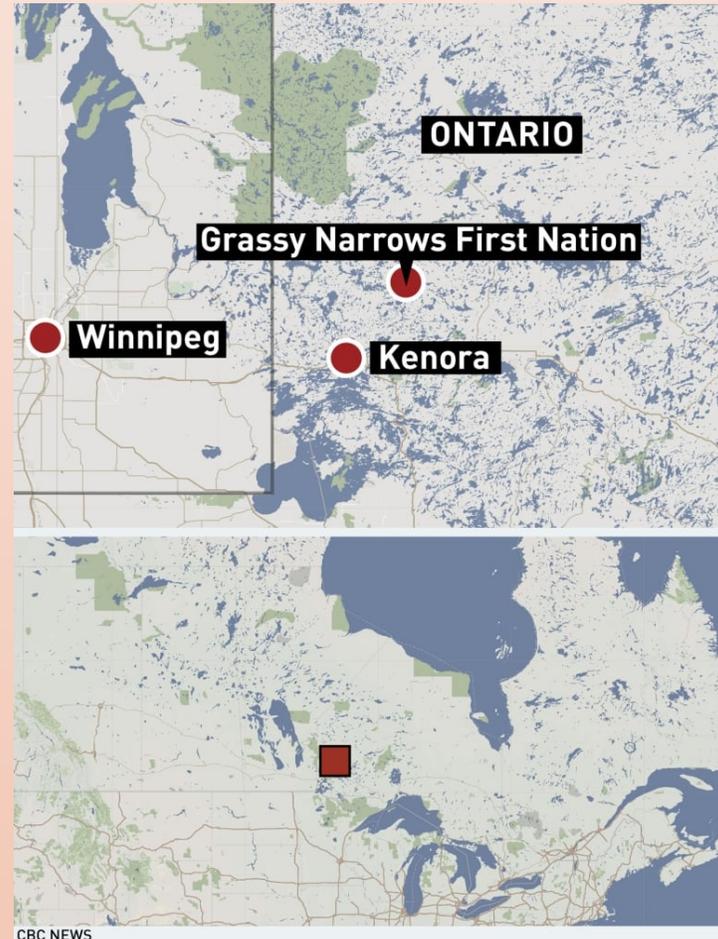




The Tale of Grassy Narrows

Grassy Narrows

A small Anishnabek First Nation of approximately 1000 people located on a reserve in northwestern Ontario on the Wabigoon-English River system, under the governances of the Bimose Tribal Council.



Their Water

The Wabigoon-English River feeds into Grassy Narrows Lake, which is the primary water supply for the reserve.

There are also three wells which service a portion of the population.

From 1962 to 1970, former owners of the Reed paper mill upstream in Dryden dumped 9000 kg of mercury waste into the river, which poisoned the lake and its wildlife. It also caused the closure of a thriving commercial fishery in the early 1970s and this devastated Grassy Narrows' economy. With few local economic opportunities and little money, residents have continued to eat the fish caught from nearby lakes and rivers over the years.



Mercury Poisoning

Mercury accumulates in the body over time, and large doses can cause numbness in the limbs, sickness, and neurological damage.

Today – mainly due to fish consumption – nearly 90% of the children and adults in Grassy Narrows show signs of mercury poisoning.

A report by fresh water scientist Patricia Sellers in 2015 found mercury levels still rising in some nearby lakes.



Health Effects of Mercury Poisoning

Residents who have been diagnosed with mercury poisoning (so, 90% of the community's population) are up to six times more likely to suffer from a wide range of debilitating health problems.

The community commissioned environmental health expert Donna Mergler, a member of a World Health Organization-affiliated research group, to study the fallout of eating fish caught from nearby waterways.

Mergler's report found that the physical and mental health of people in Grassy Narrows is "considerably worse" than that of other First Nations in Ontario. It also found that mercury exposure through the consumption of contaminated fish is associated "with poor health and well-being."

The report also stated that the health of community members "cannot be understood without taking into account their history of mercury poisoning."

Health Effects of Mercury Poisoning (Continued)



Only 21 percent of Grassy Narrows members reported their health as being “good or excellent.” That compares with 40 percent in other Ontario First Nations and 60 percent of non-Indigenous people in Canada.

The report said people who reported being diagnosed by a medical professional with mercury poisoning were:

- Almost six times more likely to have a neuropsychological disorder.
- Five times more likely to have stomach and intestinal problems.
- Four times more likely to suffer from a range of problems, including hearing loss and joint pain in people over 30 years of age.
- Three times more likely to have blindness or vision problems.

Mergler’s research also found that the likelihood of someone in Grassy Narrows reporting mercury poisoning is five times higher among residents whose father was a fishing guide.

Health Effects of Mercury Poisoning (Continued)



Thirty-three percent of community members reported losing a close friend or family member to suicide which, according to the report, is nearly five times the rate of that in other Indigenous communities in Ontario.

Twenty-eight percent of respondents in Grassy Narrows had attempted suicide, more than double the rate of other First Nations.

Risk factors for psychological distress, which the report said is a major determinant for suicide, include food and financial insecurity, disability, and chronic health conditions.

Wait! The Mercury Was Dumped from 1962-1970, Why Has the Problem Not Been Fixed?

