



Regional District of Central Okanagan

Regional Climate Resilience Strategy



Regional District of
Central Okanagan

June 2026

Land acknowledgement

The RDCO acknowledges our presence on the traditional, ancestral, and unceded tṛ́xʷúlaʔxʷ (land) of the syilx / Okanagan people who have resided here since time immemorial. We recognize, honour and respect the syilx / Okanagan lands upon which we live, work, and play.



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We are grateful to the many individuals and organizations who contributed their time, expertise, and lived experience to the development of this Strategy.

Public

188 survey participants contributed feedback through community engagement surveys supporting the development of the Strategy.

Technical & Community Input

Contributions were also received from member municipalities, First Nation governments and additional social service providers, health, education, economic development and environmental organizations across the Central Okanagan region. These included:

- Central Okanagan Economic Development Commission
- Central Okanagan Food Bank
- City of Kelowna
- City of West Kelowna
- District of Lake Country
- District of Peachland
- First Nations Emergency Support Services
- Interior Health Authority
- KCR Community Resources
- Okanagan Collaborative Conservation Program
- Okanagan Indian Band
- Okanagan Nation Alliance
- School District 23
- Turning Points Collaborative Society
- United Way British Columbia – Southern Interior Region
- Westbank First Nation
- YMCA-YWCA of the Southern Interior BC



Strategy summary

Regional climate resilience through coordinated, scaled action

The Central Okanagan faces increasing climate risks that run across jurisdictional boundaries. Extreme heat, wildfire and smoke, flooding, drought, transportation disruptions, and infrastructure stress cut across communities, watersheds, transportation corridors, and social networks in ways that make a coordinated regional response necessary. While many of the actions needed to protect people, communities, and ecosystems must be implemented locally, their effectiveness depends on regional coordination, shared standards, and aligned investment across the many jurisdictions that make up the Central Okanagan. At the same time, the region's greenhouse gas (GHG) emissions are contributing to the global conditions driving those risks and reducing them is an integral part of mitigating climate risks and maintaining regional quality of life.

A defining feature of the Regional Climate Resilience Strategy (after this referred to as the Strategy) is its clarity about the Regional District's role. The Strategy explicitly distinguishes where the RDCO has direct authority, where responsibilities are shared, and where the most effective action lies in coordination and advocacy. This clarity ensures proposed actions are realistic, accountable, and aligned with how decisions are actually made across jurisdictions and focus areas in the Central Okanagan.

Why a regional approach matters

Climate impacts in the Central Okanagan are rarely contained to a single community, infrastructure network, ecosystem, or economic sector. A heat emergency places simultaneous pressure on health systems, housing conditions, and power demand. Wildfires affect water quality, air quality, transportation access, housing security, and economic continuity at the same time. Flooding and debris flows are driven by watershed-scale dynamics and upstream land conditions which can create a series of cascading events that individual municipalities cannot manage on their own. Transportation disruptions can cross jurisdictional boundaries, cascade across supply chains, and leave vulnerable residents without mobility when they need it most. As a result, vulnerabilities in one part of the region increasingly translate into risks for the region as a whole. The RDCO's role is to coordinate action across the region, so that local initiatives strengthen each other, smaller communities have access to regional support, and risks are reduced for all Central Okanagan residents.

How this strategy is designed

This Strategy is built on the understanding that climate risks are systemic, interconnected, and compounding. Wildfire, extreme heat, flooding, drought, and infrastructure disruption do not affect communities in isolation; they cascade across transportation networks, water systems, public health, emergency services, ecosystems, and local economies.

In response, this Strategy is designed to:

- Address multiple hazards and systems together, rather than through single issue responses;
- Embed climate risk and greenhouse gas considerations into everyday decisions, including land use planning, infrastructure investment, and service delivery;
- Focus action where regional coordination delivers greater impact than isolated local efforts; and
- Prioritize protection for those most exposed and least able to absorb disruption, recognizing that social vulnerability magnifies climate risk.

How this strategy was developed

This Strategy was developed in 2026, drawing on both a technical foundation and direct input from the people who live and work in the region. The technical work included a region-wide Climate Risk and Vulnerability Assessment (CRVA), which evaluated climate risks across the region through to the 2080s, and a community greenhouse gas (GHG) emissions inventory and forecast, which set the baseline and trajectory against which the Strategy's GHG emissions reduction targets are measured.

This technical work was paired with engagement. A public survey ran from February to March 2026, and 188 residents responded, with 86% expressing concern about how climate change is affecting the region. Two workshops brought together RDCO staff, member municipality staff, emergency management personnel, First Nations staff representatives, and regional partners to identify the region's most important risks and to develop a list of potential actions to respond to them.

Each potential action was then scored against seven criteria covering GHG impact, risk reduction, feasibility, policy alignment, foundation-setting, equity, and co-benefits, and reviewed with RDCO senior management to arrive at the targeted actions in this Strategy. In some cases, these actions build on work that member municipalities, First Nations, and community organizations already have underway; in others, they introduce new approaches to strengthen coordination and climate resilience across the region. Throughout, the RDCO drew on technical and community input from governments, First Nation governments, and organizations across the Central Okanagan, and is grateful for the time and expertise contributed.



How the targeted actions deliver regional benefit

The targeted actions in this Strategy work at a regional scale, and they are designed to build on and support the work that partners across the Central Okanagan are already doing. Acting as a region lets partners pool resources, plan across municipal boundaries, and make sure that the benefits of this work reach every community, including rural areas and residents who are most at risk, such as children, seniors, people with disabilities, and people who are isolated. The targeted actions deliver this regional benefit in two connected ways: through mitigation, by reducing the greenhouse gas (GHG) emissions that cause climate change, and through adaptation, by preparing the region for the climate impacts that are already underway.

The case for mitigation

Reducing GHG emissions now limits how severe climate change can become over the next century. While many of the targeted actions focus on preparing for climate impacts, a number of them work to cut GHG emissions at the source, supporting building electrification and energy efficiency, more transit and active transportation, and the protection of forests and wetlands that store carbon. As part of this process the RDCO has also applied this thinking to its own operations, working to reduce emissions from its buildings and facilities and factoring lifecycle emissions into its capital decisions. Together, these actions help the region do its part to limit climate change while lowering the long term costs it would otherwise carry.

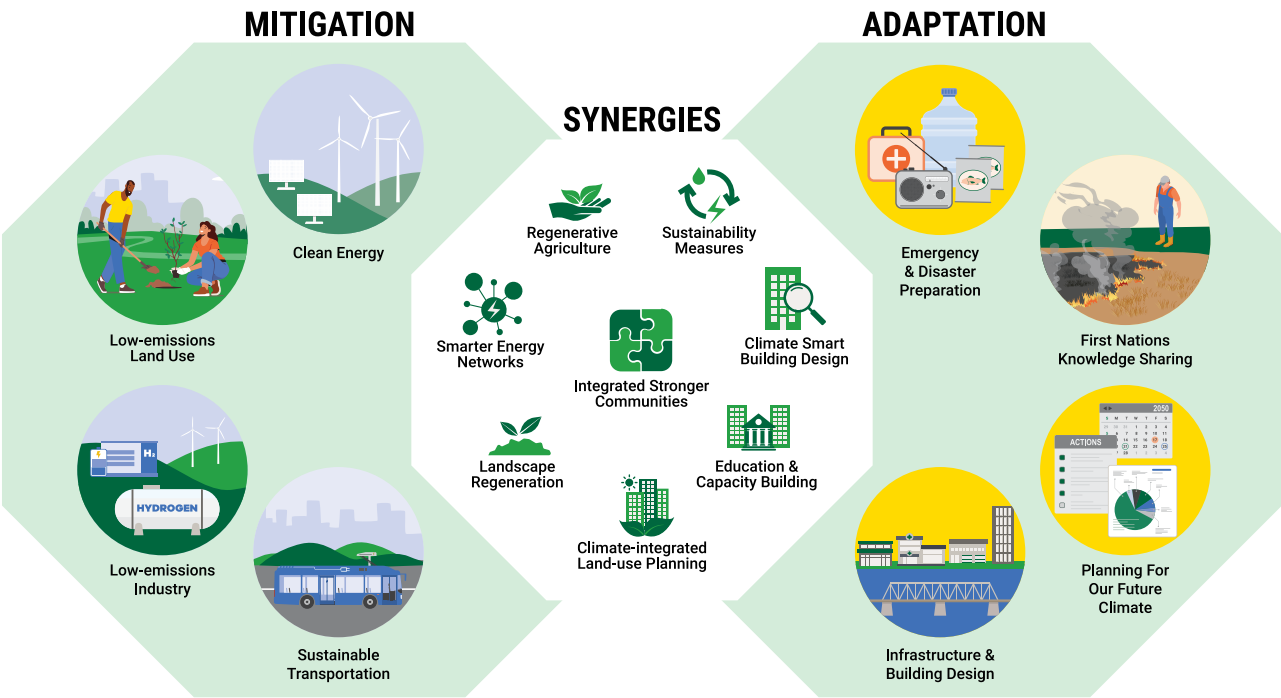
The case for adaptation

Many climate impacts are already underway, and preparing for them protects the region's residents, economy, and quality of life. Most of the targeted actions focus on preparation and strengthening the region's ability to respond to wildfire, extreme heat, flooding, drought, and the disruptions they cause. This includes both physical measures, such as protecting water supplies and hardening critical infrastructure, and the systems that support people through an emergency, such as coordinated evacuation planning and community resilience hubs. Protecting and restoring natural areas does similar work, since healthy ecosystems clean water, store carbon, reduce the severity of floods, and support the plant and animal life the region depends on, and replacing those natural services with built alternatives would be extremely expensive if they were lost.¹ The actions also build climate resilience into the way the region handles governance, capital planning, and the management of its assets, which lowers costs and reduces risk for every partner over the long term. Research has found that every dollar spent on resilient infrastructure and hazard reduction can avoid roughly six dollars in future losses, which makes this preparation one of the most cost-effective investments the region can make.²

1 National Academies of Sciences, Engineering, and Medicine. (2021). Building and Measuring Community Resilience. nap.nationalacademies.org/read/26123/chapter/3

2 Springer. (2024). *Ecosystem services and climate resilience*. link.springer.com/chapter/10.1007/978-3-031-56564-9_7

Mitigation and adaptation are closely connected. Reducing GHG emissions limits how severe future climate impacts will become, which makes adaptation more achievable, and adapting to climate impacts builds the systems and capacity that allow communities to keep making progress on GHG emissions. The Strategy recognizes that the two depend on each other and commits to action across the region, with the goal of keeping the Central Okanagan a healthy, fair, and resilient place to live for generations to come.



Regional climate resilience strategy flagship actions

While this Strategy includes 55 actions, a focused set of flagship initiatives are intended to signal the Strategy's direction, demonstrate early and visible progress, and establish enduring regional systems. These actions are intentionally designed to operate at a regional scale, where shared standards, coordinated investment, and collective action deliver benefits no single jurisdiction could achieve alone.

■ Regional natural assets & habitat corridors

Protect and restore interconnected natural systems to reduce climate risk and sustain ecological health across the region. Establish a coordinated regional approach to natural asset management and habitat connectivity, including conservation partnerships, ecological restoration initiatives, land acquisition opportunities, ongoing updates to ecosystem and natural asset inventories, and development of post-wildfire recovery and vegetation management protocols.

■ Central okanagan resilience hubs network

Ensure all residents have access to safe, trusted spaces during extreme events through a coordinated network of community resilience hubs. Develop a regional framework and designation criteria, in partnership with member municipalities and community organizations, to identify, support, and activate locally operated spaces providing cooling, clean air, emergency resources, and community supports—prioritizing areas where vulnerable residents and service gaps intersect. Strengthen coordination of extreme heat response, preparedness, and support for vulnerable residents during emergencies.

■ Home energy & resilience connector

Accelerate household-level adaptation by removing barriers to climate-ready homes. Coordinate a centralized regional approach that connects residents to rebates, financing, qualified contractors, and practical guidance to improve energy efficiency, indoor air quality, and resilience to extreme heat and wildfire smoke, with targeted outreach to low-income households, renters, and rural communities.

■ Coordinated water resilience

Improve regional capacity to manage water through drought, contamination, flooding, and system disruption. Facilitate water conservation, drought response, source water protection, and emergency supply planning across member municipalities, First Nation governments, and Electoral Areas to deliver a more integrated and adaptive regional water management framework. Support coordinated approaches to flood mitigation and environmental flow planning.

■ Transportation resilience and regional connectivity

Strengthen the region's ability to move people and goods during both everyday conditions and major disruptions. Advance a coordinated regional approach to transportation resilience that integrates active transportation networks, transit improvements, evacuation planning, and supply chain continuity. This includes advocating for completion of key regional corridors while developing shared evacuation transportation protocols and planning for extended highway disruptions through coordinated detour routes, emergency access, and fuel and goods distribution. Position the Central Okanagan for long-term resilience by working with provincial partners to advance strategic transit investments and regional supply chain infrastructure, including opportunities that diversify goods movement to the BC Interior.

■ **Economic & food systems resilience**

Strengthen the region's capacity to sustain economic activity and food systems through climate disruption and recovery. Deliver a coordinated regional approach that supports agriculture, tourism, and small and medium-sized businesses to prepare for, adapt to, and recover from climate impacts. This includes advancing a regional food security plan, business continuity and recovery supports, and agricultural emergency and water planning in partnership with irrigation districts, the Province, and the Central Okanagan Economic Development Commission. Position the Central Okanagan's economy for long-term resilience by equipping businesses with the tools, resources, and guidance needed to respond to extreme heat, water constraints, and supply chain disruptions while maintaining continuity and competitiveness.

■ **Climate-ready regional parks**

Ensure regional parks are designed and maintained to withstand future climate conditions. Update park design and infrastructure standards to incorporate shade, water efficiency, flood resilience, and fire-resistant materials, supporting both user comfort and long-term asset durability while supporting climate-adaptive park management and restoration.

■ **Climate resilient RDCO governance**

Embed climate risk, resilience, and emissions considerations into how the RDCO plans, invests, and reports, positioning the organization to lead by example in climate-informed governance. Advance an integrated governance approach that incorporates standardized climate risk and lifecycle GHG assessments into capital planning and investment decisions, embeds climate considerations into Board reporting and corporate decision-making, and strengthens the resilience of RDCO-owned assets through energy, infrastructure, and facility assessments, including targeted hardening of critical infrastructure. Ground implementation in ongoing partnership with First Nations partner governments by integrating syilx / Okanagan knowledge systems, values, and governance approaches—supporting more informed, adaptive, and place-based decision-making over time.

The RDCO's priority climate actions reflect the Regional District's role as regional convenor and coordinator, working with member municipalities, First Nation governments, and community partners to build shared frameworks and promote aligned investment to achieve a greater impact than individual organizations can have working independently.

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**One climate –
one community –
one regional strategy**

The Central Okanagan sits within the traditional and unceded territory of the syilx / Okanagan people, whose stewardship of this land and water since time immemorial continues to shape how the region understands and cares for its natural systems. Today, over 250,000 people live across a mix of cities, towns, rural communities, and syilx / Okanagan lands and reserves in a valley whose economy and quality of life are closely tied to the health of its watersheds, forests, and landscapes. The region is also home to an extensive network of regional parks and natural areas that provide recreational access, habitat connectivity, and ecological services across the valley.

The Central Okanagan is one of the fastest growing regions in Canada, projected to grow to over 300,000 residents in the next 20 years. This growth brings opportunity but also increasing pressure on the natural systems and infrastructure that support the region. More people means more vehicles on the road, more buildings to heat and cool, greater demand on water supply, more waste generation, and more development in areas exposed to wildfire and flood risk, all of which contribute to rising greenhouse gas (GHG) emissions while climate change places additional stress on regional systems. Managing this growth in a way that reduces climate hazard exposure and GHG emissions is one of the most significant planning challenges facing the region in the decades ahead.

These growth pressures interact directly with a changing climate that is already reshaping conditions across the Central Okanagan. Rising GHG emissions over the past century have contributed to observable changes across the region, including longer and more severe wildfire seasons, increased frequency of extreme heat and smoke events, growing pressure on water supply, and escalating stress on the natural systems that support communities. As climate change continues, these impacts are expected to intensify, increasing the likelihood that vulnerabilities in one part of the region translate into risks for the region as a whole.

Across member municipalities, Electoral Areas, and First Nations partner governments, reducing GHG emissions and strengthening climate resilience is a shared responsibility. Coordinated action to reduce GHG emissions and adapt to climate impacts helps avoid the significant costs associated with climate related disasters while delivering broader co-benefits, including improved public health, enhanced biodiversity, more resilient water and food systems, and economic opportunities associated with the transition to a low carbon society. Strategic investment in mitigation and adaptation supports long term regional stability, reduces future disaster recovery costs, and contributes to an improved quality of life across the Central Okanagan.

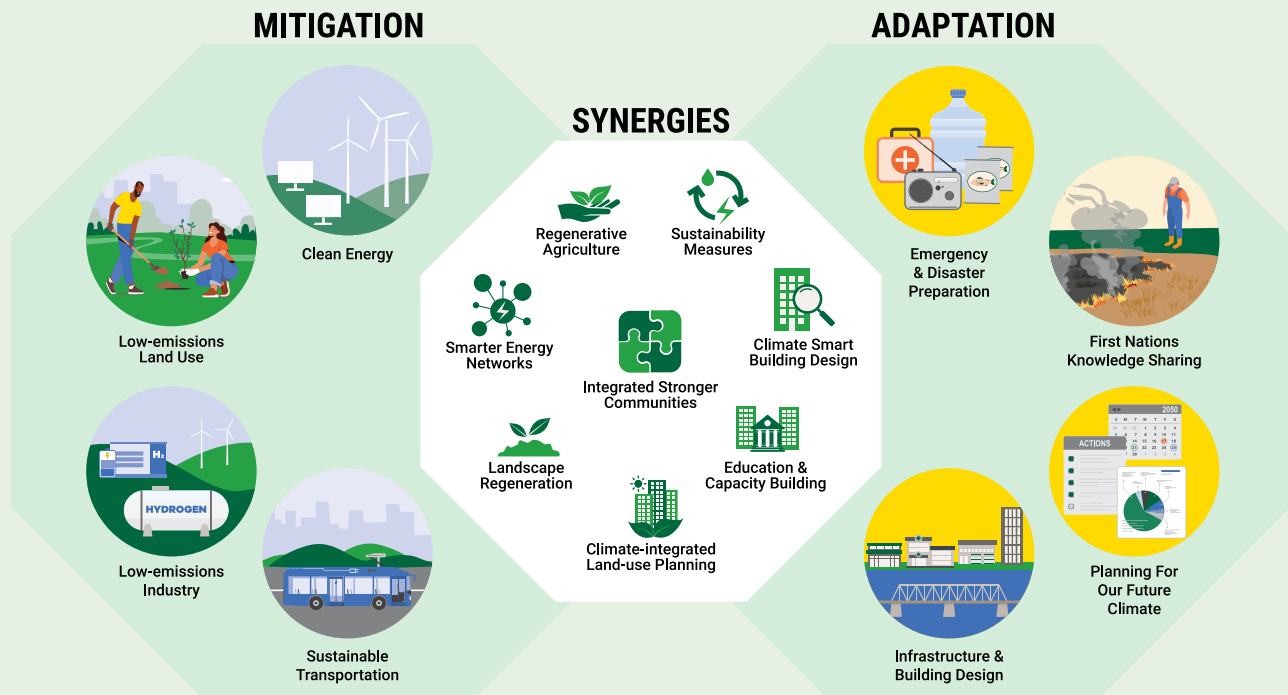
The Regional Climate Resilience Strategy (after this referred to as the Strategy) sets out how the region will work toward these outcomes through coordinated action across member municipalities, First Nation governments, community organizations, and residents.



