



ADDENDUM
ENVIRONMENT COMMITTEE

Wednesday, January 26, 2022, 5:00 P.M. - 7:00 P.M.

ELECTRONIC MEETING

Location for public attendance:

Boardroom, Service and Resource Centre, 411 Dunsmuir Street, Nanaimo, BC

Pages

5. PRESENTATIONS:

b. REIMAGINE Nanaimo Draft Green Policies Review

1. *Add - REIMAGINE Nanaimo Draft Policies Review Report and Replace PowerPoint*

2 - 49

7. REPORTS:

c. BC Government Roadmap to 2030 Overview

1. *Remove - BC Government Roadmap to 2030 Overview*

DATE OF MEETING January 26, 2022

AUTHORED BY DAVID STEWART, ENVIRONMENTAL PLANNER

SUBJECT DRAFT GREEN NANAIMO POLICIES

OVERVIEW

Purpose of Report:

To inform the Environment Committee of proposed “Green” policies to be included within the draft City Plan.

BACKGROUND

Since the fall of 2019, the City has been working towards a comprehensive update of a number of key strategic planning policy documents through the REIMAGINE Nanaimo process. This involves the creation of one comprehensive City Plan. The draft City Plan integrates and serves as the City’s Official Community Plan, Parks Recreation and Culture Master Plan, Active and Sustainable Transportation Plan and Climate Action Plan. This process includes elevating, updating, and reinforcing numerous environmental policies and actions including those in the 2012 Community Sustainability Action Plan and the 2020 Climate Change Resilience Strategy. Staff have met with the Environment Committee on four separate occasions in 2021 to present and discuss REIMAGINE Nanaimo, including a discussion on environmental policies (October), environmental indicators (January) and two meetings focused on community green house gas (GHG) emissions.

The REIMAGINE Nanaimo process is now moving into Phase 3 of the project, developing plans. Through this phase, high-level policy is being incorporated into a draft City Plan, which will replace or supersede a number of existing policy documents and provide overall citywide policy direction. Secondary policies and action-oriented items related to achieving Green goals will be included within a secondary Integrated Actions Plan document.

In addition to land use policy, the City Plan includes the following five goals:

1. Green Nanaimo- Resilient and Regenerative Ecosystems
2. Healthy Nanaimo- Community Well-being and Livability
3. Connected Nanaimo- Equitable access and Mobility
4. Empowered Nanaimo- Diversity, Culture, Reconciliation and Social Integrity
5. Prosperous Nanaimo- Economic Prosperity and Resiliency

While sustainability and climate change directions are embedded throughout the draft City Plan, specific focus on environmental policies are included in the ‘Green Nanaimo’ policy section.

DISCUSSION

The Draft Green policies are now available for the Environment Committee's information (Attachment A). Policies are grouped within the following eight topic areas:

1. Greenhouse Gas Emission Reduction and Green Building
2. Climate Adaptation and Hazard Management
3. Urban Tree Canopy, Natural Areas and Greenways
4. Healthy Watersheds
5. Brownfield Sites
6. Green and Affordable Water, Sewer and Stormwater Services
7. Solid Waste Management
8. Balanced Lighting and Preservation of Dark Skies

Each section includes desired outcomes (objectives) and policies to help the City achieve these objectives. While some policies are carried forward from existing City documents, others are new and intended to reflect emerging directions and what was heard through community and stakeholder engagement. |

NEXT STEPS

Public engagement with respect to the draft City Plan policies is expected to launch in February and be completed by the end of March. The Environment Committee will receive the full draft document after Council has received it in February. Following public engagement during Phase 3, Staff anticipate presenting a final version of City Plan and the Integrated Actions Plan to Council for their consideration in May. |

SUMMARY POINTS

- The REIMAGINE Nanaimo process is now moving into Phase 3 of the project, developing plans. The REIMAGINE team is now developing draft policies within five different goal areas.
- While sustainability and climate change directions are embedded throughout the draft City Plan, specific focus on environmental policies are included in the 'Green Nanaimo' policy section.
- The Draft Green policies are now available for the Environment Committee's information.

ATTACHMENTS

ATTACHMENT A: DRAFT GREEN NANAIMO CITY PLAN POLICIES |

Submitted by:

Ting Pan
Manager, Sustainability

Concurrence by:

Lisa Bhopalsingh
Director, Community Development

Dale Lindsay
General Manager, Development
Services/Deputy CAO

D. Policies

D.1A GREEN NANAIMO: RESILIENT & REGENERATIVE ECOSYSTEMS

ABOUT A GREEN NANAIMO

A Green Nanaimo is about how we can support lands, air, and waters. It is about advancing collective knowledge, living in harmony with our environment, and responding and reducing the impacts of climate change while protecting natural systems, people, businesses, and infrastructure. It means making decisions that prioritize a resilient and regenerative environment, moving us towards a city that gives back to our natural world rather than taking from it. A Green Nanaimo recognizes and embraces its role as a sustainable city that helps maintain what we value in our larger region and beyond.

WHY IS A GREEN NANAIMO IMPORTANT FOR OUR FUTURE?

We know that action is required by all to reduce greenhouse gas emissions and preserve the lands and waters on which we rely. We also know that our world is growing and we will be asked to support more people in our community, while at the same time reducing the amount of impact each person makes. Reducing our emissions, providing clean, green alternatives, shifting to green infrastructure, and planning to protect our region's valued lands supports resilience to hazards and mitigation of climate change impacts and is imperative for a healthy, sustainable future for all.

