



William Gagnon

williamgagnon.ca

**BEng.,
Cornell Fellow**

LEED AP BD+C,
LEED AP ND, LFA
MSc Candidate McGill 2023

In August 2023, I had to evacuate my house and my community because of a forest fire.

I believe that the health voice is the strongest motivator for people to take action on the climate crisis.

Decarbonizing healthcare is the best use of my time & energy.

> I identify as part of the 2SLGBTQAI+ community.

> Cycling, cross-country skiing, swimming, yoga, non-fiction, climate podcasts, forests, cooking, Swedish baking, Nordic crime noir TV series.

Highlights

English	●●●●
French	●●●●
Spanish	●●○○
German	●○○○
Swedish	●○○○
Norwegian	●○○○

- **Bachelor of Building Engineering** (Concordia University, 119 credits);
- **Master of Science, Bioresource Engineering** (McGill University 2023, 45 credits)
- **Certificate of Sustainable Carbon Management** (Université du Québec à Chicoutimi) (15 credits);
- **Climate Fellowship** (Cornell University, New York) (~15 credits)
- **Leadership, Organizing & Action : Leading Change** (Harvard University, 2022)
- 3 professional accreditations (LEED AP BD+C, LEED AP ND, LFA)
- **Keywords** : engineering, implementation, decarbonization, healthcare, healthcare systems decarbonization, climate advocacy, strategy, community-building, capacity building.

Médecins Sans Frontières (Doctors Without Borders)

► Energy Transition Advisor, Climate Smart (TIC, Transformational Investment Capacity)

September 2022 - Present, Yellowknife NT. Intersectional role, International office.

“The primary responsibility of the Energy Transition Advisor is to provide guidance on: strategic energy management, energy efficiency and conservation practices, energy and carbon reduction analysis and modeling, leading technology and behavioural change solutions and energy transition business cases.” Field work in Sierra Leone, Uganda, South Sudan. I understood that decarbonization cannot come at the cost of safety and security during civil unrest in South Sudan.

Government of Northwest Territories

► Climate Change Strategic Lead, Department of Infrastructure

July 2021 - April 2022, Yellowknife NT

Provide technical and policy advice on climate mitigation and adaptation for all infrastructure in Northwest Territories including but not limited to highways, ice roads, buildings, airports, energy plants, and others. Leading decarbonization efforts in the *2030 Energy Strategy*, the *Climate Change Strategic Framework* and the *2040 Transportation Strategy* while dealing with thawing permafrost, heatwaves, wildfires, floods, and their impacts on infrastructure.

My resignation letter was [shared with the media](#).

Canada Mortgage and Housing Corporation

► Innovation Specialist, Corporate Innovation

October 2020 - June 2021, Yellowknife NT (National)

Provided expertise on buildings resilience to climate impacts, and mitigation scenarios. Positioned CMHC as a change agent through its participation in global innovation workshops. Building code reform to achieve housing affordability and climate goals simultaneously. Led innovation processes. Design, plan, and coordinate research and funding programs, and partnerships, including the *Housing Supply Challenge* for the 3 Territories.

Freelancer / Sustainable Development Specialist, Northern Climate Mitigation & Adaptation Expert

June 2019 – Present (Canada, Northern British Columbia, and Sweden)

- **Research: Thawing permafrost and its impacts on infrastructure (Malmö & Stockholm, Sweden)**
Research project for *White Arkitekter*, one of the largest architecture and design firms in Scandinavia, with offices in Sweden, Norway, Denmark and the UK. Immediate and long-term impacts, and mitigation strategies for thawing permafrost and its impacts on roads, buildings, and infrastructure.
- **Preliminary design: net-zero Elders Village for Nuxalk Nation (Nuxalk Territory, Bella Coola BC)**
In partnership with NWT architect Christopher McQueen Clarke, (Łutsel K'e Dene First Nation). Sustainability strategies to achieve high energy and cost performance for buildings including Elders residences, and a health centre for Nuxalk Nation. Coordination with other energy projects in the community including micro-hydro and district energy system

biomass.

