



Achieving Environmental Justice Through Calgary's Environment Strategy

Submission to The City of Calgary for
consideration in the development of a
municipal environment strategy.

April 2021

Canadian Poverty Institute

The Canadian Poverty Institute

150 Ambrose Circle SW

Calgary, Alberta

T3H 0L5

PovertyInstitute@ambrose.edu

www.povertyinstitute.ca

@CndPovertyInst



Achieving Environmental Justice:

Submission to The City of Calgary Environment Strategy

EXECUTIVE SUMMARY

The effects of climate change and other environmental problems such as industrial pollution, air quality and adverse weather, disproportionately impact those who are low income or living in poverty. This process is called Environmental Injustice and it exists in Calgary. Environmental Injustice occurs when a certain minority of the population is forced, through their lack of access to decision-making and policy making processes, to live with a disproportionate share of environmental 'bads' and suffer the related public health problems and quality of life burdens.

Alternatively, Environmental Justice occurs when all people, regardless of gender, age, race or socio-economic status, are entitled to equal protection under environmental laws and to participate in environmental decision making in their community. As The City of Calgary develops its Environmental Strategy, the Canadian Poverty Institute at Ambrose University calls on The City to develop its strategy with a goal to achieving Environmental Justice. Accordingly, the following principles and recommendations are submitted for consideration to inform the strategy's design and implementation.

Guiding Principles

- o Accessibility for all Calgarians;
- o A recognition of the mutual and negative reinforcing effects of poverty and environmental degradation;
- o A recognition that environmental concerns and climate change disproportionately impact vulnerable and equity-seeking populations;
- o Formulate equitable policies; and,
- o Plan for the long-term sustainability for all Calgarians.

Recommendations

1. Housing

- 1.1 Commit to consulting with and hiring individuals from diverse backgrounds (i.e. BIPOC, lower income, differently-abled) as experts in urban development, design and implementation for all current and future development and redevelopment plans.
- 1.2 Develop and implement mechanisms to increase housing equity.
- 1.3 Prioritize the reinstatement of the City Charters (based on the 2018 Regulation) or create another mechanism with regulatory power.

- 1.4 Prioritize retrofitting of existing City owned housing and households experiencing energy poverty both as renters and owners.
 - 1.5 Partner with SAIT, and other post-secondary institutions, to engage their innovative talent to carry out retrofitting work as part of their training/retraining programs.
 - 1.6 In line with The City's Climate Resilience Strategy evaluate, improve, and create incentive plans for landlords to retrofit their properties.
 - 1.7 Advocate for all new developments to be "complete communities" and require a certain percentage of affordable housing units.
 - 1.8 Work with energy retail actors (Enmax, Direct, Just, ATCO, etc.) to implement energy efficiency programs (from new light bulbs to new heaters) that are cost affordable for low-income homeowners.
 - 1.9 If the City Charters are reinstated, or alternative mechanisms are created, then use the regulatory power given to change building code requirements to exceed current provincial and federal regulations if those have remained unchanged or only minimally adjusted.
2. Food In/Security
 - 2.1 Incorporate sizeable community garden space in "complete communities" development.
 - 2.2 Consider creating a clearinghouse where homeowners who have yards that can be used as gardens can be connected to people who don't have land and want to garden.
 - 2.3 Develop and implement a plan for mandatory composting in multi-residential units.
 - 2.4 Engage community leaders in areas with higher concentrations of food insecurity to imagine, identify and implement solutions to address food poverty.
 - 2.5 Pass a motion / bylaw prohibiting unsold food to be thrown away.
3. Transportation
 - 3.1 Study and integrate the recommendations and findings of Sustainable Calgary's "Neighborhood Active Transportation Network Policy Proposal."
 - 3.2 Continue to advocate for the provincial government to stop delaying the Green Line and allow the project to move forward immediately.
 - 3.3 Establish a plan to increase bus routes and the number of buses on routes and determine how to fund this.
 - 3.4 Work with existing neighborhoods to put in roadway bike lanes, bike paths, and alking paths and connect them to other nearby areas, especially shopping districts.



