

NORTHERN HEALTH

2022

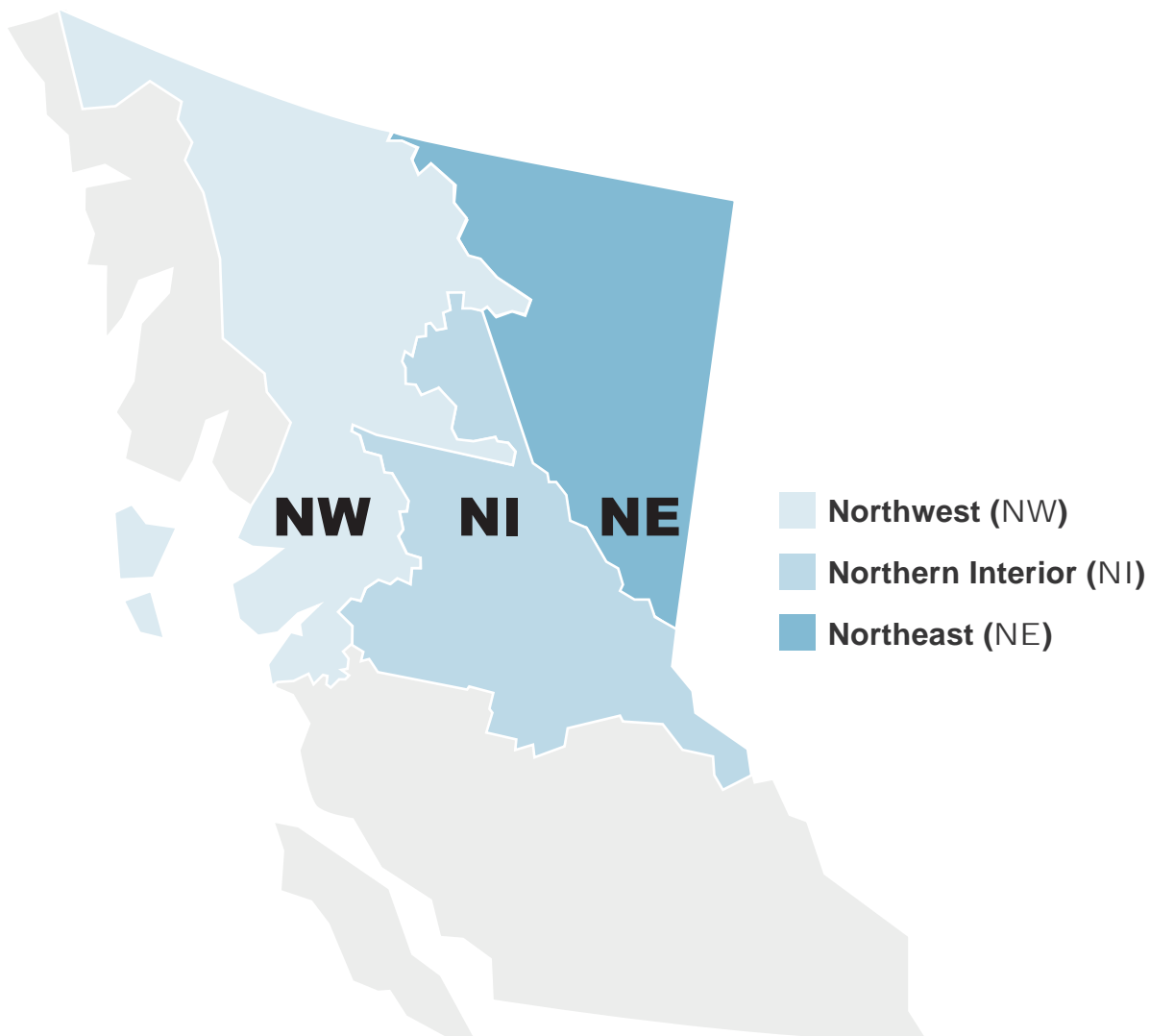
Climate Change Accountability Report



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.



DECLARATION STATEMENT

Northern Health's Climate Change Accountability Report for the period January 1, 2022 to December 31, 2022 summarizes our greenhouse gas (GHG) emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2022 to reduce our GHG emissions, and our plans to continue reducing emissions in 2023 and beyond.

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Cover photo credit: Holly Hughes, Kinbasket Lake.

1.0 EXECUTIVE SUMMARY



In 2022, Northern Health made significant progress toward a more climate-resilient future. The impacts of climate change on human health and the health system are far reaching and well documented. The lessons from the COVID-19 Pandemic, and increased frequency of what used to be once-in-a-generation weather events, have shown that Health Authorities across BC have to be more prepared for, and effective at dealing with, impacts from climate change. Whether it is extreme heat like that seen province-wide during the 2021 heat dome, or severe flooding during the same year in the Lower Mainland – what is sure is that our people and buildings need resilience to face these challenges head on.

