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## The Corporation of THE CITY OF NORTH VANCOUVER PLANNING & DEVELOPMENT DEPARTMENT

### INFORMATION REPORT

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To: Mayor Linda Buchanan and Members of Council

From: Larisa Lensink, Planner 2, Environmental Sustainability

Subject: CLIMATE AND ENVIRONMENT STRATEGY – PHASE I ENGAGEMENT OUTCOMES

Date: February 23, 2022 File No: 11-5280-20-0008/1

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### ATTACHMENTS

1. Information Report to Council from the Deputy Director, Planning and Development, entitled "Climate and Environment Strategy Update – Preliminary Vision, Goals and Strategies", dated July 8, 2021 (Doc [#2074461](#)).
2. Survey Respondents' Demographics from Climate and Environment Strategy Phase I Engagement (Doc [#2142355](#)).
3. Summary of Feedback on the Draft Vision, Goals and Strategies of the Climate and Environment Strategy from Phase I Engagement (Doc [#2142334](#)).
4. Survey Results from Climate and Environment Strategy Phase I Engagement (Doc [#2142601](#)).

### PURPOSE

This report provides an overview of what we heard during the first phase of engagement on the Climate and Environment Strategy and an update on the plan development process.

### BACKGROUND

The City is developing a Climate and Environment Strategy (CES) to guide planning and decision-making to reduce carbon pollution and promote a healthy natural environment. The new plan will build upon existing City plans and policies and respond to the climate and nature crises to form a playbook of actions for the next decade.

A draft framework of vision, goals and strategies for the CES (Figure 1) was developed and provided to Council through an Information Report in July, 2021 (Attachment #1). The framework was informed by City plans and objectives, recent research reflecting

current context, a review of emerging practices and input from the Climate and Environment Task Force. The draft CES will be built around this framework to help the City achieve its climate targets, grow its natural assets and be prepared for the future.



Figure 1. Draft framework for the Climate and Environment Strategy.

## DISCUSSION

### Purpose of Engagement

The first round of engagement on the CES aimed to hear from a broad cross section of the public and stakeholders early in the plan development process to ensure input could meaningfully be incorporated into the draft CES. Specifically, the engagement period had the following four objectives:

- 1. Inform and educate** the community about the new plan and the role of the City in climate action and environmental protection, and address common knowledge gaps and misconceptions.

- 2. Understand values, priorities, and perspectives** of stakeholders and a diverse range of voices in the community, especially those that have been historically under-represented in City plans and policies.
- 3. Seek feedback on early directions** of the CES in the draft framework of vision, goals and strategies.
- 4. Build support and relationships** with community members from a diversity of backgrounds, partner organizations, industry representatives and interested groups.

## Engagement Components

A variety of activities and tools were used to engage community members and receive their input on the CES for a period of approximately eight weeks from October 22 to December 15. Activities were undertaken in accordance with the Province's public health orders at the time including virtual meetings and mask-wearing in public indoor spaces. The components of Phase I engagement included:

- **Listening sessions:** Staff worked with partner organizations in the community to coordinate meetings with hard-to-reach and vulnerable populations. Meetings were less structured than stakeholder workshops to hear more broadly from participants' lived experiences. Four sessions were held in Farsi and Mandarin to enable participants to speak comfortably in their first language. In most cases, participants were provided compensation for their time and contribution.
- **Engagement with local First Nations:** Staff engaged Tsleil-Waututh Nation through the established consultation process and requested feedback on the CES framework. Staff also informed Squamish Nation about the new plan and opportunity to provide input and will continue to liaise at every available opportunity.
- **Dedicated project webpage:** A webpage on the City's website was created to host an overview of the CES development process, draft framework and relevant background information.
- **Let's Talk survey and survey guide:** A survey was created with an accompanying informational guide to receive feedback on the CES framework.
- **Pop-up tables:** Tables were staffed at the library and community centres to raise awareness of the engagement opportunity and allow for one-on-one conversations with residents.
- **Stakeholder workshops:** Virtual meetings were hosted with a range of industry and interest groups who responded to an invitation to provide input on the draft CES framework.
- **Social media, print and e-newsletter promotion:** The opportunity to provide input through the Let's Talk survey was promoted through the City's social media channels, ads in the North Shore News and a feature in the City's e-newsletter.

## Who We Heard From

Input was received from a range of voices through the engagement process as summarized in Figure 2.



*Figure 2. Summary of voices heard through Phase I engagement activities.*

\*Analysis of the survey respondents' reported demographics reveals that the sample of residents engaged was not representative, and that residents who own their own home, are over age 50, have household incomes over \$200,000 and are of Caucasian descent were over-represented. Full analysis of the survey respondents' demographics can be found in Attachment #2.

Of note, not all voices were represented during the engagement process. In particular, no formal input was received from Squamish Nation, and no youth under age 20 participated in the engagement activities despite outreach to the school board.

## What We Heard

Significant feedback was received through the listening sessions, stakeholder workshops and survey responses during the first phase of engagement on the CES. A summary of feedback on the draft vision, goals and strategies of the CES can be found in Attachment #3. Full survey results can be found in Attachment #4. The following list represents common and salient feedback on the early directions of the CES that will be considered during the development of the draft strategy:

- **High level of concern about the climate and nature crises:** Deep concern about the future of the planet was expressed by the vast majority of people engaged, including 81% of survey respondents rating their outlook as “very concerned”.
- **Support for urgent action:** A high level of support was expressed for the urgency communicated in the CES framework, with many respondents encouraging the City to go even further, faster in mitigating climate and environmental impacts.
- **Specific actions, timelines and targets are needed:** The intentions expressed in the CES framework need to be matched with detailed implementation plans, metrics to measure progress and targets within the ten year timeframe of the strategy.
- **Support for the City to lead:** CES strategies that are City-led received more support than those requiring individual action, and many respondents reported a need for additional support in order to make personal changes to reduce their impact.
- **Desire to see stronger emphasis on adaptation:** In light of recent storms, flooding, air quality and heat wave events, a stronger emphasis on climate resiliency and adaptation is needed throughout the CES framework.
- **Equity is important:** Respondents from both vulnerable communities and demographics that are typically over-represented in engagement expressed concerns about the accessibility of low carbon technologies and the impacts of climate change on vulnerable populations. Implications and unintended consequences of CES actions for equity-seeking groups need to be considered deeply during the development of the draft strategy.
- **Reconciliation is important:** There was strong support for the CES to be developed with early and ongoing input from local First Nations and for strategy actions to be informed by Indigenous knowledge.
- **Clarity about relationship with other City plans is needed:** Especially relating to actions which span across multiple City plans like the Mobility and Community Wellbeing Strategies, clear explanation about the relationship between plans is desired.
- **All sectors need support in low carbon transition:** Consideration should be given to the range of supports needed to achieve the CES actions for different sectors in the City including businesses, organizations, renters and homeowners.

## NEXT STEPS

The feedback received through the first phase of engagement is being used to refine the draft vision, goals and strategies of the CES, guided by the Climate and

Environment Task Force. Further, the input received will be considered and incorporated into the policies and actions of the draft CES as it is developed.

A number of key consultancies have been secured to complete final pieces of research needed to inform the draft CES. Once completed, recommendations from these research projects will be incorporated into actions of the draft CES, along with new actions identified through emerging and best practice review and actions informed by existing City plans. It is anticipated the draft CES will be ready for review by stakeholders and the public through a second phase of engagement in Spring 2022, as indicated in the updated project timeline (Figure 3).

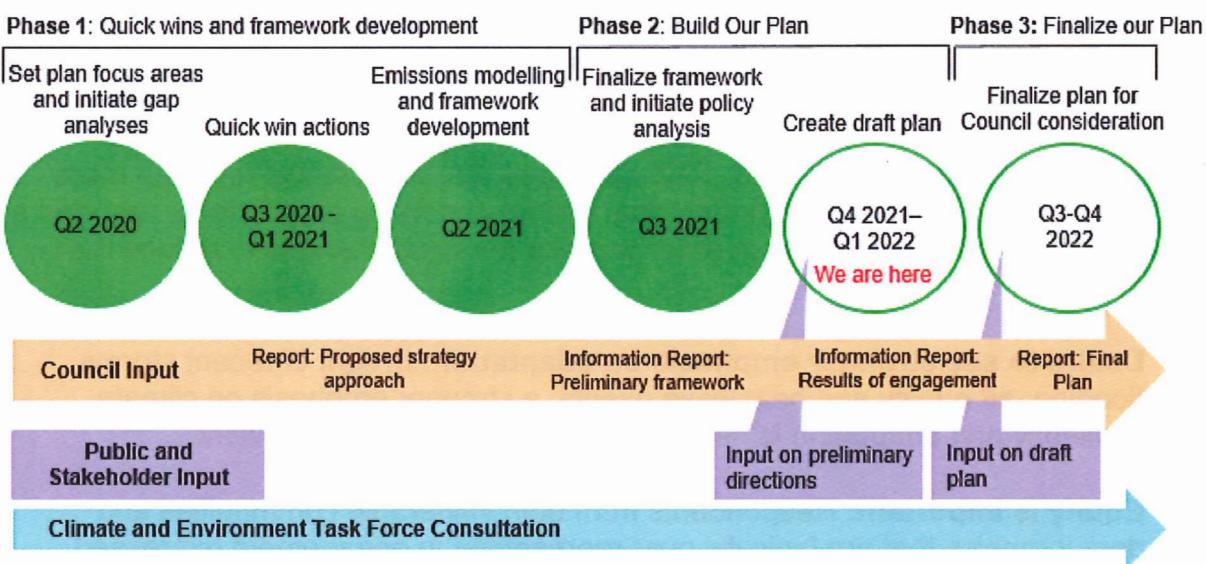
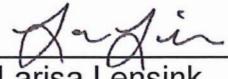


Figure 3. Climate and Environment Strategy development process.

Phase I engagement on the CES was the first comprehensive outreach on combined climate action and environmental sustainability policy directions for the City, and while a variety of engagement tools and outreach efforts were applied to capture the rich diversity of lives and experiences in the City, many voices remain unheard. Looking ahead to the second phase of engagement, staff will be placing emphasis on reaching youth, Indigenous residents and neighbours and offering more in-language sessions to hear back in greater detail how the CES can better support those most at risk of being left behind in the transition to clean energy and most vulnerable to the impacts of climate change.

Following refinements to the draft CES based on the results of Phase II engagement, the CES is expected to be brought forward for Council consideration in Fall 2022.

RESPECTFULLY SUBMITTED:

  
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Larisa Lensink  
Planner 2, Environmental Sustainability



Department Manager	Director	CAO

**The Corporation of THE CITY OF NORTH VANCOUVER  
PLANNING & DEVELOPMENT DEPARTMENT**

**INFORMATION REPORT**

To: Mayor Linda Buchanan and Members of Council

From: Jennifer Draper, Deputy Director, Planning and Development

Subject: CLIMATE AND ENVIRONMENT STRATEGY UPDATE – PRELIMINARY VISION, GOALS AND STRATEGIES

Date: July 8, 2021 File No: 11-5280-20-0008/1

**ATTACHMENTS**

1. Notice of Motion – Climate Action, dated February 25, 2019 ([Doc #1756611](#))
2. Report to Council from the Manager, Environmental Sustainability, entitled “Environment Strategy: Proposed Approach”, dated July 8, 2020 ([Doc #1931008](#))
3. Detailed Summary of Preliminary Strategies ([Doc #2068946](#))

**PURPOSE**

The purpose of this Report is to introduce Council to the framework of preliminary vision, goals and strategies of the City's new Climate and Environment Strategy (CES) and to advise Council that staff will be proceeding with obtaining public and stakeholder input on this framework for the benefit of shaping draft policy directions.

**BACKGROUND**

The City's climate and environment policy guidance requires updating to reflect our current and pressing context and a consistent overarching framework to guide decision-making across the breadth of topic areas. The new CES will build upon and consolidate existing climate and environment plans and provide an updated and simplified policy framework for the next ten years.

The CES is being developed through an integrated planning process with the new Mobility and Community Well-Being Strategies to deliver a set of three, coordinated decision-making tools to advance timely and impactful actions. The three strategies share the following set of principles to guide decision-making:

- 1. We need to take actions that improve our collective health:** we will prioritize actions that increase our sense of connection to each other and the natural world, while making it easier to meet daily needs.
- 2. We need to take resilient actions:** we will prioritize proven, people-focused actions that increase the likelihood we will achieve our goals, even in dramatically changing circumstances.
- 3. We need to take equitable actions:** we will prioritize actions that remove barriers that make it harder for some people to connect to each other and to opportunities than others.
- 4. We need to take timely actions:** we will prioritize actions that will allow us to move quickly, recognizing the steps we take today will impact our abilities into the future.

The three strategies are designed to work together so they may collectively respond to our rapidly changing conditions. This degree of nimbleness will enable the setting of emergent priorities through the City's annual Financial Plan and Corporate Business Plan.

### **Previous Decisions**

In February 2019, Council passed a Notice of Motion to establish more ambitious climate targets in recognition of the accelerated rates of climate change impacts and recent guidance from the Intergovernmental Panel on Climate Change:

THEREFORE BE IT RESOLVED THAT the City of North Vancouver establish more ambitious GHG reduction targets of 80% below 2007 levels by 2040 and achieving net zero or 100% emissions reductions by 2050;

THAT staff be directed to incorporate said targets into forthcoming updates to City plans, policies and business practices and report regularly on the City's progress toward achieving the targets;

AND THAT a Climate and Environment Advisory Task Force or Working Group be struck to provide guidance and support on actions and efforts required to achieve the transition from current GHG emissions to the new targets.

The development of the CES will define our pathway to these climate targets, guided by the Climate and Environment Task Force which was struck in early 2020. Initial workshops with the Task Force identified three principles to guide the CES: corporate leadership, a people-focused approach and data-driven accountability. The Task Force recommended that the CES include priority actions in four areas: climate action, climate resilience, ecosystem health and zero waste. These three principles, four topic areas, and a preliminary timeline for strategy development were endorsed by Council as the proposed approach to the strategy in July 2020:

PURSUANT to the report of the Manager, Environmental Sustainability, dated July 5, 2020, entitled "Environment Strategy: Proposed Approach"

THAT the proposed approach for the City's Environment Strategy be endorsed.

Since the endorsement of the proposed approach, the strategy has been renamed "Climate and Environment Strategy" to highlight the central role of defining actions to achieve our climate targets.

### **Climate Change, Biodiversity Loss and COVID-19: Three Interrelated Crises**

In recent years, citizens around world have been calling for governments to take action in the face of potentially devastating impacts of climate change. This mobilization has been spurred in a large part by the Intergovernmental Panel on Climate Change (IPCC) 2018 Special Report on Global Warming of 1.5°C which clearly communicated the consequences of inaction and the opportunity to change our current course through a rapid and far-reaching transition to renewable energy sources. As a result, governments, corporations and industry associations have made ambitious commitments to reduce their carbon pollution significantly over the next decade and achieve net zero emissions by 2050, in line with guidance from the IPCC.

At the same time, nature is facing a second, related crisis of unprecedented biodiversity loss. With the destruction and destabilization of ecosystems from human activities and a changing climate, species are disappearing at a rate tens to hundreds of times higher than it has averaged over the past 10 million years. Biodiversity supports valuable ecosystem services including water and air purification, food security, regulation of waste and disease, and as is becoming increasingly appreciated, the ability to sequester carbon. In response to the biodiversity crisis and informed by contemporary science and traditional knowledge, movements like Nature Needs Half advocate for commitments to protect 50% of the planet by 2050 to address the dual challenge of climate change and biodiversity loss.

With the spread of COVID-19, the world has been faced with yet another crisis: a global pandemic threatening and taking numerous lives and causing global social and economic disruption. People with chronic health conditions, lower incomes and communities of colour are disproportionately impacted by both COVID-19 and climate change, with pollution being at the root of both problems. The pandemic has also served as wake-up call and temporary re-set as we realize our vulnerability to extreme events and see annual global emissions drop for the first time in decades with forced restrictions to travel. As early as summer 2020 in the midst of the global pandemic, governments were announcing plans for a green recovery to ensure the necessary economic stimuli would also further progress towards climate targets.

The City's CES must respond appropriately to these three crises with consideration of the common solutions of reducing carbon pollution, and protecting and enhancing natural ecosystems to guide us towards a resilient, healthy and prosperous future state.

### **Current Climate and Environment Planning Framework**

The City's long-term vision, goals, objectives and actions for sustainable community-building are defined in the City's Official Community Plan (OCP). In the 2014 update to the OCP, a 'climate lens' was applied to ensure the integration of climate mitigation and adaptation principles throughout the Plan. Further, Chapter 4 of the OCP, "Natural

Environment, Climate & Energy" defines goals and objectives to protect and improve ecological health, reduce carbon pollution and implement climate adaptation measures in the City, recognizing the importance of a healthy environment in the City's vision for the future.

To date, a range of topic-specific plans (Table 1) have provided direction in addressing our community and corporate emissions, adapting to climate change and protecting our natural environment. This policy guidance has been instrumental in supporting significant improvement of stormwater quality and management infrastructure, increased protection of streamside ecosystems, promotion of citizen engagement, construction of energy efficient buildings and adoption of zero emission vehicles in the City.

*Table 1. An overview of the City's climate and environment plans to date.*

<b>Plan</b>	<b>Year Adopted</b>
Environmental Protection Plan	2000
Local Action Plan	2005
100 Year Sustainability Vision	2009
Community Energy and Emissions Plan	2010
Corporate Climate Action Plan	2011
Invasive Plant Strategy	2013
Climate Adaptation Plan	2013
Corporate Climate Plan Update	2017
Integrated Stormwater Management Plan	2017
Electric Vehicle Strategy	2018

In addition, a number of the climate and environment initiatives identified in the above plans are supported by Bylaws, guidelines and other tools including erosion and sediment control requirements in the Stream and Drainage System Protection Bylaw, diversion of residential organics waste through the Solid Waste Management Service Bylaw and energy efficiency and electric vehicle charging infrastructure requirements in the Zoning Bylaw.

