Town of

CANMORE

Climate Emergency Action Plan

Implementation Table

May 2024

Theme 1: Municipal Leadership

Strategy: Internal Leadership

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Adopt an annual carbon budget and implement tools and resources for integrating a climate lens into asset planning, budgeting, council decisions and municipal operations. Empower decision-makers to include GHG reduction and climate change resilience in evaluating and prioritizing projects and policies.	Precursor	$	$	0,75	Council, Sustainability, Finance, Municipal Clerks, Human Resources, Corporate Strategic Team	Immediate	Improved climate literacy	TCK	Development of the carbon budget # of departments using a carbon budget to plan and track GHG emissions annually
Expand staff and financial resources to implement climate change mitigation and resilience policies, projects and plans. Ensure that the organization is structured so that climate change remains a strategic internal and public facing priority.	Precursor	$	NA	0	Corporate Strategic Team, Human Resources, Sustainability	2-5 years	Improved job satisfaction to be part of solution		% of annual projects, plans, and policies that substantially address climate change
Ensure that staff throughout the organization have the capacity and knowledge to meaningfully advance the Town's work on climate change through their roles. Conduct targeted training sessions and workshops for Town staff, focusing on advanced aspects of climate change adaptation and resilience. These sessions should move beyond basic climate change concepts, delving into specific tools, strategies, and resources that staff can practically apply in their roles	Precursor	$	$	0,5	Corporate Strategic Team, Human Resources, Sustainability	5-10 years	Improved climate literacy		% of staff invovled in training workshops Improvement of staff understanding of climate change and their role in implementing action based on annual staff survey

Theme 1: Municipal Leadership

Strategy: Community Involvement

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Work with community groups to create an online platform for residents to monitor local projects, track progress towards community greenhouse gas reduction targets and adaptation actions, follow municipal initiatives, and stay updated on climate action efforts.	Precursor	$	$	0	Partners	2-5 years	Community Connection, Accountability, Transparency, Improved climate literacy	Biosphere, BVCA	# of visitors to online platform
Work with community groups to lead and educate on community-based broader environment and sustainability programming such as waste reduction, cycling promotion, water conservation and air quality.	Precursor	$	$	0	Partners	2-5 years	Improves community safety, Improved climate literacy, Community connection	Biosphere, BVCA, BVCAS, TCK	# of groups involved # of community members reached
Launch a comprehensive environmental education strategic plan and program. Focusing on an annual rotational basis - waste and circular economy, water conservation, efficient buidlings, EVs transit and active transportation, climate resilience and emergency preparedness. Programming should target specific groups, including but not limited to schools, businesses, and households, with extra attention to equity deserving communities (multi-lingual), to increase awareness of Town environmental programs.	Precursor	$	$	1	SWS, Sustainability, Engineering, Protective Services, Public Works - Utilities, Communication	2-5 years	Refute misinformation, Increase buy-in, Improved climate literacy	Biosphere, Schools	# of educational events held #of participants/visitors

Theme 2: Resilient, Efficient Buildings

Strategy: Municipal Climate Leadership

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Accelerate and expand renewable and low carbon energy efforts on municipal buildings and infrastructure (e.g. continued rooftop solar, solar parking lot canopies, air- and ground source heat pumps, district energy, waste heat recovery, etc.). Evaluate the cost and GHG impact of carbon offsets and virtual power purchase agreements compared to investing in local installations.	Low	$$$	$$$	1	Facilities and Public Works/ Sustainability/ Communications / Engineering	Ongoing	Job creation, Leadership credibility, Reduced operating costs, Improved resilience in power outages, Improved air quality		# of solar PVs installed on municipal buildings Installation capacity achieved
Dedicate staff capacity to continuously monitoring energy consumption in municipal facilities and water and wastewater infrastructure and identifying and implementing low cost/no cost opportunities for energy savings.	Low	$	$$	1	Facilities and Public Works	2-5 years	Leadership credibility, Reduced operating costs, Improved air quality	MCCAC - Grant Funding	# FTE working on energy efficiency
Ensure that retrofits or replacements of municipal facilities result in a significant reduction in energy demand, with a long-term goal of net-zero building portfolio.	Precursor	$	$$	1	Facilities and Public Works	Ongoing	Reduced operating costs, Improved air quality, Job creation, Improved indoor comfort, Improved resilience in power outages		% municipal buildings retrofit Total energy consumption of municipal building portfolio
Leverage municipal retrofits, renewable energy projects, and highly energy efficient new buildings to act as demonstration projects to share learnings and successes with the community, demonstrate feasibility, and inspire action. Consider housing a community organization or service in a green muncipal building to provide sustainability education for residents and visitors.	Precursor	$	$	0,25	Facilities, Communications	5-10 years	Community connection, Improved climate literacy, Leadership credibility	Biosphere, Developers, Builders	# of community members reached