Climate mitigation & adaptation

Tackling climate change requires action on multiple fronts. Mitigation focuses on reducing the greenhouse gas (GHG) emissions that drive climate change, including through the transition away from fossil fuels as sources of energy production and fuel, improved efficiency and productivity through investment in transit and active transportation, and the protection and enhancement of natural systems that store carbon.

Adaptation focuses on responding to the climate impacts that are already occurring and those expected in the future, including updating floodplain mapping, strengthening building and infrastructure design standards, and developing coordinated emergency response protocols for events such as extreme heat and wildfire.



Across the Central Okanagan, many of the most important actions deliver both mitigation and adaptation benefits, and these synergies are reflected throughout this Strategy. Protecting natural areas helps to store carbon, reduces flood risk, and strengthens the ecological systems that communities depend on. Building homes and facilities to higher energy standards reduces GHG emissions while improving safety and comfort during extreme heat and wildfire smoke events. Investing in transit reduces vehicle GHG emissions while providing affordable alternatives to private vehicle ownership.



**Our shared
climate risks**

To understand the scale of what this Strategy is responding to, it is important to begin with what is already occurring across the Central Okanagan. Communities are experiencing more frequent evacuation orders, summers with increased potential for wildfire smoke, incidences of wells running dry through successive drought years, localized flooding from extreme rain events, and agricultural losses linked to drought, extreme heat, and wildfire. Long-time residents are seeing landscapes across the region change in ways they do not recognize. Wildfire, smoke, extreme heat, and water security are the most pressing region-wide concerns. Flooding is a serious risk in specific areas but is more localized than region-wide, and residents expect coordinated action at a scale that matches these impacts. The climate hazard projections that follow reflect both the changes already underway and those anticipated over the near and long term based on current climate science and global climate scenarios.¹

Climate and geological hazards anticipated by the 2080s due to the changing climate in the Regional District of the Central Okanagan

 Hot & dry ■ 42 more days above 35°C annually in the valley ■ 7 more days above 35°C annually in the mountains ■ Increased frequency of heat waves ■ Increased frequency and intensity of drought conditions	 Winter hazards ■ 13 less days below -15°C annually in the mountains ■ Days below -15°C become an uncommon event in the valley ■ Heavy snow events become less frequent ■ Increased number of hours with freezing rain annually
 Flooding ■ Increased frequency and intensity of heavy rainfall events ■ 44% increase in extreme rainfall event intensity (short duration event, for example, a thunderstorm) ■ Increased potential for flooding events	 Geological ■ Increased number of days annually with landslide or debris flow potential ■ Okanagan Lake seiches continue to be an annual occurrence
 Extreme events ■ Increased frequency of strong wind events ■ Increased lightning activity during thunderstorms ■ Increased potential for hail during thunderstorms	 Wildfires and wildfire smoke ■ Increased potential for wildfire occurrence ■ Longer wildfire season ■ Increased frequency of poor air quality days due to wildfire smoke

¹ Climate projections in this Strategy use the Shared Socioeconomic Pathway 5-8.5 (SSP5-8.5), a high GHG emissions scenario from the Intergovernmental Panel on Climate Change (IPCC) which assumes continued increases in global GHG emissions resulting in approximately 4 to 5 degrees Celsius of global warming by 2100 relative to pre-industrial levels. The projected changes are under the high emissions SSP5-8.5 scenario and relative to the 1991-2020 period.

The risks ahead

To understand the scale and nature of risks facing the Central Okanagan, the RDCO completed a region-wide Climate Risk and Vulnerability Assessment (CRVA) in 2026, which organized risks across infrastructure, services, communities, and ecosystems over four planning periods extending to the 2080s. Across water systems, transportation networks, buildings, emergency services, ecosystems, and communities, the CRVA identified a consistent pattern: hot and dry conditions, wildfire, and wildfire smoke drive the highest and most rapidly increasing risk scores across all time horizons. Multi-day sequential flooding events that overwhelm multiple systems at once carry high consequence ratings. Geological hazards, including landslides, debris flows, and riverbank erosion, also present significant risks in Electoral Areas and post-wildfire catchments.

The region's priority climate risks

The CRVA identified four priority climate risks that can affect multiple communities, services, and systems at the same time.

- **Extreme heat** is among the highest and most rapidly increasing risks in the region. It threatens human health and places significant pressure on regional health system capacity during major heat events. Seniors, people with chronic illness, people without access to cooling, and outdoor workers are among the most exposed populations.
- **Drought** is also increasing in frequency and severity. It threatens water supply, agricultural production, and natural ecosystems already under stress. Small water systems without backup capacity, agricultural producers, and stressed ecosystems face the greatest vulnerability, with cascading effects on food security and rural livelihoods.
- **Wildfire and wildfire smoke** affect nearly every aspect of regional life, from emergency response and water quality to public health, culturally significant lands, and various economic sectors such as agriculture and tourism. Indigenous communities, rural residents, and individuals with respiratory conditions face the greatest exposure and vulnerability.
- **Multi-day sequential flooding events** can overwhelm water systems, transportation corridors, buildings, and emergency services at the same time. The most severe impacts are experienced by communities in low-lying areas, those reliant on single access routes (one-way in, one-way out), and small water systems without redundancy or backup capacity.
- **Landslides, debris flows, and erosion pose** risks to water infrastructure, transportation networks, and agricultural lands in rural and Electoral Area communities and post-wildfire landscapes where slopes are destabilized, water-resistant and more prone to failure during subsequent rainfall events.

These risks are interconnected and can cascade across systems, amplifying overall impacts. Drought conditions can weaken forest health and increase the likelihood and severity of wildfire. Wildfire can destabilize slopes and contribute to sediment and debris flows into drinking water sources. Highway closures during wildfire or flood events can simultaneously disrupt evacuation routes, supply chains, and emergency response access, reducing the capacity of communities to respond when multiple hazards occur at once.

Climate change is increasing both the frequency and severity of these hazards. As illustrated in the figure below, climate change, disaster risk, and development pressures are part of a single interconnected system. Addressing them in isolation is insufficient. This Strategy integrates climate action, disaster resilience, and land-use planning with the objective of reducing GHG emissions, strengthening regional resilience, and guiding growth in ways that reduce long-term exposure to climate risk.

It also maintains a clear focus on those least able to absorb these impacts, including seniors living alone without access to cooling, households without vehicles or the means to evacuate, rural communities without transit and served by a single access route or small water systems, agricultural workers, and Indigenous communities whose cultural landscapes and traditional use areas face direct and compounding climate-related pressures (see **Climate change & equity**).

Climate change & equity

Climate change acts as a risk multiplier, deepening existing social, economic, and health inequities across the region. Residents experience impacts from extreme heat, wildfire, flooding, drought, and service disruptions differently. These inequities arise because climate change amplifies existing social and economic conditions:

■ Unequal exposure to climate hazards.

In the region both lower and higher income households live in areas exposed to wildfire, flooding, and extreme heat. However, lower income households are more likely to live in housing that lacks adequate cooling, insulation, or ventilation to maintain safe conditions during extreme events. Unlike wealthier households, they also typically have fewer resources to prepare their homes, evacuate, and recover, which means similar levels of exposure can translate into greater harm.

■ Unequal access to housing and energy.

Older and less energy efficient housing is more common among low-income households, contributing to higher energy costs, increased exposure to poor air quality and higher GHG emissions.

■ Mental and social health impacts.

Repeated evacuations, smoke events, and climate related disruption place sustained pressure on mental health and community wellbeing, especially for community members with pre-existing mental health vulnerabilities.

■ Barriers to preparedness and recovery.

The costs of retrofitting, evacuating, or rebuilding after climate events are more difficult to absorb for households with limited income, savings, or insurance coverage, reducing their ability to prepare for or recover from impacts.

■ Loss of access to land and cultural connections.

Climate change threatens natural systems, water sources, agricultural lands, and culturally significant landscapes and traditional harvesting areas. Indigenous communities, whose community relationships, knowledge systems, and cultural and traditional use areas are tied to these places, face the heaviest losses.

■ Economic vulnerability.

Climate impacts to agriculture and tourism, two of the region's key economic sectors, disproportionately affect workers and households that depend on these industries for income stability.

Addressing these inequities is essential to building genuine regional resilience. At the same time, the transition to a lower-carbon and climate-resilient region presents opportunities in areas such as energy efficiency, housing improvements, green employment, and strengthened community services. Ensuring these benefits are accessible across all communities is a critical component of effective climate action.

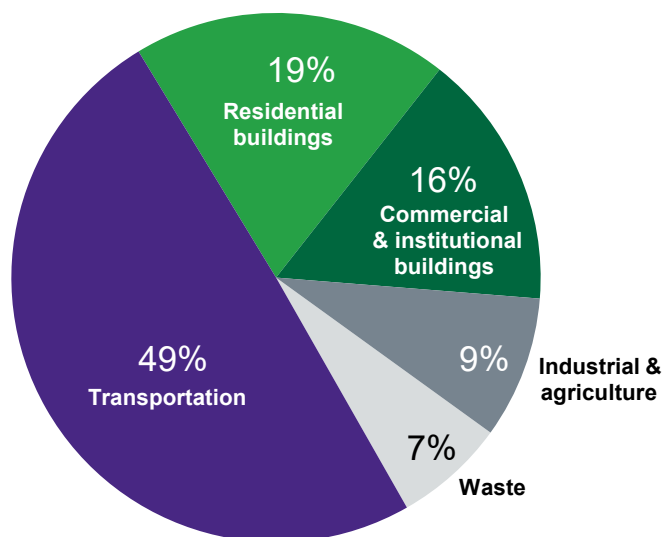
Our region's GHG emissions - our responsibility to act

Every day, the activities that power life in the Central Okanagan, driving to work, heating homes, managing waste, running farms and businesses, release GHG emissions into the atmosphere that contribute to global warming elevating the risks the region faces. In 2022, the region generated approximately 1,533,491 tonnes of gross GHG emissions (measured as *tonnes of CO₂ equivalent*; tCO₂e), noting that emissions from aviation are excluded. After accounting for the carbon sequestered by the region's forests and natural areas (estimated at 444,643 tCO₂e) net community GHG emissions totalled approximately 1,088,848 tCO₂e.

The main sources of GHG emissions in the Central Okanagan are as follows:

- **Transportation** accounts for approximately 49% of gross GHG emissions, making it the single largest source. On-road transportation is the dominant contributor, driven by the region's dispersed settlement pattern, high vehicle ownership rates, and limited alternatives to the private vehicle for most residents.
- **Residential buildings** account for approximately 19% of gross GHG emissions, with space and water heating the dominant contributors. Natural gas, heating oil, and propane remain the primary heating fuels across the region's housing stock, representing both the largest source of building-sector GHG emissions and the greatest opportunity for reduction through electrification and fuel switching.
- **Commercial & institutional buildings** account for approximately 16% of gross GHG emissions, with natural gas the dominant fuel source for space and water heating. Transitioning commercial and institutional buildings to cleaner energy systems and improving energy efficiency through benchmarking and targeted retrofits represents a significant and largely untapped reduction opportunity across the region.
- **Waste** contributes approximately 7% of gross GHG emissions, primarily through the methane generated by organic material decomposing in landfills and

Central okanagan GHG emission sources



the treatment of wastewater. Increasing diversion of organic waste from landfill through composting and circular economy programs is one of the most cost-effective GHG reduction opportunities available at the regional scale.

- **Industry & agriculture** together account for approximately 9% of gross GHG emissions, including non-energy GHG emissions from agricultural operations (i.e., biological and chemical processes rather than fuel combustion). Climate-smart agricultural practices including efficient irrigation, cover cropping, and soil health management can reduce agricultural GHG emissions while improving the sector's resilience to drought and extreme weather.
- **Land use & carbon storage** plays a significant role in the Central Okanagan's net GHG picture. The region's forests, parks, wetlands, and agricultural lands currently sequester an estimated 444,643 tCO₂e annually, offsetting approximately 29% of gross GHG emissions. This natural carbon sink itself is under increasing threat from the wildfire and drought conditions reshaping the landscape. Retaining and strengthening the region's natural carbon sink capacity is a direct contribution to the region's ability to meet its climate targets.



Our process & what we heard

Developing a Strategy that genuinely reflects the risks facing the Central Okanagan and the priorities of the people who live here required both a strong technical foundation and direct community input. This work drew on the knowledge of RDCO staff, member municipality staff, First Nation government staff, regional partners, and residents across the region who shared their experiences of how climate change is already affecting their lives and what they need from their governments in response.

How this strategy was developed

The development of this Strategy began in early 2026 with a review of existing RDCO and member municipality plans and programs, alongside relevant research and best practices, to understand what work was already underway and where gaps remained. Building on that foundation, two technical studies were completed in 2026 to assess the region's climate risks and GHG emissions trends in detail:

■ A region-wide Climate Risk and Vulnerability Assessment (CRVA)

This study evaluated climate-related risks across all RDCO focus areas, communities, and ecosystems across four planning time horizons extending to the 2080s. It drew on historical climate data, downscaled climate projections, hazard exposure mapping, and structured engagement with RDCO staff, member municipality staff, First Nation government staff, and regional organizations providing services to vulnerable residents.

■ A community GHG emissions inventory and forecast

This work established a 2007 baseline and a 2022 reporting year and used this information to develop a business-as-usual trajectory to 2050, against which the Strategy's GHG reduction targets are set.



In parallel, a public survey was conducted between February 23 and March 20, 2026, providing residents across the region with an opportunity to share their priorities, concerns, and expectations for climate action. These findings, together with the technical risk assessment, informed two in-person workshops that brought together RDCO staff, member municipality staff, First Nation government staff, emergency management personnel, and regional partners.

The first workshop on March 10 engaged 22 participants in identifying important risks and gaps within the region. The second workshop on April 14 presented a summary of the risks and engaged the 19 participants in prioritizing potential actions to address them. Potential actions were drawn from ideas in the first workshop, the literature review, opportunities to enhance ongoing regional initiatives, and best practices from other jurisdictions in British Columbia. Through structured discussion and voting, participants refined and prioritized actions related to each of the RDCO's focus areas, and with attention to the RDCO's role and sphere of influence—whether through direct service delivery, policy, coordination, or advocacy to senior levels of government (see **RDCO's sphere of influence**).

Following the workshops, each action was scored against the seven criteria listed in the table to the right, and the results were reviewed with RDCO senior management, resulting in the final 55 targeted actions in this Strategy.

Action scoring criteria

Criterion	What it measures
 GHG reduction	The potential of the action to reduce community GHG emissions
 Risk reduction	How effectively the action addresses the climate hazards and vulnerabilities identified in the CRVA
 Feasibility	Whether the action can be implemented within the RDCO's authority, capacity, and resources
 Policy alignment	How well the action aligns with existing RDCO, member municipality, and provincial plans and priorities
 Foundation-setting	Whether the action establishes frameworks, partnerships, or inventories that enable other actions to follow
 Equity	Whether the action explicitly benefits the residents and communities most exposed to climate risk
 Co-benefits	Whether the action delivers benefits beyond its primary climate purpose, including health, economic, cultural, and environmental outcomes

RDCO's sphere of influence

The RDCO has direct authority over several areas where climate action can be implemented, including services it owns and operates such as solid waste management, regional parks, Electoral Area water systems, and regional emergency management. In the Electoral Areas, it also sets land-use policy and development standards that shape how communities grow. In other areas such as building standards, source water protection, transit, and agricultural water planning, the RDCO's most important role is often to coordinate and convene regional partners around shared challenges.

Beyond Electoral Area boundaries, across member municipalities and First Nations lands, the RDCO has limited planning and regulatory authority. In these contexts, its role is primarily one of influence, coordination, and advocacy, working through partnerships, shared frameworks, and regional collaboration to support collective action. Coordinating regionally can also reduce costs (for example, a shared approach to wildfire response and recovery avoids duplication and eases strain on resources). This includes making a strong, regionally-coordinated case to provincial and federal governments for the investment and policy changes needed.

Ultimately, climate action across the Central Okanagan requires leadership and funding from all orders of government, alignment of utility and infrastructure investment with regional priorities, and the willingness of residents, businesses, and community organizations to integrate climate resilience into their decisions.

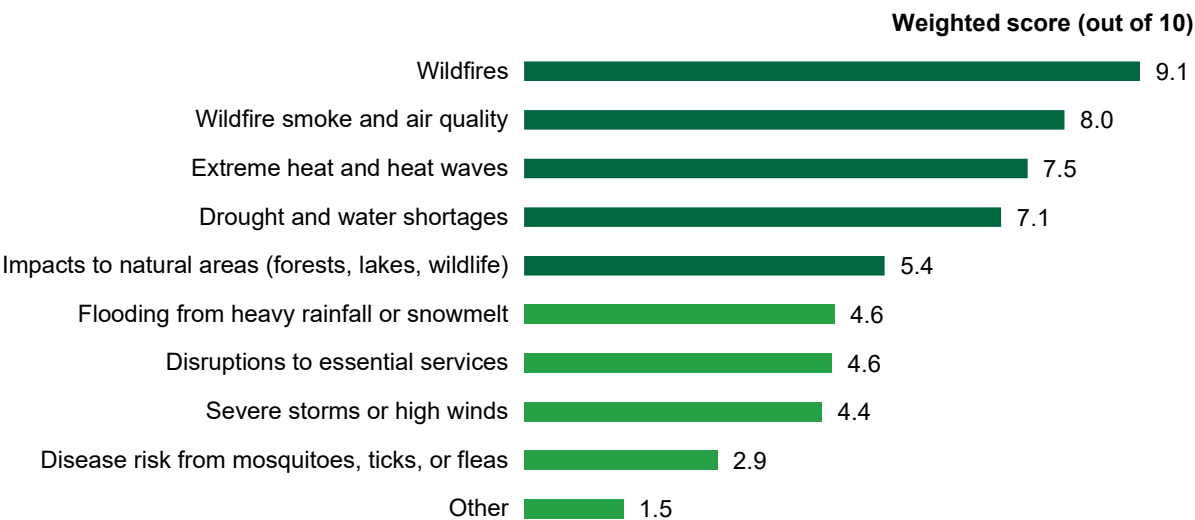
Aspect	Sphere of influence							
	In Electoral Areas				Across the Region			
	Direct control	Shared control	Influence	Advocacy	Direct control	Shared control	Influence	Advocacy
Land-Use Planning & Development Approvals	✓						✓	✓
Building Standards & Energy Efficiency			✓	✓			✓	✓
Environmental Protection & Sensitive Areas	✓	✓				✓	✓	✓
Agricultural Land Protection			✓				✓	✓
Emergency Management	✓					✓	✓	✓
Water Systems	✓			✓		✓	✓	✓
Stormwater Management			✓	✓				✓
Solid Waste & Organics	✓	✓				✓	✓	✓
Regional Parks & Natural Areas	✓				✓		✓	✓
Air Quality			✓				✓	✓
Transit & Active Transportation			✓				✓	✓
Highway & Provincial Infrastructure				✓				✓
Utilities (Telecom, Electric, Gas)				✓				✓

What we heard

Between February and April 2026, the RDCO engaged residents, staff, service providing organizations, and regional members and partners through a public survey and two in-person workshops to understand what climate impacts communities are already experiencing and what actions they want their governments to prioritize. A total of 188 residents completed the survey², and 86% expressed concern about the impacts of climate change in the region.