### **A History of Environmental Protection and Climate Action Leadership**

The City is recognized as a leader in innovative and progressive climate and environment policy and programs. In particular, the City has set a precedent within the region for energy efficiency requirements for new buildings, watershed management and electric vehicle adoption.

Some highlights of the City's history of leadership include:

- Installing raingardens starting in 2004 and promoting them on private property with over 80 rain gardens now installed in the City
- Being the first municipality in BC to use density bonusing provisions to require new buildings to meet higher energy efficiency standards in 2011

- Introducing stormwater management requirements for all new development sites, including single family homes, in 2014
- Implementing food scraps collection in 2012 and bi-weekly garbage collection in 2014 leading to one of the lowest per capita disposal rates in the region
- Being the first municipality in BC to adopt BC Energy Step Code requirements for all new buildings in 2017
- Developing one of the first municipal electric vehicle strategies in Canada in 2018
- Adopting some of the first comprehensive electric vehicle charging infrastructure requirements for both residential and non-residential buildings in 2019 and 2021
- Adopting low carbon requirements for new homes in coordination with the other North Shore municipalities in 2020

### The Need for a Climate and Environment Strategy

While the City's climate and environment plans have served us well in providing clear direction in individual topic areas, we have lacked a consistent framework to guide all climate and environment decision-making. Some policy areas, such as an overarching approach to promoting biodiversity in the City, have yet to be addressed. Additionally, both the Community Energy and Emissions Plan and the Climate Adaptation Plan have become increasingly limited in their ability to provide effective direction for climate-related decision-making as a result of new understanding of the scale of action needed to avoid significant impacts of climate change, quickly developing technologies and growing citizen mobilization. Council has recognized the need for an overarching plan and identified developing a new Climate and Environment Strategy as a key priority in their 2018-2022 Council Strategic Plan.

The CES will be the City's first comprehensive plan to guide all climate and environment work and will serve as our first point of reference for decision-making. Developing a new, overarching CES provides an opportunity to respond to our current context of multiple crises, coordinate actions to maximize co-benefits and explore innovative and holistic solutions.

### Reconciliation and Equity as Priorities

The City is within the unceded Traditional Territory of the xʷməθkʷəy̓əm (Musqueam), Skwxwú7mesh (Squamish), and Sel̓íl̓witulh (Tsleil-Waututh) First Nations. Since time immemorial, First Nations have lived here and sustained themselves and this land. Innate in the work of the CES to restore our relationship with the environment is the need learn from and work with the local Nations and urban Indigenous people.

Further, climate change disproportionately affects some communities more than others, locally and globally. Communities suffering from systemic discrimination and experiencing poverty, lack of services and unequal opportunities are more likely to be impacted by climate change and be left behind in the transition to a low carbon society. The disproportionate implications of climate change and climate action overlap with other societal issues including Indigenous rights, racial justice, immigrant rights, housing justice and gender issues. Central to our work in the CES is to ensure a just transition so that the benefits of a green economy and a clean environment are shared by everyone.

With Council's recent Equity, Diversity, Inclusion and Reconciliation (EDIR) Notice of Motion, the City has taken an important step forward in prioritizing this work. To better equip staff to center equity and reconciliation in the work of the CES, staff have been participating in a community of practice led by researchers at the University of British Columbia called Transforming Cities from Within (TCFW). The TCFW program guides participants through a learning journey exploring transformative and emergent innovations for complex climate change and equity challenges in cities. Staff aim to apply learnings during plan development to further reconciliation priorities and equity outcomes through CES policies by their design.

## DISCUSSION

### Scope of the New Climate and Environment Strategy

The Environment Strategy will build upon existing climate and environment plans and establish a comprehensive and streamlined framework for climate and environment decision-making and investments to address current policy gaps and future opportunities and challenges over the next ten years. The new Strategy will be organized around three main framework components:

1. Vision: A description of future we are striving to achieve through the work of the Strategy.
2. Goals: The desired outcomes of the Strategy that reflect our context and community priorities.
3. Strategies: Broad statements outlining what needs to be done to achieve our vision and goals. The Strategies are categorized into four themes and supported by a series of policy, program and process actions.

### Approach and Timeline for Strategy Development

Development of the CES is following a multi-phase approach as outlined in Figure 1.

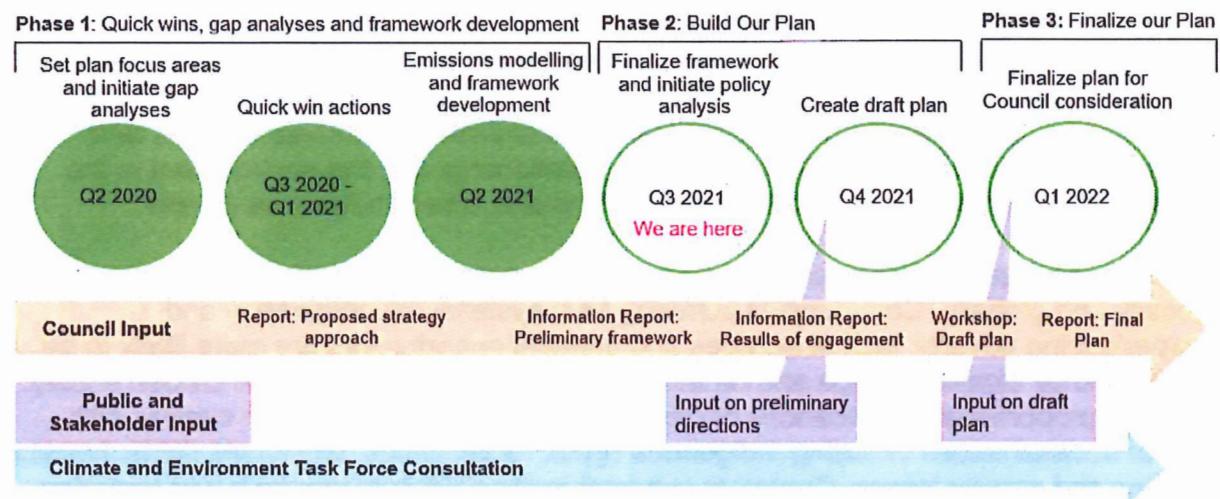


Figure 1. Climate and Environment Strategy Development Process.

Phase 1 of the project has been underway since Summer 2020 when the plan focus areas were scoped with the help of the Climate and Environment Task Force. In this process, a number of quick win actions were identified including low carbon Energy Step Code requirements for new homes, the Jump on a New Heat Pump campaign to promote fuel-switching from natural gas furnaces, electric vehicle charging infrastructure requirements for new non-residential buildings and key direction on new sites and methods for urban agriculture. Following the implementation of these no-regret actions and the completion of a policy gap analysis, focus has shifted to the development of the preliminary vision, goals and strategies for the Climate and Environment Strategy. This work is being undertaken concurrently with an emissions modelling project to better understand our community-wide emission profile and determine our pathway to interim targets and net zero emissions by 2050.

Phase 2 of the project will involve developing an engagement plan to solicit input from stakeholders and the public on the Strategy vision, goals and key directions, to be undertaken early in Fall 2021. This feedback will be used to refine the Strategy framework before proceeding with the development of a draft plan that includes a full set of prioritized supporting actions.

The draft plan will be communicated to stakeholders and the public for input early in Phase 3 to ensure it reflects the values and concerns of the community. Following engagement, staff will work to finalize the plan and provide it to Council for consideration by the end of Q1 2022.

### **Consultation Approach**

As indicated in Figure 1, there will be two primary opportunities for public and stakeholder input into the development of the CES:

1. Input on preliminary directions: The first consultation period will be initiated over the summer with focused stakeholder discussions and grow into a broader community engagement in the early fall. At this touchpoint, the CES framework will be introduced for feedback on the alignment between the vision, goals and key directions with the values of our community and stakeholders. Following the conclusion of the first consultation period, staff will update Council with a summary of the feedback received through an Information Report.
2. Input on draft plan: The second consultation period will take place in early 2022 to solicit input on the content of the draft CES. Community members and stakeholders will have the opportunity to provide feedback on the initial set of prioritized actions, procedures and programs and the degree to which they reflect the CES's vision and goals.

The majority of consultation and engagement activities is expected to take place online, however some in-person events will be considered in accordance with the City's Restart Plan. Efforts to solicit feedback in the two consultation periods will include the following tools:

- Website: A dedicated project webpage on the City's "Let's Talk" website will contain project information and resources.

- Discussion Guide: A plain-language discussion guide will outline the preliminary vision, goals and strategies and provide relevant context such as the City's progress to date and current challenges and opportunities to be addressed through the CES.
- Survey: An online survey will be designed to allow participants to provide input on as many or as few of the preliminary goals and strategies as the participant chooses. This approach makes it easier for people to participate in a manner that best suits their level of interest and meets their availability.
- Social Media and Other Notices: Information and advertisements will be published via the City's social media platforms and other digital and print media to ensure the public is advised of the process and the available methods of providing input and direct the public to information sources, such as the website.
- Stakeholder and First Nations Meetings: Staff will host virtual meetings with stakeholders and local First Nations to provide information about the CES and gather in-depth feedback and perspectives.

### **Approach to Developing the Preliminary Vision, Goals and Strategies**

The development of the preliminary vision, goals and strategies for the CES framework was informed by a range of inputs and information including:

#### **1. Existing City plans and objectives**

The CES's preliminary goals and strategies are intended to reflect and reinforce objectives of the City's Official Community Plan (2014), the Community Energy and Emissions Plan (2010), Climate Adaptation Plan (2013), and other policies that prioritize reduction of carbon pollution and improved resiliency. Further, the CES will include the City's pathway to net zero emissions by 2050 following direction from Council's 2019 Climate Action Notice of Motion.

#### **2. Current context**

The CES's framework is informed by our current context as detailed in the Background section of this report to respond to recent research and pressing issues. In particular, in drafting the vision, goals and strategies of the CES, significant consideration was given to:

- The climate emergency and citizen mobilization
- The biodiversity crisis
- A green recovery
- Reconciliation and equity

#### **3. Input from the Climate and Environment Task Force**

The City's Climate and Environment Task Force reviewed the draft CES framework and provided significant feedback to the preliminary vision, goals and strategies. The following themes emerged from the discussion which have been incorporated into the current version of the preliminary CES framework:

- Bold action: Transformative change not gradual progress needs to be prioritized.

- Influence: The City can be a leader by extending our influence through partnerships.
- Environmental protection: Our relationship with the environment needs to include giving back to nature.
- Equity: Solutions should be accessible to everyone and all community members should share the benefits of a healthy environment.

#### 4. A review of emerging practices

To continue the City's leadership in climate and environment policy, a number of emerging practices were reviewed in the development of the preliminary strategies and actions including:

- Financial tools: In recent years, Cities have been adopting carbon budgets, internal carbon prices and valuation of natural assets to better incorporate climate and environment considerations into existing financial processes.
- Addressing embodied carbon and consumption-based emissions: Cities have historically focused on carbon pollution generated within their geographic boundaries and now efforts are extending to address carbon pollution produced outside of the municipality from the production and transportation of materials used within the City.
- Nature-based solutions: More and more, cities are turning to green infrastructure, both natural ecosystems and bioengineered systems (ex. bioswales, rain gardens) as solutions to capture carbon and adapt to climate impacts such as increasing heat, altered precipitation patterns and health concerns.
- Circular economy: The movement to transition from a linear approach (make-take-waste) to a circular economy where materials are traded in a closed loop of improved design, reuse and recycling, has been gaining global momentum in recent years and many jurisdictions are developing action plans and setting targets to eliminate waste through this systemic shift to circular solutions.

## Preliminary Vision, Goals and Strategies

The full framework of preliminary vision, goals and strategies for the CES is outlined in Figure 2.

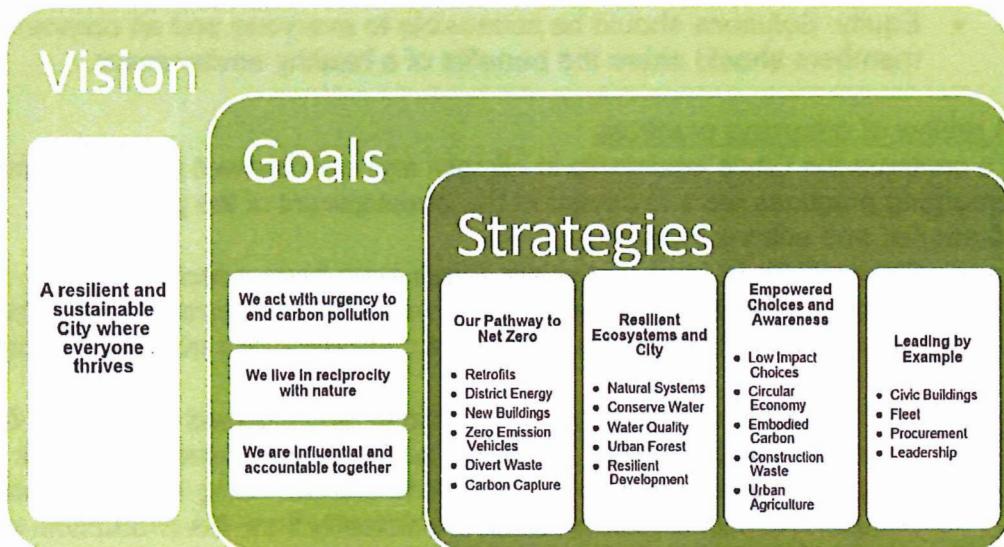


Figure 2. Preliminary CES framework.

### About the Vision

The preliminary vision for the new CES is:

**"A resilient and sustainable City where everyone thrives"**

The vision is intended to paint a picture of a healthy, green and low carbon City that is well-equipped to navigate a rapidly changing future for generations to come. In this envisioned future, transformative change has shaped a highly modern, biodiverse City fueled by renewable energy. Most importantly, the vision reflects a future where the benefits of an equitable transition and clean environment are shared by everyone.

### About the Goals

The vision is supported by three preliminary goals, as outlined in Table 3. The goals express at a high level what we are working towards through the CES.

Table 2. Preliminary Goals

Goal	Why is this important?
<b>1. We Act with Urgency to End Carbon Pollution</b>  We are a City that upholds its commitments to our community and are charting a course towards meeting our interim and	The Intergovernmental Panel on Climate Change 2018 Special Report on Global Warming of 1.5°C communicated the need for urgent action and catalysed governments around the world into setting commitments. Should warming continue at its current rate, global temperatures will cross this critical threshold in the coming decades when the impacts to human and natural systems become severe and long-lasting or irreversible. However, a window of opportunity remains to limit warming to 1.5°C through rapid and far-

2050 emissions reductions targets.	<p>reaching transitions across sectors to reduce emissions dramatically by 2030 and achieve net zero emission by 2050.</p> <p>Efforts underway to curb the impacts of climate change must be accelerated and the actions we set as a City must be transformative in order to meet our interim and 2050 targets. The CES will set nearer-term milestones and define a pathway forward to reduce our carbon pollution from buildings, transportation, waste, embodied carbon and the consumption of goods.</p>
<p><b>2. We live in reciprocity with nature</b></p> <p>We recognize that our relationship with nature cannot be unilateral; our health and well-being depend on the success of our ecosystems and we must give back to the land knowing its innate value and rich history of being well-stewarded by Indigenous people since time immemorial.</p>	<p>A City has many relationships with the land which we shape and regulate to meet a range of community objectives and priorities. From land development processes in pursuit of a more livable urban community, to enhancement practices such as habitat restoration, to climate adaptation efforts like infrastructure to prevent flooding - we interact in various ways with nature. All of these interactions have an intrinsic dependency on our understanding, appreciation and respect for the land and all the ecological services it provides. By gaining a deeper understanding of our natural systems and identifying opportunities to restore, enhance and strengthen resiliency, we can begin to strike a closer balance between giving and taking to sustain our community well into the future.</p>
<p><b>3. We are influential and accountable together</b></p> <p>Our City may be small but our ability to influence transformative change extends beyond our boundaries - guided by education, empowerment and a shared accountability for our relationship with the climate and environment.</p>	<p>The City delivers targeted outreach, programs and incentives on an annual basis to effect incremental change. In the face of more urgent action required, the CES will be setting strategic direction to guide the creation of partnerships and opportunities for sustained community involvement and empowerment. Education is a core tenet of this goal and the Strategy will provide the City's first set of policies and directions on consumption-based emissions, circular economy and embodied carbon. Further, the City must demonstrate leadership by adopting low carbon and sustainable practices as an organization before we ask the same of our community.</p>

## About the Strategies

The preliminary strategies are the broad statements that provide direction towards achieving the goals. There are 20 preliminary strategies that organized under four themes or chapters:

- A. Our Pathway to Net Zero:** Cutting carbon pollution from major sources in the City to achieve our interim targets and net zero by 2050.
- B. Resilient Ecosystems and City:** Preparing ourselves and our natural systems for a more resilient future in light of climate change.
- C. Empowered Choices:** Learning and taking action together to reduce our local and global ecological footprint.
- D. Leading by Example:** Fostering environmental leadership within our community and organization to inspire transformative change.

The table below outlines each of the preliminary strategies with descriptions which are intended to generate discussion through public input. Additional details of why each strategy is important and ideas of how it could be implemented are found in Attachment 3.

