

MOVING BOLDLY
TOWARD LOW-CARBON RESILIENCE



Acknowledgements

We would like to express our sincere gratitude to the community members of Maple Ridge for their invaluable feedback, insights and support in shaping the Plan.

MAPLE RIDGE - PROJECT LEADERSHIP TEAM:

- Zvi Lifshiz, Director of Strategic Development, Communications & Public Engagement
- Brian Montgomery, Climate Action and Resiliency Advisor
- Dan Olivieri, Manager of Corporate Planning & Consultation
- Phil Sanderson, Manager of Corporate Strategy & Business Transformation

FUNDING PARTNERS:

We are deeply grateful for the generous funding provided for this work by:



The Province of BC's Local Government Climate Action Program



The Union of BC Municipalities' Community Emergency Preparedness Fund

CONSULTING TEAM:









- · Introba Robin Hawker, Eduard Cubi, Sydney Hoffman, Stewart Somerville, Jiaxin Li
- Mycelium Sarah Gillet
- Licker Geospatial Aaron Licker, Jamie Blakey, Gaby Baasch, Russell Prentice, Camille Gay
- Diamond Head Consulting Camille LeFrancois, Mike Coulthard

MAPLE RIDGE - STAFF ADVISORY COMMITTEE:

- · Amanda Grochowich, Manager of Community Planning
- · Chad Cowles, Manager of Bylaw, Licensing, & Community Safety
- Chad Neufeld, Manager of Parks Planning and Development
- Colin Priddle, Manager of Parks Services
- Davin Wilson, Manager of Water Utility
- Edd Bennett, Corporate Emergency Program Manager
- James Clelland, Assistant Fire Chief, Planning
- · James Stiver, Director of Planning and Building
- · Jeff Baker, Business Retention and Expansion Advisor
- Joe Dingwall, Manager of Utility Engineering
- Mark Halpin, Manager of Transportation
- Mark McMullen, Manager of Development & Environmental Services
- Rodney Stott, Environmental Planner
- Sam Gu, Corporate Energy Specialist
- Tyler Westover, Director, Economic Development
- Yvonne Wai, Senior Project Engineer, Utility Planning & Management

We would also like to thank the members of Maple Ridge Council for their thoughtful feedback, support, and dedication to advancing our shared climate goals.

Contents

Rising	to the Challenge	Τ
1	Developing our Climate Plan	2
2	Climate Change in our Region	8
3	Understanding & Reducing Our GHG Emissions	14
4	Our Plan for Climate Action	18
	Bold Move 1 Address Critical Climate Safety Risks with and for the Community	20
	Bold Move 2 Enhance City Infrastructure, Natural Assets, and Services for Climate Readiness	24
	Bold Move 3 Encourage Zero Carbon and High Efficiency Buildings	28
	Bold Move 4 Foster Sustainable and Active Transportation Choices	32
	Bold Move 5 Support a Low-Carbon Resilient Economy & Agriculture	36
5	Implementing Our Plan	40

Rising to the Challenge



As the City of Maple Ridge continues to grow and thrive, we are working to navigate the new reality and challenges that climate change means for our community.

Local governments stand at the frontlines of climate action. We deliver the services that protect health, safety, and quality of life; enforce bylaws that shape how we grow and use our land; and steward the natural spaces and resources our communities depend on. Maple Ridge, along with all other municipalities across Metro Vancouver, has established commitments and plans to reduce, or "mitigate", greenhouse gas (GHG) emissions to meet Provincial and national targets and to do our part to slow the pace of climate change. Local governments also hold a unique opportunity to support residents, businesses, and property owners in reducing emissions, protecting our rich natural assets, and preparing for a changing climate—enabling the Maple Ridge community to thrive today and for generations to come.

We are already starting to see impacts from climate change here in Maple Ridge, including gradual shifts in temperature and precipitation trends, and more severe flood, heatwave, and wildfire smoke events. In the Lower Mainland, the 2021 heat dome and atmospheric river flooding that followed months later stand as two stark examples of the impact climate-driven hazards can have and the pressure felt when multiple extreme events happen in close succession. Extreme events like these and others are projected to become more frequent and severe if GHG emissions continue unabated and continue to drive rapid climate change.

With new and incoming regional, provincial, and national policies reinforcing the need for resilience, it is more important than ever to ensure the future well-being of our community. Getting ahead of climate challenges will also position us well to secure funding to undertake

the bold actions required. We are already acting on climate change, with numerous plans and policies in place, and guidance from the Mayor's Taskforce on Climate Action.

Our Climate Action Plan, **Resilient Future 2050: Moving Boldly Toward Low-Carbon Resilience** ("the Plan"), builds on this strong foundation to chart our path towards a climate-ready future as our community continues to grow and evolve.

Building on the work of the Mayor's Taskforce, this Plan incorporates a comprehensive low-carbon resilience approach to identify actions across multiple areas that will have enduring impacts to safeguard our rural and urban communities from the increasing impacts from climate change.

The Plan reaffirms our commitment to achieve net-zero emissions by 2050 and outlines specific actions across five "Bold Moves" that will guide our efforts to reduce GHG emissions while protecting and enhancing the resilience of our natural areas and assets. It aims to provide both a practical roadmap for our actions and a framework for residents, businesses, and organizations to better understand their role in achieving these objectives. Drawing on community input, regional initiatives, and existing local programs, this Plan focuses on actions that are effective, achievable, and within our control or influence.

Our Plan takes an integrated approach to both build a stronger, more resilient future and mitigate climate impacts by dramatically reducing GHG emissions. Through bold action, collaboration, and innovation, we aim to reduce GHG emissions, protect our natural and built assets, and enhance the well-being of our residents. Together, we will create a future where we lead by example in climate action and resilience, ensuring a healthier, more vibrant community for generations to come.

1

Our Plan provides a comprehensive framework that addresses both climate resilience and mitigation, ensuring that our community can adapt to the impacts of climate change while simultaneously reducing GHG emissions.

The Plan was developed through a collaborative and iterative process, shaped by extensive input from residents, businesses, staff, and Council. This section describes the steps taken to develop the Plan in alignment with community priorities.

Planning Process

The process to develop our Plan took place between January 2024 and May 2025 and involved three components: engagement, climate analysis, and climate action planning (see Figure 1).

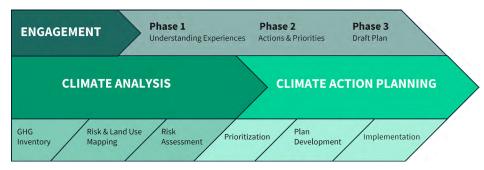


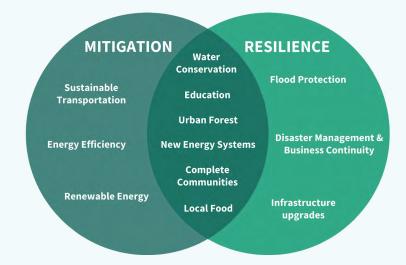
Figure 1: Steps in Developing the Plan

Principles Driving Our Approach

The Plan was developed according to six key themes to ensure it aligns with key community priorities:

- A. Taking a low-carbon resilience approach
- B. Building on our existing programs & strengths
- C. Adopting an equity-centred approach for developing and implementing the Plan
- D. Harnessing the value while honouring our natural assets
- E. Focusing on actions directly within our sphere of control & influence
- F. Leveraging resource efficiency through partnerships, co-benefits, and careful planning

A. LOW-CARBON RESILIENCE



This approach weaves together mitigation (reducing GHG emissions) and resilience (anticipating and adapting to the risks posed by climate change) efforts.

The approach was developed by Simon Fraser University's (SFU) Action on Climate Team (ACT). It promotes integrated climate action planning and decision-making, while acknowledging that climate mitigation and resilience share the same core goals of reducing climate change impacts and building community resilience.

A key advantage of the low-carbon resilience framework is that it enables a "noregrets" approach as it maximizes the benefits of integrated actions across both mitigation and resilience while unlocking a wide range of additional benefits (cobenefits). For example, nature-based solutions, which leverage the inherent resilience of ecosystems to address climate challenges while simultaneously store and offset carbon, play an important role in this approach. These solutions provide additional benefits, such as enhanced biodiversity, improved air and water quality, and a stronger sense of community well-being.

B. BUILDING ON STRENGTHS

We are already advancing climate action through a variety of plans, policies, and initiatives. The Plan is designed to build upon these ongoing efforts, further enhancing and complementing our commitment to a sustainable and resilient future. By aligning with existing work, we can accelerate implementation, avoid duplication, and amplify the overall impact of climate actions across our community.



C. EQUITY-CENTRED APPROACH

The Plan aims to prioritize climate actions that are inclusive and accessible, ensuring that the benefits of climate solutions are felt by all residents, including those in rural and urban areas, and our most vulnerable and marginalized communities. By adopting an equity-centered approach, we seek to reduce disparities in climate impacts. This focus on equity was also embedded throughout the planning process, with intentional efforts to engage diverse and typically underrepresented groups, resulting in a more effective and responsive Plan that better serves the needs of the whole community.



3

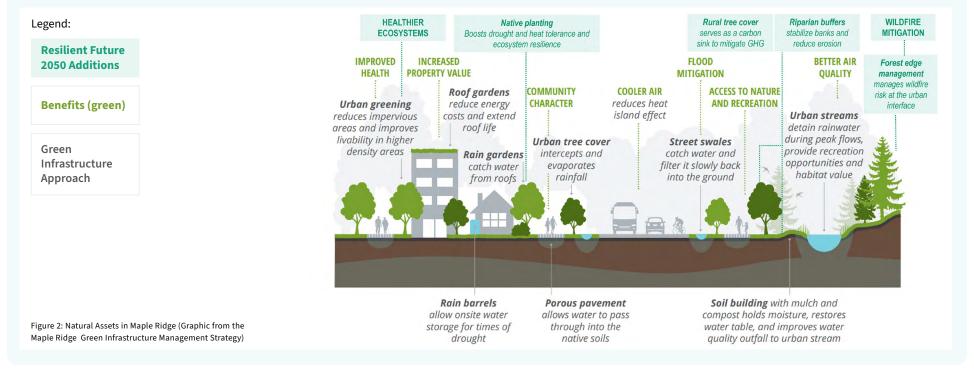
D. HONOURING OUR NATURAL ASSETS

Maple Ridge is blessed with abundant forests, streams, and greenspaces that provide rich ecological habitat, diverse recreation and eco-tourism, and form an important part of our community identity. These and other natural assets are key to the vitality, safety, and lifestyle in our community, and were an important consideration throughout the development of our Plan.

Natural assets refer to natural systems that offer services that benefit our community such as greenspaces that absorb rainwater, provide shade and help to cool urban areas, and forests that sequester (store and offset) GHG emissions. Figure 2, adapted from our Green Infrastructure Management Strategy, has been expanded upon to illustrate additional ways natural assets support climate action. We are focused on further strengthening tree canopy protection and growth throughout Maple Ridge on both urban and rural, municipal, and

private land through consistent policies and bylaws. Natural assets were considered as part of the analysis and action identification for our Plan in several ways, including:

- Using forest canopy cover mapping to inform natural asset inventories and land-use changes
- Including natural systems and assets in the climate risk and vulnerability assessment
- Factoring in environmental co-benefits when prioritizing climate actions
- Investigating incentives, conservation covenants, and other mechanisms to protect the urban and rural tree cover that are core to our natural assets
- Centring Bold Move 2 around strengthening our infrastructure and protecting, enhancing, and leveraging natural assets



E. CENTRED IN OUR SPHERE OF CONTROL & INFLUENCE

Our Plan is centred around actions that are practical, impactful, and grounded in the regional context—particularly those within our sphere of control or influence. Actions that fall within our direct control are categorized as **Take Action**, while those where we can support or influence change are labeled **Advocate & Partner**. The majority of actions in our Plan are **Take Action**, with a few supporting **Advocate & Partner** actions. By focusing on initiatives that reflect our unique role and capacity, this approach ensures efforts are realistic, achievable, and deliver meaningful outcomes for our community.