- **Research: Past, Present and Future Relationship between the Métis National Council and Parks Canada**
Led a series of interviews on the relationship between Métis members and Parks Canada, and how to build more collaborative and meaningful conservation projects in Parks Canada administered areas.
- **Strategic foresight: Innovation, Climate & Economic Development Officer with the *Conseil de Développement Économique des Territoires du Nord-Ouest (CDÉTNO, Yellowknife NT)***: Spearheaded economic development and resource management opportunities through the lenses of climate change, green jobs, circular economy and innovation. Lead membership growth efforts and strategic planning, proposal writing. Stayed abreast of funding programs for entrepreneurs, lead budgeting efforts, project management.
- **Campaign Management**: I led Yellowknife ER physician and climate and health expert Dr Courtney Howard's campaign in her bid to gain the leadership of the Green Party of Canada. We fundraised \$143k in less than 4 months and ended up in a third position, behind a close first- and second-tie. More on drcourtneyhoward.ca

Ecology North / ▶ Green Buildings Specialist

September 2017 - November 2019, Yellowknife NT

Policy work, research and advocacy. Managed up to 4 full-time staff. Represented the organization in Tulit'a, Norman Wells, Délne, Colville Lake, Jean Marie River and other Northwest Territories communities.

- **Northern Centre for Sustainability**: project lead, project design, technical review, building science, policy work, research, coordination, administration, project leadership, partnerships & community-building.
- **Northern Building Retrofit Economy**: project lead, policy work, research and advocacy for green building good practices in the North. Successfully funded by the *Canadian Northern Economic Development Agency (CanNor)*
- **Smart Cities Challenge (\$250k prize)**: project lead, research, policy work, facilitation, design & community-building. Funding from Infrastructure Canada.

Provencher Roy Associés Architectes / ▶ Green Buildings & Infrastructure Expert

May 2015 - August 2017, Montreal QC

Provided input on architectural and engineering design, facilitated discussions between architects, engineers, designers, building owners and other stakeholders, and produced the required documentation to demonstrate project compliance to third-party verifiers. Policy work (Leadership in Energy & Environmental Design), research, design, facilitation, multi-disciplinary design charrettes.

Technopôle Angus: first LEED Platinum econeighbourhood in Quebec with social entrepreneurship component. Tasked with LEED certification and compliance.

Arbora: led cross-disciplinary design workshops for the obtention of a LEED Platinum green building certification for this cross-laminated timber high-rise (wood building). Technical review.

Îlot Balmoral: participated in the certification process for this LEED Gold building downtown Montreal, with a complex ownership and sales structure where now resides the National Film Board of Canada.

Centre Hospitalier Universitaire Ste-Justine: participated in the certification process for this LEED Silver hospital for youth; with high concerns for air quality of the interior environment, in addition to views on green spaces to shorten the healing time of patients.

Integral Group / ▶ Sustainability Engineering Intern

May 2016 - August 2016, Toronto ON

Policy work, research and communications strategy for the CEO. Climate change communication, introduction of key performance index for the firm to follow a set of policies meant to accelerate the adoption of green building practices.

Concordia University Solar Building Research Lab / Engineering Intern

May 2014 - August 2014, Montreal QC

Research, design, lab work, graphic design, external communication. Support and collaboration with a large group of researchers taking part in the Smart Net-Zero Energy Strategic Buildings Research Network under the academic direction of Dr. Andreas Athientis, subtask leader for IEA and IPCC contributor.

Education

McGill University / Master of Science Bioresource Engineering (M.Sc.)

January 2021 – October 2023, Yellowknife NT, Montreal QC

I studied the applicability and viability of pyrogenic carbon capture and storage (Pyro-CCS) for the Canadian North as a carbon-negative replacement option for currently carbon-intensive heating options. I was able to demonstrate that Pyro-CCS would make an economical heating option for northerners, under several innovation and economic assumptions. \$30k in awards and grants received.