*Table 3. Preliminary Strategies*

Topic	Strategy
<b>A. Our Pathway to Net Zero</b>	
Retrofits	Enable energy efficient upgrades and fuel-switching to renewable energy in existing buildings in the City at an unprecedented rate.
District Energy	Support the transition of our district energy system to renewable energy sources.
New Buildings	Incrementally move to the highest step of the BC Energy Step Code for all new buildings, combined with low carbon requirements.
Zero Emission Vehicles	Continue to accelerate access to electric vehicle charging, especially for residents living in multifamily buildings to enable rapid, widespread adoption of electric vehicles.
Divert Waste	Prevent waste from decomposing in landfills by diverting it through recycling and composting programs.
Capture Carbon	Enhance the carbon capture ability of our natural systems to remove more carbon from the atmosphere.
<b>B. Resilient Ecosystems and City</b>	
Natural Systems	Improve the health, connectivity and biodiversity of our natural areas through the City's first Natural Systems Strategy.
Conserve Water	Promote understanding and tools to reduce drinking water demand and minimize the strain on our water supply.
Water Quality	Protect the health of our streams and the Burrard Inlet through holistic watershed management practices.
Urban Forest	Grow a resilient and accessible tree canopy through a City-Wide Urban Forest Management Strategy.
Resilient Development	Promote ecosystem services through low impact and green new development.
<b>C. Empowered Choices and Awareness</b>	
Low Impact Choices	Promote lifestyle choices that reduce the carbon pollution our actions generate outside of City boundaries.
Circular Economy	Move from a linear (take-make-waste) economy to a circular one that keeps resources in use and eliminates waste.
Embodied Carbon	Incorporate low carbon building materials in our new buildings to reduce carbon pollution from the manufacturing, transportation and installation of materials.
Construction Waste	Move from demolition and disposal, to deconstruction and reuse of building materials to reduce waste going to landfill.
Urban Agriculture	Increase access to space in a highly urbanized environment for people to grow their own food.
<b>D. Leading By Example</b>	
Civic Buildings	Retrofit our buildings to be highly efficient and powered by renewable energy and build green new facilities.
Fleet	Replace vehicles being retired with zero emission alternatives.

## INFORMATION REPORT: Climate and Environment Strategy Update – Preliminary Vision, Goals and Strategies

Date: July 8, 2021

<b>Procurement</b>	Account for carbon pollution in our internal decision-making, budgeting and purchasing processes.
<b>Leadership</b>	Grow a culture of collective climate action with community members leading the way.

### NEXT STEPS

In the coming months, staff will continue the work of building the CES through policy analysis and by seeking input on the preliminary strategies. The Climate and Environment working group and Corporate Energy and Emissions Team will continue to guide the development of the CES strategies and the Steering Committee will provide input at significant decision-making milestones. The Climate and Environment Task Force will regularly review progress made and provide feedback to the strategies as they develop. As input is solicited following the consultation approach outlined in this report, additional focus will be placed on hearing from equity-seeking groups and applying emergent learnings from the Transforming Cities from Within program, in coordination with the City's efforts on equity, diversion, inclusion and reconciliation.

A key component of the current phase of CES development is a community-wide emissions inventory update and greenhouse gas modeling exercise to inform our low carbon pathway. Staff will provide an update to Council with the results of this work in the near future, and be recommending an interim target for Council consideration to better prioritize high impact actions and strengthen outcomes of the CES.

Through the development of the CES framework presented in this report, staff have placed initial consideration towards implementation. Once the benefit of both focused and broad community and stakeholder input is realized, staff will be better positioned to advance ideas of how key actions can best represent community and civic priorities while also being achievable for the City. In light of the scale of transformative change needed across all levels of government, industry and societal action to address the urgency of climate change, a strategic approach to partnerships will be sought. In particular, specific consultation with the development industry and other key partners will be a major element of staff effort as the plan progresses into a curated set of draft collective actions.

### ADVISORY BODY INPUT

The preliminary goals and strategies have developed with input from the following City committees: Advisory Planning Commission, Social Planning Advisory Committee. Staff will be bringing the framework to the Integrated Transportation Committee and the North Shore Advisory Committee on Disability Issues in the coming weeks. These groups and Committees will continue to be engaged through the remainder of the plan development process.

### FINANCIAL IMPLICATIONS

Approximately \$230,000 has been appropriated from the 2020 and 2021 Project Plans to support the development of the CES. The funds are being used to support major components of the project including consultant support, consultation and

communications and materials development. Additional funding may be requested in future Annual Financial Plans to support the implementation of the new strategy, as appropriate, once adopted by Council.

## **INTER-DEPARTMENTAL IMPLICATIONS**

The Climate and Environment Strategy will establish new policy direction and supportive actions and strategies that will require deep collaboration across City departments. As such, the vision, goals and strategies of the CES were developed with input from the newly-established CES working group made up of representatives from various City departmental teams and the Corporate Energy and Emissions Team with staff who work directly on projects related to civic facilities and fleet. In addition, staff reviewed the CES framework with representatives of the Lonsdale Energy Corporation to discuss opportunities for alignment. Finally, the preliminary vision, goals and strategies were reviewed by the City's Policy and Projects Team and Leadership Team.

## **STRATEGIC PLAN, OCP OR POLICY IMPLICATIONS**

The Climate and Environment Strategy's preliminary framework supports and builds upon the key climate and environment-related objectives and policies in the City's Official Community Plan (2014) and vision of a vibrant, diverse and highly livable community that is resilient to climate or other changes and sustainable in its ability to prosper without sacrifice to future generations. Further, the CES will support implementation of the City's Livable City goals as articulated in Council's Strategic Plan.

RESPECTFULLY SUBMITTED:



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Jennifer Draper, P.Eng, M.PI.  
Deputy Director, Planning & Development

**2019 – Revised City Of North Vancouver GHG reduction targets**

**80% below 2007 levels by 2040 and achieving net zero or 100% emissions reductions by 2050;**

Motion carried unanimously at Feb 25, 2019 Council meeting.

**...NOTICE OF MOTION 9. Climate Action – File: 11-5280-14-0001/2019**

Submitted by Councillor McIlroy Moved by Councillor McIlroy, seconded by Councillor Bell

WHEREAS the City of North Vancouver's 2010 Community Energy and Emissions Plan established greenhouse gas emissions (GHG) reduction targets of 35.7% below 2007 levels by 2030, 51.3% by 2050 and a goal of net zero by 2107;

WHEREAS over the past nine years, the world has seen accelerated rates of climate change impacts, including the hottest years on record, declared states of emergency over wildfires and extreme weather events, displacing millions of people and costing billions of dollars;

WHEREAS in 2018, the Province of BC established GHG reduction emission targets of 40% below 2007 levels by 2030, 60% below 2007 levels by 2040, and 80% below 2007 levels by 2050;

WHEREAS in 2018, the Intergovernmental Panel on Climate Change (IPCC) released a Special Report stating that emissions must decline by 45% from 2010 levels by 2030 and reach net zero by 2050 in order to avoid severe climate change impacts;

AND WHEREAS local governments and cities are globally taking the lead on climate action, with over 90 cities in the USA committing to 100% renewable energy by 2050, 15 communities in Canada have committed to 100% renewable energy and 20 cities committing to 80-100% GHG emissions reduction by 2050;

THEREFORE BE IT RESOLVED THAT the City of North Vancouver establish more ambitious GHG reduction targets of 80% below 2007 levels by 2040 and achieving net zero or 100% emissions reductions by 2050;

THAT staff be directed to incorporate said targets into forthcoming updates to City plans, policies and business practices and report regularly on the City's progress toward achieving the targets;

AND THAT a Climate and Environment Advisory Task Force or Working Group be struck to provide guidance and support on actions and efforts required to achieve the transition from current GHG emissions to the new targets.

**CARRIED UNANIMOUSLY**

**MINUTES OF THE REGULAR MEETING OF COUNCIL, HELD IN THE CAO MEETING  
ROOM, CITY HALL, 141 WEST 14<sup>TH</sup> STREET, NORTH VANCOUVER, BC, ON  
MONDAY, JULY 13, 2020**

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**PRESENTATION**

Environment Strategy Update – Manager, Environmental Sustainability

The Manager, Environmental Sustainability provided a PowerPoint presentation regarding the "Environment Strategy Update" and responded to questions of Council.

**REPORTS**

4. Environment Strategy: Proposed Approach – File: 11-5280-14-0001/2020

Report: Manager, Environmental Sustainability, July 8, 2020

Moved by Councillor Bell, seconded by Councillor McIlroy

PURSUANT to the report of the Manager, Environmental Sustainability, dated July 8, 2020, entitled "Environment Strategy: Proposed Approach":

THAT the proposed approach for the Environment Strategy be endorsed.

**CARRIED UNANIMOUSLY**



Environment Strategy Update

July 13, 2020  
Presentation to Council

**city**  
of north  
vancouver

## Outline

Guiding Principles

Scope

Timeline

Initial Actions



## Guiding Principles

Corporate Leadership  
People-Focused Approach  
Data-Driven Accountability

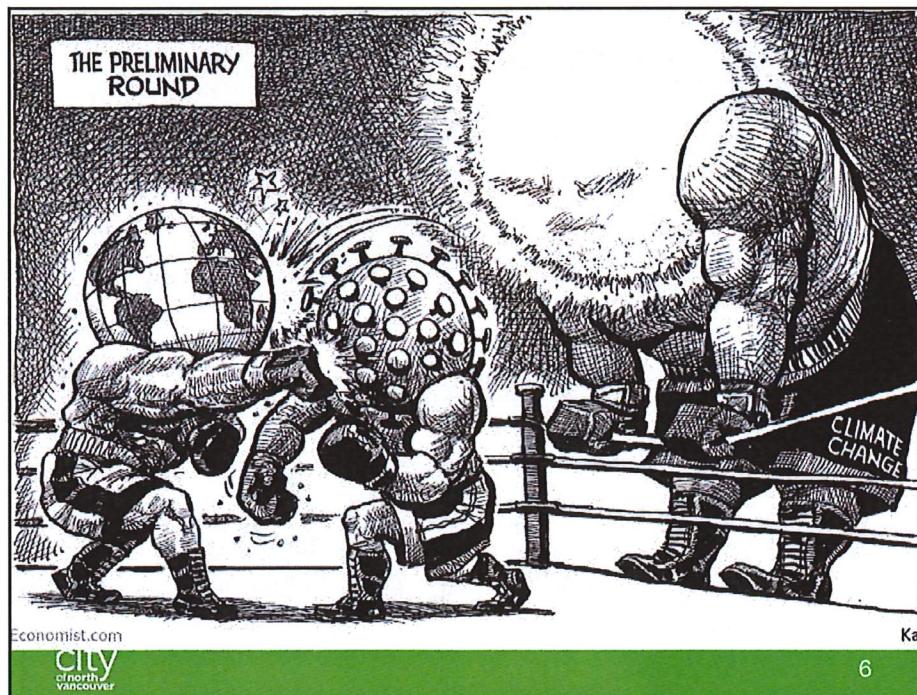


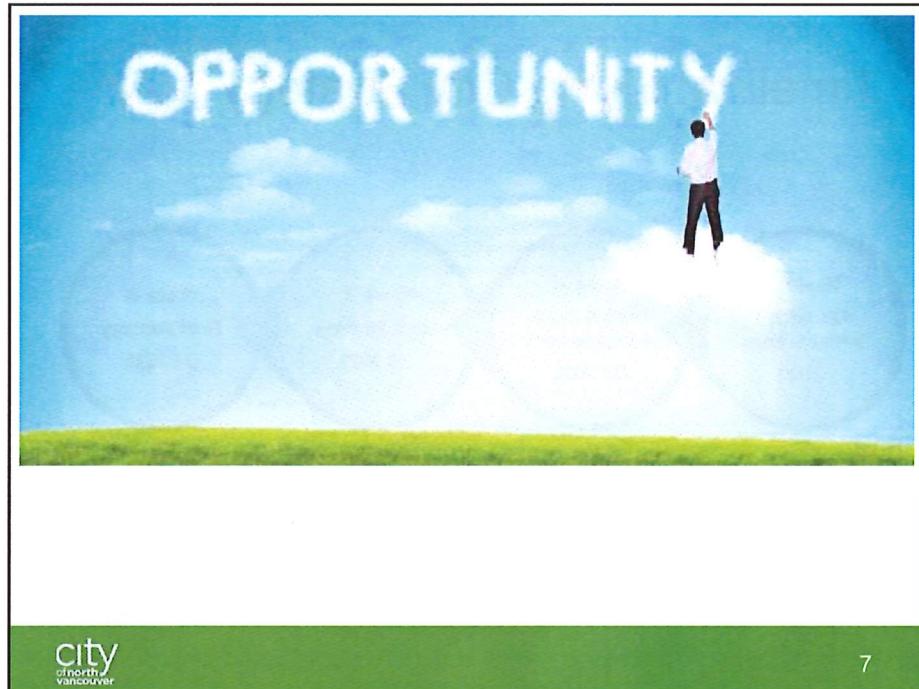
## Scope

Climate Action: Reducing Emissions  
Climate Resilience: Preparing for Impacts  
Ecosystem Health and Biodiversity  
Zero Waste



## Timeline: Living City Strategy





## Low Carbon Buildings Bylaw



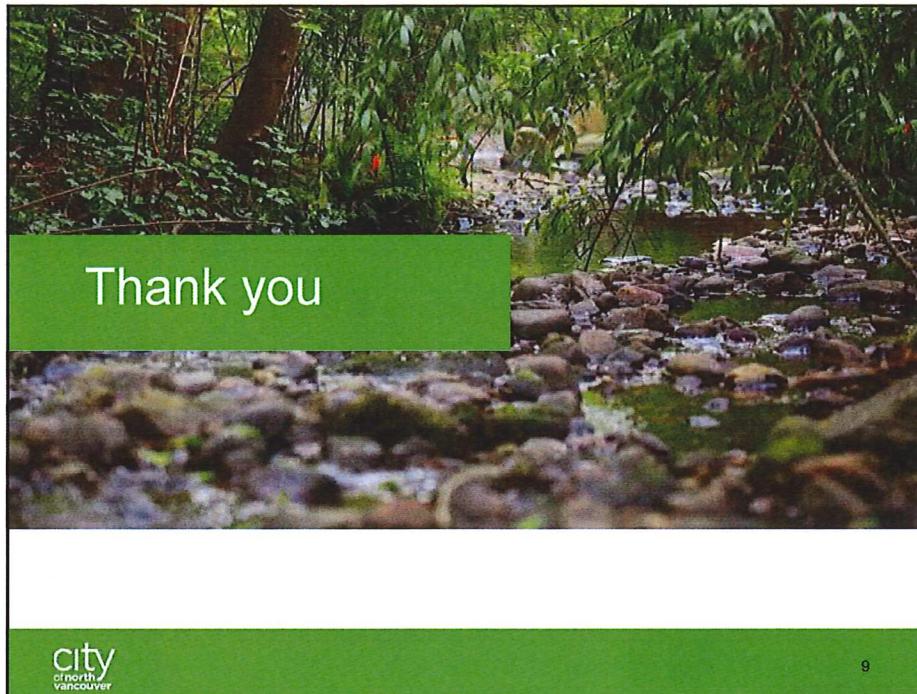
## Urban Agriculture



## Corporate Actions



Heat Pump Retrofits





	Department Manager		Director		CAO
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The Corporation of **THE CITY OF NORTH VANCOUVER**  
**PLANNING & DEVELOPMENT DEPARTMENT**

**REPORT**

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To: Mayor Linda Buchanan and Members of Council  
From: Caroline Jackson, Manager, Environmental Sustainability  
Subject: ENVIRONMENT STRATEGY: PROPOSED APPROACH  
Date: July 8, 2020 File No: 11-5280-14-0001/2020

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*The following is a suggested recommendation only. Refer to Council Minutes for adopted resolution.*

**RECOMMENDATION**

PURSUANT to the report of the Manager, Environmental Sustainability, dated July 8, 2020, entitled "Environment Strategy: Proposed Approach"

THAT the proposed approach for the City's Environment Strategy be endorsed.

**PURPOSE**

The purpose of this report is to provide an update to Council on the recent work of the Climate and Environment Task Force and to present a proposed approach to the development of the City's Environment Strategy for Council's consideration.

**BACKGROUND**

Concern is increasing regarding the impact of global temperature increases and threats to ecological health as experts caution that action is needed more urgently than previously understood (International Panel on Climate Change, 2018; IPBES Global Assessment on Biodiversity and Ecosystem Services, 2018). In February 2019, Council unanimously adopted a new community greenhouse gas reduction target of net zero emissions by 2050, and subsequently established a new Climate and Environment Task Force. Although a number of meetings were cancelled due to the COVID-19 pandemic, the Task Force is now preparing to continue its work in providing guidance and support to City staff and consultants in preparing the City's Environment Strategy.

## DISCUSSION

The Environment Strategy will provide a comprehensive roadmap to accelerate the implementation of actions identified in the Livable City section of Council's Strategic Plan. These actions comprise four themes: climate action (reducing emissions), climate resilience (preparing for future impacts of climate change), ecological health, and zero waste.

In February 2020, the Climate and Environment Task Force participated in a workshop focused on defining success and scope for the Environment Strategy. Task Force members recommended that that a number of guiding principles be considered to ensure the Environment Strategy is effective, and discussed areas to be considered within each of the Strategy's four main theme areas. Based on this input, the following guiding principles and scope are proposed for the Strategy:

### Strategy Guiding Principles

- 1. Corporate Leadership.** All City departments should be involved in Strategy development, and the strategy should be integrated with other priorities (e.g. economic development, asset management). The City should lead by example through zero carbon fleet, equipment, and building operations and sustainable purchasing practices.
- 2. A People-Focused Approach.** The Strategy should ensure that no one is left behind and must consider traditionally disadvantaged groups. The Strategy should be accessible to City staff and the public and connect with them personally to create a vision for what can be achieved. Actions with co-benefits (health, affordability, equity, economic development) should be prioritized.
- 3. Data-Driven Accountability.** Targets, policies and actions in the Strategy should be identified and prioritized based on best available research with ongoing accountability in implementation supported through regular reporting processes.

