

Black Tickle-Domino, Labrador:

Case Study for the NL Rural Drinking Water Project

Introduction

The Indigenous community of Black Tickle-Domino is one of the many rural communities located in Labrador that deals with drinking water issues. As of 2011, the Local Service District (LSD) had a population of 126. Black Tickle-Domino is a unique case study because it is one of the few communities in the province that do not have piped in water, forcing residents to travel over 1km to retrieve water. While a Potable Water Dispensing Unit (PWDU) was installed in Domino in 2004, access to water is severely limited and costly, where residents are required to pay up to two dollars a litre for their drinking water. It should be noted that this research was completed in October 2013 after a period of time when the PWDU was unfunded and closed for many months.



*Town of Black Tickle-Domino PWDU
(Photo Maura Hanrahan)*

Policy/Governance

Indigenous peoples were not mentioned in the 1948 Terms of Union between Newfoundland and Canada (Hanrahan, 2003). Thus, the new province's Indigenous people, including the Southern Inuit of Black Tickle-Domino, did not

enjoy Aboriginal rights recognition or have access to federal programs and services for Indigenous peoples. Although a full discussion of this is beyond our purview, subsequent recognition of the province's Indigenous peoples has been sporadic and inconsistent. It is worth noting however, that, until the early 1970s, Black Tickle-Domino was included in housing and other federal programs for Indigenous communities in Labrador.

Since the early 1980s, Black Tickle-Domino has been a member community of NunatuKavut Community Council (NCC, formerly the Labrador Metis Nation). While NCC receives some federal funding and enjoys some recognition of its members' Aboriginal rights (e.g. hunting and fishing), NCC's comprehensive land claim is one of many Indigenous land claims in Canada that has not yet been accepted for negotiation.

Similar to many small communities in the province, Black Tickle-Domino's local government is a LSD, consisting of volunteers with no paid staff.

Infrastructure

Black Tickle-Domino lacks the appropriate infrastructure to deal with the demands of water for its residents. Currently, there is no piped water system or water truck in the community. In 2004, a PWDU was installed in Domino, about 1.5km away from the majority of the homes in Black Tickle. Many residents continue to use untreated brooks and still ponds for their water supply as they did prior to the installation of the PWDU.

Water means survival for this community. Water means everything.

- Town Resident

The PWDU receives its water from Martin's Pond, approximately 2km from Black Tickle. The water has high turbidity, colour, iron, and has been found to contain pathogens. The water is treated under a multi-step process. The PWDU extracts raw pond water and chlorinates it, where it is then put through a multimedia filter. It is chlorinated a second time and put through a sand filter, where it is chlorinated for a third time before being put through reverse osmosis. The water is then put in holding tanks and exposed to ultra-violet light, after which its turbidity, colour, and iron are measured at zero.

The PWDU would be unsustainable without consistent government funding. In early 2013, the LSD faced a \$2000 power bill that it could not afford to pay. As a result, it received cut-off notices from Newfoundland and Labrador Hydro and was forced to charge two dollars a litre in order to keep the site running. This creates further difficulty in the community, as the unemployment rate is high with the closure of the fish plant in 2012.



*Town of Black Tickle
(Photo Maura Hanrahan)*

PWDU Source Water

Testing of water sources was carried out in April 2013. In terms of chemistry, the PWDU tested within the safe range. The water from the PWDU has 16 times the iron from the normal level. Although this poses no threat to human health, the high iron content lends a brown cast to the water, creating an aesthetic issue, which makes the water unappealing. The water also consists of high levels of manganese, but this is

neither a health issue nor visible to the naked eye. Changes in weather are associated with increased amounts of contamination during the warmer seasons. The source water from Martin's Pond is not protected by a fence for cultural reasons: everything is communally owned and accessed in Black Tickle, making fencing an alien idea. (This is not to say that community members would never consider fencing).

E-coli was also detected in samples from shared community wells in October 2013, following warm weather when such contamination is more likely.

Water quantity in Black Tickle-Domino is another important factor to consider. Water is more accessible in the winter months as snow cover allows for easier travel via snowmobile to retrieve water. A standard komatik can hold 70 litres of water while tow carts attached to ATVs can hold upward to 115 litres of water. With the distance and the physical effort required, water retrieval is labour intensive and can take over half a day depending on the size of the family. In this gender stratified community, men are responsible for water retrieval with the result that most suffer musculo-skeletal and other related problems.

