SURVEY GUIDE





Take our survey to share your feedback.

WELCOME



Shape our City's Climate and Environment Strategy!

The City of North Vancouver is developing a Climate and Environment Strategy (CES) to eliminate carbon pollution and promote a healthy environment. Our new strategy will be the playbook for planning and making decisions on climate and environment today and over the next decade.

In this guide you will learn about the City's role in tackling climate change, protecting our environment, and how you can be involved in shaping our future. Your input will help develop a draft Strategy that will bring together previous planning and policies into a single, cohesive plan with implementable actions.





Learn

- ► Read the information in this Survey Guide
- Prefer a printed copy? Download and print at the web address below



Share

- ► Share your feedback on the draft vision, goals, and strategies for climate and
- Questions? Send us an email using the



Submit

environment@cnv.org

141 W. 14th St., North Vancouver, BC V7M 1H9 Attention: CES

LETSTALK.CNV.ORG/ENVIRONMENT

Do you know someone else who might be interested in helping shape our City's Climate and Environment Strategy? Please spread the word!

Deadline for input is November 26, 2021 at 4:00 pm.

Need this Survey Guide translated? Contact us at the details above.

INTRODUCTION





The latest report from the United Nations Intergovernmental Panel on Climate Change (IPCC) provides new estimates that our world is on track for exceeding a critical temperature increase threshold of 1.5° Celsius by mid-century.

Higher global temperatures could significantly impact our health, emergency services, neighbourhoods, local economy, food security, water supply, and environment.

We need to take action.



Our climate is changing at a rapid and unprecedented rate. We're seeing the impacts of these changes more and more every year. Hotter, drier summers, poor air quality from wildfires, and more intense storms are a new normal.

At the same time, we are seeing loss of habitat, rapid decline of species, and threats to food production due to development, exploitation of natural resources, and climate disruption.

A healthy climate and environment are essential for human existence and our quality of life. We need immediate and significant reductions in carbon pollution to limit warming and mitigate severe and potentially irreversible effects of climate change.

With careful planning, we have many opportunities to take action and create a resilient and sustainable City where everyone thrives.



The climate we experience in the future depends on our decisions now.

— IPCC presentation on the recent Sixth Assessment Report

ABOUT THE STRATEGY



A new pathway

To make progress, we need strong actions that reflect current scientific research, public concerns and priorities, and evolving best practices.

The Climate and Environment Strategy will include:

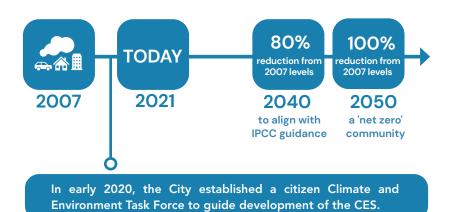
- a vision for a resilient and sustainable future
- goals to help us support the vision and respond to the climate and nature crises
- strategies to cut our carbon pollution and promote a healthy environment

The CES will align with the City's Official Community Plan and build off existing City plans and policies for climate and environment.

New targets

In February 2019, based on IPCC guidance, the City adopted new community-wide targets to cut our carbon pollution:

- ▶ 80% reduction below 2007 levels by 2040
- ▶ 100% reduction or net zero carbon pollution by 2050



Our City as a Leader



Rain gardens installed across the City since 2004



Energy efficient requirements for construction since 2011



Stormwater management controls required for all new developments



One of the lowest per capita garbage disposal rates in the region (organics collection since 2012)



EV charging requirements for all new buildings



4,000 trees planted across the City over the past three years



Low carbon requirements for new homes starting in 2021



BC's first E-bike share (in collaboration with North Shore municipalities)

PROCESS



Process









Summer 2020 - Summer 2021

- Determine focus areas
- Initiate gap analyses
- Identify and action quick wins
- Complete emissions modelling
- Develop framework
- Early stakeholder meetings on focus areas

Fall 2021 - Winter 2021

- Analyze policy directions
- Build draft strategy



Public engagement on draft vision, goals, and emerging strategies

Winter 2022 - Spring 2022

Finalize Strategy for Council consideration



Public engagement on draft Climate and **Environment Strategy**

CLIMATE & ENVIRONMENT TASK FORCE CONSULTATION

Equity and reconciliation

Climate change impacts some people more than others. Locally and globally, people facing systemic discrimination, poverty, and lack of services are those most affected by climate change.