### Strategy Scope

- 1. Climate Action**
  - a. Set targets and timelines for zero emissions new and existing buildings;
  - b. Work with the Lonsdale Energy Corporation to further reduce emissions;
  - c. Reduce transportation emissions through encouraging active transportation and transit use, supporting the transition to electric vehicles, and making housing more affordable.
- 2. Climate Resilience**
  - a. Develop a strategy to ensure the City, the community, and its infrastructure are resilient to future climate changes;
  - b. Improve resiliency to expected impacts such as extreme weather events, particularly for disadvantaged groups;

### 3. Ecosystem Health

- a. Protect and enhance ecological health through managing invasive species and restoring fish and wildlife habitat;
- b. Bring nature back to the City and foster connections with nature through targeted programs and services;
- c. Continue the City's leadership in rainwater management through the installation of additional green infrastructure such as rain gardens;
- d. Advance the City's urban agriculture initiatives and advocate for additional growing space in new developments.

### 4. Zero Waste

- a. Support the transition to zero waste through supporting reuse, reducing single use items, and encouraging recycling;
- b. Reduce construction and demolition waste through increased materials recycling while advancing the use of recycled material in building practices;
- c. Identify and reduce consumption-based emissions (emissions from goods produced elsewhere).

### Timeline

The anticipated timeline for the Environment Strategy development is outlined below (Figure 1). While the timeline has been adjusted to take into account COVID-19 related budget restrictions, staff continue to advance the Strategy development. At the same time, staff are also focused on implementing no-regret initial actions critical to achieving long term success, such as preparing proposed low carbon amendments to the City's Energy Step Code requirements, demonstrating corporate leadership through building and fleet policies, advancing urban agriculture initiatives to improve local food security and community resiliency, and accessing senior government and utility funding opportunities to expand the City's public electric vehicle charging infrastructure and other projects.



**Figure 1. Environment Strategy Development Timeline**

Staff will report back to Council at the conclusion of each phase in the Strategy as detailed in Table 1.

**Table 1. Environment Strategy Timeline**

<p><b>Phase 1: Research + Initial Actions (2020)</b></p> <ul style="list-style-type: none"><li>• Establish Task Force and define Strategy approach (principles and scope)</li><li>• Seek Council's endorsement of proposed approach</li><li>• Complete baseline (greenhouse gas emissions and ecological health inventories, environmental performance indicators, anticipated climate impacts for the City)</li><li>• Complete research and analysis and review best practices</li><li>• Initiate internal staff engagement</li><li>• Implement initial no regret actions (low carbon building programs, corporate leadership, advancing urban agriculture, implementing electric vehicle charging infrastructure)</li></ul> <p><i>Report to Council: Phase 1 Summary: Baseline and Potential Policies &amp; Actions</i></p>
<p><b>Phase 2: Draft Actions + Engagement (Q2 2021)</b></p> <ul style="list-style-type: none"><li>• Based on Council's direction with respect to policies and actions identified in Phase 1, engage with key stakeholders and the broader community to seek feedback regarding potential policies and actions for the Environment Strategy</li></ul> <p><i>Report to Council: Environment Strategy Engagement Summary</i></p>
<p><b>Phase 3: Draft Strategy Development (Q3 2021)</b></p> <ul style="list-style-type: none"><li>• Based on work completed in Phase 1 (Research + Initial Actions) and Phase 2 (Draft Actions and Engagement), prepare draft Environment Strategy for Council's consideration identifying specific actions to achieve net zero emissions by 2050, enhance ecosystem health, advance zero waste, and ensure resilience to climate change impacts</li></ul> <p><i>Report to Council: Draft Environment Strategy</i></p>
<p><b>Phase 4: Final Strategy Development (Q4 2021)</b></p> <ul style="list-style-type: none"><li>• Share draft Environment Strategy with stakeholders and the wider public to seek additional feedback</li><li>• Based on Council, stakeholder and community feedback received, make changes required to the draft strategy and prepare Final Environment Strategy for Council's consideration</li></ul> <p><i>Report to Council: Final Environment Strategy</i></p>

## **FINANCIAL IMPLICATIONS**

Staff are proceeding with Strategy development using existing available budget and staffing. The Strategy timeline has been adjusted to take into account COVID-19 related restrictions. Cost implications of the Strategy will be identified during Strategy

development with some costs already provided for within existing staffing, operating, and capital budgets, or through realignment of existing budget priorities. Significant opportunities will exist, particularly in the coming years, to reduce costs through securing external funding from senior government and utility programs and through strategic partnerships with other agencies. Incremental costs associated with the Strategy will be identified with funding requests brought forward for Council's consideration during the City's Financial Planning process.

### **INTER-DEPARTMENTAL IMPLICATIONS**

This report and recommendation were reviewed by the City's Leadership and Policy and Projects Teams on July 7, 2020.

### **STRATEGIC PLAN, OCP OR POLICY IMPLICATIONS**

This plan will support implementation of the City's Livable City goals as articulated in Council's Strategic Plan. This Strategy also supports the City's OCP vision of a vibrant, diverse and highly livable community that is resilient to climate or other changes, and sustainable in its ability to prosper without sacrifice to future generations.

RESPECTFULLY SUBMITTED:



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Caroline Jackson, M.Sc.  
Manager, Environmental Sustainability

## Tables of CES Strategies and Actions

The tables on the following pages outline each preliminary strategy, why it is important, and examples of possible ideas for actions the City could take to support or implement the strategy. They are intended to illustrate each preliminary strategy and generate discussion through public input. As plan development progresses, decision making criteria will be set for establishing plan priorities and how they relate to the shared principles of the three strategies. Additionally, careful consideration of partnerships, specific consultations with industries, such as the development industry, will be undertaken to create a set of prioritized draft actions that are achievable for the City and its key partners in the delivery of the CES.

### A. Our Pathway to Net Zero: Cutting carbon pollution from major sources in the City to achieve our interim targets and net zero by 2050.

To avoid catastrophic climate change, the Intergovernmental Panel on Climate Change warns that we must limit warming to 1.5° C by dramatically reducing carbon pollution by 2030 and reaching net zero by 2050. Meeting these goals will mean cutting our carbon pollution from buildings, transportation and waste in the City at an unprecedented rate, and increasing carbon capture. Our pathway to net zero will be informed by current modeling of our carbon pollution and low carbon actions to prioritize high impact moves.

The strategies in Our Pathway to Net Zero will require close collaboration with other City departmental teams and with partners, including the Lonsdale Energy Corporation. Further, strategies to cut carbon pollution from the transportation sector are included in both the CES and the Mobility Strategy, with active transportation strategies captured entirely in the Mobility Strategy.

Strategy	Why is this important?	Examples of how we might do this
<i>Accelerate low carbon building retrofits</i>	Today, more than 40% of carbon pollution in the City comes from buildings. While some of these buildings will be replaced by new, low-carbon buildings over the coming decades, the majority of our building stock will still be standing in 2050. To achieve our climate targets, an unprecedented rate of low carbon retrofits will be required. Retrofitting our building stock will also provide improved comfort, air quality and lower energy costs to residents.	<ul style="list-style-type: none"> <li>Explore opportunities for financing tools to support residents and building owners to pursue deep carbon retrofits</li> <li>Prepare for and implement the Province's upcoming retrofit code and advocate that it addresses carbon pollution</li> <li>Continue to pursue regional partnerships to support scalable solutions for whole building deep carbon retrofits</li> <li>Implement programs to promote property owner awareness and support such as home energy labeling, building energy benchmarking and decision-making tools</li> </ul>
<i>Decarbonize district energy</i>	The City's district energy system provides efficient heating to almost 100 buildings in the City including some of the largest civic facilities,	<ul style="list-style-type: none"> <li>Support LEC's planning for decarbonization through studies, data sharing, advocacy</li> </ul>

Support the transition of our district energy system to renewable energy sources	accounting for 11% of floor space in the City. LEC has been incorporating renewable energy sources into its system when possible and transitioning the system to 100% renewable energy represents a significant opportunity to reduce carbon pollution from buildings in the City.	and exploration of funding sources
<i>Make new buildings net zero</i>  Incrementally move to the highest step of the BC Energy Step Code for all new buildings, combined with low carbon requirements.	One of the City's strongest levers in addressing carbon pollution from buildings is through regulation of new buildings' energy efficiency through the BC Energy Step Code. With the City's low carbon requirements now in effect for new homes, it is time to consider what is next to ensure all new buildings are highly efficient and zero emission.	<ul style="list-style-type: none"> <li>Establish a timeline to increase Step Code requirements in advance of the provincial timeline for all new buildings</li> <li>Transition from current two tier compliance pathway to Step Code requirements with greenhouse gas intensity requirements when enabled by Province</li> <li>Introduce low carbon requirements for large buildings</li> </ul>
<i>Accelerate the transition to zero emission vehicles</i>  Continue to accelerate access to electric vehicle charging, especially for residents living in multifamily buildings to enable rapid, widespread adoption of electric vehicles.	Uptake of electric vehicles in the City has been increasing exponentially in recent years and we need to ensure that this trend continues to realize critical reductions in carbon pollution from transportation. In particular, we need to promote equitable access to electric vehicles to enable widespread adoption.	<ul style="list-style-type: none"> <li>Continue implementing the actions of the City's Electric Vehicle Strategy (2018) by pursuing partnerships with car-sharing services, supporting retrofits of multi-family buildings and providing public education about EVs</li> <li>Increase access to EV charging infrastructure in priority neighbourhoods that have significant barriers to EV retrofits and are underserved by the public charging network</li> </ul>
<i>Reduce waste going to landfill</i>  Prevent waste from decomposing in landfills by diverting it through recycling and composting programs.	Disposing of materials by landfill is the least preferred management option due to a number of challenges and impacts of landfills. The carbon pollution from solid waste attributed to the City is based on quantity of waste generated in the City sent to landfill and the methane released from the decomposition of organic waste in the landfill. By reducing our waste going to landfill through diverting recyclable and compostable materials, we can cut our carbon pollution from this sector and minimize the other negative impacts of landfills	<ul style="list-style-type: none"> <li>Update the Solid Waste Management Services Bylaw to include the mandatory separation of recyclable materials at the source of collection for all sectors</li> <li>Continue to educate the public and provide support regarding proper waste diversion practices, with particular attention given to multi-family buildings</li> <li>Undertake waste characterization audits to gain an understanding of the composition of each waste stream to develop more targeted waste diversion education programs</li> </ul>
<i>Increase carbon capture</i>	In addition to reducing the amount of carbon we pollute, we need to capture carbon pollution to reduce the amount	<ul style="list-style-type: none"> <li>Explore opportunities to enhance carbon capture in the City through increased tree</li> </ul>

Enhance the carbon capture ability of our natural systems to remove more carbon from the atmosphere.	of carbon in the atmosphere. Carbon can be captured through natural processes in forests, wetlands and soils.	<ul style="list-style-type: none"><li>canopy cover, and shoreline and estuary restoration</li><li>Explore opportunities at the sub-regional level to capture carbon through land and aquatic-based projects outside of the City in partnership with the other North Shore municipalities</li></ul>
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**B. Resilient Ecosystems and City:** Preparing ourselves and our natural systems for a more resilient future in light of climate change.

The City adopted its first climate change adaptation plan in 2013, which provided an assessment of risks and vulnerabilities for the City to start addressing through plans and investments. Achieving adaptation outcomes relies on having access to the best available information at the time and considering much has changed with regards to our climate patterns and scientific understanding of human and ecosystem vulnerabilities, a re-assessment is required. Through the following strategies, adaptation will guide our policy making towards more resilient outcomes.

Strategy	Why is this important?	How could we do this?
<i>Enhance our natural systems</i>  Improve the health, connectivity and biodiversity of our natural areas through the City's first Natural Systems Strategy	Without fully understanding the extent of the ecological services provided by our natural systems and how stressors, such as climate change, invasive species and urbanization are impacting their viability, we will be challenged to sustain, let alone restore and enhance these vital systems.  In an urbanizing environment, green infrastructure such as techniques for storing, filtering and re-using stormwater can be used to better integrate natural and semi-natural areas.	<ul style="list-style-type: none"><li>Develop the City's first Natural Systems Strategy for improved resiliency that is informed by updated inventories, citizen science indicators and monitoring</li><li>Embed stewardship principles to better understand the provisions of our ecosystems, including food and medicine by applying traditional ecological knowledge</li><li>Complete parks assessments to identify sensitive areas and set clear roles for enhancement with our partner agencies and parks stewards</li><li>Embed green infrastructure opportunities into practices for improving east-west connectivity of our natural areas,</li><li>Increase the ecological services of the City's greenway network</li><li>Explore resiliency guidelines to improve species diversity and develop mitigation measures to protect vulnerable native species</li></ul>
<i>Increase Water Conservation</i>  Promote understanding and tools to reduce drinking water demand and minimize	Each year the City delivers over 9 billion litres of drinking water to its residents and businesses and while average consumption of potable water in Metro Vancouver is declining year over year, it remains well above other countries with strong conservation policies.	<ul style="list-style-type: none"><li>Increase outreach and develop targeted initiatives on the region's water supply to promote conservation ideas and tools.</li><li>Look to landscape design guidelines to reduce irrigation needs</li></ul>

the strain on our water supply.	From a community perspective, reducing water demand can also reduce energy consumption, emissions and costs for residents and businesses since the heating of water is typically carbon intensive.	<ul style="list-style-type: none"> <li>• Make alternative sources of water more readily available such as filtered rainwater or reclamation of greywater</li> </ul>
<i>Improve Water quality</i>  Protect the health of our streams and the Burrard Inlet through holistic watershed management practices.	The City's four watersheds (Mackay, Mosquito, Mission-Wagg and Lynn creeks) are increasingly susceptible to increased runoff from impermeable surfaces, increased peak flows, degraded habitats, spills and pollution – all of which present downstream risks to the Burrard Inlet.  The City remains a leader in the region for early adoption of stormwater management controls for single detached homes and duplexes but increasing impermeability will continue to add complexity to on-going asset investment and management for the City.	<ul style="list-style-type: none"> <li>• Explore new forms of green infrastructure, such as blue roofs and other source controls to manage the quantity and quality of water entering our watersheds while also assessing the cooling and reuse benefits of stored water</li> <li>• Explore incentives for maintaining permeable areas on private property</li> <li>• Explore best practices for erosion and sediment control measures, especially on smaller projects</li> <li>• Update educational materials on the importance to fish and aquatic habitat of riparian area restoration and conservation.</li> <li>• Encourage citizen science projects and continued partnerships with stewardship groups</li> </ul>
<i>Expand and protect our urban forest</i>  Grow a resilient and accessible tree canopy through a City-Wide Urban Forest Management Strategy.	The 2007 Urban Forest Management Plan technical report provided an overview of forested areas in CNV Parks and identifies key risks such as low proportions of old growth and young seral forest and the risks of hotter, drier summers on certain tree species.  The City has an opportunity to create a comprehensive strategy for public and private property, and to set goals and targets related to the long-term canopy coverage, health and resiliency of our trees	<ul style="list-style-type: none"> <li>• Develop a City-wide Urban Forest Management Strategy with clear objectives and targets informed by new inventory data</li> <li>• Identify opportunities for improved resilience of our urban forests to increase tolerance from climate change</li> <li>• Coordinate with the Community Wellbeing and Mobility Strategies to identify opportunities for increased access to urban forests and improved connectivity through active modes</li> <li>• Explore opportunities for increased tree planting on private property</li> <li>• Set objectives for City streets and underutilized rights of ways to grow our canopy within the public realm</li> </ul>
<i>Make new development resilient</i>  Promote ecosystem services through low	Several community objectives are pursued through development processes, including sustainability and increased livability and while natural systems can never be exactly	<ul style="list-style-type: none"> <li>• Explore biodiversity, climate and environment performance guidelines for new development with supportive education and certification tools for residents</li> </ul>

impact and green new development.	<p>replicated, we have an ability to apply nature's practices to mitigate our impacts</p> <p>The City has made strong gains with respect to building energy standards, green infrastructure and landscaping but can benefit from direction on other considerations to grow overall resilience through development</p>	<ul style="list-style-type: none"><li>• Consider pursuing designations such as the 'Bird Friendly City' and coordinate with the North Shore's local and First Nations governments to improve outcomes for our local and migrating bird species</li><li>• In coordination with the urban forest management strategy, review the ability to incentivize increased permeability on private property</li><li>• Review the City's Streamside Protection and Enhancement development permit guidelines.</li></ul>
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**C. Empowered Choices and Awareness:** Learning and taking action together to reduce our local and global ecological footprint

Central to the success of the CES is collective action by community members making informed choices to minimize the impact of their actions. For the City, this means broadening our scope to consider the carbon pollution from our consumer choices generated outside of City boundaries. Many of the strategies of this section will involve growing public awareness through outreach efforts and innovative policy tools to minimize the impact of the materials we use and consume, and the waste we generate.