Some actions in our plan include those that we do not directly control, but that we may be able to influence through partnerships and advocacy to other regional actors.



Most actions in our plan are actions that fall within our control: where Maple Ridge staff and Council have near-complete or full decision-making authority over components of the urban system or issue in question.

F. MAXIMIZING RESOURCE EFFICIENCY

Our Plan focuses on Bold Moves and actions that deliver the greatest impact while ensuring efficient use of finite resources. This involves prioritizing high-need, high-impact, and cost-effective solutions, as well as applying an equity lens to direct benefits to those who need them most. Strategic financial planning further supports these efforts, incorporating measures such as proactive asset management, intentional project phasing, and leveraging grants to ensure long-term affordability and effectiveness. More details on these financial strategies will be explored in Section 5.



Lessons Learned from Engagement

Engagement with community members and City staff played a critical role in developing the Plan and directly influenced analysis and action planning (see BOX 1). Engagement was divided into three phases (as seen in Figure 1): Phase 1: Understanding Experiences, Phase 2: Actions & Priorities, and Phase 3: Confirming Priorities.

PHASE 1: UNDERSTANDING EXPERIENCES

In our first phase of engagement, we learned from residents about their experiences with the impacts of climate change and about their priorities for climate mitigation and adaptation actions.

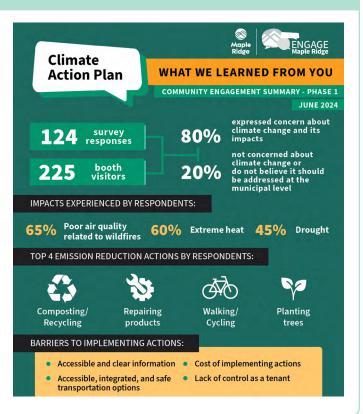
Engagement feedback in this phase directly informed climate analysis during planning, and in particular the climate risk and vulnerability assessment. The early thoughts on climate actions, including barriers to emissions reduction or resilience strategies, informed the initial drafting of the climate actions which were shared during Phase 2 engagement.

Engagement for Phase 1 took place from April - June 2024 and included information booths at four events and farmers markets (225 visitors) and a public online survey (124 responses).

BOX 1: SHAPING THE PLAN TOGETHER

Throughout the planning process, we committed not only to listening, but also to closing the loop. After each phase of engagement, we shared back what we learned through visually engaging posters (as seen on the right). These snapshots helped keep residents informed and highlighted how public input was directly shaping the Plan. Community feedback played a big role in setting priorities and ensuring the actions reflect the voices and values of people across Maple Ridge.

We heard early on how important it is to consider the different experiences in rural and urban areas of Maple Ridge. Our diverse geography and neighbourhoods are something that defines our City, and should be reflected in climate action planning and implementation.



SURVEY RESPONSES SHARING OUR STORIES & QUESTIONS:

"The heat dome forced our family to huddle in one room and sleep on the floor to avoid heat exhaustion."

80% of respondents

said they're concerned about climate change and its impacts

"I would like to ride my bicycle more, but the lack of safe cycling infrastructure in Maple Ridge is a barrier."

Respondents are most concerned about and impacted by:

- 1. Poor air quality from wildfires (65%)
- 2. Extreme heat events (60%)
- 3. Drought & water shortage (45%)

"What is Maple Ridge doing to ensure cleaner business practices?"

PHASE 2: ACTIONS & PRIORITIES

Phase 2 community engagement took place from October - November 2024 and focused on gathering feedback on what mitigation and adaptation actions we could take and how the community prioritizes them. The results of Phase 2 engagement allowed the planning team to assign each action being considered by Maple Ridge an engagement prioritization score (high, medium or low). The relative ranking of actions during engagement served as one of the criteria used to prioritize actions in the draft Plan. Insights from Phase 2 engagement included:

98% of Phase 2 participants support local

climate action

RANKING OUR PRIORITIES:

- 1. Protect community safety and well-being
- 2. Enhance natural systems
- 3. Lower-carbon and resilient buildings and infrastructure
- 4. Lower-carbon transportation and mobility
- 5. Thriving and resilient business, industry, and agricultural sectors
- 6. Waste reduction

98%

of Phase 2 participants would consider taking action at home or work

ACTIONS PARTICIPANTS ARE ALREADY TAKING:

- Climate-resilient landscaping
- · Energy-efficient retrofits
- Use of public transportation, cycling, or walking
- Purchasing food from local farmers

PHASE 3: DRAFT PLAN

Phase 3 engagement was carried out in April 2025 to report back on the public input received that helped shape the actions and understand how the actions proposed will impact Maple Ridge residents and businesses and surface any outstanding questions or concerns. Community feedback during this final phase of engagement was used to fine-tune the actions in our Plan and support next steps for implementation planning.

HELPING TO REFINE OUR ACTIONS...

Key ideas & areas of focus from participants:

- Preserve greenspace as we continue to grow & densify
- Leverage new technology and innovation for municipal assets
- · Prioritize retrofitting older existing buildings
- Implementing innovative strategies for lower-carbon transportation will be key to reducing our emissions
- Work with local businesses to reduce waste

...AND GUIDING IMPLEMENTATION

- Focus the Plan on short-term actions (e.g., 2-years)
- Establish strong targets and indicators to track success
- Leverage pilot projects to test different approaches
- Continue to highlight the multiple benefits ("co-benefits") of climate actions
- · Ongoing engagement with the community will be key

Staff & Council Guidance

The Staff Advisory Committee played an invaluable role throughout the development of the Plan by providing feedback on project methodologies, verifying results, consolidating feedback, and sharing local knowledge. The Committee was made up of staff from many City departments, including engineering, community planning, operations, fire, transportation,

parks, community services, and development planning. This wide range of expertise allowed for detailed input reflecting the objectives of many departments. In addition, City Council provided important feedback at key milestones throughout the Plan development to ensure the Plan reflects our community's priorities and can be fully supported and implemented.

Climate change is a global challenge that affects every community, including Maple Ridge. The emissions from our city, along with those from communities worldwide, contribute to the warming of our planet. This global warming leads to a cascade of climate hazards at the local level, such as rising temperatures, extreme weather events, and more frequent natural disasters.

Globally, emissions have continued to rise, driving a range of impacts, including shifting weather patterns and more intense climate events. As seen in Figure 3, the most recent Intergovernmental Panel on Climate Change (IPCC) projections suggest that climate change will pose increasingly significant risks to communities and individuals of all ages if not proactively managed alongside efforts to reduce GHG emissions¹.

The extent to which current and future generations will experience a hotter and different world depends on choices now and in the near term.

Climate Change in Maple Ridge

As an early step in the planning process, a climate risk and vulnerability assessment was conducted to understand which climate hazards pose the greatest risk to our assets, people, natural environments, and to help us prioritize resilience strategies to invest in. The risk assessment identified and assessed over 140 potential impacts across:

- Three assessment categories: economic, social & cultural, and environmental
- Two future time horizons: 2050s and 2070s.
- Six climate hazards: wildfire, flooding (rainwater, riverine, and coastal), extreme heat, drought, poor air quality, and wind & storm

Each impact was evaluated based on its likelihood (the chance of a climate-related hazard occurring or worsening over a specified timeframe) and its consequence (the severity of the hazard's impacts on different systems). Likelihood and consequence were combined to determine the overall risk of each identified impact and determine priority areas to focus community investment and action.

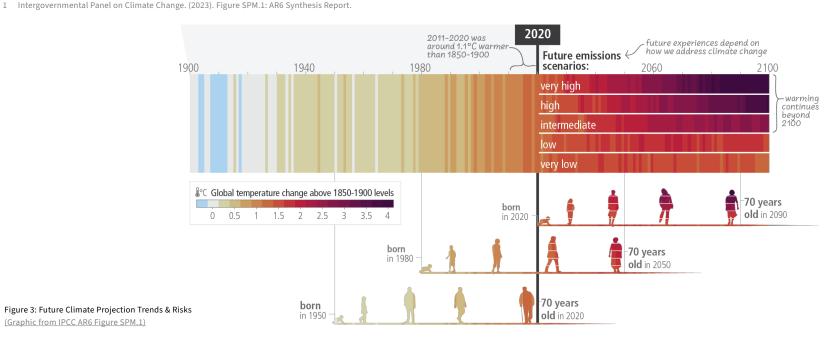


Figure 3: Future Climate Projection Trends & Risks (Graphic from IPCC AR6 Figure SPM.1)

The results of the assessment, summarized in Table 1, highlighted that wildfire, flooding, poor air quality, and extreme heat pose the greatest risks to our community. Conditions are expected to worsen across these and other climate hazards, as seen in Table 1.

While the assessment focused on the severity of each hazard separately, it is important to note that in some cases, these hazards may occur together or in sequence, creating compounding and cascading impacts, such as in 2021, when the summer heat dome was followed by an atmospheric river in the fall. The heat had caused significant die-off of bank-stabilizing vegetation, which in turn contributed to increased slope instability and worsened the effects of flooding. These complex scenarios can amplify risks and increase the strain on people, assets, natural environments, and services.

Table 1 Notes

- 2 Climatedata.ca. (2024).
- 3 Lower Mainland Flood Management Strategy Synthesis of Technical Analysis. (2023).
- 4 Simulating the Effects of Sea Level Risk and Climate Change on Fraser River Flood Scenarios. (2014).
- 5 Particulate air pollution from wildfires in the Western US under climate change. (2016).
- 6 Community Health and Climate Change Mapping Exposure, Sensitivity, and Adaptive Capacity to Four Health-Related Climate Hazards. (2021).
- 7 Pacific Climate Impacts Consortium Design Value Explorer. (2024).

Hazard	Climate Projections*	Likelihood 2050s**	Likelihood 2070s**
Wildfire	 Fire season length is expected to increase from 277 days historically to 345 days in the 2050s² Fire weather frequency is expected to increase from 29 days historically to 57 days in the 2050s² 	Very High	Very High
Flooding	 Short-duration rainfall intensity during a 100-year, 1-hour flood is expected to increase from 30mm/hr historically to 41mm/hr in the 2070s² 1-in-500 year peak river water levels are expected to increase from 8.8 m historically to 10 m in the 2070s³ The contribution of sea level rise to Fraser River flood levels is expected to increase from 0 m historically to 0.41-0.57 m in the 2070s⁴ 	High	Very High
Extreme Heat	 Days above 30°C are expected to increase from 6 historically to 35 in the 2070s² Average annual temperature is expected to increase from 9.8°C historically to 14.0°C in the 2070s² 	Very High	Very High
Drought	 The longest annual dry spell is expected to increase from 21 days historically to 26 days in the 2070s² Average summer precipitation is expected to decrease from 201 mm historically to 160 mm in the 2070s² 	Medium	High
Poor Air Quality	 The number of smoke waves is expected to increase from 3-4 historically to 5-6 in the 2050s⁵ Ozone levels are expected to increase as temperatures warm⁶ 	Very High	Very High
シープ Wind & Storm	 50-year return period maximum wind pressure is expected to increase from 0.41 kPa historically to 0.45 kPa in the 2070s⁷ Annual wind gusts above 70km/h are expected to increase from 6 hours historically to 11 hours in the 2070s⁷ 	Low	Medium

Table 1: Climate Trends for Maple Ridge

^{*} Climate projections in this table are presented for two time periods: the "2050s" (2041–2070) and the "2070s" (2061–2090). These timeframes were selected to assess how climate hazards are expected to change over the medium and longer term, both within and beyond the planning horizon of this Plan. Where possible, historical baseline values (typically averaged over 1971–2000) are included to illustrate how conditions are projected to shift.

^{**} Likelihood scores range from 1 (very low) to 5 (very high) and are colour-coded to help communicate which hazards are expected to change the most—and therefore pose the greatest threat to our community.

Visualizing Climate Vulnerabilities in Maple Ridge

Climate hazard and vulnerability mapping was an important part of our analysis and helped identify where our people, infrastructure, natural spaces, and services may be most exposed. This mapping was completed for our four greatest climate hazards: extreme heat, coastal and riverine flooding, wildfire, and poor air quality (wildfire smoke).