Theme 2: Resilient, Efficient Buildings

Strategy: Efficient and Resilient New Buildings

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Advocate for building labelling/disclosure of energy performance in both new and existing construction. In advance of a higher level regulatory regime, explore mechanisms to require or incentivize building labelling locally.	Precursor	$	$	0	Sustainability with Planning Support	5-10 years	Improved climate literacy, Reduced operating costs, Improved air quality		# of real estate postings with energy ratings
Develop mechanisms to transition new and existing buildings away from natural gas, including incentives for air and ground source heat pumps for space and water heating and induction stoves. Consider options to discourage or restrict natural gas connections in new buildings and neighbourhoods.	High	$$$	$	0,25	Engineering with Sustainability and Planning Support, Legal support	2-5 years	Improved air quality, Space cooling during heat events, Job creation	BOWDA	Total community natural gas consumption
Offer incentives to developers to build or retrofit housing that meets high energy efficiency standards, with a focus on providing quality, resilient housing with low ongoing energy costs for lower-income households.	Precursor	$$$	$$	1	Sustainability and Planning and Development	5-10 years	Reduced operating costs, Improved air quality, Improved resilience during power outages, Reduced energy poverty	BOWDA	# of retrofits annually
Work with community groups to offer educational sessions to builders on net- zero design principles and funding opportunities.	Precursor	$	$	0,25	Partners	2-5 years	Improved relationships with key partners, Reduced costs for heating/ cooling homes	Biosphere, BVGEC, BOWDA	# of participants
Advocate for the Province to accelerate adoption of the higher tiers in the 2020 National Building Code and National Energy Code for Buildings, or any subsequent Codes, so that all new buildings are both highly energy efficient and more resilient to extreme weather.	High	$$	$	0	Planning and Development/ CST	2-5 years	Reduced operating costs, Improved air quality, Improved resilience during power outages, Reduced energy poverty		Advocacy campaign initiated
As provincial flood mapping is updated, consider additional measures to restrict new development and increase minimum floor elevation levels in Bow River floodplains aligned with more severe flood return periods.	NA	$	$	0	Engineering / Planning and Development	2-5 years	Reputation protection, Reduced community vulnerability	BOWDA, Council Direction	# of plans updated with new flood mapping

Theme 2: Resilient, Efficient Buildings

Strategy: Efficient and Resilient New Buildings (continued from previous table)

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Explore mechanisms to require and/or encourage lifecycle assessments for new buildings so that developers and builders are motivated to minimize the overall environmental impact, from construction to end-of-life.	NA	$	$	0,5	Planning/ Engineering/ Sustainability	5-10 years	Reduction in waste production and management, Job creation, Stimulating local industry	BOWDA	# of lifecycle assessments completed # of developers involved in programs
Explore options for using materials with lower embodied carbon for municipal infrastructure projects and buildings (e.g., warm-mix asphalt, recycled aggregates, low carbon concrete, wood fibre insulation, cross-laminated timber, etc.)	Medium	$	$	0	Engineering	2-5 years	Job creation, Stimulating local industry		# of projects using lower carbon materials
Identify and remove existing regulatory and other barriers to high-efficiency building construction and renewable and low carbon energy sources, including solar, ground and air source heating, battery storage, etc.	High	$$$	$	0,1	Planning and Development, Municipal Enforcement	Immediate	Reduces vulnerability in the Community		# of buildiers and developers engaged # of policies or regulations updated
In advance of provincial building codes requiring 'net- zero- energy ready' construction, incentivize developers and builders to aim for 'passive house', 'net-zero' or 'net-zero ready' standards for new buildings. Promote the co-benefits of more efficient construction, for example, high-performance air filtration providing improved indoor air quality and occupant comfort during extreme heat and wildfire smoke events.	Precursor	$$	$	0,25	Planning and Development/ Sustainability	Immediate	Increase resilience, affordability, cost recovery, increase equity, business continuity	BOWDA	# of buildiers and developers engaged # of buildings constructed with low-carbon incentive programs
Require new developments/subdivisions to design lot and roof orientations that enable the future installation of solar PV.	Precursor	$	$	0	Planning and Development/ Sustainability	5-10 years	Reduced costs for heating/cooling, Reduced energy poverty, Improved resilience during power outages		# of new construction units with orientation considerations