As we transition towards a low carbon community, we must ensure that we are equitable in applying solutions so that the benefits of a greener economy and a cleaner environment are shared by everyone.

The City of North Vancouver is located within the unceded Traditional Territories of the x^wmθθk^wýθm (Musqueam), Skwxwú7mesh (Squamish), and səĺílẃətaʔɫ (Tsleil-Waututh) people who have inhabited and sustained themselves with these lands since time immemorial, and continue to do so today. Finding a path to resiliency and sustainability through the Climate and Environment Strategy requires learning from and working with the local Nations and urban Indigenous people.

OUR CITY TODAY



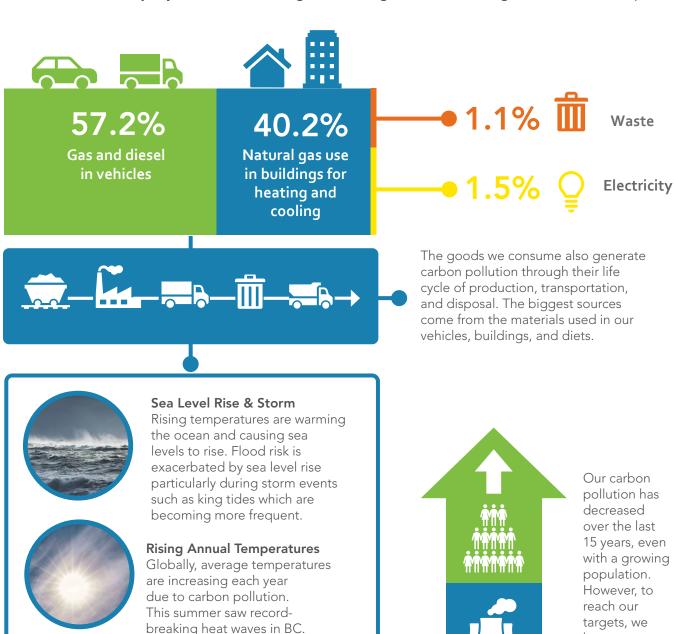
have to cut our carbon

even faster.

pollution

Our carbon pollution

Carbon pollution in our City is creating local impacts and contributing to global warming. But where does it come from? The majority comes from burning fossil fuels (gas, diesel, natural gas). What are the impacts?



Air Quality

Particulate matter in our City

has reached unhealthy levels for multiple days in four of the last five summers due to smoke from wildfires in the region.

OUR CITY TODAY



Our natural environment

Two important factors are indicators of ecological health and our resiliency to climate-related impacts: our tree canopy and our impervious surfaces.



Our tree canopy cover (25%) is below the regional average, but higher than some jurisdictions of similar density. Increasing our tree canopy can provide many benefits including shading and cooling, carbon storage, stormwater management, habitat enhancement, and human health. We can enhance our tree canopy by planting, maintaining, and protecting trees on our properties, parks, and streets.

What is a tree canopy?

Our tree canopy is all the aboveground cover, stems, branches, and leaves of trees on both public and private land. Our canopy indicates the extent of our urban forest and all the ecosystem services it provides.

What are impervious surfaces?

Impervious surfaces, such as paved roads and buildings, are surfaces that do not allow water to soak into the ground. This can lead to higher urban temperatures ('heat islands'), more stormwater runoff, increased pollutants into our water systems, and impacts to stream and wildlife health.



Our impervious surfaces (65%) is higher than the regional average and comparable to jurisdictions of similar density. Best practices for stormwater management in our streets, homes, and public areas can help manage the quantity of our rainfall runoff, improve water quality, and enhance our environment. In recent years, the Mackay Creek has supported healthy runs of Coho and Pink salmon due to the City's actions of implementing stormwater management and habitat improvement projects.