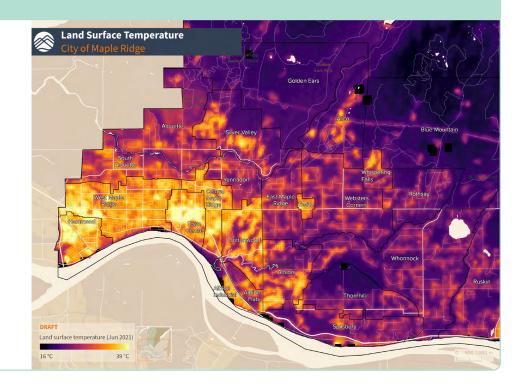
Vulnerability to Heatwaves

The 2021 heat dome brought record-breaking temperatures that impacted communities across British Columbia—including Maple Ridge. BOX 2 shares some of the impacts the heat dome had on our community and includes a satellite map of the actual land surface temperatures across our city during that event, revealing significant variation between rural and urban areas. Areas with less tree cover, more pavement, and limited access to greenspace—such as urban areas—saw much higher temperatures than those with mature trees, parks, and natural features. These insights highlight the importance of cooling strategies, such as preserving and increasing our urban and rural tree canopy, expanding greenspace, and designing more heat-resilient public spaces—particularly in the most heat-vulnerable areas of our community.

BOX 2: JUNE 2021 HEAT DOME

In late June 2021, Maple Ridge, along with much of British Columbia, was impacted by an unprecedented extreme heat event. Over several days, the region experienced record-breaking temperatures that led to serious health risks, strained public services, and damaged ecosystems. Vulnerable populations such as seniors, people with chronic health conditions, and those without access to cooling were especially affected.

In response, we opened cooling centres at facilities like the Greg Moore Youth Centre and the Maple Ridge Leisure Centre. We also increased access to water in public spaces and issued public safety messaging to help residents stay cool and safe.

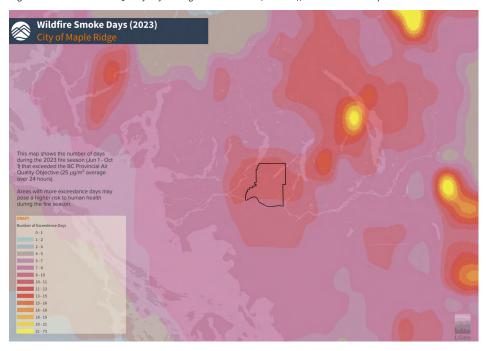


Figure~4: Land~Surface~Temperatures~Recorded~during~2021~Heat~Dome~(Jun~2021), Source: Licker~Geospatial~Control Control Con

Vulnerability to Wildfire & Smoke

Wildfire and wildfire smoke are increasingly significant climate hazards in BC, posing significant impacts to both public health and safety. As part of the analysis for our Plan, we developed a map illustrating the number of wildfire smoke days experienced in Maple Ridge during the 2023 fire season, indicating how often air quality exceeded the BC Provincial Air Quality Objective (25 $\mu g/m^3$ average over 24 hours). In 2023, Maple Ridge experienced 8 to 10 exceedance days, placing it among the more heavily impacted communities in the Lower Mainland.

Figure 5: Number of Poor Air Quality Days during 2023 Fire Season (Jun - Oct), Source: Licker Geospatial



BOX 3: ONGOING IMPACTS OF DROUGHT

Climate change is already affecting local ecosystems. Western redcedar – a species of cultural and ecological importance to local First Nations and our ecosystems – is showing clear signs of drought stress in Maple Ridge and across the region. Tree mortality is already being seen in stands like the one pictured below in the Webster's Corner neighbourhood. In sites like this, the impacts of climate change are often made worse by changes in local hydrology from logging, road building, or development. Future climate projections suggest that, despite its historical abundance, western redcedar will only be suitable in moist areas where it is less exposed to drought.



Vulnerability to Flooding

Developing our Plan also involved spatial analysis of flood mapping from the the Metro Vancouver Multi-Hazard Maps (2024) project. This mapping illustrated how far flood waters are expected to reach during a 200-year riverine flood or a 200-year coastal flood event under future climate conditions, each considered to be a relatively rare flood event with a 0.5% chance of occurring in a given year.

These two maps highlight the neighbourhoods that are especially vulnerable to flooding, enabling the City and property owners to better prioritize adaptation strategies—such as flood protection infrastructure, resilient land use planning, and natural flood mitigation—to safeguard residents, ecosystems, and critical infrastructure. River (or riverine) flood events

happen when a river spills over its banks, often due to a combination of rapid snowmelt or intense rainfall. As shown in the map, the neighbourhoods most at risk from this river flood scenario are concentrated along the North and South Alouette Rivers, as well as in low-lying areas of Hammond, Albion, and the Albion Flats. Though coastal flooding (typically when a coastal storm surge happens during high tide) appears to have a smaller footprint than river flooding, there is still potential for significant flooding along the west and northwest boundaries of the City. Flood waters could reach even further if a coastal flood event were to happen at the same time as a riverine flood event (where flood water is driven downstream due to snowmelt at higher elevations or a major rainstorm).

Figure 6: Riverine Flood Risk Mapping, Map Data Source: Metro Vancouver Multi-Hazard Mapping Project

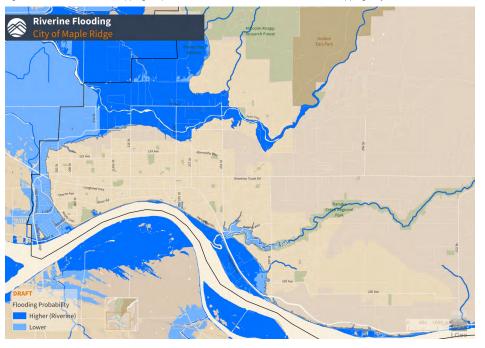
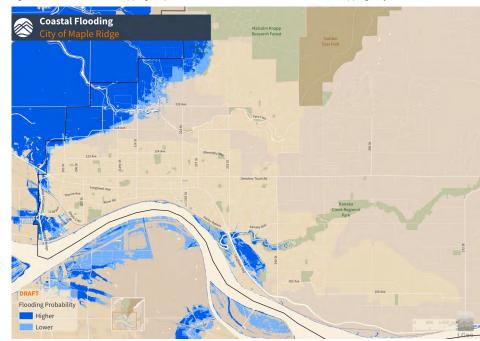


Figure 7: Coastal Flood Risk Mapping, Map Data Source: Metro Vancouver Multi-Hazard Mapping Project



Local Climate Risks

In addition to highlighting key hazard of concern (see Table 1), the climate risk and vulnerability assessment identified specific risks that should be priorities to address through climate action. Table 2 summarizes the highest risks facing our city, and some key vulnerabilities associated with them. While there are many areas for us to address, our community has already faced climate challenges and demonstrated strength in our response. These efforts will serve as the foundation for our future climate resilience work.

BOX 4: OCTOBER 2024 FLOODING



Between October 18 to 20, 2024, a Category 4 atmospheric river event impacted the Lower Mainland of British Columbia, including Maple Ridge. The region experienced record-breaking rainfall and up to 1 in 50-year flow rates in local rivers. October 19 saw the most intense rainfall with multiple single day rainfall records broken. Severe impacts from the event were observed across the Lower Mainland. Burnaby, Coquitlam, Langley, North Vancouver, Port Coquitlam, Surrey, Vancouver and West Vancouver all experienced flash flooding, damage to infrastructure, as well as residential and business impacts. Flooded premises, loss of business revenue, loss of properties, landslides, evacuation orders, and loss of life were all the unfortunate results of this event.

Wildfire	Flooding	Extreme Heat	Drought	Poor Air Quality	೨೦ Wind & Storm	W Key Vulnerabilities
 Damage or destruction of buildings Increased water demand Damage to roads Damage to third party infrastructure Business interruptions 	Damage to buildings Damage to roads Damage to third party infrastructure Water contamination Reduced patronage for businesses	 Overheating in buildings Damage to third party infrastructure Reduced staff productivity and patronage for businesses 	Reduced availability of drinking water Loss of important ecosystems Reduced viable agricultural land Water restrictions	Unsafe indoor conditions Reduced patronage for businesses	 Damage to third party infrastructure Blockage of roads Business interruptions 	Buildings and infrastructure in forested areas Buildings and infrastructure in floodplains Buildings in areas with low urban tree canopy
 Mental and physical health impacts Higher demand for health and social services Damage to cultural sites Damage to recreational sites and park closures 	Increased injury, illness, or death Increased demand for health and social services Damage to historical and cultural artifacts Reduced mobility	Mental and physical health impacts Difficulty performing culturally significant practices or accessing traditional plants	Die-off of vegetation and landscaping at cultural sites	Mental and physical health impacts Higher demand for health and social services Reduced access to cultural sites	Increased injuries from flying debris Damage to historical and cultural artifacts and buildings	Elders or seniors, young children, people with chronic health issues, people living alone, unhoused people, outdoor workers, people with disabilities Cultural sites in forested areas, floodplains, or areas with low urban tree canopy
 Reduced watershed and riparian forest cover Damage to trees and forest vegetation Destruction of habitats 	Scouring and erosion of stream banks, stream beds, and shorelines Waterlogging of soils Debris flows Damage to habitats	Loss of trees and vegetation Increased stream temperatures Changing ecosystems	Loss of trees and vegetation Low flows in streams Changing ecosystems	Air pollution particulate contaminating soil and water	No high risks identified	Ecosystems and habitats in areas of high wildfire risk or floodplains

Table 2: Summary of the Risk Assessment Results (Highest Climate Risks and Vulnerabilities for each Relevant Hazard in Maple Ridge)

In response to the colossal threat posed by rising global temperatures, many countries have committed to reducing GHG emissions, aiming to limit global temperature rise to well below 2°C, with efforts to stay below 1.5°C 8. These commitments are reflected in national and regional strategies, such as Canada's 2030 Emissions Reduction Plan, British Columbia's CleanBC Roadmap, and Metro Vancouver's Climate 2050 which guide our own climate action

goals. At the city-level, these global trends and targets have shaped our approach to climate action. Our targets for reducing emissions and increasing resilience are informed by national and regional commitments, ensuring that we contribute to a collective global and regional effort while addressing the unique climate hazards faced locally.

8 Paris Agreement. (2015)

Residential Buildings 29% **BUILDINGS (45%)** (e.g., single-family homes, townhomes, apartments) Building emissions are primarily Commercial & Institutional Buildings 6% related to the energy used for heating, cooling, hot water, (e.g., schools, hospitals, malls, offices) ventilation, lighting, cooking and equipment. This includes grid-6% Manufacturing, Industry & Construction supplied electricity as well as natural (e.g., industrial facilities, construction sites) gas, oil, and wood combustion. **Our Emissions** Agriculture and Forestry (e.g., farms, greenhouses) In 2022, our community GHG emissions were 487,300 tCO2e Off-Road Equipment (approximately 5.8 tCO2e per (e.g., construction machinery, forklifts) capita). This can be broken 40% down into the three sectors Cars & Trucks **TRANSPORTATION (53%)** (e.g., personal vehicles, delivery vans) seen in Figure 8. 98% of our transportation emissions come from on-road Heavy Duty Vehicles 12% sources, including cars, trucks, and (e.g., semi-trucks, log haulers, transit buses) heavy-duty vehicles. Marine, Air & Rail 1% (e.g., trains, boats, floatplanes) **WASTE (2%)** 2% (e.g., landfill emissions, compost sites) Around 73% of our solid waste is disposed of at landfill sites, the other 27% is diverted to Metro Vancouver's Wastewater 0% Waste to Energy facility. (e.g., sewage treatment systems)

Figure 8: GHG Emissions in Maple Ridge, by Sector

Reducing Emissions in a Period of Growth

Our emissions in 2022 increased by 12% since 2010. However, it should be noted that our community is currently in a period of rapid growth and our population increased from 74,811 to 92,994 between 2007 and 2022 - a 24% increase. Achieving absolute emission reduction in the context of this growth presents a real challenge. The energy we use in our buildings, the fuel we use in our vehicles, and the waste we generate increase as our population increases. However, on a per capita basis, our community GHG emissions decreased by 10% over the same period.