Theme 2: Resilient, Efficient Buildings

Strategy: Efficient and Resilient Residential Retrofits

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Advocate to the provincial and federal government for a community-scale deep energy retrofit program for existing residential and commercial buildings, with an initial priority on reducing energy poverty.	High	$$$	$$	1	Sustainability with Support from Planning and Engineering	2-5 years	Reduced energy poverty, Increased affordability	BOWDA	Advocacy campaign initiated
Extend and expand the current four-year pilot of the residential Clean Energy Improvement Program (CEIP) and/or develop additional measures for financing and incentives for building energy retrofits. In addition, look to implement CEIP for the commercial sector.	High	$$$	$	0,25	Sustainability	5-10 years	Reduced costs for heating/ cooling, Reduced energy demand, Job creation, Improved air quality, Improved affordability	Biosphere BILD AB CHBA	# of particiants in the CEIP
Expand and/or develop a longer term program for low income households to receive free energy efficiency upgrades aimed at reducing energy poverty (e.g., Home Upgrades Program). Identify strategies to assist in retrofitting homes for tenants/landlords, with a focus on low-income households.	High	$$$	$	0	Sustainability	2-5 years	Increased affordability, Improved accessibility	Biosphere	# of households receiving upgrades # of rental properties upgraded
Collaborate with other organizations (e.g. educational, utilities, etc.) to host public demonstrations of retrofit projects to share information about results and payback.	Precursor	$	$	0,1	Partners	2-5 years	Community connection and involvement	Biosphere, BVCA	# of community members reached

Theme 2: Resilient, Efficient Buildings

Strategy: Efficient and Resilient Commercial and Institutional Retrofits

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Extend and expand the current four-year pilot of the residential Clean Energy Improvement Program (CEIP) and/or develop additional measures for financing and incentives for building energy retrofits. In addition, look to implement CEIP for the commercial sector.	High	$$$	$	0,25	Sustainability	5-10 years	Reduced costs for heating/ cooling, Reduced energy demand, Job creation, Improved air quality, Improved affordability	Biosphere BILD AB CHBA	# of particiants in the CEIP

Theme 3: Clean, Resilient Energy

Strategy: Renewable, Reliable Electricity

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Expand and accelerate current program and incentives to increase renewable and low carbon energy systems for all new and existing residential, commercial, and institutional, buildings (e.g., solar rooftop installations, parking lot solar canopies, ground and air source heat pumps, battery storage, etc.). Advocate for requirements for renewable energy in new construction.	High	$$$	NA	0	Sustainability	Ongoing	Job creation, reputation, Decreased energy costs for the community, Decreased operating costs for residential buildings	BOWDA, Solar AB, AAA Biosphere BVGEC	# of participants in incentive programs # kW of solar capacity installed
Set a goal for local solar energy to account for at least 20% of the community's electricity mix for buildings by 2030.	High	$$$	$	0,25	Sustainability/ Partners	5-10 years	Job creation, Improved air quality, Reduced heating/cooling costs		# kW of solar capacity installed
Expand community programs that allow residents and businesses to subscribe to solar and other renewable energy at a reduced cost without requiring installation on their property.	High	$$	$	0,25	Sustainability/ Partners	5-10 years	Improved air quality, Improved equity and inclusivity, Reduced energy costs	Biosphere BVGEC	# of participants in incentive programs # kW of solar capacity installed

Theme 3: Clean, Resilient Energy

Strategy: Emergency Energy Management

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Advocate for investment into Alberta's electricity grid to prepare for increasing extreme weather events, such as isolating and managing outages more effectively via 'smart grid' systems.	NA	$	NA	0	CST/Council	2-5 years	Improved resilience in power outages		Advocacy campaign initiated
Advocate for a voluntary energy demand response program where residents and businesses can opt- in to reduce energy usage during peak times in exchange for reduced utility rates or other incentives.	Precursor	$	$	0,25	Sustainability/ Partners	5-10 years	Reduced energy costs, Reduced need for additional electrical infrastructure, Improved air quality	Biosphere BVGEC	Advocacy campaign initiated

Theme 3: Clean, Resilient Energy

Strategy: Reduce Energy Poverty

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Advocate to the Province for a energy bill assistance program so that no household spends more than a certain percentage of their income on energy.	NA	$	$	0,25	Council, Corporate Strategic Team	5-10 years	Reduced energy poverty, Improved equity and accessibility		Advocacy campaign initiated
Integrate energy poverty mitigation into existing social services, ensuring that support for energy is part of holistic assistance programs.	Precursor	$	$	0,25	Sustainability/CSD	2-5 years	Improved accessibility		# of programs that integrate energy poverty support
Work with community groups to start community- based energy literacy programs to educate residents about energy- saving techniques and available support. Develop a network of energy advisors within the community that can provide personalized support to households struggling with energy bills.	NA	$	$	0,25	Partners/CSD	2-5 years	Community Connection, Community Ownership, Affordability, Inclusivity	Biosphere, BVCA	# of community members reached

