COMMITTEE OF THE WHOLE
MEETING AGENDA
Wednesday, August 2, 2023 at 8:30 a.m.

Council Chambers, Town Hall
Zoom Link

1. **Call to Order**

2. **Agenda Approval**

3. **Scheduled Delegations**

   3.1 Climate Resilience Plan Close Out Presentation – Tristan Walker - **Pg. 2**

4. **Committee Reports**

5. **Administration**

   5.1 Municipal Energy Management Year 2 presentation - **Pg. 114**

6. **Business Arising from the Minutes**

   6.1 Snow Management Community Engagement Strategy - **Pg. 143**
   6.2 Old RCMP Building Land Rezoning - **Pg. 149**

7. **Policy**

   7.1 Policy Training Discussion

8. **New Business**

   8.1 Council meeting September 25th, 2023 - **Pg. 166**
   8.2 Courageous Companions Sponsorship Request - **Pg. 168**
   8.3 CMR Huckleberry Festival - Event Sponsorship Request - **Pg. 208**

9. **Closed Session Discussion**

   9.1 Arena Concession Agreement - FOIP S. 16 & 24
   9.2 Strategic Planning Sessions Discussion – FOIP s. 24

10. **Adjournment**

Climate Risk Assessment & Adaptation Plan

for the Pincher Creek Region

June 2023

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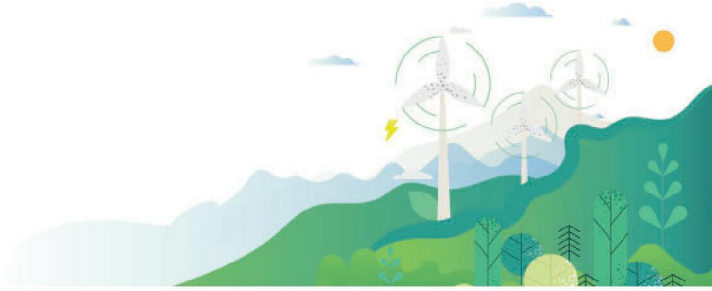


Acknowledgements

The Climate Risk Assessment and Adaptation Plan (the "Plan") was collaboratively prepared by the Town of Pincher Creek, the Municipal District (MD) of Pincher Creek, the Piikani Nation and a consulting team led by All One Sky Foundation. The Pincher Creek Climate Adaptation Project Team was instrumental in the development of the Plan; contributing time and participating throughout the planning process, and providing essential local knowledge, advice and direction to ensure the successful completion of the Plan:

- Tristan Walker, Municipal Energy Project Lead
- David Desabrais, Utilities and Infrastructure Manager, Municipal District of Pincher Creek
- Brett Wuth, Director of Emergency Management, Pincher Creek Regional Emergency Management Organization
- Andrea Hlady, Director of Family and Community Support Services, Town of Pincher Creek
- Tawnya Plain Eagle, Project Manager, Piikani Nation Lands Department

In addition, many other Town and MD staff and community members participated in and supported the process through completion of the community survey and attendance at the open houses, the risk assessment workshop and climate adaptation action planning sessions.

All One Sky Foundation managed the project and led all aspects of the community and stakeholder engagement, costs of inaction, climate impact assessment and climate adaptation planning process. The Prairie Adaptation Research Collaborative completed the climate modelling, projections and mapping for the Pincher Creek region. The Resilience Institute led the First Nations engagement.

Name	Organization	Role
Jeff Zukiwsky	All One Sky Foundation	Project Manager, Climate risk assessment and adaptation planning lead
Richard Boyd	All One Sky Foundation	Technical lead, climate change economics lead
Calvin Kwan	All One Sky Foundation	Research, community engagement and planning support
Dave Sauchyn	Prairie Adaptation Research Collaborative	Climate science lead
Soumik Basa	Prairie Adaptation Research Collaborative	Climate data acquisition
Jon Belanger	Prairie Adaptation Research Collaborative	GIS and mapping
Laura Lynes	The Resilience Institute	First Nations Engagement Lead
Amie Chaotakoongite	Avenir Creative	Creative design

Funding for this project was provided by the Municipal Climate Change Action Centre's Climate Resilience and Capacity Building Program. The Municipal Climate Change Action Centre is a partnership of Alberta Municipalities, Rural Municipalities of Alberta, and the Government of Alberta.

The project team acknowledges the traditional territories of the Niitsitapi (Blackfoot) and the people of the Treaty 7 region in Southern Alberta, which includes the Siksika, the Piikani, the Kainai, the Tsuut'ina, and the Stoney Nakoda First Nations, including Chiniki, Bearspaw, and Wesley First Nations. Southern Alberta is also home to the Métis Nation of Alberta Region 3.

1 Introduction

There is unequivocal evidence that Alberta has warmed over the last century and will warm further in the future[1]. Projections indicate a warmer and generally wetter future climate, with an increase in the frequency, intensity, or both, of some extreme weather events. Climate change is already altering our natural environment with observable changes related to the timing and availability of water, shifts in natural ecosystems, landscapes and species' ranges[2]. It is also negatively impacting the ability of municipalities to meet levels of service targets due to accelerated deterioration of infrastructure and reduced performance and reliability[3]. In addition, climate change is a driver of health risks related to extreme heat, wildfires and the expansion of vector-borne diseases; risks anticipated to increase as warming continues[4]. These impacts affect every aspect of our lives—our livelihoods and economy, social connectedness, culture and traditions, and general wellbeing. With further climate change anticipated this century there is a growing need for governments at all levels to understand, prioritize, and efficiently manage climate change risks.

This Plan provides a climate resilience and adaptation roadmap for the Pincher Creek region. It was developed following the participatory approach to climate adaptation planning shown in Figure 1. The Plan supports the Town of Pincher Creek (the "Town") and Municipal District (MD) of Pincher Creek to better understand the climate change risks facing residents, the economy, natural environment, and infrastructure in the region, to prioritize risks, and outlines a robust plan to adapt to these risks. Implementation of this Plan has tremendous potential to make the Pincher Creek region, economy and way of life more resilient to weather disruptions and stress, and healthier and safer for residents, now and in the future.

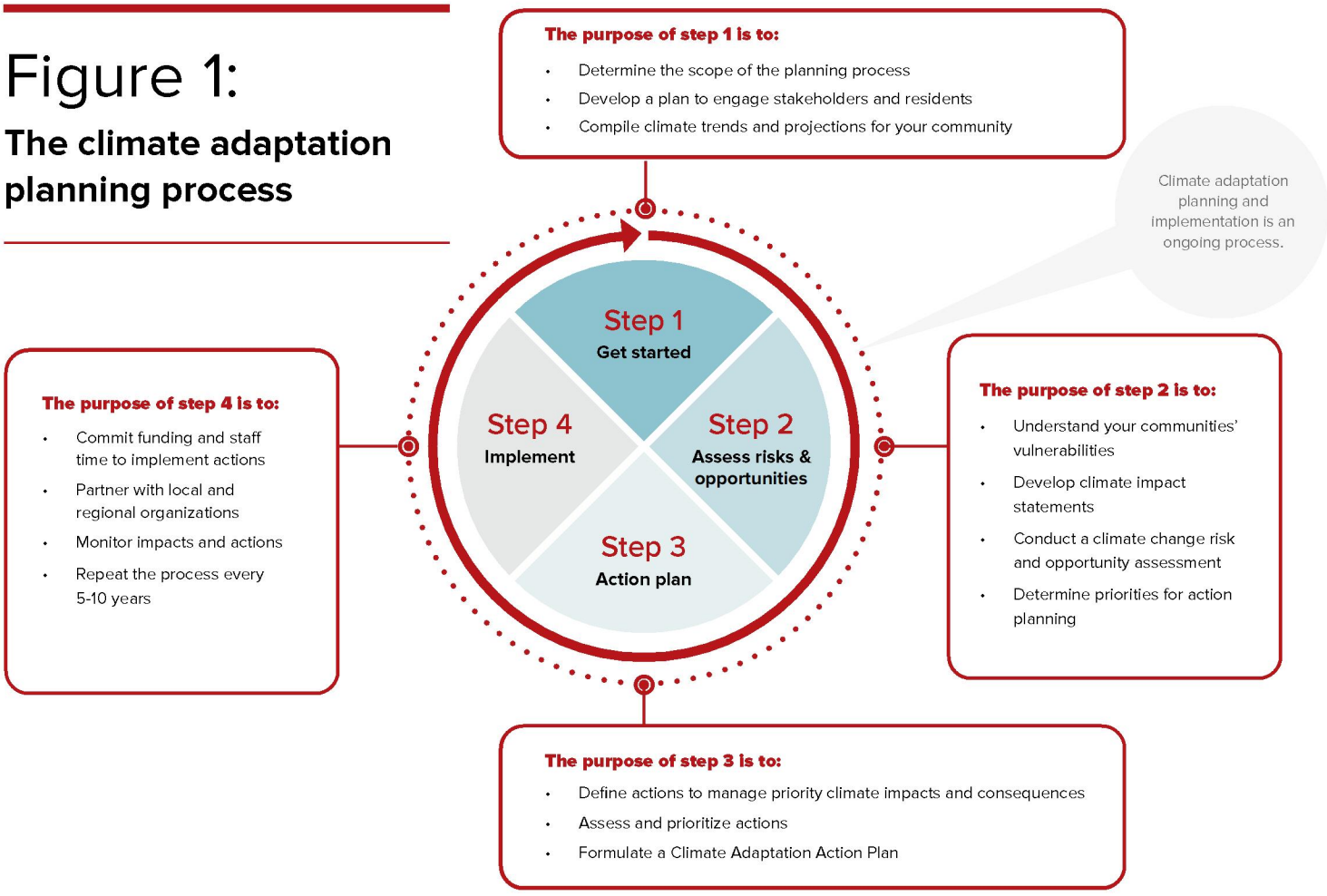
Encompassing the first three steps in Figure 1, this Plan is structured as follows:

Section 2	An overview of the project scope
Section 3	A summary of climate projections for the Pincher Creek region
Section 4	An overview of the community and stakeholder engagement for this project
Section 5	A summary of the economic impacts of climate change on the Pincher Creek region
Section 6	The climate impact assessment approach and results
Section 7	The Climate Adaptation action Plan for the Town and MD of Pincher Creek

1 Zhang, X., et al. (2019): Changes in Temperature and Precipitation Across Canada; Chapter 4 in Bush, E. and Lemmen, D. (Eds.). Canada's Changing Climate Report. Government of Canada, Ottawa, Ontario.
2 Bonsal, B. et al. (2019): Changes in freshwater availability across Canada; Chapter 6 in Canada's Changing Climate Report, *ibid*.
3 Brown, C., et al. (2021): Cities and Towns; Chapter 2 in Warren, F. and Lulham, N. (Eds.). Canada in a Changing Climate: National Issues Report. Government of Canada, Ottawa, Ontario.
4 Berry, P. and Schnitter, R. (Eds.). (2022). Health of Canadians in a Changing Climate: Advancing our Knowledge for Action. Government of Canada, Ottawa, Ontario.

Figure 1:

The climate adaptation planning process



Source: Climate Resilience Express: A Community Climate Adaptation Planning Guide, All One Sky Foundation and the Municipal Climate Change Action Centre [www.allonesky.ca]

2 Project Scope

Climate change impacts are widespread in scope, affecting nearly every aspect of community life, the economy, the natural environment, as well as built assets, infrastructure and municipal services. It is therefore necessary to be clear about what the climate risk assessment and adaptation planning process is to include and what it is to exclude. The scope of the exercise is summarized below:

The project is focused on consequences arising from climate-related impacts that occur directly within the **geographical boundaries** of the **MD of Pincher**

The project includes both **chronic (slow onset)** and **acute (rapid onset) climate-related impacts** with consequences for the natural environment, built environment, the regional economy, and the health and well-being of residents and visitors.

Where relevant, the climate risk assessment and adaptation plan distinguish between **impacts that affect the Town and MD of Pincher Creek differently.** The Action Plan specifies whether the action is intended for implementation by the Town, MD, or both.