Concordia University / Bachelor of Building Engineering (BEng.)

September 2012 - May 2017, Montreal QC

I learned project management, thermodynamics, building science, daylighting and illumination, structural engineering, calculus, heat transfer, building foundations, concrete foundations, steel infrastructure, calculus, and more. My keystone project was on the design and audit of a net-zero energy and net-zero carbon building.

Civil engineering + Bioclimatic architecture (Jan-May 2015) (student exchange)

Instituto Tecnológico y de Estudios Superiores de Monterrey, Monterrey, México

6 full-time courses in Spanish: Project Management, Concrete Structures Design, Steel Structures Design, Bioclimatic Architecture, Soil Mechanics, and a Laboratory of Soil Mechanics. Gained Spanish fluency. Intramurals swimming team twice weekly.

Civil engineering + wind energy engineering (Sept-Dec 2013) (student exchange)

University College Cork, Cork, Ireland

5 full-time courses: Wind Energy, Numerical Methods and Programming, Fluids, Measurements and Surveying, and Environment and Public Health.

Université du Québec à Chicoutimi / Sustainable Carbon Management

September 2017 - December 2018, Chicoutimi QC (15 credits)

This certificate (in French) taught me sectoral approaches to greenhouse gas emissions mitigation, in addition to the impacts of the climate crisis. I learned about the carbon cycle, air quality, carbon markets, regulation, policy, mitigation, measurements and calculations, climate crisis impacts. A particular interest of mine is on forest fires and their place in the regulatory environment, as well as the eco-council approach to economic development.

It gave me a deep understanding of the regulatory and market approaches to mitigating the climate crisis and accelerating the transition to a low-carbon economy, through tools and approaches similar to the Pan-Canadian Framework on Clean Growth and Climate Change. Obtained Dec'18.

Cornell University / Climate Fellowship, Civic Ecology Lab

September 2019 - December 2019, Ithaca, NY (~ 15 credits)

Policy work, research, climate communication and design : I designed a project concept for the community of Dettah of the Yellowknives Dene to reach carbon-neutrality by the year 2030 with a combination of district energy system, pyrogenic carbon capture and storage, building retrofits, and others. I presented my work at a panel hosted by Cornell University under the leadership of Dr. Allison Chatrchyan at a COP25 side-event in Madrid, Spain in December 2019.

McGill University / MSc. Bioresource Engineering (thesis)

January 2021 - September 2023, Montreal QC (virtually) 45 credits

\$16k graduate award. I am studying decarbonization strategies and negative emissions technologies applicable to Northwest Territories. Pyrogenic Carbon Capture & Storage for the Northwest Territories.

Harvard Kennedy School / Leadership, Organizing and Action: Leading Change (course)

February 2022 - May 2022, Yellowknife NT (virtually)

With Senior Lecturer Marshall Ganz- "learning by doing" : organizing global healthcare workers to decarbonize their hospitals and national healthcare delivery. In collaboration with Dr Courtney Howard.

Professional Credentials & Training

LEED AP / Building Design & Construction

September 2014 - December 2014

Accredited by the United States Green Building Council.

LEED ND / Neighbourhood Development

September 2015 - December 2015

Accredited by the United States Green Building Council.

Living Future Institute / Accredited

March 2018 - April 2018

Accredited by the International Living Future Institute
Green buildings, & regenerative infrastructure.

Climate Change and Infrastructure Risk Assessment - the PIEVC Protocol

October-November 2021

Completed, delivered by the Climate Risk Institute

Applied Strategic Foresight

June 2022

Accredited by the Copenhagen Institute for Future Studies.

UNLEASH 2022 GREENLAND / Lead Facilitator

August 2022, Nuuk (Greenland)

I will be leading a group of 20 facilitators and 200 youth through the UNLEASH Innovation process for one week.