The primary purpose of this Climate Change Accountability Report (CCAR) is to report on Northern Health’s actions that reduced carbon emissions from stationary, fleet and paper, and our climate change mitigation and adaptation plans going forward. In 2022, Northern Health released 22,435 tonnes of greenhouse gas (GHG) emissions from our buildings, paper, and fleet. This was a 2.4% increase from 2021. We will pay \$560,875 in carbon offsets to meet our carbon neutrality obligations. In 2022, three major capital projects and three minor retrofit projects were completed that reduced carbon emissions by 218 tonnes. Additionally, seven operational improvement projects were initiated that have the potential to save an additional 117 tonnes.

In addition to the actions above, Northern Health continues to investigate innovative strategies to help mitigate, and adapt to, the effects of climate change. Whether by working with industry stakeholders on policy proposals, researching new technologies with great savings potential, or bringing additional knowledge and resources to the team that will help plan for the extreme and lasting impacts of climate change, our organization is committed to the improvements necessary to help prepare our people and buildings to be able to weather these impacts. We are pleased to present our 2022 CCAR and look forward to building a more climate-resilient health system in Northern BC.

A handwritten signature in black ink that reads "Cathy Ulrich". The signature is written in a cursive, flowing style.

Cathy Ulrich
President and CEO, Northern Health

2.0 GREENHOUSE GAS EMISSIONS

Greenhouse gasses (GHGs) are molecules of various types present in Earth’s atmosphere that have the ability to trap heat. During the course of daily operations at Northern Health, our buildings, corporate fleet, and staff activities necessitate the consumption of energy and goods that directly or indirectly emit GHGs into the atmosphere. Direct emissions are primarily from the combustion of fossil fuels in buildings and fleet vehicles; indirect emissions would be from using paper sourced from a mill that emits GHGs in the manufacturing process.

In order to measure Northern Health’s impact on total atmospheric GHGs, these gasses are converted into equivalent quantities of carbon dioxide – the most common greenhouse gas – and reported in equivalent metric tonnes of carbon dioxide (tCO₂e). Table 1 below shows Northern Health’s total calculated 2022 GHG emissions from stationary (buildings), mobile (fleet), and paper sources. Our total GHG emissions for 2022 was 22,435 tCO₂e. Stationary emissions accounted for 95%, mobile emissions 4%, and paper 1%.

Table 1. Northern Health 2022 Carbon Emissions

t CO ₂ e, GHG, All		
	2022	%
Northern Health Authority		
Stationary energy use	21,244	95%
Mobile energy use	901	4%
Office paper	290	1%
Total	22,435	



Photo location: Barkerville, BC.

3.0 RETIREMENT OF OFFSETS

In accordance with the requirements of the *Climate Change Accountability Act* [S. 6(1)] (Queen’s Printer, 2007) and *Carbon Neutral Government Regulation* [S. 7(1)] (Queen’s Printer, 2008), Northern Health (the Organization) is responsible for arranging for the retirement of the offsets obligation reported above for the 2022 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.

Table 2 below outlines total offsets required for Northern Health to meet legislated carbon neutrality requirements.

Table 2. NH 2022 GHG EMISSIONS & OFFSET SUMMARY

Northern Health 2022 Reporting Year GHG Emissions and Offset Summary		
Total emissions	22,470	tCO ₂ e
Total bioCO ₂	35	tCO ₂ e
Total offsets	22,435	tCO ₂ e
Offsets adjustment	0	tCO ₂ e
Grand total offset to be retired for the 2022 reporting year	22,435	tCO ₂ e
Offset investment (\$25 per tCO₂e + GST)		\$560,875

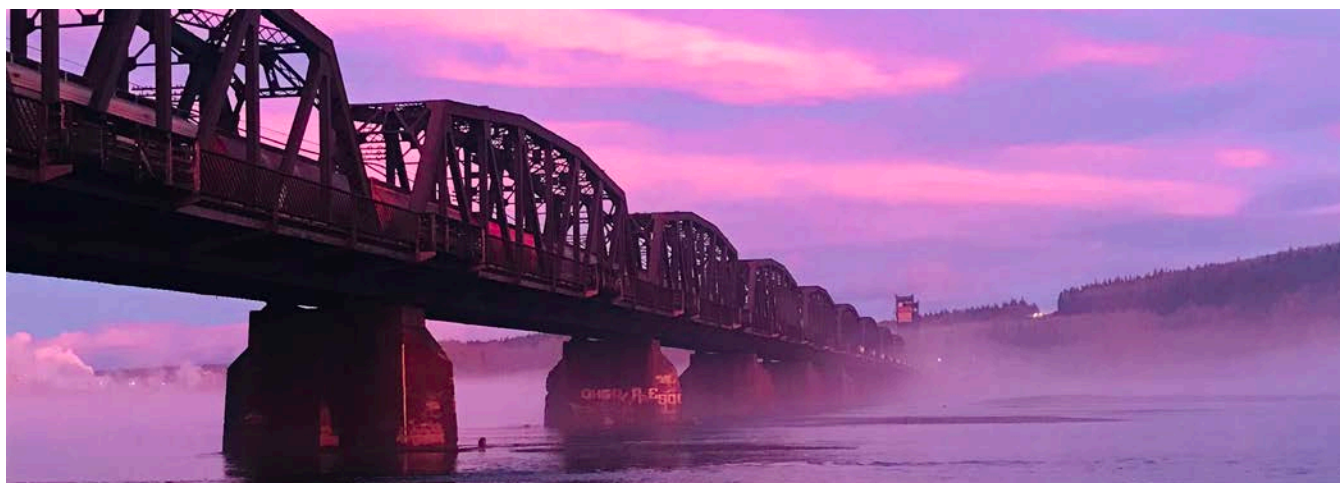


Photo credit: Heather Nelson, Prince George.