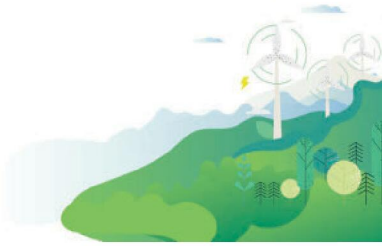
It is a **high-level assessment** of risk focusing on identifying significant climate-related impacts that affect **broad categories of built and natural assets and/or aspects of the economy and well-being.** The assessment does not consider impacts to specific or individual assets or infrastructure components.

Climate projections and the climate risk assessment are based on a **"high emissions scenario"** whereby global greenhouse gas emissions and global warming continue unabated to the end of the century[5]. Under this scenario global mean temperature reaches +3°C relative to the 1976 to 2005 baseline period by the 2070s.

The risk assessment is **future –focused**, characterizing the severity of impacts anticipated to occur within the MD boundaries under projected climate conditions by the 2070s.

The Climate Adaptation Plan considers **existing and planned measures** in place to manage climate-related impacts. The goal is to identify the incremental impacts of climate change by **overlaying the climate of the future onto the Pincher Creek of today.**

The Climate Adaptation Plan identifies both current and future adaptation deficits and **actions that can be implemented in the next 10 years** to close these gaps.



5 This scenario is consistent with the representative concentration pathway (RCP) 8.5, whereby global mean temperatures are projected to reach 4.3°C [likely range of 3.2-5.4°C] above pre-industrial levels by 2081-2100.

3 Climate Projections for the Pincher Creek Region

Predicting the future is inherently uncertain. To accommodate this uncertainty, projections of future climate change consider a range of plausible scenarios. Scenarios have long been used by planners and decision-makers to analyse futures in which outcomes are uncertain. Projections of future climate change for the Pincher Creek Region were developed under a high-end emissions scenario (referred to in the climate science literature as Representative Concentration Pathway 8.5 or RCP 8.5) where no additional effort is made to curtail human factors contributing to climate change[6]. For this assessment climate projections are based on when a 3°C increase in global mean temperature is realized relative to the 1976 to 2005 historical baseline period. This is expected to occur around the 2070s.

Overall, future climate projections for Pincher Creek for the 2070s indicate the following:

- Hotter temperatures, with increases in maximum temperature, minimum temperature and the number of hot days;
- Less cold, with higher mean and minimum winter temperatures and fewer cold days;
- Drier summer conditions, with more dry days, and an increase in drought risk;
- Wetter conditions overall, with more heavy precipitation days and potential flooding; and
- A longer summer season with fewer frost days, a longer growing season with more degree days.

Table 1 provides a summary of projected changes to climate variables for the Pincher Creek region.

Table 1 — Summary of Climate Projections for the Pincher Creek Area

Variable	Historic	Future	Change
Average maximum summer temperature (°C)	20	24.3	+4.3
Number of hot days (above 30°C)	2.7	17.2	+14.5
Number of hot days (above 35°C)	0.03	2.0	+2.0
Average minimum winter temperature (°C)	-9.8	-5.7	+4.1
Very cold days (temps below -30°C)	3.4	0.3	-3.1
Number of frost days (temps below 0°C)	198	134	-64
Length of the frost-free season (days)	167	231	+64
Average annual precipitation (mm)	795	853	+58 (+7%)
Average spring precipitation (mm)	256	312	+56 (+22%)
Average summer precipitation (mm)	176	165	-11 (-6%)
Number of wet days (>10mm rainfall)	23.9	26.4	+2.5
12-Month Standardized Precipitation Evapotranspiration Index[7]	0.7	0.6	-0.1

Figure 2 through Figure 6 contain maps depicting projected changes in a selection of climate variables for the Pincher Creek region. Detailed climate projections and additional maps are provided in the companion Report – *'Climate Change Projections for Pincher Creek'*, prepared by the Prairie Adaptation Research Collaborative (PARC). Additional climate projections, as well as information on historical trends in extreme weather events, are also provided in Appendix A.

6 The number 8.5 refers to the additional warming (in Watts per square metre) anticipated under this scenario by 2100.

7 The Standardized Precipitation Evapotranspiration Index (SPEI) provides a measure of potential drought or excessive moisture conditions, with values greater than +1 being associated with excessive moisture, and values less than -1 being associated with drought.

Figure 2:

Map of projected changes in the Number of Hot Days (T > 30° C)

As shown in Figure 2, the Pincher Creek region will have an increase in the number of hot days (+30°C or higher) in the future, with 15 more hot days per year, on average, across the region by the 2070s. Lower elevation areas in the east are projected to see greater increases in the number of hot days in the future, compared to the higher elevation areas in the west towards the mountains. The Town of Pincher Creek is projected to have, on average, about 27 hot days per year in the future, compared to only five historically (1976-2005).

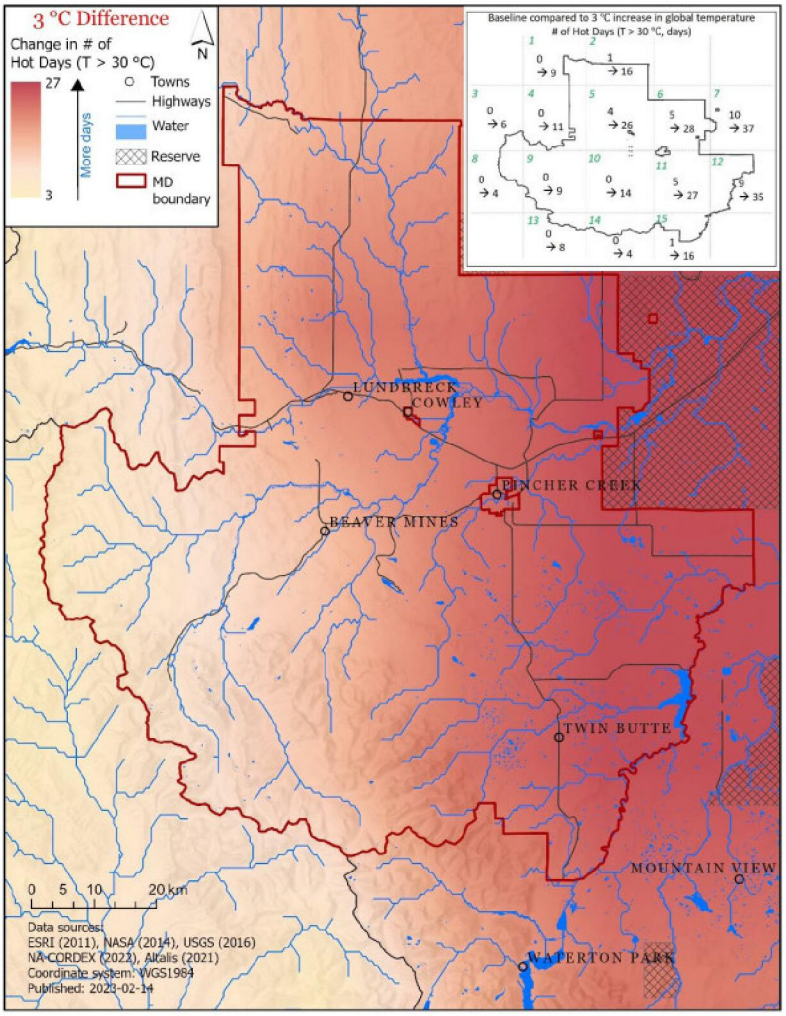


Figure 3:

Map of projected changes in the length of the frost-free season

The length of the frost-free season is projected to increase across the Pincher Creek region, with 58 - 69 extra days without frost by the 2070s (Figure 3). The Town of Pincher Creek is projected to have, on average, 66 more frost free days per year in the future relative to the 1976-2005 baseline period. The increase in the frost-free season suggests an earlier start and later end to the plant, tree and agricultural growing season in the region.

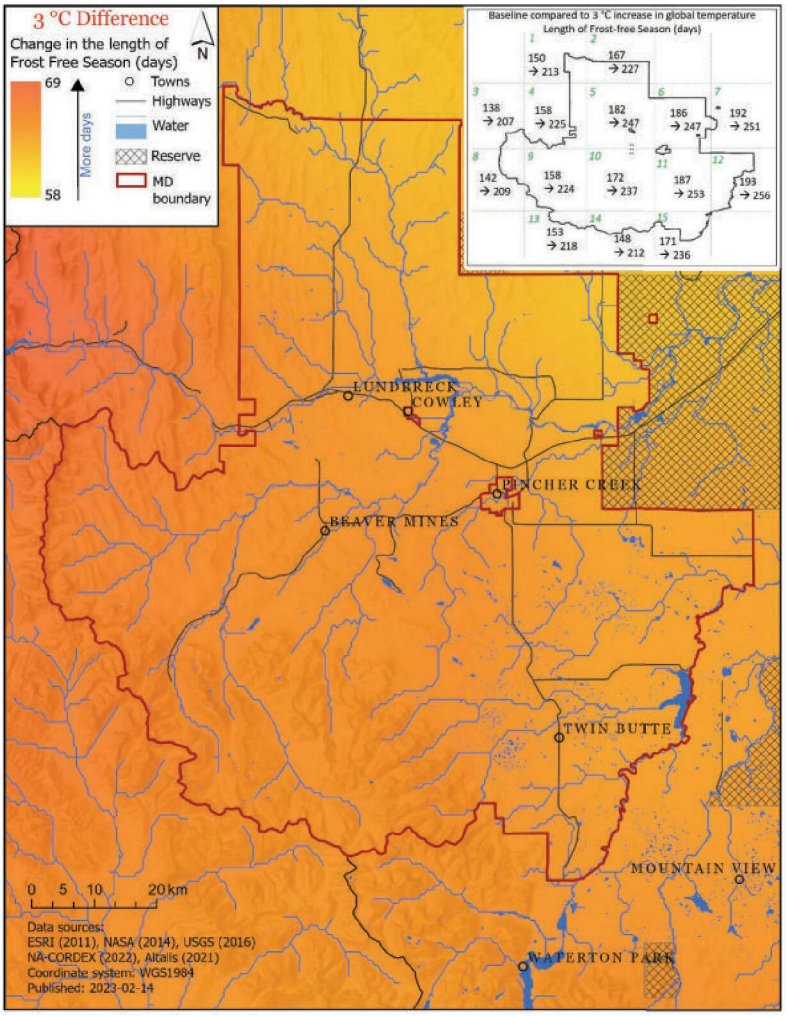


Figure 4:

Map of projected changes in summer precipitation

Climate projections show that the Pincher Creek region will have less summer (June, July and August) precipitation in the future (Figure 4). Higher elevation areas in the west and southern parts of the MD are projected to see larger reductions in summer precipitation than lower elevation areas in the northeast. By the 2070s the Town of Pincher Creek is projected to have, on average, about 9 millimetres less precipitation in the summer (a 6% reduction) relative to the 1976-2005 baseline period.

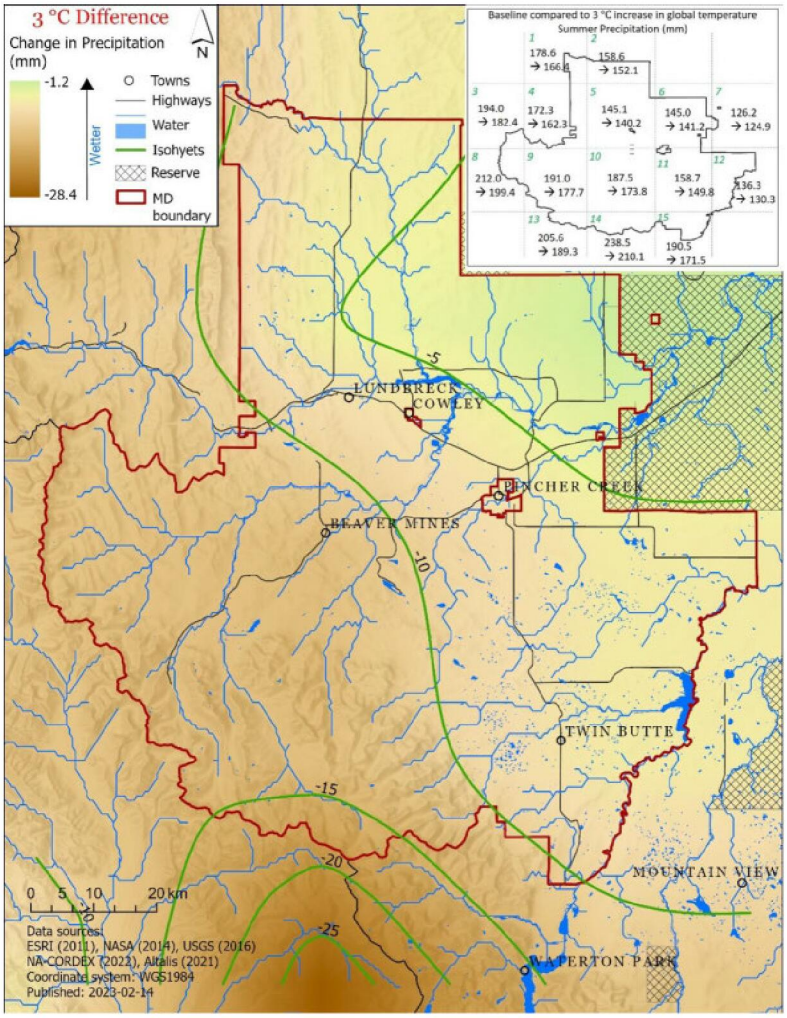


Figure 5:

Map of projected changes in spring precipitation

Precipitation in the spring (March, April and May) is projected to increase across the Pincher Creek region in the future. Lower elevation, valley bottom areas are projected to have a larger increase in spring precipitation than higher elevation areas in the west. By the 2070s the Town of Pincher Creek is projected to have, on average, about 67 millimetres more precipitation in the spring (a 30% increase) relative to the 1976-2005 baseline period.

