queen, by and with the Advice and Consent of the Senate and the House of Commons, to make Laws for the Peace, Order and good Government of Canada...it is hereby declared that...the exclusive Legislative Authority of the Parliament of Canada extends to all Matters....that is to say:

**24.** Indians, and Lands reserved for Indians.

*Constitution Act, 1867.*

Aboriginal rights are constitutionally entrenched via section 35(1) of the *Constitution Act, 1982* and at that point no longer existed as common law and could not be altered or extinguished by any “ordinary” legislation put forth by the federal government (Crawford-Dickenson, n/d/Library of Parliament, 2001).

The federal government's legislative authority allowed them to enact a statute entitled the *Indian Act*, first passed in 1876 with the most recent revision in 1985 (Library of Parliament, 2001). The *Indian Act*:

...Defines who is an Indian and regulates band membership and government, taxation, lands and resources, money management, wills and estate, and education.

Library of Parliament, 2001.

#### 5.1.2.(ii) Provincial jurisdiction

Although the federal government has jurisdiction over First Nations, provincial authority does sometimes enter into the picture. Provincial laws of general application, such as those related to education (Library of Parliament, 2001) or driving licenses do apply to First Nations. The Library of Parliament (2001) explains some important qualifiers in regards to the application of provincial laws:

- Provincial laws to which Indians are subject must be general in nature and cannot relate exclusively or directly to Indians, because such laws would infringe upon an area of exclusive federal jurisdiction.
- Provincial laws must not affect an integral part of primary federal jurisdiction over Indians and lands reserved for Indians.
- Provinces subject to the 1930 Natural Resources Transfer Agreements (Manitoba, Saskatchewan and Alberta) may not enact laws that deprive Indians of their right to take game and fish for food.
- A provincial law, like a federal law, can be declared of no force and effect if it unjustifiably infringes an existing Aboriginal or treaty right protected under section 35 of the *Constitution Act, 1982*.

Library of Parliament, 2001.

The *Safe Drinking for First Nations Act, 2013*, referenced provincial law to regulate drinking water quality in the Act. The *Expert Panel on Safe Drinking Water for First Nations (2006)*, after hiring Willms & Shier Environmental Lawyers LLP to examine the five possible regulatory

options, clearly stated in their report that using provincial law of general application would be “fraught with such uncertainty” that the effectiveness of the option would not exist.

In spite of Section 91(24) of the Constitution Act, 1867, having “exclusive jurisdiction” for any laws related to “Indians and lands reserved for the Indians” (Expert Panel, 2006), the eventual choice made by the federal government was the “application of provincial laws as laws of general application” (Expert Panel, 2006). The Panel did mention it was possible that provincial law may apply through s. 88 of the Indian Act but since water systems affect reserve lands, it would be “an uncertain basis for applying provincial drinking water laws on reserve” (Expert Panel 2006).

The only other way that provincial laws could apply in regards to reserve lands is if the general application law does not affect “Indianness” (Expert Panel, 2006). A case could be made stating that the regulation of water is a public health concern and has no connection to “being ‘Indian’” (Expert Panel, 2006). Certainly First Nations leadership were very unhappy with the incorporation of provincial law. The Chiefs of Ontario’s submission to the House of Commons Standing Committee on Aboriginal Peoples (2013, May) prior to the passing of Bill S-8 discusses the delegation of powers for the regulation of drinking water systems:

Using a regulation to sub-delegate legislative and even judicial powers is almost certainly unconstitutional. This and other related provisions...reflect a failure to carefully think through the intricacies of the relationship between provincial and First Nation water regulation, assuming Bill S-8 leads to an incorporation of provincial standards.

Chiefs of Ontario, 2013.

Bill S-8 was passed into law on June 19, 2013 and the *Safe Drinking for First Nations Act* uses provincial laws as the basis of its regulations, ignoring the recommendations of the Expert Panel and First Nations representatives.

## **5.2 Comparability: Similar size**

The government policies of comparability use size and location as two of the main community criteria to be matched. Unfortunately, these two qualifiers are not good indicators for comparison. This section shows that First Nation communities, governed under the *Indian Act* are not “municipalities” and are not comparable (First Nations size is limited by the *Indian Act* “reserve lands”). Size, also complicated through the on-reserve and off-reserve issues (most people live off reserve), biased census definitions and counts, is a poor indicator for comparability since the true number of on-reserve residents has not been determined (personal interview, 2015).

### *5.2.1 Effect of size on community services*

Community size is important to drinking water quality on a reserve since INAC’s grant for Band Support Funding, i.e. the funding for local government to administer band services, is based upon a formula that includes “total status band membership on and off reserve, and “status population on reserve” (INAC, 2016, Jan./personal interview, 2015). This funding formula was first developed in 1983 and revised in 2005 (INAC). Therefore the population counts by Statistics Canada are a very important part of how a First Nations community operates.

Community size also affects staffing of water system assets: The smaller the population pool from which to pull potential candidates, the more difficult it is to find appropriate staff (personal interview, 2015). On reserves, once an employee is found and trained, it is then harder to keep that qualified technician to run and maintain the water system since they will be paid less and be doing more than their counterparts in non-First Nations communities (personal interviews, 2015 & 2016). First Nations communities, having smaller and less flexible budgets also tend to pull funding from one area to compensate for a lack of funding in another, thus leaving crucial service areas vulnerable (personal interview, 2015).<sup>28</sup>

Since size is one of the main criteria used by INAC to inform their comparability model, it is important to look at the two community types, First Nations and non-First Nations, to see if on size alone, comparability can be achieved. Information from Canada's main source of population demographics, Statistics Canada's census, has been used to compare the communities. The census is issued every five years. However the usage of Statistics Canada to measure and compare population groups may be problematic since First Nations reserves are not classified in the same way as non-Indigenous communities. A brief survey of Statistics Canada classifications will therefore be presented before the examination of each group based upon size. Understanding how communities are seen by the federal ministry that reports their findings, could point to biases that affect accuracy.

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<sup>28</sup> Even INAC pulls funds from one areas to another.



### 5.2.2 First Nations reserves defined

A “band” and a “reserve” as defined in the *Indian Act* (1985) clearly show that the ownership of the land the reserve is built upon is “vested in her Majesty” (quote):

**2 (1)** In this Act,

***reserve***

**(a)** means a tract of land, the legal title to which is vested in Her Majesty, that has been set apart by Her Majesty for the use and benefit of a band, and

***band*** means a body of Indians

**(a)** for whose use and benefit in common, lands, the legal title to which is vested in Her Majesty, have been set apart before, on or after September 4, 1951,

**(b)** for whose use and benefit in common, moneys are held by Her Majesty,

*Indian Act, 1985.*

This definition of a band and reserve defines a type of community of which there is no parallel.

If the government of Canada cannot see what their own legislation has deemed to be exclusive, how likely is it that they will see comparability as an inadequate measure based upon their own parameter of size?

### 5.2.3 Statistics Canada – Classifications

#### 5.2.3.(i) First Nations Reserves

There are 54 census subdivisions (CSDs) types that follow “official designations” based upon either provincial, territorial or federal authorities (Statistics Canada, 2015). Statistics Canada includes reserves in the census subdivisions (CSD) but uses terminology based upon the provincial definition of a municipality, or its equivalent (Statistics Canada, 2015):

Census subdivision is the general term for municipalities (as determined by provincial/territorial legislation) or areas treated as municipal equivalents for statistics purposes (e.g. Indian reserves, Indian settlements and unorganized territories).

Statistics Canada, 2015.

Treating reserves as “municipal equivalents”, albeit for statistical purposes and then lumping reserves in with municipalities that fall under provincial legislation, seems to be a strange way to classify First Nations communities that are under federal jurisdiction.

Statistics Canada’s website provides a more detailed explanation of the CSD as it applies to First Nations reserves and uses INAC’s criteria to define “six CSD types legally affiliated with First Nations Indian bands” (2015). The six “types” are:

Indian reserve (IRI)

Indian settlement (S-E)

Indian government district (IGD)

Terres reservees aux Cris (TC)

Terres reserves aux Naskapis (TK)

Nisga’a land (NL)

Statistics Canada, 2015

These classifications create a confusing mixture of designations and levels of jurisdiction. Under the CSD definition, First Nations reserves are classified as equivalent to a provincial municipality. Statistics Canada then utilizes a federal department to further describe the CSD’s “legal affiliations” and presents six CSD types. However the concept of the CSD and which reserves qualify under that designation is a conversation between Statistics Canada and INAC (Statistics Canada, 2015):

Statistics Canada only recognizes the subset of Indian reserves that are populated (or potentially populated) as census subdivisions. For 2011, of the more than 3,100 Indian reserves across Canada, there are 961 Indian reserves classified as CSDs. Statistics Canada works closely with AANDC (INAC) to identify those reserves to be added as CSDs.

Statistics Canada, 2015.

It appears that First Nations reserves are not being classified by population alone, or by geography alone but rather by the “legal definition of communities affiliated with First Nations or Indian bands” (Statistics Canada, 2015). One has to wonder if the reason that only 961 of 3,100 reserves were deemed CSDs is that they did not meet the “affiliation” criteria. Already there seems to be a strong case that First Nations communities cannot be compared to non-First Nations communities using standard population statistics based upon how they are classified. What non-First Nations town or village is defined by Statistics Canada based upon definitions that on the one hand refer to provincial legislation regarding municipalities and then on the other hand refers to federal legal affiliations?

The municipal designation for reserves is all the more unusual since Statistics Canada is interested not only in population changes but is heavily invested in evolving geographical classifications to better define communities in Canada as will be seen with the non-First Nations communities’ classifications. However, there is no other comprehensive collator of statistics. Although Statistics Canada is an imperfect data source, in an attempt to provide some consistency, it will be used for the two community types comparison<sup>29</sup>. Most of the information will be extracted from the 2011 Census of Population Program (CPP)<sup>30</sup>, which provides detailed demographic information about Canada. The *Population and Dwelling Count*

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<sup>29</sup> If the federal government’s Budget 2012 had continued to fund the First Nations Statistical Institute instead of decreasing and then cutting all funding by 2014, perhaps more accurate and in-depth information would be available.

<sup>30</sup> The Census of Population is derived from the 2011 National Household Survey, which replaced the previous long-form, detailed census questionnaire of previous census years, eg. 2006 or 2001.

*Highlight Tables*<sup>31</sup> from the 2011 CPP shows the population of every enumerated community in Canada, including First Nations reserves (Statistics Canada)<sup>32</sup>.

### 5.2.3.(ii) Non-First Nations communities

Non-First Nations communities tend to have a much wider population range, with many mid-to-large size cities, as well as smaller towns and villages. Since the 2011 Census, Canadian communities of 1000 – 29,999 people or more are now classified as small population centres, instead of “small urban centres” and inhabitants outside of “population centres” that have populations of less than 1000 are now deemed to be part of “rural areas” by Statistics Canada (2015). A rural area (RA), as defined by Statistics Canada includes:

...All territory lying outside population centres (POPCTRs). Taken together, population centres and rural areas cover all of Canada.

Statistics Canada, 2015.

Therefore populations living outside of census designation areas such as Census metropolitan areas, CMAs (core population of 50,000 or more) and, Census agglomerations, CAs (core population of at least 10,000) , are rural (Statistics Canada, 2015). Statistics Canada describes some of the contexts included in their rural designation:

- Small towns, villages and other populated places with less than 1,000 population
- Agricultural lands
- Remote and wilderness areas

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<sup>31</sup> The *Highlight Tables* do indicate CSD classifications but are more focused on actual population increases from the 2006 Census, the number of dwellings, total square kilometres of the CSD and population density. Statistics Canada. (2016, Jan. 7). *2011 Census, Ontario*. Retrieved July 29, 2016: <http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/hltfst/pd-pl/Table-Tableau.cfm?LANG=Eng&T=302&SR=1&S=51&O=A&RPP=9999&PR=35&CMA=0>

<sup>32</sup> Not every First Nations community was enumerated in the 2011 Census. There were 31 reserves and settlements across Canada that were “incompletely enumerated” due to permission not granted, interrupted enumerations, or natural causes, such as forest fires (in northern Ontario). Statistics Canada, (2016). Retrieved July 24, 2016: <https://www12.statcan.gc.ca/census-recensement/2011/dp-pd/hltfst/pd-pl/Notes-eng.cfm>

Looking again at the *Highlight Table* for Ontario, the CSD types for non-First Nations communities are based upon “provincial/territorial authorities” and designations include “town”, “township”, incorporated village, village and municipality. There is no mention of federal “legal affiliat(ions)” and no confusing mixture of classifications, although to be fair, the rural designation is fairly broad. However that does not change the fact that non-First Nations communities in Canada with fewer than 1000 habitants are not captured in the same way by Statistics Canada as First Nations reserves. Their classification is based mainly upon geography and population, not various legal descriptions and affiliations. In spite of these differences, these are the communities that would be compared to First Nations reserves using the comparability language of the Government of Canada.

#### *5.2.4 First Nations reserves - Population*

##### *5.2.4.(i) Canada*

The Census of Population Program also provides the Aboriginal Demographics from the 2011 National Household Survey (NHS). The NHS indicates that of the 793 reserve communities<sup>33</sup> enumerated in Canada, community populations range from less than 100 people to over 2000 residents<sup>34</sup> (figure 29), (Statistics Canada, 2011). There are 693 First Nations communities

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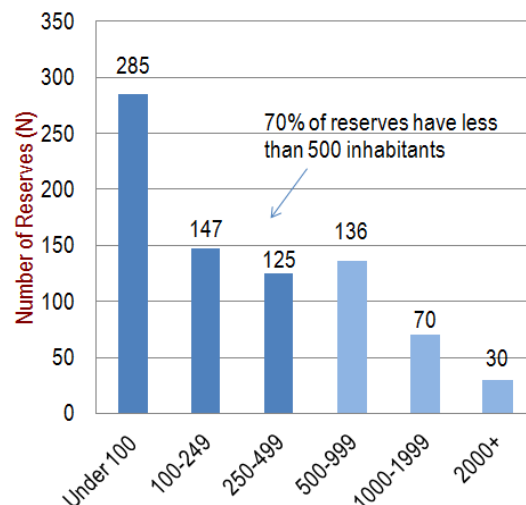
<sup>33</sup> It should be noted that some First Nations have more than one reserve. What also is not recognized is that reserve populations can fluctuate greatly since many community members seek employment and live off-reserve (personal interview, 2015).

<sup>34</sup> The largest reserve in Ontario is Six Nations of the Grand River with 6,213 residents as indicated in the 2011 Census.

across Canada with under 1000 residents (Statistics Canada, 2011)<sup>35</sup>. However the majority, or 70% of First Nations reserves (figure 28), have less than 500 residents (Statistics Canada, 2011).

#### 5.2.4. (ii) Ontario

INAC reports that there are in total, 126 First Nations bands across the province of Ontario, living on 207 reserves and settlements (2014). Using Ontario as an example<sup>36</sup> (figure 30), the Aboriginal Demographics also indicate that there are 81 reserves with fewer than 500 inhabitants in the province of Ontario (Statistics Canada, 2011). Further examination of the Statistics Canada *Highlight Table* shows that there are a total of 94 First Nations communities in Ontario with a population under 1000, excluding 19 communities that were not fully enumerated and 10 that had populations of “0” (Statistics Canada, 2011). The conclusion is that First Nations reserves are, in the main, small communities.

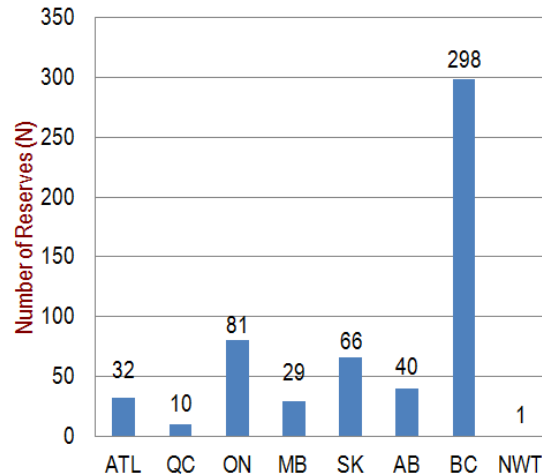


**Figure 35. Population Size of First Nations Reserves in Canada**

**Source: Aboriginal Demographics from the 2011 National Household Survey, Statistics Canada.**

<sup>35</sup> Except for two “legally defined reserves”, Statistics Canada did not include communities in the Yukon or in the Northwest Territories. Statistics Canada. (2013, June). Aboriginal Demographics from the 2011 National Household Survey. Retrieved July 24, 2016: <https://www.aadnc-aandc.gc.ca/eng/1370438978311/1370439050610>

<sup>36</sup> Due to length constraints for this paper, the province of Ontario will be used extensively but not exclusively, as the sample area for First Nations reserves and non-First Nations communities.



**Figure 36. First Nations Reserves with less than 500 Residents by Region**  
 Source: Aboriginal Demographics from the 2011 National Household Survey, Statistics Canada.

Therefore communities under 1000 will be the main focus of comparison in terms of size so as to include the majority of First Nations reserves.

### 5.2.5 Non-First Nations communities- Population

#### 5.2.5.(i) Ontario<sup>37</sup>

There are 444 communities in the province of Ontario (Ontario Ministry of Municipal Affairs and Housing, 2016) but many are large municipalities. However the same Statistics Canada *Population and Dwelling Count Highlight Table* shows the populations of all of Ontario's non-First Nations communities, including those with less than 1000 inhabitants:

Classification Types	Town	Township	Village	Municipality	Total
Communities with fewer than 1000 residents	6	58	7	4	<b>75</b>

**Figure 37. Non-First Nations Small Communities in Ontario**  
 Source: Data from Statistics Canada Population and Dwelling Count Highlight Table, 2011.

<sup>37</sup> Given the large population of Canada, the comparison will move directly to the province of Ontario.

There are 75 non-First Nations communities in Ontario that have populations less than 1000.