WHAT CAN THE CITY DO?



City actions to reduce impacts



REGULATE NEW CONSTRUCTION

Ensuring new developments are energy efficient, low carbon, and green



ADVOCATE TO SENIOR GOVERNMENT

Advocating to both the provincial and federal governments for stronger climate and environmental policies



BUILD COMPACT COMMUNITIES

Designing neighbourhoods so housing is close to daily needs and transit can encourage sustainable modes of transportation



REGULATE WATER USE

Enforcing regional water conservation regulations



PROVIDE MORE WAYS TO GET AROUND

Providing more infrastructure and amenities for active transportation and transit and installing public EV charging stations for cars



GREEN THE CITY

Planting trees and native plants in City parks and boulevards



PROTECT SENSITIVE HABITATS

Protecting sensitive ecosystems through development permit areas as well as protecting and restoring habitat areas on City land



PROVIDE REBATES AND INCENTIVES

Providing rebates and other financial incentives to enable residents to switch to low carbon technologies



IMPROVE CITY OPERATIONS

Ensuring our buildings, operations, and City fleet are low impact to reduce carbon pollution



IMPROVE WASTE MANAGEMENT

Improve collection of organics for all homes and providing opportunities for recycling in public spaces



PROVIDE PUBLIC EDUCATION

Raising awareness about climate and environment issues and educating the public on actions they can take in their daily lives

WHAT CAN YOU DO?



7 actions to reduce your impacts



If you need to drive, consider using car-share or switch to an electric vehicle



Eat less meat and dairy products and try plant-based proteins like lentils and tofu



Reduce waste by repairing broken things, buying second-hand, and sharing



Switch to an electric heat pump to heat your home



Plant native plants, climateresilient tree species, and your own food in your garden



Volunteer with the City Park Stewards to help restore natural areas and biodiversity



Walk, ride a bike, or take transit instead of driving



Go to cnv.org and search 'jump on a new heat pump' to learn about rebates and making the switch.

STRATEGY FRAMEWORK







A resilient and sustainable City where everyone thrives

GOALS NEEDED TO ACHIEVE OUR VISION



GOAL I:

We act with urgency to end carbon pollution

GOAL 2:

We live in reciprocity with nature

GOAL 3:

We are influential and accountable together

STRATEGIES TO ACHIEVE OUR GOALS

Our Pathway to Net Zero



- ▶ District Energy
- ► New Buildings
- Zero Emission Vehicles
- Waste
- CarbonCapture

Resilient Ecosystems and City

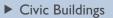
- Natural Systems
- ► Water Conservation
- ▶ Water Quality
- ▶ Urban Forest
- ► Resilient Development
- ► Citizen Resilience

Empowered Choices and Awareness



- Circular Economy
- ► Embodied Carbon
- ► Construction Waste
- ► Urban Agriculture

Leading by Example



- ► Fleet
- ► Procurement
- ► Leadership

DRAFT VISION & GOALS



Our vision sits atop the draft framework pyramid to act as an aspirational guide to the plan, supported by goals and strategies. It paints a picture of a healthy, green, and low carbon City that is well-equipped to navigate a rapidly changing future for generations to come, and where the benefits of a clean environment are shared by everyone.



GOAL I:

We act with urgency to end carbon pollution

THIS MEANS WE...

- ► Commit to creating a more sustainable future for everyone
- ► Understand we have a limited window of opportunity to reduce carbon pollution to avoid severe or irreversible impacts
- ▶ Use effective actions to help us meet our carbon pollution reductions targets
- ► Act, along with other cities in the world, as a leader in reducing carbon pollution

▶ Understand that our health, wellbeing, and prosperity is linked to a healthy natural environment

GOAL 2:

We live in reciprocity

with nature

- ▶ Give back more than we take from the natural systems that support us
- ► Respect our lands and what they provide to us with better planning, regulating, and caring
- ► Continue to build our resiliency
- ► Honour our land and its history of stewardship by Indigenous people

GOAL 3:

We are influential and accountable together

- ► Are capable of making transformative change despite being a small City
- ► Can work with partners to help make changes in our community
- ► Support public education and communication to reach our goals
- ► Will adopt sustainable practices within our organization while encouraging both individual and community efforts

OUR PATHWAY TO NET ZERO

did you Know•

Did you know natural gas is a fossil fuel? 40% of the carbon pollution in the City comes from burning natural gas to heat space and water in our homes and buildings.



