

REGIONAL DISTRICT *of* EAST KOOTENAY CLIMATE ACTION PLAN

2025 – 2030

Prepared by:



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The RDEK thanks all individuals and organizations who contributed to developing the RDEK Climate Action Plan.

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EXECUTIVE SUMMARY

The Regional District of East Kootenay (RDEK) developed this Climate Action Plan (CAP) to respond to increasing concerns about the effects of climate change in the region. The CAP builds on past efforts to **reduce greenhouse gas (GHG) emissions** that contribute to climate change and to **improve the region's resilience** to the changes that are happening and anticipated to amplify over time. These changes include increasing annual average temperature and precipitation, and increasing frequency and intensity of wildfires, heatwaves, and flooding. The process to develop the CAP involved research and engagement with staff, stakeholders and the public.

The CAP covers how the RDEK can:

- Directly improve energy efficiency and reduce GHG emissions from its corporate operations;
- Mainstream improved planning for climate resilience throughout corporate operations and decision-making; and
- Support improved energy efficiency, reduced GHG emissions and enhanced preparedness for and resilience to climate change across the region.

In support of federal and provincial goals, and in alignment with the CleanBC Roadmap to 2030, the RDEK has set the following targets for reducing emissions:

- Reduce 2007 GHG emission levels by 40% by 2030
- Achieve net-zero GHG emissions by 2050

Climate change adaptation and resilience refers to preparing for and adapting to the impacts of climate change so that it is possible to anticipate, cope with, and recover from them. The climate resilience goal for the region is to:

- Reduce the negative consequences of climate change impacts, proactively prepare for long-term changes and acute events, and enhance community resilience.

The CAP is organized into six climate action areas, each with objectives and actions. Objectives have been designated either as corporate, focusing only on RDEK operations; or community, focusing on broader community outcomes.

Theme	2030 Objectives
Green and Resilient Buildings and Property	Corporate: RDEK leads by example with new buildings and facilities built to high energy efficiency and zero-carbon standards with consideration of climate-resilient design. Corporate & Community: RDEK applies a climate lens integrating climate adaptation and mitigation into organizational decision making, land use, asset management and capital planning. Community: Homes and buildings are built and retrofit to high energy efficiency and low carbon standards with consideration of increasing climate resilience to floods, heat, smoke and wildfire. By 2030, new homes will be built to zero-carbon standards.
Green Transportation	Corporate: The RDEK shows regional leadership by transitioning its corporate fleet to zero-emission vehicles when possible and carpooling. Community: The RDEK has robust and connected Electric Vehicle (EV) infrastructure. Community: The RDEK invests in and promotes safe, affordable and sustainable transportation such as walking, cycling, rolling and public transit for all levels of mobility.

EXECUTIVE SUMMARY *(continued)*

Theme	2030 Objectives
Green Economy and Resilient Livelihoods	Community: Agricultural producers and property owners have the tools and resources to be resilient. Community: Businesses have the tools and resources to reduce emissions, improve business continuity and adapt to climate change.
Resilient Water Supply	Corporate: Water systems owned or managed by RDEK are resilient and reliable. Corporate & Community: Growth management is informed by current information on the quality and quantity of potable water resources. Community: Regional water users understand drought management and water conservation approaches and use water resources responsibly.
Zero Waste	Corporate and Community: Creation of waste is reduced, working towards achieving zero waste. Community: Emissions from waste are minimized.
Healthy and Resilient Communities	Corporate: The RDEK transitions to zero-carbon electric equipment, reducing reliance on gas-powered tools and lowering the RDEK's carbon footprint. Community: Local food security is improving year to year. Community: The RDEK responds and recovers effectively and quickly to and from climate-related hazard events. Community: Community and regional collaboration support leadership in climate action.
Cultivating Resilient Ecosystems	Corporate: Regional parks are resilient and provide buffers to climate change. Community: The RDEK promotes and supports natural climate solutions and natural assets. Community: The RDEK considers high-value ecological areas and the importance of green space in promoting land use for compact, connected community development. Community: Regional sensitive ecosystems and wildlife habitat areas are protected, restored, and monitored for impacts as much as possible.

Implementation of the CAP requires a whole society approach with partners and community members collaborating to move the region forward. The CAP adopts an adaptive management approach with annual progress reviews and ongoing monitoring. It will be reviewed after 2030 to incorporate new ideas and recalibrate actions to be successfully implemented.



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1. INTRODUCTION

The Regional District of East Kootenay (RDEK) faces escalating challenges due to climate change. The RDEK is experiencing various extreme climate-related events, from devastating wildfires and severe flooding to intense heat waves and prolonged droughts. These events are reshaping residents' daily lives and transforming the operational dynamics of local governments and businesses. Indigenous communities' traditional practices and livelihoods are also being profoundly affected by these changes.

As projections point to increased frequency and intensity of these climate events in the coming decades, the RDEK is actively working to improve the region's resilience to climate change and reduce greenhouse gas (GHG) emissions contributing to climate change. The severity of the impacts of climate change is tied to the global concentration of GHGs in the atmosphere. The more everyone in the worldwide community does to reduce GHG emissions, the more likely it is that catastrophic climate-related events can be avoided.

Even if there are significant reductions of emissions over the coming decades, there will still be changes to the climate, some of which are already occurring. Studies show that early investments in adaptation are likely far less costly than delaying investment—for every \$1 spent proactively in climate adaptation action, \$6 of future costs are avoided.¹

This Climate Action Plan (CAP) sets the pathway for the RDEK to:

- **Enhance energy efficiency and lower GHG emissions in corporate operations;**
- **Improve corporate climate resilience and adaptation;**
- **Facilitate community-level energy efficiency and emission reduction; and**
- **Strengthen community climate adaptation and resilience.**



The CAP sets targets and actions to be achieved by 2030, with a long-term vision extending to 2050. The CAP is designed to harmonize with the climate targets set by both federal and provincial governments. The CAP is also aligned with CleanBC and Climate Preparedness and Adaptation Strategy (CPAS), two provincial frameworks aimed at taking action on climate change. CleanBC provides a roadmap to reduce GHG emissions and shift towards a sustainable, energy-efficient economy. CPAS focuses on preparing for and adapting to the impacts of climate change. By integrating these provincial strategies, the CAP ensures regional efforts contribute to achieving British Columbia's climate goals.



¹ The Federation of Canadian Municipalities and the Insurance Bureau of Canada. Investing in Canada's Future: the cost of climate change adaptation. Accessed January, 2024. <https://fcm.ca/en/resources/investing-in-canada-future#:~:text=Filter%20by%3A%20FCM%20Program&text=According%20to%20the%20report's%20findings,all%20three%20orders%20of%20government>.



2. REGIONAL DISTRICT OF EAST KOOTENAY OVERVIEW

The RDEK is located in the southeastern corner of British Columbia. It includes the Columbia and Kootenay River valleys within the Rocky Mountain Trench and the Elk Valley to the east. The Columbia and Kootenay Rivers valley is bordered east by the Rocky Mountains and to the west by the Purcell Mountains. The region's population in the 2021 census was 65,896, 17,283 of which reside in unincorporated areas under the jurisdiction of the RDEK, a 9% increase from 2016.

The RDEK's regional boundaries are within the homelands of four First Nations. Three are Ktunaxa (ʔakisq̓nuk, ʔaq̓am and Yaq̓it ʔa·knuq̓i'it) and one is Secwepemc (Shuswap). We are grateful to our First Nations neighbours, who have been caretakers and stewards of this land for time immemorial.

The RDEK covers six electoral areas and eight municipalities.

It is a partnership of municipalities and electoral areas that work together throughout the region to provide and coordinate services that range from land use planning and park management to fire protection and emergency management. Water supply to some communities is the responsibility of the RDEK, as well as solid waste management, recycling, and sewage disposal.

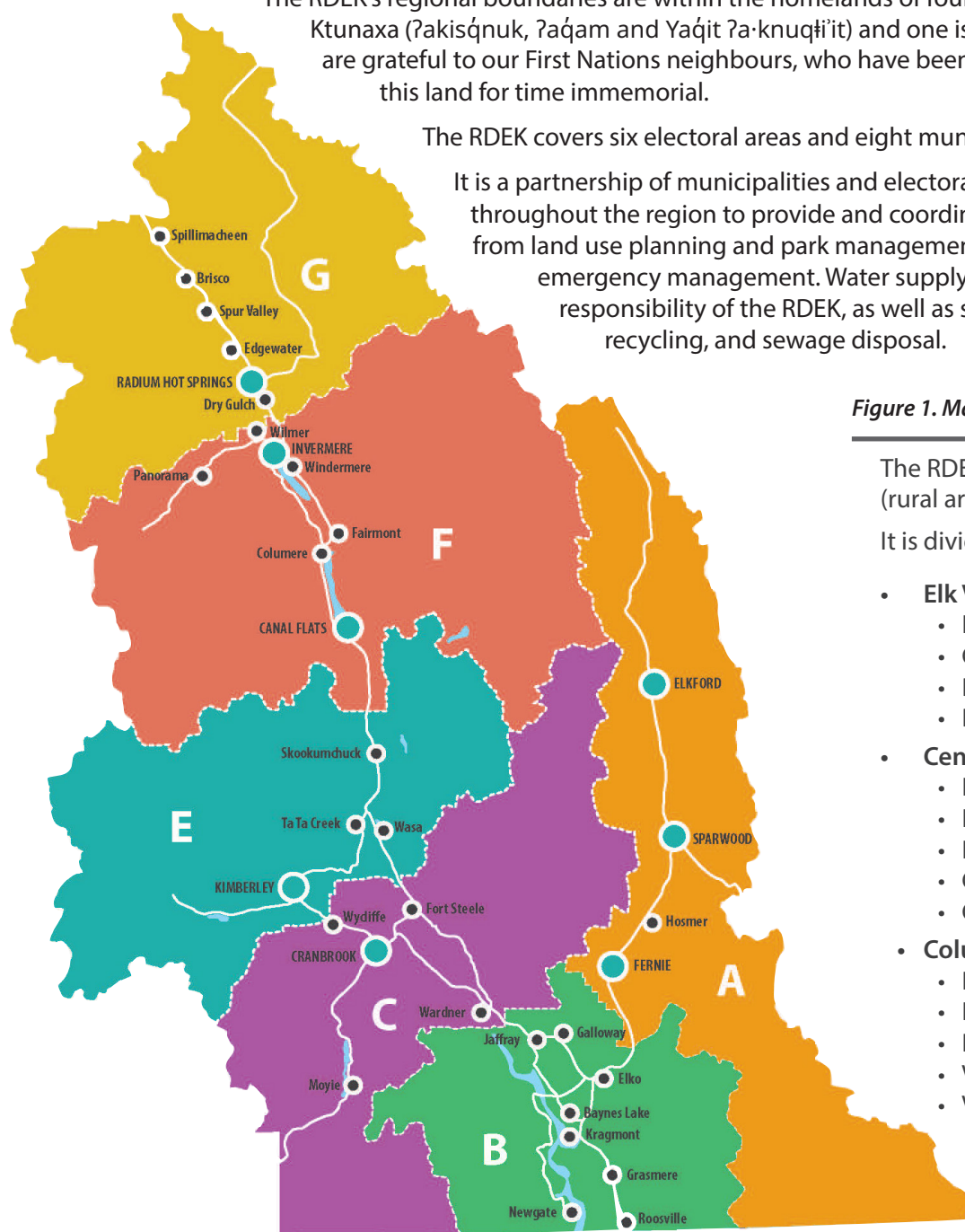


Figure 1. Map of the RDEK

The RDEK includes six Electoral Areas (rural areas) and nine municipalities.

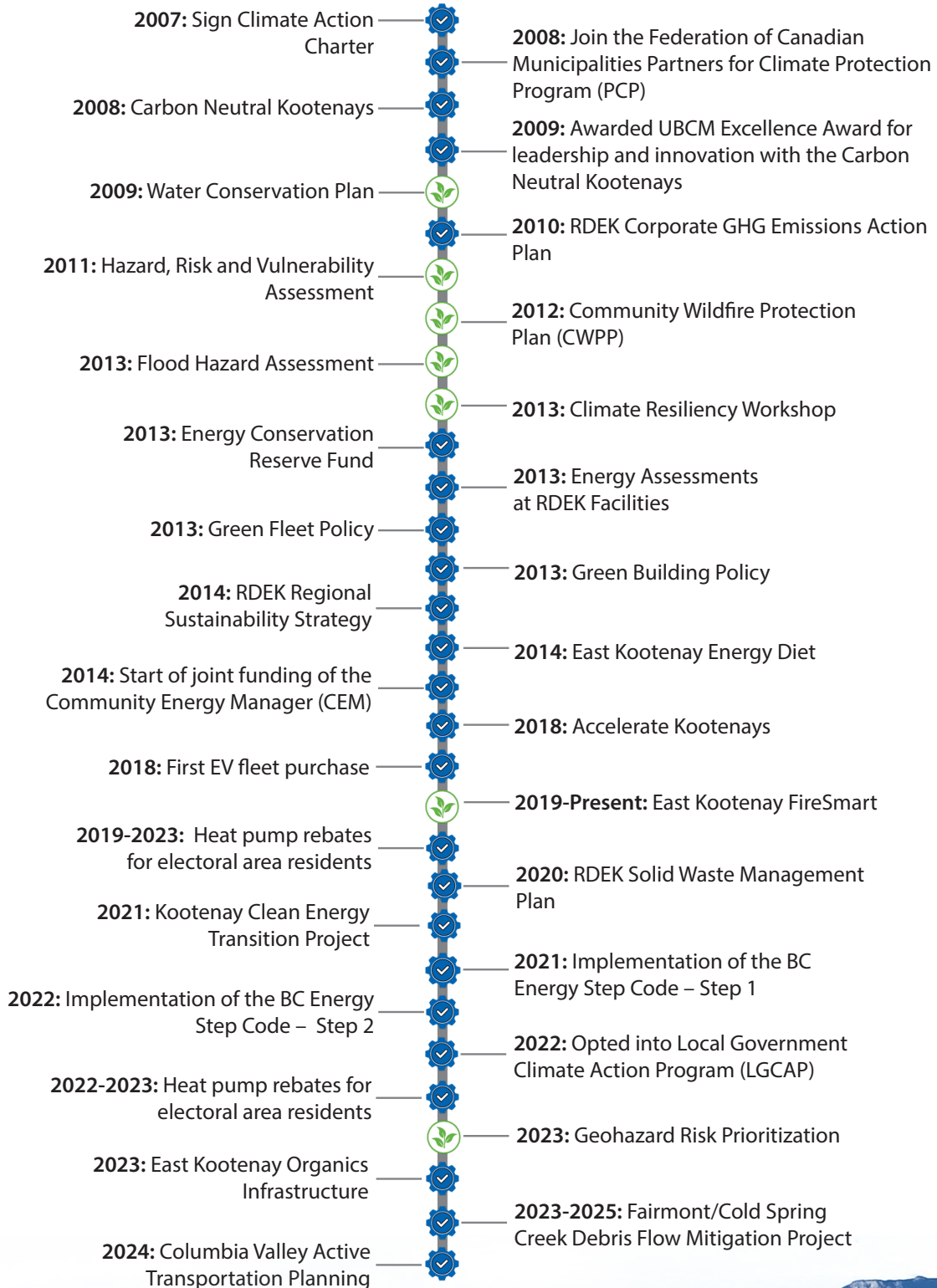
It is divided into three subregions:

- **Elk Valley Subregion:**
 - Electoral Area A
 - City of Fernie
 - District of Sparwood
 - District of Elkford
- **Central Subregion:**
 - Electoral Area B
 - Electoral Area C
 - Electoral Area E
 - City of Cranbrook
 - City of Kimberley
- **Columbia Valley Subregion:**
 - Electoral Area F
 - Electoral Area G
 - District of Invermere
 - Village of Radium Hot Springs
 - Village of Canal Flats

3. RDEK'S CLIMATE ACTION TIMELINE

 = Mitigation

 = Adaptation





4. CLIMATE ACTION PLAN DEVELOPMENT

The CAP was created after conducting detailed research, analysis, public outreach, and a series of workshops involving RDEK staff, representatives from stakeholder organizations and community members. The RDEK was fortunate to have the participation of many community representatives who provided valuable feedback during the process. Based on these interactions, a set of objectives and actions to steer regional climate efforts for the years ahead was developed.

Project Steps

1. Review existing policies, data, plans and information relevant to climate action
2. Develop energy and GHG emissions inventories for corporate operations and the wider community
3. Prepare emission reduction scenarios to guide the development of targets
4. Analyze climate projection data and identify priority climate hazards, risks, and vulnerabilities for the region
5. Develop objectives and actions to address climate adaptation and mitigation specific to the RDEK
6. Draft and finalize the Climate Action Plan (CAP)

Engagement

- Host two Technical Advisory Committee meetings with RDEK staff to guide all aspects of plan development
- Organize two staff and two stakeholder workshops to contribute to the climate risk assessment and to help define objectives and actions
- Conduct an online public survey to collect community views and priorities concerning climate change (1086 respondents)
- Present the draft CAP to the RDEK Board of Directors

Public Survey

Based on survey responses, residents in the RDEK are highly aware of the impacts of climate change. Many express moderate to extreme concern, especially regarding the risks of wildfires, drought, and changes in precipitation patterns that could affect water resources. Given these concerns, residents prioritize support for the region to mitigate these risks and develop adaptation and resilience programs.

Figure 2. Residents' concerns about the impacts of climate change in the RDEK

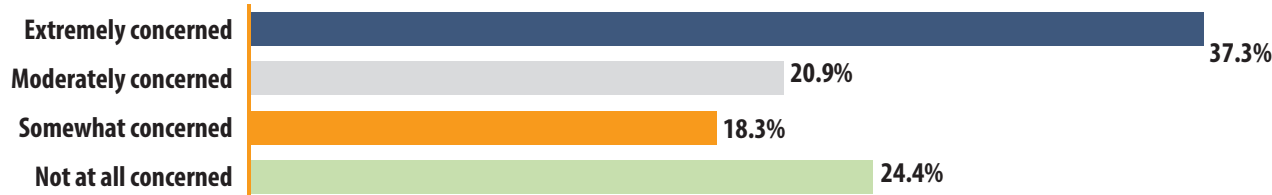
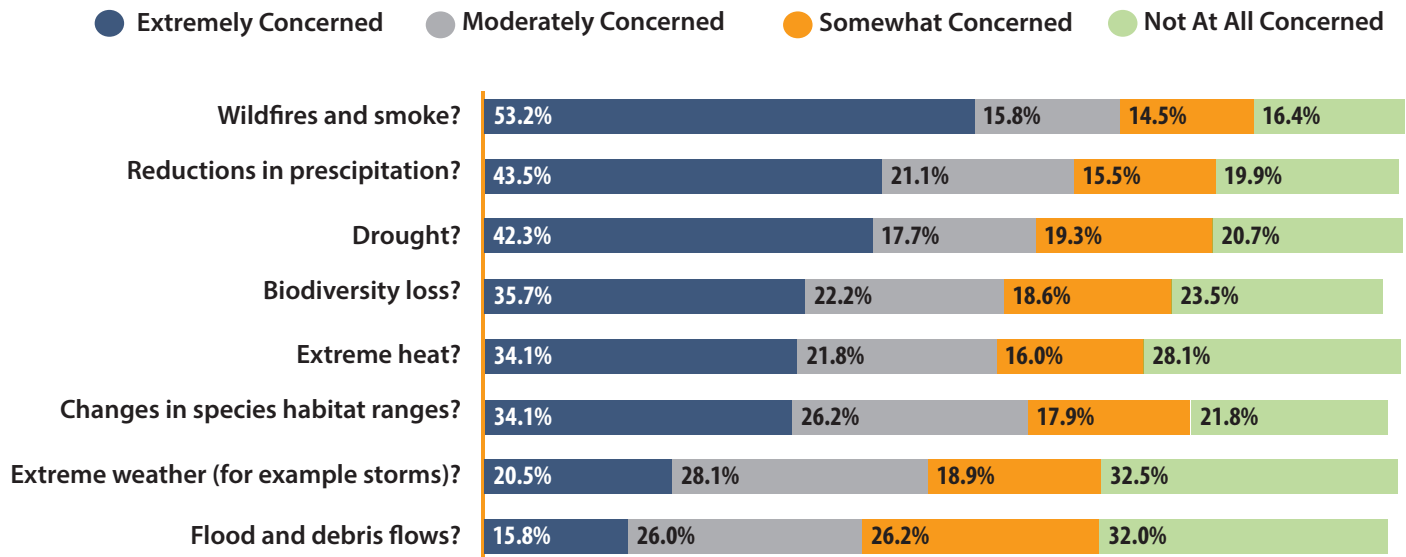


Figure 3. Residents' concerns about climate-related hazards and slow onset climate risks in the RDEK over the next decade



The survey responses also showed that the community is already taking action to address climate change. Residents are starting to choose electric vehicles (EVs) and to install heat pumps to reduce their carbon footprint. However, despite the willingness to embrace these technologies, they also signaled obstacles to broader adoption. The primary challenges are the high upfront costs of these technologies, even with available rebates, and the need for sufficient EV charging infrastructure to ensure locals can drive long distances safely and easily.



In addition to EVs, there is a growing interest in active transportation such as cycling and walking. Improving the related infrastructure could accelerate this trend, supporting the community's transition to a lower-carbon lifestyle.

Many respondents also identified the need for government decisions to reflect consistent climate leadership. The RDEK is taking steps towards climate action with the implementation of the CAP and other strategies that aim to help residents become more resilient to climate change and lower their carbon emissions.

The survey also showed that while some residents are concerned about climate change and taking action to mitigate its impacts, there are also individuals who are not at all concerned. These residents are hesitant about the government allocating resources towards climate resilience initiatives, especially if it leads to increased taxation. The RDEK has considered all perspectives through development of the CAP to ensure that adequate and inclusive climate resilience measures are implemented for the region.

The survey indicates that although there are different perspectives, many residents are concerned about climate change and are taking action. The CAP aims to leverage this momentum by addressing financial and infrastructural barriers and enabling residents to contribute effectively to the region's climate resilience.

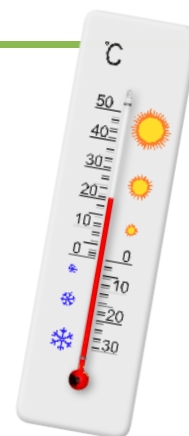


5. CLIMATE CHANGE IN THE RDEK

Climate Projections

Despite local and national best efforts to reduce GHG emissions, global emissions continue to rise and, with them, global average temperatures. As temperatures increase, the atmosphere can hold more moisture, increasing precipitation, and land ice melts, raising sea levels. Climate trends anticipated in British Columbia include hotter, drier summers and warmer, wetter winters. As averages increase, so do the extent of these extreme trends. While uncertainty is involved in projecting the future climate, incorporating future climate projections into planning is more accurate than looking at historical data.

Regional trends and averages in regions with high geographical diversity can often mask differences between various elevations, microclimates, and contrasting rural and urban environments. However, regional projections can still provide meaningful insights.²



Hotter temperatures: From 1971 to 2000, the region's average annual temperature was 5.5°C. Projections indicate that this average will rise to 11°C by the end of the century. Historically, the region's average hottest temperature hovered around 27°C, but projections identify an increase to 32°C by mid-century and to 35°C by the end of the century. Days with temperatures above 30°C, which used to happen approximately two days per year between 1971 and 2000, are projected to rise sharply to 12 days by mid-century and 26 days by the end of the century. In some areas of the region, particularly in South Country, the projections are even more striking: the average hottest day may reach 42.5°C, with more than 50 days above 30°C annually by the end of the century. Additionally, projections indicate an increase in the frequency of summer nighttime temperatures over 18°C, posing challenges for cooling down people and homes.

Drier summers: Summer rainfall will continue to decrease over time. Drier and warmer weather pull moisture out of vegetation and the ground, increasing the risk of forest fire if there is an ignition source present, such as lightning or human-caused sparks.

Warmer winters: Winter projections indicate milder temperatures, bringing longer growing seasons, fewer freeze-thaw cycles, and reduced heating demand for homes and buildings. The coldest winter day will only be a few degrees below zero by the end of the century, and the warmest winter day will be well above freezing. Frost-free days are increasing by 50 days by mid-century and 80 days toward the end of the century.

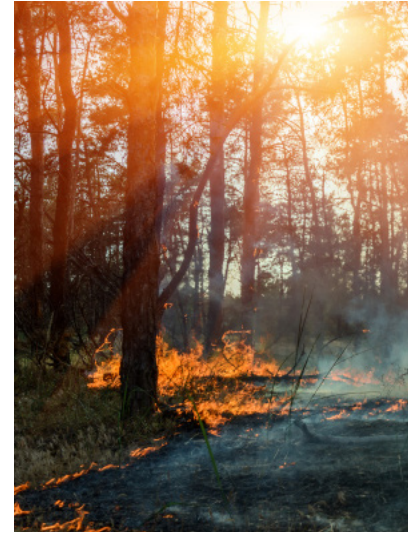
More rainfall and less snow: Between 1971 and 2000, the annual average precipitation was 448mm. Projections include an 11% increase between the 2070s and 2100. The average precipitation in the region is expected to increase modestly in all seasons except for the summer, where projections indicate a decrease in precipitation. The days that were the wettest in the past will occur more frequently with climate change and will have a slightly higher volume of rain in the future.



² The trends presented below are regional averages using the "business as usual" GHG emissions scenarios (RCP 8.5) and are all from the climatedata.ca web portal.

Less snow: There is a significant projected change in snowpack volume and the elevation at which precipitation falls as snow. Compared to a 1961-1990 baseline, the regional average for precipitation as snow by mid-century is projected to decrease 16% in the winter, 38% in the spring and 24% annually. This directly correlates with the above increase in precipitation as precipitation that has historically fallen as snow is now anticipated to fall as rain. As streamflow becomes more reliant on precipitation and less reliant on snow melt, the timing and volume of peak flows will change.³

More frequent and intense extreme events: As global average temperatures rise, approaching 2°C above pre-industrial levels, British Columbians are witnessing a shift in what constitutes 'normal' weather patterns, pushing extreme events to even more severe levels. For instance, BC's heat dome event in the summer of 2021 was categorized as a once-in-1000-year event or an exceptionally rare one. However, ongoing climate changes will likely cause such extreme weather events to happen more frequently in the future.