The CSD classifications used are:

- Town
- Township
- Village
- Incorporated village
- Municipality

### *5.2.6 Fluctuations of population*

While municipal designations may differ, on paper, the comparability of First Nations reserves using federal government statistical population counts alone, does hold up in terms of size.

Without doubt there are non-First Nations communities with populations under 1000, or even 500 residents. However the reality of reserve community populations presents a very different picture than that presented by Statistics Canada. Many non-Status First Nations, who are not counted by Statistics Canada, live on reserve, as well as a small number of non-First Nations individuals (personal interview, 2016). Conversely, residents of non-First Nations communities are not obligated to prove who they are and what their ancestry is, in order to be counted for the Census. Non-First Nations also do not have to rely upon population counts for municipal administrative funding.

First Nations residents will move back and forth to the reserve, depending upon employment, educational opportunities and family obligations and these individuals may not be statistically captured as being part of the community (personal interview, 2016). There are no other people residing in Canada with a permanent “hometown” to which they are legally bound. In essence,



this is what reserves are for First Nations peoples. While some funding formulas do take into account on and off reserve populations, there should never be a formula that only counts those residents who actually are living in the community. The 2016 Census does ask respondents to report residents who are temporarily away to be included but how "temporary" is defined is not clear.

As well, the First Nations population in general is younger and growing faster<sup>38</sup> than any other group in Canada (Statistics Canada, 2011), which means that almost as soon as the statistics are published, they are out of date. In practical terms, this means that between the five-year gap of census-taking, a community's basic needs could be increased by the number of newly-born residents. By the time the next census is taken, five years later (and the information disseminated six years later) the Band Support Funding that is based upon population could be completely inaccurate.

### **5.3 Comparability - Similar location**

#### *5.3.1 Remote northern communities*

While Ontario has five of the twenty largest First Nations communities in Canada (INAC, 2014), there are also many small, isolated communities, especially in the northern part of the province. While it may be said that both First Nations and non-First Nations communities can be found in remote locations, there is actually a much stronger chance of that remote community being a First Nations reserve (INAC, 2014). INAC states that one out of every four

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<sup>38</sup> The Census does require babies to be reported as well as adults.

First Nations in Ontario is a small community whose remoteness makes accessibility difficult (INAC, 2014).

*5.3.1.(i) Access to services and supplies is difficult*

Many of these remote communities must rely upon air transport for personal travel and to bring in supplies. Those communities near rivers can travel by boat in the summer and bring in bulky supplies by barge but by early fall ice starts to form on the rivers near northern reserves. Only winter brings access to the rest of the world, with the construction of the winter road (personal interview, 2016).

Roads give communities the freedom to do business, to use available hospitals for health care (e.g. pregnant women and emergencies), and to import large items such as fridges, stoves, cars and building supplies, whenever they choose. The winter road dictates when things get done, the alternative being to pay high air transportation prices. Getting mail, groceries, even medical and educational supplies are dependent upon scheduled flights when the ice road is not open and those flights are dependent upon the weather (personal interview, 2015).

A visual illustration of locations will better show the comparison of First Nations and non-First Nations communities. The maps in figures 31-35, show the locations of First Nations reserves and non-First Nations communities in selected portions of Ontario:

- Southwestern Ontario
- Southeastern Ontario
- Georgian Bay area
- Northern Ontario

A review of the maps show that both First Nations communities and non-First Nations communities are in southern Ontario or border major lakes. However, many reserves are very far north and are not close to any major cities or towns. For those communities that are close to larger non-First Nations municipalities, there appears to be more parity in terms of purchasing access and medical care. There would also be more opportunities for employment.

#### *5.3.1.(ii) No small northern communities except First Nations*

Northern First Nations communities tend to be isolated but are still considered part of the blanket statement whereby comparable non-First Nations community are nearby. The maps below confirm that in Ontario, there are no non-First Nations communities of similar size and in a similar location to these reserves. In fact, there are no communities nearby period unless the comparison is only between First Nations communities themselves. How then, are these communities supposed to have comparable drinking water systems that reflect their location? Such a comparison does not exist and it hard to believe that INAC is not aware of this discrepancy. As well, even if First Nations communities are close to non-First Nations communities, jurisdictionally, the differences are striking as will be seen in the section discussing jurisdiction.

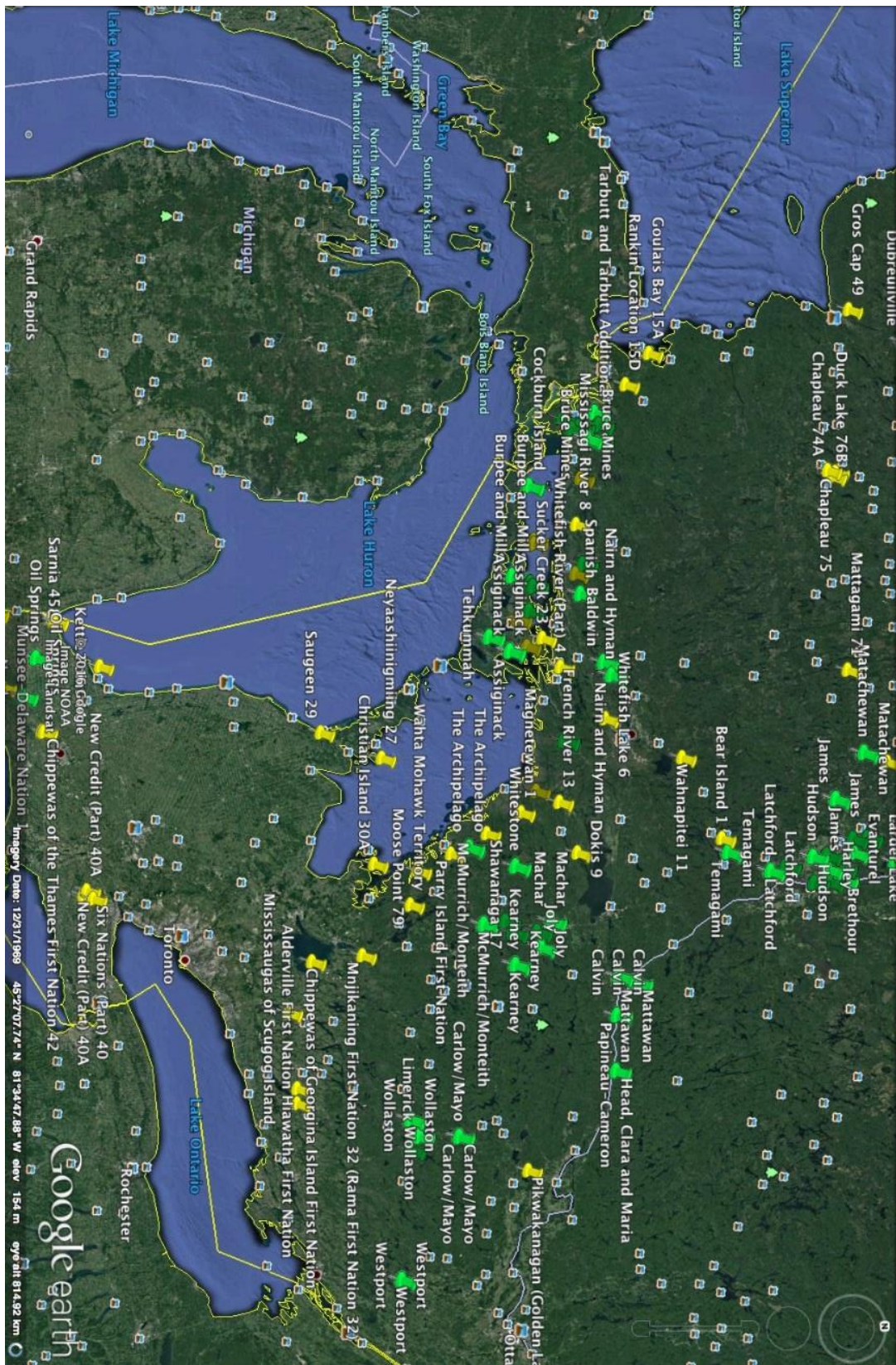


Figure 38. First Nations (IRI) CSDs (yellow) and non-First Nations communities (green) clustered around the Great Lakes. Source: York University, Map Library, R. Orlandini.



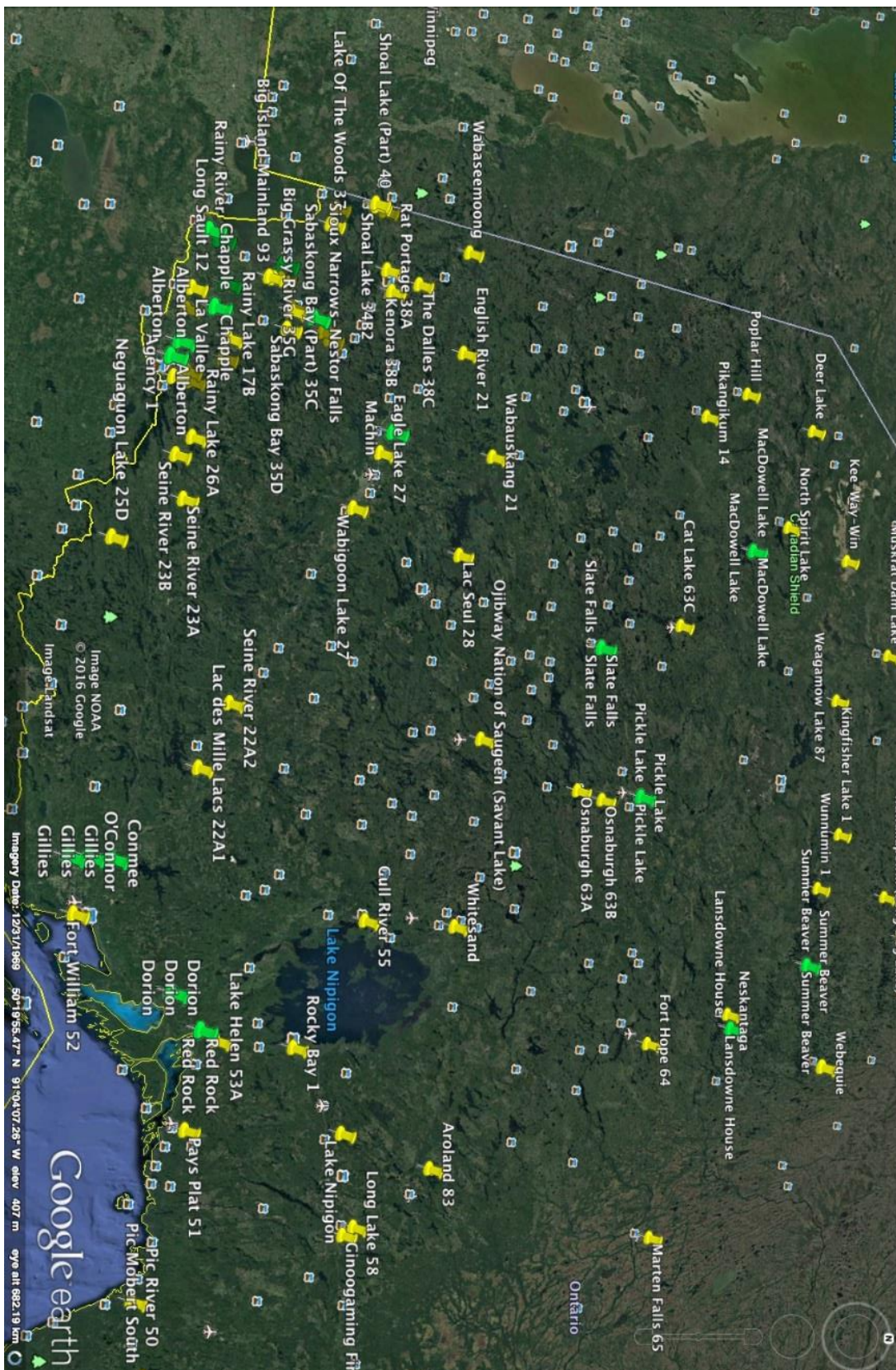


Figure 39. North-western Ontario. First Nations (yellow) compared to non-First Nations communities (green). Source: York University, Map Library, R. Orlandini.



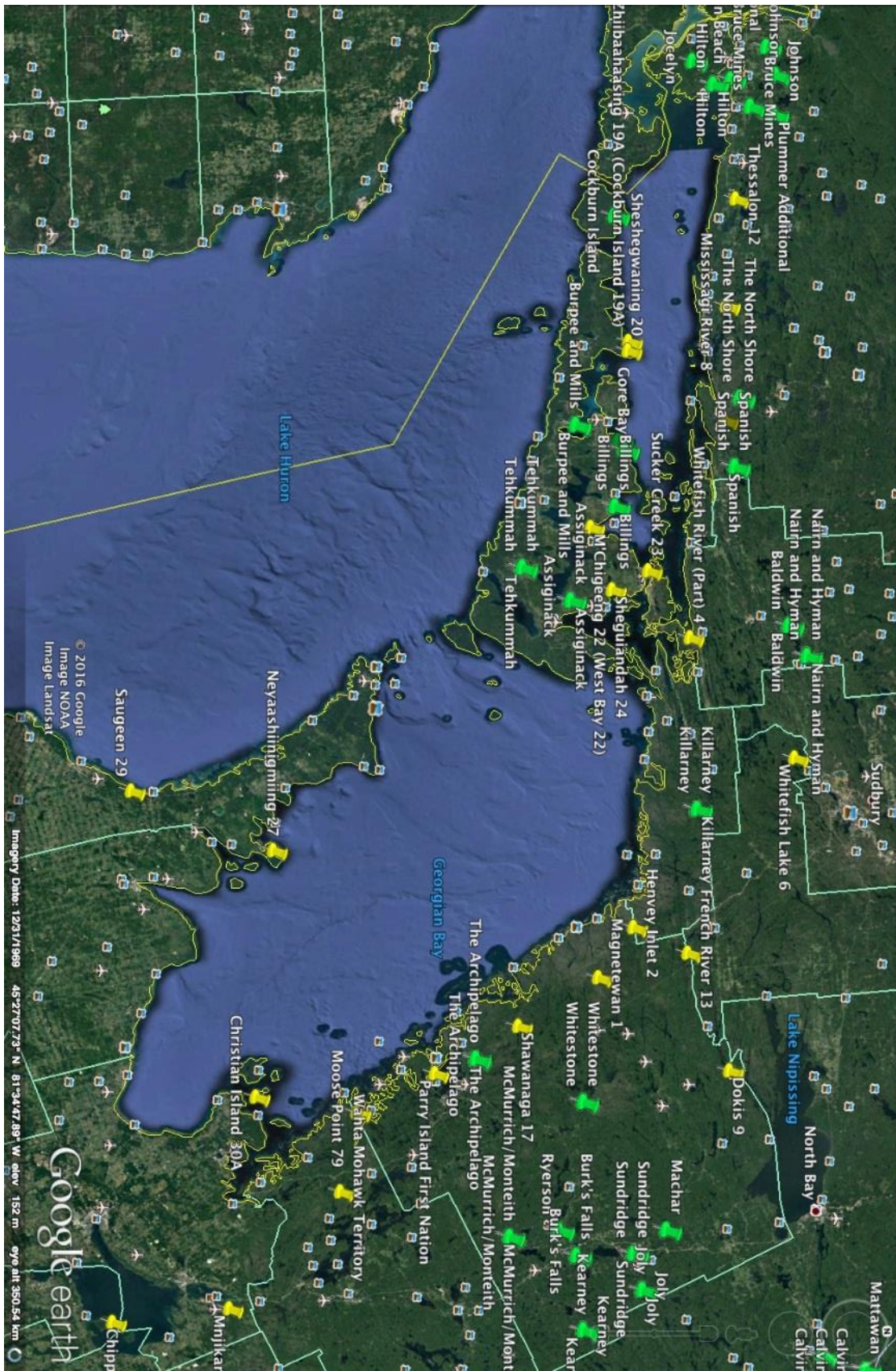


Figure 40. South-Central Ontario  
 Source: York University, Map Library, R. Orlandini.



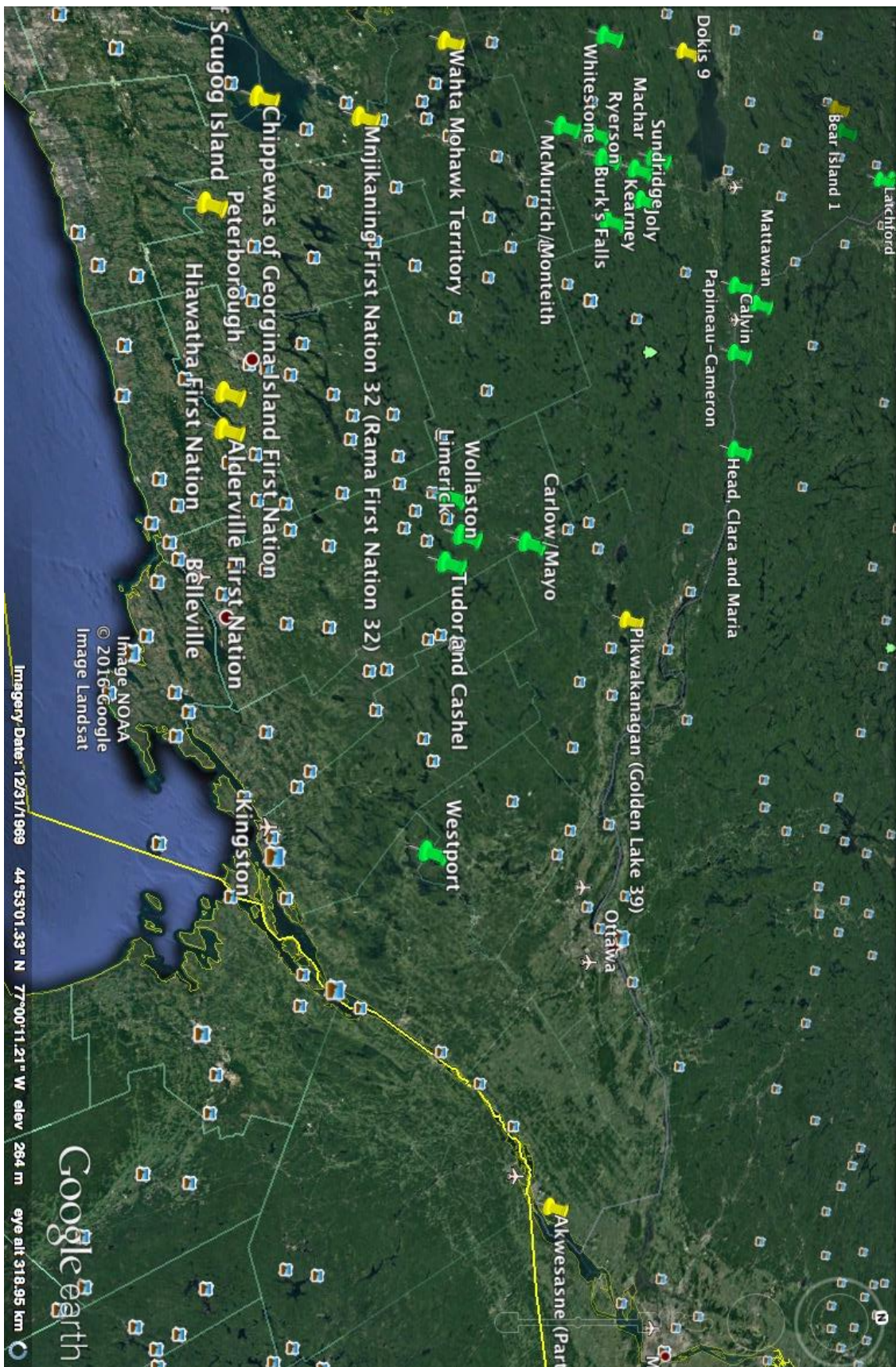


Figure 41. Southeastern Ontario. Source: York University, Map Library, R. Orlandini.



