Hydroelectric Power and Anishinaabe Diets: What Oral Testimony Suggests About Managing Food (In)Security on Reserve

Samantha Mehltretter, Brittany Luby, and Andrea Bradford

Summary

The arrival of settlers on the Winnipeg River in Northwestern Ontario resulted in drastic changes to the natural system's ecology and the livelihood of First Nations like Niisaachewan Anishinaabe Nation (NAN). Community members emphasize the loss of manomin ("wild rice" in English), a complex carbohydrate, in histories of colonial contact, and bodily and economic decline. Elders at NAN attribute manomin decline specifically to changes to water level patterns in the twentieth century. Listening to Anishinaabe histories inspires new approaches to addressing food (in)security on reserve, encouraging researchers to address declining yields from the water—not just the land.

Mehltretter, Samantha, Brittany Luby, and Andrea Bradford. "Hydroelectric Power and Anishinaabe Diets: What Oral Testimony Suggests About Managing Food (In)security on Reserve." Environment & Society Portal, *Arcadia* (Summer 2020), no. 33. Rachel Carson Center for Environment and Society. https://doi.org/10.5282/rcc/9112.

Print date: 07 November 2026 06:48:59

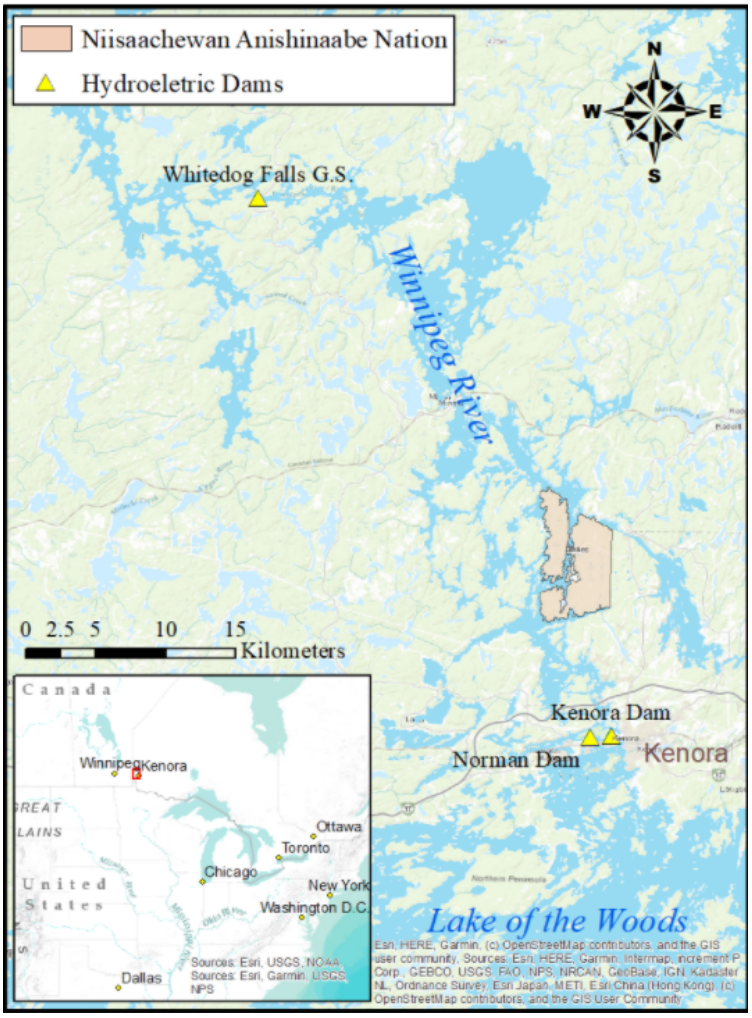


Fig. 1. Map of the hydroelectric dams on the Upper Winnipeg River in Northwestern Ontario, Canada. The Kenora Dam was first installed in 1892, and the Norman Dam in 1893. Both were updated to generating stations in 1906 and 1926, respectively. Whitedog Falls Generating Station (G.S.) was installed 50 kilometers downstream of Kenora in 1958.

Map by Samantha Mehltretter, OpenStreetMap, and contributors.

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License .