Theme 4: Safe and Protected Natural Spaces

Strategy: Protected Forests and Urban Trees

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Update the Urban Forest Management Plan into a broader Natural Asset Strategy and urban tree canopy assessment that reflects climate considerations and integrated hazard management. Include set percentage for canopy targets, and develop reserve fund for tree plantings in capital projects.	NA	$	$	0	Parks Planner	2-5 years	Reduced heat in urban areas, Improved air quality, Improved water quality, Human health benefits, Tourism benefits	Alberta Parks	Updated Strategy developed
Update Land Use Bylaw landscaping requirements and Engineering Design and Construction Guidelines to ensure that reducing wildfire risk and providing shade are priorities in landscape planning and design.	NA	$	$	0	Parks Planner, Engineering	Immediate	Community connections spaces, Parks become more enjoyable, Reduced water need, Improved equity and affordability, Improved awareness of hazards, Reduced building maintenance costs		# of bylaws and guidelines updated
Ensure that trees are planned and budgeted for as part of transportation capital projects, with a focus on providing shade along active transportation routes.	Low	$	$$	0	Parks Planner, Engineering	Immediate	Supports mode-shift, Cooler urban spaces, Improved wildlife habitat, Improved community health		# of trees planted

Theme 4: Safe and Protected Natural Spaces

Strategy: Protected Freshwater

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Update the Bow River Flood Response Plan to include water quality and environmental impacts due to a potential uncontrolled release of contamination resulting from flood damage to the wastewater treatment plant.	NA	$	$	0	Protective Services/ Engineering/Public Works-Utility/ EPCOR	Immediate	Reputation Management, Decreased insurance costs, Long term financial benefit (prevention is cheaper than response/recover), Prevent costly contamination for downstream communities,	EPCOR	Plan updated
Establish guidelines and regulations for the use of pesticides, particularly in areas where groundwater is vulnerable (e.g., permissible pesticide types, application methods, buffer zones around water bodies, and restricted use near groundwater recharge areas).	NA	$	$	0,1	Parks - municipal land Protective Services/Parks/ Utilities Planning/ Engineering - Private land (Bylaw)	5-10 years	Improved human health, Improved air quality, Improved water quality		Volume of pesticides used by Town # of regulations developed
Develop and implement a Salt Management Plan. Consider strategies to reduce the amount of salt required to clear sidewalks, paths and roads and how and where it is applied in proximity to sensitive ecosystem, habitats or waterbodies.	NA	$	$	0,25	Streets and Roads	Immediate	Improved wildlife habitat, Improved water quality		Plan developed and implemented

Theme 5: Emergency Preparedness for All

Strategy: Wildfire Management

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Review and update the Canmore Wildfire Mitigation Strategy on a regular basis (e.g., every 5 years) to ensure that it incorporates the latest modelling of wildfire risk, including climate change projections. Ensure that the Municipal Emergency Management Plan is updated accordingly.	NA	$	$	0,25	Protective Services (EM), with support from Fire Services/ Sustainability	Ongoing	Reputation Management, Decreased insurance costs, Long term financial benefit (prevention is cheaper than response/recover), Job creation, Decreased property damage, Increased community safety, Increases relationships with key partners	Contractors - Expertise	Plan updated
Complete regular testing of the wildfire incident preparedness plan (every 1-3 years).	NA	$	$	0,25	Protective Services (EM), Fire Services, All Town Departments	Ongoing	Reputation Management, Decreased insurance costs, Long term financial benefit (prevention is cheaper than response/recover), Job creation, Decreased property damage, Increased community safety, Increases relationships with key partners	CEMA, AB Wildfire, Other regional partners	# of tests completed
Develop a regional wildfire management working group to coordinate FireSmarting, grants, and other fire management priorities and activities across the region.	NA	$	$	0,25	Protective Services, Fire Serives, Sustainability	Immediate	Improved relationships with key partners, Improved resilience		# of meetings # of groups involved in working group
Develop programs and incentives for property owners to implement Fire Smarting, including the potential of offering a Town service to collect material from households. Regularly monitor for continued compliance.	NA	$	$	0,25	Protective Services (EM) support Fire Services, Sustainability,, Communications	2-5 years	Decreased costs in emergencies, Reduced need for evauations, Improved resilience		# of recipients of incentives # of participants in programs
Ensure all drinking water and wastewater facilities (e.g., lift stations, pumphouses, etc.), are retrofitted with fire resistant cladding and roofing, starting with those that have been identified for near-term life-cycle maintenance and updates.	NA	$$	$	0,25	Public Works - Utility, Support from Sustainability	2-5 years	Decreased costs in emergencies, Improved resilience	EPCOR	# of retrofits completed

Theme 5: Emergency Preparedness for All

Strategy: Wildfire Management (continued from previous table)

