



Climate Action Plan

2025-2029

June 2024

Regional District of Nanaimo
Climate Action Technical Advisory Committee



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Executive Summary

Decisions made by the Regional District of Nanaimo (RDN) and other levels of government, directly influence the vulnerability of RDN residents to the effects of climate change, and how easily residents can take action to reduce emissions and manage their risk. While the RDN considers climate change within its programming, more action is required to adapt to climate change and support residents in reducing emissions: the RDN response needs to reflect the severity and immediacy of the risk posed by climate change.

The Climate Action Technical Advisory Committee (CATAC) was initiated by the RDN Board to recommend top priority climate actions for immediate implementation, with a focus on community climate action. An initial three-year CATAC-recommended work plan was approved by the Board in 2021 and successfully implemented over 2022-2024. This document provides CATAC-recommended climate action for 2025-2029, following gap analysis of existing climate work within RDN services.

CATAC recommendations include three complementary elements:

1 Ongoing support for existing, critical climate action initiatives: existing strategies, plans and projects to address critical climate action, and that require ongoing support.



2 Focused priorities to address existing gaps: priorities and actions that address critical climate action not already part of an existing initiative or strategy proposed for 2025-2029.



3 Implementation of key strategic supports: methods and approaches that should be incorporated into all work addressed in this report to maximize the chance of success.



The Climate Action Technical Advisory Committee (CATAC) recommends support for the following existing initiatives, focused priorities, and strategic supports:

Recommended RDN Climate Actions (2025-2029)	
<p>1</p> <p>Ongoing support for existing critical climate action initiatives</p>	<ul style="list-style-type: none"> • Coastal Climate Adaptation Strategy • Development of Regional Growth Strategy Implementation Plan • Geohazards and flood plain work • Drinking Water and Watershed Protection (DWWP) Action Plan 2.0 • Rainwater Management Strategy implementation • Climate risk assessments for RDN infrastructure • Update of Hazard Risk and Vulnerability Assessment to include climate risk and added detail on vulnerable populations • Transit Redevelopment Strategy implementation and positioning for electrification • Transit service expansion, including interregional routes and links supporting multi-modal transportation • Parks and Trails Strategy implementation, including Active Transportation elements • Biodiversity Strategy development and implementation • Solid Waste Management Plan implementation, including Zero Waste initiatives and emission reductions from landfill gas and haulage • Development and implementation of Regional Strategy for Net Zero Buildings and Localized Energy Generation • Zoning Bylaw Phase II Review (including focus on Climate) • Agriculture Area Plan implementation
<p>2</p> <p>Focused Priorities</p>	<ul style="list-style-type: none"> • Climate Resilient Policy • Accelerating uptake of low carbon, climate resilient buildings (both new and existing) • Improving knowledge on regional growth and water resilience • Improving wildfire resilience • Formalizing integration of natural asset management
<p>3</p> <p>Key Strategic Supports</p>	<ul style="list-style-type: none"> • Equity-centered design and delivery • Well-resourced, professional outreach and education for public, RDN staff and Board • Active Advocacy • Collaboration and regional participation • Interdepartmental approaches • Regular reporting, accountability, adaptive approaches



1 A Call to Action

Local governments across the world are at the frontline dealing with the current and anticipated impacts of climate change, in both their own operations and their communities. Urgent efforts are required on climate action through mitigation, adaptation, and resilience. Mitigation actions reduce emissions that increase global temperatures. Adaptation actions prepare for significant climatic changes, and resilience actions better predict and recover from severe climatic events.

Adaptation is particularly important for protecting vulnerable populations, such as low-income communities, people with disabilities, children, minority groups, and the elderly. As members of these groups may be at higher risk from climate-related damage, CATAC has applied a social equity lens in determining its recommendations. The cost of inaction is exponentially higher than prevention. To protect lives, livelihoods and landscapes, local governments must mitigate, adapt and improve their resilience to current and increasingly risky future climate impacts.

Climate change is already impacting the wellbeing and livelihoods of residents within the RDN. These impacts, including more frequent extreme heat events, prolonged wildfire seasons, extended drought, sea level rise, and severe winter storms and flooding will become worse within our lifetime. Some of the impacts of climate change are already unavoidable, and we must adapt how we live and operate within the region to minimize the severity of those impacts on RDN residents, infrastructure, and landscapes. This will require immediate action to address current risk, and sustained commitment to longer-term adaptation planning and development. Without this, the RDN risks being caught in a state of constant response and recovery as climate-driven events become more frequent and extreme. Inaction is the highest risk and cost option.

While some impacts are already unavoidable, we can avoid the worst impacts of climate change by dramatically reducing global greenhouse gas emissions within the next decade. This requires concerted effort across all societies and an ‘all-hands-on-deck’ approach. It is critical that all levels of government, including the RDN, commit significant resources to reducing emissions, supporting climate-adaptive development, and making it as easy as possible for residents and business to take personal action.

For the RDN, this means investing more money up front on the zero-emission design option and sustained investment in programs and policy changes that better support adaptation of homes, infrastructure, and land use, and more supports for residents to make low-emission and climate adaptive choices. It also means recognizing that action cannot be delayed based on short-term costs, convenience, or the inaction of others.



We know what we need to do, and we must now do it.

2 About CATAAC

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The RDN’s Climate Action Technical Advisory Committee (CATAAC) is comprised of seven local technical experts and three RDN elected officials. Local technical experts have technical knowledge and skill in areas related to climate change, ranging from forestry, hydrology and building science to public outreach and communications and sit on the committee as volunteers. At the direction of the RDN Board, the CATAAC membership provides them recommendations for priority climate actions. The CATAAC membership also monitors progress and provides technical advice on implementation of Board-approved climate action.

This report, developed during the winter and spring of 2024, provides recommendations to the RDN Board on priority climate actions for 2025-2029.



3 About this Plan

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This document provides a snapshot of the RDN’s main community emission sources, primary climate-related risks, and actions the RDN can take to reduce emissions (mitigation) and adjust how we do things so that we are less vulnerable to the impacts of climate change (adaptation). The plan was developed by the RDN’s Climate Action Technical Advisory Committee in consultation with RDN staff and reflects the work of almost all RDN departments.

3.1 Relation to Regional Growth Strategy

The RDN has updated its Regional Growth Strategy to improve high-level goals for climate change and other objectives. The Regional Growth Strategy goals reflect significant resident and stakeholder engagement on how growth should proceed in our area. This plan incorporates RGS goals on climate and is designed to put them into action, working towards the regional vision described in the RGS.

The climate-related goals of the Regional Growth Strategy and how they link to the recommendations described in this document, are listed separately in Appendix 1 - Relevant Climate Priorities from the Regional Growth Strategy.

3.2 CATAC Climate Action Planning Process

All decisions were consensus-based following the Board-approved CATAC Terms of Reference (TOR).

RDN staff provided initial details on current climate action within RDN services, including observed gaps, and recommended actions to address those gaps. This work was also guided by relevant sections of the RDN’s new Regional Growth Strategy as it reflects extensive public and stakeholder consultation, including on climate action. CATAC membership discussed this information and based on their expertise, criteria in the CATAC terms of reference, and additional criteria concurred by members (Table 1) made recommendations for adjustments, new actions, prioritization, and areas where additional detail was required.

Staff incorporated this feedback into more detailed feasibility assessments of adjusted priorities and work plans. Following this work, the CATAC membership finalised its draft recommendations for consideration by the RDN Board (this report).

3.3 Core Principles

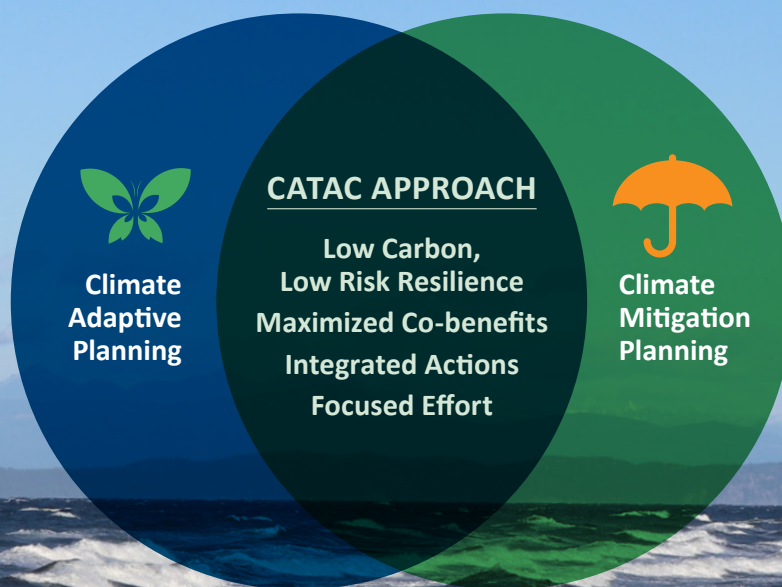
The Climate Action Technical Advisory Committee Terms of Reference specify climate action criteria to help inform decision-making. These, along with additional criteria concurred by members serve as core principles directing CATAC recommendations and an integrated, climate resilient planning approach.

TABLE 1. Criteria used for identifying climate adaptation and mitigation priorities

Source	Criteria
CATAC Terms of Reference	<ul style="list-style-type: none"> • Build upon previous CATAC work and recommendations • Have the lowest ratio of cost to GHG emissions reductions using a benefit/cost or return on investment methodology (for mitigation work) • Can be undertaken by the RDN and its members within existing legislative authority • Provide co-benefits for other local government functions • Are equitable across the socio-economic income spectrum
CATAC Membership	<ul style="list-style-type: none"> • Effectiveness in addressing adaptation and mitigation concurrently (integrated approach) • Consider other elements of equity (e.g., age-related, ability-based, etc.) • Overall feasibility (can be implemented quickly and be effective)

3.3.1 Integrated Approach

A climate resilient planning approach considers both adaptation and mitigation together and was foundational to the first CATAC plan. This approach was retained as it supports both adaptation and mitigation while maximizing co-benefits and reducing overall costs to the Regional District and its residents (Figure 1). This helps ensure that recommended climate actions achieve multiple goals, have a high likelihood of success, and have a lower risk of achieving one outcome at the expense of another.



3.3.2 Build upon existing CATAC work

Building on work already started under CATAC helps us capitalize on change already under way. It also recognizes that significant work was undertaken in 2020/2021 to assess options and identify high priority areas with a strong likelihood of success, so that limited staff and financial resources can focus on these areas. The top areas for action addressed under the initial CATAC work plans included:

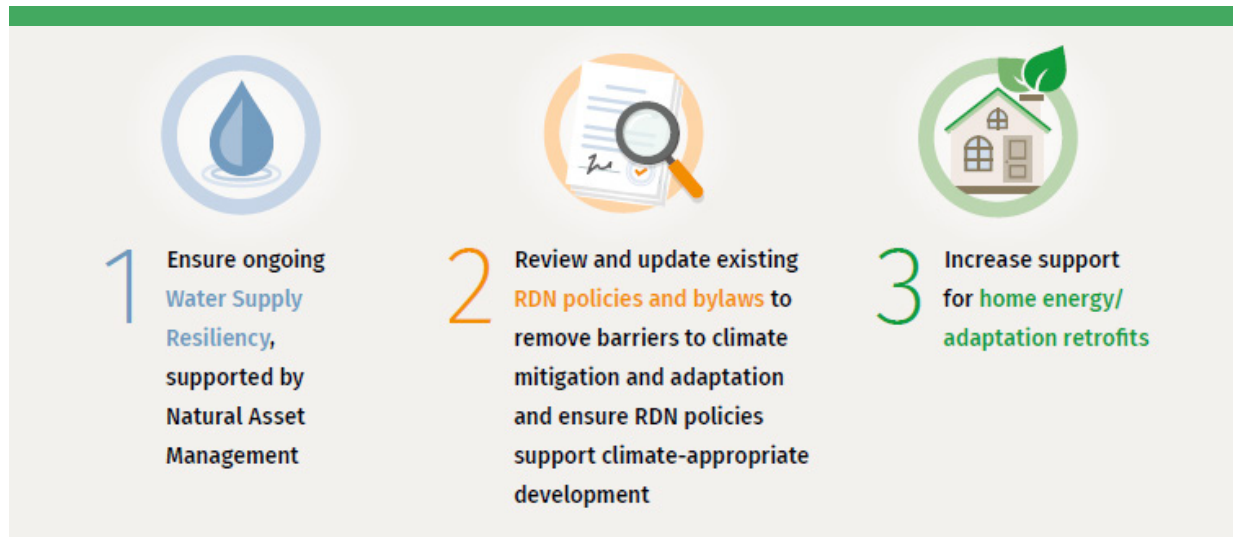


FIGURE 1. CATAC approach to prioritization and planning

The 2021-2024 CATAC Work program also identified two additional priorities were identified for action if staff and financial resources allowed.

- i. Accelerating implementation of the BC Energy Step Code (energy efficiency in buildings)
- ii. Improving food security

CATAC membership considered additional action that does not specifically building on previous work, recognizing changing contexts and new information.

3.3.3 Within Current RDN services and Jurisdiction

The RDN can only provide services where a service bylaw has been adopted by the RDN Board. Focusing on actions that are within the RDN's jurisdiction helps ensure limited resources can have the most impact. These areas generally include land use and the built environment in rural areas, high level regional growth planning, transit services, drinking water and watershed protection, water and wastewater services, parks, trails and recreation, emergency and fire services. A description of relevant RDN services can be found in Appendix 2.

Areas outside of RDN jurisdiction include: land use planning and building practices in municipal areas, activities on private managed forest lands (~63% of RDN), non-transit transportation (including road design/maintenance), water allocation/licensing, human health, economic development, and social planning. These are areas that the RDN can influence through advocacy and relationship building. More detailed information is available in Appendix 2.

3.3.4 Low dollar cost per GHG saved

Identifying options that reduce emissions for a lower cost can help ensure limited resources are used efficiently, when balanced against the magnitude of greenhouse gas savings. This considers lifetime costs and lifetime emissions savings, costs to the RDN and those incurred or avoided by future residents where possible. Only high-level cost indicators have been provided for this work. A similar consideration for adaptation impacts (e.g., approximate cost of damages avoided through adaptation actions or “cost of doing nothing”) was considered by the membership but not formally adopted. High level qualitative estimates of adaptation value are provided with each priority.

3.3.5 Rapid planning, rapid implementation

The CATAC approach uses ‘rapid planning and implementation’ to identify actions that are feasible and can be implemented with a high likelihood of success. This supports action and quick implementation.

The focus on rapid implementation risks deprioritizing difficult but critical actions (e.g., those that may require a new service or long-term planning to advance action in a meaningful way). An example of this is active transportation and transportation outside of transit, neither of which fit neatly in to existing RDN services.

3.3.6 Equitable climate action

Addressing equity through climate action is critical because climate change disproportionately impacts marginalized and poorer communities, who often make little contribution to climate change and can have limited voice in shaping solutions. Climate solutions can be unintentionally inequitable, prioritizing services to those who already have substantial resources (e.g., incentives for climate-friendly new homes), and reinforcing existing inequities (e.g., devaluing homes in flood plains, often populated by more marginalized residents, by restricting future development). Ensuring equity in solutions helps address these disparities, enabling fair access to adaptation and mitigation measures. In current CATAC work, this is achieved by following an equity framework during implementation.

While the CATAC terms of reference focus on equitability across the socio-economic spectrum, equity the CATAC process considered broader dimensions of equity (e.g., age, race, gender, etc.) in climate planning.

3.3.7 Co-Benefits

CATAC membership considered the co-benefits achieved by different climate actions, prioritizing actions that solve multiple problems at once. Co-benefits are other benefits that accrue from climate action and commonly include: improving climate adaptation, cost/tax savings (current or future), improving equity, job creation, protection of natural areas, recreational opportunities, efficient resource use, improved human wellbeing, enhanced community connections, and improved resource (food, water, energy) security among other things.



4 Emission Sources

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This section provides background context on current emission targets, sources and trends. The values provided here are from a broad scope community emissions inventory completed for the RDN by Stantec Consulting. Due to inherent uncertainty in inventory work at this scale, estimates should be used to draw general trends and magnitudes.

4.1 Emission Targets

The RDN adopted new emission reduction targets through the recently updated Regional Growth Strategy:

- 40% below 2007 levels by 2030
- 60% below 2007 levels by 2040
- Net Zero by 2050

Net zero means either producing no carbon emissions or offsetting emissions through activities that remove carbon from the atmosphere (e.g., tree planting, carbon capture, enhanced soil carbon sequestration). These new targets align with the reductions required to give us the best chance of keeping warming below 2 degrees Celsius.