CONTENTS

D1.1 Greenhouse Gas Emission Reduction & Green Building

D1.2 Climate Adaptation & Hazard Management

D1.3 Urban Tree Canopy, Natural Areas & Greenways

D1.4 Healthy Watersheds

D1.5 Contaminated & Brownfield Sites

D1.6 Green & Affordable Water, Sewer, & Stormwater Services

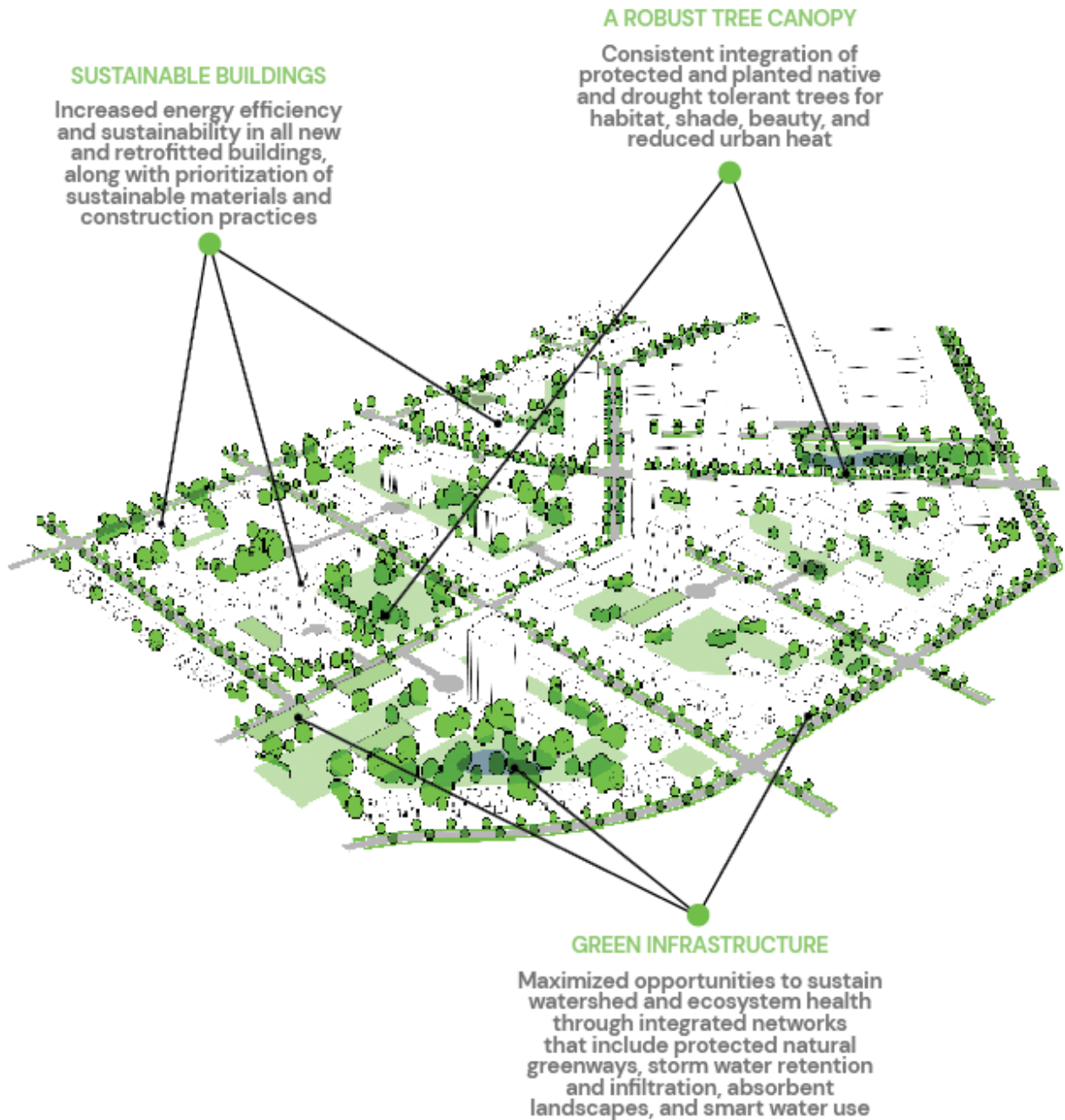
D1.7 Solid Waste Management

D1.8 Balanced Lighting and Preservation of Dark Skies

INTEGRATION



What does **A GREEN NANAIMO** look like in an **URBAN CENTRE**?



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INTEGRATION

What does **A GREEN NANAIMO** look like in a **NEIGHBOURHOOD**?

WATERSHED SMART

Landscapes that absorb and mimic natural water systems including stormwater detention, absorbent landscapes, and low water use standards to support watershed health

HEALTHY URBAN FOREST

Urban forest supported by retaining existing and planting new trees on public and private property



CLIMATE MITIGATION & ADAPTATION AT THE LOCAL & INDIVIDUAL SCALE

Efforts to shift individual behaviours to reduce reliance on personal vehicles, limit GHG emissions in homes through retrofits like heat pumps, protect homes and individuals from climate change impacts, and support one another during emergencies

ENVIRONMENTAL PROTECTION

Continued protection of sensitive areas, watercourses and riparian areas, steep slopes, and forest stands



D.1.1 Greenhouse Gas Emission Reduction & Green Building

We are in a climate emergency. To mitigate climate impacts, Nanaimo is taking a leadership role to significantly reduce our greenhouse gas emissions through changes to our buildings, land use patterns, transportation system, solid waste management, and in our decision-making.

[TO BE ADDED: graphics/visuals and text boxes to explain concepts and terms]

Desired Outcomes

- ▶ **Become a 100% renewable city by 2050 and achieving the city's greenhouse gas emissions reduction goals** as part of our commitment to minimizing Nanaimo's climate change impact.
- ▶ **Be a model of efficient use of land and resources to create healthy and comfortable built environments** through changes in behaviours, zero-carbon and energy efficient buildings, neighbourhoods, employment centres, and use of renewable energy options.

Policies

Overall

- D.1.1.1 Leverage Nanaimo's available resources and authority and work with community members, organizations, businesses, and other levels of government to shift away from fossil fuels to 100% renewable energy by 2050 and, by sequestering or removing carbon, reduce Nanaimo's overall community greenhouse gas emissions to below zero by 2050.
- D.1.1.2 Set and actively work towards interim targets for greenhouse gas emission reductions for 2030, 2035 and 2040.
- D.1.1.3 Monitor progress annually towards targets and review/update greenhouse gas reduction targets every 3 years to ensure they are in line with the recommendations from the Intergovernmental Panel on Climate Change and reflect actions from Provincial and Federal Governments.

Buildings

- D.1.1.4 Accelerate zero-carbon and energy efficient building design and practices for all new construction before 2030 and require this for all new construction after 2030.
- D.1.1.5 Support the upgrade of existing buildings so that all buildings achieve net zero emissions by 2050.
- D.1.1.6 Develop a framework for evaluating the full-life cycle of carbon emissions of buildings, including embodied emissions.

Transportation

- D.1.1.7 Prioritize walking, cycling, and transit over other transportation modes.
- D.1.1.8 Ensure that all residents have access to zero-emission vehicle charging facilities.

D.1.2 Climate Adaptation & Hazard Management

Climate adaptation is critical to lessen the impacts of climate change and ensure our community continues to thrive even as climate change occurs.

Desired Outcomes

- ▶ **Protected and enhanced ecological assets and natural diversity** to support resiliency and prepare for a changing climate.
- ▶ **Increased agility** in preparing for, responding to, and recovering from climate-related hazards.
- ▶ **Enhanced community awareness, support, and understanding** about climate change and adaptation measures.
- ▶ **People and major community assets protected** from the impacts of climate change.

Policies

Communication & Capacity Building

- D.1.2.1 Improve community capacity and resilience by increasing public awareness of climate change, its expected local impacts, and how individuals, businesses, community groups, and others can contribute to mitigation and adaptation.
- D.1.2.2 Support community and neighbourhood-level organizations that help community members prepare for climate change and other hazards.
- D.1.2.3 Encourage and incentivize community members and local businesses to adopt mitigation and adaptation strategies to make homes, businesses, and local economy resilient to a changing climate.

Planning & Strategy

- D.1.2.4 Prioritize hazardous lands and properties at risk for consideration in the City's property acquisition strategy. Advocate to the Province for support in acquisition.
- D.1.2.5 Apply a climate change resilience lens when assessing, planning, designing, or retrofitting city-owned facilities and infrastructure.
- D.1.2.6 Encourage shoreline naturalization to support and protect waterfront properties from flooding risk and landslip while also protecting and restoring habitats.
- D.1.2.7 Manage lands and infrastructure:
 - » to reduce wildfire risk while balancing urban tree canopy health, environmental protection,

and community use and enjoyment.

- » to reduce flood and landslip risk while balancing protection of public and private property and protection of aquatic environments and sensitive slopes where possible.
- » to adapt to sea level rise while balancing protection of public waterfront assets.
- » to protect and increase resilience of infrastructure against sea level rise and climate extremes.

D.1.2.8 Discourage and redirect existing and future development away from areas prone to flooding, landslip, or sea level rise. Where development does occur, require efforts to mitigate climate change impacts while protecting the natural environment.

D.1.2.9 Regularly update coastal flooding plans and regulations to encourage public and private development to avoid areas at risk of anticipated sea level rise, and where development exists be resilient to potential sea level rise during the remaining life-cycle of the development.

D.1.2.10 Ensure contingency reserves contain an allowance for recovery from severe weather-related events.

D.1.2.11 Work with community partners to minimize the health impacts of extreme weather on community members.

