

NORTHERN HEALTH

2023

Climate Change Accountability Report



northern health
the northern way of caring

NORTHERN HEALTH REGION



We acknowledge with respect and gratitude that this report was produced on the territory of the Lheidli T'enneh First Nation – part of the Dakelh peoples – and that the Northern Health region is shaped by 55 First Nation territories.

Bear by Carla Aubichon Joseph, Prince George, BC. Created for [Northern Health's Commitment to Cultural Safety](#) posters

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OVERVIEW

In 2023, NH emitted 20,985 tonnes of carbon dioxide equivalents (tCO₂e). To meet carbon neutrality obligations, \$525,175 in carbon offsets were purchased. New work to support carbon emission reductions within NH includes optimizing and recommissioning existing buildings, upgrading older and inefficient heating and hot water equipment, and continuing to design new construction projects to LEED Gold certification. In 2023, NH pursued three capital carbon reduction projects along with many more facility energy efficiency projects. Construction progressed to redevelop Mills Memorial Hospital in Terrace and Stuart Lake Hospital in Fort St. James. Both new hospitals will have lower emissions than the hospitals they are replacing and will achieve LEED Gold.

In addition to the above facilities improvements, the report highlights other work underway to help mitigate, and adapt to, the effects of climate change. Some examples include removing anesthetic gases from NH formularies that have significant greenhouse gas impacts and maximizing the use of the organisations electric fleet vehicle. Further sections in the report overview other important actions and progress such as maturing climate leadership and focused staff within the organization, gaining information from, informing, and sharing information relevant to climate and health in Northern BC, and the development of a “Northern Health organizational Climate Change and Sustainability Roadmap” that will provide a cohesive, long-term plan to guide NH in a cross-portfolio approach to climate change adaptation, mitigation, and sustainability efforts.

1.0 2023 GREENHOUSE GAS EMISSIONS

1.1 EMISSIONS SCOPE

Northern Health’s reportable greenhouse gas (GHG) emissions fall into three categories – Scope 1, 2 and 3. Scope 1 emissions are those that physically occur at the location of the asset. Scope 2 emissions are those that occur elsewhere but are directly associated with energy consumption of the asset. Scope 3 emissions are those that are not directly tied to energy consumption of Northern Health but are tied to life cycle emissions of the material consumed by Northern Health. Scope 1, 2 and 3 emissions are considered reportable emissions under the Climate Change Accountability Act and Carbon Neutral Government Regulation.

The breakdown of Northern Health’s emission sources can be seen in the below table.

Scope 1 Direct emissions from sources owned or leased by Northern Health	Scope 2 Indirect emissions from purchased electricity	Scope 3 Other indirect emissions
Building Heating – Natural Gas or propane	Building Heating – Electric	Paper Consumption
Emergency power generation – Diesel or propane	Other electricity use in buildings	
Vehicles powered by fossil fuels or biofuels	Electric vehicles	

1.2 NORTHERN HEALTH EMISSION TARGETS

CleanBC has established ambitious targets for reducing GHG emissions. As of 2023, Northern Health is on track to achieve 2025 CleanBC targets and has identified pathways in partnerships with the Health Authorities to meet future targets with adequate funding.

1.3 2023 EMISSION PROFILE

In 2023, 95% of Northern Health’s GHG emissions were produced from operating our buildings. Mobile emissions from our fleet contributed to 4% and paper consumption contributed 1%.