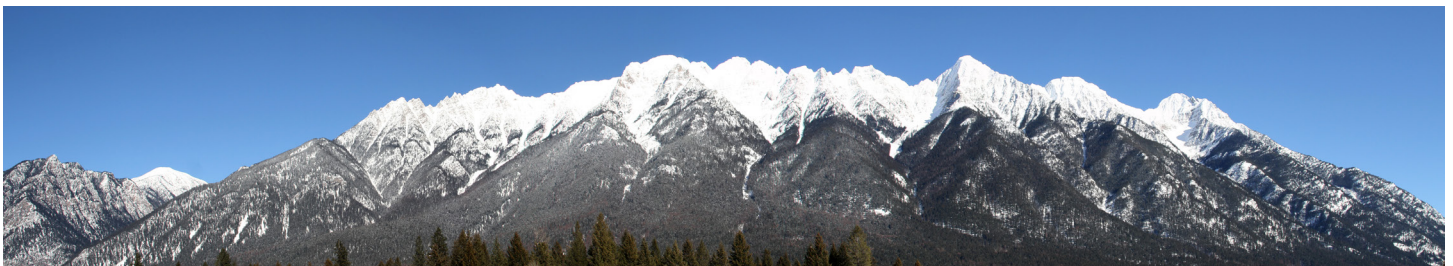
Climate Impacts

As with many other places provincially, federally and globally, the RDEK has experienced an uptick in climate change related impacts in recent years. The region has experienced flooding in several crucial locations within the Elk Valley in 2021, recurring wildfires, resulting in evacuation orders and properties destroyed in 2022 and 2023,⁴ and a Level 5 drought (of a 6 level rating system) in the East Kootenay Basin in the summer of 2023.

In 2011, the RDEK started exploring climate resilience and climate-related hazards. During a climate resiliency workshop, the most concerning impacts were related to wildfire, water quality and quantity changes, and the effects on tourism and recreation. The 2011 Hazard, Risk, and Vulnerability Assessment (HRVA) prepared for the RDEK rated interface and wildland fire and flooding as the top risks in the region. A workshop with the Board of Directors in 2013 discussed the most significant climate changes and added drought, invasive species, and warmer winters to the list of concerns. In 2023, while developing the CAP, the climate-related hazards identified as the most significant reflect those previously identified, including drought, flooding and debris flow, wildfire, weather extremes, and poor air quality from wildfire smoke.

Impacts identified through staff and stakeholder engagement were broad and interconnected. They touched on health and well-being, livelihoods and business, natural systems, transportation, water, buildings and property, social connectedness, and government operations.

The table on the following pages summarizes the various effects of climate change in the RDEK across different categories, as identified through staff and stakeholder engagement activities. These categories include health and well-being, economy and livelihoods, infrastructure, buildings and property, natural systems, and compounding issues caused by multiple simultaneous impacts.



³ Snowpack and snow as precipitation data was taken from the Pacific Climate Impacts Consortium website and the BGC report: Geohazard Risk Prioritization. March, 2023. These two sources use a slightly different baseline than climatedata.ca

⁴ Global News. "Cranbrook fire triples in size to 2,600 hectares." Accessed Feb 28, 2024. <https://globalnews.ca/news/9846074/cranbrook-fire-triple-size-2600-hectares/>.

The Free Press. "Three large wildfires continue to burn in East Kootenay." Accessed Feb 28, 2024. <https://www.thefreepress.ca/news/three-large-wildfires-continue-to-burn-in-east-kootenay-5145906>.



	Wildfire & Smoke	Flood & Debris Flow	Drought	Extreme Temperatures	Increasing Extremes
Health and well-being	Mental and physical impacts of poor air quality and/or evacuation (alert or order), property loss Health system surge and back up	Mental health impacts of being on evacuation alert, being displaced, losing property	Conflict over water resources Impacts to food security over time	Morbidity and mortality for the most heat-vulnerable individuals, mental health impacts Health system surge and back up	Climate anxiety and other mental health impacts Impacts to food security and to community connections with increasing displacements
Economy and livelihoods	Resources to manage response, alerts and evacuation Supply chain disruption Reduced tourism with smoky skies	Cost prohibitive or unavailable insurance Supply chain disruptions Recovery and relocation funds are scarce	More expensive, and reduced availability of water for irrigation and to grow feed for livestock	Reduced productivity and increased absenteeism due to hot work environments Gradually increasing temperatures increase growing season but extreme heat and cold can kill vegetation.	Tourism ramifications from less winter and spring snow Increasing emergency response and recovery impacts government budgets Agriculture and business losses more frequent
Infrastructure, buildings & property	Property and/or infrastructure damage and insurance issues/ costs	Property and/or infrastructure damage or loss	Surface and aquifer water resources reduced and wells drying up	Public and private buildings overheating, increased energy demand where air conditioning Infrastructure surpassing temperature design thresholds and failing	Increases the frequency of damage to infrastructure and property or service disruption, especially power Lifespan of infrastructure decreases as durability impacted
Natural Systems	Impact to watershed, ecosystems and wildlife May increase wildlife/ human conflict	Loss of wildlife habitat Groundwater may be affected	Lower water flow impacts aquatic species Increases in tree and vegetation mortality	Plant and animal mortality and changes in migration patterns Gradually increasing temperatures are changing species range and type	Far reaching impacts to natural systems from increased frequency of extreme events
Compounding issues	Wildfire changes water patterns and increases landslide risk Wildfire smoke during extreme heat poses conflicting messaging (e.g., open/close windows)	Heavy rainfall and saturation can increase landslide risk	Increases wildfire risk Flash flooding if soils very dry with heavy rain	Increased demand for outdoor recreation increases wildfire risk Hot, smoky days makes it hard to be outside or inside	Rain on snow increase in short term causes localized flooding

Disproportionate Impacts



The health and well-being of residents rely on a broad spectrum of personal, societal, economic and ecological factors necessary for a healthy life, such as access to nutritious food, secure housing, clean water, unpolluted air, and social connection – the determinants of health. Climate change impacts the spectrum of these determinants of health, from living conditions and ecosystem health to individual and community health risks. Climate change also acts as a risk multiplier, amplifying existing health inequities and disproportionately impacting some community members.

People and communities are not inherently vulnerable but instead vulnerable due to various factors, often beyond one's control, that place people in contexts where they are more susceptible to negative outcomes when impacted by climate change or other adverse events. These factors include age, health status, socioeconomic conditions, geographical location, or systemic inequalities.

The 2021 summer heat dome event has been studied extensively to help communities understand the factors that increase individual and community vulnerability and risk. Factors found to raise the risk of heat morbidity and mortality included low income, older adults, living alone, pre-existing mental and physical health conditions, and living in hot urban environments with no cooling.⁵ Some individuals and groups may be more exposed to climate-related hazards based on being unhoused or poorly housed, working outdoors, or living near interface fire zones.

Action to reduce the negative consequences of climate change-related events must consider the individuals and groups that are likely to be most affected and prioritize supporting them. Improving and investing in the determinants of health for everyone (i.e. housing, access to food and employment, and a healthy environment) will reduce the negative impacts of climate change over time.

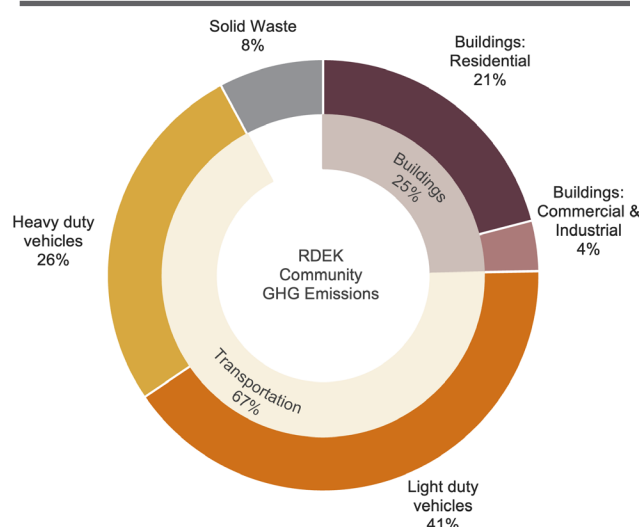
6. GHG EMISSIONS

The CAP addresses the GHG emissions for the RDEK's operations, also known as "corporate emissions," and the community-wide GHG emissions in the region's electoral areas resulting from local activities. The community-wide GHG emissions inventory calculates the amount of GHG emissions generated within the community boundaries and includes corporate emissions. Below is a more detailed breakdown of those emissions.

6.1 COMMUNITY GHG EMISSIONS INVENTORY

Across the community, activities from residents, businesses and organizations result in GHG emissions. This inventory includes the following sources: heating and cooling buildings, heating hot water, transporting people and goods, and disposing of organic waste in landfills (such as food scraps, paper, and wood). According to the latest Provincial Community Energy and Emissions Inventory, in 2021, total community-wide GHG emissions for the RDEK unincorporated areas were approximately 125,000 tonnes of CO₂e. Figure 4 shows the community's GHG emissions by sector. Buildings comprise 25% of all community emissions, transportation accounts for an estimated 67%, and the remaining emissions (8%) result from the breakdown of waste in the landfill.⁶

Figure 4. RDEK community GHG emissions by sector, 2021



⁵ National Collaborating Centre for Environmental Health. (2024, February 28). "SPPH OEH Seminar: Mortality during the catastrophic 2021 heat dome: What we know." Accessed on Feb 28, 2024. <https://ncceh.ca/events/upcoming-events/spph-oeh-seminar-mortality-during-catastrophic-2021-heat-dome-what-we-know>.

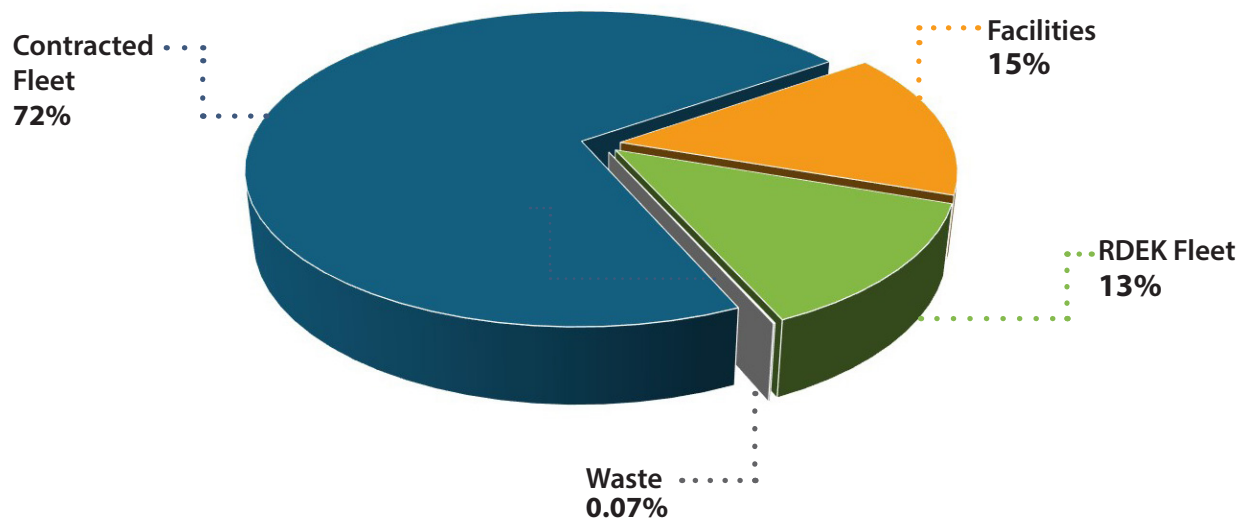
⁶ Province of British Columbia (2024, February 28) "2021 Community Energy and Emissions Inventory Data." Accessed on February 28, 2024. <https://www2.gov.bc.ca/gov/content/environment/climate-change/data/ceei/current-data>.



6.2 CORPORATE GHG EMISSIONS INVENTORY

The RDEK's corporate emissions result from the delivery of community services, including fire services, building inspections, recreation services, parks, waste management, water and wastewater management and contracted services. In 2022, RDEK operations resulted in 1,785 tonnes of CO₂e. This is about 1% of the estimated total community GHG emissions. These emissions, though a small sub-component of the overall community emissions are under the direct responsibility of the RDEK for oversight and management. Most corporate GHG emissions derive from the contracted services fleet (such as solid waste collection and transfer station operations), 72%, while facilities and the RDEK fleet contributed 15% and 13%, respectively (see Figure 5). Waste accounts for less than 1% of the 2022 corporate GHG emissions.

Figure 5. RDEK corporate GHG emissions by sector, 2022



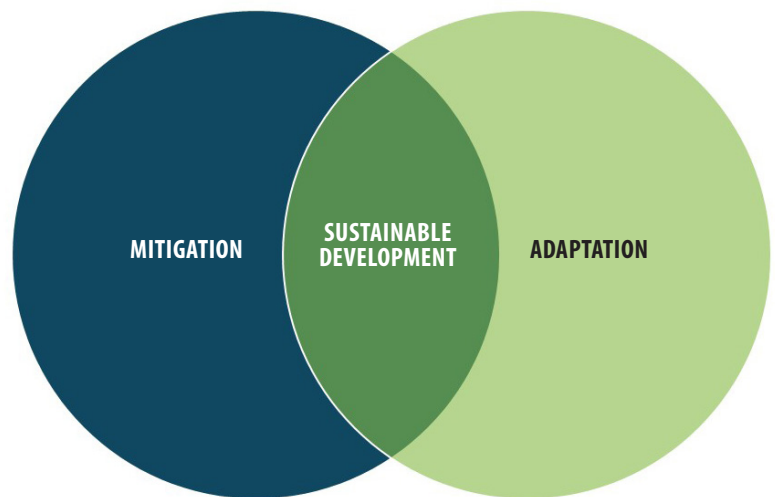
7. CLIMATE ACTION PLAN

Reducing GHG emissions and enhancing climate resilience and preparedness requires a whole society approach. The CAP includes objectives strictly aimed at improving the RDEK's corporate performance on climate change and objectives that focus more broadly on the region's community climate outcomes. Actions span many regional government functions and include actions the RDEK can take, actions that rely on collaboration with partners and residents, and actions that the RDEK can support all residents to be involved in implementing.

Implementing many of the actions will rely on successful applications for funding from other levels of government as well as on key partnerships. Staff capacity is crucial to identify and apply for funding, to manage funded projects and to build partnerships.