D.1.3 Urban Tree Canopy, Natural Areas & Greenways

Urban tree canopies and natural areas are a fundamental part of the city's infrastructure that support wildlife habitat; ecological services including rainwater attenuation, air, and water quality improvements; heat island attenuation and climate resiliency; human health and safety; and livability of our city. The City now manages over 1,000 hectares of parkland, of which over 70% is natural area with significant tree canopy and lands along watercourses. Creating and maintaining a connected urban tree canopy, parks, and natural areas throughout the city are essential for community health and wellbeing.

Desired Outcomes

- ▶ **Natural and constructed infrastructure and landscapes that are adapting to climate change, increasing our resiliency, and being sustained** through management of trees and absorbent areas on both public and private lands.
- ▶ **Continuation of Nanaimo's treed character and recreational networks** through a strongly integrated system of connected parks and trails, open spaces, and habitat corridors.
- ▶ **Increased number and quality of trees** throughout all parts of the city.
- ▶ **Improved community understanding** of the benefits of tree canopies and green infrastructure.

Policies

Urban Tree Canopy

- D.1.3.1 New development and redevelopment in the city will endeavour to maintain and expand the city's tree canopy in balance with other desired land use outcomes.
- D.1.3.2 Street tree planting and other climate resilient landscaping should be considered in new neighbourhoods and redevelopment sites.
- D.1.3.3 Planting of trees on public and private lands will be promoted throughout the city.
- D.1.3.4 Consider ecosystem biodiversity and resilience when replacing or planting new trees in public spaces.
- D.1.3.5 Wherever possible, private landowners will be encouraged to retain trees that are not a hazard and to replant or plant new trees that support and enhance the treed character of the city.
- D.1.3.6 Removal of trees purely for view enhancement is not supported.
- D.1.3.7 Provide information and education to raise community awareness on the importance of healthy trees.

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- D.1.3.8 Consider incentives and programs that encourage retention of existing trees or planting of new trees on private lands.
- D.1.3.9 Where possible, the City will continue to acquire and protect lands that possess significant tree values.

Natural Areas

- D.1.3.10 Development should avoid ecological features such as steep slopes, watercourses, riparian areas, significant trees, and environmentally sensitive lands.
- D.1.3.11 Where riparian or other environmentally sensitive sites have been altered from natural state historically or by development, appropriate restoration will be encouraged as a part of redevelopment, targeting net gain of ecological values.
- D.1.3.12 On steep slope areas, efforts will be made to maintain existing treed areas and restore tree and vegetative cover for the purpose of controlling erosion, enhancing ecological services, reducing visual and aesthetic impacts, and protecting the ecosystem.
- D.1.3.13 Through development applications, private lands with significant environmental, urban tree canopy, natural capital or recreational value should be protected by means of tools such as covenant, eco-gifting, or land dedication.
- D.1.3.14 When planning for natural assets and park spaces, strive to find creative solutions that protect ecological assets and functions and allow defined public access and amenities if and where appropriate while balancing watercourse, tree protection, and environmentally sensitive area regulations.
- D.1.3.15 Through programs and partnerships, the City will endeavour to preserve ecosystem integrity by removing invasive species from natural areas, restoring disturbed ecologically sensitive areas with native and/or appropriate non-invasive vegetation, and joint stewardship and restoration initiatives.
- D.1.3.16 Continue to acquire natural areas as parkland and continue to manage forests and ecosystems within them so they adapt and evolve with climate change.

Greenways

- D.1.3.17 The City will work with other agencies and interested community groups to promote and implement potential greenways, including both habitat greenway systems and recreational greenway systems, which may be combined in appropriate locations.
- D.1.3.18 Over the long term, the City will continue to create an interconnected greenway network, including along lake and ocean waterfronts, watercourses, and slopes.

- D.1.3.19 Greenways will continue to be established to protect and enhance natural habitat, support wildlife, and allow for active transportation routes where environmental setbacks and constraints allow. Development of trails, viewing points, and rest areas within greenways will be supported, sited and installed in an environmentally sensitive manner.

D.1.4 Healthy Watersheds

In addition to the role of vegetated riparian shoreline areas, ecological function in Nanaimo's streams, lakes, wetlands, and waterfronts is dependent on the quality and quantity of water provided by related watersheds that drain to them.

Desired Outcomes

- ▶ **A significant number and wide array of biologically diverse freshwater and saltwater ecosystems** throughout the city that are preserved for future generations.
- ▶ **Restoration of areas that have been impacted by erosion** related to past development.
- ▶ **Thoughtful integration of urban development and built and natural systems** that protect and enhance the quality of the city's watersheds, even as the city densifies.

Policies

- D.1.4.1 Wherever possible, incorporate best management practises for new and existing developments to support watershed health, such as pervious paving, rain gardens and bioswales, deep absorbent soils, green / blue roof, rainwater capture or detention systems, or other best practices that evolve.
- D.1.4.2 Regularly review and update City design standards and regulations for public and private development and stormwater and rainwater management systems to be resilient to anticipated climate change, including attention to cumulative flows and water quality at the watershed scale. Objectives include:
- » supporting stream summer base flows and limiting in-stream or bank erosion related to stormwater flows and volumes, by addressing extent and sizing of rainwater management best practices and detention storage;
 - » maintaining environmental water quality standards, by addressing erosion and sediment control and stormwater pollution risks;
 - » managing risks of flooding including overland flow paths and relationships with sea level rise.
- D.1.4.3 Continue to protect and manage freshwater and saltwater shoreline areas to maintain the best possible hydrological functions.
- D.1.4.4 Continue to work with adjacent jurisdictions including Snuneymuxw First Nation, the RDN, and other organizations to collaborate on areas of shared interest for watershed management including drinking water protection.

D.1.5 Brownfield Sites

Redeveloping brownfields is one of the most promising ways to promote the environmental, economic, and social health in Nanaimo and aligns with the Nanaimo Doughnut.

Nanaimo has a number of brownfield sites throughout the community which are a legacy from the City’s coal mining history, early industrial activities, and fossil fuel storage for transportation. Many sites are found in prime locations with significant development potential, but have sat idle for years as redevelopment is complicated by remediation costs, regulations, liability concerns, and other barriers.

Desired Outcomes

- ▶ **Redevelopment of key brownfield sites in Nanaimo**, ensuring that the work generates significant triple-bottom line benefits by improving the City’s economic, environmental, and social health.

Policies

- D.1.5.1 Stimulate and leverage private and public sector investment to promote the remediation, rehabilitation, adaptive re-use, and overall improvement of brownfield sites throughout the city.
- D.1.5.2 Increase community awareness of the economic, environmental, and social benefits of brownfield redevelopment.
- D.1.5.3 Continue to use city resources to demonstrate leadership in the remediation, rehabilitation, adaptive re-use, and overall improvement of brownfield sites throughout the city.
- D.1.5.4 Achieve appropriate permanent redevelopment or interim uses of brownfield sites throughout the city.
- D.1.5.5 Leverage financial opportunities from a range of stakeholders.
- D.1.5.6 When considering land dedication of potentially contaminated sites, the City will consider risks and public benefit of accepting the property.

D.1.6 Green & Affordable Water, Sewer, & Stormwater Services

Provision of affordable and sustainable utility services is critical to the health of a community. Thoughtful, compact urban growth and adoption of best practices for conservation and management helps to control costs of servicing; reduces pressure to increase taxes, servicing levies, and development cost charges; and frees up money for investment in other community services.