The RDN should keep sector-specific, provincial targets in mind as they will guide provincial funding policy in the near term:

- Transportation, 27-32% below 2007 levels by 2030
- Buildings and communities, 59-64% below 2007 levels by 2030

4.2 Emission Sources and Trends

Total regional emissions have increased since 2007 (Figure 2). In general, emissions from all sectors are either steady or slightly increasing. On-road transportation emissions dominate in all years followed by building emissions and emissions from manufacturing industries and construction. The balance of emissions are comprised of those from agriculture, forestry, and fishing activities, industrial processes, solid waste, and other smaller sources.

The dashed lines below show current RDN adopted targets which are also referenced in its land use policy documents (e.g., Regional Growth Strategy, Official Community Plans).

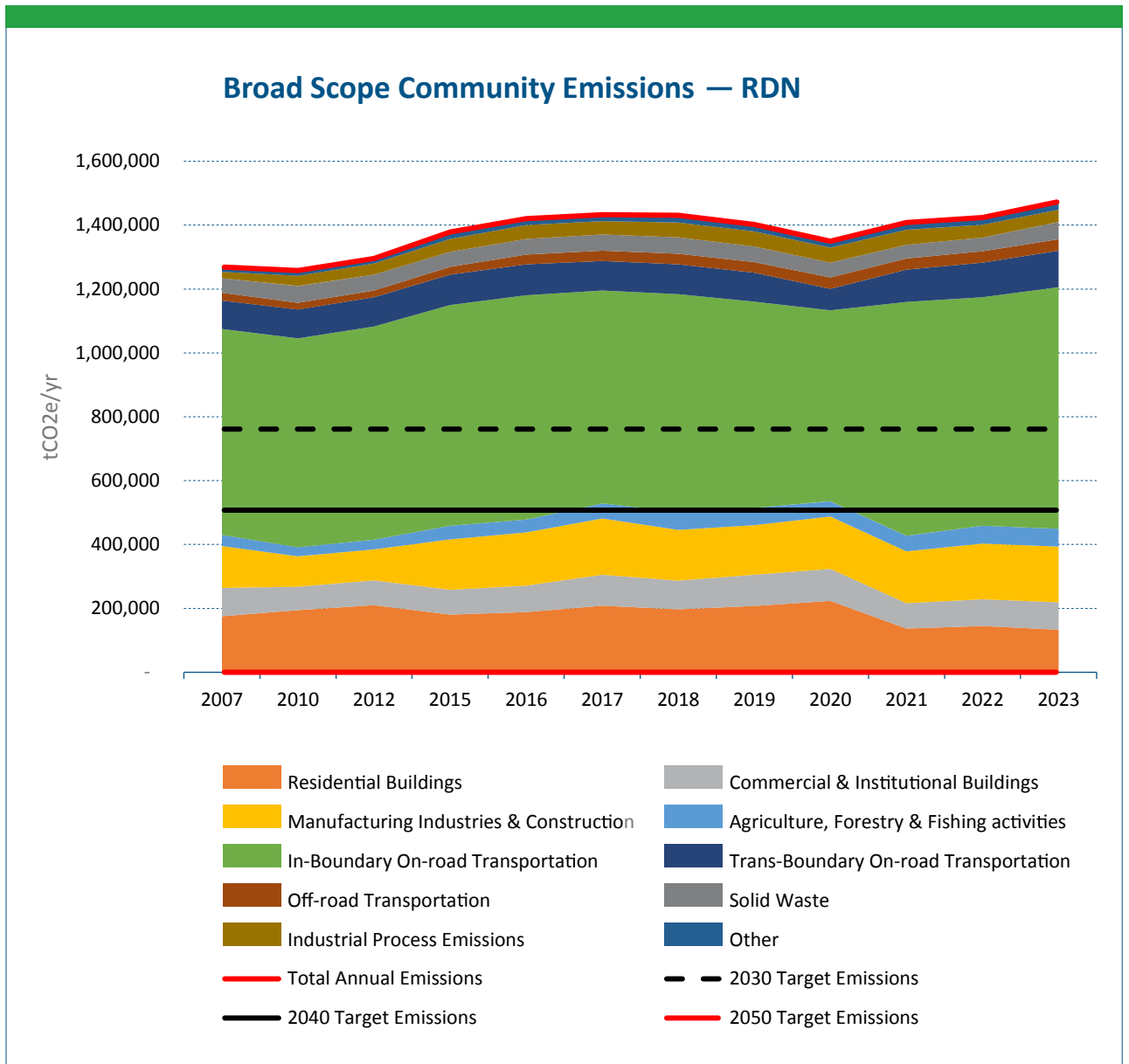


FIGURE 2. Estimated annual emissions for the RDN from broad scope community emissions, including residential, commercial and institutional buildings, manufacturing, transportation, solid waste and other categories. Emissions reduction targets are shown as lines.

4.2.1 Other emissions

The inventory does not include estimates of emissions from land conversion or landscape carbon sequestration due to difficulties in estimating these quantities. It also does not include consumption-based emissions produced from imported goods and services. Overall, the inventory provides a partial pictures of the region’s total climate impact but one that focuses on sources more likely to be under the RDN’s control.

4.2.2 Transportation Emissions

On-road transportation accounts for most regional emissions (~60 %) and these emissions are not decreasing at the rate needed to meet near term targets. They rebounded quickly following a pandemic-related drop, in part due to population growth and consumer preference for high-emitting trucks and SUVs. This increase has been reduced by positive effects of work from home policies and increasing uptake of electric vehicles (>10% of annual provincial sales). Data quality is low and should be used with caution.

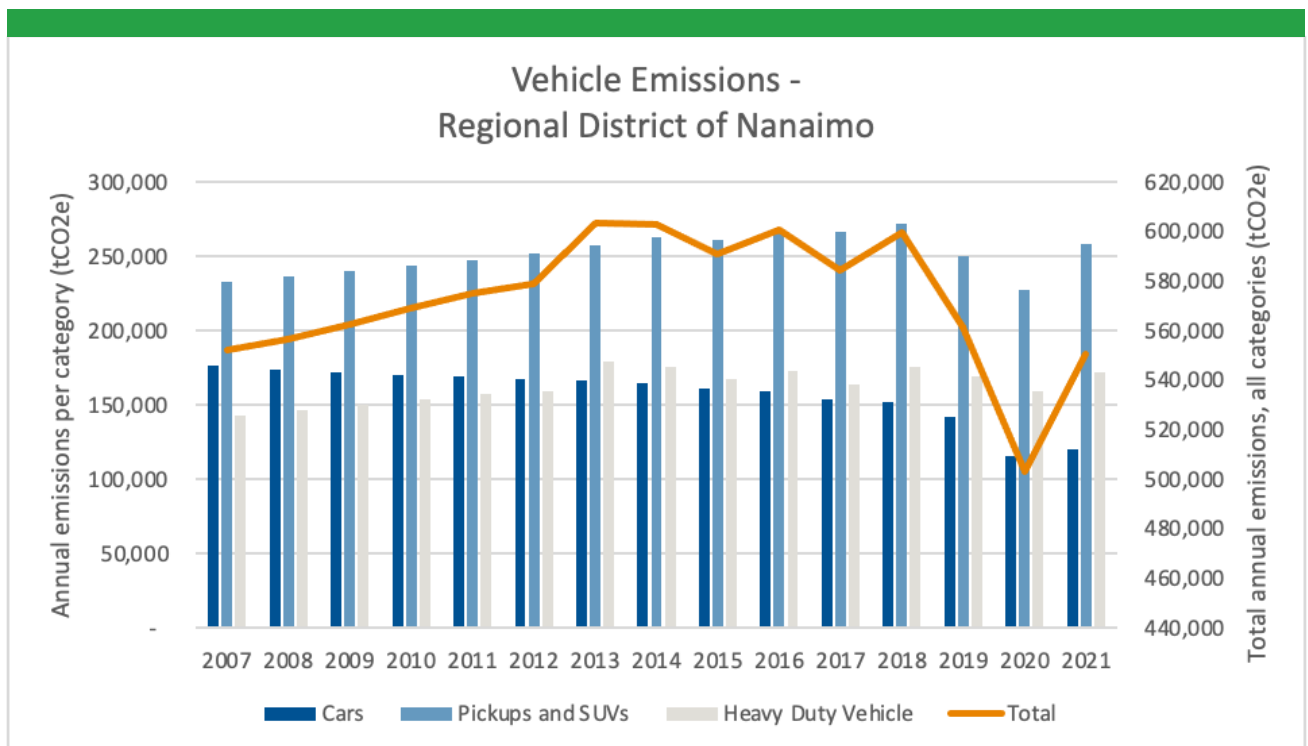


FIGURE 3. On-road transportation emissions in the RDN. Source: Provincial CEEI, 2023 release. These are estimates only – transportation emissions data has significant uncertainty. The total emission numbers vary from the total transportation emissions in the complete community inventory, but trends are similar.

4.2.3 Solid Waste Emissions

Solid waste accounts for approximately 5% of core regional emissions and prior to the pandemic was a declining source of emissions. A recent uptick in volumes of waste received at the landfill, thought to be associated with the pandemic or changing commercial disposal patterns has increased emissions in 2020 and 2021.

Waste-related emissions come from the decomposition of land-filled materials, which releases methane-heavy landfill gas to the atmosphere. The RDN has a landfill gas capture system in place which recovers landfill gas to reduce emissions. The emissions reported here are those remaining after landfill gas recovery.

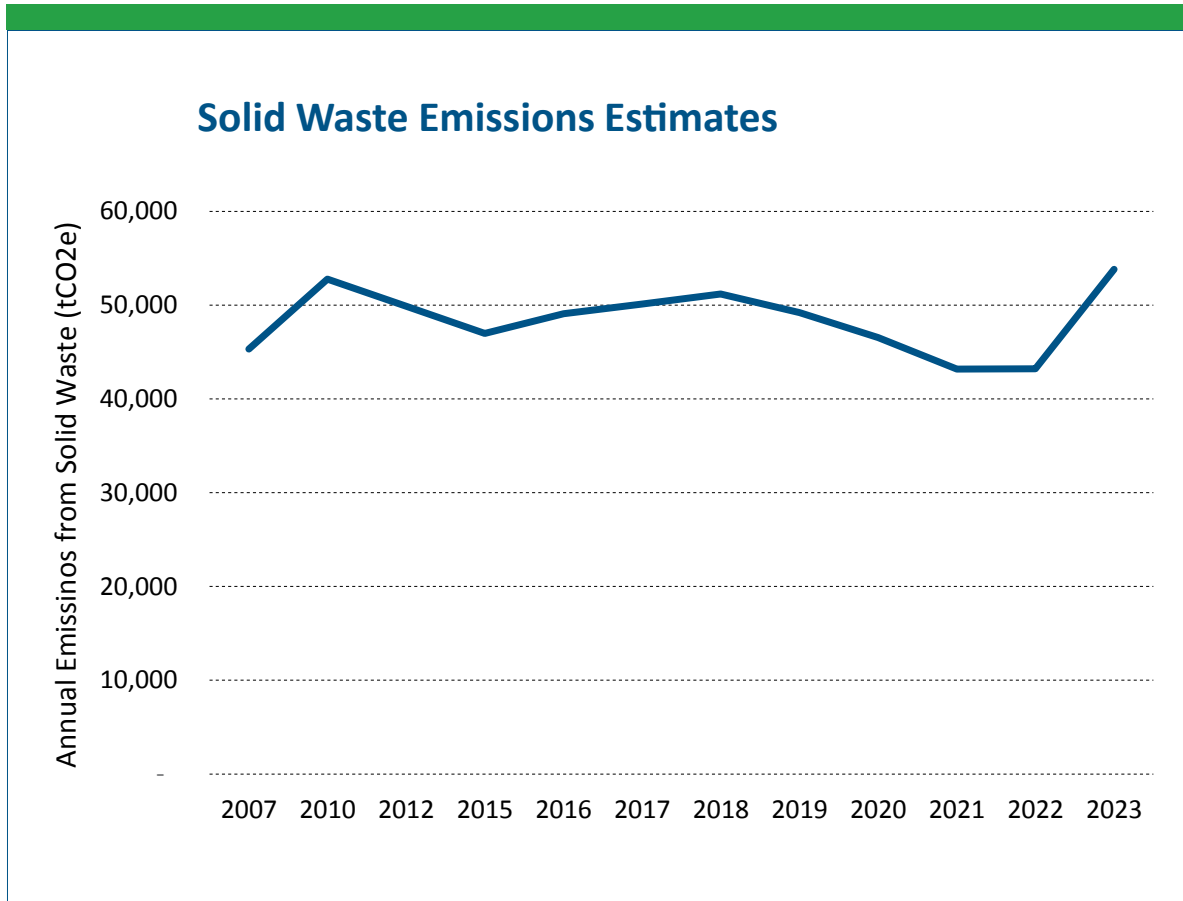


FIGURE 4. Emissions from solid waste produced and managed in the Regional District of Nanaimo. The increase in 2023 emissions is due to landfill management activities that impacted the effectiveness of methane capture equipment at the landfill.

4.2.4 Building Emissions

Residential and commercial/institutional buildings contribute about 19% of regional emissions. Residential (single family homes, townhomes etc.) contribute about 13% and larger apartment complexes/commercial/institutional buildings contribute about 6%. This does not include embodied emissions from steel, concrete, insulation, and other high emission materials used in building construction, which can sometimes exceed a building’s lifetime operational emissions.

Emissions from residential energy use in the RDN have been rising over time (Figure 5), primarily due to the uptake of natural gas, which has outweighed emissions savings from electricity grid decarbonization. While emissions from natural gas and electricity use are drawn from BC Hydro and Fortis, those of wood, propane and oil use are rough estimates provided by the province and should be used with caution.

Policies to help promote conversion of buildings from fossil fuels to electrification, and concurrent improvements in energy efficiency can rapidly reduce emissions from the built environment, using familiar technologies that work in our area. Promoting low carbon building materials can also reduce embodied emissions that are usually outsourced to other jurisdictions.

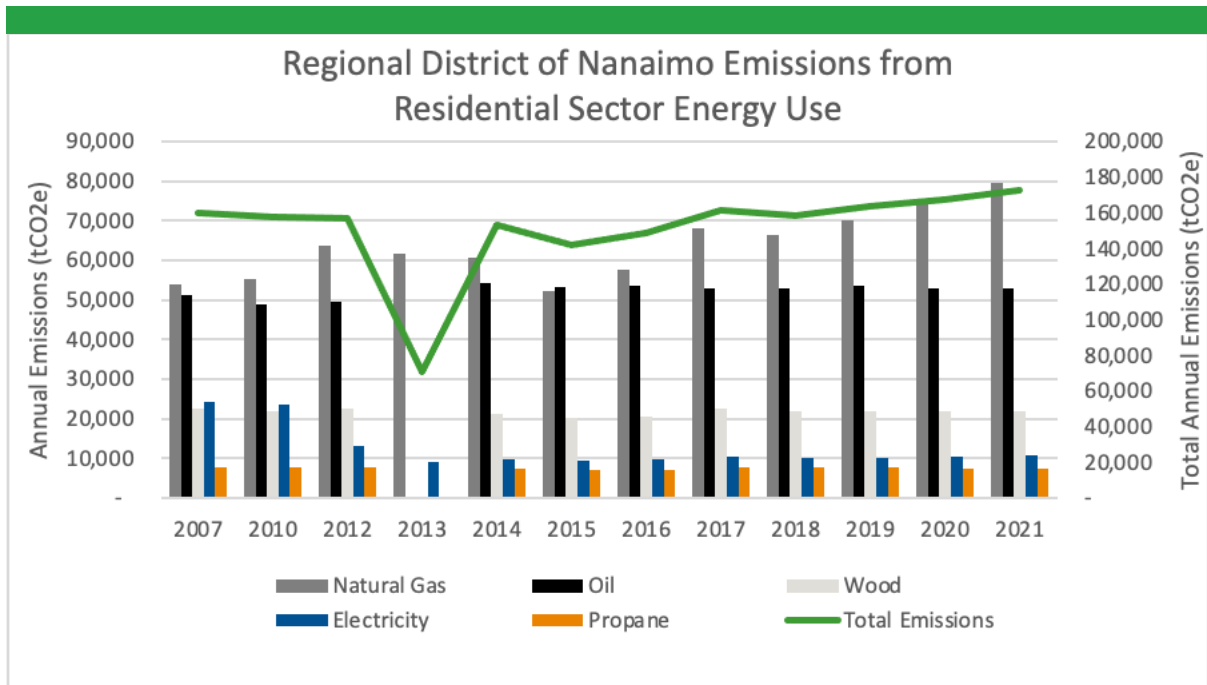


FIGURE 5. Emissions from residential energy use 2007 through to 2021, for years where data is available. Source: Provincial Community Energy and Emissions Inventory (CEEI, 2023 data release). There may be minor differences in quantities between this data and the total community data above. Emission increases are driven primarily through increase in natural gas use.