4.0 EMISSIONS REDUCTION: ACTIONS & PLANS

4.1 COMMITMENT

In order to achieve our stated emissions reduction goals, Northern Health (NH) has dedicated resources to the Energy & Environmental Sustainability (E&ES) team. Its members work to meet governmental directives on climate change by participating in the Carbon Neutral Capital Program (CNCP), a program that provides specific funding for all Public Sector Organizations for major capital projects that are proven to reduce emissions. In addition, the E&ES team works in a multi-disciplinary fashion with other NH departments – Finance, Capital Planning, Facilities Maintenance, People and Public Health and others as required – to coordinate activities required to complete carbon reduction projects and report on our results through documents like our Strategic Energy Management Plan (SEMP) and this CCAR. Northern Health is aided in this effort by organizations such as BC Hydro and FortisBC, as they provide specific funding for staffing the E&ES Team.

4.2 SITUATIONAL ANALYSIS

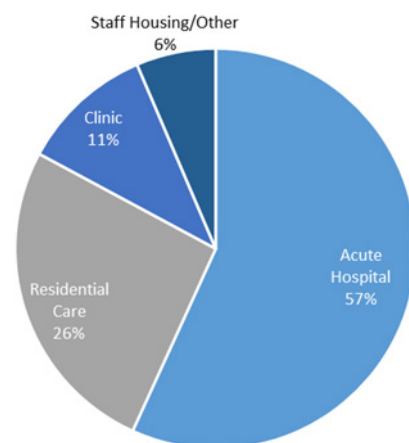
Our organization is made up of approximately 7,000 health care professionals and support staff that provide care for the 300,000+ people in the NH region. The NH region makes up almost two-thirds of BC’s land mass and is home approximately 55 First Nations and Chartered Métis Communities.

Northern Health staff serve the population of the region through various building types as seen in the Table 3 and Figure 1. The largest emissions reduction potential exists in our acute hospitals and residential care facilities as they comprise over 80% of total gross floor operated by NH.

Table 3. NH Facility Type and Size

Building type	Count	Area (m ²)
Acute hospital	17	187,063
Residential care	28	85,787
Clinic	32	35,318
Staff housing/ other	55	21,145
Total	132	329,313

Figure 1. Facility Type by Percentage



4.3 EMISSIONS REDUCTION ACTIONS & PLANS

The primary sources of emissions for Northern Health come from stationary sources – i.e. buildings – which consume energy and materials that have an associated carbon footprint; our fleet, which service those buildings, staff and patients that are powered primarily by gasoline and diesel, and one electric vehicle; and finally from paper materials consumption, which has an associated carbon footprint in the production process. Below is a high-level summary of our emissions reduction action and plans in these categories.

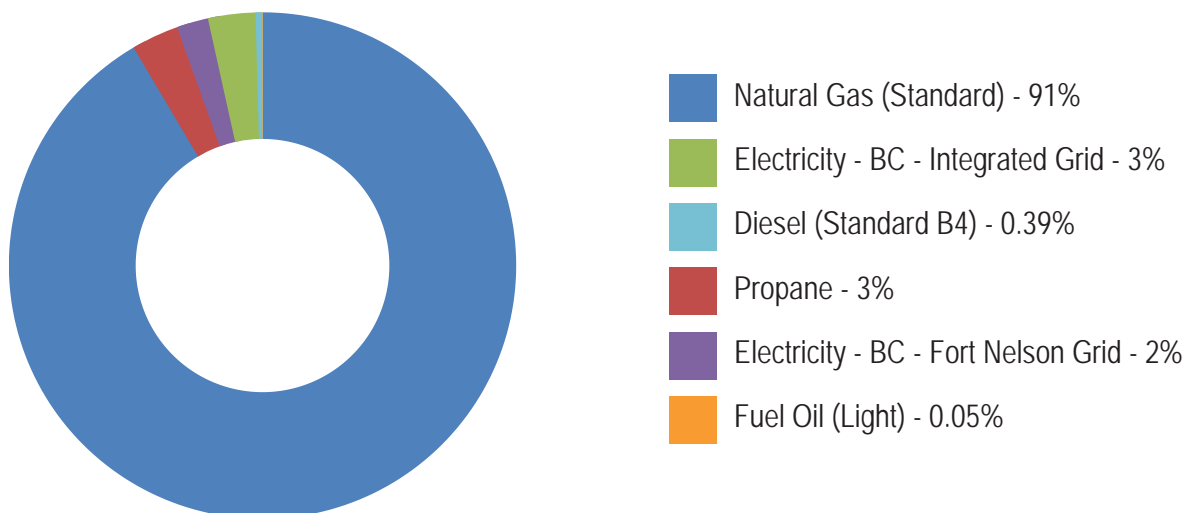
4.3.1 Stationary Sources: Buildings

As noted in Table 1 above, stationary sources account for 95% of Northern Health’s total GHG emissions, therefore our the greatest return in emissions reduction planning and actions come from this sector.