The City's role in servicing includes:

- ▶ **Drinking Water Provision:** The City owns and operates its water system, with supply provided by the South Nanaimo River watershed, located 20 km southwest of the city. Water is delivered to all customers through a system of dams, distribution mains, treatment facilities, reservoirs, and pumping stations. The City manages water supply so it can continue to serve a growing population and encourages conservation so that costs of expansion are managed.
- ▶ **Sewer Services:** The City is responsible for the collection of sanitary sewage and conveyance to the Regional District of Nanaimo's sewer trunk mains and waste water treatment facilities.
- ▶ **Stormwater Services:** The City manages infrastructure to manage runoff from rainfall within the city. Effective management of rainwater reduces flood risk and protects natural aquatic environments. With impacts of climate change contributing to more intense rainfall events, the City takes a forward-looking view to stormwater management and seeks to integrate both built infrastructure and natural assets such as wetlands, ponds and creeks.

Desired Outcomes

- ▶ **A clean, safe, cost-effective, resilient and sustainable drinking water supply** for all customers that supports continued growth while maintaining environmental quality and accounting for climate change impacts.
- ▶ **Continued provision of an efficient sewer system** to the urban areas of the city that meets public health and environmental standards and supports thoughtful urban growth.
- ▶ **An affordable, resilient stormwater system** that integrates both built infrastructure and natural assets to provide flood protection, support healthy aquatic environments, and meet demands of climate change resiliency.
- ▶ **Sufficient capital and operating funds** to ensure long-term financial viability of city services and certainty regarding future development cost charges.
- ▶ **Innovations that support service delivery that is more cost effective, sustainable, and environmentally friendly** developed in partnership with other levels of governments and organizations.
- ▶ **Strongly linked growth and servicing capacity planning** so that expansion and upgrades are strategic and efficient.

Policies

Overall

- D.1.6.1 Growth in areas with sewer, water, drainage, or transportation infrastructure capacity restrictions will not proceed until there is confirmed funding and plans to address capacity shortfalls.
- D.1.6.2 Investigate and apply current climate science to ensure resilience of infrastructure life-cycle financial planning and sustainable maintenance.
- D.1.6.3 Coordinate utility infrastructure upgrades with transportation and/or parks improvements to minimize disruption and optimize community investments.
- D.1.6.4 Make land use, planning, and capital investment decisions with a long-term life-cycle asset management perspective for the design, maintenance, and renewal of servicing infrastructure, including natural assets.
- D.1.6.5 Where possible, consider mitigation of air, noise, and light pollution associated with the provision of civic infrastructure including parks, buildings, and facilities.

Drinking Water Provision

- D.1.6.6 To ensure the long-term sustainable use and protection of its water source, the City will continue to participate in planning and monitoring land and water use in the region in conjunction with the other major water users and license holders.
- D.1.6.7 The City will continue advancing its water conservation program.

Sewer Services

- D.1.6.8 Plans for future expansion and upgrading of sewer services should reflect:
 - » priority of servicing of Urban Centres based on their priority designation (see policy C5.3.3);
 - » priority of servicing land within the UCB, except lands designated low-density residential or resource management; and
 - » limiting new services outside the UCB.
- D.1.6.9 The City supports the RDN's Liquid Waste Management Plan (LWMP). The City's sewage collection system will continue to evolve to support the principles, goals, and objectives of the LWMP.
- D.1.6.10 The City and the RDN will continue to explore and implement ways to improve the efficiency of the liquid waste collection and treatment system.

Stormwater Management Services

- D.1.6.11 Watercourses used for storm drainage should be maintained in a natural state and daylighted where practical.
- D.1.6.12 The City will continue to maintain and update a Stormwater Management Policy, along with subdivision standards and specifications for stormwater management, to support the goals and desired outcomes of City Plan.
- D.1.6.13 The City will work with the RDN regarding stormwater management planning where drainage basins cross jurisdictional boundaries.
- D.1.6.14 The City acknowledges the importance of integrated stormwater management planning for significant watercourses and their watersheds and supports preparation of Drainage Master Plans for significant watercourses in Nanaimo.
- D.1.6.15 The City recognizes the integrated role of watercourses both as drainage and flood control systems and as ecosystems that provide valuable aquatic habitat.
- D.1.6.16 The City acknowledges that overland flooding resulting from heavy rainfall may increase with climate change and will seek to identify, enhance, and establish overland flood paths, drainage basins, and protected rights-of-ways on private property to reduce potential impacts.
- D.1.6.17 The City recognizes and supports the role of natural assets in stormwater management and supports the protection, enhancement, and maintenance of their function.

Servicing Costs

- D.1.6.18 Development Cost Charges (DCCs) planning will endeavour to reflect the land use designations in this Plan in determining the demands and priorities for use of DCC funds.
- D.1.6.19 DCCs will be reviewed and updated on a regular and ongoing basis (generally every five years), and involve input from stakeholders and the public.
- D.1.6.20 DCCs will seek to achieve equitable distribution between existing and future residents of the costs associated with new development.
- D.1.6.21 Comprehensive servicing planning and costing may be included as part of Area Planning processes for Urban Centres (see policy C5.3.16).
- D.1.6.22 Servicing investments will be prioritized to align with the development of Urban Centres based on their priority designation

D.1.7 Solid Waste Management

Solid waste management is a collaborative process. The City is responsible for curb-side compost, garbage, and recycling pickup while the RDN is responsible for solid waste management and disposal, including the Regional landfill site on Cedar Road. Private sector services also provide recycling drop-off depots and other services. Reduction in solid waste supports preservation of land, reduction of greenhouse gas emissions, and other benefits.

Desired Outcomes

- ▶ **Effective and responsible solid waste, composting, and recycling collection, management, and disposal** to meet community needs.
- ▶ **Progress towards zero** waste throughout the full life-cycle of production, consumption, recycling, and disposal to achieve local and regional waste management goals.
- ▶ **Support for development of circular economies** which aim for maximum use of finite resources, transition to renewable resources, and recovery of materials and products that result in minimum waste generation.

Policies

Partnerships

- D.1.7.1 Work with the RDN, Nanaimo residents, businesses, partners, and agencies to accelerate waste reduction and avoidance in support of regional goals.
- D.1.7.2 Work with appropriate government partners to change to existing regulatory barriers that discourage the reuse of materials and promote material exchange networks and the re-engineering of recycled materials.
- D.1.7.3 Support the Regional District of Nanaimo's Solid Waste Management Plan.
- D.1.7.4 Work with similar municipalities across the globe to develop and enhance circular economies.

Zero Waste

- D.1.7.5 Work to eliminate organic matter sent to the regional landfill by 2030.
- D.1.7.6 Increase public awareness to overcome barriers to recycling, reuse, and waste reduction through City outreach programs and community partnerships. Practice the "four R's," providing city residents opportunities to refuse, reduce, reuse, and recycle, as well as to explore redesign, composting, and other practices.
- D.1.7.7 Incorporate zero waste management and circular economy principles in the development of new buildings, landscapes, and neighbourhoods.

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- D.1.7.8 The City aims to increase public awareness and participation in the zero waste mandate and refusing, reducing, reusing, and recycling by improving access to recycling and re-use opportunities and supporting programs for the sharing of resources.
- D.1.7.9 Support waste diversion through improved reuse and recycling services for a diversity of materials.
- D.1.7.10 Set the fee structure for solid waste collection so that it provides residents with an acceptable basic level of service at reasonable cost while encouraging users to reduce unnecessary waste.
- D.1.7.11 City-operated recycling services will provide incentives for users as alternatives to waste disposal that pursue the “four R’s” and will focus on cost effective programs that have the greatest potential for materials diversion from the landfill.
- D.1.7.12 Continue to set good examples of waste reduction in the City’s procurement practices by emphasizing reusable packaged products, minimizing the procurement of over-packaged products, and promoting products that contain recycled materials.
- D.1.7.13 Encourage recycling and reuse programs run by others to locate in the city in places that are accessible to multiple modes of transportation.
- D.1.7.14 Encourage the adaptive reuse of buildings to help reduce construction waste.
- D.1.7.15 Support local material bans that align with local, regional, provincial, and federal initiatives.