4.3 Carbon Storage and Sinks

While not quantified, natural landscapes within the RDN, particularly treed areas, soils, estuaries and marine environments act as significant carbon sinks and reservoirs. The RDN’s rural electoral areas, particularly where natural systems (forest, wetlands) are protected and retained, provide an important carbon storage function, likely helping offset the impacts of urbanization in other areas of the Regional District. Focusing development within urban containment boundaries, supporting compact, complete communities within those boundaries, and encouraging residents and private land owners to protect and restore natural systems, helps maximize landscape carbon sequestration.



5 Climate Hazards and Adaptation

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Some degree of climate change is unavoidable for our region and the effects of climate change are already being felt. How well the region copes with that change will depend, in part, on the policies put in place today, and their effectiveness in protecting against the anticipated effects of climate change for our area. To prepare for climate change, the RDN will need to understand what changes are likely (climate projections), and how those changes are likely to affect the likelihood and severity of different hazards (hazard risk assessments and risk characterization). We can then better understand what changes we need to make to manage that evolving risk.

Adaptation occurs as organisations and individuals implement these changes and move from ways that worked in the past to ways that are compatible with a future climate. This can include renovating buildings so that they have external shading in hot weather, designing stormwater infrastructure for the type of extreme weather event we anticipate under climate change, and limiting development in areas where evolving risk cannot be effectively mitigated.

5.1 Climate Projections and Climate-Mediated Hazards

The RDN has completed work on regional climate projections so that we can better understand what changes to expect in our area, and plan on how to adapt to those changes.

Key projections for our area include:

- Warmer summer temperatures, with more extreme heat days and heatwaves;
- Warmer nights and a longer growing season;
- Warmer winter temperatures and less frequent frost;
- Less rain and more dry days in the summer months;
- More precipitation falling in fall, winter and spring;
- An increased fraction of precipitation falling as rain;
- More rain delivered in extreme rainfall events.

These projections can be used in combination with information on known hazards to understand how the frequency and intensity of these hazards may evolve with climate change. The RDN's 2019 Hazard Risk and Vulnerability Assessment (HRVA) included the following climate-mediated hazards (**Table 2**), the first six of which are within the top 10 highest risk hazards facing the RDN. Expected trends for those hazards and potential impacts, based on work completed under the RDN Climate Change Projections project are also described.

TABLE 2. Climate related hazards, anticipated trends and impacts for the Regional District of Nanaimo. These are drawn from the RDN's 2019 Hazard Risk and Vulnerability Assessment, and Regional Climate Projections project.

Climate-related Hazard	Expected trend and impacts
Fires (Wildfire and Urban Interface)	<ul style="list-style-type: none"> Increased frequency and severity of wildfires, including in the urban interface (where residential areas meet forest) Increased likelihood of structure fires (due to wildfire in urban interface) Potential impacts to structures, residents, ecosystem function, supply chains and human health/safety
Overland flooding	<ul style="list-style-type: none"> Increased frequency and severity of overland flooding, including of rivers, lakes, streams Potential impacts to infrastructure, property, ecosystem function, supply chains and human health/safety
Wind Event	<ul style="list-style-type: none"> Estimated to increase as average air temperature and moisture increase but trends cannot be accurately predicted Damage to structures, power outages, tree blowdowns, supply chain disruption
Drought	<ul style="list-style-type: none"> Increased frequency, length and severity of drought, with impacts on local water quality, agricultural productivity and ecosystem function Increased opportunities for invasive species, posing risk to agriculture and native ecosystem function Compounding risk for wildland and urban interface fires
River, Lakes and Stream Flooding	<ul style="list-style-type: none"> Increased frequency and severity of overland flooding, including of rivers, lakes, streams Potential impacts to infrastructure, supply chains, property and resident safety
Human Disease	<ul style="list-style-type: none"> Changing dynamics of human disease including via new insect and plant vectors
Extreme heat	<ul style="list-style-type: none"> Increased frequency, duration and severity of heat events Impacting native species, resident health (particularly for those living in low quality buildings and unhoused population)

TABLE 2. – Continued

Climate-related Hazard	Expected trend and impacts
Extreme cold	<ul style="list-style-type: none"> Increased risk of unpredictable cold weather events with impacts on agriculture, infrastructure, and human health
Landslides	<ul style="list-style-type: none"> Increased risk of landslides due to compounding impacts from elevated fire risk and more severe rainfall events Risk to property and resident safety
Coastal flooding	<ul style="list-style-type: none"> Over time, elevated risk of coastal flooding and increasing height of inundation Significant impacts to coastal homes, infrastructure, recreational areas, and ecosystems. Eventual permanent loss.
Power Outages	<ul style="list-style-type: none"> Increased risk and duration of power outages due to extreme weather events

5.1.1 Hazard Risk and Vulnerability Assessment Update

In 2025/2026, the RDN will be updating the Hazard Risk and Vulnerability Assessment and including new provincial requirements, including:

- an assessment of how these risks are likely to evolve given the impacts of climate change
- detailed information on how different populations will be affected by these Hazards.

Both measures help ensure that climate adaptation addresses existing inequities that make some communities more vulnerable to climate change and help ensure climate impacts do not settle disproportionately on marginalized and vulnerable populations.

CATAC recommends that the results of this work be shared with CATAC membership through the annual review process, and CATAC work plans adjusted if new information warrants.

5.2 Adaptation Targets

The RDN does not have explicit climate adaptation targets, but does have related goals, milestones and objectives within strategies and service-specific action plans (e.g., Drinking Water and Watershed Protection). The RDN can improve its understanding of progress on adaptation by summarizing existing adaptation targets, understanding where gaps exist, and identifying new targets, including those that specifically consider equity.

6 Recommended Action

CATAC recommendations recognize that there is already significant climate action under way within RDN services but that and include three complementary elements:

1 Ongoing support for existing, critical climate action initiatives: existing strategies, plans and projects to address critical climate action, and that require ongoing support.



2 Focused priorities to address existing gaps: priorities and actions that address critical climate action not already part of an existing initiative or strategy proposed for 2025-2029.



3 Implementation of key strategic supports: methods and approaches that should be incorporated into all work addressed in this report to maximize the chance of success.



6.1 Support for Existing Initiatives

CATAC's recommended Priorities (Section 6.2) are in addition to work currently underway and rely on that work continuing. Climate adaptation and mitigation work is needed across departments and must continue to be integrated into existing plans/strategies.

Existing programs are essential for minimizing risk to RDN residents and for reducing overall costs. Existing programs address key climate risks to RDN residents and allow preventative action. The programs reduce overall costs to the RDN and area residents by avoiding more costly, reactive responses, which are also less effective.

CATAC recommends the Board provide sustained, long term investment for the following RDN adaptation and mitigation programs underway, including future expansion in response to evolving risk:

- Sea Level Rise and Climate Adaptation Program (Long Range Planning)
- Development of Regional Growth Strategy Implementation Plan (Long Range Planning)
- Geohazards and flood plain work (Long Range Planning)
- Drinking Water and Watershed Protection (DWWP) Action Plan 2.0 (DWWP)
- Rainwater Management Strategy implementation (DWWP)
- Update of Hazard Risk and Vulnerability Assessment to include climate risk and added detail on vulnerable populations (Emergency Services)
- Transit Redevelopment Strategy implementation and positioning for electrification (Transit)
- Transit service expansion, including interregional routes and links supporting multi-modal transportation (Transit)
- Parks and Trails Strategy implementation, prioritizing Active Transportation elements (Parks)
- Biodiversity Strategy development and implementation (Parks)
- Solid Waste Management Plan implementation, including Zero Waste initiatives and emission reductions from landfill gas and haulage (Solid Waste)
- Development and implementation of Regional Strategy for Net Zero Buildings and Localized Energy Generation (Energy and Sustainability)
- Zoning Bylaw Phase II Review (including focus on Climate) (Current Planning)
- Agricultural Area Plan Implementation (Long Range Planning)

Progress reporting on each of these initiatives should be included in reporting to CATAC.

Details on each of these initiatives and its contribution to climate action is found in Appendix 3 – State of Climate Action.

6.2 Focused Priorities

While all actions, including existing programs, need to be completed for meaningful progress on climate adaptation and mitigation, CATAC recommends focused support and resourcing for the 5 priority areas described in this section.

These priorities were selected because they align well with the criteria outlined in the CATAC terms of reference and are important for advancing climate adaptation and/or mitigation in the Regional District. This means that they have a high likelihood of delivering meaningful, equitable climate action for our Region, at an efficient lifetime cost.

Priorities are not listed in any order and include a concise rationale for their inclusion. Additional details on selection criteria for each Priority can be found in Appendix 4.

6.2.1 Accelerating uptake of climate-adaptive buildings



6.2.1.1 PRIORITY DESCRIPTION

Accelerate uptake of new and existing buildings that are low emissions and adapted to the anticipated effects of climate change for our area. For new buildings this means continuing work on the Regional Strategy for Net Zero Buildings and Localized Energy Generation, including implementation of effective regulations to reduce emissions (specifically Zero Carbon Step Code) and supports for improving energy efficiency and climate-adaptive building approaches (e.g., builder education, resident awareness). For existing buildings this means continuing work on community efficiency financing, improving complementary supports for homeowners (concierge service, outreach, rebates), and evaluating these programs on a routine basis to ensure they are meeting objectives. This work should integrate with priorities to manage risk in high-hazard areas (e.g., Climate Resilient Policy work) to ensure a holistic approach to managing climate risk in the built environment.

6.2.1.2 RATIONALE

This priority recognizes the substantial contribution of building emissions to the RDN's regional emission profile, and the need to ensure our buildings can offer safe shelter under future climate conditions. Many of the new building and retrofit measures that reduce emissions also improve climate adaptation by providing cooling and protection for wildfire smoke infiltration. Building directly on previous CATAC work and the RDN's work on Net Zero Buildings and Localized Energy Generation, this Priority is feasible and keeps momentum on the substantial work already achieved under these two initiatives.

6.2.1.3 SUMMARY OF PROPOSED WORK 2025-2029

Area	Action	5 Year Budget
New Buildings	<ul style="list-style-type: none"> Implement highest level of the BC Zero Carbon Step Code (EL-4) in 2025, if not adopted earlier Implement policy/supports for higher levels of BC Energy Step Code (improved resident rebates/awareness building, industry training) Identify and implement supports for reducing embodied emissions and those from commercial buildings 	\$90,000
Existing Buildings	<ul style="list-style-type: none"> Community efficiency financing design and implementation Evaluate and if appropriate, continue retrofit concierge program, provide additional supports for high value activities (e.g., fossil fuel to electric conversions) Continue community outreach and builder education 	\$614,500
Total Budget over 5 years		\$694,500
Total FTE over 5 years (uses existing resources)		3.7
Estimated Grant funding		Medium
Completed with existing staff resources?		Yes









6.2.1.4 DETAILED WORK PLAN FOR CLIMATE ADAPTIVE BUILDINGS

ID	Action	Purpose	Years
B1	Implement Zero Carbon Step Code to reduce emissions from new buildings in Electoral Areas	Ensures new buildings are compatible with RDN's climate commitments and avoid future costs of retrofit	2024-2025
B2	Design and implement building sector supports for uptake of higher levels of BC Energy Step Code.	Helps ensure our local building industry is prepared for higher levels of BC Energy Step Code.	2025-2029
B3	Develop education and outreach materials for embodied emissions	Options to address embodied emissions identified and selected	2026
B4	Evaluate and adjust retrofit concierge program, resident supports (including rebates) and strategy for regional funding approach	Evaluate effectiveness of retrofit concierge against alternatives, identify regional funding solutions to distribute program cost	2025
B6	Develop and implement community efficiency financing program-contingent on design results	Residents have access to alternative financing methods for retrofits	2025-2029
B5	Implementation of revised retrofit concierge program/resident supports with regional cost-sharing	Ongoing program adaptation to ensure effective solutions for residents	2026-2029
B7	Scope and implement options for supporting commercial retrofits	Low-cost/effort ways to promote commercial building retrofits identified	2027
B8	Education/outreach (ongoing program design/delivery) incorporating new buildings, embodied emissions, retrofits, commercial	Residents have awareness, supports and motivation to implement climate adaptive measures	2025-2029

* assumes substantial grant funding received from FCM and 3rd party financing model, otherwise the initiative is unviable



6.2.1.5 INTEGRATION OF STRATEGIC SUPPORTS

 <p>Equity</p>	 <p>Educate to Mobilize</p>	 <p>Active Advocacy</p>
<p>Equity guidelines embedded in all buildings work, including analyses of impacted populations, equity-centered program design and delivery</p>	<p>Outreach and awareness-building is centre to this program, delivered through designated Outreach Coordinator position</p>	<p>Advocacy for provincial Property Assessed Clean Energy (PACE)-enabling legislation</p>
 <p>Collaboration and Regional Participation</p>	 <p>Interdepartmental Approach</p>	 <p>Reporting, Accountability, Adaptive Approaches</p>
<p>RDN delivers regional outreach in collaboration with municipalities – particularly City of Nanaimo and Qualicum Beach, sharing resources as feasible</p>	<p>Program collaborates with DWWP, Emergency/Fire Services and Solid Waste to deliver climate-informed practices and building principles that minimize waste</p>	<p>Part of regular reporting cycle</p>

6.2.2 Building Wildfire Resilience



6.2.2.1 PRIORITY STATEMENT

Improve regional wildfire resilience with accurate characterization and mapping of current and future wildfire risk and potential compounded risks (slope instability, debris flow etc.), assessment and implementation of appropriate development controls, and effective, equitable supports that build resident awareness and capacity. This priority will help the Regional District of Nanaimo better understand regional wildfire risk and implement adaptation approaches in line with that risk.

6.2.2.2 RATIONALE

Wildfire is the number one hazard for the RDN based on the RDN’s 2019 Hazard Risk and Vulnerability Assessment (HRVA) and this hazard is expected to increase with climate change. The RDN can prepare for changing wildfire risk by better understanding how that risk is distributed on private lands, and where potential risks might compound (e.g., where there is more potential for landslide following a wildfire). Building public awareness around compounding risks and implementing supportive policies can help ensure both the RDN and its residents can adapt landscapes and development to minimize the risks from this evolving hazard.