While Total Emissions Are Rising, Per Person Emissions Are Falling



Figure 9: Comparison of 2010 and 2022 Community GHG emissions

Moving forward, our climate goals will be further supported by other key strategies recently completed, including:

- Our Urban Forest Management Strategy (2024) that guides urban forest management to increase canopy cover
- The Strategic Transportation Plan (2023) that prioritizes investments for walking and cycling and completing existing connections
- The adoption of the Zero Carbon Step Code in February 2025 as a new requirement for new residential and commercial buildings in Maple Ridge
- The Green Infrastructure Management Strategy (2021) expands the City's toolkit to
 integrate green infrastructure into future decision making regarding municipal operations,
 capital projects, and area plans. This also supports measures such as tree canopy
 preservation and expansion in urban and rural areas.

Some key initiatives that have enabled us to reduce our emissions per capita include:

- Increasing household and municipal adoption of electric vehicles, supported by Provincial rebates and incentives
- The installation of public charging stations to support vehicle charging at City Hall, Haney Place, Albion Community Centre, and commercial centres
- Increased transit and transit connections through TransLink initiatives
- Reducing our transportation emissions due to compact land use planning, residential infill, and transit-oriented development through the Official Community Plan
- Expanding home-based business regulations to support residents in building their own businesses and working from home
- Provincial incentives that encourage more energy efficient retrofits, such as heat pump and window upgrades

Our Emission Reduction Targets

On May 25, 2021, we amended our Official Community Plan to include our GHG emission reduction targets:

- Reduce emissions by 45% below 2010 levels by 2030
- Reach net-zero emissions by 2050

These targets are ambitious and represent our commitment to meaningful action on climate change. Meeting these targets will require us to take bold action in how we plan and design our neighbourhoods, invest in transportation and infrastructure, and guide the transition to low-carbon buildings. Residents also have an important role to play through everyday choices at home and in their lifestyles (see BOX 5).

Extensive modelling has been conducted to estimate, or "project", our future community GHG emissions in order to understand what strategies will be most effective for meeting our targets. The majority of emission reduction (shown by the coloured bands in Figure 10) will be driven by existing or planned regulations from the federal and provincial governments, such as the BC Zero Carbon Step Code, Canada's Zero-Emission vehicle sales targets, the Clean Electricity Delivery Standard, and the Highest Efficiency Equipment Standard. However, local governments play a crucial role in supporting the successful implementation of these regulations so they yield the anticipated emissions reductions. Many of the actions in this Plan relate to the implementation of these regulations, and without these actions, the potential emissions reductions from these regulations would not be achieved.

Changes Needed to Meet our GHG Targets

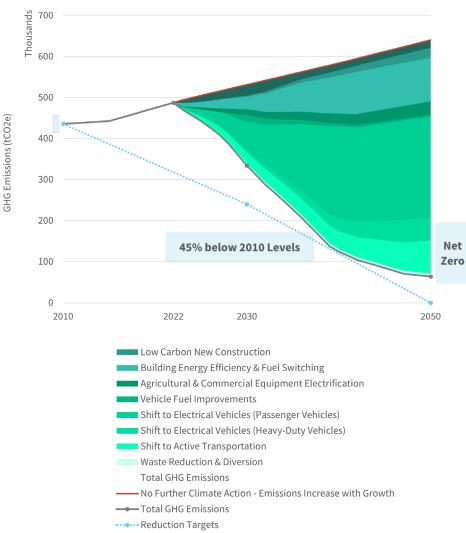


Figure 10: Greatest drivers for achieving the City of Maple Ridge's 2030 and 2050 GHG emissions reduction target

Thanks in large part to regulation and the supporting actions proposed in this Plan, modelling results indicate that we will see a 23% reduction in our total GHG emissions and a 47% reduction in GHG emissions per capita by 2030, compared to our baseline emissions in 2010. By 2050s, we expect to reach an 85% reduction in total GHG emissions and a 93% reduction per capita. These are very significant GHG reductions, particularly given the high population growth expected in our community. However, there is still a gap between the projected values and our emissions targets for both 2030 and 2050. These ambitious targets reflect our commitment to climate action, and they push us to continue looking for creative opportunities to accelerate our decarbonization journey, including leveraging regional collaboration and use of new emerging technologies – particularly in the context of the netzero emissions target by 2050.

Achieving this level of emissions reduction, both in Maple Ridge and more broadly, is a collaborative effort. Local governments and senior governments, citizens and businesses, utilities and manufacturers all play a part in reducing emissions. This Plan outlines the actions we will take to support this effort and also sets out who we will advocate to and partner with going forward.

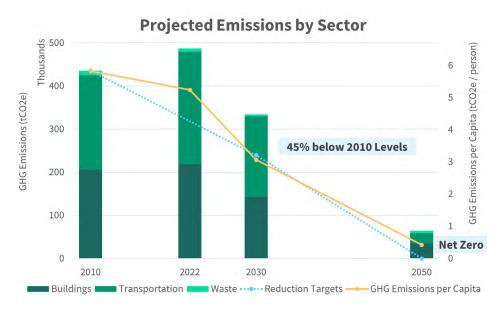


Figure 11: Projections of 2030 and 2050 City of Maple Ridge GHG emissions, by sector

BOX 5: WHAT CAN BE DONE AT HOME?



Everyone has a role to play in building a low-carbon future. Here are a few everyday actions households can take to reduce emissions:

- Use energy-saving settings on appliances and switch to cold water cycles for laundry.
- · Install weather stripping or caulking to keep heat in during the winter and out during the summer.
- · Adjust thermostats seasonally and consider installing a programmable thermostat to reduce heating and cooling use.
- Walk, bike, take transit, or carpool more often to reduce transportation emissions.
- · Planting or maintaning trees on your property
- Buy from and support local farmers

More ways to reduce household emissions can be found at www.mapleridge.ca.

Our Plan for Climate Action

The City of Maple Ridge is dedicated to building a low-carbon, resilient future in the face of climate change. This section of our Plan reaffirms our commitment to reducing our GHG emissions and outlines specific Bold Moves that we will take to reduce our emissions and build community resilience to climate change.

Our Climate Action Bold Moves

Our Plan is centred around five Bold Moves that highlight the greatest priorities and needs for climate action. These Bold Moves were developed based on analysis results and engagement feedback and provide clear direction for our near-term priorities, serving as specific next steps rather than broader themes. Additionally, the actions outlined under each Bold Move build on the extensive set of climate-related actions in our other (existing) City plans, complementing them and going further.

The following sections outline each of our five Bold Moves, providing additional details, highlighting actions already underway, and presenting ways that Maple Ridge will **Take Action** and **Advocate & Partner** to work towards each move.

- 1 Address Critical Climate Safety Risks with and for the Community
- 2 Enhance City Infrastructure, Natural Assets, and Services for Climate Readiness
- 3 Encourage Zero Carbon and High Efficiency Buildings
- 4 Foster Sustainable and Active Transportation Choices
- 5 Support a Low-Carbon Resilient Economy & Agriculture

Our Plan for Climate Action

Understanding the Drivers for Each Bold Move:

As shown in the example summary panel on this page, each Bold Move section also includes key related outcomes from engagement, along with a summary of other plans and initiatives that the City of Maple Ridge already has in place to complement the goals and actions under each Bold Move.

CLIMATE BENEFITS

Climate impact was a top priority to ensure the Bold Moves significantly reduce both climate risk and emissions. Each summary includes:

- the estimated percent contribution to our 2030 emissions reduction target
- · the specific emissions sectors impacted by the Bold Move (Buildings, Transportation, Waste)
- the climate hazards addressed by the Bold Move (Extreme Heat, Drought, Wildfire, Poor Air Quality, Flooding, Wind & Storm)

COSTS

The City is committed to prioritizing actions and Bold Moves that deliver the greatest benefit for our investment. For each new action, we've included a high-level estimate of start-up and ongoing operational costs:

- Start-up Cost: An estimate of the upfront investment required to initiate or implement an action (\$ = less than \$200,000, \$\$ = \$200,000-\$500,000, \$\$\$ more than \$500,000).
- **Operations Cost:** An estimate of the annual ongoing cost to operate, maintain, or monitor the action once implemented (\$ = less than \$50,000, \$\$ = \$50,000-\$150,000, \$\$\$ = more than \$150,000).

Before implementation, these new actions will undergo more detailed evaluation, including careful cost analysis, assessment of service level implications, and alignment with existing plans and priorities. Through this process, we will seek opportunities to enhance cobenefits, use resources efficiently, and deliver actions that are practical, impactful, and responsive to community needs.

BENEFITS

Potential GHG Emissions Reductions

12% of potential emissions reductions from the following sectors









Climate Hazards of Focus





Co-Benefits



ENVIRONMENTAL

- Improved Air Quality · Enhanced Natural Areas
- · More Trees and Green Space



HEALTH & EQUITY

- Improved Health
- Social Equity
- · Improved Livability



ECONOMIC

- Energy and Fuel Savings
- Resilient Energy
- New Jobs

OUR CURRENT PROGRESS

EMERGING (Level 2/5)



CO-BENEFITS:

Co-benefits were a key consideration throughout the development of our Plan, as we aim to maximize these additional benefits to our community. The co-benefits framework focused on three categories: health and equity, environmental, and economic. Each category includes up to three co-benefits, and the relevant co-benefits for each Bold Move are represented in their respective summarv.

The following nine co-benefits were considered:

- **Environmental:** Improved air quality, enhanced natural areas, more trees and green space.
- Health & Equity: Improved health, social equity, and improved liveability
- **Economic:** Energy and fuel savings, new jobs, and resilient energy

BASELINE PROGRESS

The degree to which existing City initiatives are already supporting achievement of each Bold Move is shown by the progress tracker graphic in each section.



Getting Started



Emerging



Strengthening







BOLD MOVE 1

Address Critical Climate
Safety Risks with and
for the Community

OUR PLAN FOR CLIMATE ACTION

We're working together to protect our community from the most serious climate hazards facing Maple Ridge—wildfires, flooding, extreme heat, and poor air quality. By strengthening partnerships, upgrading protection systems, expanding greenspaces, and supporting vulnerable residents, we are building a safer, more resilient Maple Ridge for everyone.

Our Plan for Climate Action

BOLD MOVE 1

Address Critical Climate Safety Risks with and for the Community

WHY THIS BOLD MOVE IN MAPLE RIDGE?

Maple Ridge has already faced significant impacts from climate hazard events. In recent years, we have endured a record-breaking heat dome, a severe atmospheric river, increased wildfire smoke days, and heightened water restrictions. These events underscore the urgency for robust climate action to protect our community. This Bold Move puts adaptive and proactive climate action at the forefront of our Plan, aiming to build a resilient future that can withstand the escalating impacts of climate change.

Actions under this Bold Move focus our emergency management efforts on the greatest climate hazards that face our community, and on the areas and groups that are most vulnerable. As we move forward, we will also look to draw on emerging resources, such as Fraser Health Authority's heat impact data and national vulnerability mapping from Laval University, to strengthen our local understanding and response.

Regional hazard mapping and analysis through our climate risk assessment identified four top priority hazards: **Extreme Heat, Wildfire, Poor Air Quality, and Flooding.** Addressing and mitigating the risks associated with these hazards is critical to ensuring the safety and well-being of our citizens, preventing damage to both built and natural assets, and maintaining essential services during critical times. As we strengthen our resilience, we must also ensure that actions are implemented in low-carbon ways that support our emissions reduction goals – creating opportunities to advance both together. The preservation, stewardship, and careful management of natural spaces in rural areas, parks, at the urban wildland interface is not only essential for managing wildfire and flood risk, but also serves to protect the trees, water courses, and habitats that are so important to our community.

As we continue to implement the actions listed below, we will further our progress towards becoming a more resilient community.

WHAT ARE WE ALREADY DOING?