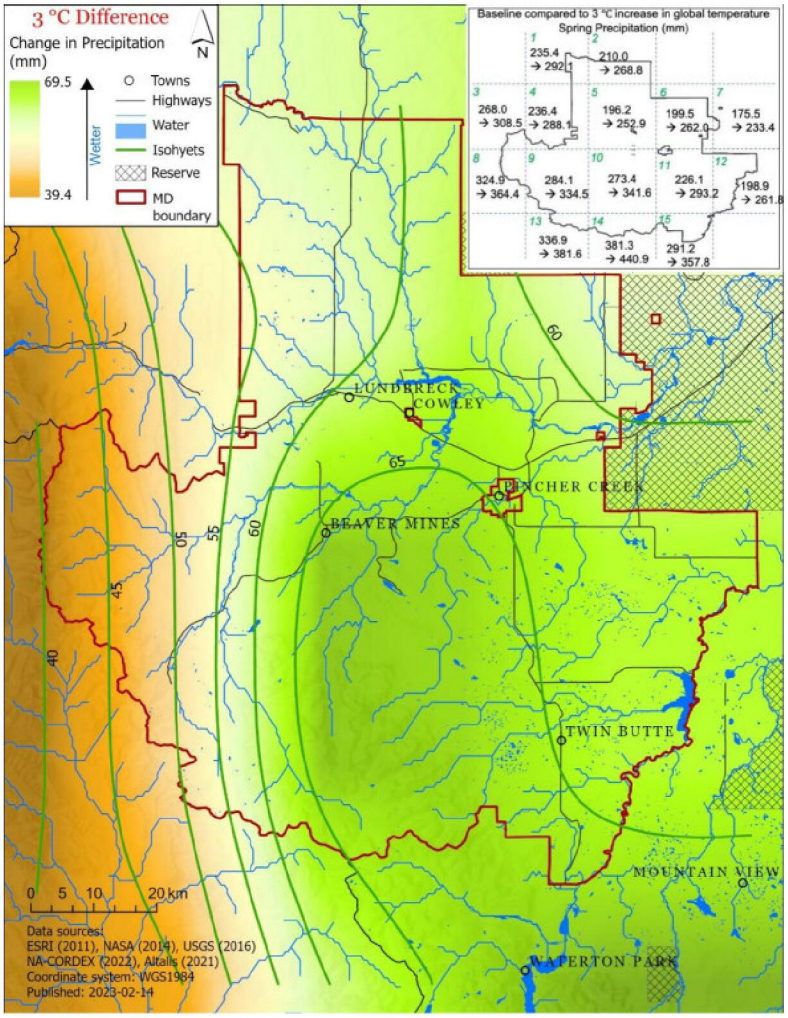
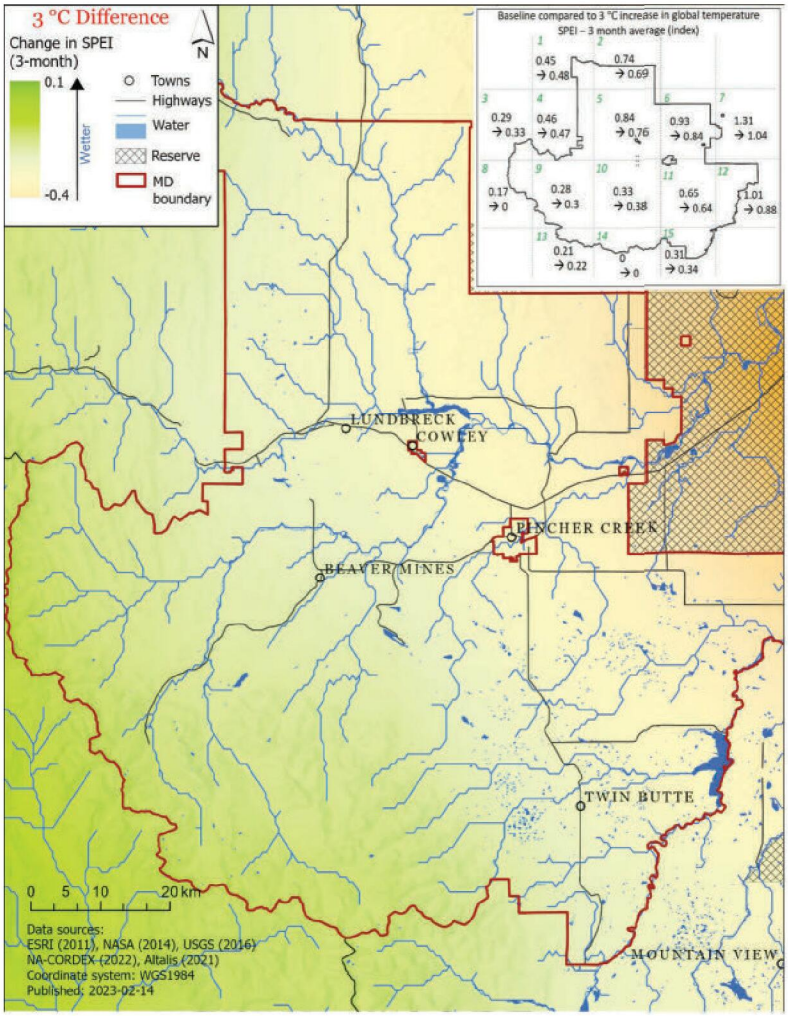


Figure 6:

Map of projected changes in meteorological drought conditions

Figure 6 shows projected changes in meteorological drought conditions in the Pincher Creek region in the future, using the Standardized Precipitation Evapotranspiration Index (SPEI). The SPEI measures potential drought or excessive moisture conditions, with values greater than +1 being associated with excessive moisture, and values less than -1 being associated with moderate-extreme drought conditions. Projected changes to the SPEI suggest that slightly drier conditions are anticipated on average in the lower elevation areas in an around the Town of Pincher Creek, Cowley, Lundbreck and Twin Butte. Moisture conditions are projected to remain relatively stable through much of the rest of the region.



4 Community and Stakeholder Engagement

Field tour with staff.

The development of this Plan is grounded in a participatory approach to climate adaptation. Not only does this provide an effective way of making climate and impact science accessible to staff and members of the community—fostering learning and capacity building—but it also enables the inclusion of local knowledge in the planning process. This increases the credibility, legitimacy and ownership of outcomes, increasing the likelihood that recommendations will be incorporated into decision-making and successfully implemented.

Town and MD Staff

This Plan was developed collaboratively with the Pincher Creek Project Team consisting of representatives from the Town, MD, Pincher Creek Regional Emergency Management Organization and Piikani Nation. In addition to the Project Team, other staff from the Town and MD contributed their expertise through participation in the climate risk assessment and adaptation action planning sessions.

Community open house.

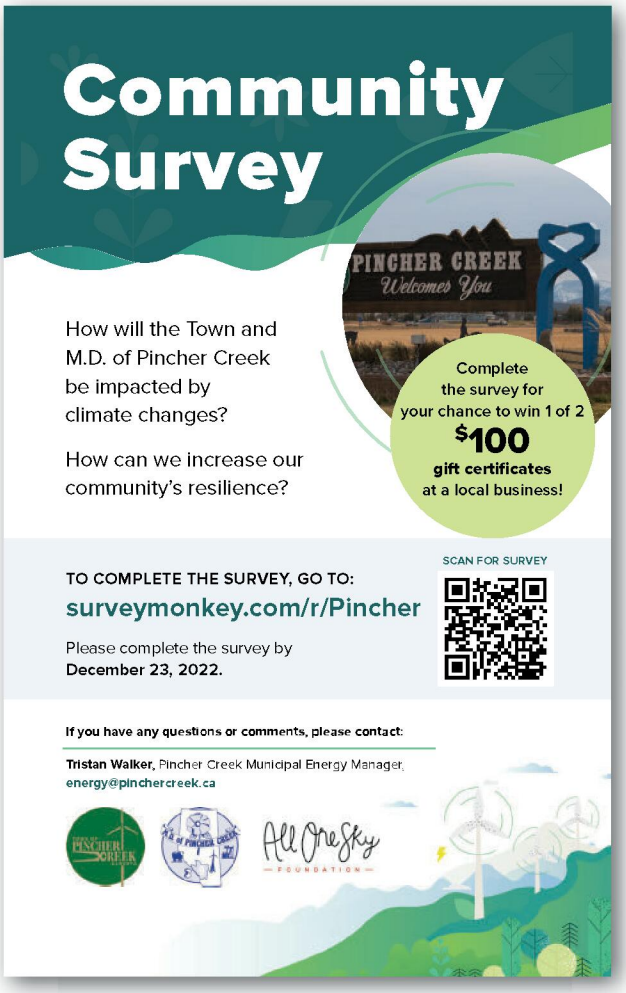
Open Houses

A community open house was hosted on April 13th, 2023, to hear from community members about the climate change projections for the region, provisional climate risk assessment findings, and potential actions to increase regional resilience to climate change. The community open house was attended by over 30 residents, with more than 40 ideas brainstormed to manage priority climate risks in the region.

A second community open house was hosted on June 28th, 2023, to present and discuss a draft of the Climate Adaptation Plan.

Piikani Nation

Throughout the project the Town and MD sought to engage meaningfully with the Piikani to provide an opportunity to share their perspectives on key climate risks facing region and to help identify climate adaptation actions that would benefit from collaboration between the Piikani Nation and the Town and MD. Piikani staff were hosted in Pincher Creek to share and discuss the climate risk assessment and identify opportunities for future collaboration on climate resilience. Tawnya Plain Eagle with the Piikani Lands Department was an active participant on the project team.

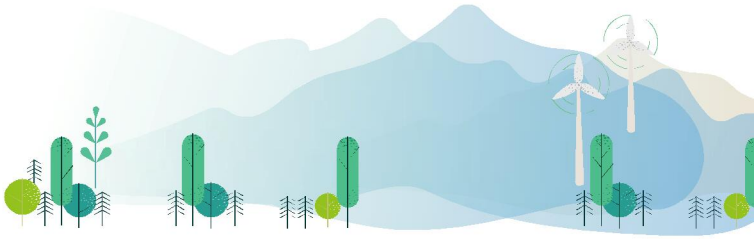


Community survey

An online survey – which ran from November 14 to December 26, 2022 – provided Pincher Creek residents with the opportunity to offer their thoughts on how the community might be affected by climate change in the future. The survey yielded 211 usable responses.

Overall, the survey results show that residents in the Pincher Creek region are quite concerned about the local impacts of climate change, mainly hotter temperatures, warmer winters, drier summer conditions, more severe storms, and shifting seasons and ecosystems.

The full survey results are available in Appendix B.