In the Northwestern region of what is now Ontario, Canada, lies the outlet of Lake of the Woods (LOW), draining into the now slow-moving waters of the Winnipeg River. In the late 1800s, however, Samuel Benfield Steele described the Winnipeg River as “one of the most difficult in the world” to navigate. Settler-colonists forever changed the system when they harnessed water energy to generate hydroelectric power and stimulate the development of Kenora (see Fig. 1 for location). The first dam on the Winnipeg River was built in 1887 at the outlet of LOW. It was later replaced by the Kenora Dam and Norman Dam. First Nations quickly expressed concerns about the impact of water regulation on aquatic crops. In 1890, Anishinaabe Chief Thomas Lindsay complained,

> Since the Dam was built across the Mouth of the River it is higher and has killed all our Wild Rice

Mehltretter, Samantha, Brittany Luby, and Andrea Bradford. “Hydroelectric Power and Anishinaabe Diets: What Oral Testimony Suggests About Managing Food (In)security on Reserve.” Environment & Society Portal, *Arcadia* (Summer 2020), no. 33. Rachel Carson Center for Environment and Society. https://doi.org/10.5282/rcc/9112.
Print date: 07 November 2026 06:48:59

... a great loss to us (Kinew, 1995).

Canada did not actively consider Anishinaabe concerns about crop yields in 1890 or during the industrial boom that followed World War II. Canada focused on meeting the electrical demands of its settler population. Within Ontario, power demands increased 250 percent between 1945 and 1957 which prompted the Hydro-Electric Power Commission of Ontario (HEPCO) to modify the Winnipeg River to satisfy them. Whitedog Falls Generating Station was completed in 1958. Changes to the river system may have increased prosperity for Canadians generally, but Anishinaabe lifestyles suffered. Related legal settlements have focused on land loss and devaluation. The impact on food security, particularly aquaculture, has yet to be considered.



Fig. 2. Anishinaabe harvesters at work in manomin stands, n.d.

Unknown photographer, n.d.
Courtesy of the MUSE – Lake of the Woods Museum.

Used by permission

The copyright holder reserves, or holds for their own use, all the rights provided by copyright law, such as distribution, performance, and creation of derivative works. https://rightsstatements.org/page/InC/1.0/?language=en .

Well before settlers impinged on the Winnipeg River, the Anishinabeg relied on the river's source of wild rice (henceforth *manomin*), a complex carbohydrate and native cereal, to complement the lean protein in their diet from fish. It was not only a historic staple in Anishinaabe diets and considered essential to winter survival, but also provided a secondary income to First Nations as they engaged in settler markets. Manomin improved economic security on reserve in the late nineteenth and early twentieth centuries. Elders at Niisaachewan Anishinaabe Nation (NAN) estimate that their ancestors harvested five hundred thousand pounds of manomin from nearby fields. Today, oral testimony suggests that contemporary yields have declined by 99 percent. Band

Mehltretter, Samantha, Brittany Luby, and Andrea Bradford. "Hydroelectric Power and Anishinaabe Diets: What Oral Testimony Suggests About Managing Food (In)security on Reserve." Environment & Society Portal, *Arcadia* (Summer 2020), no. 33. Rachel Carson Center for Environment and Society. https://doi.org/10.5282/rcc/9112.
Print date: 07 November 2026 06:48:59

members of NAN who live along the Winnipeg River associate contemporary food insecurity with the historic installation of hydroelectric dams and their continued operation.



Fig. 3. The high-water mark on the river's Precambrian bedrock shoreline on the Winnipeg River.

Photograph by Brittany Luby, 2018.
© Brittany Luby and Niisaachewan Anishinaabe Nation

Used by permission

The copyright holder reserves, or holds for their own use, all the rights provided by copyright law, such as distribution, performance, and creation of derivative works. https://rightsstatements.org/page/InC/1.0/?language=en .

Large impoundments like those installed on the Upper Winnipeg River in the 1900s drastically altered natural water level patterns. These fluvial changes can have detrimental impacts on local ecology, including manomin growth. Elders from NAN are intimately knowledgeable of manomin habitat needs. In 2018, Elder Terry Greene shared with researchers that manomin "is dependent on a fairly low water level beginning in the springtime." If the water level is too high after germination, the light cannot reach the seedling to produce the energy needed to grow to the water's surface. Also in 2018, Elder Clarence Henry described this as "something like drowning out [manomin]." Rapid increases in water levels can also negatively impact manomin before harvest. Elder Danny Strong told researchers, "the water would start rising pretty quick and then they'd [manomin], ... start falling down." Archie Wagamese, another NAN Elder, put it simply: "everything used to grow nice before ... those dams."

