Politecnico di Torino

Master of Science in Architecture Construction City

Land use Management and Governance in Metro Vancouver

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Academic year: 2024 / 2025

Acknowledgment

I would like to sincerely thank my supervisor, Professor Mario Artuso and Angioletta Voghera, for their guidance, support, and invaluable feedback throughout this research. Their expertise and patience provided me with both academic and personal support during this journey. I am also grateful to the faculty at Politecnico di Torino for providing essential resources and data for the case studies.

Special thanks to my colleagues and friends for their encouragement and constructive discussions, and to my family for their unwavering support and patience. This thesis would not have been possible without the guidance and support of all these individuals.

Abstract

This thesis investigates the multi-level governance of land use planning in Canada, with a particular focus on the Metro Vancouver region and a detailed case study of the City of Burnaby. Land use planning has evolved from early regulatory approaches aimed at public health and urban order to complex frameworks addressing sustainability, social equity, climate change, and economic development. Canada presents a unique context for this study due to its decentralized governance, fast-growing urban populations, diverse landscapes, and progressive regional planning strategies, including Metro 2050 and Climate 2050.

The research examines how federal, provincial, regional, and municipal authorities interact to achieve coordinated planning objectives, with particular attention to sustainability and climate resilience. A qualitative, case study-based methodology is employed, combining document analysis of regional growth strategies, municipal plans, zoning bylaws, and climate action frameworks with comparative assessments between Metro Vancouver and Burnaby. Visual tools such as maps, diagrams, and tables support the analysis of spatial organization, planning instruments, and governance structures.

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INTRODUCTION

Introduction

Background and Importance of the topic

Rapid urbanization, industrialization and public health crises have caused the emergence of land use planning in the 19th and early 20th century. Unregulated cities in Europe and North America with unsafe working environments and environmental degradation was the reason for early planning efforts with focus on zoning ordinances to control growth and public health. Over time urban planning has expanded beyond the regulation for bigger goals, involving a broader range of disciplines and stakeholders which has made it an important topic to study.

Nowadays, land use planning functions as a key mechanism for shaping spatial organization, improving quality of life, and guiding urban growth but meanwhile it has become related to a broader range of disciplines such as environmental science, economics, sociology, and others, which allows planning to move beyond traditional zoning practices.

To address contemporary challenges such as climate change, social equity, affordable housing, and economic competitiveness, a multidisciplinary and collaborative approach is needed, involving the integration of diverse fields, effective teamwork, professional coordination, and streamlined workflows among multiple stakeholders, including planners, architects, policymakers, and engineers, as well as the use of a variety of digital tools.

Why Canada and Metro Vancouver?

On a personal level, immigrating from Iran to Italy, and Italy to Canada, Metro Vancouver, and observing the differences between these countries' land use and management compared to European countries and middle eastern, was the first reason I decided to delve deeper in Canada's urban land management to understand how land use planning has shaped the place I am going to live work and interact in.

Meanwhile there were other reasons that make Canada and metro Vancouver a unique context for studying land use planning because of its fast-growing urban populations due to immigration and diverse landscapes and climate changes which is a big challenge to balance economic development with environmental protection. Canadian cities face some global challenges as well, such as urban sprawl, housing affordability, transportation demand and climate change that needs a strategic and forward-looking planning for a sustainable growth.

Metro Vancouver is one of Canada's fastest-growing metropolitan regions, with complex urban and natural systems within a limited geographical area that has made it a compelling case study. Moreover, the region has adopted advanced planning frameworks to address climate change, which represents one of the most critical global challenges for contemporary land use planning which makes it a particularly valuable case for analysis. Metro Vancouver has a long-term plan, the Metro 2050 regional growth strategy and Climate 2050 that studies how the region is planning to address this and other contemporary challengers through a comprehensive approach.

Motivation and Research Gap

Land use planning has been thoroughly explored over time at individual governance levels, such as national, regional or municipal, but there is limited literature exploring how these different government sectors interact and operate together to reach the shared planning objectives specially to develop a sustainable land use planning. In my opinion, little attention has been given to how these multi-level governance functions toward a common vision, such as the Metro 2050 strategy. Moreover, studying whether these sectors are functioning with the same mindset and along the same path to support each other is necessary to determine if the land use planning goals of a city are likely to be achieved. This raises the main question of this thesis: How does land use planning operate in Canada, specifically in Metro Vancouver, across different governance sectors?

Presentation of the thesis question

This thesis is structured around three central research questions that guide the analysis of land use governance in Canada. The first question investigates how land use governance operates across the multiple levels of government in Canada, with particular attention to the roles, tools, and authority of different sectors. This includes identifying which level of government holds the greatest influence over planning decisions and how responsibilities are coordinated across federal, provincial, and municipal jurisdictions.

The second question focuses specifically on Metro Vancouver as a regional case study. It examines the region's land use planning framework, highlighting the strategies and mechanisms it employs to address global challenges, particularly climate change adaptation and mitigation. This analysis emphasizes how regional planning frameworks integrate sustainability goals into land use policies, and how they balance environmental, economic, and social priorities.

The third question shifts to the municipal scale, using Burnaby as an illustrative example. This component explores how governance, planning tools, and policy frameworks operate at the city level, and assesses how municipal strategies align with regional objectives. Special attention is given to the mechanisms through which Burnaby implements climate change adaptation, and how these measures reflect or diverge from the broader regional planning goals established by Metro Vancouver.

Thesis Goal

The final goal of this thesis is to examine the overall alignment and interaction between national, regional, and municipal approaches to land use governance in Canada. Specifically, it seeks to understand how governance structures, planning tools, and sustainability strategies at each level of government work together, or sometimes operate in tension, to address complex, long-term challenges such as climate change. By analyzing the connections between federal policies, regional strategies like Metro Vancouver's Metro 2050, and local municipal planning in Burnaby, the study evaluates the coherence, consistency, and effectiveness of Canada's multi-level land use governance system.

Methodology

This thesis adopts a qualitative, case study-based methodology to understand the multi-level structure of land use governance in Canada, with a focus on the Metro Vancouver region and a deeper study of the City of Burnaby. A comparative approach was also applied, examining both case studies to identify similarities and differences in planning frameworks, instruments, and outcomes. Various documents were used to support and illustrate the research, providing clear explanations and visualizations. These include land use maps, Community Plan Areas (CPA), supplementary maps illustrating corridors, nodes, transportation networks, and other features, as well as diagrams and tables presenting relevant statistics and projections. All materials are cited from authoritative sources, such as Metro 2050, the Regional Growth Strategy of Metro Vancouver, and official municipal, regional, and federal websites.

Structure of the chapters

This The structure of the thesis is organized to move progressively from national and provincial perspectives to regional governance and finally municipal and includes 3 main chapters.

Chapter 1 examines the historical and institutional foundations of Canadian land use planning. It traces the federal and provincial roles in shaping urban planning, with emphasis on Canada's decentralized governance framework and the constitutional limits of municipal authority.
Chapter 2 analyses the regional scale through a study of Metro Vancouver. It explores the governance structure of the regional district, the development and implementation of regional growth strategies, and the integration of sustainability and climate action into metropolitan land use planning.

Chapter 3 focuses on the City of Burnaby at the municipal scale. It reviews Burnaby's planning framework, including its Official Community Plan (OCP), zoning, development permit areas, and community plan areas. It also examines Burnaby's Climate Action Framework and the Climate Change and Natural Hazards Mitigation Guide, showing how the City operationalizes both regional strategies and climate policies at the local level.

At the conclusion of each chapter, a dedicated section is included to present ideas and suggestions for further research. This section highlights potential areas where additional investigation could expand understanding, address remaining questions, or explore related topics that were beyond the scope of the current study. By doing so, it provides guidance for future scholars and practitioners who wish to build on the findings and analyses presented in the chapter.

In preparing this thesis, artificial intelligence (AI) tools were utilized to support the writing process. AI was employed for grammar checking, paraphrasing certain terms, and refining the overall clarity and style of the text. Additionally, specific information presented in Chapters 1.2 and 1.3 was extracted and synthesized with the assistance of AI, ensuring that the content is both accurate and clearly articulated. All AI-generated suggestions were carefully reviewed and integrated to maintain academic rigor and consistency with the sources cited.

CHAPTER 1:

LAND USE PLANNING AND GOVERNANCE IN CANADA

1.1. Historical Evolution of Land Use Planning in Canada

1.2. Multilevel Governance and Institutional Framework

1.3. Canadian urban planning tools and techniques

1.1 Canada historical Evolution of Urban and Land Use Planning

1.1.1 Pre-Contact and Colonial Planning (Pre-1800s)

The evolution of land use planning in Canada reflects a complex interplay of Indigenous knowledge systems, colonial influences, urban challenges, and modern planning ideologies (Grant, Filion, & Baxter, 2020). From early settlement patterns to the emergence of a professional planning discipline, Canada's planning history demonstrates both adaptation and innovation in response to social, environmental, and economic pressures. Canada's earliest land use planning originated with Indigenous communities like the Huron-Wendat and the Salish, who organized their settlements according to environmental conditions, social needs, and sustainable resource use. Their fortified villages and seasonal encampments demonstrated functional planning practices that prioritized communal living and ecological balance. However, with European colonization, Indigenous planning traditions were largely disregarded. French and British settlers introduced urban planning models rooted in military, administrative, and agricultural concerns, drawing from classical and Renaissance influences (Grant, Filion, & Baxter, 2020) **(Figure 1-1).**

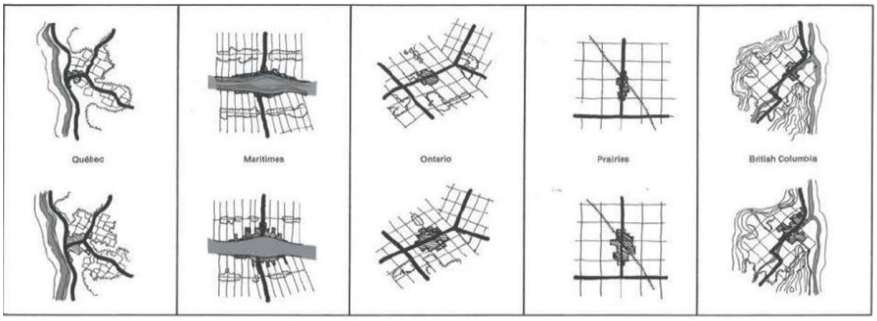

Figure 1-1. Patterns of land development across Canada (Grant, Filion, & Baxter, 2020).

Early French settlements such as Québec (1608), Trois-Rivières (1634), and Montréal (1642) showcased organized layouts, often employing grid systems and central squares. According to Grant, Filion, and Baxter (2020), Jean Talon's 1667 village plans as shown in **figure 1-2**, including Charlesbourg, emphasized radial layouts around communal services. Meanwhile, military engineers like Jean-François de Verville designed fortified towns such as Louisburg **(Figure 1-3)** using principles from Vauban's defensive urbanism. In Atlantic Canada, British settlements followed more organic development at first evident in St. John later adopted more formal gridiron plans. Regarding Nova Scotia, Grant, Filion, and Baxter (2020) note that Colonel des Barres' 1785 plan for Sydney diverged with circular plazas and axial streets. In Upper Canada (Ontario), post-Revolutionary War settlements were guided by Lord Dorchester's township grid plans **(Figure 1-4)**. However, implementation varied, as seen in Kingston's

adapted layout or Guelph's radial plan as shown in figure 1. inspired by Washington, D.C. (Grant, Filion, & Baxter, 2020) **(Figure 1-5)**.

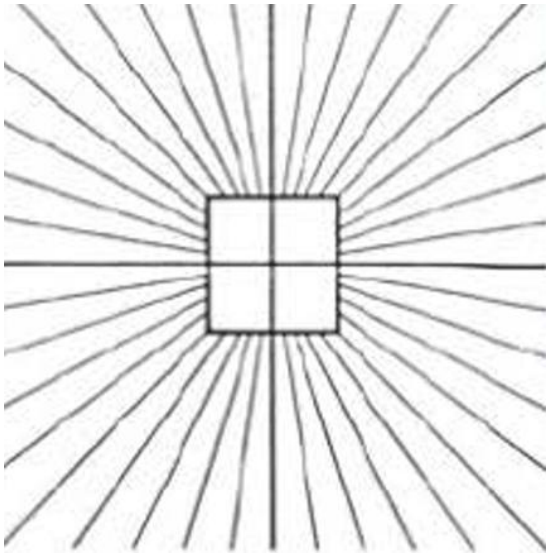

Figure 1-2. Talon designed this plan for inland villages, and each one was about 2.5 km on the side, and the central square was about 275 m on the side. A main road was projected to bisect the area in each direction to connect with other towns. (Grant, Filion, & Baxter, 2020).

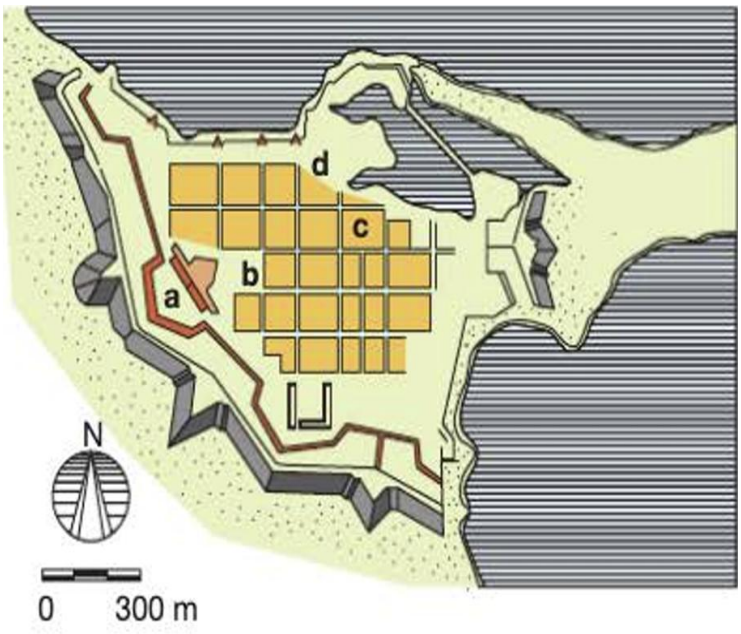

Figure 1-3. Louisburg, 1720, Renaissance gridiron street pattern. a: main bastion, b: square, c: hospital, d: market (Grant, Filion, & Baxter, 2020).

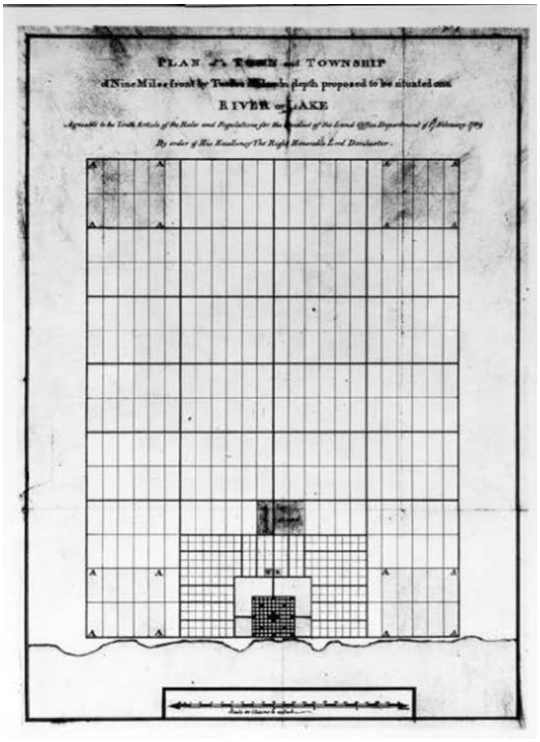

Figure 1-4. Lord Dorchester's model Township plan, 1789, a town near a river or lake incorporated Canada's first town planning regulation. The ring of empty space around the town was to be a military reserve (Grant, Filion, & Baxter, 2020).

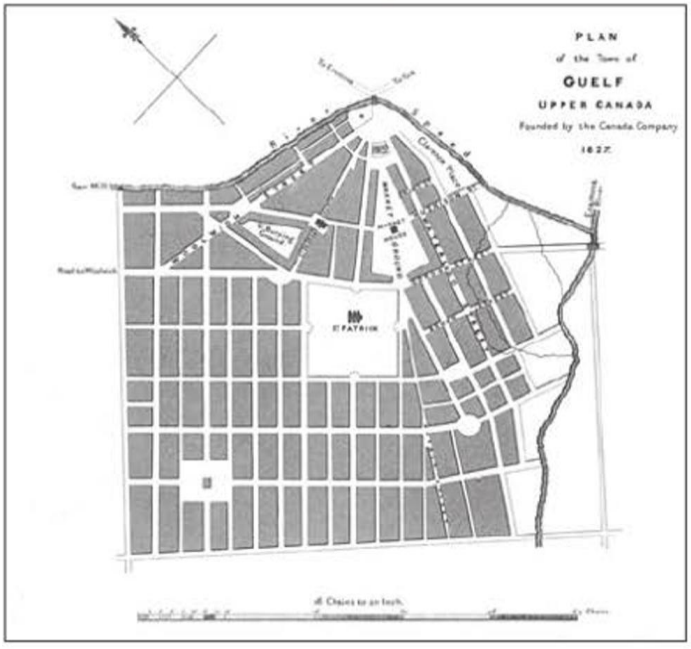

Figure 1-5. A town planned by John Galt to encourage settlement in western Ontario. Guelph shows the influence of the radial street pattern used in the plan for Washington DC. Note the central church and wedged-shaped market. (Grant, Filion, & Baxter, 2020).

1.1.2 Industrialization and Early Reform (1800s–1910s)

Rapid industrialization in the 19th century significantly influenced Canadian cities. Based on Grant, Filion, and Baxter (2020), between 1815 and 1865, the population grew sevenfold, intensifying pressures on infrastructure and public health. Early cities lacked formal planning, leading to poor sanitation, disease outbreaks (e.g., cholera in 1832), and frequent fires. These challenges highlighted the need for organized urban governance and public health infrastructure. As stated by Grant, Filion, and Baxter (2020), fire and sanitation crises catalyzed reform efforts, while the rise of slums in cities like Montréal and Toronto underscored the link between poor housing and social unrest. This era also saw early housing reform movements, including the Toronto Tenement Building Association (1884) (Grant, Filion, & Baxter, 2020).

1.1.3 Institutionalization of Planning (1910s–1945)

By the 1910s, planning had matured into a recognized profession in Canada. According to Grant, Filion, and Baxter (2020), planners advocated comprehensive land use regulation, infrastructure planning, and public welfare. Movements like the City Beautiful and Garden city **(Figure 1-6)** promoted monumental civic spaces and aesthetic harmony, though many proposals remained unbuilt. Grant, Filion, and Baxter (2020) also point out that Thomas Mawson and Harland Bartholomew were notable figures in shaping Canadian planning during this period. After World War I, planning became increasingly functionalist, inspired by Modernist principles of density, efficiency, and rational design. The Neighborhood Unit model, proposed by Clarence Perry, gained influence in suburban development, focusing on pedestrian safety, community cohesion, and proximity to schools and parks. Environmental awareness in planning grew during the early 20th century. The 1909 Commission for the Conservation of Natural Resources emphasized sustainable management of Canada's land, forests, and water (Grant, Filion, & Baxter, 2020). Town planning acts and conferences began integrating conservation with urban design. Planning also aligned with public health reforms, particularly in improving housing, sanitation, and water systems. The "City Scientific" approach, exemplified in Vancouver's 1929 comprehensive plan, relied on data-driven analysis of population and infrastructure needs (Grant, Filion, & Baxter, 2020) **(Figure 1-7)**.

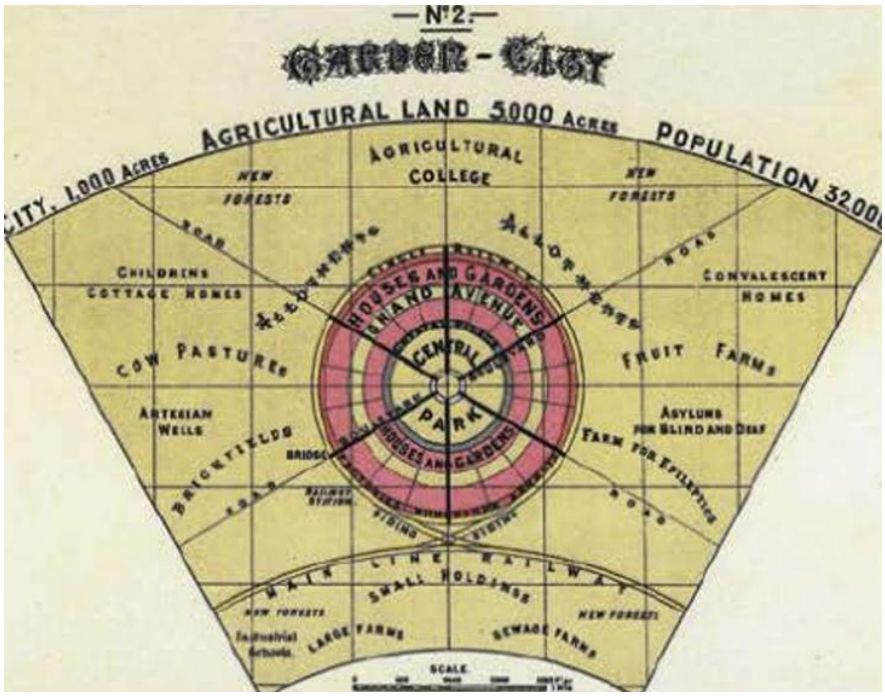

Figure 1-6. Garden city diagram - Ebenezer Howard's diagram - A small constellation of these satellite cities was to be established at a distance from the central city, separated by a green belt. Each house would have its own garden. (Grant, Filion, & Baxter, 2020).

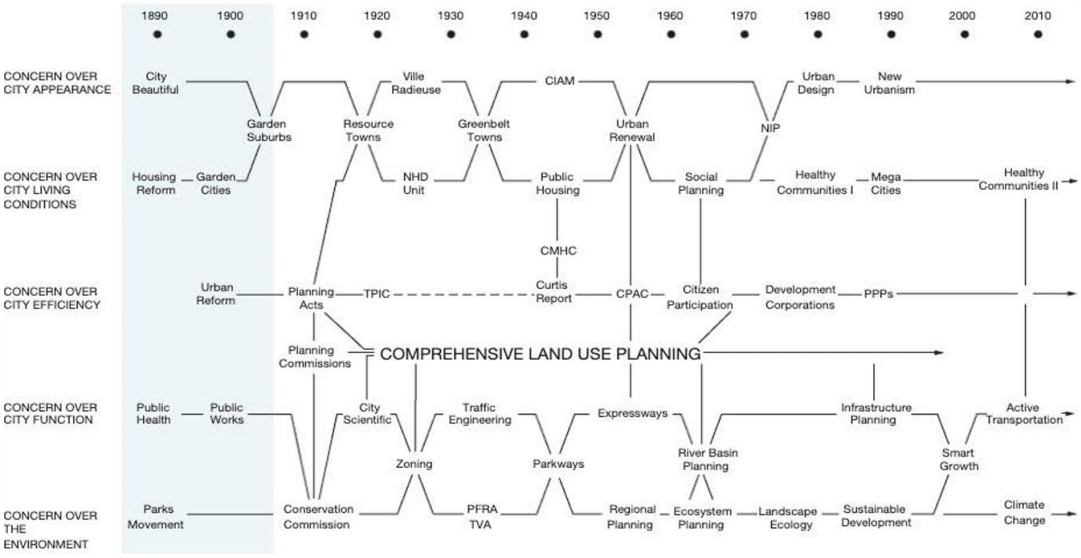

Figure 1-7. The diagram illustrates modern community planning based on five basic concerns in the final decades of the 19th century. Each of these was initially articulated around broad social movements such as beautiful city, garden cities (Grant, Filion, & Baxter, 2020).

1.1.4 Postwar Expansion and Suburbanization (1945–1970s)

Following World War II, Canada experienced rapid demographic and spatial transformation, spurred by the baby boom, increased immigration, and economic growth. These trends created unprecedented demand for housing, infrastructure, and social services, fundamentally reshaping land use planning. As highlighted by Grant, Filion, and Baxter (2020), planners responded with large-scale suburban developments rooted in automobile-centric design, facilitated by federal initiatives such as Wartime Housing Ltd. and the Canada Mortgage and Housing Corporation (CMHC). Suburbs, characterized by low-density, single-use zoning, became the dominant urban form, enabling widespread homeownership but also contributing to sprawl, congestion, and environmental degradation **(Figure 1-8)**. Federal housing policy played a central role in shaping postwar urban form. According to Grant, Filion, and Baxter (2020), mortgage insurance programs and housing subsidies encouraged suburban growth, while public housing initiatives addressed affordability gaps. Starting with Regent Park in 1947, over 250,000 public housing units and an equal number of non-profit and co-operative units were built by the late 20th century, although these projects often faced social stigmatization and spatial segregation.

Figure 1-8. Longueuil, Quebec, Impact of expressways on the metropolitan landscape (Grant, Filion, & Baxter, 2020).

1.1.4 Urban Renewal and Critiques (1970s–1990s)

By the 1970s, critiques of top-down urban renewal, especially its displacement effects, led to a shift toward neighborhood-scale planning and mixed-income, community-based development, exemplified by Toronto's St. Lawrence Neighborhood. At the same time, Grant, Filion, and Baxter (2020) explain that declining federal investment gave rise to public-private partnerships, as seen in projects like Granville Island and Toronto's Harbourfront, marking a market-oriented turn in urban redevelopment.

1.1.5 Sustainable and Inclusive Urbanism (1990s–Today)

From the 1990s onward, land use planning increasingly emphasized densification, sustainability, and social inclusion. Detached housing declined, replaced by multi-unit forms such as townhouses and condominiums. As argued by Grant, Filion, and Baxter (2020), policies focused on infill development, brownfield redevelopment, and Smart Growth principles aimed to limit sprawl and enhance transit access. Revitalization of aging modernist housing estates, such as Regent Park's redevelopment into a mixed-income community, reflected an evolving commitment to inclusive and resilient urbanism. Today, Canadian planning integrates public health, climate resilience, and citizen participation, while grappling with affordability, displacement, and equity (Grant, Filion, & Baxter, 2020).

1.1.6 Climate, Health, and Regional Innovation (2000s–Today)

By the late 20th century, Canadian land planning began to evolve beyond traditional infrastructure and zoning concerns to address public health, environmental sustainability, and social equity. This transformation was driven by new global discourses, local activism, and a growing recognition of planning's role in shaping broader determinants of well-being (Grant, Filion, & Baxter, 2020). The Healthy Communities movement, inspired by the World Health Organization and adopted by the Canadian Institute of Planners (CIP) and allied organizations, marked a shift from top-down, medicalized responses to localized, preventative health strategies. Grant, Filion, and Baxter (2020) emphasize that this approach highlighted walkability, cycling infrastructure, active transportation, green space, and environmental cleanup. Urban planners collaborated closely with public health professionals to redesign neighborhoods in ways that promoted physical activity, reduced car dependency, and addressed chronic diseases linked to urban form.

Environmental consciousness entered mainstream Canadian planning in the 1970s, influenced by seminal works like *Silent Spring* and *Design with Nature*. Ian McHarg's overlay mapping laid the foundation for Geographic Information Systems (GIS), helping planners identify ecologically sensitive areas. This led to the rise of Environmental Impact Assessments (EIAs) and specialized commissions such as the Niagara Escarpment and B.C. Agricultural Land Commissions (Grant, Filion, & Baxter, 2020). Urban and regional plans increasingly prioritized green infrastructure, ecological corridors, and stormwater management, signaling a more systemic integration of landscape ecology into urban growth strategies. Deindustrialization left Canadian cities with significant contaminated land. Brownfield redevelopment initiatives in Toronto's Portlands, Victoria's Dockside Green, and Ottawa's LeBreton Flats sought to rehabilitate these sites using sustainable urban design principles (Grant, Filion, & Baxter, 2020).

The emergence of landscape urbanism reframed infrastructure and ecology as central elements of urban form, seen in projects like Downsview Park and the Don River mouth re-naturalization. These efforts blended flood control, public space, and biodiversity into large-scale regeneration plans (Grant, Filion, & Baxter, 2020). Infrastructure development facilitated regional governance reforms, enabling metropolitan authorities to coordinate large-scale projects and service delivery. As explained by Grant, Filion, and Baxter (2020), cities transitioned from car-centric planning to transit-oriented development (TOD), as seen in Toronto's Stop Spadina movement and Vancouver's suburban TOD initiatives. By the 1990s, Smart Growth became the dominant planning framework, integrating economic, environmental, and social goals. Case studies in cities like Prince George illustrated how municipal strategies could advance climate resilience at the local scale (Grant, Filion, & Baxter, 2020).

The shift from technocratic to participatory planning in the 1970s–80s introduced public hearings, charrettes, and citizen advocacy into land use processes. Activist victories, such as stopping urban highways and preserving historic neighborhoods, reshaped how plans were made and justified. Equity concerns, including Indigenous rights, housing access, and the distribution of environmental risks, became integral to Canadian planning norms. Ultimately, Grant, Filion, and Baxter (2020) argue that these shifts, informed by the Charter of Rights and Freedoms and broader social justice movements, continue to define the Canadian planning landscape.

1.2 Governance and Framework in Canadian Urban planning

1.2.1 Multilevel Governance and framework of Urban Planning in Canada

Urban planning governance in Canada is defined by a multilevel structure rooted in constitutional authority, institutional history, and evolving normative values. This framework is made up of distinct but interrelated layers with their own role federal, provincial, regional, municipal, and site-specific each contributing to the formulation, coordination, and implementation of land use policies. Understanding this hierarchical model is essential for assessing the capacity of Canadian governance institutions to manage complex urban challenges.

1.2.1.1 Federal Influence

Although the Canadian Constitution doesn't give the federal government direct authority over land use planning, it still plays an important role by influencing decisions through funding and national policies. It sets broad goals and provides financial support, especially through programs run by the Canada Mortgage and Housing Corporation (CMHC), which help fund affordable housing, infrastructure, and climate adaptation projects. Investments in public transit, environmental protection, and Indigenous reconciliation to repair and improve relationships with Indigenous Peoples after a long history of colonization, discrimination, and harm and also guide how provinces and municipalities grow and develop.

Even without formal control, the federal government often establishes national standards like those found in the National Housing Strategy or climate policies that provinces and cities are expected to follow, especially if they want access to federal funding. In this way, the federal government, while not directly in charge of land use, still has a powerful influence over urban planning across the country. **(Figure 1.)**

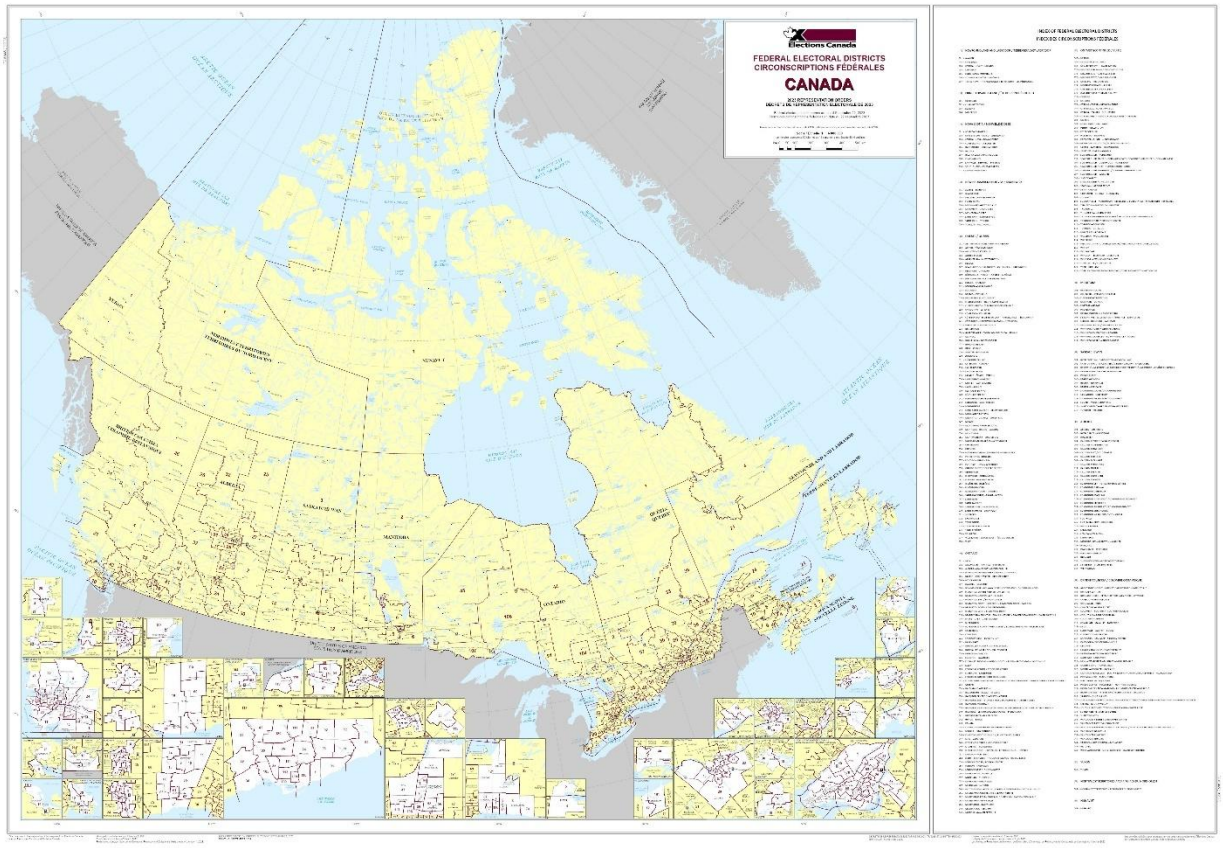

Figure 1. This map shows Canada's federal electoral districts (ridings), which are used to elect Members of Parliament (MPs) to the federal government's House of Commons. Each riding elects one MP, and together they form the federal government that handles national issues (Elections Canada, 2023).

1.2.1.2 Provincial Authority

The main authority over urban planning authority in Canada lies at the provincial level. Under the Constitution Act of 1867, provinces are the only sub-national governments with formal constitutional status, giving them full control over land use, infrastructure, and the governance of municipalities. Cities and towns described as "creatures of the province," receive their powers through provincial laws such as British Columbia's Local Government Act or Ontario's Planning Act. This vertical structure reinforces a unitary hierarchy, wherein municipalities are subordinate to provincial priorities and oversight.

Provincial governance in Canada is strongly influenced by the Westminster parliamentary tradition. Executive dominance, reinforced by party discipline and a lack of institutional veto points, results in policymaking that is centralized and programmatic. Which means most decisions are made by the Premier and Cabinet. Because of strong party discipline and few checks on power, policymaking is

centralized and efficient. However, this top-down approach also means that municipalities have limited independence, and there are fewer opportunities for public input or alternative voices to influence planning decisions. In this model, policy ideas typically enter through senior bureaucracies and cabinet-level decision-makers, rather than through broad public advocacy or independent legislative initiatives. While this structure can facilitate efficient, coherent policymaking, it also reduces the scope for institutional pluralism and local autonomy.

Historically, provinces have shaped urban governance through landmark legislation. For example, Ontario's Planning Act of 1946 which made it mandatory for municipalities to prepare comprehensive land use plans turning planning from something optional into a core responsibility. Other provinces followed similar approaches, embedding planning within a legal and administrative apparatus focused on managing economic growth and spatial rationality. However, even with these formal systems in place, municipalities still operate under provincial authority and have only limited freedom to create or experiment with their own policies. **(Figure 1.)**

Figure 1. This map of Canada shows provinces, boundaries, capitals, selected place names, selected lakes and rivers, the Arctic Circle, and adjacent foreign areas. (Natural Resources Canada, n.d.).

12.1.3 Regional Governance

In some provinces, notably British Columbia, regional districts serve as intermediaries between provincial governments and municipalities. Entities such as the Metro Vancouver Regional District (MVRD) are mandated to facilitate inter-municipal coordination in areas including growth management, transportation planning, and environmental stewardship. These regional authorities are particularly vital in metropolitan areas where urban development transcends municipal boundaries.

Metro Vancouver's Regional Growth Strategy (RGS) currently articulated in the Metro 2050 plan establishes population, housing, and employment targets for each member municipality. It also outlines transit corridors and greenbelt protections that inform land use decisions across the region. Municipalities are required to align their Official Community Plans (OCPs) with the RGS, thereby reinforcing the hierarchical integration of planning objectives across scales. **(Figure 1.)**

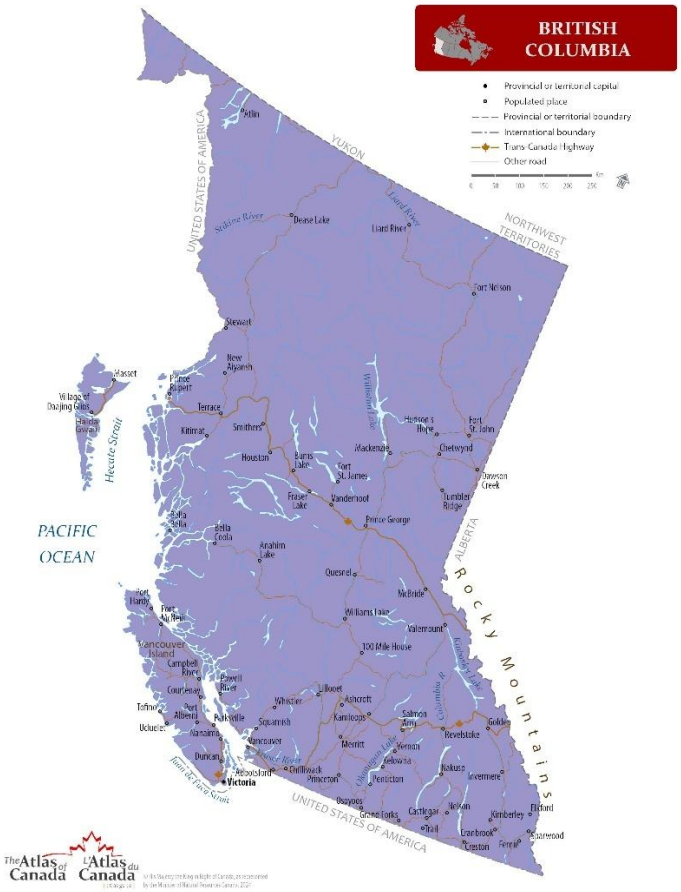

Figure 1. This political map of British Columbia shows boundaries, the provincial capital, selected populated places with names, selected drainage with names and selected roads. the largest metropolitan region in British Columbia in terms of population. (Natural Resources Canada, n.d.).