D.1.8 Balanced Lighting and Preservation of Dark Skies

Enjoyment of dark night skies is becoming increasingly challenging in our city due to light pollution from artificial lighting. Besides affecting views of the night sky, light pollution can have harmful effects on ecosystems, wildlife, and quality of life. Careful consideration of use of artificial lighting on streets, buildings, community spaces, and facilities, can improve the quality of our urban environments while also addressing community safety, quality of life and environmental health, and energy savings.

Desired Outcomes

- ▶ **Recognition of Nanaimo as a Dark Sky Community** through public and private initiatives to protect dark sky views.
- ▶ **Effective and smart lighting on public and private lands** that protects access to dark sky views while also directing light where it is needed for human safety.
- ▶ **Education of community and organizations** of the environmental and quality of life benefits of dark skies and ways to avoid light pollution, increase safety and save energy through lighting design and placement.

Policies

Partnerships

- D.1.8.1 Work with neighbouring governments including Snuneymuxw First Nation, District of Lantzville and the RDN, Nanaimo residents, businesses, partners, and agencies to build awareness and understanding of the benefits of protecting dark skies and support for collaborative strategies and actions.

Street Lighting

- D.1.8.2 Continue to balance community safety, energy, and dark sky preservation in the selection and installation of new and upgraded street lighting infrastructure.

City Buildings and Facilities

- D.1.8.3 Continue to balance dark sky values with safety principles when building new or retrofitting existing City buildings and facilities.

New and Upgraded Buildings and Developments

- D.1.8.4 Continue to support dark sky principles balanced with safety considerations for new and upgraded buildings and developments.

Parks, Trails and Natural Areas

- D.1.8.5 Work with community and other interested parties to prioritize the designation of suitable City Parks as Dark Sky Parks or Preserves.
- D.1.8.6 Recognize Dark Sky spaces as recreational amenities for community members and visitors.
- D.1.8.7 Work to establish a hierarchy of lighting of trails, parks, and natural areas to provide a range of user options that balance dark sky and community safety.

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DRAFT Glossary of Terms used in the Green Policies – UNDER CONSTRUCTION
Absorbent landscapes
Adaptation: Actions taken to cope with or adjust to a changing climate.
Adaptive re-use
Brownfield - A brownfield is defined as an abandoned, vacant, derelict or underutilized commercial, industrial or institutional property where past actions have resulted in actual or perceived contamination or threats to public health and safety, and where there is active potential for redevelopment.
Carbon negative: Carbon negative means that greenhouse gas emissions are less than those sequestered or removed on an annual basis.
Carbon Sequestration/Removal: natural or technological processes that provide long-term storage of carbon dioxide from the atmosphere.
Circular Economy
Dark Sky Principles
Ecological Capital
Ecological function
Embodied Emissions: The greenhouse gas emissions produced in creating and delivering a particular material (e.g., infrastructure or consumable goods), including the energy used for extraction of raw materials, manufacturing and transportation of the end product.
Environmental Capital
Fossil fuel: fuels such as coal, gasoline, natural gas, oil, diesel, etc. that are sourced from organic materials formed over a long geological time period.
Fossil fuels
Green infrastructure
Greenhouse Gas: A gas that contributes to climate change by trapping heat in the earth's atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases.
Greenway network
Greenway - Habitat
Greenway - Recreational
Hydrologic function. Means soil, stream, wetland and riparian area properties related to the storage, timing, distribution, and circulation of water.
Light Pollution
Mitigation: Actions taken to reduce climate change, primarily by reducing greenhouse gas emissions. Make this broader to relate to a range of hazards
Natural Capital
Natural Systems
Net-Zero Carbon: Net-zero carbon means that greenhouse gas emissions minus carbon sequestration equals zero on an annual basis.
Net-Zero Energy: In the context of a building, it is a building that produces as much energy as it consumes on an annual basis.
Recreational Greenway
Regenerative
Renewable city
Renewable Energy: Renewable energy is energy derived from natural processes (e.g., sunlight and wind) that are replenished at a faster rate than they are consumed.

Nanaimo City Plan – Green Nanaimo Policies
DRAFT – January 2022

Resilient
Retrofitted
Riparian
Sustainability
Tree canopy
Triple bottom line
Zero Emission Vehicle: a vehicle that emits no greenhouse gases from tailpipe exhaust, such as a battery electric or a hydrogen powered vehicle.



reimagine
NANAIMO

DRAFT GREEN NANAIMO POLICIES

2022-JAN-26
ENVIRONMENT
COMMITTEE

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Today's Agenda

TOPICS

- | | |
|---|--|
| 1 | Reimagine Background and Framework |
| 2 | 8 Green Topics |
| 3 | Draft GHG Policy directions |
| 4 | Key Questions |
| 5 | Other Green Topics |
| 6 | Other City Plan Areas of Potential Interest
(Blue-green network; Integrated Mobility;
Integrated Land Use) |
| 7 | Next Steps |

Background



- Committee received 4 previous REIMAGINE presentations - focus on GHG policy (July and December 2021)
- Moving into Phase 3 - Developing Plans
- Includes new policy and policies from existing plans (Climate Sustainability Action Plan, Climate Change Resiliency Strategy and others)
- 5 draft goals - sustainability lens included in all goals
- Draft Green policies presented for Committee review



3

ONE FRAMEWORK ■■■■■■ FIVE DRAFT GOALS











- A GREEN NANAIMO: RESILIENT & REGENERATIVE ECOSYSTEMS
- A HEALTHY NANAIMO: COMMUNITY WELL-BEING & LIVABILITY
- A CONNECTED NANAIMO: EQUITABLE ACCESS & MOBILITY
- AN EMPOWERED NANAIMO: DIVERSITY, CULTURE, RECONCILIATION & SOCIAL INTEGRITY
- AN ENABLED NANAIMO: ECONOMIC PROSPERITY & RESILIENCY

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8 Green Nanaimo Topics



-  Greenhouse Gas Emission Reduction & Green Building
-  Climate Adaptation and Hazard Management
-  Urban Tree Canopy, Natural Areas and Greenways
-  Healthy Watersheds
-  Brownfield Sites
-  Green and Affordable Water, Sewer Stormwater
-  Solid Waste Management
-  Balanced Lighting and Preservation of Dark Skies



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GHG EMISSIONS AND GREEN BUILDING



GHG Emissions WHAT WE'VE BEEN HEARING



DRAFT GOAL
A GREEN NANAIMO:

82% Of participants felt this goal is important for Nanaimo's future (highest of any of the goals)

DRAFT
INDICATOR
S

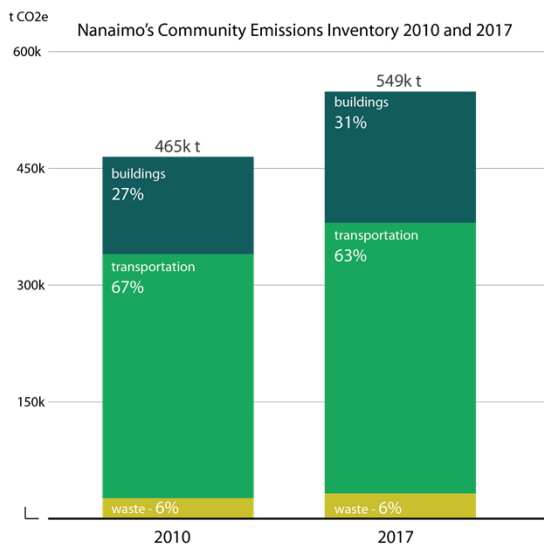


- Strong support for measuring GHG Emissions regularly
- Suggestions for breakdown and education to help the community understand sources of emissions and how to accelerate progress



Strong support and discussion on selecting land use directions that support compact, walkable, and complete neighbourhoods that reduce reliance on automobiles, supporting progress on GHG Emissions Reduction among other goals

What causes Nanaimo's Emissions?