Achieving Environmental Justice Through Calgary's Environment Strategy



INTRODUCTION

There are great shifts happening economically, socially, and environmentally all over the globe. These macro forces are interwoven and impact the ability of people to meet their basic needs, especially those most vulnerable. The work of the Canadian Poverty Institute (CPI) revolves around linking evidence-based research to practice. We take a multi-dimensional approach to understanding poverty and how collectively we might work for its eradication. Through this brief it is our intention to shed light on the intersection of environmental concerns and poverty. While The City of Calgary (The City) is working to prioritize and strategize Calgary's plan for addressing environmental issues, the Canadian Poverty Institute asks The City to consider strategies that would inform equitable policy, speak to the interconnected nature of environment and poverty, and plan for long-term sustainability for all Calgarians.

A. GUIDING PRINCIPLES AND ANALYTICAL FRAMEWORKS

In the development and implementation of The City of Calgary's Environmental Strategy, the Canadian Poverty Institute recommends that this work be informed by the following Guiding Principles.

- o Accessibility for all Calgarians;
- o A recognition of the mutual and negative reinforcing effects of poverty and environmental degradation;
- o A recognition that environmental concerns and climate change disproportionately impact vulnerable and equity-seeking populations;
- o Formulate equitable policies; and,
- o Plan for the long-term sustainability for all Calgarians.

The recommendations contained in this submission are informed by the following analytical framework that articulates the intersection of poverty and the environment.

Comprehensive Accessibility: Process, Decision-making, Design, Implementation, and Benefit

When designing and communicating the strategy, it is critical to do so in a way that clearly links environmental issues with equity issues. In large urban centers, there usually are concentrated areas with more extreme health, poverty, and environmental concerns, (Islam & Winkel, 2017). For vulnerable people, efforts are focused on meeting basic needs of food, shelter, clothing and transportation. Often people living in lower income areas do not have the power, time, or resources to seek change. Many Calgarians have these challenges. An effective and equitable environmental strategy must create bridges between those with access to, and power in, the

decision-making process and those who are excluded. There is also a parallel disconnect between environmental issues and determinants of health and wellbeing. One key reason for this disconnect is that issues exist in silos with little hint of the obvious interconnections and negative impacts (Calgary Housing, Environment and Safety Management, food security, energy retailers etc.).

This upcoming Environmental Strategy will be used to guide future action and policy. Therefore, these policies and actions should be accessible and beneficial for all residents of Calgary from the earliest planning stages through implementation, regardless of income or the community in which they live. Specifically, we would like to see policies and practices that will not increase risk to, or negatively impact, vulnerable populations and that will in fact increase their health and well-being economically and environmentally.

The City of Calgary provides multiple avenues of democratic engagement and advocacy with municipal matters. Individuals can participate in online surveys, letter writing, phone calls, and in-person round table discussions (pre-Covid19). Are there any ways that these processes can become more accessible to Calgarians who historically have had lower rates of engagement? (i.e. lower income, language barriers, new to Canada, etc.).

Do the current ways of public engagement have meaningful impact on municipal decision making? Are there any policies in place where public input holds genuine weight in change processes? Transparency about the impact of public engagement may encourage a diverse range of people to “buy in” to climate action. It will also highlight interconnections between poverty/equity and environmental concerns that may not be immediately apparent to policy makers.

Meaningful participation must lead to meaningful and tangible benefit. As an example, only those with higher levels of disposable income can access emerging technology and alternative energy options currently; such as electric cars or installing solar panels on their roofs. Equity-seeking Calgarians need to be present at conversations about the concrete impacts of climate change and be given the resources and capacity to implement solutions. Although there is much that all people can do to support a resilient environmental future, the knowledge and accessibility gap must be bridged for inclusive engagement and effective efforts. The recommendations contained herein are designed to ensure such comprehensive access for equity-seeking and vulnerable populations.