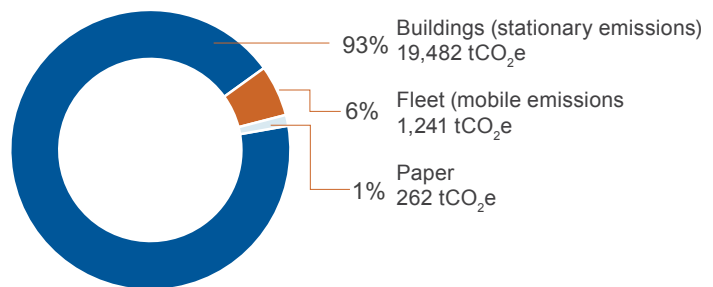


Figure 1. Breakdown of Northern Health GHG emissions

2.0 ACTIONS TAKEN TO MINIMIZE EMISSIONS

2.1 BUILDINGS EMISSIONS

Northern Health continues to replace old, inefficient mechanical building systems with more efficient equipment that reduces GHG emissions. In 2023, we improved the comfort of the nurse's residence in Burns Lake by upgrading the domestic hot water and heating system while simultaneously aiming to reduce the building's emissions by over 30%. In 2023 we also improved some of the domestic hot water distribution by decoupling some loops from the main heating for UHNBC. This will enable future GHG emissions reductions by allowing the UHNBC central heating plant to run at more favorable temperatures. Planning continues into 2024 to deliver many more projects that will improve occupant comfort and building reliability, all while reducing GHG emissions.

Northern Health also focuses on optimizing existing building to ensure they are running as efficiently as possible. Often, relatively small, cost-effective operational changes are all that are needed to help reduce building overall emissions by 10 – 15% and sometimes more.

In 2023, the bulk of the construction on the new Mills Memorial Hospital was completed and construction progressed well for the new Stuart Lake Hospital. Both hospitals were designed to LEED Gold certification. The new Mills Memorial Hospital is designed to emit at least 70% less GHG emissions per square metre compared to the current facility. The new Stuart Lake Hospital is designed to emit almost 50% less GHG emissions per square metre compared to the current facility.



▲ New Stuart Lake Hospital, Fort St. James, taken March 2024.

2.2 FLEET EMISSIONS

In 2023, there was a 38% increase in fleet emissions compared to 2022 due to increased demand on our internal logistics and transportation department. Despite the increase in our fleet emissions, we reduced our reliance on external couriers by roughly 30%. In 2023, we increased our fleet size by 24% to a total of 296 vehicles, one of which is electric. Many of the new vehicles added to the fleet last year were to support the growing logistics and transportation department.

Where possible, staff are encouraged to use virtual options to reduce travel. More staff are aware of our electric vehicle and request to use it when available, thus maximizing its utility.

2.3 PAPER EMISSIONS

In partnership with Provincial Health Services Authority, the health sector continues to work with suppliers and vendors to identify reasonably priced post consumer recycled paper. This, along with looking at ways to improve our printing behaviour has shown a downward trend over the years for paper emissions.



▲ Figure 2. Northern Health paper GHG emission trend.

2.4 OUT OF SCOPE (UNREPORTED) EMISSIONS

Northern Health recognizes that reportable emissions make up a fraction of total healthcare emissions. In 2023, we requested the removal of desflurane, a highly GHG intensive anesthetic gas, from the provincial formularies and swapped in less GHG intensive alternatives.

3.0 PLANS TO CONTINUE REDUCING EMISSIONS

3.1 BUILDINGS EMISSIONS

We will continue to optimize our buildings for energy performance while simultaneously improving quality of care, occupant comfort, air quality, and climate adaptation and resiliency.

For our new builds, we continue to plan and build towards better than LEED Gold baseline for energy performance.



▲ Upgraded AC ductwork inside the Chetwynd General Hospital lab

3.2 FLEET EMISSIONS

Northern Health continues to look for ways to reduce fleet emissions through replacing internal combustion engine vehicles with plug-in hybrid electric or electric vehicles when use case and product availability support. As charging infrastructure at our sites become more readily available, this will support community use of electric fleet vehicles. Our new hospitals are being designed and built to support electric vehicle charging. Northern Health is planning purchases of plug-in hybrid electric vehicles in the coming year.

3.3 PAPER EMISSIONS

New work is planned through the Provincial Health Services Authority to increase sugar sheet utilization across the health authorities. Sugar sheets have 37% lower associated emissions compared to paper made from virgin wood fibre.

