

SEARCH TERM: Health (and synonyms) – 9 projects

Southern Forest Water Futures

- Collaboration with the GWF Co-creation of indigenous **water quality tools and ecosystem health group to conduct modelling studies** at McKenzie Creek to explore the impacts of climate change on hydrological processes and water resources in the Six Nations Community.
- We collaborate with the GWF Co-creation of indigenous **water quality tools and ecosystem health project team members for climate change and hydrologic studies** in the Six Nations Community.

Co-Creation of Indigenous Water Quality Tools

- Completed water collection on the reserve from wells and cisterns
- Finalizing the integrated water and food survey with Six Nations Health services, preparing for co-analysis with hair sampling for 2022

eDNA

- Development and implement of eRNA based wastewater surveillance of SARS-CoV-2 and major Variants of Concern supporting public health authority of Saskatoon, Prince Albert, North Battleford, Waterloo, Peal Region
- Continue to advise Saskatchewan Public Health Authority
- Continue to do public interviews and answer inquiries from public health authorities and the public

FISHNET

- Collaboration with the Food, Environment, Health and Nutrition of Children and Youth (FEHNCY) team, including a data sharing agreement.
- In collaboration Mushkegowuk Council, Fort Albany First Nation, and consultation with the (FEHNCY) team, we developed a survey to collect data on food behaviour and perceptions of adults (household food insecurity, impact of wild-harvested fish on food security, risk perception, changes to food security and fish health over time and related to climate, relationships between fish health and human consumption).
- To estimate arsenic and mercury exposures using a probabilistic model. The model will be used to characterize the risks and benefits of wild-harvested fish in Mushkegowuk Region.
- The main outcomes of this work include i) quantification of inorganic arsenic levels in fish tissue; and ii) communication of exposure assessment knowledge on mercury and arsenic contamination to Mushkegowuk Council and Fort Albany First Nation.
- Findings will support public health strategies that promote traditional food reliance in ways that limit contaminant exposure and will inform measures to improve food security.

FORMBLOOM

- Rashidi H, Baulch H, Gill A, Bharadwaj L, Bradford L. 2021. Monitoring, Managing, and Communicating Risk of Harmful Algal Blooms (HABs) in Recreational Resources across Canada. *Environmental Health Insights* 15: 1-14, doi: 10.1177/11786302211014401.

Geogenic Contamination of Groundwater Resources

- Groundwater sampling at a community supply well near Whitehorse that is contaminated by naturally occurring uranium [Image]

Northern Water Futures

- *Mitigating risks associated with changing fish resources*
 - Develop the conceptual and analytical framework for linking terrestrial changes with fish mercury concentrations
 - Evaluate relationships between water quality and healthy fatty acid concentrations in fish
 - Develop public health screening tool to assess fish consumption risks
 - Develop a model linking environmental change with contaminant exposures and nutrient status using a risk benefit framework
 - Develop and pilot test a risk communication strategy based on results from the Health Messages Survey
 - Examine impact of consumption advisories on food choices and contaminant exposure
 - Develop and pilot test a risk communication strategy based on results from the Health Messages Survey
- Packull-McCormick, S., Swanson, H., Skinner, K., and Laird, B.: Estimating the Impact of Freshwater Fish Harvest Location on Mercury Exposures in Dene Communities of the Northwest Territories, Report prepared for Government of the Northwest Territories, Health and Social Services, 2020
- Ratelle, M., Skinner, K., Laird, M. J., Majowicz, S., Brandow, D., Packull-McCormick, S., Bouchard, M., Dieme, D., Stark, K. D., Henao, J. J. A., Hanning, R., and Laird, B. D: Implementation of human biomonitoring in the Dehcho region of the Northwest Territories, Canada (2016-2017), *Archives of Public Health*, 76, 73, <https://doi.org/10.1186/s13690-018-0318-9>, 2018a
- Ratelle, M., Laird, M., Majowicz, S., Skinner, K., Swanson, H., and Laird, B.: Design of a human biomonitoring community-based project in the Northwest Territories Mackenzie Valley, Canada, to investigate the links between nutrition, contaminants and country foods, *International Journal of Circumpolar Health*, 77:1, <https://doi.org/10.1080/22423982.2018.1510714>, 2018b
- Ratelle, M., Haig, L., Laird, B., and Skinner, K.: Game bird consumption in Dene communities of the Northwest Territories, Canada, *Public Health Nutrition*, 24, 1229-1239, <https://doi.org/10.1017/S1368980021000021>, 2021

Saskatchewan Private Wells

- Online survey captured approximately 200 responses around perceptions, practices, and health associated with private well use

- Baseline understanding of water quality in private wells in Saskatchewan
- Exploration of potential impacts of climate change on water quality in private wells

Water Good to Drink

- Submitting CIMP proposal for continuation of TK-based monitoring of water-related health
- Community-based *all my relations* (indicators) for health-related water status