Climate change adaptation and resilience and reducing GHG emissions are intertwined. While the RDEK does its part to decrease emissions locally, there is also a need to recognize that global emissions are at play and that there are already certain impacts of climate change that are guaranteed, given the concentration of emissions in the atmosphere. This is why, in order to enhance our community and regional resilience, we must adapt to the impacts of climate change while also reducing emissions. There are actions outlined in this Plan that both reduce GHG emissions and improve community resilience. Prioritizing these actions will help the RDEK stay safe during extreme events and achieve sustainable development. For instance, heat pumps are an energy-efficient way to heat and cool homes and provide thermal safety during heat waves.

Figure 6. The intersection of adaptation and emission reduction strategies for sustainable development



RDEK EMISSION TARGETS:

Reduce 2007 GHG emissions by 40% by 2030

Net-zero GHG emissions by 2050



7.1 GHG TARGETS

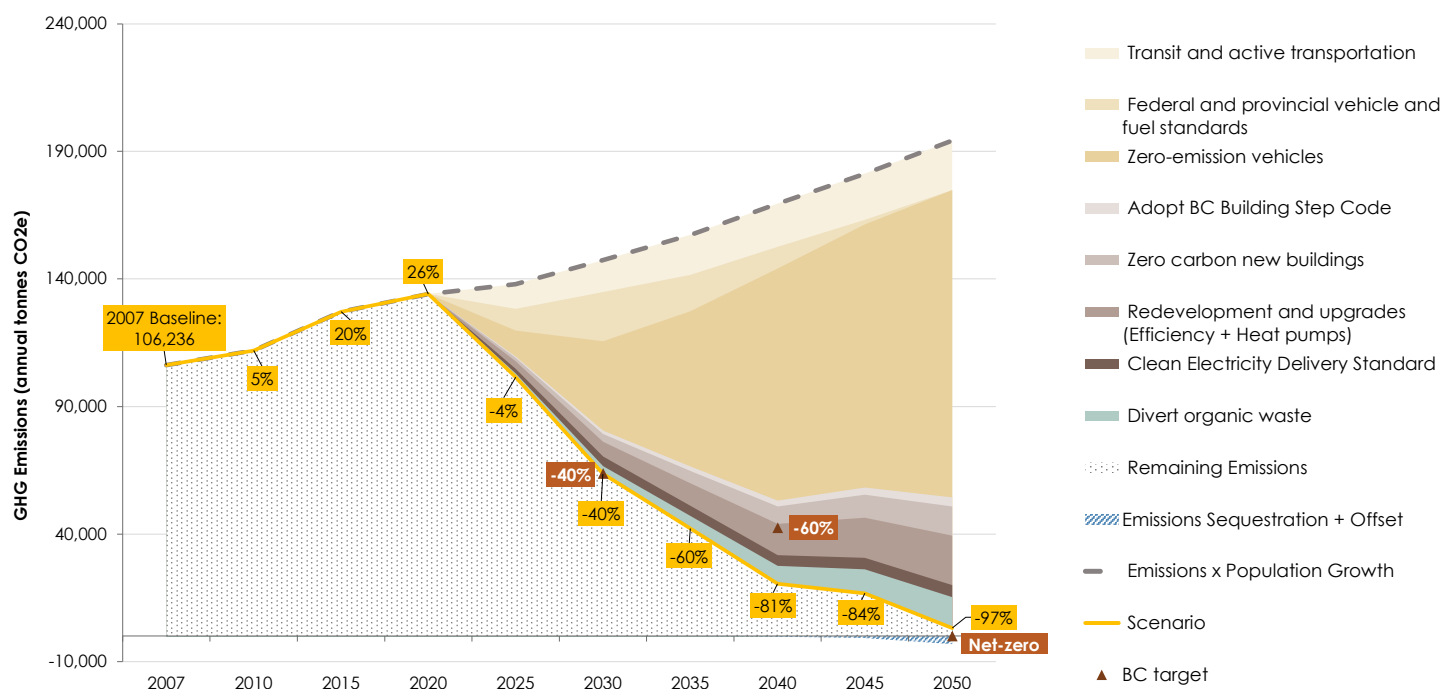
The RDEK GHG emission reduction targets align with the provincial CleanBC plan:

- Reduce 2007 GHG emission levels by 40% by 2030
- Achieve net-zero GHG emissions by 2050

Figure 7 highlights one potential pathway toward reaching these targets in the RDEK electoral areas. This pathway requires that significant action be taken by all levels of government, residents, businesses, and community organizations. Substantial reductions are expected through initiatives prioritizing transitioning to zero-emission vehicles, adopting energy-efficient design in building construction and renovation, installing zero-emission heat pumps in buildings, and implementing measures to capture and divert organic waste from landfills.

The Appendix contains detailed assumptions regarding the impacts of these actions.

Figure 7. Pathway to achieving RDEK GHG emissions reduction targets by Aligning with CleanBC Targets



The RDEK is essential in actively supporting the community to decrease GHG emissions. However, achieving reduction targets relies on collaboration and support from provincial and federal governments and active participation from the community and businesses. Furthermore, despite substantial reductions, some emissions may persist beyond 2050. Specifically, landfill waste will continue emitting GHGs for decades, and only some of these emissions can be effectively captured. Although most buildings may eventually transition to electric heating, specific high-energy-intensity applications, such as industrial and commercial, might take longer to switch. Therefore, alongside emission reduction efforts, it will be crucial for the community to identify opportunities to protect and restore natural areas that sequester additional carbon, ultimately achieving a net-zero emissions region. As an example, forests and grasslands are considered one of the best sources of carbon sequestration, which removes carbon dioxide from the atmosphere and stores it. The region contains these very ecosystems and by enhancing or restoring forests and grasslands, this can offset any emissions that are difficult to reduce given existing technologies.



7.2 RESILIENCE GOAL

The RDEK aims to minimize the adverse effects of climate change, prepare for long-term changes and acute events, and enhance community resilience. Achieving this goal will require assessing vulnerabilities in critical sectors such as agriculture, water resources, and infrastructure and prioritizing areas at the most significant risk. Strengthening infrastructure to withstand extreme climate-related weather events is vital. Moreover, conserving ecosystems and implementing sustainable land management practices are crucial for maintaining natural buffers against climate impacts. However, planning for climate change is challenging due to its complexity and unpredictability. Taking an adaptive capacity approach is essential, which includes developing flexible strategies and policies that can evolve as conditions change, promoting learning and innovation, and investing in research and development to enhance knowledge and tools for adaptation.

The RDEK adaptation actions reflect the four pathways in the provincial Climate Preparedness and Adaptation Strategy:

1. Foundations for Success (understanding risk);
2. Safe and Healthy Communities;
3. Climate-ready Economy and Infrastructure; and,
4. Resilient Species and Ecosystems.

7.3 GREEN AND RESILIENT BUILDINGS AND PROPERTY

2030 Objectives

- **Corporate:** RDEK leads by example with new buildings and facilities built to high energy efficiency and zero-carbon standards with consideration of climate-resilient design.
- **Corporate & Community:** RDEK applies a climate lens integrating climate adaptation and mitigation into organizational decision-making, land use, asset management and capital planning.
- **Community:** Homes and buildings are built and retrofit to high energy efficiency and low carbon standards with consideration of increasing climate resilience to floods, heat, smoke and wildfire. By 2030, new homes will be built with zero-carbon standards.

Buildings and properties are central to people's daily lives and provide shelter. They are also responsible for 25% of GHG emissions in the RDEK's electoral areas.

The Province of British Columbia is advancing significant programs and regulations to help the province reach emissions targets and climate resilience goals. This includes introducing two Step Codes (Energy and Zero Carbon Step Codes) in the BC Building Code that provide local governments and the building industry with tools to implement higher building standards. These tools will help support RDEK's climate goals by reducing energy consumption and emissions from buildings.

The BC Energy Step Code, introduced in 2017, sets performance requirements for energy efficiency in new construction and groups them into increasingly stringent "steps" representing a path to net-zero energy-ready buildings.





As of May 2023, the BC Building Code now requires 20% better energy efficiency for most new buildings in BC (Step 3 of 5), meaning that the lower steps of the Energy Step Code are now included in the base building code and required for all local governments in the province.

The Zero Carbon Step Code is a newer tool focused on decarbonizing building operations through space and hot water heating systems. While the Zero Carbon Step Code is currently optional for local governments, the Province has stated that they will introduce carbon pollution limits into the BC Building Code in 2024 and 2027, in addition to requiring zero-carbon new construction for all buildings starting in 2030.

Additionally, building technology advancements have assisted in reducing emissions from homes and buildings. Heat pumps are an excellent example of this as they are a newer way to meet some of the performance requirements of the Zero Carbon Step Code and improve resilience by providing cooling for thermal safety during heat waves. Recent studies show that heat pumps are a feasible and efficient heating solution in various climates across British Columbia, including the East Kootenay.⁷

The RDEK has taken significant steps toward greener buildings, properties, and low-carbon design, including installation of solar panels to supply electricity to the Wycliffe Exhibition Grounds. Still, it is essential to continue improving and innovating to meet the climate action targets. This will require continued improvement in building bylaws, policies, and practices to minimize energy consumption and allow the remaining energy needs to be covered through a cost-effective use of renewable energy sources. Additionally, these improvements need to consider both construction of new buildings and retrofitting existing buildings. Achieving these improvements requires financial incentives, educational initiatives, and collaborative efforts across different sectors.

Beyond reducing emissions, buildings must also be resilient to the impacts of climate change, such as floods and wildfires. This involves land use planning with hazards in mind, structural changes, indoor air quality improvement, and thermal comfort.

Local Builder's Heat Pump Cold Climate Test

Amidst a severe cold wave in the RDEK, local builder Bruce Murdoch tested a home's cold climate heat pump system.

The house in question was a "Net-Zero Ready" home with a building envelope designed to capture and maintain heat inside the building. The home had an air source heat pump, which was subjected to extreme temperatures that dropped to -25°C.

Despite the harsh cold weather demands, the heat pump system exceeded expectations. Mr. Murdoch concluded that heat pumps work exceptionally well in cold climates and provide summer air conditioning. They are also cost-effective to operate. On a typical winter day in the area, which tends to be in the 0°C to -10°C temperature range, heat pumps are highly efficient and cost less to operate than a high-efficiency gas furnace. "We are ready for low-emission energy for homes even in our cold climate," he said.

Source: The Heat Pump Torture Test



Wycliffe Exhibition Grounds Solar Panels

⁷ Building to Electrification Coalition. (2023). "Coming Cold: Heat Pump Efficiency at Low Temperatures." Accessed Feb 28, 2024. <https://b2electrification.org/coming-cold-heat-pump-efficiency-low-temperatures>. Building to Electrification Coalition. (2023). "Coming Cold: Heat Pump Efficiency at Low Temperatures." Accessed Feb 28, 2024. <https://b2electrification.org/coming-cold-heat-pump-efficiency-low-temperatures>.

Successes

The RDEK has demonstrated a strong commitment to reducing GHG emissions and enhancing energy efficiency in the region. The RDEK has been the joint funder of the Community Energy Manager (CEM) position for ten years. Through this position, the RDEK has participated in the East Kootenay Energy Diet and established the Energy Conservation Reserve Fund, supporting homeowners through subsidies for energy audits and upgrades. The CEM has organized energy efficiency workshops to engage contractors and trades in understanding and implementing the BC Energy Step Code. They have also partnered with the Regional District of Central Kootenay and the Regional District of Kootenay Boundary to launch the Kootenay Clean Energy Transition Project. This initiative has been instrumental in the transition to clean energy by supporting market transformation through capacity building for long-term impacts. The project focuses explicitly on retrofits, solar power, and electric vehicles.⁸



In pursuing energy-efficient building practices, the RDEK has encouraged energy modelling and improved efficiency in new construction. The RDEK referenced Step 1 prior to the BC Building Code change to support familiarity with energy modelling and using energy advisors. By successfully implementing the BC Energy Step Code, the RDEK has offered rebates that incentivize builders and owners to choose more energy-efficient building options. This effort has been complemented by upgrading regional facilities, replacing outdated lighting with LED

alternatives in several fire halls, integrating solar panels at the Wycliffe Exhibition Grounds, and implementing energy-efficient upgrades at the Eddie Mountain Memorial Arena and RDEK's Cranbrook office.

The 2022/2023 Heat Pump Rebate for electoral area residents and the Energy Step Code Incentive Program further underline RDEK's commitment to energy conservation. Moreover, the Green Building Policy mandates that all new RDEK development projects, major renovations, and retrofits incorporate environmental, economic, and social considerations in their design and evaluation.

Alongside mitigation efforts, the RDEK has actively pursued adaptation strategies to enhance resilience against climate-related risks. The 2012 Community Wildfire Protection Plan (CWPP) and the East Kootenay FireSmart program have been integral in mitigating wildfire risks in the region.

In response to the increasing threat of flooding, the RDEK completed Flood Hazard Assessments in 2013 and 2021 and recently prioritized the study of geohazard risks in 2023. Engineering flood mitigation projects at Fairmont Hot Springs and along Fairmont and Cold Spring Creeks represent significant steps towards reducing flood risk. Regular flood risk assessments, scheduled every ten years, ensure RDEK's strategies remain effective and responsive to changing conditions.

These comprehensive measures in mitigation and adaptation demonstrate the RDEK's proactive and holistic approach in addressing the challenges posed by climate change. RDEK's ongoing efforts in green building practices and environmental resilience are pivotal in shaping the region's sustainable and secure future.



⁸ Shifts Happening. "Shifts Happening Homepage." Accessed February 28, 2024. <https://www.shiftshappening.ca/>.