5 Costs of Inaction: Economic Analysis of Climate Risks

Information on the economic consequences of climate change is increasingly being demanded by decision-makers as they contemplate how to respond. A key piece of economic evidence used to make the business case for action are the costs that result from allowing climate change to continue unabated and without new adaptation. Estimates of the costs of climate change are being used by decision-makers to inform the overall scale of investment in adaptation, the prioritization of risks, and the selection, timing and sequencing of specific adaptation options, as well as the distribution of costs and adaptation benefits. An economic analysis of climate risks for the Pincher Creek region was completed to inform and provide impetus to the climate adaptation planning process. The results are summarized below.

While climate change is anticipated to bring some benefits for the Pincher Creek region, the total economic impact is projected to be overwhelmingly negative. Under the high future climate scenario, direct economic losses attributable to further climate change are estimated at **$18.3 million** and **$32.8 million** (in 2020 dollars) per year, on average, by the 2050s and 2080s, respectively. The scale and direction of projected direct economic losses varies across climate-sensitive sectors (also see Figure 7):

Losses of **$13.5 million** (2050s) to **$26.2 million** (2080s) annually from public health impacts caused by higher temperatures and periods of poor air quality (e.g., from wildfire smoke).

Losses of **$0.5 million** (2050s) to **$1.0 million** (2080s) annually from reduced worker productivity due to higher temperatures.

Losses of **$4.0 million** (2050s) to **$6.5 million** (2080s) annually from damages to transportation infrastructure and associated delays in the movement of people and freight due to high temperatures and heavy precipitation events.

Losses of **$1.6 million** (2050s) to **$2.7 million** (2080s) annually from damages to electricity transmission and distribution infrastructure due to a range of climate-related hazards.

Losses of **$0.7 million** (2050s) to **$1.9 million** (2080s) annually from damages to water, wastewater and drainage infrastructure due to heavy precipitation events and drought conditions.

Losses of **$0.8 million** (2050s) to **$1.4 million** (2080s) annually from damages to building structures and contents resulting from river and stormwater flooding.

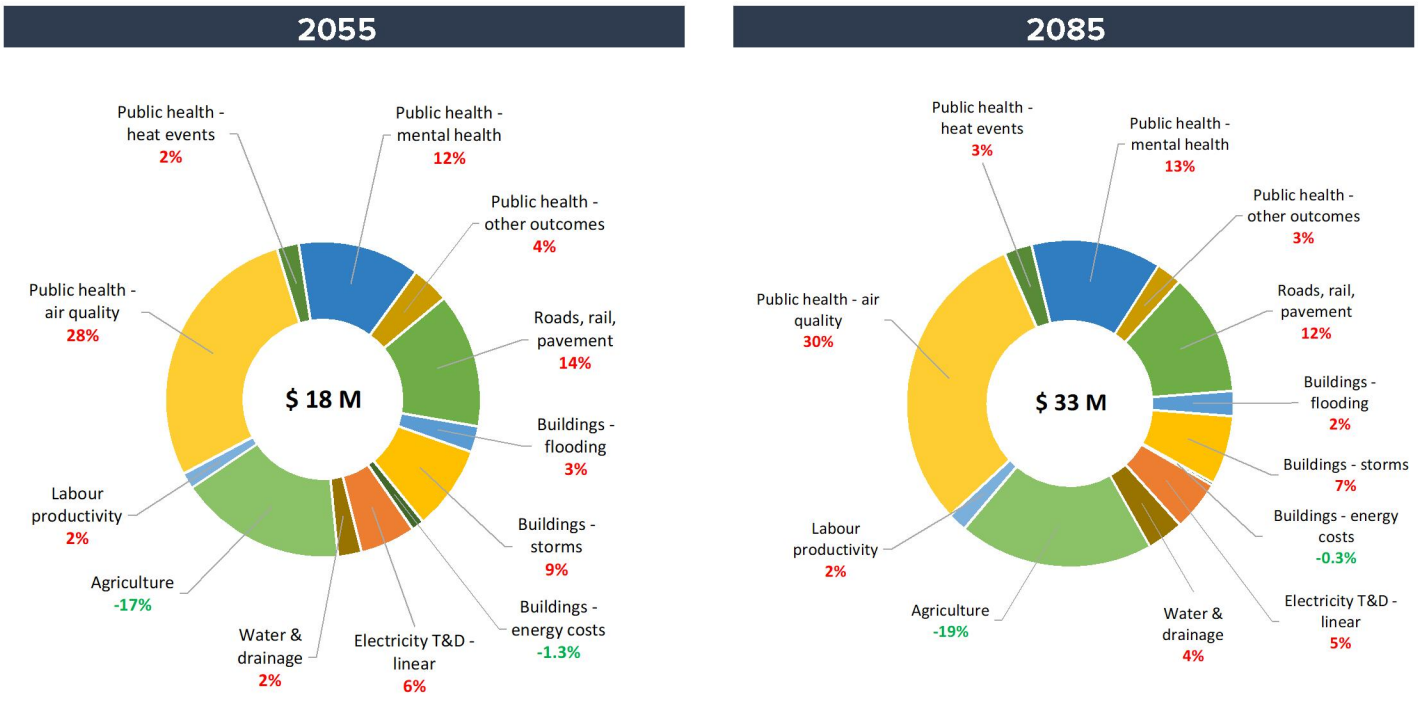
Losses of **$2.5 million** (2050s) to **$3.6 million** (2080s) annually from damages to building structures resulting from high winds, hail and freezing precipitation.

Savings of **$0.4 million** (2050s) to **$0.2 million** (2080s) annually from reduced building energy costs due to rising seasonal temperatures.

Increases in farmland values of **$4.9 million** (2050s) to **$10.4 million** (2080s) annually from rising agricultural productivity due to seasonal warming, a longer growing season and increases in total annual precipitation.

Figure 7:

Projected direct economic impacts of climate change for the Pincher Creek region in 2055 and 2085 by affected climate-sensitive sector



The direct economic losses listed above will give rise to a range of secondary or indirect costs in the wider economy as spending by affected businesses and households in the region and beyond is adversely impacted. The direct impacts of climate change on the Pincher Creek region are projected to reduce Gross Domestic Product in the wider economy by **$4.6 million** and **$6.8 million** per year, on average, by the 2050s and 2080s, respectively.

The estimated costs of climate change for the Pincher Creek region are almost certainly larger than the losses presented above. There are several key gaps in our current state-of-knowledge, including failure to account for cascading and compounding impacts across interdependent infrastructure systems and climate hazards that occur simultaneously or in close sequence, the loss of key service flows provided by infrastructure (e.g., drinking water, power, etc.), and impacts to some key climate-sensitive sectors (e.g., natural landscapes, tourism).

As noted above, estimates of the costs of climate change can be used to inform the overall scale of investment in adaptation. Building resilience and adapting municipalities to climate change has been conservatively estimated to require an annual investment of 0.26% of GDP[8], which equates to a total expenditure of about $13.6 million for the Town and MD of Pincher Creek over 10 years. Table 2 shows the estimated costs and benefits from investing this amount over the 10-year period 2025-2035, assuming the money is invested in climate resilience actions offering typical rates of return found in other economic studies of between $3-$5[9]. The corresponding benefits in present value terms (at a discount rate of 3% per year) over the useful life of the implemented actions are shown in the third column. For example, the present value benefits from a total 10-year investment of $13.6M in adaptation in the Pincher Creek region at an assumed $3 rate of return are estimated at $41M. The fourth column in the table shows the percentage reduction in the projected

8 IBC and FCM, 2020, Investing in Canada's Future: The Cost of Climate Adaptation at the Local Level, Final Report, February 2020.

9 Boyd, R. and Markandya, A., 2021, Costs and benefits of climate change impacts and adaptation; Chapter 6 in Canada in a Changing Climate: National Issues Report, (Eds.) F.J. Warren and N. Lulham; Government of Canada, Ottawa, Ontario [https://changingclimate.ca/national-issues/chapter/6-0/]

total direct costs presented above. The fifth column shows the percentage of these projected costs still being incurred even with a total 10-year investment of $13.6M in adaptation—i.e., the residual direct costs of climate change. Continuing with the same example, an adaptation investment of $13.6M at the assumed $3 rate of return is estimated to reduce projected direct costs over the lifetime of the adaptation actions by 21%, with 79% of projected costs still being incurred. It is evident from Table 2 that investing 0.26% of projected GDP in adaptation actions at typically rates of return from other economic studies ($3-$5) still leaves the Pincher Creek region exposed to significant residual losses. But what if the investment in adaptation actions was roughly tripled to 0.75% of projected GDP annually? This equates to a total investment of about $39.3M over 10-years or roughly $560 per person per year. At the same typical rates of return found in other economic studies (i.e., $3-$5), it is now evident from Table 2 that this higher level of investment in adaptation can virtually eliminate the incurrence of residual direct costs—especially if adaptation projects return close to $5 per $1 invested.

Table 2 — Simulated costs and benefits of 10-year adaptation investment strategy for the Pincher Creek region

Investment Strategy	10-year adaptation investment plan	Present value lifetime benefits of adaptation investment	Reduction in projected total direct costs (2025–2060)	Present value residual direct costs with adaptation (2025–2060)
	($2022 M)	($2022 M)		
Invest 0.26% of projected GDP				
$1 returns $3	13.6 $1,935 / person	41	21%	79%
$1 returns $4		54	27%	73%
$1 returns $5		68	34%	66%
Invest 0.75% of projected GDP				
$1 returns $3	39.3 $5,585 / person	118	59%	41%
$1 returns $4		157	79%	21%
$1 returns $5		196	99%	1%

6 Climate Risk Assessment

This section describes the process that was followed and the results of the climate risk assessment for the Pincher Creek region. The process involved four key steps:

- Defining climate impact scenarios,
- Assessing the *likelihood* of each scenario occurring in the Pincher Creek region,
- Assessing the *consequences* of each scenario, should they occur, and
- Evaluating the results to determine priorities for action planning.

The level of risk for Pincher Creek resulting from each climate impact scenario is determined by combining the outcomes of the likelihood assessment and the consequences assessment.

Each step in the climate impact assessment process is outlined below.

Define Climate Impact Scenarios

Climate impact scenarios characterize the cause-and-effect relationship, or impact chain, between climate impact-drivers, biophysical impacts, and the potential consequences of those impacts for Pincher Creek. Climate impact-drivers, as the term implies, are climate conditions (e.g., mean summer precipitation, heatwaves, hailstorms, etc.) that can result in harmful, beneficial or neutral consequences for residents, buildings or infrastructure, services, or the natural environment of Pincher Creek. Climate impact-drivers with largely negative consequences are commonly known as **climate hazards**; conversely, those with largely positive consequences are commonly known as **climate opportunities**.

Based on the results of the community survey, and discussions with the Project Team, the climate impact scenarios summarized in Table 3 were defined and included in the climate risk assessment process. Each impact scenario is described in detail in Appendix A.

Table 3 — Summary List of Climate Impact Scenarios

1  Extreme heat impacts to human health and livestock	2  Wildfire causes damage to homes and infrastructures	3  Wildfire smoke reduces air quality causing local health impacts
4  Hailstorm damages homes and infrastructure	5  Blizzard disrupts transportation	6  Windstorm damages homes and infrastructure
7  Freezing rainstorm damages trees and disrupts transportation	8  River and creek flooding causes damage to homes and properties	9  Ongoing river and creek flooding
10  Dam flooding (overtopping) occurs across the District	11  Overland flooding of homes and property in urban areas	12  Prolonged drought affecting local farmers, ranchers, wildlife and vegetation
13  Water supply shortage reduces community service levels	14  Loss of winter recreation	15  Invasive weed outbreak affecting local ranchers and farmers
16  Outbreak of invasive species or pest affecting local trees and forests	17  Vector-borne disease outbreak with public health risks	18  Changing ecosystems negatively affects wildlife and habitat

The climate impact scenarios in Table 3 result in primarily negative consequences for Pincher Creek—i.e., they can all be classified as climate hazards. A number of potential opportunities (or benefits) of climate change were also identified; for example, the region is projected to have a longer agricultural growing season with potential for new crop types and varieties to be grown, a longer construction season, and a longer summer recreation season with potential improvements in the quality of life and wellbeing of residents. In contrast to the climate hazards, however, the climate opportunities were not put through a formal assessment process. Nonetheless, the climate adaptation actions formulated in Section 7 do include measures to take advantage of potential climate opportunities identified for Pincher Creek.