Disproportionate Impact on Vulnerable Populations

The effects of climate change and other environmental problems such as industrial pollution, air quality and adverse weather, disproportionately impact those who are low income or living in poverty (Islam & Winkel, 2017). This process is called Environmental Injustice (EI) and it exists in Calgary. EI occurs when a certain minority of the population is forced, through their lack of access to decision-making and policy making processes, to live with a disproportionate share of environmental ‘bads’ and suffer the related public health problems and quality of life burdens (Ollevier & Tsang, 2007). Our most recent demonstration of environmental injustice occurred on June 13, 2020 with one of Canada’s most costly hailstorms in history (Rieger, 2020).

Environmental injustice is also manifested in environmental racism. Along with those who have lower income, racialized communities are exposed to greater amounts of pollution, degraded natural environments, and harm (Amnesty International, n.d.). One example of this in Calgary is that poorer neighborhoods have fewer trees, creating urban heat islands and areas that lack the wind break protection trees provide. Another example is the situation where lower-income areas tend to have higher speed limits negatively impacts the safety of pedestrians and cyclists, making these areas less suitable for alternative modes of transit.

This situation is rooted in a long and enduring pattern of decision-making shaped by colonialism and racism. Being marginalized and excluded from planning processes has resulted in what can be termed environmental segregation (Romero, et al., 2012). This holds true for Calgary. When a map coded by income is overlaid with a map showing land use, there is a strong correlation between lower income areas (Statistics Canada, 2016) and those with high concentrations of industrial, intensive industrial and major traffic routes (City of Calgary, 2017).

At CPI, we are advocating for the upcoming Environmental Strategy to be based on the principles of Environmental Justice (EJ). Environmental justice occurs when all people, regardless of gender, age, race or socioeconomic status, are entitled to equal protection under environmental laws and to participate in environmental decision making in their community (Ollevier & Tsang, 2007). Environmental justice cannot be divorced from considerations of economic justice. Economic justice results when wealth and economic opportunity are more equitably shared, and all people are part of the decision-making process. Economic and environmental justice are interconnected as economic decisions have environmental impacts and environmental issues have economic costs and benefits.

An Environmental Strategy grounded in justice principles will effectively address issues at the intersection of poverty and the environment, and increase equity in our City overall, realizing Mayor Nenshi's words that "we are stronger together." It is our hope that these principles and the following recommendations will not only make Calgary a greener City, but also a more equitable and just place to live, work and play.

B. KEY ISSUES AND RECOMMENDATIONS

The CPI identifies three main areas where actions to reduce poverty and benefit the environment work synergistically: housing, food (in)security, and transportation.

1. Housing

The City of Calgary has an inadequate stock of affordable housing for low-income residents. The rental market supply of low to moderately priced units is also insufficient. The suggested amount of income for rent is 25%-30%. However, market rates for rental housing result in many families having to pay disproportionately more of their income on housing. This negatively impacts their ability to afford other basics such as utilities, food, transportation, and clothing.

Much of Calgary's housing supply, be it privately or City owned, was built at a time when energy efficiency standards were far lower. The result is that these buildings "bleed" energy, contributing to excessive and avoidable GHG emissions. Furthermore, energy inefficiency disproportionately impacts those with lower incomes through energy poverty. Energy poverty,

as with poverty in general, is linked to poor physical and mental health and increased mortality, especially for older adults, children, those living with disabilities and those with long-term illness. However, energy poverty has a more immediate detrimental impact on health (Boyd & Corbett, 2018).

Considerations

Retrofitting is cost prohibitive for lower income homeowners and only available to renters at the landlords' discretion. For both existing and new housing, insulation is a key component to address both energy poverty and GHG reductions. "Insulation is one of the most practical and cost-effective ways to make buildings more energy efficient—both in new construction and through retrofitting older buildings that often are not well encased" (Hawken, 2017, p. 101). New affordable, energy-efficient housing positively addresses housing poverty, energy poverty and environmental sustainability. Furthermore, adequate, affordable housing allows people to provide for other needs and have more income to spend locally.

Specific Recommendations

1.1 Commit to consulting with and hiring individuals from diverse backgrounds (i.e. BIPOC, lower income, differently-abled) as experts in urban development, design and implementation for all current and future development and redevelopment plans.

- This will mitigate future developmental strategies from segregating, isolating, and putting vulnerable people at risk.