Actions

1. Build the proposed **new RDEK Cranbrook office** to high energy efficiency standards, net zero-ready standards and climate resilience best practices.
2. Engage with partners, such as FortisBC and BC Hydro, to complete **energy and resilience assessments** focused on heating, cooling and clean air systems for all facilities owned by the RDEK and expected to be in use for the long term. Following the assessment, prioritize and initiate upgrades.
3. Review RDEK assets to identify where **renewable energy** options could be incorporated to provide backup power resilient to extreme weather events.
4. Develop a **business continuity plan** to ensure corporate functions can withstand and quickly recover from climate events, especially areas most vulnerable to climate events.
5. Continue to complete **hazard-specific studies** on regional threats like wildfires, floods, and extreme weather. This effort aims to pinpoint vulnerabilities, forecast impacts, and craft mitigation strategies to bolster community safety and resilience.
6. Continue to **update hazard areas** during Official Community Plan (OCP) reviews, depending on new information.
7. Continue to promote climate-smart, **denser mixed-use and mixed-income development** to improve the feasibility and cost per household of public transit and active transportation connections in identified growth areas. Focus density away from areas with high exposure to climate-related hazards such as floods and wildfires.
8. Continue to include **Wildfire Hazard Development Permit Areas** in all OCPs and provide information through the East Kootenay FireSmart program.
9. Continue to resource implementation of the **Community Wildfire Resilience Plan (CWR)** and **FireSmart program**. Update the CWR regularly as needed.
10. Continue to provide links to external resources (e.g., Federal and Provincial) for both builders and residents, covering energy efficiency, zero-carbon building and renovating, resilience to climate-related hazards at home and building siting best practices.
11. Collaborate with the Community Energy Manager to refine RDEK's BC Energy Step Code policies and incentives, **aligning them with the most recent provincial BC Building Code updates and work towards incorporating the Zero Carbon Step Code**. Leverage the CEM's work plan to proactively enhance East Kootenay's market readiness ahead of new Provincial regulations.
12. Work with partners such as Fortis BC, BC Hydro, and the Community Energy Manager to develop and identify funding opportunities to support training programs and capacity building for builders, architects, and related professionals in **low-carbon building design**.
This initiative will focus on the latest techniques and materials that reduce the carbon footprint of new buildings and major renovations.
13. Work with the Community Energy Manager (CEM) to establish an **Electric Vehicle Ready Bylaw** that provides requirements for electric vehicle charging requirements for new buildings, and where possible retrofits, designed for the RDEK context.
14. Implement a **building retrofit program** to prioritize a holistic home retrofit strategy, emphasizing the importance of an envelope-first approach.

7.4 GREEN TRANSPORTATION

2030 Objectives:

- **Corporate:** RDEK shows regional leadership by transitioning its corporate fleet to zero-emission vehicles and carpooling when possible.
- **Community:** The RDEK has robust and connected EV infrastructure.
- **Community:** The RDEK invests in and promotes safe, affordable, and sustainable transportation such as walking, cycling, rolling and public transit for all levels of mobility.



Reducing GHG emissions from transportation requires transitioning to zero-emission vehicles, enabling and promoting active transportation and public transit ridership to reduce reliance on vehicles, and improving goods movement efficiency. Through the CleanBC Plan, the provincial government has committed to reducing GHG emissions from transportation with short- and long-term targets. In the short term CleanBC supports improving alternative modes of transportation and increasing the renewable content in gasoline and diesel. In December 2023 the federal government's Electric Vehicle Availability Standard was finalized, resulting in an update to the Zero-Emission Vehicles Act with sales targets for 100% of new light-duty vehicle sales to be zero emission by 2035.

Both levels of government provide rebates to consumers who purchase electric vehicles. With the global push towards cleaner transportation, zero-emission vehicles are rapidly increasing, and their availability is expanding worldwide. This trend, supported by incentives and policy initiatives in British Columbia and Canada, has significantly increased electric vehicle adoption in the region. Since 2018, the number of electric vehicles in the Southern Interior has grown fivefold.⁹ Despite their higher initial cost, electric vehicles are increasingly viewed as cost-effective due to their lower operating expenses. The lower cost of charging a zero-emission vehicle than fueling a traditional vehicle plays a crucial role in this economic benefit. As the market shifts towards zero-emission vehicles, the market for used zero-emission vehicles is expected to expand in the coming years, also increasing supply. Additionally, vehicle manufacturing companies are focusing on research and development of solid state batteries for electric vehicles, which could provide many advantages over the current liquid state batteries and address many barriers to adoption of current electric vehicles. The alignment of both federal and provincial documents provides clear direction for the RDEK to bolster green transportation options and make them a viable option for rural residents.



Active transportation also reduces GHG emissions and supports healthy communities. Land use planning can aid in lowering trip length and offering infrastructure that facilitates safe, convenient and inclusive active transportation. Opportunities can be mobilized to forgo vehicle ownership for car-sharing or reduce vehicle trips through carpooling, cycling, e-biking, and public transportation (where available), particularly in areas with homes and services nearby. Particularly in the RDEK and beyond to other centres in the broader Kootenay region, where distances to services can limit the feasibility of active transportation, public transportation can provide options to reduce vehicle trips. In addition to improving inter-community public transportation options, inter-regional public transportation options should also be at the forefront of discussions to improve transportation options.

As electrification progresses across BC, it is important to collaborate with partners to ensure the power grid's resilience and modernization and to plan for sufficient backup power. Transportation systems should be made more resilient to the impacts of climate change, with shaded routes during summer and shelters for taking refuge from the elements.

⁹ ICBC. "Vehicle Population Data." Available on Tableau Public. Accessed Feb 28, 2024 at <https://public.tableau.com/app/profile/icbc/viz/VehiclePopulationIntroPage/VehiclePopulationData>.



Successes

The RDEK has promoted various green transportation initiatives, contributing to a more sustainable and environmentally friendly region. The RDEK received two sustainability awards for participation in the **Accelerate Kootenay Project** – the 2018 Union of BC Municipalities Excellence Award for sustainability and the 2020 Visionary Award from FCM's Sustainable Communities. This initiative marked Canada's first community-driven, collaborative strategy to establish a clean transportation network that caters to electric vehicles. The project, a 2-year endeavour with a budget of \$1.5 million, led to the creation of the "Electric Highway." This network of electric vehicle charging stations spans the broader Kootenay region, encompassing 13 fast charging stations and 40 Level 2 charging stations.

The success of the "Electric Highway" is a testament to the power of collaboration involving partnerships with neighbouring regional districts, the Columbia Basin Trust, the Federation of Canadian Municipalities, the Province of British Columbia, FortisBC, BC Hydro, and Powertech Labs. This initiative not only facilitates cleaner transportation options but also positions the Kootenays as a leader in sustainable mobility.

In addition to the electric vehicle infrastructure, the RDEK is developing the Columbia Valley Active Transportation Plan. This plan focuses on enhancing non-motorized transportation options such as walking and cycling, diversifying and greening the region's transportation network and creating more accessible, safe, and environmentally friendly transportation choices for residents and visitors.



Complementing these initiatives, the RDEK has also implemented the Green Fleet Policy. This policy highlights a commitment to reduce the corporate fleet's carbon footprint. It includes adopting more fuel-efficient vehicles, integrating zero-emissions vehicles into the fleet, and exploring alternative fuel options. The Green Fleet Policy represents an important step in the ongoing journey towards reducing GHG emissions and promoting sustainable transportation within the region. Since adoption of the Green Fleet Policy, the RDEK has purchased three electric fleet vehicles and one hybrid vehicle. Three level 2 charging stations have been installed between the two RDEK administration buildings, each with the capacity to charge two electric vehicles.

These successes in green transportation highlight the RDEK's dedication to climate action and sustainable development. By pioneering projects like Accelerate Kootenays and actively planning for more eco-friendly transportation options, the RDEK is paving the way for a greener, cleaner future in the Kootenays.

Actions

1. Develop a **corporate zero-emissions vehicle strategy**. This strategy will include:
 - a. A procurement policy for adopting zero-emission vehicles, plug-in hybrids, or standard hybrids at the time of vehicle replacement, wherever suitable models are available. This policy would match suitable vehicles to departmental requirements and limitations.
 - b. A plan for establishing and expanding corporate zero-emissions vehicle charging infrastructure to support the fleet's needs over time.
2. Establish a systematic approach to **document and analyze the performance and range of existing zero-emissions vehicles** in the RDEK fleet.

This information will be regularly shared with staff to improve their understanding and confidence in using zero-emissions vehicles. Additionally, the RDEK will organize tutorial sessions to familiarize staff further with the operation and benefits of zero-emission vehicles.
3. Identify key corridors and zones that require additional **fast-charging infrastructure**.
4. Engage with BC Hydro to support the planning, design and installation of Level 2 charging at strategic RDEK facilities where dwell time is greater than two hours (i.e. arena).
5. Continue to provide links to external resources (e.g., Federal and Provincial) that aim to **increase awareness of zero-emission vehicles**, improve understanding of future-proofing for load management and information about vehicle grid opportunities as a resilience measure.
6. Continue to plan for safe **active transportation**, including walking, cycling and rolling trails within and between communities. Collaborate with appropriate partners and stakeholders to implement these plans.
7. Explore partnerships with regional municipalities and BC Transit to explore improved **intercommunity and inter-regional public transportation options** and support BC Transit's existing electrification initiatives in the East Kootenay.



Community Partners

Living Lakes Canada's implementation of a coordinated water monitoring network across nearly all of the RDEK provides decision-makers with information about the impacts of climate change on water supply.

In addition, Living Lakes Canada's Columbia Basing Water Hub open-source database serves as a repository for a wide range of current and historic water-related data for the region.

Learn More: <https://livinglakescanada.ca/>



7.5 GREEN ECONOMY AND RESILIENT LIVELIHOODS

2030 Objectives:

- **Community:** Agricultural producers and property owners have the tools and resources to be resilient.
- **Community:** Businesses have the tools and resources to reduce emissions, improve business continuity and adapt to climate change.

Businesses can also prepare for climate change by reducing risks to their operations and taking advantage of opportunities such as longer growing seasons. Planning for business continuity at the RDEK and throughout the community will ensure improved response and recovery from climate-related events. The RDEK and community can support large and small businesses in reducing emissions while improving their readiness for the new climate normal.

Tourism businesses need to adapt to more frequent low snow years and smoky summer skies. At the same time, the agriculture sector is preparing for more frequent disruptions with rising temperatures and more frequent and intense climate events. Employment disruptions or temporary stoppages may become more frequent, especially for outdoor workers. The Province's *Strategic Framework for Tourism 2022–2024: A Plan for Recovery and Resiliency* is a three-year roadmap for rebuilding and revitalizing BC's tourism industry, focusing on working with partners to ensure the industry is cleaner, more resilient and prepared to adapt to climate change.

For the agriculture sector, the Province has developed two programs to support the adaptation of agriculture in the province: the *Extreme Weather Preparedness for Agriculture* and the *Agricultural Water Infrastructure* programs. Funding provided through these programs will support initiatives, including farm-level climate risk assessments and adopting practices that reduce farm operations vulnerabilities from extreme heat, wildfires, and flooding. In the Kootenay region, the agriculture sector is supported by Kootenay and Boundary Farm Advisors (KBFA), with information and expertise to help find solutions to farm-specific issues. KBFA facilitates climate change education and action, aiding in adapting to challenges like drought, wildfire, and flooding, ensuring sustainable and climate-resilient farming practices.



Successes

In 2014, the RDEK approved an **Agricultural Plan** to support the development of sustainable and profitable agriculture in the region. This policy document identifies key issues and opportunities, recommends future actions, and outlines an implementation strategy.

The same year, the RDEK also approved the **Regional Sustainability Strategy** (RSS), which includes various key initiatives for economic and agricultural development in the region. The RSS is a long-term planning tool that provides a “sustainability lens” for guiding and evaluating regional operations and decision-making.

Actions

1. Continue to support **Kootenay Boundary Farm Advisors (KBFA)** to work with regional producers to improve climate resilience in the agricultural sector.
2. Work with KBFA to continue encouraging **agriculturalists to develop emergency plans** (e.g., livestock relocation) and undertake an assessment to clearly define the RDEK's role and capabilities in supporting the agricultural community during emergency events.

This will ensure that the RDEK's involvement is effectively coordinated and aligns with the needs and challenges faced by agriculturalists in times of crisis.

3. Engage with the **tourism sector to convene a working group to discuss the implications of climate change on tourism** and share lessons learned on preparing and adapting tourism operations within the region and from other jurisdictions.
4. Collaborate with **local chamber(s) of commerce** to help businesses access resources and support the organization of programs, including workshops, networking events, and expert-led seminars on climate adaptation and mitigation.
5. Collaborate with BC Hydro, Fortis BC, and other organizations with programs ready to support training in energy efficiency and other associated topics.

7.6 RESILIENT WATER SUPPLY

2030 Objectives:

- **Corporate:** Water systems owned or managed by RDEK are resilient and reliable.
- **Community:** Growth management is informed by current information on the quality and quantity of potable water resources.
- **Community:** Regional water users understand drought management and water conservation approaches and use water resources responsibly.



The changing climate affects both the quality and quantity of water. The projected decline in snowpack in the region will change the amount and timing of peak flow in regional rivers. Summer water supply will depend more on precipitation than on snowmelt. Additionally, extreme precipitation and storms can increase water turbidity, clogging water distribution systems or necessitating further treatment. To address these issues, the Province is devising a Watershed Security Strategy to lead the necessary changes to ensure better care and stewardship of watersheds in British Columbia. This initiative is part of the BC Climate Preparedness and Adaptation Plan and is expected to be completed in 2024.