Wildfire, smoke, extreme heat, and water security dominated responses across all engagement activities, reflecting lived experience in communities that have endured successive fire seasons, smoke filled summers, and increasing water stress since 2017. Survey respondents described years of evacuation orders, summers spent indoors, wells running dry, crops and livestock losses, and significant changes to landscapes. Many also described the cumulative emotional and mental burden of these experiences, including the ongoing stress of preparing for each fire season, grief over landscape change, and a growing sense of climate anxiety. As shown below, wildfire ranked first by a considerable margin, with 60% of respondents identifying it as their top concern, followed by wildfire smoke and air quality, extreme heat, and drought. Workshop participants identified similar priorities, with wildfire fuel management, post wildfire runoff management, and enabling First Nations led cultural and prescribed burning within air quality frameworks emerging as near-term priorities.

Climate impacts of highest concern to survey respondents



² The survey was opt-in and reflects the views of a self-selected group of residents, not a statistically representative sample of the regional population.

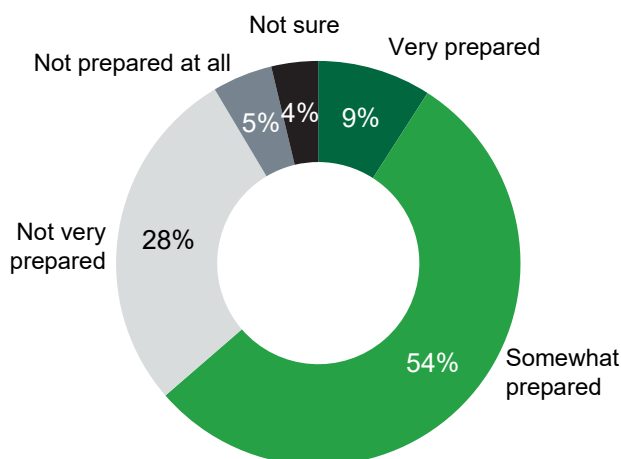
When asked what would help residents take further action, responses were direct. Better local alerts and early warnings ranked first, modernizing emergency channels to meet notification preferences in a timely and efficient manner. Financial support to prepare homes and properties ranked second, with many respondents noting that preparedness comes with costs that are not equally affordable for all residents. Workshop participants reinforced these needs and identified the need for year-round spaces providing emergency preparedness resources, cooling and clean air, and community services distributed across the region. They also highlighted several near-term priorities, including a regional extreme heat response plan developed with health agencies, whole home retrofit support, indoor air quality programs for wildfire smoke, building electrification aligned with grid capacity, and climate-informed disaster waste management options.

What survey respondents feel would help them take further action



In terms of preparedness for climate-related emergencies, approximately one third of respondents are concerned and do not feel prepared. While 64% of respondents described themselves as prepared or somewhat prepared, 33% said they were not very prepared or not prepared at all. Many of these residents are willing to act but lack the means to do so, including financial capacity, tenure status (e.g., renters), and access to support programs. Workshop participants identified the same gap, emphasizing the need to reach renters, low-income households, newcomers, and seasonal and undocumented workers with preparedness resources. They noted that financial and structural barriers are preventing the most exposed residents from taking protective steps that are available to others.

How prepared survey respondents feel they are for climate-related emergencies



When asked about their highest priorities for improving climate resilience in the Central Okanagan, 162 responses were received from survey respondents and workshop participants. Wildfire mitigation, emergency communications, water security, and access routes dominated responses, alongside consistent calls for financial support to help residents protect their homes and properties.

Engagement themes	What residents asked for
Community resilience & emergency services	Timely emergency alerts and communications, support for unhoused and vulnerable residents during extreme events, cooling and clean air spaces, scaled evacuation planning, mental health supports, community resilience hubs distributed across Electoral Areas
Buildings & home resilience	Financial incentives and rebates for heat pumps, insulation, and solar upgrades, mandatory FireSmart assessments for private property, stronger standards for new development, indoor air quality supports during smoke events
Water security	Stronger enforcement of water restrictions, source water and watershed protection, better management of competing water demands including agriculture and golf, drought resilience and water storage infrastructure
Natural areas & wildfire	Forest fuel reduction and controlled burns, protection of natural areas and wetlands, urban tree canopy expansion, reform of forest management practices, proactive investment before the next fire, enabling First Nations-led cultural and prescribed burning within air quality frameworks
Transportation & evacuation	Secondary access roads for Peachland, Naramata, and communities dependent on Highway 97, investment in transit and active transportation, coordinated regional evacuation planning, transportation options for residents without private vehicles
Agriculture & food	Agricultural water planning and drought resilience for farming operations, support for farmers and farmland protection, local food security, livestock evacuation planning
Regional coordination & governance	Coordinated regional emergency response, partnership with First Nations on natural resource management including protection of culturally significant sites, leadership by example, and moving from planning into visible action



**Our strategic
response**

The Central Okanagan faces climate risks that are increasingly complex, interconnected, and systemic. More frequent and severe wildfire seasons, increasing extreme heat, growing water scarcity, and the cascading effects these conditions produce across communities, ecosystems, and economies are already reshaping life in the valley. Vulnerable residents, including children, seniors, people with disabilities, those without financial reserves, and Indigenous communities whose cultural landscapes face direct climate threats, are bearing a disproportionate share of these impacts. The Strategy is designed to address these risks through coordinated adaptation actions to ensure our region is prepared, responsive, and resilient in the face of climate impacts.

Yet adaptation alone is not enough. The science is clear: reducing global greenhouse gas (GHG) emissions is essential to limit the severity and frequency of future climate hazards. Mitigation is not a separate or secondary priority; rather it is a foundational pillar that supports and amplifies our adaptation efforts. Without meaningful GHG reductions, the scale and intensity of regional climate impacts will continue to escalate, undermining the effectiveness of even the most robust adaptation strategies.

GHG reductions cannot be tackled exclusively at any one scale. Municipal governments, the private sector, and individual households each play a vital role, but their efforts are often fragmented and limited by jurisdictional boundaries, resource constraints, and policy gaps. Regional frameworks are essential to amplify local action, align standards, and unlock collective impact. By convening partners, coordinating investments, and establishing shared protocols, the RDCO can ensure that mitigation efforts are mutually reinforcing and as a result, deliver greater progress than any single community or sector could achieve alone.

In summary, responding to these realities requires the Central Okanagan to act on four fronts simultaneously.

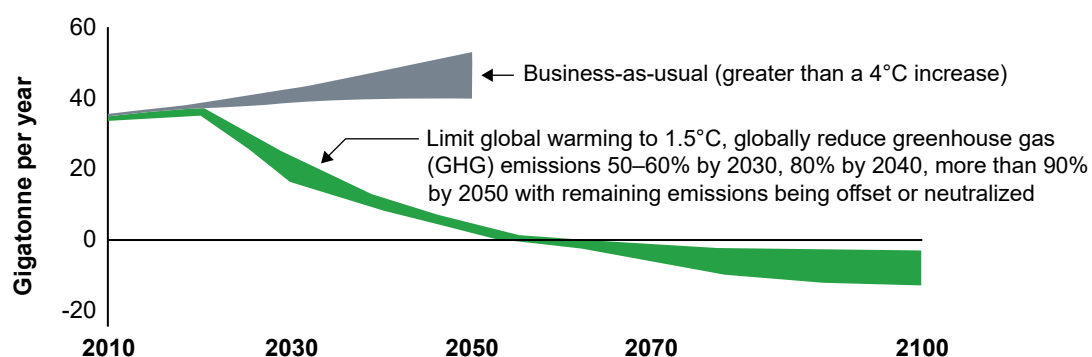
- 1** The region must **reduce the GHG emissions** contributing to the global conditions driving these risks, through investments in clean energy, building electrification, and sustainable transportation.
- 2** It must **build the resilience of its communities, infrastructure, and natural systems** to withstand conditions that are already locked in, with a focus on protecting those most exposed.
- 3** It must **strengthen the partnerships with member municipalities, First Nation governments, community organizations, and senior governments** to ensure regional action is coordinated, consistent, and more effective than any single organization could achieve alone.
- 4** It must **engage and support residents, businesses, and community organizations** in taking proactive steps, recognizing that the scale of the challenge requires action beyond local and regional government programs and planning cycles.

Responding to these realities requires the Central Okanagan to pursue a coordinated and long term approach to climate action, one that supports a connected and resilient region where people, communities, infrastructure, economies, and ecosystems are better protected and prepared for a changing climate. This includes working toward sustained reductions in GHG emissions, strengthening resilience to climate impacts that are already occurring, and supporting a vibrant regional economy and healthy natural systems for future generations.

Our commitment – regional targets

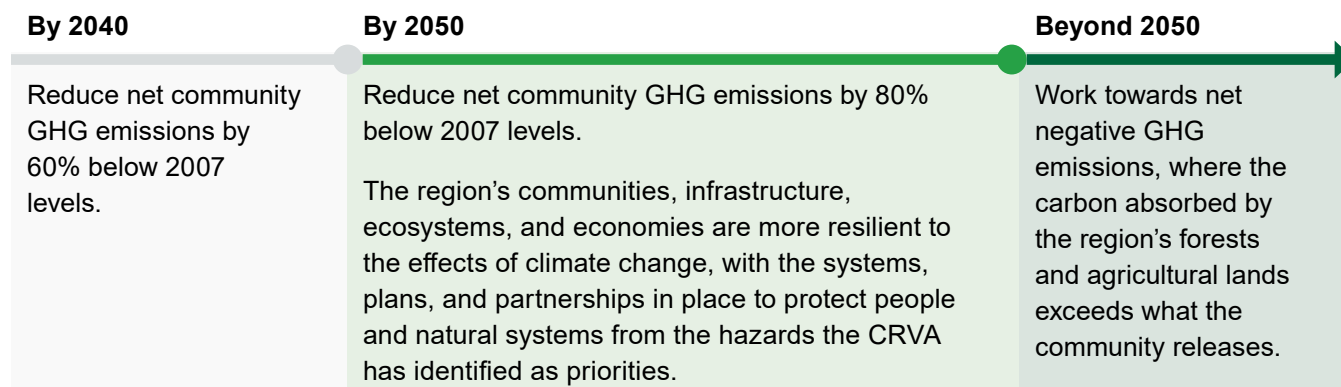
The Intergovernmental Panel on Climate Change (IPCC), in its sixth assessment report, found that there is no safe range of allowable temperature increase beyond 1.5°C. A two or three degree rise is predicted to result in serious and in some cases catastrophic consequences for human health, water security, food systems, ecosystems, and the stability of the conditions that communities across the world, including the Central Okanagan, depend on. To limit global warming to 1.5°C, global GHG emissions must decline from 2007 levels by 50 to 60% by 2030, 80% by 2040, and more than 90% by 2050, with remaining GHG emissions offset, neutralized and becoming net negative in the second half of the century.

Global net CO₂ emissions pathways



Adapted from The Net Zero Challenge Report – World Economic Forum and BCG

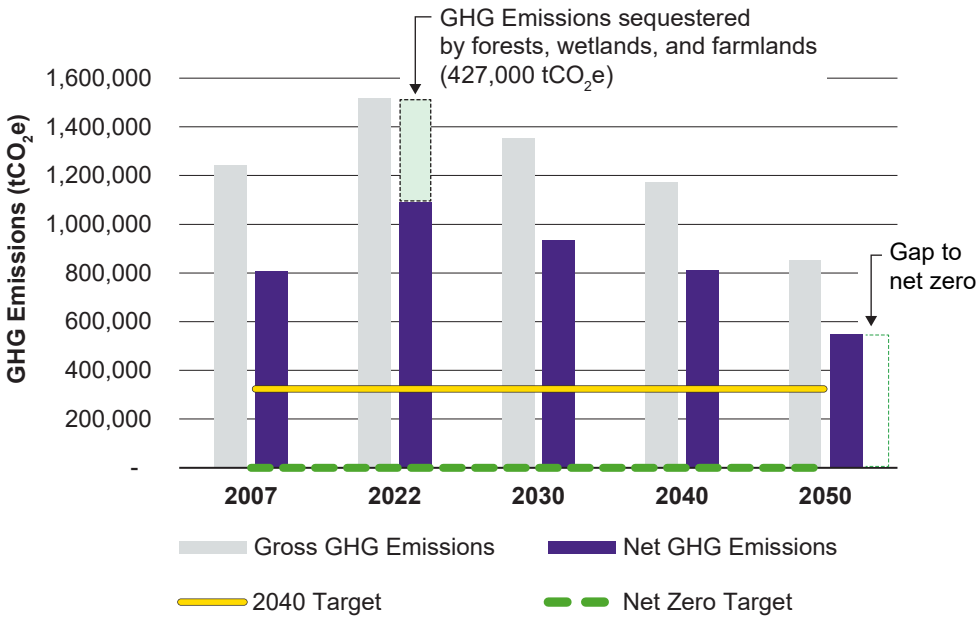
In response to the science-based IPCC findings, the Province of British Columbia, through the *Climate Change Accountability Act*, has established legislated targets of 40% below 2007 levels by 2030, 60% by 2040, and 80% by 2050. Regional districts and municipalities across BC have been aligning with that provincial framework, and the Central Okanagan is doing the same. Informed by the CRVA, the regional GHG inventory, and what member municipalities and residents across the region have identified as priorities, and with an ambition to exceed provincial targets, the RDCO is adopting the following long-term climate commitments:



To cut GHG emissions at the pace the science calls for, the region needs to change how energy, transportation, buildings, and land-use work. That means moving away from fossil fuels and toward renewable energy, using less and wasting less, and protecting the forests, wetlands, and farmlands that store carbon. The RDCO will do what it can on its own, work in partnership with member municipalities and First Nation governments on actions requiring a shared effort, and advocate to the Province and the federal government for the funding and policy changes that local action cannot deliver alone.

As of 2022, the region’s net community GHG emissions were a 35% increase from 2007, driven by population growth and development. Under current provincial and federal policies, the region’s net community GHG emissions are projected to decline by approximately 53% by 2050 as vehicle electrification increases, the electricity grid becomes cleaner, and buildings are upgraded with more efficient systems. However, this still leaves a significant gap to achieve an 80% reduction in GHG emissions (below 2007 levels) resulting in a mitigation gap of over 548,000 tCO₂e by 2050. Most of the projected reductions depend on senior government programs that are not guaranteed. The transportation sector is most exposed to this risk. Closing the gap will require near complete electrification of buildings and vehicles, deep retrofits of the existing building stock, and continued protection of forests and agricultural lands as carbon sinks.

Central okanagan GHG emission projections



The benefits of acting now

The actions in this Strategy are an investment in the region's long-term prosperity, health, and quality of life. Acting proactively on climate change delivers returns that far exceed the cost of inaction. For every dollar invested in resilient infrastructure and hazard mitigation, roughly six dollars in future losses can be avoided.³

The transition to a lower-carbon and more resilient Central Okanagan also creates meaningful economic opportunity. Investing in renewable energy and building electrification generates significantly more local employment than equivalent investment in fossil fuels, with solar energy creating an average of 1.5 times as many jobs per dollar invested⁴ and ecosystem restoration creating 3.7 times as many jobs per dollar compared to oil and gas production.⁵ Improving the energy efficiency of homes and buildings saves households an estimated \$500 annually in reduced energy costs⁶ while making those homes more comfortable and better able to withstand extreme heat and wildfire smoke. Expanding transit and active transportation networks reduces average commute times and transportation costs for residents while cutting the GHG emissions that the region's vehicle dependence currently produces, with cities that have invested in cycling infrastructure and expanded transit options seeing commute time reductions of up to 30%.⁷

The health benefits of climate action are equally significant. Reducing air pollutants through cleaner energy systems decreases the incidence of respiratory and cardiovascular diseases that poor air quality exacerbates⁸, and protecting residents from extreme heat reduces the health system costs that heat events consistently generate. Protecting and restoring the region's natural systems sustains the water purification, carbon sequestration, flood attenuation, and biodiversity services that the Central Okanagan's communities and economy depend on, services that would be extraordinarily expensive to replace with engineered alternatives if the natural systems that provide them are lost.⁹ And implementing climate-smart agricultural practices, including efficient irrigation and cover cropping, can improve soil health and increase crop yields by up to 20%, supporting a sector that generates billions of dollars in provincial economic impact.¹⁰

The costs of inaction are also real and growing. The January 2024 cold snap cost the Okanagan region's wine industry an estimated \$445 million.¹¹ The 2023 McDougall Creek wildfire shut down the peak tourism season at its most economically critical moment.¹² Successive years of evacuation, smoke, and drought have taken a toll on residents' mental health, property values, and sense of security that does not show up in a single event loss estimate but builds across the community over time. Every year of delay makes the transition more expensive and the risks more severe.

3 National Academies of Sciences, Engineering, and Medicine. (2021). Building and Measuring Community Resilience. nap.nationalacademies.org/read/26123/chapter/3

4 World Economic Forum. (2021). *Renewable energy jobs vs fossil fuels*. www.weforum.org/agenda/2021/12/jobs-renewable-energy-fossil-fuels/

5 World Resources Institute. (2021). *Green investments create more jobs than polluting alternatives*. www.wri.org/insights/green-investments-create-more-jobs-polluting-alternatives

6 American Progress. (2022). *Clean energy will lower household energy costs*. www.americanprogress.org/article/clean-energy-will-lower-household-energy-costs/

7 World Economic Forum. (2021). *How cities can save on commuting time*. www.weforum.org/press/2021/12/world-economic-forum-study-shows-how-cities-can-save-on-commuting-time-double-job-access/

8 AirNow. (2024). *At-risk groups and air quality*. www.airnow.gov/sites/default/files/2024-03/at-risk-groups-of-people-fact-sheet_0.pdf

9 Springer. (2024). *Ecosystem services and climate resilience*. link.springer.com/chapter/10.1007/978-3-031-56564-9_7

10 Springer. (2022). *Climate-smart agricultural practices*. link.springer.com/chapter/10.1007/978-3-031-01330-0_4

11 bcchamber.org/policy-search/supporting-british-columbias-devastated-wine-industry-2024

12 www.kelownadailycourier.ca/news/article_3095cb90-bd75-11ef-8269-5bc5f915b8f0.html

What we are already doing

Climate action in the Central Okanagan did not begin with this Strategy. The RDCO and its partners have been building resilience, reducing risk, and investing in the region's long-term sustainability for years, through flood mitigation planning, wildfire risk reduction, air quality management, agricultural strategy, emergency management modernization, and land-use planning that increasingly reflects the realities of a changing climate. Residents have also been taking action of their own, FireSmarting their properties, conserving water, and preparing their households for emergencies.

Regional flood mitigation strategy

The RDCO has been working to reduce flood risk across the Central Okanagan since significant flooding events in 2017 and 2018. The RDCO took a phased approach to updating floodplain and flood hazard maps for lakes and creeks and, with the help of Associated Engineering, completed a Regional Floodplain Management Plan in 2021. This was followed by a Regional Flood Mitigation Strategy in 2022 that focuses on non-structural approaches to flood mitigation and preparedness. The Strategy reduces flood risk by maintaining and restoring natural areas and managing land use in flood hazard areas, alongside the use of dikes and dams. In August 2022, the RDCO updated its Zoning Bylaw for Electoral Areas to incorporate floodplain setbacks and mandate flood construction levels in flood hazard areas. The actions in this focus area advance and build on that work, extending consistent floodplain mapping and bylaw alignment across all member municipalities.