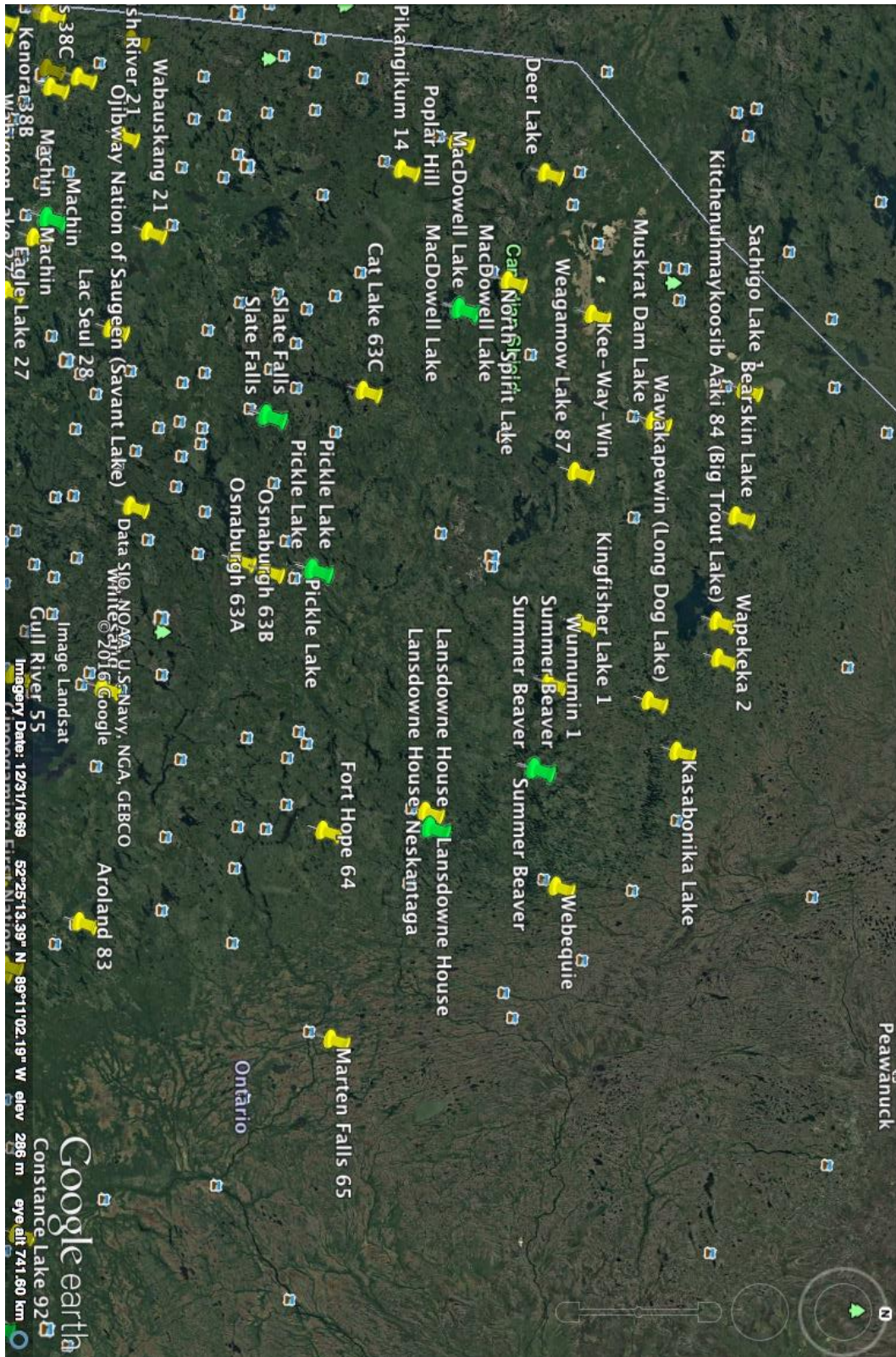
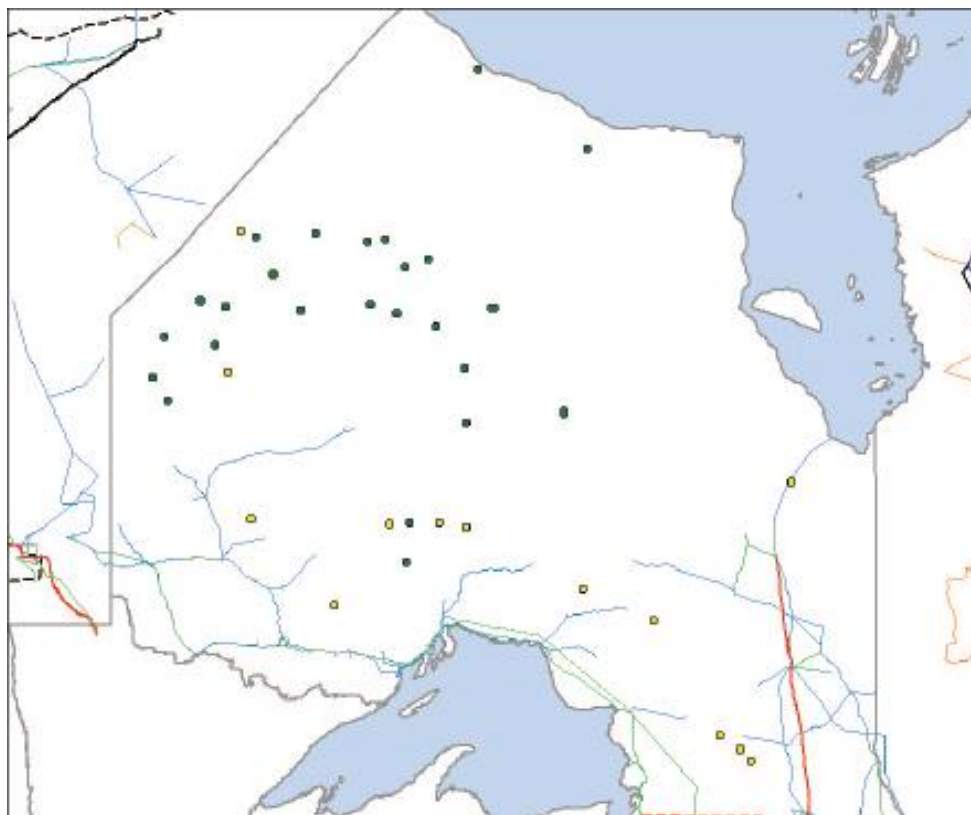


Figure 42. Northwestern Ontario. Summer Beaver, Lansdowne House, MacDowell Lake and Slate Falls are actually First Nations reserves and should be yellow. That means there is only one non-First Nations community with a population under 1000, in northwestern Ontario. Source: York University. Map Library, R. Orlandini.



To reinforce the effects of isolation for northern communities another type of map will be used. The *Status of Remote/Off-Grid Communities in Canada* (2011), INAC's<sup>39</sup> joint report with Natural Resources Canada, looks at electricity production and consumption in off-grid Canadian communities. The report provides maps and a table that compares "Aboriginal"<sup>40</sup> to non-Aboriginal remote communities (figure 36). The Report references data from the 2006 Census stating that of the 38 remote communities in Ontario studied with a total population of 21,342, there were 25 communities, or 14,236 residents who were "Aboriginal", composing two-thirds of the total communities.



**Figure 43. Northwestern Ontario small communities, electrical consumption**  
Green: Aboriginal Yellow: Non-Aboriginal Source: *Status of Remote/Off-Grid Communities in Canada, 2011.*

<sup>39</sup> At the time this report was written, INAC's departmental name was Aboriginal Affairs and Northern Development Canada.

<sup>40</sup> The report does not provide a definition of "Aboriginal" but INAC has deemed that term to include First Nations, Inuit and Metis peoples. INAC. (2012). *Terminology*. Retrieved May 30, 2016: <http://www.aadnc-aandc.gc.ca/eng/1100100014642/1100100014643>

### 5.3.2 Fuel costs and fuel access

It should be pointed out that while these maps are indicating electrical consumption/production, the majority of these communities are relying upon diesel-fueled generators for their electrical production (INAC, 2011). This again emphasizes the need for easy and reliable access to fuel. If a water treatment plant runs out of fuel for their generator, then they have no electricity. Without electricity to run the water treatment plant, then drinking water pressure within the system will be compromised (personal interview, 2016). A drinking water advisory or even a do not consume advisory will be the result (personal interview, 2016).

Fuel that is flown in on an emergency basis, is going to be at least twice as much as fuel that is brought in via winter road or barge, which is in itself expensive enough (Remote Communities, 2011). The *Remote Communities* report also explains how fuel costs are calculated differently for off-grid fossil fuel users. Costs will vary depending upon generator size, how long the generator runs without full maintenance and the generator manufacturer's performance expectations (Remote Communities, 2011). Given that many communities must run their generator the entire day, the life of their equipment is greatly shortened.

Aside from the greater costs, flying in supplies is also dependent upon the weather and airline schedules, whereas communities further south, with natural gas pipelines or electrical lines brought into their communities, do not experience such limitations. Being off grid with no user fees to fall back upon, along with expensive transportation costs are the types of unexpected costs that can break a small community's utility budget (personal interview, 2016) and definitely are linked to location. Lastly, for those remote communities dependent upon diesel

generators, they tend to be quite loud and the emissions could affect community members' health (Remote Communities, 2011).

### *5.3.2.(i) User fees*

The high expenses continue as off-grid electricity can cost as much as “10 times higher than electricity generated on the main grid” but this is not the worst part of the costs (Remote Communities in Canada, 2011): In Ontario, electricity rates are passed on to the user and in most remote non-First Nations communities, those rates are subsidized by the provincial government (Remote Communities in Canada, 2011). In fact the rates for Ontario users is set according to the average residential rates of on-grid customers and these lower rates are passed on to all residential customers, including those that are off-grid (Remote Communities in Canada, 2011) . This is a huge difference in how both location and jurisdiction affects fuel prices. First Nations communities cannot avail themselves of that rate structure and in many cases, user fees are but a phantom income since residents are unable to pay them.

Looking again at the Remote Communities map, the green dots are First Nations reserves, and these community locations confirm the remoteness of northern Ontario. In particular, as seen earlier in figure 35, the northwestern part of Ontario shows a number of reserves with no non-First Nations community nearby. There are definitely many reserve communities in Ontario that do not have non-First Nations communities nearby. Comparability based upon geographical location alone may be present in most of southern Ontario but does not hold up in the northern parts of the province.

## 5.4 Comparability – Legislation

### 5.4.1 Introduction

Legislation and laws allow a community to understand how it functions within a broader legal context. Not having legislation with regulations that have been enacted means that no standards can be legally enforced. INAC has not followed through with the regulations that should accompany the *Safe Drinking Water for First Nations Act* thereby giving First Nations communities the legislated safeguards for drinking water quality that all non-First Nations communities have in the province of Ontario. If comparability is what the federal government wishes to use when speaking of drinking water quality, then the differences in legislation and regulations must be discussed.

First Nations are well-acquainted with the *Indian Act*, legislation - with deeply racist, sexist and paternalistic overtones – that has been designed to eradicate the Indian (Alfred, T., 2009/ Lawrence, B., 1999/Gehl, L., 2000). Given their experiences with an *Act* that allows residential school to exist for over a century, it is not surprising that there is little trust among First Nations’ communities regarding legislation that will govern their drinking water quality. However legislation is a large part of how governments manage assets such as drinking water and wastewater systems. Both provincial (Ontario) and federal legislation will be examined but a brief explanation of municipal legislation will be presented first since Statistics Canada has designated First Nations communities as municipal equivalents.

### 5.4.2 Municipalities – Ontario

Municipalities in Ontario fall under the *Municipal Act, 2001*. Within the Act, a municipality “is a

reference to its geographical area or to the municipal corporation” (2001, c.25, s.1(2)). The province of Ontario created municipalities to:

...Be responsible and accountable governments with respect to matters within their jurisdiction and each municipality is given powers and duties under this Act and many other Acts for the purpose of providing good government with respect to those matters.

*Municipal Statute Law Amendment Act, 2006, c.32, Sched. A, s.2.*

A municipality may be single-tier, lower-tier or upper-tier in Ontario: *The Municipal Statute Law Amendment Act* states that both lower-tier and upper-tier municipalities “may provide any service or thing that municipality considers necessary or desirable for the public” (2006, c. 32, Sched. A, s.10(1) & 11(1)). Lower and upper-tier municipalities may also pass by-laws regarding a wide range of jurisdictional matters as indicated in Schedule A, section 8, including:

- Highways and other transportation systems
- Waste management
- Public utilities
- Culture/heritage, parks & recreation
- Drainage and flood control
- Structures
- Parking
- Animals
- Economic development
- Business licensing

All of these areas are controlled by a municipality so as to improve and have control over the lives of its residents. First Nations communities are not given the same opportunities. They do not have the same freedom to design and develop their communities. A review of provincial and federal legislation regarding water quality will provide even more instances of legislative limitations for First Nations communities.

### 5.4.3 Legislation governing water quality – Ontario Government

To understand the differences regarding roles and responsibilities between First Nations and non-First Nations communities, the applicable federal and provincial<sup>41</sup> Acts, regulations and policies that apply to drinking water quality should be examined. In Canada, the individual provinces are responsible for the water quality for their residents with the exception of federal lands, which will be discussed later. The non-First Nations communities that INAC is comparing reserves to all fall under provincial jurisdiction and provincial drinking water Acts and regulations. The following chart shows the relevant legislation and foundational documents:

<b>ONTARIO (PROVINCIAL)</b>		
Water policy foundational documents:		
1. <i>Ontario Water Resources Act</i>	1990	
2. <i>Capital Investment Plan Act</i>	1993	
→ Creation of Ontario Clean Water Agency		
3. <i>Savings and Restructuring Act</i>	1995	
4. <i>Municipal Water and Sewage Transfer Act</i>	1997	
5. <i>Energy Competition Act</i>	1998	
Type of multi-barrier protection:	Year	Legislation
		<b>MINISTRY OF THE ENVIRONMENT</b>
Treatment & Distribution	2002	<i>Safe Drinking Water Act</i>
Water Quality Monitoring		<i>Safe Drinking Water Act</i>
Water System Management	2006	<i>Clean Water Act</i> <sup>42</sup>
	2002	<i>Safe Drinking Water Act</i>
Source Water	2006	<i>Clean Water Act</i> <sup>43</sup>
		<i>Legislation and Water Regulations</i>
		<b>MINISTRY OF HEALTH</b>
(Monitoring of health programs)	1990	<i>Health Protection and Promotion Act</i>
		O. Reg. 319/08: Small Drinking Water Systems

**Figure. 44 Ontario Government Water Legislation**  
**Source: Ontario Ministry of the Environment and Ontario Ministry of Health**

<sup>41</sup> Only legislation, standards and guidelines for the province of Ontario will be shown.

<sup>42</sup> The *Clean Water Act* concerns source water protection and will not be discussed in this paper.

<sup>43</sup> *Ibid.*

#### 5.4.3.(i) Legislative history

Water quality oversight in Ontario has a long history with the first piece of legislation, the *Baldwin Act*, 1849<sup>44</sup>, giving municipalities the right to own and operate water systems (OSWCA, 2001). Many of the same problems that are occurring on reserves now regarding contaminated water and unrestricted residential and commercial fires, were occurring in Ontario municipalities in the mid-1880s (OSWCA, 2001). By 1882 the *Municipal Water Works Act* was created so that municipalities would create water systems under water utilities and in 1884, after scientists confirmed that disease transmission could be waterborne, the *Public Health Act* (OSWCA, 2001). Administration of the *Act* was under the Provincial Board of Health and the responsibility for drinking water quality, sewage and septic systems and contaminants disposed into lakes and rivers was now enforceable (OSWCA, 2001). This fact bears repeating, as of 2016, it has been 132 years since residents in Ontario have had legislation for their drinking water.