Water is a crucial component of natural systems. Rising stream temperatures and droughts are hurting both aquatic and terrestrial ecosystems. To prepare for and adapt to climate change, it is important to consider these changes when planning water-related infrastructure and land use and to continue building water conservation awareness.



Successes

The RDEK's Water Conservation Plan, established in 2009, outlines a comprehensive approach to managing water resources effectively. The plan encompasses regulations, economic incentives, maintenance tools, and educational initiatives to foster sustainable water use. This strategic approach addresses the needs of both the community and the general water supply, ensuring long-term sustainability.

Actions

1. Develop robust **water systems master plans** that account for climate change projections and long-term water supply, integrating them into long-term capital planning.
2. Develop and implement an **asset management plan** for all RDEK-owned water systems and related assets.

This will include contributing to reserve funds to support upgrades and replacements as needed; and, prioritizing reducing water loss within the RDEK water distribution systems.

3. Update the RDEK's **Water Conservation Plan** to incorporate risks from climate change and ensure all information, targets and objectives are up to date.
4. Prioritize and complete **aquifer studies**, as funding becomes available, in collaboration with local stewardship groups as appropriate.

This will also include supporting groundwater monitoring, identifying sustainable development thresholds to prevent overuse and identifying drought-prone areas.

5. Incorporate policies in OCPs that **direct development to areas with existing water systems with proven available capacity** and other areas with proven reliable water sources or opportunities to link smaller systems into larger ones, ensuring sustainable growth and resource management.
6. Support local organizations' regional quality and quantity **surface water monitoring** initiatives to inform management and adaptation. Encourage open sharing of water data to better understand water systems and better organize monitoring initiatives.
7. Continue **water conservation public education** to increase community awareness and participation in sustainable water use practices, including xeriscaping, within RDEK water systems.
8. Consider a) implementing **tiered metering rates** in communities with existing meters and b) **installing meters** in communities without meters, such as Elko and Moyie.
9. **Collaborate with local water stewardship groups**, reinforcing community-led efforts in sustainable water management and conservation.



East Side Water System Treatment Plant

7.7 ZERO WASTE

2030 Objectives:

- **Corporate and Community:** Creation of waste is reduced, working towards achieving zero waste.
- **Community:** Emissions from waste are minimized.

In 2021, 8% of GHG emissions in the RDEK came from decomposing waste. When organic waste, such as food scraps, wood, and natural materials, breaks down in landfills, it produces methane. This potent GHG is eighty-one times more powerful than carbon dioxide in the first twenty years after its release.¹⁰ To reduce emissions from waste, the region needs to focus on managing green waste for reuse, as well as better reusing, redesigning, and recycling other waste streams and increasing waste recovery and treatment.

The Provincial and Federal governments have implemented several laws, policies, and programs to manage waste and mitigate environmental and ecological damages effectively. These measures include the Federal Strategy on Zero Plastic Waste, and Provincial Zero Waste BC Plan, Recycling Regulation, and Hazardous Waste Regulation.

Successes

The RDEK is in the final stages of establishing a composting project projected to reduce GHG emissions by 4077 tonnes annually, with a total reduction of 81544 tonnes over the first 20 years of operation. The Organic Infrastructure Program will support this initiative to develop three compost facilities within the East Kootenay area, including composting for biosolids, substantially advancing waste diversion strategies and reducing GHG emissions.

Along with these composting efforts, the RDEK has six Recycle BC Depots at the main transfer stations, and is adding a seventh with construction of the Radium Transfer Station. These depots significantly increase recycling capabilities, offering residents convenient and efficient options. Additionally, the RDEK continues to forge partnerships with extended producer responsibility programs. These collaborations provide additional diversion opportunities, facilitating a broader range of recycling services for the community.

The 2020 RDEK Solid Waste Management Plan highlights the commitment to responsible waste management. This plan lays out a comprehensive strategy for waste reduction, recycling, and responsible disposal, ensuring that waste management practices harmonize with environmental sustainability and reduce GHG emissions.



Central Organics Receiving & Processing Facility

¹⁰ IPCC. "Fifth Assessment Report." Accessed Feb 28, 2024 at <https://www.ipcc.ch/assessment-report/ar5/>



Actions

1. Build and operate three **organics processing and receiving facilities**, one in each of the RDEK's subregions, through the Regional Organics Initiative. These facilities will accept residential-type organics through municipal curbside programs and green, yard and biosolid waste generated or collected by local governments in the region.
2. In RDEK's procurement processes, consider **products with high recycled content**, supporting environmental sustainability in operations.
3. Review and update the existing RDEK Purchasing Policy to **encourage zero waste practices**.
4. Continue to **promote composting and organics diversion** through educational initiatives.
5. Implement a **landfill gas capture system** in lined cells to reduce landfill emissions.
6. Conduct an updated **waste characterization study** at the Central Landfill.

7.8 HEALTHY AND RESILIENT COMMUNITIES

2030 Objectives:

- **Corporate:** The RDEK transitions to zero-carbon electric equipment, reducing reliance on gas and diesel-powered tools and equipment and lowering its carbon footprint.
- **Community:** Local food security is improving year to year.
- **Community:** The RDEK responds and recovers effectively and quickly to and from climate-related hazard events.
- **Community:** Community and regional collaboration support leadership in climate action.

The factors influencing an individual's health are broad and encompass many aspects. These include healthy behaviours such as having access to and consuming nutritious food, living in a physically healthy environment with access to clean water and unpolluted air. Further, adequate housing, having strong social supports and coping skills, being employed under good working conditions, and having a decent income to support oneself and one's family are also key indicators of healthy communities.

Climate change is a risk multiplier, increasing health disparities and the severity of consequences experienced from events. To protect health, the region must address the immediate impacts of climate change – such as increased asthma attacks during wildfire smoke events – and the underlying determinants of health that lead to disproportionate impacts across the RDEK. It is crucial to continue increasing housing and food security and facilitating social connections between neighbours. A resilient community uses available resources, including social capital, to prepare for, respond to, withstand and recover from adverse events.

Increasingly, people are experiencing mental and physical health impacts from climate change. The Intergovernmental Panel on Climate Change (IPCC) reports that mental health challenges, including anxiety and stress, are expected to increase under further global warming. These health impacts are more pronounced among young people, with studies reporting elevated climate-related fear and sadness.¹¹



¹¹ IPCC. (2023). "Summary for Policymakers, in Climate Change 2022: Impacts, Adaptation, and Vulnerability." Accessed May 14, 2024. https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf

Planning for climate-related hazard events includes reducing risks through risk mitigation. An example of risk mitigation is improving homes' climate control and air filtration and establishing extreme temperature and clean air shelters. Preparing for climate-related hazards involves understanding the potential hazards that could occur, identifying those who may require assistance, and being aware of the necessary measures to be taken. In addition, recovery after a hazard event, which includes restoring infrastructure, systems, and business functions, presents an essential opportunity for adaptive learning, rebuilding, and promoting greater resilience with a focus on equity. PreparedBC provides a wide range of guides and resources to help the public prepare for emergencies and recover from their impact.

Collaborative systems are pivotal in effective disaster mitigation, preparedness, response and recovery. Community partnerships can lead to a more coordinated and comprehensive approach to addressing climate hazards. Through information sharing, joint planning, and coordinated action, communities can be better equipped to manage the multifaceted challenges of climate change. Preparing for, responding to, and recovering from extreme events requires a comprehensive approach that involves the whole community. This approach should include learning about the unique needs and culturally sensitive approaches to hazard management, collaborating with existing community support networks and building new ones.

At the provincial level, the legislation governing emergency response and climate risk assessments has been modernized and integrated into the Emergency and Disaster Management Act (EDMA). The new legislation includes requirements to incorporate climate risks in assessing local risks and to collaborate with local First Nations partners. The Province is updating its guidance and the hazard, risk and vulnerability assessment toolkit (HRVA) to align with the new legislation. Various programs are being implemented to support emergency management and wildfire prevention. Additionally, the Province is developing a food security policy framework to guide food security planning and action in British Columbia.

Successes

The RDEK Regional Emergency Program is designed to respond to major emergencies such as forest fires, floods, hazardous materials spills, or other catastrophes. In a large-scale emergency, the regional Emergency Operations Centre (EOC) is activated. The EOC serves as a central location where representatives coordinate response and recovery actions and resources, supporting emergency response personnel in the field. The RDEK has trained staff who can work effectively in the EOC during an activation. Staff training is extensive, ensuring daily services can continue while responding to frequent events.

In 2011, the RDEK conducted a Hazard Risk and Vulnerability Assessment (HRVA) to assess and enhance community resilience. This analysis helped the RDEK to effectively plan for response, mitigation, and recovery from various hazards. By identifying key risks, the HRVA enabled targeted actions to protect lives and reduce economic losses, ensuring a well-prepared and responsive community. This strategic assessment is crucial in safeguarding the region against potential emergencies. It supports the assertion that action needs to be taken through programs like FireSmart and other hazard mitigation measures that are important for enhancing the overall health and resilience of the community.

The RDEK has also implemented routine staff training programs to ensure the safety and well-being of its workforce in the face of climate-related challenges. The training programs have been designed to protect outdoor workers during extreme weather conditions and are complemented by annual training. These training programs aim to equip RDEK staff with the necessary knowledge and tools to navigate hot and cold weather hazards safely.





Actions

1. Amend the purchasing policy to **prioritize zero-emission equipment** as replacements for gas and diesel powered tools and equipment wherever feasible. Regional Parks have already started to transition to electric equipment as of 2024.
2. Support development of a **food security plan** for the region as funding becomes available. This plan will focus, in part, on ensuring stable, sustainable, and nutritious food sources for all members of the community.
3. Continue to provide and promote educational resources on the benefits and practical methods of **small-scale farming and home gardening**, empowering residents to engage in and contribute to local food security.
4. Review policies and regulations to support small-scale farming opportunities.
5. Continue to provide links on the RDEK's website to external **resources focused on climate education**.
6. Support local community associations to consider **programming to build community connections** and support members during extreme events.
7. Update **risk assessments and emergency plans** to align with the new Emergency and Disaster Management Act (EDMA) in collaboration with First Nations and member municipalities.
8. Seek grant funding to undertake risk assessments (HRVA), mitigation projects and development of hazard and area-specific risk mitigation and management plans.
9. Continue to implement education campaigns to raise awareness about practices that **enhance resilience and reduce health risks during extreme weather events**, applicable in various settings like home, work, and recreational areas. Take into consideration high-risk groups, including seasonal workers, seniors, people experiencing homelessness, and people with disabilities.
10. Continue to collaborate with municipalities and interested First Nations and provincial agencies (e.g., BC Housing, Emergency Management and Climate Readiness, Health Emergency Management BC, Interior Health) through the Regional EOC to ensure the widespread availability of **extreme-temperature and clean-air shelters** across the region.
11. Increase **fire department and emergency program resourcing** in response to the increasing frequency of emergency events and Emergency Operations Centre (EOC) activations.
12. Incorporate **citizen science and monitoring** from community and non-profit groups into assessing year-round climate change impacts and tracking regional progress on plan implementation.



7.9 CULTIVATING RESILIENT ECOSYSTEMS

2030 Objectives:

- **Corporate:** RDEK parks are resilient and provide buffers to climate change.
- **Community:** The RDEK promotes and supports natural climate solutions and natural assets.
- **Community:** The RDEK considers high-value ecological areas and the importance of green space in promoting land use for compact, connected community development.
- **Community:** Regional sensitive ecosystems and wildlife habitat areas are protected, restored, and monitored for impacts as much as possible.

Preserving and restoring natural systems increases biodiversity, protects watersheds, and creates carbon sinks, which can reduce overall GHG emissions within the atmosphere and provide valuable ecosystem services. Ecosystem services such as flood management, protection against erosion or provision of shade in hot environments offer a buffer against the impacts of climate change.

Natural climate solutions or nature-based solutions represent opportunities to reduce the carbon in the atmosphere (through carbon sequestration) and adapt to climate change while providing benefits for biodiversity, ecosystems and natural resources. These can include urban interventions such as green roofs and rain gardens, and in rural areas, this can consist of protecting and/or restoring natural areas.

Successes

Various successful initiatives within the RDEK focus on ecosystem resilience. One such initiative is the management of invasive plants, which is essential for maintaining the health and diversity of local ecosystems, protecting native plant communities, and preventing the spread of non-native species.

Another project, the Regional Parks Wildfire Fuel Reduction project, is working to reduce wildfire fuel at Wycliffe, Tie Lake, and Wilmer parks. This project aims to eliminate ground fuels, ladder fuels, and dangerous trees to minimize fire risks in Wildland Urban Interface areas. Fuel Management Plans are being used to guide these treatments, which involve using brush saws, chainsaws, tracked chippers, and controlled burning of wood debris when appropriate.

Aquatic Conservation Partners

Living Lakes Canada (LLC), in partnership with Fisheries and Oceans Canada (DFO), has taken significant strides in conserving aquatic habitats within the Columbia Basin. Under the Canada Nature Fund for Aquatic Species at Risk Program, LLC has updated the Foreshore Integrated Management Protocol (FIMP) for better management of priority lakes. This initiative aims to enhance the health of foreshores and protect habitats for Species at Risk in the Upper Columbia Basin lakes.

The RDEK uses these studies to inform their shore-line development protocols/permit areas.