RDCO PROJECTS IN PROGRESS

This Strategy builds on the following plans and programs:

- Regional Flood Plan (2007)
- Keeping Nature in Our Future (2012)
- Regional Growth Strategy (2014)
- Clean Air Strategy (2015)
- Climate Projections for the Okanagan Region (2020)
- RDCO Emergency Response Plan (2020)
- Regional Transportation Plan (2020)
- Okanagan Sustainability Leadership Council - Okanagan Biomass Inventory (2021)
- Non-Structural Flood Mitigation Resource Guide (2021)
- Regional Floodplain Management Plan (2021)
- Regional Evacuation Planning Framework (2022)
- Regional Flood Mitigation Strategy (2022)
- RDCO Extreme Heat Response Plan (2023)
- Westside Regional Wastewater Treatment Plant Asset Management Plan (2023)
- RDCO Natural Assets Inventory (2024)
- Regional Growth Strategy Priority Projects Plan 2024-2028
- Regional Agricultural Strategy (2025)
- Community Wildfire Resiliency Plan (2026)

Our regional climate resilience strategy – an overview

The actions in this Strategy are organized across seven focus areas that together address the full range of climate risks facing the Central Okanagan and the GHG emissions reductions the region is committed to achieving. The focus areas are grounded in two primary sources of evidence: the risks and vulnerabilities identified in the Climate Risk and Vulnerability Assessment and the priorities raised through the public survey and workshops. Together, these focus areas form an integrated regional decision framework. The Strategy is intended to guide land-use planning, infrastructure investment, service delivery, emergency management, and intergovernmental advocacy over time to ensure that climate risk reduction and emissions considerations are consistently reflected in how the Central Okanagan grows, invests, and responds to disruption.



Each focus area reflects where both the technical analysis and community input identified the most pressing need for action.



Each focus area begins with key priorities that describe what the region is working toward in broad terms, based on the risks and vulnerabilities identified in the CRVA.

#

A series of targeted actions then sets out a workplan for the RDCO and our members and partners to achieve those key priorities, with each action supported by a brief rationale in a summary implementation table.

Focus areas



Community services & resilience

Emergency management, community facilities, public health supports, and social service providers that help residents prepare for, respond to, and recover from climate events.



Buildings, land use, & development

Homes, businesses, and public buildings, including how they are planned, built, operated, and retrofitted for improved energy efficiency, electrification, and climate resilience.



Water systems

Drinking water, stormwater, and wastewater (sewage) systems that support public health and manage flood and drought risks.



Natural assets & ecosystems

Forests, wetlands, grasslands, shorelines, and lake systems that support biodiversity, store carbon, and reduce flood and heat risks.



Transportation & evacuation

Roads, transit, active transportation networks, and emergency evacuation routes that move people, goods, and services safely during normal conditions and emergencies.



Economy & food systems

Agriculture, tourism, and local businesses that depend on climate-sensitive natural systems and support regional economic stability and food security.

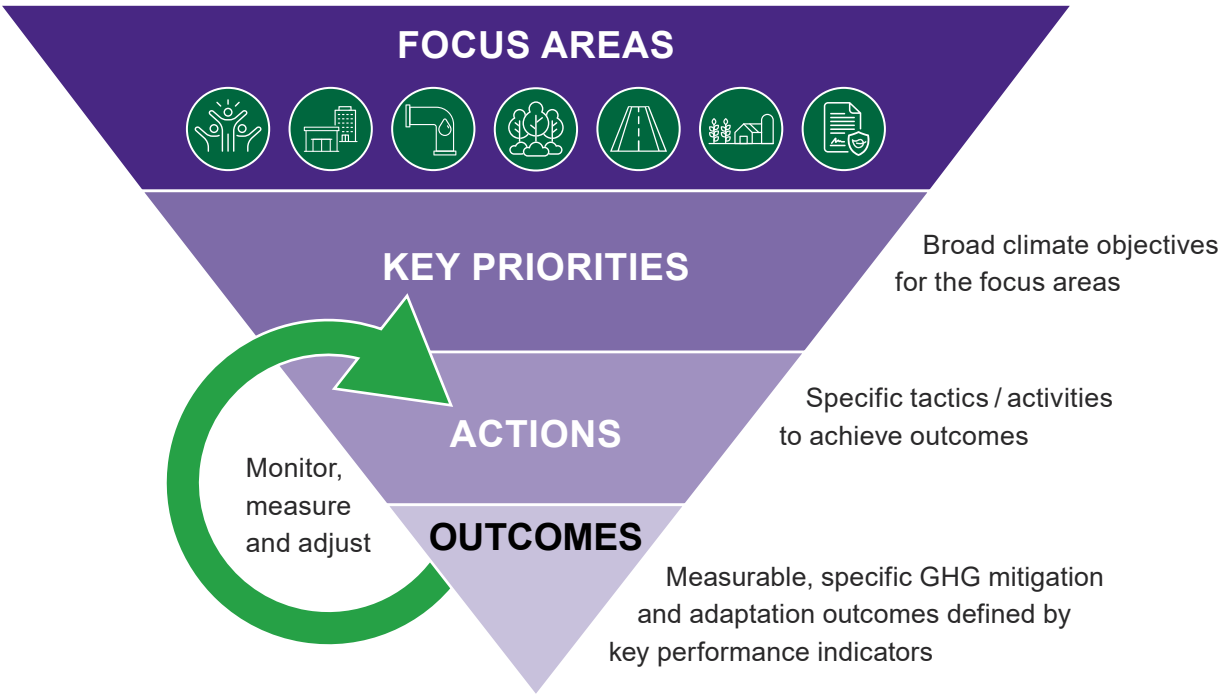


Climate resilient RDCO governance

RDCO policies, planning, operations, and decision-making systems that integrate climate mitigation and adaptation into regional governance and action.

In each focus area, key priorities describe broad climate action objectives, which are then supported by individual targeted actions.

Regional climate resilience strategy structure





Focus area 1: **Community services & resilience**

Building genuine community resilience means ensuring that every resident, regardless of where they live, what they earn, or how much support they have around them, can remain safe and recover from climate-related events.

Context & key risks



The Central Okanagan's community services, including recreation centres, libraries, community halls, emergency management systems, public health infrastructure, and the networks of organizations that support vulnerable residents, are the systems people rely on when climate events disrupt daily life. Extreme heat, wildfire and smoke, flooding, and landslides and debris flows place distinct and potentially compounding demands on these services. The cascading nature of these hazards means a single event can simultaneously disrupt critical support services while increasing risk for those who depend on them. Wildfire smoke above safe thresholds for public health is currently a roughly one-in-three-year occurrence in the Central Okanagan and is projected to become nearly annual by the end of the century. Extreme heat events are increasing in both frequency and duration. Flooding and debris flows can isolate rural and Electoral Area communities and limit access to essential services, while post-wildfire slope instability continues to present risks long after wildfire events.

Those most affected are those least able to protect themselves and to respond and recover, including seniors living alone without access to cooling or air filtration, children, people with disabilities or chronic illness, residents without vehicles or financial reserves, agricultural workers, and unhoused individuals who face compounding risks during climate events. Residents have consistently identified key needs, including better emergency alerts, accessible cooling and clean air spaces, and additional support for people facing financial, mobility, or housing tenure barriers to taking independent action.

Addressing these challenges requires strengthening regional capacity to prepare for, respond to, and recover from climate related events, focused on reaching those most at risk. This includes expanding access to safe cooling and clean air spaces during emergencies; improving coordination between health agencies, social service providers, and emergency management systems; strengthening communication and outreach to vulnerable residents; and enhancing recovery supports following climate events. It also requires better inter-agency coordination and integration of infrastructure data.



Key priorities

- Strengthen the region's capacity to prepare for, respond to, recover from, and adapt to climate events by fostering strong community networks, social connections, and local support systems.
- Support the identification and protection of the most vulnerable residents before, during, and after climate events.

Stay informed: subscribe to central okanagan emergency alerts

Climate-related emergencies such as wildfires, floods, and extreme heat can develop quickly. Residents and business owners are encouraged to subscribe to Central Okanagan Emergency Management alerts to receive timely notifications about evacuation orders, emergency conditions, and safety information directly from local authorities.

Subscribe at:
www.coemergency.ca/subscribe



Targeted actions

- 1.1** Establish a regional framework and designation criteria to coordinate Community Resilience Hubs, and work with member municipalities, community organizations, and partners to identify, support, and activate locally operated hubs that provide clean air, cooling, preparedness resources, and community support during extreme events.
- 1.2** Improve coordination and collaboration around Extreme Heat Response Plans to ensure implementation continuity across the region with health agencies, member municipalities, and service providers, including protocols for identifying at-risk populations, activating cooling spaces through resilience hubs, coordinating wellness checks, and escalating service response.
- 1.3** Initiate a regional voluntary registry for vulnerable residents and facilitate coordination with partner agencies on information sharing, assisted evacuation planning, and emergency response.
- 1.4** Develop and maintain a standardized regional post-disaster recovery framework that guides coordinated housing navigation, access to financial assistance programs, psychological first aid, and long-term mental health referral pathways, delivered by partner agencies following climate-related events.
- 1.5** Encourage uptake of emergency preparedness and response communications by working with community organizations, settlement services, and member municipalities and First Nations partner governments to reach vulnerable residents.
- 1.6** Continue working with telecommunications providers, municipalities, and emergency management partners to monitor and strengthen backup power, redundancy, and continuity measures for telecommunications infrastructure, and address gaps as identified.

Community hall upgrades in preparation for extreme weather events

Building climate-resilient community spaces is already underway across the Electoral Areas. With support from the Province of BC's Disaster Resilience and Innovation Funding, the RDCO has invested in critical infrastructure upgrades to enhance the emergency readiness of two community halls. The Killiney Beach Community Hall received a new HVAC system to provide climate-controlled shelter during extreme weather events and a standby generator to ensure the facility remains operational during power outages. At the Joe Rich Community Hall, a new standby generator will be installed to support the existing HVAC system. These halls will be able to offer safe and reliable space for Electoral Area residents during emergencies and extreme weather events. The Community Resilience Hubs framework in this focus area builds on this foundation, extending the designation and support of safe spaces across all communities in the region.

RDCO PROJECTS IN PROGRESS

1.7 Develop a climate-informed disaster waste management plan for the Central Okanagan that prepares the region's solid waste system to manage the volumes and types of waste generated by major climate events.

1.8 Continue to work with member municipalities and partners to deliver education programs promoting waste reduction, reuse, recycling, and circular economy approaches.

1.9 Explore opportunities to expand regional building material recovery and reuse initiatives, including assessing the feasibility of additional facilities or partnerships to support the separation, collection, and reuse of construction, renovation and demolition waste materials.

Expected benefit 	How this is achieved
Increased community resilience and emergency preparedness	Establishing Community Resilience Hubs and coordinated Extreme Heat Response planning provides locally accessible cooling, clean air, preparedness resources, and coordinated emergency activation during climate events (Actions 1.1, 1.2).
Increased support for vulnerable residents	A regional voluntary registry for vulnerable residents facilitates coordination with partner agencies on information sharing, assisted evacuation planning, and trigger-based emergency responses (Action 1.3).
Enhanced emergency response capabilities	Improved coordination of telecommunications redundancy, backup power systems, and continuity planning strengthens emergency communications and response reliability during climate disruptions (Action 1.7).
Improved mental and social health outcomes	A standardized post-disaster recovery framework supports coordinated housing navigation, financial assistance access, and mental health referral pathways following climate events (Action 1.4).
Reduction in GHG emissions through waste diversion and circular economy programs	Expanded waste reduction, reuse, recycling, and circular economy programs reduce material volumes entering the waste stream, supported by disaster waste planning and ongoing education initiatives (Actions 1.8, 1.9).
Stronger community connections and social cohesion	Accessible and culturally appropriate emergency communications delivered through community partners improve awareness, preparedness, and engagement across diverse populations (Action 1.5).



Focus area 2: Buildings, land use, & development

The homes, businesses, and community facilities that make up the Central Okanagan's built environment are both a major source of the region's GHG emissions and one of its most significant areas of climate vulnerability. Making buildings more energy efficient, cleaner to operate, and more resilient to climate events is a direct way the region can act on both fronts at once.

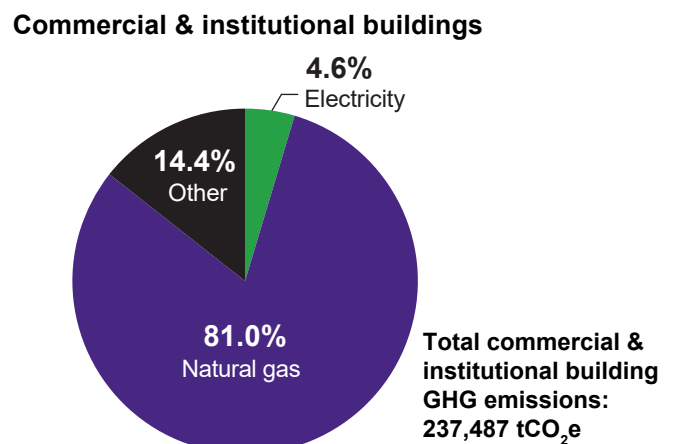
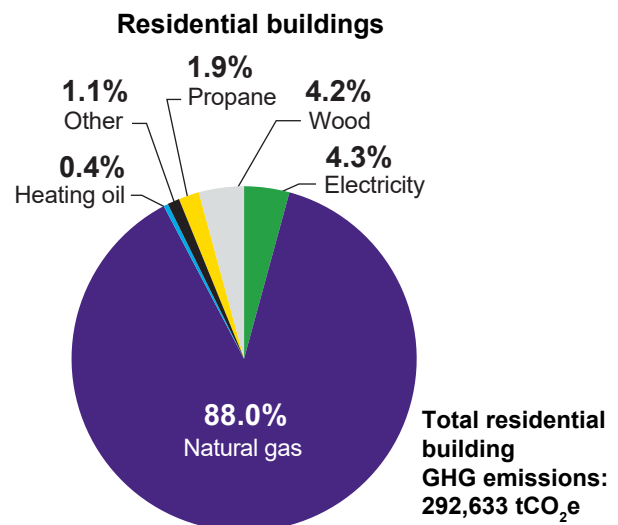
Context & key risks



Buildings account for 34% of the Central Okanagan's gross GHG emissions, with natural gas, heating oil, and propane the dominant contributors to home and business heating across the region.

Because buildings have long lifespans, more than half of the building stock expected to exist in 2050 is already in place and was not designed for future climate conditions. This creates a growing gap between existing building performance and evolving climate resilience demands. Extreme heat events are exposing the limitations of homes and buildings without mechanical cooling or adequate insulation. Older housing stock, often home to low-income households and renters, faces the greatest exposure. Wildfire smoke is already a recurring seasonal reality, yet many buildings lack the filtration systems needed to maintain safe indoor air quality during prolonged smoke events. Buildings in flood prone areas and on unstable slopes face increasing risks of structural damage. More broadly, the energy systems that support heating and cooling are increasingly vulnerable to power disruptions caused by extreme weather.

GHG emissions by building type and heating source



Addressing these challenges requires a major transformation of the existing building stock, focused on improving both energy performance and resilience while reducing building sector GHG emissions through transition away from fossil fuel-based heating systems. Electrification of buildings, through the replacement of fossil fuel systems with electric alternatives such as heat pumps, is a key strategy for reducing GHG emissions while also improving resilience to extreme heat and cold. Heat pumps provide both heating and cooling, supporting both climate mitigation and adaptation objectives. Achieving these outcomes will require widespread deep energy retrofits across the region's existing buildings. However, this transition is constrained by several barriers. High upfront costs disproportionately affect low-income households, renters, and residents in rural and Electoral Area communities. Split incentives can also hinder action, as property owners typically bear the cost of upgrades while tenants receive many of the benefits. In addition, limited technical capacity within parts of the construction and consulting sectors, combined with uncertainty about heat pump performance, can slow adoption and increase implementation costs.

To address these barriers, a coordinated regional approach can improve access to support for building retrofits and electrification, strengthen alignment across planning and regulatory tools, and reduce long term exposure to climate risk and building sector GHG emissions.

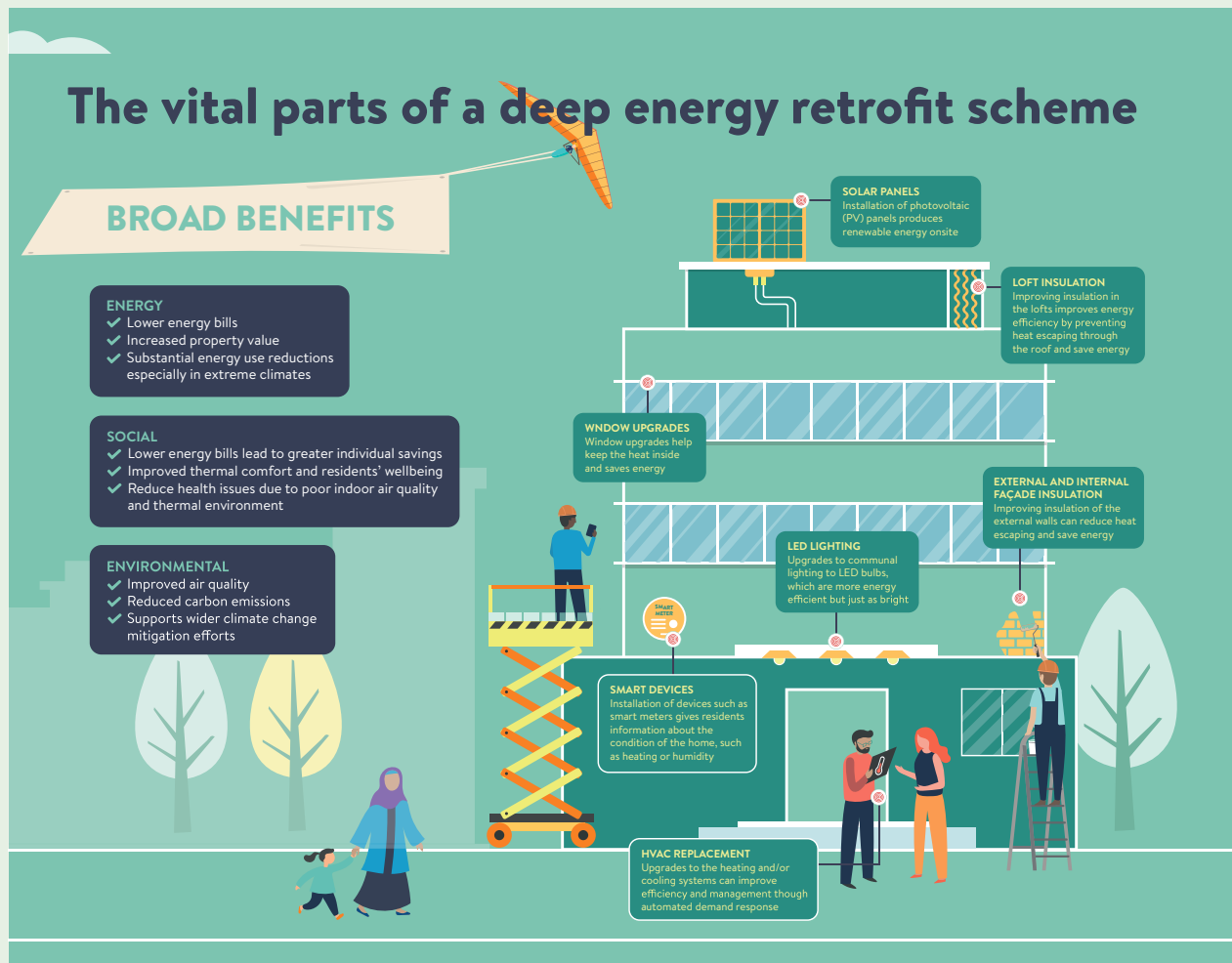
Key priorities



- Accelerate the transition of the region's building stock away from fossil fuels.
- Make homes and buildings more resilient to extreme heat, wildfire smoke, and flooding.
- Direct the benefits of building retrofits and electrification toward the residents who face the greatest barriers to implementing retrofits without financial and practical support.