3.4 OUT OF SCOPE (UNREPORTED) EMISSIONS

New work being planned through Health Quality BC's Low-Carbon, High-Quality Care Collaborative to provide some Northern Health programs with education and recycling resources for pressurized metered dose inhalers that contain potent GHG gases called hydrofluoroalkanes (HFAs).



4.0 PUBLIC SECTOR CLIMATE LEADERSHIP

Northern Health collaborates with government ministries and other BC Health Authorities on the provincial and federal level to address climate risk to health and the healthcare system. Aligned with Provincial efforts to move towards a climate resilient health system, Northern Health has adopted the internationally recognized World Health Organization Framework for Climate Resilient Health Systems (see Figure 3 below). A health system that is climate resilient is “capable of anticipating, responding to, coping with, recovering from, and adapting to climate-related shocks and stress, to bring about sustained improvements in population health, despite an unstable climate”. This framework demonstrates that addressing climate change is a shared responsibility of the entire health system, with concrete steps taken at all levels and across all portfolios. Reconciliation must also be a key factor in all aspects of this work.



▲ Figure 3. World Health Organization Framework for Climate Resilient Health Systems, 2023.

Over the past year, we have progressed significant work in collaboration with our health sector colleagues under the BC Government Climate Preparedness and Adaptation Strategy (CPAS) (BC Ministry of Environment and Climate Change Strategy, 2021). Under this umbrella strategy, Northern Health has centered its focus this past year on progressing work within five strategic areas:

1. **Organizational Leadership and Capacity:** Strengthen health sector leadership and governance for climate preparedness and adaptation within NH
2. **Workforce Training and Capacity:** Enhance health workforce knowledge, capacity, and resources to anticipate, prevent, prepare for, and respond to climate risks.
3. **Research, Knowledge, Evidence, and Data:** Enhance knowledge, data and evidence for effective and equitable policies, programs, and services to promote population health and health system climate resilience.
4. **Public Preparedness and Awareness:** Empower northern B.C. communities and the public to prepare for and adapt to the health impacts of climate change.
5. **Climate and Health Policy:** Bring climate and health considerations into policies, programs, and services to enhance resilience, responsiveness, and adaptive capacity as related to the Climate Change and Health Vulnerability and Adaptation Assessment (CCHVAA).

4.1 KEY ACTIONS, CHANGES & PROGRESS

Maturing Climate and health focused staff, governance, and operational structures across NH

- Two new full-time roles created: Lead, Climate Change and Health and Climate & Health Scientist
- Establishment of a Strategic Leadership Structure within Population and Public Health.
- Close and active collaboration with Facilities, Indigenous Health, HEMBC, Environmental Health, and Health and Resource Development, including through NH's governance structure for climate and health.
- Close working relationships with other health authority Climate and Health Leads, BC Centre for Disease Control (BCCDC), and MoH Climate Resilience Unit.

Completing NH Climate Change and Health Vulnerability and Adaptation Assessment (CCHVAA)

A CCHVAA assists health authorities in identifying and interpreting information needed to prepare their health systems for the impacts of climate change. The CCHVAA project workplan was completed in June and work is underway to describe the health risks to Northern BC population health from three key priority hazards: extreme heat, cold, and wildfires (incl. wildfire smoke). These hazards were scoped for this first iteration of the assessment and future iterations of the assessment will examine other hazards, such as drought, flooding, erosion etc. We are actively adding value to and closely collaborating with other health authorities on this work to ensure opportunities for research and knowledge exchange are pursued where possible.

Gaining information from, informing, and sharing information relevant to climate and health in Northern BC.