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
During extreme heat events and/ or poor air quality due to wildfire smoke, ensure that the community is aware of designated cooling centres and/or clean air shelters.	NA	$	NA	0	Protective Services/Facilities	Ongoing	Improved safety and wellbeing, Improved equity/ inclusion, Reputation improvement		Improved awareness of shelters in community surveys
Review and update FireSmart guidelines for new developments in the Land Use Bylaw and explore options for more stringent requirements for both building hardening and landscaping. Advocate to the Province to ensure that the building code is aligned to FireSmart goals.	NA	$	$	0,1	Planning and Development, Public Works - Parks Planner,	2-5 years	Decreased costs in emergencies, Reduced need for evauations, Improved resilience		# of guidelines reviewed
Work with the Province to develop a region- wide FireSmart program, exploring broad landscape FireSmarting and Fireguards, withscheduled monitoring to ensure continued compliance with FireSmart regulations.	NA	$	$	0,25	Protective Services (EM) support Fire Services, Sustainability, Public Works (Park Planner), Communications	Immediate	Decreased costs in emergencies, Improved human-wildlife coexistence, Supports tourism, Supports biodiversity and wildlife	Province of AB, KID, MD Bighorn, Banff, Stony Nakoda, Parks Canada	Working group established
Integrate and find efficiencies with the mountain pine beetle monitoring and control program with FireSmart tree removal program, ensuring long- term funding for pine beetle management is included in budgeting.	NA	$	NA	0	Parks / Fire/ Protective Services	Ongoing	Decreased cost to rate payers, Improved air quality, Improved community safety, Recreational benefits, Increased biodiversity and wildlife habitat	"MD Big Horn Alberta Forestry Kananaskis Improvement District Biosphere"	# hectares of forest treated for beetles
Develop a Pest Management Plan that reflects the impacts and changes to local ecosystems due to climate change and update it every 5 years.	NA	$	$	0	Protective Services, Parks/ Parks Planner, Streets and Roads, Sustainability	2-5 years	Improved resilience, Improved community safety, Improved environmental quality	Calgary Region Municipal Wildlife Group, Town of Banff, MD Big Horn	Plan developed and implemented

Theme 5: Emergency Preparedness for All

Strategy: Flooding and Steep Creek Hazard Management

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Continue to fund and implement steep creek debris flow and flood mitigation measures. Ensure that watershed-level hazard and risk assessments are continually updated to align with advances in flood mitigation measures and climate change science and modelling (at least every 10 years). Update restrictions for development in steep creek flood zones to align with ongoing updates to debris flow/flood projections.	NA	$$$	$$$	0	Engineering	Ongoing	Reputation Management, Decreased insurance costs, Long term financial benefit (prevention is cheaper than response/recover), Job creation, Decreased property damage, Increased community safety, Increases relationships with key partners		# of creeks mitigated $ spent on mitigation activities
Equip all pump station and lift stations with back up power plans and supply to ensure reliable access to water and sanitary services during extreme weather events. This includes access to water for fire suppression in the event of a wildfire.	NA	$$	$$$	0,25	Facilities and PW Utilities- EPCOR	Immediate	Tourism benefits, Decreased cost of disaster support, Faster re-entry post incident, Improved community safety	EPCOR, TransAlta	# of retrofits completed
Complete regular testing of the steep creek emergency response plan and evacuation plan (every 1-3 years).	NA	$	$	0,25	Protective Services/ Engineering	ongoing	Reputation Management, Decreased insurance costs, Long term financial benefit (prevention is cheaper than response/recover), Job creation, Decreased property damage, Increased community safety, Increases relationships with key partners		# of tests completed
Increase flood protection infrastructure for the wastewater treatment plant.	NA	$$	$$$	0	Public Works - Utilities with Support from Engineering	2-5 years	Improved resilience, Long-term financial benefit, Reduced property damage, Improved community safety	EPCOR, Province of AB, Contractors/ Consultants	Flood protection measures constructed