6.2.2.3 SUMMARY OF PROPOSED WORK 2025-2029

Activity	Description	5 Year Budget
Data/information improvement	Obtaining more comprehensive fire risk data through advocacy, partnership or independent means	\$20,000+ TBD for independent acquisition
Risk characterization and response	Mapping of compounding risk and determining need for development controls	\$150,000
Planning, Education and Outreach	Updating resiliency plans, improving resident awareness and capacity	\$143,000
Total 5 year budget		\$313,000
Total 5 year FTE		2.1
Estimated Grant funding		High

6.2.2.4 DETAILED WORK PLAN FOR IMPROVING WILDFIRE RESILIENCE

ID	Action	Purpose	Years
F1	Advocate to province for comprehensive wildfire risk maps.	RDN requires accurate information on fire risk, including changing dynamics under climate change, for response planning and preparedness.	2025
F2	Work directly with Private Managed Forest Land managers to acquire missing fire risk data	RDN requires accurate information on fire risk, including changing dynamics under climate change, for response planning and preparedness.	2025
F3	Scope feasibility of acquiring fire risk data independently	Understand options and feasibility for acquiring data independently, including through data-sharing with Mosaic	2026
F4	If feasible, acquire fire risk data independently	RDN requires accurate information on fire risk, including changing dynamics under climate change, for response planning and preparedness.	2027-2028
F5	(Contingent on data) Identify areas with higher wildfire risk and potential for compounded risk following wildfire	RDN knows likely location and extent of both wildfire risk and compounded risk (debris flow, slope instability, flooding) following wildfire to prioritize risk mitigation	2028-2029



6.2.2.4 DETAILED WORK PLAN FOR IMPROVING WILDFIRE RESILIENCE

– Continued

ID	Action	Purpose	Years
F6	If warranted, develop and implement development controls in higher risk areas	Implementing development controls (e.g., wildfire/wildland urban interface Development Permit Areas) supports resilient new development and mitigates risk	2029
F7	Update Community Wildfire Resilience Plans (CWRPs) with new risk data	Ensures CWRPs are appropriate for estimated current risk, and consider projected risk	2028-2029
F8	Dedicated outreach to residents on compounded risks of wildfire and how to reduce risk	Improves resident understanding of and action to reduce risk from compounding events (wildfire followed by potential for debris flow, flooding, landslide)	2026-2028
F9	Improve outreach collaboration with E&S Resilient Homes program	Sharing of resources and community outreach opportunities provide more effective use of staff resources.	2025
F10	Advocate to province for long-term, no application FireSmart funding for the RDN	Improved program funding certainty, increased funding, staff time freed to focus on implementation	2025-2029

6.2.2.5 INTEGRATION OF STRATEGIC SUPPORTS

<p>Equity</p>	<p>Educate to Mobilize</p>	<p>Active Advocacy</p>
Risk assessment can include an understanding of economic/ social vulnerability of residents residing in higher risk areas.	Accompanied by dedicated, topic-focused outreach	Advocacy to province for improved risk data
<p>Collaboration and Regional Participation</p>	<p>Interdepartmental Approach</p>	<p>Reporting, Accountability, Adaptive Approaches</p>
Data and methodologies will be shared with member municipalities.	Collaborative delivery with Long Range Planning, Current planning, Emergency Services, and Energy/Sustainability	Part of regular reporting cycle



6.2.3 Managing Water and Growth

6.2.3.1 PRIORITY STATEMENT

CATAC recommends prioritizing work to better understand how climate change, population growth, and water use are likely to impact local water resources and regional water security. This means working towards a regional understanding of impacts to shared water sources and sharing information so that growth can be directed into areas with appropriate water resources, or plans can be made for additional water storage. It also includes testing best practices that can be shared with other areas (e.g., updating water budgets with revised climate and growth projections) and supporting improved data collection across the region.

6.2.3.2 RATIONALE

The RDN's Drinking Water and Watershed Protection Program (DWWP) provides leading edge research and collaborative watershed management to protect water resources and supporting ecological systems across the RDN. This Priority complements existing DWWP work and builds on progress made under the CATAC 2022-2024 work plan to help ensure future water security for our region, in the context of complicated water jurisdiction. With new provincial housing mandates, individual water suppliers, including the RDN, are evaluating potential impacts on water supplies. By working towards a more regional understanding of cumulative impacts, including updating climate and growth projections, and sharing the results of its own work, the RDN can help ensure that broader impacts for the region are understood and planned for.

6.2.3.3 SUMMARY OF PROPOSED WORK 2025-2029

Activity	Description	Budget
Analyses and policy development	Update of French Creek and Nanoose water budgets with new growth and climate projections, consider this info in OCPs. Ensure updated growth and climate projections are include in Yellow Point water budget (2025)	Existing DWWP budget
Collaborative learning	Share approach and results with other stakeholders	N/A
Regional collaboration	Bring together analyses completed by all area water providers to better understand regional impacts of revised growth projections on share water resources, including where additional water storage may be needed	\$120,000
Data improvement	As part of DWWP Action Plan renewal – scope automation of monitoring services to expand data and trending	\$30,000
Total 5 year budget		\$150,000
Total 5 year FTE		0.8
Estimated grant funding		low



6.2.3.4 DETAILED WORK PLAN FOR MANAGING WATER AND GROWTH

ID	Action	Purpose	Year
W1	Update Phase 2 water budgets for French Creek and Nanoose, ensure within Yellow Point water budget work	Understanding potential impacts of new provincial housing policies on servicing capacity/water resilience	2026
W2	Update corporate process on water and growth	Corporate process to ensure impacts to water sources understood alongside provincially mandated growth, approach and findings shared with other Local Governments	2026-2027
W3	Analyses considered in updates to OCPs	Where OCP updates occur, ensure relevant results from this work are considered	2026-2029
W4	Integration of regional information	Work towards regional analyses of growth and water use to improve understanding of regional resilience and shared water resources, including where additional water storage may be required	2028-2029
W5	Water monitoring system upgrade feasibility assessment and implementation	Improved ability to understand ground and surface water trends across more areas of the RDN	2029

6.2.3.5 INTEGRATION OF STRATEGIC SUPPORTS

<p>Equity</p>	<p>Educate to Mobilize</p>	<p>Active Advocacy</p>
Limited ability to integrate equity, however where there are	Results will inform communications in affected areas	Not yet integrated
<p>Collaboration and Regional Participation</p>	<p>Interdepartmental Approach</p>	<p>Reporting, Accountability, Adaptive Approaches</p>
Delivered as part of DWWP work, which has basis in regional participation. Participation of different water purveyors/ jurisdictions will be at their discretion	Collaborative delivery with Energy and Sustainability (E&S) and DWWP, following previous approaches.	Part of regular reporting cycle

6.2.4 Formalize Natural Asset Management within RDN Services



6.2.4.1 PRIORITY STATEMENT

Advance natural asset management within RDN services to ensure underlying ecological systems and processes are protected, restored, and maintained. An overarching policy will: direct integration of natural asset management within RDN services; invest in data and resources to support that integration; develop methods to prioritize investment in critical natural assets, and; mobilize the public to protect natural assets through outreach and incentives.

6.2.4.2 RATIONALE

Natural asset management recognizes, values, and protects the services provided by natural ecosystems, organisms and landscapes through formal integration into asset management practices. This increases the likelihood these systems will be invested in and protected, and thereby, can continue to provide critical services and benefits and avoid the costs of replicating these services through engineered approaches (e.g., water treatment plants, impounded storage). Natural asset management is a key example of a climate resilient approach that enhances both adaptive capacity and landscape carbon sequestration (mitigation).

Because many climate hazards are the result of altered natural processes, investment in natural assets often reduce risks from multiple hazards. For example, functional forest ecosystems moderate local temperatures, protect from severe winds, better absorb rainfall, retain soils on steep slopes to reduce landslide risk, and affect both water quality and quantity. This, in turn, reduces infrastructure costs and risks for RDN residents.

While the RDN has mixed jurisdiction to implement natural asset management practices, particularly on private lands, it can help support this approach by building its own practice, and improving awareness of key natural assets in the region. This priority builds directly on the significant work already completed under the 2022-2024 CATAC Priority on Water Resilience and Natural Assets.

6.2.4.3 SUMMARY OF PROPOSED WORK 2025-2029

Activity	Description	Budget
Policy Development	Defining guiding principles for systemic integration of natural asset management	Staff time only
Natural Asset Management Plan	Determining level of service, required investment in specific natural assets, data needs and acquisition	\$120,000
Risk assessment	Prioritize assets for investment, understand consequence of natural asset loss	\$120,000
Outreach and Incentives	Mobilize public to protect natural assets	\$50,000
Total over five years		\$290,000
FTE over 5 years		3
Estimated grant funding		High



6.2.4.4 DETAILED WORK PLAN FOR FORMALIZING NATURAL ASSET MANAGEMENT

ID	Action	Purpose	Year
NA1	Policy - Include climate resilience in criteria for Parks Acquisition Strategy (resilience lens)	Lands that maximize value for RDN across recreation, biodiversity, resilience are prioritized for acquisition	2024-2025
NA2	Policy - Integrate natural and physical asset management planning	Natural asset management becomes normal practice with formal processes and plans	2025-2026
NA3	Policy - Integrating upcoming natural asset valuation requirements from PSAB and CPA	Standard and mandatory natural asset valuations in local government	2025-2026
NA4	Policy - Strengthen environmental/ climate values in asset management policy	Environmental goals and resources needed to achieve those defined in plans	2025
NA5	Natural asset management plan	Board plan with clear direction on criteria and supporting data used to prioritize natural asset action, including key natural asset descriptions/functions, levels of service, and maintenance	2025
NA6	Plan – identify, acquire, and maintain data for accurate natural asset monitoring, including through Mosaic	Existing data informing natural asset work, data gaps identified, data platform selected	2025-2026
NA7	Plan - For key natural assets, establish levels of service and required budget to maintain those level of service	Methods for determining levels of service and budget established. LOS, budget determined for some priority natural assets	2027-2029
NA8	Risk Assessment - Key Natural asset identification and prioritization including scenarios of key natural asset loss	Key natural assets at high risk identified, prioritized for action	2025-2026
NA9	Support for in-situ demonstrations of natural assets /green infrastructure (Parks, LRPES, DWWP)	Cross-departmental involvement in natural asset/green infrastructure projects.	2026-2029
NA10	ID incentives for private residents to protect natural assets	Private landowners support for positive actions	2028-2029
NA11	Develop public education on value of natural assets and ecosystem services	Empowerment of private landowners and support for positive actions	2026



6.2.4.5 INTEGRATION OF STRATEGIC SUPPORTS

<p>Equity</p>	<p>Educate to Mobilize</p>	<p>Active Advocacy</p>
<p>Equity lens can be applied to natural asset management policy development – not yet integrated</p>	<p>Accompanied by dedicated, topic-focused outreach and incentive program</p>	<p>Advocacy to Mosaic for access to condition assessment data of key areas/assets</p>
<p>Collaboration and Regional Participation</p>	<p>Interdepartmental Approach</p>	<p>Reporting, Accountability, Adaptive Approaches</p>
<p>Data and methodologies will be shared with member municipalities. Data inputs may be sought from member municipalities. Potential for regional working group.</p>	<p>Collaborative delivery with interdepartmental working group (Parks, DWWP, E&S, Long Range Planning)</p>	<p>Part of regular reporting cycle</p>

6.2.5 Climate Resilient Policy



6.2.5.1 PRIORITY STATEMENT

Building on work completed under CATAC Priority 2 (Removing barriers to climate action within RDN policy), Climate Resilient Policy means the RDN establishes very clear direction on climate adaptation, mitigation and resilience through overarching policy, and ensures other key policies align with that direction. This includes establishing appropriate Board policies that clarify the RDN’s approach to climate action and risk mitigation, ensuring that zoning bylaws reflect the climate goals and sustainability priorities of the Regional Growth Strategy and Official Community Plans, updating existing policies for compatibility with Board climate policies, and evaluating and implementing new policy tools where appropriate. As with all CATAC priorities, investing in resident outreach and education, and a strong focus on equity will make work on this priority more effective.

6.2.5.2 RATIONALE

The RDN has substantial influence over long term patterns of development through zoning and land use policy. Development patterns, in turn, affect resident vulnerability to climate change, and how easy or difficult it is for residents to make sustainable choices that reduce emissions and climate vulnerability.

The Regional District also has responsibilities to understand climate risk and guide development that acknowledges and, as reasonable, limits risk to residents and infrastructure. Many of these risks have been discussed earlier in this document and include overland and coastal flooding, geohazards, wildfire, and water availability. The RDN’s own assets must be designed for low carbon climate resilience with the intent to not worsen climate change, design for anticipated future climate conditions, and located away from climate hazard areas if risk cannot be mitigated.



Establishing a clear Board policy on climate action, including levels of service, provides clarity for both the RDN and for residents on how the RDN will prepare for and respond to climate change. Ensuring alignment of subordinate policies, ranging from subdivision servicing standards to zoning bylaws and the RDN's own facility designs will help drive positive change throughout the organization.

6.2.5.3 SUMMARY OF PROPOSED WORK 2025-2029

Action	Description	5 Year Budget
Rank and review policies	Identify and review policies with highest likely impact, determine order for other policies	\$50,000
Policy amendments	Implement required changes within policies (bylaw updates)	\$150,000
Development Controls	Complete work on development permit areas and amend in to OCPs, explore additional tools (e.g., limited use policies)	\$320,000
Total Budget (over 5 years)		\$520,000
Total FTE (over 5 years) – multiple depts		5.3
Estimated Grant funding		Low

6.2.5.4 DETAILED WORK PLAN FOR CLIMATE RESILIENT POLICY







ID	Action	Purpose	Year
P1	Establish inter-departmental working group, develop prioritization criteria	Delivers coordinated approach across RDN based on clear priorities	2025
P2	Review priority policies for alignment with Board Climate Policies e.g., <ul style="list-style-type: none"> Bylaw 2500 (zoning) Subdivision servicing bylaw, including active transportation provisions Transportation policy – e.g., EV-ready buildings 	Changes required to high impact policies are understood	2025-2029
P3	Update and amend policies, starting with high impact policies e.g.: <ul style="list-style-type: none"> Bylaw 2500 (zoning) Subdivision servicing bylaw Other policies as prioritized 	High impact policies are updated so they are compatible with RDN commitments on climate	2027-2029



6.2.5.4 DETAILED WORK PLAN FOR CLIMATE RESILIENT POLICY – Continued

ID	Action	Purpose	Year
P4	Finalise and amend draft DPAs for aquifer, ESA, hazard lands and shorelines in OCPs	Natural areas are protected, resident risk exposure is reduced	2024-2026
P5	Evaluate limited use policy, including financial implications, and update restrictive covenants on development applications	New policies are evaluated and implemented where reasonable	2026-2028

6.2.5.5 INTEGRATION OF STRATEGIC SUPPORTS

 Equity	 Educate to Mobilize	 Active Advocacy
Equity guidelines for adaptation to be embedded in work, including how policies will impact vulnerable populations and measures reviewed to ensure equitable implementation. These are to be included in project scope and reported on to CATAC as part of annual reports.	Outreach and education are integrated into design and delivery of policies that impact RDN residents.	Not yet integrated
 Collaboration and Regional Participation	 Interdepartmental Approach	 Reporting, Accountability, Adaptive Approaches
RDN will be sharing results with other interested municipalities	Interdepartmental working group to oversee process	Provincial policy changes to be monitored – particularly Emergency and Disaster Management Act- and plan adjusted accordingly



7 Special Comments

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7.1 Transportation

CATAC members acknowledge the importance of reducing transportation emissions within the Regional District. As federal and provincial policies will help drive change in transportation emissions over the next decade, CATAC recommends that the RDN focus on existing work within its own jurisdiction, for example, public transit, strategic advocacy for effective provincial policy, and focused adjustment of relevant RDN policies under the Climate Resilient Policy priority. Specific recommendations are provided in Table 3. As all work is already underway (existing initiatives, continued advocacy) or can be completed as part of another Priority, no criteria evaluation or work plan are provided for transportation.

TABLE 3. CATAC recommendations for Transportation

Work Area	Description
Support for existing initiatives	<ul style="list-style-type: none"> • Implementation of the Transit Redevelopment Strategy, including continuing strong advocacy to province for necessary resources • Service expansions, including interregional services and connections that support multi-modal transportation. • Implementation of the Parks and Trails Strategy, particularly prioritizing work on: <ul style="list-style-type: none"> Action 6.1 - Evaluate and update the proposed Regional Trail Network to reaffirm regional trail priorities Action 6.2 - Review the implementation of regional active transportation planning initiatives and determine approach and resourcing requirements

TABLE 3. CATAAC recommendations for Transportation — *Continued*

Work Area	Description
Continued Advocacy	<ul style="list-style-type: none"> • Advocate to province for rural road management compatible with the province’s climate action goals and which diversify resident transportation choices. • Advocate to province for regional transportation plan that supports province’s stated climate action goals for transportation and provides clear path for local governments • Advocate to province for adequate funding and electrification of transit fleet
New Policy Work	<ul style="list-style-type: none"> • Through Climate Resilient Policy priority: <ul style="list-style-type: none"> • update requirements for active transportation within subdivision servicing bylaw • update buildings bylaw to promote EV-ready buildings

7.2 Improving Local Food Security

CATAAC recognizes local food security both reduces emissions by promoting local and seasonal food consumption, and improves adaptation of local agriculture and food production, transportation, and storage systems. The RDN plays a limited role in supporting local agricultures as it does not explicitly fit within existing services or legislative authority. The RDN, however, has established an Agricultural Area Plan and has participated in a regional project to understand how climate change might specifically impact agriculture in our area.

CATAAC recommends that planned work on of the Agriculture Area Plan (AAP) consider actions in the context of climate change.