Table 4: Emissions by fuel type

Annual comparison by site - Stationary fuels		
	GJ 2022	t c02e, GHG, All 2022
Northern Health Authority		
Diesel (Standard B4)	1,202	83.2
Fuel Oil (Light)	143	9.84
Natural Gas (Standard)	389,495	19,415
Propane	11,259	687
Electricity - BC - Fort Nelson Grid	2,785	376
Electricity - BC - Integrated Grid	210,846	673

Figure 2: Emissions by fuel type



Drilling down further, we see from Table 4 and Figure 2 that natural gas accounts for 91% of CO2 emissions from stationary sources, therefore the E&ES team focuses much of its attention on analyzing and proposing emissions reduction strategies for these sites.

4.3.1.1 Actions

In 2022, Northern Health undertook stationary emissions reduction action in four main categories: capital retrofits, new construction, operational improvements and behavioural change initiatives.

Capital

In terms of capital retrofits, Table 5 below highlights project thermal savings and associated emissions reduction. Three of these projects received capital funding through the CNCP program discussed.

Table 5: 2022 Capital Project List

Site name	Facility type	Description	Thermal savings (GJ)	t CO2e, GHG
<i>COMPLETED</i>				
Gateway Lodge/Rainbow Care	Care facility	Hydronic additives	796	38
Rainbow Lodge/Parkside Care	Care facility	Pipe insulation	361	18
Fort Nelson General Hospital	Hospital	Improve boiler efficiency and provide heat recovery	2,248	112
Chetwynd Hospital/ Dunrovin Park Lodge	Hospital	Chetwynd - Condensing boiler replacement	967	48
		Dunrovin - Condensing boilers (heating and DHW)		
GR Baker	Hospital	HE Convection Oven	35	2
Total			4,380	218
<i>INITIATED</i>				
Fraser Lake Centre	Clinic	Controls	389	19
Bulkley Lodge	Care Facility	Controls	202	10
Prince Rupert Regional Hospital	Hospital	DHW upgrade	316	16
Total			907	45

New Construction

Northern Health currently has three hospitals in various phases of construction that are following the MoH Chapter 11 LEED Gold Certification guideline for new construction – Dawson Creek General Hospital in Dawson Creek, Mills Memorial Hospital in Terrace, and Stuart Lake Hospital in Fort St. James. As was noted in previous CCARs, Northern Health continues to collaborate with the Ministry of Health (MoH) and other health authorities on developing Health Capital Policy Manual chapters 11 (Environmental Sustainability and LEED Gold Certification) and chapter 12 (Carbon Neutral and Climate Resilient Health Care Facilities) which address requirements for new healthcare construction.

To meet the specific energy and emissions reduction requirements for LEED Gold, these sites have some commonalities in system selection – we are generally seeing heat pump technology with heat recovery on air exhaust streams, condensing boilers for peaking loads, decoupled DHW loops, high efficiency motors and a plethora of DDC controls. The LEED Gold guideline is a good starting point for architects and engineers to achieve savings, though sometimes NH is looking to go a little deeper.

In February 2022, Northern Health began construction of the new Stuart Lake Hospital in Fort St. James. The Design Build Agreement stipulated a specific “Energy Guarantee”, which challenged architects and engineers to construct a building that would meet a thermal energy demand intensity of 412 ekWh/m², a more aggressive energy target than is demanded by achieving LEED Gold Building Design & Construction for healthcare. The final design incorporated heat pumps, condensing boilers and heat recovery on the heating and domestic hot water loops. This hybrid system created gas savings of 7,285 GJ and 359 tonnes CO₂e, or -72% and -69% respectively, over the ASHRAE 90.1 baseline building.



Mills Memorial Hospital Replacement project.

Operational Improvements

In terms of operational improvements, Northern Health initiated six retro-commissioning projects, seen in Table 6 below, that addressed needs in the areas of heating & cooling set point strategies, loop temperature optimization, actuator operation, damper operation, heating/cooling plant optimization, air-handler optimization and others. These projects have the benefit of providing Northern Health with detailed insight into how our sites can be run more efficiently and generally without the requirement of major capital expense. Many of these projects come with additional carbon emissions savings as these buildings are using heating and cooling resources much more efficiently.