It has taken decades for Grassy Narrows to begin to secure government commitments. Judy Da Silva, the environmental health co-ordinator in Grassy Narrows (who, like many others in the community, suffers from mercury poisoning), contrasted that with the quick response to the public health crisis in the wake of the Walkerton, Ontario crisis from residents drinking water contaminated with e. coli.

She said, “It’s a shame on Canada, a shame on the province that we are treated so inhumanely.”



Four Boil Water Advisories at Grassy Narrows



There are four boil water advisories at Grassy Narrows.

Three, which have been in effect since 2013, are due to unacceptable uranium levels in the well water.

The fourth boil water advisory was put into effect in 2014 because of contaminants – including disinfectant by-products – in the primary water supply.

The surface water treatment plant was installed in 1993, and reports indicate the design is critically flawed.

The chemicals identified in the water supply can potentially disrupt hormonal patterns, liver and kidney functioning, and neurological activity, and are not safe to consume even in small quantities. These chemicals cannot be removed through boiling. Therefore, the wells on-reserve are under do not consume advisories.

Problems at Grassy Narrows' Surface Water Treatment Plant

The surface water treatment plant, which serves nearly the entire reserve, does not screen out many harmful protozoa.

Also, the highly turbid (turbidity makes water cloudy or opaque) water is not in contact with treatment chemicals long enough for disinfection to occur, which produces by-products which may be harmful for consumption.



Recommendations

Mergler's report made a number of recommendations, including cleaning up the pollution from the river, and bettering a wide range of treatment and health care available to residents.

The study calls for increased funding and better programs for treating physical and mental injury, a specialized long-term care facility in Grassy Narrows, programs for food security, including access to non-contaminated walleye and permanent institutions to facilitate traditional healing.

Grassy Narrows has few Elders, that means they have fewer Elders to pass on the traditions.



Ontario's Commitment

Ontario has committed \$85 million for the remediation of the river, with the money being secured in a trust fund.

Da Silva said the community has been told actual remediation won't begin for another couple of years, as pre-cleanup engineering and sediment sampling work still need to be done.

In late 2017, Ottawa committed to funding a treatment centre.



About the Solution

The design problems with the water treatment system at Grassy Narrows will need to be overcome, and a plan developed to ensure its future sustainability.

Uranium contamination in the well water can be mitigated by installing point-of-entry anion exchange devices on well-reliant homes.

The Department will need to consider the resource requirements, operator training, the capacity of the reserve to operate and service its water supply, the effects of off-reserve activity on Grassy Narrows' source water, and the long-term health impacts of the existing contamination.

The (2011) estimated total cost of upgrading, servicing, operating, and maintaining Grassy Narrows' surface water treatment system is \$24 million. This sum does not include the cost of redesigning the system, well water treatment, training programs for operators, or mercury removal (dredging in the lake).

About the Solution (Continued)

It will be difficult to find highly qualified residents who can be trained to operate and maintain the water treatment plant, and external contractors will be needed for the design and upgrade work. Governance challenges on-reserve will also limit the potential for future oversight and monitoring of operators.

Reports indicate the water supply is contaminated by mining, logging, and damming activities upstream of the reserve, in addition to a sewage runoff point located near to Grassy Narrows' drinking water intake. These activities contribute to the high turbidity of the drinking water and strain the water treatment system. Resolving this challenge will require interdepartmental and potentially cross-jurisdictional collaboration.

Infrastructure Canada's Small Communities Fund is providing support for critical upgrades to the water treatment plant, while the Department aims to conduct a feasibility study for the development of a long-term solution.

About the Solution (Continued)

The main implementation challenge involves navigating between the short-term need for potable water on-reserve and the long-term need for sustainable human capital and mercury decontamination in Grassy Narrows Lake.

Grassy Narrows is one of the more likely First Nations communities in Ontario currently on a long-term boil water advisory to still be in that category in mid-2020.

A contractor was selected in November 2017 to study the feasibility of upgrading the plant. However, Band officials have not responded to Indigenous Services Canada's requests for a kick-off meeting to initiate the assessment.

If Grassy Narrows is to meet the Ontario Region's advanced target of mid-2020 for access to clean water, the deterioration of the well water needs to be addressed.

The Next Steps

The current interim plan is to substitute the well water with a regularly-refilled cistern containing treated surface water. However, that project depends on treatment plant upgrades being completed on-schedule.

Infrastructure Canada's Small Communities Fund has approved \$1 million – shared equally by the provincial and federal governments – for critical plant upgrades.

Budget 2018 committed an additional \$172.6 million over three years to improving First Nations' drinking water nationwide, some of which could potentially be utilized to assist this community.

The Ontario Regional Office may wish to establish a dedicated water management team, consisting of Regional Office and Grassy Narrows personnel, to consistently meet and directly oversee the completion and implementation of the feasibility study.

The Next Steps (Continued)

The Ontario Regional Office may also wish to explore alternative options for well water decontamination, in case renovations to the surface water treatment plant are not completed on schedule.

In addition, it may be a good idea to consider further investment in the Bimose HUB program to assist Grassy Narrows in building long-term capacity. The newly-announced Indigenous Skills and Employment Training Program could potentially support such an effort.

A Video About Grassy Narrows' Story

Let's watch a video about Grassy Narrows' Water Story:

<https://www.youtube.com/watch?v=9E06pWtCHlg>