Assessing Likelihood

The likelihood of each climate impact scenario being realized in the 2070s was determined using a combination of methods ranging from analysis of the historic occurrence of discrete events like heavy snowfall, modelled projections for climate variables like "the number of frost-free days", and published research studies, as well as the professional judgment of local stakeholders and the consulting team. Where possible, the preferred approach involved using the modelled projections for climate variables to estimate the probability that specific thresholds would be exceeded in any given year, on average, during the baseline period and the 2070s. Regardless of the approach, a 1-5 likelihood score was determined for each impact scenario using the scale at Table 4. The detailed climate impact scenarios provided in Appendix A include the likelihood scores for the baseline period and the 2070s; the approach used to determine the likelihood scores is also provided.

Table 4 — Climate Impact Likelihood Scale

Score	Descriptor	Likelihood/Probability
1	Rare	Impact scenario is expected to happen less than once every 100 years (Annual chance < 1% in 2070s)
2	Unlikely	Impact scenario is expected to happen about once every 51-100 year (1% ≤ annual chance < 2% in 2070s)
3	Possible	Impact scenario is expected to happen about once every 11-50 years (2% ≤ annual chance < 10% in 2070s)
4	Likely	Impact scenario is expected to happen about once every 3-10 years (10% ≤ annual chance < 50% in 2070s)
5	Almost Certain	Impact scenario is expected to happen once every two years or more frequently (Annual chance ≥ 50% in 2070s)

Climate risk assessment workshop

Assessing Consequence

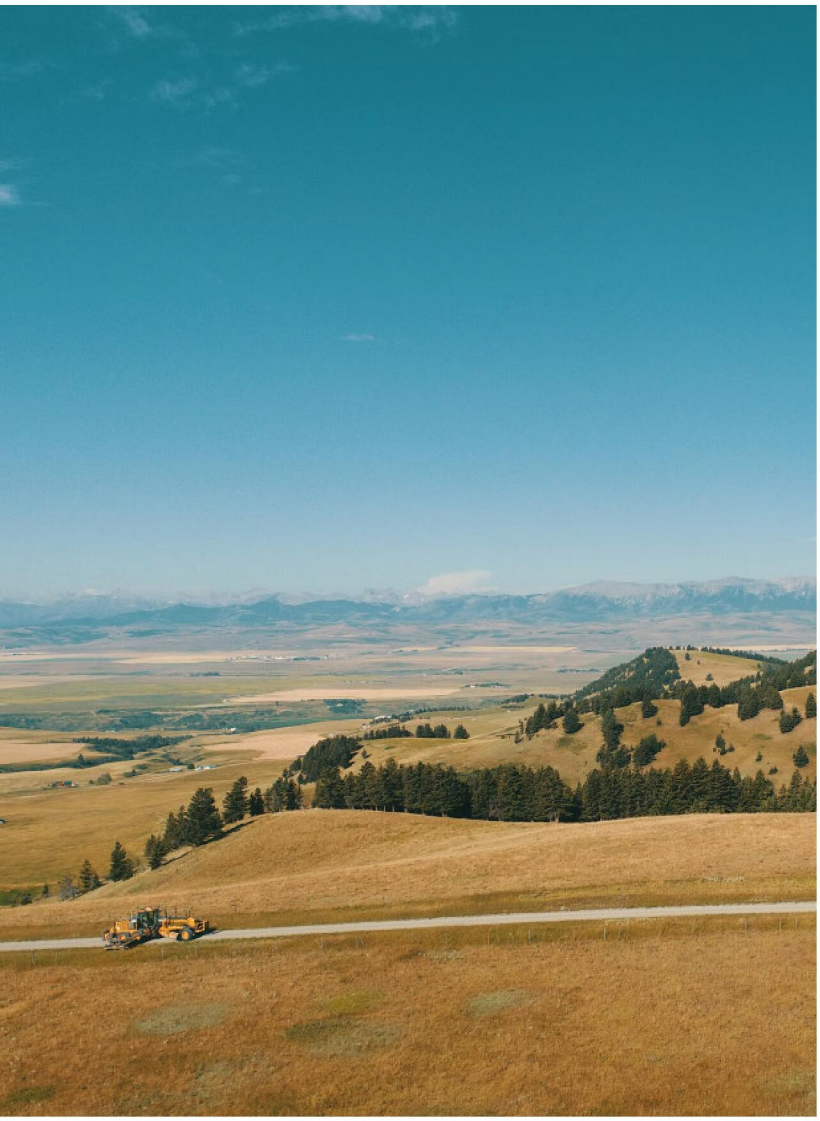
The individual consequences of a climate impact scenarios may range from negligible to catastrophic. To define the level of risk associated with each impact scenario for the Pincher Creek region it is necessary to establish the significance of resultant consequences. To these ends a consequence assessment was completed through a facilitated workshop in Pincher Creek on March 1, 2023, at which participants assigned categorical and numerical (1 to 5) values to the potential consequences of each climate impact scenario. To support the assessment, a tailored 1-5 scale for rating the consequences of each scenario for the Pincher Creek region was developed (shown in Table 5). The scale was developed to be consistent with the Region's Hazard Identification and Risk Assessment and with guidance and best practices for climate change risk assessments[10].

10 See for example: International Organization for Standardization (ISO) guideline 14092 – Climate adaptation planning for local governments and communities; All One Sky Foundation - Climate Resilience Express Community Climate Adaptation Planning Guide; and the Canadian Council of Ministers of the Environment (2021) Guidance on Good Practices in Climate Change Risk Assessment.

Table 5 — Scale of Rating for Consequences of Risks[11]

Criteria	Very Low (1)	Low (2)	Moderate (3)	High (4)	Very High (5)
Health & Well-being	• Negligible impact • Not likely to result in fatalities, injuries, evacuations, psychosocial impacts, or impacts to quality of life		• Some injuries, or modest temporary impact on quality of life for some residents and vulnerable populations • Some psychosocial impacts • Modest temporary impact on quality of life for some residents and vulnerable populations		• Many serious injuries or illnesses, some fatalities, or long-term impact on quality of life for most residents and vulnerable populations • Widespread psychosocial impacts • Long-term impact on quality of life for most residents and vulnerable populations
Business / Financial	• Very minimal impact on local businesses or the economy • Financial loss equal to <1% tax impact		• Temporary impact on income and employment for a few businesses, or modest costs and disruption to a few businesses • Financial loss of between 3% and 5% tax impact		• Long-term impact on businesses and economic sectors, major economic costs or disruption • Financial loss equal to >7% tax impact
Natural Environment	• Minimal or no environmental disruption or damage		• Could cause localized and reversible damage. Quick clean up possible		• Could cause severe and irreversible environmental damage. • Full cleanup not possible
Property, Infrastructure & Municipal Services	• Not likely to result in property damage or service disruption		• Localized moderate damage (a few buildings may be destroyed) and temporary interruption of a critical municipal service		• Widespread severe damage (many buildings destroyed • Long-term interruption of critical municipal services

11 Note: the descriptions for 2 (Low) and 4 (High) have been left blank intentionally.



Evaluate and Prioritize Risks

Following conventional risk management best practice, the outcomes of the likelihood and consequence assessments were combined in a table (known as a risk matrix) to determine an overall risk level for each climate impact scenario. The resultant risk matrix is shown in Figure 8. The matrix delineates between climate impact scenarios that pose a relatively significant threat to Pincher Creek (in the red and orange cells in the upper right corner) and those that do not (in the blue and green cells in the lower left corner). The matrix also serves to assign priorities to climate impact scenarios for adaptation planning in accordance with the criteria listed in Figure 9. Very high (red cells) and high (orange cells) rated climate impact scenarios were taken forward to adaptation action planning.

A provisional version of the risk matrix was reviewed and verified by the Pincher Creek project team and local stakeholders. Stakeholders were afforded the opportunity to review the relative position of the climate impact scenarios in the provisional matrix and make well-reasoned arguments to adjust their location if they judged a scenario—when viewed collectively with all scenarios—to have been either over or under-rated in comparison to one another. The provisional risk matrix was also presented at the first community open house (April 13, 2023). Members of the community generally supported the risk ratings with few comments received suggesting any changes.

Figure 8:

Climate Risk Matrix for Pincher Creek

Consequence	Rare (1)	Unlikely (2)	Possible (3)	Likely (4)	Almost Certain (5)
Very high (5)					
High (4)		River and creek flooding	Wildfire Drought Water shortage		
Medium (3)		Overland flood	Dam flooding Invasive weed outbreak Vector-borne disease Changing ecosystems	Extreme heat Loss of winter recreation	Wildfire smoke
Low (2)			Hailstorm	Invasive species outbreak Blizzard	Windstorm Freezing rain Ongoing flooding
Very Low (1)					

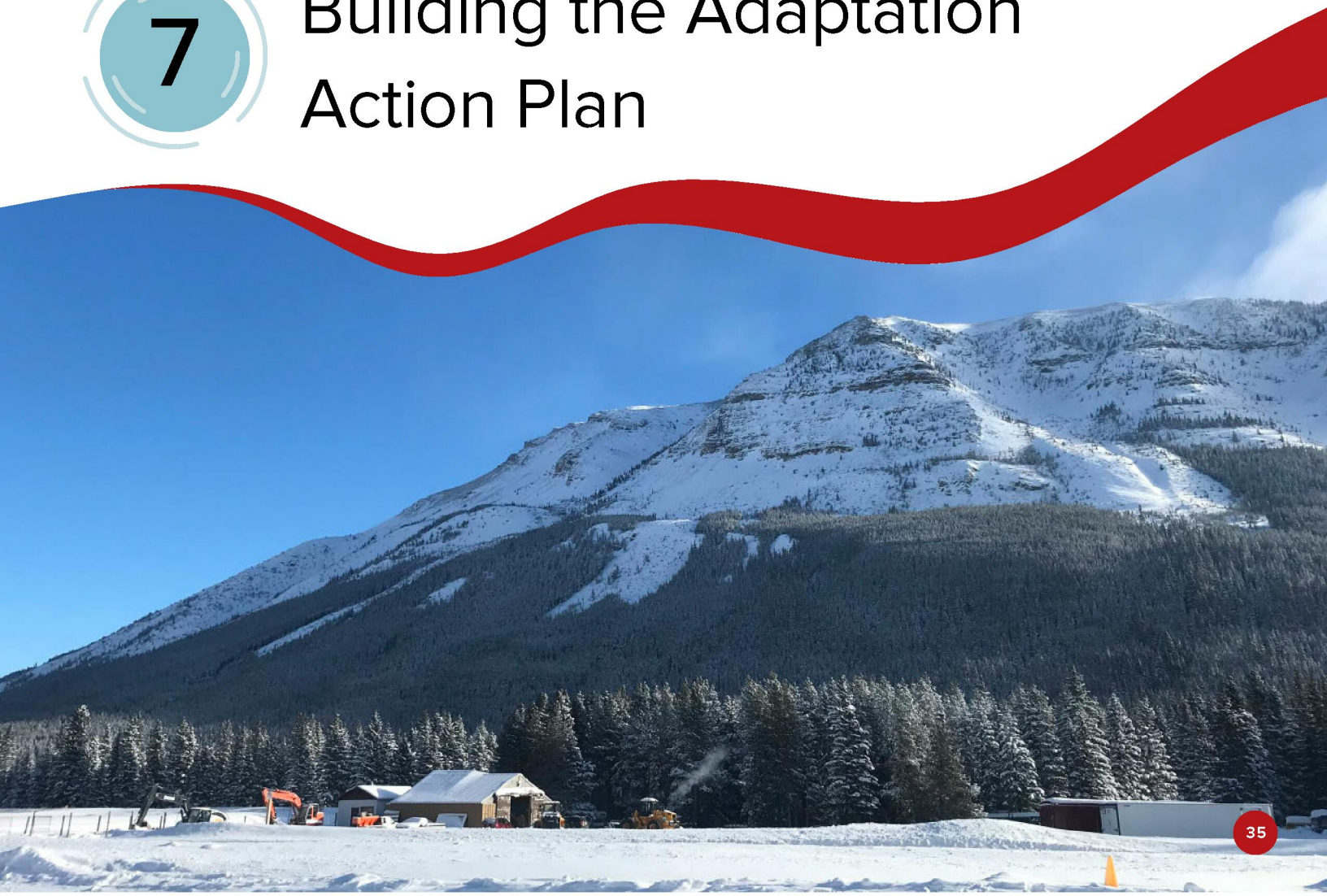
Likelihood

After the evaluation process was completed and all climate impacts were finalized, the last step of the impact assessment was to determine which climate impact scenarios should be considered for action planning. Figure 9 provides the decision-making framework that was used to prioritize scenarios based on where they fell in the matrix. In general, very high (red) and high (orange) rated impact scenarios should be considered for action planning.