1.2.1.4 Municipal Governance

Municipal governments are responsible for the day-to-day implementation of land use policy. However, municipal authority is both conditional and constrained. Municipal plans must conform to regional strategies and remain within the parameters set by provincial legislation. For example, the City of Burnaby's land use planning, located in Metro Vancouver, must not only align with the Local Government Act but also with the growth allocations specified by Metro Vancouver. In practice, this means that municipalities possess implementation authority but operate within a tightly regulated framework shaped by higher levels of government.

Despite these constraints, municipalities are often the public's most direct point of contact with urban governance. They mediate community interests, manage development applications, and administer consultation processes. However, their capacity to innovate remains limited by fiscal dependence on property taxes and the conditional nature of provincial transfers and approvals.

1.2.2 Rethinking Urban Governance

Urban governance in Canada has never been static. As society has changed, so have the expectations people place on governments to plan and manage cities. Over time, concerns like economic stability, environmental protection, and public participation have pushed governments to rethink how decisions are made and who gets a voice. This section looks at how Canada's approach to urban governance has evolved and highlights key shifts in public values, the role of environmental priorities, and the challenges of cooperation between different levels of government.

1.2.2.1 Institutional Performance and Normative Evolution

The effectiveness of Canadian urban governance has varied over time in response to changing societal norms. Before the Great Depression, the period between 1929 and the 1930s, when there was widespread unemployment, with nearly a quarter of the population out of work and citizens struggling to afford food, housing, and other basic needs, governments followed a hands-off approach. The crisis exposed the weaknesses of the existing economic system and showed that governments needed to take a more active role in supporting citizens. In response, Canada gradually expanded public programs and laid the groundwork for the modern welfare state. Depression not only reshaped the economy but also changed public attitudes, leading to greater expectations for government intervention in areas like urban planning, housing, and social services.

Even after World War II, things shifted. People began to trust expert-led governance, which allowed provinces to expand welfare programs and carry out major infrastructure projects. During this period, centralized provincial leadership worked well, supported by agreement among political and institutional leaders.

By the 1970s, however, people began to care more about environmental protection, quality of life, and having a say in decisions that affected their communities. People's increasing demand for openness and a say in decision-making didn't sit well with the top-down style of the Westminster system. As a result, it became more difficult for provincial governments to move forward with reforms especially as politics grew more divided and trust in centralized leadership began to fade.

1.2.2.2 Environmentalism and Governance Adaptation

Environmental values have become a powerful influence on how cities are planned and managed in Canada. Starting in the 1960s, planners and decision-makers were pushed to take nature and sustainability into account when making land use choices. This led to new rules like environmental impact assessments, requirements for green infrastructure, and protections for natural areas like streams. These changes made the planning process more complex and often required different levels of government to work together and include the public in decision-making.

In response, provinces began to change how they communicated with the public, introduced more opportunities for people to get involved, and sometimes gave more responsibilities to local governments. Still, the basic structure hasn't changed provinces remain in control and have the final say in planning decisions.

1.2.2.3 Intergovernmental Dynamics and the Challenge of Coordination

In Canada, political disagreements are often handled through negotiations between the federal and provincial governments, especially in areas where their responsibilities overlap like environmental rules, Indigenous land issues, and funding for infrastructure. While this setup can help provinces act in a coordinated way, it sometimes leaves cities out of the conversation, particularly in large urban areas where local needs don't always match provincial priorities.

In cities like Toronto, Vancouver, and Montréal, these limits are becoming more obvious especially when it comes to transit funding, housing shortages, and dealing with climate change. These issues show that Canada's planning system needs to be more flexible and responsive, with better ways to include city voices and make decisions that reflect local realities.

1.3 Tools and Techniques in Canadian Urban Planning Governance

Urban planning in Canada is implemented through a wide array of tools that operate at different governance levels. These tools fall into three functional categories: federal policy instruments that shape planning outcomes indirectly through funding and strategic programs; regional integration tools that ensure coordination across jurisdictions; and municipal regulatory tools applied at the site level. Together, they form a multilayered toolkit supporting Canada's hierarchical yet cooperative planning system.

1.3.1 Federal Policy Instruments

Although land use planning is constitutionally a provincial responsibility, the federal government exerts a strong indirect influence through funding strategies, programmatic tools, and collaborative governance mechanisms. These instruments, outlined in Canada's Urban Strategy: A Blueprint for Action (External Advisory Committee on Cities and Communities, 2002), are designed to shape planning outcomes by linking financial support to specific goals such as affordability, sustainability, and infrastructure efficiency.

1.3.1.1 National Programmatic Tools

The federal toolkit includes national-level programs like the National Affordable Housing Program, which supports the construction and rehabilitation of rental housing through public-private partnerships, investment incentives, and tax-based reforms. The National Transit/Transportation Program offers funding for sustainable, multimodal transit infrastructure to reduce reliance on cars and encourage climate-aligned mobility systems. In parallel, the National Sustainable Infrastructure Program promotes long-term investments in green urban development and integrated infrastructure strategies that respond to evolving environmental and economic needs.

1.3.1.2 Fiscal Incentives and Tax Tools

Fiscal levers such as Capital Cost Allowances (CCAs) and capital gains tax deferrals are used to stimulate investment in underutilized or brownfield sites, particularly for affordable and sustainable housing projects. Proposed tax credit programs aim to support the development of low-income rental markets, while heritage preservation incentives are intended to encourage the adaptive reuse and restoration of historic buildings, thereby merging cultural conservation with modern urban planning goals.

1.3.1.3 Urban Lens and Strategic Evaluation

The Urban Lens is a proposed policy tool designed to ensure that all federal programs including those outside the direct scope of urban planning are assessed for their impact on cities. By embedding urban considerations into broader policymaking areas such as immigration, environmental protection, and transportation, the Urban Lens seeks to align national decisions with local realities and planning priorities.

1.3.1.4 Intergovernmental Partnership Mechanisms

To foster cooperation across jurisdictions, the federal strategy emphasizes tri-partite agreements that bring together federal, provincial, and municipal governments to jointly implement large-scale urban initiatives. This is supported by governance instruments such as Urban Summits, advisory councils, and the proposed establishment of a federal Minister for Urban Affairs, all intended to institutionalize dialogue and strengthen vertical policy alignment (External Advisory Committee on Cities and Communities, 2002).

1.3.1.5 Technical and Capacity-Building Tools

The federal government also supports urban planning through capacity-building initiatives. This includes providing access to GIS tools, spatial datasets, and climate risk modelling platforms, as well as investing in national research networks to support evidence-based policy and municipal planning innovation (External Advisory Committee on Cities and Communities, 2002).

1.3.1.6 Performance-Based Funding Frameworks

All federally supported urban programs are increasingly expected to operate under performance-driven frameworks. These models tie funding to specific, measurable outcomes in areas like housing delivery, infrastructure quality, and environmental resilience. The goal is to make urban investments more accountable and results-oriented (External Advisory Committee on Cities and Communities, 2002).

1.3.2 Regional Integration Tools

Regional governance plays a central role in harmonizing planning efforts across municipal boundaries. In Canada, regions such as Metro Vancouver use a suite of tools to align land use, transportation, housing, and environmental objectives among member municipalities.

1.3.2.1 Official Community Plans (OCPs)

Each municipality prepares an Official Community Plan (OCP), which outlines its long-term development vision for land use, transit, housing, and public services. While OCPs are developed at the municipal level, they must conform to overarching provincial legislation and regional strategies such as Metro 2050. This alignment ensures that local planning decisions contribute to the broader regional goals of compact growth, infrastructure coordination, and environmental protection (Horak, 2021; Sancton, 2018).

1.3.2.2 Regional Context Statements

To demonstrate conformity with regional plans, municipalities in areas like Metro Vancouver are required to submit Regional Context Statements. These documents show how their OCPs and zoning bylaws align with the Metro 2050 Regional Growth Strategy. Regional Context Statements help coordinate development across jurisdictions and ensure consistency with key targets, including population growth distribution, job creation, transportation access, and climate resilience (Sancton, 2018; Metro Vancouver Regional District, 2022).

1.3.3 Municipal Regulatory Tools (Site-Specific Instruments)

At the municipal level, planning tools are implemented directly on the ground, regulating land use and development at the parcel or neighborhood scale. These site-specific instruments are authorized by provincial law and form the practical framework for shaping cities.

1.3.3.1 Zoning Bylaws and Overlay Districts

Zoning bylaws divide land into districts that control what kinds of buildings can be developed, how tall they can be, and how densely they can be built. This basic land use regulation is fundamental to shaping urban form. Overlay districts introduce additional requirements in special areas, such as those prone to environmental risk or designated for heritage conservation. For example, the City of Burnaby uses overlays to protect sensitive ecosystems and manage development on hillside terrain (Horak, 2021; Sancton, 2018; City of Burnaby, 2023).

1.3.3.2 Development Permit Areas (DPAs)

Development Permit Areas are designated zones where municipalities impose specific design and environmental standards before permitting construction. These areas may include rules about building

aesthetics, landscaping, signage, or ecological buffers. In Metro Vancouver, DPAs are especially prevalent in Urban Centres and Frequent Transit Development Areas (FTDAs), helping to align new developments with regional sustainability goals and transit-oriented growth patterns (Sancton, 2018; Metro Vancouver Regional District, 2022).

1.3.3.3 Site Plan Control Agreements

Site plan control agreements are legal contracts between developers and municipal authorities that establish specific requirements for a project's layout, access routes, stormwater management, and integration with surrounding infrastructure. These agreements are especially important in large-scale residential, commercial, or industrial developments where coordinated infrastructure delivery is essential. They ensure that developments not only meet zoning and OCP standards but also support broader municipal objectives for connectivity, walkability, and servicing (Sancton, 2018; City of Burnaby, 2023; Metro Vancouver Regional District, 2022).

1.3.3.4 Density Bonusing and Community Amenity Contributions (CACs)

To generate public benefits from private development, municipalities use tools such as density bonusing and Community Amenity Contributions (CACs). Density bonusing allows developers to build at higher densities than normally permitted in exchange for providing benefits like affordable housing, green space, or public art. CACs formalize this trade-off and are often used to fund local infrastructure or services. In Burnaby, these tools have been successfully applied in areas like Metrotown, where they have financed childcare centers and community facilities. Metro 2050 also recognizes CACs as a tool to promote regional equity, affordability, and environmental sustainability (Sancton, 2018; City of Burnaby, 2023; Metro Vancouver Regional District, 2022).

Further research:

While Chapter 1 provided an overview of the historical background of urban planning in Canada from Indigenous settlement systems to colonial layouts, industrial reforms, and contemporary land management practices it is equally important to recognize that modern land management by First Nations follows distinct paths that differ from mainstream Canadian frameworks. Also understanding how First Nations communities currently operate within hierarchical governance structures is crucial for gaining a complete picture of contemporary land management in Canada. Studying these approaches is vital for gaining a more complete picture of Canada's planning and governance today.

Jung (2019) offers a broad reflection on the First Nations Land Management Act after twenty years, situating it within the larger story of reconciliation and institutional change in Canada. Building on this, Jobin and Riddle (2019) provide a critical analysis of the rise of the First Nations Land Management Regime, linking governance innovations to wider political and economic contexts. This regime, known as the First Nations Land Management Regime (FNLMA), emerged as a response to colonial-era policies that centralized authority over Indigenous lands under federal control, which often limited the autonomy of First Nations communities (Jobin & Riddle, 2019). It allows participating communities to opt out of certain sections of the Indian Act and develop their own land codes, marking a significant policy shift toward self-determination.

A key focus of Jobin and Riddle (2019) is the relationship between Indigenous self-governance and federal and provincial authorities. While the FNLMA legally enables communities to manage their lands, its implementation is constrained by federal oversight, funding requirements, and compliance mechanisms. Provincial governments also play a role, particularly when provincial legislation intersects with areas such as resource management, environmental protection, or land-use regulation. This creates a complex governance environment where Indigenous autonomy is both facilitated and limited by external authorities.

The authors identify several major findings regarding the outcomes and limitations of the FNLMA. First, the regime has enabled many communities to improve local governance capacity, allowing for more culturally aligned decision-making, better administrative practices, and increased opportunities for economic development (Jobin & Riddle, 2019). Second, participation in the FNLMA is uneven across communities. Factors such as community size, financial resources, technical expertise, and political organization influence how effectively a First Nation can develop and implement its land code. Smaller or resource-limited communities often face challenges in fully exercising autonomy, revealing a structural limitation in the regime's design (Jobin & Riddle, 2019).

Another significant finding concerns the structural barriers embedded in the federal-provincial system. Even with legally recognized authority under the FNLMA, First Nations must navigate overlapping jurisdictional boundaries, negotiate with provincial and federal authorities, and comply with external regulations. These constraints sometimes restrict the ability of communities to enact their plans fully, highlighting the tension between Indigenous aspirations for self-governance and the ongoing influence of state institutions (Jobin & Riddle, 2019).

Finally, Jobin and Riddle (2019) underscore that while the FNLMA is a step toward reconciliation and empowerment, it is not a complete solution. The regime reflects a partial devolution of authority, requiring communities to work within structures that maintain significant federal and provincial control. The authors suggest that understanding these dynamics is essential for evaluating the effectiveness of modern First Nations land management initiatives.

Fligg and Robinson (2020) then examine the relationship between First Nations land management regimes and community well-being, pointing to how governance models directly shape social outcomes. More detailed insights are offered by Kobzik and Krawchenko (2022), who analyze Comprehensive Community Plans in British Columbia to illustrate how Indigenous communities articulate their own visions of development. At a more specific level, Fligg, Ballantyne, and Robinson (2022) highlight informal land-use practices within Curve Lake First Nation, revealing the nuanced and context-specific realities that underlie formal systems. Finally, Gothe et al. (2025) push the discussion forward by exploring co-design processes that prioritize Indigenous leadership, emphasizing design practices that advocate for change and more inclusive futures.

CHAPTER 2:
URBAN PLANNING IN METRO VANCOUVER

2.1 Metro Vancouver overview

2.1.1 The origin and formation of Metro Vancouver

Vancouver's early urban development was heavily shaped by colonial administration during the late 1850s. As outlined by Smith (1929), Governor James Douglas and Colonel Moody were tasked with laying out land for military, settlement, and strategic use, selecting locations such as Coal Peninsula (now Stanley Park), Granville Reserve, and Jericho **(Figure 2-1)**. These early decisions provided the groundwork for what would become key parts of the city's structure.

According to Smith (1929), private landownership soon followed, with prominent figures like Robert Burnaby and Henry Crease acquiring significant waterfront properties. Logging operations, notably at Hastings Mill, drove the region's early economy. Meanwhile, the extension of the Canadian Pacific Railway from Port Moody to the Granville townsite shifted Vancouver's trajectory from a forested frontier to a vital transportation and trade hub.

The city was officially incorporated in 1886, but just six weeks later, it was nearly destroyed by a fire. Despite this setback, Vancouver rapidly rebuilt. As documented in Smith's report (1929), the arrival of the transcontinental railway the following year marked the start of accelerated urban growth. However, this expansion occurred largely without coordinated planning. Subdivisions were laid out speculatively on paper, often disconnected from the city's geography or infrastructure.

Smith (1929) further notes that it wasn't until the 1920s that a shift toward organized urban planning began to take hold. Advocacy from groups like the Town Planning Institute of Canada led to the passage of the 1925 Town Planning Act and the establishment of a planning commission. This marked a turning point where city leaders moved from reacting toward managing it with foresight and intention.

In envisioning the future, the Commission, as summarized by Smith (1929), emphasized the need for zoning, integrated transport, and efficient land use. Vancouver began to define itself not only as a Pacific seaport but as a city capable of balancing industrial, residential, and recreational demands through long-term planning. These foundational efforts helped shape Vancouver we know today and remain a cornerstone of its planning legacy.

According to Smith (1929), the area commonly referred to as Greater Vancouver encompasses the Burrard Peninsula, located between the Fraser River and Burrard Inlet, as well as the northern slopes of Burrard Inlet, as shown in figure 2.1. The peninsula covers approximately 88 square miles and features rolling terrain suitable for urban development, while Burrard Inlet provides a high-quality natural harbour with adjacent level lands for port and industrial use. The original town of Granville, registered

in 1870, consisted of six blocks, and the city of Vancouver was incorporated in 1886 with 6,750 acres. Subsequent annexations, including Hastings Townsite and Ward 8, increased the city's area to 10,547.2 acres by 1928. The City of Vancouver proper covered only 16.5 square miles, relatively small compared to other major cities. The 1929 amalgamation with Point Grey and South Vancouver expanded the city to approximately 45 square miles (Smith, 1929).

Figure 2-1. The Greater Vancouver area includes the Burrard Peninsula and surrounding slopes (Smith, 1929).

2.1.2 Contemporary Metro Vancouver

2.1.2.1 Geography

Metro Vancouver is in the southwest corner of British Columbia, Canada, and is characterized by a highly constrained physical geography that plays a central role in regional planning and development strategies. Bounded by the Pacific Ocean to the west, mountain ranges to the north and northeast, and the Fraser Valley to the east, the region's natural features limit outward urban expansion and shape where and how growth can occur (Metro Vancouver, 2018).

This complex geography includes a mix of urban cores, suburban municipalities, agricultural lands, and significant conservation areas. Much of the land within Metro Vancouver is either not suitable or not

available for development due to steep slopes, floodplains, environmentally sensitive ecosystems, and provincially protected agricultural lands (Metro Vancouver, 2018). As a result, the developable land base is limited, reinforcing the need for a regionally coordinated strategy that prioritizes densification over sprawl **(Figure 2-2)**.

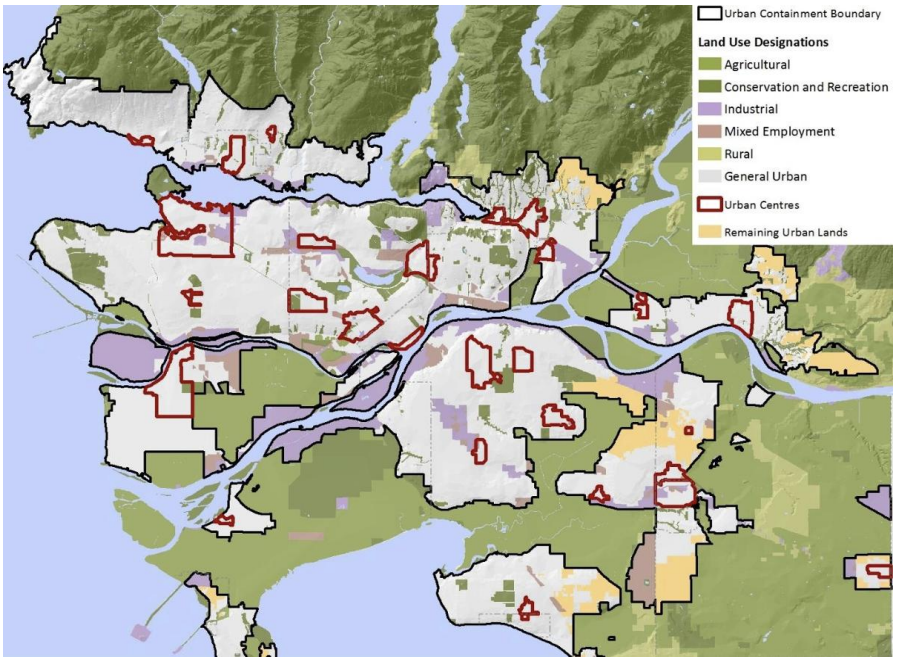

Figure 2-2. Metro Vancouver's "General Urban" Land use map (Metro Vancouver, 2018).

2.1.2.2 Population

Metro Vancouver is the most populous region in British Columbia, accounting for over half of the province's total population. In 2016, the region was home to approximately 2.5 million people, and this number is expected to reach 3.8 million by 2050 (Metro Vancouver, 2018) **(Figure 2-3)**. This sustained growth reflects a combination of international immigration, interprovincial migration, and, to a lesser extent, natural increase. Over recent decades, migration, particularly from international sources, has been the dominant driver of demographic expansion in the region. Figure 2.2 illustrates the expected elements of population growth in Metro Vancouver up to 2050. Starting from a base population of 2,570,000 in 2016, the population is projected to rise by approximately 1 million, reaching around 3,600,000 by 2050.

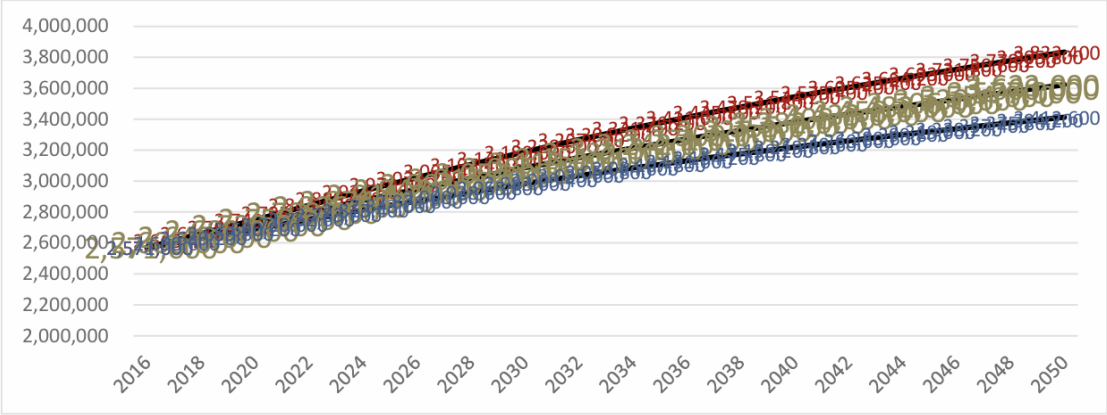

Figure 2-3. Population expectation by 2050 (Metro Vancouver, 2018)

The document provided by Metro Vancouver (2018) illustrates that between 2001 and 2016, net migration was responsible for nearly two-thirds of the region's population growth. On average, 35,000 to 40,000 new international immigrants arrive in the Metro Vancouver area each year, making it one of Canada's primary immigration destinations. These newcomers are drawn by the region's economic opportunities, cultural diversity, and high quality of life. This trend reinforces the fact that Metro Vancouver's demographic profile is increasingly shaped by international inflows rather than by domestic population changes through births.

Natural population increase defined as the difference between births and death is steadily declining. Although births still outnumber deaths, the gap is narrowing due to two key factors: falling fertility rates and an aging population (Metro Vancouver, 2018). Birth rates have plateaued or declined in many urban areas, and this is true for Metro Vancouver as well. Simultaneously, the number of annual deaths continues to rise, primarily due to the aging of the baby boomer generation. As a result, natural increase contributes a smaller portion to population growth than in previous decades.

In addition to international immigration, domestic migration significantly influences population patterns in the region. Metro Vancouver attracts individuals from across Canada, particularly from other parts of British Columbia and Alberta. However, it also experiences outmigration, especially among families and older residents seeking more affordable housing and a different lifestyle in suburban or rural areas. These flows both inbound and outbound vary from year to year and tend to respond to changes in employment, housing affordability, and quality of life indicators (Metro Vancouver, 2018). The net result is that while international immigration remains stable and positive, domestic migration can fluctuate and sometimes be negative. **(Figure 2-4)**

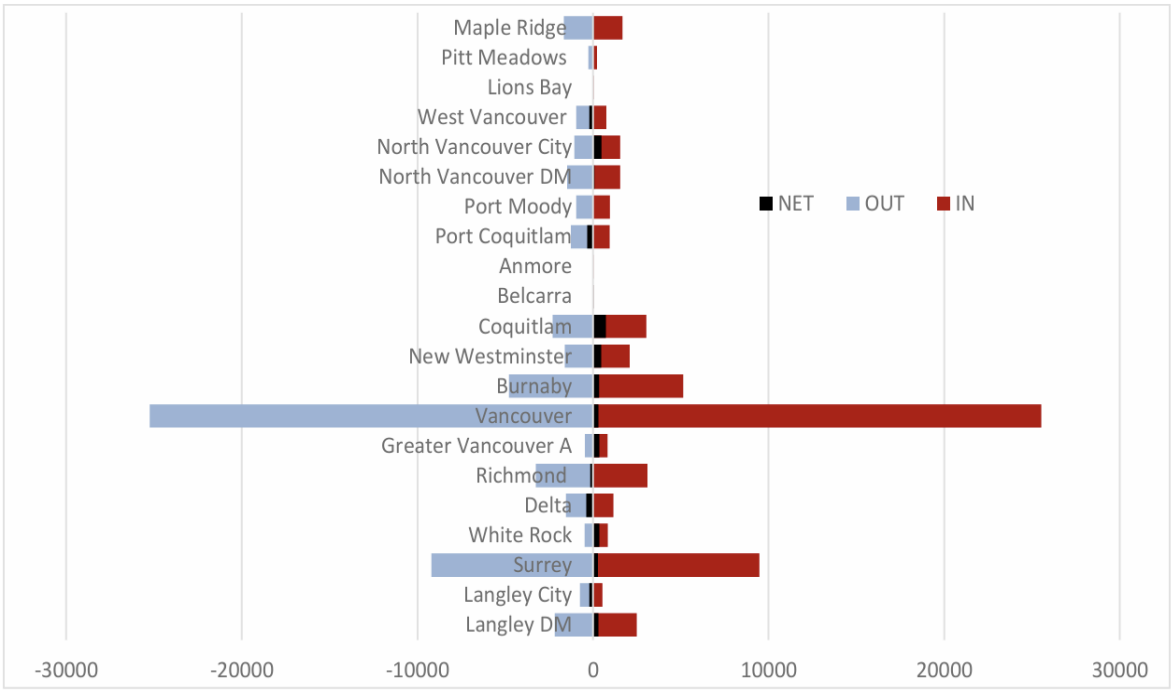

Figure 2-4. Inter-Provincial Migration Patterns Among Metro Municipalities – 5 Year Totals 2011-2016 (Metro Vancouver, 2018).

Within the region, migration patterns are also observed between municipalities. Urban centers such as Vancouver, Burnaby, and Surrey often receive higher numbers of new immigrants and internal movers, while suburban municipalities may see slower but more stable growth. The diversity of population movements within the region poses unique challenges for regional planners **(Figure 2-5)**, particularly in ensuring equitable access to housing, transportation, and services across all communities **(Figure 2-6)** (Metro Vancouver, 2018).

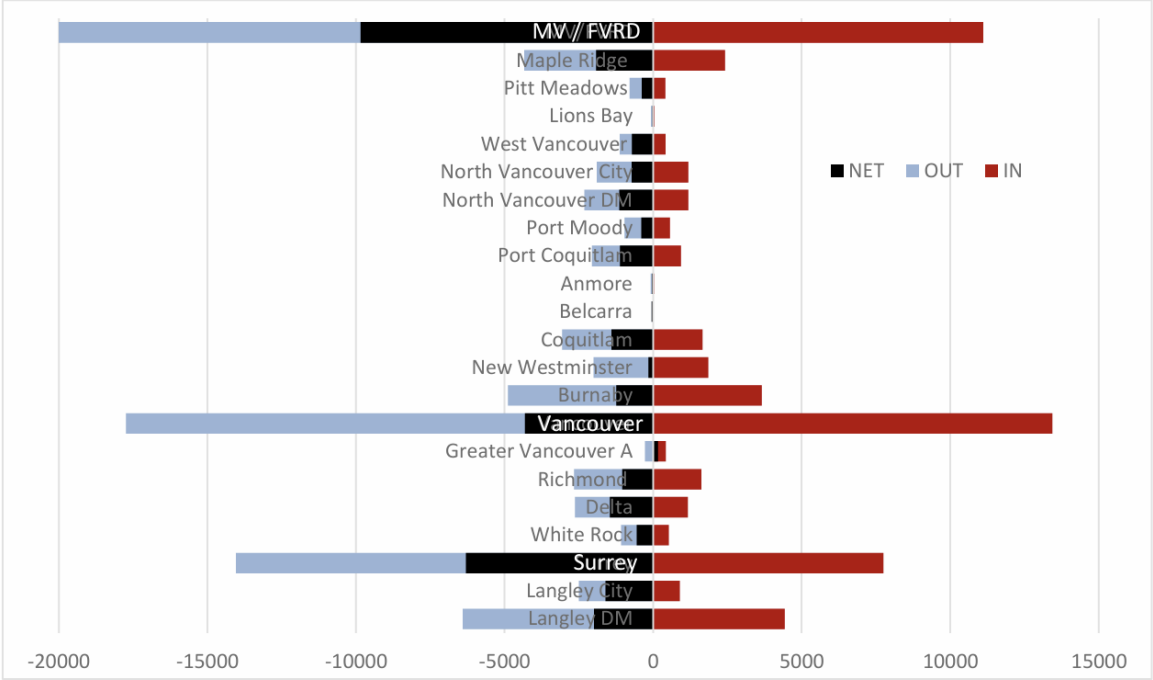

Figure 2-5. Intra-Provincial Migration Patterns Among Metro Municipalities – 5 Year Totals 2011-2016 (Metro Vancouver, 2018).

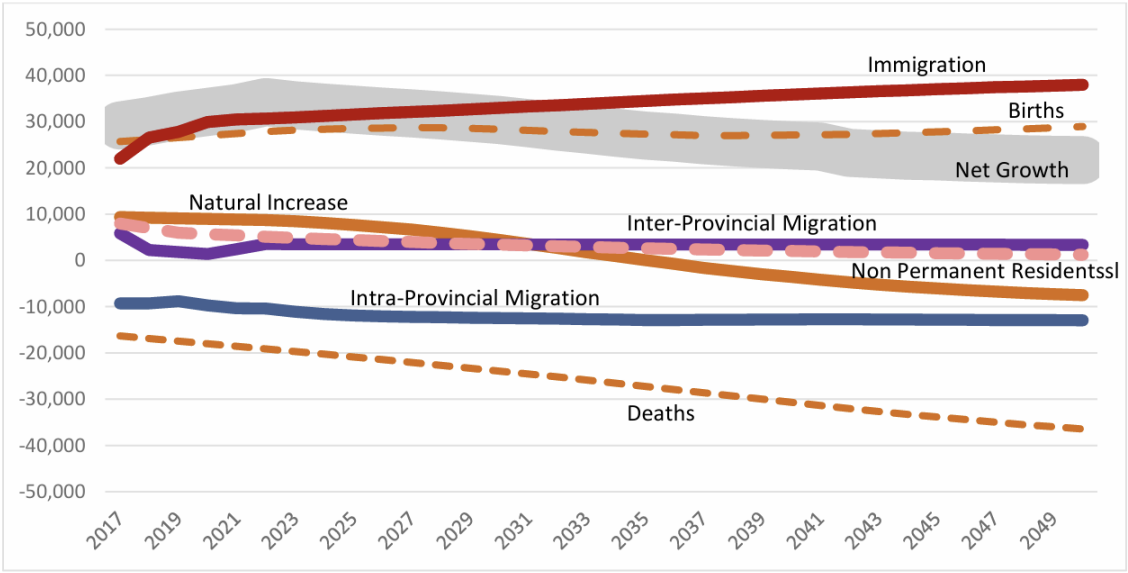

Figure 2-6. Metro Vancouver Baseline Scenario - Projected Population Growth Components 2016 - 2050 (Metro Vancouver, 2018).

2.2 Governance and Planning Structure of Metro Vancouver Regional District

Based on Metro Vancouver regional district (2022), MVRD included 21 municipalities, one Electoral Area, and one Treaty First Nation, with over 2,800 km² of diverse urban, suburban, rural, and natural landscapes, it provides a governance framework that balances the autonomy of individual municipalities with the need for regional cooperation to effectively manage growth, infrastructure, and environmental protection. (Metro Vancouver Regional District, 2022)

The MVRD is governed by a Board of Directors made up of elected representatives from each member municipality. Voting power is weighted by population size to ensure proportional influence, with an emphasis on consensus and collaboration to collectively address regional challenges (regarding Metro 2050, Metro Vancouver Regional District, 2022) **(Figure 2-7)**.

Figure 2-7. Metro Vancouver entities and services (Metro Vancouver Regional District, 2022).

2.2.1 Regional Planning Coordination and Sub-Regional Collaboration

Urban growth, transportation networks, natural resource management, and economic development cross municipal boundaries, requiring coordinated planning at both the regional and sub-regional levels **(Figure 2-8)**. According to Metro 2050 (Metro Vancouver Regional District, 2022), Metro Vancouver plays a vital role in aligning these efforts, preventing fragmented development and duplication of infrastructure investments.

The Regional Growth Strategy (Metro 2050), a legally binding plan under British Columbia's Local Government Act, sets shared goals, policies, and land use designations to guide sustainable growth. Based on Metro 2050 (Metro Vancouver Regional District, 2022), member municipalities reflect these regional priorities in their own plans through Regional Context Statements, maintaining local decision-making authority while promoting consistency across the region.

Figure 2-8. Metro Vancouver's sub-regions for the purpose of metro 2050 projections (Metro Vancouver Regional District, 2022).

Sub-regional collaboration enables municipalities within defined areas to address local priorities while contributing to broader regional objectives. Regarding Metro 2050 (Metro Vancouver Regional District, 2022), this approach supports long-term capital planning and infrastructure investment programs, ensuring services and growth are well coordinated across nearby communities.

2.2.2 Indigenous Inclusion in Regional Planning

Metro Vancouver acknowledges that its territory is the traditional and unceded land of Coast Salish peoples. The district is committed to fostering respectful, government-to-government relationships with First Nations. According to Metro 2050 (Metro Vancouver Regional District, 2022), Indigenous rights, knowledge, and perspectives are integrated into regional planning, environmental stewardship, and resource management.

This collaboration supports reconciliation efforts and promotes inclusive development that respects Indigenous governance and cultural values. Based on Metro 2050 (Metro Vancouver Regional District, 2022), recognizing the role of Indigenous communities strengthens Metro Vancouver's legitimacy and fosters shared stewardship of the region's natural and built environment.

2.2.3 Service Delivery and Regional Infrastructure

Beyond planning, Metro Vancouver provides essential regional services critical to urban and rural communities alike. It manages the region's drinking water supply, sourced from protected mountain watersheds, operates advanced wastewater treatment facilities, and runs a solid waste management system focused on reduction, recycling, and responsible disposal (regarding Metro 2050, Metro Vancouver Regional District, 2022). The district also monitors air quality and manages a network of regional parks and greenways that preserve ecosystems, offer recreational opportunities, and support biodiversity.

Centralizing these services at the regional level allows Metro Vancouver to achieve economies of scale, ensure consistent standards, and provide advanced infrastructure that individual municipalities could not afford alone (according to Metro 2050, Metro Vancouver Regional District, 2022).

2.2.4 Balancing Regional Goals with Local Autonomy

The federated governance structure respects the diverse priorities of member jurisdictions, from dense urban centers to rural agricultural areas. Through weighted voting and consensus-building, based on Metro 2050 (Metro Vancouver Regional District, 2022), Metro Vancouver balances local autonomy

with regional objectives, enabling coordinated management of shared challenges such as transportation networks, environmental quality, waste management, and climate resilience.

2.2.5 Accountability, Monitoring, and Adaptation

Metro Vancouver emphasizes transparency and adaptability by monitoring key performance indicators outlined in Metro 2050, including housing affordability, transportation use, land preservation, and emissions reduction. According to Metro 2050 (Metro Vancouver Regional District, 2022), this monitoring builds trust among municipalities and supports informed adjustments to policies and strategies. Amendments to the Regional Growth Strategy require appropriate approval levels to maintain regional consensus.

2.2.5 Integration with Other Regional Strategies

The Regional Growth Strategy works in harmony with other regional plans addressing affordable housing, parks, water and waste management, and climate resilience (Climate 2050). Based on Metro 2050 (Metro Vancouver Regional District, 2022), this integrated planning framework promotes sustainability, livability, and resilience throughout Metro Vancouver.

2.2.6 Challenges and Opportunities

Metro Vancouver faces the complex challenge of accommodating approximately 35,000 new residents annually while protecting the environment, addressing housing needs, and supporting economic growth. Regarding Metro 2050 (Metro Vancouver Regional District, 2022), the region's land base is constrained by protected areas such as the Agricultural Land Reserve (ALR), natural hazards, and the Urban Containment Boundary (UCB), limiting outward expansion. This pressure necessitates intensification of existing urban areas while maintaining livability, equity, and sustainability.