- In 2023, Northern Health the Research Evaluation and Analytics department enabled and funded a collaboration with the University of Northern BC (UNBC) Health Research Institute to conduct a knowledge synthesis to summarize northern BC specific information and data on the three key climate health hazards being analyzed for the NH CCHVAA.
- NH is actively developing relationships with UNBC climate researchers in northern BC to help advance knowledge generation on climate and health in the north and identify local adaptation capacity and opportunities.
- Last year, a Masters of Public Health (MPH) intern and a UBC PhD Candidate worked on foundational aspects of the climate and health portfolio of work at NH to help inform the work of the CCHVAA, with another MPH student beginning in January 2024, all externally funded.
- Five educational opportunities were promoted to NH staff and five NH staff from across the three HSDAs were funded to travel to Vancouver to attend the 2023 Low Carbon, High Quality Care Summit. Emissions reductions solutions from this meeting were brought back to several areas within Northern Health and some were able to be implemented successful immediately.
- Presentations on the climate and health portfolio were delivered at nine different opportunities to internal NH staff audiences, as well as at select external events.

Developing an Organizational Climate Change Sustainability Roadmap

- The Climate Change and Health portfolio of work at NH has grown significantly since 2022. This year will include the development of a “Northern Health organizational Climate Change and Sustainability Roadmap” that will provide a cohesive, long-term plan to guide NH in a cross-portfolio approach to climate change adaptation, mitigation, and sustainability efforts addressing all relevant building blocks of the WHO framework within NH’s purview. Supplementary funding has been secured from the Ministry of Health for this initiative.

4.2 CLIMATE RISK MANAGEMENT

The Ministry of Health is coordinating workplans across health authorities, and as a result, Northern Health has moved forward with an ambitious plan for the current fiscal year, despite low but developing capacity to implement it. Building alliances, collaborating across departments and programs, establishing roles and duties, and filling jobs as needed remain significant tasks. Northern Health is actively exploring additional capacity needs in this portfolio, as well as leveraging support from other teams and external opportunities such as student involvement (e.g., Masters in Public Health, UNBC Health Sciences, internships through the Pacific Institute for Climate Solutions), and via local partners.

Building a climate resilient health system and region requires extensive partnerships and engagement across Northern Health, sectors, and communities. Northern Health's ability to advance climate change work relies heavily on partner interest and capacity. As a result, our climate resilience team's focus for 2024 is to build on the solid foundational work of 2023, develop an organization-wide climate change and sustainability strategy while identifying climate change and health actions we can implement alongside our growing list of partners.



5.0 2023 GHG EMISSIONS AND OFFSET SUMMARY TABLE

5.1 DECLARATION STATEMENT

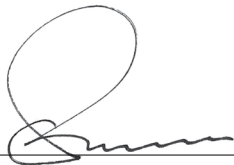
Northern Health's Climate Change Accountability Report for the period January 1, 2023 to December 31, 2023 summarizes our greenhouse gas (GHG) emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2023 to reduce our GHG emissions, and our plans to continue reducing emissions in 2024 and beyond.

5.2 RETIREMENT OF OFFSETS

In accordance with the requirements of the Climate Change Accountability Act and Carbon Neutral Government Regulation, Northern Health (the Organization) is responsible for arranging for the retirement of the offsets obligation reported above for the 2023 calendar year, together with any adjustments reported for past calendar years (if applicable). The Organization hereby agrees that, in exchange for the Ministry of Environment and Climate Change Strategy (the Ministry) ensuring that these offsets are retired on the Organization's behalf, the Organization will pay within 30 days, the associated invoice to be issued by the Ministry in an amount equal to \$25 per tonne of offsets retired on its behalf plus GST.

Northern Health 2023 GHG Emissions and Offsets Summary	
GHG emissions for the period January 1 - December 31, 2023	
Total BioCO ₂	0
Total Emissions (tCO ₂ e)	20,985
Total Offsets (tCO ₂ e)	20,985
Adjustments to Offset Required GHG Emissions Reported in Prior Years	
Total Offsets Adjustment (tCO ₂ e)	22
Grand Total Offsets for the 2023 Reporting Year	
Grand Total Offsets to be Retired for 2023 Reporting Year (tCO ₂ e)	21,007
Offset Investment (\$)	525,175

6.0 EXECUTIVE SIGN-OFF



Signature

May 31, 2024

Date

Ciro Panessa

Name

President and Chief Executive Officer

Title





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