Deep retrofits involve comprehensive upgrades such as improving insulation, upgrading mechanical systems, enhancing windows and air sealing, addressing flood risks to basements and mechanical equipment, and integrating renewable energy systems where feasible. These measures can significantly reduce energy use and its associated GHG emissions while improving comfort, safety, and resilience under changing climate conditions.



Deep energy retrofits: Enhancing energy efficiency in the built environment - Sharing Cities

Targeted actions

- 2.1** Establish a Central Okanagan Home Energy and Resilience Connector Program, delivered in partnership with utilities, governments, and service providers, to provide residents with end-to-end support to improve energy efficiency, climate resilience, and home survivability, including improved insulation, cooling, and wildfire smoke resilience for vulnerable residents and other priority populations.
- 2.2** Advocate for a regional coordination process with utilities and municipalities to align building electrification initiatives with grid capacity planning, emergency resilience needs, and demand-response strategies that reduce peak energy demand during extreme weather and ensure resilient energy supply.
- 2.3** Coordinate an Indoor Air Quality and Smoke Resilience initiative, providing guidance, education, and access to low-cost filtration and radon risk mitigation supports through partner delivery.
- 2.4** Coordinate development of a regional commercial and institutional building energy benchmarking approach, working with member municipalities and the Province to track energy use and GHG emissions and inform long-term retrofit and investment priorities.
- 2.5** Develop a best practice guide for climate resilient development and building practices, tailored to the Central Okanagan.
- 2.6** Ensure the new RGS and Electoral Official Community Plans (OCPs) consider current Electoral Area policy that permits new subdivision only where adequate services (including fire protection, or other emergency response measures) are available or can be feasibly extended (e.g. not proceeding with OCP or zoning amendments or subdivision applications in areas not included in a fire protection district).

RDCO Regional Air Quality Program

RDCO has delivered a Regional Air Quality Program through regional partnership since 1999. The [Central Okanagan Clean Air Strategy](#) encompasses both pollution prevention and emissions reduction goals. One of the program's major successes is encouraging and supporting chipping instead of agricultural and residential open burning to manage wood waste. It has also helped residents replace old, high emission wood burning appliances with cleaner technologies through rebates.

RDCO PROJECTS IN PROGRESS

Expected benefit 	How this is achieved
Reduction in GHG emissions from the building sector	A regional Home Energy and Resilience Connector Program, building benchmarking system, and retrofit support initiatives remove barriers to energy efficiency upgrades and accelerate building electrification and performance improvements (Actions 2.1, 2.4).
Energy savings and lower household energy costs	Improved access to rebates, financing, and contractor support through a centralized connector program enables households to complete energy efficiency upgrades that reduce energy consumption and utility costs (Action 2.1).
Increased thermal comfort and indoor air quality for building occupants	Indoor air quality and smoke resilience initiatives, including access to low-cost filtration and education programs, improve health and comfort during wildfire smoke and extreme heat events (Action 2.3).
Improved building resilience to wildfire, flooding, and extreme heat	Integrated building policy guidance, land-use planning, and wildfire interface considerations strengthen building design standards and reduce exposure to climate hazards in both new and existing development (Actions 2.5, 2.6).
Increased access to clean energy and electrification support for vulnerable households	Coordinated electrification planning, utility partnerships, and targeted retrofit support ensure that vulnerable households can access clean energy upgrades and grid-supported resilience measures (Actions 2.1, 2.2).
Green jobs created through the building retrofit and electrification sector	Expanded retrofit programs, electrification initiatives, and benchmarking-driven investment priorities stimulate demand for skilled labour in energy efficiency, construction, and clean energy sectors (Actions 2.1, 2.4, 2.5).



Focus area 3: Water systems

Water is the foundation of everything the Central Okanagan depends on. Securing the region's water supply from source to tap, through drought, wildfire, flooding, and infrastructure disruption, is a fundamental commitment of this Strategy.

Context & key risks



The Central Okanagan sits in one of Canada's driest regions, and the snowpack that feeds its watersheds is shrinking and melting earlier as the climate warms.^{13 14} Drought and low water conditions are projected to worsen significantly in the decades ahead, with summer stream flows declining and the period of peak water demand growing longer as temperatures rise and dry seasons extend. In addition, prolonged droughts will increase pressure and risks for small water systems and the many Electoral Area households that depend on groundwater wells, some of which are already running dry.

Wildfire poses a direct threat to source water quality by creating water-repellent soils and increasing the risk of ash, debris, and sediment entering watercourses and water intakes following a fire. These impacts can significantly increase water treatment requirements, as communities downstream of the 2021 White Rock Lake Fire experienced firsthand in the Whiteman Creek watershed.

Flooding poses a direct threat to water infrastructure by disrupting treatment and distribution systems at times when communities are already responding to multiple concurrent emergencies. Erosion and bank instability along key watercourses in the Electoral Areas further increase risks to infrastructure while contributing to higher sediment and nutrient loads that can impair water quality during and after flood events.

These compounding risks place increasing pressure on surface and ground water systems and highlight the growing importance of water security for residents across the region. Water security is consistently identified as a top concern, with residents calling for stronger enforcement of water restrictions, improved management of competing water demands among agricultural, recreational, domestic, and environmental uses, and greater protection of source watersheds. These expectations reinforce the need for coordinated regional action to ensure water resources are managed sustainably and equitably under changing climate conditions.



Key priorities

- Secure the region's water supply from source to tap through drought, wildfire, and disruption.
- Explore regional alignment and education on drought response frameworks.
- Strengthen the resilience of small and rural water systems in the Electoral Areas.

¹³ www.bcclimatechangeadaptation.ca/regional-adaptation/okanagan/

¹⁴ obwb.ca/wsd-index/climate-change-scenarios/supply-scenarios/

Targeted actions

- 3.1** Explore regional alignment and education on Provincial and Okanagan Basin Water Board drought response frameworks and participate on the OBWB Watershed Stewardship Council.
- 3.2** Advance and coordinate source water protection planning to address climate-driven risks including wildfire, erosion, debris flows, and contamination, and cumulative watershed impacts, while participating in existing and emerging regional water governance initiatives.
- 3.3** Implement the Central Okanagan Flood Mitigation Strategy, working with regional partners to align floodplain mapping and bylaw updates across member governments.
- 3.4** Identify and develop emergency water supply options to provide drinking water in Electoral Areas during disruptions.
- 3.5** Ensure small and community water systems have emergency and continuity plans in alignment with the requirements under the *Emergency and Disaster Management Act*.
- 3.6** Work with the Province, utilities, and regional members and partners to assess and address erosion and bank instability risks to critical infrastructure along key watercourses in the Electoral Areas, including developing monitoring triggers and mitigation options.
- 3.7** Work with the Province, the Okanagan Nation Alliance, water purveyors, and irrigation districts to define and integrate environmental flow needs into regional drought response, water planning, and Electoral Area land-use decisions.

Okanagan Basin Water Board Water Conservation Initiatives

Regional water conservation has been a shared priority across the Okanagan for years. The RDCO is one of the three founding regional districts of the Okanagan Basin Water Board (OBWB) and appoints three directors each year to sit on the OBWB Board of Directors. The Water Board plays an important role in supporting long-term drought resilience and encouraging an interjurisdictional water conservation culture across the Okanagan Valley. Make Water Work is the Board's flagship initiative focused on reducing outdoor water use and has an online catalogue of WaterWise, xeriscape, and FireSmart plants. The Board publishes regular drought bulletins that summarize the current state of snowpack and stream flows, raises awareness on local water restrictions as set by utilities, and provides grants focused on drought resilience to local governments, First Nations, irrigation districts, and non-profit organizations. All of these actions arise from the OBWB's climate adaptation-informed Okanagan Sustainable Water Strategy. The Regional Water Conservation and Drought Response Framework in this focus area builds on this partnership, aligning drought stages and response measures consistently across all member municipalities and Electoral Areas.

RDCO PROJECTS IN PROGRESS

Expected benefit 	How this is achieved
Improved water security and supply reliability	A regional Water Conservation and Drought Response Framework improves coordination of drought stages, response measures, and public communication across member municipalities and Electoral Areas (Action 3.1).
Improved water and wastewater infrastructure resilience	Ensuring small and community water systems have emergency options and plans, enhances continuity of service during disruptions (Action 3.4, 3.5).
Reduced risk of wildfire-driven drinking water contamination	Source water protection planning and participation in regional watershed governance address wildfire, erosion, debris flow, and contamination risks at the basin scale (Action 3.2).
Updated and climate-resilient water policies across member municipalities	Implementation of flood mitigation strategies, coordinated floodplain mapping, and cross-jurisdictional bylaw alignment supports consistent, climate-informed water and land-use policy (Actions 3.3, 3.6, 3.7).
Environmental flow needs integrated into regional drought response	Ensures instream flows for fish and aquatic ecosystems are accounted for as summer stream flows decline, and the period of peak human demand lengthens, rather than becoming the default casualty of drought. (Action 3.7)





Focus area 4: Natural assets & ecosystems

The Central Okanagan's forests, wetlands, grasslands, riparian corridors, and lake systems are the infrastructure that sustains the region's economy and communities. They filter water, store carbon, reduce flood risk, and support biodiversity.

Context & key risks



The Central Okanagan covers roughly 314,000 hectares. More than half is forested, with the remainder consisting of water bodies, agricultural land, settlements, roads, and the smaller wetlands and riparian areas that connect them. The broader Okanagan Basin is recognized as one of Canada's most endangered ecosystems, and the Central Okanagan supports a high concentration of species at risk relative to its size, reflecting a diverse valley ecosystem shaped by long-standing development pressure.¹⁵ These pressures are already evident across the landscape and are being intensified by climate change.

Drought conditions reduce stream flows, raise water temperatures, and place increasing stress on riparian vegetation and fish habitat, with dry years expected to occur more frequently in the future. Wildfire is a key risk in undeveloped wildland vegetation and in wildfire interface areas. Following wildfire, landscapes become increasingly vulnerable to landslides, debris flows, and bank erosion that destabilize slopes, damage riparian corridors, and deliver sediment into watercourses. These impacts can persist long after a fire has been extinguished, and the conditions that produce them are expected to become more frequent as fire seasons lengthen. Wind events during fire seasons also increase risks of canopy damage and the spread of invasive species into disturbed areas.

The region's natural assets play a direct role in both ecological health and GHG emissions balance. Forests, wetlands, and grasslands across the region's hillsides, valley floors, and riparian corridors sequester a meaningful share of community GHG emissions (~30%), and maintaining and enhancing this carbon sink capacity is essential to achieving reducing GHG emissions to be on a pathway towards net zero. However, wildfire and drought are already undermining this function, converting forests from carbon sinks into carbon sources when they burn. Protecting and restoring natural systems is therefore both an ecological priority and a necessary climate mitigation strategy. At the same time, these ecosystems provide critical services that reduce climate risk for communities. Intact forests and wetlands slow and absorb stormwater, reducing flood peaks and protecting downstream infrastructure. Healthy riparian corridors stabilize banks, filter sediment, and help maintain water temperatures required by aquatic species. Grassland and shrub steppe ecosystems store carbon in soils that are highly vulnerable to disturbance and slow to recover. As urbanization and climate change intensify, the loss of these systems increases both ecological vulnerability and reliance on costly engineered infrastructure to manage flooding, erosion, and heat (due to the loss of natural cooling functions).

¹⁵ [OKANAGAN HABITAT PRESERVATION 2030 - Home Page](#)

To respond effectively, climate resilience and ecosystem protection must be embedded into land-use planning, development decisions, and regional policy frameworks. Nature-based solutions that conserve and restore natural systems can enhance resilience while delivering multiple co-benefits, including improved water quality, reduced flood risk, stabilized slopes, enhanced carbon storage, cooler neighbourhoods, and improved habitat conditions. This requires recognizing natural assets as essential regional infrastructure, integrating ecosystem services into planning and asset management systems, and prioritizing the protection of high-value ecological areas before they are lost to development pressure. Collaboration with First Nations, provincial agencies, and conservation partners will be essential to protect and manage these systems.

Key priorities



- Protect and connect the region's ecologically significant natural areas.
- Manage natural systems as critical regional infrastructure that stores carbon, cools communities, and provides beneficial ecosystem goods and services to communities.
- Embed natural asset values into how the RDCO plans, invests, and makes decisions.



Targeted actions

- 4.1** Continue to work with the Okanagan Collaborative Conservation Program, Living Lakes Canada, and other partners to identify and implement conservation opportunities that enhance climate resilience, including watershed function, habitat connectivity and wildlife corridor protection, foreshore management, carbon storage and ecosystem services, through mapping, land acquisition, and conservation partnerships, in collaboration with First Nations partner governments.
- 4.2** Continue periodic updates to the RDCO's Sensitive Ecosystems Inventory (SEI) mapping and update Electoral Area OCP policy and environmental Development Permit Areas (DPAs) to ensure no net loss of regional habitat, including conservation areas and carbon sinks.
- 4.3** Update the RDCO's natural asset inventory, including incorporation of ecosystem service metrics such as the role of regional parks in providing clean water, flood buffering, carbon storage, and landscape cooling.
- 4.4** Develop a climate-adaptive ecological restoration program for RDCO regional parks to recover after natural disasters, helping park ecosystems to be more resilient to climate change.
- 4.5** Advocate to BC Wildfire Service and other Provincial agencies, and collaborate with local watershed partners to develop post-wildfire runoff and debris flow response protocols for key catchments in the region, including monitoring triggers, alert systems, and community notification procedures.
- 4.6** Continue to support the coordinated lake water quality monitoring and response program led by the Okanagan Basin Water Board (co-chaired by the City of Kelowna and Westbank First Nation) by contributing local data, coordinating public notification protocols, and aligning beach closure procedures across RDCO-managed parks and beaches.
- 4.7** Advocate to the Province to develop clear protocols enabling Westbank First Nation and Okanagan Indian Band to conduct cultural and prescribed burning within air quality management framework.
- 4.8** Support the development of a regional stream temperature monitoring network and public-facing visualization tool, in partnership with the Okanagan Nation Alliance, OBWB, and watershed groups, to track thermal stress in key tributaries through the warm season.

Expected benefit 	How this is achieved
Sustained ecosystem services including water purification, carbon sequestration, and flood attenuation	Partnerships with conservation organizations support ecosystem mapping, land acquisition, stewardship agreements, and habitat corridor protection and stream temperature monitoring to secure high-value natural areas (Action 4.1, 4.8).
Preservation and expansion of natural carbon sinks	Official Community Plans guide land-use decisions and Environmental Development Permit Areas protect high-value ecosystems (Action 4.2).
Improved climate resilience and community protection	Climate-adaptive vegetation management and post-wildfire watershed response protocols reduce wildfire, pest, and debris flow risks while maintaining ecosystem function (Actions 4.4, 4.5).
Green jobs through ecosystem restoration and conservation investment	Investment in ecosystem mapping, conservation partnerships, and land management programs supports employment in restoration, stewardship, and environmental monitoring sectors (Actions 4.1, 4.4).



Sensitive ecosystem inventory

Understanding and protecting the region's most ecologically significant natural areas has been an RDCO priority for more than two decades. The RDCO maintains a Sensitive Ecosystem Inventory, which is one of the best sources of information on the Central Okanagan, one of British Columbia's most ecologically significant regions. As a low-elevation semi-arid landscape, it supports a remarkable diversity of ecosystems, from dry grasslands to high elevation old conifer forests, and provides habitat for some of Canada's rarest plant and animal species.

The SEI was first developed in 2001 through a partnership between the RDCO and the Province of BC and most recently updated in 2021, with public release in 2024. Since 2001, the SEI has been widely referenced in official community plans, development permit area designations, and environmental assessment practices across the Central Okanagan. The SEI provides a science-based platform for regional efforts to minimize disturbance to natural drainage areas, protect significant regional carbon sinks, and support ecosystem health alongside wildfire hazard reduction efforts.

The region's GHG study demonstrates that natural ecosystems have significantly slowed the region's emissions growth, with forests, parks, wetlands, and other natural areas absorbing approximately 445,000 tonnes of CO₂ over the past several decades, roughly 30% of the region's total GHG emissions during that period. The natural asset inventory update and habitat retention targets in this focus area build directly on the SEI's foundation.

RDCO PROJECTS IN PROGRESS



Focus area 5: Transportation & evacuation

The Central Okanagan's regional transportation network connects the region, moves people and goods, and helps residents get out of harm's way when emergencies unfold. Disruption during climate events affect every part of regional life and is best addressed at the regional level.

Context & key risks



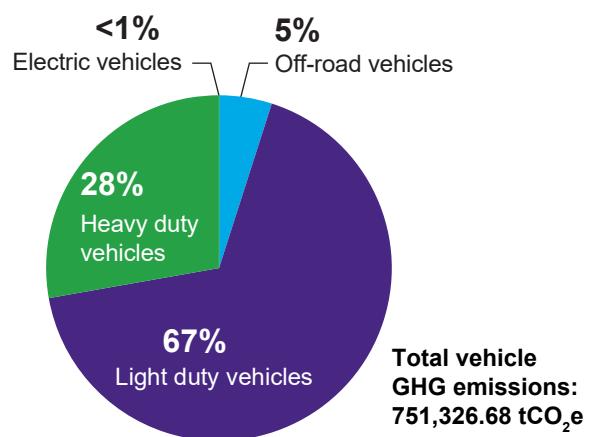
The Central Okanagan's transportation network is connected by a limited number of highway corridors that are increasingly exposed to wildfire, flooding, landslides, and debris flows. When these corridors are disrupted, the consequences extend well beyond inconvenience. Highway closures can cut off evacuation routes, disrupt supply chains, isolate communities with no alternative access, and leave residents without vehicles or mobility support stranded during emergencies. Flooding and debris flows may cause closures to secondary roads and damage to bridges in rural and Electoral Area communities, with these risks expected to increase as rainfall events intensify. Wildfire events have also resulted in the loss of forest service roads that previously provided secondary access to rural communities.

At the same time, the transportation system is a major source of GHG emissions. Personal vehicles account for the dominant share of the 49% of community GHG emissions attributed to transportation, with light duty vehicles representing more than 65% of transportation related GHG emissions (see chart to the right). This points to the need to reduce dependence on private automobiles and reconsider how communities are designed across the region.

While responsibility for transportation planning is shared across multiple levels of government, with highways and most Electoral Area roads under provincial jurisdiction and local road networks managed by member municipalities, there remains an opportunity to reduce both risk and GHG emissions through coordinated planning. This includes improving transit and active transportation systems,

enhancing redundancy across critical transportation corridors where feasible, and better integrating land-use and transportation planning to reduce vehicle dependence and long-term exposure to corridor failures and climate-related disruptions. It also involves ensuring evacuation and emergency response systems can support residents without access to private vehicles.

GHG emissions by vehicle type





Key priorities

- Optimize evacuation systems to support residents during climate emergencies.
- Reduce the region's dependence on single-occupancy vehicles and the GHG emissions they produce.
- Build regional supply chain and transportation network resilience to prepare for climate disruptions.