Strategy	Why is this important?	How could we do this?
<i>Grow awareness of low impact consumer choices</i>  <i>Promote lifestyle choices that reduce the carbon pollution our actions generate outside of City boundaries.</i>	<p>Traditionally, municipalities have focused efforts on carbon pollution generated within their jurisdictional boundaries. However, as we look to make more dramatic reductions to carbon pollution globally, it is becoming increasingly clear that we need to consider the carbon pollution of our actions generated outside of the City through the production and transportation of goods.</p> <p>To better understand the impacts of our consumer choices, the City participated in the EcoCity study in 2017 to develop a consumption-based emission inventory and ecological footprint which will inform the actions of this strategy.</p>	<ul style="list-style-type: none"><li>• Create outreach materials that educate residents on the highest impact actions they can take to lower their individual carbon footprint</li><li>• Promote the importance of purchasing local goods and using local services ,when possible</li><li>• Develop and promote rebate and incentive programs that subsidize the cost of less carbon intensive choices</li><li>• Update education materials to highlight the importance of reduction in the waste hierarchy</li></ul>
<i>Transition towards a circular economy</i>  <i>Move from a linear (take-make-waste) economy to a circular one that keeps resources in use and eliminates waste.</i>	<p>A circular economy is an economic system aimed at eliminating waste and encouraging the continual use of resources. The circular economy movement creates a culture shift which reduces the overall ecological footprint of our community and encourages innovation through continued efforts to design out waste and pollution. Further, a circular economy contributes to well-being by increasing disposable income through the increased utility of items through durability and reduced obsolescence.</p>	<ul style="list-style-type: none"><li>• Ensure Circular Economy principles are a part of long-term strategies for both waste management and community planning</li><li>• Encourage local restaurants and retailers to adopt more reuse programs such as cup share programs and to only provide single-use items by request</li><li>• Continue to support initiatives such as lending libraries and repair cafes where volunteers offer to teach residents how to repair items</li><li>• Map the flow of textile waste throughout the City to assess where reuse, repair, or collection infrastructure is lacking</li><li>• Advocate for coordinated municipal, provincial and federal policies to create a circular economy strategy</li></ul>

<i>Embodied carbon in new construction</i>  Incorporate low carbon building materials in our new buildings to reduce carbon pollution from the manufacturing, transportation and installation of materials.	While the operational emissions of buildings have been measurable for some time, there is a growing appreciation for the impact associated with building materials from cradle to grave. Life cycle assessments quantify the environmental impacts with the construction materials used over a building's lifespan. Research conducted within the architectural field estimates that embodied carbon will account for nearly half of total new construction emissions between now and 2050.	<ul style="list-style-type: none"> <li>Explore the development of case studies to help guide new developments in evaluating low carbon alternatives in the sourcing, transportation and construction techniques.</li> <li>Advocate for the use of life cycle assessment tools in business case methodologies with project partners</li> <li>Consider setting embodied carbon reduction targets for new developments</li> </ul>
<i>Increase diversion of construction and demolition waste</i>  Move from demolition and disposal, to deconstruction and reuse of building materials to reduce waste going to landfill.	Up to one-third of our region's waste is comprised of material from the construction, demolition and renovation of buildings. Recently, there has been an increased interest in demolition waste diversion from many local jurisdictions.  There are ample opportunities across the government and private sector to collaborate on innovative solutions which target the diversion of these materials.	<ul style="list-style-type: none"> <li>Enhance and enforce waste diversion requirements during demolition</li> <li>Pursue options to support the market for salvaged/deconstructed demolition materials</li> <li>Develop policies that encourage deconstruction rather than demolition</li> </ul>
<i>Expand urban agriculture</i>  Increase access to space in a highly urbanized environment for people to grow their own food.	The benefits of local food production include reduced travel to obtain nutritious food, an improvement in water infiltration, and positive impacts on the urban microclimate. Access to affordable and healthy food provides opportunities for socialization, improves food security, and increases mental and physical health.  The trend towards the development of multi-family residential buildings in the City signals a need for increased garden space as the demand and desire for residents to garden will only continue to increase.	<ul style="list-style-type: none"> <li>Expand the current network of community gardens</li> <li>Explore and implement modern methods for enabling food production in a highly urbanized environment</li> <li>Streamline the permitting process for residential boulevard planting</li> <li>Continue to support partners that provide urban agriculture related workshops to the public</li> </ul>

**D. Leading by Example:** Fostering environmental leadership within our community and organization to inspire transformative change

Demonstrating leadership as an organization and encouraging climate leadership within the community is a key strategy in achieving the goals of the CES. As we promote and require low carbon buildings and vehicles in our community, it is critical that we lead the way with cutting the carbon generated from our facilities, fleet and processes. Further, we can encourage widespread change by encouraging the development of climate and environment leaders within our community.

Strategy	Why is this important?	How could we do this?
<i>Make civic buildings low carbon</i>  Retrofit our buildings to be highly efficient and powered by renewable energy, and build green new facilities	The City's civic facilities currently account for more than 60% of its corporate GHG emissions. The City is taking a leadership role building highly efficient new civic buildings including the new Harry Jerome Community Recreation Centre. In order to meet the community GHG emissions targets, The City will need to develop comprehensive transition plans to reduce emissions from its existing buildings.	<ul style="list-style-type: none"><li>• Undertake energy audits across all City facilities with external funding support</li><li>• Improve efficiency through continuous optimization for the City's larger facilities with external funding support</li><li>• Develop and implement a low carbon pathway for each City building, highlighting major retrofit opportunities timed with asset management plans</li><li>• Implement the City's new low carbon city building policy, once approved by council</li><li>• Identify opportunities to support district energy's transition to low carbon energy sources at civic facilities, and identify opportunities for heat recovery</li></ul>
<i>Transition to low carbon fleet</i>  Replace vehicles being retired with zero emission alternatives.	The City's fleet accounts for 30% of its total GHG emissions. The City has long been an early adopter in transitioning to low carbon fleet vehicles; however, it will need to accelerate its efforts to transition to a zero carbon fleet in order to align with net zero emissions target.	<ul style="list-style-type: none"><li>• Increase access to EV charging for City fleet and staff vehicles with external funding support</li><li>• Develop a comprehensive fleet transition strategy including a full costing study for transitioning vehicles and upgrading electrical infrastructure</li><li>• Develop fleet procurement policy to reflect an approved EV fleet transition roadmap</li><li>• Upgrade electrical infrastructure at the Operations Centre to support fleet electrification</li><li>• Develop EV infrastructure plan for Gerry Brewer building</li></ul>
<i>Implement sustainable procurement &amp; financial processes</i>	Incorporating decarbonization as a clear priority in the City's financial processes provides strong guidance across the organization and reduces some key barriers to the	<ul style="list-style-type: none"><li>• Set new corporate GHG Targets advancing the community net zero target, and consider a 2030 interim target</li></ul>

**REPORT: Climate and Environment Strategy – Preliminary Vision, Goals and Strategies**  
**Date: June 30, 2021**

Account for carbon pollution in our internal decision-making, budgeting and purchasing processes.	transformation needed to achieve climate targets	<ul style="list-style-type: none"><li>• Update the corporate climate action plan with new targets and clear roles and responsibilities</li><li>• Work with Finance to investigate and implement financial policies and processes that incorporate carbon reduction as a key priority in the City's financial processes (for example, include internal price of carbon or carbon accounting)</li><li>• Review &amp; update existing sustainable purchasing policy requirements</li><li>• Develop guidance for low carbon operations (meetings, supplies, etc.)</li></ul>
<i>Invest in climate leadership</i>  Grow a culture of collective climate action with community members leading the way.	With the increase of community mobilization around the globe, especially among youth, comes an opportunity to achieve stronger outcomes for our city and closer ties as a community.	<ul style="list-style-type: none"><li>• Improve the climate and environment related training to staff across the organization</li><li>• Improve the City's ability to provide information, resources, and education on climate and environment</li><li>• Provide mentorship opportunities and foster climate leadership in the community</li><li>• Improve availability of the City's climate action data</li></ul>

## Survey Respondents' Demographics from Climate and Environment Strategy Phase I Engagement

Data from the 2016 City of North Vancouver Census Profile was used to compare the percentage of respondents that completed the Climate and Environment Survey to the percentage of City residents. This comparison is used to illustrate groups that were over- or underrepresented in the City survey and will be used to inform how staff approach future engagement processes to better engage all residents.

The demographic analysis below only represents those who completed the survey (approximately 255 respondents). It does not include listening session or stakeholder workshop participants if they were unable or chose not to complete a survey.

### Gender

As shown in Figure 1, of the survey respondents, 42.4% identified as male, 51.4% as female, 0.4% as non-binary, 0.8% did not identify as any of these categories, and 5.1% preferred not to answer.

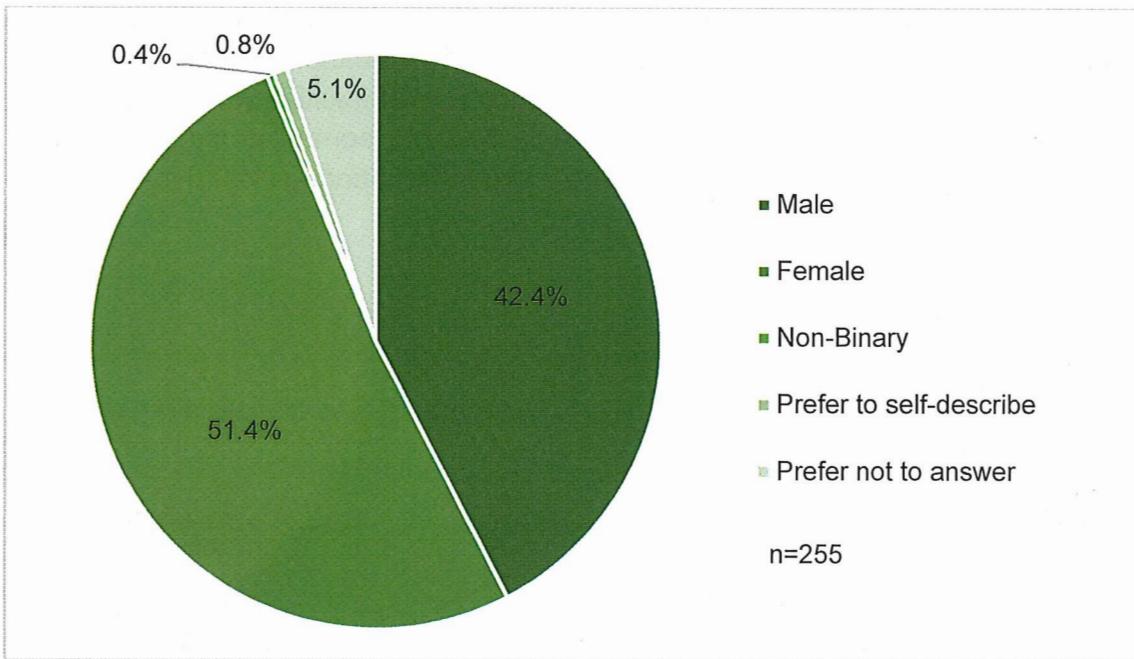
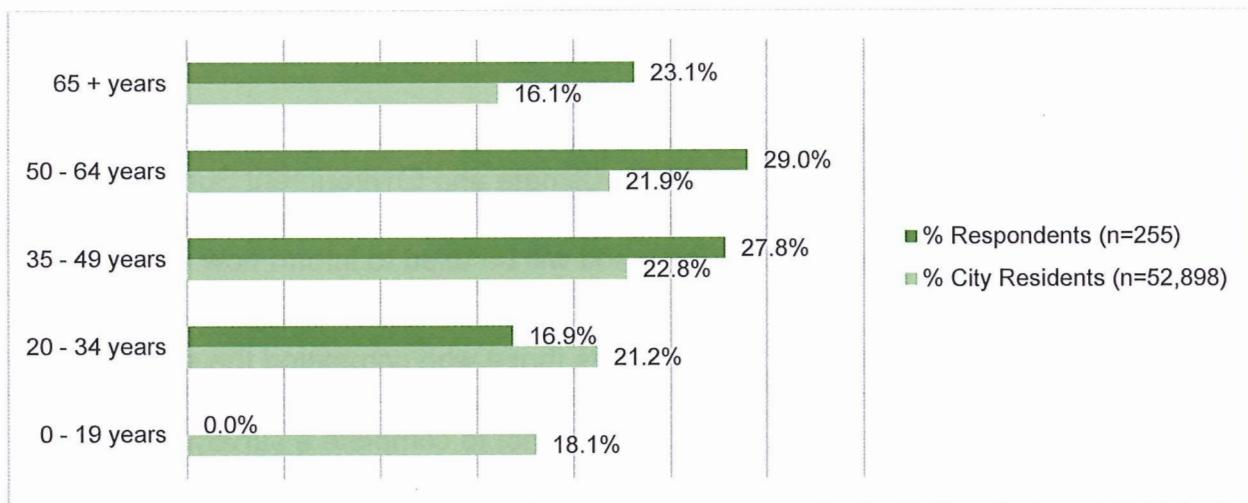


Figure 1. Gender of survey respondents from Climate and Environment Strategy Phase I engagement.

### Age

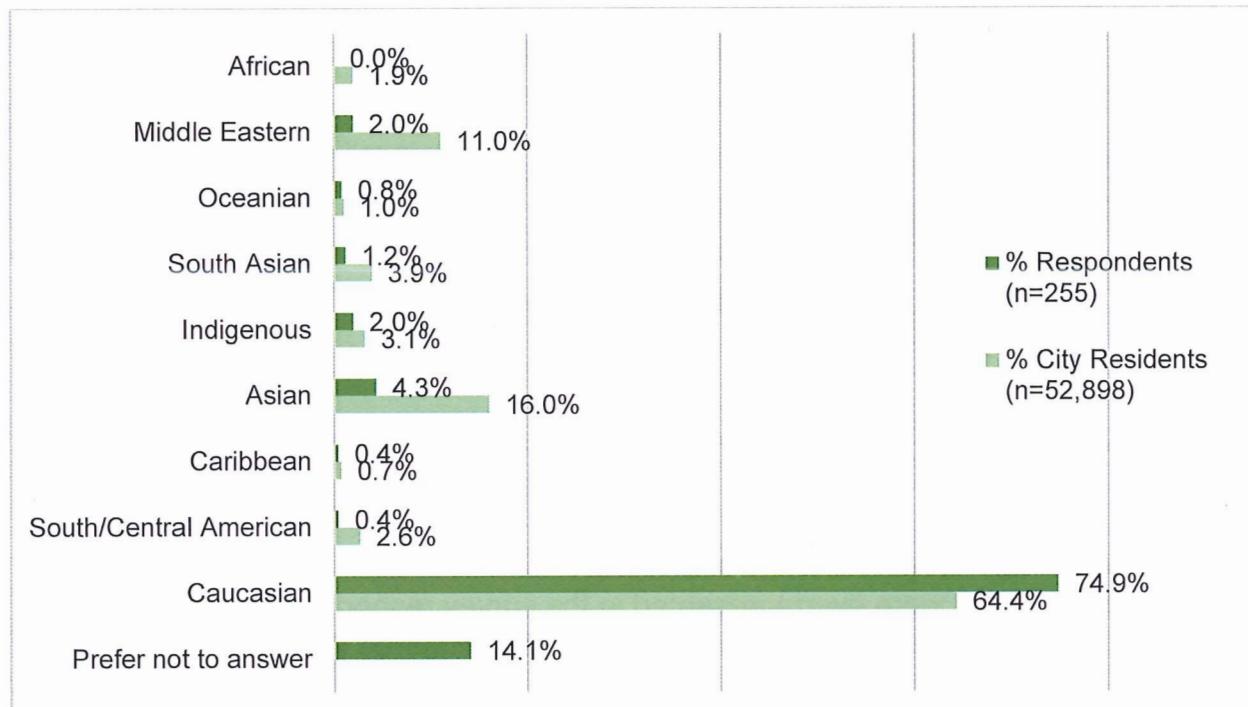
Residents under age 19 were not represented in the survey responses (Figure 2). Residents over age 30 were overrepresented in the survey responses, especially residents over age 50, making up 52.1% of responses compared to 38.0% of City residents.



*Figure 2. Age of survey respondents from Climate and Environment Strategy Phase I Engagement compared to 2016 Canadian Census data.*

### Race/Ethnicity

When comparing the percentage of responses collected in the Climate and Environment Strategy Phase I engagement survey and those in the 2016 Census, Caucasian respondents were overrepresented while all other races and ethnicities were underrepresented in the survey responses (Figure 3). Notably, some listening session participants mentioned that they would like to see more information provided in-language to better participate.



*Figure 3. Race/Ethnicity of survey respondents from Climate and Environment Strategy Phase I Engagement compared to 2016 Canadian Census data.*

## Income

Household income data collected through the Climate and Environment Strategy Phase I engagement survey did not align perfectly with the income brackets from the 2016 Census, however general trends can be observed. Overall, respondents with household incomes greater than \$200,000 were overrepresented in the survey responses, and respondents with lower household incomes were underrepresented (Figure 4).

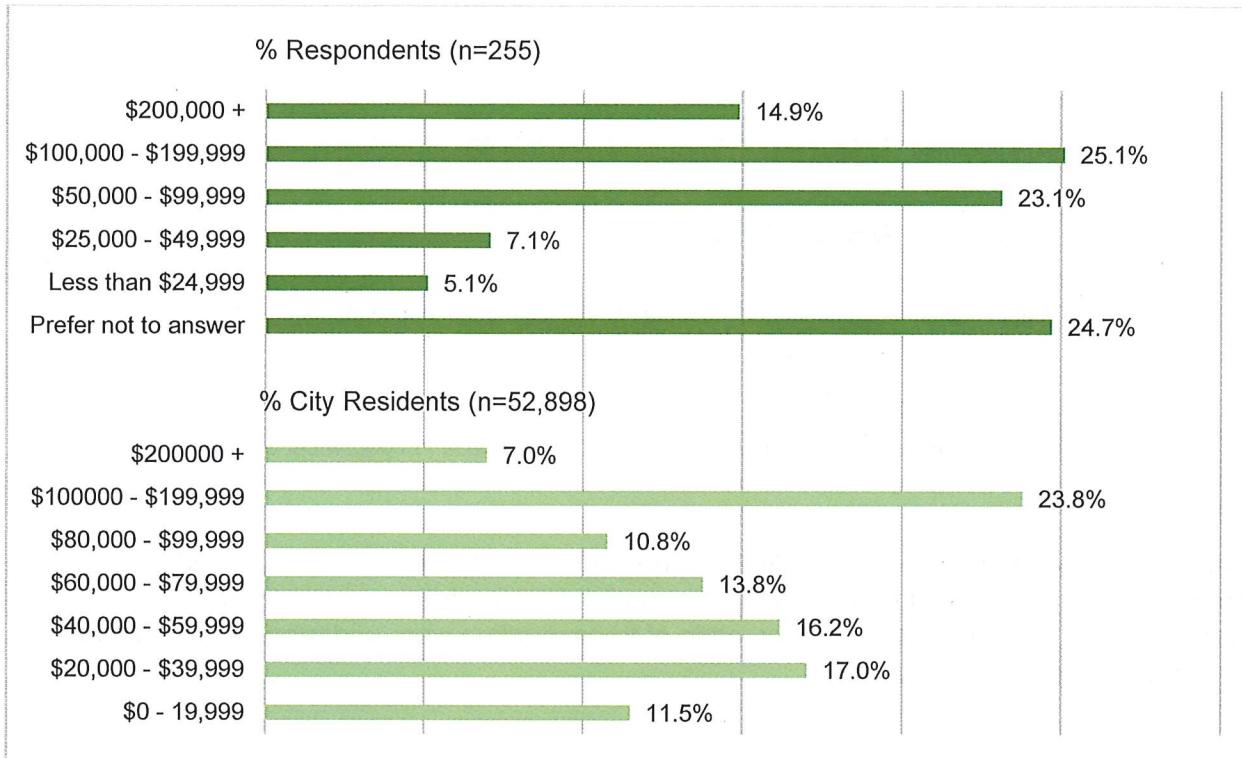


Figure 4. Household Income. Comparison between survey responses from Climate and Environment Strategy Phase I Engagement and 2016 Canadian Census.