What is district energy?

District energy is a centralized heating system that distributes thermal energy through a network of underground pipes and mini-plants to multiple buildings in an area.



What is a heat pump?

Heat pumps are a high efficiency appliance that uses electricity to heat your home in the winter and cool it in the summer. A heat pump can fully replace your existing heating or hot water system to significantly reduce a home's carbon pollution. It also improve indoor air quality!



Lonsdale Energy Corporation
(LEC) is the City's award-winning
district energy system that has
been in operation since 2003.
The system uses a combination
of natural gas boilers, ground
source heat pumps, heat
recovery from cooling, and
solar thermal panels to heat
hot water. LEC is exploring new
opportunities to incorporate
clean, renewable energy
sources into its system including
recovery of waste heat from
data centres and wastewater.



Our Pathway to Net Zero

DRAFT STRATEGIES

Cutting carbon pollution from major sources in the City to achieve our interim targets and net zero by 2050.



To avoid catastrophic climate change, we have set targets to significantly reduce carbon pollution by 2040 and reach net zero by 2050. Meeting these goals will mean cutting carbon pollution from buildings, transportation, and waste in the City at an unprecedented rate and increasing our carbon capture.



Accelerate low carbon building retrofits

Why?

» More than 40% of carbon pollution comes from buildings. so low carbon retrofits to existing building stock will help achieve targets, improve comfort and air quality, and lower costs

Ideas for how we can do this:

- » Provide tools, equitable financing, and incentives for retrofits
- » Prepare for and implement BC's upcoming retrofit code
- » Promote property owner awareness of building energy and climate performance
- » Prioritize low income and rental housing upgrades



De-carbonize district energy

Why?

» Transitioning district energy to 100% renewable energy sources will reduce carbon pollution from large buildings in the City

- » Continue research, data sharing, and exploration of potential funding mechanisms for decarbonized district energy
- » Optimize the performance of buildings connected to district energy by investigating commissioning services that show how energy use could be improved

OUR PATHWAY TO NET ZERO



Make new buildings net zero

Why?

» The buildings we construct today will be in operation in 2050 and beyond, so it is important that they are designed with low carbon systems

Ideas for how we can do this:

- » Set a timeline ahead of the provincial timeline to increase Step Code energy efficient requirements for all new buildings
- » Help builders and developers access incentives for new low carbon buildings
- » Introduce low carbon requirements for large buildings



Accelerate the transition to zero emission vehicles

Why?

» Enabling widespread, equitable access to electric vehicles (EVs) will lead to critical reductions in carbon pollution from personal vehicles

Ideas for how we can do this:

- » Continue implementing the City's Electric Vehicle Strategy by pursuing partnerships with car-sharing services, supporting retrofits of multifamily buildings, and providing public education about EVs
- » Increase access to EV charging stations in priority neighbourhoods
- » Explore opportunities to provide additional support for low income residents to transition to EVs



Reduce waste going to landfill

Why?

» Landfills produce carbon pollution from decomposing organic waste. We can cut carbon pollution from landfills by diverting waste through recycling and composting programs

- » Divert more waste by strengthening the Solid Waste Management Services Bylaw
- » Provide public education about best practices to divert waste
- » Work with the Province to enhance Extended Producer Responsibility (EPR) legislation so that more products are included and designed with end of life in mind

OUR PATHWAY TO NET ZERO



Increase carbon capture

Why?