The main and statutory basis for modern times is the *Ontario Water Resources Act*, 1993. This *Act* had broad powers giving the Minister of the Environment and delegated staff the ability to (WaterTap, 2013):

- Approve facilities
- Carry out inspections
- Create and enforce work orders

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<sup>44</sup> The *Baldwin Act* is also referred to as the *Municipal Corporations Act*, 1849. This pre-Confederation *Act* came into force on January 1, 1850 and was the first municipal statute in Ontario. Law Society of Upper Canada. (2014). Library Blog. *More ephemera: The Baldwin Act*. Retrieved July 17, 2016: [http://www.lsuc.on.ca/Great-Library/Blog/More-Ephemera\\_-The-Baldwin-Act/](http://www.lsuc.on.ca/Great-Library/Blog/More-Ephemera_-The-Baldwin-Act/)

The *Ontario Water Resources Act* first came into being in 1972 when it was renamed from the *Ontario Water Resources Commission Act*. This was an important change because new language in the *Act* allowed the “promulgation of regulations specifying standards of quality for potable and other water supplies” (OWRA, 1972<sup>45</sup>). Regulations formed under an enabling *Act* such as the OWRA, give legislation the power to actually affect and govern the water quality that residents receive. As well, decisions made by the Directors appointed under the *Act*, were legally binding (WaterTap, 2013).

The *Capital Investment Plan Act*, 1993, created the Ontario Clean Water Agency (OCWA) whose mandate was to both own and operate water plants (WaterTap, 2013). A major change took place when the *Municipal Water and Sewage Transfer Act*, 1997, transferred the legal title of approximately 230 water and wastewater treatment plants from OCWA<sup>46</sup> ownership to the municipalities. This change is important because with ownership comes control and although some municipalities decided to continue using the OCWA as plant operators (WaterTap, 2013), the liability now fell on individual municipalities.

Ontario now has 445 municipalities whereas prior to the 1996 amalgamation brought about by the *Savings and Restructuring Act*, 1995, there were 815 separate communities (WaterTap, 2013). Varying structures of drinking water and wastewater ownership and operation then emerged since the consolidation of drinking water and wastewater operators depended upon

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<sup>45</sup> The latest revision to the *Act* is 1990.

<sup>46</sup> There are also some First Nations communities that liaise with the OCWA for project management and operational support. OCWA. (2013). *First Nations services*. Retrieved July 16, 2016: [http://www.ocwa.com/en/first\\_nations\\_services](http://www.ocwa.com/en/first_nations_services)



individual community situations and whether they continued with the OCWA. However once the *Energy Competition Act, 1998*, came into force most public utilities commissions (PUC) disbanded, and their responsibilities for producing drinking water and electricity ended (WaterTap, 2013).

While legislation was shaping water treatment in Ontario, there were private organizations that formed to assist municipal water officials from various communities and discuss water operations (OMWA, 2013). In October of 1966 the Ontario Municipal Water Association had its first meeting in London, Ontario (OMWA, 2013). THE OMWA developed into an institution with a constitution, members and elected personnel (OMWA, 2013). The OMWA later consulted with the Ontario Section of the American Water Works Association (OMWA, 2013) and the relationship continues today. The coming together of all these industry specialists provides an unparalleled support system and knowledge-sharing base related to drinking water quality, water treatment techniques and new developments that could apply to their communities.

Regarding the *Savings and Restructuring Act of 1996*, the OMWA held a press conference that resulted in an important clause of the Act; that a municipality could not sell its water system to a private sector buyer, unless they first repaid all of their capital grants from the province since 1978 (OMWA, 2013). In effect, this meant that private ownership of water treatment plants would no longer be possible in Ontario. Today the OMWA is a strong advocate for water supply representing over 180 municipally-owned drinking water authorities (OMWA, 2013). The organization provides important services including:

...promot(ing) the development of sound policy and the assurance of high standards of treatment, infrastructure, operations and general management for safe, reliable, high quality municipal water supplies.

...ensur(ing) adequate funding through charges and user rates dedicated solely to water systems

Ontario Municipal Water Association, 2013.

In essence, the OMWA is akin to having the added insurance of a private "watchdog" for drinking water quality in the province of Ontario.

#### 5.4.3.(ii) Ontario Safe Drinking Water Act

Ontario's *Safe Drinking Water Act*, S.O. 2002, c.32, is the culmination of many years of legislative policy, experience and jurisprudence. All drinking water systems in Ontario, of which there are approximately 700 (OWWA, 2016), are regulated by the Ministry of the Environment except for those systems under federal jurisdiction. The *Act* recognizes that Ontarians are "entitled to expect their drinking water to be safe...through the control and regulation of drinking water systems and drinking water testing (*Safe Drinking Water Act*, 2002). The *Act* was generated in direct response to the Report of the Walkerton Inquiry (Part II) and Justice O'Connor's Recommendation 67:

The provincial government should enact a *Safe Drinking Water Act* to deal with matters related to the treatment and distribution of drinking water.

Report of the Walkerton Inquiry, Part II, 2002

The *Safe Drinking Act* also works in conjunction with other provincial acts through "deemed approval" authorization, in particular the *Ontario Water Resources Act*. This occurs when previous legislation has already covered a specific area:

Deemed approval under this Part

(2) An approval granted under section 52 of the *Ontario Water Resources Act* for a municipal drinking water system shall be deemed to be an approval under this Part for the system and

may be amended, suspended, reinstated and revoked as if it were an approval granted by the Director under this Part. 2002, c. 32, s. 31 (2).

*Safe Drinking Water Act, 2002.*

Ontario looks after two types of drinking water systems: 1) Municipal drinking water systems; and 2) non-municipal drinking water systems. The latter category is the closest area to First Nations reserves in that it governs an area outside of a municipality but beyond that, the comparison ends.

#### *5.4.3.(iii) Enacted Drinking Water Quality Regulations*

With the passing of the *Safe Drinking Water Act, 2002*, Ontario was given the drinking quality protection that would allow members of the public to see that the government recognized the seriousness of being the overseer of drinking water quality, especially in light of the Walkerton tragedy. The regulations enacted under the *Safe Drinking Water Act, 2002* that concern drinking water for Ontario residents are comprehensive and can handle all aspects of drinking water quality:

- O. Reg. 128/04: Certification of Drinking-Water System Operators and Water Quality Analysts
- O. Reg. 169/03: Ontario Drinking Water Quality Standards
- O. Reg. 170/03: Drinking Water Systems
- O. Reg. 171/03: Definitions of Words and Expressions Used in the Act
- O. Reg. 172/03: Definition of Deficiency and Municipal Drinking Water System
- O. Reg. 188/07: Licensing of Municipal Drinking Water Systems
- O. Reg. 242/05: Compliance and Enforcement Regulation
- O. Reg. 243/07: Schools, private schools and day nurseries
- O. Reg. 248/03: Drinking Water Testing Services, relating to laboratory licensing

All of these regulations have been enacted in Ontario. It is these regulations and others, that the *Safe Drinking Water for First Nations Act*, subsections 5(3) and 5(4), will be discussing for incorporation by reference of provincial laws (INAC, 2014). INAC has been considering which

regulations should be incorporated using eleven “key essential regulatory components” as a guide (INAC, 2014).

#### 5.4.3.(iv) Standards

Under the *Safe Drinking Water Act*, Reg. 169/03: Ontario Drinking Water Quality Standards lists sixty-five chemical standards, 78 radiological standards and two microbiological standards – *Escherichia coli* and total coliforms - that must be met (SDWA, 2002). If these standards cannot be met in a drinking water system, the regulation states that the medical officer of health must be contacted and “appropriate corrective action (must be) taken”. Regulation 248/03: Drinking Water Testing Services also falls under the *Safe Drinking Water Act* and describes in great detail, all aspects of water testing, including the protocols and handling of test samples. Through the *Safe Drinking Water Act* and the regulations enacted, the province of Ontario now has a rigorous, multi-faceted drinking water program in place, ensuring high drinking water quality through actions including: Source water protection, accredited and licensed testing labs<sup>47</sup>, operator training and certification and annual reports (Chief Drinking Water Inspector, 2015).

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<sup>47</sup> An accredited lab’s license will remain valid for five years. Ontario uses the ISO/IEC 17025 international standard to judge the technical competence of a lab. Audits will be performed, the results of which are available to the public. Ontario. Chief Drinking Water Inspector Annual Report, 2014-2015. Retrieved July 15, 2016: <https://www.ontario.ca/page/chief-drinking-water-inspector-annual-report-2014-2015>

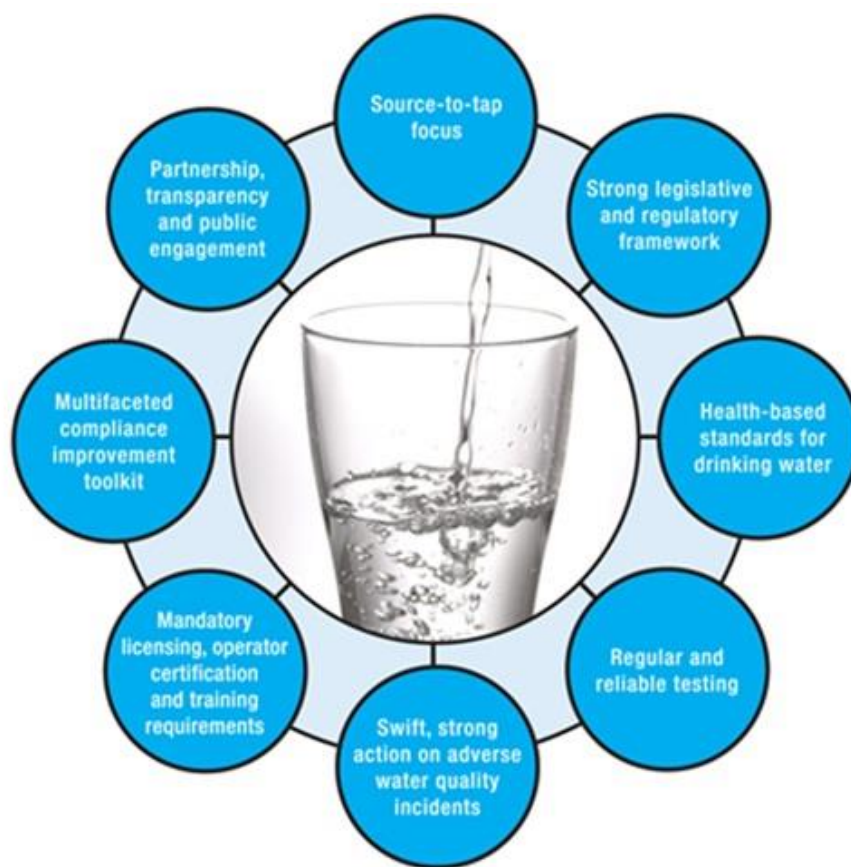


Figure 45. Ontario's drinking water safety net/ Source: ECCC, Annual Report on Drinking Water, 2015

#### 5.4.3.(v) Chief Drinking Water Inspector

Ontario also issues an annual report from the Chief Drinking Water Inspector which provides information related to: Drinking water systems, laboratories, results from drinking water tests, enforcement as well as drinking water programs (Report CDWI, 2015). Of particular interest is that under the *Safe Drinking Water Act*, operators, water treatment facilities and consultants can be disciplined, fined and have their certification or license revoked and their convictions posted for the public to view. The following examples were taken verbatim from the Chief Drinking Water Inspector Annual Report 2014-2015:

Ex. of Facility Conviction

System	Charge	Charges laid	Convicted	Total Fines
YMCA Camp Stephens Water Treatment Plant	A legal entity was convicted for failing to report that inadequately treated water was directed to users of a drinking water system.	August 30, 2013	May 8, 2014	\$24,000

Ex. of Consultant Conviction

System	Charge	Charges laid	Convicted	Total Fines
Garry Palmateer Consulting Inc. <sup>48</sup> (Only Mr. Palmateer was charged, not the business corporation.)	An individual was convicted of offering and providing a drinking water testing service without a valid drinking water testing licence.	January 20, 2014	December 9, 2014	\$2,500

Ex. Disciplinary actions taken against certified drinking water operator

Operator	Reason for Action	Action Taken
Ontario government withheld name.	Operator failed to exercise the level of care, diligence and skill that a reasonably prudent operator would be expected to exercise; failed to act honestly, competently and with integrity; worked as an operator without being certified as such.	Revoked: Class II Water Distribution and Supply Certificate Fined: Operator was convicted under the Safe Drinking Water Act and fined \$1000.

**Figure 46. Extracts from Chief Drinking Water Inspector Annual Report, 2014-2015**  
**Source: Ontario Ministry of the Environment and Climate Change.**

<sup>48</sup> In the case of Mr. Palmateer, not only was he charged but the lab and its owner were also charged, fined and the information regarding the convictions posted in the Ontario government's Court Bulletin on January 16, 2016. Retrieved July 16, 2016 at: <https://news.ontario.ca/ene/en/2016/01/laboratory-fined-16000-for-safe-drinking-water-violations.html>

The *Safe Drinking Water Act* allows people who live outside of reserves to have confidence that their drinking water is fully regulated and there are consequences for those who do not follow the law. The same cannot be said for drinking water quality on reserves.

#### 5.4.4 Guidelines governing water quality – Federal Government

##### 5.4.4.(i) Source water but not drinking water protection

In broad terms, the federal government’s fresh water governance involves more than 20 departments and agencies (ECCC, 2016). The most well-known areas of jurisdiction relate to “fisheries, navigation, federal lands, international relations...(and) the management of boundary waters” (ECCC, 2016). The biggest focus of the federal government for water is environmental management with the *Canada Water Act* introduced in 1970 and the Department of the Environment created in 1971 (ECCC, 2016). The management of most water resources fall under provincial jurisdiction<sup>49</sup> and the need for drinking water legislation has been passed onto the provinces, the water resource “owners”, through the *Constitution Act, 1867* (ECCC, 2016).

The exceptions under the *Constitution Act* are those areas that do not fall under provincial jurisdiction and are part of the “federal house” (ECCC, 2016). Included in the federal

house are:

- Federal lands
  - National parks and campgrounds
- Federal facilities
  - Military Bases
  - Office buildings (including healthcare clinics on reserves)
  - Laboratories
  - Penitentiaries

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<sup>49</sup> Source water protection is also under provincial jurisdiction.

Federal conveyances  
Rail, plane and ship transportation  
First Nations reserves  
Nunavut and the Northwest Territories

ECCC, 2016, Federal Policy and Legislation.



Figure 47. Ex. of "Federal House", Sault Ste. Marie Canal National Historic Site. Source: Parks Canada.



Figure 48. Ex. of "Federal House", Toronto-Vancouver train. Source: Via Rail

#### 5.4.4.(ii) Guidelines are not enforceable regulations

A review of the legislative history of federal drinking water documents leads to "guidelines", "procedures", "advice(s)" and "learning modules" issued by subcommittees and committees but no actual legislation or regulations. This is a crucial difference since without the ability to enforce standards, the documents have no power to protect public health. Scientist and



environmental advocate David Suzuki enlisted academic and researcher David R. Boyd to compare guidelines versus standards in the David Suzuki Foundation report *The Water We Drink: An International Comparison of Drinking Water Standards and Guidelines* (Boyd, D.R., 2006)<sup>50</sup>. Boyd and Suzuki categorize guidelines as being "weaker" than standards and "unevenly applied at the provincial or state level", whereas standards protect human health at a "superior level" since they are "legally binding and enforceable" (2006).

The report emphasizes the belief that a voluntary approach to protecting the environment is "generally ineffective" and that regarding contaminations, the "precautionary principle" should be incorporated into legislation (Boyd, 2006). Justice Dennis O'Connor, the chair of the Walkerton Inquiry and author of its two extensive reports, concurs stating that when "setting up systems that affect human health, "decision makers usually err on the side of safety, regardless of the costs" (Report of the Walkerton Inquiry, Part II, 2002) O'Connor also refers to a "precautionary approach" which focuses on prevention:

Precautionary measures include setting standards to account for uncertainties, investments in risk mitigation or alternative technologies and investments in research.

Report of the Walkerton Inquiry, Part II, 2002.

It is a shame that the federal government did not spend the time to read some of O'Connor's recommendations prior to enacting the drinking water legislation for First Nations.

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<sup>50</sup> Suzuki conducted research comparing Canada's current federal *Guidelines for Canadian Drinking Water Quality* with water quality frameworks in the United States, Australia and the European Union. Suzuki, David. (2006). Retrieved July 18, 2016 at <http://www.davidsuzuki.org/publications/downloads/2006/DSF-HEHC-water-web.pdf>

CANADA (FEDERAL) First Nation			
Water policy foundational documents: Canadian Drinking Water Standards and Objectives, 1968 Guidelines for Canadian Drinking Water Quality, 1978 Federal Water Policy, 1987 Canadian Water Quality Guidelines, 1987-1998 Guidance for Safe Drinking Water in Canada: From Intake to Tap, 2001 From Source to Tap: The multi-barrier approach to safe drinking water, 2002/2004			
Type of multi-barrier protection:	Year	Legislation	Standard and/or Programs
			Responsibility: INAC and First Nations
Treatment & Distribution System	2010		<i>Protocol for Centralised Drinking Water Systems in First Nations Communities</i> <i>Protocol for Decentralised Drinking Water Systems in First Nations Communities</i>
	2013	<i>Safe Drinking Water for First Nations Act</i>	No regulations have been developed to date.
			Responsibility: Health Canada and First Nations
Water Quality Monitoring	1996		Guidelines for Canadian Drinking Water Quality
			Responsibility: INAC and First Nations
Water System Management	2014		First Nations Infrastructure Investment Plan (Capital Facilities and Management Program)
	2011		Water and Wastewater Policy and Level of Service Stands
	2013		Guidance for Providing Safe Drinking Water in Areas of Federal Jurisdiction, v.2
			Responsibility: ECCC and First Nations
Source Water	2014		First Nations On-Reserve Source Water Protection Plan

Figure. 49. Federal Government Water Guidelines and Legislation  
Sources: INAC, Health Canada and ECCC

#### 5.4.4.(iii) Federal drinking water history

The *Canadian Drinking Water Standards and Objectives*, (1968) is generally considered the first document to compile recommendations regarding water contamination conditions and limits

(Health Canada, 1996). Under the Department of National Health and Welfare, the report was prepared by the Joint Committee on Drinking Water Standards of the Advisory Committee on Public Health Engineering and, the Canadian Health Association (Health Canada, 1996).