## Housing Situation

Homeowners were overrepresented in the Climate and Environment Strategy Phase I engagement survey responses, making up 74.6% of responses compared to 52.9% of City residents (Figure 5).

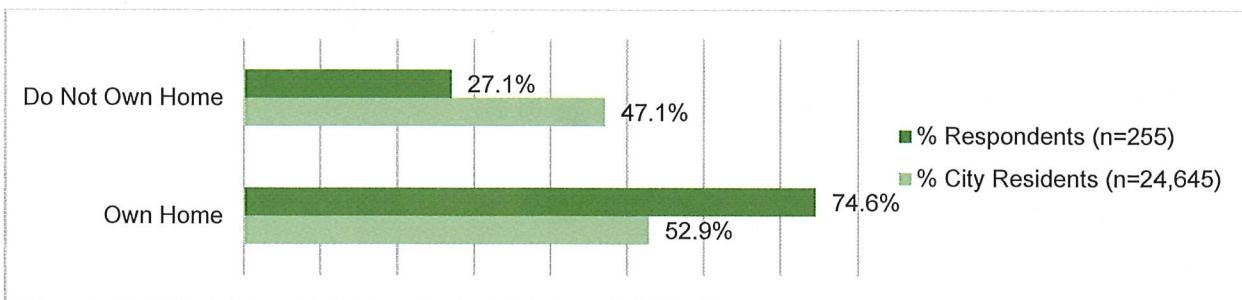
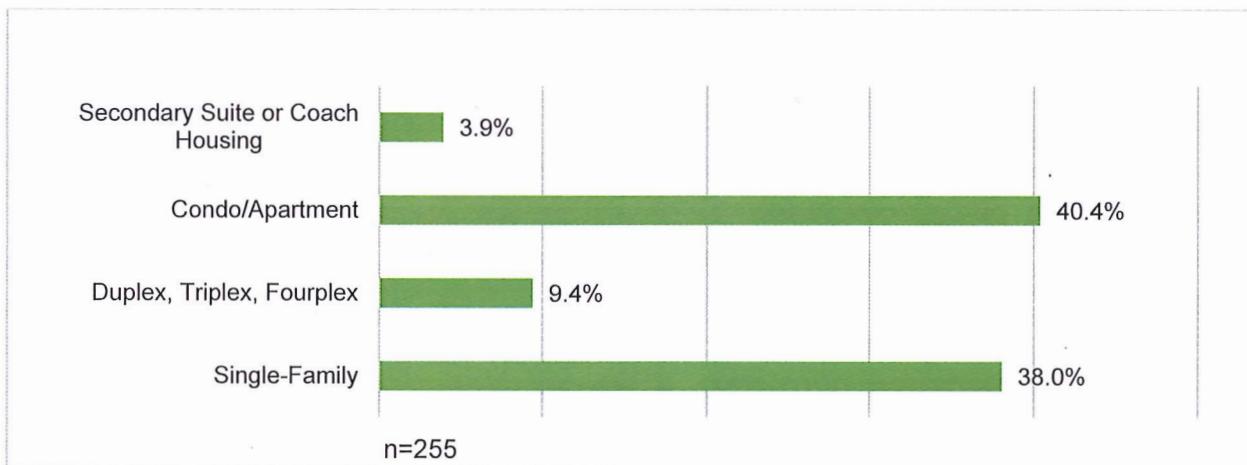


Figure 5. Home ownership. Comparison between survey responses from Climate and Environment Strategy Phase I Engagement and 2016 Canadian Census.

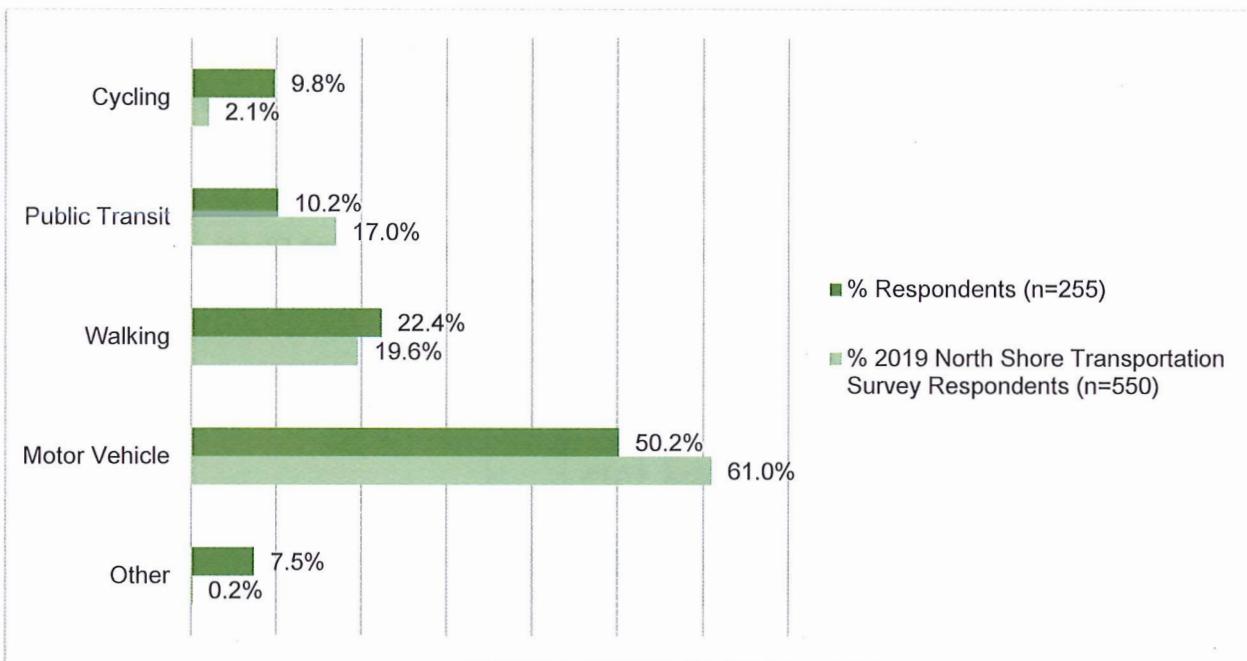
Residents of single-family homes were overrepresented in the survey responses, making up 38.0% of responses compared to 12% of occupied dwelling units in the City (2016 Canadian Census). Whereas multi-family buildings account for 88% of occupied dwelling units in the City, residents living in these building types were underrepresented in the survey responses, making up only 53.7% of responses.



*Figure 6. Home Ownership. Source: Climate and Environment Strategy Phase I Engagement Survey.*

## Transportation

When compared to the results of the 2019 North Shore Transportation Survey, residents who reported cycling as their primary mode of transportation were overrepresented and those who reported motor vehicle as their primary mode of transportation were underrepresented in the survey responses (Figure 7).



*Figure 7. Primary Mode of Transportation. Comparison between survey responses from Climate and Environment Strategy Phase I Engagement and 2019 North Shore Transportation Survey.*

## **Summary of Feedback on the Draft Vision, Goals and Strategies of the Climate and Environment Strategy from Phase I Engagement**

Feedback on the draft vision, goals and strategies of the Climate and Environment Strategy was received through listening sessions, stakeholder workshops, pop-up tables, review by Tsleil-Waututh Nation and comments in the public survey. Common and salient feedback is summarized below and will be used to refine the strategy framework and inform the draft strategy.

### **Feedback on Vision and Goals:**

- Overall support vision statement as a picture of an aspirational future state of the City with strong alignment with mission of partner organizations;
- Suggestions refine language used in the vision statement, specifically “sustainable” to better reflect climate goals and “City” wording to encompass the community and natural components of the City;
- Support for level of ambition of goals and a desire to see them supported by bold and effective actions in the CES; and
- Some confusion about the meaning of Goal 3 “We are influential and accountable together” and how it applies beyond corporate leadership.

### **Feedback on Pathway to Net Zero Strategies:**

- Enthusiastic support to take urgent and bold action to reduce our carbon pollution;
- Concern about impacts to housing affordability and cost of living;
- A desire for improved public transit service to support residents who don’t drive and to enable residents to drive less;
- Health benefits and risks associated with climate change mitigation need to be better communicated;
- Support for increased emphasis on active transportation (especially cycling infrastructure) and complete neighbourhoods in strategies to reduce carbon pollution from transportation sector; and
- A need for ongoing rebates, financing solutions and decision-making supports for residents to switch to low carbon technologies, especially in multi-family buildings.

### **Feedback on Resilient City and Ecosystems Strategies:**

- Strong support for actions to enhance our natural systems and expand and protect our urban forest;
- A need for increased support for unhoused citizens in protection from hazardous invasive species (hogweed) and for vulnerable residents more broadly during extreme weather events (heat waves, poor air quality and storms);
- Support for increasing resiliency of new development through passive design and green infrastructure;
- Need to clarify the types of water addressed by “improve water quality” and “conserve water” strategies; and
- Opportunity for Indigenous knowledge to inform strategies, especially actions to enhance our urban forest and to improve stream water quality.

Empowered Choices and Awareness Strategies:

- Education will be important to enable residents to make informed, low impact choices;
- Concern about costs associated with local products and food;
- Support for maintaining and upgrading older buildings to avoid further construction and demolition waste;
- A desire for increased access to shared garden space and for more land dedicated to growing food in the City; and
- Strategies need to be broadened to better address food security.

Leading By Example Strategies:

- Support for the City to foster strong partnerships with organizations, local First Nations and community groups to grow a culture of climate leadership;
- Need to clarify the role of the City and individual actions;
- Opportunity for the City to share sustainable corporate practices with businesses and organizations;
- Encouragement for the City to lead in zero emission fleet vehicles (including garbage trucks), low carbon civic buildings and sustainable procurement; and
- Support for the City to advocate for strong climate and environmental policy from senior levels of government.

## Survey Results from Climate and Environment Strategy Phase I Engagement

In total, approximately 255 survey responses were received, primarily through the City's online Let's Talk platform. The survey consisted of 34 multiple choice questions designed to gauge level of support for the draft vision, goals and strategies, respondents' priorities and potential barriers to individual action needed from respondents to achieve the CES strategies. Respondents were also given the opportunity to provide additional feedback through comments.

The responses to the multiple choice questions are summarized below. These results will be used to refine the Climate and Environment Strategy framework, with consideration given to the unrepresentative nature of the survey responses.

### Level of Concern

When asked about their level concern about the climate and nature crises, 81% of respondents reported that they are very concerned (Figure 1).

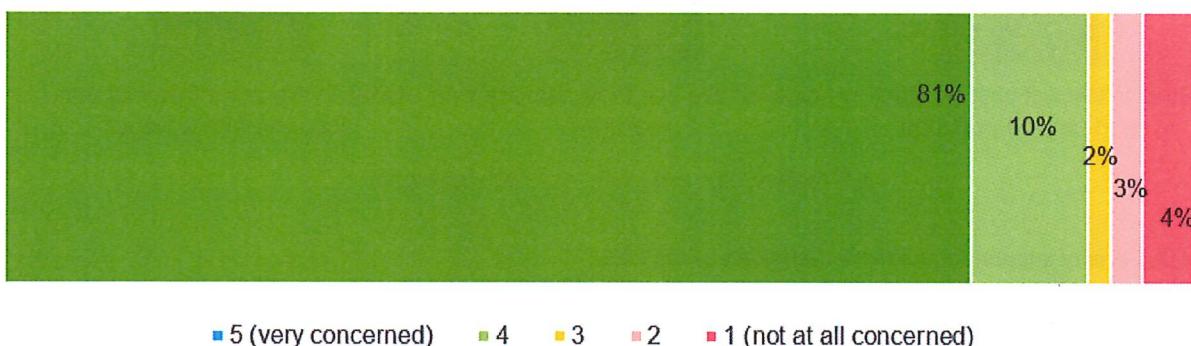


Figure 1. Level of concern about the climate and nature crises from CES Phase I engagement survey responses.

### Vision

Respondents were asked their level of support for the draft CES vision, "A resilient and sustainable City where everyone thrives". Approximately half of respondents supported the vision and 44% suggested there are some changes needed (Figure 2).

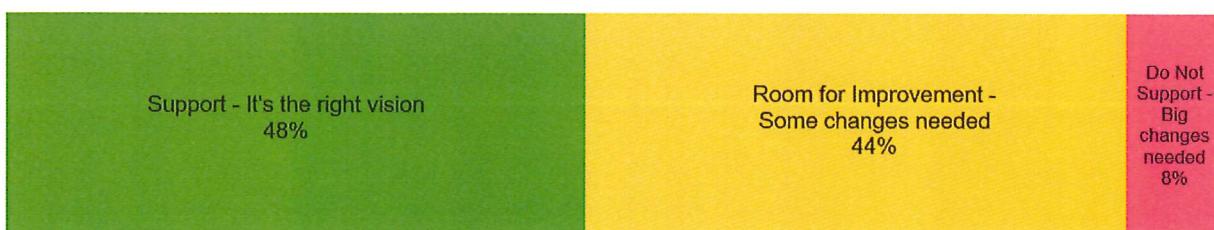


Figure 2. Level of support for the draft CES vision, "A resilient and sustainable City where everyone thrives".

## Goals

Respondents were asked how well they thought each of the three draft goals would help to achieve the vision. The first goal, “We act with urgency to end carbon pollution” received the most support, and all three goals received high or relatively high rankings in over 60% of responses (Figure 3).

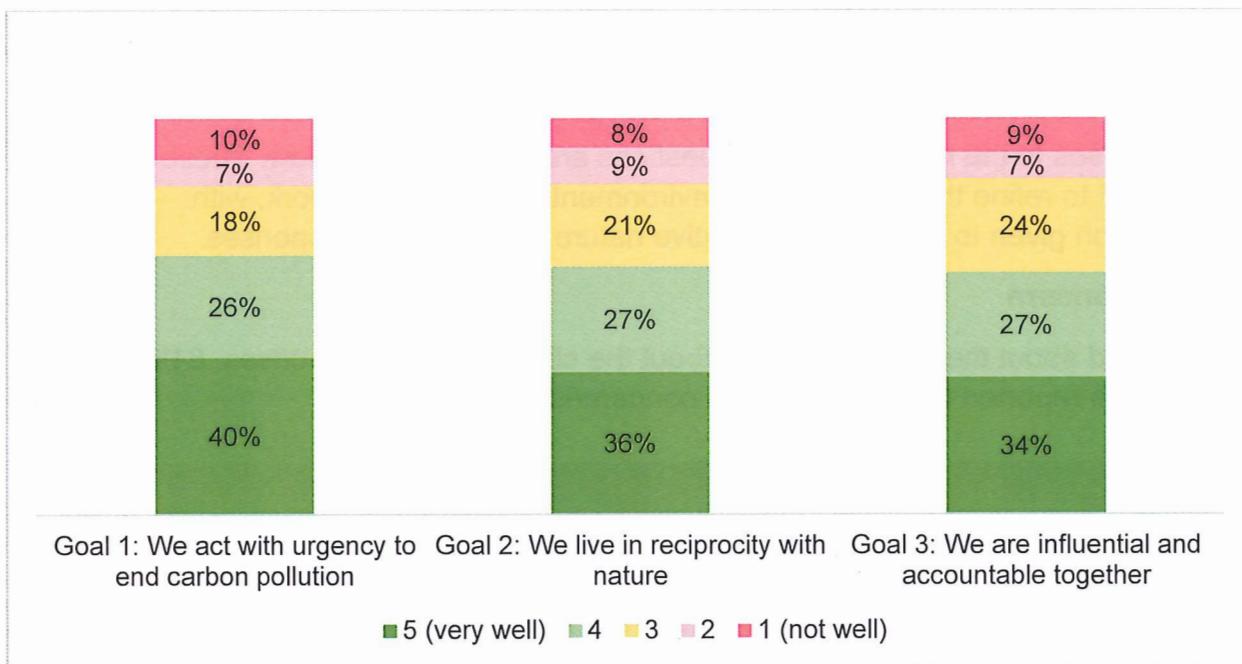


Figure 3. Level of support for the three draft goals of the CES.

## Pathway to Net Zero Strategies

Respondents were asked to rank how important each of the draft “Pathway to Net Zero” strategies are to them. The strategy to “make new buildings net zero” received the highest level of support and all six strategies received high or relatively high rankings in over 60% of responses (Figure 4).