Housing affordability remains one of the most pressing challenges. As population growth increases demand and land becomes scarce, housing costs rise sharply. Compact, complete communities that provide diverse housing options near transit, employment, and services are essential. Based on Metro 2050 (Metro Vancouver Regional District, 2022), Transit-Oriented Development (TOD) is a key strategy but requires overcoming zoning, infrastructure, and political barriers.

Climate change presents both immediate and long-term risks, including sea level rise, flooding, heat waves, and wildfires. At the same time, it offers an opportunity to redesign cities for resilience through green infrastructure, sustainable buildings, and integrated watershed planning (according to Metro

2050, Metro Vancouver Regional District, 2022). Environmental goals, such as emissions reduction and biodiversity protection, must be central to land use decisions.

Demographic shifts also reshape regional priorities. An aging population will increase demand for accessible housing, healthcare, and age-friendly urban design. Meanwhile, younger generations' preference for walkable, transit-connected lifestyles supports more compact urban development (regarding Metro 2050, Metro Vancouver Regional District, 2022).

Economically, the region is transitioning from resource-based industries to knowledge and service economies. Protecting employment lands and adapting to new business types through mixed-use areas, innovation hubs, and flexible zoning are essential to maintaining economic vitality (based on Metro 2050, Metro Vancouver Regional District, 2022).

Finally, Indigenous reconciliation is both a legal and ethical priority. First Nations are increasingly asserting stronger roles in regional planning through land ownership, governance partnerships, and cultural recognition. According to Metro 2050 (Metro Vancouver Regional District, 2022), building respectful, collaborative relationships with Indigenous governments will be crucial for Metro Vancouver's long-term success.

2.3 MRVD Principles Goals and Tools for Regional Development

The Metro 2050 Regional Growth Strategy (RGS) is the central planning document guiding long-term urban development in the Metro Vancouver region, based on Metro Vancouver Regional District (2022). Adopted under the authority of British Columbia's Local Government Act, it represents a legally binding commitment among member municipalities to manage growth in a coordinated, sustainable, and equitable manner through 2050, according to Metro Vancouver Regional District (2022).

Metro 2050 builds on decades of regional planning in Metro Vancouver, reflecting lessons learned from previous strategies, including the Livable Region Strategic Plan (1996) and Metro 2040 (2011), as outlined by Metro Vancouver Regional District (2022). The new strategy updates these foundations to respond to emerging challenges such as climate change, housing affordability, rapid population growth, and reconciliation with Indigenous Peoples, regarding Metro Vancouver Regional District (2022).

2.3.1 Vision and Guiding Principles

At the heart of Metro 2050 is a clear, shared vision: to create a resilient, equitable, and sustainable region that delivers a high quality of life for all residents while protecting the natural environment and responding proactively to climate change, according to Metro Vancouver Regional District (2022).

This vision is supported by five guiding principles that shape the entire plan, as noted by Metro Vancouver Regional District (2022):

Advance Reconciliation – Building respectful relationships with Indigenous Peoples, recognizing rights and title, and supporting self-determination, based on Metro Vancouver Regional District (2022).

Support Complete Communities – Promoting inclusive, connected, and livable neighborhood s that provide access to housing, services, jobs, and amenities, according to Metro Vancouver Regional District (2022).

Protect the Environment and Respond to Climate Change – Strengthening conservation, adaptation, and mitigation to reduce risks and preserve ecological health, as outlined by Metro Vancouver Regional District (2022).

Create Compact Urban Areas – Limiting sprawl by focusing growth in denser, well-served urban areas, reducing car dependence, and supporting transit, regarding Metro Vancouver Regional District (2022).

Ensure Shared Prosperity – Supporting a strong, sustainable, and diverse regional economy with equitable opportunities for all, based on Metro Vancouver Regional District (2022).

These principles are not abstract ideals; they underpin every policy direction, land use designation, and implementation mechanism within the Strategy, according to Metro Vancouver Regional District (2022).

2.3.2 Key Components and Structure of Metro 2050

Metro 2050 is structured to provide a comprehensive framework for managing the region's projected population growth of over one million new residents by the year 2050, as noted by Metro Vancouver Regional District (2022). The strategy is organized around five overarching goals, each supported by specific strategies, policy actions, performance indicators, and implementation mechanisms, based on Metro Vancouver Regional District (2022). At its core, the plan is guided by a unifying vision statement and a set of guiding principles that reflect the region's values and aspirations, according to Metro Vancouver Regional District (2022).

It establishes an Urban Containment Boundary (UCB) to limit urban sprawl and uses a system of land use designations to direct how and where future growth should occur, as outlined by Metro Vancouver Regional District (2022). The strategy also incorporates detailed growth projections related to population, housing, and employment to inform planning decisions, based on Metro Vancouver Regional District (2022). To ensure its implementation, Metro 2050 employs tools such as Regional Context Statements, which align local plans with regional objectives, according to Metro Vancouver Regional District (2022). Furthermore, the strategy includes clear procedures for monitoring progress and making amendments, thereby ensuring both accountability and adaptability, regarding Metro Vancouver Regional District (2022). Through this structure, Metro 2050 is positioned not merely as a visionary statement but as a practical and enforceable plan that guides municipal planning, service delivery, and regional investment priorities, as noted by Metro Vancouver Regional District (2022).

2.3.3 The Five Goals of Metro 2050

2.3.3.1 Goal 1: Create a Compact Urban Area

This goal focuses on limiting urban sprawl by concentrating growth within the Urban Containment Boundary, according to Metro Vancouver Regional District (2022). By directing growth to existing

urban areas, Urban Centers, and Frequent Transit Development Areas (FTDAs), the region can make better use of existing infrastructure, support sustainable transportation, and preserve agricultural and natural lands, as outlined by Metro Vancouver Regional District (2022). Policies under this goal encourage higher-density, mixed-use development that reduces reliance on automobiles, supports walkability, and makes efficient use of land, based on Metro Vancouver Regional District (2022).

2.3.3.2 Goal 2: Support a Sustainable Economy

Recognizing the importance of economic resilience, this goal prioritizes the protection and enhancement of Industrial and Employment Lands, according to Metro Vancouver Regional District (2022). Strategies aim to ensure that sufficient land is available for jobs and business activity, promote innovation and green economic transitions, and improve the efficiency of goods movement, regarding Metro Vancouver Regional District (2022). Metro 2050 explicitly seeks to balance employment growth with housing development to maintain complete communities where people can live and work close to each other, as noted by Metro Vancouver Regional District (2022).

2.3.3.3 Goal 3: Protect the Environment and Respond to Climate Change

Environmental sustainability is a cornerstone of Metro 2050, based on Metro Vancouver Regional District (2022). This goal commits the region to conserving sensitive ecosystems, protecting biodiversity, maintaining clean water and air, and integrating green infrastructure into urban areas, as outlined by Metro Vancouver Regional District (2022). The Strategy also includes clear commitments to reducing greenhouse gas emissions, preparing for climate change impacts such as sea level rise and flooding, and integrating climate adaptation into all aspects of regional planning, according to Metro Vancouver Regional District (2022).

2.3.3.4 Goal 4: Develop Complete Communities

This goal emphasizes the creation of inclusive, livable communities with a full range of housing options, services, and amenities, regarding Metro Vancouver Regional District (2022). Metro 2050 aims to ensure diverse and affordable housing, accessible shops and services, safe and connected public spaces, and strong local identities, based on Metro Vancouver Regional District (2022). Policies also address health equity, access to parks and recreation, and social inclusion for marginalized populations, according to Metro Vancouver Regional District (2022).

2.3.3.5 Goal 5: Support Sustainable Transportation Choices

Metro 2050 closely integrates land use planning with transportation investments to reduce car dependency and support transit, walking, and cycling, as outlined by Metro Vancouver Regional District (2022). By directing growth to areas well-served by transit and enhancing connections between housing, jobs, and services, the Strategy seeks to reduce greenhouse gas emissions, congestion, and infrastructure costs while improving mobility for all residents, according to Metro Vancouver Regional District (2022).

2.3.4 Key Planning Tools and Techniques in Metro 2050

In Metro 2050, several key tools and techniques are employed to guide and manage sustainable regional growth, based on Metro Vancouver Regional District (2022). These instruments provide a structured framework for directing development, protecting valuable lands, and supporting population and economic growth in a coordinated manner, regarding Metro Vancouver Regional District (2022). The following summarizes the primary tools and techniques outlined in the Strategy:

A) Urban Containment Boundary (UCB)

The Urban Containment Boundary (UCB) is a foundational planning mechanism that defines the spatial limits for urban growth within the Metro Vancouver region, according to Metro Vancouver Regional District (2022) **(Figure 2-9)**. Its primary purpose is to direct development inward, thereby preventing outward sprawl and protecting agricultural, conservation, and rural lands from encroachment, as noted by Metro Vancouver Regional District (2022). By guiding urban expansion within a clear and enduring boundary, the UCB supports compact, transit-oriented development, encourages infill and redevelopment, reduces dependency on automobile travel, minimizes greenhouse gas emissions, and preserves valuable ecological and agricultural assets, based on Metro Vancouver Regional District (2022). The UCB serves as a long-term growth management strategy to uphold sustainable urban form and land use patterns, regarding Metro Vancouver Regional District (2022).

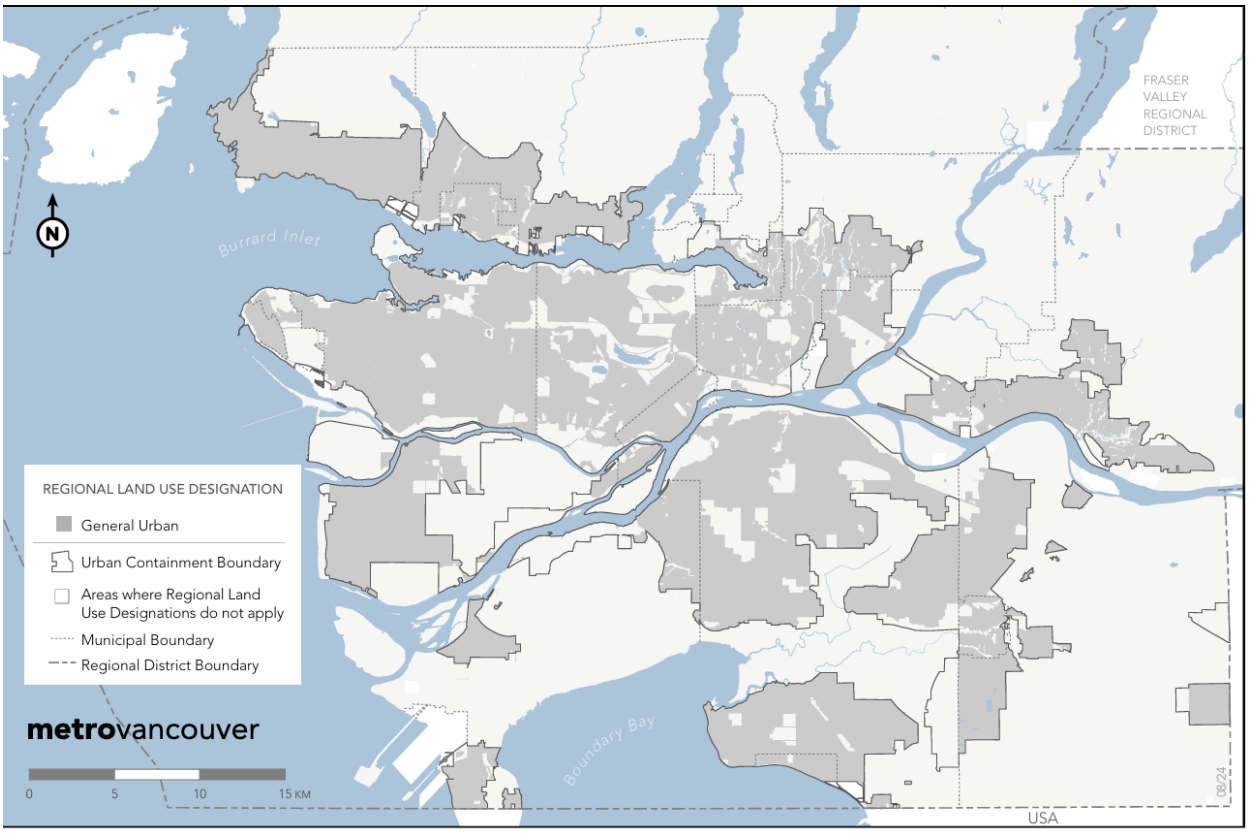

Figure 2-9. Urban Containment Boundary and General urban lands - Metro Vancouver (Metro Vancouver Regional District, 2022).

B) Regional Land Use Designations

Metro Vancouver applies a system of regional land use designations to guide how land is developed and used across the region, as outlined by Metro Vancouver Regional District (2022). These designations help structure growth, ensure land-use compatibility, and support long-term sustainability goals, according to Metro Vancouver Regional District (2022).

- **General Urban areas** are intended primarily for residential neighborhoods that are integrated with commercial, institutional, and recreational functions, based on Metro Vancouver Regional District (2022) **(Figure 2-10)**. These areas accommodate higher densities particularly in Urban Centers and Frequent Transit Development Areas (FTDAs), thereby supporting walkable, transit-oriented environments, according to Metro Vancouver Regional District (2022).

- **Industrial lands** are designated to support manufacturing, warehousing, logistics, and other industrial activities, as noted by Metro Vancouver Regional District (2022). These areas are

encouraged to intensify in a context-sensitive manner, helping to retain industrial employment and regional economic competitiveness, based on Metro Vancouver Regional District (2022).

- **Employment lands** are intended for a mix of commercial and light industrial uses, with limited residential development, regarding Metro Vancouver Regional District (2022). These are typically located in proximity to major transit infrastructure and serve as hubs for jobs and economic activity, according to Metro Vancouver Regional District (2022).

- **Rural lands** are intended to preserve low-density, non-urban uses such as agriculture and natural landscapes, as outlined by Metro Vancouver Regional District (2022). These areas are not equipped with urban infrastructure and are protected from intensive development, based on Metro Vancouver Regional District (2022).

- **Agricultural lands** are specially designated for the protection and enhancement of farming and agricultural operations, particularly within the provincial Agricultural Land Reserve (ALR), according to Metro Vancouver Regional District (2022). These lands support regional food security and agricultural sustainability, as noted by Metro Vancouver Regional District (2022).

- **Conservation and Recreation lands** are designated to safeguard ecologically sensitive areas, watersheds, green spaces, and recreational sites, regarding Metro Vancouver Regional District (2022). These areas play a crucial role in preserving biodiversity, providing ecosystem services, and supporting public health and well-being, based on Metro Vancouver Regional District (2022).

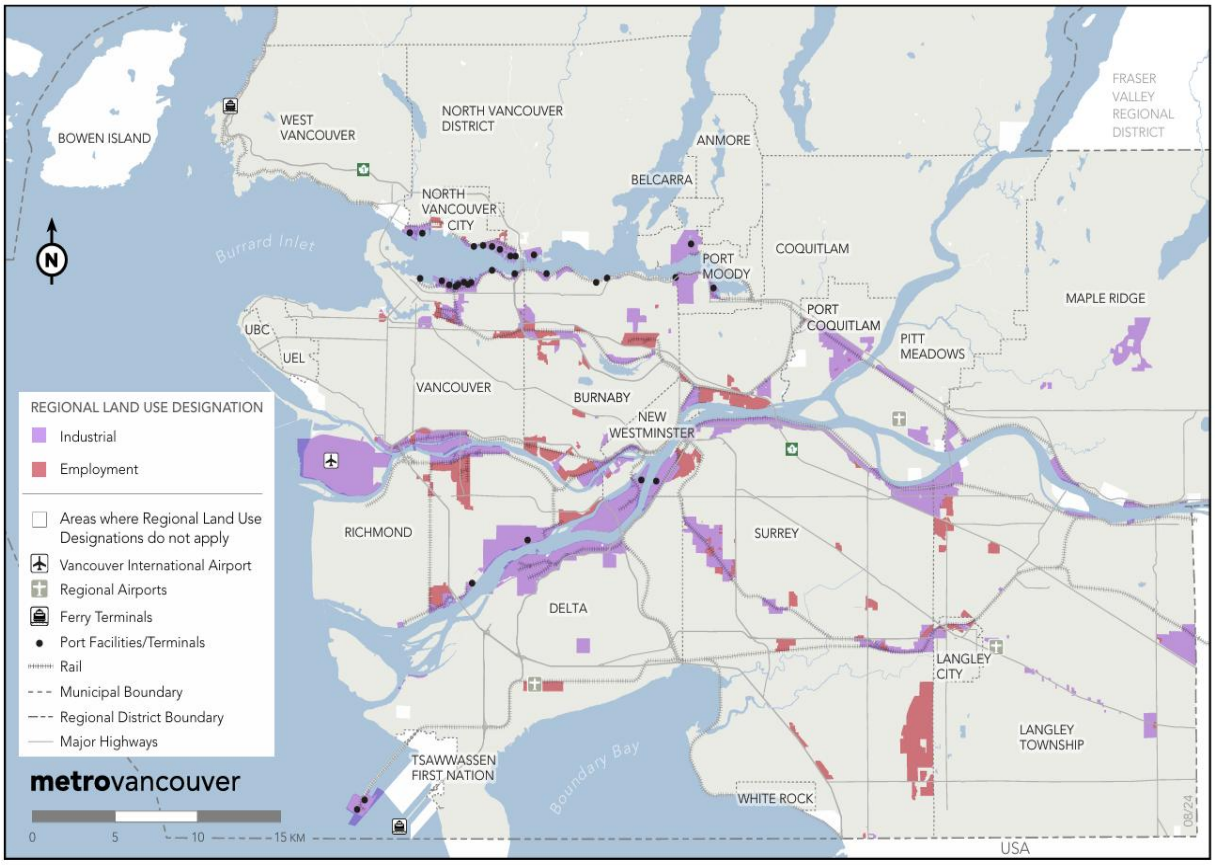

Figure 2-10. Urban Containment Boundary and General urban lands - Metro Vancouver (Metro Vancouver Regional District, 2022).

C) Regional Overlays

In addition to base land use designations, Metro Vancouver applies regional overlays as a planning technique to target and manage growth in specific priority areas, according to Metro Vancouver Regional District (2022).

- **Urban Centers** are designated as primary focal points for dense, mixed-use, and transit-oriented development, as outlined by Metro Vancouver Regional District (2022) **(Figure 2-11)**. These areas are intended to accommodate a significant share of future residential and employment growth, according to Metro Vancouver Regional District (2022).

- **Frequent Transit Development Areas (FTDAs)** are strategically located near rapid transit corridors and are targeted for higher-density development to support walkability, transit usage, and complete communities, based on Metro Vancouver Regional District (2022).

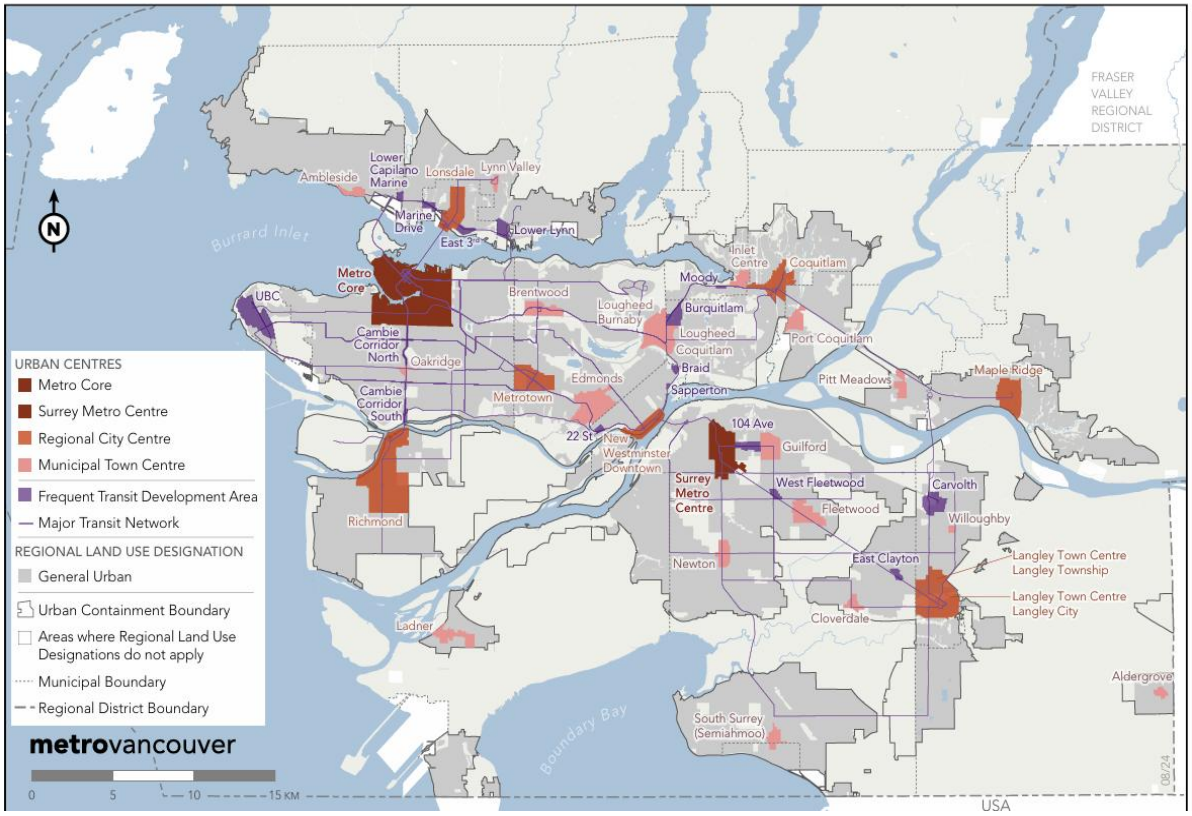

Figure 2-11. Urban centers and frequent transit developments areas (Metro Vancouver Regional District, 2022).

- **Major Transit Growth Corridors** identify linear development areas along key transit routes that connect Urban Centers and FTDAs, regarding Metro Vancouver Regional District (2022) **(Figure 2-12)**. These corridors guide future transit-oriented growth and investment in public infrastructure, as noted by Metro Vancouver Regional District (2022).

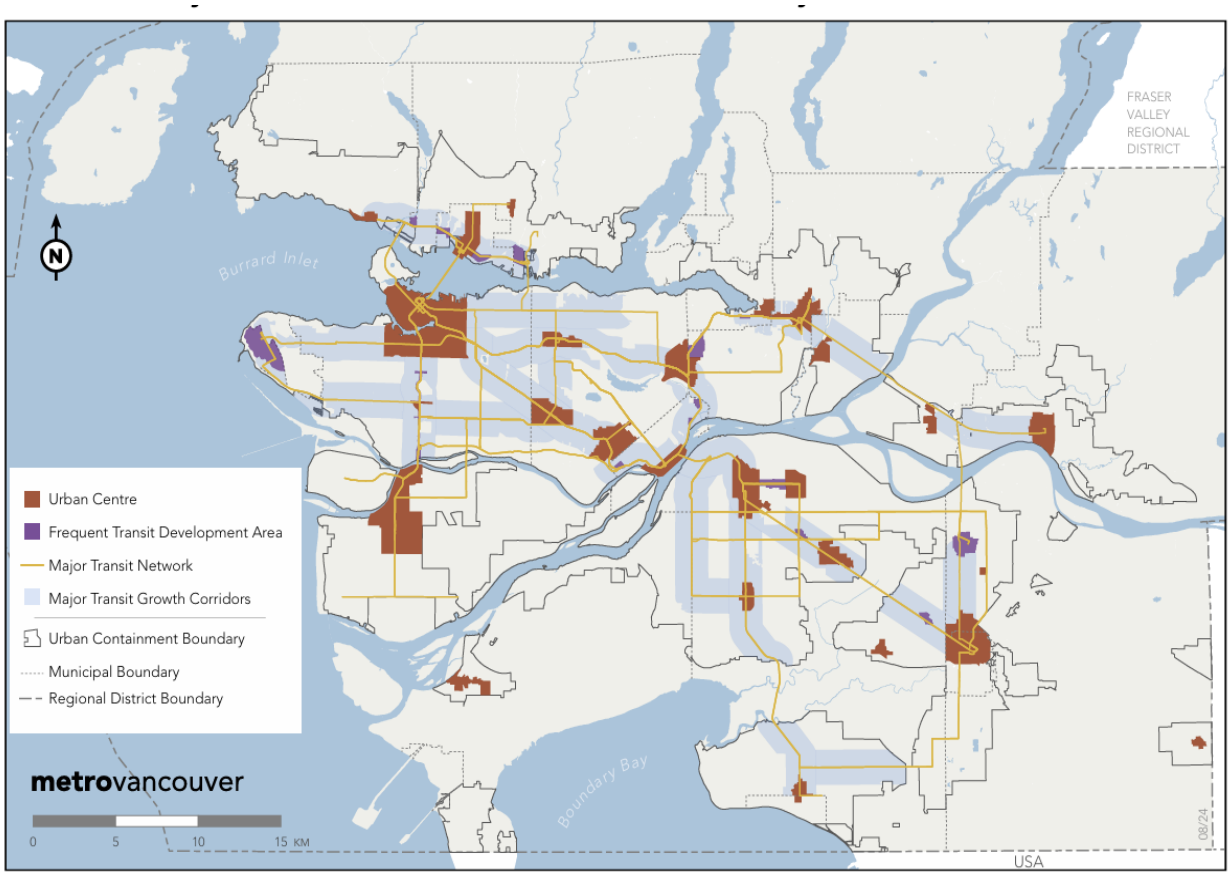

Figure 2-12. Major Transit growth corridors and major transit network (Metro Vancouver Regional District, 2022).

- **The Trade-Oriented Lands Overlay** identifies key industrial areas critical for regional, national, and global goods movement, according to Metro Vancouver Regional District (2022). These areas are protected and enhanced to support the region's economic role as a gateway for trade, as outlined by Metro Vancouver Regional District (2022).

- **The Natural Resource Areas Overlay** acknowledges provincially sanctioned natural resource activities occurring within conservation zones, based on Metro Vancouver Regional District (2022). It aims to balance the use of natural resources with the preservation of ecological values and long-term sustainability, according to Metro Vancouver Regional District (2022).

D) Regional Growth Projections

Metro Vancouver employs population, housing, and employment growth projections as essential tools to guide regional planning, regarding Metro Vancouver Regional District (2022). The Metro 2050 strategy anticipates that by the year 2050, the region will grow by approximately one million people, which will require the development of about 500,000 new housing units and the creation of roughly 500,000 new jobs, as outlined by Metro Vancouver Regional District (2022). This projected growth is planned to be concentrated in Urban Centers and FTDAs to promote complete, walkable, and transit-connected communities, according to Metro Vancouver Regional District (2022). Furthermore, demographic trends such as an aging population will significantly influence the types of housing and services required in the future, based on Metro Vancouver Regional District (2022). Employment growth is expected to be driven largely by commercial services, public administration, and other strategically important sectors aligned with the region's long-term economic development goals, as noted by Metro Vancouver Regional District (2022).

Metro Vancouver Regional Planning prepared updated growth projections for the period 2021 to 2050, focusing on population, dwelling units, and employment. The projections are presented under three scenarios: medium growth (MG) **(Figure 2-13)**, which serves as the baseline reference, high growth (HG) **(Figure 2-14)**, which assumes higher immigration and fertility rates, and low growth (LG) **(Figure 2-15)**, which assumes lower rates. Housing and employment forecasts are directly informed by these population scenarios while maintaining consistent assumptions. The results are summarized by decade and presented at the regional, sub-regional, and municipal scales, with detailed tables outlining projections for each growth scenario. (Metro Vancouver Regional District, 2023)

MEDIUM GROWTH SCENARIO	2021	2030	2040	2050
Metro Vancouver Regional Total	2,784,300	3,323,100	3,808,100	4,210,400
BURRARD PENINSULA Sub-Region	1,074,800	1,279,900	1,456,700	1,600,200
City of Burnaby	261,810	310,060	353,820	388,220
City of New Westminster	82,940	106,580	127,390	142,790
City of Vancouver	697,730	816,360	912,480	990,690
Electoral Area A - UBC	28,910	37,490	45,240	52,410
Electoral Area A - UEL	3,390	9,400	17,730	26,050
NORTH SHORE Sub-Region	210,300	239,100	266,400	292,100
Bowen Island Municipality	4,400	5,160	5,850	6,450
City of North Vancouver	61,550	76,260	89,210	99,080
District of North Vancouver	94,190	103,610	112,830	122,260
District of West Vancouver	48,570	52,190	56,420	61,970
Village of Lions Bay	1,430	1,710	1,960	2,170
Electoral Area A - Howe Sound	110	120	130	140
NORTH EAST Sub-Region	258,100	304,500	348,900	387,400
City of Coquitlam	155,550	189,880	222,210	249,330
City of Port Coquitlam	64,260	71,650	78,680	84,820
City of Port Moody	34,980	39,280	44,140	49,070
Village of Anmore	2,460	2,780	3,040	3,290
Village of Belcarra	700	750	750	780
Electoral Area A - Indian Arm/Pitt Lake	110	120	130	140
RIDGE MEADOWS Sub-Region	115,300	137,300	157,900	176,100
City of Maple Ridge	95,110	114,300	132,130	147,850
City of Pitt Meadows	20,200	23,030	25,740	28,220
SOUTH OF FRASER – EAST Sub-Region	789,300	970,100	1,138,100	1,276,600
City of Langley	30,330	36,300	41,800	46,480
City of Surrey	597,260	734,040	859,150	959,750
City of White Rock	22,580	25,770	29,240	32,560
Township of Langley	139,010	173,880	207,760	237,700
Electoral Area A - Barnston Island	120	130	140	150
SOUTH OF FRASER – WEST Sub-Region	336,600	392,300	440,200	478,000
City of Delta	113,090	127,850	141,780	154,550
City of Richmond	221,180	257,980	288,530	311,240
Tsawwassen First Nation	2,360	6,470	9,870	12,220

Figure 2-13. Population projection - Medium Growth Scenario: The Medium Growth (MG) scenario represents the baseline projection for Metro Vancouver from 2021 to 2050, reflecting moderate assumptions for population. It provides a reference point against which higher or lower growth scenarios can be compared (Metro Vancouver Regional District, 2023).

HIGH GROWTH SCENARIO	2021	2030	2040	2050
Metro Vancouver Regional Total	2,784,300	3,337,700	3,881,000	4,394,400
BURRARD PENINSULA Sub-Region	1,074,800	1,285,400	1,484,700	1,669,700
City of Burnaby	261,810	311,510	361,630	408,150
City of New Westminster	82,940	107,080	129,720	148,500
City of Vancouver	697,730	819,870	929,780	1,033,010
Electoral Area A - UBC	28,910	37,560	45,740	53,660
Electoral Area A - UEL	3,390	9,420	17,840	26,340
NORTH SHORE Sub-Region	210,300	240,000	271,100	303,900
Bowen Island Municipality	4,400	5,170	5,900	6,550
City of North Vancouver	61,550	76,660	90,940	103,230
District of North Vancouver	94,190	103,980	114,640	126,830
District of West Vancouver	48,570	52,340	57,490	64,930
Village of Lions Bay	1,430	1,710	1,980	2,230
Electoral Area A - Howe Sound	110	120	130	140
NORTH EAST Sub-Region	258,100	305,700	355,300	404,000
City of Coquitlam	155,550	190,700	226,520	260,630
City of Port Coquitlam	64,260	71,940	79,920	87,850
City of Port Moody	34,980	39,440	44,930	51,210
Village of Anmore	2,460	2,790	3,070	3,390
Village of Belcarra	700	750	750	800
Electoral Area A - Indian Arm/Pitt Lake	110	120	130	140
RIDGE MEADOWS Sub-Region	115,300	137,900	160,000	181,400
City of Maple Ridge	95,110	114,760	133,940	152,300
City of Pitt Meadows	20,200	23,120	26,090	29,100
SOUTH OF FRASER – EAST Sub-Region	789,300	974,800	1,161,500	1,336,400
City of Langley	30,330	36,500	42,600	48,440
City of Surrey	597,260	737,730	878,290	1,009,050
City of White Rock	22,580	25,840	29,580	33,440
Township of Langley	139,010	174,650	210,850	245,360
Electoral Area A - Barnston Island	120	130	140	150
SOUTH OF FRASER – WEST Sub-Region	336,600	393,900	448,400	499,000
City of Delta	113,090	128,350	144,220	160,750
City of Richmond	221,180	259,020	294,270	325,970
Tsawwassen First Nation	2,360	6,480	9,900	12,280

Figure 2-14 Population projection – High Growth Scenario: The High Growth (HG) scenario represents a projection for Metro Vancouver from 2021 to 2050 that assumes higher immigration and fertility rates. It shows the potential population if growth is above the baseline reference (Metro Vancouver Regional District, 2023).

LOW GROWTH SCENARIO	2021	2030	2040	2050
Metro Vancouver Regional Total	2,784,300	3,306,600	3,713,400	3,980,600
BURRARD PENINSULA Sub-Region	1,074,800	1,273,500	1,419,800	1,513,200
City of Burnaby	261,810	308,380	343,460	363,170
City of New Westminster	82,940	106,020	124,380	135,660
City of Vancouver	697,730	812,360	889,810	937,840
Electoral Area A - UBC	28,910	37,400	44,580	50,830
Electoral Area A - UEL	3,390	9,380	17,570	25,690
NORTH SHORE Sub-Region	210,300	238,000	260,300	277,300
Bowen Island Municipality	4,400	5,150	5,800	6,320
City of North Vancouver	61,550	75,820	87,000	93,920
District of North Vancouver	94,190	103,200	110,510	116,590
District of West Vancouver	48,570	52,010	54,990	58,230
Village of Lions Bay	1,430	1,700	1,920	2,090
Electoral Area A - Howe Sound	110	120	130	140
NORTH EAST Sub-Region	258,100	303,000	340,700	366,700
City of Coquitlam	155,550	188,960	216,590	235,200
City of Port Coquitlam	64,260	71,330	77,120	81,060
City of Port Moody	34,980	39,100	43,110	46,400
Village of Anmore	2,460	2,770	2,990	3,170
Village of Belcarra	700	750	740	760
Electoral Area A - Indian Arm/Pitt Lake	110	120	130	140
RIDGE MEADOWS Sub-Region	115,300	136,700	155,200	169,500
City of Maple Ridge	95,110	113,810	129,930	142,410
City of Pitt Meadows	20,200	22,930	25,300	27,130
SOUTH OF FRASER – EAST Sub-Region	789,300	964,800	1,107,900	1,202,200
City of Langley	30,330	36,080	40,790	44,080
City of Surrey	597,260	729,840	834,170	898,170
City of White Rock	22,580	25,690	28,810	31,470
Township of Langley	139,010	173,060	203,980	228,360
Electoral Area A - Barnston Island	120	130	140	150
SOUTH OF FRASER – WEST Sub-Region	336,600	390,500	429,400	451,700
City of Delta	113,090	127,290	138,670	146,870
City of Richmond	221,180	256,770	280,910	292,660
Tsawwassen First Nation	2,360	6,460	9,840	12,150

Figure 2-15 Population projection – Low Growth Scenario: The Low Growth (LG) scenario represents a projection for Metro Vancouver from 2021 to 2050 that assumes lower immigration and fertility rates. It shows the potential population if growth is below the baseline reference (Metro Vancouver Regional District, 2023).

2.4 Detailed Analysis of Metro 2050's Five Strategic Goals

2.4.1 Goal 1: Create a compact urban area

2.4.1.1 Definition and Purpose:

The first goal of Metro Vancouver's Regional Growth Strategy is to create a compact urban area by focusing development within a clearly defined Urban Containment Boundary (UCB). This boundary serves as a planning tool that distinguishes urban from non-urban areas, helping to structure future growth in a way that is both sustainable and livable (Metro Vancouver, 2022).

The primary purpose of this goal is to limit urban sprawl, which has several negative consequences. Sprawling development leads to the loss of natural landscapes, requires costly and inefficient infrastructure such as extended sewer systems and transit services, contributes to air pollution and greenhouse gas emissions, and can negatively impact both mental and physical health (Metro Vancouver, 2022). By focusing development within a compact area, the region can minimize these harms while promoting healthier, more efficient, and more resilient communities.

This goal also aims to protect Rural, Agricultural, Conservation, and Recreation lands by avoiding unnecessary expansion into these areas. Instead, growth is to be concentrated in designated Urban Centers and Frequent Transit Development Areas (FTDAs), which are strategically located along Major Transit Growth Corridors. These areas are prioritized for higher-density residential and commercial development, mixed-use buildings, and transit-oriented urban forms that reduce car dependency (Metro Vancouver, 2022).

Furthermore, the creation of complete communities where people can live, work, learn, and play is a central objective. These communities are walkable, connected by transit, and provide easy access to a wide range of services and amenities. They foster a strong sense of place, encourage social connection, and improve community resilience (Metro Vancouver, 2022).

Equity is another core component. The strategy emphasizes the importance of managing growth in an equitable way, ensuring that all residents regardless of age, income, or background have access to healthy environments, opportunities, and services. This involves recognizing and addressing the specific needs of different communities, and intentionally working to avoid reinforcing inequality during the growth process (Metro Vancouver, 2022).