» By enhancing our natural systems, we can increase the ability of our forests, wetlands and soils to remove carbon from the atmosphere

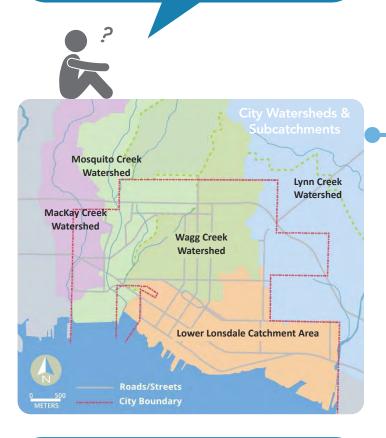
- » Increase our tree canopy cover
- » Protect and restore shorelines and estuaries
- » Engage with local Indigenous people to identify opportunities to enhance or re-establish native species



RESILIENT ECOSYSTEMS & CITY

What is a watershed?

A watershed or a catchment area is the area of land that drains all the rainfall and streams to a common outlet into the ocean. That's why careful management of our watersheds can help protect our streams, fish habitats, and oceans.



did you Know•

There are four watersheds and one catchment area in the City: Mackay Creek, Mosquito Creek, Wagg Creek, and Lynn Creek, and Lower Lonsdale. All four watersheds have fish-bearing streams, including some of the few remaining salmon-bearing streams in Metro Vancouver. Which watershed do you live in?

WHAT IMPACTS OUR WATERSHEDS?

- High percentage of impermeable surfaces
- Water quality issues from stormwater discharge, pollution, and spills
- Degraded habitats
- ► Changes to precipitation and temperatures

What is stormwater?

Stormwater is rain that lands on rooftops, roads, and sidewalks that runs over the land and into our stormwater system instead of soaking into the ground. We can manage stormwater runoff through measures like rain gardens, permeable pavement, and planting trees.



Resilient **Ecosystems and** City

DRAFT STRATEGIES

Preparing ourselves and our natural systems for a more resilient future in light of climate change.



We are already experiencing the impacts of climate change and we need to make sure our community, natural areas, and infrastructure are ready for our future. Healthy, biodiverse, and connected ecosystems will be able to adapt to changing conditions and improve the resiliency of our community.



Enhance our natural systems

Why?

» The health, connectivity, and biodiversity of our natural areas provide important habitats and essential ecosystem services (e.g., clean air, pollination, carbon storage)

Ideas for how we can do this:

- » Develop the City's first Natural Systems Strategy to identify actions to increase biodiversity, improve connectivity, and enhance sensitive ecosystems on public and private property
- » Engage Indigenous elders and knowledge keepers in the policy development process



Increase water conservation

Why?

» By reducing potable water demand, we can minimize the strain on our water supply and cut carbon pollution from water heated using fossil fuels

- » Promote water conservation tools and use
- » Develop guidance for landscaping to reduce irrigation needs
- » Strengthen water reuse requirements in new developments to minimize use of drinking water for nonpotable end uses (e.g., toilet flushing, clothes washing)

RESILIENT ECOSYSTEMS & CITY



Improve water quality



Expand and protect our urban forest



Make new development resilient

Why?

» Careful management of stormwater and protection of our streamside areas can improve the health of our creeks and the Burrard Inlet

Ideas for how we can do this:

- » Enhance the use of infrastructure to capture rainwater and increase infiltration on private property
- » Provide education on the importance of riparian area protection and restoration to fish habitat
- » Encourage citizen science projects and stewardship groups

Why?

» Growing a diverse, resilient, and accessible urban tree canopy on public and private lands will improve air quality, provide habitat, and enhance our community wellbeing

Ideas for how we can do this:

- » Develop a City-wide Urban Forest Management Strategy with clear targets informed by new inventory data
- » Identify opportunities for increased access to urban forests
- » Ensure forest management considers traditional knowledge and relationships with other natural systems

Why?