Figure 9:
Decision Criteria for Action Planning

Label	Decision
Very high priority	Adaptation actions should be developed in the near-term to reduce risks or take advantage of opportunities.
High priority	Adaptation actions should be developed in the near- medium-term, to reduce risks or take advantage of opportunities.
Medium Priority	Adaptation actions may be developed, particularly where low-cost options are available that provide other social, economic or environmental benefits.
Low Priority	No action required at this time beyond monitoring and consideration as part of regular reviews.
Very low priority	No action required at this time beyond monitoring and consideration as part of regular reviews.

7 Building the Adaptation Action Plan



It was not practical to address all potential impacts of climate change through this Climate Adaptation Plan. The value of the impact assessment was to focus the efforts of the adaptation plan on the highest risks facing the region. Informed by the results of the climate risk assessment, the next step in the approach to adaptation planning involves: identifying actions to manage priority climate impacts and consequences to acceptable levels; evaluating and prioritizing those actions; and identifying how, when and by whom the prioritized actions will be implemented. The outcomes of this process are encapsulated in the Adaptation Action Plan for the Pincher Creek region. This Plan provides a roadmap for the Town of Pincher Creek and MD of Pincher Creek to enhance resilience and adapt to projected changes in the local climate.

Identifying and Evaluating Actions

The climate adaptation actions outlined below were informed by:

- The **community survey**, which included questions about support for climate adaptation and resilience actions, and open-ended question asking for the most important actions Pincher Creek should take to increase resilience to climate change, which garnered 143 responses. Overall, the most popular suggestions included enhancing education and awareness, emergency management and preparedness, environmental protection, and upgrading infrastructure (see Figure 30 in Appendix A).
- The **community open house** (April 13, 2023) where more than 40 ideas were brainstormed to manage priority climate risks for the region.
- **Action planning sessions** with MD and Town staff. Action planning sessions were hosted with staff from the Town and MD of Pincher Creek, the Piikani Nation, and other regional stakeholders. These sessions were focused on five climate adaptation themes (Health and wellbeing, Disaster resilience, Infrastructure, Parks and Environment and Economy) and with the goal of answering the following questions:
    1. What is regions climate adaptation vision and goals?
    2. How are the Town and MD currently managing each priority climate impact?
    3. Do current actions need to be modified or improved?
    4. What additional actions can be implemented by the Town and MD to better manage impacts?

In addition to inputs from staff, members of the community and other stakeholders, the consulting team provided ideas for adaptation actions drawing from their knowledge of how other municipalities across Alberta and beyond are managing climate change impacts.

Prioritizing Actions

Potential climate adaptation actions identified through the above process were consolidated and then evaluated using a multi-criteria, cost-benefit framework. This assessment is intended to support the prioritization of cost-efficient adaptation actions. A benefit-cost ratio for each action is calculated based on all potential benefits and all relevant costs needed to deliver those benefits, with those actions with the highest ratio assigned higher priority. Details of the prioritization process and the results are provided in Appendix C.

The Adaptation Action Plan

The Climate Adaptation Plan for the Pincher Creek region is presented below. The Plan represents a set of actions recommended for implementation within the next 10 years to increase community and regional resilience to the anticipated impacts of climate change.

The Action Plan is guided by the following vision for climate resilience and adaptation in the region:

> **Vision**
>
> Our region is safe and resilient for all to enjoy responsibly

The Action Plan contains **35 recommended climate adaptation actions** organized according to five themes and corresponding goals:

Health & Wellbeing

Goal: People and communities remain safe and healthy in the face of climate change and continue to enjoy a high quality of life

Disaster Resilience

Goal: Pincher Creek is prepared to respond and recover from climate-related events and disasters

Infrastructure

Goal: Pincher Creek's capital assets are resilient and adapted to the future climate

Parks & Environment

Goal: Improve and adapt our parks and natural assets and protect wildlife and ecosystems

Economy

Goal: The regional economy and local businesses are climate-ready and resilient

The **type of action** is defined based on the following action type categories:

Action Types	
Partnership	Establish new or strengthen existing partnerships with key stakeholders (both internal and external)
Plan	Plans or strategies to either establish new direction, or embed climate resilience into existing plans or strategies
Policy	Establishing or updating rules and regulations through a policy, guideline or standard
Program	Develop a new or strengthen an existing program to advance climate resilience
Project	Implement projects to advance climate resilience, such as asset improvements
Research	Conduct research to better under risks and/or the effectiveness of actions
Education	Develop and disseminate educational information to support climate resilience

The **level of urgency** for each action is defined as high, medium or low, depending on the timeline by which the action should be implemented. High urgency actions should be implemented in the near-term to address more immediate threats that the region is more vulnerable to.

Urgency	
High	Implemented in the next 2 years
Medium	Implemented in the next 3-5 years
Low	Implemented in the next 5-10 years

This is a collaborative climate adaptation plan between the Town and MD of Pincher Creek. The responsibility for implementation of each action is defined:

Responsibility	
Town	Actions to be implemented by the Town only
MD	Actions to be implemented by the MD only
Both collaboratively	Actions to be implemented collaboratively by the Town and MD
Both separately	Actions to be implemented by the Town and MD separately

Individual actions identify what residents can do to support community resilience and/or protect your health and wellbeing and your assets

Action recommendations are provided below, organized by theme and ordered by the actions ranking within the cost-benefit analysis (CBA) (see Appendix C for details).

Health and Wellbeing

Goal People and communities remain safe and healthy in the face of climate change and continue to enjoy a high quality of life

Action HW 1	**Support Community Gardening**
Description	To improve local food security, support residents and local organizations to establish gardens, greenhouses and/or create a community garden. Support could include financing or incentives.
Action type	Program
Urgency	Low
CBA score (rank)	3.09 (9)
Responsibility	Both separately
Individual action	Plant your own garden and grow food.

Action HW 2	**Install outdoor water features**
Description	Install new outdoor water features around the Town and Hamlets within the MD, including water stations and fountains along pedestrian paths and parks
Action type	Project
Urgency	Low
CBA score (rank)	2.75 (15)
Responsibility	Both separately
Individual action	Take actions to protect your health during extreme heat events including proper hydration, particularly during strenuous outdoor activities.

Action HW 3	Upgrade the spray park
Description	Upgrade the spray park with features, such as benches and shade structures, to promote participation by all community members (including seniors) as a way to cool down during extreme heat.
Action type	Project
Urgency	Medium
CBA score (rank)	2.43 (18)
Responsibility	Town
Individual action	Take actions to protect your health during extreme heat events including staying cool and proper hydration.

Action HW 4	Purchase temporary shading structures
Description	Temporary shading structures could include tents, shelters or canopies. Shade structured should be deployed during extreme heat events, and at prominent community gathering spots.
Action type	Project
Urgency	Low
CBA score (rank)	2.38 (19)
Responsibility	Town
Individual action	Take actions to protect your health during extreme heat events which include planning outdoor activities for cooler days, or in cooler locations, which have shaded areas. Consider purchasing your own shade structures (tent, tarp, etc.) to stay cool when you want to be outdoors on a hot day.

Action HW 5	Install permanent shade structures
Description	Permanent shading structures should be installed in high traffic areas across the Town and MD to provide protection from extreme heat. High traffic areas may include at parks, along pathways, and outside municipal buildings and facilities. Permanent shade structures should be incorporated into future projects and developments.
Action type	Project
Urgency	Medium
CBA score (rank)	2.12 (25)
Responsibility	Both separately
Individual action	Take actions to protect your health during extreme heat events which include planning outdoor activities for cooler days, or in cooler locations, which have shaded areas.

Action HW 6	Adjust recreation programming during heat and smoke events
Description	Adjust recreation programming and direct resources differently during extreme heat and smoke events. For example, promote outdoor water activities during extreme heat and indoor activities during wildfire smoke. This could involve adjusting staff schedules and re-allocating resources.
Action type	Policy
Urgency	High
CBA score (rank)	2.03 (26)
Responsibility	Both separately
Individual action	Adjust your recreation activities during heat and smoke events to protect your health. For extreme heat, schedule activities in the coolest part of the day or recreation indoors. During smoke events, limit outdoor activities and strenuous physical activities as much as possible or recreation indoors.

Disaster Resilience

Goal Pincher Creek is prepared to respond and recover from climate-related events and disasters

Action DR 1	**Update Land Use Bylaws to enhance flood protection**
Description	Update Land Use Bylaws to enhance flood protection, including by updating the defined flood risk areas and development regulations. The Land Use Bylaws should reference the Pincher Creek Flood Hazard Study (2020) and associated mapping and consider increasing development restrictions to account for the uncertainty associated with climate change, for example by using the 1:200-year flood elevation (i.e., a flood that has a 0.5% chance of occurring each year).
Action type	Plan
Urgency	Medium
CBA score (rank)	3.99 (2)
Responsibility	Both Separately
Individual action	Go to the Alberta flood maps website and check to see if your property is in a flood hazard area: https://floods.alberta.ca/. It is possible to 'Switch to Draft Studies View' to see flood inundation maps up to 1:1,000-year flood event (i.e., a flood that has a 0.1% chance of occurring each year).

Action DR 2	Develop a heat alert response plan
Description	Develop a heat alert response plan and incorporate into the Regional Emergency Management Plan. The heat alert response plan should include: an overview of potential health risks posed by extreme heat in the region; identification of at-risk populations and locations; An alert protocol and triggers for activation of extreme heat response; a communications plan; and identification of long-term preventive actions, including existing buildings and facilities that may be appropriate cooling centres.
Action type	Plan
Urgency	High
CBA score (rank)	3.78 (3)
Responsibility	Both Collaboratively
Individual action	Take actions to protect your health during extreme heat events: Follow local weather forecasts and alerts[12]; find an air conditioned space; know the signs of heat illness; stay cool; stay hydrated; visit neighbours, friends and older family members. [Reference: https://www.canada.ca/en/health-canada/services/publications/healthy-living/infographic-staying-healthy-heat.html]

Action DR 3	Develop a smoke alert response plan
Description	Develop a smoke alert response plan and incorporate into the Regional Emergency Management Plan. The smoke alert response plan should include: an overview of potential health risks posed by wildfire smoke; identification of at-risk populations and locations; an alert protocol and triggers for activation of wildfire smoke response; a communications plan; and identification of long-term preventive actions, including existing buildings and facilities that may be appropriate clean air centres.
Action type	Plan
Urgency	Medium
CBA score (rank)	3.78 (3)
Responsibility	Both Collaboratively
Individual action	Take actions to protect your health during wildfire smoke events. To ensure you have clean air in your home, recirculate air through your HVAC system, purchase a good quality air filter and ensure you have a functioning carbon monoxide alarm. If you can't maintain clean air inside your home, be aware of locations in your community where you can find clean air. [Reference: https://www.canada.ca/en/health-canada/services/publications/healthy-living/how-prepare-wildfire-smoke.html]

12 Heat alerts are issues for the Pincher Creek area when two or more consecutive days of daytime maximum temperatures are expected to reach 32°C or warmer, and nighttime minimum temperatures are expected to fall to 16°C or warmer. Source: Government of Canada, Criteria for public health alerts: https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/public/criteria-alerts.html

Action DR 4	Develop a homeowner climate change vulnerability assessment toolkit
Description	Develop and publish a toolkit to help residents to assess their home, property and personal risk and resilience to climate change impacts. The toolkit should help them understand actions they can take to support resilience, including access to grants and funding.
Action type	Education
Urgency	High
CBA score (rank)	3.26 (7)
Responsibility	Both collaboratively
Individual action	Understand how to protect your home and property from climate change impacts. Explore the City of Calgary Climate Ready Home Guide: www.calgary.ca/environment/climate/climate-ready-home-guide

Action DR 5	Develop a Drought Response Plan that considers climate change
Description	Prolonged drought and water supply shortage should be considered in the Regional Emergency Management Plan, including response planning and other information to support emergency management of water supply shortage.
Action type	Plan
Urgency	Medium
CBA score (rank)	2.90 (12)
Responsibility	Both collaboratively
Individual action	Do your part to conserve water. Water saving tips are available on the Town of Pincher Creek website: http://www.pinchercreek.ca/docs/files/Water%20Saving%20Ideas%20Summer%202017.pdf

Action DR 6	Enhance emergency preparedness education and communication
Description	Enhance emergency preparedness education and communication for residents regarding climate-related emergencies and evacuations. Enhanced communication could be via the Town and MD websites, social media, and/or other forms and include information about the local impacts of climate change and preparedness measures.
Action type	Education
Urgency	High
CBA score (rank)	2.78 (14)
Responsibility	Both collaboratively
Individual action	Visit www.getprepared.ca to learn more about how to ensure your family is prepared for climate-related emergencies.