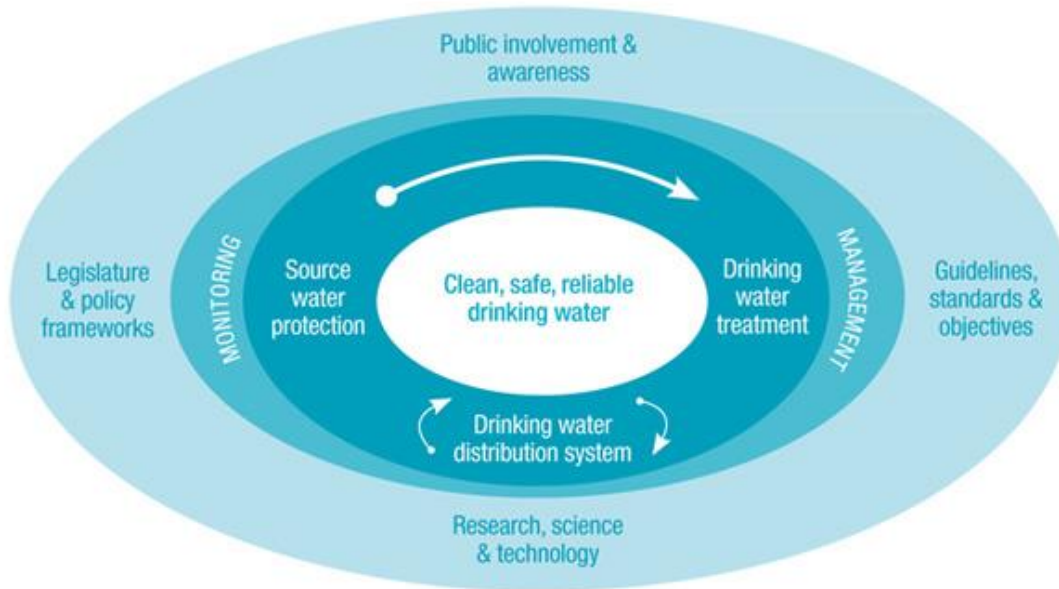
The Canadian Council of Ministers of the Environment, under Health and Welfare Canada, issued the 1978 *Guidelines for Canadian Drinking Water Quality* replacing the Standards and Objectives after a critical reexamination of water quality parameters (Health Canada, 1996). By 1986 the Joint Committee on Drinking Water Standards had been replaced with the Federal-Provincial Subcommittee on Drinking Water. Their mandate remained the same, to “establish the Guidelines for Canadian Drinking Water Quality” (Health Canada, 2006). New and/or modified standards are included through each revision of the *Guidelines* as technology and science evolves.

The Federal-Provincial Sub-committee again changed its name as the 2002 title page for the position paper, *From Source to Tap: The multi-barrier approach to safe drinking water* indicates:

Prepared by the Federal-Provincial-Territorial Committee on Drinking Water of the Federal-Provincial-Territorial Committee on Environmental and Occupational Health, and, the Water Quality Task Group of the Canadian Council of Ministers of the Environment.

Federal-Provincial Sub-committee, 2002

This position paper again focuses upon the multi-barrier approach:



**Fig. 50. Multi-barrier approach to water quality**

Source: Canadian Council of Ministers of the Environment, as reproduced by Fraser Basin Council, (n/d).

The report is concerned with the treatment and distribution of drinking water “taking into account all local or provincial bylaws” (2002, 11). A later and more detailed version of this position paper in 2004, entitled *From Source to Tap: Guidance on the multi-barrier approach to safe drinking water* brings together the Committee of provincial and federal government employees for over a two-year period (2004). The 242-page report goes over every aspect of drinking water treatment, distribution and risk management for both surface and groundwater water supplies but includes a strange *proviso* in its introduction:

The principles outlined in this document are applicable to all drinking water systems in Canada, from small communal systems in rural areas to large municipal ones in urban centres. In short, it applies to any system with a central treatment plant and distribution system. Nevertheless, small communal systems may find it difficult to implement many of the suggestions outlined in this document given their limited resources. Small system owners and operators are therefore

encouraged to focus improvements in areas that promise the greatest positive impact on public health.(p.10)

From Source to Tap: Guidance on the multi-barrier approach to safe drinking water, 2002.

This *proviso* may be the only instance of comparability between small non-First Nations communities and First Nations communities, where there is some common ground. Small communal systems do experience difficulties maintaining and operating the water treatment plant. This one grain of truth could have been a good starting point towards recognizing the problems that First Nations communal systems also go through but it seems to have been either forgotten or ignored as time has passed.

The *Guidelines'* focus throughout the decades has focused on monitoring the Maximum Acceptable Concentrations (MAC) of chemical, physical, microbiological and later radiological contaminants. The Federal-Provincial-Territorial Committee on Drinking Water (CDW) is the title now used for the committee. The current version of the *Guidelines for Canadian Drinking Water Quality* (Health Canada, 2014) also provides guidance documents including the following:

Waterborne bacterial pathogens (2013)

Use of the microbiological drinking water guidelines (2013)

Issuing and rescinding boil water advisories (2009)

Issuing and rescinding drinking water avoidance advisories in emergency situations (2009)

Controlling corrosion in drinking water distribution systems (2009)

The process the *Guidelines* go through is strenuous, which seems strange given that the *Guidelines* are basically promote a voluntary management system. An amazing amount of energy and accountability is injected into these non-regulatory steps, starting with how each proposed revision of the *Guidelines* is sent to the Water Quality and Health Bureau (Health

Canada, 2006). The Health Bureau reviews the *Guidelines* in view of its technical revisions, sends the document out to be “peer-reviewed by external experts”, by the CDW itself as well as through a public consultation (Health Canada, 2006). All the feedback is used to revise the document, which is then sent for approval to the parent committee of the CDW (Health Canada, 2006). After all of these steps, the *Guidelines* are then posted on Health Canada’s website (Health Canada, 2006).

This appears to be one of the most onerous processes to obtain a document that has no enforceable capabilities. Everything about *the Guidelines for Canadian Drinking Water Quality* compliance is voluntary. While the intentions for rigorous protocols seem credible, what point is there to all of the consultations, reviews and feedback if the resultant guidelines are based upon discretionary compliance? It would seem that the federal government, through Health Canada, has more power to change committee names than to move towards meaningful legislation with the capacity for enforcement.

#### *5.4.4.(iv) Thirty years and little to show*

The foundation document Federal Water Policy (1987) was the result of a 1984-1985 Inquiry on Federal Water Policy that engaged in nationwide consultations with provincial/territorial governments and also organized public hearings (Pearce, P.H., Quinn, F., 1996). The report was meant to address water resource management across varied formats including environmental, agricultural, industrial and research-based (ECCC, 2016). Page seventeen of the policy report states how the federal government has a commitment to “ensur(e) safe drinking water within areas under its jurisdiction” and that it will “consider legislation” to meet these goals

(Environment Canada, 1987). Almost 30 years have passed and no legislation directly related to federal drinking water systems has had any regulations passed.

#### *5.4.5 First Nations drinking water legislation*

##### *5.4.5.(i) No regulations in sight*

At first glance, it appears that First Nations have legislation that protects their drinking water quality. It should be explained, however that although the *Safe Drinking Water for First Nations Act* came into force November 1, 2013, not one regulation has ever been enacted. In essence, this means that the guidelines and standards in place today are the same ones that were in place prior to the *Act*. Those drinking water guidelines and regulations were non-enforceable and did not allow First Nations to have clean water comparable to the rest of Canadians. The regulatory gap still exists and the safety of First Nations is still at risk. This point of view regarding the lack of safeguards seems to coincide with that of former Minister of Aboriginal Affairs Bernard Valcourt who, when announcing the drinking water regulatory development that was to take place in October of 2014 stated that:

First Nations should have the same access to healthy and safe drinking water in their communities, as other Canadians. Prior to the passing of the *Safe Drinking Water for First Nations Act*, First Nation lands were the only jurisdictions in Canada without regulatory safeguards for drinking water or the effective treatment of wastewater.

Valcourt, B., 2014, Moving Forward to Develop Regulations under the Safe Drinking Water for First Nations Act. AANDC.

##### *5.4.5.(ii) Regulatory development has stalled*

It is now 2016 and no regulations have been enacted. Although INAC planned to phase in the regulations, region-by-region, after an intensive consultation process with "First Nation

leadership, their technical experts, and provincial, territorial and municipal governments, as well as other stakeholders"<sup>51</sup> it appears that the process has stalled (AANDC, 2014).

The reasons for the delay are probably the same reasons mentioned during the Senate and House of Commons meetings on the Bill that preceded the Act; Bill S-8. Those reasons were lack of consultation, and liability without funding. These issues go as far back as 2007 when the *Final Report from the Standing Committee on Aboriginal Peoples* on safe drinking water for First Nations referenced First Nations organizations and their views expressed at the 2006 Expert Panel on Safe Drinking Water for First Nations. The Atlantic Policy Congress of First Nations Chiefs stated: "Do not put the cart before the horse in implementing a regulatory regime since that would leave First Nations in a bad or worse position" (Parliament. Canada, 2007).

In an AFN Bulletin, former National Chief Shawn A-in-Chut Atleo succinctly explains the issues First Nations communities are facing regarding their drinking water quality:

First Nations need infrastructure, training and support to meet the requirements of the new regulations. Regulations without the capacity and financial resources to support them will only set up First Nations to fail and to be punished for this. In my view, we must address the 'capacity gap' as well as the 'regulatory gap'. After all, the safety and health of First Nations people is the stated goal.

Atleo, S., 2010, AFN National Chief Calls for Real Action on Safe Drinking Water for First Nations.

Member of Parliament Carolyn Bennett, the then Liberal critic for the Aboriginal Affairs and Northern Development Canada portfolio (AANDC), asks the Minister for AANDC at that time,

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<sup>51</sup> Portraying First Nations as "stakeholders" is not accurate since they are the ones primarily affected by the legislation. This is yet another way that the government refuses to accurately portray their relationship with First Nations peoples.



John Duncan, one of the most urgent questions regarding the proposed legislation (Bennett, C., Parliament of Canada, 2012):

...I would like to ask the minister whether we can anticipate in the upcoming 2013 budget the amount of money that would be required to meet the objective of this bill. When, in a long-term strategy, could 100% of first (N)ations homes in 100% of First Nations communities be expected to have safe drinking water?

Bennett, C., 41<sup>st</sup> Parliament, 1<sup>st</sup> Session. November 1, 2012.

Duncan's response skirted the question and mentioned and made no mention of funding

(Duncan, J., Parliament of Canada, 2012):

Mr. Speaker, it is our intent to move as quickly as possible on all of this infrastructure, certification and operator training question, because this is a health and safety issue. We have discovered, with our serious investments to date, that the national assessment set some pretty good priorities.

Duncan, J., 41<sup>st</sup> Parliament, 1<sup>st</sup> Session. November 1, 2012.

This exchange typifies the government response to queries regarding funding that should accompany the downloading of responsibility and liability for drinking water and wastewater on reserves.

The Assembly of First Nations, in their submission to the Standing Senate Committee on Aboriginal Peoples (May 16, 2012), again stated their concerns regarding funding:

Concerns about the provision of adequate resources has repeatedly been raised to the Senate committee. ...Bill S-8 will impose substantial new costs and responsibilities on First Nations without a committed transfer of resources. Currently, there are no legislative guarantees that an adequate level of funding will be provided to address dire needs of First Nations. And...no transition provisions for delaying the...legislation before the resource gap has been addressed.

Assembly of First Nations, 2012.

Another issue was lack of consultation regarding Bill S-8. At the same House of Commons meeting as Minister Duncan, Member of Parliament Jean Crowder described the supposed "engagement process" that preceded the legislation (Crowder, J. Parliament of Canada 2012):

It was interesting to hear people describe the consultation process as engagement. It is an interesting twist of words, because when we talk about full, prior and informed consent, I am sure that many (First) nations would argue that engagement does not equal full, prior and informed consent.

Crowder, J., 41<sup>st</sup> Parliament, 1<sup>st</sup> Session. November 1, 2012.

Jean Crowder goes on to reference a position statement by the Safe Drinking Water Foundation made in April of 2009 which stated that not only did many First Nations not receive their engagement session invitation packages in time for them to attend but that those that did attend the discussion groups found themselves “dominated” by civil servants who “offered incomplete and inaccurate information” while failing to “relay (F)irst (N)ations’ concerns to the larger audience” (Crowder, J., Parliament of Canada, 2012).

In 2010 the Assembly of First Nations issued Resolution 58 which discussed Bill S-11, the precursor to Bill S-8 which passed into law as the *Safe Drinking Water for First Nations Act* (AFN, 2010). In this resolution the AFN laid out their terms for acceptance of the new legislation including that they would:

Advise the Federal Government that First Nations expect that any new water legislation, including any potentially revised version of Bill S-11, must comply with First Nations constitutionally protected and inherent Treaty and Aboriginal rights, the United Nations Declaration on the Rights of Indigenous Peoples and the report of the Expert Panel on Safe Drinking Water for First Nations.

AFN, Resolution 58/2010, Bill S-11 Safe Drinking Water for First Nations Act.

The Chiefs-in-Assembly also stated that if the federal government did not hold to these points, they would "work to stop (the legislation) from becoming enacted" (AFN, 2010). While the legislation did pass in 2013, critical issues such as those raised by the AFN may be a direct reason as to why the regulations have not been negotiated.

Indigenous and Northern Affairs Canada has been curiously quiet about the *Safe Drinking for First Nations Act*. The regulatory discussions were supposed to start in the Atlantic region, with six other regions to follow (personal interview, 2016). At this point in time, there is no discernable movement in regards to developing regulations, which means once again, First Nations reserves are without enforceable protection for their drinking water. The comparison to non-First Nations communities is barely credible since there is absolutely no parity between the two groups in terms of legislation. Comparable communities based upon legislation is a *non-sequitur*.

## 5.5 Comparability – Jurisdiction

### 5.5.1 Non-First Nations communities – Federal jurisdiction

Most non-First Nations communities in Canada fall under a combination of municipal and provincial jurisdiction in regards to drinking water. However there are instances when a “community” falls under a federal ministry with overall jurisdiction, specifically Environment and Climate Change Canada (ECCC, 2016). The following are the types of non-First Nations communities whose drinking water falls under federal jurisdiction: National parks camping sites, military bases, federal office buildings and labs, navy ships, cruise ships, train and aircrafts and federal penitentiaries (Auditor General, 2009/ECCC, 2016).

In 2009 the *Auditor General’s Status Report of the Commissioner of the Environment and Sustainable Development, Chapter 1 – Safety of Drinking Water* discussed the results of a 2005 Auditor General audit of Health Canada’s development and review of the *Guidelines for Canadian Drinking Water Quality*. The *Status Report* explains that the obligation to provide

clean drinking water at federal facilities and sites comes from the *Canada Labour Code* and regulations (Auditor General, 2009):

Drinking water systems on federal premises serve thousands of employees and millions of other people. Federal departments and agencies must take all reasonable precautions to ensure that their drinking water is safe.

Office of the Auditor General, 2009, Status Report of the Commissioner of the Environment and Sustainable Development.

One could be forgiven if the federal government appears to value the health of their employees in federal facilities more than that of residents of First Nations reserves. These non-First Nations communities under federal jurisdiction will not be included in this study. In terms of comparability with First Nations, it is interesting that only temporary residences, passenger conveyors, military bases and places of incarceration have similar circumstances in terms of jurisdiction.

#### *5.5.2 Non-First Nations - Ontario jurisdiction*

While the terms town, township, village and municipality are familiar, they actually are not official designations under the *Ontario Municipal Act, 2001*. The *Act* controls the creation of any municipality and the terms “upper tier”, “lower tier” and “single tier” are now being used to describe municipalities (AMCTO, n/d/ AMO, 2016). These designations are still tied to the community size but are more related to whether the community is in a “county” or a “region” (AMCTO, n/d/ AMO, 2016). The Municipal Property Assessment Corporation (MPAC) describes each municipal category:

<b>Upper-Tier Municipality</b>	A county, regional municipality or district such as the County of Haliburton, the Region of Durham or the District Municipality of Muskoka.
<b>Lower-Tier Municipality</b>	A local municipality such as a town, township, city or village.
<b>Regional Municipality</b>	A federation of municipalities. Each regional municipality has a regional council, the members of which are either from municipal councils or are directly elected.
<b>Single-Tier Municipality</b>	A municipality that is not part of a county but which is located within a county's boundaries (e.g. the Town of Smiths Falls, which is in the County of Lanark). Some larger cities also fall under this designation including: City of Greater Sudbury, City of Hamilton, City of Toronto.

**Figure 51. Types of Municipalities within Ontario**

**Sources: Municipal Property Assessment Corporation, 2016/Association of Municipalities Ontario, 2012**

Many provinces have upper and lower-tier municipal governments as well as county, regional and single tier<sup>52</sup> governments (AMO, 2016). In Ontario, a regional or upper-tier government provides services such as: Transit, waste disposal, land use planning, health care, social services, policing of arterial roads and sewer and water systems (AMO, 2016). However not all communities fall under a regional government. In southern Ontario county governments, as upper-tier governments, offer fewer services than their regional counterparts including: Healthcare, social services, land use planning and arterial roads (AMO, 2016).

The management of certain municipal services in Ontario was consolidated in 1998 with 47 Consolidated Municipal Service Managers (CMSMs) being created to service the province (OMSSA, 2012). In essence, these CMSMs are local county and regional governments that look after smaller towns and townships that fall under their legal jurisdiction (ONPHA, 2016).

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<sup>52</sup> Single-tier municipalities are usually larger amalgamated cities, counties or regions (Association of Municipalities Ontario, 2016). Due to their size, they will not be included in this discussion.