Strategies to Achieve a Compact Urban Area

Metro 2050 outlines four integrated strategies:

Strategy 1.1: Contain urban development within the Urban Containment Boundary

Strategy 1.1 focuses on limiting urban development, including housing and job growth, within a defined Urban Containment Boundary (UCB) **(Figure 2-16).**

POPULATION						
SUB-REGIONS		2016	2020	2030	2040	2050
	Metro Vancouver Total	**2,593,200**	**2,767,000**	**3,206,100**	**3,564,100**	**3,836,800**
	Burrard Peninsula	1,014,800	1,064,900	1,206,000	1,311,900	1,387,800
	North Shore	199,600	207,600	236,400	254,100	271,000
	Northeast	245,300	263,100	316,100	363,800	396,500
	Ridge Meadows	105,500	110,800	127,200	142,800	155,000
	South of Fraser – East	713,400	782,600	939,300	1,077,400	1,185,300
	South of Fraser – West	314,500	337,900	381,100	414,100	441,300
DWELLING UNITS						
SUB-REGIONS		2016	2020	2030	2040	2050
	Metro Vancouver Total	**1,000,500**	**1,075,500**	**1,287,700**	**1,460,500**	**1,589,400**
	Burrard Peninsula	435,900	462,900	533,200	584,600	623,400
	North Shore	79,600	83,500	100,500	111,800	121,900
	Northeast	90,000	96,800	124,800	148,600	165,700
	Ridge Meadows	38,800	42,200	50,000	56,800	61,900
	South of Fraser – East	242,800	267,000	332,400	395,300	441,100
	South of Fraser – West	113,500	123,100	146,700	163,400	175,400
EMPLOYMENT						
SUB-REGIONS		2016	2020	2030	2040	2050
	Metro Vancouver Total	**1,342,200**	**1,420,100**	**1,621,600**	**1,775,300**	**1,883,600**
	Burrard Peninsula	643,700	671,700	739,500	786,500	820,000
	North Shore	89,400	94,000	107,200	115,900	123,200
	Northeast	92,000	98,900	120,500	137,500	148,200
	Ridge Meadows	35,800	38,600	45,500	51,200	55,100
	South of Fraser – East	287,100	309,500	372,900	426,600	465,200
	South of Fraser – West	194,100	207,500	236,000	257,700	271,900

Figure 2-16. Regional and sub-regional projections by decade 2050 (Metro Vancouver Regional District, 2022).

This approach aims to reduce urban sprawl, which can consume natural landscapes and require costly infrastructure extensions such as sewer, water, and transit services. Containing growth within the UCB promotes efficient infrastructure provision, protects important rural, agricultural, and conservation

lands from scattered development, and supports greenhouse gas emission reductions by encouraging trip reduction and avoidance. Maintaining this boundary also helps preserve lands vital for food production and carbon storage (Metro Vancouver, 2022).

Metro Vancouver will:

Metro Vancouver will direct the Greater Vancouver Sewerage and Drainage District (GVS&DD) to restrict regional sewer connections to lands designated as Rural, Agricultural, or Conservation and Recreation, except under specific conditions such as mitigating public health risks or where connections would not affect the boundary's goals. The region will accept Regional Context Statements ensuring growth occurs within the UCB and work collaboratively with Member Jurisdictions to manage growth impacts on regional sewer systems. Metro Vancouver will also coordinate with provincial and federal governments, TransLink, and adjacent regions to enhance interregional transportation connections and ensure that new infrastructure projects consider risks like sea level rise and flooding. Engagement with First Nations will be prioritized to incorporate their development plans into the regional strategy. The region will advocate senior governments to direct urban, commercial, and institutional investments to areas inside the UCB and to prevent transportation investments that encourage growth outside the boundary (Metro Vancouver, 2022).

Member Jurisdictions will:

Member Jurisdictions are responsible for adopting Regional Context Statements that clearly map the Urban Containment Boundary and outline population, housing, and employment projections consistent with regional targets emphasizing growth within the boundary. They must maintain regular communication with Metro Vancouver's Liquid Waste and Water Services to coordinate major developments and sewer planning. Jurisdictions are also expected to align local land use policies with regional economic strategies and implement measures to minimize negative impacts, such as environmental noise, near ports and airports (Metro Vancouver, 2022).

TransLink will:

TransLink will continue to support a compact urban form by aligning its transportation planning, strategies, and investments with the goal of containing growth within the Urban Containment Boundary. The agency will avoid providing infrastructure that facilitates the dispersal of housing and employment beyond the boundary, thereby reinforcing sustainable land use and transportation integration (Metro Vancouver, 2022).

Strategy 1.2: Focus growth in Urban Centers and Frequent Transit Development Areas

This strategy aims to direct population and employment growth into designated Urban Centers and Frequent Transit Development Areas (FTDAs) within Major Transit Growth Corridors. By concentrating development in these areas, the region can reduce greenhouse gas emissions through promoting sustainable transportation options and minimizing travel distances for daily activities. Compact development also enhances land and energy efficiency and encourages walkable, vibrant, mixed-use communities with access to a variety of services and amenities. Identifying FTDAs within transit corridors ensures growth occurs where frequent, high-quality transit service is available, supporting the integration of land use and transportation planning.

Metro Vancouver will:

Metro Vancouver will collaborate with Member Jurisdictions and other agencies to promote and incentivize the location of major commercial, office, retail, and institutional developments in Urban Centers. The regional authority will support transportation network development to facilitate growth in these areas and maintain up-to-date mapping of Urban Centers, FTDAs, and transit corridors. Metro Vancouver will monitor progress toward regional growth targets and work with First Nations to encourage transit-oriented, climate-resilient development on their lands. Additionally, the region will advocate senior governments to align their investments and planning policies with the Regional Growth Strategy, ensuring that public facilities, housing, and transit infrastructure support growth in Urban Centers and FTDAs, and avoid areas at risk from natural hazards.

Member Jurisdictions will:

Local governments are expected to adopt Regional Context Statements that detail their growth projections for dwelling units and employment within Urban Centers and FTDAs, aligned with regional targets. They must implement policies to manage growth and encourage higher-density development in these areas, supporting transit use by adjusting parking requirements and promoting infill development. Member jurisdictions will prioritize infrastructure and amenity investments in Urban Centers and FTDAs and take measures to mitigate negative health impacts from busy roadways. They will also coordinate long-term growth and transportation planning with adjacent municipalities, First Nations, and regional agencies to ensure a cohesive regional development approach.

TransLink will:

TransLink's role is to develop and implement transportation plans that support the Regional Growth Strategy's goals by expanding and improving transit networks in Urban Centers and FTDAs. This includes collaboration with local governments and stakeholders to ensure transit infrastructure avoids hazard-prone areas, and where unavoidable, integrates risk mitigation strategies. TransLink will also enhance walking and biking infrastructure to improve connectivity within and between growth areas, facilitating safe, efficient movement of people, goods, and services. Furthermore, TransLink will incorporate affordable rental housing considerations into its land holdings and development planning to support complete, accessible communities.

This table provides an overview of the function and location of the different types of Urban Centers and FTDAs. It also includes planning guidance about the Urban Center and FTDA attributes that members are expected to plan for and work towards overtime. (Metro Vancouver, 2022) **(Figure 2-17)**.

CENTRE TYPE	FUNCTION	GENERAL EXPECTATIONS / ATTRIBUTES	LOCATION
Urban Centre - All *(applies to Metro Core, Surrey Metro Centre, RCCs, HG-MTCs, and MTCs)*	*Primary hubs of activity.* Accommodates significant regional residential and employment growth and contributes to targets. Provides a range of amenities and services. Major Road Network access. Primary locations for Major Trip-Generating Uses.	Primary focal points for concentrated growth in the region. Complete communities with a balanced mix of housing, employment, services, and amenities. High intersection densities. High quality, accessible walking, cycling, and rolling environment. Provision of transit priority measures and other transit-supportive road infrastructure and operations. Managed parking supply. Parks, green spaces, and public open spaces. The supply of affordable rental housing is protected and expanded. Industrial uses are maintained.	Locations identified on Map 2
Metro Core - Vancouver	*The Region's downtown.* Region-serving uses (central business district). Accommodates significant levels of regional employment and residential growth. Principal centre of business, employment, cultural, and entertainment activity for the region.	Region-serving uses. Institutional, community, cultural, and entertainment uses. Office uses. High degree of cycling connectivity and cycling network completeness. High walkability index score. Provision of transit priority measures and other transit-supportive road infrastructure and operations.	Vancouver
Metro Centre - Surrey	*Centre of activity South of the Fraser River.* Region-serving uses. Accommodates significant levels of regional employment and residential growth.	High degree of cycling connectivity and cycling network completeness. High walkability index score. Office uses. Provision of transit priority measures and other transit-supportive road infrastructure and operations. Institutional, community, cultural, and entertainment uses.	Surrey
Regional City Centre	*Sub-regional hub of activity.* Accommodates significant levels of sub-regional residential and employment growth.	Sub-region serving uses (hospital, post-secondary). Office uses. Sub-regional-scale employment, services, business and commercial activities. Major institutional, community, cultural and entertainment uses. High and medium density forms of housing (in General Urban only), including affordable housing choices. Existing frequent transit services. Provision of transit priority measures and other transit-supportive road infrastructure and operations. Minimum density of 60-350 Jobs + People/hectare.	Locations on the Major Transit Network.

High Growth Municipal Town Centre	*Centre of activity for one or more Member Jurisdictions.* Accommodates significant levels of municipal employment and residential growth.	Municipally-serving shops, services, uses, and amenities. Higher density commercial uses. Higher density residential uses, (in General Urban only) including affordable and rental options. Minimum density of 60-200 Jobs + People/hectare.	Maximum 1,200 metres from a Major Transit Network station. Not in an area with known and unmitigated natural hazards. Locations with high regional accessibility to jobs.
Municipal Town Centre	*Centre of activity for one or more Member Jurisdictions.* Accommodates municipal residential and employment growth.	Municipal focus for community and cultural activities. Services, shops, uses, amenities, and activities oriented to the local needs of the surrounding communities. Employment, services, business and commercial activities, typically serving the municipal or local area. Institutional, community, cultural, and entertainment uses. Medium to high density forms of residential uses, including affordable options. Minimum density of 20-150 Jobs + People/hectare.	Locations on the Major Transit Network.
Frequent Transit Development Area (FTDA)	*Location for transit-oriented development and mixed-uses in alignment with the Major Transit Growth Corridors.* Accommodates additional employment and residential growth. Locations for multi-unit housing including affordable and rental housing. Locations for Major Trip-Generating Uses.	Transit-oriented employment and / or housing growth. Supply of affordable and rental housing is protected and expanded. A range of multi-unit housing forms. Development intensity scales to the frequency and capacity of the transit service. Walkable and bike-friendly urban design. Managed parking supply. Transit priority measures. Provides appropriate noise, vibration, and air quality mitigation measures. Parks, green spaces, and public open spaces. Industrial uses are maintained.	Located in appropriate locations within the Major Transit Growth Corridors. The shape of an FTDA is tailored to the stop spacing distance of the transit service. Distance of FTDA boundaries to the transit stops are scaled to the frequency and capacity of the service provided; the greater the service capacity, the greater the radius.
General Guidance on Frequent Transit Development Areas	*Corridors* Linear FTDAs that support frequent transit corridors that have generally shorter stop spacing. Densities and uses to support bus- based frequent and rapid transit.	Generally linear-shaped geography along a transit corridor. Location for medium density housing forms, especially wood-frame construction. Location for affordable and rental housing and employment growth. Minimum density of 35-80 Jobs + People/hectare.	Located along segments of the MTGC with shorter stop spacing. No more than 1,000 metres from the Major Transit Growth Corridor centreline. Boundary radius scaled to the level of transit service capacity and frequency. 800 metre radius recommended for frequent bus.
	Station Areas Nodal FTDAs that support transit stations. Generally, located where stations are further apart. Accommodates significant residential and employment growth including rental and affordable housing. Densities and uses to support high-capacity rapid and frequent transit.	Generally nodal-shaped around a transit station. May include higher density forms supportive of higher capacity transit service. Office and employment uses. Additional parking management to support transit and active transportation. Minimum density of 60-350 Jobs + People/hectare.	Located along higher capacity and higher frequency transit service with wider stop spacing. No more than 1,000 metres from an existing Major Transit Network Station. Boundary radius scaled to the level of transit service capacity and frequency.

Figure 2-17. Guidelines for urban centers and frequent transit development areas (Metro Vancouver Regional District, 2022).

Strategy 1.3: Develop resilient, healthy, connected, and complete communities with a range of services and amenities

Strategy 1.3 aims to create complete communities, especially within Urban Centers, that provide a mix of land uses, affordable services, and amenities accessible to residents of all ages and abilities. This approach enables people to meet most daily needs within their neighborhood by walking, rolling, or using transit, thereby supporting trip reduction, promoting healthier lifestyles, addressing climate change, and fostering equitable access to key community resources. Complete communities also build resilience by encouraging social inclusion and connection (Metro Vancouver, 2022).

Metro Vancouver will:

Metro Vancouver will support Member Jurisdictions, First Nations, and other agencies through regional strategies, research, and best practices to develop resilient, healthy, connected, and complete communities. This includes promoting access to affordable community services, childcare, healthy food, and public green spaces, reducing greenhouse gas emissions, enhancing resilience to climate change and natural hazards, and advancing social equity and universal accessibility. The region will provide technical assistance, data, and research to improve air quality, reduce emissions, and better understand health and social equity impacts related to land use and infrastructure decisions. Metro Vancouver will also collaborate with health authorities, academic institutions, and researchers to promote neighborhood designs that encourage walking, cycling, social activity, and equitable access to green spaces. The region will monitor access to community services and advocate senior governments to ensure timely provision of social amenities and locate public facilities in transit-accessible Urban Centers (Metro Vancouver, 2022).

Member Jurisdictions will:

Member Jurisdictions are tasked with adopting Regional Context Statements that support compact, mixed-use communities oriented towards transit, walking, cycling, and rolling. They will prioritize locating community, cultural, recreational, institutional, health, social service, education, and childcare facilities, as well as local retail uses, within Urban Centers or transit-accessible areas. Jurisdictions will provide and encourage public spaces and placemaking amenities to support social connections for all ages and abilities. They will address health and climate-related risks by ensuring equitable access to recreational and green spaces and safe, accessible active transportation environments. Additionally, jurisdictions are expected to support food security by including community gardens and local food markets in accessible locations. When planning new neighborhoods or infrastructure, they will incorporate formal health and social impact assessments to mitigate negative effects and promote

inclusivity and safety through design. Recognition of Indigenous and other cultures may also be incorporated into community planning where appropriate (Metro Vancouver, 2022).

TransLink will:

TransLink will provide equitable and accessible transit services to both communities and employment areas. The agency will continue improving sustainable mobility options beyond Urban Centers and Frequent Transit Development Areas, focusing on neighborhoods classified under the General Urban land use designation, thereby supporting a connected and healthy regional transportation network (Metro Vancouver, 2022).

Strategy 1.4: Protect Rural lands from urban development

Strategy 1.4 emphasizes the protection of Rural designated lands, which are situated outside the Urban Containment Boundary and are intended to remain free from urban forms of development. By containing growth within the Urban Containment Boundary, this strategy ensures the conservation of natural, rural, and agricultural areas, while also promoting the efficient and cost-effective delivery of infrastructure and community services such as sewerage and transit. Urban containment supports the reduction of greenhouse gas emissions and enhances opportunities for natural carbon sequestration through preserved ecosystems (Metro Vancouver, 2022).

Metro Vancouver will:

Metro Vancouver will direct the Greater Vancouver Sewerage and Drainage District (GVS&DD) to restrict connections to regional sewerage services for lands designated as Rural. Exceptions to this rule may be permitted in cases where the Metro Vancouver Regional District (MVRD) Board determines that such connections are essential either to prevent or address public health or environmental contamination risks, or when connections will not significantly undermine the protection of Rural lands from urban development. Additionally, Metro Vancouver will accept Regional Context Statements that reinforce the protection of Rural lands from urban development and that work towards the objectives of this strategy (Metro Vancouver, 2022).

Member Jurisdictions will:

Based on Metro Vancouver (2022) Member Jurisdictions are responsible for adopting Regional Context Statements that clearly identify Rural lands and their boundaries in alignment with regional mapping. They must limit development within these areas to scales, forms, and densities compatible with the Rural designation and capable of supporting on-site sewer servicing. Jurisdictions are expected to specify allowable densities, and land uses consistent with sewer servicing guidelines and prioritize agricultural uses within the Agricultural Land Reserve (ALR), while also supporting agriculture outside the ALR where appropriate. Furthermore, they will support the protection, enhancement, restoration, and expansion of ecological systems to maintain ecosystem integrity, enable connectivity, increase natural carbon sinks, and adapt to climate change impacts.

2.4.2 Goal 2: Support a Sustainable Economy

2.4.2.1 Definition and Purpose:

Based on Metro Vancouver (2022), this goal of the Regional Growth Strategy focuses on supporting a sustainable economy by leveraging the region's existing economic strengths to ensure future prosperity. The strategy emphasizes support for diverse commercial and industrial sectors, fostering employment growth, and promoting well-designed regional places with an emphasis on public space and transit connectivity. Recognizing the region's critical role as a provincial and national gateway, the strategy integrates regional land use designations with economic and transportation policies to sustain economic vitality.

According to Metro Vancouver (2022), Urban Centers distributed throughout the region provide strategic locations for commercial activities, services, and employment uses close to residential areas. This spatial organization facilitates economic and transportation efficiencies by encouraging compact, transit-oriented development. The design of these Urban Centers supports a strong sense of place, promotes a positive civic image, and enhances quality of life through diverse housing types and amenities, as noted by Metro Vancouver (2022). The strategy discourages the dispersal of major employment and Major Trip-Generating uses outside of Urban Centers and Frequent Transit Development Areas to support jobs proximate to homes and accessible by sustainable transportation modes.

Based on Metro Vancouver (2022), the region faces significant challenges related to industrial land supply, as growing population and economic activity increase demand, while market pressures favor conversion of industrial lands to non-industrial uses such as office, retail, and residential developments. Policies emphasize protecting and intensifying the use of industrial lands, including trade-oriented

lands. These lands support a variety of economic functions including container storage, freight forwarding, warehousing, manufacturing, and repair services, all critical to maintaining a resilient supply chain and supporting local and global economies. Industrial densification and intensification are promoted for efficient land use, business expansion, job creation, clustering of operations, and enhanced transportation system efficiency (Metro Vancouver, 2022).

Regarding Metro Vancouver (2022), non-traditional industrial economic activities that are not viable within Urban Centers or Frequent Transit Development Areas are accommodated in Employment areas, complementing Urban Centers and industrial lands. The presence of major educational and medical institutions further strengthens the regional economy by providing research, innovation, and incubation of new industries, as noted by Metro Vancouver (2022).

Based on Metro Vancouver (2022), agriculture is recognized as a vital sector, essential for local food production and the regional economy. The strategy highlights the importance of protecting agricultural land through legislation and support for economically viable farming operations. Climate change impacts, including temperature shifts, altered precipitation, flooding, and extreme weather, pose significant risks to agricultural productivity. Policies focus on enhancing agricultural resilience through infrastructure improvements, climate adaptation measures, and protection of ecosystem services, as emphasized by Metro Vancouver (2022).

According to Metro Vancouver (2022), equitable growth management is integrated throughout the strategy, emphasizing sustainable planning practices that promote economic accessibility and benefit diverse populations. This includes support for employment growth, efficient use of industrial lands, sustainable transportation systems, and climate-smart agricultural practices. The strategy also acknowledges the need to mitigate disproportionate impacts on ecosystems, communities, and vulnerable groups, aiming to foster a resilient and inclusive regional economy.

2.4.2.2 Strategies to Support a Sustainable Economy

Strategy 2.1: **Promote land development patterns that support a diverse regional economy and employment opportunities close to where people live**

Based on Metro Vancouver (2022), this strategy emphasizes the importance of locating economic and employment activities such as post-secondary institutions, medical facilities, retail centers, business parks, and transportation terminals close to residential areas and transit networks. By integrating these activities with Urban Centers and Industrial lands, the region supports a diverse economy while fostering complete communities. Locating jobs near homes reduces social inequities, lowers energy

consumption, decreases greenhouse gas emissions through reduced vehicle travel, and encourages active transportation, as noted by Metro Vancouver (2022).

According to Metro Vancouver (2022), Metro Vancouver will provide regional utility infrastructure to support economic functions and efficient employment patterns. The region collaborates with federal, provincial, municipal, First Nations, and private sector partners through initiatives like Invest Vancouver to attract strategic investments and advance shared prosperity. Metro Vancouver also explores fiscal measures to incentivize employment growth in designated Urban Centers, Frequent Transit Development Areas, and Industrial and Employment lands, while advocating for tax reforms that promote sound land use decisions. Furthermore, the region works with neighboring regional districts on economic and transportation initiatives and accepts Regional Context Statements aligned with supporting economic activity consistent with land use designations. The region advocates for sustainable transportation infrastructure investments and encourages airport and port authorities to optimize surplus lands for industrial uses, transition to low-emission goods movement, and develop climate adaptation strategies. Support for existing and emerging industries through investment, procurement, tax incentives, and skill development programs is also advanced (Metro Vancouver, 2022).

Regarding Metro Vancouver (2022), Member Jurisdictions adopt Regional Context Statements that support appropriate economic activities and built forms consistent with Urban Centers, Frequent Transit Development Areas, Industrial, and Employment lands. Policies encourage the development and expansion of large-scale office and retail uses in Urban Centers, with smaller-scale commercial uses in Frequent Transit Development Areas, utilizing zoning, density bonuses, and financial incentives. Conversely, jurisdictions discourage major commercial and institutional developments outside designated growth areas to maintain compact, transit-supportive economic growth (Metro Vancouver, 2022).

Strategy 2.2: Protect the supply and enhance the efficient use of industrial land

Based on Metro Vancouver (2022), this strategy acknowledges the critical role that Industrial lands play in supporting a diverse and resilient regional economy. Industrial lands provide the necessary space for businesses to operate efficiently, facilitate job creation, and reduce commuting and goods transportation costs. Recognizing the vulnerability of these lands due to urban pressures and market demands, the strategy emphasizes policies that both protect the limited supply of Industrial and Employment lands and promote their efficient use, as noted by Metro Vancouver (2022).

According to Metro Vancouver (2022), Metro Vancouver monitors the supply, demand, and utilization of Industrial land to assess whether the region has sufficient capacity to meet economic growth needs. The region collaborates with the Province, Member Jurisdictions, and other agencies to investigate taxation policies that support Industrial development and densification, seeking to incentivize efficient land use. Additionally, Metro Vancouver, together with Member Jurisdictions, develops implementation guidelines addressing emerging industrial trends such as urban industry, e-commerce, new technologies, and design innovations. The region also engages key stakeholders, including TransLink, the Port of Vancouver, the Vancouver International Airport Authority, the Ministry of Transportation and Infrastructure, and the Agricultural Land Commission, to gather input on proposed amendments affecting Industrial and Employment lands (Metro Vancouver, 2022).

Regarding Metro Vancouver (2022), Member Jurisdictions are expected to adopt Regional Context Statements that clearly delineate Industrial and Employment lands and their boundaries, consistent with regional mapping. These statements identify Trade-Oriented lands, designating specific permitted uses that support logistics, warehousing, distribution, and transportation functions essential to inter-regional and international trade. Policies define and protect Industrial uses while limiting non-industrial uses incompatible with the intended land function, such as large-format retail and residential uses, except for limited accessory uses like caretaker units. Jurisdictions are encouraged to foster intensification and improved utilization of Industrial lands by removing unnecessary regulatory barriers and updating parking and loading requirements to reflect evolving industrial activities and transit service improvements (Metro Vancouver, 2022).

Strategy 2.3: Protect the supply of agricultural land and strengthen agricultural viability

Based on Metro Vancouver (2022), this strategy emphasizes the essential role of protecting agricultural lands to ensure the ongoing viability of the agricultural sector and the overall resilience of the region. Agricultural land preservation is challenged by competing demands for residential, industrial, and commercial development. Strong multi-jurisdictional collaboration, particularly with the Agricultural Land Commission, is crucial to safeguard these lands primarily for food production and to support climate change adaptation measures (Metro Vancouver, 2022).

According to Metro Vancouver (2022), Metro Vancouver directs the Greater Vancouver Sewerage and Drainage District (GVS&DD) to generally restrict connections to regional sewer services for Agricultural designated lands, with exceptions only under specific circumstances such as mitigating public health risks or where no negative impact on agricultural land protection would occur. The region

actively monitors the status of agricultural lands and local agricultural production, assessing their contribution to ecosystem services in collaboration with the Province and Agricultural Land Commission. Metro Vancouver identifies and pursues strategies to increase the amount of actively farmed agricultural land, enhance economic viability, and minimize land use conflicts, working closely with Member Jurisdictions and provincial agencies (Metro Vancouver, 2022).

Regarding Metro Vancouver (2022), Member Jurisdictions adopt Regional Context Statements that clearly identify Agricultural lands within their jurisdictions, including those inside the ALR. They implement policies and programs to increase markets and distribution networks for local food, thereby strengthening agricultural viability and increasing food availability. Policies protect agricultural land supply by assigning appropriate designations, discouraging incompatible land uses, supporting consolidation of small parcels, and minimizing fragmentation. Climate adaptation strategies are included, addressing impacts such as flooding and sea-level rise, while supporting necessary infrastructure improvements for irrigation and drainage. Jurisdictions also protect agricultural land integrity through edge planning measures along the Urban Containment Boundary, including buffers and screening to reduce conflicts with adjacent land uses. Supporting farm-related economic development opportunities benefiting from proximity to agricultural operations is encouraged, aligning local policies with Agricultural Land Commission legislation and regulations. Finally, Member Jurisdictions, in partnership with relevant agencies, promote Agricultural awareness to reinforce the importance of agriculture and local food systems (Metro Vancouver, 2022).

2.4.3 Goal 3: Protect the Environment, Address Climate Change, and Respond to Natural Hazards

2.4.3.1 Definition and Purpose:

Based on Metro Vancouver (2022), the region's natural environment is not only locally vital but globally significant. Metro Vancouver is home to diverse ecosystems such as forests, wetlands, coastal zones, and the Fraser River estuary, which serves as critical habitat for migratory birds and aquatic species. These ecosystems provide essential services, including clean air and water, pollination, carbon storage, flood control, cooling, and culturally significant resources for Indigenous communities (Metro Vancouver, 2022) **(Figure 2-18).**

According to Metro Vancouver (2022), the region's ecological integrity is increasingly threatened by climate change, land development, invasive species, and other human-induced pressures. These challenges reduce nature's ability to provide life-sustaining services and impact community resilience. As temperatures rise, snowpack diminishes, and extreme weather events intensify, the risks posed by

climate change and natural hazards such as drought, flooding, and sea-level rise are becoming more severe. Based on Metro Vancouver (2022), responding to these interconnected threats is urgent. Land use and regional planning must align with natural systems to build healthier, more resilient communities. Strategies under this goal support the region's commitment to achieving carbon neutrality by 2050 and emphasize the importance of urban containment, sustainable transportation, and ecosystem protection in mitigating climate impacts, as noted by Metro Vancouver (2022).

Regarding Metro Vancouver (2022), integrating Indigenous knowledge and equity considerations is essential. Indigenous peoples have long stewarded these lands and possess knowledge systems that can enrich contemporary planning. Equitable climate strategies are needed to address social, health, and financial disparities that may be worsened by the effects of climate change or low-carbon policies (Metro Vancouver, 2022). Based on Metro Vancouver (2022), the region commits to ongoing monitoring and revision of targets and policies to ensure planning remains adaptive, science-based, and responsive to both ecological and societal needs.

Figure 2-18. Ecosystem services provided by healthy ecosystems (Metro Vancouver Regional District, 2022).

2.4.3.2 Strategies to Protect the Environment, Address Climate Change, and Respond to Natural Hazards

Strategy 3.1: Protect and enhance Conservation and Recreation Lands

Based on Metro Vancouver (2022), Strategy 3.1 emphasizes protecting and enhancing conservation and recreation lands, which are essential to supporting biodiversity, maintaining ecological services, and increasing resilience to climate change. Conservation and recreation lands also contribute to overall health and livability by providing accessible spaces for recreation, education, and connection to nature (Metro Vancouver, 2022).

According to Metro Vancouver (2022), the Conservation and Recreation land designation safeguards ecologically and recreationally significant lands from development pressures and ensures their long-term sustainability. These lands help mitigate climate risks, act as natural buffers, and provide residents with outdoor activity and environmental awareness opportunities.

Metro Vancouver (2022) plays a central role in upholding this strategy. It ensures regional sewerage services are not extended to these lands except for critical public health or environmental reasons. The region collaborates with member jurisdictions on long-term plans like the Regional Parks Plan and Greenways Strategy, avoids ecological degradation during infrastructure development, and requires ecological mitigation and restoration when impacts are unavoidable. Metro Vancouver also monitors ecological changes and advocates to senior governments to protect these lands and ensure infrastructure or resource extraction does not compromise ecological values (Metro Vancouver, 2022).

Based on Metro Vancouver (2022), member jurisdictions align local policies and land use plans with the regional Conservation and Recreation designation, identifying designated lands in official plans and applying strong protections to sensitive ecosystems. Local governments prevent fragmentation or degradation and ensure land uses remain limited to conservation, low-impact recreation, environmental education, and select agricultural uses. Buffer zones and development permits are used to manage adjacent land use impacts, as noted by Metro Vancouver (2022).

According to Metro Vancouver (2022), TransLink, while not responsible for land use decisions, is expected to avoid ecosystem disruption in planning or operating transportation infrastructure near conservation lands and implement mitigation and restoration measures to ensure no net loss of ecological function.

Strategy 3.2: Protect, enhance, restore, and connect ecosystems

Based on Metro Vancouver (2022), this strategy envisions protecting at least half the land base to sustain ecosystem functions and human well-being. Achieving this requires collective efforts to protect, restore, and enhance ecosystems, and strategically connect green spaces across urban and rural areas to create a resilient ecological network.

According to Metro Vancouver (2022), expanding the urban tree canopy is crucial for improving climate resilience, intercepting rainwater, reducing urban heat islands, and promoting community health. Metro Vancouver aims to increase protected natural areas from 40% to 50% and grow the urban tree canopy from 32% to 40% by 2050, as noted by Metro Vancouver (2022).

Based on Metro Vancouver (2022), the region implements its Ecological Health Framework, tracking data on sensitive ecosystems, tree canopy coverage, carbon storage, and impervious surfaces. This data guides planning and is shared with local governments. Natural assets and ecosystem services are integrated into regional planning and asset management.

According to Metro Vancouver (2022), Metro Vancouver manages assets and works with local governments, First Nations, and other agencies to protect ecosystems, identify areas vulnerable to climate change, and develop a green infrastructure network that enhances biodiversity and human health. Co-management opportunities with Indigenous communities and the exchange of ecological knowledge are encouraged.

Based on Metro Vancouver (2022), local governments align policies with this vision, including setting ecosystem protection and tree canopy targets, using development permits and conservation covenants, retaining and expanding urban forests, managing invasive species, strengthening green infrastructure, and promoting watershed planning and stormwater management. Advocacy to senior governments focuses on species and ecosystem protection, nature-based climate solutions, invasive species management, and cumulative impact assessment in sensitive areas.

Strategy 3.3: Advance land use, infrastructure, and settlement patterns to reduce energy consumption and GHG emissions

According to Metro Vancouver (2022), this strategy addresses climate change by promoting land use and infrastructure planning that reduces energy consumption and greenhouse gas emissions, supports carbon storage, and improves air quality. Central to the strategy is reducing GHG emissions by 45% below 2010 levels by 2030 and achieving carbon neutrality by 2050.

Based on Metro Vancouver (2022), achieving these goals requires supporting compact urban forms, sustainable transportation networks, energy-efficient higher-density developments, and preserving land that naturally sequesters carbon, such as conservation and agricultural areas. Aligning planning with these principles integrates emissions reduction into urban growth and development.

Metro Vancouver (2022) implements climate and air quality policies, collaborates with senior governments, utilities, First Nations, and the private sector to monitor emissions, air quality, and energy use, and identifies carbon sequestration opportunities. The region provides guidance and best practices to local governments, encourages health impact assessments for major developments, and advocates for building code reforms, zero-emissions construction, electrification, and sustainable transportation initiatives.

According to Metro Vancouver (2022), local governments adopt policies reflecting regional climate goals, integrating emissions reduction into local plans, prioritizing low-carbon development, encouraging active transportation, and investing in transit-oriented infrastructure. Urban Centers and transit corridors are critical nodes to minimize emissions while supporting livability.

Based on Metro Vancouver (2022), TransLink contributes by electrifying its fleet and transitioning to zero-emissions technologies, collaborating with Metro Vancouver and municipalities to align development proposals with transportation and climate objectives.

Strategy 3.4: Advance land use, infrastructure, and settlement patterns to improve resilience to climate change impacts and natural hazards

Based on Metro Vancouver (2022), the region is increasingly vulnerable to climate change impacts and natural hazards, including rising temperatures, sea-level rise, droughts, flooding, wildfires, and earthquakes **(Figure 2-19)**. These risks pose challenges to communities, infrastructure, and ecosystems. Proactive, collaborative, and risk-informed planning integrates climate adaptation and hazard mitigation into land use, infrastructure, and emergency management (Metro Vancouver, 2022).

NATURAL HAZARDS	RELATED CLIMATE CHANGE IMPACTS
Earthquakes	
Tsunamis	Sea level rise
Landslides	More precipitation (fall, winter, and spring)
Floods (pluvial, coastal, riverine)	More precipitation (fall, winter, and spring) Sea level rise Decrease in snowpack
Wildfires	Longer drought periods (summer) Warmer temperatures and extreme heat events Reduced air quality
Erosion	Sea level rise More precipitation (fall, winter, and spring)
Subsidence	Sea level rise
Windstorms and other extreme weather events	Sea level rise More precipitation (fall, winter, and spring)

Figure 2-19. Major natural hazards and climate impacts affecting Metro Vancouver (Metro Vancouver Regional District, 2022).

Based on Metro Vancouver (2022), member jurisdictions adopt Regional Context Statements incorporating policies to reduce climate and hazard risks, including heat and air quality response plans, seismic retrofits, and flood-proofing initiatives. They employ land use controls, hazard-specific development permits, and managed retreat policies while mitigating unavoidable risks. Climate and hazard risk assessments guide planning for new utilities, assets, and services, with integration of emergency management and adaptation frameworks.

According to Metro Vancouver (2022), TransLink supports this strategy by collaborating with Metro Vancouver and member jurisdictions to ensure transportation infrastructure planning addresses climate and hazard risks, maintaining safe, reliable, and sustainable transit services.

2.4.4 Goal 4: Provide Diverse and Affordable Housing Choices

2.4.4.1 Definition and Purpose:

Based on Metro Vancouver (2022), a diverse and affordable housing stock is fundamental to accommodating population growth and supporting the social and economic fabric of the region. Metro Vancouver currently faces significant housing pressures, including escalating costs in both rental and ownership markets, and critically low rental vacancy rates. According to Metro Vancouver (2022), these challenges are compounded by an aging affordable rental housing stock that requires substantial maintenance and renewal, as well as high land and construction costs, particularly near transit corridors where demand is strongest.

Metro Vancouver (2022) notes that the majority renter population predominantly households earning less than 80% of the Regional Median Household Income is increasingly compelled to seek housing outside core urban areas to find affordability. Vulnerable populations, including those experiencing or at risk of homelessness, face acute shortages of permanent, affordable, and supportive housing, underscoring the need for targeted interventions.

Based on Metro Vancouver (2022), Goal 4 emphasizes providing a broad mix of housing types and tenures reflecting diverse household incomes, changing family structures, and an aging population. Varied housing choices ensure that residents can secure suitable, affordable homes aligned with their income levels and individual needs. For Metro 2050, "affordable housing" is defined as housing affordable to households earning up to 120% of the Regional Median Household Income (Metro Vancouver, 2022).

According to Metro Vancouver (2022), this goal advocates for policies and strategies that increase supply across the housing continuum, support the protection and expansion of rental and non-market housing, and promote permanent and supportive housing. These strategies enable residents to live within preferred communities, close to employment, transit, education, amenities, and social networks, fostering inclusive and resilient neighborhoods.

Based on Metro Vancouver (2022), Goal 4 incorporates a commitment to social equity by addressing the needs of housing-insecure populations, preventing economic, health, and access disparities that disproportionately affect lower-income groups, renters, and individuals at risk of homelessness. Achieving this requires examining and reforming systemic barriers limiting housing affordability, accessibility, and quality, contributing to a more livable and climate-resilient region.

2.4.4.2 Strategies to Provide Diverse and Affordable Housing Choices

Strategy 4.1: **Expand the supply and diversity of housing to meet a variety of needs**

Based on Metro Vancouver (2022), expanding the supply and diversity of housing addresses the needs of households across different sizes, incomes, ages, and abilities. Housing diversity fosters affordability, enhances social equity, and increases resilience by providing a broad spectrum of options across the housing continuum.

Metro Vancouver (2022) will support Member Jurisdictions in developing housing strategies and action plans by providing demographic analysis, household characteristics, and market data. It collaborates with local governments to refine housing priorities, review local housing needs reports, monitor progress, provide implementation guidance, research best practices, and facilitate regional dialogue on common housing issues. Metro Vancouver accepts Regional Context Statements detailing how local plans will expand diverse and affordable housing and advocates for enabling legislation and funding support. Special attention is given to supporting Treaty and other First Nations in housing needs assessments.

According to Metro Vancouver (2022), Member Jurisdictions adopt Regional Context Statements demonstrating how local policies will meet future housing demands, promote diverse and affordable housing types, and implement actions to increase supply. This includes promoting ground-oriented and infill housing near transit, integrating land use with transportation planning, enhancing social connectedness, and encouraging low-carbon, climate-resilient housing stock.