Action DR 7	Conduct research to understand future wind patterns
Description	Climate projections obtained through this project do not model changes in extreme weather, and specifically wind. Windstorms were identified as a medium priority risk; however, the region's hazards are exacerbated by high winds, and minimal local information is available about the future trajectory of wind patterns. A wind research project would allow for a better understanding of trends and more accurate future projections of wind patterns and potential risks, allowing the region to better prepare for climate-related impacts. A partnership with a university research centre, using the Pincher Creek region as a case study, may be appropriate.
Action type	Research
Urgency	Medium
CBA score (rank)	2.59 (16)
Responsibility	Both collaboratively
Individual action	

Action DR 8	Develop a plan for enhanced fire department response capabilities
Description	Develop a plan, working with Pincher Creek Emergency Services Commission to meet the increased demand on emergency services generated by climate change. This includes increased medical calls for heat-related emergencies and increased wildland fire responses within the region. The plan should evaluate the increased needs of the organization to meet the higher call volumes. Future requirements of buildings, equipment and staffing should also be identified and assessed.
Action type	Plan
Urgency	High
CBA score (rank)	2.57 (17)
Responsibility	Both Collaboratively
Individual action	

Action DR 9	Update development legislation with FireSmart revisions
Description	Update the Intermunicipal Development Plan, Municipal Development Plans, Land Use Bylaws, and Area Structure Plans as recommended in the Wildfire Mitigation Strategy and FireSmart Canada recommendations. Recommended revisions to protect new developments from wildfire risk include identifying wildfire hazard as a development constraint, requiring wildfire risk assessments, requiring FireSmart construction materials, and requiring FireSmart landscaping and vegetation management.
Action type	Policy
Urgency	High
CBA score (rank)	2.20 (24)
Responsibility	Both collaboratively
Individual action	Help reduce the risk of wildfire to your home and neighbourhood and help firefighters to defend your home by following the recommendations in the FireSmart Homeowner's Manual: https://open.alberta.ca/publications/9781460121436

Action DR 10	Conduct forest fuel treatments and vegetation management
Description	Conduct forest fuel treatments and vegetation management to create a buffer between structures and flammable forests and vegetation to reduce the intensity and rate of spread of wildfires, as recommended in the Wildfire Mitigation Strategy. Focus on priority high and extreme fire hazard areas.
Action type	Research
Urgency	High
CBA score (rank)	1.65 (28)
Responsibility	Both collaboratively
Individual action	Help reduce the risk of wildfire to your home and neighbourhood and help firefighters to defend your home by following the recommendations in the FireSmart Homeowner's Manual: https://open.alberta.ca/publications/9781460121436

Action DR 11	Retrofit designated emergency reception centres
Description	Buildings identified for use as emergency reception centres should meet guidelines for emergency centres and should be suitable as clean air and cooling centres to address wildfire smoke and extreme heat events[13]. Important retrofits include upgrading heating, ventilation and air conditioning (HVAC) systems as necessary to ensure they can handle cooling loads and are equipped with air filers (MERV rating of 13 or more), and backup power generation. These centres should also have accessibility features and a variety of amenities and services available for the community (e.g., water, food, medical supplies, communications equipment, etc.).
Action type	Project
Urgency	High
CBA score (rank)	1.59 (29)
Responsibility	Both collaboratively
Individual action	

13 For additional information see: Health Canada: Guidance for Cleaner Air Spaces during Wildfire Smoke Events; CSA C282:19: Emergency electrical power supply for buildings; Health Canada: Health Facilities Preparation for Extreme Heat Recommendations for Retirement and Care Facility Managers; US Centre for Disease Control: The Use of Cooling Centres to Prevent Heat-Related Illness. ANSI/ASHRAE Standard 62.1-2019: Ventilation for Acceptable Indoor Air Quality.

Infrastructure

Goal Pincher Creek's capital assets are resilient and adapted to the future climate

Action IF 1	**Develop a climate resilient procurement policy**
Description	Update procurement policies to require consideration of climate change impacts and adaptation in all future projects and developments including in bids, tenders and projects related to, for example, buildings, land development, stormwater management, water supply, roads and pathways. Projects should also include a lifecycle assessment of the operations and maintenance costs (energy, repairs etc.) and return on investment.
Action type	Policy
Urgency	High
CBA score (rank)	4.31 (1)
Responsibility	Both Separately
Individual action	When considering a major renovation or construction project at your home, think about how to make your home and property more resilient in the process and hire contractors that can support you.

Action IF 2	Research climate resilient building materials and infrastructure
Description	Conduct research to understand and analyze climate resilient building materials and infrastructure (roads, etc.) appropriate for the Pincher Creek region. Apply the results of this research to modify educational materials for residents, and to update municipal development policies and legislation.
Action type	Research
Urgency	Low
CBA score (rank)	2.90 (12)
Responsibility	Both Collaboratively
Individual action	Understand how to protect your home and property from climate change impacts by using climate resilience building materials. See the City of Calgary Climate Ready Home Guide for details: www.calgary.ca/environment/climate/climate-ready-home-guide

Action IF 3	Upgrade municipal buildings to provide better protection from extreme heat
Description	Upgrades could include: upgrading heating, ventilation and air conditioning (HVAC) systems as necessary to ensure they can handle increased cooling loads over time; the installation of air- or ground-source heat pumps; whole building fans; shaded external spaces and cooling stations; enhanced insulation; energy efficient windows and/or glazing; green roofs; vegetative cooling such as trees and shrubs; and/or connection to emergency power in the event of a power outage[14].
Action type	Project
Urgency	Medium
CBA score (rank)	1.41 (30)
Responsibility	Both Separately
Individual action	For information and resources about how to better protect your home from extreme heat, see: Institute for Catastrophic Loss Reduction - Protect your home from extreme heat: https://www.iclr.org/wp-content/uploads/2020/07/ICLR_Extreme-heat_2020.pdf; or City of Calgary - Climate ready home handout for extreme heat: https://www.calgary.ca/content/dam/www/uep/esm/documents/esm-documents/Climate-Ready-Home_Handout_Extreme-Heat.pdf

14 For additional information see: US Green Building Council (n.d.). Designed for enhanced resilience. LEED Pilot Credit IPpc99; US Green Building Council (n.d.). Heat Island Reduction. LEED v4 Sustainable Sites. US Green Building Council (2020). RELi 2.0. Rating Guidelines for Resilient Design and Construction; or 2030 Palette. Sustainable design principles for vegetative cooling, heat island mitigation, and building sites.

Action IF 4	Upgrade and enhance flood mitigation infrastructure
Description	Evaluate, upgrade and enhance flood mitigation infrastructure to provide protection from the 1:100 historic flood (Pincher Creek) at minimum. And consider protection from the 1:200-year flood event where feasible. Upgrades or enhancements could include increased dike infrastructure and/or enhanced capacity of upstream areas such as reservoirs. The purchase of temporary flood mitigation solutions (tiger dams) for rapid deployment should also be considered.
Action type	Project
Urgency	Low
CBA score (rank)	1.27 (33)
Responsibility	Both Collaboratively
Individual action	

Action IF 5	Install a solar covering on the Town water reservoir
Description	Install solar panels on the Town water reservoir to reduce evaporation and conserve water, and to act as a renewable energy source. This could be in the form of floating solar panels or fixed piles in the reservoir. Power generated can be used to offset the usage of all municipal facilities through net metering.
Action type	Project
Urgency	Low
CBA score (rank)	1.14 (34)
Responsibility	Town
Individual action	

Parks & Environment

Goal

Improve and adapt our parks and natural assets and protect wildlife and ecosystems

Action PE 1	**Develop a Natural Asset Inventory and Management Plan**
Description	Develop an inventory of natural assets across the Pincher Creek region to understand the extent and current state of natural assets, including trees and wetlands. Based on the inventory, a management plan should be developed to ensure trees and wetlands are resilient to climate impacts, and how natural assets can be used to support climate adaptation. Investigate the use of 'shelter belts' to protect from wind and blowing snow, and for ground stabilization.
Action type	Plan
Urgency	Medium
CBA score (rank)	3.78 (3)
Responsibility	Both collaboratively
Individual action	As a property owner in the region, consider the natural assets that exist on your property, their current state, and how you can increase resilience of your natural assets to climate change.

Action PE 2	Develop a water sharing agreement between that Town and MD
Description	The Town and MD should develop a partnership and water sharing agreement to share water and collaborate on the supply of water in times of scarcity. Collaborative water management should be considered in future land use planning and development and incorporated into the Intermunicipal Development Plan.
Action type	Partnership
Urgency	Low
CBA score (rank)	3.56 (6)
Responsibility	Both collaboratively
Individual action	

Action PE 3	Develop a Source Water Protection Plan
Description	Develop a Source Water Protection Plan to protect long-term drinking water quality and quantity and consider the impacts of climate change. A Source Water Protection Plan should link to existing plans and policies such as drinking water safety plans, municipal development plans, etc.[15]
Action type	Plan
Urgency	Medium
CBA score (rank)	3.26 (7)
Responsibility	Both collaboratively
Individual action	

15 Reference: Alberta Water Council Guide to Source Water Protection Planning: https://open.alberta.ca/dataset/dfb9347c-52cb-4b56-b13c-824edf43ec69/resource/d4367d4c-8ddf-4a13-8b92-a801c8d893d7/download/aep-guide-to-source-water-protection-planning-protecting-sources-of-drinking-water-in-alberta.pdf

Action PE 4	Develop a Water Conservation, Efficiency and Productivity Plan
Description	The Water Conservation, Efficiency and Productivity Plan should outline a strategy to manage water demand such that supplies are sustainable into the future, and without adversely impacting the local economy, lifestyles or well-being of residents. The Plan should include an overview of water sources and water use in the region, future water demand projections considering projected climate change, and concrete actions focused on water conservation and efficiency goals. The Plan should consider for example water reuse and stormwater use[16], and be integrated into existing policies and Bylaws where possible.
Action type	Plan
Urgency	Medium
CBA score (rank)	2.92 (11)
Responsibility	Both collaboratively
Individual action	Do your part to conserve water. Water saving tips are available on the Town of Pincher Creek website: http://www.pinchercreek.ca/docs/files/Water%20Saving%20Ideas%20Summer%202017.pdf

Action PE 5	Update the Water Utility Bylaw with an improved water pricing structure
Description	Update the Water Utility Bylaw to include an increasing block rate pricing structure for water consumption whereby a higher rate is paid for larger volumes of water consumption.
Action type	Policy
Urgency	Medium
CBA score (rank)	2.38 (20)
Responsibility	Both separately
Individual action	Do your part to conserve water. Water saving tips are available on the Town of Pincher Creek website: http://www.pinchercreek.ca/docs/files/Water%20Saving%20Ideas%20Summer%202017.pdf

16 Reference: Public health guidelines for water reuse and stormwater use: https://open.alberta.ca/publications/public-health-guidelines-water-reuse-stormwater-use

Action PE 6	Enhance support for watershed planning and protection
Description	Enhance support for watershed planning and protection focused on the preservation of natural landscapes to provide flood protection to the Pincher Creek region. Support could include increased collaboration with the Oldman Watershed Council, advocacy and/or partnerships with intergovernmental organizations, farmers, and ranchers to support land stewardship.
Action type	Partnership
Urgency	Low
CBA score (rank)	2.31 (21)
Responsibility	Both collaboratively
Individual action	

Action PE 7	Develop a tree planting program
Description	Develop a tree planting program with the goal of enhancing urban forests to support climate adaptation. Tree can provide cooling benefits, shade and windbreaks, and have many other co-benefits such as greenhouse gas emissions reduction; habitat restoration; increasing biodiversity; cleaning air and water; and enhancing wellbeing. This program should support the *Natural Asset Inventory and Management Plan* and include volunteer component that encourages residents to plant trees on public and private property.
Action type	Program
Urgency	Low
CBA score (rank)	1.80 (27)
Responsibility	Both separately
Individual action	Plan climate-resilient trees on your property. Plant deciduous trees on the south, east and west sides of your house to provide shade use coniferous (evergreen) trees planted in a row to protect against high winds. When planting trees, remember to avoid overhead power lines and planting trees near the foundation of your house. The FireSmart Guide to Landscaping provides a comprehensive list of tree species, including their Hardiness zone, sun/ shade preferences and water use requirements: https://firesmartcanada.ca/wp-content/uploads/2022/01/328254-PIP-Landscape-low-res.pdf

Action PE 8	Enhance irrigation infrastructure
Description	Enhance irrigation infrastructure at municipal buildings and outdoor facilities (e.g., sports fields), to protect natural assets from drought. Consider options for water reuse and stormwater use[17].
Action type	Project
Urgency	Medium
CBA score (rank)	1.39 (31)
Responsibility	Both separately
Individual action	Consider ways to improve irrigation on your property including options to capture and reuse water, for example through the use of rain barrels or cisterns.