Mehltretter, Samantha, Brittany Luby, and Andrea Bradford. "Hydroelectric Power and Anishinaabe Diets: What Oral Testimony Suggests About Managing Food (In)security on Reserve." Environment & Society Portal, *Arcadia* (Summer 2020), no. 33. Rachel Carson Center for Environment and Society. https://doi.org/10.5282/rcc/9112.
Print date: 07 November 2026 06:48:59



Fig. 4. Kenora Powerhouse, a hydroelectric generating station affecting levels on the Winnipeg River. It was first built in 1892, and later converted to a generating station in 1906.

Photograph by Brittany Luby, 2018.

This work is licensed under a Creative Commons Attribution 4.0 International License .

When food insecurity is considered in discussions of fluvial regulation, potential solutions to restore traditional foods like manomin can be explored. Re-establishing ancestral crops for First Nations like NAN is of great importance not only to improve food security but also to improve community health. Shinjini Pal, François Haman, and Michael A. Robidoux examine the relationship between reduced consumption of traditional foods among First Nations in Ontario and widespread obesity and related chronic illnesses like hypertension, heart disease, and diabetes on reserve. Many of the Elders at NAN maintain that diabetes increased as manomin fields declined. Wagamese shared with researchers: "everybody has got the sugar and diabetes ... But, in those days [when we harvested manomin], you never had anything like that." Ancestral foods, like manomin, are nutritionally dense and require expended energy to obtain and process for consumption. In contrast, westernized or market food is often made up of simple sugars and saturated fats that require little work to obtain and ingest. Elder Terry Greene explains that fast-food restaurants have "taken over." Greene believes "that's why a lot of our Native people are ... getting a lot of diabetes." For Elders at NAN, the history of industrial expansion in Canada

Mehltretter, Samantha, Brittany Luby, and Andrea Bradford. "Hydroelectric Power and Anishinaabe Diets: What Oral Testimony Suggests About Managing Food (In)security on Reserve." Environment & Society Portal, *Arcadia* (Summer 2020), no. 33. Rachel Carson Center for Environment and Society. https://doi.org/10.5282/rcc/9112.
Print date: 07 November 2026 06:48:59

is directly linked to the history of disease and crop destruction.

Fig. 5. NAN Knowledge Keeper Terry Greene speaks to University of Guelph Researcher Samantha Mehltretter about what wild rice means to him.

Anishinaabe histories of manomin decline require us to broaden explanations of food insecurity on reserve. Limited discussion of the Anishinabeg harvesting cereal crops (like manomin) in the historical literature and contemporary negotiations may be tied to colonial stereotypes, such as those identified in Sarah Carter's research, that "[t]he Indian was not a natural farmer. He was a born hunter and warrior" or, perhaps, our association of cereal crops—like wheat and barley—with the land. Oral histories from NAN Elders, however, illustrate that water level regulation must be considered in discussions of food insecurity and dietary health on reserves in Canada. This broader perspective provides new ideas for responding to Canadian colonialism (and related losses) from the water.

Arcadia Collection:
Water Histories

Further readings:

- Carter, Sarah. *Lost Harvests: Prairie Indian Reserve Farmers and Government Policy*. Montreal: McGill-Queen's University Press, 1993.
- Crown-Indigenous Relations and Northern Affairs Canada. "The Specific Claims Policy and Process Guide ." Government of Canada, 2010.
- Kinew, Kathi Avery. "Manito Gitigaan: Governing in the Great Spirit's Garden: Wild Rice in Treaty #3." PhD diss., University of Manitoba, 1995.
- Luby, Brittany. *Dammed: The Politics of Loss and Survival in Anishinaabe Territory*. Toronto: York University, 2016.
- Pal, Shinjini, François Haman, and Michael A. Robidoux. "The Costs of Local Food Procurement in Two Northern Indigenous Communities in Canada." *Food and Foodways* 21, no. 2 (2013): 132–52.
- Steele, Samuel Benfield. "Running the Winnipeg River, 1870." *Manitoba Pageant* 17, no. 3 (1972 [1870]): 5.
- Vennum, Thomas, Jr. *Wild Rice and the Ojibway People*. Saint Paul: Minnesota Historical Society Press, 1988.