Burning of fossil fuels by residents is primary driver:

- gasoline/diesel for vehicles
- natural gas/oil for heating/hot water

GHG Targets – City Plan



CURRENT POLICY (2008 OCP):

The City of Nanaimo will work to reduce emissions by 3% below 2007 emissions levels by the year 2020. Over the long term, the City will continue to work toward reducing emissions by 39% of 2007 emissions levels by the year 2050. The *Sustainability Action Plan* identifies sustainability actions to achieve the City targets for GHG emission reduction.

Council declared a Climate Emergency in 2019 and set targets for 2030 and 2050.



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GHG Targets – City Plan



WHAT WE HEARD FROM ENVIRONMENT COMMITTEE:

- Stronger language throughout GHG policies
- Specific wording for a target policy statement

CITY PLAN PROPOSED POLICY (DRAFT):

Leverage Nanaimo's available resources and authority and work with community members, organizations, businesses, and other levels of government to shift away from fossil fuels to 100% renewable energy by 2050 and, by sequestering or removing carbon, reduce Nanaimo's overall community greenhouse gas emissions to below zero by 2050.(D.1.1.1)



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GHG Targets – City Plan



WHAT WE HEARD FROM ENVIRONMENT COMMITTEE:

- Stronger language throughout GHG policies
- Inclusion of a regular review cycle to evaluate policies and actions

CITY PLAN PROPOSED POLICY (DRAFT):

Set and actively work towards interim targets for greenhouse gas emission reductions for 2030, 2035 and 2040. (D.1.1.2)

Monitor progress annually towards targets and review/update greenhouse gas reduction targets every 3 years to ensure they are in line with the recommendations from the Intergovernmental Panel on Climate Change and reflect actions from Provincial and Federal Governments.

(D.1.1.3)



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GHG Targets – City Plan



WHAT WE HEARD FROM ENVIRONMENT COMMITTEE:

- Recommend zero carbon and energy efficiency building design practices (2030)

CITY PLAN PROPOSED POLICY (DRAFT):

Accelerate zero-carbon and energy efficient building design and practices for all new construction before 2030 and require this for all new construction after 2030. (D.1.1.4)

Develop a framework for evaluating the full-life cycle of carbon emissions of buildings, including embodied emissions. (D.1.1.6)



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Draft GHG Policies – City Plan



WHAT WE HEARD FROM ENVIRONMENT COMMITTEE:

- Discussion around existing building stock and potential incentives for upgrading

CITY PLAN PROPOSED POLICY (DRAFT):

Support the upgrade of existing buildings so that all buildings achieve net zero emissions by 2050. (D.1.1.5)



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Draft GHG Policies – City Plan



WHAT WE HEARD FROM ENVIRONMENT COMMITTEE:

- Eliminate organic matter sent to landfill by 2030
- All vehicles having electric vehicle charging options

CITY PLAN PROPOSED POLICY (DRAFT):

Eliminate organic matter sent to landfill by 2030.
(D.1.7.5)

Ensure that all residents have access to zero-emission vehicle charging facilities. (in D.1.1.8)



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Key Questions











1. Overall, do the language and the policies in the draft Green Policies chapter adequately reflect the level of commitment Council and the community have towards environmental sustainability?
2. More specifically, what aspects of the current draft are of great value and should not be changed?
3. What aspects of the current draft or policies need further refinement or are missing?



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Other Green Nanaimo Topics



-  Greenhouse Gas Emission Reduction & Green Building
-  Climate Adaptation and Hazard Management
-  Urban Tree Canopy, Natural Areas and Greenways
-  Healthy Watersheds
-  Brownfield Sites
-  Green and Affordable Water, Sewer Storm Water
-  Solid Waste Management
-  Balanced Lighting and Preservation of Dark Skies






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OTHER CITY PLAN AREAS OF POTENTIAL INTEREST

Other Potential Topics of Interest



-  Blue Green Network and Structure
-  Integrated Mobility
-  Integrated Land Use



BLUE AND GREEN NETWORK STRUCTURE

Sustaining Natural Assets

BLUE and GREEN NETWORK WHAT WE'VE BEEN HEARING

COMMUNITY PRIORITIES FOR BLUE & GREEN NETWORKS



Healthy, connected streams and rivers



Building greener



Enhanced natural areas



Urban forest



Increasing public concern about preparing for the impacts of climate change



In Phase 2, participants discussed how a City could grow and densify while at the same time becoming greener

BLUE and GREEN “BIG MOVES”

Add Blue and Green to our City Structure



PREVIOUS APPROACH & BACKGROUND:

- Significant protection provided through nature parks, Development Permit Areas, Tree and Riparian Area Protection requirements, and Engineering Standards
- Limited public awareness of protection efforts

CITY PLAN EMERGING DIRECTION:

- Elevate Blue & Green Networks as part of our overall City Structure, integrating with our Mobility and Land Use Networks
- Adapt both urban development and Blue & Green Networks to risks of climate change
- Continue land acquisition of natural assets



Buttertubs Marsh

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BLUE and GREEN “BIG MOVES”

Preparing for More Water



ADAPTING TO INCREASED RAINFALL INTENSITY AND RISING SEA LEVELS:

- Education and technical support for wide-spread adoption of rainwater management requirements in City regulations
- Enhancement of natural areas / wetlands
- Integration and protection of stormwater detention facilities and flood overland flow paths
- Integration of sea level rise adaptation strategies for coastal and tide-influenced areas
- Updated mapping and adaptation approaches for river and lake floodplains to consider climate change
- Review of risks of steep slope failure and adaptation of related education, regulation, and management
- Continue land acquisition of natural assets



Millstone River

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BLUE and GREEN “BIG MOVES” Preparing for More Heat



MANAGING HABITAT VALUES AND DROUGHT/HEAT RISKS:

- Continue ‘open streams’ policy, avoiding further piping of watercourses
- Strive to support base flows and reduced erosion by broad adoption of current rainwater management requirements
- Increase connectivity and quality of streamside and habitat corridors during redevelopment
- Sustain the cumulative forest cover by tree retention and replacement planting through application of existing regulations and tree planting programs
- Increase shading during urban redevelopment
- Review strategies for urban interface fire risk (potential DPA)
- Continue water conservation and growth management strategies in partnership with the Region
- Continue land acquisition of natural assets



Volunteer Tree Planting

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INTEGRATED MOBILITY

Moving around the City

INTEGRATED MOBILITY WHAT WE'VE BEEN HEARING

COMMUNITY PRIORITIES FOR IMPROVING TRANSPORTATION OPTIONS



Feeling
safe from
vehicles



Increasing
walking
routes



Completion
of missing
links



More
frequent
transit



Improved
experiences /
attraction



In Phase 1, over 75% of
survey participants
believe active
transportation
infrastructure is a good
use of tax dollars



Positive
feedback in
public workshops on
recent projects
including Metrol Dr
and Front St