Columbia Lake - Headwaters of the Columbia River





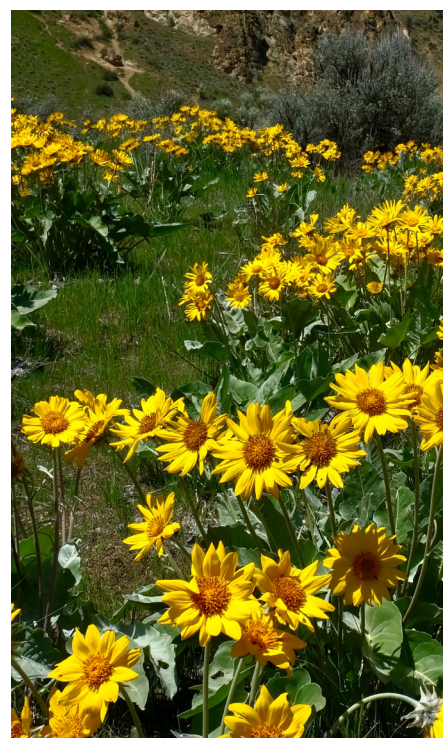
The East Kootenay Integrated Lake Management Partnership (EKILMP) was a coalition of stakeholders dedicated to protecting lake ecosystems for diverse values such as fish, wildlife, drinking water, heritage, recreation, and aesthetic values. EKILMP developed science-based, coordinated management guidelines for land and water uses associated with East Kootenay lakes. Furthermore, EKILMP created a series of reports based on the Sensitive Habitat Inventory and Mapping (SHIM) protocols, which are being developed in British Columbia for lakes in the RDEK. While EKILMP is no longer in operation, the work continues with Foreshore Integrated Management Planning (FIMP) that is being undertaken by Living Lakes Canada. FIMP maps shoreline habitats, assesses habitat values and established Shoreline Development Guidelines, which shape RDEK Shoreline Development Permit Areas, to conserve ecosystems, support climate resiliency and protect species of conservation concern.

In 2008, in partnership with the Kootenay Conservation Program, the RDEK established a conservation fund to provide local financial support for important projects that contribute to the conservation of valuable natural areas. The Columbia Valley Local Conservation Fund was a first of its kind established in Canada, and from 2010 to 2023 approved 120 grants totaling over \$2.8 million, including ecosystem restoration, invasive species control, lake management, water quality monitoring, and a pilot ecological services project. This local investment has leveraged nearly nine times that amount in additional grants and in-kind contributions. In 2017, the Fund received a peer-nominated award from the Species and Ecosystems at Risk (SEAR) Local Government Working Group for its exemplary work in initiatives related to species and ecosystems at risk.

Lastly, there are Environmentally Sensitive Areas (ESA) development permits, which aim to protect the natural environment, its ecosystems, and biological diversity. Due to their unique characteristics, these areas are critical in supporting productive and diverse plant and animal populations.

Actions

1. Continue advancing **FireSmart initiatives in regional parks**, pursuing grant funding opportunities to offset costs.
2. **Review RDEK park space for shade provision during the summer months.** Where shade opportunities are few, especially for more vulnerable children and seniors, consider planting shade trees or installing covered areas or sun shades.
3. Maintain and restore **natural buffers along riparian corridors** in RDEK parks to increase ecosystem health and resilience.
4. Research best practices and explore options to incorporate **natural assets** into asset management planning initiatives.
5. Expand **environmentally sensitive areas (ESAs)** development permit areas into more OCPs and expand the environmental values already included, and ensure local specific attributes are included, to ensure protection and sustainable management of these key areas. Promote public awareness of ESA locations and related restrictions.
6. Add ESAs and hazard areas to the existing RDEK **online map portal**. This tool will display sensitive ecosystems, protected zones, and other critical environmental areas, including flood-prone and drought-affected regions, to inform and guide public awareness and land-use planning.
7. Support local stewardship groups that play a key role in the advocacy, understanding, protection and restoration of critical ecosystems.



8. IMPLEMENTATION AND REPORTING

The six climate action themes supported by 21 objectives and 61 actions identified in the CAP provide a path forward for the RDEK to support community and corporate efforts to reduce GHG emissions, prepare for climate change, and enhance resilience. The actions build on efforts already underway by the regional, Provincial and Federal governments, community residents and organizations.

The Protective Services and Development Services departments will lead the CAP's implementation at the RDEK. In addition, each department identified as the responsible lead will advance specific actions and provide status updates.

Appendix 1 outlines the estimated resources and leadership needed for implementation. To successfully implement the CAP, it is necessary to allocate time in staff work plans for priority actions and increase or reallocate budgets accordingly. Actively operationalizing action-specific work plans through further planning, consultation, and, in some instances, seeking external funding is also crucial. Detailed resourcing and budget estimates for each initiative will be prepared during the work planning phases.

Key Elements of Implementation

Implementing the CAP will involve combining the following elements:

- **Being Opportunistic:** Monitor and take advantage of emerging policies, partnership opportunities, funding programs and resources to best leverage limited RDEK resources. This may result in adapting the current CAP to adjust timelines or update actions based on opportunities that arise.
- **Seeking Equitable Outcomes:** Decarbonizing regional communities and reducing disproportionate impacts from climate change provide a significant opportunity to support equitable outcomes. Equity must be at the forefront of considerations as the RDEK develops policies and programs from the CAP.
- **Showing Leadership:** The CAP provides a common path forward to mobilize climate action in the region. The RDEK Board of Directors and staff can rally behind the CAP to lead by example and spark further innovation and movement toward climate goals.
- **Collaboration:** The RDEK is home to many residents and businesses passionate about mitigating climate change and the risks it brings. Harnessing the vast expertise in the region to build awareness and take action is an imperative part of meeting climate action objectives.
- **Adaptive Management:** The context within which climate action takes place is constantly shifting, driven by changes in the economy, emerging policies, new technologies, research, etc. An action, once implemented, may have unpredicted outcomes, or opportunities may arise to do something different. Adaptive Management means committing to a continuous feedback loop of tracking implementation and re-navigating as needed. After 2030, the RDEK will undertake a thorough review and update to determine which actions should continue to be advanced and which are redundant. Any new actions should be added to the CAP.

Partnerships

The successful implementation of the CAP heavily relies on the strength and collaboration of partnerships. These partnerships enable the RDEK to extend its reach, leverage expertise, and secure resources beyond its immediate capabilities. Key examples of partnerships include:

- Collaborations with the Community Energy Manager and the Community Energy Association to drive forward energy efficiency and renewable energy projects. These partnerships aim to reduce GHG emissions and support community-wide energy sustainability initiatives.
- Engagement with KBFA to promote agricultural practices that contribute to climate resilience and sustainability, aligning farming practices with broader environmental goals.



By working with a diverse range of partners, the RDEK can harness collective expertise, resources, and enthusiasm to achieve the goals outlined in the CAP.

Funding

Securing adequate funding is essential for the implementation of this CAP. Beyond the reallocation of existing budgets and the allocation of staff resources, external funding is a critical component of the CAP's financial strategy.

The Local Government Climate Action Program Fund (LGCAP) is a key funding source for climate action initiatives. This fund is designed to support local governments in reducing greenhouse gas emissions and adapting to climate change. It provides financial assistance for projects that align with the objectives of local climate action plans, such as energy efficiency improvements, renewable energy installations, sustainable transportation initiatives, and climate adaptation measures. The RDEK will leverage the LGCAP to support various projects identified in the CAP.

Monitoring and Reporting

RDEK staff will continue publicly reporting annually on the progress in implementing the CAP. For each action theme area, progress reporting will include the number of actions initiated and underway as a proportion of the total. This report can split actions into corporate only vs. community.

Outcome indicators are more complex to track as many actions will see minimal change annually. The table below lists the initial indicators to be tracked and reported.

Theme	Indicator
Green and Resilient Buildings and Property	Hectares of FireSmart properties and number of FireSmart Canada Recognized Neighbourhoods. Percentage of electoral areas with hazard DPAs, including wildfire DPAs GHG emissions profile of corporate buildings
Green Transportation	Number of charging stations in the region Number of ZEVs, Plug-in hybrid electric vehicles and hybrid vehicles in RDEK fleet Regional GHG emissions profile for transportation
Green Economy and Resilient Livelihoods	Number of outreach events to regional agriculturalists (request from KBFA) Number of outreach events targeting small and large businesses regarding climate change
Water Supply	Water consumption per capita, for each RDEK owned or managed water system Updated Water Conservation Plan Number of water systems master plans Number of aquifer studies
Zero Waste	Solid waste disposal rate (kg/person as per Solid Waste Management Plan)
Healthy and Resilient Communities	Number of public extreme temperature and air quality shelters available in the region Number of education and outreach materials and/or events that improves community resiliency
Cultivating Resilient Ecosystems	Area covered by environmentally sensitive ecosystem DPAs Annual funding for FireSmart application in RDEK parks Number of collaboration efforts with local stewardship groups

As the RDEK moves forward with the CAP, it is crucial to recognize the urgency of advancing these initiatives. The increasing impacts of climate change require immediate and decisive action. Fortunately, the region has significant strengths that provide a robust foundation for effective climate action. These strengths include a strong community spirit, diverse local expertise, and a rich natural environment that needs protection and provides resources for sustainable solutions. By utilizing these strengths and working together, the RDEK can meet and exceed its climate action goals, setting a standard for resilience and sustainability that will benefit current and future generations. The CAP is more than just a blueprint for action; it is a commitment to a sustainable future.



*The CAP is more than just a blueprint for action;
it is a commitment to a sustainable future.*





9. APPENDIX : ACTION IMPLEMENTATION TABLE

Timeframe	Investment	Staff Resources (Full Time Equivalent)
Ongoing	Existing resources	Existing resources
Short 1 – 2 years	\$ \$0-\$50,000	* <10% of one FTE
Medium 3 – 4 years	\$ \$50,000-\$500,000	** 10-25% of one FTE
Long 5+ years	\$ \$500,000-\$1,000,000	*** 25-75% of one FTE
	\$ \$1,000,000+	**** 75-100% of one+ employees dedicated

	Action	Lead Department	Supporting Department	Investment	Staff Resources	Timeframe	Adaptation or Mitigation	Priority
7.3	GREEN AND RESILIENT BUILDINGS AND PROPERTY							
	Corporate Objective: RDEK leads by example with new buildings and facilities built to high energy efficiency and low carbon standards with consideration of climate-resilient design.							
1	Build the proposed new RDEK Cranbrook office to high standards of energy efficiency, net zero-ready standards and climate resilience best practices.	CAO	Cross-departmental project team	\$\$\$\$	Existing resources	Medium	Both	High
2	Engage with partners such as FortisBC and BC Hydro to complete energy and resilience assessment focused on heating, cooling and clean air systems for all facilities owned by the RDEK and expected to be in use for the long term. Following the assessment, prioritize and initiate upgrades.	Lead dependent on department	All	\$ \$	**	Medium	Both	High
3	Review RDEK assets to identify where renewable energy options could be incorporated to provide backup power that is resilient to extreme weather events.	Lead dependent on asset	All	\$ \$ \$	*	Medium	Mitigation	Low
	Corporate and Community Objective: RDEK applies a climate lens to organizational decision-making, land use, asset management and capital planning							
4	Develop a business continuity plan to ensure corporate functions can withstand and quickly recover from climate events, especially areas most vulnerable to climate events.	Human Resources, Protective Services	All	\$	**	Ongoing	Adaptation	High

	Action	Lead Department	Supporting Department	Investment	Staff Resources	Timeframe	Adaptation or Mitigation	Priority
5	Continue to complete hazard-specific studies on regional threats like wildfires, floods, and extreme weather. This effort aims to pinpoint vulnerabilities, forecast impacts, and craft mitigation strategies to bolster community safety and resilience.	Protective Services, Engineering	Planning	\$	**	Ongoing	Adaptation	High
6	Continue to update hazard areas during Official Community Plan (OCP) reviews, depending on new information.	Planning	Protective Services, Engineering	Existing resources	Existing resources	Ongoing	Adaptation	Medium
7	Continue to promote climate-smart, denser mixed-use and mixed-income development to improve the feasibility and cost per household of public transit and active transportation connections in identified growth areas. Focus density away from areas with high exposure to climate-related hazards such as floods and wildfires.	Planning	n/a	Existing resources	Existing resources	Ongoing	Both	High
Community Objective: Homes and buildings are built and retrofit to high energy efficiency and low carbon standards with consideration of increasing climate resilience to floods, heat, smoke and wildfire								
8	Continue to include Wildfire Hazard Development Permit Areas in all OCPs and provide information through the East Kootenay FireSmart program.	Planning	Protective Services	Existing resources	Existing resources	Short	Both	Low
9	Continue to resource implementation of the Community Wildfire Resilience Plan (CWR) and FireSmart program. Update the CWR regularly as needed.	Protective Services	n/a	\$	Existing resources	Ongoing	Adaptation	Low



	Action	Lead Department	Supporting Department	Investment	Staff Resources	Timeframe	Adaptation or Mitigation	Priority
10	Continue to provide links to external resources (e.g., Federal and Provincial) for both builders and residents, covering energy efficiency, zero-carbon building and renovating, resilience to climate-related hazards at home and building siting best practices.	Comms	Building, Planning, Community Energy Manager (CEM)	\$	**	Short	Both	High
11	Collaborate with the Community Energy Manager to refine RDEK's BC Energy Step Code policies and incentives, aligning them with the most recent provincial BC Building Code updates and work towards incorporating the Zero Carbon Step Code. Leverage the CEM's work plan to proactively enhance East Kootenay's market readiness ahead of new Provincial regulations.	Building, CEM		\$	**	Medium	Both	High
12	Work with partners such as Fortis BC, BC Hydro, and the Community Energy Manager to develop and identify funding opportunities to support training programs and capacity building for builders, architects, and related professionals in low-carbon building design. This initiative will focus on the latest techniques and materials that reduce the carbon footprint of new buildings and major renovations.	CEM	Building, Finance	\$	**	Short-Medium	Both	High