CMSMs in Northern Ontario are called District Social Services Administration Boards (DSSABs) to account for the lack of a municipal government with jurisdiction but essentially DSSABs offer the same services CMSMs give to southern municipalities within specified geographic areas (AMO, 2016/ONPHA, 2016). The format and powers of the DSSABs is laid out in the *District Social Services Administration Boards Act, 1990* including a provision not available to First Nations; the ability to issue a promissory note to borrow funds “to meet the current expenditures of the board until the current revenue is received” (R.S.O. 1990, c.D.15, s.9(1)).

There are 10 DSSABs that look after the lower-tiered municipalities of northern Ontario<sup>53</sup> (AMO, 2016/ OMSSA, 2012). Lower-tier municipalities in northern Ontario could also fall under areas classified as “unorganized territory” where the Ministry of Northern Development, Mines and Forestry will provide assistance to set up “local service boards” that will deliver basic services (AMO, 2016). The Association of Municipalities Ontario (2016) and the Ontario Municipal Social Services Association (2012), list the services offered by the CMSMs (and DSSABs):

- Ontario Works (welfare)
- Child Care and early learning
- Social Housing
- In some cases, land ambulance and public health
- Housing
- Homelessness prevention programs

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<sup>53</sup> It is interesting to note that the locations of these Board Offices are only spread across central Ontario with the furthest north office being near the tip of James Bay. Association of Municipalities Ontario. 2016. *Ontario Municipalities*. Retrieved July 22, 2016: <http://www.amo.on.ca/AMO-Content/Municipal-101/Ontario-Municipalities.aspx>

### 5.5.3 Ontario supports its non-Indigenous communities

Nominally, a lower-tier or local government must pay for all of their municipal services but due to the structure of Ontario's provincial government, the smallest communities fall under either a regional or county government or an administration or service board. This means they never have to pay for all of their community services nor meet the associated fiscal requirements forced upon First Nations communities. As well, if the District Board is short of funding, they can temporarily borrow funds to cover their expenses. It is this combination of both local and provincial governments working together that allows non-First Nations communities to provide the social and health services that their communities need. Different levels of government working together also allows communities to better balance their budgets, plan their infrastructure and keep their neighbourhoods viable.

The revised provincial designations of upper, lower and single-tier affect communities based upon both size and location. However there is great flexibility in how a community becomes part of an upper or lower tier government especially in the case of municipal amalgamations which the province of Ontario has actively promoted (AMO, 2012). In 1996 there were 815 municipalities in Ontario but as of 2009, there are now 444. Such flexibility is not available to First Nations reserve communities as amalgamation is controlled by the *Indian Act* and the Minister of Indigenous and Northern Affairs Canada (INAC, 2010). As well, the funding for water infrastructure in non-First Nations communities is often shouldered by higher-level regional and district governments, freeing a smaller community from the financial burden. In a way, the small communities become part of a larger community that acts like a big sister, offering

assistance as the communities grow. There is nothing yet available to First Nations communities that would give similar advantages in how they run their public services.

#### 5.5.4 First Nations jurisdiction

Water quality on First Nations reserves falls under three federal government ministries and also First Nations themselves:

Ministry	Drinking water responsibility
Health Canada	Water quality monitoring (advisory)
Environment Canada	Source Water
INAC	Capital construction and portion of O&M <sup>54</sup> (80%)
First Nations <sup>55</sup>	Running of water system and portion of O&M (20%)

**Figure 52. Breakdown of responsibilities for First Nations drinking water**  
**Source: Health Canada, ECCC and INAC**

While the federal government has joint jurisdiction over drinking water quality, it should not be forgotten that First Nations on reserve have their own jurisdictional hierarchies. The Chief and Council are elected every two years and are capable of passing bylaws (*Indian Act, 1985*). There are also external tribal councils that provide direction to reserves within their geographic area. For instance, Matawa First Nation Management Inc., looks after nine reserves including Martin Falls First Nation and Neskantaga First Nation; the Bimose Tribal Council has fourteen reserves that it advises including Grassy Narrows First Nation and Shoal Lake No. 40 First Nation; and the Mushkegowuk Tribal Council has seven communities under its purview including Kashechewan First Nation and Attawapiskat First Nation (INAC, 2014).

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<sup>54</sup> O & M stands for operations and maintenance.

<sup>55</sup> It is a strange paradox that those most in need of the financial, technical and staffing assistance to allow accountability are told that they themselves are to be held accountable, even though INAC knows they do not have the required supports in place.



There are also political organizations, for example, the Chiefs of Ontario and nationally, the Assembly of First Nations, as well as other political advisors such as Nishnawbe Aski Nation that look after Treaty 9 communities. All of these organizations may, at various times, speak with authority about drinking water quality on reserves. Beyond these tribal councils there are technical advisory organizations such as the Ontario First Nations Technical Corporation (OFNTC), which used to oversee the Circuit Rider training program for water technicians. There is also the Aboriginal Water and Wastewater Association of Ontario, an organization dedicated to providing technical and training/certification information to plant operators (AWWAO, 2016.) Their quarterly newsletter, *The Waterdrum*, tells readers about upcoming training and meetings as well as sharing community information including water treatment operator success stories (AWWAO, 2016). While these organizations do not have jurisdiction over First Nations communities, they provide the kind of assistance that non-First Nations communities would receive from their provincial government and other organizations dedicated to drinking water quality.

The inability to cross jurisdictions hampers the ability of a community to obtain the assistance they need for on-reserve infrastructure. Towns and cities have provincially -enforced overlapping tiers of government that take on a portion of municipal services for groups of communities within a jurisdictional region, thereby dividing service costs and staffing needs. Conversely, First Nations reserves are responsible for all services related to community infrastructure. This responsibility places not only a larger financial burden upon them but forces them to contract out for expertise they do not have at home.

## 5.6 Comparability - Funding/Economic opportunity

Jurisdiction is at the core of why First Nations cannot move ahead financially in their communities. The federal government owns the land that the reserves are built upon. This creates a huge deficit for economic growth that would otherwise assist in paying for appropriate drinking water systems. Since the legal title for reserve land is “vested in her Majesty” (*Indian Act, 1985*) and a Band does not own the land upon which they reside, they can never use the lands as collateral for a loan, mortgage or bonds. To understand the negative impacts of not having these financial resources, some examples of how non-Indigenous communities are able to raise monies through land ownership and other revenue sources, would be beneficial.

### 5.6.1 Case Study, Township of Gillies, Ontario

The township of Gillies, Ontario has a population of 473 (Statistics Canada, 2011) and is located 27 kilometres southwest of Thunder Bay (Gillies Official Plan Background Report, n/d). The rural township is a local single-tier government but enjoys federal and provincial funding (Township of Gillies Budget 2016). Gillies is considered part of the Thunder Bay regional District (Thunder Bay CEDC, n/d). There are three small villages in the township: Gillies, South Gillies and Hymer (Township of Gillies, 2016).

Services for the township are shared among the Township of Gillies, the District of Thunder Bay, the province of Ontario and the District Social Services Administration Board (AMO, 2012/).

Thunder Bay is also the “reception community” should an emergency occur that requires an evacuation (Township of Gillies, 2013). The areas the township alone must look after are

substantial (211 Ontario North, n/d/Township of Gillies Budget, 2016) but some of these areas actually bring in revenue:

- By-law enforcement
- Cemetery
- Emergency Services
- Permits (including building permits, burning permits and marriage licenses)
- Road maintenance
- Waste disposal
- Zoning
- Policing

#### *5.6.1. (i) A vibrant community*

The monthly newsletter “Gillies Municipal News” shows a vibrant community that hosts businesses such as a local farms selling produce, a lodge and restaurant, a print/design shop, a community centre, a rural land development company, a gas station and a mechanical inspection service for chimneys and wood furnaces (2016, June). There are also advertisements for “youth summer employment opportunit(ies)” at the local library along with a children’s summer reading program (Gillies Municipal News, 2016). The local church hosts the Kakbeka Falls Seniors’ Technology Centre where there is free Wi-Fi, computer lessons and public computers (Gillies Municipal News, 2016). There is also a farmer’s market from June to October (Gillies Municipal News, 2016) providing access to fresh fruit and vegetables for residents.

Institutional properties include a Ministry of Transportation equipment yard (for nearby highways), a municipal office, a volunteer fire hall, a Township garage and the Whitefish Valley School with over 300 students attending from Junior Kindergarten up to grade 8 (Gillies Official

Plan Background Report, n/d). The township also owns a 13.4 hectare gravel pit in a nearby township and for local history there is also the Hymers Museum, which is privately operated.

#### *5.6.1.(ii) Township revenues – Property taxes and grants*

The township's July 2016 newsletter discusses how the Municipal Property Assessment Corporation (MPAC) assesses their property taxes and states that “property taxes represent a significant portion of the Township’s total revenues” (Gillies Municipal News, 2016). This important tax revenue can only be generated if the property involved is subject to ownership. Additional income for the township is brought in through re-zoning application fees for property owners who wish to sever portions of their land, indicating yet another aspect of how land ownership brings in revenue.

Gillies’ 2016 Budget (with years 2013 to 2015 also showing) indicates major grants from the following sources:

Federal Gas Tax (Fund)

Ontario Municipal Partnership (Fund)

Ontario Community Infrastructure Fund

There are also smaller grants such as:

Recycling Grant

Provincial Offences Act

Library Grant

Gillies also receives income from building permits and inspections while they tend to have prior year surpluses to help keep their budgets in good shape.

### *5.6.1.(iii) A good quality of life despite limited infrastructure*

Gillies has a good quality of life to offer its residents with opportunities for employment at the school, local businesses and library. Although the rural community does not have a high school, Thunder Bay is less than a 30 kilometre drive away. Electrical heat for the residential, institutional and commercial properties is provided by Ontario Hydro but oil burning, wood burning units are used as well as combination heating sources and alternative heat sources including wind generators and solar panels (Gillies Official Plan Background Report, n/d).

However one area is much like many reserves in Ontario: Gillies does not have a municipal drinking water system but instead uses privately owned wells, cisterns and septic tanks within the township (Gillies Official Plan Background Report, n/d). The main drinking water issue for the township is how close wells are located to farm animals (Gillies Administrative Report, 2014) but the Thunder Bay District Health Unit accepts samples at no charge, submitted to “ensure safe drinking water” and suggests testing at least three times a year (Gillies Official Plan Background Report, n/d/TBDHU, 2016 ). The lab is less than a half hour away from the township by car, so drinking water testing is certainly available to Gillies' residents, if a little inconvenient. Yet the inconvenience cannot be compared to the fly-in First Nations communities that must have their samples flown to a licensed lab in Timmins, Kirkland Lake or also Thunder Bay (Ontario ECC, 2016). As well, a comprehensive Emergency Management Plan for the township instructs the Medical Officer of Health to "arrange for an alternate supply of potable water, if required" (Gillies Emergency Plan, 2013) so there are no jurisdictional hoops to be jumped should an emergency occur.

However, if a municipal drinking water system were the prime indicators for non-First Nations community success, Gillies would not be seen as offering a good quality of life. It is the access to variable sources of income and the knowledge of reliable revenue streams that has made the township move forward. There are revenue sources beyond grants such as building permits, zoning applications and property taxes, all of which are not available to First Nations communities because they do not own the land they reside upon. The issue of revenue is a key signifier of community growth and many Ontario townships are using creative strategies to increase funds coming into their communities. Gillies can hardly be called a comparable community, even though its population is similar to many First Nations reserves. Taking a look at specific revenue generators in a few more communities, it is clear that reserves are being held back by factors out of their control.

#### *5.6.2 Case Study, revenue - United Townships of Head, Clara and Maria (HCM)*

This township is a 20 minute drive west of Ottawa and has a population of 235 people (Statistics Canada, 2011). HCM's 2014 Asset Management Plan (AMP), an in-depth document that looks at the "state of local infrastructure", is focused on sustainability (HCM-AMP, 2014). The province of Ontario funds HCMs water and wastewater assets allowing them to develop an asset management plan that focuses on roads, culverts, parks, boat ramps municipal buildings/facilities and bear fences/containers (HCM-AMP, 2014). In other words, the community was able to focus on upgrading their key assets outside of water and electricity.

### 5.6.2.(i) Township revenues – Earmarked user fees

Revenue is from internal sources including “general operating revenues” or local taxes, user fees and grants (HCM-AMP, 2014). There are also “earmarked user fees” that potentially allow specific projects to receive dedicated funds, for example, “water and sewer charges for water infrastructure” (HCM-AMP, 2014). The explanation under the township “reserves” drives home the explicit difference between First Nations reserves and non-First Nations communities:

Financing capital projects through funds set aside for capital spending is the reverse of financing through borrowing. A “capital levy” (usually a few percentage points of the local property tax) is set aside and accumulates in interest earning accounts segregated from general revenues.

Head, Clara and Maria, Asset Management Plan, 2014.

Aside from self-governed First Nations communities that are no longer under the *Indian Act*, a First Nations reserve will never be able to institute a capital levy. With the serious underfunding by INAC, a savings funds is not a reality and borrowing is impossible without either property, land or financial collateral. The *Indian Act* has crippled First Nations reserves by taking away serious revenue generating options.

### 5.6.3 Case study, revenue - Gordon/Barrie Island

The municipality (MU) of Gordon/Barrie Island has a population of 526 (Statistics Canada, 2011). Their asset management plan (AMP) focuses on financial solutions that a Capital Plan, i.e. “a blueprint for planning a community’s capital expenditures” would bring to their community (Gordon/Barrie Island AMP, 2014). The asset management plan also discusses financial strategies for “water, wastewater, roads and bridges” that include a 2.3% operating income increase through property tax and a 2% increase in user fees, both on an annual basis (Gordon/Barrie Island AMP, 2014).

### 5.6.3.(i) Levies and the issuance of debt

Gordon/Barrie Island's report also discusses a special infrastructure levy of, for example, .05% to "generate sufficient revenues to reduce the tax related infrastructure gap" (Gordon/Barrie Island AMP, 2014). The AMP also discusses an unusual method to handle debt; the "issuance of debt":

Debt is frequently issued and considered a standard practice in municipalities for capital projects that are long term in nature and that benefit future taxpayers.

If the Municipality were to issue \$1 million in debt to address a portion of the (budget) backlog ...that was beyond reserve availability, the debt payments would be approximately \$88,000 (assuming a 15 year term).

Gordon/Barrie Island Asset Management Plan, 2014.

The dollar amounts are not important but rather the opportunity to use varying strategies to raise money is what allows small towns, townships and municipalities to get ahead. The Ontario government's Ministry of Infrastructure issued a report in 2011 entitled the *Growth Plan for Northern Ontario, 2011*. The report's preamble shown below, describes economic success:

In North America, economic success is increasingly based on several key components:

- an economy that is diversified and that exemplifies a culture of innovation and entrepreneurship
- people who are healthy, educated, creative and skilled
- communities that are vibrant and attractive
- infrastructure that is modern and efficient
- an environment that is clean and healthy

Growth Plan for Northern Ontario, 2011.

First Nations communities could be all of these things and it not clear why the federal government does not give them the freedom to develop "economic success".



#### *5.6.4 First Nations funding - A world of difference*

##### *5.6.4. (i) “Deplorable” water quality*

Chief Angus Toulouse, former Regional Chief of the Chiefs of Ontario, when interviewed on television by TVO’s Steve Aiken on “The Agenda” (2012) stated that the water quality on Ontario’s reserves was “deplorable” and that the billions of dollars given to First Nations communities has been used mainly to “catch up” to mainstream Canada and also for water technician training. Basically, the millions of dollars given to First Nations communities have only been putting a band-aid on a very large cut that needs more than basic first aid.

Chief Toulouse also stresses that there is a huge capacity gap between First Nations communities and the rest of Canada. Capacity is an issue that will be returned to again and again by First Nations representatives. Many First Nations do not have the financial, technical, infrastructural and social capacity to allow for a healthy, functioning community after decades of abuse and neglect from the federal government. The idea of introducing the idea of comparability simply by injecting small amounts of funding is nonsensical given these issues.

##### *5.6.4.(ii) Breaking down the numbers*

While the federal government talks about billions of dollars given for First Nations drinking water and wastewater infrastructure, it is worthwhile taking another look at the funding for water system infrastructure and associated costs. The *National Assessment of First Nations Water and Wastewater Systems* estimated that Canada-wide, the total costs (both construction and non-construction) to enable reserves to comply with the applicable guidelines and protocols, would be \$846 million (2011). The *Assessment* also mentions upgrades for 209 systems that use surface water as their source, at \$1 – \$2.5 million per system. This adds, at the

very least, another \$209 million to the \$846 million required but a figure closer to \$300 million would be more realistic. The total is now well over a billion dollars that would be required to bring First Nations facilities at par with normal water system parameters and operating costs are not included. As well, none of the funding is for the necessary environmental assessments, contracting of engineers to design the plant or other associated soft costs (personal interview, 2015).