In Phase 2, strong support
and discussion on selecting
land use directions that
support compact, walkable,
and complete
neighbourhoods that reduce
reliance on automobiles

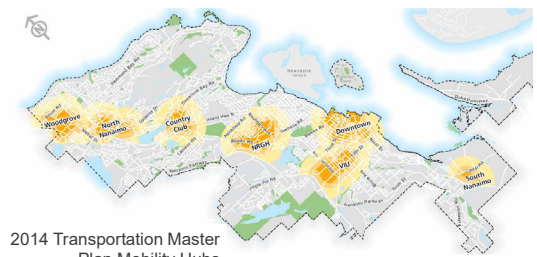
MOBILITY "BIG MOVES" Align our Mobility and Land Use Planning

PREVIOUS APPROACH & BACKGROUND:

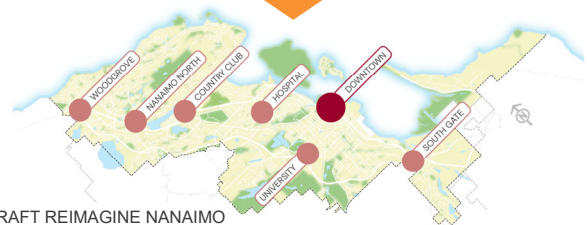
- **2014 Transportation Master Plan** identified 7 Mobility Hubs and encouraged their transformation of these into complete hubs with more people, jobs, and services
- Not all Mobility Hubs were identified as key Urban Centres in the **2008 OCP**

CITY PLAN EMERGING DIRECTIONS:

- Through REIMAGINE, taking an integrated approach for mobility and land use, to align Urban Centres with the Mobility Hubs



2014 Transportation Master
Plan Mobility Hubs



DRAFT REIMAGINE NANAIMO
Urban Centres

MOBILITY “BIG MOVES” Streets for all Modes, Ages, Abilities



PREVIOUS APPROACH & BACKGROUND:

- Earlier upgrades did not always accommodate a full range of modes
- Recent projects like Metral Drive, Front Street, and Bowen Road upgrades have shifted to creating space for all modes, ages, and abilities
- Updated MOESS provide updated standards for City streets

CITY PLAN EMERGING DIRECTION:

- Reinforce and support the City's newer standards and approach for integrated streets for all modes



Front Street

MOBILITY “BIG MOVES” Transit Integration



PREVIOUS APPROACH & BACKGROUND:

- RDN has led provision of transit in Nanaimo
- City is an active partner in the current Transit Redevelopment Strategy
- Emerging directions from the new strategy identify three primary routes that connect key City destinations

CITY PLAN EMERGING DIRECTION:

- Land Use patterns are seeking to encourage future population growth in Centres and Corridors that will be well served by future primary transit routes
- Ongoing partnerships to integrate transit, the overall mobility network, and land use



Front Street

MOBILITY “BIG MOVES”

Mobility and Recreation Integration



PREVIOUS APPROACH & BACKGROUND:

- In previous years, planning, building, and managing mobility routes have been separate from recreational trails and mobility trails have been separate processes

CITY PLAN EMERGING DIRECTION:

- Through REIMAGINE, the recreational and mobility networks are being combined, recognizing the synergy and benefits of a fully-integrated network
- Efficiencies in planning, building, maintaining, and managing the lifecycle of these assets



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INTEGRATED LAND USE

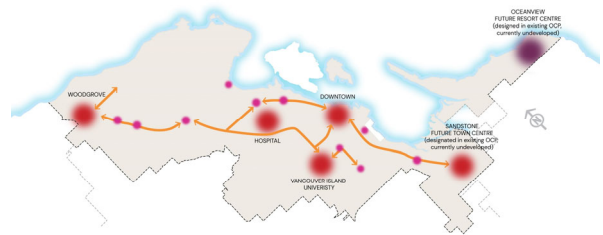
Planning for Growth



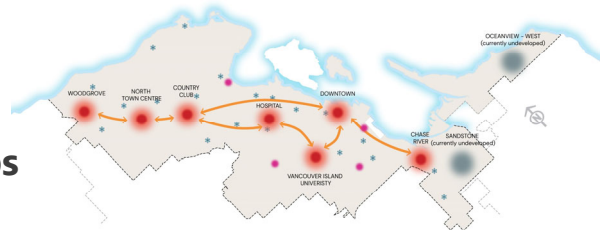
Three Preliminary Scenarios



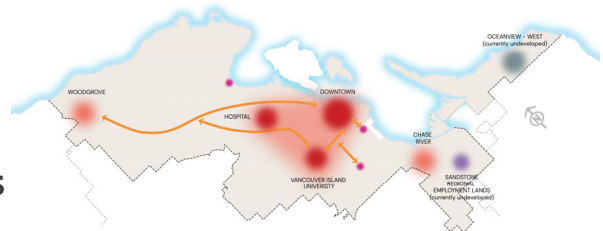
Scenario 1:
Current Path



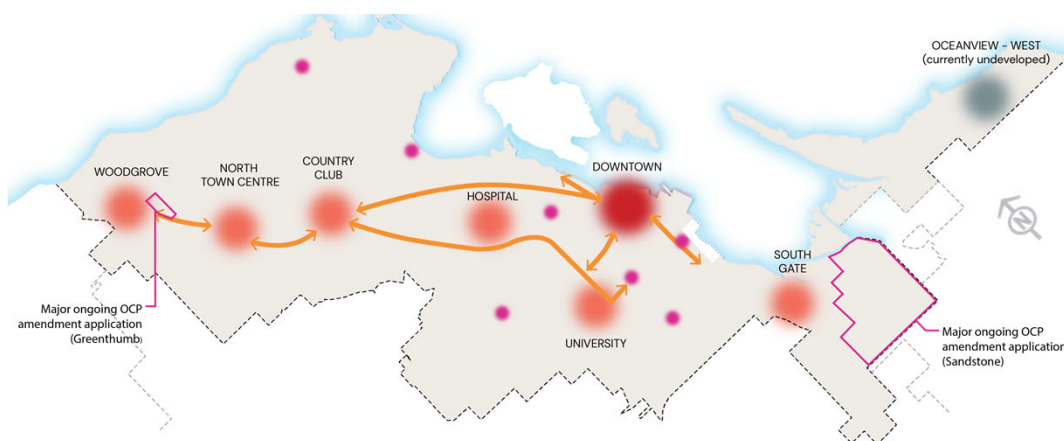
Scenario 2:
Mobility Hubs



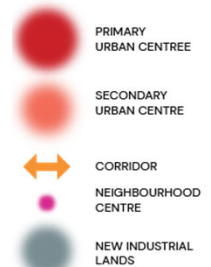
Scenario 3:
Central Focus



Draft Consolidated Scenario

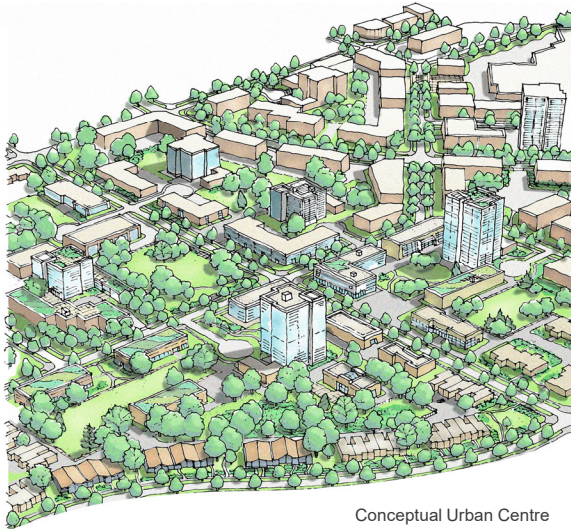


LEGEND



LAND USE "BIG MOVES"