Water Source Alternatives

As of 2013, neither the PWDU nor bottled water were the main sources for the community; most residents relied on shared shallow wells, none of which were monitored or treated. Residents also collect water from Herring Cove Pond, about 1km away from Black Tickle, and a stream in Porcupine Bay, about 25km away, which was the winter home of community members before year-round settlement in Black Tickle in the 1960s.

Public Perception, Awareness, and Demand

In 2013, use of the PWDU was limited due to cost and a history of breakdowns, which

engendered mistrust in the unit. Animal use of Martin's Pond is also a concern.

Muskrats, they live in the water.

There was a beaver there last year.

- Comments made in a community focus group regarding the PWDU water supply.



*Dug well used in Black Tickle
(Photo Maura Hanrahan)*

Health Concerns

There are a significant number of health issues related to the drinking water quality and accessibility for Black Tickle-Domino's residents. Some of these include: men's musculo-skeletal health, obesity, food security, type II diabetes, gastro-intestinal illness, and mental health. Given the physical demands of retrieving water, many men experience chronic pain and suffer from back and shoulder injuries. Gastro-intestinal illness is common, especially when

the PWDU is not working and residents are forced to find other drinking water sources.

This past fall there was a large outbreak of what everybody called the stomach bug. It was a lingering problem within the community all through the (Christmas) holiday season. Every household was affected by this. It was a crippling (illness): throwing up, diarrhea, flu. It was striking the young and the old and it lingered.

- Local Service District Member

I've been stomach sick all my life.

- Elder, aged 70

It is difficult to over-estimate the mental stress caused by Black Tickle- Domino's water quality and accessibility problems. People report that water is always on their minds. At least two community residents report they suffer from obsessive-compulsive disorder, and their symptoms are heightened by water quality and appearance.

If we had access to water, you wouldn't have to carry it, you could get a shower every day, you could do your laundry and flush the toilet when you wanted too. Life would be easier.

- Town Resident

Accessibility

Accessibility to water is another significant health concern for the people of Black Tickle-Domino. With no piped system available, there is no direct access for water, requiring residents to travel to get water. However, there are other external issues that make obtaining water more difficult. In periods of harsh weather and during winter, people may be housebound for days and unable to retrieve water. Conservation is the

main coping strategy for Black Tickle-Domino's water situation; meaning people restrict their water intake. Most community members, including those suffering from diabetes and/or other chronic illnesses, utilize this strategy.

No one is drinking enough water in the community.

- Community Member

Community Sharing

Traditional Inuit sharing practices in Black Tickle remain strong and are utilized in dealing with water issues faced by community members. One woman mentioned, "if you share with me when I don't have anything, then I'm going to share with you when you don't have anything." Unfortunately, sharing water can also result in health concerns. Multiple people use the same water for bathing and showering, where it can then be recycled and used for waste disposal. This type of sharing can lead to the spread of disease and further mental stress.

Conclusions and Future Directions

There are over 1.1 billion people globally who do not have adequate access to safe drinking water (Gerlak and Wilder 2012:5). The residents of Black Tickle-Domino are among these people. Unfortunately, Black Tickle-Domino is just one community of the primarily northern, indigenous communities that suffer from inadequate access to drinking water. This issue goes beyond the local, regional, provincial, or federal entities that deal with it. The United Nations Human Rights Council affirmed in 2010 that access to water is a human right and placed an obligation on government to provide these rights. It would appear that even with this announcement made over four years ago, Canada still has a long way to go to in addressing the needs of water and infrastructure throughout communities across the nation.

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To see the full case study report please visit the *Exploring Solutions for Sustainable Rural Drinking Water Systems* website: http://nlwater.ruralresilience.ca/?page_id=17.

References

Gerlak, A. K., and Wilder, M. (2012, March/April). "Exploring the Textured Landscape of Water Insecurity and the Human Right to Water." *Environment*, (54) 2: 4-17.

Hanrahan, M. (2003). *The Lasting Breach: The Omission of Aboriginal People from the Terms Of Union Between Newfoundland and Canada and Its Ongoing Impacts*. Research Paper for the Royal Commission on Renewing and Strengthening Our Place in Canada.