	Action	Lead Department	Supporting Department	Investment	Staff Resources	Timeframe	Adaptation or Mitigation	Priority
13	Work with the CEM to establish an Electric Vehicle Ready Bylaw that provides requirements for electric vehicle charging requirements for new buildings, and where possible retrofits, designed for the RDEK context.	Building, CEM		\$	*	Short	Both	High
14	Implement a building retrofit program to prioritize a holistic home retrofit strategy, emphasizing the importance of an envelope-first approach.	CEM	Building	\$\$	*	Short	Both	High
7.4	GREEN TRANSPORTATION							
Corporate Objective: RDEK shows regional leadership by transitioning its corporate fleet to zero-emissions vehicles and carpooling when possible								
1	Develop a corporate zero-emissions vehicle strategy . This strategy will include: a) A procurement policy for the adoption of zero-emission vehicles, plug-in hybrids, or standard hybrids at the time of vehicle replacement, wherever suitable models are available. This policy would match suitable vehicles to departmental requirements and limitations. b) A plan for establishing and expanding corporate zero-emissions vehicle charging infrastructure to support the needs of the fleet over time.	Finance, Building	Building	\$	*	Short	Mitigation	High



	Action	Lead Department	Supporting Department	Investment	Staff Resources	Timeframe	Adaptation or Mitigation	Priority
2	Establish a systematic approach to document and analyze the performance and range of existing zero-emissions vehicles in the RDEK fleet.	Fleet Manager	n/a	Existing resources	*	Medium	Mitigation	High
Community Objective: The region has a robust and connected EV infrastructure								
3	Identify key corridors and zones that require additional fast charging infrastructure .	CEM	n/a	\$\$	**	Medium	Mitigation	High
4	Engage with BC Hydro to support the planning, design and installation of Level 2 charging at strategic RDEK facilities where dwell time is greater than two hours (i.e. arena).	CEM	All Depts	\$\$	**	Medium	Mitigation	High
5	Continue to provide links to external resources (e.g., Federal and Provincial) that aim to increase awareness of zero-emission vehicles , improve understanding of future-proofing for load management and information about vehicle grid opportunities as a resilience measure.	Planning	Comms	\$\$	Existing Resources	Short	Mitigation	Medium
Community Objective: The region invests in and promotes sustainable transportation such as walking, cycling and transit								
6	Continue to plan for safe active transportation , including walking, cycling and rolling trails within and between communities. Collaborate with appropriate partners and stakeholders to implement these plans.	Planning	Environmental Services	\$	**	Ongoing	Mitigation	High

	Action	Lead Department	Supporting Department	Investment	Staff Resources	Timeframe	Adaptation or Mitigation	Priority
7	Explore partnerships with regional municipalities and BC Transit to consider improved intercommunity and inter-regional public transportation options and support BC Transit's existing electrification initiatives in the East Kootenay.	Corporate Services	n/a	Existing Resources	Existing Resources	Ongoing	Mitigation	Medium

7.5 GREEN ECONOMY AND RESILIENT LIVELIHOODS

Community Objective: Agricultural producers and property owners have the tools and resources to be resilient

1	Continue to support KBFA in improving climate resilience in the agricultural sector.	KBFA	Planning	\$	*	Ongoing	Both	High
2	Work with KBFA to continue encouraging agriculturalists to develop emergency plans (e.g., livestock relocation) and undertake an assessment to clearly define the RDEK's role and capabilities in supporting the agricultural community during emergency events	Protective Services	Planning	\$	*	Ongoing	Adaptation	High

Community Objective: Businesses have the tools and resources to reduce emissions, improve business continuity and adapt to climate change

3	Engage with the tourism sector to discuss the implications of climate change on tourism and share lessons learned on preparing and adapting tourism operations within the region and from other jurisdictions.	CEM		\$	*	Medium	Both	Low
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	Action	Lead Department	Supporting Department	Investment	Staff Resources	Timeframe	Adaptation or Mitigation	Priority
4	Collaborate with local chamber(s) of commerce to help businesses access resources and support the organization of programs, including workshops, networking events, and expert-led seminars on climate adaptation and mitigation.	CEM	Protective Services, Planning	\$	**	Ongoing	Both	Medium

- | | | | | | | | | |
|---|---|-----|--|--|--|--|--|--|
| 5 | Collaborate with BC Hydro, Fortis BC and other organizations that have programs ready to support training in energy efficiency and other associated topics. | CEM | | | | | | |
|---|---|-----|--|--|--|--|--|--|

7.6 RESILIENT WATER SUPPLY

Corporate Objective: Water systems owned or managed by the RDEK are resilient and reliable

1	Develop robust water systems master plans that account for climate change projections and long-term water supply, integrating them into long-term capital planning.	Engineering	Finance	\$\$	**	Medium or Long	Adaptation	High
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| 2 | Develop and implement an asset management plan for all water systems and related assets.

This will include contributing to reserve funds to support upgrades and replacements as needed; and, prioritizing reducing water loss within the RDEK water distribution systems. | Engineering | Finance | \$\$ | *** | Long | Adaptation | High |
|---|--|-------------|---------|------|-----|------|------------|------|

	Action	Lead Department	Supporting Department	Investment	Staff Resources	Timeframe	Adaptation or Mitigation	Priority
3	Update the RDEK's Water Conservation Plan to incorporate risks from climate change and ensure all information, targets and objectives are up to date.	Engineering	Comms	\$	**	Medium	Adaptation	High
Community Objective: Growth management is informed by current information on the quality and quantity of potable water resources								
4	Prioritize and complete aquifer studies , as funding becomes available, in collaboration with local stewardship groups as appropriate. This will also include supporting groundwater monitoring, identifying sustainable development thresholds to prevent overuse and identifying drought-prone areas.	Planning	Engineering	\$\$	**	Short	Adaptation	High
5	Incorporate policies in OCPs that direct development to areas with existing water systems with proven available capacity and other areas with proven reliable water sources or opportunities to link smaller systems into larger ones, ensuring sustainable growth and resource management.	Planning	Engineering	\$	*	Ongoing	Adaptation	High
6	Support local organizations' regional quality and quantity surface water monitoring initiatives to inform management and adaptation. Encourage open sharing of water data to better understand water systems as a whole and better organize monitoring initiatives.	Planning	Engineering	\$	*	Ongoing	Adaptation	Medium



	Action	Lead Department	Supporting Department	Investment	Staff Resources	Timeframe	Adaptation or Mitigation	Priority
Community Objective: Regional water users understand drought management and water conservation approaches and use water resources responsibly								
7	Continue water conservation public education , aiming to increase community awareness and participation in sustainable water use practices, including xeriscaping, within RDEK water systems.	Comms	Engineering	\$	*	Short	Adaptation	Medium
8	Consider a) implementing tiered metering rates in communities with existing meters and b) installing meters in communities without meters, such as Elko and Moyie.	Engineering	Finance	\$\$	*	Medium	Adaptation	Medium
9	Continue to collaborate with local water stewardship groups , reinforcing community-led efforts in sustainable water management and conservation.							
7.7	ZERO WASTE							
Corporate and Community Objective: Creation of waste is reduced, working towards achieving zero waste								
1	Build and operate three organics receiving and processing facilities , one in each of the RDEK's sub-regions, through the Regional Organics Initiative. These facilities will accept residential-type organics through municipal curbside programs as well as green, yard and biosolid waste generated or collected by local governments in the region.	Environmental Services	n/a	\$\$\$\$	***	Ongoing	Mitigation	High
2	In RDEK's procurement processes, consider products with high recycled content , supporting environmental sustainability in operations.	Finance	n/a	\$	Existing resources	Ongoing	Adaptation	Low

	Action	Lead Department	Supporting Department	Investment	Staff Resources	Timeframe	Adaptation or Mitigation	Priority
3	Review and update the existing RDEK Purchasing Policy to encourage zero waste practices .	Finance	All departments	\$	*	Medium	Mitigation	Medium
4	Continue to promote composting and organics diversion through educational initiatives.	Environmental Services, Comms	n/a	\$	**	Medium	Mitigation	High
Community Objective: Emissions from waste are minimized								
5	Implement landfill gas capture system in lined cells to reduce landfill emissions.	Environmental Services	n/a	\$\$	*	Long	Mitigation	Low
6	Conduct an updated waste characterization study at the Central Landfill.	Environmental Services	n/a	\$\$	*	Long	Mitigation	Low
7.8 HEALTHY AND RESILIENT COMMUNITIES								
Corporate Objective: The RDEK transitions to environmentally friendly electric equipment, reducing reliance on gas - and diesel - powered tools and equipment and lowering the RDEK's carbon footprint								
1	Amend the purchasing policy to prioritize zero-emission equipment as replacements for gas and diesel powered tools and equipment wherever feasible.	Finance	All departments	Existing resources	Existing resources	Ongoing	Mitigation	High
Community Objective: Local food security is improving year to year								
2	Support development of a food security plan for the region as funding becomes available. This plan will focus, in part, on ensuring stable, sustainable, safe and nutritious food sources for all members of the community.	KBFA	Planning	\$\$	*	Short	Both	Medium
3	Continue to provide and promote educational resources on the benefits and practical methods of small-scale farming and home gardening , empowering residents to engage in and contribute to local food security.	KBFA	Comms	\$	**	Ongoing	Both	High



	Action	Lead Department	Supporting Department	Investment	Staff Resources	Timeframe	Adaptation or Mitigation	Priority
4	Review policies and regulations to support small-scale farming opportunities.	Planning	n/a	\$	**	Ongoing	Both	High
5	Continue to provide links on the RDEK's website to external resources focused on climate education.	Comms	Planning	Existing resources	Existing resources	Short	Both	Medium
Community Objective: The RDEK responds to and recovers effectively and quickly from climate-related hazard events								
6	Support local community associations to consider programming to build community connections and support members during extreme events.	Protective Services	Comms	Existing resources	Existing resources	Ongoing	Adaptation	Low
7	Update risk assessments and emergency plans to align with the new Emergency and Disaster Management Act (EDMA), in collaboration with First Nations and member municipalities.	Protective Services	Engineering	\$\$-\$\$\$	**	Long	Adaptation	High
8	Seek grant funding to undertake risk assessments (HRVA), mitigation projects and development of hazard and area-specific risk mitigation and management plans.	Protective Services, Engineering	Planning	\$\$-\$\$\$	***	Medium	Both	Medium
9	Continue to implement education campaigns to raise awareness about practices that enhance resilience and reduce health risks during extreme weather events , applicable in various settings like home, work, and recreational areas. Take into consideration, high risk groups including seasonal workers, seniors, people experiencing homelessness and people with disabilities.	Comms	Protective Services	\$	**	Short	Adaptation	High

	Action	Lead Department	Supporting Department	Investment	Staff Resources	Timeframe	Adaptation or Mitigation	Priority
10	Collaborate with municipalities and interested First Nations and provincial agencies (e.g., BC Housing, Emergency Management and Climate Readiness, Health Emergency Management BC, Interior Health) through the Regional EOC to ensure the widespread availability of extreme-temperature and clean-air shelters across the region.	Protective Services	n/a	Existing resources	*	Ongoing	Adaptation	
11	Increase fire department and emergency program resourcing in response to the increasing frequency of emergency events and Emergency Operations Centre (EOC) activations.	Protective Services	n/a	\$\$	*	Medium	Adaptation	High

Community Objective: Community collaboration supports leadership in climate action

12	Incorporate citizen science and monitoring from community and non-profit groups into the assessment of year-round climate change impacts and the tracking of regional progress on plan implementation.	CEM	n/a	\$\$	**	Medium	Both	Low
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7.9 CULTIVATING RESILIENT ECOSYSTEMS

Corporate Objective: RDEK parks are resilient and provide buffers to climate change

1	Continue advancing FireSmart initiatives in regional parks, pursuing grant funding opportunities to offset costs.	Environmental Services, Protective Services	n/a	Existing resources	*	Ongoing	Adaptation	n/a
2	Review RDEK park space for shade provision during the summer months. Where shade opportunities are few, especially for more vulnerable children and seniors, consider planting shade trees, installing covered areas or sun shades	Environmental Services	n/a	\$	**	Medium	Adaptation	Medium
3	Maintain and restore natural buffers along riparian corridors in RDEK parks to increase ecosystem health and resilience.	Environmental Services	Planning	\$	*	Medium	Both	Medium



	Action	Lead Department	Supporting Department	Investment	Staff Resources	Timeframe	Adaptation or Mitigation	Priority
Community Objective: The RDEK promotes and supports natural climate solutions and natural assets								
4	Research best practices and explore options to incorporate natural assets into asset management planning initiatives.	Engineering	n/a	\$\$	**	Medium	Both	Medium
Community Objective: The RDEK considers high-value ecological areas and the importance of green space in promoting land use for compact, connected community development								
5	Expand environmentally sensitive areas (ESAs) development permit areas into more OCPs and expand the environmental values already included, and ensure local specific attributes are included, to ensure protection and sustainable management of these key areas. Promote public awareness of ESA locations and related restrictions.	Planning	Comms	\$	**	Ongoing	Both	High
6	Add ESAs and hazard areas to the existing RDEK online map portal . This tool will display sensitive ecosystems, protected zones, and other critical environmental areas, including flood-prone and drought-affected regions, to inform and guide public awareness and land-use planning.	GIS	Planning, Comms	\$	**	Medium	Both	Low
Community Objective: Regional sensitive ecosystems and wildlife habitat areas are protected, restored and monitored for impacts as much as possible								
7	Support local stewardship groups that play a key role in the advocacy, understanding, protection and restoration of critical ecosystems.	Environmental Services, CEM		\$	*	Short	Both	Medium