Regional Bicycling and Trails Master Plan

Investment in active transportation infrastructure that gives residents low-carbon, low-cost alternatives to private vehicle ownership is already underway across the region. A Regional Bicycling and Trails Master Plan was developed in 2020 that includes recommended projects for connecting key regional destinations across the Central Okanagan with safe and comfortable bicycle and trail facilities. These types of connections are an important way of encouraging low-carbon access to many of the RDCO's 25 regional parks, which were recognized in 2024 as an integral part of Canada's National Conservation Network. The active transportation actions in this focus area build on this foundation, advancing advocacy for completion of the Westside Trail, Okanagan Rail Trail, and other regional corridors identified in the Master Plan.

RDCO PROJECTS IN PROGRESS

Targeted actions

- 5.1** Achieve fast and reliable transit by advocating for building a new regional transit facility required for fleet expansion, creating a new transit lane on the William R. Bennett bridge, and adding dedicated transit lanes along Harvey Avenue, as recommended in the Regional Transportation Plan.
- 5.2** Create a safe and convenient regional bicycling and trails network by advocating for the completion of the Westside Trail, Okanagan Rail Trail, and other regional active transportation corridors recommended in the Regional Bicycling and Trails Master Plan.
- 5.3** Continue to coordinate on evacuation transportation protocols with municipalities, First Nations, and service providers, to support residents without access to private vehicles during evacuations and major disruptions.
- 5.4** Coordinate regional response planning for extended highway closures, including detour planning, emergency access, fuel and food distribution, and supply chain continuity, in collaboration with provincial and regional partners.
- 5.5** Increase the resilience of the Central Okanagan's supply chain during highway closures by advocating for improved air access and intermodal terminals in the BC Interior, as recommended in the Central Okanagan Goods Movement Study.
- 5.6** Advocate to the province for sufficient transit service and infrastructure funding to ensure frequent transit service can be provided in transit-oriented areas and along transit-supportive corridors (as more housing is provided in these locations across the region as part of implementing Bill 44).
- 5.7** Advocate to restore or replace critical routes in Electoral Areas, such as forest service roads, to maintain access for First Nations, rural, and vulnerable residents.
- 5.8** Assess seismic risk to critical facilities, transportation corridors, and access routes across the Electoral Areas, including vulnerabilities within critical infrastructure systems and networks, and use the results to guide emergency planning and response priorities.
- 5.9** Explore developing policy guidance for the Electoral Areas for when secondary access should be required at the time of subdivision approval to support emergency evacuations.

Expected benefit 	How this is achieved
Avoided GHG emissions from the transportation sector	Investments in transit priority infrastructure, active transportation corridors, and density-aligned transit service policy reduce reliance on private vehicles and support mode shift (Actions 5.1, 5.2, 5.6).
Shorter commute times and improved mobility options for all residents	Transit priority lanes, expanded regional active transportation networks, and transit-oriented development policies improve travel efficiency and increase transportation choices across the region (Actions 5.1, 5.2, 5.6).
Increased community resilience through improved emergency access and evacuation planning	Regional evacuation transportation planning establishes clear triggers, routes, responsibilities, and partnerships to support residents without private vehicles during emergencies (Action 5.3, 5.4, 5.7, 5.9).
Improved supply chain resilience during highway closures	Regional highway closure response planning and advocacy for resilient intermodal transport options strengthen goods movement continuity during wildfire and winter disruption events (Actions 5.4, 5.5).
Increased access to transit and active transportation for residents without vehicles	Expansion of connected transit and active transportation networks, combined with policy linking land use and transit frequency, improves equitable access to mobility options (Actions 5.2, 5.6).





Focus area 6: Economy & food systems

The Central Okanagan's economy is deeply tied to its landscapes and climate. Agriculture, tourism, and the small and medium-sized businesses that serve a growing population are all exposed to the effects of climate change in ways that threaten livelihoods and the economic foundation of the region.

Context & key risks



The Central Okanagan's economy is highly exposed to climate related risks due to its reliance on environmental conditions and regional connectivity. Tourism and recreation are closely tied to the region's lakes, parks, landscapes, and outdoor experiences, making them particularly vulnerable to climate-related hazards. Wildfire smoke, extreme heat, flooding, and other disruptions can reduce visitor numbers, limit access to recreational areas, and affect the quality of the natural environments that attract visitors. Given the region's reliance on a summer visitor economy, these impacts can have significant economic consequences for local businesses and communities. Agriculture is similarly exposed, with production increasingly affected by drought, extreme heat, flooding, and shifting seasonal conditions that reduce yields, increase uncertainty, and place growing pressure on farm viability. Changing climate conditions also increase the spread of pests and diseases, further compounding risks to agricultural productivity.

Regional food systems are highly dependent on external supply chains. As a result, transportation disruptions, extreme weather, and emergency events can quickly translate into reduced food availability, higher costs, and the potential for food insecurity, especially among vulnerable residents. This dependence limits regional resilience and highlights the need to strengthen local food production, distribution capacity, and coordination across the food system to better withstand climate related shocks. Small and medium sized businesses across the region are also vulnerable to power outages, supply chain disruptions, and the cumulative impacts of repeated emergency events, which can deter visitors, disrupt operations, and create financial instability. Agricultural operators face additional pressures from water scarcity, labour constraints during emergencies, and the potential loss of infrastructure and productive land due to wildfire and flooding.

Strengthening economic resilience in this context requires coordinated action across economic development, emergency management, agriculture, and land-use planning. This includes improving preparedness and continuity planning for businesses and agricultural operations, enhancing local and regional food system capacity, strengthening agricultural water management, and supporting diversification and adaptation across key economic sectors. It also requires integrated planning to reduce long term vulnerability and support more effective recovery following climate events.

At the same time, these climate-related risks create a growing need and opportunity for innovation, technology adoption, and economic diversification. The transition to a low carbon and climate resilient economy is accelerating demand for clean technology, agri technology, and digital solutions that improve efficiency, reduce GHG emissions, and strengthen resilience across sectors. Without coordinated support, local businesses and farms may face barriers to adopting new technologies or accessing emerging markets, limiting their ability to adapt. Strengthening the region's innovation ecosystem, including connections between businesses, post secondary institutions, and investors, is critical to ensuring that local industries can develop, adopt, and scale solutions that respond to climate impacts while supporting long-term economic stability.

Key priorities



- Strengthen the resilience of the region's economy, including sectors with higher vulnerability to climate related events such as agriculture and tourism.
- Build a more resilient regional food system that can withstand supply chain disruptions.
- Give farms and small businesses tools and support to manage climate risk, including supporting access to technology, innovation, and clean energy solutions.
- Support the growth of innovation, clean technology, and agri-technology sectors to enable climate adaptation, reduce emissions, and diversify the regional economy



Targeted actions

- 6.1** Ensure that agriculture is integrated into regional emergency preparedness, response, and recovery plans, including livestock evacuation, water supply management, feed access, and farm continuity planning, as recommended in the Regional Agricultural Strategy.
- 6.2** Develop a regional food security plan that supports existing community efforts to strengthen food systems, improve understanding of food flows, and enhance long-term food resilience, including food hub development.
- 6.3** Develop and maintain a regional business continuity and recovery framework to support small and medium-sized enterprises in preparedness, response, and recovery from disruptions, including outreach, coordination, and navigation supports.
- 6.4** Partner with interested groups on agricultural water planning in the region, including efficient irrigation, water storage, and drought adaptation measures, with consideration of watershed-wide water availability, environmental flow needs, and drought allocation priorities within existing regional drought response frameworks, as recommended in the Regional Agricultural Strategy.
- 6.5** Work with the Central Okanagan Economic Development Commission, member municipalities, and First Nation governments to develop programs and resources that support businesses in adapting operations to climate impacts, including extreme heat and water constraints, including the adoption of innovative technologies and practices that improve efficiency, resilience, and long-term sustainability.
- 6.6** Work with the Central Okanagan Economic Development Commission, member municipalities, First Nation governments, and regional partners to advance the growth of innovation, clean technology, and agri technology sectors by supporting local business growth and focusing business attraction efforts.

Regional Agricultural Strategy

Agriculture is an important part of the heritage and cultural identity of the Central Okanagan, and a changing climate is among the most significant challenges facing the industry. A new Regional Agricultural Strategy was endorsed by the Board on September 18, 2025, and among its core strategies is the need to increase water security for the agri-food industry and to prepare for emergencies with agriculture in mind. Member governments, partners, producers, industry associations (including the Cross-Commodity Leadership Support Project), and relevant government agencies all participated to develop a regionally coordinated approach for the next decade. Priorities to support regional agricultural sector resilience include planning for efficient irrigation, water storage, and drought adaptation measures. Priorities also include integrating agriculture into regional emergency preparedness, response, and recovery plans, including livestock evacuation, water supply management, feed access, and farm continuity planning. The actions in this focus area build directly on those priorities, advancing the implementation of the Regional Agricultural Strategy's most climate-critical commitments.

RDCO PROJECTS IN PROGRESS

Expected benefit 	How this is achieved
Strengthened agricultural resilience and sustainability	Integration of agriculture into emergency preparedness and recovery planning supports coordinated responses for livestock, water supply, feed access, and farm continuity during climate events (Action 6.1, 6.5).
Enhanced agricultural productivity through climate-smart practices	Agricultural water planning, including efficient irrigation, water storage, and drought adaptation measures, improves long-term farm viability under changing climate conditions (Action 6.4).
Diversified and resilient food security measures	A regional food security plan that maps food flows and supports food hub development strengthens local distribution capacity and reduces vulnerability to supply chain disruptions (Action 6.2).
Improved business continuity and economic resilience	A regional business continuity and recovery framework supports SMEs and tourism operators in planning for, responding to, and recovering from climate-related disruptions (Actions 6.3, 6.5, 6.6).
Enhanced protection for agricultural and outdoor workers from climate hazards	Climate adaptation programs and agricultural support initiatives help businesses adjust operations to heat, water constraints, and climate-related exposure risks affecting outdoor and agricultural workers (Action 6.5).





Focus area 7: Climate resilient RDCO governance

Leading by example on climate resilience and GHG emissions reduction is part of the RDCO's governance responsibility.

Context & key risks



The RDCO owns and operates a significant portfolio of assets and services that are directly exposed to the climate risks described throughout this strategy, including regional parks infrastructure, Electoral Area water systems, waste facilities, and the emergency management systems that coordinate the region's response to climate events. Many of these assets were designed under climate assumptions that no longer reflect current or future conditions, creating increasing risk that essential services may not perform as intended when communities are most reliant on them.

Addressing this risk requires looking beyond individual assets to the decisions that shape them over time. RDCO capital planning and asset renewal decisions represent significant long-term investments that can lock in infrastructure performance, resilience, and GHG emissions outcomes for decades. Similarly, the RDCO's land-use planning and policy responsibilities in the Electoral Areas directly influence development patterns that determine future exposure to climate hazards. Embedding climate risk considerations into these decision-making processes in a consistent and systematic way is a key lever to reduce long-term vulnerability and avoid costly adaptation needs and retrofits over time. At the same time, climate change requires organizational adaptation. Like other local governments, the RDCO must manage competing priorities within constrained resources while climate change increasingly affects all focus areas and decision-making processes. Without deliberate integration of climate considerations into core systems, there is a risk of fragmented responses, increased

financial liability, and operational disruption. Over time, this can result in reduced infrastructure performance, increased service disruptions during extreme events, and higher costs associated with emergency response and recovery.

To respond effectively, climate resilience and GHG emissions considerations must be embedded across all levels of RDCO decision making, including policies, bylaws, procedures, capital planning, and asset management systems. This includes integrating climate risk into corporate risk management frameworks, strengthening internal climate leadership, and ensuring staff and decision makers have the tools and information required to incorporate climate considerations into everyday decisions. It also requires aligning capital investment decisions with long-term climate projections to reduce the risk of investing in infrastructure that is not resilient to future conditions or reliant on high GHG emissions pathways.



Key priorities

- Embed climate risk and GHG emissions considerations into RDCO decision-making.
- Lead by example through reducing corporate GHG emissions and hardening of RDCO infrastructure.
- Partner with First Nations in the implementation and future renewal of this Strategy.

Building resilience: integrating disaster risk reduction, emergency management, and climate adaptation for a safer future

This Strategy also supports the RDCO's obligations under British Columbia's *Emergency and Disaster Management Act*, which requires local governments to develop and maintain plans and programs that identify and reduce the risks that hazards pose to people, property, and the environment. The RDCO is actively integrating Disaster Risk Reduction, Emergency Management, and Climate Adaptation into this climate resilience plan to build a resilient community to the effects of climate change. These efforts are aligned with the four stages of disaster preparedness: Prevention, Preparedness, Response, and Recovery.

The RDCO continuously seeks opportunities to reduce the probability of emergencies and their consequences, takes actions to be ready for emergencies through organizing, training, and evaluating emergency actions, protects life and infrastructure during and immediately after emergencies, and works to rebuild and restore services post-emergency. By integrating these elements into the Strategy, the RDCO is working towards reducing vulnerability to climate-related hazards, enhancing community preparedness, and promoting sustainable development.



RDCO PROJECTS IN PROGRESS

Targeted actions

- 7.1** Ensure ongoing engagement with First Nation governments and inclusion of nsyilxcən language, knowledge systems, and governance in Regional Climate Resilience Strategy implementation.
- 7.2** Integrate climate resilience and GHG emissions considerations into RDCO asset management, capital planning, and bylaws through a phased review and update of existing policies.
- 7.3** Require standardized climate risk and lifecycle GHG assessments for RDCO capital projects and infrastructure decisions and use the results to inform prioritization and design.
- 7.4** Embed climate risk into RDCO corporate risk management frameworks, business continuity planning, and recovery processes.
- 7.5** Update regional park design guidelines to incorporate climate change resiliency in the development of regional parks assets that supports park users and the parks to be adaptable to climate change (i.e., shade trees or structures for playgrounds, using water conservation appliances, higher and longer bridges, use of fire-resistant materials, etc.
- 7.6** Conduct energy and resilience assessments of RDCO-owned buildings and facilities and develop and implement a phased plan to reduce corporate GHG emissions and improve the climate resilience of RDCO infrastructure.
- 7.7** Develop best practices for incorporating nature-based solutions into RDCO-owned infrastructure planning and design, identifying where they can be used in place of or alongside engineered approaches.
- 7.8** Identify lift stations in flood-prone areas and develop flood-proofing and manual operation protocols.
- 7.9** Develop a regional approach to infrastructure hardening and resilience improvements at RDCO critical facilities to improve resilience to wildfire, flooding, and extreme weather, including standards for flood protection, fire-resistant materials, and vegetation management.
- 7.10** Develop and implement a fleet electrification plan including transition targets and charging infrastructure at RDCO facilities.

Rising from ashes: wildfire recovery

Four Central Okanagan regional parks were severely damaged due to wildfires. This is the recovery story about these parks.

The 2023 Grouse Complex Wildfire (including McDougall Creek, Walroy Lake and Clarke Creek wildfires) burned 13,970 hectares (139 km²) from August 15 to September 21 during the worst wildfire season on record in British Columbia. The fires forced the temporary closure of more than half the regional parks in the Central Okanagan. The fires caused severe burn damage to four regional parks, one remains fully closed.

The RDCO is working with provincial agencies to access funding and permits, specialized geotechnical consultants to assess the damage and hazards, and forestry experts to plan recovery and restoration of the wildfire damaged parks.

Raymer Bay and Traders Cove Regional Parks reopened in April 2024. Ten percent of Rose Valley reopened on December 20, 2024 and Stephens Coyote Ridge Regional Park remains closed.

The post-wildfire recovery process includes assessments of environmental damage, risks to public safety, impacts on wildlife habitat, infrastructure and archeological sites. Post-wildfire hazards are identified including higher peak water

runoff and flow, reduced water storage capacity, increased soil erosion, and hazardous trees and roots. Ensuring public safety is of the utmost importance in all regional parks. Trails, entry gates, washrooms, kiosks, trail markers and way-finding signs are recovered and repaired. Park restoration includes salvage harvesting, and replanting with consideration to cultural and habitat needs, seasonality, and appropriate species.

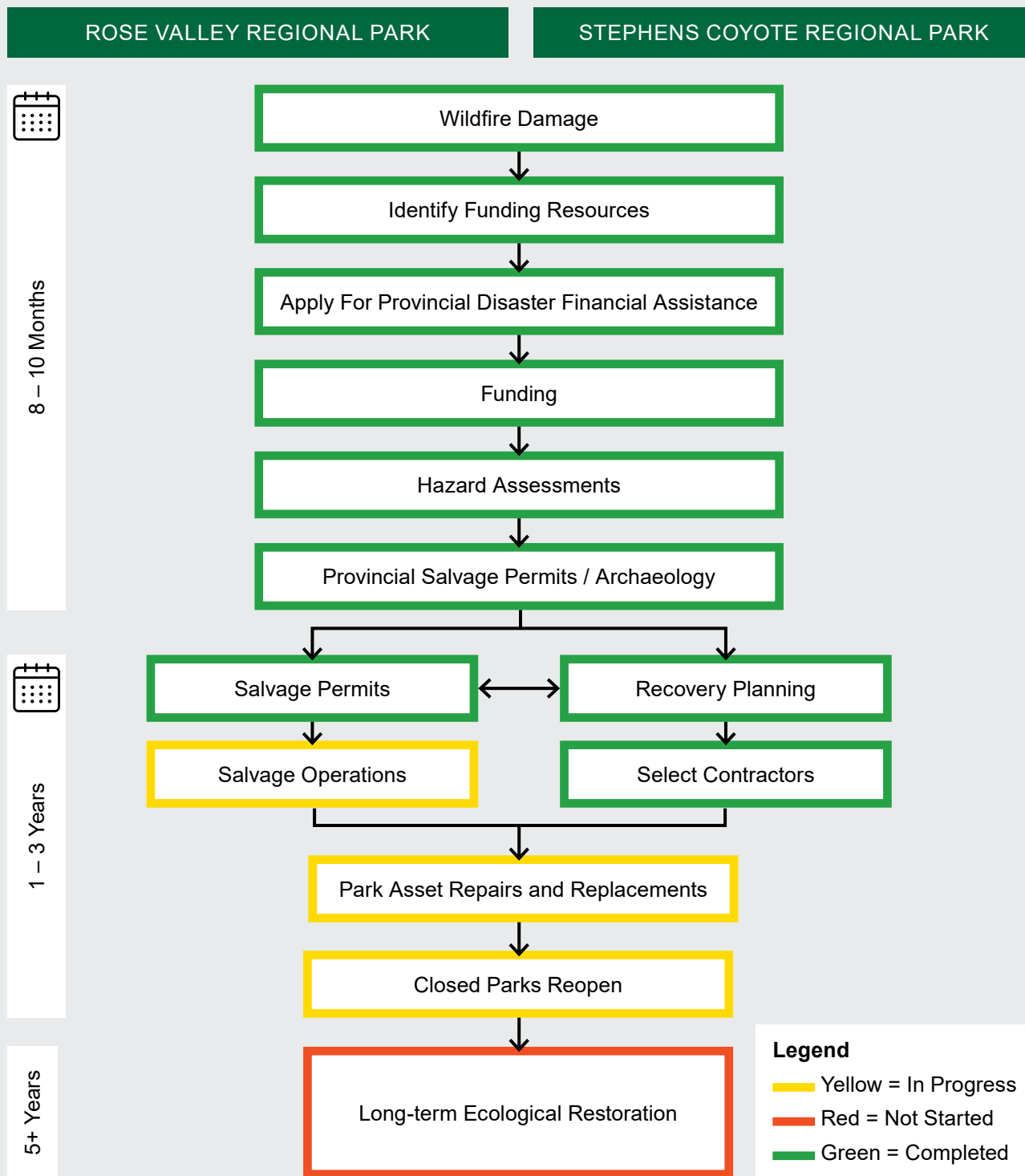
Nearly three years after the 2023 McDougall Creek wildfire, Rose Valley Regional Park is showing steady signs of recovery. RDCO continues to use a phased approach that prioritizes visitor safety while supporting ecosystem regeneration.