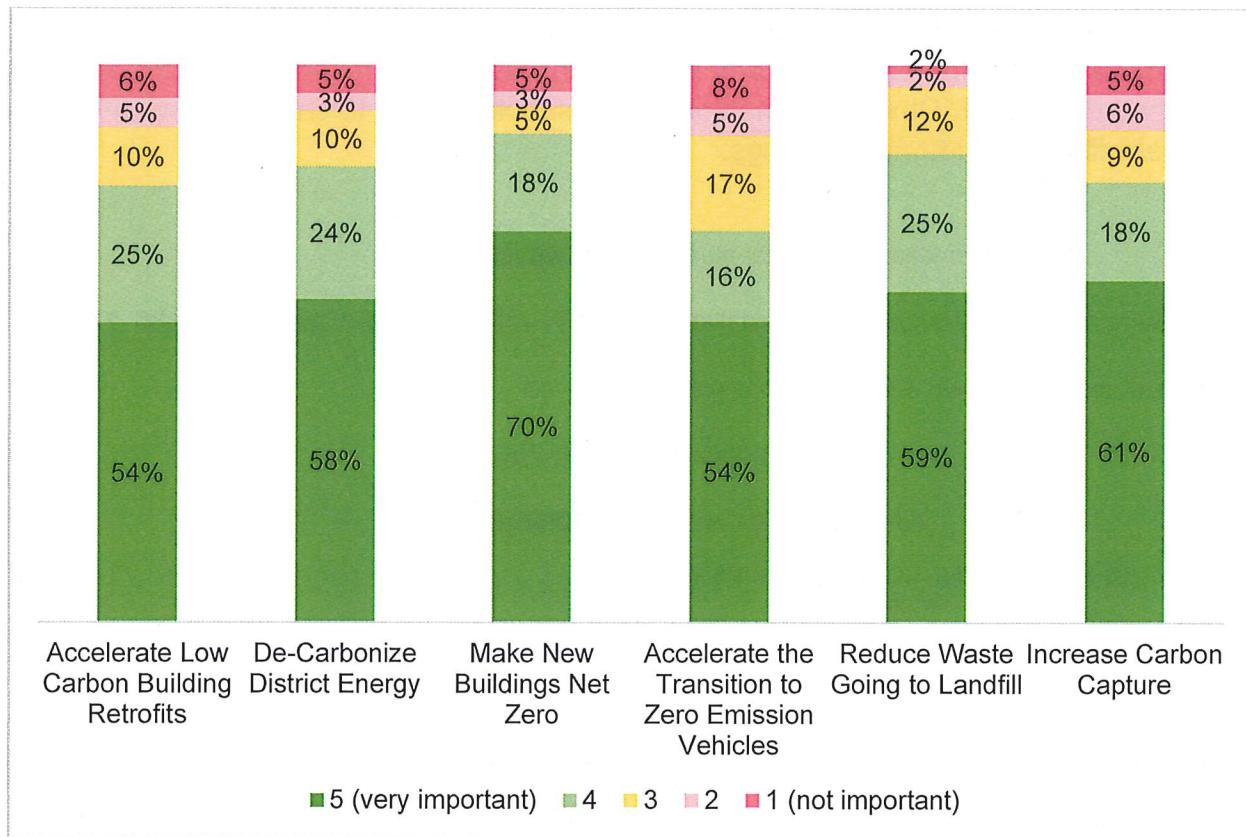


Figure 4. Level of support for "Pathway to Net Zero" draft strategies.

Respondents were asked what actions they are willing to take, or are already doing to reduce carbon pollution. The actions that were reported the most were recycling and composting, conserving energy and using sustainable transportation (Figure 5).

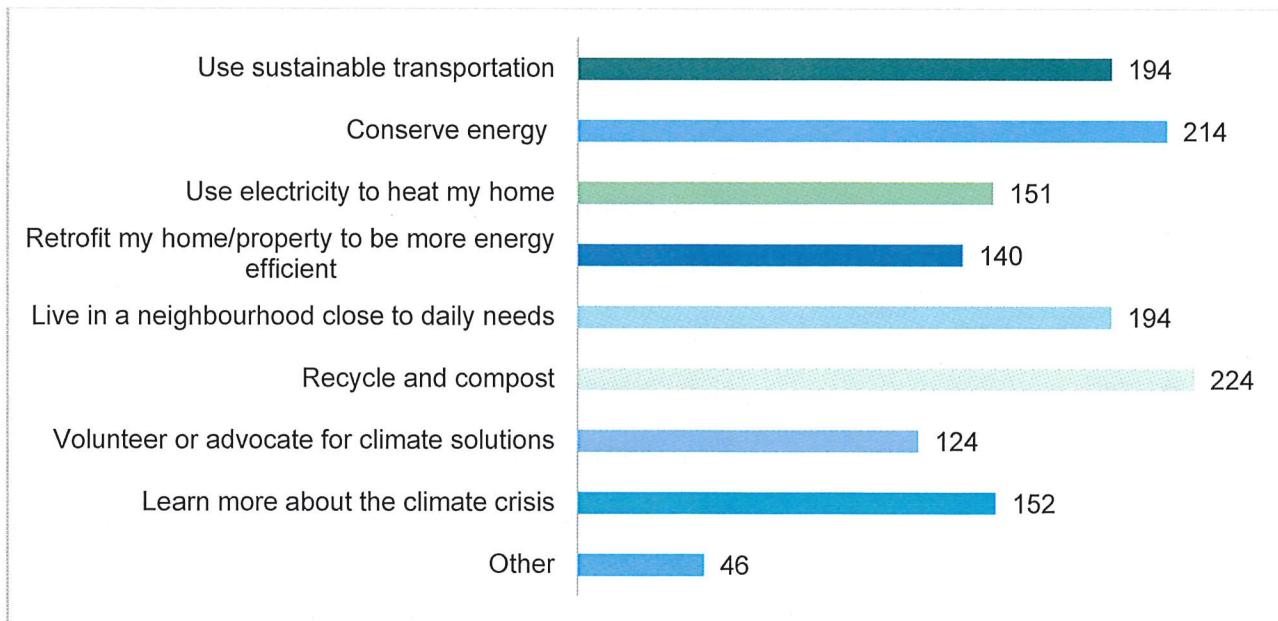
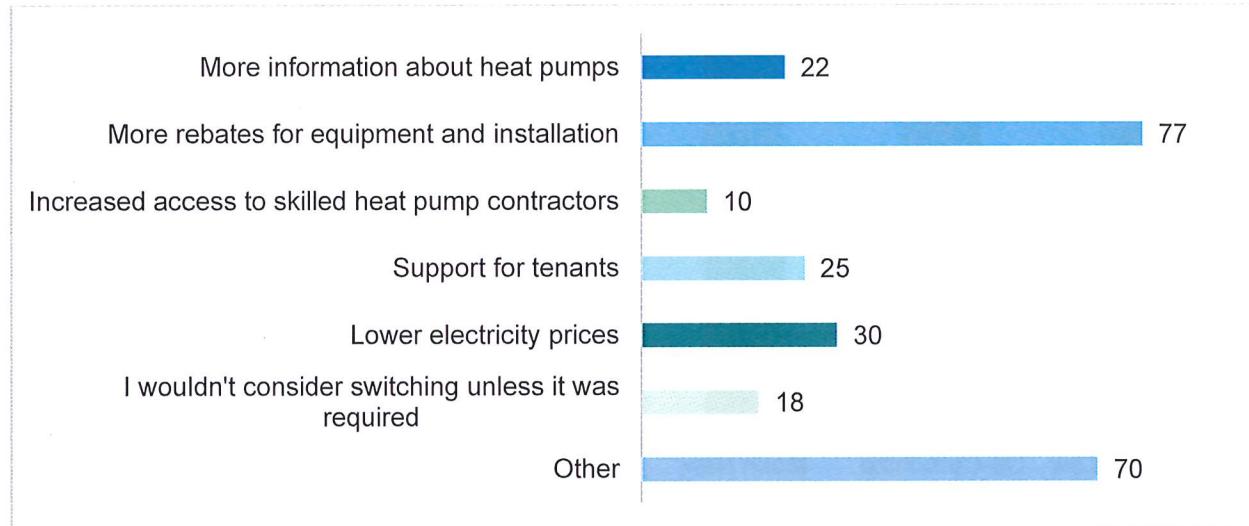


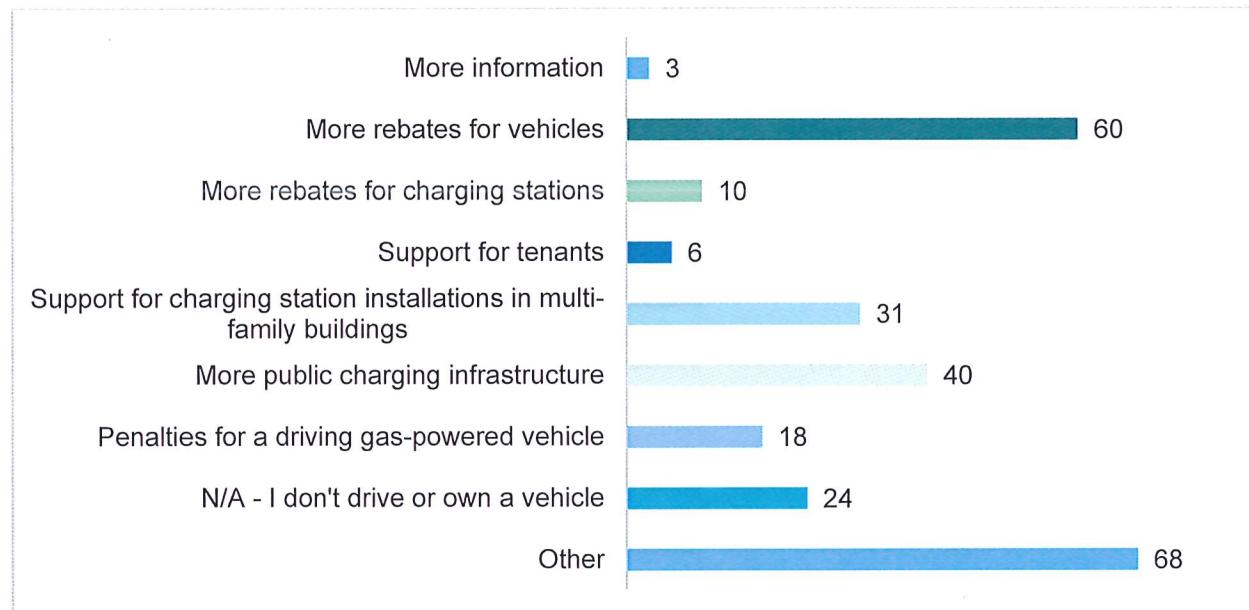
Figure 5. Actions respondents are willing to take to reduce carbon pollution (number of responses).

When asked what would be the number one thing that would help them switch to a heat pump, more rebates for equipment and installation was the top response (Figure 6). For those that responded “Other”, the majority of comments related to challenges with heat pump retrofits in multi-family buildings.



*Figure 6. What is needed to help respondents switch to a heat pump (number of responses).*

Respondents were asked what would be the number one thing that would help them switch to an electric vehicle and the top response was more rebates for vehicles (Figure 7). Respondents that selected “Other” reported already owning an electric vehicle, challenges with vehicle availability and concerns about the environmental impact of electric vehicles.



*Figure 7. What is needed to help respondents switch to an electric vehicle (number of responses).*

When asked what would be the number one thing that would help them walk, cycle or use a scooter for short trips and daily needs, the most common response was a connected network of protected bike lanes (Figure 8). For those who responded “Other”, some respondents commented that they already frequently walk, cycle or use a scooter and others reported a need for better protection from weather and secure bike parking.

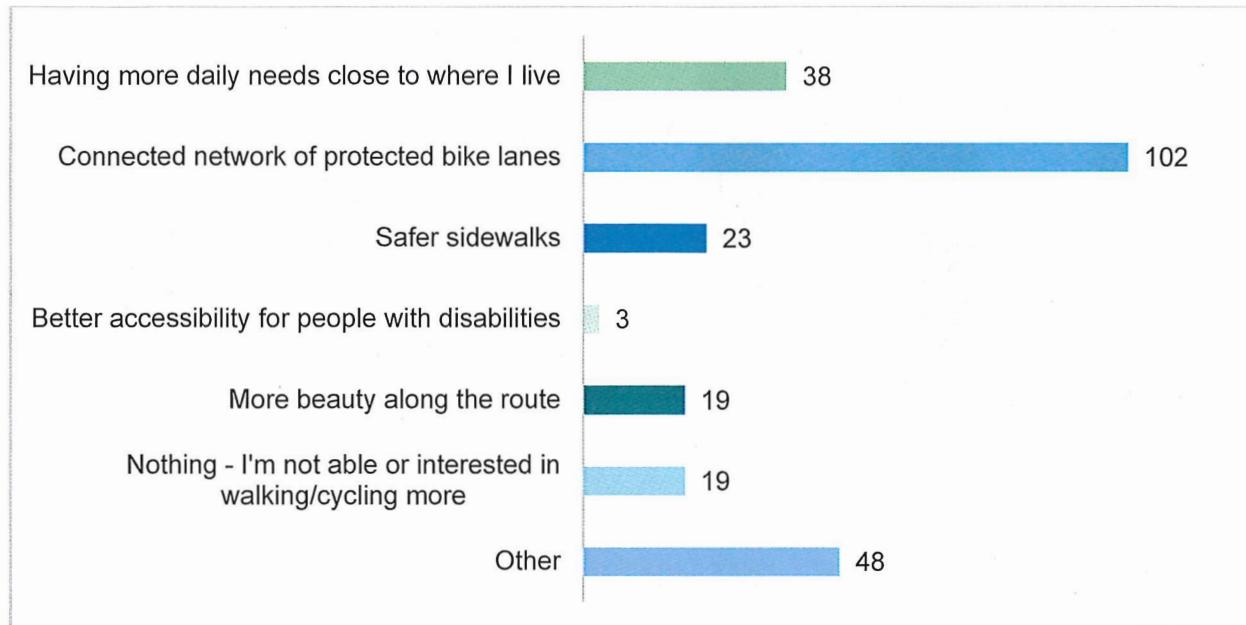


Figure 8. What is needed to help respondents walk, cycle or use a scooter for short trips and daily needs (number of responses).

### Resilient Ecosystems and City Strategies

When asked how important each of the draft “Resilient Ecosystems and City” strategies are to them, respondents gave the highest levels of support across all draft CES strategies. In particular, the “expand and protect our urban forest” and “enhance our natural systems” draft strategies both received the highest ranking of importance from over 70% of respondents (Figure 9).

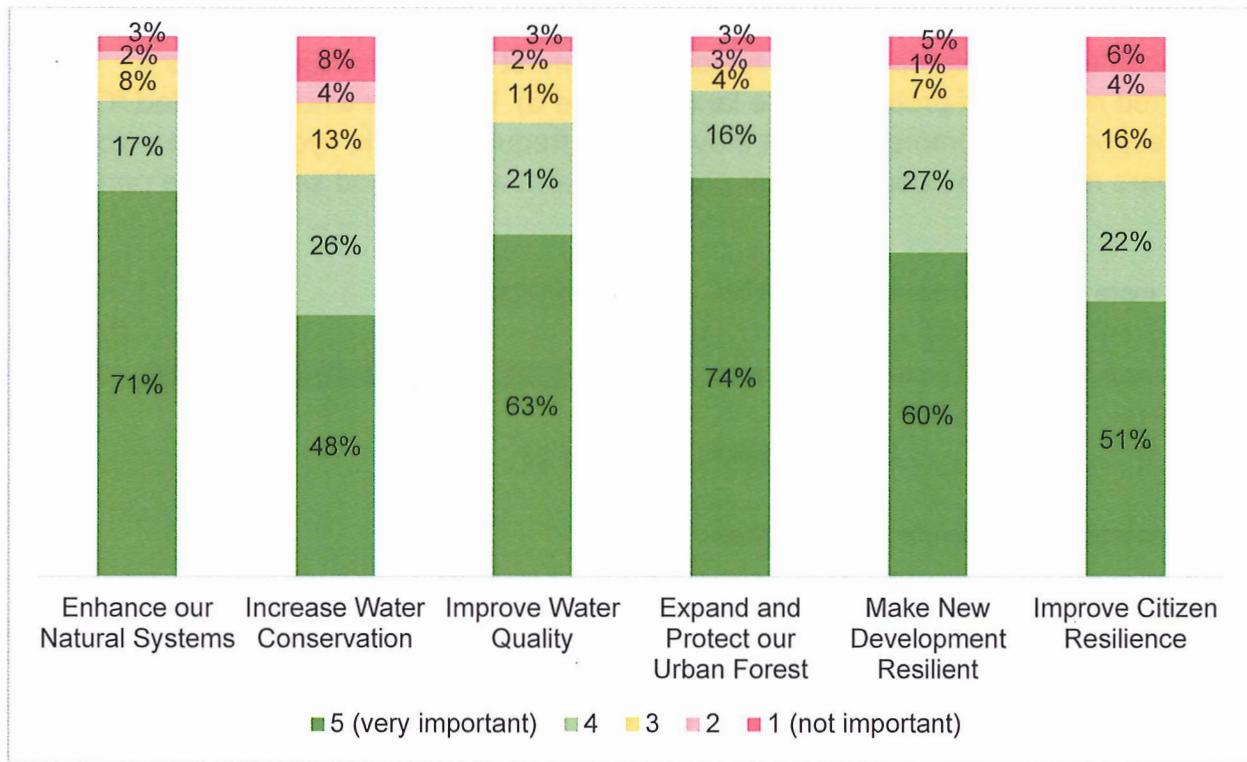


Figure 9. Level of support for "Resilient Ecosystems and City" draft strategies.

Respondents were asked what actions they are willing to take, or are already doing, to help the natural environment. The most common responses were planting and maintaining plants and trees on their property, using less water and preparing for heat waves and poor air quality (Figure 10).