Table 6: 2022 Operational Improvement Projects

Site name	Facility type	Description	Estimated thermal savings	t CO2e, GHG
<i>INITIATED</i>				
Dunrovin Park Lodge	Care facility	Retro-commissioning - C.Opt	405	20
Chetwynd Hospital	Hospital	Retro-commissioning - C.Opt	133	7
Fort Nelson Hospital	Hospital	Retro-commissioning - C.Opt	380	19
Terraceview Lodge	Care facility	Retro-commissioning - C.Opt	352	18
Gateway Lodge	Care facility	Retro-commissioning - C.Opt	1,000	50
Fraser Lake Centre	Clinic	Retro-commissioning	75	4
Saint John Hospital	Hospital	Heat pump optimization	287	14
Total			2,345	117

Behavioural Change Programs

In 2022, Northern Health worked with the utility led (BC Hydro & FortisBC) Energy Wise Network to initiate a training program for building operators. We recognize that to ensure long-term operational effectiveness of our building systems, and to maintain energy and carbon reductions for newly installed equipment, we need to also focus on training staff. This year we ran two workshops – one fall and one spring session – that focused on operational efficiencies and improvements in HVAC systems for healthcare facilities.

Training was completed in partnership with Fraser Health and BC Care Providers' Association. Overall Northern Health turnout was high at 73 participants. Staff were able to compete for post workshop prizes by completing an Action Tracking Checklist, which challenged them to complete a thorough walk-through of their sites and identify operational improvement opportunities that were outlined during training.

Table 7: Behavioural Change Program - Building Operator Training

Site name	Facility type	Description	Participants
<i>IN-PROGRESS</i>			
Multiple sites	Hospital, care facilities	Building operator training - DDC & controls, mechanical & thermal savings opportunities	73

4.3.1.2 Plans

Northern Health's energy and emissions reduction planning process follows an analytical approach, where sites are evaluated on factors like: energy use intensity, age of equipment, facility age and replacement plans, existing capital plan timelines, complaints from facilities maintenance, emergency replacement needs, among others. The result of these analyses lead the E&ES team to initiate deeper energy studies in order to identify and implement recommended capital projects as well as accessing utility incentives.



Photo credit: Kate Ames, Bulkley River Suspension Bridge.

In 2022, the E&ES team initiated 8 energy studies of which six were completed, two are ongoing. These studies allow the cycle of energy savings and emissions reduction to continue, giving us insight into opportunities at other sites. In most cases, energy conservation measures identified that have paybacks within an acceptable time frame, and/or meet specific site needs, will be implemented within one to three years. A list of these studies can be found in Table 8 below:

Table 8: 2022 Energy Studies

Site name	Facility type	Description	Potential thermal savings (GJ)	t CO ₂ e, GHG
<i>COMPLETED</i>				
Bulkley Valley Hospital	Hospital	Energy study	2,000	100
Kitimat Hospital and Health Centre	Hospital	Energy study	3,000	150
Stikine Health Centre	Clinic	Energy study	1,000	50
Terraceview Lodge	Care facility	Energy study	1,480	74
Burns Lake Hospital - Nurses Residence	Residential	Energy study	158	8
Stewart Health Centre	Clinic	Energy study	508	31
Total			8,146	412
<i>INITIATED</i>				
University Hospital of Northern British Columbia	Hospital	Phase 2 Energy study - Condensing boilers/heat pump	4,482	224
Wrinch Memorial Hospital	Hospital	Energy study	N/A	N/A
Total			4,482	224

In addition to these planned energy studies, the E&ES team is also investigating new and innovative ways to achieve Clean BC emissions reduction targets through new technologies. We are currently looking at:

- Ozone/Hydroxyl Laundry Systems – laundry systems that operate best with cold water, allowing up to 85% reduction of hot water use
- Thermal Gradient Headers – New piping strategy that interconnects all heating and cooling systems in a building to maximize cascading heating/cooling effects to improve efficiencies
- Natural Gas absorption heat pumps (GAHPs) – Gas fired heat pumps that provide efficiencies of 120%

No projects have been approved to date with these technologies.

4.3.2 Mobile Sources: Vehicle Fleet

Northern Health’s fleet composition remained largely unchanged year-over-year, with a total of 238 vehicles. Approximately 96% of these are passenger cars, trucks and vans, and around 4% are utility vehicles – loaders and tractors, for example. NH has one electric passenger vehicle, stationed in Prince George. There were no acquisitions of electric vehicles or hybrid vehicles in 2022.

Emissions from the NH fleet make up 4% of the annual total, as noted in Section 2. Total consumption of diesel has been trending down over the past three years, while total gasoline consumption has been trending higher, as seen in Table 9 below. Overall three year GHG emissions are rising from our fleet as we are seeing a return to normal traveling operations post-COVID.