Based on Metro Vancouver (2022), local governments prepare and maintain housing strategies or action plans aligned with recent needs assessments, reflecting current market conditions by tenure, supply, demand, and affordability. Strategies prioritize demographic changes, climate and hazard resilience, and equity-seeking group requirements, with clear implementation measures within financial capabilities.

Strategy 4.2: **Protect tenants and expand, retain, and renew rental housing supply**

According to Metro Vancouver (2022), expansion, retention, and renewal of rental housing is critical for providing diverse and affordable housing choices. Purpose-built rental housing ensures security of tenure for residents who cannot or choose not to purchase homes. The private rental market, including secondary suites, laneway/coach houses, and rented condominiums, contributes significantly to

regional rental options. Increasing supply while protecting tenants during redevelopment or renovations preserves affordability and expands access to energy-efficient homes.

Metro Vancouver (2022) monitors regional rental housing, reports supply gaps by income and bedroom count, implements the Housing 10-Year Plan, and partners with Member Jurisdictions to expand affordable rental housing. The region sets a target for at least 15% of newly completed housing in Urban Centers, Frequent Transit Development Areas, and Major Transit Growth Corridors combined to be affordable rental units by 2050, tracking progress and reviewing targets regularly. Metro Vancouver accepts Regional Context Statements aligning local plans with these objectives and advocates for federal and provincial incentives to stimulate private rental investment.

Based on Metro Vancouver (2022), Member Jurisdictions adopt Regional Context Statements demonstrating local contributions to rental targets and tenant protections, identify regulatory tools to preserve rental housing, and promote renewal of aging stock. Policies support reducing energy consumption and GHG emissions in rental housing while maintaining affordability. Local governments implement strategies encouraging rental development, minimizing losses, and collaborating with Metro Vancouver Housing and agencies to deliver affordable rental housing.

Strategy 4.3: Meet the housing needs of lower income households and populations experiencing or at risk of homelessness

Based on Metro Vancouver (2022), Goal 4 emphasizes addressing housing needs for lower income households and populations experiencing or at risk of homelessness. Collaboration with federal and provincial governments supports the provision of non-market housing, ensuring equitable access and broader societal benefits such as improved health outcomes and social cohesion.

Metro Vancouver (2022) accepts Regional Context Statements outlining how local plans, strategies, and policies will address the housing needs of lower-income households and those at risk of homelessness. It collaborates with Member Jurisdictions, non-profits, and senior governments to coordinate regional homelessness responses, advocates for incentives and funding to construct permanent, affordable, and supportive housing, and promotes ongoing rent supplements and income assistance to ensure affordability.

According to Metro Vancouver (2022), Member Jurisdictions adopt Regional Context Statements detailing collaboration with senior governments and partners to increase permanent, affordable, and supportive housing. Policies foster partnerships to create pathways out of homelessness and integrate

homelessness reduction strategies. Local governments prepare housing strategies that identify opportunities in multi-level programs, promote community acceptance, and align with broader regional housing goals.

2.4.5 Goal 5: Support Sustainable Transportation Choices

2.4.5.1 Definition and Purpose:

Based on Metro Vancouver (2022), the relationship between land use and transportation is inherently reciprocal: land use patterns influence travel behavior and transportation systems, while transportation infrastructure and services shape land development. Achieving the objectives of Metro 2050 requires the coordinated alignment of land use and transportation strategies to foster accessible and sustainable mobility options. According to Metro Vancouver (2022), central to this alignment is promoting compact urban development characterized by transit-oriented growth within Urban Centers, Major Transit Growth Corridors, and Frequent Transit Development Areas. This spatial framework supports increased transit ridership, active transportation modes such as walking and cycling, and alternatives to single-occupancy vehicle travel.

Metro Vancouver (2022) notes that a transit-oriented growth pattern mitigates traffic congestion, reduces energy consumption, and lowers greenhouse gas emissions from transportation sources, contributing to environmental sustainability and climate action goals. It also enhances mobility resilience, facilitates shorter and more efficient trips, and reduces household transportation costs, improving overall quality of life for residents. As noted by Metro Vancouver (2022), planned transit investments, including those outlined in Transport 2050's Major Transit Network, reinforce this growth strategy by providing guidance on future development and infrastructure priorities.

Based on Metro Vancouver (2022), Goal 5 acknowledges the critical function of the Major Road Network, Regional Truck Routes, provincial highways, and federal transportation facilities in regional connectivity, goods movement, and integration with broader transportation systems. It emphasizes proactive management of existing road network capacity to minimize costly expansions, while preserving rail corridors and marine access points to support future multimodal goods movement.

According to Metro Vancouver (2022), in partnership with Member Jurisdictions, TransLink, the Port of Vancouver, airport authorities, and senior governments, Metro Vancouver coordinates strategic transportation planning across road, transit, active transportation, and goods movement initiatives, including emerging mobility technologies such as micro-mobility and automated vehicles. These efforts ensure equitable integration to reduce greenhouse gas emissions and congestion.

Based on Metro Vancouver (2022), Goal 5 ultimately seeks a more equitable land use and transportation system that enhances social cohesion, mitigates environmental and economic risks associated with goods movement, and provides affordable, accessible, and safe transportation options, contributing to quality jobs, inclusive communities, and sustainable regional growth.

2.4.5.2 Strategies to Support Sustainable Transportation Choices

Strategy 5.1: **Coordinate land use and transportation to encourage transit, multiple-occupancy vehicles, cycling, and walking**

Based on Metro Vancouver (2022), aligning land use and transportation planning fosters sustainable regional development. Prioritizing transit, shared mobility, cycling, and walking cultivates a compact urban form that reduces reliance on private vehicles, lowers greenhouse gas emissions, improves public health through increased physical activity, reduces household transportation costs, and enhances economic resilience by improving access to employment, housing, and amenities.

Metro Vancouver (2022) provides expert input into TransLink's regional transportation system planning by supplying data on land use, growth management, and air quality, evaluating impacts of land use decisions on vehicle emissions. Metro Vancouver establishes objectives supporting the regional land use framework, reducing energy consumption and emissions, and ensuring safe and efficient movement of passengers, goods, and services. Collaboration with TransLink and Member Jurisdictions encourages prioritization of transit services along key networks, while increasing trips made by transit, shared mobility, cycling, walking, and rolling. Metro Vancouver supports the Regional Greenway Network, regional parking strategies, and the transition to zero-emission vehicles, accepting Regional Context Statements aligned with these objectives.

According to Metro Vancouver (2022), Member Jurisdictions adopt Regional Context Statements outlining policies to increase transit, shared mobility, cycling, walking, and rolling, and support transportation demand management strategies including parking pricing, transit priority measures, and end-of-trip facilities for active transportation. Member jurisdictions also manage municipal infrastructure to support sustainable transportation modes, promote zero-emission vehicles, and facilitate regional greenway and bikeway networks for safe, direct access to transit and daily destinations.

Metro Vancouver (2022) notes that TransLink prepares and implements strategic transportation plans supporting focused growth in Urban Centers and Frequent Transit Development Areas, incorporating Metro Vancouver's input. TransLink establishes performance measures to increase transit use, shared mobility, active transportation, and zero-emission vehicle adoption while reducing emissions. It implements demand management strategies, develops cycling and micro-mobility networks, evaluates

and mitigates climate change risks to transportation infrastructure, and coordinates greenway networks and transit connectivity with government partners and First Nations communities.

Strategy 5.2: Coordinate land use and transportation to support the safe and efficient movement of vehicles for passengers, goods, and services

Based on Metro Vancouver (2022), safe and efficient movement of people, goods, and services is vital for economic vitality and livability. This strategy emphasizes protecting transportation corridors and infrastructure including roads, highways, railways, waterways, ports, and airports while minimizing environmental and community impacts. It advocates for demand management alternatives to costly roadway expansions and supports sustainable freight movement by preserving industrial lands and transportation rights-of-way.

Metro Vancouver (2022) supports the Regional Goods Movement Strategy and participates in freight coordination forums such as the Greater Vancouver Urban Freight Council. It accepts Regional Context Statements incorporating coordinated policies to facilitate safe and efficient vehicle movement and collaborates with senior governments and port authorities to reduce truck traffic on local roads by promoting multimodal freight networks. Metro Vancouver advocates for evaluations of roadway expansions emphasizing emissions reduction, land use impacts, ecosystem protection, and climate resilience.

According to Metro Vancouver (2022), Member Jurisdictions adopt Regional Context Statements identifying routes and policies for safe and efficient goods movement, optimize land use for freight, and support active transportation. They develop transportation management strategies for traffic flow, transit priority for goods vehicles, and protection of transportation rights-of-way, while mitigating noise, vibration, air pollution, and neighborhood impacts.

Based on Metro Vancouver (2022), TransLink manages the Major Road Network and Regional Truck Route Network to support safe and efficient movement consistent with regional land use strategies. TransLink implements the Regional Goods Movement Strategy, improves active transportation and transit connections to Industrial and Employment lands, protects rail rights-of-way, and strives to minimize negative impacts on environmental quality and public health in the Lower Fraser Valley Airshed.

2.5 Metro Vancouver's Climate 2050 Framework

2.5.1 The Challenge and Opportunity of Climate change

The *Climate 2050 Strategic Framework* (2018) identifies climate change as both an urgent challenge and an opportunity for transformation in Metro Vancouver. The region is already experiencing hotter, drier summers, wetted winters, and more frequent extreme weather events. These changes intersect with issues of affordability, social equity, and ecosystem health, underscoring the need for integrated responses that build more resilient and liveable communities (Metro Vancouver, 2018).

Metro Vancouver has a history of regional climate action, with initiatives spanning more than two decades. Examples include biogas recovery at the Annacis Island Wastewater Treatment Plant and the adoption of ambitious greenhouse gas (GHG) reduction targets, such as reducing emissions by 80 per cent below 2007 levels by 2050. Climate policies are also embedded within broader regional planning frameworks, particularly *Metro 2040: Shaping Our Future*, which emphasizes compact urban growth and low-carbon transportation as essential components of climate mitigation (Metro Vancouver, 2018). **(Figure 2-20)**.

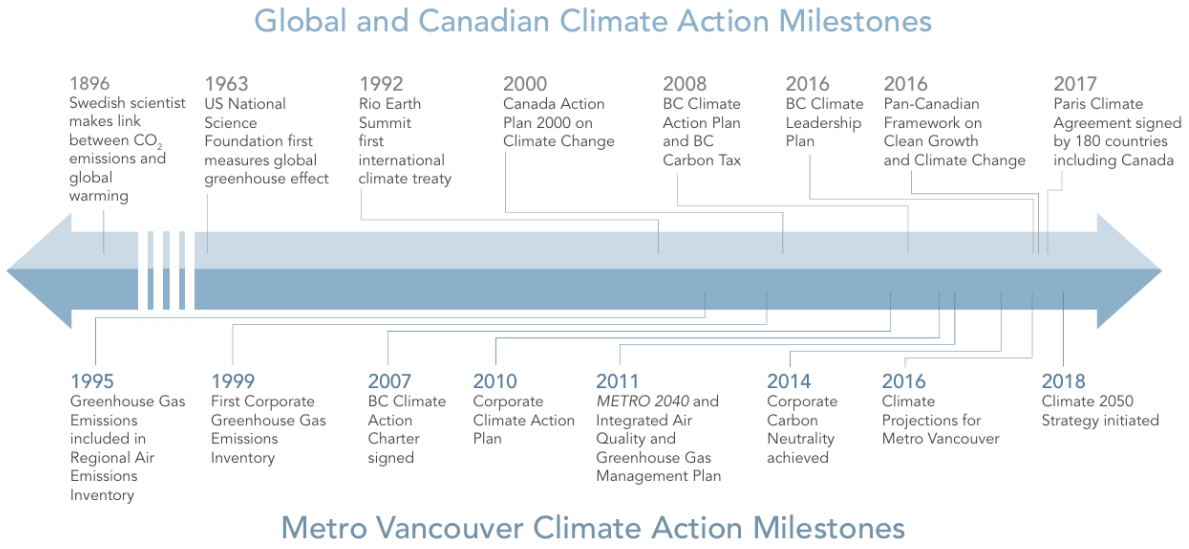

Figure 2-20. Metro Vancouver – Global and Canadian Climate Action Milestones (Metro Vancouver, 2018).

The framework highlights the multiple co-benefits of climate action, noting that measures to reduce GHG emissions also generate improvements in public health, air quality, building efficiency, and ecological systems. Furthermore, the transition toward renewable energy, clean technologies, and a circular economy is presented as a driver of new economic opportunities (Metro Vancouver, 2018).

Equity emerges as a central concern, as climate impacts are unevenly distributed across populations. Vulnerable and low-income communities are disproportionately exposed to extreme weather and often lack resources for adaptation. Consequently, Metro Vancouver emphasizes the importance of embedding equity, accessibility, and reconciliation with First Nations communities into all aspects of climate planning (Metro Vancouver, 2018).

Finally, the framework stresses that successful climate action requires multi-level collaboration. While all levels of government, businesses, civil society, and residents share responsibility, Metro Vancouver positions itself as a regional leader in coordinating action, demonstrating best practices, and leveraging both scientific expertise and traditional Indigenous knowledge in the transition toward a low-carbon and resilient future (Metro Vancouver, 2018).

2.5.2 Guiding Principles and Conceptual Framework for Climate 2050

The Climate 2050 strategy is structured around ten guiding principles that ensure Metro Vancouver's climate policies are ambitious, adaptive, and equitable (Metro Vancouver, 2018).

Ambitious initiatives demonstrate leadership by setting high targets for greenhouse gas reductions and resilience. **Dynamic** approaches allow strategies to evolve with emerging knowledge and technologies, while **evidence-based** decisions rely on scientific research, traditional knowledge, and local insights. **Relevant** actions address the region's specific social, ecological, and economic conditions, and **comprehensive** measures span municipal functions and sectors. Integrated planning aligns climate actions with regional, provincial, and federal policies. **Fair** solutions consider vulnerable populations and responsibilities to future generations, and **actionable** measures are realistic within Metro Vancouver's mandate and capacities. **Inclusive and collaborative** engagement ensures diverse stakeholder input, while **transparent and verifiable** processes support accountability through measurable goals and reporting. Together, these principles provide a framework for coordinated, effective, and equitable climate action across the region (Metro Vancouver, 2018).

The conceptual framework of Climate 2050 is structured around three interrelated components: the Strategic Framework, the Climate 2050 Roadmaps, and an online Reporting and Communication Tool. The Strategic Framework sets a 30-year vision for the region, outlines guiding principles, and defines a dynamic, adaptive approach to climate policy. The roadmaps translate the Strategic

Framework into actionable pathways for achieving a resilient, low-carbon region. These Roadmaps include goals, strategies, actions, and performance metrics, and are designed to evolve in response to technological innovation, policy changes, and emerging environmental data. The Reporting and Communication Tool serves as a central hub for sharing best practices, engaging stakeholders, providing background information, and monitoring progress toward targets. **(Figure 2-21)**.

Figure 2-21. The three main components of Climate 2050 Strategy (Metro Vancouver, 2018).

The implementation of Climate 2050 actions is integrated within Metro Vancouver's existing organizational structures, including departmental work plans, annual budgets, and five-year financial plans. Actions are organized across ten Issue Areas, reflecting the breadth of Metro Vancouver's mandate and addressing both mitigation and adaptation objectives. The strategy also emphasizes alignment with existing management plans and highlights opportunities for revising or developing new corporate and Board policies to embed climate considerations into regional decision-making processes. Collectively, these elements ensure that Metro Vancouver's approach is holistic, coordinated, and adaptable to evolving climate challenges (Metro Vancouver, 2018). **(Figure 2-22)**.

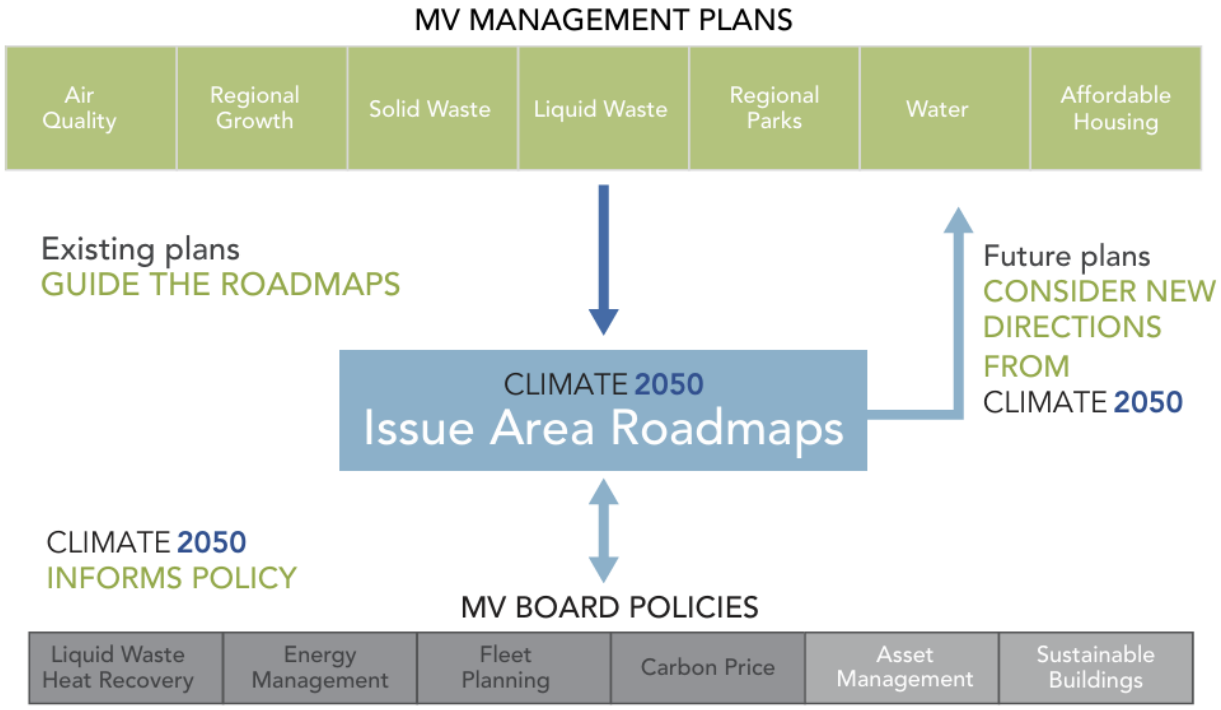

Figure 2-22. Climate 2050 strategy's relationships with other Plans and Policies (Metro Vancouver, 2018).

2.5.3 Institutional Roles in Metro Vancouver's Climate Strategy

Metro Vancouver

Metro Vancouver plays a central role in climate change action within the region, with responsibilities spanning the delivery of core services, regional planning, and serving as a forum for collaboration. Through its core services, the organization adapts critical infrastructure—including drinking water, liquid waste management, air quality management, and regional parks—to changing climate conditions while also pursuing renewable energy opportunities. In planning for the region's future, Metro Vancouver supports the development of compact, low-carbon communities and assesses how climate change may affect growth and development. As a regional forum, it engages member jurisdictions, stakeholders, and the public to coordinate joint climate action initiatives, including the development of the Climate 2050 Roadmaps (Metro Vancouver, 2018).

Federal government

The federal government contributes to climate action by regulating emissions for federal undertakings, including transportation, ports, airports, and industrial activities. It establishes national standards, policies, and funding programs, such as those under the Pan-Canadian Framework on Clean Growth and Climate Change, which provide incentives and resources to reduce greenhouse gas emissions and support clean growth initiatives (Metro Vancouver, 2018).

First nations

First Nations in the Metro Vancouver region play a critical role in climate resilience by managing sustainability and land use within their communities. Their strategies often include ecosystem protection and restoration, incorporating traditional knowledge into climate action planning to enhance local adaptation and mitigation efforts (Metro Vancouver, 2018).

Provincial government

The provincial government influences greenhouse gas emissions through legislation, policy, and regulation across sectors such as energy, transportation, buildings, forestry, and industry. It funds major infrastructure projects, enforces climate-related codes, and has introduced carbon pricing and clean growth programs. The province also provides strategic guidance through advisory councils and intention papers, shaping long-term regional climate strategies (Metro Vancouver, 2018).

Member jurisdictions

Local municipalities hold authority over land-use planning and infrastructure investments, including transportation, water, and sewer systems. They implement climate adaptation measures such as stormwater management, flood protection, and emergency response planning. Many have adopted climate action plans aligned with Metro Vancouver's regional strategies, promoting compact, low-carbon communities and active transportation options (Metro Vancouver, 2018).

TransLink

TransLink is responsible for long-term regional transit planning and investments in road and bridge infrastructure that enable low-carbon transportation. It manages regional transportation demand programs and transit fleet operations to reduce greenhouse gas emissions and is developing a 30-year Regional Transportation Strategy that integrates climate objectives (Metro Vancouver, 2018).

Energy utilities

Regional energy providers, including BC Hydro and Fortis BC, ensure the delivery of low-carbon energy and the resilience of energy infrastructure. They administer conservation programs that encourage reduced energy demand and greenhouse gas emissions, while supporting the transition to renewable energy sources for both residential and commercial sectors (Metro Vancouver, 2018).

2.5.4 Regional Greenhouse Gas Emissions and Carbon Neutrality

Metro Vancouver plays a significant role in influencing greenhouse gas (GHG) emissions from residents and businesses through planning, policy development, and its role as a regional forum, although less than 1% of regional emissions are directly associated with Metro Vancouver's corporate operations (Metro Vancouver, 2018). Emissions inventories indicate that regional GHG emissions decreased by nearly 12% between 2007 and 2015 **(Figure 2-23)**., driven by improvements in building and vehicle energy efficiency, transitions to lower carbon energy sources, and shifts in industrial activity (Metro Vancouver, 2018). In 2015, transportation and buildings were the largest contributors to the regional carbon footprint, accounting for 31% and 26% of emissions respectively, followed by industry (17%), air/marine/rail (7%), non-road engines (8%), agriculture (3%), heavy-duty vehicles (5%), and waste (3%) (Metro Vancouver, 2018). **(Figure 2-24)**.

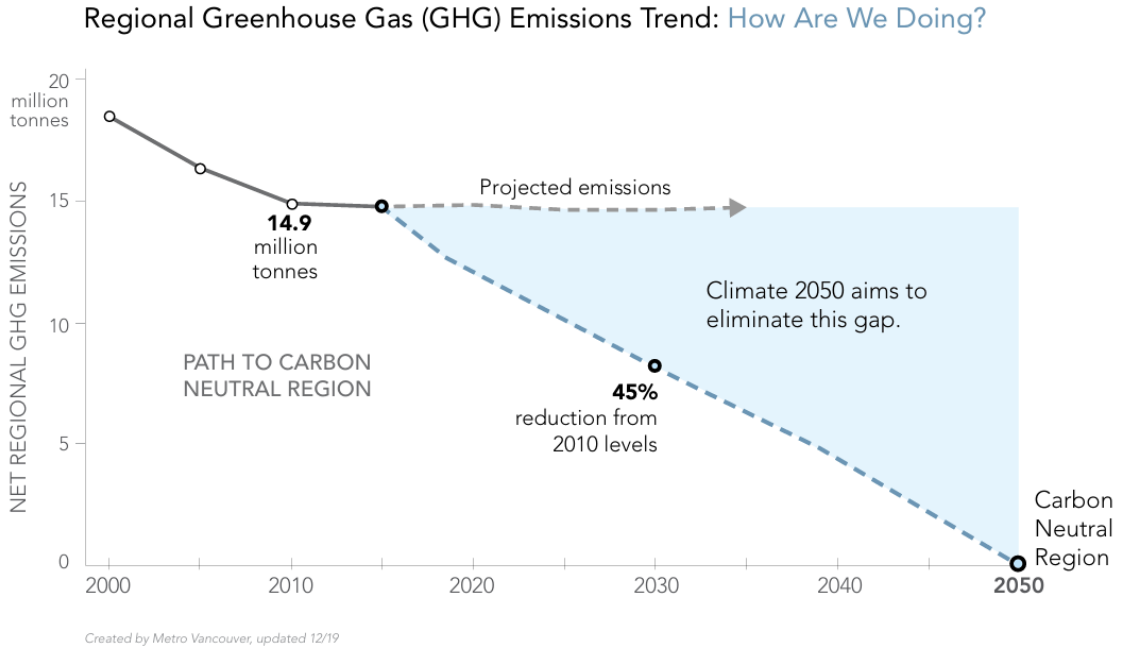

Figure 2-23. Regional Greenhouse Gas Emission trend (Metro Vancouver, 2018).

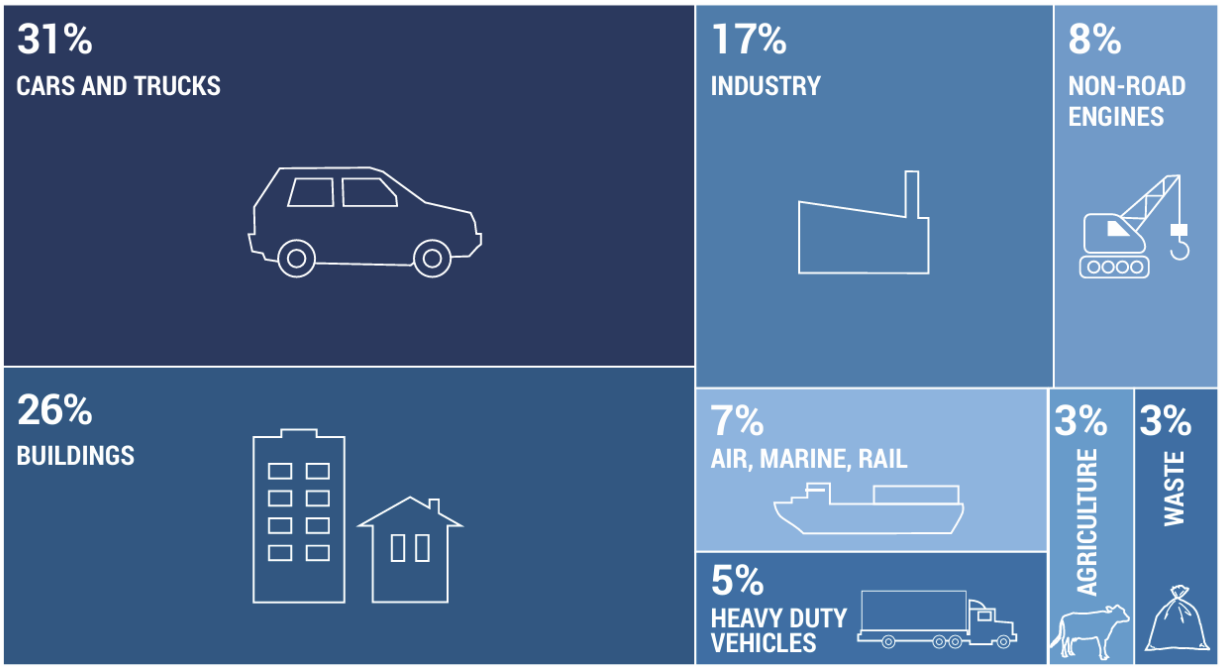

Figure 2-24. Summary of how different sources contributed to the regional carbon footprint – Transportation and buildings continue to contribute the greatest share of greenhouse gas emissions in Metro Vancouver's emission inventory (Metro Vancouver, 2018).

Achieving a carbon neutral region by 2050 will require substantial emissions reductions across most sectors, with many sectors needing to reach near-zero emissions and residual emissions offset through ecological and technological carbon removal strategies (Metro Vancouver, 2018). An interim target of a 45% reduction in emissions from 2010 levels by 2030 has been established to guide this transition. The development of the Climate 2050 Roadmaps will involve sector-specific analyses to identify cost-effective pathways for emissions reductions, with collaboration among all levels of government, partner organizations, and key stakeholders being critical to success (Metro Vancouver, 2018). **(Figure 2-25)**.

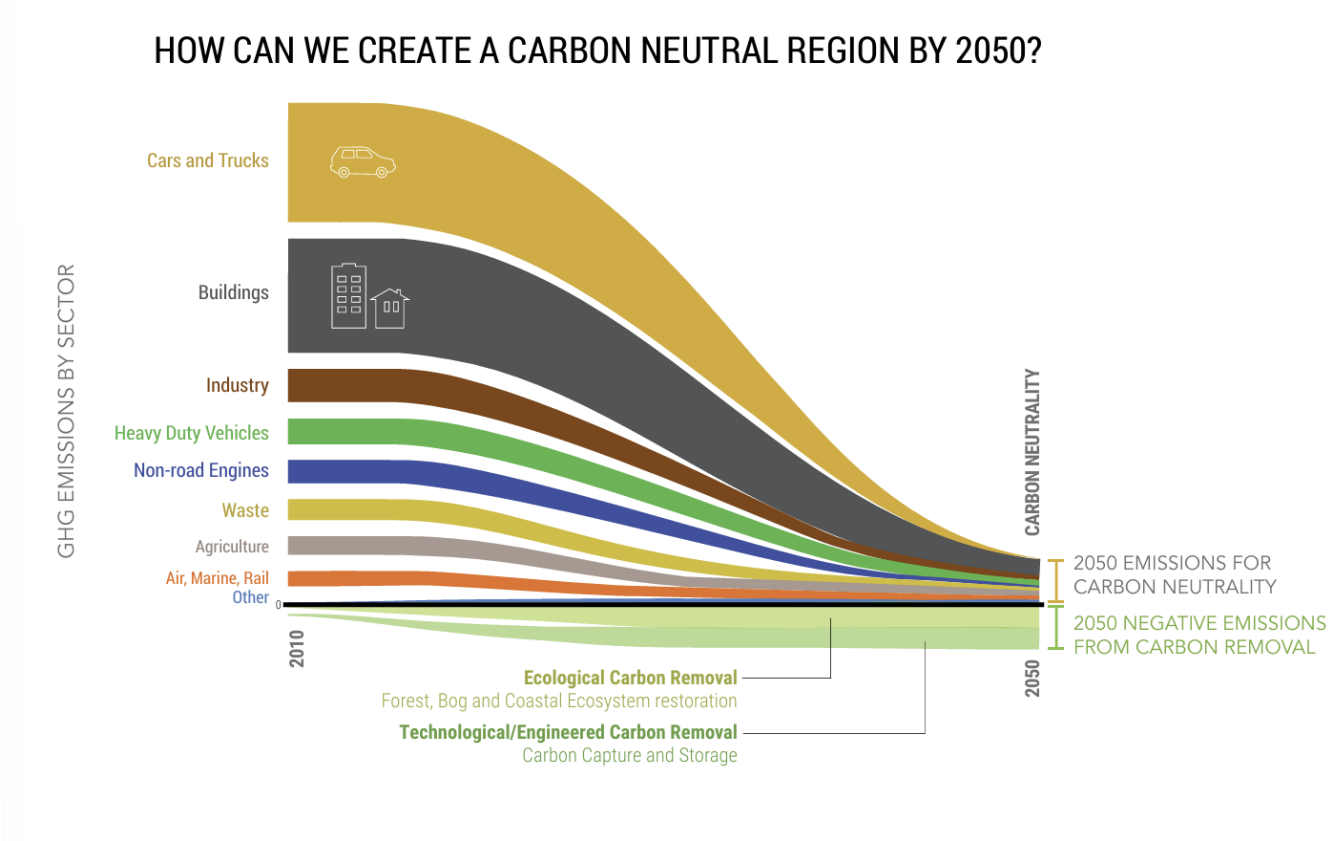

Figure 2-25. How to become a carbon neutral region by 2050 (Metro Vancouver, 2018).

The Climate 2050 strategy adopts a dynamic and adaptive approach to address the evolving challenges of climate change in Metro Vancouver. Recognizing the urgency of action and the ongoing development of climate science, the strategy is designed as a "living" framework that evolves in response to new data and emerging opportunities (Metro Vancouver, 2018).

Central to this approach are the Climate 2050 Roadmaps, which will be developed for each of the ten identified Issue Areas. (chapter 2.6) These Roadmaps provide a detailed analysis of current conditions, potential challenges, and regional and corporate goals, aligning with existing management plans while allowing for the incorporation of new strategies and actions. Gap analyses and stakeholder engagement are integral to the process, ensuring that the roadmaps reflect both current priorities and emerging opportunities (Metro Vancouver, 2018).

The Roadmap development process is structured around three main activities: research and analysis to gather evidence on the impacts of proposed actions; goal and performance metric setting, which

establishes quantifiable measures for tracking progress toward the Climate 2050 vision; and action planning, which identifies strategies from existing management plans and new directions that can be implemented or incorporated into future plans. This process emphasizes alignment with the Climate 2050 guiding principles and includes ongoing engagement with the public and stakeholders in accordance with Metro Vancouver's Public Engagement Policy (Metro Vancouver, 2018) **(Figure 2-26)**.

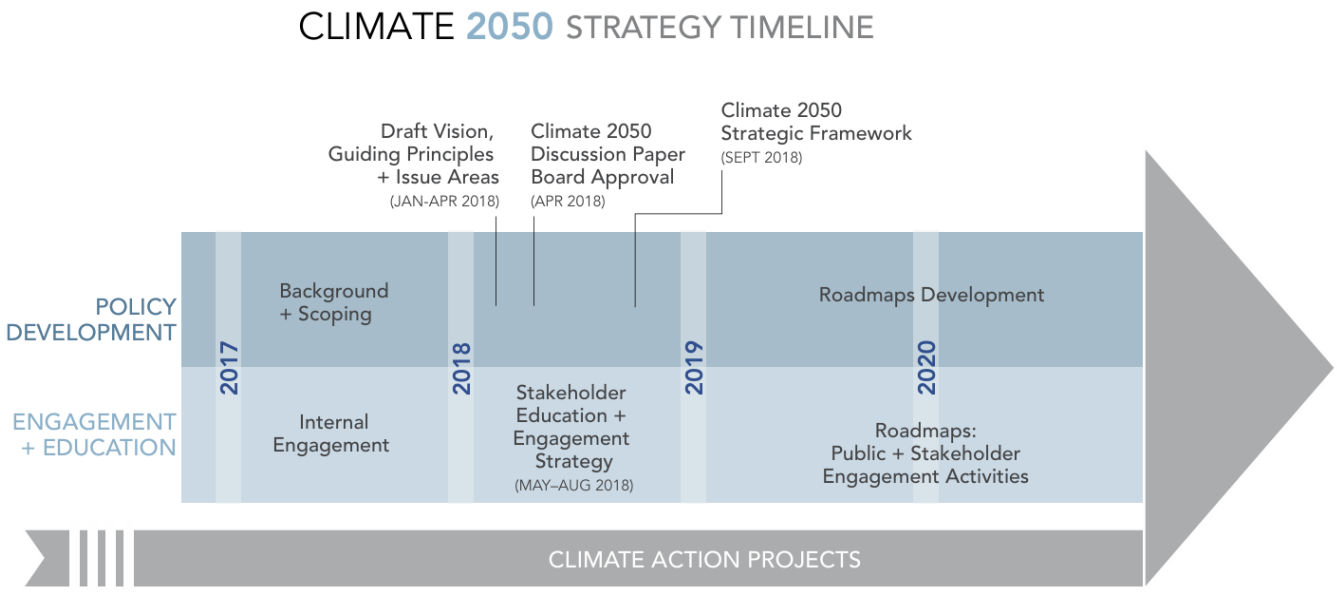

Figure 2-26. Climate 2050 strategy timeline (Metro Vancouver, 2018).

2.6 Ten Regional Issue areas: Climate 2050

The Climate 2050 strategy addresses the region's most pressing climate challenges through ten distinct issue areas **(Figure 2-27)**.. Each area identifies specific goals, strategies, and actions to reduce greenhouse gas emissions and enhance climate resilience. By organizing the strategy around these issue areas, Metro Vancouver ensures a comprehensive, coordinated, and adaptive approach to achieving a low-carbon, resilient region by 2050 (Metro Vancouver, 2018).