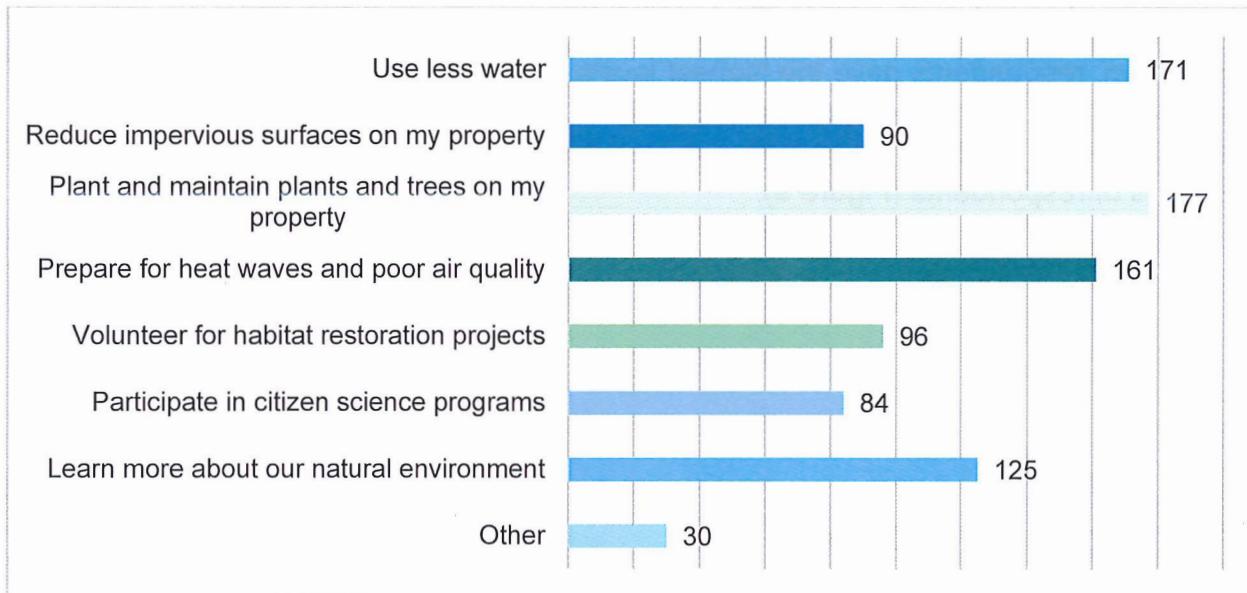


Figure 10. Actions respondents are willing to take to help the natural environment (number of responses).

When asked what would be the number one thing that would help them grow and maintain native tree and plant species, or grow food in the city, the top response was increased access to garden space (Figure 11).

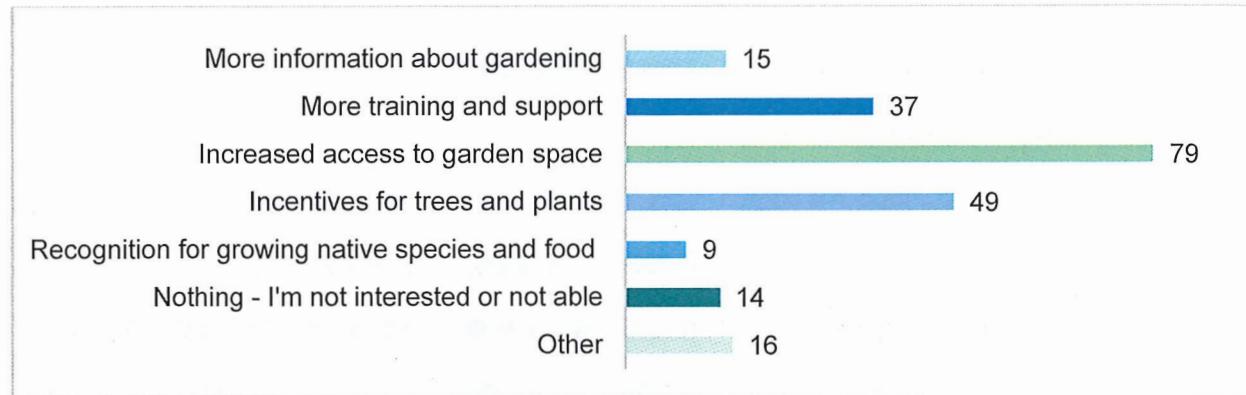


Figure 11. What is needed to help respondents grow and maintain native tree and plant species, or grow food in the city (number of responses).

### Empowered Choices and Awareness Strategies

Respondents were asked how important each of the “Empowered Choices and Awareness” draft strategies are to them. Each of the five draft strategies were given high or relatively high rankings in at least 77% of responses, and the “increase construction and demolition waste diversion” draft strategy received the highest level of support (Figure 12).

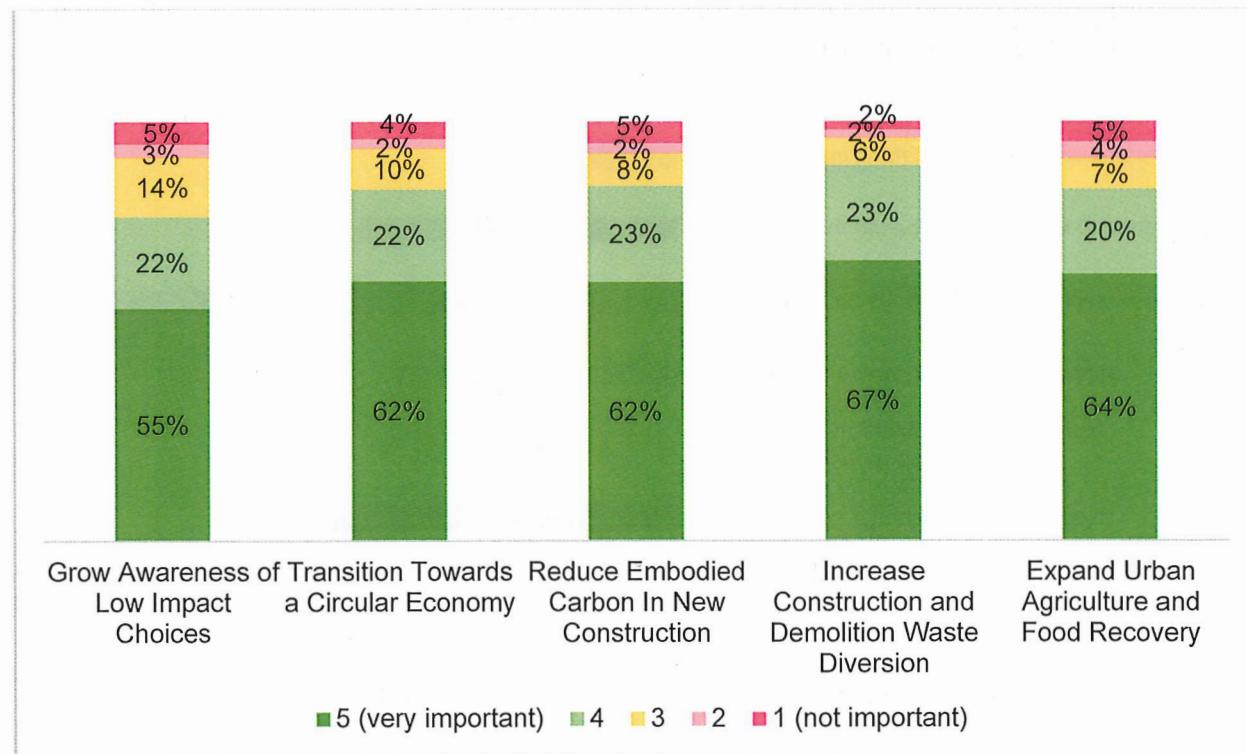
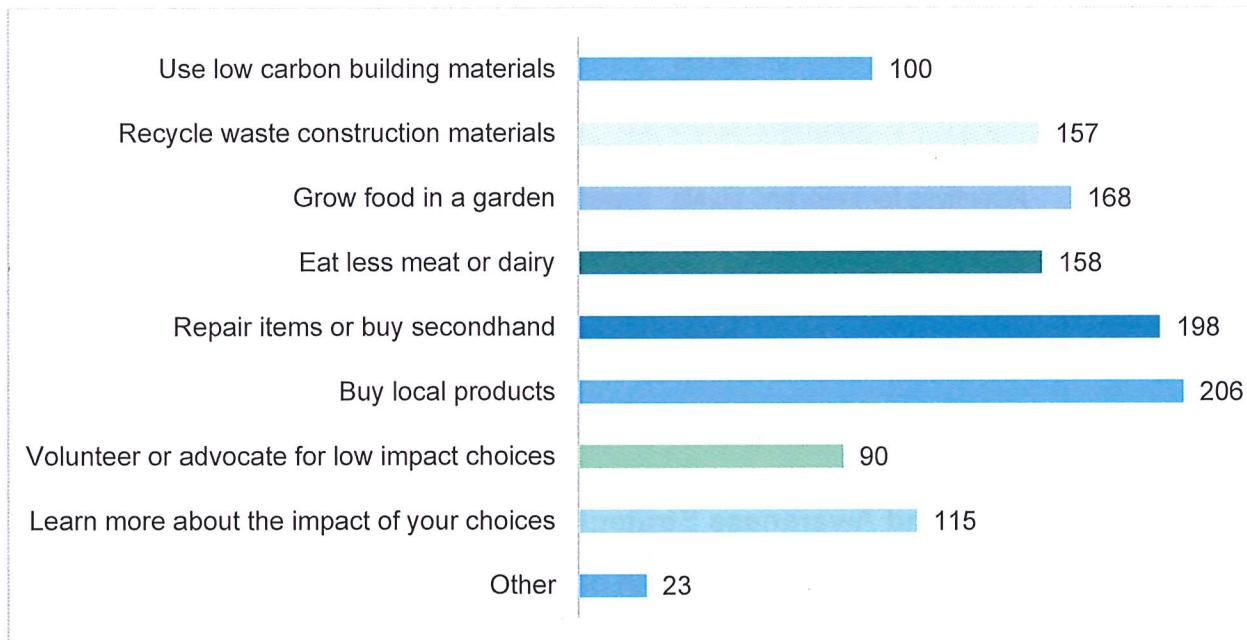


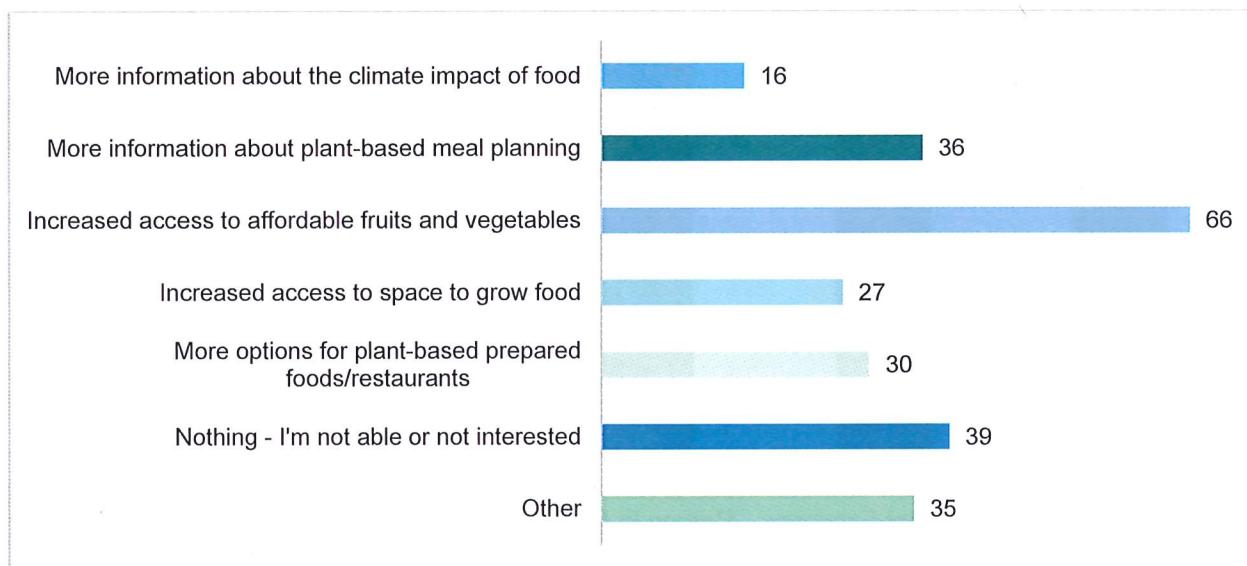
Figure 12. Level of support for “Empowered Choices and Awareness” draft strategies.

When asked what actions they are willing to take or are already taking to make low impact choices, buying local products and repairing items or buying secondhand were the most frequently reported actions (Figure 13).



*Figure 13. Actions respondents are willing to take to make low impact choices (number of responses).*

Respondents were asked what would be the number one thing that would help them to have a more plant-based diet and the top response was increased access to affordable fruits and vegetables (Figure 14).



*Figure 14. What is needed to help respondents to have a more plant-based diet (number of responses).*

## Leading By Example Strategies

Respondents were asked how important each of the “Leading By Example” draft strategies are to them. Each of the strategies receive high or relatively high rankings in at least 75% of responses and the “transition to low carbon fleet” strategy received the highest level of support (Figure 15).

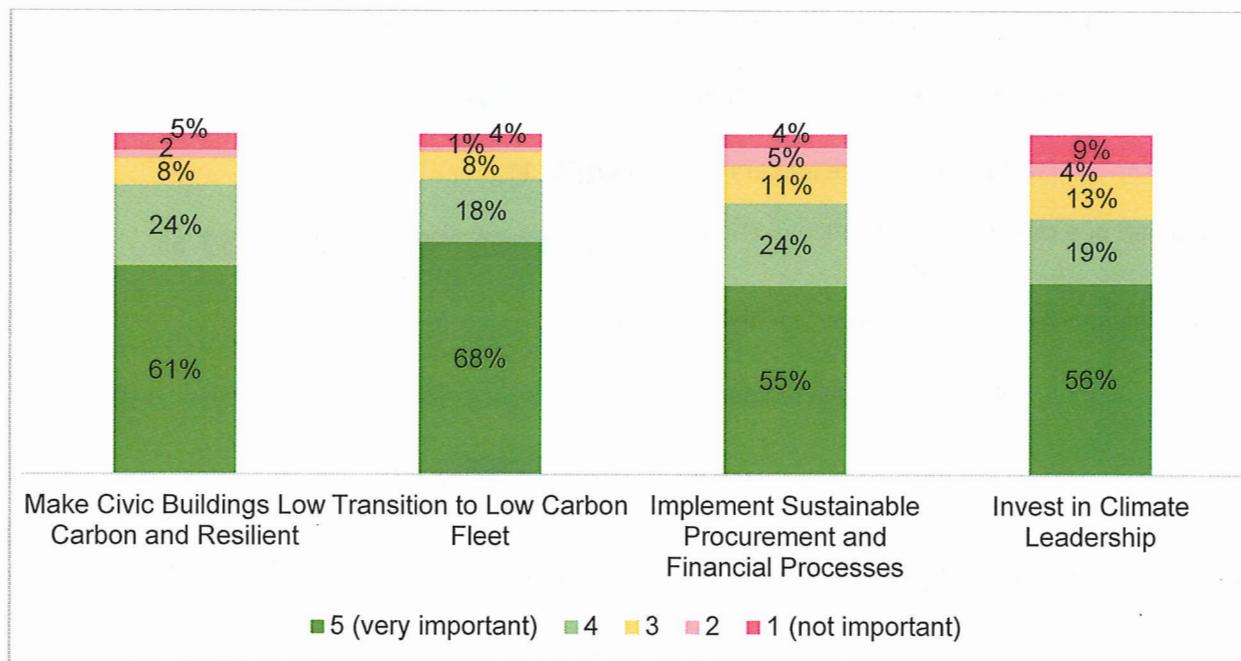


Figure 15. Level of support for “Leading by Example” draft strategies.

Respondents were asked what actions they are willing to take or are already taking to help grow a culture of collective action and climate leadership. The actions that received the highest number of responses were learning about City and individual actions that reduce our impact, advocating for climate solutions and environmental protection and talking to friends and neighbours about low impact choices (Figure 16).

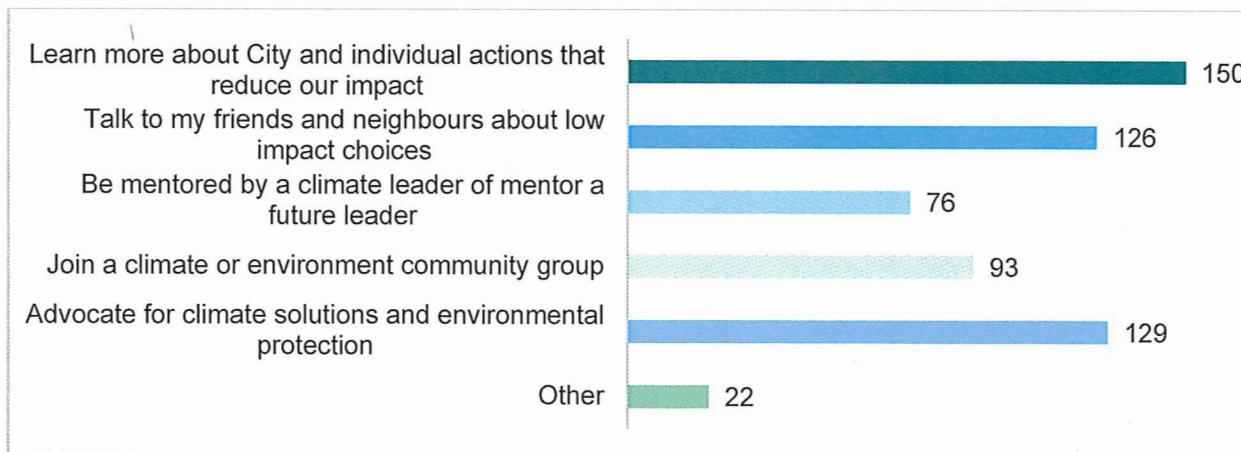


Figure 16. Actions respondents are willing to take to grow a culture of collective action and climate leadership (number of responses).

When asked what would be the number one thing that would help them become a climate leader, the options which received the highest number of responses were not applicable, being part of a climate or environmental community group and learning more about climate action in the city (Figure 17).



Figure 17. What is needed to help respondents become climate leaders (number of responses).