Table 9: Annual comparison by site - Mobile fuels

	litres			t CO2e, GHG All		
	2020	2021	2022	2020	2021	2022
Northern Health Authority						
Diesel mobile use	30,912	23,950	21,396	81.9	63.0	56.3
Gasoline mobile use	261,958	315,659	383,657	615	740	899

4.3.2.1 Actions

The E&ES team has been working with NH Fleet Services on a coordinated approach to fleet decarbonization. Currently, these teams are looking at actions around feasibility of EVs in the Northern environment and overall logistics of electrification before any significant steps are taken. In 2022, some progress was made in analyzing Northern Health’s overall readiness for fleet electrification and is outlined below.

Long Range EV Test

In June 2022, the E&ES team took a long-range trip with our Chevy Bolt, travelling from Prince George to Whistler and back – roughly 630 km and a 7.5 hour travel time excluding refreshment stops. This trip was to simulate driving distances often encountered traveling to more remote NH sites. While the EV performed very well on the road, the extra charging time along with refreshment stops ended up making a one way trip approximately 12 hours. This was done in summer with little use of air conditioning or other car resources. We can forecast that winter driving, where heating is necessary and slower driving conditions from snow, that long-range trips are currently not feasible with electric vehicles due to expected trip times.

Market Analysis – EV Availability

At this time, there are significant logistical and supply chain barriers to widespread adoption of electric vehicles (EVs) and/or plug-in hybrid electric vehicles (PHEVs) in the north. Research into availability from local suppliers is resulting in wait times of two to three years for most models. Also, the availability of mechanical expertise for EVs is lacking in many areas of the north, making a large scale switch to EVs not currently feasible.

Public Sector Fleet Community of Practice

The E&ES team is a participant in the Public Sector Fleet Community of Practice, a series led by the provincial Climate Action Secretariat that brings together all public sector organizations (PSOs) to discuss fleet electrification programs, guidelines, and upcoming regulation changes. The Community of Practice is an excellent means of keeping up-to-date on current fleet trends and programs available for PSOs.

4.3.2.2 Plans

Northern Health is committed to keeping an open mind on fleet electrification and will continue to participate in government and industry led initiatives, looking for opportunities to learn. Northern Health will thus be EV transition ready when market conditions create an environment where the organizations needs can be met by readily available technology.



Photo credit: Alanna Wilson, Tow Hill, Haida Gwaii

4.3.3 Paper Consumption

4.3.3.1 Actions

Approximately 1% of Northern Health’s annual carbon emissions comes from paper consumption. In 2022, we saw a slight increase in the total amount of recycled paper purchased, though overall paper consumption was down YoY which has resulted in a 6% reduction in carbon emissions.

Table 10: Emissions from Paper Consumption

	Units			t CO2e, GHG All		
	2020	2021	2022	2020	2021	2022
Northern Health Authority						
8.5 X 11 paper	49,807	46,337	43,679	317	294	277
8.5 X 14 paper	507	920	232	4	7.05	2.61
11 x 17 paper	619	576	818	8	7.34	10.3

4.3.3.2 Plans

Northern Health is currently purchasing recycled paper at volumes that make the most sense for the organization.



Photo credit: Kate Ames, Lheidli T’enneh Memorial Park.

4.4 OTHER SUSTAINABILITY ACTIONS & PLANS

4.4.1 Actions

Sharps Recycling – Update

The sharps recycling program that was implemented in 2021 continued for 2022. This program focuses on replacing disposable sharps containers with reusable ones, which is having a dramatic effect on total disposed plastics. From the period of Dec 2021 to Nov 2022, Northern Health diverted 57,787 kg of plastic from the landfill.



4.4.2 Plans

PPE Recycling Program

Conversations around strategies for reducing waste through recycling of protective personal equipment (PPE) have been ongoing amongst BC's health authorities for the past couple of years. A PPE recycling program would see single-use items such as masks, isolation gowns, PP5 and PE fabrics, PP5 bottles, and sterile wrapping put in recycling bins and sent to a facility for sterilization and processing.

In 2022, Northern Health provided input to the PPE recycling working group and also facility data to be included in the development of a PPE recycling program pilot. In December of 2022, after completion of the pilot, Staples Inc. was awarded the contract for the program rollout. Eighteen Northern Health sites, primarily acute care, were indicated as participants in the program, along with sites from all Health Authorities across BC. The recycling program will focus primarily on masks for the first phase, which is expected to rollout in earnest in 2023.

Anesthetic Gases

In 2022, the E&ES team learned that other Health Authorities were engaged in a study on the potential to reduce GHG emissions through analyzing and taking actions on anesthetic gas use. In hospital emergency and operating rooms there is generally a dedicated exhaust for any anesthetic gas used for surgeries and these gases are vented directly to atmosphere. There is a potential for hospitals to switch their preferred anesthetic gas over to one with lower global warming potential (GWP). The pilot report is expected sometime in 2023 and if results are good the E&ES team will work with clinical stakeholders to determine if any of our sites might be good candidates for this type of sustainability project.

Sustainable Procurement

Northern Health has been working with sustainability leads from Fraser Health (FH), Interior Health (IH), Vancouver Island Health Authority (VIHA), and Provincial Health Services Authority (PHSA) on strategies to procure materials more sustainably. Currently, 80% of healthcare emissions come from supply chain, so looking at sourcing these materials from sustainable sources can have a meaningful impact on the sector's overall emissions portfolio. These discussions are still in early days and in more of a strategic direction setting currently.