7.3 Financing Climate Action

The RDN may not be able to fund the level of adaptation and mitigation action needed through existing revenue tools (e.g., taxation). Most climate work is completed through grant funding, which takes staff time and effort to acquire and does not always align with timelines, staff capacity, or local priorities. The availability of grant funding for climate action is also dependent on provincial and federal funding priorities, which change with the party in power. If there are concurrent changes in federal and provincial policies, there may be significant change to climate-oriented grant funding.

Ongoing downloading of provincial responsibilities to local governments, without adequate, multi-year funding, compounds this issue. This primarily affects staff capacity within Development and Emergency Services with lesser effects on Regional and Community Utilities and leads to delays in climate action implementation.

While CATAAC membership considered an option to assess alternative funding models, including establishing new services, establishing green revolving funds, leveraging private investment, and developing a grant strategy, a focus on advocacy is recommended.

7.3.1 Recommendation

That the Regional District continue to advocate to the province for effective funding solutions for local government climate action. This includes addressing issues of provincial downloading on to local governments without appropriate levels of funding.

8 Strategic Supports

These supports were selected following extensive consideration and evaluation by the first iteration of the CATAC and the current CATAC membership recommends that they be retained with the following descriptions.



8.1 Equity

Without conscious inclusion of equity, we run the risk of implementing policies and programs that support or worsen existing inequities. Ensuring all climate adaptation and mitigation work is equity centered and considers the different ways inequity can arise will help us avoid this risk. Following the Urban Sustainability Directors Network Guidelines¹ for equity during program development and implementation and updating the monitoring framework to better track progress on equity will better ensure equity-centered climate action. Costs to implement these guidelines and associated monitoring approaches should be evaluated and included in program budgets.



8.2 Educate to Mobilize

Action on these priorities will not succeed unless supported by awareness and understanding of the Board, staff and public. Each of the priorities must be supported with budgets and staff/consultant resources for professional-quality, equity-informed outreach that goes beyond side-of-desk approaches.

Programs reliant on public/voluntary action or voter support must include budgets for professionally designed, targeted outreach that motivates action and supports equity. Inward facing programs should include staff resources and funding to develop Board and staff awareness to support effective adoption and implementation. Existing educational tools and resources should be used and adjusted for local circumstances.

1 2018. Urban Sustainability Directors Network – A Guidebook on Equitable Clean Energy Program Design for Local Governments and Partners.
<https://cusnetwork.ca/wp-content/uploads/2020/03/USDNEquitableCleanEnergyGuidebookCompressed-2.pdf>



8.3 Active Advocacy

On its own, the RDN cannot achieve effective climate adaptation and mitigation. Each priority that relies on other jurisdictions/stakeholders (e.g., other levels of government, private landowners, industry) for effective implementation needs to develop and implement a clear advocacy plan, including both collaborative advocacy (e.g., through UBCM resolutions and coordinated lobbying efforts with other local governments) and advocacy driven by the RDN.



8.4 Collaboration and Regional Participation

Implementation of each priority should be supported by an assessment for potential collaboration with, and active outreach to other jurisdictions, local NGOs, or potential industry partners. This often requires more advance planning and development of agreements but can deliver a better result than might be achieved individually. Directing staff across all departments to support collaborative efforts, including through project management with interdepartmental teams, can support this. Engaging with and supporting existing opportunities that move local government interests forward (e.g., VICC-CLP, Help Cities Lead), can help deliver more cost-effective solutions.



8.5 Interdepartmental Approach

All the RDN's major strategies and initiatives need to advance climate adaptation and mitigation. To ensure this is done efficiently across the RDN and different strategies are mutually supportive, the RDN should ensure staff from other departments, not just the lead department, are involved in strategy development. This reduces risk of siloed work and will better support an integrated approach to climate adaptation and mitigation across RDN services.



8.6 Reporting, Accountability, Adaptive Approaches

Regular, public-facing reports on progress should continue under the existing Monitoring and Reporting Framework. This includes budgeting for acquisition of baseline, trending and reporting data across the RDN and following a triple bottom line reporting approach where possible. Higher level reporting should continue to be supported by program level targets and reporting to track implementation within all RDN services. While mitigation targets are well-established, clear adaptation targets are not yet in place – these will strengthen our understanding of progress.

Reporting keeps the electorate informed of progress on climate adaptation and mitigation measures, enables them to see policy results in action, and provides the Board with readily accessible, replicable progress results. Action should not be delayed by a lack of data but adapted through the annual reporting process as data becomes available and external supports change.



9 Review Cycle

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In addition to annual public-facing reports, priority actions and recommendations should be reviewed every 5 years to ensure ongoing improvement of existing actions and development of new actions. This will allow for changes to prioritization as new information becomes available and external supports/risks change.

Appendix 1 — Relevant Climate Priorities from the Regional Growth Strategy

RGS	Description	Relevant CATAAC or RDN Corporate activities addressing this action
1.1	Adopt provincial targets to reduce Greenhouse Gas (GHG) emissions to 40% below 2007 levels by 2030 and net-zero emissions by 2050. Aim to exceed these targets to achieve net-zero emissions as soon as possible.	Targets included within CATAAC document
1.2	Encourage land use, infrastructure, and human settlement patterns that reduce fossil fuel and the associated emissions, create carbon storage opportunities, and improve connectivity.	Board policy for climate action will require zoning bylaw alignments
1.3	Support and advocate, where feasible and appropriate, local, energy recovery, renewable, and clean energy generation, storage, and transmission systems.	Buildings Priority and implementation of Net Zero Buildings and Localized Energy Generation
1.4	Promote best practices in the development and implementation of corporate actions to reduce fossil fuel use and the associated emissions from vehicle operations. Potential strategies include:	Recognition of Corporate Carbon Neutral Plan Implementation
	i. prioritizing fuel-efficient vehicle fleets or alternative modes of transportation in day-to-day operations;	In Corporate Carbon Neutral Plan
	ii. creating a ‘Green Fleet Strategy’ to schedule the turnover of internal combustion engine vehicles to zero emissions vehicles; and	In Corporate Carbon Neutral Plan
	iii. adding solar photovoltaic (PV) generation and electricity storage options for vehicles used in local government activities.	In Corporate Carbon Neutral Plan
1.5	Prepare for and respond to low and zero emissions technologies and other e-mobility infrastructure in collaboration with the province, member municipalities and adjacent regional districts, where possible and appropriate. Potential strategies include:	Climate Resilient Policy Priority
	i. participating in establishing a regional EV charging network;	Ongoing project to complete 2025
	ii. ensuring all new buildings are EV charging infrastructure ready, and;	Climate Resilient Policy Priority
	iii. developing a multi-unit residential building EV charging infrastructure retrofit strategy, and;	Not addressed
	iv. supporting other low-carbon mobility options and technologies as they emerge	Not addressed

RGS	Description	Relevant CATAAC or RDN Corporate activities addressing this action
1.6	<p>Ensure OCPs Bylaws recognize and support new buildings designed to be highly energy efficient and low-carbon emitting. Potential strategies include:</p> <ul style="list-style-type: none"> i. applying the BC Energy Step Code and any future iterations, ii. anticipating GHG performance standards in forthcoming iterations of the BC Building code, and; iii. looking for opportunities to implement sustainable building design, such as building-level solar PV generation. 	<p>Buildings priority, specifically implementation of Regional Strategy for Net Zero Buildings and Localized Energy Generation</p> <p>Buildings priority, specifically implementation of Regional Strategy for Net Zero Buildings and Localized Energy Generation</p> <p>Buildings priority, specifically implementation of Regional Strategy for Net Zero Buildings and Localized Energy Generation (Zero Carbon Step Code Regs)</p> <p>Buildings priority, including Regional Strategy for Net Zero Buildings and Localized Energy Generation</p>
1.7	<p>Ensure OCP Bylaws recognize and support updates to existing buildings to encourage high energy efficiency and low-carbon emissions by considering the following strategies:</p> <ul style="list-style-type: none"> i. coordinating the development and delivery of an energy efficiency retrofit program under which buildings are upgraded with improved envelope performance and efficient thermal energy systems ii. coordinating and promoting new and existing building energy efficiency incentive programs such as rebates or financing mechanisms (e.g., property-assessed clean energy – PACE). 	<p>Climate Resilient Policy Priority, Buildings Priority</p> <p>In place – continued support for the program expressed through Buildings Priority</p> <p>Underway and continued through Buildings priority</p>
1.8	<p>Ensure the region’s approach to waste management is optimized by exploring opportunities to share resources; respect the full lifecycle of materials; minimize greenhouse gas emissions associated with waste, and work towards diversion targets.</p>	<p>Solid Waste Management Plan implementation, including Zero Waste initiatives and emission reductions from landfill gas and haulage</p> <p>Buildings Priority work on embodied emissions</p>
1.9	<p>Maximize co-benefits by coordinating land use planning, future infrastructure investment efforts (including natural assets) to reduce the risk of climate change impacts, (i.e., such as wildfires, extreme weather events, flooding, coastal storm surge, erosion and sea level rise), and reduce costs.</p>	<p>Natural Asset Management Priority</p> <p>Climate Resilient Policy Priority</p> <p>Existing Sea Level Rise and Climate Adaptation Program</p>
1.10	<p>Collaborate in developing and sharing data and information on natural hazards, risks and vulnerabilities in the region, which may include hazard mapping and risk assessments; exploring mitigation options and priority action; developing and implementing strategies; and developing long-term funding mechanisms.</p>	<p>Updating Hazard Risk and Vulnerability Assessment (2025/2025)</p> <p>Climate Resilient Policy priority</p> <p>Wildfire Resilience priority</p> <p>Existing Sea Level Rise and Climate Adaptation Program, Rainwater Management Strategy</p>

RGS	Description	Relevant CATAAC or RDN Corporate activities addressing this action
1.11	Advocate for province and federal governments to improve legislation and guidelines on local flood hazard management, including flood design standards; acquiring and sharing new data and information and permanent funding for local and regional climate adaptation and resiliency planning.	Part of advocacy section for Climate Resilient Policy Priority, Wildfire Preparedness Priority General Advocacy
1.12	Work with property owners, businesses, the provincial government, and First Nation communities to improve and support the essential role of forests in the lives and economy of the region by:	Natural Asset Management Priority Water Resilience Priority Biodiversity Strategy development Parks and Trails Strategy Implementation
	i. supporting ecological diversity and a healthy natural environment;	All above
	ii. providing ecological services i.e., natural stormwater management, erosion reduction and water filtration;	Water Resilience Priority Natural Asset Management Priority Existing Sea Level Rise and Climate Adaptation Program Parks biodiversity strategy
	iii. storing carbon dioxide and moderating air temperature i.e., reducing the urban heat island effect,	Natural Asset Management Priority Water Resilience Priority Parks Acquisition Strategy
	iv. spiritual and cultural enrichment.	Natural Asset Management Priority Park Biodiversity Strategy Parks Acquisition Strategy
10.1	Improve safe and efficient access to basic utilities by determining if green infrastructure and emerging technologies can improve efficiencies and maximize future financial investments.	Natural assets Priority Water Resilience Priority
10.15	Support and promote energy-efficient subdivision, site, and building design and construction.	Buildings priority Climate Resilient Policy priority
10.16	Support and promote the use of clean energy technologies to support growth and development (e.g., district-energy systems, geo-thermal, solar, wind).	Buildings priority Climate Resilient Policy priority

Appendix 2 — Areas within and outside of RDN jurisdiction

Areas within RDN Jurisdiction	
<p>Building Inspection (electoral areas only) – ensures building code met by local developments, including energy efficiency and GHG limits</p>	<p>Solid Waste and Recycling – (electoral areas, some municipalities, landfill) policy development for waste minimization, waste collection, regional landfill operations</p>
<p>Bylaw Services – follows up and resolves bylaw complaints (electoral areas only)</p>	<p>Water and Wastewater – provides drinking water so small areas of RDN, manages sewerage and wastewater treatment plants, infrastructure for large parts of RDN</p>
<p>Current Planning (electoral areas only) – applies land use policy, manages shorter term policy (e.g., zoning bylaws, agricultural area plan development and implementation,</p>	<p>Drinking Water and Watershed Protection – watershed/natural asset-focused program supporting water stewardship, informed management of water resources, and water-centric policy (entire region)</p>
<p>Long Range Planning (electoral areas only) – develops and implements land use policy guiding long term growth (e.g., Official Community Plans)</p>	<p>Regional Transit (entire region) – transit services (regular and HandiDart) to entire Regional District, does not extend to any other form of transportation</p>
<p>Regional Growth Strategy (entire region) – provides high level guidance for regional development</p>	<p>Parks (regional parks, electoral areas, and specific areas) – management of parks, recreational trails, and infrastructure, parks planning including acquisition</p>
<p>Emergency Services (select areas) – emergency planning and response for rural areas of the RDN, new provincial responsibilities in development</p>	<p>Recreation (Oceanside, Electoral area A) – runs recreation facilities in Oceanside and supports recreation programming limited areas, sometimes active transportation planning</p>
<p>Fire Services (specific areas) – provides fire prevention and response services to areas that have requested services</p>	

Not in RDN Jurisdiction	Authority With Jurisdiction	Options for RDN
Land use planning in municipal areas	Managed by municipalities	Advocacy, reminders about RGS policy
Private Managed Forest Lands (most of RDN)	Mosaic, Provincial guidelines	Advocacy, relationship building
Building standards or enforcement in municipal areas	Managed by municipalities	Advocacy, collaboration, info sharing on policies, reminder about RGS policy
Water allocation and licensing (surface, groundwater)	Provincial	Advocacy
Water provision outside of the limited RDN water provision services	Municipal, Districts	Advocacy, relationships through DWWP
Environmental protection outside of RDN parks, provincially-mandated areas	Provincial, Federal, private landowners	Advocacy, strengthening of DPAs, Parks Acquisition, education/outreach
Transportation (other than transit)	Ministry of Transportation and Infrastructure; Municipalities	Advocacy, contribution to provincial initiatives, development of active transportation plans under parks/current planning (but generally can't implement)
Human health	Island Health	Supporting role only, participate in regional initiatives, advocacy
Economic Development	Province, Chambers of Commerce	Advocacy, support via other strategies where feasible (e.g. zero waste)
Social Planning (housing/homelessness, poverty reduction, child services, etc.)	Province, some municipalities	Advocacy only

Appendix 3

Status, Gap Analysis and Recommendations for Climate Action – Regional District of Nanaimo

This document summarizes current climate action within Regional District of Nanaimo services in response to key emission sources and important hazards that are expected to worsen with climate change. This document provides a snapshot of RDN context, current action, and gaps observed by the RDN’s Climate Action Technical Advisory Committee and RDN staff, and which informed the 2025-2029 Climate Action Technical Advisory Committee- recommended work program.

This document fulfills the CATAC Monitoring and Reporting Framework requirements for summarizing climate action across RDN services every three years.

1. Transportation

Transportation emissions are both the most significant source of emissions within the RDN and the most challenging to reduce. Complex factors including individual transportation choice, consumer preference for larger, inefficient vehicles, economic barriers to electric vehicle uptake, significant jurisdictional limitations, and a legacy of development centered on private vehicles make reducing transportation emissions a challenge for all local governments in Canada, but solutions are available.



Best practices for climate actions in the transportation sector include:

- Land use planning policy that supports active transportation and transit-focused growth (e.g. compact, complete communities)
- Ambitious investments in public transit and planning for multi-modal transportation
- Policy supports for zero emission vehicles (e.g., bylaws for EV-ready buildings)
- Incentive programs for e-mobility (e.g., e-bikes)
- Infrastructure planning for future conditions (e.g., park and facility designs that consider charging for ZEV, e-bikes etc.)
- Charging infrastructure installed at level needed to support ZEV adoption

1.1 RDN Context and Current Status

The RDN Board has identified a shift to sustainable transportation as one of two strategic areas for climate action, recognizing significant magnitude and ongoing growth of transportation emissions in the Region. While the RDN has no jurisdiction over roads or non-transit transportation planning, the RDN can influence change through its jurisdiction over land use planning and buildings in rural areas (focusing development in compact, complete communities within urban containment boundaries, EV-ready buildings), and its management of the regional transit system and trail network, with the following caveats:

- The RDN is dependent on the province to fund transit service expansions and electrification options. In general, funding has been less than what the RDN has requested and is insufficient to support the RDN's goals for system expansion and electrification.
- The RDN can only require EV-ready buildings in electoral areas, where most building forms are single family dwellings where installing EV-charging stations is fairly straightforward
- Active transportation planning is not allocated to a specific RDN service and lack of jurisdiction coupled with high costs creates significant challenges for implementing active transportation initiatives in rural areas, particularly next to active roads.