Hazard tree removal, salvage logging, and controlled pile burning have helped prepare the landscape for renewal, and select trails are now reopened including Yellow Bell, Forest, and Bitterroot. In the spring of 2026, RDCO staff and community volunteers planted more than 600 native trees, shrubs, forbs and grasses, many grown from locally collected seeds while other areas are being left to recover naturally.

Larger scale planting and restoration efforts will continue, recognizing that rebuilding healthy forests, wildlife habitat, and resilient trails is a long term process.

CASE STUDY

Post-wildfire recovery process



CASE STUDY

Expected benefit 	How this is achieved
Dedicated oversight and improved climate accountability	Integrating climate resilience and GHG considerations into RDCO asset management, capital planning, bylaws, and land-use planning ensures consistent corporate oversight of climate outcomes across all decisions (Action 7.2).
Reduction in GHG emissions from RDCO corporate operations	Developing and implementing a corporate fleet electrification plan, alongside emissions-focused planning for RDCO operations, reduces direct corporate emissions and supports clean energy transition (Action 7.2, 7.3, 7.6, 7.10).
Improved climate resilience of RDCO-owned assets and infrastructure	Conducting energy and resilience assessments and implementing phased upgrades, along with infrastructure hardening standards and flood/fire protection measures, improves the durability of RDCO facilities under climate stress (Actions 7.6, 7.9, 7.8).
Smarter capital planning and long-term cost avoidance	Requiring climate risk and lifecycle GHG assessments for capital projects embeds long-term risk and emissions considerations into investment decisions, reducing the likelihood of maladaptive infrastructure (Actions 7.3, 7.2).
Improved organizational risk management and continuity	Integrating climate risk into corporate risk management, business continuity, and recovery planning strengthens the RDCO's ability to anticipate, prepare for, and respond to climate-related disruptions (Action 7.4).
Increased use of nature-based solutions in infrastructure planning	Developing best practices for incorporating nature-based solutions into RDCO infrastructure and park design provides a structured framework for integrating ecological approaches alongside engineered solutions (Action 7.5, 7.7).



Implementation

Delivering the actions in this Strategy will require sustained investment from multiple sources over the coming decades.

Some actions fall within the RDCO's existing operating budgets and can be advanced through current programs and staff capacity. Others will require new dedicated resources, including staff positions, program budgets, and capital investment, identified and secured through the RDCO's annual budget process. Many of the Strategy's most significant actions depend on funding from provincial and federal governments, including infrastructure grants, climate adaptation funding programs, and the growing range of programs supporting GHG reduction and community resilience. The RDCO is committed to actively pursuing those opportunities and advocating persistently for the investment the region needs. Where external funding is a prerequisite for a particular action, the RDCO will prioritize the enabling work needed to position the region to access that funding when it becomes available.

The RDCO will work with Interior Health, provincial agencies, member municipalities, First Nation governments, and regional service providers to identify opportunities for cost-sharing, joint programming, and coordinated investment.



Monitoring & reporting

A robust monitoring framework will guide the RDCO in tracking the implementation and impact of the actions in this Strategy. To be effective, this Strategy must not only set a long-term strategic direction but also be integrated within the RDCO's day-to-day service delivery, planning, and investment decisions. Implementation will occur through a structured process aligned with the RDCO's corporate planning and budgeting cycles, with performance tracked and reported to the Board.

The first is tracking implementation of actions. Each action in the Strategy will be assessed for progress on a regular basis, with status reported using the following scale:

Not started - the action has not yet been initiated

On track - the action is being implemented as planned

Outstanding - an issue, barrier, or challenge is preventing implementation

Delayed - the action has been deferred or placed on hold

Completed - the action has been fully implemented

The second is the quantification and monitoring of GHG emissions. The RDCO will compile and analyze regional community GHG emissions data on a periodic basis in alignment with the review of this Strategy to track progress toward the region's targets, identify trends across sectors, and measure the cumulative impact of the Strategy's mitigation actions over time. This inventory tracks trends and provides critical feedback on mitigation effectiveness.

The third is evaluating climate vulnerabilities and risks. The CRVA that informed this Strategy will be reviewed and updated periodically to incorporate the latest climate science and regional data. This periodic evaluation will ensure that the Strategy's adaptation and resilience priorities remain responsive to evolving conditions and that the region's emergency preparedness measures reflect current hazard assessments.

Progress reports will include updates on GHG emissions trends, the status of all actions, descriptions of work completed, identification of issues or barriers encountered, proposed adjustments to priorities or timelines where needed, and a list of new actions to address emerging challenges or opportunities.

Potential indicators

The indicators outlined below are intended to support **tracking progress toward the implementation and outcomes** of the Strategy, rather than serve as absolute or comprehensive measures of performance. Collectively, they are intended to reflect progress over time and provide a practical means of understanding whether the Strategy is advancing as intended, where momentum is building, and where additional focus, coordination, or adjustment may be required.

Many actions in this Strategy are foundational or enabling in nature; establishing policies, partnerships, governance frameworks, and regional coordination mechanisms that create the conditions for longer term outcomes. As a result, early reporting will emphasize implementation progress and capacity building, with outcome oriented measures becoming more prominent over time as actions mature and data availability improves.

Focus area	Key performance indicators
 Community services & resilience	■ Number of people served by designated community resilience hubs ■ Per capita solid waste generation (kg/cap/yr) ■ Curbside organic waste diversion rate ■ Reported level of preparedness for climate events (survey)
 Buildings, land use, & development	■ Number of households supported through the Home Energy and Resilience Connector ■ Average energy cost savings per household achieved through supported retrofits from the Home Energy and Resilience Connector (\$) ■ Number of commercial and institutional buildings participating in regional energy benchmarking and average energy use intensity (EUI)
 Water systems	■ Number of Water Wise Pledges ■ Per capita water consumption (litres/cap/day) ■ Number of days per year under water restrictions (by stage)
 Natural assets & ecosystems	■ Hectares of land protected through conservation agreements or as regional parks ■ Number of FireSmart Certified Properties ■ Rate of change in sensitive ecosystems/natural assets as measured from SEI, SHIM, WIM, and FIMP updates

Focus Area	Key Performance Indicators
 Transportation & evacuation	■ Usage metrics for regional active transportation network ■ Reported level of evacuation route knowledge and preparedness (EA) ■ Percentage of people signed up for emergency evacuation alerts
 Economy & food systems	■ Number of surveyed businesses reporting climate-related disruption ■ Number of surveyed businesses participating in climate adaptation business continuity planning ■ Number of people are using food banks and associated supports
 Climate resilient RDCO governance	■ Number of initiatives co-developed with First Nations partner governments ■ Number of RDCO capital projects with climate risk and lifecycle GHG assessments ■ Amount of grant funding secured or leveraged as a result of this Regional Climate Resilience Strategy ■ Percentage of zero emission vehicles in RDCO Fleet

Strategy review & adaptation

This Strategy will be formally reviewed every five years, with the first review scheduled for 2031. Each review will assess progress against the Strategy's targets and commitments, incorporate updated climate projections and risk assessments as they become available, and adjust priorities and actions to reflect changing conditions, emerging opportunities, and lessons learned from implementation. The review process will engage member municipalities, First Nations, regional partners, and the public to ensure that the Strategy continues to reflect the priorities and needs of communities across the Central Okanagan.

Climate projections carry uncertainty and the region's understanding of its risks will continue to evolve. This Strategy is designed to be a living document that adapts as conditions change and understanding improves.

Glossary

Adaptation

Adaptation is action to help people and infrastructure adjust to the current and future effects of climate change. Preparing emergency and disaster plans or altering the design of buildings and bridges are examples of adaptation.

Carbon sequestration

Carbon sequestration is the process by which carbon dioxide is captured from the atmosphere and stored in natural systems such as trees, soils, and wetlands, reducing the overall concentration of greenhouse gases in the atmosphere.

Carbon sink

A carbon sink is a natural system such as a forest, wetland, or grassland that absorbs more carbon dioxide from the atmosphere than it releases, helping to offset greenhouse gas (GHG) emissions. The Central Okanagan's forests, parks, and agricultural lands currently function as an important regional carbon sink.

Climate change

Climate change refers to changes over a long period of time in the average weather conditions of a region, such as its typical temperature, rainfall or snowfall, and other measures of climate such as wind frequency and speed.

Climate Risk and Vulnerability Assessment (CRVA)

A Climate Risk and Vulnerability Assessment (CRVA) is a technical study that evaluates the likelihood and consequences of climate-related hazards across a community's infrastructure, services, ecosystems, and populations, and identifies where risks are greatest.

Fossil fuels

Fossil fuels are carbon-based, non-renewable energy sources such as coal, oil, and natural gas.

Greenhouse gas (GHG)

Greenhouse gases are gases in the earth's atmosphere that trap heat. Many of these gases are produced by human activities and are increasing faster than they are being removed from the atmosphere. The main greenhouse gases are water vapour (H₂O), carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Greenhouse gas emissions are measured in tonnes of carbon dioxide equivalent (tCO₂e), this unit allows combining different gases based on their global warming potential. Note that the term "community GHG emissions" used in this document refers to emissions from the region as a whole.

Mitigation

Mitigation is action to reduce or prevent the release of greenhouse gas (GHG) emissions into the atmosphere. Changing to energy that produces less GHG emissions, such as solar panels, is an example of mitigation.

Net zero GHG emissions

Net zero refers to the balance between the amount of greenhouse gas (GHG) emissions that are produced and the amount that are removed from the atmosphere. This balance can be achieved through a combination of reducing emissions and removing emissions through actions such as planting trees or employing technologies that can capture carbon before it is released into the air.

Residential home resilience

Refers to the ability of a home to withstand, adapt to, and recover from climate-related hazards such as extreme heat, wildfire smoke, flooding, and severe weather, while maintaining safe and habitable conditions for occupants

Resilience

The ability of communities, including their social, economic, and environmental systems, to anticipate, prepare for, respond to, and recover from the impacts of hazardous events, trends, or disturbances related to climate.

Resiliency assessment

In the context of a public building or facility, a resiliency assessment is a structured evaluation of how well that facility can withstand, adapt to, and recover from disruptions or hazards—especially those related to climate change, natural disasters, and other shocks or stresses. A resiliency assessment goes beyond typical condition or safety inspections. It looks at future risks and system performance under stress, including critical functions, service continuity, and protection of vulnerable residents using the facility.

Vulnerable residents

Vulnerable residents are individuals or groups residing within RDCO boundaries who may be disproportionately impacted by climate change and face a higher risk of harm or greater barriers to preparing for, responding to, and recovering from climate-related hazards. This may be due to personal, social, economic, health, housing, or geographic factors. Vulnerable residents may include children, seniors, people with disabilities or chronic medical conditions, low-income households, people experiencing homelessness or housing insecurity, renters, Indigenous communities whose cultural landscapes face direct climate threats, and residents of rural or remote areas with limited access to services or evacuation routes.

Wildfire interface

The wildfire interface, sometimes called the wildland-urban interface, refers to areas where homes, buildings, and communities are located near or adjacent to forests and other natural areas that can carry wildfire. Communities in the wildfire interface face elevated risk from fire spreading from natural areas into residential and developed areas.





Appendix A: Regional climate resilience strategy actions

The table below presents the targeted actions identified through this Strategy to advance the RDCO's climate goals. Each action is paired with a set of indicators that provide additional context on its implementation. The indicators are described below.

Implementation phase

Indicates when each action should be initiated:

			
Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+
Programs already underway	Actions that are ready now or critical for near-term risk reduction	Actions that require enabling work, obtaining funding, or further regional coordination	Actions that are long-term, capital-intensive, or policy-dependent



GHG reduction

Identifies actions that contribute to reducing greenhouse gas emissions, either directly through changes to RDCO operations and infrastructure, or indirectly by enabling lower-emission choices across the region

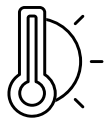


Equity

Identifies actions that explicitly benefit the residents and communities most exposed to climate risk, including children, seniors, people with disabilities, low-income households, residents without vehicles, Indigenous communities, rural and Electoral Area residents, and agricultural workers

Hazard scenario addressed

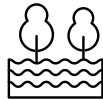
Identifies the climate hazard scenario from the CRVA that each action directly addresses.



Hot & dry



Winter hazards



Flooding



Geological



Extreme events



Wildfire



Air quality

Scale

Indicates where each action operates, using the following designations.



Regional actions are delivered through coordination, shared frameworks, or advocacy across the Central Okanagan, working with member municipalities, First Nations, and regional partners to address challenges that cross jurisdictional boundaries



Electoral Area actions apply to the Electoral Areas, where the RDCO has direct authority over land use, selected community water systems, regional parks, and some local services.



Corporate actions apply to the RDCO's own operations, assets, buildings, and internal decision-making processes

Some actions carry more than one designation where they operate across more than one scale.

Lead RDCO department

Identifies the RDCO department responsible for leading implementation of each action.

Partners

Identifies the key organizations and agencies whose participation is needed to deliver each action.

	Implementation phase									
										
Action	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+	GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
Focus area 1: Community services & resilience										
1.1 Establish a regional framework and designation criteria to coordinate Community Resilience Hubs, and work with member municipalities, community organizations, and partners to identify, support, and activate locally operated hubs that provide clean air, cooling, preparedness resources, and community support during extreme events.								      	Emergency Services	Member municipalities, First Nation governments, community organizations
1.2 Improve coordination and collaboration around Extreme Heat Response Plans to ensure implementation continuity across the region with health agencies, member municipalities, and service providers, including protocols for identifying at-risk populations, activating cooling spaces through resilience hubs, coordinating wellness checks, and escalating service response.									Emergency Services	Interior Health, member municipalities

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



Extreme events



Wildfire



Air quality

Action	Implementation phase				GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+						
1.3 Initiate a regional voluntary registry for vulnerable residents and facilitate coordination with partner agencies on information sharing, assisted evacuation planning, and emergency response.									Emergency Services	Member municipalities, health agencies and social service providers
1.4 Develop and maintain a standardized regional post-disaster recovery framework that guides coordinated housing navigation, access to financial assistance programs, psychological first aid, and long-term mental health referral pathways, delivered by partner agencies following climate-related events.									Emergency Services	Health agencies and social service providers, provincial emergency management partners
1.5 Encourage uptake of emergency preparedness and response communications by working with community organizations, settlement services, and member municipalities and First Nations partner governments to reach vulnerable residents.									Emergency Services	Member municipalities, health agencies, First Nation governments, FNHA, FNESS, social service providers, settlement services

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



Extreme events



Wildfire



Air quality

Action	Implementation phase				GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+						
1.6 Continue working with telecommunications providers, municipalities, and emergency management partners to monitor and strengthen backup power, redundancy, and continuity measures for telecommunications infrastructure, and address gaps as identified.							R	      	Emergency Program	Telecommunications providers, member municipalities
1.7 Develop a climate-informed disaster waste management plan for the Central Okanagan that prepares the region's solid waste system to manage the volumes and types of waste generated by major climate events.							R EA	     	Emergency Program & Engineering Services	Member municipalities, provincial emergency management partners (Ministry of Environment, Ministry of Health), health agencies
1.8 Continue to work with member municipalities and partners to deliver education programs promoting waste reduction, reuse, recycling, and circular economy approaches.							R		Engineering Services	Member municipalities, community organizations

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



Extreme events



Wildfire



Air quality

Action	Implementation phase				GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+						
1.9 Explore opportunities to expand regional building material recovery and reuse initiatives, including assessing the feasibility of additional facilities or partnerships to support the separation, collection, and reuse of construction, renovation and demolition waste materials.							 		Development & Engineering Services	
Focus area 2: Buildings, land use, & development										
2.1 Establish a Central Okanagan Home Energy and Resilience Connector Program, delivered in partnership with utilities, governments, and service providers, to provide residents with end-to-end support to improve energy efficiency, climate resilience, and home survivability, including improved insulation, cooling, and wildfire smoke resilience for vulnerable residents and other priority populations.								      	Development & Engineering Services	City of Kelowna, member municipalities

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



Extreme events



Wildfire



Air quality

Action	Implementation phase				GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+						
2.2 Advocate for a regional coordination process with utilities and municipalities to align building electrification initiatives with grid capacity planning, emergency resilience needs, and demand-response strategies that reduce peak energy demand during extreme weather and ensure resilient energy supply.									Development & Engineering Services	Utility providers, BC Utilities Commission, member municipalities
2.3 Coordinate an Indoor Air Quality and Smoke Resilience initiative, providing guidance, education, and access to low-cost filtration and radon risk mitigation supports through partner delivery.									Development & Engineering Services	City of Kelowna, member municipalities, health agencies, Environment Canada
2.4 Coordinate development of a regional commercial and institutional building energy benchmarking approach, working with member municipalities and the Province to track energy use and GHG emissions and inform long-term retrofit and investment priorities.									Development & Engineering Services	Member municipalities, Province of BC

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



Extreme events



Wildfire



Air quality

Action	Implementation phase				GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+						
2.5 Develop a best practice guide for climate resilient development and building practices, tailored to the Central Okanagan.							R EA		Development Services	Member municipalities
2.6 Ensure the new RGS and Electoral Area Official Community Plans (OCPs) consider current Electoral Area policy that permits new subdivision only where adequate services (including fire protection, or other emergency response measures) are available or can be feasibly extended (e.g. not proceeding with OCP or zoning amendments or subdivision applications in areas not included in a fire protection district).							EA		Development & Engineering Services	MOTT ¹⁶

16 BC Ministry of Transportation and Transit (Subdivision Authority)

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



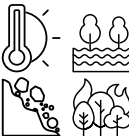
Extreme events



Wildfire



Air quality

	Implementation phase									
Action	 Ongoing 2026+	 Phase 1 2027–2028	 Phase 2 2029–2031	 Phase 3 2032+	GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
Focus area 3: Water systems										
3.1 Explore regional alignment and education on Provincial and Okanagan Basin Water Board drought response frameworks and participate on the OBWB Watershed Stewardship Council.									Development & Engineering Services	OBWB, member municipalities, First Nations
3.2 Advance and coordinate source water protection planning to address climate-driven risks including wildfire, erosion, debris flows, and contamination, and cumulative watershed impacts, while participating in existing and emerging regional water governance initiatives.									Development & Engineering Services	Okanagan Nation Alliance, OCCP ¹⁷ , member municipalities, First Nation governments

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



Extreme events

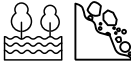


Wildfire



Air quality

¹⁷ Okanagan Collaborative Conservation Program (OCCP)

Action	Implementation phase				GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+						
3.3 Implement the Central Okanagan Flood Mitigation Strategy, working with regional partners to align floodplain mapping and bylaw updates across member governments.							R EA	 	Development Services	Member municipalities, First Nation governments
3.4 Identify and develop emergency water supply options to provide drinking water in Electoral Areas during disruptions.							EA	     	Engineering Services	N/A
3.5 Ensure small and community water systems have emergency and continuity plans in alignment with the requirements under the <i>Emergency and Disaster Management Act</i> .							EA	     	Emergency Services & Engineering Services	Health agencies