UHNBC Green Working Group

Northern Health will continue to be involved in the BC Hydro Energy Wise Network and this year will look to re-engage the lapsed UHNBC Green Working Group. Plans are to engage clinical staff to help implement sustainability initiatives at our largest hospital – UHNBC in Prince George. These initiatives might include reducing carbon emissions through a Turn-it-Down campaign focusing on high-energy equipment; management of anesthetic and inhaler gas use; and reducing overall waste streams from perioperative care.



Photo credit: Erin Pichurski, Tumbler Ridge

5.0 PUBLIC 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. Congruent with provincial priorities, the focus in past years was primarily on emergency preparedness and response, and carbon reduction within NH facilities. However, in recent years there has been a heightened focus on health system resiliency and climate preparedness and adaptation. Over the past year we have aligned our climate change and health efforts 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 is progressing work on seven broad areas of focus, including:

- **Organizational Leadership and Capacity:** Initiate and develop a Climate Resilience program within Northern Health.
- **Workforce Knowledge and Capacity:** Build staff capacity and knowledge in climate preparedness and adaptation.
- **Governance:** Identify and establish governance structures to guide our organization's climate actions.
- **Reporting and Accountability:** Support reporting and contribute to key performance indicators to track progress of CPAS actions.
- **Vulnerability and Adaptation Assessment:** Co-develop (with Ministry and other health authorities) workplans and capacity for climate and health vulnerability and adaptation assessments.
- **Public Health Communications and Awareness:** Develop and implement a knowledge translation and communications plan related to mitigation, adaptation and protection of population and public health from climate-related health risks.
- **Cross-sectoral collaboration and engagement on innovative, evidence-based solutions grounded in cultural safety and health equity:** Build collaborative relationships/ partnerships across and beyond health systems to advance CPAS goals.

Northern Health's work under the 2022-23 CPAS has included but was not limited to the following: the establishment of a population and public health climate resilience team; the development and implementation of a CPAS workplan with collaboration with internal partners, health authorities, and the Ministry of Health; and the establishment of a climate change and health lead role within population and public health. Ongoing work of the population and public health climate resilience team includes a Climate Change and Health Vulnerability and Adaptation Assessment which will inform long-term monitoring, mitigation, resilience, and adaptation plans.

5.1 CLIMATE RISK MANAGEMENT

The Ministry of Health is coordinating workplans across health authorities and as a result, Northern Health has a very ambitious plan for this current fiscal year with limited established capacity to support this work. There is considerable work ahead to build partnerships, work across departments and programs, establish roles and responsibilities, and fill positions as appropriate. Northern Health is actively exploring further capacity needs in this portfolio as well as drawing on support other teams can provide along with student involvement (e.g., Masters in Public Health or UNBC Health Sciences) and other partners.

Building a climate resilient health system and region is work that extends well beyond the health system and will rely heavily on partnership and collaboration across Northern Health, sectors, and communities. Northern Health's ability to advance climate change work will rely heavily on partner interest and capacity, as a result, the Northern Health climate resilience team's focus for 2023/24 is primarily on laying a solid foundation for the work to proceed in a good way while identifying climate change and health actions we can implement while alongside this work, and with the intent of weaving this into future work plans that will be more focused on completing work to develop a resilient health system.

5.2 NORTHERN HEALTH IS ENGAGED ON AN ONGOING BASIS IN THE FOLLOWING CLIMATE ACTION TABLES:

- Northeast Climate Resilience Network
- Five air quality improvement roundtables across the Northern Health Region
- Climate Resilience Guidelines for Health Facility Planning/Design
- Provincial Environmental Technical Team (PETT)
- Community Energy Association's Northern BC Climate Action Network (NorthCAN)
- Environment, Community, Health Observatory Network (UNBC-NH Partnership; ongoing)
- Environmental Health Surveillance Working Group
- Health Authority Climate Change Council
- BC Health and Smoke Exposure Committee (BC HASE)
- BC Health Effects of Analogous Temperatures Committee (BC HEAT)

5.3 NH CLIMATE ADAPTATION AND RESILIENCE WORK TO DATE INCLUDES THE FOLLOWING KEY ACTIONS:

- Development of Climate Preparedness and Adaptation Strategy workplan
- Establishment of Population and Public Health (PPH) Climate Resilience Team
- Established a full-time role titled 'Lead, Health and Climate Change' to oversee PPH's contributions to Northern Health's climate change resilience work
- Collaboration and coordination with HEMBC and other PPH teams on seasonal readiness and emergency preparedness
- Active recruitment of interns or practicum students to work on climate change portfolio within Northern Health
- Collaborated with UNBC on Health Promotion student projects, including:
 - Heat Response Strategies for Rural and Remote Communities: implemented a pilot survey with northern municipalities to assess community wildfire and extreme heat preparedness planning (2022)
 - A review of best practices regarding online website climate change communication by health organizations (2022)
- UNBC research seed grant – collaborative effort between Northern Health and PHSA – focusing on climate change adaptation in Northern BC communities.