We have already made significant strides towards this Bold Move, meaning our community is in the **strengthening** stage to establish high-impact strategies that will complement the programs we already have in place, including:

- Emergency Response Plan (2025): Provides guidance on the actions
 to prepare for, respond to, and recover from major disasters. It includes
 scenario specific response plans for key hazards, including those
 arising from climate change such as flood and wildfire, that threaten
 our community. The plan prioritizes actions to mitigate risks and
 outlines the roles and responsibilities of staff and response agencies.
- Emergency Readiness Community Outreach work led by the City includes the Public Emergency Readiness Training Sessions and Flood and Freshet mailouts to residents and businesses in or near to high flood risk areas in Maple Ridge. The City Fire Department and youth services have also offered transportation to help community members reach cooling centres.
- Wildfire Protection Plan (2019): Includes key actions to enhance our resilience to wildfires, such as mandating fire-resistant building materials and landscaping, developing best practices for utility right-of-way management to reduce fire risk, conducting fire flow vulnerability assessments, and setbacks and replacement standards for fire prevention.
- Integrated Stormwater Management Plans (2021): The Blaney, North Alouette, and Fraser River, and South Alouette and Kanaka Creek plans outline strategies to improve the resilience of our water systems, including updating permits and bylaws to control erosion and sediment, promoting nature-based solutions, revising design criteria for stormwater infrastructure, and developing comprehensive drainage plans.
- Parks, Recreation & Culture (PRC) Master Plan (2023): Provides
 a 10-year roadmap to enhance parks and recreational services,
 increase access to green spaces, improve climate-resilient
 infrastructure, and guide park land acquisition.
- Green Infrastructure Management Strategy (2021): Encourages
 the use of nature-based design, including tree planting and green
 stormwater features and supports measures to preserve and expand
 natural assets in urban and rural areas.

BENEFITS

Emissions Reductions

Bold Move 1 can contribute to emissions reductions by preventing infrastructure failures, reducing the need for emergency repairs, and lowering energy demand.

Climate Hazards of Focus









Extreme Heat

Wildfi

dfire Flooding

Poor Air Quality

Co-Benefits



ENVIRONMENTAL

- Improved Air Quality
- Enhanced Natural Areas
- More Trees and Green Space



HEALTH & EQUITY

- Improved Health
- Social Equity
- Improved Livability

OUR CURRENT PROGRESS

STRENGTHENING

(Level 3/5)



City of Maple Ridge | Resilient Future 2050

Our Plan for Climate Action

BOLD MOVE 1

Address Critical Climate Safety Risks with and for the Community

NEW ACTIONS UNDER THIS BOLD MOVE

Our Climate Action Plan includes 18 new actions to further our commitment and efforts towards building a climate-resilient community.

These initiatives complement our ongoing work to enhance resilience, address key risks, and foster a holistic approach to climate adaptation.

The following table highlights how we will **Take Action** to provide a solid foundation for concrete and realistic work towards this Bold Move.

30 EXISTING COMPLEMENTING ACTIONS

18 NEW ACTIONS

TAKE ACTION							
ID	Action	Start-up Cost	Operation Cost	Resilience Benefits	GHG Benefits		
1.1	Establish a flood and geohazard Development Permit Area based on the Maple Ridge Flood Hazard Assessment (2024) to require appropriate development and construction in identified flood and geohazard areas . Integrate nature-based solutions to flood hazard mitigation.	\$	\$	High	Low		
1.2	Maintain and enhance flood/erosion protection in higher risk areas , including maintaining and restoring healthy riparian areas with a high vegetation cover, and considering changes to drainage paths.	\$\$\$	\$\$	High	Low		
1.3	Continue to install shading, urban greening solutions, water fountains and bottle filling stations in urban land use areas, parks, areas with high traffic, limited greenspace, and higher heat exposure to promote cooling and safe recreation. Prioritize planting of trees along key active transportation routes to/from key heat respite sites (e.g., cooling centres, beaches, parks) to develop shaded, thermally comfortable corridors.	\$\$	\$	Medium	Low		
1.4	Prioritize extreme heat management initiatives in neighbourhoods and building types that are most vulnerable to overheating (e.g., targeted education, emergency outreach and response; subsidized tree programs in vulnerable areas).	\$	\$	High	Low		
1.5	Complete a parkland acquisition strategy in accordance with the PRC Master Plan. Seek out opportunities to acquire and expand park land in areas of low park equity to enhance access to nature, support natural flood mitigation, and reduce urban heat island effects. Focus on providing neighbourhood park space within a 5-minute walk in urban areas.	\$\$\$	\$\$	Medium	Low		
1.6	Ensure climate considerations are included in implementation of the City's Integrated Stormwater Management Plans, and report to the public on progress made. Maintain a focus on stormwater management to proactively identify inflow and infiltration risks, and undertake targeted system upgrades, inspections, maintenance, and communication with residents to reduce the volume of groundwater and rainwater entering the sanitary sewage collection system.	\$\$	\$\$	High	Low		
1.7	Undertake forest and wildfire risk assessment that builds on regional multi-hazard mapping (in 2024), identifies strategic partners, and informs future updates of the Community Wildfire Protection Plan with the best available data and analyses.	\$	\$	High	Low		
1.8	Partner with academic institutions, health authorities, and other organizations to develop, support, and showcase pilot projects, case studies, and research demonstrating the health, safety, and well-being benefits of cooling, flood and wildfire management strategies.	\$\$	\$\$	Low	Low		
1.9	Develop a strategy to enhance air quality through educational initiatives (e.g., for outdoor burning and wildfire smoke), and partner with Metro Vancouver to support regional initiatives.	\$	\$	Low	Low		
1.10	Ensure prioritization in capital planning and resource allocation supports actions within the Urban Forest Management Plan (e.g. Action 1.1.2 canopy density and minimums, Action 1.1.5 exploring incentives for properties). Incentive planning should include both urban and rural areas.	\$	\$\$	Low	Low		

City of Maple Ridge | Resilient Future 2050

Our Plan for Climate Action

BOLD MOVE 1 Address Critical Climate Safety Risks with and for the Community

In addition, the following list highlights how the City will **Advocate & Partner** at the regional and provincial levels to further this Bold Move and drive significant change in our community.

	ADVOCATE & PARTNER						
ID	Action	Start-up Cost	Operation Cost	Resilience Benefits	GHG Benefits		
1.11	Coordinate or partner with regional transportation providers or the Province to offer free or low-cost transportation options for residents to access cooling centres and parks (e.g., school buses, private buses, neighbourhood carpools, mobile cooling centres). Ensure services are clearly communicated to the community.	\$	\$	Medium	Low		
1.12	Collaborate with community groups, health authorities, regional bodies, and local First Nations to expand outreach and education efforts to strengthen household decarbonization and resilience and assist residents in identifying and accessing existing support resources in their community.	\$	\$	Medium	Medium		
1.13	Host or partner on existing workshops to build awareness and preparedness (e.g., DIY air filtration, health resilience).	\$	\$	Medium	Low		
1.14	Work with regional bodies (e.g., Metro Vancouver, local First Nations) and local groups to deliver educational or incentive programs to promote sustainable water use (and reuse) and encourage behavioural change. These programs could include a golden (or ugliest) lawn incentive program and educational programs about new planting care, encouraging water harvesting, less water-intensive landscaping, or water reuse.	\$	\$	Medium	Low		
1.15	Advocate to the Province to investigate and upgrade dikes that protect the city to meet provincial standards for seismic stability and flood levels under future climate conditions.	\$	\$	High	Low		
1.16	Advocate to BC Hydro, Fraser Health Authority and other public organizations for publicly funded portable air conditioner distribution programs target medically vulnerable and low-income individuals.	\$	\$	Medium	Low		
1.17	Advocate to the Province to incorporate resilience measures into the B.C. Building Code and amend the B.C. Residential Tenancy Act to include a "right to cool" , enabling renters to implement minor or moderate cooling upgrades, such as installing fans, window-mounted air conditioners, or shades, to enhance climate resilience and tenant well-being.	\$	\$	Medium	Low		
1.18	Work with BC Hydro to ensure measures in place for the Alouette, Stave Falls and Ruskin dams remain resilient to climate hazards and future conditions, and where possible mitigate downstream bankfull and erosion impacts from dam releases.	\$\$\$	\$\$	Medium	Low		



BOLD MOVE 2

Enhance City Infrastructure, Natural Assets, and Services for Climate Readiness

OUR PLAN FOR CLIMATE ACTION

We're upgrading City infrastructure and services to be more resilient and lower-carbon, while protecting, enhancing, and leveraging the rich natural assets in our community. From modernizing our fleet and facilities to integrating climate resilience into emergency management and everyday decisions, this Bold Move ensures our systems are ready to face the future.

Our Plan for Climate Action

BOLD MOVE 2

Enhance City Infrastructure, Natural Assets, and Services for Climate Readiness

WHY THIS BOLD MOVE IN MAPLE RIDGE?

Maple Ridge's infrastructure and services are already being impacted by the changing climate. From rising demands on water and energy systems, to the growing strain on emergency response and maintenance, climate change is putting added pressure on the services our community relies on every day. These challenges highlight the need to strengthen our systems now before disruptions become more frequent and severe.

Bold Move 2 is centred on leading by example to reduce GHG emissions from City infrastructure and operations, and prepare systems for climate change risks. Making low-carbon resilience a core part of how we build, retrofit, manage, and maintain our infrastructure and services is important to meet our GHG reduction targets and enable the City to reliably deliver essential community services.

Stewardship of natural assets and green infrastructure is key to maximizing our climate readiness and has been embedded as a key strategy throughout this Bold Move. Protecting and enhancing natural assets such as parks, trees, and waterways helps these systems continue to provide cooling, drainage, and biodiversity benefits. This includes preserving natural spaces in our rural areas and expanding and enhancing greenspace in urban and already built out areas. These efforts will help reduce emissions from municipal operations, preserve key ecosystems, and maintain the quality of life that makes Maple Ridge such a special place to live.

WHAT ARE WE ALREADY DOING?

We are already laying the foundation for climate-ready infrastructure, services, and natural systems. Maple Ridge is in the **strengthening** stage, meaning we're building on a solid base of plans and policies that are already moving us toward more resilient, lower-carbon operations.

The following key plans highlight our ongoing efforts to enhance climate resilience across our natural and built infrastructure and services:

- Urban Forest Management Strategy (2024): Sets a 40% tree
 canopy target in urban areas alongside other measures to increase
 climate resilience, support natural cooling, manage stormwater,
 and integrate trees and vegetation into capital planning and asset
 management systems.
- Integrated Stormwater Management Plans (2021): The Blaney, North Alouette, and Fraser River, and South Alouette and Kanaka Creek plans outline a roadmap of actions to address the longterm climate impacts on our drainage and water systems through priority upgrades to infrastructure and enhancing natural assets for flood management.
- Flood Response Plan (2020): Lays out our action plan for emergency preparedness and response to a major flood event, including responsibilities for infrastructure monitoring and recovery plans for critical assets.

As we continue to implement the actions listed below, we will demonstrate leadership in building a safe and resilient Maple Ridge.

BENEFITS

Emissions Reductions

Bold Move 2 can contribute to emissions reductions by preventing infrastructure failures, reducing the need for emergency repairs, and lowering energy demand.

Climate Hazards of Focus







Drought



ght Flooding

Co-Benefits



ENVIRONMENTAL

- Improved Air Quality
- Enhanced Natural Areas
- More Trees and Green Space



HEALTH & EQUITY

- Improved Health
- Social Equity
- · Improved Livability



ECONOMIC

- · Energy and Fuel Savings
- Resilient Energy

OUR CURRENT PROGRESS

STRENGTHENING

(Level 3/5)



City of Maple Ridge | Resilient Future 2050

Our Plan for Climate Action

BOLD MOVE 2

Enhance City Infrastructure, Natural Assets, and Services for Climate Readiness

NEW ACTIONS UNDER THIS BOLD MOVE

Twelve new actions are included in our Plan to strengthen the climate readiness of our infrastructure, services, and natural systems. These initiatives build on our ongoing efforts to integrate climate considerations and emissions reductions into municipal operations and capital planning, while supporting long-term resilience. The following table highlights how we will **Take Action** on this Bold Move.