The *National Assessment* was published in 2011 but was based upon information from assessments done in 2009 and 2010. The amount of federal funding from 2010 is as follows:

First Nations Water and Wastewater Action Plan (FNWWAP)

Budget 2010            \$330 million for two years

Budget 2012            \$330 million for two years

Budget 2014            \$323 million for two years

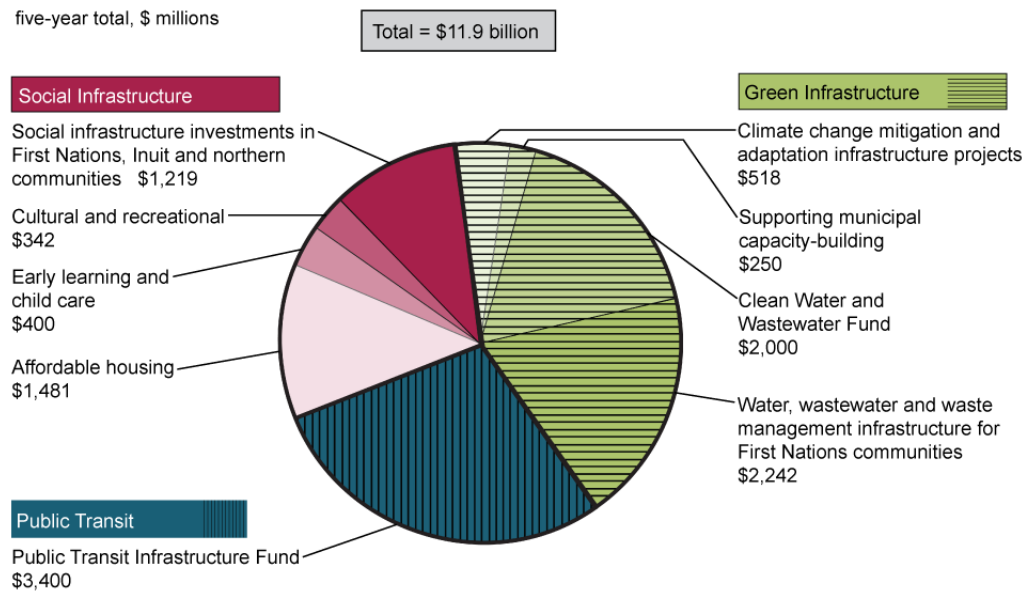
Certainly a billion dollars in funding is a lot of money but it simply is not enough, especially since O & M costs increase each year that repairs are not completed. Keeping in mind the 20% that First Nations must pay towards those O & M costs, it is important to understand that the cost of the water treatment plant is directly related to the operating costs. A technical consultant with many years of experience estimated that a small water treatment plant would have a minimum capital outlay of \$4 million (personal interview, 2016). Maintenance normally is at least 5% of capital costs making a single reserve's maintenance costs of \$200,000 (personal interview, 2016). Keeping in mind that INAC funds reserves on the initial capital estimates for a plant and not the actual costs at completion (personal interviews, 2015, 2016), one can see

how a reserve with a small population and no tax base would have difficulties meeting a \$200,000 obligation.

The solution would be to pull money from other areas, for example choosing to spend less money on plant upkeep and having fewer spare parts and extra supplies on hand (personal interview, 2015). This means the asset will have a shorter life cycle since the required maintenance cannot be done. Reducing upkeep also can put the community at risk for a negative health event (personal interview, 2015). The other aspect usually not recognized is that these funding programs have two-year sunsets. In other words, communities only have a two-year period to take advantage of directed funding (personal interview, 2016). It is almost impossible for any community to do long-term infrastructure planning when you have such a short-term funding cycle (personal interview, 2016). Prime Minister Justin Trudeau's five-year funding program, starting in 2016-2017, may help change this dynamic.

The federal government has stated that from 2006 to 2014 they have invested over \$3 billion towards drinking and wastewater infrastructure (INAC, 2016). The current government under Prime Minister Justin Trudeau has pledged \$1.8 billion over five years for infrastructure starting in 2016 – 2017 (INAC, 2016). However these amounts could be looked at in a few different ways. First of all, Canada's Gross Domestic Product (GDP) for 2015 was stated to be from \$1462 to \$1550 billion USD (Trading Economics, 2016/Knoema, 2016). Since 1.8 billion is 0.12 percent of the lowest estimate for Canada's 2015 GDP (1462 billion), it is possible that \$1.8 billion is not such a large amount after all when compared to other federal expenditures (personal interview, 2016).

Looking at Budget 2016, then comparing First Nations water and wastewater infrastructure funding to the non-First Nations water funding, shows similar amounts. First Nations are desperately behind in their capital asset construction, repairs and upgrading and will require more funding than their current allocations. If previous federal administrations had provided the kind of funding that was required, First Nations would not need to catch up with the rest of Canada:



**Figure. 53. Selected funding figures from 2016 Budget.**  
**Source: Budget 2016, Government of Canada.**

Ontario’s drinking water systems were estimated to require an investment of \$30 to \$40 billion over 15 years so that they will be able to handle expected growth and to “bring them in to a state of good repair” (WaterTap. 2013). Therefore, \$40 billion divided by fifteen years would give \$2.6 billion a year for water infrastructure upgrades and repairs in Ontario. Budget 2016 gives First Nations \$360 million per year for not only upgrades and repairs but also for new

construction. Granted there are much larger cities in Ontario but it is important to realize that large amounts of money do go to other areas to provide safe drinking water.

Finally, if the figure of \$1.8 billion to provide drinking water infrastructure for First Nations is divided into the number of on-reserve First Nations residents, which is already known to be under-reported, the government is pledging at most \$5,725.73 per person over the five-year period of the funding<sup>56</sup>. While figures can always be manipulated to highlight a desired result, the amount of funding for First Nations water systems is still not enough to fix the physical infrastructure problems on reserves.

#### *5.6.4.(iii) Federal funding for First Nations*

Since most First Nations communities do not have economic opportunities they must depend upon funding from Indigenous and Northern Affairs Canada. A review of how funding is delivered to First Nations communities is important to understand.

Canada's federal government, like those of most economically developed countries, funnels its policies through an extensive hierarchy. Any changes to the water quality situation within a First Nations community, must go through various planning levels which include not only the First Nations themselves but through the community, regional and national offices of the federal ministry Indigenous and Northern Affairs Canada (INAC). After moving through the

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<sup>56</sup> Statistics Canada indicates that in 2011 there were 314,370 "Registered (or status) Indians" in Canada. *Aboriginal peoples in Canada: First Nations people, Metis and Inuit*. (2015). Retrieved July 4, 2016: <https://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-011-x2011001-eng.cfm>

ministry, the parliamentary budgetary processes then begin, with strict procedures and deadlines. The result is long timelines that can affect real change within communities. For example, from the first day that an individual First Nation applies for a project such as a new water treatment plant, until the day that construction actually starts, at least two years could have passed, no matter how urgent the situation (personal interview, 2015).

#### *5.6.4.(iv) First Nations Infrastructure Investment Plan*

##### *5.6.4.(iv)a Capital Facilities and Maintenance Program*

A more structured definition of how INAC prioritizes water quality is via the First Nations Infrastructure Investment Plan. This Plan is developed each year by INAC and provides five-year investment overviews through the *Capital Facilities and Maintenance Program* (CFM). The CFM assists First Nations communities in planning, constructing and acquiring not only water supply and water treatment systems but also educational facilities, housing, roads, bridges, community buildings, connectivity, fire protection, energy systems and land remediation (INAC, 2015).

The objectives of the CFM as displayed below, is to provide the necessary financial support thereby enabling First Nations to:

- Invest in the appropriate physical assets/services that will reduce risks to health and safety
- Ensure the management of assets meets “established codes and standards”
- Maximize the asset life cycle by engaging in cost-effective and efficient management
- These activities should follow “environmentally sound and sustainable” methods

National First Nations Infrastructure Investment Plan, 2015-2016

#### 5.6.4.(v) Federal Sustainable Development Strategy

The strongest indication that improving water quality is a priority for INAC is their endorsement of the 2016 Federal Sustainable Development Strategy (FSDS). These goals will require significant and long-term funding. The 2013-2016 FSDS Target 3.1 discusses a desire to have more low risk water systems:

*3.1 Target* — Increase the percent of on-reserve First Nations water systems with low risk ratings from 27% to 50% by 2015. Increase the percent of on-reserve First Nations wastewater systems with low risk ratings from 35% to 70% by 2015. (AANDC, 2016)

Target 3.1 breaks down further, explaining the department's desire to make important changes.

Targets 3.1.2. and 3.1.3 are particularly important since they discuss putting money on the table:

*3.1.1* Increase on-reserve First Nations capacity to operate and maintain water and wastewater systems by improving access to and support for operator certification and training, in order to augment the number of certified operators. (AANDC, 2016)

*3.1.2* Prioritize investment support to on-reserve First Nations to target highest-risk water and wastewater systems. (AANDC, 2016)

*3.1.3* Provide on-reserve First Nations with funding and advice regarding, design, construction, operation and maintenance of their water and wastewater treatment facilities. (AANDC, 2016)

The government's policies and strategies appear to be pointing in the same direction, improvement of infrastructure so as to provide "comparable" water quality for First Nations communities. Their proposed method of reaching their goal of comparable communities is two-pronged: 1. Increasing financial capacity through funding for the construction, operation and maintenance of water treatment plants and distribution systems that will reduce health and safety risks; and 2. supporting the training of water technicians and assisting in the monitoring of water systems. The funding that Prime Minister Justin Trudeau has proposed in Budget 2016

targets both of these areas (Budget 2016, Chapter 3) but is it enough and is money the right approach at this time?

#### *5.6.5 An important “shopping list” for Justin Trudeau*

While Justin Trudeau is making inroads in regards to drinking water quality on reserves, the Government of Canada needs to understand that financial capacity is a delicate balance of funding and support. This support should be not only for the physical water infrastructure but for technician training; access to laboratories in a timely fashion; backup energy sources for water treatment plants; redundancy for equipment, supplies and trained employees; residential hook-ups, long-term dedicated funding for water treatment plant employees; distribution pipes and the equipment to dig far enough to lay them down; and, broadband for connections to technical advisory sources and also for off-site monitoring (personal interviews, 2015, 2016). All of these issues must be part of the support given to First Nations in order to improve drinking water quality on reserves.

##### *5.6.5.(i) Infrastructure planning*

There are circumstances that exist within First Nations communities that illustrate the tremendous difficulties that the Chief and Council face. For example, having a water treatment plant is useless if there are no residential hookups to allow the clean water to be pumped into the homes, such as what is happening in Neskantaga First Nation (personal interview, 2015). Or having a plant that was designed to pump 50 cubic metres (cm) of water capacity as in White Fish First Nation but driven by high levels of usage, the Council is forced to push the water capacity to 100 cu. means not only increased maintenance requirements but also a lessening of



the longevity for the facility (Gilbert, C. 2009, July 8). The water system has to match the community and terrain. For example, putting in a highly sophisticated system with remote online monitoring is useless if the community has no access to internet towers (personal interview, 2015). All of these conditions relate to a submission to the federal government by the Environmental Law Centre which points to Ottawa's failure to "meet commitments to rectify infrastructure, operation, and maintenance issues that originated with the construction of the original drinking water facilities" (Crooks, 2012, 6).

#### *5.6.5.(ii) Another reminder regarding capacity*

Whitefish River First Nations' Chief Franklin Shining Turtle Paibomsai comments upon the history accompanying infrastructure planning:

In the mid-1980s, the government began devolving services to First Nations. They knew about the challenges and decided to unload them. But they did not accompany this devolution with the resources and training required to build the necessary capacity.

Krakow, E., 2016.

In 2013, just prior to the final vote for the *Safe Drinking Water for First Nations Act*, several voices came out speaking against the legislation but promoting the need for financial capacity:

Member of Parliament Alan Giguere

It is not rocket science. It will take 10 years and \$4.5 billion. Yet, all the government offered was \$330 million (over two years), and then it attacked all kinds of conditions to it.

Giguere, A., 41<sup>st</sup> Parliament, Session 1, June 20, 2013.

Grand Chief Charles Weaselhead

It's a good first step but regulations without capacity and financial resources to support them will only set up First Nations to fail... We must address the capacity gap as well as the regulatory gap.

Weaselhead, C., in Myers, S. 2012, Calgary Herald.

One of the biggest problems is that infrastructure dollars are determined via five-year plans. However the required amounts for capital expenditures could and should be determined annually based on actual costs, which end up providing much more accurate funding for a reserve and possibly a method to use guaranteed funding as collateral for a bond (personal interview, 2016). Giving First Nations communities partial infrastructure funding and drinking water quality monitoring funding but no support in other related areas means that crucial steps are being ignored and an opportunity to really make a difference, missed.

To obtain infrastructure capacity means that reserves require funding that will allow them to build and maintain water system infrastructure without continually pulling from other designated funding earmarked for road repairs, housing upgrading, health care or education (personal interview, 2016). As well, the funding has to include any upgrades to the water systems that reflect their individual circumstances and growing population. It important, however to remember that as important as funding is, financial capacity is not the clear-cut solution that will lead to comparable living conditions for First Nations communities. If the Government of Canada hopes to improve the quality of life for First Nations peoples without understanding the broader scope of social and economic deficits their own policies have engendered within communities, their programs are doomed to fail.

#### *5.6.5.(iii) Reduced life spans of facilities*

Unlike towns and cities that have fully staffed departments that look after public works, water and construction, First Nations communities must hire a company to come in and design the capital facility and then build it. During the Proceedings of the Standing Senate committee on

Aboriginal Peoples (Frank, J., 2015), infrastructure expert Jeffrey Frank spoke about two issues he felt were of great impact:

Two of the biggest issues we have on reserve right now, one is the initial quality of construction, which depending on the region is mediocre to poor. The second part is the long-term care of these facilities. Typical right now is that a lot of these infrastructure projects, especially the building and water infrastructure as well as the delivery infrastructure, tend to last half the lifespan that it should.

Frank, J., SSCAP, 2015.

Frank continues his testimony, stating that the value of capital assets decreases by fifty percent of what they should be, even after only 10 years since the maintenance and care is so poor (Frank, J., 2015). He is not pointing the figure specifically at individual First Nations but is talking about the initial bidding process for the project design, construction and the post-construction maintenance of the facility and how it is almost impossible to have builder warranties honoured for building components (Frank, J., 2015).

Frank estimates that warranties are only enforceable about 20% of the time, especially in remote communities where the companies that constructed the facility may end up making “multiple trips to figure out a singular problem” as they lack the training and the expertise in what these communities need (Frank, J., 2015) An integral part of the problem is that the consultants used for these projects are not leaders in their fields and often submitted the cheapest tender, a selection process which INAC controls (personal interview, 2016).

### *5.6.6 Funding alternatives*

#### *5.6.6.(i) Public – Private Partnerships - P3s*

Jeffrey Frank spoke at length about the idea of Public – Private Partnerships (P3s) being a

possible solution to infrastructure development on reserves. P3s are based upon a long-term approach that involves the private sector, (hopefully experienced, reliable and ethical companies), assuming much of the risk regarding financing, construction, performance and maintenance (PPP Canada, n/d). There would be a contract, for a prescribed length of time, for example 30 years, in which the company is responsible for building and maintaining the asset. This responsibility would involve the whole life-cycle of the capital facility and provide stability for First Nations communities. Any non-performance, for instance, a system breakdown of the facility, is handled by the private company as per their contractual obligations (PPP Canada, n/d). The most important incentive is that payments to the private contractor are based upon performance, thereby guaranteeing high quality maintenance and care of a facility (PPP Canada, n/d).

However P3s are dependent upon the asset lasting its full life cycle since the private sector contractor is getting funding based upon projected good performance of the asset. P3s sound like a great innovation that could help address the infrastructure gap for First Nations communities. Jeff Frank and Dale Booth's presentation at the National First Nations Infrastructure Conference and Tradeshow in 2014 discusses the barriers that prevent this P3 development in First Nations communities:

First Nations are under federal jurisdiction and P3 Canada cannot offer the usual 25% capital cost equity to a potential contractor since Canada cannot in essence, provide backing for itself.

The threshold for activating a P3 project agreement is \$100 million. Since most reserves do not have projects this large, it will involve bundling potential projects with other communities. This requires not only a willingness for communities to join together in a long-term project with each other but also with a private sector company. This kind of project building requires experienced and knowledgeable individuals, perhaps from a regional or tribal council, that can help communities work together.

User fees may be involved and for some communities this would be an added financial burden that they may not be able to sustain.

Frank, J., 2014.

Some companies have found a way around this but the creative and motivated solutions required would definitely have to involve First Nations, perhaps through tribal councils assisting in the bridging of projects. There should also be a business style used that incorporates the First Nations perspective, a style that both government and private industry must learn to respect and accept.

Jeff Frank also mentioned that the federal government needs to have its own “aggregate entity”, that would be responsible for infrastructure projects (Frank, J., 2015). Frank gave the examples of Alberta Infrastructure, SaskBuilds and ProjectsBC as institutions that were created to assume primary responsibility for projects (Frank, J., 2015). They also were bondable which means obtaining a bond rating, thus moving projects ahead much faster because of the quicker access to funding.

#### *5.6.6.(ii) Own-source revenue and economic opportunities*

Own source revenue could also be generated through some unusual methods and new revenue routes should be examined to see if they are applicable. For example, if telephone lines cross a reserve, that utility should be charged a fee (personal interview, 2016). If fuel is being sold, a tax rebate should be going to the Band Office (personal interview, 2016). While Health Canada and the RCMP often have offices and clinics on the reserve, are they paying rent (personal interview, 2016)? When Ontario Hydro drives their big trucks through reserve lands, a toll

should be charged and an internal Band by-law might make this possible (personal interview, 2016). Most importantly if mining and forestry companies are accessing and using First Nations lands, there should be revenue-sharing and not just token payments (personal interview, 2016) but partnership shares. Finally, having the funds to hire a good CGA makes a difference since financial strategies require a professional with many years of experience, especially with small communities (personal interview, 2016).

The First Nations Finance Authority, a not-for-profit organization under the First Nations Fiscal Management Act, 2006, is willing to help First Nations communities generate own-source revenue and advise them how to use and invest their income, as well prepare communities to become good candidates for loans (personal interview, 2016). Their mission is to:

...Provide investment options and capital planning advice and...access to long-term loans with preferable interest rates. The FNFA is not an agent of her Majesty or a Crown corporation and is governed solely by the First Nations communities that join as Borrowing Members.

FNFA, 2016.

While not every First Nation is in a situation that will allow them to take advantage of the FNFA, this option is a crucial part of giving communities hope and sound financial advice from an organization that is run by their peers. Looking at the list of individuals on the Board of Directors, a former member on the 2014 Board was Jody Wilson-Raybould, the current federal Minister of Justice and Attorney General of Canada.

#### *5.6.7 Summary – Chapter V*

After using the parameters of size, location, legislation, jurisdiction and funding/economic opportunity, the comparison of First Nations communities versus non-First Nations

communities is undeniably unequal. There is little that the two groups of communities have in common except perhaps community size.