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



Extreme events



Wildfire

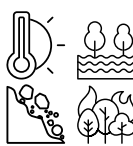


Air quality

Action	Implementation phase				GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+						
3.6 Work with the Province, utilities, and regional members and partners to assess and address erosion and bank instability risks to critical infrastructure along key watercourses in the Electoral Areas, including developing monitoring triggers and mitigation options.							EA		Emergency Services & Engineering Services	Province of BC, utilities, member municipalities, First Nation governments
3.7 Work with the Province, the Okanagan Nation Alliance, water purveyors, and irrigation districts to define and integrate environmental flow needs into regional drought response, water planning, and Electoral Area land-use decisions.							R EA		Development & Engineering Services	OBWB, member municipalities, First Nation governments

Climate Hazard Scenarios



	Implementation phase									
Action	 Ongoing 2026+	 Phase 1 2027–2028	 Phase 2 2029–2031	 Phase 3 2032+	GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
Focus area 4: Natural assets & ecosystems										
4.1 Continue to work with the Okanagan Collaborative Conservation Program, Living Lakes Canada, and other partners to identify and implement conservation opportunities that enhance climate resilience, including watershed function, habitat connectivity and wildlife corridor protection, foreshore management, carbon storage and ecosystem services, through mapping, land acquisition, and conservation partnerships, in collaboration with First Nations partner governments.									Development Services	OCCP, Living Lakes Canada, First Nation governments
4.2 Continue periodic updates to the RDCO's Sensitive Ecosystems Inventory (SEI) mapping and update Electoral Area OCP policy and environmental Development Permit Areas (DPAs) to ensure no net loss of regional habitat, including conservation areas and carbon sinks.									Development Services	OCCP, member municipalities, First Nation governments

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



Extreme events



Wildfire



Air quality

Action	Implementation phase				GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+						
4.3 Update the RDCO's natural asset inventory, including incorporation of ecosystem service metrics such as the role of regional parks in providing clean water, flood buffering, carbon storage, and landscape cooling.							EA C	     	Development & Engineering Services, Parks Services	N/A
4.4 Develop a climate-adaptive ecological restoration program for RDCO regional parks to recover after natural disasters, helping park ecosystems to be more resilient to climate change.							R EA	     	Parks Services	Member municipalities, First Nation governments
4.5 Advocate to BC Wildfire Service and other Provincial agencies, and collaborate with local watershed partners to develop post-wildfire runoff and debris flow response protocols for key catchments in the region, including monitoring triggers, alert systems, and community notification procedures.							R EA	     	Emergency Program & Engineering Services	BC Wildfire Service, Province, local watershed partners

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



Extreme events



Wildfire



Air quality

Action	Implementation phase				GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+						
4.6 Continue to support the coordinated lake water quality monitoring and response program led by the Okanagan Basin Water Board (co-chaired by the City of Kelowna and Westbank First Nation) by contributing local data, coordinating public notification protocols, and aligning beach closure procedures across RDCO-managed parks and beaches.							R		Development & Engineering Services, Parks Services	OBWB, Interior Health, member municipalities, First Nation governments
4.7 Advocate to the Province to develop clear protocols enabling Westbank First Nation and Okanagan Indian Band to conduct cultural and prescribed burning within air quality management framework.							R		Development Services & Emergency Services	Westbank First Nation, Okanagan Indian Band, BC Wildfire Service
4.8 Support the development of a regional stream temperature monitoring network and public-facing visualization tool, in partnership with the Okanagan Nation Alliance, OBWB, and watershed groups, to track thermal stress in key tributaries through the warm season.							R		Engineering Services	Okanagan Nation Alliance, OBWB, local watershed partners

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



Extreme events



Wildfire



Air quality

	Implementation phase									
Action	 Ongoing 2026+	 Phase 1 2027–2028	 Phase 2 2029–2031	 Phase 3 2032+	GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
Focus area 5: Transportation & evacuation										
5.1 Achieve fast and reliable transit by advocating for building a new regional transit facility required for fleet expansion, creating a new transit lane on the William R. Bennett bridge, and adding dedicated transit lanes along Harvey Avenue, as recommended in the Regional Transportation Plan.									Development & Engineering Services	BC Transit, MOTT, member municipalities, First Nation governments
5.2 Create a safe and convenient regional bicycling and trails network by advocating for the completion of the Westside Trail, Okanagan Rail Trail, and other regional active transportation corridors recommended in the Regional Bicycling and Trails Master Plan.									Development & Engineering Services	Member municipalities, MOTT, First Nation governments
5.3 Continue to coordinate on evacuation transportation protocols with municipalities, First Nations, and service providers, to support residents without access to private vehicles during evacuations and major disruptions.							 		Emergency Program	Member municipalities, First Nation governments, BC Transit, carshare, ridehail, and taxi companies

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



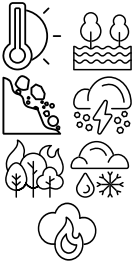
Extreme events



Wildfire



Air quality

Action	Implementation phase				GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+						
5.4 Coordinate regional response planning for extended highway closures, including detour planning, emergency access, fuel and food distribution, and supply chain continuity, in collaboration with provincial and regional partners.									Emergency Program	Member municipalities, First Nation governments, MOTT
5.5 Increase the resilience of the Central Okanagan's supply chain during highway closures by advocating for improved air access and intermodal terminals in the BC Interior, as recommended in the Central Okanagan Goods Movement Study.									Development & Engineering Services	MOTT, Kelowna Airport
5.6 Advocate to the province for sufficient transit service and infrastructure funding to ensure frequent transit service can be provided in transit-oriented areas and along transit-supportive corridors (as more housing is provided in these locations across the region as part of implementing Bill 44).									Development & Engineering Services	BC Transit, member municipalities, First Nation governments

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



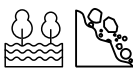
Extreme events



Wildfire



Air quality

Action	Implementation phase				GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+						
5.7 Advocate to restore or replace critical routes in Electoral Areas, such as forest service roads, to maintain access for First Nations, rural, and vulnerable residents.									Development & Engineering Services	Ministry of Forests, First Nation governments
5.8 Assess seismic risk to critical facilities, transportation corridors, and access routes across the Electoral Areas, including vulnerabilities within critical infrastructure systems and networks, and use the results to guide emergency planning and response priorities.									Emergency Services & Engineering Services	MOTT
5.9 Explore developing policy guidance for the Electoral Areas for when secondary access should be required at the time of subdivision approval to support emergency evacuations.									Development & Engineering Services, Emergency Services	MOTT

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



Extreme events



Wildfire



Air quality

	Implementation phase									
	 Ongoing 2026+	 Phase 1 2027–2028	 Phase 2 2029–2031	 Phase 3 2032+						
Action					GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
Focus area 6: Economy & food systems										
6.1 Ensure that agriculture is integrated into regional emergency preparedness, response, and recovery plans, including livestock evacuation, water supply management, feed access, and farm continuity planning, as recommended in the Regional Agricultural Strategy.							 		Emergency Program & Development Services	Cross-Commodity Leadership Support Project, Ministry of Agriculture
6.2 Develop a regional food security plan that supports existing community efforts to strengthen food systems, improve understanding of food flows, and enhance long-term food resilience, including food hub development.									Emergency Program & Development Services	Member municipalities, service providers, Ministry of Agriculture
6.3 Develop and maintain a regional business continuity and recovery framework to support small and medium-sized enterprises in preparedness, response, and recovery from disruptions, including outreach, coordination, and navigation supports.									COEDC ¹⁸	Member municipalities

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Climate Hazard Scenarios



Action	Implementation phase				GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+						
6.4 Partner with interested groups on agricultural water planning in the region, including efficient irrigation, water storage, and drought adaptation measures, with consideration of watershed-wide water availability, environmental flow needs, and drought allocation priorities within existing regional drought response frameworks, as recommended in the Regional Agricultural Strategy.									Development & Engineering Services	Cross-Commodity Leadership Support Project, OBWB
6.5 Work with the Central Okanagan Economic Development Commission and member municipalities to develop programs and resources that support businesses in adapting operations to climate impacts, including extreme heat and water constraints, including the adoption of innovative technologies and practices that improve efficiency, resilience, and long-term sustainability.									COEDC	Member municipalities, First Nation governments, health agencies

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



Extreme events



Wildfire



Air quality

Action	Implementation phase				GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+						
6.6 Work with the Central Okanagan Economic Development Commission, member municipalities, and regional partners to advance the growth of innovation, clean technology, and agri technology sectors by supporting local business growth and focusing business attraction efforts.							 		Development Services, COEDC	Member municipalities, First Nation governments
Focus area 7: Climate resilient RDCO governance										
7.1 Ensure ongoing engagement with First Nation governments and inclusion of nsilxcən language, knowledge systems, and governance in Regional Climate Resilience Strategy implementation.									Development Services, Indigenous Advisor	First Nation governments
7.2 Integrate climate resilience and GHG emissions considerations into RDCO asset management, capital planning, and bylaws through a phased review and update of existing policies.								      	Development & Engineering Services	N/A

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



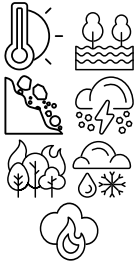
Extreme events



Wildfire



Air quality

Action	Implementation phase				GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+						
7.3 Require standardized climate risk and lifecycle GHG assessments for RDCO capital projects and infrastructure decisions and use the results to inform prioritization and design.							C		Financial Services & Engineering Services	N/A
7.4 Embed climate risk into RDCO corporate risk management frameworks, business continuity planning, and recovery processes.							C		Financial Services & Engineering Services	N/A
7.5 Update regional park design guidelines to incorporate climate change resiliency in the development of regional parks assets that supports park users and the parks to be adaptable to climate change (i.e., shade trees or structures for playgrounds, using water conservation appliances, higher and longer bridges, use of fire-resistant materials, etc.							C R		Parks Services	N/A

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



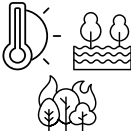
Extreme events



Wildfire



Air quality

Action	Implementation phase				GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
	Ongoing 2026+	Phase 1 2027–2028	Phase 2 2029–2031	Phase 3 2032+						
7.6 Conduct energy and resilience assessments of RDCO-owned buildings and facilities and develop and implement a phased plan to reduce corporate GHG emissions and improve the climate resilience of RDCO infrastructure.							C		Engineering Services & Facilities & Parks Services	N/A
7.7 Develop best practices for incorporating nature-based solutions into RDCO-owned infrastructure planning and design, identifying where they can be used in place of or alongside engineered approaches.							C		Engineering Services	N/A
7.8 Identify lift stations in flood-prone areas and develop flood-proofing and manual operation protocols.							EA C		Engineering Services	N/A

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



Extreme events



Wildfire



Air quality

	Implementation phase									
Action	 Ongoing 2026+	 Phase 1 2027–2028	 Phase 2 2029–2031	 Phase 3 2032+	GHG reduction	Supports equity	Scale of action	Hazard scenario addressed	Lead RDCO department	Partners
7.9 Develop a regional approach to infrastructure hardening and resilience improvements at RDCO critical facilities to improve resilience to wildfire, flooding, and extreme weather, including standards for flood protection, fire-resistant materials, and vegetation management.							EA C		Engineering Services	N/A
7.10 Develop and implement a fleet electrification plan including transition targets and charging infrastructure at RDCO facilities.							C		Fleet	N/A

Climate Hazard Scenarios



Hot & dry



Winter hazards



Flooding



Geological



Extreme events



Wildfire



Air quality



Appendix B: Climate hazard projections

Climate hazard threshold		Historical (1991-2020)	2020s (2011-2040)	2050s (2041-2070)	2080s (2071-2100)
Hazards scenario: hot & dry					
	Extreme heat (valley and mountain) Days with maximum temperature $\geq 35^{\circ}\text{C}$	Valley			
		1 day every 1-1.5 years	8.6 days every year	21.5 days every year	42.8 days every year
	Heat waves (valley) 2 or more consecutive days with maximum temperature $\geq 35^{\circ}\text{C}$ and minimum temperature $\geq 18^{\circ}\text{C}$	Mountain			
		0 days	0 days	1 day every ~8 years	7.3 days every year
	Drought Years with drought conditions ¹⁹	1 every 30 years	1 every 7 years	~2 every year	~4.5 every year
		1 year every 15 years	1 year every 6 years	1 year every 3 years	1 year every 2 years

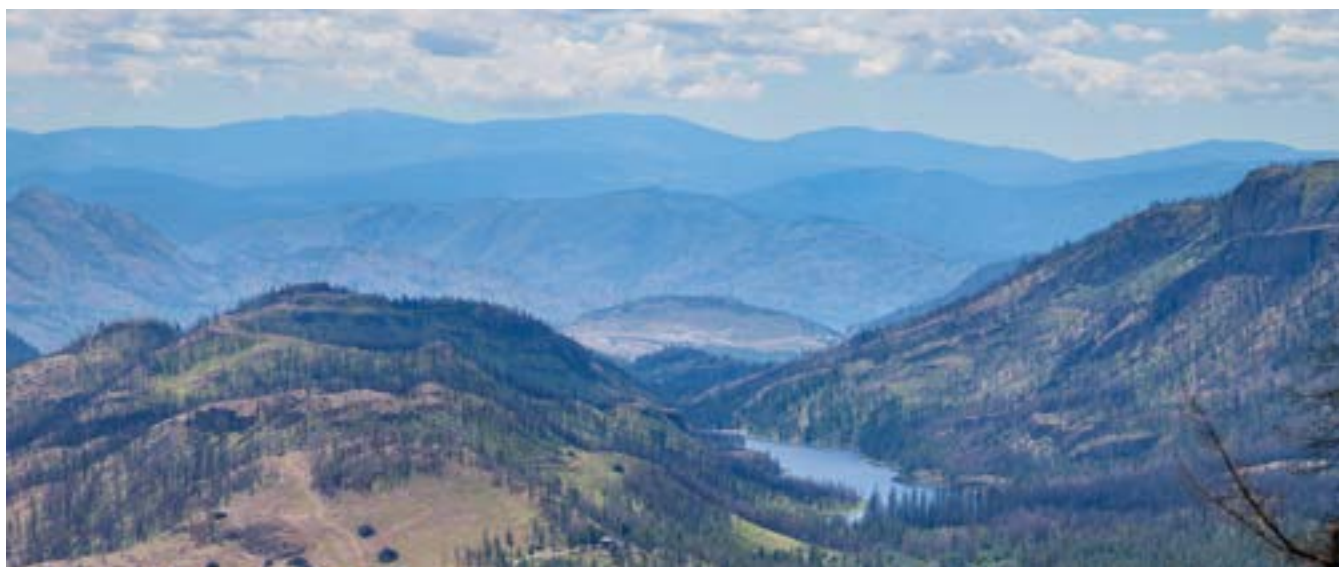
19 Occurrence of Standardised Precipitation Evapotranspiration Index (SPEI) of less than -0.5 (12-month scale for at least 3 consecutive months). SPEI is a drought index based on the difference between precipitation and potential evapotranspiration. Negative (positive) values indicate water deficit (surplus). SPEI-12 presents the SPEI value for the 12-month period.

B.C. drought severity classifications (drought levels) consider six primary drought indicators:

- Precipitation percentiles (various timescales)
- Standardized Precipitation Index (SPI) (various timescales)
- Standardized Precipitation Evapotranspiration Index (SPEI) (various timescales)
- 7-day average streamflow percentiles
- 7-day average lake level percentiles
- Daily groundwater level percentiles

SPEI < -0.5 aligns with the quantitative thresholds for a Level 1 or more severe drought classification. Additional information on B.C. drought monitoring and drought levels is available on the B.C. Drought Information Portal (droughtportal.gov.bc.ca) and in the 2026 British Columbia Drought and Water Scarcity Operations Plan (www2.gov.bc.ca/assets/gov/environment/air-land-water/water/drought-info/drought_and_water_scarcity_operations_plan.pdf).

Projected changes in drought conditions are in alignment with specialized studies. See the RDCO Climate Risk and Vulnerability Assessment and the RDCO Hazard, Risk and Vulnerability Assessment for more information.



Climate hazard threshold		Historical (1991-2020)	2020s (2011-2040)	2050s (2041-2070)	2080s (2071-2100)
Hazard scenario: winter hazards					
	Extreme cold (valley and mountain) Days with minimum temperature ≤ -15°C	Valley			
		4.9 days every year	3.6 days every year	1.4 days every year	0.07 days every year
	Winter freeze- thaw cycles Days with maximum temperature > 0°C and minimum temperature ≤ -1°C in winter (December-January-February)	Mountain			
		15.4 days every year	11.6 days every year	6.2 days every year	2.2 days every year
	Fog Hours with fog (annually)	1,178 hours	Increasing trend		
	Freezing rain or drizzle Median annual hours per year of freezing rain	5-10 hours	5-10 hours	15-20 hours	20+ hours
	Heavy snowfall (10 cm and 15 cm)	Days with 10 cm or more snowfall in 24 hours			
		1-2 days every year	1 day every year	1 day every 1-1.5 years	1 day every 1.5-2 years
		Days with 15 cm or more snowfall in 24 hours			
	Blizzard Days with ≥ 10 cm snow on ground and wind gusts ≥ 60 km/hr	1 day every 3 years	1 day every 4-5 years	1 day every 5-6 years	1 day every 10 years
Hazard scenario: flooding					
	Multi day rainfall Annual maximum 5-day rainfall (mm) [average across region (minimum-maximum)]	45.0 mm (25.8-63.6)	47.1 mm (27.0-67.1)	50.2 mm (28.2-70.8)	54.4 mm (29.8-77.4)
	Flash flooding Short duration high intensity rainfall proxy: historical 1:50-year 1-hour event	Change in frequency			
		1:50-year	1:30-year	1:18-year	1:7-year
		Change in intensity			
	Lake & riverine flooding Flood rating (district average of asset point locations from hazard exposure mapping)	20.6 mm	22.9 mm +11%	25.8 mm +25%	29.7 mm +44%
		Low	Increasing trend		

Climate hazard threshold		Historical (1991-2020)	2020s (2011-2040)	2050s (2041-2070)	2080s (2071-2100)
Hazard scenario: geological					
	Landslide / debris flow Moderate to high landslide hazard days ²⁰ annually	16 days	18 days	20 days	22 days
	Erosion (riverbank) Annual maximum daily discharge ≥ 80 m³/sec (Mission Creek)	1:6 year Steady trend in frequency projected			
	Seiche Occurrence of seiche in Okanagan Lake	Annual occurrence			
Hazard scenario: extreme events					
	High wind gusts Days with wind gusts ≥ 90 km/hr	1 day every 10 years	1 day every 10 years	1 day every 8 years	1 day every 6 years
	Hail (thunderstorm) Severe hail days (hail diameter ≥ 2 cm) in summer (June-July-August)	1-2 days	Likely increasing trend	2-4 days	Likely increasing trend
	Lightning Cloud-to-ground lightning flash density (flashes per km² per year)	0.025	0.027 +10%	0.029 +19%	0.035 +43%
Hazard scenario: wildfire					
	Wildfire interface Wildfire rating ²¹ (district average of grid cells with assets from hazard exposure mapping)	Moderate	Moderate	Moderate	Moderate
Hazard scenario: air quality					
	Wildfire smoke Days per year with PM2.5 > 150 ug/m³	1 day every 3 years	1 day every 2.5 years	1 day every 2 years	1 day every 1-1.5 years

20 Landslide hazard day classification considers antecedent rainfall and the susceptibility of the local land surface (i.e., the potential for weakened slope stability and generation of a landslide in response to a trigger) .

21 The wildfire rating characterizes key factors contributing to wildfire potential and spread, including vegetation (fuel types), topography (slope and aspect), and climate (fire weather). Wildfires are more frequent and intense when there is abundant flammable vegetation and when conditions are hot, dry, and windy. Steep and south-facing slopes enhance fire spread. Additional information available at: climatedata.ca/app/fire-weather-projections/.