1.2 Develop and implement mechanisms to increase housing equity.

- Implement new approaches such as community land trusts and cooperatives so that innovative / equitable housing options are more available and Calgary communities share the benefits of new or re-development. This will stabilize and strengthen local communities (Chakrabarti, 2016).

1.3 Prioritize the reinstatement of the City Charters (based on the 2018 Regulation) or create another mechanism with regulatory power.

- This would give regulatory power to The City in areas such as energy efficiency standards through the ability to set building code requirements. During the time the Charter was in effect, The City's stated position was, "... rather than utilizing this regulatory ability, this program [Climate Resilience Strategy] focuses on supporting regulation at the provincial and federal level and supporting energy performance code through incentives and financing" (City of Calgary, 2018, p. 35). However, it is unclear if this has been effective. Having and using regulatory power may be required to achieve the necessary changes in a timely manner.

1.4 Prioritize retrofitting of existing City owned housing and households experiencing energy poverty both as renters and owners.

1.5 Partner with SAIT, and other post-secondary institutions, to engage their innovative talent to carry out retrofitting work as part of their training/retraining programs.

- SAIT is launching a Green Building Technologies Lab affiliated with its High-Performance Residential Design and Construction program (SAIT, n.d.). This could be a significant resource and partner.

1.6 In line with The City’s Climate Resilience Strategy evaluate, improve, and create incentive plans for landlords to retrofit their properties.

- This should target the least energy efficient units and designated affordable housing units first and apply to new construction so that all new residences are built to exceed current energy efficiency standards.
- Look to extend this to commercial buildings. While this is not directly related to housing and energy poverty, reducing GHG emissions from commercial properties contributes to cleaner air overall and the health benefits which result. As per The City’s own analysis (City of Calgary, 2018, p. 25), 26% of emissions are from residential buildings and 39% from non-residential buildings.

1.7 Advocate for all new developments to be “complete communities” and require a certain percentage of affordable housing units.

- a) Ensure that any costs associated with these units are not transferred to other renters / owners but recouped in some other way by the developer / builder.
- b) Actively pursue additional schemes beyond set-asides within private developments for affordable housing units; for instance, cooperative housing, laneway housing, micro housing, co-housing etc., scaling up successful pilot programs.
- c) Meet intentionally with a diversity of low-income people including racialized, and differently abled people to hear their ideas and perspectives.
- d) It is of primary importance to recognize explicitly that communities with diverse income levels are a social good: reducing isolation, breaking down assumptions and stereotypes, and fostering social cohesion and community. This will require changing the tone of conversations to “Yes In My Back Yard” (HomeComing, 2021) and intentionally recognizing the undue influence of wealthier areas to determine outcomes - this is yet another manifestation of economic and environmental injustice.

1.8 Work with energy retail actors (Enmax, Direct, Just, ATCO, etc.) to implement energy efficiency programs (from new light bulbs to new heaters) that are cost affordable for low-income homeowners.

- This should target those living in energy poverty first (not all low-income homeowners are energy poor) (Boyd & Corbett, 2018).
- Design programs where upgrades can be made without upfront cost to the household. Rebates are workable for some, but not for those with minimal income. For instance, if an energy poor household needs a new heating unit, it is likely they do not have the money to purchase one up front.

- Energy retailers should provide the heater to the household and have the cost paid back in small monthly installments attached to the energy bill. There can be creative solutions that do not rely solely on rebates after purchase.

1.9 If the City Charters are reinstated, or alternative mechanisms are created, then use the regulatory power given to change building code requirements to exceed current provincial and federal regulations if those have remained unchanged or only minimally adjusted.

- While net-zero or passive housing standards may be too ambitious, changes that require high, standard R-value will result in significant reductions in both energy poverty and GHG emissions. Work with developers and builders to find a financial structure that mitigates these increased building costs, so they are not simply transferred onto the renters/buyers. Given the urgency of the need to reduce emissions and the enduring reality of poverty, requirements and incentives both need to be employed.