43 EXISTING COMPLEMENTING ACTIONS

12 NEW ACTIONS

	TAKE ACTION							
ID	Action	Start-up Cost	Operation Cost	Resilience Benefits	GHG Benefits			
2.1	Build a lower-carbon municipal fleet by assessing current vehicles and developing a 15-year implementation plan to phase out fossil-fuel combustion vehicles. Part of this plan could include adopting a 'Low Carbon First' policy that prioritizes electric, hybrid, or zero-emission vehicle purchases unless cost-prohibitive, and purchasing pilot electric or alternative-fuel vehicles to transition to zero-emission options by 2030, where available, and exploring other available technologi es.	\$\$\$	\$\$	Low	High			
2.2	Integrate the outcomes of the Climate Action Plan and Corporate Climate Action Plan into capital planning decisions and asset management and renewal, including considering site risk factors, resilience deficiencies, and critical decarbonization opportunities that may necessitate proactive renewal. Review Procurement Policy to maintain a focus on material selection and whole life carbon in procurement for infrastructure and capital projects.	\$	\$\$\$	High	High			
2.3	Establish a recommended vegetation species list for plantings in municipal, residential and commercial projects in both urban and rural locations, considering the MVRD list for changing climate species, to prioritize the use of more climate resilient and native species in parks, boulevards, stormwater management.	\$	\$	High	Low			
2.4	As part of Business Continuity Program development, establish a staffing redundancy and/or cross-training program to support municipal service continuity during catastrophic events that may cause major transportation barriers and make it difficult for critical staff to reach key facilities.	\$	\$	Medium	Low			
2.5	Incorporate a climate-ready, low-carbon resilience lens into City decision making including, policies and plans as they are updated (e.g., Official Community Plan, development and environmental planning).	\$	\$\$	High	High			
2.6	Develop local strategies to improve resilience and reduce emissions from local water operations , water-meters e.g., taking into account increased peak demand during heat waves, investigating opportunities for non-potable water use, and reviewing fire flow requirements at forest interface locations.	\$	\$\$	Medium	Low			
2.7	Carry out an assessment of existing civic facilities (including historic buildings, emergency operations centres) to identify highest priorities for climate action-focused updates (e.g., to address critical risks/deficiencies, serve as clean air shelters or cooling centres, or address decarbonization priorities).	\$	\$\$\$	High	High			

City of Maple Ridge | Resilient Future 2050

Our Plan for Climate Action

BOLD MOVE 2

Enhance City Infrastructure, Natural Assets, and Services for Climate Readiness

	TAKE ACTION								
ID	Action	Start-up Cost	Operation Cost	Resilience Benefits	GHG Benefits				
2.8	Establish standards for new and retrofit municipal projects to encourage lower-carbon design and technologies (e.g., zero emissions, water meters), leverage passive strategies (e.g., operable windows with good cross-flow ventilation, external shading), enhance resilience to climate hazards (e.g., backup power), prioritize water conservation (e.g., low-flow fixtures, water harvesting and re-use), integrate the use of trees and vegetation, and take a resilient low-carbon approach to procurement for new and retrofit municipal projects.	\$\$	\$\$\$	High	High				
2.9	Create a Maple Ridge Corporate Climate Action Plan that establishes the path towards low-carbon resilient City operations.	\$	\$	Low	High				
2.10	Identify one or two key buildings that could serve as pilot demonstration projects to showcase new technologies and innovative industry approaches.	\$\$\$	\$\$	Medium	High				
2.11	Expand on the existing benchmarking study of 12 City-owned facilities to benchmark the energy use of all municipal facilities annually and publish results online. Use these results to inform emissions reduction targets and strategies.	\$\$	\$	Low	Low				
2.12	Enhance data collection and monitoring for climate impacts in Maple Ridge to inform City maintenance, capital planning, and response.	\$\$	\$\$	Low	Low				



BOLD MOVE 3

Encourage Zero
Carbon and High
Efficiency Buildings

OUR PLAN FOR CLIMATE ACTION

We're accelerating our transition towards buildings in our community that are lower-carbon, more energy-efficient, and climate-resilient—across both public and private sectors. By removing barriers, offering incentives, and supporting education and training, we're helping residents, builders, and businesses create healthier, climate-forward spaces in Maple Ridge that reduce emissions and build long-term resilience.

Our Plan for Climate Action

BOLD MOVE 3

Encourage Zero Carbon and High Efficiency Buildings

WHY THIS BOLD MOVE IN MAPLE RIDGE?

Buildings are one of the largest sources of GHG emissions in Maple Ridge, accounting for approximately 45% of communitywide emissions. Reducing emissions from both new and existing buildings is critical to achieving our climate targets and to ensuring buildings are more comfortable, efficient, and prepared for a changing climate.

Bold Move 3 focuses on transitioning publicly- and privatelyowned buildings across the city to be lower-carbon, more energy-efficient, and more resilient. This includes raising the bar for new construction through the Zero Carbon Step Code, while also enabling climate-ready retrofits of existing buildings, which represent most of our built environment.

This Bold Move positions us as a leader in encouraging the adoption of cleaner technologies, supporting education and training, and increasing awareness of available tools and incentives for homeowners, renters, builders, and business owners.

By aligning policies and development standards with our climate objectives, we will create a built environment that supports emissions reductions and long-term community well-being.

WHAT ARE WE ALREADY DOING?

We are in the **emerging** stage for Bold Move 3 as we start to accelerate our work on zero carbon and high-efficiency buildings and lay the groundwork for deeper action in the years ahead.

The following initiatives highlight our existing efforts to support lower-emission, energy-efficient construction and retrofits, and will help guide the implementation of this Bold Move:

- Adopted the BC Zero Carbon Step Code (2025): In February 2025, City Council endorsed the implementation of the Zero Carbon Step Code (ZCSC), setting timelines for higher performance standards in new construction. For Part 9 residential and Part 3 residential buildings, we plan to achieve Strong Carbon Performance (EL-3) by July 1, 2025, and Zero Carbon Performance (EL-4) by September 1, 2026. These steps aim to reduce operational GHG emissions in new buildings.
- **Promoting Sustainable Building Features:** We encourage the incorporation of sustainable building features in new developments by providing educational materials on the common features and benefits of green buildings, and highlighting sources for further detail (e.g., Canada Green Building Council, CMHC, NRCan). This includes advocating for net-zero energy buildings.

As we continue to implement the actions listed below, we will further our progress towards a low-carbon, high-efficiency, and resilient building stock.

BENEFITS

Potential GHG Emissions Reductions

45% of potential emissions reductions from the following sector:



BUILDINGS

(e.g., fuel switching, energy efficiency)

Climate Hazards of Focus







Poor Air Quality

Co-Benefits



HEALTH & EQUITY

- Improved Health
- Social Equity
- · Improved Livability



ECONOMIC

- · Energy and Fuel Savings
- · Resilient Energy
- New Jobs

OUR CURRENT PROGRESS

EMERGING

(Level 2/5)



Our Plan for Climate Action

BOLD MOVE 3

Encourage Zero Carbon and High Efficiency Buildings

NEW ACTIONS UNDER THIS BOLD MOVE

Our Climate Action Plan identifies 13 new actions to accelerate the transition to low-carbon, energy-efficient, and climate-resilient buildings in Maple Ridge. These initiatives complement our ongoing work to remove barriers, support retrofits, and raise performance standards in both new and existing buildings. The following table highlights how we will **Take Action** to create a strong foundation for practical, impactful change through this Bold Move.

3 EXISTING COMPLEMENTING ACTIONS

13 NEW ACTIONS

	TAKE ACTION						
ID	Action	Start-up Cost	Operation Cost	Resilience Benefits	GHG Benefits		
3.1	Implement the Zero Carbon Step Code for Part 3 and Part 9 buildings to meet Strong Carbon Performance (EL-3) by July 1, 2025 and Zero Carbon Performance (EL-4) by September 1, 2026).	\$	\$\$	Low	High		
3.2	Collaborate with neighbouring municipalities, builders, and developers to develop a Green Building Renovation Guide and associated incentives for more climate-ready homes and multi-unit residential buildings.	\$	\$	Medium	Medium		
3.3	Update the City's rezoning requirements and bylaws to accelerate resilient buildings through electrification, decarbonization and other initiatives (e.g., incentives for energy or resilience performance above requirements; floor area ratio bonuses; height and overhang exemptions for higher-rated insulation; renewable energy generation; streamlined permitting; requirements for both heating and cooling in new developments).	\$	\$	High	High		
3.4	Develop a building retrofit strategy, and associated targets for municipal and private retrofits, that focuses on strategies to accelerate resilient building electrification in Part 9 and Part 3 buildings, as well as other building decarbonization and resilience initiatives such as passive design strategies, nature-based approaches, energy efficiency upgrades, carbon-neutral design, and climate risk mitigation.	\$	\$\$	Medium	Medium		
3.5	Identify training needs and develop targeted training programs for community interest holders , such as trades professionals (e.g., HVAC technicians, electricians, plumbers), builders and developers, and property managers and owners, to support high-efficiency heat pump and renewable system installation, including educating homeowners.	\$	\$\$	Medium	Medium		
3.6	Build community awareness of, and access to, retrofit resources and related funding opportunities (e.g., hosting workshops on heat pumps, exterior shading, passive ventilation, water meters, flood/drought resilient and FireSmart landscaping, resilient renewable energy systems, and finding appropriate trades for retrofits).	\$	\$	Medium	Medium		
3.7	Explore Revitalization Tax Exemptions (RTEs) or other incentive mechanisms for buildings that implement energy efficiency or carbon reduction measures.	\$	\$\$	Medium	Medium		
3.8	Prepare for energy benchmarking and building performance standards from other levels of government (e.g., by hosting workshops or training sessions for staff, reviewing current building data and energy use, identifying resources needed to comply, collaborating with other municipalities to share strategies and insights).	\$	\$	Low	Low		

City of Maple Ridge | Resilient Future 2050

Our Plan for Climate Action

BOLD MOVE 3

Encourage Zero Carbon and High Efficiency Buildings

In addition, the following list highlights how the City will **Advocate & Partner** at the regional and provincial levels to support stronger building standards, expand access to incentives, advance policies that enable widespread adoption of low-carbon, highericiency building solutions in our community, and drive significant change in our community.

	ADVOCATE & PARTNER						
ID	Action	Start-up Cost	Operation Cost	Resilience Benefits	GHG Benefits		
3.9	Communicate existing incentives or top-ups to existing and new funding programs such as NRCan's Greener Homes, BC Hydro programs (e.g., MURB program), CleanBC, Province of BC's low income qualified rebate program.	\$	\$	Medium	Medium		
3.10	Partner with Metro Vancouver to develop resources with consistent and complementary messaging to assist homeowners, tenants, stratas, and business owners with low-carbon resilient retrofits.	\$	\$	Medium	Medium		
3.11	Advocate to the Province to support early implementation of Highest Equipment Efficiency Standard (HEES) for both private and public sector buildings and explore opportunities for early adoption.	\$	\$	Medium	Medium		
3.12	Work with local industries to identify local suppliers/installers of high efficiency heat pump systems and renewable systems (e.g., solar).	\$	\$	Medium	Medium		
3.13	Work with regional and provincial bodies and local experts to develop a standardized scope of work description for conversions to heat pump-based systems for the most common building types in Maple Ridge. Explore options to overcome financial barriers to heat pump installations.	\$	\$	Low	Medium		



BOLD MOVE 4

Foster Sustainable and Active Transportation Choices

OUR PLAN FOR CLIMATE ACTION

We're accelerating the shift to cleaner, more connected transportation in Maple Ridge, making it easier for people to walk, cycle, and take transit. By improving local infrastructure, supporting zero-emissions vehicles, and partnering with regional agencies, we're building a healthier, more accessible, and lower-carbon transportation system for everyone. We are maximizing opportunities to expand the proportion of sustainable mode share by providing sustainable transportation options, while helping ensure people and goods can move across the transportation network in the community.

Our Plan for Climate Action

BOLD MOVE 4

Foster Sustainable and Active Transportation Choices

WHY THIS BOLD MOVE IN MAPLE RIDGE?