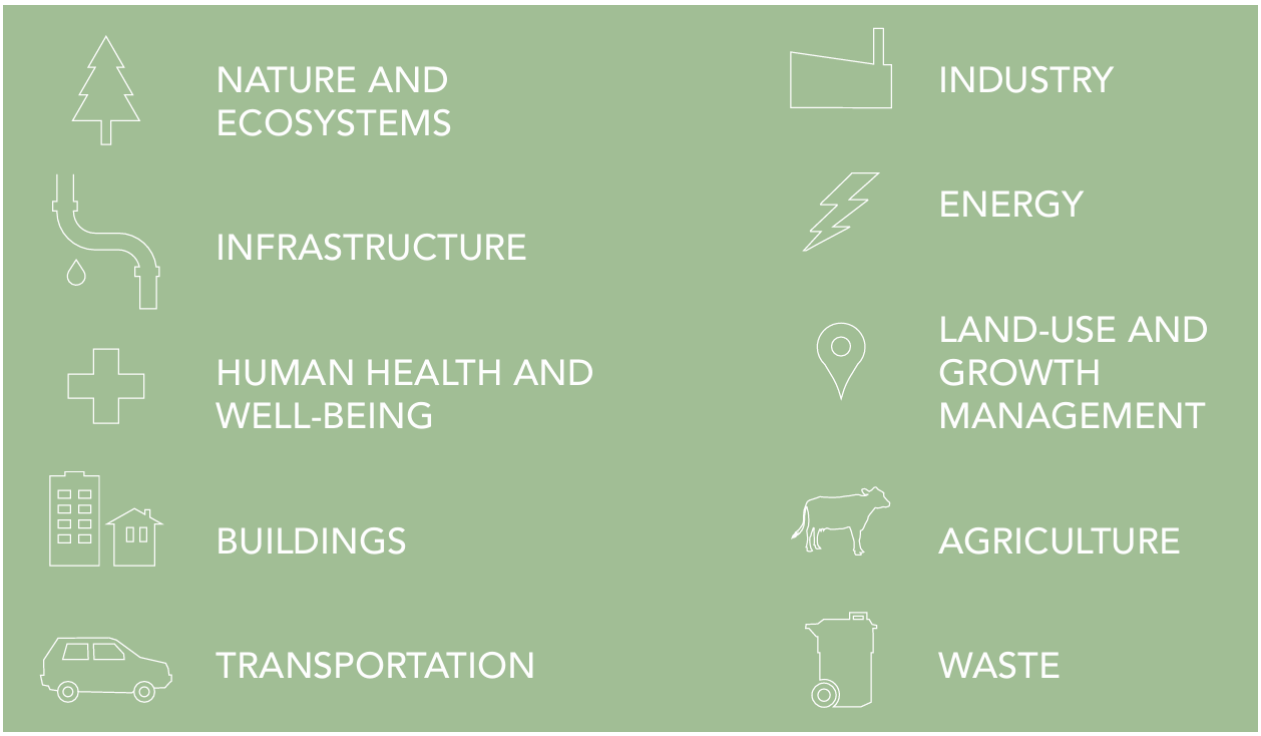

Figure 2-27. Metro Vancouver ten most significant issues (Metro Vancouver, 2018).

2.6.1 Nature and Ecosystems

Metro Vancouver is home to a rich and diverse natural environment, providing critical ecosystem services such as clean air and water, pollination, flood control, carbon storage, and urban cooling. These ecosystems—forests, wetlands, soils, and rivers—also hold deep cultural significance for local First Nations communities, supporting traditional food systems, ceremonies, and cultural heritage (Metro

Vancouver, 2018). Healthy ecosystems underpin regional food security, biodiversity, and the local economy.

Climate change is increasingly threatening these ecosystems. Rising temperatures, altered precipitation patterns, and extreme weather events jeopardize species that cannot adapt quickly enough. Fragmentation of natural habitats reduces ecological connectivity, further exacerbating vulnerability. Metro Vancouver addresses these risks by protecting natural areas through regional parks, conservation programs, and restoration initiatives. The organization also promotes urban greening strategies, such as expanding tree canopy, managing urban forests for resilience, and implementing green infrastructure—including rain gardens, bioswales, and green roofs—to enhance ecosystem services in urban environments (Metro Vancouver, 2018).

Marine and Intertidal Ecosystems

The region's marine and intertidal ecosystems provide critical habitat for fish, birds, and marine mammals, including endangered species like salmon and killer whales. Salt marshes, eelgrass beds, and tidal wetlands act as carbon sinks and buffer against coastal flooding. These areas also hold spiritual, cultural, and subsistence value for First Nations communities.

However, these ecosystems are highly sensitive to climate impacts. Rising sea levels, increased storm intensity, and altered ocean chemistry threaten intertidal habitats, while coastal armoring (e.g., sea walls) limits the ability of wetlands to migrate inland. Metro Vancouver collaborates with First Nations, federal and provincial agencies, and conservation organizations to restore tidal wetlands, monitor marine biodiversity, and maintain shoreline resilience. Programs include habitat restoration projects, community stewardship initiatives, and long-term ecological monitoring to ensure carbon storage and ecosystem health are maintained (Metro Vancouver, 2018).

2.6.2 Infrastructure

Infrastructure underpins regional economies and quality of life. Water supply systems, treatment plants, stormwater networks, roads, power lines, and dikes are all vulnerable to climate impacts. Increased frequency and intensity of extreme precipitation can overwhelm sewer systems, while heat waves and droughts challenge drinking water availability. Infrastructure construction and operation also contribute to greenhouse gas emissions.

Metro Vancouver integrates climate projections into planning, design, and operations, aiming to maintain reliable services and enhance resilience. Actions include upgrading stormwater and wastewater systems, integrating green and low-impact infrastructure, and employing energy-efficient construction

techniques. Coordination with seismic and other physical risk assessments allows more cost-effective and robust infrastructure solutions. Metro Vancouver also promotes infrastructure innovation to reduce greenhouse gas emissions, including smart water management systems, energy-efficient pumps, and low-carbon construction materials (Metro Vancouver, 2018).

Water

Climate change impacts water availability, quality, and timing. Flooding, drought, and extreme precipitation events are expected to increase, affecting ecosystems, agriculture, and urban communities. Water management strategies—such as protecting and restoring rivers, lakes, bogs, and estuaries—are central to climate adaptation.

Metro Vancouver implements water conservation programs, maintains watershed health, and restores riparian habitats to ensure water supply resilience. The organization coordinates with municipalities on flood protection measures, such as dikes and retention ponds, and promotes policies that safeguard water resources for drinking, agriculture, and ecosystems while maintaining flood mitigation capacity (Metro Vancouver, 2018).

2.6.3 Human Health and Well-Being

Climate change poses direct threats to human health through extreme heat, wildfire smoke, flooding, and disease outbreaks. Indirect effects include reduced food security, chronic stress, displacement, and mental health challenges. Vulnerable groups including children, the elderly, people with preexisting conditions, and low-income residents face disproportionate risks.

Metro Vancouver collaborates with health authorities, provincial agencies, and municipalities to reduce exposure to these risks. Programs include urban greening to provide cooling and shade, improving public access to safe drinking water, enhancing air quality advisories during wildfires, promoting local food access, and planning community cooling centers. These interventions also produce co-benefits by reducing emissions, promoting physical activity, and supporting social connections (Metro Vancouver, 2018).

Emergency Management

Increasing frequency and intensity of climate-related emergencies—wildfires, floods, storms, and droughts—require robust planning and response. Metro Vancouver supports emergency management by strengthening regional coordination, preparing communities, and enhancing infrastructure resilience. Better planning, early warning systems, and coordinated responses reduce damages, protect public health, and speed recovery. These measures also improve resilience to non-climate-related emergencies, creating multi-hazard preparedness (Metro Vancouver, 2018).

2.6.4 Buildings

Buildings account for approximately a quarter of regional greenhouse gas emissions, primarily from fossil fuel use for space and water heating. Climate change also drives higher cooling demand during heat waves, while increased flood risk impacts building siting and retrofits.

Metro Vancouver supports energy efficiency and the transition to low-carbon heating and cooling systems, including district energy, heat pumps, solar, and renewable natural gas. Programs encourage building retrofits, adoption of the BC Energy Step Code, and urban tree canopy expansion to reduce energy demand. These actions reduce long-term emissions and improve resilience to heat and flooding impacts (Metro Vancouver, 2018).

2.6.5 Transportation

Transportation is the largest source of greenhouse gas emissions in the region, driven mainly by cars and light trucks. Shifting to walking, cycling, public transit, and low-carbon vehicles is essential to reduce emissions. Climate impacts such as flooding and sea level rise can also disrupt transportation networks.

Metro Vancouver promotes sustainable mobility through investment in transit infrastructure, pedestrian and cycling networks, and policies encouraging low-emission vehicle adoption. Efforts also include planning for resilient transport infrastructure that maintains connectivity and mobility during extreme events (Metro Vancouver, 2018).

2.6.6 Industry

The industrial sector including manufacturing, construction, and chemical production accounts for roughly 23% of regional greenhouse gas emissions. Industrial processes such as cement production, metal fabrication, and fossil fuel use are major contributors.

Metro Vancouver encourages industries to adopt low-carbon fuels, implement energy efficiency measures, and reduce emissions through technology and operational changes. Programs are tailored to sector-specific needs to ensure effective mitigation while supporting economic sustainability (Metro Vancouver, 2018).

Climate change presents ongoing technical and economic challenges despite the availability of many existing solutions. Research and innovation are essential to develop new technologies, improve low-carbon practices, and enhance resilience across ecosystems, infrastructure, and communities.

Metro Vancouver supports research initiatives, pilot projects, and innovation programs to advance energy efficiency, renewable energy, waste heat recovery, and ecosystem protection. These efforts help reduce emissions, improve climate adaptation, and provide scalable solutions for a carbon-neutral, resilient region (Metro Vancouver, 2018).

2.6.7 Energy

Energy consumption for buildings, transportation, and industry contributes significantly to greenhouse gas emissions. Transitioning to low-carbon electricity, renewable fuels, and energy-efficient technologies is vital.

Metro Vancouver invests in renewable natural gas production, waste heat recovery, solar energy, and district energy systems. The organization promotes energy efficiency upgrades, supports clean energy projects, and encourages the adoption of renewable technologies across the region. These efforts reduce emissions, enhance local energy self-sufficiency, and support economic development (Metro Vancouver, 2018).

2.6.8 Land-Use and Growth Management

The Metro Vancouver region is experiencing rapid growth, with an annual increase of approximately 30,000 residents and a projected population of 3.6 million by 2050 (Metro Vancouver, 2018). The location and design of new homes, businesses, and public institutions directly influence greenhouse gas emissions and vulnerability to climate change impacts.

Land-use planning determines where people live, work, and access amenities. To reduce emissions, Metro Vancouver and its member municipalities focus on creating compact, complete communities within a network of transit-oriented urban centers. This approach encourages walking, cycling, and public transit, reducing reliance on personal vehicles and supporting low-carbon mobility. Land-use policies are also coordinated with transportation strategies to maximize these benefits.

Growth management is crucial for climate resilience. The placement of development affects exposure to flooding from rising seas and rivers. By directing growth away from high-risk zones and preserving natural areas, land-use planning can reduce vulnerability to climate impacts while maintaining ecosystem services such as flood mitigation. For developments in flood-prone areas, Metro Vancouver and municipalities may invest in protective infrastructure, such as dike upgrades, while supporting emergency preparedness and response measures (Metro Vancouver, 2018).

Land-Based Carbon Inventory

Urbanization transforms forests, wetlands, agricultural lands, and other natural areas into residential, commercial, or industrial zones. This conversion often releases greenhouse gases stored in soils, vegetation, and organic matter, reducing the region's carbon sequestration capacity. Metro Vancouver acknowledges that conventional emissions inventories do not fully capture the effects of land development on local carbon sinks.

To address this, a land-based carbon inventory is being explored. Such an inventory would quantify the carbon storage lost or altered through land-use changes, providing a more accurate understanding of emissions and informing policies to protect and enhance natural carbon sinks, including forests, wetlands, and soils (Metro Vancouver, 2018).

2.6.9 Agriculture

Agriculture in Metro Vancouver benefits from fertile soils, a mild climate, and local demand for fresh produce, contributing significantly to regional food security. Climate change, however, poses risks and opportunities. Rising temperatures may allow new crops to be grown and reduce heating costs in greenhouses. Conversely, increased heat, pests, diseases, and changes in precipitation patterns can stress crops and livestock, while droughts and altered river flows may reduce irrigation availability. Sea level rise and storm surges can necessitate dike upgrades to protect farmland (Metro Vancouver, 2018).

Agriculture also contributes to greenhouse gas emissions, accounting for about 3% of regional emissions. Key sources include methane from livestock and manure, nitrous oxide from fertilizers and soil management, and carbon dioxide from fossil fuel use in equipment and heating. At the same time, agricultural soils can act as carbon sinks, sequestering carbon while maintaining soil productivity (Metro Vancouver, 2018).

Metro Vancouver supports agricultural resilience by protecting farmland, promoting sustainable practices, enhancing local food production, and maintaining ecosystem services such as wildlife habitat, nutrient cycling, and flood management. Ensuring local food production contributes to both climate adaptation and emergency preparedness (Metro Vancouver, 2018).

2.6.10 Waste

Waste management contributes to regional greenhouse gas emissions, primarily through methane released from landfills. Fossil fuels used in manufacturing, transport, and disposal of goods also add to

the region's carbon footprint. Metro Vancouver emphasizes waste reduction, reuse, recycling, and energy recovery as critical strategies to reduce emissions.

Transitioning to a circular economy helps retain materials and energy within the system, reducing emissions while creating economic opportunities. Methane captured from landfills or anaerobic digestion facilities can be converted into renewable natural gas, displacing fossil fuel use. Metro Vancouver enforces policies and programs that incentivize waste diversion, energy recovery, and resource efficiency to mitigate climate impacts while fostering innovation in the local economy (Metro Vancouver, 2018).

Consumption-Based Emissions Inventory

Traditional sector-based greenhouse gas inventories track emissions released directly within the region, primarily from transportation and building energy use. However, these inventories overlook emissions embedded in goods and services consumed in Metro Vancouver but produced elsewhere.

A consumption-based inventory accounts for the full lifecycle emissions of products and services, including production, transport, retail, use, and disposal. Metro Vancouver is exploring this approach to better understand the broader climate impact of regional consumption patterns. Together with sector-based inventories, consumption-based assessments provide a more comprehensive view of emissions and inform strategies to reduce the global carbon footprint associated with regional activities (Metro Vancouver, 2018).

Further research:

While Chapter 2 examined the contemporary dynamics of urban planning, land use, and governance in Metro Vancouver, it is equally important to explore additional research on sustainable urban design and the integration of planning strategies that support a resilient metropolitan region. Understanding these approaches provides deeper insight into how governance structures, planning policies, and design practices interact to shape the long-term sustainability of Metro Vancouver, particularly in the context of the Metro 2050 regional growth strategy.

Several sources provide foundational perspectives on these topics. Deakin (2019) offers comprehensive frameworks linking transportation, land use, and environmental planning, which are essential for understanding the mechanisms guiding urban development in Canadian cities. Wideman (2021) analyses historical land use planning in Vancouver, highlighting how property norms, regulatory practices, and socio-political priorities shaped urban form and social outcomes, providing context for contemporary governance challenges. Yumagulova (2018) examines urban and regional resilience in the Metro Vancouver region, offering insights into how environmental, social, and infrastructural factors interact to influence planning processes and regional sustainability. Taylor (2020) situates local planning within broader institutional structures, discussing metropolitan governance models in Canada and their influence on resource allocation, policy coordination, and regional development.

Among these works, Macdonald (2020) is particularly significant for Chapter 2, as it directly addresses urban design for sustainable and liveable communities in Vancouver. Drawing on policy analysis, case studies, and urban design evaluation, Macdonald (2020) identifies several core strategies that have shaped the city's sustainable development trajectory. One key finding is the importance of mixed-use development, integrating residential, commercial, and recreational spaces. Macdonald (2020) notes that such neighbourhoods reduce the need for private vehicle travel, enhance accessibility, lower greenhouse gas emissions, and foster socially vibrant communities. The study highlights specific examples from Vancouver, such as developments in the False Creek and Mount Pleasant areas, which successfully combine housing, retail, and public amenities in compact, walkable layouts (Macdonald, 2020).

Another important insight concerns pedestrian-oriented infrastructure and transit-supportive land use. Macdonald (2020) shows that neighbourhoods designed around walkability and accessible public transit improve mobility, public health, and social inclusion. Examples from Vancouver indicate that pedestrian-friendly streets, bicycle networks, and proximate transit hubs contribute to higher resident satisfaction and lower environmental impact. The study emphasizes that aligning land use with transit investments is essential to achieving both environmental and social objectives (Macdonald, 2020).

Macdonald (2020) also emphasizes the role of green infrastructure and ecological integration, noting that parks, green corridors, and urban forests support biodiversity, manage stormwater, and mitigate urban heat effects while offering recreational and aesthetic benefits. These ecological strategies align closely with Metro 2050 objectives, particularly in enhancing regional resilience and reducing ecological footprints. The study provides detailed examples, including the integration of greenways connecting urban neighbourhoods to natural areas and the use of ecological landscaping in multi-use developments (Macdonald, 2020).

A further key finding concerns participatory planning and community engagement. Macdonald (2020) argues that sustainable urban design is most effective when local communities are actively involved in decision-making processes, including co-design of public spaces and integration of resident feedback. Participatory approaches are shown to increase social legitimacy, ensure responsiveness to local needs, and reduce stakeholder conflicts. Case studies cited in the research demonstrate successful engagement strategies, such as neighbourhoods' workshops and design charrettes, which helped shape development projects to reflect community priorities (Macdonald, 2020).

Macdonald (2020) also identifies challenges and limitations in implementing sustainable urban design. Governance fragmentation, competing political priorities, and limited financial resources can delay or dilute sustainability initiatives. Additionally, market-driven development often disproportionately benefits higher-income residents, highlighting the need for inclusive policies to ensure equitable access to sustainable urban spaces. The study stresses that coordinated planning, targeted incentives, and inclusive governance mechanisms are essential to overcoming these barriers and achieving comprehensive sustainability outcomes (Macdonald, 2020).

Macdonald (2020) concludes that strategic urban design, informed by both policy frameworks and community perspectives, is central to creating sustainable, resilient, and liveable urban environments. Her study illustrates how targeted interventions in Vancouver from transit-oriented development to green infrastructure integration and participatory planning can advance the goals of Metro 2050, particularly those related to sustainability, inclusivity, and climate resilience (Macdonald, 2020).

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CHAPTER 3:

BURNABY'S MUNICIPAL PLANNING FRAMEWORK

3.1 Burnaby's Land Use Planning Framework and Urban Structure

Burnaby, a major municipality within Metro Vancouver, plays a central role in the region's land use and urban development (City of Burnaby, 2025). Based on the City of Burnaby's Land Use Framework (2025), as one of British Columbia's fastest-growing cities, Burnaby is expected to accommodate significant population and employment growth in the coming decades. According to projections from Metro Vancouver, the city is anticipated to grow by approximately 146,000 residents, 68,000 new housing units, and 71,000 jobs by 2050 **(Figure 3-1)**. Regarding future development, Burnaby has developed a comprehensive land use framework designed to ensure that this growth occurs in a sustainable, coordinated, and strategically planned manner (City of Burnaby, 2025). This framework is codified in Part B of the Official Community Plan (OCP), which integrates future development with transportation infrastructure, environmental policies, and community needs, ensuring a coherent trajectory for the city's evolution (City of Burnaby, 2025).

		Forecasted numbers		
	2021	2030	2040	2050
Population	261,810[1]	311,510	361,630	408,150
Units	106,170[2]	128,330	151,860	174,060
Jobs	160,330[3]	185,490	209,940	231,820

Figure 3-1. Growth projections to 2050: Numbers in the table above reflect Metro Vancouver high-growth scenario forecasts for population, dwelling units and employment for the City of Burnaby (City of Burnaby, 2025).

3.1.1 The Components of Burnaby's Land Use Framework

The Land Use Framework in Burnaby's OCP comprises four core components **(Figure 3-2)**: the Urban Structure, Community Plan Areas (CPAs), the Land Use Map, and Development Permit Areas (DPAs). Based on the City of Burnaby (2025), these components collectively provide spatial and regulatory guidance for future land use, while supporting the delivery of amenities, services, and infrastructure. The framework is strongly aligned with Metro Vancouver's Regional Growth Strategy (Metro 2050), emphasizing regional coherence and consistency. Regarding Burnaby's approach, the "nodes and corridors" model seeks to concentrate development along transit corridors and near frequent transit nodes (City of Burnaby, 2025). This model promotes transit-oriented development (TOD),

enabling compact growth and reducing car dependency. The intention is not only to accommodate more people and jobs, but to do so in a way that enhances access, sustainability, and livability.

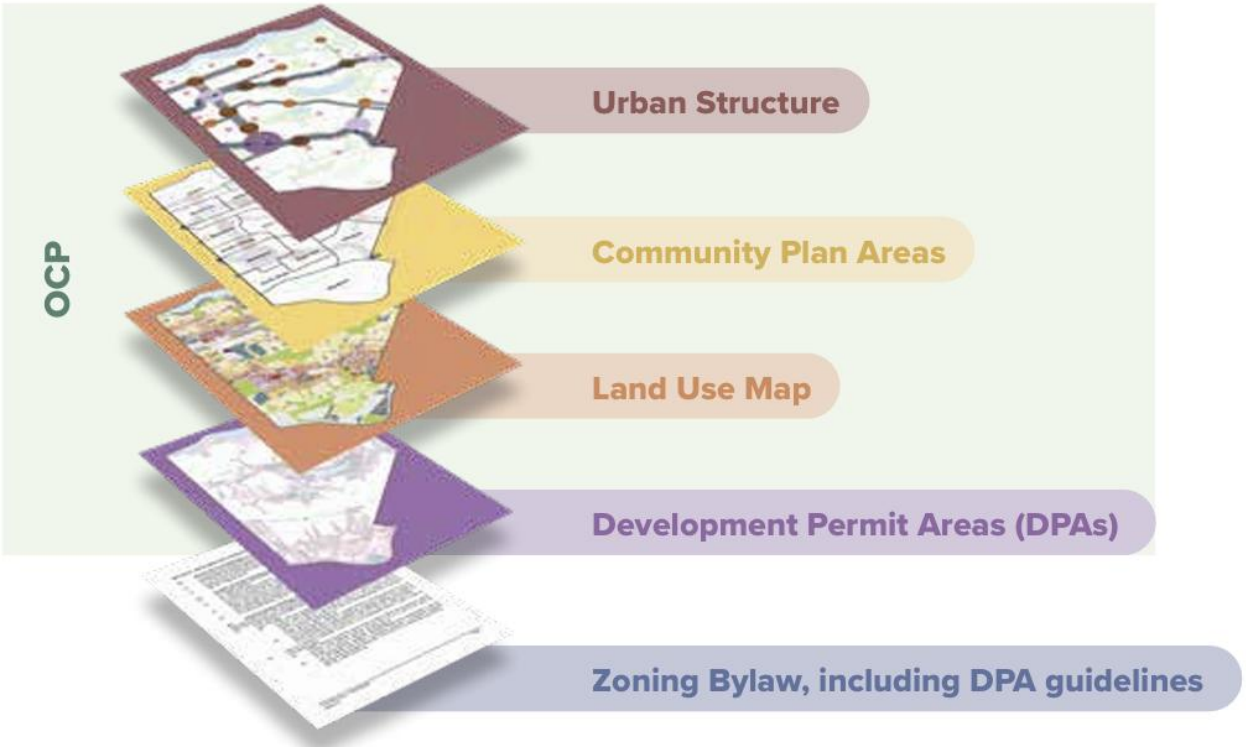

Figure 3-2. Structure of land use framework in Burnaby (City of Burnaby, 2025).

3.1.2 Urban Structure and the Hierarchy of Centers

At the heart of Burnaby's land use strategy is the Urban Structure Map (City of Burnaby, 2025). This spatial framework classifies the city into distinct urban center types, each defined by its function, development intensity, and connection to the transit network. These center types include the Downtown (Metrotown), Town Centers (Brentwood, Edmonds, Lougheed), Rapid Transit Urban Villages (e.g., Bainbridge, Broadview), Urban Villages (e.g., Heights, Garden Village), and Neighborhood Centers (e.g., Buckingham Heights, South Slope). Each area type is associated with different levels of density, services, and land uses, creating a hierarchy of growth that distributes residential and employment opportunities across the city (based on City of Burnaby, 2025).

3.1.3 Spatial Logic and Transitions Across the City

The Urban Structure Map **(Figure 3-3)** plays a foundational role in shaping how development is distributed across Burnaby (City of Burnaby, 2025). Regarding the planning logic, it provides a blueprint for transitioning between high-density nodes and lower-density residential areas, ensuring that growth does not occur haphazardly but rather is sequenced and serviced appropriately. For example, areas around SkyTrain stations such as Metrotown, Brentwood, and Lougheed land use policies that support high-rise, mixed-use developments to take advantage of regional transit infrastructure. Moving away from these centers, densities gradually decrease, transitioning into mid-rise and low-rise residential forms, with single-family homes and duplexes characterizing the outer neighborhood s. This tiered structure addresses diverse housing needs while maintaining neighborhood character and environmental integrity (City of Burnaby, 2025).

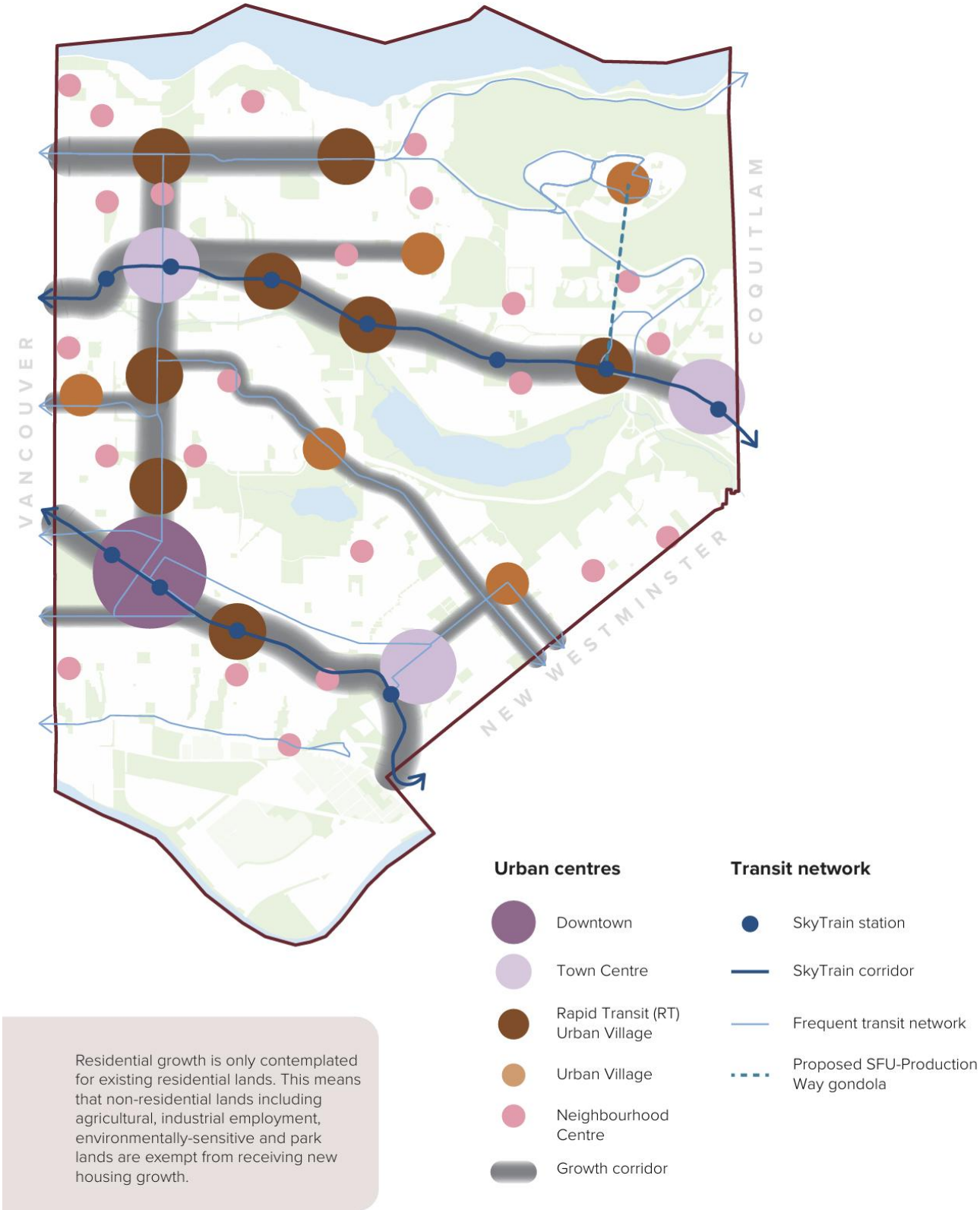

Figure 3-3. Urban structure map: Nodes and Corridors (City of Burnaby, 2025).

3.1.4 Transit Integration and Sustainability Objectives

The integration of urban structure with public transit is a defining feature of Burnaby's planning philosophy (City of Burnaby, 2025). Based on the City of Burnaby's framework, the city has carefully aligned land use intensities with the regional transit network, supporting climate goals, economic development, and social inclusion. By directing growth to areas served by frequent transit and encouraging mixed-use development, Burnaby aims to foster walkable communities with easy access to employment, services, and amenities. In addition to transportation integration, the Urban Structure also embeds sustainability and climate resilience considerations. Concentrating density in transit-accessible areas reduces greenhouse gas emissions, while preserving green space and environmentally sensitive areas in other parts of the city (City of Burnaby, 2025).

3.1.5 Housing Diversity and Community Infrastructure

Furthermore, Burnaby's Urban Structure supports a wide variety of housing options, from high-rise apartments to townhomes and laneway houses, helping to address affordability and demographic diversity (City of Burnaby, 2025) Based on this differentiated structure, the city facilitates inclusive growth that meets the needs of families, seniors, students, and newcomers. The strategic distribution of density also underpins the delivery of public infrastructure, such as parks, schools, and utilities, ensuring that community development keeps pace with population growth (City of Burnaby, 2025). This diversity analysis is based on center types include the Downtown (Metrotown), Town Centers (Brentwood, Edmonds, Lougheed), Rapid Transit Urban Villages **(Figure 3-4),** (e.g., Bainbridge, Broadview) **(Figure 3-5),** Urban Villages **(Figure 3-6),** (e.g., Heights, Garden Village), and Neighborhood Centers **(Figure 3-7),** (e.g., Buckingham Heights, South Slope) (City of Burnaby, 2025).

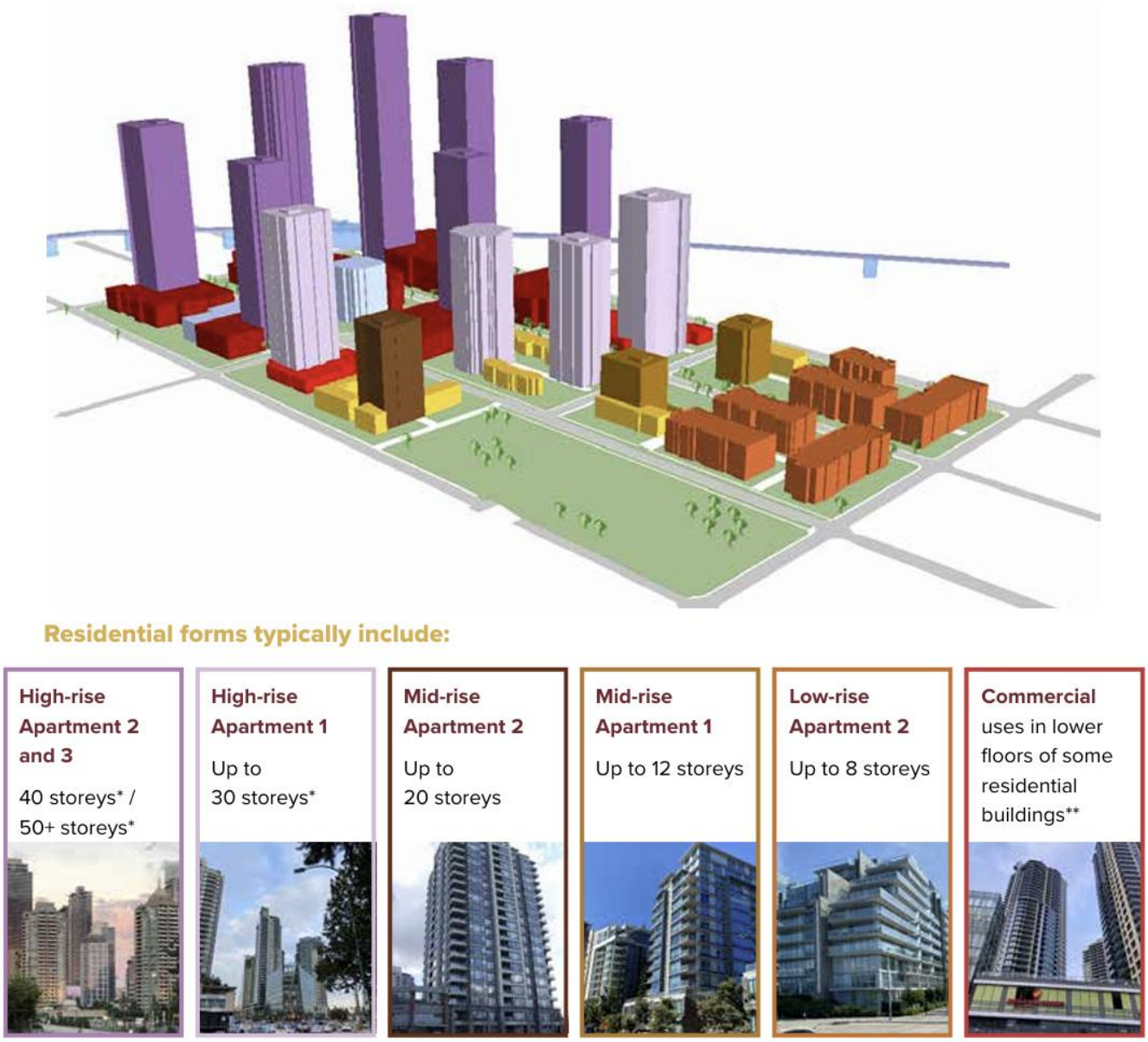

Figure 3-4. Downtown and town centers: Downtown is the central business and commercial hub of Burnaby offers high-density housing, major retail, and employment opportunities. It serves as the focal point for regional transit and urban activity - Town Centers (Brentwood, Edmonds, Lougheed) are Medium-density mixed-use areas that combine residential, commercial, and office spaces. They support local services and connect neighborhoods to rapid transit (City of Burnaby, 2025).

Residential forms typically include:

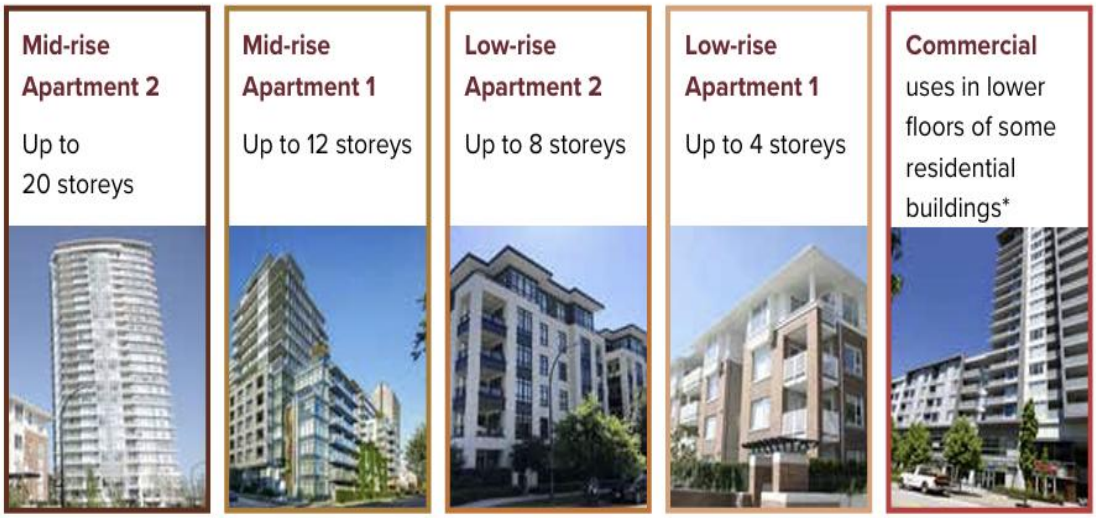

Figure 3-5. Rapid Transit Urban Villages (e.g., Bainbridge, Broadview): Compact, transit-oriented communities built around SkyTrain stations. They promote high-density housing, pedestrian-friendly design, and access to amenities Burnaby, 2025).

Residential forms typically include:

Figure 3-6. Urban Villages (e.g., Heights, Garden Village): Medium-density residential areas with local shops, parks, and services. These villages focus on walkability and community-oriented living (City of Burnaby, 2025).

Figure 3-7. Neighborhood Centers (e.g., Buckingham Heights, South Slope): Low-density residential hubs providing essential neighborhood services, parks, and schools. They maintain a local, community-focused character (City of Burnaby, 2025).

3.2 Planning and Regulatory Tools for Urban Development in Burnaby

3.2.1 Planning and Regulatory Tools for Urban Development

Urban development in Burnaby is guided and regulated through a set of complementary tools that integrate policy, spatial planning, and legal frameworks **(Figure 3-8)**. Community Plans provide localized guidance, outlining objectives for growth, land use, and infrastructure in specific areas. The Land Use Map translates these objectives into spatial designations, identifying intended uses, density, and transportation connections for individual parcels. Development Permit Areas (DPAs) impose site-specific requirements to ensure that development aligns with urban design, environmental protection, and social equity goals. The Zoning Bylaw functions as the primary regulatory instrument, establishing permissible land uses, building forms, and developing standards. Collectively, these instruments enable the city to coordinate growth, manage density, and safeguard public and environmental interests while maintaining flexibility to respond to changing community needs.

Figure 3-8. Role of Community Plans, Land Use Map, Development Permit areas and the Zoning Bylaw (City of Burnaby, 2025).

3.2.2 Community plan area

Burnaby's urban planning approach is structured through the designation of twenty Community Plan Areas (CPAs), each designed to reflect the unique characteristics and planning needs of its corresponding neighborhoods **(Figure 3-9)**. These CPAs serve as localized planning units that provide more detailed policy direction than the overarching Official Community Plan (OCP). While the OCP establishes citywide principles and growth strategies, CPAs enable neighborhood -specific guidance on urban design, land use, and the integration of public amenities. This two-tiered structure allows the City of Burnaby to tailor its land use policies to local conditions, balancing broader objectives with community-level sensitivities (City of Burnaby, 2025).