2. Food In/Security

Food insecurity is a significant problem in Calgary. Numerous studies over the last 20 years peg the number of food insecure households in the City at around 12% on average. The pandemic has exacerbated this. In April of 2020, 21% of households were struggling to have sufficient food (Calgary Foundation, 2020; United Way Calgary, 2020; Alberta Health Services, 2017). Many innovative programs are being implemented to meet this need from prepared food rescue to mobile mini grocery stores including: Zero Food Waster YYC, Fresh Routes Calgary and Leftovers Foundation Food Rescue. These initiatives are, however, piecemeal and insufficient to address the scale of the issue.

While charity has its place, having charity as the main vehicle to address food insecurity is not solving the root cause of the problem. This situation re-inscribes social inequity and power disparities where for instance, people must demonstrate need to access a food hamper. Moreover, services that require a demonstration of need such as foodbanks, deny people choice and agency to make their own decisions around food. For many people, the issue isn't lack of food per se; it is persistent insufficient income to afford it. Barriers to grocery stores due to lack of transit, difficulty reaching stores due to street design and layout, and/or proximity issues may also be issues exacerbating food insecurity and linked to the ways in which the urban environment is designed.

Food waste is a major issue and addressing it can both reduce food insecurity and benefit the environment. Nearly 1/3 of all the food produced in the world does not make it on to people's tables. This results in 4.4 gigatons (or 8%) of all global GHG emissions (Hawken, 2017, p. 42). Experts believe that reducing or eliminating food waste is the third most effective and immediate solution to mitigating climate change.

Considerations

While recognizing that The City of Calgary has limited involvement with food production and distribution, there are steps it can take to encourage increased food security and reduce GHG emissions from food waste.

Specific Recommendations

2.1 Incorporate sizeable community garden space in “complete communities” development.

- These gardens need to be available to all with no fees. Community Association gardens require a fee for parcel use, thus reducing accessibility for lower income people.
- While community gardens are important, they also have significant limitations. They produce food only for a short season. They require people to have the time and tools to maintain. And they provide only a limited type of food: fresh vegetables.

2.2 Consider creating a clearinghouse where homeowners who have yards that can be used as gardens can be connected to people who don’t have land and want to garden.

- This would require some oversight (staff or an existing non-profit) to set up the system, ensure safety and establish terms of use. This could be designed to align with The City’s existing programs promoting natural landscapes in yards, bee-friendly plants, among similar initiatives.
- Work with urban farms to expand capacity in City-owned greenspaces, using for example, surplus land along transportation and utility corridors to increase local food production.

2.3 Develop and implement a plan for mandatory composting in multi-residential units.

- Work with building owners to create this program and design it so that the costs of compost collection are not an undue financial burden on residents.

2.4 Engage community leaders in areas with higher concentrations of food insecurity to imagine, identify and implement solutions to address food poverty.

- This work should explore social enterprise opportunities, expanding the reach of existing groups, and being willing to adjust bylaws (with due consultation) that hinder implementation efforts.
- Intentionally seek solutions that are not charity and offer food at extremely affordable prices.

2.5 Pass a motion / bylaw prohibiting unsold food to be thrown away.

- In 2016, France passed such a law. Large supermarkets were prohibited from throwing out unsold food and were required to give it to charity (since then this law has been expanded). This has resulted in a substantial increase in the amount and the quality of food given (food redirected from retailers now accounts for 50% of food given out by charities) (Kelsey, 2020, p. 167). Given the limitations of charity, if food had to be donated here in Calgary it should look to do so through a hybrid model: charity and social enterprises.

3. Transportation

Transportation is another area where poverty, justice, and environmental issues intersect. Cars are expensive and while electric cars will have benefits in terms of reducing emissions, they are expensive to purchase. As per The City's own analysis (City of Calgary, 2018, p. 25), 34% of Calgary emissions are generated by transportation. Access to reliable and frequent public transit, and safe, effective bike / walking paths also has a positive effect on the affordability of housing and food security. According to Sustainable Calgary, if people could realistically choose to be car free, the number of housing units that people could then afford would increase significantly for households in the \$20-30,000 income bracket (Keough, et al., 2020).