The RDN Board has identified a shift to sustainable transportation as one of two strategic areas for climate action. The RDN has supported more sustainable modes of transportation through diverse initiatives, including those outlined in Table 1.

TABLE 1. Current progress for reducing emissions from transportation

Goal	Action
Increase low carbon transit and multi-modal transportation	<ul style="list-style-type: none"> • Advocacy to province for bus fleet electrification (under way in near term) • Transit Redevelopment Plan to support service expansions and ongoing advocacy for fleet expansion • Transit planning for multi-modal transportation • Substantial expansion of transit service hours and routes • Ongoing advocacy to province for additional transit funding • Support for transit-oriented development in electoral areas (focusing development in growth containment boundaries)
Increase active transportation	<ul style="list-style-type: none"> • Approved Parks and Trails strategy with focus on active transportation • Active transportation plans completed for some electoral areas • Memorandum of understanding with MOTI specifically to address active transportation infrastructure in rural areas • Supportive land use policy statements in OCPs
Support low carbon transportation	<ul style="list-style-type: none"> • Mid-Island EV Charging Network (installing 28 new charging stations in under-served areas of mid-Vancouver Island) • Incentivization of home EV charging stations • Occasional public outreach on electric vehicles (webinars) • Seasonal go-by-bike programming via recreation services • Advocacy to province for regional transportation plan compatible with provincial climate change goals

1.2 Gaps

Current gaps in regional supports for more sustainable forms of transportation include:

- Lack of resources to focus on active transportation which is currently completed as a side-of desk activity
- Funding does not match RDN ambitions for transit service expansions
- Limited policy on supporting resident uptake of zero emission vehicles, including
 - provisions for EV-ready buildings to avoid future costs of retrofit
 - managing public charging on RDN property
 - clarification of RDN role in public EV charging infrastructure
- Need for update of subdivision servicing standards to meet current best practice and modern standards (e.g., Master Municipal Construction Document Association (MMCD) standards)
- Provincial rural road design/management are incompatible with active transportation and provincial objectives for transportation sector decarbonization

1.3 CATAC Recommendation

CATAC membership acknowledge the importance of reducing transportation emissions within the Regional District. As federal and provincial policies will help drive significant change in emissions over the next decade, CATAC recommends that the RDN focus on existing work within its own jurisdiction, strategic advocacy for effective provincial policy, and focused adjustment of relevant RDN policies under a Climate Resilient Policy priority (Section 6.2.5.4, page 31).

2 Reducing Solid Waste Emissions

Emissions from municipal solid waste are about 5% of regional emissions and vary with both levels of landfill gas recovery and volumes/composition of waste going to landfill. Waste flows and diversion rates are influenced by upstream packaging decisions (manufacturers), resident behaviour, and programs in place to make diversion easy for residents, among other things.



Best practices in reducing emissions from solid waste include:

- Establishing and achieving ambitious solid waste diversion targets
- Providing community organics and recyclables programs
- Implementing policies to drive waste diversion from all sectors, including residential, commercial, and institutional
- Focused education and outreach to promote awareness, behaviour change, and community mobilization
- Programs to support circularity, consideration of total lifecycle impacts
- Effective collection and use of landfill gas

2.1 RDN Context and Current Status

The RDN has taken aggressive action to minimize emissions from solid waste through its industry-leading Solid Waste Management Plan (Table 2).

TABLE 2. Current initiatives for reducing emissions from solid waste in the Regional District of Nanaimo

Area	Description
Waste Diversion Targets	<ul style="list-style-type: none"> Adopting some of the highest waste diversion targets in North America Achieving some of the highest waste diversion rates in North America
Diversion programs	<ul style="list-style-type: none"> Implementation of community-wide organics recycling, including expansion to yard waste collection
Policy Development	<ul style="list-style-type: none"> Successfully advocating to province for new jurisdiction to regulate waste from previously unregulated sectors, including commercial and institutional sources
Zero Waste, Circular Economy and Community Mobilization	<ul style="list-style-type: none"> Annual funding of \$300,000 to local organisations advancing zero-waste initiatives Annual school programming to build awareness of waste diversion methods Well-resourced community campaigns to improve awareness and connect residents with resources
Landfill management	<ul style="list-style-type: none"> Strategic planning and innovation to maximize landfill lifetime and landfill gas reclamation (e.g., improving compaction rates, evaluating optimal use of landfill gas)

2.2 Gaps

The RDN's Solid Waste Management Plan is ambitious and progressive with minimal gaps. Opportunities lie primarily within operations, including potential to explore options for decarbonizing waste haulage, and ongoing optimization of the landfill gas collection system however these are likely best addressed internally through the landfill management plan and implementation of the RDN's Corporate Carbon Neutral 2023 Plan, respectively.

2.3 CATAC Recommendation

CATAC acknowledges the Solid Waste Management Plan implementation, including Zero Waste initiatives, as a key existing priority for ongoing emission reductions within the RDN. Status of initiatives to address emissions from waste haulage and landfill gas management should be included in progress reporting to CATAC.

2.4 Buildings Sector

Buildings both contribute to climate change and play a pivotal role in how well we adapt to climate change. Strategies must encompass both new and existing buildings and concurrently address equity, climate adaptation, and reduction of both operational and embodied emissions. As buildings are long-lived, activities must address the 50 to 80% of existing building stock that will be standing in 2050, and, as much as possible ensure that new buildings do not further contribute to climate change or associated vulnerabilities. Those that do are likely to need future retrofit, which comes at a significant future cost to society.

Buildings will need to adapt to the evolving risk presented by climate change, specifically risk of increased wildfire, including infiltration of wildfire smoke, overheating, extreme weather, flooding and drought. This is particularly true for older buildings. Fortunately, many of the actions required to mitigate emissions from buildings also improve adaptation to the expected effects of climate change in our area.



Best practices for climate actions in the Buildings sector include:

- improving energy efficiency to reduce demand on the electricity grid and protect consumers from energy price fluctuations (e.g. BC Energy Step Code, Climate Adaptive home retrofits)
- decarbonizing home energy sources, specifically moving from fossil fuel sources to efficient electric heating (electric heat pumps) can reduce home heating emissions by over 90%, including through regulation (e.g., Zero Carbon Step Code)
- decarbonizing home building materials to address embodied emissions
- improving climate adaptation of homes by increasing their resilience to wildfire (fire and smoke infiltration), extreme weather (heat/cool) and wind damage
- concurrently addressing equity including affordability, access to climate-adapted homes, and protection from energy poverty
- building local capacity through outreach and education to residents, builders, and supporting industries

2.5 Context and Current Status

The RDN has regulatory control over new buildings within the Electoral Areas and can implement regulations that rapidly decarbonize new buildings (BC Zero Carbon Step Code) and improve their energy efficiency (BC Energy Step Code). In contrast, the RDN can only influence building retrofits, using strategic interventions and supportive policies that help building owners take action.

The RDN has supported residents building new sustainable homes or completing retrofits since 2012, and it increased supports for retrofits through the 2022-2024 CATAC priority on accelerating climate adapted home retrofits. This work introduced a retrofit concierge service to support residents with non-financial barriers to retrofit, increased rebate values for decarbonization of heating systems, and evaluated options for helping connect residents with retrofit financing. This work has significant momentum.

For new buildings, the Regional District has evaluated regulatory options under the BC Energy Step Code and the Zero Carbon Step Code. Both are policies available to local governments in BC and which the RDN could implement for new buildings in electoral areas. Policy analyses recommended adopting the highest level (EL-4) of the Zero Carbon Step Code in January of 2025, and uptake of the highest level of the BC Energy Step Code by 1 January 2027, for both Part 3 (larger buildings) and Part 9 (single family, smaller multi-family buildings).

Zero Carbon Step Code adoption will nearly eliminate emissions from new buildings and avoid high future cost of retrofits for residents. While the timeline for Zero Carbon Step Code can be implemented with known technologies and minimal impacts to cost, accelerated uptake of the BC Energy Step Code presents greater risk of unanticipated cost implications and unreadiness of the local building industry.

Progress on advancing low carbon, climate adaptive buildings is outlined in Table 3.

TABLE 3. Current progress on low carbon, climate-adapted buildings

Area	Current Activity
Existing Buildings	<ul style="list-style-type: none"> • Regional retrofit concierge program (Home Energy Navigator) helps residents overcome non-financial barriers to home retrofits (e.g., retrofit selection, connecting with contractors etc.) • Existing and new incentives for home retrofits (heat pumps, home energy assessments) with an increased budget for electoral area residents • Outreach and awareness-building through workshops, webinars, social media, and school programming to connect residents with knowledge and resources supporting climate-adaptive home retrofits • Development of local climate action volunteer programming, including for home retrofits • Examining alternative community financing options for retrofits including property assessed clean energy (PACE) • Supporting industry training in net zero renovation techniques to reduce risk for residents and improve uptake of deep energy retrofits • Development of mobile-home focused resources for retrofit and electrification (in progress)
New Buildings	<ul style="list-style-type: none"> • Outreach, education, and small incentives to support uptake of more sustainable building practices in new homes • Training programs for high performance building and resident awareness of benefits • Public webinars, workshops on sustainable building, and tours of climate-friendly homes • Initial work on Regional Strategy for Net Zero Buildings and Localized Energy Generation, including policy analysis of regulatory options under the BC Energy Step Code and Zero Carbon Step Code • 2012 bylaw review and update to remove barriers to sustainable building and renewable energy • Publication and promotion of resources on rainwater harvesting, renewable energy, and sustainable site design

2.6 Existing Gaps

- The RDN is currently not exercising the option to limit fossil fuel heating or require higher levels of efficiency in new buildings within electoral areas, as available under the Zero Carbon Step Code and BC Energy Step Code.
- Retrofit supports are not included in any other work plans/strategies beyond 2024 and progress made under the 2022-2024 CATAC work program is at risk
- Limited outreach/support for retrofit of commercial buildings or embodied emissions
- Metrics to gauge program success need improvement – particularly for Home Energy Navigator

2.7 CATAC Recommendation and Priority Description

CATAC recommends prioritizing work to reduce emissions and improve adaptation of the built environment (both new and existing buildings).

2.7.1 PRIORITY DESCRIPTION

Accelerate uptake of new and existing buildings that are low emissions and adapted to the anticipated effects of climate change for our area. For new buildings this means continuing work on the Regional Strategy for Net Zero Buildings and Localized Energy Generation, including implementation of effective regulations to reduce emissions (specifically Zero Carbon Step Code) and supports for improving energy efficiency and climate-adaptive building approaches (e.g., builder education, resident awareness). For existing buildings this means continuing work on community efficiency financing, improving complementary supports for homeowners (concierge service, outreach, rebates), and evaluating these programs on a routine basis to ensure they are meeting objectives. This work should integrate with priorities to manage risk in high-hazard areas (e.g., Climate Resilient Policy work) to ensure a holistic approach to managing climate risk in the built environment.

2.7.1.1. Evaluation criteria — new buildings

Criterion	Score	Rationale
Jurisdiction	High	Directly within RDN jurisdiction, existing legislation means we can regulate carbon and energy efficiency in new buildings
Near term implementation?	High	Can be implemented within 6 months, most work completed under Regional Strategy for Net Zero Buildings and Localized Energy Generation. Low carbon – good industry feasibility, energy efficiency -medium industry feasibility
Equitable	High	Benefits are highest for building types more likely to be used as rentals, utility bill savings, regulation makes available to anyone occupying a new home, not just custom builds
Co-Benefits	Medium	Climate resilience (cooling, buffering, wildfire smoke incursion), reduced materials due to improved building longevity
Cost per GHG	Medium	Limited cost to local government, Zero Carbon Step Code negligible or cost savings with GHG reductions, significant savings from avoided costs of future retrofit. Energy Step Code

2.7.1.1. Evaluation criteria — new buildings — *Continued*

Criterion	Score	Rationale
Builds on CATAC work	Medium	CATAC (2021) identified Regional Strategy for Net Zero Buildings and Localized Energy Generation, and work on BC Energy Step Code as important work for climate
Magnitude of GHG savings	Medium	Modest savings if provincial keeps to their policy timeline, more significant savings if provincial policy not implemented.
Feasibility	Med/High	Medium for energy efficiency, high for decarbonizing home energy systems with Zero Carbon Step Code. Significant local government adoption on Zero Carbon Step Code, including within RDN. Supportive community of practice and model bylaws.
Consequence of inaction within next 5 years	Medium	Missed opportunity for emission reductions by not implementing Zero Carbon Step Code. Limited consequence for not implementing BC Energy Step Code. Dependency on provincial timelines/political inclinations. Residents exposed to high cost of retrofits and poorer economic outcomes.

2.7.1.2. Evaluation criteria — existing buildings

Criterion	Score	Rationale
Jurisdiction	Low	RDN supports through encouragement, advocacy, incentives; only successful if strong provincial, federal supports continue
Near term implementation?	High	Significant momentum from existing work allows rapid implementation
Equitable	High	Properly designed, benefits can accrue to equity-seeking populations, RDN is increasing capacity for equitable programming
Co-Benefits	Medium	Climate resilience (cooling, buffering, wildfire smoke incursion), health benefits, local economy
Cost per GHG	Low/Med	Costs more favourable if focusing on fossil fuel system conversions, higher cost per GHG for systems that are already electric
Builds on CATAC work	High	Continues work on previous priority (Accelerating uptake of climate-adapted retrofits)
Magnitude of GHG savings	Medium	High magnitude if critical mass achieved through combination of provincial, federal and RDN efforts. RDN efforts will not be effective on their own.
Feasibility	Med/High	Strong potential for success, existing programs in place and underway. Compatible with Provincial CleanBC Plan and Federal policy directions. Very good funding available through FCM if applied for by 2026 and funding unlikely to continue beyond this point.
Consequence of inaction within next 5 years	Medium	Pace of retrofits would slow somewhat each year. RDN may miss out on grant funding for existing programs (Home Energy Navigator), RDN residents have fewer options than residents in neighbouring jurisdictions. Existing provincial programs will continue to provide some funding.

3 Adapting for a new normal

Adaptation work at the RDN has focused primarily on the top climate-mediated risks within the RDN, including overland flooding events and coastal inundation, drought and its effect on water quality/quantity, landslides/geohazards, and fire risk. Significant effort has also been invested in preparing for coastal inundation, as though that risk is farther off, it requires early planning to minimize economic impacts and develop effective policy. Effective adaptation to all evolving hazards requires coordinated action across RDN service areas, which is reflected in current collaborative approaches.

3.1 Rainwater Management, Flooding and Coastal Inundation

Coastal and riverine flood risk are both expected to increase with climate change in our area due to increased frequency and magnitude of rainfall. Due to potential property impacts, policy solutions require long term advance planning, based on reliable risk characterization.



Best Practices Include:

- protecting natural areas that absorb and receive and absorb rainwater (forests/trees, wetlands, lakes, natural flood plains, soils),
- maintaining and enhancing rainwater absorption in built-up areas (e.g., through water-centric design)
- ensuring that RDN infrastructure is designed for both the surface runoff expected under climate change and potential risk of future inundation (design for future climate risk)
- identifying areas at risk of flooding and inundation under current and future conditions and managing development in those areas to reduce impacts to people, property, economy and ecosystems
- mobilizing resident action through outreach, awareness-building and focused supports

3.1.1 CURRENT STATUS

The RDN has a comprehensive approach for adapting to increased risk of flood events and more long-term coastal inundation, supported by work across multiple departments and through multiple strategies and work plans. This work, described in Table 4 addresses the best practice areas above.