Related links:

- Manomin Research Project homepage
  https://niche-canada.org/manomin/
- Roberts, Owen. "Wild Rice Comeback Eyed by Indigenous Harvesters." *Guelphtoday.com*, 26 November 2018.
  https://www.guelphtoday.com/columns/urban-cowboy-with-owen-roberts/wild-rice-comeback-eyed-by-indigenous-harvesters-5-photos-1136632
- Wild Rice (The Canadian Encyclopedia article)

Mehltretter, Samantha, Brittany Luby, and Andrea Bradford. "Hydroelectric Power and Anishinaabe Diets: What Oral Testimony Suggests About Managing Food (In)security on Reserve." Environment & Society Portal, *Arcadia* (Summer 2020), no. 33. Rachel Carson Center for Environment and Society. https://doi.org/10.5282/rcc/9112.

Print date: 07 November 2026 06:48:59

https://www.thecanadianencyclopedia.ca/en/article/wild-rice
- Ojibwe (The Canadian Encyclopedia article) https://www.thecanadianencyclopedia.ca/en/article/ojibwa
- "Voices of the Peace." *Arcadia* 2020 http://www.environmentandsociety.org/node/9100
- "Manoomin: The Taming of Wild Rice in the Great Lakes Region." *Arcadia* 2015 https://doi.org/10.5282/rcc/6830

How to cite:

Mehltretter, Samantha, Brittany Luby, and Andrea Bradford. "Hydroelectric Power and Anishinaabe Diets: What Oral Testimony Suggests About Managing Food (In)security on Reserve." Environment & Society Portal, *Arcadia* (Summer 2020), no. 33. Rachel Carson Center for Environment and Society. https://doi.org/10.5282/rcc/9112 .

This work is licensed under a Creative Commons Attribution 4.0 International License .
2020 Samantha Mehltretter, Brittany Luby, and Andrea Bradford
This refers only to the text and does not include any image rights.
Please click on the images to view their individual rights status.

ISSN 2199-3408
Environment & Society Portal, *Arcadia*

Websites linked in image captions:

- https://rightsstatements.org/page/InC/1.0/?language=en
- https://rightsstatements.org/page/InC/1.0/?language=en

About the authors:

Samantha Mehltretter
Samantha Mehltretter is a water resources engineer-in-training with an interest in the social and environmental impacts of engineering. She completed her bachelor's degree in water resources at the University of Guelph in 2015, and subsequently worked in coastal engineering for two years before pursuing graduate research. Samantha is currently working on her doctorate and investigating manomin decline on the Winnipeg River in partnership with Niisaachewan Anishinaabe Nation.
https://orcid.org/0000-0002-7770-4263

Brittany Luby
Brittany Luby is an award-winning researcher who originates from Treaty #3 in what is now known as Northwestern Ontario. Luby seeks to stimulate public discussion of Indigenous issues through her critical and creative work. The Canadian Historical Association has described Luby's research as "innovative in its structure and responsive to Indigenous research methodologies." Her pieces can be found in periodicals such as the *Canadian Bulletin of Medical History*, the

Canadian Journal of Native Studies, and *Prairie Fire*.

Andrea Bradford

Andrea Bradford has been a faculty member in Water Resources Engineering at the University of Guelph since 2002, with expertise in stream and wetland restoration and green infrastructure design for urban water management. Andrea obtained her PhD from Queen's University, focusing her dissertation on the ecohydrology of Minesing Swamp, near Barrie, Ontario. Dr. Bradford has provided expert testimony on the impacts of development on streams and wetlands. She is passionate about advancing management and design approaches to meet the needs of aquatic systems and protect the livelihoods and well-being of the people who depend upon them.

Mehltretter, Samantha, Brittany Luby, and Andrea Bradford. "Hydroelectric Power and Anishinaabe Diets: What Oral Testimony Suggests About Managing Food (In)security on Reserve." Environment & Society Portal, *Arcadia* (Summer 2020), no. 33. Rachel Carson Center for Environment and Society. https://doi.org/10.5282/rcc/9112.
Print date: 07 November 2026 06:48:59