Theme 5: Emergency Preparedness for All

Strategy: Water Security

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Implement key recommendations from the Wellhead Protection Study to reduce potential impacts to drinking water sourced from groundwater (e.g., spill response plans, stormwater management standards, regulating high risk land uses, drywell rehabilitation, etc.)	NA	$	$	0,25	Public Works, Engineering, Protective Services, Planning and Development	Immediate	Improved environmental quality, Improved resilience	BOWDA, Land Owners	# of recommendations implemented
Examine drywell infrastructure and design guidelines to determine rehab and future install requirements to minimize pluvial flooding and ensure adequate stormwater quality treatment in wellhead protection area.	NA	$	$	0,5	Engineering with support Public Works-Utilities/ Street and Roads	2-5 years	Improved environmental quality, Improved resilience	EPCOR	# of guidelines reviewed and updated
Develop a comprehensive drought contingency plan that includes thresholds for triggering water restrictions and emergency water supply measures, as well as a supporting communications plan. Ensure an equity lens is applied to limit potential negative impacts of water restrictions to vulnerable populations and food security.	NA	$	$	0	Public Works and Communications and Protective Services	Immediate	Improved affordability of water, Reduced costs for water treatment, Improved resilience to drought	Inform: Community Social Development, Businesses (laundry, brewery, etc.)	Plan developed and implemented
Develop an Emergency Response Plan for the potential of wastewater treatment, drinking water treatment, and/or pumping operations being limited or ceased as a result of a flood or wildfire events. Ensure that hazard mitigation strategies are integrated into plans for life cycle replacements and updates to facilities.	NA	$	$	0,25	Protective Service / Engineering/ Public Works	2-5 years	Improved resilience, Long-term financial benefit	EPCOR	Plan developed and implemented
Develop a Source Water Protection Plan to holistically evaluate the risks to Canmore's drinking water sources (e.g., wildfire, flooding, impacts from different land use impacts, recreation, etc.) and to prioritize mitigations, which may include a Source Water Protection Bylaw.	NA	$	$	0,25	Public Works and Engineering	2-5 years	Reduction in water treatment costs, Improved environmental stewardship	TransAlta	Plan developed and implemented
Establish a working group to coordinate approaches on water supply management across the region, integrating local expertise.	NA	$	$	0,25	PW Utilities, support from Sustainability	2-5 years	Improved relationships with key players, Improved resilience	TransAlta, Bow River Basin Council	# of meetings # of groups involved in working group

Theme 5: Emergency Preparedness for All

Strategy: Community and Visitor Safety

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Continuously review community-wide evacuation plans and routes, with a focus on neighbourhoods with vulnerable populations and challenging access to designated emergency routes. Support these plans with regular communication, including translation into multiple languages.	NA	$	$	0	Protective Services /Communication / Engineering /	Ongoing	Improved public trust, Improved accessibility, Increased inclusivity	RCMP, U of A / UBC Research project data will help inform this	# of plans reviewed # of people reached through communication channels
Update the Municipal Emergency Management Plan to more specifically address the potential impacts of climate-related emergencies on visitors and the tourism sector. Continue to collaborate with Tourism Canmore Kananaskis and other representatives from the tourism sector on emergency and overall preparedness.	NA	$	$	0,1	Protective Services /Communication	Ongoing	Reputation Management, Decreasing insurance costs, Long-term financial benefit (prevention is cheaper than response/recover), Job creation, Decreased property damage, Increased community safety, Improved relationships with key partners	TCK	Plan updated
Advocate to the Province to develop an regional working group to monitor the spread of invasive species that could have impacts on ecosystems, infrastructure as well as human health (e.g., weeds, pests, vectors for diseases such as ticks and mosquitos, etc.).	NA	$	$	0,1	Parks Planner / CST /Council with support from Parks, Sustainability and Communications	2-5 years	Improved relationships with key partners, Improved community safety	Local Health Authority, Province of AB, Banff, MD Big Horn, Parks Canada, TCK	Advocacy campaign initiated
Equip all radio towers with back up power plans and supply, and any other required mitigations to ensure that radio communication is available in the event of an emergency. Explore a similar measure for cellular equipment.	NA	$	$$$	0	IT, Protective Services, Fire Services	Immediate	Increased resilience, Reduced impact of emergencies	EPCOR, FORTIS, TransAlta	# of towers equipped
Ensure that access to energy supply is integrated into emergency response plans, including the ability to communicate with residents and visitors during an emergency if the power is out.	NA	$	$	0,1	Protective Services	Ongoing	Reputation Management, Decreasing insurance costs, Long-term financial benefit (prevention is cheaper than response/recover), Job creation, Decreased property damage, Increased community safety, Improved relationships with key partners	TransAlta, Fortis, AltaLink	# of ERPs updated

Theme 5: Emergency Preparedness for All

Strategy: Community and Visitor Safety (continued from previous table)

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Work with community partners to determine which facilities in Canmore should be defined as 'critical infrastructure' during emergency events and ensure that these can continue to operate (e.g., generators and/or batteries for back up power at the hospital).	NA	$	$$$	0	Facilities / Public Works	5-10 years	Services and business continuity, Resident satisfaction, Improved resilience, Improved community independence		# of community partners involved
Identify and maintain locations within the community to serve as short- term shelters and reception centres during and after events such as floods, steep creek debris flows or floods, or wildfires. Ensure these facilities have access to back up power supply and that the community is aware of these options for local shelter during emergencies.	NA	$	$	0	Protective Services, Facilities, Arts and Culture, Economic Development, Community Social Development	Immediate	Tourism benefits, Improved relationship building within the community, Community connection	Public and Private Partners	% of neighbourhoods with shelters identified
Work with Town Communications and tourism industry leaders to develop multilingual communications about climate hazards and emergencies, such as air quality, extreme heat, etc.	NA	$	$	0	Protective Services /Communication	Ongoing	Community connection, Improved resilience	Biosphere	# of communications materials developed # of people reached through communication channels
Review the Engineering Design and Construction Guidelines to identify opportunities to enhance multi- hazard protection, including FireSmart, drought management, wildlife safety, etc.	NA	$	$	0,1	Engineering	2-5 years	Improved resilience, Job creation	Contractor support, BOWDA, Province of AB	# of plans reviewed