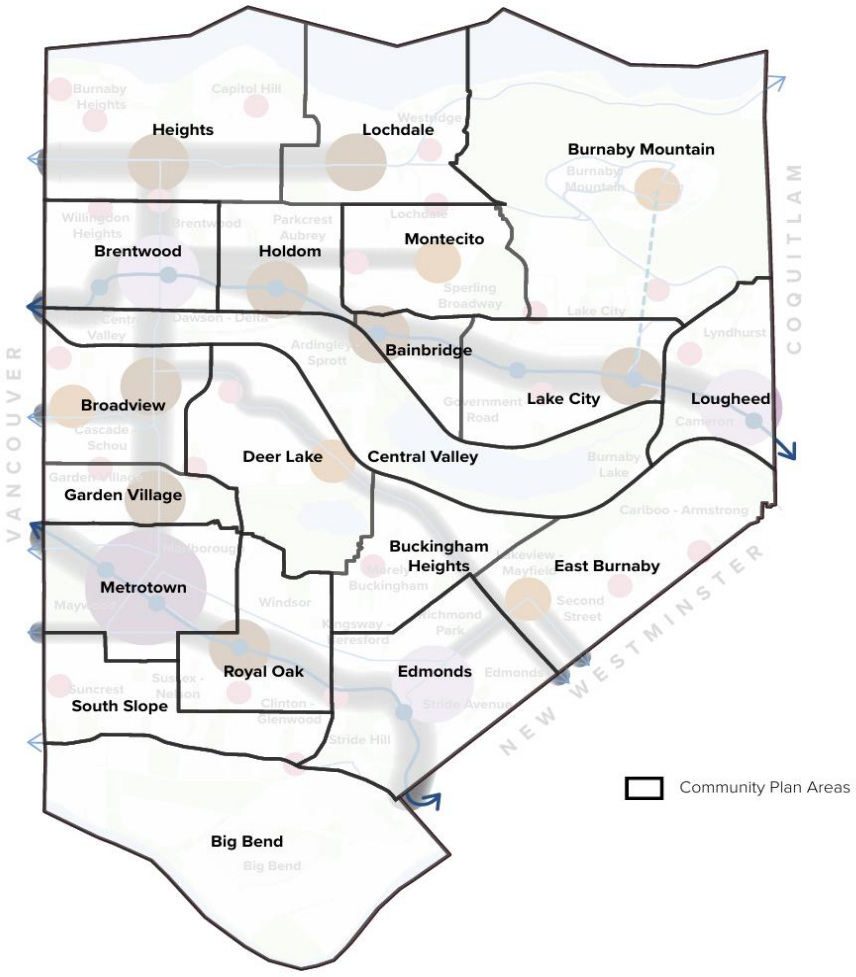

Figure 3-9. Community Plan Areas (City of Burnaby, 2025).

3.2.3 Purpose and Role of Community Plans

Each CPA is accompanied by a community plan, a secondary planning document that complements the objectives of the OCP. These community plans provide guidance on public realm improvements, development form, and land use, with specific attention to placemaking, heritage conservation, and urban character. However, the degree of alignment between these community plans and the current OCP varies. Several community plans are decades old and may not reflect recent changes in policy or urban growth expectations. In such cases, the OCP supersedes the outdated plan and governs land use decisions within that CPA (City of Burnaby, 2025).

3.2.4 Classification of CPAs

The city categorizes Community Plan Areas based on the highest-order urban center located within each area. These classifications align with Burnaby's urban structure and regional planning frameworks, which emphasize density, accessibility, and transit orientation. The CPA system includes a range of urban center types: Downtown, Town Centers, Rapid Transit Urban Villages, Urban Villages, and Neighborhood Centers. These designations are used to differentiate areas by their development intensity, form, and function within the broader city fabric.

3.2.5 Neighborhood Centers and Local-Scale Planning

Neighborhood Centers represent one of the lowest-density designations within the CPA typology. These areas are characterized by predominantly ground-oriented residential forms such as single-family homes, duplexes, triplexes, and townhomes. The planning approach in Neighborhood Centers emphasizes preservation of local character while allowing for gentle density increases. Small-scale commercial nodes and community amenities like parks and schools are integrated into these areas to support walkability and local needs. Despite their modest scale, Neighborhood Centers play an essential role in accommodating incremental growth without undermining the existing neighborhood fabric.

3.2.6 Urban Villages and Transit Integration

In contrast to Neighborhood Centers, Urban Villages accommodate a broader mix of uses and higher building forms. These areas, often situated outside of major transit corridors, feature a mix of low- to mid-rise residential buildings, civic institutions, and commercial establishments. The planning objective in Urban Villages is to create locally oriented centers that provide services and housing options within a pedestrian-friendly environment. These centers often serve as important cultural and institutional anchors, and their design supports gradual density transitions outward from the urban core.

3.2.7 Rapid Transit Urban Villages and Intensification

Rapid Transit Urban Villages (RTUVs) are strategically located around SkyTrain stations and along frequent transit corridors. These areas are prioritized for higher density development, including mid- and high-rise buildings, and are designed to support complete communities with a mix of residential, employment, and institutional uses. RTUVs serve as nodes for transit-oriented development, with densities tapering outward to lower-scale areas. Their role is central to Burnaby's goal of accommodating population growth in a sustainable manner, leveraging transit infrastructure to support compact, livable communities.

3.2.8 Planning Gaps and Policy Hierarchy

While the CPA system offers an effective means of neighborhood planning, the varying age and comprehensiveness of community plans present a challenge. In areas where plans have not been updated in alignment with the current OCP, inconsistencies may arise in the interpretation and application of planning policies. In such instances, the OCP holds precedence and provides the definitive direction for land use, development form, and infrastructure planning. As Burnaby continues to experience growth and demographic change, the city may prioritize the review and updating of legacy community plans to ensure coherence across its planning framework.

3.2.9 Land Use Map and Zoning in Burnaby

Based on the City of Burnaby (2025), the Land Use Map is a key part of Burnaby's Part B Land Use Framework, providing parcel-specific land use designations and indicating anticipated future transportation connections. It works alongside community plans, Development Permit Areas (DPAs), and the Zoning Bylaw to guide site-specific development and provide policy direction, ensuring growth occurs in a coordinated and strategically planned way.

The Land Use Map includes several important elements. Land use designations define the long-term intended use for each parcel, helping to guide future development **(Figure 3-10)**. Future transportation connections identify where streets, lanes, green corridors, or other mobility and public realm links may be required as redevelopment occurs. Special study areas, marked with pink hatching, highlight parcels requiring further evaluation due to environmental concerns, natural hazards, or cultural significance to Host Nations. Parcels in these areas retain their base land use designation until additional studies clarify the best long-term use. Mixed-use sites combine a base land use designation with an overlay designation, allowing redevelopment to incorporate either or both types of uses, subject to overlay conditions (City of Burnaby, 2025) **(Figure 3-11)**.

Regarding zoning, each property in Burnaby has both a zoning district and a land use designation **(Figure 3-12)**. The zoning district regulates what can be built on the property, including building height, setbacks, and permitted uses, whereas the land use designation sets the intended long-term use. Rezoning applications must align with the land use designation, although approval is not guaranteed, and properties may not achieve the full potential indicated by their designation (City of Burnaby, 2025).

The Land Use Map provides a structured framework that integrates long-term development intentions, transportation planning, environmental considerations, and cultural values **(Figure 3-13)**. This ensures that city planners and developers can make informed decisions while balancing growth, sustainability, and community needs, consistent with Metro Vancouver's broader Regional Growth Strategy (Metro Vancouver, 2022).

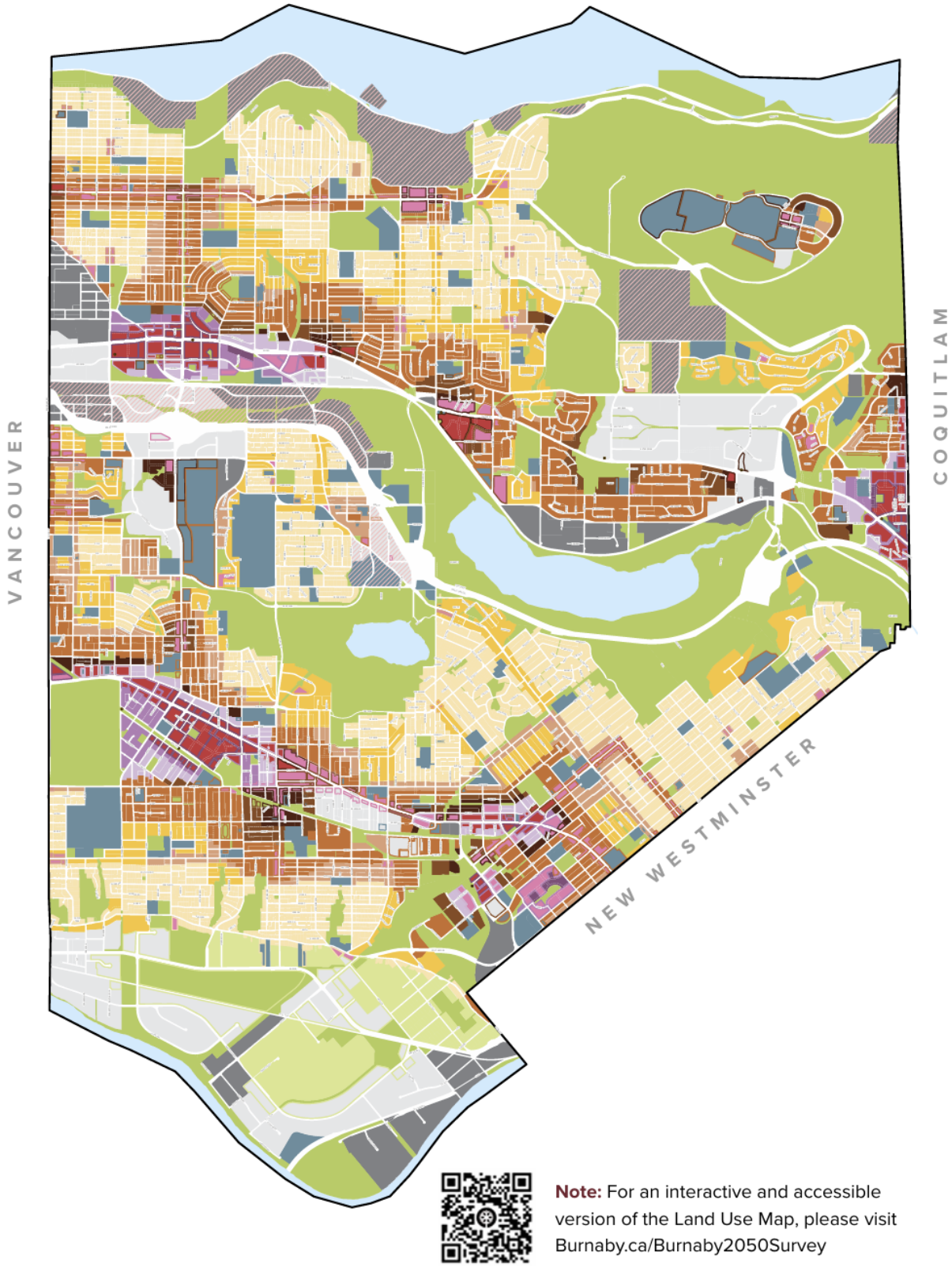

Figure 3-10. Burnaby land uses map (City of Burnaby, 2025).

Base land use designation	Overlay land use designation	Conditions
Neighbourhood Commercial	Institutional	No Conditions - Either designation is possible on the parcel or a mix of both
	Residential*	Minimum 1 storey Neighbourhood Commercial
General Commercial	Institutional	No Conditions - Either designation is possible on the parcel or a mix of both
	Residential*	Minimum 2 storeys General Commercial
Employment	Agriculture	No Conditions - Either designation is possible on the parcel or a mix of both
	Neighbourhood Commercial	Minimum 1 storey Neighbourhood Commercial
	Institutional	Primary uses on the parcel must be Employment. No residential uses allowed.
	Residential*	Minimum of 4 storeys must be Employment. Residential uses must be non-market.
Industrial	Residential*	No Conditions - Either designation is possible on the parcel
Institutional	Neighbourhood Commercial	Must have Institutional uses on parcel
	General Commercial	Must have Institutional uses on parcel
	Residential*	Must have Institutional uses on parcel and include a non-market residential component. If a parcel is identified as part of a new school or a school expansion, there are no conditions, and either designation is possible on the parcel.
Parks, Open Space and Natural Areas	Agriculture	No Conditions - Either designation is possible on the parcel or a mix of both
	Residential*	No Conditions - Either designation is possible on the parcel or a mix of both
Residential*	Employment	No Conditions - Either designation is possible on the parcel or a mix of both
	Neighbourhood Commercial	No Conditions - Either designation is possible on the parcel or a mix of both
	Institutional	No Conditions - Either designation is possible on the parcel or a mix of both
	Parks, Open Space and Natural Areas	No Conditions - Either designation is possible on the parcel or a mix of both

Figure 3-11. Mixed use sites: overlay conditions (City of Burnaby, 2025).

Figure 3-12. Burnaby land use map legend (City of Burnaby, 2025).

Type	Land use colour	Height	Land use designation	Intent
Commercial		Varies by use	Neighbourhood Commercial	To support pedestrian-oriented, local-serving commercial uses at a scale and intensity that meets the day-to-day needs of the surrounding neighbourhood, such as corner stores, small grocers and coffee shops.
		Varies by use	General Commercial	To support a wide range of city-serving commercial goods and services at a scale and intensity that meets the needs of multiple neighbourhoods, such as larger format retail, major office space, entertainment venues and limited vehicle-oriented uses.
		Varies by use	Employment	To support compatible light industrial, commercial, and private recreational uses of a form and character that minimizes conflict with neighbouring residential and agricultural areas and provides creative employment opportunities. Limited opportunities for affordable rental housing in proximity to transit may also be supported.
		Varies by use	Industrial	To support a wide range of industrial uses that vary in scale and intensity, including manufacturing and processing of raw and finished materials, distribution and warehousing, and compatible supporting commercial and accessory uses.
		Varies by use	Agriculture	To support for agricultural and other complementary uses on lands within and outside of the Agricultural Land Reserve, including the growing, rearing, producing, harvesting, storage, processing and sale of agricultural products.
		Varies by use	Institutional	To support a wide range of institutional, cultural, recreational, educational, public worship and other community-serving uses at various scales and intensities.
		Varies by use	Parks, open space and natural areas	To preserve and enhance public and private areas of ecological, historic and recreational value including parks, plazas, greenways, and other public facilities and supporting uses.
Ground oriented residential		4	Small-scale multi-unit housing	To support a range of primarily ground-oriented housing, including single-family, duplex, multiplex, and rowhouse dwellings, while providing opportunities for limited neighbourhood-serving commercial uses.
		4	Townhouse	To provide ground-oriented residential townhouse and rowhouse forms of up to 4 storeys that can sensitively integrate with lower-density housing forms, while providing opportunities for limited neighbourhood-serving commercial uses.

Type	Land use colour	Height	Land use designation	Intent
Low-rise residential		4	Low-rise apartment 1	To support low-rise residential apartment forms of up to 4 storeys, with opportunities for ground-oriented residential and limited neighbourhood-serving commercial uses.
		6-8	Low-rise apartment 2	To support low-rise residential apartment forms of up to 6 storeys, or up to 8 storeys if located within a Transit Oriented Area (TOA), with opportunities for ground-oriented residential and limited commercial uses.
Mid-rise residential		12	Mid-rise apartment 1	To support mid-rise residential apartment buildings of up to 12 storeys that may include terraced forms and offer a transition in scale between low- and high-rise buildings, with opportunities for ground-oriented residential and commercial uses.
		20	Mid-rise apartment 2	To support for mid-rise residential buildings of up to 20 storeys, typically in the form of apartment towers with podiums that may include terraced forms and offer a transition in scale between low- and high-rise buildings, with opportunities for ground-oriented residential and commercial uses.
High-rise residential		30	High-rise apartment 1	To support high-rise residential buildings of up to 30 storeys, typically in the form of apartment towers with podiums that support ground-oriented residential and commercial uses.
		40	High-rise apartment 2	To support high-rise residential buildings of up to 40 storeys, typically in the form of apartment towers with podiums that support ground-oriented residential and commercial uses.
		50+	High-rise apartment 3	To support high-rise residential buildings of 50 storeys or more, typically in the form of apartment towers with podiums that support ground-oriented residential and commercial uses. This designation supports development of the tallest permitted residential buildings in the city and is intended for buildings with exceptional design that can serve as skyline-defining landmarks.

Figure 3-13. Burnaby land use designation (City of Burnaby, 2025).

3.2.10 Supplementary Notes on the Land Use Map

According to the City of Burnaby (2025), the Land Use Map is accompanied by supplementary notes that clarify specific conditions affecting parcels across the city. Development limitations may arise from site-specific factors such as irregular configurations, provincial or federal regulations, environmental constraints including riparian areas and natural hazards, heritage agreements, or Development Permit Area (DPA) guidelines. These considerations help ensure that growth occurs safely, sustainably, and in alignment with the community's vision.

Commercial and Institutional Uses may be added to sites through rezoning applications, including those designated for Neighborhood or General Commercial and Institutional use, without triggering an Official Community Plan (OCP) amendment (City of Burnaby, 2025).

Based on City of Burnaby (2025), Building heights are guided by land use designations, with residential designations progressing in height from low-rise forms to taller structures. On mixed-use sites, the maximum height is determined by the residential designation where present, or otherwise by the most permissive land use on the site. Variances may be considered to accommodate site constraints, encourage desirable housing and public realm outcomes, or provide diverse building heights across multiple-building developments. Heritage properties may be eligible for incentives such as relaxed height or setback restrictions to support their retention. In addition, lands designated for institutional use with a Residential overlay may achieve additional height or density if significant community benefits such as non-profit rental housing, community gathering spaces, or childcare facilities are provided (City of Burnaby, 2025) **(Figure 3-14)**. Future developments may also be required to include non-market rental units, and projects led by housing authorities or government agencies may qualify for increased height allowances up to six stories.

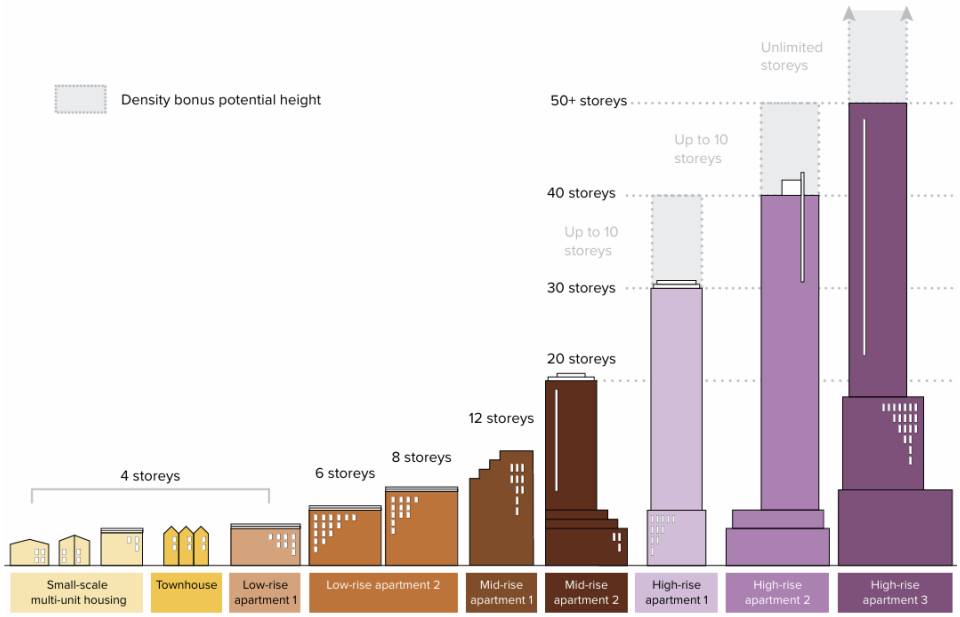

Figure 3-14. Illustration of all Land Use Map Residential Districts and potential density bonus heights (City of Burnaby, 2025).

Parks and School Expansions: Some parcels are designated to accommodate future park or school expansions. These designations do not affect existing land use rights or redevelopment under current zoning, and property owners are not obligated to sell to the City or School District. Acquisition, if pursued, would occur at fair market value (City of Burnaby, 2025).

Transportation connections shown on the Land Use Map are conceptual and may be adjusted to reflect local needs. New streets, lanes, open spaces, and green connections are typically achieved through land dedication, easements, or rights-of-way during redevelopment.

3.2.11 Development Permit Areas in Burnaby

Based on city of Burnaby (2025), Development Permit Areas (DPAs) in Burnaby are designated zones where additional regulations apply to ensure environmentally responsible, safe, and aesthetically consistent urban development. These areas are established to protect ecosystems, prevent risks from natural hazards, and uphold urban design standards. The city currently operates three primary DPAs: the Form and Character DPA, the Streamside Protection and Enhancement DPA, and the Tenant Protection DPA, with plans to expand these in the future. (City of Burnaby, 2025).

The Form and Character DPA regulates the outward appearance of buildings, including landscaping, building shape, access, and design features, ensuring that new developments maintain community standards and contribute positively to the urban environment. The Streamside Protection and

Enhancement DPA focuses on safeguarding natural areas such as streams, wetlands, and riparian corridors, promoting ecological preservation and public safety during urban growth. (City of Burnaby, 2025).

The Tenant Protection DPA addresses social considerations by requiring developers to provide financial compensation, relocation support, and the right of return for tenants in redeveloped multi-family rental buildings, thereby balancing densification with housing security. Collectively, these DPAs serve as strategic tools that integrate environmental stewardship, urban design quality, and social protection into Burnaby's development framework (City of Burnaby, 2025).

3.3 Burnaby's Climate Action Framework

3.3.1 Overview

Burnaby has been experiencing increasingly severe impacts of climate change, including extreme heat, wildfires, flooding, and large storms, which have become more frequent in recent years (City of Burnaby, 2024; City of Burnaby, 2020). The summer of 2021 saw a deadly heat dome and widespread wildfires, followed by an atmospheric river that caused mudslides and blocked transportation routes. In 2023, British Columbia experienced its most destructive wildfire season, with over 2.84 million hectares burned, mass evacuations, and significant property losses (City of Burnaby, 2024). These events highlight the urgent need for both mitigation of greenhouse gas (GHG) emissions and adaptation strategies.

In response, Burnaby City Council declared a climate emergency in 2019 and established ambitious targets to reduce GHG emissions: 45% by 2030, 75% by 2040, and achieving carbon neutrality by 2050 (City of Burnaby, 2020; City of Burnaby, 2024) **(Figure 3-15)**. To achieve these goals, the city developed the Climate Action Framework, which provides sector-specific recommendations for GHG reduction, including buildings, transportation, waste management, and energy systems, complemented by the City Energy Strategy for municipal operations (City of Burnaby, 2024) **(Figure 3-16)**.

Figure 3-15. Burnaby's GHG reduction target (City of Burnaby, 2020).

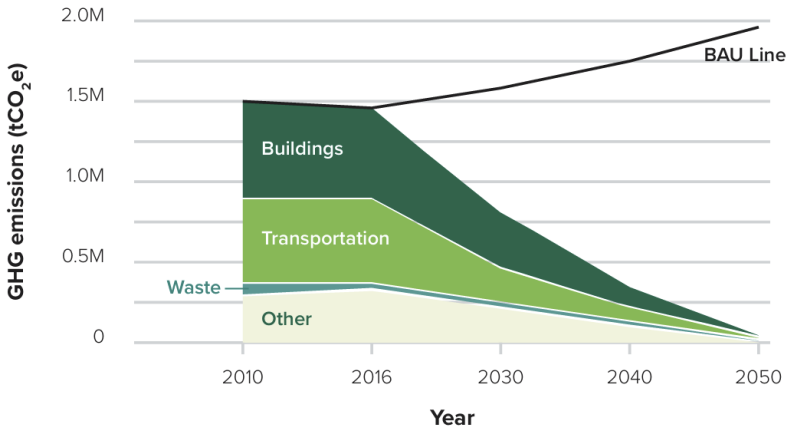

Figure 3-16. Reduction of greenhouse gas emissions (GHG) by sector if everyone takes more action. BAU means business as usual. (City of Burnaby, 2020).

Community engagement plays a central role in Burnaby's approach. Residents have identified addressing extreme heat, smoke, and flooding as top priorities, emphasizing the importance of clean energy, carbon footprint reduction, green infrastructure such as rain gardens, safe and resilient buildings, water conservation, low- and zero-emission vehicles, and waste management (City of Burnaby, 2020). Public awareness and education about climate emergencies are also considered essential.

Burnaby faces several challenges in climate action, including limited municipal authority, reliance on other government levels and private actors, and the long-term nature of adaptation benefits, which may not be immediately visible in financial planning (City of Burnaby, 2020). However, there are significant opportunities: climate action can enhance public health and sustainability through improved transit, cycling, and walking infrastructure, while provincial support and renewable electricity from BC Hydro enable significant reductions in GHG emissions through building electrification and transportation initiatives (City of Burnaby, 2020) **(Figure 3-17)**.

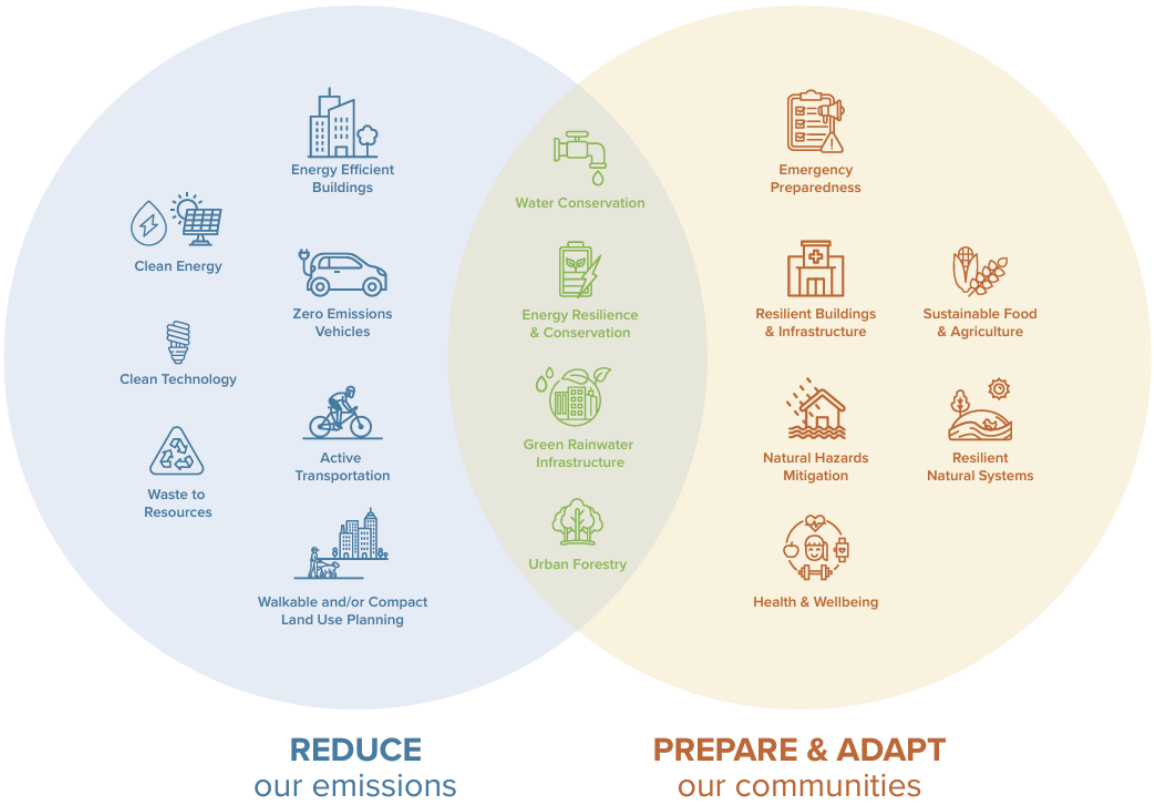

Figure 3-17. Opportunities to address climate change in Burnaby (City of Burnaby, 2020).

3.3.2 Seven Strategic Big Moves

Big Move 1: Climate Leadership

Burnaby's first Big Move establishes climate leadership as the foundation of its action framework **(Figure 3-18)**. The City recognizes that ambitious goals cannot be met without strong institutional leadership, clear governance structures, and effective collaboration across multiple levels of government (City of Burnaby, 2024). This Big Move includes commitments to embed climate considerations into all municipal decision-making processes, from budgeting to land use planning (City of Burnaby, 2024). Burnaby also emphasizes working in partnership with Indigenous Nations, regional authorities, non-governmental organizations, and the private sector to align efforts and pool resources (City of Burnaby, 2024). Education and outreach are central to this leadership role: Burnaby intends to increase public awareness of climate risks and to support residents and businesses in adopting low-carbon practices (City of Burnaby, 2024). Through these measures, the City aims to establish itself as a climate leader in British Columbia, providing a model for other municipalities (City of Burnaby, 2024).

Figure 3-18. Climate leadership Move Timeline **(**City of Burnaby, 2024).

Big Move 2: Resilient Neighbourhoods

The second Big Move focuses on transforming Burnaby's neighbourhoods into hubs of resilience and low-carbon living (City of Burnaby, 2024) **(Figure 3-19)**. Burnaby plans to encourage compact, complete communities that reduce dependence on automobiles and integrate housing, employment, and services within walkable distances (City of Burnaby, 2024). Specific strategies include advancing stormwater management through green infrastructure, enhancing flood protection in vulnerable areas, and increasing shade and cooling measures to address extreme heat (City of Burnaby, 2024). The city also envisions retrofitting existing urban areas with climate-ready infrastructure, such as permeable

surfaces, bioswales, and urban canopy expansion (City of Burnaby, 2024). Social resilience is equally emphasized: Burnaby seeks to strengthen local networks and emergency preparedness at the community level, ensuring that residents are equipped to respond collectively to climate hazards (City of Burnaby, 2024).

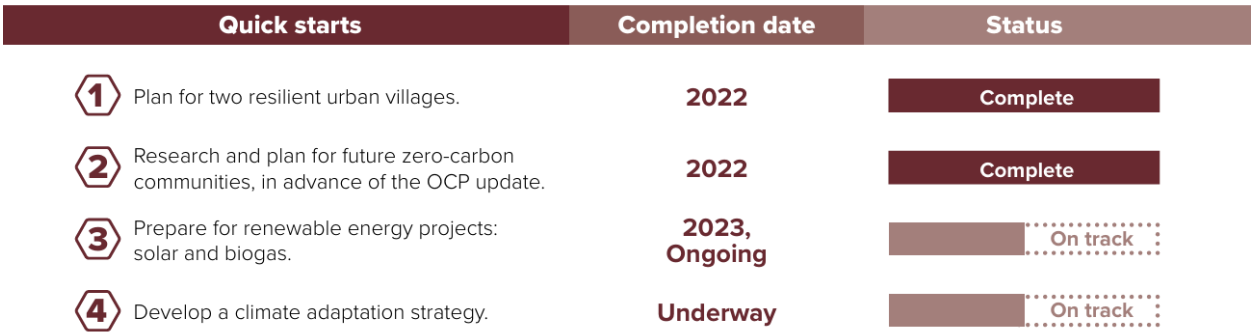

Figure 3-19. Resilient neighborhood Move Timeline **(**City of Burnaby, 2024).

Big Move 3: Healthy Ecosystems

Burnaby acknowledges that ecological health is inseparable from climate resilience (City of Burnaby, 2024) **(Figure 3-20)**. Under Big Move 3, the city commits to protecting, restoring, and enhancing natural systems such as forests, wetlands, and riparian corridors (City of Burnaby, 2024). Specific goals include expanding Burnaby's urban forest, preserving streamside areas, and implementing restoration projects that improve habitat connectivity (City of Burnaby, 2024). Ecosystem services—such as carbon storage, flood mitigation, and temperature regulation—are framed as vital assets for both human and environmental well-being (City of Burnaby, 2024). Burnaby also emphasizes the integration of nature-based solutions into urban design, including green roofs, urban agriculture, and constructed wetlands (City of Burnaby, 2024). Through these initiatives, the city seeks to maintain biodiversity, mitigate climate impacts, and provide residents with accessible natural spaces that enhance quality of life (City of Burnaby, 2024).

Figure 3-20. Healthy ecosystem Move Timeline **(**City of Burnaby, 2024).

Big Move 4: Accelerated Mode Shift

Transportation is one of the largest contributors to greenhouse gas emissions in Burnaby, and the fourth Big Move seeks to address this by accelerating a shift toward sustainable mobility (City of Burnaby, 2024) **(Figure 3-21)**. The City's goal is to significantly increase the proportion of trips made by walking, cycling, and public transit, thereby reducing reliance on private automobiles (City of Burnaby, 2024). To achieve this, Burnaby plans to invest in extensive active transportation infrastructure, such as protected bike lanes, pedestrian-friendly streets, and enhanced transit corridors (City of Burnaby, 2024). Land use planning will support this transition by promoting transit-oriented development, ensuring that new growth is concentrated near rapid transit stations and bus routes (City of Burnaby, 2024). Burnaby also intends to work with TransLink and regional partners to improve transit frequency and accessibility (City of Burnaby, 2024). By prioritizing active and public modes of transport, Burnaby seeks to not only lower emissions but also create healthier, safer, and more liveable communities (City of Burnaby, 2024).

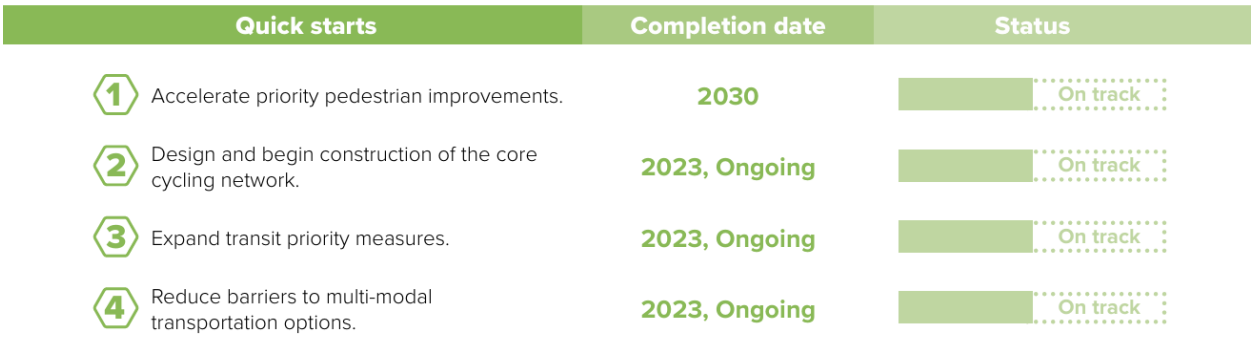

Figure 3-21. Accelerated mode shift Move Timeline **(**City of Burnaby, 2024).

Big Move 5: Zero-Emission Vehicles

While reducing automobile dependence remains a priority, Burnaby recognizes that vehicles will continue to play a role in urban mobility (City of Burnaby, 2024). Big Move 5 therefore focuses on ensuring that vehicles used in the city are zero-emission (City of Burnaby, 2024) **(Figure 3-22)**. This includes expanding the availability of electric vehicle (EV) charging infrastructure in residential, commercial, and public spaces (City of Burnaby, 2024), as well as updating bylaws to require charging-ready parking in new developments (City of Burnaby, 2024). Burnaby also intends to transition its municipal fleet to zero-emission technologies, demonstrating leadership by example (City of Burnaby, 2024). Public incentives and partnerships with utilities and private companies will be used to encourage residents and businesses to adopt EVs (City of Burnaby, 2024). In this way, Burnaby aims to eliminate emissions from its vehicle fleet while complementing the broader effort to reduce overall car dependency (City of Burnaby, 2024).

Figure 3-22. Zero-Emission Vehicles Move Timeline **(**City of Burnaby, 2024).

Big Move 6: Zero-Emission New Buildings

Recognizing that the building sector is a major source of emissions, Burnaby's sixth Big Move sets the ambitious goal of ensuring all new buildings are constructed to zero-emission standards (City of Burnaby, 2024) **(Figure 3-23)**. This will involve implementing stringent energy efficiency requirements, encouraging the use of renewable energy systems, and promoting low-carbon building materials (City of Burnaby, 2024). Burnaby plans to align its building codes and policies with provincial standards while also pursuing innovative approaches that push beyond minimum requirements (City of Burnaby, 2024). The city envisions new construction that achieves net-zero energy performance,

minimizes embodied carbon, and integrates climate adaptation features such as enhanced insulation for heat resilience (City of Burnaby, 2024). By embedding zero-emission standards into new construction today, Burnaby ensures that future building stock contributes to its climate goals rather than adding to long-term liabilities (City of Burnaby, 2024).