Reliance on cars for transportation within the city negatively impacts the quality of life from the stress of driving to air pollution to traffic jams to accidents. Public transit such as buses and the C-train provide transit for those without a car (and those who want to avoid using their cars) and offer many positives. We commend The City for its commitment to keeping the low-income transit pass in place; it is a tangible act of justice and equity that helps the entire City.

Despite the positive impacts of the low-income transit pass, cuts to public transit are negatively impacting Calgarians and need to be reversed. For those solely reliant on public transit, it can take hours to get from one location to another given how infrequently bus routes run (every 30 minutes for many routes). This has significant ramifications for those reliant solely on public transit as so much time is taken up waiting to get where they need to go. And if transit is down, they are stranded. For equity-seeking and less economically advantaged people, this can result in many ill effects from job security to getting to their children in a timely manner if they get sick at school. Effective and affordable public transit is critical for people of all economic brackets and comes with positive social and environmental benefits.

Considerations

Designing and redesigning the city in ways that do not require vehicles for people to move around is critical. This is beneficial to people's and the environment's health. As detailed in Sustainable Calgary's report (2020), reorienting city design from vehicle-centric to people-centric will not only increase equity, reduce negative environmental effects and have tangible health benefits, but also it will also create vibrant streets and communities where local businesses thrive and people come together and mingle, reducing isolation and fostering a sense of belonging.

Specific Recommendations

3.1 Study and integrate the recommendations and findings of Sustainable Calgary's "Neighborhood Active Transportation Network Policy Proposal."

- This proposal aligns with the goals of The City's Climate Resilience Strategy and Sustainability goals. It also complements and supports The City's work for "complete communities" and transforms existing communities into livable, people-friendly places.
- Consult with a diverse cross-section of communities (per earlier recommendations) to develop plans and how best to implement them.

3.2 Continue to advocate for the provincial government to stop delaying the Green Line and allow the project to move forward immediately.

3.3 Establish a plan to increase bus routes and the number of buses on routes and determine how to fund this.

- Given current revenue constraints this is likely a plan of action for the future but a plan nonetheless to keep in mind for its potential to positively produce an equitable city.

3.4 Work with existing neighborhoods to put in roadway bike lanes, bike paths, and walking paths and connect them to other nearby areas, especially shopping districts.

- Ensure that these paths pay special attention to ensuring people can safely navigate busy intersections, etc., and that they are accessible for children, people with mobility issues and those using motorized chairs. Even though essential services such as grocery stores or parks, may be nearby in terms of distance, it may be difficult or impossible to reach due to roadways and other impediments. This aligns with The City's Complete Communities and Climate Resiliency strategies.

C. CONCLUSION

Climate change is an important problem that cities around the world are taking very seriously in order to pre-empt the negative effects on their populations as a whole. Attune cities are also taking deliberate steps to ensure that their most at-risk citizens are not left to suffer the brunt of the changing environment alone. Calgary has won several awards for its leadership in livability, and architectural design. To continue to be on the forefront of change, Calgary needs to include very consciously in its environmental framework, specific, impactful actions that speak directly to and improve the lives and well-being of those most at risk of living with poverty and the brunt of climate change. The Canadian Poverty Institute expects that the actions suggested here will be examined dispassionately but with empathy to improve the equity standing of the city for all Calgarians to enjoy.