Complete Urban Centres



Conceptual Urban Centre



A GREEN NANAIMO:
RESILIENT & REGENERATIVE
ECOSYSTEMS



A HEALTHY NANAIMO:
COMMUNITY WELL-BEING &
LIVABILITY



A CONNECTED NANAIMO:
EQUITABLE ACCESS &
MOBILITY



AN EMPOWERED NANAIMO:
DIVERSITY, CULTURE,
RECONCILIATION & SOCIAL
INTEGRITY



AN ENABLED NANAIMO:
ECONOMIC PROSPERITY &
RESILIENCY

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LAND USE "BIG MOVES"

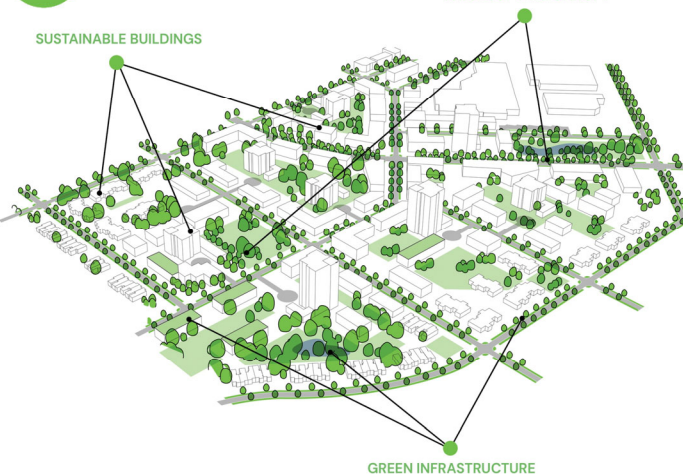
Complete Urban Centres



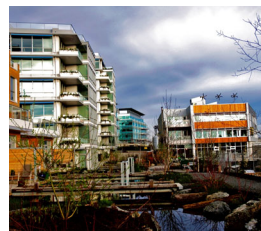
A GREEN NANAIMO:
RESILIENT & REGENERATIVE
ECOSYSTEMS

SUSTAINABLE BUILDINGS

A ROBUST TREE CANOPY



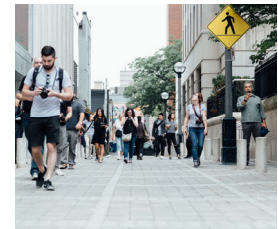
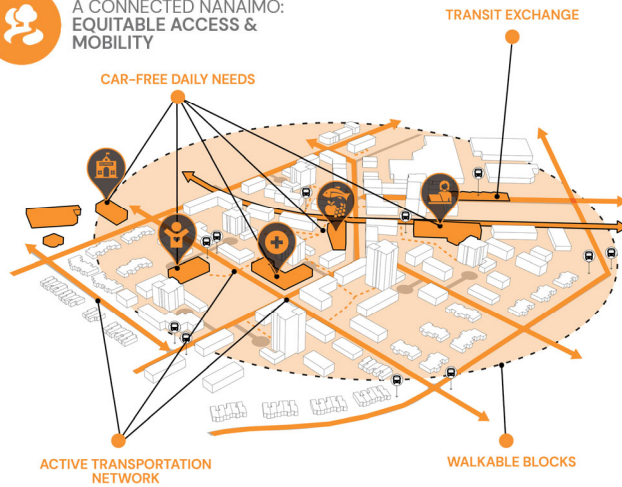
GREEN INFRASTRUCTURE



LAND USE "BIG MOVES" Complete Urban Centres



A CONNECTED NANAIMO:
EQUITABLE ACCESS &
MOBILITY



LAND USE "BIG MOVES" Prioritization of Urban Centre Growth



CURRENT APPROACH (2008 OCP):

- No specific guidance on priority
- High-rise supported equally in all Urban Nodes and Commercial Centres

CITY PLAN EMERGING DIRECTIONS:

 <p>One Primary Urban Centre (Downtown)</p> <p>Supports 12+ storeys</p>	 <p>Six Secondary Urban Centres</p> <p>Supports up to 12 storeys (limited potential for additional)</p>
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- Written policy outlining a hierarchy for City investment in Urban Centres
- Policy recognizing growth in areas with infrastructure capacity restrictions will not proceed until funding and plan to address is in place

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LAND USE “BIG MOVES” Large-Format Retail Accommodation



CURRENT APPROACH (2008 OCP):

- Support for free standing large box retailers in Woodgrove Urban Node, future South Nanaimo Urban Node, and Commercial Centre designations

CITY PLAN EMERGING DIRECTIONS:

- Support for large-format retail in all Urban Centres, provided it is consistent with the walk, cycle, and transit-oriented nature envisioned for these areas
- No support for large areas of surface parking in Urban Centres



Example: Home Depot, Nanaimo

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LAND USE “BIG MOVES” Stand-Alone Commercial Accommodation



CURRENT APPROACH (2008 OCP):

- Support for stand-alone commercial in Woodgrove Urban Node, future South Nanaimo Urban Node, and Commercial Centre designations

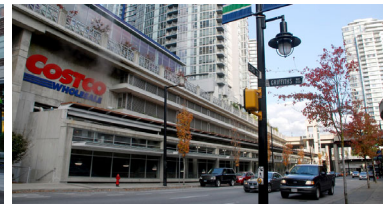
CITY PLAN EMERGING DIRECTIONS:

- Emphasis of integrated commercial and residential mixed uses in Urban Centres and Corridors
- Less supportive of drive-thru and other car-oriented formats



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Large-Format Retail and Stand-Alone Commercial Accommodation

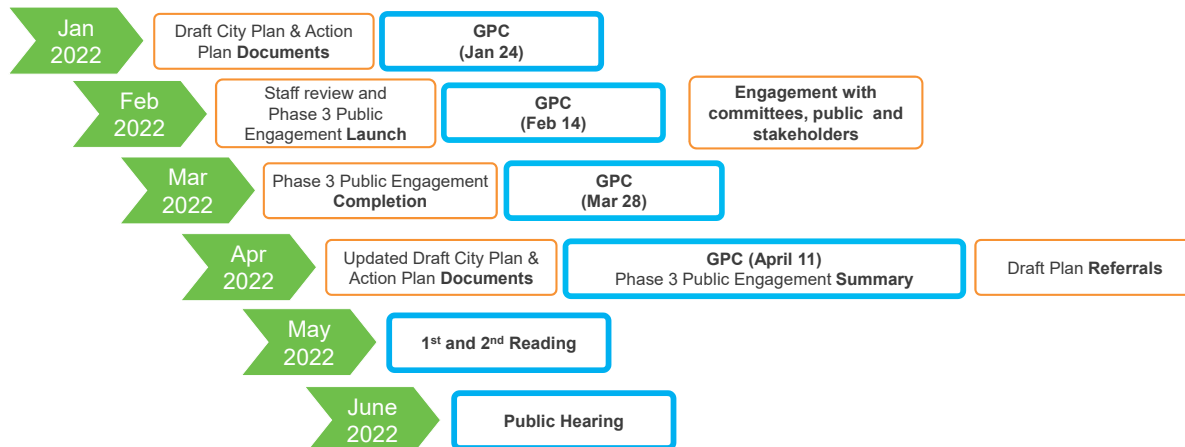


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Next Steps



Next Steps— Phase 3 Council Timeline



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Potential Key Topics for Next Council Mtgs



GPC 14 FEBRUARY 2022

Phase 3 Engagement Launch



Hay cep q'a Siem