TABLE 4. Adaptation actions completed or under way for rainwater management, overland flooding and coastal inundation

Program/Tool	Actions
Foundational information	<ul style="list-style-type: none"> Regionally downscaled climate projections completed for the RDN to understand future precipitation patterns Hazard Risk and Vulnerability Assessment (HRVA) completed but does not include equity or climate risk (scheduled for update 2025/2026)
Land use planning	<ul style="list-style-type: none"> coastal flood hazard modeling and mapping (complete), including creation of a coastal atlas river flood hazard modeling, mapping, and preliminary risk analysis (complete) to identify flood plain areas and characterize flood risk update of land use policy (Regional Growth Strategy and Official Community Plans) to incorporate risks Flood Hazard Mitigation Bylaw update and proposed coastal development permit areas to manage development risk exposure in high-risk areas (pending bylaw adoption) Climate risk assessment for coastal floodplain to understand how climate impacts may affect coastal floodplains (underway) Interdepartmental working group to support implementation (GIS, LRP, Emergency Services, Water Services) Sea Level Rise and Climate Adaptation Program Phase 2, including: <ul style="list-style-type: none"> Technical studies: to characterize and prioritize risk to buildings, infrastructure and people located in the coastal floodplain under present day and future climate conditions Coordination Framework: to be co-developed with member municipalities, local First Nations and others to help guide and support implementation. Coastal Climate Resilience Strategy: to identify mitigation options and community values for practical and meaningful actions to reduce flood risks influenced by a changing climate; and Community-based Incentive: to explore options to incentivize property owners to minimize impact of new development on coastal areas.
Infrastructure adaptation	<ul style="list-style-type: none"> RDN water and sewer services have inundation risk mapping for southern infrastructure that guides update and design of facilities Climate risk assessment and planning for critical infrastructure like water and sewer services (under way) Starting integration of climate risk into asset management plans
Public outreach and watershed management (Drinking Water and Watershed Protection Program -DWWP)	<ul style="list-style-type: none"> Watershed level stewardship to protect freshwater resources, including from existing functions Public outreach for practices that limit water runoff like limiting impervious surfaces, rain gardens, topsoil conservation, and rainwater collection, supported by incentives Data-driven initiatives to map wetlands and other areas important for flood mitigation

TABLE 4. Adaptation actions completed or under way for rainwater management, overland flooding and coastal inundation— *Continued*

Program/Tool	Actions
Regional Strategy for Rainwater Management (delivered by DWWP)	<ul style="list-style-type: none"> • Strategy to reduce overland runoff of rainwater and mitigate impacts of extreme rainfall events on local infrastructure, including: <ul style="list-style-type: none"> • Framework for collaboration across jurisdictions: RDN, municipal, Ministry of Transportation and Infrastructure (province), private forestry, stewardship groups and residents, among others • Foundational studies to help establish watershed performance targets and associated implementation tools i.e. policy changes, standardization of requirements, education, incentives etc. • Pilot implementation of studies • The plan is not fully resourced – completion of Funding Options Assessment, may determine how much of the plan is implemented.
Natural Assets initiative (CATAC)	<ul style="list-style-type: none"> • Framework supporting future identification and management of green infrastructure to moderate overland flooding • Interdepartmental working group to advise on implementation
Capacity building (Parks)	<ul style="list-style-type: none"> • Sponsoring Greenshores training for local staff and community partners
Emergency Preparedness and Response	<ul style="list-style-type: none"> • Emergency preparedness and response in place for flood and storm surge events

3.1.2 GAPS

The RDN’s approach to managing risk from flooding and coastal inundation is comprehensive, and already included in work plans for DWWP, Liquid Waste, Long Range Planning, Parks, and Emergency Services for 2025-2029. One area that is not addressed is advocacy to the province to either take back responsibilities for flood management infrastructure, or to provide appropriate levels of funding. Work on Natural Assets will not likely continue in a comprehensive way unless the CATAC priority for Natural Assets is implemented.

3.1.3 CATAC RECOMMENDATION

CATAC acknowledges the following programs addressing flooding and coastal inundation as ‘key existing programs critical to regional resilience’ and should receive updates on their implementation. Equity and associated adaptation targets (short term and long term) should be established and included in progress reporting for these initiatives:

- Sea Level Rise and Climate Adaptation Program
- Implementation of Regional Strategy for Rainwater Management
- Update of HRVA to integrate equity and climate risk (mandated by province)
- Climate risk assessment of RDN critical assets (mandated by province)
- Drinking Water and Watershed Protection program and action plan activities

3.2 Landslides/geohazards

Increased frequency and intensity of extreme weather events can affect terrain stability (e.g., increased landslide risk following drought, forest fires, or during extreme rainfall). This can increase risk for properties constructed on steep slopes and certain types of terrain, and those located nearby.

3.2.1 CURRENT ACTIVITIES

To respond to this evolving risk, the RDN has initiated geohazard risk prioritization work to identify areas with steep slope geohazards that may impact developed properties and development potential. This information will be brought into development controls where warranted and is identified in both the existing Coastal Adaptation Strategy work plan and the Climate Resilient Policy Priority (Section 9.2).

3.2.2 GAPS

This work is already part of climate risk mitigation through the land use policy work plan and Coastal Adaptation Strategy work plan. Results would also inform work (including outreach) on compounded risks under the Building Wildfire Resilience priority (Section 8.3). As with other adaptation work, equity considerations could be strengthened, including through establishment of equity-centered targets. No other high consequence gaps have been identified for this work.

3.2.3 CATAC RECOMMENDATION

Existing work on geohazards is recognized as a 'key existing program critical to regional resilience' and implementation updates should be included in annual reporting to CATAC. Geohazards work should support Building Wildfire Resilience priority (see Section 8.3) and other relevant adaptation work. As with other adaptation measures, equity impacts and targets should be tracked and reported.

3.3 Building Wildfire Resilience

Wildfire is the number one hazard for the RDN based on the RDN's 2019 Hazard Risk and Vulnerability Assessment (HRVA). Climate projections for the RDN suggest an increasing risk of high temperatures and limited rainfall, which are in turn likely to increase future risk of wildfire. Population growth in rural areas and changing fire dynamics are expected to further increase future wildfire risk and impact.

The RDN is responsible for responding to fire hazards and supporting response. It can draw on provincial resources if local resources are inadequate.



Best practices for wildfire adaptation include:

- Identifying high risk areas and understanding how those change over time (e.g., urban wildfire interface mapping)
- Building homes that are more resilient to fire risk (e.g., designed using FireSmart Principles or other principles appropriate local fire dynamics)
- Landscaping that balances fire risk with other benefits (e.g., shading, water retention)
- Ensuring response capability is suitable for evolving level of risk
- Ensuring response planning addresses equity and vulnerable populations

3.3.1 CONTEXT AND CURRENT ACTION

Wildfire is the number one hazard for the RDN based on the RDN's 2019 Hazard Risk and Vulnerability Assessment (HRVA). Climate projections for the RDN suggest an increasing risk of high temperatures and limited rainfall, which are in turn likely to increase future risk of wildfire. Population growth in rural areas and changing fire dynamics are expected to further increase future wildfire risk and impact.

While Crown land fire response is typically the responsibility of the BC Wildfire Service (BCWS), RDN-funded fire departments (6) have responsibilities to prepare for and respond to wildfires within their assigned Fire Protection Areas (FPA). The RDN's Emergency Management Service also builds resident capacity for wildfire preparedness through FireSmart Programming, which empowers residents to manage wildfire risk around their properties.

The RDN currently relies on provincial fire risk maps for programming, but these exclude private managed forest lands (63% of RDN land base) and give an incomplete understanding of our region's fire risk. The RDN currently lacks a land use planning approach to reducing wildfire risk (e.g., Wildfire/ Wildland-urban interface development permit area), and the underlying accurate wildfire risk data that would determine a need for these development controls.

The RDN also currently lacks information on areas where wildfire might trigger other emergency events like slope instability, debris flow events, flooding, and severe impacts to water quality, and there is likely limited resident awareness around these potentially compounding risks.

To address wildfire risk, the RDN runs prevention, preparedness, and response programming outlined in Table 5. The RDN can draw on provincial fire response resources should local resources be inadequate.

TABLE 5. Current Activities to address Wildfire Risk

Area	Actions
Prevention	<ul style="list-style-type: none"> • Advocating to province for updated community wildfire risk maps to guide policy development • Firesmart Programming for homeowners and landowners and outreach via FireSmart Coordinator • Scoping development of wildfire strategy for RDN Park areas, intent to integrate wildfire into park management plans where not already integrated. • Standardized messaging for development referrals including FireSmart principles and ensuring design allows fire response access
Preparedness	<ul style="list-style-type: none"> • Outreach to increase resident awareness of wildfire risk and methods of reducing that risk (e.g. FireSmart programming) • Evacuation route planning • Supporting RDN fire departments with appropriate training and equipment • Building structural protection unit trailer (protects houses from wildfire)
Response	<ul style="list-style-type: none"> • Increased Staffing to allow more effective response • Assessment of new responsibilities allocated by province

3.3.2 GAPS

- FireSmart programming and community outreach work contingent on provincial grant funding
- The RDN does not have a good understanding of fire risk as provincial fire risk maps exclude the majority of RDN land base.
 - challenging to understand fire risk in areas on and adjacent to these unassessed lands, and to make sure response capacity is adequate for that level of risk.
 - understanding this risk is becoming increasingly important for the RDN as recent fire events suggest that fire behaviour is changing for our area, a trend that is likely to increase as climate change progresses.
 - Accurate risk assessment data is needed to ensure Community Wildfire Response Plans (CWRPs) are appropriate, and for assessing need/design of development controls to mitigate wildfire risk (e.g., Wildfire/Wildland-Urban Interface Development Permit Area)
- Potential for combining outreach with RDN Climate Resilient Homes programming not realized due to limited staff capacity
- The RDN currently lacks a land use planning approach to reducing wildfire risk (e.g., Wildfire/Wildland-urban interface development permit area), and the underlying accurate wildfire risk data that would determine a need for these development controls
- The RDN currently lacks information on areas where wildfire might trigger other emergency events like slope instability, debris flow events, flooding, and severe impacts to water quality, and there is likely limited resident awareness around these potentially compounding risks.

3.3.3 CATAAC RECOMMENDATION AND PRIORITY DESCRIPTION

CATAAC recommends that the RDN prioritize work to improve Wildfire Resilience across the region, including investment in data, risk characterization, planning and outreach.

3.3.3.1 Priority Statement

Improve regional wildfire resilience with accurate characterization and mapping of current and future wildfire risk and potential compounded risks (slope instability, debris flow etc.), assessment and implementation of appropriate development controls, and effective, equitable supports that build resident awareness and capacity. This priority will help the Regional District of Nanaimo better understand regional wildfire risk and implement adaptation approaches in line with that risk.

3.3.3.2 Evaluation Criteria

Criterion	Score	Rationale
Jurisdiction	Mixed	RDN has responsibilities for Fire services in parts of the RDN but is in dependent on province for fire risk information
Near term implementation?	High	Can be implemented quickly if resources in place, however acquisition of data governed by 3 rd parties and their schedule.
Equitable	Medium	If planning integrates vulnerable populations then this action can be equitable
Co-Benefits	Medium	Can lead to improved protection of natural areas, human wellbeing, reduced economic impacts but indirectly
Cost per GHG	Medium	Depends on extent of wildfire avoided
Builds on CATAC work	Low	No previous CATAC work on fire risk reduction, but complements natural asset work
Magnitude of GHG savings	Medium	Potential for high GHG savings over long term if significant reduction in large wildfire events. Otherwise focus is on adaptation.
Adaptation Value	Medium	Cost of an interface fires and infrastructure damage from compounded risks is high compared to the costs of risk reduction measures.
Feasibility	Medium	Advocacy efforts feasible, efforts to acquire risk maps independently need more scoping to address feasibility. High feasibility of evaluating and implementing Wildland/Urban interface development controls.
Consequence of inaction within next 5 years	Medium	Firesmart program would continue, RDN would operate as best possible with potentially inaccurate risk data. Compounded risk areas would not be identified and may leave some RDN residents, assets and emergency service response with higher risk exposure.

3.4 Managing Drought

Drought is one of the most significant hazards for the RDN based on the RDN's 2019 Hazard Risk and Vulnerability Assessment (HRVA) and it is likely that we will experience more severe and extended droughts as climate change progresses. As our climate changes, precipitation patterns will also change for our area, with increased winter precipitation and decreased summer precipitation, coupled with increased evaporation (water loss) in the summer months. This increases the risk of both drought and flood events, which have significant impacts on local economy, agriculture, resident wellbeing, and the health of local ecosystems. In general, there is uncertainty around impacts to groundwater recharge, surface water flow and its timing, seasonal snow storage, and changes to water quality. Taking adaptive, precautionary approaches can help manage this uncertain risk.

These climate-related risks compound with the growth-related risks of increased water demand, conversion of natural areas to built-up areas, and encroachment on natural systems that degrade ecosystem functions like water flow regulation, water quality maintenance, and aquifer recharge/storage.



Best practices include:

- Managing at a watershed level, using adaptive, precautionary approaches
- Investing in data and research required to understand how local water supplies will respond to climatic change and growth/use patterns (e.g., water budget development), and implications for residents, economy and ecosystems
- Building effective stakeholder relationships where complex jurisdiction exists
- Prioritizing protection and restoration of natural ecosystems that maintain and protect local hydrological patterns
- Implementing effective policy to ensure land use planning aligns with current and future water resources
- Mobilizing residents through effective awareness and education and supporting action through strategic policy and incentives

3.4.1 CONTEXT AND CURRENT ACTION

Ensuring water resilience in the context of drought is a responsibility shared by the Province, the RDN, member municipalities, all water providers, and all residents and businesses. Considering this jurisdictional complexity, the RDN has taken a proactive approach, implementing a leading-edge program to ensure we have accurate information to build water-centric land use planning policy, and public awareness to support those policies.

This work is delivered through the RDN's Drinking Water and Watershed Protection Program and guided by its current action plan and technical advisory committee. The program effects change through education, data-driven policy development (e.g., land use planning, water conservation), sharing and demonstrating best practice, and building strong relationships with others involved in water management. It actively improves our understanding of how climate change will impact our water resources and effectively implements relevant adaptation measures.

To complement the DWWP work, the RDN's CATAC 2022-2024 priority on Water Resilience focused on improving our understanding of water supply resilience in the RDN. The priority was to ensure that climate change was integrated into supply planning in RDN water services, and to identify areas where conservation and distributed storage (e.g. rain barrels, aquifers) may not be adequate for meeting future water demands under climate change. Despite strong stakeholder relationships, work on this priority was challenged by the significant complexity of water supply jurisdiction in our area.

TABLE 6: Current activities to manage drought

Action Area	Description and Actions
DWWP Action Plan 2020-2030	<p>Comprehensive long-term plan supports the development of water-centric, evidence-based land use planning across the RDN, and the public/political awareness that leads to support for water-centric planning and behaviour change for water conservation, protection, and ecosystem stewardship.</p> <p>This includes:</p> <ul style="list-style-type: none"> • Water data collection, monitoring and reporting to understand trends and relationships • Technical analysis and modelling to understand water dynamics in our area and inform policy development • Policy advocacy and planning decision support, including water-centered land use planning to protect important natural assets, and establish water conservation practices • Public awareness and education and incentive/rebate programs around the importance of our water resources, and how residents can protect them
Water Supply Services	<p>The RDN provides water supply services to some RDN residents, through several small water supply services. Adaptation work under these water supply services includes:</p> <ul style="list-style-type: none"> • Development of formal asset management plans, including consideration of climate. • Implementing the recommendations from the ‘Best Practices in Climate-Informed Water Supply Planning, as appropriate to the size of service. • Working with other water service providers to coordinate regional water conservation (e.g., watering restrictions) and in developing and implementing best practices.
CATAC 2022-2024 Work Plan Priority “Water Resilience Supported by Natural Asset Management”	<p>This priority focused on understanding how well climate change was being integrated into regional supply planning, addressing identified gaps, public communication of findings, and identifying areas in the RDN where water conservation and natural distributed storage were unlikely to meet future needs. Work completed includes:</p> <ul style="list-style-type: none"> • Establishment of best practices in climate-informed water supply planning • Understanding how area water suppliers are integrating climate change into supply planning, including key issues, and needed supports. • For RDN-run water services – identifying changes to supply planning to align with best practices for supply size and risk • Developing outreach materials to improve public awareness around how the RDN is preparing for climate change in the context of water supply <p>Pending Work:</p> <ol style="list-style-type: none"> i. identifying areas of the RDN where, under projected climate change and growth, water conservation and distributed storage approaches may be inadequate for meeting remaining water demand. ii. Developing long term plans for where additional water sources (specifically, impoundment or other forms of storage) may be needed

3.4.2 GAPS

The DWWP program is a leading-edge program and there are limited gaps in its management of water-related climate risks. These gaps are primarily related to the program meeting maximum capacity with existing resources, and the desire to avoid further tax requisitions. These challenges include:

- limited ability to expand water data collection needed to inform policy development and decision-making.
- ensuring water servicing and demand are addressed concurrently with new provincial housing mandates (Bill 44)
- ensuring that diverse priorities, including protection of key natural assets (e.g., aquifer recharge zones, flood-mitigation lands) are included in RDN land acquisition initiatives.
- work from original CATAC Priority on water resilience and scheduled for 2025 is challenging due to jurisdictional complexity

3.4.3 CATAC RECOMMENDATION AND PRIORITY DESCRIPTION

3.4.3.1 Priority Statement

CATAC recommends prioritizing work to better understand how climate change, population growth, and water use are likely to impact local water resources and regional water security. This means working towards a regional understanding of impacts to shared water sources and sharing information so that growth can be directed into areas with appropriate water resources, or areas of additional water storage can be built. It also includes testing best practices that can be shared with other areas (e.g., updating water budgets with revised climate and growth projections) and supporting improved data collection across the region.