Theme 6: Rethinking Transportation and Mobility

Strategy: Electric Vehicles for All

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Require all new residential and commercial developments to be 100% EV ready (building in the required electrical infrastructure in order to simplify the installation of a future EV charger) and continue to install and enable public charging.	Precursor		$	0	Sustainability and Planning and Development, Facilities	Immediate	Increased equity, Increased visitors using EV, Improved air quality	BOWDA	# of public chargers installed # of new development with EV charging
Develop a long term fleet strategy for right sizing, incorporating bikes or e-bikes into municipal fleet, and transitioning to electric vehicles as options become available.	Low	$$	$$$	0	Fleet Service, with support from Facilities and Engineering	Immediate	Reduced operating and maintenance costs, Improved air quality, Reduced vehicle noise	Fortis	Strategy developed and implemented
Develop and deliver a community-wide anti-idling program to support the existing by-law (e.g., signage and education, enforcement approach, target locations, tactics, municipal fleet idling policy, etc.)	Low	$	$	0,5	Municipal Enforcement, Communication, Streets and Roads, Sustainability, Engineering	2-5 years	Reduced noise, Improved air quality		# of community members reached
Develop an EV charger installation incentive program for existing multi-family and commercial buildings, ensuring that both residents and visitors have access to charging.	Precursor	$$	$	0	Sustainability	2-5 years	Improved affordability, Reduced traffic, Reduced parking demand	TCK CHLA	# of incentives offered
Establish an EV car sharing program to reduce the need for personal vehicle ownership, reduce parking demand in higher density neighbourhoods, and support mode shift goals by providing access to shared vehicles for trips that can't be served by transit, walking or cycling.	Medium	$	$$	1	Sustainability	2-5 years	Improved air quality, Improved affordability, Reduced traffic congestion, Reduced traffic noise, Reduced parking demand	Biosphere	# of personal vehicles owned in Canmore
Support the local tourism industry in their efforts to reduce the impact to and prepare for climate change (e.g., Tourism Canmore Kananaskis Regenerative Tourism Framwork working group)	Precursor	$	$	0	TCK	5-10 years	Job creation, Tourism, Reputation, Community, Economic Benefit	TCK Canmore Hotel and Lodging Association	Working group established

Theme 6: Rethinking Transportation and Mobility

Strategy: Active Mobility Across Canmore

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Ensure that new and infill development are designed and built to reduce the need for personal vehicles. Update key policy and strategic documents (e.g., Land Use Bylaw, Integrated Transportation Plan, Integrated Parking Management Plan, Engineering Design Construction Guidelines) to enable this.	Precursor	$	$	0,2	Engineering / Planning	Immediate	Community connection, Tourism and economy, Increase space and ability to mode shift, Inclusivity, Improved air quality, Improved accessibility	BOWDA	# of policies and strategies updated
Establish pedestrian and cycling zones in high- traffic areas of Canmore, particularly in the downtown core. Complement this with the development of intercept parking.	Low	$	$	0	Engineering, Planning and Development	Immediate	Improved inclusivity, Improved air quality, Reduced traffic noise, Reduced traffic congestion	BIA, TCK, BOWDA	# of km of car-free zones
Fund an expanded and longer-term electric bike incentive program, indexed to income. Consider adding non-electric bikes, and other mobility aids.	Low	$$	$	0	Sustainability, Community Social Development, Engineering	Immediate	Increased accessibility, Community wellbeing, Inclusivity		# of incentives issues
Pilot an e- bike or e- scooter sharing system for residents and visitors to use for short trips around town.	Low	$	$	0,1	Ec Dev with support from Engineering, Sustainability, Communication, Municipal Enforcement	2-5 years	Increase health and fitness, Enjoyment of natural spaces, Reduced traffic congestion, Improved accessibility, Enhanced tourism	BIA, CHLA, TCK, Chamber, etc.	Pilot program launched
Prioritize the build- out of Canmore's network of safe, accessible, and equitable walking and cycling infrastructure to ensure that every residential area has access to safe and connected mobility paths leading to major destinations like downtown, schools, and shopping.	Precursor	$$$	$$$	0	Engineering	Ongoing	Enhances worker and community safety, Improved lifestyle, Decreased transportation costs, Health benefits, Decreased public infrastructure costs, Decrease emissions and noise, Increase air quality, Increased mental health, Improved tourism, Economic driver, Increased resident satisfaction, Increased accessibility	BOWDA	# of km of walking and cycling infrastructure constructed