» Through low impact and sustainable building measures, we can promote ecosystem services in new development to further strengthen our resiliency

- » Provide education, certification tools, and incentives to increase biodiversity and environmental performance
- » Encourage permeable surfaces on private property
- » Modernize and consolidate environmental development permit guidelines so they are consistently followed



RESILIENT ECOSYSTEMS & CITY

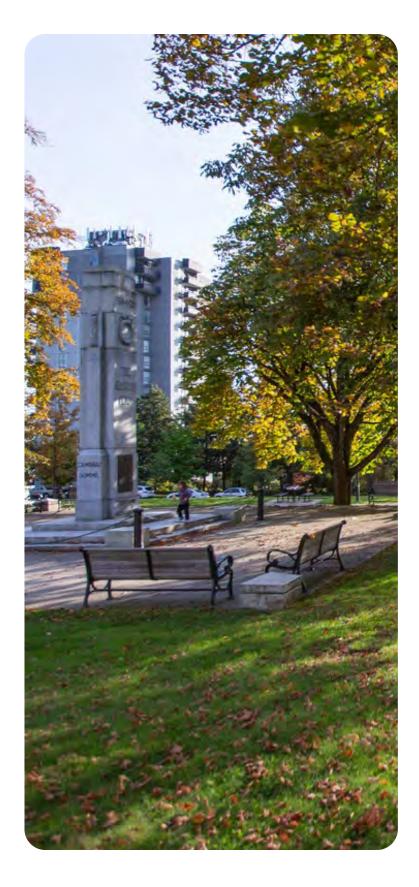


Improve citizen resilience

Why?

» Preparing our community to be resilient to the adverse impacts of climate change improves our health and wellbeing

- » Provide enhanced public support during heat events (e.g., shaded spray parks, stationary and mobile water fountains, cooling centers during emergencies)
- » Prioritize interventions that reduce risk for those who are most vulnerable
- » Educate citizens on climate change and resilience preparedness



EMPOWERED CHOICES & AWARENESS

did you Know•

Did you know that the materials we use and the goods we consume in the City generate carbon pollution in other parts of the world from their production? The food we eat and the materials used in buildings and vehicles are some of our biggest sources of carbon pollution produced outside of the City.

Food systems account for one third of our global carbon pollution. The majority comes from agriculture and land use, especially for meat and dairy production. Eating more plant-based foods and choosing locally-grown products can significantly reduce your carbon footprint.



In Canada, low carbon alternatives like wood, mineral wool, and recycled materials are readily available for the production of homes to limit embodied carbon.

What is embodied carbon?

Embodied carbon is the total carbon pollution released from building and infrastructure development throughout its life cycle, from extraction through construction, operation, and eventual demolition and disposal.



Empowered Choices and Awareness

DRAFT STRATEGIES

Learning and taking action together to reduce our local and global ecological footprint.

Why is this important?

Our consumer choices and individual actions have climate and environmental impacts inside and outside of the City. We need collective action by community members making informed choices to minimize the impact of the materials we use and consume and the waste we generate.



Grow awareness of low impact consumer choices

Why?

» Our lifestyle choices and consumer habits can have a big impact on carbon pollution

Ideas for how we can do this:

- » Promote awareness of high impact actions that will lower individual carbon footprints
- » Promote local goods and services
- » Subsidize sustainable choices through rebates and incentives
- » Monitor City consumption patterns and communicate findings



Transition towards a circular economy

Why?

» A linear 'take-make-waste' economy is not sustainable but a circular economy encourages continual use of resources to eliminate waste and reduce our ecological footprint

- » Integrate circular economy principles into long-term planning strategies
- » Encourage reuse and repair initiatives within the community
- » Advocate for a coordinated circular economy strategy in BC

EMPOWERED CHOICES & AWARENESS



Reduce embodied carbon in new construction



Increase construction and demolition waste diversion



Expand urban agriculture and food recovery

Why?

» Carbon pollution generated from manufacturing, transporting, and installing building materials can be significant, but we can reduce embodied carbon impacts in new construction by choosing low carbon building materials

Ideas for how we can do this:

- » Incentivize the use of low carbon building materials including mass timber
- » Advocate for the use of life cycle assessment tools
- » Consider embodied carbon reduction targets for new developments with equity in mind

Why?