3.4.3.2 Evaluation Criteria

Criterion	Score	Rationale
Jurisdiction	Medium	The RDN has jurisdiction to complete this work and can apply in its own areas. Cannot apply outside own areas.
Near term implementation?	Medium	This work can be implemented in the near term with current staff resources but may require additional funding
Equitable	High	Supports long term protection of critical public resource
Co-Benefits	Medium	Supports longer term sustainable growth patterns
Cost per GHG	N/A	N/A
Builds on CATAC work	High	Builds directly on previous CATAC work
Magnitude of GHG savings	N/A	Does not directly contribute to greenhouse gas savings

3.4.3.2 Evaluation Criteria — *Continued*

Criterion	Score	Rationale
Adaptation value	Medium	Impacts long term adaptation of critical assets in focused areas of the RDN, if results influence policy.
Feasibility	Medium	Scope for water-centric growth is generally feasible for the two RDN services, with some potential political challenges. Significant feasibility issues in extending to regional analysis. It is unlikely that grant funding exists for this work. Growing provincial interest in this type of work and general policy alignment. Key question for numerous local governments balancing population growth, provincial housing policy, and impacts of climate change
Consequence of inaction within next 5 years	Low	Generally monitoring data will still be able to provide insight into aquifer health, and we can proceed with narrower scope that looks just at water service area without water budget reviews. We would have more limited insight into consequence of growth on water services.

4 Cross-cutting solutions

This section highlights approaches and solutions that can have positive impacts across multiple areas, for both emission reductions and adaptation. These approaches are often integrated across departments and support multiple risk management and emission mitigation objectives through the establishment of corporate-wide practices.

4.1 Advancing Natural Asset Management

Natural asset management ensures that the services provided by natural ecosystems, organisms and landscapes are recognized, valued, and protected, through formal integration into asset management practices. This increase the likelihood that these systems will be invested in and protected and can continue to provide critical services and benefits, avoiding the cost of replicating these services through engineered approaches (e.g., water treatment plants, impounded storage). Natural asset management is a key example of a climate resilient approach that enhances both adaptive capacity and landscape carbon sequestration (mitigation).

Because many climate hazards result of altered natural processes, investment in natural assets often reduce risks from multiple hazards. For example, functional forest ecosystems moderate local temperatures, protect from severe winds, better absorb rainfall, retain soils on steep slopes to reduce landslide risk, and affect both water quality and quantity. This in turn reduces infrastructure costs and risks for RDN residents.

4.1.1 CONTEXT AND CURRENT STATE

The Regional District has mixed authority to deliver natural asset work, with direct influence over natural assets on its owned property and in some development permit areas, but little influence in areas outside its jurisdiction (e.g., private managed forest land). However, the RDN can take a proactive approach that makes progress within its jurisdiction while encouraging improved practices on private lands.

Multiple departments are involved in the delivery of natural asset management at the RDN, specifically Drinking Water and Watershed Protection (DWWP), Parks, and Long Range Planning, Energy and Sustainability (LRPES).

- DWWP is founded on principles of natural asset management and protecting ecosystem services that deliver clean drinking water and natural flood hazard mitigation
- RDN Parks manages the RDN’s natural lands for long term sustainability and protection
- CATAC work program on water resilience supported by natural asset management has started formal integration of natural asset work across the RDN, supporting formalization of natural asset management within RDN services. This work is summarized in Table 7.

TABLE 7. Current progress on formalizing natural asset management

Program area	Actions
DWWP Action Plan	<ul style="list-style-type: none"> • Millstone River Ecological Accounting Process to understand possible base valuation approaches for natural assets, and appropriate levels of investment/protection • Ecological accounting process collaboration with Mount Arrowsmith Biosphere Reserve • Rainwater management plan – integration of landscapes for rainwater management and flood mitigation • Wetland and waterbody mapping and condition assessment to guide restoration initiatives • Ongoing stewardship initiatives to protect and enhance ecological services • Ongoing monitoring to support condition assessment of water resources (aquifers, streams etc.) and function of ecosystem services
Parks	<ul style="list-style-type: none"> • Park management plans consider both user experience and natural attributes • Development of Park Acquisition Strategy (pending) • Development of Biodiversity Strategy (pending) • Manages existing natural areas under direct RDN ownership
Long Range Planning, Energy and Sustainability	<ul style="list-style-type: none"> • Implementation of CATAC priority on Natural Assets <ul style="list-style-type: none"> • High level natural assets inventory, condition, and risk assessment (desktop only, not ground-truthed) • Road map completed to identify general priorities/next steps • High level identification of key natural asset types and high level risk assessment of those asset types • Running scenarios of key natural asset loss to draw out value, impacts and cost of replacement • Complementary work on CATAC Priority 2 (Land Use Policy) <ul style="list-style-type: none"> • Draft development permit areas (DPA) to provide extra protections for aquifers, forested areas, and other key natural assets

4.1.2 GAPS

- No formal supports in place for natural asset work past 2024, current advancements on natural assets are at risk
- Work to date has not provided many opportunities for incorporating equity, but more opportunities will be available if work progresses.

4.1.3 CATAC RECOMMENDATION AND PRIORITY DESCRIPTION

CATAC recommends that the RDN prioritize natural asset management within RDN services to ensure underlying ecological systems and processes are protected, restored, and maintained.

4.1.3.1 Priority Statement

Advance natural asset management within RDN services to ensure that underlying ecological systems and processes are protected, restored, and maintained. This means developing overarching policy that directs integration of natural asset management within RDN services, investing in data and resources to support that integration, developing methods to prioritize investment in critical natural assets, and mobilizing the public to protect natural assets through outreach and incentives.

4.1.3.2 Evaluation Criteria

Criterion	Score	Rationale
Jurisdiction	Mixed	The RDN has direct authority over its own lands, can influence some activity on private lands, but no authority over majority of RDN land base (e.g., private managed forest lands)
Near term implementation?	High	This work can be implemented in the near term for RDN areas if staff resources and funding are made available.
Equitable	High	Dependent on implementation but generally protection of natural assets delivers equitable public benefits
Co-Benefits	High	Protection of natural areas, human wellbeing, reduced economic impacts, recreation, cultural benefits, multi-purpose use of areas
Cost per GHG	Medium	Potential to enhance carbon sequestration at relatively low cost
Builds on CATAC work	High	Builds on previous CATAC work on natural assets
Magnitude of GHG savings	Medium	Reasonable potential if natural assets are indeed protected - carbon sequestration enhanced, avoided emissions of engineered solutions
Adaptation Potential	High	Protection of existing natural processes/features is adaptation best practice – significant temperature moderation, water quality value

4.1.3.2 Evaluation Criteria — *Continued*

Criterion	Score	Rationale
Feasibility	Medium	Desktop work, policy development straightforward but update via land use policy and outside of RDN property may be difficult Strong funding programs, ‘trending’ focus for local governments
Consequence of inaction within next 5 years	Medium	Drinking water and watershed protection program generally delivers programming that promotes understanding, protection, and investment in our key natural assets required for water. Formal structures for integrating asset management would not be put in place in the near term, missing opportunities to implement better practice.

4.2 Climate Resilient Policy**4.2.1 CONTEXT AND STATUS**

The RDN has substantial influence over long term patterns of development through zoning and land use policy. Development patterns continue to affect resident vulnerability to climate change, and how easy or difficult it is for residents to make sustainable choices that reduce emissions and reduce climate vulnerability. Due to this long-lasting influence and jurisdictional power, “Identifying and removing barriers to climate action within RDN policy” was a Priority Action under the 2022-2024 CATAC work plan.

The Regional District also has responsibilities to understand climate risk and guide development in a way that acknowledges and, as reasonable, limits risk to residents and infrastructure. Many of these risks have been discussed earlier in this document and include overland and coastal flooding, geohazards, wildfire, and water availability. For the RDN’s own assets, this extends to ensuring assets are designed for low carbon climate resilience meaning, as best possible, they do not worsen climate change, are designed for anticipated future climate conditions, and are located away from climate hazard areas if risk cannot be mitigated.

The RDN has implemented a variety of climate-resilient policies within its land use policies and bylaws, and within its corporate operations, as outlined in Table 8 below.

TABLE 8. Current progress on Climate Resilient Policy at the Regional District of Nanaimo

Area	Actions Delivered
Land Use Planning Work	<ul style="list-style-type: none"> • Commitments to compact complete communities within RDN OCPs • Establishment of growth containment boundaries and adherence to those boundaries in planning decisions and recommendations • Review of RGS to better address climate priorities. • Establishment of a mandatory sustainable development checklist (this has not proven successful) • Requirement for prove-out of water production – this could be updated to include forecasts under climate change • Implementation of aquifer protection DPA in Electoral Area A • Implementation of DPAs for ecologically sensitive areas • Reviewed and amended bylaws to remove barriers to sustainable building
Work completed under CATAC Priority 2	<ul style="list-style-type: none"> • Developed draft Development Permit Areas to better protect natural spaces and reduce climate risk in rural areas including: aquifer, environmentally sensitive areas, hazard lands & shoreline protection • Identified need for Board Policy on climate change that sets overall corporate direction to prioritize climate change adaptation and mitigation in all functions, including a high level of service • Board policy development and implementation to proceed in 2024, including initiating work on a framework to support integration of climate risk resilience into land use policy

4.2.2 GAPS

- Existing work is only partially complete and no supports are in place for this work to continue past 2024
- While OCPs and the Regional Growth Strategy documents contain many statements and goals related to climate, their impact is generally not monitored and zoning bylaws may not get updated to reflect the goals stated within OCPs
- Interventions for climate action and risk mitigation are often left too late in the approvals process, usually when designs and plans are already established.
- Low fees for permits and applications prevent cost-recovery and limit capacity for funding sustainable practices, placing costs on existing taxpayers and externalized costs on future residents.
- Protection of ecologically sensitive areas (ESAs), even where DPAs exist, can be overruled through the Board of Variance, resulting in damage to riparian areas and other sensitive habitats.

4.2.3 DRAFT CATAAC RECOMMENDATION AND PRIORITY STATEMENT

Building on work completed under CATAAC Priority 2 (Removing barriers to climate action within RDN policy): Climate Resilient Policy means that the RDN establishes very clear direction on Climate Adaptation, Mitigation and Resilience through overarching policy, and ensures other key policies align with that direction. This includes establishing appropriate Board policies that clarify the RDN’s approach to climate action and risk mitigation, ensuring that zoning bylaws reflect the climate goals and sustainability priorities of the Regional Growth Strategy and Official Community Plans, updating existing policies for compatibility with Board climate policies, and evaluating and implementing new policy tools where appropriate. As with all CATAAC priorities, investing in resident outreach and education, and a strong focus on equity will make work on this priority more effective.

4.2.3.1 Evaluation Criteria

Criterion	Score	Rationale
Within RDN Jurisdiction?	High	The RDN has direct authority over land use planning in rural areas and its own internal policies, however this will only affect new development.
Near term implementation?	Medium	This work can be implemented in the near term if staff resources and funding are available.
Equitable	Mixed	Dependent on how well equity is embedded in RDN’s overarching climate policies. Following equity framework and reporting on equity will support.
Co-Benefits	High	Protection of natural areas, human wellbeing, reduced economic impacts, reduced RDN liability.
Cost per GHG	Medium	Enhanced carbon sequestration potential at relatively low cost through implementation of conservation oriented DPAs.
Builds on previous CATAAC work	High	Builds directly on previous CATAAC work on land use policy (Priority 2)
Magnitude of GHG savings	Med	Limited over the short term, but good potential over the long term if policies are effective – avoided land conversion, reduced transportation emissions and long-term influence on growth pattern
Adaptation impact	High	Manages long term risk exposure to key climate-driven hazards, helps avoid future high costs by moving development out of hazard areas

4.2.3.1 Evaluation Criteria — *Continued*

Criterion	Score	Rationale
Feasibility	Medium	Generally feasible, some of this work may be politically controversial. Timing of work depends on staff availability. Likely significant potential for grant funding through new FCM Adaptation program. Policy alignment with strong emphasis on adaptation and land use planning through both provincial and federal governments. Communities of practice not yet well established in Canada but some supports present.
Consequence of inaction within next 5 years	High over longer term	Land development will continue in ways that are potentially incompatible with climate resilience and in some cases potentially incur liability risk for the RDN.

4.3 Improving Local Food Security

CATAC recognizes that local food security plays a role in both reducing emissions by promoting local and seasonal food consumption and improving adaptation of local agriculture and food production, transportation, and storage systems. The RDN plays a limited role in supporting local agricultures as it does not explicitly fit within existing services. However, the RDN has established an Agricultural Area Plan and has participated in a regional project to understand how climate change might specifically impact agriculture in our area.

CATAC recommends that implementation of the Agriculture Area Plan (AAP) include climate elements where feasible.

4.4 Financing Climate Action

The RDN has limited staff and financial resources and faces realistic limitations in the amount of revenue it can generate through property taxation.

4.4.1 EXISTING FUNDING

The original CATAC work program was funded through a combination of grants and taxation (about a 50% split). Current funding available for CATAC initiatives (existing and any new proposed) is about \$240,000/yr (two-thirds from the Local Government Climate Action Program, LGCAP) and one third from taxation. It is not clear if LGCAP funds will be available after 2026. Expenses beyond this amount will require either a tax increase to pay for project costs or compatible grant funding and staff capacity to apply for those grants. Existing CATAC programming (e.g., retrofit concierge, natural asset work, community climate outreach) uses this funding in its entirety.

The RDN's Corporate Climate Action Reserve may only be spent on corporate emission reductions and has no mechanism to replenish it.

Most larger cost climate work (\$50,000+) is completed through federal or provincial grant funding, which takes staff time and effort to acquire and does not always align with timelines, staff capacity, or local priorities. The availability of grant funding for climate action is also dependent on provincial and federal funding priorities, which change with the party elected to office. Current grant availability is included in the climate action priorities to help evaluate feasibility.

4.4.2 STAFF CAPACITY

Climate-focused staff are currently at capacity and staff who work part time on climate may have to reallocate some of that time towards meeting requirements of new provincial housing regulations. New projects will likely require staff to divert time away from existing projects or will require additional staff resources (temporary or permanent).

4.4.3 CONCLUSIONS

The RDN may not be able to fund the level of adaptation and mitigation action needed through existing revenue tools (e.g., taxation). Most climate work is completed through grant funding, which takes staff time and effort to acquire and does not always align with timelines, staff capacity, or local priorities. The availability of grant funding for climate action is also dependent on provincial and federal funding priorities, which change with the party in power. If there are concurrent changes in federal and provincial policies, there may be significant change to climate-oriented grant funding.

Ongoing downloading of provincial responsibilities to local governments, without adequate funding, compounds this issue. This primarily affects staff capacity within Development and Emergency Services with lesser effects on Regional and Community Utilities and leads to delayed implementation of climate action.

4.4.4 CATAAC RECOMMENDATION

While CATAAC membership considered an option to assess alternative funding models, including establishing new services, establishing green revolving funds, leveraging private investment, and developing a grant strategy, a focus on advocacy is recommended.

CATAAC recommends that the Regional District continue to advocate to the province for effective funding solutions for local government climate action. This includes addressing issues of provincial downloading on to local governments without appropriate levels of funding.

5 Conclusion

The Regional District of Nanaimo integrates climate action throughout its services and has made significant investments and advancements over the past decade. This work ranges from ambitious plans for transit expansion to leading programs in waste management and drinking water and watershed protection, and significant supports for residents taking climate action at home. There is still more work to do. Addressing existing gaps through focused work plans and strategic policy, resource and knowledge development will help ensure the RDN can maintain and build on the positive change it has already made.