Transportation is the largest source of GHG emissions in Maple Ridge, making up 53% of total community emissions. Reducing emissions from this sector is essential to meeting our climate goals and it also creates opportunities to improve mobility, health, and access for everyone in the community.

Bold Move 4 provides a climate lens to amplify the transportation enhancements planned under the Maple Ridge Strategic Transportation Plan (2023). By improving transit, active transportation networks, and support for zero-emission vehicles, we can offer people more choices for how they move through the city in a safer and more environmentally friendly way. This Bold Move also supports longterm livability by reducing traffic congestion, improving air quality, and supporting higher-density, more connected neighbourhoods. Together these actions complement the smart growth and complete communities goals within our Official Community Plan.

WHAT ARE WE ALREADY DOING?

We have already made significant progress in advancing sustainable and active transportation through our active implementation of our Strategic Transportation Plan. As such, we are in the **strengthening** stage of this Bold Move and will build on our robust foundation to accelerate the transition toward a lower-carbon, more resilient transportation system. The following key plans and strategies highlight ongoing efforts that support the implementation of this Bold Move:

- Strategic Transportation Plan (2023): Guides long-term transportation investments and policies that reduce emissions and improve access to low-carbon travel options. It includes a robust and tailored set of 55 specific actions to encourage walking, cycling, transit, and new mobility – all of which complement our emission reduction goals. It prioritizes infrastructure in higher-density areas and outlines clear steps to build complete communities, improve transit access, and support electric mobility.
- Official Community Plan (2014): Supports compact, mixed-use development and concentrates growth in the Town Centre and Lougheed Transit Corridor. This smart growth approach promotes walkability, improving access to transit, and reducing the need for car travel.
- Green Infrastructure Management Strategy (2021): Encourages the use of nature-based design in public rights-of-way, including tree planting and green stormwater features that enhance the comfort and safety of walking and cycling routes.
- Lougheed Transit Corridor Area Plan (estimated completion 2026): Focuses on building high-density, transit-oriented neighbourhoods supported by pedestrian- and cyclist-friendly streets, strong land use connections, and high-quality public features.

As we continue implementing the actions outlined below, we will build a cleaner, safer, and more resilient transportation system for the community.

BENEFITS

Potential GHG Emissions Reductions

53% of potential emissions reductions from the following sectors



TRANSPORTATION

(e.g., active transport, public transport, micromobility)

Climate Hazards of Focus





Extreme Heat

Poor Air Quality

Co-Benefits



ENVIRONMENTAL

Improved Air Quality



HEALTH & EQUITY

- Improved Health
- · Improved Livability



ECONOMIC

· Energy and Fuel Savings

OUR CURRENT PROGRESS

STRENGTHENING (Level 3/5)



City of Maple Ridge | Resilient Future 2050

Our Plan for Climate Action

BOLD MOVE 4

Foster Sustainable and Active Transportation Choices

NEW ACTIONS UNDER THIS BOLD MOVE

A series of additional actions have been identified to advance our shift toward cleaner, more accessible, and lower-carbon transportation in Maple Ridge. These initiatives build on existing strategies to expand active transportation, improve transit, and support zero-emissions mobility. The following table highlights how we will **Take Action** to create a more connected, inclusive, and climate-friendly transportation system through this Bold Move.



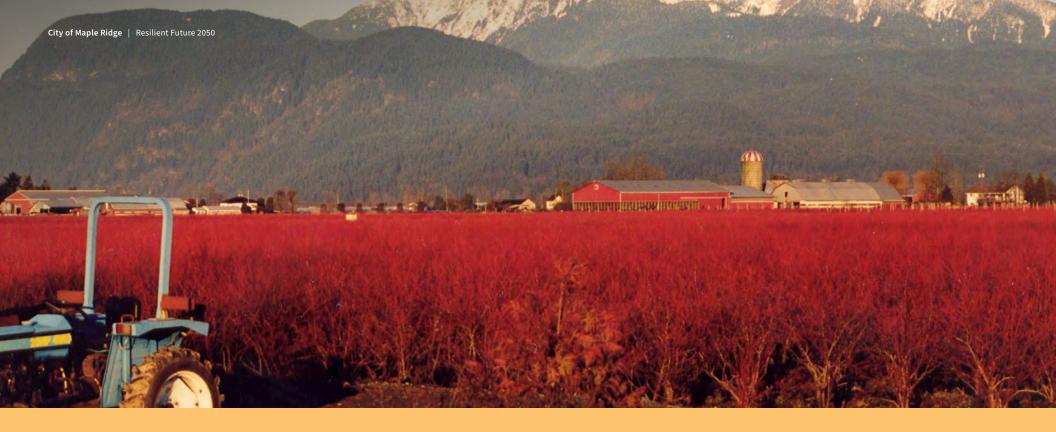


TAKE ACTION					
ID	Action	Start-up Cost	Operation Cost	Resilience Benefits	GHG Benefits
4.1	In accordance with current City planning documents, concentrate growth and density along the Lougheed Transit Corridor and within the Town Centre to create opportunities to walk, cycle, and use transit.	\$\$	\$\$\$	Medium	High
4.2	Ensure prioritization of actions within the Strategic Transportation Plan in capital planning and resource allocation decisions, review and update the transportation plan by 2030, and report on implementation progress as part of the annual Business Planning process.	\$	\$\$\$	Medium	High
4.3	Improve access to and use of E-bikes and E-scooters , potentially through the use bike/scooter sharing programs and improvements to the micro-mobility and cycling network and infrastructure, while maximizing the safety of all users according to the principles of the BC Active Transportation Design Guide.	\$\$\$	\$\$	Low	Medium

In addition, the following list highlights how the City will **Advocate & Partner** at the regional and provincial levels to improve transit access, accelerate transportation electrification, support broader system changes that enable more sustainable travel choices in Maple Ridge, and drive significant change in our community.

ADVOCATE & PARTNER					
ID	Action	Start-up Cost	Operation Cost	Resilience Benefits	GHG Benefits
4.4	Advocate to the Province and TransLink to enhance public transportation use and access (e.g., expanding routes, increasing frequency, improving connection to the Lower Mainland, and improving access to transit pass programs and discounts to reach those in the greatest need).	\$	\$	Medium	Medium
4.5	Advocate for regional and provincial programs, policies, incentives, and requirements related to zero-emissions solutions for medium- and heavy-duty vehicles.	\$	\$	Low	Medium
4.6	Support adoption of lower carbon vehicles and alternative fuels through advocacy for incentives and removing any barriers in policy or legislation (e.g., EV and EV charging incentives, hydrogen).	\$	\$	Low	Medium
4.7	Deliver public education on idling vehicles in partnership with MVRD (e.g., signage in key locations, media) to reduce unnecessary vehicle idling and raise awareness of health and climate impacts.	\$	\$	Low	Low





BOLD MOVE 5

Support a Low-Carbon Resilient Economy & Agriculture

OUR PLAN FOR CLIMATE ACTION

We're working to nurture an economy that's both low-carbon and resilient, supporting green businesses, local farming, and innovation that drives climate solutions. By creating the conditions for clean industry, sustainable agriculture, retention of trees on rural and agricultural land, and smart resource use, we're positioning our community for long-term economic growth and climate leadership.

Our Plan for Climate Action

BOLD MOVE 5

Support a Low-Carbon Resilient Economy & Agriculture

WHY THIS BOLD MOVE IN MAPLE RIDGE?

Climate change presents both risks and opportunities for local economies. As the global transition to a low-carbon future accelerates, cities that take early action to support clean innovation, sustainable agriculture, and climate-resilient infrastructure will be better positioned to thrive.

Bold Move 5 is about ensuring Maple Ridge is not only prepared but also on the leading edge. By supporting businesses and agriculture to reduce emissions, adapt to climate risks, and embrace clean technologies, we can foster a local economy better able to weather changing conditions while also shaping growth in a greener economy.

This Bold Move also positions Maple Ridge as a regional centre for low-carbon innovation and climate-smart agriculture. With the right tools and partnerships in place, we can attract forward-looking businesses, support local food systems, and secure long-term prosperity in a changing climate.

Preserving our agricultural infrastructure including urban, rural interfaces and rural properties is a priority under this Plan. This will be coordinated with work under the Urban Forest Management and Green Infrastructure Management Strategies.

WHAT ARE WE **ALREADY DOING?**

We are laying the foundation for a low-carbon, resilient economy and local agriculture. We are in the emerging stage of this Bold Move and starting to build momentum through early planning and actions that support green business development. With a growing focus on clean innovation, local food systems, and proactive action, we are creating the conditions to become a hub for climate-leading industries and agriculture. The following plans and initiatives highlight what we are already doing to support the implementation of this Bold Move:

- Investment Attraction Strategy (2025): Sustainability and climate action are increasingly recognized as key factors in supporting investment attraction. It focuses efforts to stimulate investment in Maple Ridge by industry and businesses that contribute to clean and sustainable development. It aims to attract targeted sectors that could help expand the city's sustainable industry base while supporting long term economic resilience such as higher employment and a diversified tax base.
- Economic Development Strategy (2021): Guides our efforts to attract and retain forward-looking businesses and investments, create new jobs, and support innovation through partnerships with educational institutions, local entrepreneurs, and industry groups.
- Agricultural Plan (2009): Outlines how we protect and support agriculture in Maple Ridge, including enhancing the active farm use of agricultural land, promoting alternative farming approaches, and integrating agriculture into our broader economic development priorities.
- **Innovation Challenge:** Showcases and supports local businesses and entrepreneurs who are driving innovation in areas such as technology, agriculture, sustainability, community building, and economic development (including those leading on climate action).

As we continue to implement the actions outlined below, we will strengthen our leadership in building a thriving, low-carbon economy and a more resilient future for Maple Ridge.

BENEFITS

Potential GHG Emissions Reductions

12% of potential emissions reductions from the following sectors







Buildings

Transport

Climate Hazards of Focus







Drought

Co-Benefits



ENVIRONMENTAL

- Improved Air Quality
- Enhanced Natural Areas
- More Trees and Green Space



HEALTH & EQUITY

- Improved Health
- Social Equity
- Improved Livability



ECONOMIC

- · Energy and Fuel Savings
- Resilient Energy
- New Jobs

OUR CURRENT PROGRESS

EMERGING

(Level 2/5)



City of Maple Ridge | Resilient Future 2050

Our Plan for Climate Action

BOLD MOVE 5

Support a Low-Carbon Resilient Economy & Agriculture

NEW ACTIONS UNDER THIS BOLD MOVE

A series of additional actions have been identified to advance more climate-resilient and low-carbon businesses in Maple Ridge. These initiatives complement our ongoing efforts to support sustainable agriculture, reduce business-related emissions, and create the conditions for clean, future-ready industries to thrive. The following table highlights how we will **Take Action** to build a strong foundation for meaningful progress on this Bold Move.

1 EXISTING COMPLEMENTING ACTIONS



TAKE ACTION					
ID	Action	Start-up Cost	Operation Cost	Resilience Benefits	GHG Benefits
5.1	Incorporate low-carbon resilience considerations into future updates to the Agricultural Plan to help local farmers and other interest holders anticipate, plan for, and increase resilience to climate change in the local food system.	\$	\$\$	High	High
5.2	Undertake economic development initiatives to create the conditions to attract green businesses and that support businesses to reduce their environmental footprint and be innovative (e.g., commercial EV charging hub). Update economic development strategies and initiatives to attract and retain businesses that create opportunities for a zero-carbon resilient future in Maple Ridge.	\$\$	\$	Low	Low

City of Maple Ridge | Resilient Future 2050

Our Plan for Climate Action

BOLD MOVE 5

Support a Low-Carbon Resilient Economy & Agriculture

In addition, the following list highlights how the City will **Advocate & Partner** at the regional and provincial levels to support low-carbon industries, create opportunities that benefit both the local economy and our community's long-term resilience, and drive significant change in our community.