Jurisdictional differences show that First Nations have a unique status in Canada that also leaves them without the ability to raise collateral for loans. Looking at the non-First Nations communities it became obvious that user fees and a tax base are the main sources of income, both of which are not part of many First Nations financial regimes.

Federal funding, with its long timelines and focus on inflexible five-year capital plans, does not assist communities in developing infrastructure. Financial capacity is again shown to be critical in how communities move ahead but perhaps P3s and own source revenue are the road leading to the future. This last chapter has brought together all of the comparability research so that conclusions can be made about what might be a better mode to move First Nations away from contaminated water and into a healthy, growing community. Change needs to occur and the majority of it will have to come from the federal government.



## **Chapter 6: Conclusion: Willingness to Embrace Change**

### **6.1 Introduction**

This paper has investigated the very serious problem of drinking water quality on First Nations reserves. The federal government, through Indigenous and Northern Affairs Canada, has a long-standing policy of comparability to address drinking water quality in First Nations communities. Through the research conducted in this paper, it has become apparent that comparing First Nations communities to non-First Nations communities is not appropriate. The divide is too wide spanning legislative, jurisdictional and financial inequities. Historical trauma hindered many communities' opportunity to grow and look for a better future. This historical context cannot be underestimated or forgotten and the effects on social capital in a First Nations community may require specific and culturally-sensitive solutions that will only come through discussions with community members and leadership.

Another essential aspect of drinking water quality is to acknowledge the diverse range of First Nations communities residing in this land base now called Canada. Even within a single province there are differences of language, culture, history, geography and current perspectives as



related to water. In terms of the drinking water conditions on each reserve, some reserves have absolutely no water treatment plant, some have outdated plants, some have new plants and some have clean drinking water but do not trust it since for decades the water has been contaminated (personal interview, 2016).

Aside from individual needs and requirements, as a whole there are contrasting views of how drinking water quality is seen: The federal government, through INAC and Health Canada, has historically seen water quality as an issue related to funding and once the funding deficit is solved, the problem goes away (personal interview, 2016). However First Nations see drinking water quality linked to fundamental issues such as "governance, growth and economics" (personal interview, 2016). With two (overall) differing approaches to changing/improving drinking water on reserves, time should be spent with First Nations communities to understand exactly what clean drinking water means to them.

## **6.2 Safety through legislation**

The *Safe Drinking Water for First Nations Act, 2013*, introduced by then Minister of Aboriginal Affairs and Northern Development Canada John Duncan, has the ability to rectify the regulatory gap since there are "currently no legally enforceable standards and protocols governing water quality on First Nations lands" (Duncan, 2013, June 19). As of today, no regulations have been passed and the confidential consultations with First Nations for regulatory development per the *Safe Drinking Water for First Nations Act*, are most likely still discussing the same issues that were mentioned numerous times; that is, the devolution of responsibilities without the accompanying funding. This point has been brought up during the Expert Panel on Safe Drinking

Water, in Justice O'Connor's chapter on First Nations and in the many discussions in the House of Commons and Senate committees regarding the *Safe Drinking Water for First Nations Act*. No doubt the devolution of responsibilities will continue to be mentioned until the federal government understands the steps to be taken. The *Act* was heralded as being the answer to First Nations drinking water issues but has been disappointing in its lack of regulatory progress. Meanwhile the Ontario provincial government has their *Safe Drinking Water Act* that was passed two years after the Walkerton crisis. Numerous enforceable regulations related to drinking water quality have also been passed provincially but nothing for First Nations.

Enforceable legislation is a crucial component of protecting a water system. In a process as complex and multi-faceted as the one required to provide clean drinking water, if there is no sense of accountability and consequences then consistency of water quality is impossible to maintain. How long will it take before communities like Neskantaga First Nation, Marten Falls First Nation and Six Nations of the Grand River First Nation find the concrete assistance that they require to obtain and/or improve drinking water infrastructure?

### **6.3 Financial capacity is a start**

Regarding funding, there are many opportunities that are given to non-First Nations communities but the equivalent is not being offered to First Nations reserves. Having a tax base from which to pull funds and even plan for future capital assets is incredibly important and is part of the financial strategy that every non-First Nations community employs. There must be own-source revenue generated if the First Nations communities are going to not only survive but prosper and the federal government should be encouraging the development of these

economic drivers. Whether P3s are the answer, time will tell. P3s are a complicated process that must not be rushed but rather have all the pros and cons examined so that Chiefs and Councillors can fully participate and decide where best to focus the business negotiations.

However it should be emphasized that it is not that First Nations community members cannot be innovative, it is that they are hampered by legislation, jurisdiction and often times, location. In particular, imagine how hard it is to invite prospective clients to your community for business discussions and yet you cannot even offer to have them stay overnight since the water is contaminated (personal interview, 2015). Even more important, how does a reserve with bad water attract much needed permanent external service providers such as teachers and nurses if there are continual drinking water advisories being issued in the community (personal interview, 2015)?

Researchers Lebel and Reid discuss five aspects of capacity, including financial, in their paper entitled *The Capacity of Montreal Lake, Saskatchewan to Provide Safe Drinking Water: Applying a Framework for Analysis* (2010). Their paper focuses on small water systems with a definition of financial capacity that focuses on "applicable water standards" and whether or not the water system is able to "meet the financial obligations required for (the) operation and maintenance" at those set levels (Brown et al., 2005). Being able to afford to build and then run a water treatment plant and system, with the required staff, is one of the most important aspects of addressing the drinking water quality problem.

First Nations Bands are expected to pay 20% of operating and maintenance costs in spite of INAC policies that refer to improvements in water funding. The Government of Canada fails to acknowledge any complicity in the current drinking water predicament and how they could initiate policies to lower the 20% O & M costs, thereby assisting reserves. While the 2% funding cap has been lifted, it will take many years to catch up to inflation, never mind that current funds do not meet current needs as seen by the 2011 National Assessment (personal interview, 2015).

Prior to Canada's Budget 2016, the AFN was hoping to see a commitment that would provide the kind of long-term investments to make "equitable funding" a reality, including funding for clean drinking water (AFN, 2015). These commitments are critical components of providing a lifestyle that any Canadian deserves:

In recent years, Canada has ranked between 6<sup>th</sup> and 8<sup>th</sup> on the UN Human Development Index while First Nations fall between 63<sup>rd</sup> and 78<sup>th</sup>. The federal government's Community Well-Being Index shows that the gap has not changed at all since 1981.

AFN, 2015, Closing the Gap.

Prime Minister Justin Trudeau has committed to making a large investment in First Nations infrastructure. These commitments are related to dollar amounts and rely upon technology to fix situations that are based in colonial history, a legacy that remains to this day. Money alone will be of limited assistance but increased funding may be the first visible step and one that a Western mindset more easily embraces. However funding is not the only kind of change that is necessary. Taking a further look at the AFNs *Closing the Gap* will summarize these changes.

### 6.3 “Closing the Gap”

The Assembly of First Nations (AFN), a national organization that advocates for the majority of First Nations peoples, understands the deep issues that affect their communities (AFN, 1999). Their policy document entitled *Closing the Gap: Federal Election Priorities for First Nations and Canada* (2015), discusses the large gap between First Nations and the rest of Canada. The AFN identified six priority areas that must be addressed with the federal government:

- Strengthening First Nations, families and communities
- Sharing and equitable funding
- Upholding rights
- Respecting the environment
- Revitalizing Indigenous languages
- Truth and Reconciliation

This is a holistic approach to healing and explains how to respectfully move forward and rectify the human rights issues that involve First Nations in this land that is now called Canada. At the time of *Closing the Gap's* publication in 2015, the AFN was anticipating that a new federal administration was going to listen to them and take their concerns seriously. In addition to the six key priority areas, the document identifies specific issues that must be faced so First Nations have the opportunity to reestablish community strength and heritage, including:

- Programs to develop positive health outcomes.
- Skills and employment training "responsive to First Nations and Industry's needs".
- Implementation of "restorative First Nations justice systems".

- Implementation of a cohesive emergency prevention and management process with the "full involvement of First Nations.
- Recognition of First Nations as "full partners from the earliest stages" regarding decisions that impact communities including "law, policy, administration and procedure".
- Recognition of the inherent rights of First Nations to engage in many areas that affect them including the environment.
- Free, prior and informed consent must be applied "consistent with First Nations' fundamental rights, in any decision-making that has the potential to impact First Nations' lands, territories or resources".

AFN, 2015, Closing the Gap.

It should not be a matter of *asking* for these changes from the federal government since they are related to human and constitutionally enshrined rights. Perhaps *Closing the Gap* could better be seen as an attempt by the Assembly of First Nations to try to educate a government that has chosen to ignore their own systemic inadequacies, as well as their fiduciary duty towards First Nations. Parliament should be reminded of their true obligations that exist through legal treaties and legislation and it is important that First Nations be considered full partners with Canada's federal government if and when consultations take place. They are Nations that were ignored when Canada was created and their status with the Government of Canada should be on a nation-to-nation basis if not now, then in the near future. First Nations are unique, distinct and should be recognized as such.

The Chiefs of Ontario, the AFN's regional organization, may also be part of a movement towards re-education as seen by their document *Understanding First Nation Sovereignty*:

As distinct and independent Nations, we possess inherent rights to self-determination. These inherent rights were not endowed by any other state or Nation, but are passed on through birthright, are collective, and flow from the connection to the Creator and our lands. They cannot be taken away.

Chiefs of Ontario, n/d.

Therefore, self-governance should not be seen as First Nations breaking away from Canada but rather, the acknowledgement and returning to what were the laws, jurisdictions and policies of "Turtle Island" long before any Europeans immigrated to these lands. This is a huge conceptual step to take, for those who are non-Indigenous. Yet the consequences of colonialism must be negotiated and what was stolen, must be returned, including not only the quality of life but the recognition of Nationhood status for First Nations.

### **6.3 Willingness to embrace change**

While this paper has attempted to define what is meant by "comparable" water infrastructure and financial capacity, it is not just money that will result in positive advances specific to First Nations communities. What is needed is a willingness to embrace change from both sides of the table. Chief Connie Gray-McKay of the Mishkeegogamang First Nation, while discussing housing infrastructure during the Standing Senate Committee on Aboriginal Peoples hearings of September 15 to October 1, 2014, explains what is required for change:

I always thought that I could make some changes in my community, only to find out that change can only happen if your treaty partners are a participant to that change, providing the resources, the training, the capacity for a community to begin to address the housing and building on the young people.

Gray-McKay, C., Standing Senate Committee on Aboriginal Peoples, 2014.

The fact that Chief Gray-McKay discusses housing infrastructure is incidental, the willingness of the federal government to participate fully is imperative in a treaty relationship. Gray-McKay's point regarding "building on the young people" is very important since it is their futures that are being directly affected by the residue of colonialism which has been enacted through decades of neglect.

Further to Chief Gray-McKay's point regarding how change can occur, Wes Bova, former executive director of the Ontario First Nations Technical Corporation and current Technical Services manager at Matawa First Nations Management, also participated in the Senate Hearings, expressing his disillusionment with the endless rounds of reports and fact-finding:

...I've seen the 2005 engineering reports that were mandated for Ontario. I participated in the expert panel discussions and in the national assessment that was conducted by Neegan Burnside. It's very frustrating, from my perspective, to see how little has been done over the course of 10 years but how much has been invested in investigating and finding the same thing year after year that the plants are getting worse because the significant capital investments that's required hasn't been made.

Bova, W., Standing Senate Committee on Aboriginal Peoples, 2015.

#### **6.4 Taking a 180 degree turn**

Perhaps the government has just been looking in the wrong direction? Instead of looking for answers in the non-First Nations communities, they should be seeking input from the people whose daily lives are framed by boil water advisories and health scares. Those community members would be able to say what parts of a water system are more important to them and could make their lives easier. It may not be tap water they want but just clean drinking water. Speaking to First Nations leadership, to determine their preferred modes of communication and also, the steps that would make meaningful change in their communities is a defining



element of the government making that 180 degree turn. There could be a First Nations Board of Water Health, designed and run by First Nations with traditional values incorporated into the business model.

While movie stars such as Leonardo DiCaprio make speeches at Academy Awards ceremonies that recognize First Nations history and land ownership, and famous singers such as Gord Downie from the Tragically Hip point to Prime Minister Justin Trudeau and announce their expectations in terms of improving the quality of life for First Nations, there is so much more that needs to be done to effect substantial change (Lau.A, Nurwisah, R, 2016/ Wheeler, K., 2016). With technology and funding seen as providing the stereotypical “fix” for water quality on reserves, there is one more aspect in regards to water that could and should be brought into the water quality discussion; Traditional Ecological Knowledge (TEK).

The Mother Earth Water Walks were founded by Anishinaabe Grandmother Josephine Mandamin from the Wikwemikong First Nation (Indian Country, 2016. Mar.). Grandmother Mandamin espouses traditional values aimed at the healing of water and has walked over 17,000 kilometres, including the entire perimeter of the Great Lakes, to bring the plight of contaminated water to public attention (Indian Country, 2016, Mar.). The personal connection to and responsibility for water that First Nations “Anishinaabek” women have traditionally taken on is what Mandamin lives, through her Mother Earth Walks and through being such a strong advocate of the power of healing (Indian Country, 2016, Mar. /, London Free Press, 2014, Apr./ Indigenous Rising, 2015, Sept.):



**Figure 54. Josephine Mandamin. Source: Indigenous Rising, 2014.**

As women, we are carriers of the water. We carry life for the people. So when we carry that water, we are telling people that we will go any lengths for the water. We'll probably even give our lives for the water if we have to. We may at some point have to die for the water, and we don't want that...

Water has to live, it can hear, it can sense what we're saying, it can really, really, speak to us. Some songs come to us through the water. We have to understand that water is very precious.

Mandamin, J., 2015, Indigenous Rising.

Perhaps there is a way of combining Traditional Ecological Knowledge (TEK) with technology that might better fit the needs of First Nations communities. The Canadian Environmental Assessment Act introduced interim principles that acknowledge "Aboriginal Traditional Knowledge" (ATK) and its potential use in environmental assessments:

There is growing recognition--both in Canada and abroad--that Aboriginal peoples have a unique knowledge about the local environment, how it functions, and its characteristic ecological relationships. This Aboriginal traditional knowledge (ATK) is increasingly being recognized as an important part of project planning, resource management, and environmental assessment (EA).

Section 16.1 of the *Canadian Environmental Assessment Act* (CEAA), gives responsible authorities conducting an EA the discretion to consider Aboriginal traditional knowledge in any EA: "Community knowledge and Aboriginal traditional knowledge may be considered in conducting an environmental assessment."

Canadian Environmental Assessment Agency, 2016.

This information regarding ATK posted on the website of the Canadian Environmental Assessment Agency's website is less than two months old. There are many more aspects of Traditional Knowledge that the federal government could use and perhaps these changes are on the way. Merrell-Ann Phare (2009) talks about a "water ethic" that could be incorporated in future discussions:

We can begin to work closely with Indigenous Peoples to articulate a new water ethic, one that combines the most long-term sustainable elements of the worldviews that created and today comprise Canada. This requires a "from source, to tap, back to source" approach, meaning it must address the full length and breadth of the needs for and use of water by Indigenous Peoples, all other Canadians and the environment itself. None of these three groups should be relegated to the status of second-class citizen.

Phare, M.S., 2009, Denying the Source.

It is still early days with the Justin Trudeau administration as they have been in office less than a year. Could this finally be the Prime Minister that rectifies the horrendous treatment of First Nations and who will understand that for decades, there have been many lost opportunities to help and also to learn from First Nations peoples? Prime Minister Trudeau has promised to change drinking water quality on reserves, with all boil water advisories being revoked within five years (CBC News, 2015, Oct. 5). A technical expert expressed doubt as to the timelines stating that "from an engineering standpoint, there may not be enough staff to get it done" (personal interview, 2016). Certainly the water stations that were meant to be interim measures must become just that, temporary, with distribution systems eventually moving out into the residential portions of the community.

An improvement of drinking water quality and overall quality of life must start now and not with policies that will be implemented based upon fiscal year deadlines but with immediate and

if necessary emergency political intervention. The future of the First Nations youth; of First Nations heritage - which is the defining and original heritage of this land base; and the legacy of the strong centuries-long environmental stewardship provided by First Nations are all at stake. If Mr. Trudeau ever earns the right to metaphorically “hold the eagle staff”, it will be because his leadership saw not just funding solutions but real treaty recognition for those who kept this land secure and strong for so many centuries.

At the beginning of this paper I stated that the underlying causes of poor drinking water quality would be examined. Using INAC's comparability model, a comprehensive discussion has illuminated incompatible communities based upon the areas of jurisdiction, legislation, size, location and economic opportunity. In addition, there are overarching historical links to colonialism that have prevented First Nations communities from properly moving forward. If "colonialism" defined this country in the 17<sup>th</sup> to 21<sup>st</sup> centuries, let there be a new "ism" that rejects the calcified thinking of the past but rather enhances innovative possibilities both for today and for the future. Perhaps "egalitarianism" comes close to what is needed but a strong component of justice and ethics must also be present. It is evident that some substantial changes must be effected if First Nations communities are going to have the health and safety they deserve.

Justin Trudeau's ministerial mandate letter to Dr. Carolyn Bennett, while often quoted, states very clearly the agenda for the new federal government:

No relationship is more important to me and to Canada than the one with Indigenous Peoples. It is time for a renewed, nation-to-nation relationship with Indigenous Peoples, based on recognition of rights, respect, co-operation, and partnership.

Trudeau, J., 2015, Minister of Indigenous and Northern Affairs Mandate Letter.

The type of relationship that is needed is important to define and must come from a stance of recognizing the true place of First Nations within Canada. They are partners of this land base and should be accorded much-deserved respect. Perhaps this time the relationship can be seen as an opportunity for the federal government to "get it right" by listening closely to what First Nations are saying, integrating suggestions that will actually work for First Nations communities and understanding that in spite of First Nations uniqueness, their rights must be protected at the highest levels. Nothing less is acceptable if First Nations are indeed important to Canada.

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