Photo credit: Tanya Adler, Fort St. John.

5.4 SUCCESS STORIES

Food security is a key determinant of human health to which climate change poses serious risk. In rural remote and Indigenous communities, access to affordable, acceptable, and culturally significant foods has been impacted in unique ways by the COVID-19 pandemic, climate change and climate-related events. In early 2022, Northern Health, in collaboration with the First Nations Health Authority, launched an annual Rural, Remote and Indigenous Food Action Grant cycle. Supported projects that build toward community food security and Indigenous food sovereignty can positively impact community health and wellbeing and can help communities mitigate and adapt to the effects of climate change through a more self-determined food system. Six projects across the Northern Health region were awarded grants in 2022 to fund their food security and Indigenous food sovereignty projects.

For more information about the funded projects and impacts, see here [Rural, Remote, and Indigenous Food Action Grant open for applications | Stories \(northernhealth.ca\)](#).

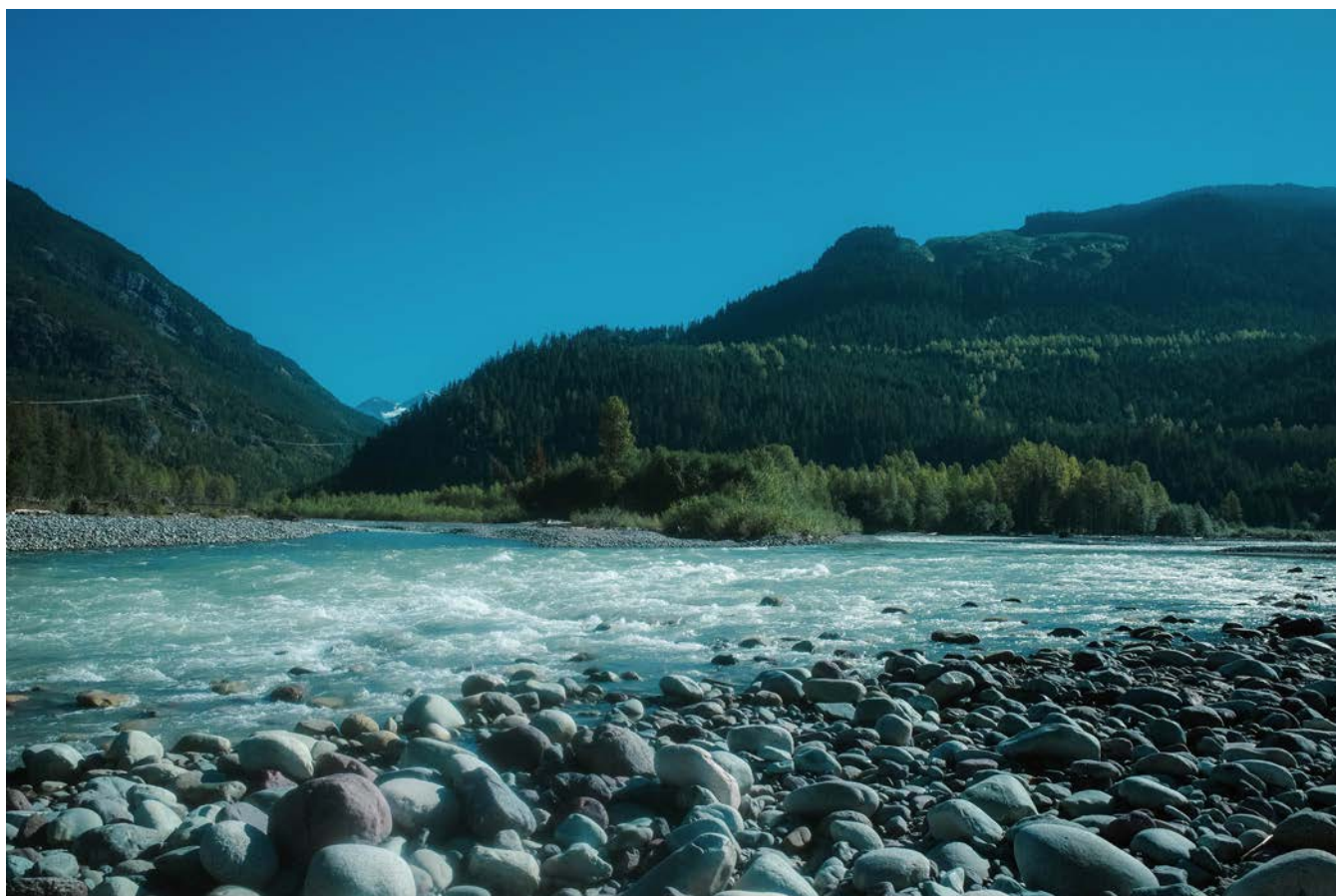


Photo credit: Varenka Kim, Terrace River.

RESOURCES

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