REFERENCES

- Alberta Health Services. (2017). *Household food insecurity in Alberta: A backgrounder*. <https://www.albertahealthservices.ca/assets/info/nutrition/if-nfs-household-food-insecurity-in-alberta.pdf>
- Amnesty International (n.d.). *Climate change: Overview*. Retrieved April 9, 2021. <https://www.amnesty.org/en/what-we-do/climate-change/>
- Boyd, R. & Corbett, H. (2018). *Energy poverty: An energy poverty strategy for Alberta*. All One Sky Foundation. Calgary, AB. Retrieved April 2021. <https://static1.squarespace.com/static/5da8ba132a4fea6a5c56cf3f/t/5daf352811ba3112ee346120/1571763519718/Alberta+Energy+Poverty+Strategy>
- Calgary Foundation. (2020). Vital signs 2020. Retrieved April 2021. <https://calgaryvitalsigns.ca/>
- Chakrabarti, V. (2016, July 18). How urban design perpetuates racial inequality and what we can do about it. *Fast Company*. <https://www.fastcompany.com/3061873/how-urban-design-perpetuates-racial-inequality-and-what-we-can-do-about-it>
- City of Calgary (2017). *Municipal development map plans*. Retrieved April 2021. <https://www.calgary.ca/content/dam/www/pda/pd/documents/municipal-development-plan/mdp-maps.pdf>.
- City of Calgary. (2018). *City resilience strategy: Mitigation & adaptation action plan*. Retrieved April 2021. <https://www.calgary.ca/uep/esm/climate-change/climate-actions.html>
- Hawken, P. (Ed.). (2017). *Drawdown: The most comprehensive plan ever proposed to reverse global warming*. Penguin.
- HomeComing (2021). *Yes In My Back Yard*. <https://yesinmybackyard.ca/>
- Islam, S.N., & Winkel, J. (2017, October). *Climate change and social inequality*. (DESA Working Paper No. 152). United Nations: Department of Economic & Social Affairs. New York: New York. https://www.un.org/esa/desa/papers/2017/wp152_2017.pdf
- Kelsey, E. (2020). *Hope matters: Why changing the way we think is critical to solving the environmental crisis*. Greystone Books.
- Keough, N., Scheffel, G., & Chapa, L. (2020). *Neighborhood active transportation network policy proposal*. Sustainable Calgary. <https://static1.squarespace.com/static/5ab716b9ee1759b04ca2703e/t/5fb60bb1b5b9ff47dcf16d02/1605766099671/NATN+Sustainable+Calgary+2020+Nov+17+20MB.pdf>
- Ollivier, M., & Tsang, E. (2007, April). Environmental justice in Toronto report. *The City Institute at York University*. https://city.apps01.yorku.ca/wp-content/uploads/2011/05/file_2_ej_report_fin.pdf
- Province of Alberta. (2018). *Municipal government act: City of Calgary charter, 2018 regulation*. Alberta Queen's Printer. https://www.qp.alberta.ca/1266.cfm?page=2018_040.cfm&leg_type=Regs&isbncIn=9780779815487
- Rieger, S. (2020, July 8). Calgary hailstorm that caused \$1.2B in damage ranks as Canada's 4th costliest natural disaster. *Canadian Broadcasting Corporation*. <https://www.calgary.ca/uep/esm/climate-change/climate-actions.html>

- Romero, H. Vásquez, A., Fuentes, C., Salgado, M., Schmidt, A., & Banzha, E. (2012). Assessing urban environmental segregation (UES): The case of Santiago de Chile. *Ecological Indicators*, 23, pp. 76-87. <https://doi.org/10.1016/j.ecolind.2012.03.012>
- SAIT. (n.d.) High performance residential design and construction certificate of completion. Retrieved April 2021. <https://coned.sait.ca/public/category/courseCategoryCertificateProfile.do?method=load&certificateId=1696029>
- Statistics Canada. (2016). *Census of Population: Calgary CMA*. Retrieved April 2021. <https://www12.statcan.gc.ca/census-recensement/2016/geo/map-carte/ref/thematic-thematiques/inc-rev/files-fichiers/map-carte-5/2016-92173-004-825-013-01-00-eng.pdf>
- United Way of Calgary and Area (2020, October 16). *How you can help with food security in Calgary*. <https://calgaryunitedway.org/blog/how-you-can-help-with-food-security-in-calgary/>

ABOUT THIS REPORT

This report submission was produced by the Canadian Poverty Institute to provide input to The City of Calgary in the development of a municipal environment strategy. The Canadian Poverty Institute is an inter-disciplinary institute of Ambrose University with a mission to contribute to the healing of poverty in Canada through teaching, research and practice.

Authors:

Natasha Brubaker Garrison
Delia Cudney

For more information contact:

The Canadian Poverty Institute
Ambrose University
150 Ambrose Circle SW
Calgary, Alberta,
T3H 0L5

www.povertyinstitute.ca

povertyinstitute@ambrose.edu