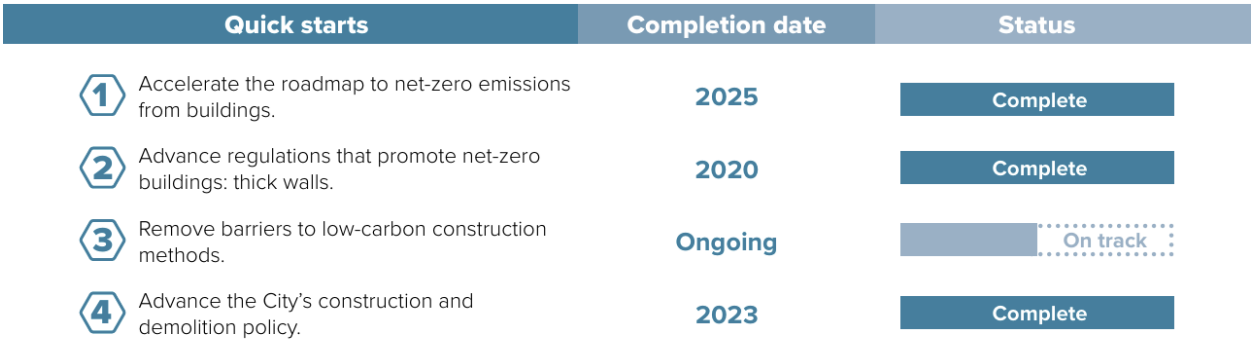

Figure 3-23. Zero-emission new buildings Move Timeline **(**City of Burnaby, 2024).

Big Move 7: Zero-Emission Building Retrofits

The final Big Move addresses the existing building stock, much of which will still be in use in 2050 (City of Burnaby, 2024). Retrofitting these buildings is critical to reducing emissions and enhancing climate resilience (City of Burnaby, 2024) **(Figure 3-24)**. Burnaby plans to support widespread retrofits through incentives, regulatory requirements, and partnerships with utilities and property owners (City of Burnaby, 2024). Specific measures include transitioning heating systems from fossil fuels to electricity, upgrading insulation and windows to improve energy efficiency, and installing renewable energy technologies where feasible (City of Burnaby, 2024). The City also acknowledges the need for equitable policies that support homeowners, renters, and businesses in managing the costs of retrofits (City of Burnaby, 2024). In addition to emission reductions, retrofitting is framed as a means of improving comfort, lowering energy bills, and protecting vulnerable populations from climate extremes such as heat waves (City of Burnaby, 2024). Through this Big Move, Burnaby seeks to transform its existing building stock into an asset for climate resilience (City of Burnaby, 2024).

Quick starts	Completion date	Status
1 Transition to heating and cooling permits.	Underway	On track
2 Advance low-carbon programs for existing buildings.	Ongoing	On track
3 Develop a citywide zero-emission building retrofit strategy.	2023	Complete

Figure 3-24. Zero-emission building retrofit Move Timeline (City of Burnaby, 2024).

3.3.3 Policy Direction for Climate Change and Natural Hazards in Burnaby

The Climate Change and Natural Hazards Mitigation, Adaptation and Readiness Guide complements Burnaby's Climate Action Framework by translating the City's strategic vision into concrete policies and planning tools. These directions are designed to be embedded into the City's Official Community Plan (OCP), ensuring that climate adaptation and hazard readiness are institutionalized across governance, land use, infrastructure, and community life (City of Burnaby, 2020)

3.3.3.1 City Leadership

Policy directions for City leadership are described in **Figure 3-25**.

City leadership	
Policy directions	**Why we are proposing these policies**
1. Use research and data on climate change mitigation, climate change adaptation and natural hazards in the City's operational, land and facilities planning. a) Work with host Nations to include traditional knowledge in the City's climate change plans and adaptation strategies. b) Design buildings and infrastructure to lower the impacts of natural hazards and climate change. c) Prevent, respond and recover from natural disasters.	» This policy direction builds on the commitments to address climate change in the City's Declaration of Climate Emergency and the Burnaby Climate Action Framework and the City Energy Strategy. » These policy directions align with the Emergency Disaster Management Act and funding opportunities from the federal government. » Research by the Canadian Climate Institute shows that for every dollar spent on climate change adaptation measures today we can save $13 to $15 in the future.

Figure 3-25. Policy directions for City leadership (City of Burnaby, 2020).

3.3.3.2 Low carbon, climate-ready communities and emergency preparedness

Policy directions for low carbon, climate-ready communities and emergency preparedness are described in **Figure 3-26**.

Low carbon, climate-ready communities and emergency preparedness

Policy directions

2. Build communities that can accommodate growth and support the City's GHG emission targets.
   a) Use land use and regulatory policies that encourage "complete communities" that include shops, recreational opportunities and other amenities, so people do not need to drive as often.
   b) Use urban design and development practices that help make the built environment safer and more comfortable as climate change impacts the city.
   c) Prevent the impacts of natural hazards caused by climate change by protecting sensitive areas through Development Permit Areas (DPA) and guidelines.
3. Help community members become more prepared for climate change, extreme weather and natural hazards.
   a) Encourage different organizations and sectors to work together to adapt to climate change.
   b) Educate community members and businesses on how to prepare for emergencies.
   c) Help build strong communities so neighbours can help each other in emergencies.
   d) Create a system to understand how vulnerable Burnaby is to climate change.
   e) Support people who are more at risk or more exposed to the impacts of climate change.

Why we are proposing these policies

» Transportation emissions make up 36% of the city's GHG emissions. Reducing the need for people to drive to get around will significantly reduce emissions.

» Building infrastructure that can better withstand and adapt to climate change will save money in the long run and reduce the impact of climate change on people who are more exposed or at risk of extreme heat, wildfires, smoke and more.

» People who are isolated are more at risk in natural disasters.

» Individuals and households need to be prepared for emergencies.

Figure 3-26. Policy directions for low carbon, climate-ready communities and emergency preparedness **(**City of Burnaby, 2020).

3.3.3.2 Energy sources and storage

Policy directions for Energy sources and storage are described in **Figure 3-27**.

Energy sources and storage	
Policy directions	**Why we are proposing these policies**
4. Explore opportunities for energy sources and storage that reduce GHG emissions, including: a) Systems that distribute energy to multiple buildings or across a neighbourhood (e.g. district energy). b) Renewable energy projects. c) Small- and large-scale batteries and energy storage.	» Different or diversified energy sources can reduce GHG emissions and improve the community's ability to adapt to a changing energy landscape. » Energy storage can be used for back up in case of emergencies as well as to store renewable energy when more energy is produced than used.

Figure 3-27. Policy directions for Energy sources and storage **(**City of Burnaby, 2020)

3.3.3.2 Buildings

Policy directions for buildings are described in **Figure 3-27**.

Buildings	
Policy directions	**Why we are proposing these policies**
5. Continue to improve energy efficiency and reduce GHG emissions in new and existing buildings. a) Use low-carbon energy sources. b) Speed up the process to make existing buildings more energy efficient and climate-ready. c) Support the measurement and reporting of energy use in buildings. d) Protect natural plants and trees around buildings to provide cool, shady areas and manage storm water runoff. e) Help people who are more at risk or more exposed to climate change. 6. Reduce the amount of waste and carbon emissions in building materials and the development and construction industries by: a) Offering incentives for using low-carbon materials. b) Using guidelines and zoning regulations that promote prefabricated construction. c) Repurposing or relocating buildings instead of demolishing them. d) Establishing and sharing best practices.	» Existing buildings are the source of 40% of emissions across the city and are Burnaby's biggest opportunity to reduce emissions. » Every new building contributes to emissions, and it's easier and less expensive to build a low-carbon energy efficient and climate-ready building from the start than to adapt it later. » These directions align with the BC Energy Step Code and the BC Zero Carbon Step Code. » Embodied carbon (the GHG emissions it took to make and transport a material) is a growing source of GHG emissions in buildings. Reducing the embodied carbon in new buildings could reduce overall GHG emissions of a new building by up to 30%.

Figure 3-28. Policy directions for buildings **(**City of Burnaby, 2020).

3.3.3.2 Transportation – electric vehicles and other zero emissions vehicles

Policy directions for Transportation – electric vehicles and other zero emissions vehicles are described in **Figure 3-29**.

Transportation – electric vehicles and other zero emissions vehicles	
Policy directions	**Why we are proposing these policies**
7. Make it easier for people to own an electric vehicle and other zero emissions vehicles. a) Support the building of more electric vehicle and other zero emissions vehicle infrastructure, including charging stations. b) Consider providing incentives for zero emission vehicle retrofits including upgrades to electrical capacity. c) Education and awareness about electric vehicles and other zero emissions vehicles, and federal government incentives.	» Transportation emissions make up 36% of Burnaby's GHG emissions. » Transitioning from fossil fuel powered vehicles to zero-emission vehicles will make up 20% of the emission reduction Burnaby needs to reach carbon neutrality by 2050.

Figure 3-29. Policy directions for Transportation – electric vehicles and other zero emissions vehicles **(**City of Burnaby, 2020).

Further Research

Chapter 3 examined urban hierarchies and spatial organization in contemporary cities, highlighting the roles of downtowns, urban villages, and residential neighbourhoods in shaping governance, land use, and community dynamics. To gain deeper insight into how different areas function within broader urban hierarchies, further research into municipal planning documents, governance studies, and Indigenous perspectives is recommended. Understanding these different urban typologies and their planning frameworks helps contextualize how policies, zoning, and community engagement influence the city's spatial and social structures.

Several sources provide foundational perspectives for this chapter. Armstrong and Lucas (2022) analyse the structure of municipal voting in Vancouver, offering insights into how political processes and representation vary across neighbourhoods and influence decision-making at different scales of the city. Bouvier and Walker (2018) examine Indigenous planning and municipal governance, highlighting transformative lessons that can be applied to integrate community priorities, equity, and cultural perspectives into urban development. The City of Burnaby has produced several planning documents relevant to urban hierarchy: the *Bainbridge Urban Village Community Plan* (City of Burnaby, 2022) provides a framework for medium-density, mixed-use neighbourhoods, and the *Royal Oak Community Plan* (City of Burnaby, 2025) outlines strategies for suburban residential areas and community infrastructure. These plans are essential for understanding how local government's structure development according to urban typologies, density, and function.

Among these sources, the Metrotown Downtown Plan (City of Burnaby, 2017) is particularly significant for Chapter 3, as it provides a detailed framework for understanding high-density urban cores. The plan establishes a vision for Metrotown as a vibrant, mixed-use downtown that balances residential, commercial, and public spaces, integrating sustainability, mobility, and liveability into a cohesive urban hierarchy (City of Burnaby, 2017).

A key finding of the plan is the emphasis on mixed-use development as a core strategy for downtown vitality. The plan identifies multiple zones that combine residential towers, office spaces, retail amenities, and cultural facilities. This mix supports economic growth while also creating opportunities for diverse community interactions, enhancing the social fabric of the downtown. By clustering amenities, residential units, and workplaces, the plan reduces commuting distances, promotes walkability, and encourages a pedestrian-oriented urban lifestyle (City of Burnaby, 2017).

Another significant focus is on transit-oriented design and mobility integration. The Metrotown plan emphasizes the creation of walkable streets, bicycle infrastructure, and integration with the regional SkyTrain system, reflecting the principle that mobility and accessibility are critical to a functioning

urban hierarchy. The plan demonstrates that high-density urban cores must be designed to accommodate high volumes of pedestrian, bicycle, and transit traffic while minimizing private vehicle dependence. This approach not only reduces congestion and greenhouse gas emissions but also strengthens the downtown's role as a regional hub (City of Burnaby, 2017).

Public space planning and community amenities form another important finding. The plan identifies parks, plazas, and cultural spaces as central elements of urban hierarchy, recognizing that well-distributed public spaces enhance social cohesion and urban vitality. It highlights how central gathering points such as Metrotown Civic Plaza and retail concourses serve as focal points for community activity, supporting both cultural engagement and economic activity. The integration of recreational facilities, public art, and green infrastructure ensures that high-density areas retain human-scale qualities and contribute to liveability (City of Burnaby, 2017).

The plan also addresses phasing and development sequencing as critical to managing growth in hierarchical urban systems. Different areas of downtown are assigned varying densities and building heights, illustrating a carefully considered hierarchy within the downtown core. Higher-density towers are concentrated near transit hubs, while mid-rise and lower-rise buildings provide transitional zones connecting to surrounding neighbourhoods. This gradation helps balance growth pressures, preserve sunlight and airflow, and maintain liveable streetscapes (City of Burnaby, 2017).

Another key finding concerns environmental sustainability and resilience. The plan prioritizes green infrastructure, stormwater management, and energy-efficient building practices. Green roofs, landscaped plazas, and pedestrian corridors are integrated into building designs to enhance environmental performance. These strategies illustrate how hierarchical planning in dense urban centers can incorporate ecological considerations without compromising economic or social objectives (City of Burnaby, 2017).

Community engagement and participatory planning are emphasized throughout the Metrotown Downtown Plan. The city conducted workshops, public consultations, and collaborative design charrettes to ensure that the perspectives of residents, businesses, and stakeholders were incorporated. These processes are critical in shaping urban hierarchy because they ensure that growth supports the needs of multiple users while avoiding conflicts between different functional areas. Engagement strategies also increase transparency and accountability in governance, contributing to a sense of ownership among community members (City of Burnaby, 2017).

Finally, the plan identifies several challenges and limitations. High-density development pressures require careful coordination of infrastructure, transportation, and service delivery. Market-driven development can create affordability issues, potentially limiting access to downtown living for lower-

income residents. The plan underscores the importance of policy interventions, zoning regulations, and incentive programs to mitigate these challenges and achieve equitable, sustainable outcomes (City of Burnaby, 2017).

CONCLUSION

Key Findings

Chapter 1 served as the conceptual and legal backbone of the thesis. It begins with a historical review of the emergence of urban planning in Canada starting with Indigenous ecological practices to colonial grid-based models, later reshaped by industrialization and early reforms addressing health and infrastructure. The 20th century institutionalized planning, while postwar suburbanization created sprawl and segregation. Since the 1970s, planning has emphasized participatory and sustainable approaches, with regional governance coordinating growth through transit-oriented and environmentally conscious development. This sub chapter shows that planning has never been static in Canada, and it has constantly transformed to reflect social values, public health and environmental priorities.

After gaining insights on Canada's background in land use planning evolution, studies delved deeper on Canada's multi-level governance framework for land use planning. It emphasized that planning in Canada is not centrally coordinated but through nested responsibilities and there is a vertical division of powers and tools that influence land use decisions across scales. In Canada, land use governance is institutionally layered, with each level of government holding different degrees of authority. At the federal level programs such as National Housing Strategy giving funds to support housing and developments, and provinces empowered by the Constitution Act of 1867, has the major role of planning legislation, meanwhile regional districts like Metro Vancouver serve to align municipal actions with broader goals, especially in areas like transit, housing, and green space. Municipalities implement day-to-day planning but operate within constraints set by provincial law and regional frameworks. They mediate community interests and manage development applications, yet their authority is conditional and fiscally dependent.

The instruments can vary by level, federal authority influences land use planning through some funding programs, strategic initiatives and intergovernmental partnerships. Provinces apply legislation such as Local Government Act, regional governance use tools such as official community plans (OCPs) to harmonize planning across municipalities, and municipalities use several tools to manage land use. Zoning and overlay districts regulate density and building form, while Development Permit Areas set design and sustainability standards. Site plan controls guide infrastructure in large projects, and density bonuses with Community Amenity Contributions leverages private development to fund housing, green space, and community facilities.

Chapter 2 examines land use planning in Metro Vancouver, focusing on how provincial legislation is implemented at regional level, and how regional governance seeks to align local actions with broader goals, particularly in addressing global challenges such as climate change**.** delves deeper into a smaller scale of land use planning within Canada. The first subchapter presents a historical, geographical, and

demographic overview of Metro Vancouver. Early growth was driven by colonial land allocation, private speculation, and the Canadian Pacific Railway, but planning only became formalized with the Town Planning Act of 1925 and the establishment of a planning commission. These early efforts in zoning, transport, and land use laid the foundation for long-term growth management.

Geography plays a key role, as the region is bounded by the ocean, mountains, and agricultural reserves, with much land unavailable for development due to slopes, floodplains, and ecological protections. These limits have reinforced the importance of densification, compact urban form, and regional coordination.

Demographically, Metro Vancouver is British Columbia's most populous region, growing from 2.5 million residents in 2016 to a projected 3.8 million by 2050. Immigration is the main driver of growth, while natural increase is slowing due to low fertility and an aging population. Domestic migration fluctuates, influenced by housing costs and lifestyle factors, with most newcomers settling in urban centers such as Vancouver, Burnaby, and Surrey, while suburban areas experience slower but steady growth.

In the next chapter governance and planning structure of Metro Vancouver is analysed. The Metro Vancouver Regional District (MVRD) encompasses 21 municipalities, one Electoral Area, and one Treaty First Nation across 2,800 km^2 and is governed by a Board of Directors with population-weighted voting, emphasizing collaboration. The Regional Growth Strategy (Metro 2050) provides a legally binding framework under the Local Government Act, with municipalities aligning local plans through Regional Context Statements while maintaining autonomy. Sub-regional collaboration supports coordinated infrastructure and service delivery, and Indigenous perspectives are increasingly integrated in planning and governance. Beyond planning, MVRD centralizes management of region's drinking water supply, operates advanced wastewater treatment facilities, and runs a solid waste management system focused on reduction, recycling, and responsible disposal and moreover, monitoring air quality and manages a network of regional parks and greenways that preserve ecosystems, offer recreational opportunities, and support biodiversity. The governance model balances regional coordination and local priorities, addressing shared challenges such as transportation, climate resilience, and housing. Performance is monitored through indicators, and Metro 2050 can be amended by consensus to maintain adaptability. Integration with other strategies ensures holistic planning, but rapid population growth, land constraints, housing affordability, climate risks, demographic shifts, economic transitions, and Indigenous reconciliation remain key challenges and opportunities for the region. The governance analysis shows that MRVD's authority is chosen from voluntary inter-municipal cooperation and provincial delegation and not from legislation. Importantly, the analysis finds out that MVRD has a unifying vision, its effectiveness as a governance body depends on mutual trust, soft power and technical coordination rather than direct control which shows it works through "networked governance".

Despite lacking binding power over the matter of land use decisions, MVRD's strategic plan has significant influences through policy integration requirements.

The first aim of chapter 2.3 is to analyse the planning tools of Metro Vancouver that are used to coordinate plannings. Which includes Urban containment boundary (UCB) a central mechanism to prevent sprawl and agricultural lands, Regional land use designations which are structured categories (general urban, industrial, employment, rural, agricultural, conservation/recreation) to ensure land compatibility and sustainability, Regional Overlays targeted growth areas including Urban Centres, FTDAs, Transit Growth Corridors, Trade-Oriented Lands, and Natural Resource Areas, and Regional Growth Projections which are demographic and employment forecasts (medium, high, low growth scenarios) to guide housing and infrastructure planning. Moreover, a detailed analysis of Metro 2050's five strategies has been done through this sub chapter that revealed a sophisticated planning agenda beyond the growth management for Metro Vancouver in 2050.

Chapter 2.4 outlines the strategies of Metro 2050 for the five main goals identified in the previous chapter, detailing how Metro Vancouver, its member jurisdictions, and TransLink collaborate to implement each strategy. Goal 1, to foster a compact, complete, and connected region, emphasizes compact urban development, complete communities, and transit-oriented growth, promoting efficient land use, social cohesion, and reduced reliance on private vehicles. Goal 2, supporting economic development and prosperity, focuses on building a competitive and innovative regional economy while integrating sustainability, with Metro Vancouver providing policy guidance, municipalities implementing initiatives, and private stakeholders driving diversification. Goal 3, protecting the environment, addressing climate change, and responding to natural hazards, targets ecosystem conservation, greenhouse gas reduction, and climate resilience through adaptive planning and Indigenous knowledge integration. Goal 4, providing diverse and affordable housing choices, prioritizes expanding supply and diversity, protecting rental stock, and supporting vulnerable populations, aligning housing development with transit, low-carbon infrastructure, and climate-ready design. Finally, Goal 5, supporting sustainable transportation choices, integrates land use and mobility planning to promote transit, active transportation, and zero-emission vehicles while maintaining efficient movement of people and goods through coordinated efforts among Metro Vancouver, TransLink, and municipalities. Collectively, these strategies demonstrate a multi-level governance approach that links regional policy, local implementation, and transportation infrastructure to address urban growth, sustainability, and climate resilience.

Chapter 2.5 focuses on Goal 3 of Metro 2050, which addresses climate change, and examines the guiding principles, conceptual framework, and institutional roles involved in regional climate action. Based on

the studies, Metro Vancouver faces increasing climate risks, including hotter, drier summers, wet winters, and more frequent extreme weather, which intersect with affordability, social equity, and ecosystem health. Climate action offers co-benefits such as improved public health, energy efficiency, air quality, and economic opportunities. The Climate 2050 framework is guided by ten principles emphasizing ambition, adaptability, evidence-based policy, integration, fairness, inclusivity, and accountability. Its structure comprises three interconnected components: a Strategic Framework defining vision and principles, Climate 2050 Roadmaps providing actionable pathways, and a Reporting and Communication Tool for progress tracking and stakeholder engagement. Key institutional roles include Metro Vancouver (coordination and planning), federal and provincial governments (regulation, funding, legislation), First Nations (Indigenous knowledge and resilience), member jurisdictions (local implementation), and TransLink and utilities (low-carbon transportation and energy). Based on the data, between 2007 and 2015, regional GHG emissions fell 12%, mainly from energy efficiency and cleaner energy. Transportation and buildings are the largest sources, and achieving carbon neutrality by 2050 requires near-zero emissions, sector-specific strategies, and adaptive, evidence-based actions.

And the last chapter of regional governance analysis of Metro Vancouver, stated ten regional issue areas within the Climate 2050 framework and present the strategies and actions. Metro Vancouver's climate strategies address key sectors to enhance resilience and reduce emissions. 1. Nature and ecosystems are protected through conservation, restoration, urban greening, and collaboration with First Nations, providing carbon storage, flood control, and biodiversity benefits. 2. Infrastructure integrates climate projections with energy-efficient, low-impact, and green designs to withstand extreme weather. 3. Human health and well-being are supported through heat mitigation, air quality management, and emergency preparedness. 4. Buildings and 5. Transportation—major sources of GHGs are targeted with energy-efficient retrofits, low-carbon heating, transit expansion, active mobility infrastructure, and low-emission vehicles. 6. Industry and 7. Energy sectors adopt efficiency measures, renewable energy, and low-carbon fuels to reduce emissions while maintaining economic viability. 8. Land use and growth management promotes compact, transit-oriented development to limit emissions and protect carbon sinks. 9. Agriculture leverages sustainable practices for carbon sequestration and climate adaptation, while 10. Waste management emphasizes reduction, recycling, energy recovery, and circular economy principles. Together, these measures integrate mitigation, adaptation, and sustainability across sectors.
Chapter 3 provided an in-depth study of Burnaby, as a case study, which is one of the 21 municipalities of Metro Vancouver, to assess how a single municipality implements land use planning aligned with regional and higher-level governance frameworks. Burnaby's Land Use Framework functions as both a guiding framework and an operational tool for coordinating development, transportation, environmental policies, and community needs. Growth projections indicate that the city is expected to

accommodate approximately 146,000 new residents, 68,000 housing units, and 71,000 jobs by 2050, with the framework ensuring that growth occurs strategically, sustainably, and in alignment with regional objectives. The framework includes four key components: Urban Structure, Community Plan Areas (CPAs), the Land Use Map, and Development Permit Areas (DPAs). The "nodes and corridors" model concentrate development along transit corridors, serving as a practical instrument to promote transit-oriented development (TOD). The urban structure establishes a hierarchy of centers Downtown, Town Centers, Rapid Transit Urban Villages, Urban Villages, and Neighbourhood Centers directing higher-density development near SkyTrain stations while preserving lower-density neighbourhoods. Spatial logic and transition planning ensure a smooth progression from high-rise, mixed-use nodes to mid- and low-rise areas, facilitating infrastructure delivery and maintaining neighbourhood character. Transit integration and sustainability objectives embed low-carbon principles into land use planning, aligning intensities with regional transit networks to promote walkable communities, reduce greenhouse gas emissions, and preserve green and environmentally sensitive areas. Finally, housing diversity and community infrastructure are operationalized through policies and development tools that support varied housing types and ensure access to essential services, parks, schools, and utilities, fostering inclusive, resilient, and sustainable community growth.

Chapter 3.2 examines the planning and regulatory instruments guiding urban development in Burnaby. Burnaby employs a comprehensive set of planning and regulatory tools, including Community Plans, Land Use Maps, Development Permit Areas (DPAs), and the Zoning Bylaw, which provide spatial, policy, and regulatory guidance while allowing flexibility to respond to evolving community needs. The city's 20 Community Plan Areas (CPAs) serve as localized planning units, complementing the citywide OCP with detailed policies on land use, infrastructure, public realm improvements, heritage, and placemaking, categorized according to the urban structure hierarchy. Neighborhood Centers maintain low-density, ground-oriented housing and local amenities, while Urban Villages support medium-density, mixed-use development with pedestrian-friendly design and cultural anchors. Rapid Transit Urban Villages (RTUVs), located near SkyTrain stations, prioritize high-density, mixed-use, transit-oriented development to accommodate population growth sustainably. The Land Use Map and Zoning Bylaw provide parcel-specific guidance, regulate building form, and integrate environmental, heritage, and non-market housing considerations. DPAs, including Form and Character, Streamside Protection, and Tenant Protection, ensure site-specific compliance with design, environmental, and social objectives. While some CPAs are outdated, the OCP provides overarching guidance, highlighting the need to update legacy plans to maintain alignment with growth projections and contemporary urban strategies.

The final chapter of this study examines Burnaby's comprehensive approach to climate action and its integration into urban planning, providing a basis for comparing the Climate 2050 framework of Metro

Vancouver. This comparison allows an assessment of the extent to which regional and municipal climate adaptation goals align and operate coherently across different scales of governance. Burnaby faces increasingly frequent and severe climate events, including extreme heat, wildfires, flooding, and storms, highlighting the urgent need for both mitigation and adaptation measures. Effective climate action relies on strong institutional leadership, collaboration with Indigenous Nations, regional authorities, NGOs, and the private sector, as well as the integration of climate considerations across municipal decision-making. Community engagement guides the creation of compact, complete, and resilient neighborhoods, reducing car dependence and enhancing infrastructure to address hazards. Ecosystem protection and restoration, urban forest expansion, wetland management, and green infrastructure provide flood mitigation, carbon storage, and cooling benefits. Strategies in low-carbon transportation focus on active mobility, electric vehicle infrastructure, and zero-emission technologies, while energy diversification and storage strengthen resilience and reduce emissions. Building policies promote net-zero and climate-ready new constructions and retrofitting existing buildings to improve energy efficiency, reduce emissions, and protect vulnerable populations, including reducing embodied carbon. Natural hazards management integrates floodplain planning, slope stabilization, and protection of sensitive areas, with the Still Creek corridor designated for targeted flood mitigation and community planning. Finally, long-term, cost-effective planning demonstrates that proactive adaptation investments yield substantial future savings and align with federal and provincial regulations and the City's climate commitments.

Interpretation on Thesis Main Questions

The history of land management and governance in Metro Vancouver gives important insights into understanding today's urban policy and planning practices. It shows that today's urban planning in Canada, especially Metro Vancouver, is shaped by both historical influences like Indigenous land stewardship and colonial planning and modern priorities such as sustainability, fairness, and climate resilience. In other words, current planning balances respecting the past with addressing today's social, environmental, and economic needs. However, planning has shifted from previous centralized, top-down approaches to more participatory and collaborative discipline, to gain the ability to adapt to social, demographic, and environmental changes. These findings suggest that Metro Vancouver's land management framework balances historical constraints with contemporary planning priorities, forming the foundation of this thesis.

After analysing the roles of different authorities in land use planning in Canada, it is evident that Metro Vancouver is not the only actor involved, as some decisions are shaped by other authorities and intergovernmental relations. Analyzing this hierarchy and their roles shows that each level has a different scope of effectiveness in land use planning: the federal level has a more limited role, the provincial level plays the primary role, and the regional level acts as a balancing authority between the provinces and municipalities, while also exercising its own powers in certain areas. The existence of different tools and instruments at each level provides further evidence that the scope and roles of these levels vary, reflecting their distinct responsibilities and needs. Second, the analysis shows how normative values, such as social equity, sustainability, and public engagement, can influence the region's performance in land use planning, meaning that it is not just laws and other authorities that have an impact. To conclude, it becomes clear that Metro Vancouver, positioned between provincial and municipal powers, plays a key role in balancing these levels of authority to achieve better coordination and harmony.

Metro Vancouver's case demonstrates how geography, population, and governance shape land management challenges, making coordinated governance essential. The region's constrained geography, with limited land and surrounding mountains, restricts urban expansion. Population pressures, driven by rapid growth and high levels of immigration, increase demand for housing and infrastructure, while the region must also contend with global challenges such as climate change and natural hazards.

From a land management perspective, examining Metro Vancouver's structure and governance shows that regional oversight is crucial for addressing issues that go beyond municipal boundaries. It also allows the region to achieve economies of scale, maintain consistent standards, and provide advanced infrastructure that individual municipalities could not support on their own. The centralization of critical services (water, waste, parks) further helps to reduce costs, ensure fair access to infrastructure and coordinate land use, resource management, and the overall quality of life for residents. However,

challenges such as housing affordability and climate change show that regional planning tools alone are not enough and they need strong cooperation between government levels and flexible governance.
Thus, Metro Vancouver's governance model is not only a mechanism of coordination but also manages conflicts of the land's usage.
One of the key tools used by regional authorities is the Regional Growth Strategy. This thesis focuses on the Metro 2050 Regional Growth Strategy (RGS) to better understand how regional bodies manage and coordinate land use planning.
Metro 2050 serves as the core framework for land management and governance in Metro Vancouver, addressing regional challenges through five main goals. The first goal, fostering a compact, complete, and connected region, highlights the importance of coordinated land use planning that supports dense, mixed-use communities with strong transit connections and integrated services. This approach helps manage growth efficiently, preserve green spaces, strengthen social cohesion, and reduce car dependency, showing how governance can shape sustainable and liveable urban environments.
The second goal, supporting economic development and prosperity, emphasizes creating jobs, fostering innovation, and developing the workforce while aligning growth with sustainable practices. Industrial and technological development is planned in a way that minimizes environmental impacts, while collaboration among regional authorities, municipalities, and private stakeholders enhances economic resilience and demonstrates that prosperity can coexist with sustainability and equity.
The third goal, protecting the environment, addressing climate change, and responding to natural hazards, stresses the need to conserve land, restore ecosystems, and use nature-based solutions. Compact, energy-efficient development, sustainable transportation, and hazard planning reduce emissions and strengthen community resilience. Collaborative governance incorporating Indigenous knowledge ensures that environmental management remains adaptive, science-based, and equitable.
The fourth goal focuses on expanding housing supply and diversity to meet varied needs while safeguarding tenants and supporting vulnerable groups. By promoting accessible, energy-efficient, and climate-resilient housing, and by collaborating with governments and non-profits to provide non-market and supportive housing, the strategy aims to create inclusive communities that balance social, economic, and environmental priorities.
The fifth goal emphasizes the integration of land use and transportation to promote transit, cycling, walking, and shared mobility. These strategies improve accessibility, reduce emissions, and enhance the efficient movement of people and goods. Coordinated planning between Metro Vancouver, TransLink, and municipalities strengthens system reliability, climate resilience, and equitable access, effectively linking transportation planning with sustainability and land use objectives.

After presenting the goals of Metro 2050, this thesis turns to a case study of Burnaby, one of the most structured cities in Metro Vancouver, to evaluate how regional objectives are reflected at the municipal

level. Burnaby's land use planning framework demonstrates a strategically coordinated, transit-oriented, and sustainability-focused approach that closely corresponds to several Metro 2050 goals.

For example, the city's "nodes and corridors" model promote high-density development around transit hubs, reducing car dependency, lowering greenhouse gas emissions, and enhancing connectivity. This approach is strongly aligned with Goal 3 (Support Sustainable Transportation Choices) and Goal 5 (Support Metro Vancouver's Environmental Goals).

At the same time, Burnaby's classification of five urban structure types ranging from downtown and town centres to urban villages and lower-density neighbourhoods illustrates a gradual transition in density that preserves environmental quality and social diversity. This strategy reflects Goal 1 (Create a Compact Urban Area) and Goal 5 (Support Metro Vancouver's Environmental Goals) by concentrating growth while protecting ecological and community values.

Burnaby also integrates housing diversity with community infrastructure such as parks, schools, and utilities. This reinforces liveability and inclusiveness, directly aligned with Goal 4 (Provide Diverse and Affordable Housing Choices) and Goal 2 (Support a Sustainable Economy), as it balances social equity with economic opportunities.

Burnaby's regulatory system strongly reflects Metro 2050's instruments and structure, but in a more operational and site-specific form. Where Metro 2050 provides the regional vision and monitoring framework, Burnaby translates these into neighborhood-level tools and regulations that directly shape land use, density, and development outcomes. The alignment is therefore both conceptual and practical, with Burnaby acting as a local-scale executor of regional sustainability, livability, and transit-integration goals. The Official Community Plan (OCP), Community Plans, and Community Plan Areas (CPAs) provide citywide guidance while allowing neighborhood-specific flexibility. This mirrors Metro 2050's regional land use designations such as Urban Centres, Frequent Transit Development Areas, Industrial/Employment Lands, and Rural Lands which guide growth across the region. In this comparison, Metro 2050 sets the overall vision for where growth should occur, and Burnaby translates that vision into practical, localized strategies. In other words, Burnaby applies regional priorities at a finer scale, adapting them to the specific characteristics and needs of its neighborhoods.

The Land Use Map and Zoning Bylaw translate these policies into clear rules on land use, density, and building form. This corresponds closely to Metro 2050's Growth Strategy Maps, which also aim to direct development toward compact, transit-oriented, and mixed-use areas. Both frameworks place emphasis on sustainable land use and environmental protection, showing a strong degree of alignment.

Development Permit Areas (DPAs) provide Burnaby with site-specific oversight to ensure that developments meet ecological, design, and social equity objectives. While these are local regulatory tools, they conceptually align with Metro 2050's regional monitoring and performance instruments, which track progress toward broader goals such as climate resilience, housing equity, and sustainable growth. Although DPAs operate at the parcel level and Metro 2050's tools operate at the regional level, both

serve the same overarching purpose: translating regional sustainability and livability objectives into measurable outcomes. In this sense, DPAs represent a local implementation mechanism that helps achieve the regional targets set by Metro 2050.

Finally, in this study, the climate action framework has been chosen as one of the main goals of land use globally, and both Metro Vancouver and Burnaby have been examined to compare differences in functions and similarities in objectives.

Metro Vancouver's Climate 2050 framework and Burnaby's Climate Action Framework represent two levels of the same governance system, but they operate at different scales and with different capacities. Metro 2050 provides a broad regional vision, framing climate change as both a serious challenge and an opportunity for transformation. Its strength lies in long-term ambition—setting carbon neutrality goals, proposing new ways of measuring emissions, and embedding climate considerations across the region's planning frameworks. Burnaby's framework, on the other hand, translates these ambitions into concrete actions through its seven "Big Moves" and detailed policies on buildings, transport, energy, and hazard management.

This relationship highlights both the advantages and limits of multi-level governance. On one side, the two frameworks reinforce each other: Metro sets the overall trajectory, and Burnaby demonstrates how it can be implemented on the ground. Metro's emphasis on compact communities and sustainable mobility is mirrored in Burnaby's investment in resilient neighbourhoods, transit-oriented growth, and active transportation infrastructure. Similarly, regional commitments on decarbonizing buildings are realized locally through Burnaby's requirements for zero-emission new buildings and large-scale retrofit programs. In these areas, the strategies align closely, creating a coherent approach across scales.

At the same time, important tensions emerge. Metro's framework reaches into areas that extend beyond municipal authority, such as consumption-based emissions, land-based carbon inventories, and large-scale infrastructure. Burnaby, with its limited jurisdiction and fiscal tools, cannot address these challenges alone. Financing is a central issue: while regional strategies highlight the need for major transformations, municipalities often lack the capacity to deliver them without provincial or federal support. This gap illustrates one of the central challenges of Canadian planning: municipalities are at the frontline of climate action yet remain structurally dependent on higher levels of government.

Overall, the comparison shows that Metro 2050 and Burnaby's framework are not separate strategies but different expressions of the same governance system. Their alignment demonstrates the potential of regional–municipal collaboration to achieve ambitious climate goals, while their gaps reveal the structural limits of decentralization. The case study underlines that effective climate and land use governance in Canada requires not only visionary regional plans but also the practical, well-supported capacity of municipalities to carry them out.

Further Research

Further research could explore contemporary First Nations land management in more depth, particularly the ways in which self-governance, community-led planning, and co-design processes interact with broader urban frameworks. In Metro Vancouver, additional studies on how regional strategies are implemented at the municipal level would help evaluate their effectiveness in promoting sustainability, climate resilience, and social equity. For Burnaby, a detailed examination of different urban areas downtown cores, urban villages, and lower-density neighborhoods based on density, function, and local context would provide richer insights into how planning decisions influence environmental, social, and infrastructural outcomes.

As a next step, conducting interviews with municipal authorities, such as those at the City of Burnaby, and surveys or questionnaires for residents could provide more grounded, real-world data on planning impacts, community needs, and ongoing challenges.

Last Implications

In conclusion, this study highlights that effective urban planning requires the integration of historical knowledge, regional strategies, and local implementation. By examining both Metro Vancouver and Burnaby, it becomes clear that multi-scalar, adaptive, and inclusive approaches are essential for achieving sustainability, resilience, and social equity as well as addressing global challenges such as climate change. Ultimately, the ability to align broad regional objectives with neighborhood-level realities offers a pathway for creating cities that are not only low-carbon and climate-resilient but also vibrant, inclusive, and livable for all residents.

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