» Up to a third of our region's waste is material from the construction, demolition, and renovation of buildings

Ideas for how we can do this:

- » Enhance and enforce waste diversion requirements during demolition
- » Support growth in the market for salvaged demolition materials
- » Encourage deconstruction rather than demolition to encourage reuse of building materials

Why?

» Growing food in the City improves air and soil quality, boosts biodiversity, increases food security, and provides opportunities for strengthened community connection

- » Expand the network of community gardens
- » Make it easier to grow food in residential boulevards
- » Support partnerships that encourage food waste recovery (e.g., unsold food to people or organizations in need)



LEADING BY EXAMPLE

did you Know.

Studies have shown that our climate-conscious actions can influence our neighbours to reduce their carbon pollution. We can ALL be climate leaders by making choices that enhance our environment.



Benchmarking is the process of tracking a building's energy and climate performance over time to help identify opportunities for operational efficiency improvements and retrofit projects. The City currently benchmarks the performance of our civic buildings and discloses the results on the voluntary BuildingBenchmarkBC Disclosure Map.



BE A CLIMATE LEADER!

There are many ways we can reduce our carbon pollution as a community:

- ► The City can reduce carbon pollution from our own operations
- Building owners and managers of residential, commercial, and industrial buildings can gain competitive insights by benchmarking their buildings through BuildingBenchmarkBC
- Community groups, non-profit organizations, and citizen-led groups can protect and restore habitats and promote sustainable solutions
- Residents can take advantage of rebates to retrofit their homes, use active transportation, conserve waters, grow their own food, and make sustainable purchasing choices. They can also learn more and encourage others!



Leading by Example

DRAFT STRATEGIES

Fostering
environmental
leadership within
our community and
organization to
inspire transformative
change.

Why is this important?

We need leaders
to mobilize our
community to take
action on climate
change. The City
can lead the way
by adoption new
corporate climate
targets and cutting
carbon from our
operations.



Make civic buildings low carbon and resilient

Why?

» Our civic buildings, like our recreational centres, account for more than 60% of our corporate carbon pollution

Ideas for how we can do this:

- » Undertake energy audits to optimize City facilities
- » Establish low carbon retrofit plans for each civic building
- » Integrate resilience and embodied carbon considerations into new building and retrofit standards



Transition to low carbon fleet

Why?

» Our civic fleet, like our garbage trucks, landscaping equipment, and other vehicles, account for 30% of our corporate carbon pollution

- » Increase EV charging stations for City fleet and staff vehicles
- » Upgrade electrical infrastructure at civic facilities to support fleet electrification
- » Develop a procurement policy to support the transition to a zero emissions fleet

LEADING BY EXAMPLE



Implement sustainable procurement and financial processes

Why?

» By accounting for carbon pollution in our internal budgeting, purchasing, and decision-making, we can prioritize opportunities to cut carbon pollution

Ideas for how we can do this:

- » Include carbon reduction considerations in our financial processes
- » Update our existing sustainable purchasing policy
- » Update our policies to adopt low carbon alternatives



Invest in climate leadership

Why?

» We need leaders within our community to grow a culture of collective action and work together to cut our carbon pollution and protect our environment

Ideas for how we can do this:

- » Improve staff training about climate and environment issues and opportunities
- » Enhance public education and climate literacy
- » Provide mentorship opportunities to encourage climate leadership in the community, especially among youth and visible minorities



Share your Feedback!

Now that you have some background about the Climate and Environment Strategy, we'd like to hear from you.

Please visit letstalk. cnv.org/environment to learn more about the Strategy and complete an online survey by November 26 at 4:00 pm.

Prefer a printed copy? Download and print a printable PDF and follow the instructions on how to submit your feedback.





City of North Vancouver 141 West 14th Street North Vancouver, BC V7M 1H9

Email: environment@cnv.org

Phone: 604-983-7357









STAY CONNECTED