UNLEASH 2019 CHINA / Facilitator

November 2019, Shenzhen (China)

Innovation Lab on the United Nations SDGs, participated as a facilitator with a team of 20 youth. One of my 4 teams ended up winning the first prize out of 200 teams.

UNLEASH 2018 SINGAPORE / Innovator Participant

July 2018, Singapore (Singapore)

Innovation Lab on the United Nations SDGs; participated as an expert.

Dechinta Bush University / Decolonization Workshop

February 2019, Blachford Lake Lodge NT

3-day training on decolonization taught by Dr Leanne Betasamosake Simpson

Talks

- SHARM EL SHEIKH (Egypt) 2022 [Queer Changemakers: The Role of 2SLGBTQIA+ in Climate Action in Canada](#)
- MONTREAL 2022 COBEE2022: "Pyro CCS in NWT", and "Climate Crisis : Overhauling Engineering Curricula in Canada"
- YELLOWKNIFE 2020 NAPEG Conference: Innovation, Carbon Pricing & the Nordics
- MADRID (Spain) 2019 COP25 UNFCCC side-event: Decarbonization Work at Cornell University
- SHENZHEN (China) 2019 / UNLEASH: Channeling Ecoanxiety Into Climate Action
- ROTTERDAM 2019 / Professional Lighting Design Convention: Smart Cities Challenge
- YELLOWKNIFE 2019 / Yellowknife Chamber of Commerce: Northern Climate Solutions
- MONTREAL 2019 / for Aedifica Architecture: Lunch and Learn Green Buildings in the North
- HELSINGBORG (Sweden) 2019 / for Lund University : the Living Building Challenge
- TRONDHEIM (Norway) 2019 / for NTNU : the Living Building Challenge
- MADRID (Spain) 2019 / in parallel to COP25 : The Living Building Challenge
- OSLO 2019 (Norway) / Out of the Blue : Oslo European Green Capital 2019
- SEATTLE 2019 / Living Future unConference 2019: Northern Green Buildings
- MONTREAL 2019 / Donor & Student Awards Celebration : Guest speaker, Concordia University
- YELLOWKNIFE 2018 / NWTAA Conference: The Living Building Challenge
- ANCHORAGE 2018 / Cool Talk— Climate Action: NorthXNorth Festival
- YELLOWKNIFE 2017 / NWT Association of Architects: Changing Buildings, Changing Climate



▲ **Talk** : COP26 WHO Pavilion 2022
Dr Courtney Howard and I shared our experience running a Planetary Health-focused political campaign in Canada. [Vimeo](#).



▲ **Moderation** : COP27 Canada Pavilion 2022
I moderated a panel on 2SLGBTQIA+ changemakers in climate action in Canada. [Eng. Fr.](#)



▲ **Speech** : Concordia University 2019
Speech on the climate emergency at the Donor & Student Awards Celebration. [Click this link](#).

Publications

- **ARTICLE**: Journal of Resources, Conservation & Recycling (November 2023) "Fighting Fire with Fire: Carbon-Negative Heat Production in Canada's North Using Pyrolysis of Fire-Killed Trees. Accepted. Currently under proof.
- **THESIS**: MSc Bioresource Engineering (October 2023) "Reaching the Paris Targets : pyrogenic carbon capture & storage for combined heat and biochar production in the Canadian North". Accepted and approved, currently being processed.
- **COBEE 2022 (2022)** : "[Calling for Engineering Curricula that Address the Climate Emergency: A Brief Case Study of Civil Engineering Programs](#)";
- **COBEE 2022 (2022)** : "[Decarbonizing the North : carbon analysis of space heating combined with carbon capture & storage](#)";
- **Métis National Council & Parks Canada (2021)** : "[Weaving Worldviews Parks Canada & Métis National Council: Moving Past Outcomes & Into Process](#)";
- **Alternatives North (2020)** : "[Climate Emergency - Getting the NWT Off Diesel Report and Webinar](#)";
- **Ecology North (2019)** : "[The Northern Building Retrofit Economy](#)"