Theme 6: Rethinking Transportation and Mobility

Strategy: Low-Carbon Transit

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Update current transit mode share targets to align with area development plans, so that neighbourhoods with higher density, services, and identified need have more ambitious targets for transit ridership (at least 15% mode share attributed to transit).	Precursor	$	$	0,2	Engineering / Planning	Immediate	Community Connection, Inclusivity, Affordability	BOWDA, BVRTC	# of targets updated
Continue to coordinate with ROAM Transit to transition to electric buses, and install necessary charging infrastructure throughout town.	Medium	$	$	0	Engineering	Ongoing	Improved air quality, Improved accessibility, Improved affordability of transportation, Noise reduction	BVRTC	# of chargers installed
Continue to expand ROAM Transit service to high traffic visitor destinations.	High	$$$	$	0,5	Engineering, Recreation	Immediate	Inclusivity, Improved accessibility, Improved air quality	BVRTC, Province of AB, TCK	# of destinations accessible by transit
Integrate an equity lens in transit planning and ensure that residents who don't own personal vehicles can travel to critical facilities such as the hospital, grocery stores, pharmacies, etc.	Precursor	$	$	0,5	Engineering, Community Social Development	Immediate	Increase accessibility, Improved community wellbeing, Inclusivity		# of policies and strategies updated with equity lens

Theme 7: Efficient Waste, Water, and Wastewater Management

Strategy: Water Conservation and Management

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Reduce water loss, inflow, and infiltration, through a formalized and funded system-wide municipal water leak detection program (including close-circuit TV), continual maintenance, and Utility Lifecycle Upgrade program.	Low	$$	$$$	0,5	Public Works budget, Engineering leading	Ongoing	Cost saving due to early detection and maintenance, Decreased costs for users in long run	EPCOR	Volume of water treated in municipal system
Develop an Integrated Stormwater Master Plan, which incorporates Low Impact Development approaches, updated stormwater design criteria, updated Intesity Duration and Frequency (IDF) curves, and explore the option of implementing a stormwater utility rate.	NA	$	$	0,1	Engineering with Planning Support	2-5 years	Improved water quality, Cost savings in water treatment, Improved urban habitat, Reduced urban temperatures	BOWDA	# of LIDs installed Stormwater study completed
Develop and implement a water conservation strategy that identifies and targets the sectors with the highest water consumption.	Low	$	$	0,25	Public Works - Utilities and Communications and Sustainability	Immediate	Cost savings in water treatment, Improved resilience to drought	Consultants/ summer students	# of high consumers reached
Ensure strategies to reduce energy demand and integrate renewables and/or efficient technologies such as waste heat capture are included in any updgrades or retrofits for the wastewater treatment plant upgrades.	Low	$$	$$$	0	Public Works - Utilities, Sustainability, Facilities	Immediate	Reduction in building operational costs, Improved air quality	Consultants/ EPCOR	Volume of water treated in municipal system
Install smart water metering systems for all properties to monitor water usage in real- time and identify leaks quickly.	Low	$$	$$	0	Public Works - Utilities	5-10 years	Cost savings in water treatment, Improved resilience to drought		# of smart meters installed

Theme 7: Efficient Waste, Water, and Wastewater Management

Strategy: Waste Reduction

Action description	GHG Reduction Potential Low: 0-10 KtCO2e Medium: 10-50 KtCO2e High: 50+ KtCO2e	Total Cost of Investment $: $0-$10M $$: $10M - $30M $$$: $30M+	Municipal Cost Details $: $0-$100k $$: $100k - $1M $$$: $1M+	Municipal Resource Requirements (FTE)	Lead Department	Timeline	Co-Benefits	Partners	KPIs
Increase enforcement of the existing commercial food waste diversion bylaw, ensuring that all food-service businesses are actively diverting their food waste.	Low	$	$$	1	SWS, Enforcement	Immediate	Community connection, Compost giveaway to community members, Reduced food costs through reduction in waste		Diversion rate
Develop a regional Construction, Renovation and Demolition Waste Strategy incorporating circular economy principles. The strategy should establish requirements and incentives to maximize the re-use, recycling, and reduction of waste while creating jobs and local economic development opportunities.	Precursor	$	$	0	SWS, Planning, Sustainability	Immediate	Circular economy location potential (i.e. reuse centre), diversification of economy, Reduced costs for waste management	BOWDA Bow Valley Regional Waste Commission	Strategy developed and implemented
Dispose of municipal solid waste in a landfill with methane gas capture.	High	$	$	0	SWS	Immediate	Improved air quality, Reputational improvement	Town of Banff	Action completed
Develop and implement a Zero Waste Strategy, with a focus on circular economy. Include actions to both incentivize and require waste diversion, with a focus on food waste and other organic material.	Low	$	$	0,5	SWS, Sustainability, Communication	5-10 years	Community involvement, Reduced costs of waste management		Strategy developed and implemented

Town of
CANMORE