ADVOCATE & PARTNER					
ID	Action		Operation Cost	Resilience Benefits	GHG Benefits
5.3	Promote existing green business incentive and certification programs for low-carbon resilient solutions, including but not limited to electrification, renewable energy, biofuels, or green infrastructure in the commercial, industrial, and agriculture sector.	\$	\$	Medium	Medium
5.4	Establish a working group or workshop series to share knowledge and best practices for addressing climate risks and reducing emissions or embodied carbon .	\$	\$	Medium	Medium
5.5	Investigate options to build awareness and incent agricultural and rural property owners in Maple Ridge to maintain tree canopy and density through carbon sequestration partnerships or other incentive and conservation mechanisms. This will be coordinated with action 1.1.5 in the Urban Forest Management Strategy.	\$	\$	Low	Low
5.6	Advocate to the Province to tie water licences and subsidies to water-wise agricultural practices (e.g., use of drip irrigation, on-site reservoirs).	\$	\$	Medium	Medium
5.7	Collaborate with neighbouring communities to investigate the feasibility of a farm incubator program to support new farmers and active use of available agricultural lands.	\$\$	\$\$	Medium	Medium
5.8	Collaborate with waste haulers to increase access to organics and recycling disposal options for commercial, institutional, and industrial properties through mandates on property owners, incentives for property owners, improved instructions for waste pick-up, or other measures.	\$	\$	Low	Low

Successfully implementing the Plan will require dedication across City departments, collaboration across the region, and a clear roadmap. This section outlines the principles, strategies, and actions we will take to ensure the Plan's goals are achieved in alignment with our community values.

Principles for Climate Action Implementation

To guide effective implementation of the Plan, we developed a set of principles to ensure that the goals we set to develop this Plan can continue to guide its successful implementation over time (see Figure 12).

- Data-Informed Decision-Making: All decisions will be based on the best available data to
 ensure that we focus on the most urgent, impactful, and cost-effective actions.
- Amplifying Impact Through Partnerships: Collaboration is key to success. We will work
 with local First Nations, local organizations, businesses, the agricultural community,
 utilities, and regional actors to maximize our collective impact and resources.

- **Empowering Community Members to Improve Household Resilience:** We will offer programs that provide resources, knowledge, and support to residents to help them reduce emissions and build climate resilience in their everyday lives, while ensuring ongoing communication and engagement with the community.
- **Equity-Centred Approach:** We will prioritize equity and inclusivity in all actions, ensuring that vulnerable or disproportionately impacted people in our community receive the support they need to adapt to climate impacts.
- Mainstreaming Climate Action Throughout the Organization: Climate action will not be siloed but integrated across our City departments, policies, and decision-making processes.
 Every department will play a role in achieving our climate goals and implementing our Bold Moves.
- Building On and Beyond Existing Programs and Initiatives: We will leverage our existing strengths and capacity to build upon our current programs, plans, policies, and initiatives, while also introducing new actions to accelerate progress.

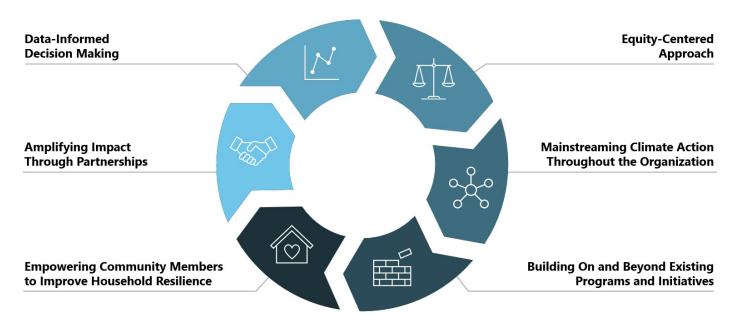


Figure 12: Climate Action Plan Implementation Principles

Financing Our Plan

Financing our Plan will involve a blend of City investment, strategic financing, and designing actions to maximize cost efficiencies and opportunities for partnership. Key strategies that underpin our approach include:

- Maximize Cost Efficiency through:
 - Careful planning to make efficient use of staff time and budgets and complement existing initiatives.
 - Integrating climate actions into existing initiatives such as asset management planning, capital projects, and procurement.
 - Designing initiatives to enhance co-benefits to address cross-cutting community objectives.
 - Timing project implementation to leverage available grant funding and partnership initiatives.
 - Phasing projects to focus on our most essential needs first and enable project efficiencies through lessons learned.
- Creating a Funding Strategy to Guide City Investment: A comprehensive strategy will be
 developed to identify and secure the financial resources needed for the most critical Plan
 actions. This will include identifying long-term funding streams and emergency reserve funding.
- Accessing Diverse Funding Sources: We will design projects to draw on a range of funding
 options including grants, growth funding, municipal fees, and taxes.

Mainstreaming & Working Together

Achieving climate action goals requires coordinated effort across all levels of government and the community. Our collaborative approach include:

- Climate Action Policy: A formal Climate Action Policy will be developed to provide clear direction for consistent and effective implementation. The policy will define roles and responsibilities for staff.
- Educational Strategies: Public and staff education is essential to building awareness and engagement around climate issues. We will help increase awareness amongst residents and staff on relevant climate risks, the importance of climate action, and how they can contribute.
- Collaboration and Regional Partnerships Climate action is a shared responsibility. We
 will work closely with regional, provincial, and federal governments, as well as other
 municipalities, local First Nations, local businesses, non-profits, and academic institutions,
 to ensure aligned efforts. We will leverage available resources and expertise, and seek out
 partnerships to support climate action initiatives, with organizations that have established
 trust and relationships with vulnerable communities playing a key role in ensuring support
 reaches those who need it most.

BOX 6: PUTTING CLIMATE INVESTMENT INTO PERSPECTIVE

The actions outlined in our Plan represent new commitments and initiatives that will have a cost to implement. However, these up-front costs are far lower than the costs anticipated if we do nothing to protect our assets, enhance awareness and preparedness, and do our part to reduce emissions and slow the pace of climate change.

While there is no way of knowing definitively how much the current trajectory will truly cost members of our community, numerous studies in Canada and globally provide examples of the types of damages and costs we could expect if we don't act now. Recent data from the Insurance Bureau of Canada shows that average annual insurable losses due to natural hazards in Canada have increased year over year since 2001, reaching over \$8 billion in

2024; 12 times the annual average between 2001 and 2010. Studies by the World Resources Institute's Global Commission on Adaptation (2020) and Federation of Municipalities (2020) suggest that every \$1 spent on adaptation will result in \$4 to \$6 saved from avoided losses.

While adaptation action is a critical "harm reduction" approach to reduce climate change-related damages and losses, investing in emissions reduction is essential to reduce and reverse the pace of climate change, thereby proactively addressing more severe conditions and costs in our future.

Measuring Success

We have established a system for measuring and reporting on Plan implementation progress and success. We will track progress on our Plan in the following three ways:

- Track the **status of actions** using our <u>Climate and Environmental Priority: Climate</u>
 <u>Leadership and Environmental Stewardship Priority Dashboard</u>, which is currently being used to track actions in our Strategic Plan. We will use this platform to track progress on our Climate Action Plan every quarter, in alignment with the reporting cycle used for our Strategic Plan.
- Integrate metrics into our **Key Performance Indicator (KPI) Framework** to track how Plan implementation reflects our Principals for Climate Action.
- 3 Documenting the **success** of our Plan in terms of the outcomes and impacts its implementation is having to achieving our climate action goals.

Examples of what success could look like for achieving each of our Bold Moves is shown in Table 3, below. These provide a starting point for defining success indicators that we will track and report over time to better understand the impact our Plan is having with and for our community.

In addition to tracking progress and outcomes from Plan implementation, the Plan will be updated regularly to reflect new climate data, changing community needs, and advancements in technology. These updates will take place on a five-year cycle, ideally aligned with the release of the latest IPCC reports and data, to ensure the Plan remains relevant and effective. The latest version of the IPCC (the Sixth Assessment Report) was released between 2022 – 2023, with the next version expected in 2028 – 2029. In addition to these Plan updates, we will release interim progress reports in 2027, 2030, 2032, and 2035.

A communication strategy will also be implemented to keep the public informed about our progress, celebrate successes, and highlight the importance of ongoing community involvement in climate action. This will include regular updates, educational materials, and engagement opportunities. The newly established Climate and Environmental Advisory Committee will play a key role in supporting these efforts by providing ongoing input and helping to review and report on progress.



Table 3: Proposed Targets for Tracking Success of our Plan

BOLD MOVE		TARGET				
	Address Critical Climate Safety Risks with and for the Community	50% of residential and commercial properties have a park or designated cooling centre within 1 km by 2030, 75% by 2050				
		Fog test the entire sanitary sewer system on a 15-year cycle				
		Limit site impervious on residential parcels to 60% or less				
		25% of new residential development within the 1 in 200-year river or coastal floodplain by 2030, 5% by 2050				
		30% of Wildland Urban Interface within Maple Ridge boundary has a plan for fuel load management and response, 60% by 2050				
		50% of residents and businesses report feeling prepared for heat, smoke, flood and wildfire events by 2030, 90% by 2050				
	Enhance City Infrastructure, Natural Assets, and Services for Climate Readiness	5% of infrastructure projects incorporate nature-based solutions by 2030				
		By 2030, less than 20 hours cumulative downtime of critical City services due to a climate-related outage or event, and less than 10 hours by 2050				
2		40% of municipal fleet are ZEVs by 2030, 80% by 2050				
		Protect 50% of the region for nature (aligns with Urban Forest Management Strategy)				
		Achieve 40% tree canopy cover in the urban area by 2050 (aligns with Urban Forest Management Strategy)				
		Target 80% of residents within the urban area to be within 500m of an active park space by 2050				
	Encourage Zero Carbon and High Efficiency Buildings	Reduce GHG emissions from municipal buildings from 2010 baseline by 440 tCO2e by 2030.				
(3)		15% of all municipal buildings or infrastructure systems have incorporated a climate retrofit by 2030, 50% by 2050				
		35% of new buildings that are designated zero emissions by 2030, 75% by 2050				
4	Foster Sustainable and Active Transportation Choices	Connect high density neighbourhoods to the downtown core with AAA cycling corridors by 2035.				
		25% sustainable mode share (transit, walking, cycling) for all trips by 2030, 50% by 2050				
	Support a Low-Carbon	Conduct at least one workshop by 2027 with local businesses to share knowledge and best practices for supporting the green economy				
9	Resilient Economy & Agriculture	Host at least two workshops by 2027 with City partners to identify existing green initiatives in Maple Ridge				

Conclusion

The implementation of this Plan marks a critical step forward in our commitment to building a resilient, low-carbon future for Maple Ridge. Climate change is already impacting our community through more frequent and severe climate events. This Plan outlines our strategy to advance both climate resilience – to protect our people, assets, natural environments, and services – and emissions reduction – to help slow the pace of climate change and meet our long-term targets. It provides a bold, actionable path forward that is grounded in analysis and community input.

The Plan identifies the most important opportunities to reduce emissions and strengthen resilience: our Bold Moves. Each Bold Move highlights how we will **Take Action** directly through municipal policy, infrastructure, and services, and where we will **Advocate & Partner** with our community, regional partners, and interest holders to support broader systems change. These efforts build on our existing work and help position Maple Ridge as a regional leader in climate action.

In parallel to the comprehensive detail included in this Plan, Council's existing Strategic Plan and core operational activities also deliver foundational activities that support climate action. Part of the implementation of the Plan includes continuing to iterate the Bold Moves and targets as new information comes to light and as conditions change. The Plan will be implemented as a living document enabling refinement and expansion of targets and actions to be considered during implementation. Ensuring accountability across City departments for the actions in this Plan will be assured by integrating the Bold Moves and Actions into the City's performance measurement framework, which is reported on a quarterly basis to Council and the community. Actions are tasked across all City departments and will be monitored and reported regularly to demonstrate transparency and accountability of implementation of the Plan.

This Plan will guide how we design neighbourhoods, invest in infrastructure, and deliver services; embedding a climate lens into decision-making across all departments. Through collaboration, innovation, and leadership we are building a stronger, healthier, and more climate-ready Maple Ridge to meet the climate challenges of today and tomorrow.