Advocacy wins

- **2020**: Dr Courtney Howard's leadership bid for the Green Party of Canada. I led Yellowknife ER physician and climate and health expert Dr Courtney Howard's campaign in her bid to gain the leadership of the Green Party of Canada. We fundraised \$143k in less than 4 months and ended up in a third position, behind a close first- and second-tie. We brought climate and health to the national agenda. More on [drcourtneyhoward.ca](#)
- **2023**: My advocacy led to the reduction of the cost of HIV PrEP from \$300 to \$50 per month in Northwest Territories, Canada. Despite its demonstrated effectiveness in improving health outcomes and decreasing healthcare costs, HIV PrEP in Northwest Territories Canada remained not covered by the local government despite being available for free in most other Canadian jurisdictions. With a [petition that gained more than 20k signatures](#), I advocated for the HIV prevention medication to be free, amongst other asks. Since September 2023, the medication is now available at a reduced cost on a sliding scale from \$50/month (40k annual salary) to \$300 (150k). Our work continues for the protection of at-risk individuals. I celebrate this small win.

Governance

- Northern Council for Global Cooperation
> President (June'20 to May'24)
> NWT Board Member (May'18 to May'20)
- Yellowknife CarShare Co-Op Board Member
> 2020 to 2021
- Information & Communications Technology Council
> Advisor (Sept'18 to Jan'2021)
- Green Party of Canada Federal Council Board Member
> Quebec Representative, 2017-2018
> Northwest Territories Representative, 2018-2019
- Young Greens of Canada Federal Council Board Member
> Quebec Representative, 2016
- The World - 08/23 "[I never thought I'd be a climate refugee](#)";
- 24heures - 08/23 "[C'est fucking stressant](#)";
- 98.5 FM - 08/23 "[Incendies de forêt à Yellowknife](#)";
- Radio-Canada Info - 08/23 "[Témoignage de William Gagnon](#)";
- Radio-Canada C-B - 08/23 "[Être un déplacé climatique au Canada...](#)";
- Cabin Radio - 01/23 "[Advocates renew call for NWT to fully cover PrEP](#)";
- CBC North - 09/22 "[...petition calls for preventative HIV drug to be free](#)"
- Cabin Radio - 09/22 "[Is the NWT doing enough to combat an unprecedented syphilis crisis?](#)"
- Cabin Radio - 10/22 "[No timeline for PrEP coverage in NWT, minister says](#)"
- Cabin Radio - 05/22 "[Younger GNWT climate change staff are losing faith, fast](#)"
- McGillREPORTER - 11/21 "[McGillians taking part in COP26](#)"
- Ecohabitar (Spain) 05/20: "Ecodiseño: Qué pasaría si cada acta de diseño y construcción hiciera del mundo un lugar mejor?";
- Courrier du Sud 09/20 "[William Gagnon, jusqu'à Yellowknife pour sauver la planète](#)"
- BAASAC 06/20 "[Eco-Anxiety with William Gagnon](#)"
- Vice 05/20 "[Habiter loin, voir loin](#)" interview William Gagnon;
- CBC Yukon 05/20 Interview on ecoanxiety with Elyn Jones (anchor);
- L'Aquilon 11/19 "Urbanisme : Rénovation verte aux Territoires";
- Concordia University Magazine 06/19 "Climate Action Alleviates Eco-Anxiety";
- CBC North 03/19 "[Why a Yellowknife man created a Twitter bot](#)";
- Radio-Canada - 03/19 "[Un écoanxieux passe à l'action sur Twitter dans le Grand Nord](#)";
- Radio-Canada - 11/19 *La croisée*: "[Êtes-vous victime d'éco-anxiété?](#)";
- Radio-Canada - 12/18 "[L'écoanxiété et les changements climatiques](#)";
- The Concordian 09/16 "Montrealers get decorative with parking spaces".

References and additional information will be provided upon request.

Media coverage