Action PE 9	Enhance environmental monitoring
Description	The Town and MD should work collaboratively to enhance monitoring of environmental assets and conditions in the region, including water quality and quantity in rivers, creeks and wetlands, snowpack, weather and soil conditions. Enhanced monitoring should be done in collaboration with Alberta Environment and Protected Areas and Environment and Climate Change Canada and be designed to fill gaps in existing monitoring. Monitoring priorities should be based on results from the *Natural Asset Inventory and Management Plan* to support an improved understanding of the current state of natural assets in the region. Environmental monitoring results should be analyzed and shared with the public.
Action type	Project
Urgency	Low
CBA score (rank)	0.80 (35)
Responsibility	Both collaboratively
Individual action	Get involved as a citizen scientist to support environmental monitoring. See: the Alberta Citizen Science Community of Practice: https://www.citscialberta.com/

17 Reference: Public health guidelines for water reuse and stormwater use: https://open.alberta.ca/publications/public-health-guidelines-water-reuse-stormwater-use

Economy

Goal The regional economy and local businesses are climate-ready and resilient

Action EC 1	**Provide climate resilience education materials to farmers and ranchers**
Description	Conduct research and provide education materials to farmers and ranchers about climate resilience. For example, drought tolerant crops and livestock management practices, climate-resilient crops and farming practices, as well as disaster management and emergency preparedness practices.
Action type	Education
Urgency	Low
CBA score (rank)	3.09 (9)
Responsibility	MD
Individual action	Ranching and farming are climate sensitive economic sectors. As a rancher or farmer, you should continue to stay informed about how the climate is changing, the impacts of climate change, and climate resilient practices.

Action EC 2	Develop a Tourism & Recreation Master Plan
Description	A Tourism and Recreation Master Plan should be developed for the region to provide long-term and sustainable strategy for the development of recreation and tourism-related programs, assets and services. The Plan should assess the current state of tourism and recreation and include an inventory of tourism and recreation assets and strengths, and recommendations for programs, events, parks, infrastructure, and services, including camping areas, hiking and biking trails, signage, parking, river and lake access, etc.
Action type	Plan
Urgency	Medium
CBA score (rank)	2.24 (22)
Responsibility	Both collaboratively
Individual action	

Action EC 3	Improve accessibility to outdoor recreation
Description	Improve accessibility to parks and outdoor recreation amenities and areas, including for example: developing and improving parking areas; installing informational signage; and installing lighting for night-time use. Include a focus on improving access to lakes, rivers and other water features during the summer months to provide cooling options and improve wellbeing.
Action type	Project
Urgency	Low
CBA score (rank)	2.22 (23)
Responsibility	Both separately
Individual action	During extreme heat events, plan your outdoor recreation activities in cooler locations such as lakes, rivers and other water features, and during cooler times of the day (morning and evening).

Action EC 4	Enhance marketing of the Pincher Creek region
Description	Enhance marketing and promotion of the Pincher Creek region to support climate adaptation. For example, focus on the benefits of summer, fall and spring recreation opportunities, as traditional winter sports become less viable. In the winter, emphasize alternative recreation opportunities which do not rely on snow or ice, including indoor activities. Through marketing and promotion, including a focus on the high quality of life within the region as a way to attract amenity migrants, entrepreneurs and businesses, and to promote long-term living in the region.
Action type	Education
Urgency	High
CBA score (rank)	1.38 (32)
Responsibility	Both collaboratively
Individual action	

Implementation and Updating the Plan

The Climate Adaptation Plan provides a 'shopping-list' of recommended actions to increased climate resilience in the Pincher Creek region. The most important step of the climate adaptation planning process is implementation of the plan. Several actions can be implemented quickly with minimal investment, whereas other actions have longer-term timeframes and require a higher level of investment. External funding sources may be needed and should be leveraged where possible.

It is recommended that the Pincher Creek Climate Adaptation Team, consisting of representatives from the Town, MD and Piikani Nation, be maintained and continue to meet regularly to support action implementation. Additional staff to support coordination and implementation will also be needed. Public participation and communication should continue to be a key aspect of climate resilience efforts in the region – helping residents understand climate projections, impacts and adaptation actions.

The Climate Adaptation Plan should be evaluated regularly—at least every **5-10 years**—to ensure it remains effective and relevant. The evaluation should consider:

- Lessons learned from the implementation of actions, both in terms of whether actions have been implemented as intended and the effectiveness of implemented actions in achieving the intended results.
- New research and scientific information on climate projections and impacts, which may affect the understanding of risks and opportunities facing the community.
- Changes to community goals, or changes to social, economic, or environmental conditions, which likewise may affect the understanding of risks and opportunities facing the community.

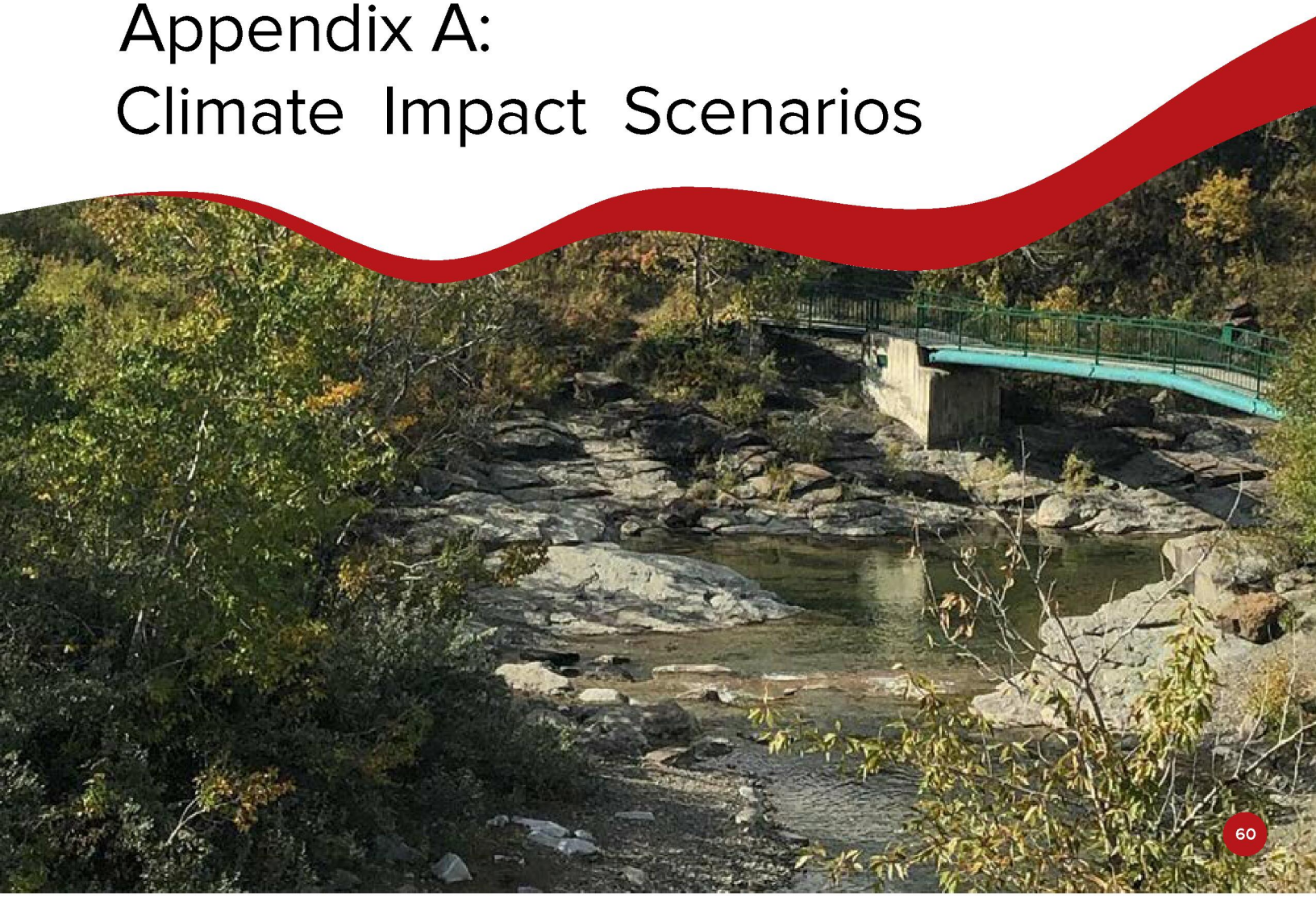
Keeping the Plan updated may only involve a few minor adjustments, or it may require revisiting some of the steps in the planning process and preparing a new Action Plan.

Implementation recommendations

In addition to the 35 climate adaptation action recommendations, the following additional recommendations are provided to support implementation:

ID	Action	Description
IM 1	Dedicate staff time and resources	The Pincher Creek Climate Adaptation Team, consisting of representatives from the Town, MD and Piikani Nation, should be maintained and continue to meet regularly to support action implementation. A climate adaptation implementation 'champion' should be identified and supported.
IM 2	Commit annual funding	Funding should be committed annually to support implementation activities, including funding for monitoring and evaluation of action implementation. Grant funding should be sought to support implementation projects where possible.
IM 3	Monitor and evaluate implementation results	The Climate Adaption Action Plan should be monitored and evaluated on a regular basis and should be updated every 5-10 years.

Appendix A:
Climate Impact Scenarios



1) Extreme Heat Impacts to Human Health and Livestock

Description	Multiple days of extreme heat causes negative impacts to human health
Climate Driver(s)	Hotter temperatures
Threshold	28 hot days in a year where temperatures reach +30°C
Historic Likelihood Score	**2 (Unlikely)**
Future Likelihood Score	**4 (Likely)**
Potential Consequences	• Injuries/fatalities (vulnerable populations disproportionately affected including seniors, obese individuals, and those with chronic health conditions) • Increased space cooling costs • Reduced participation in outdoor activities • Increased water demand for both irrigation and drinking • Negative health impacts to livestock
Consequence Score	**3 (Moderate)**
Risk Score	**High**

Notes

Climate driver(s)

- Climate projections show more hot days (+30°C), very hot days (+35°C) and warmer maximum temperatures

Threshold

- 30°C is an approximate temperature at which health effects from extreme heat escalate cause increased morbidity and mortality for at-risk populations[18]

Historic Likelihood

- Likelihood score determined based on the Pincher Creek climate projections report.

Future Likelihood

- The number of hot days where temperatures reach +30°C are projected to increase from 5 days to 28 days in the Pincher Creek area[19].

18 See: Health Canada (2012) Heat Alert and Response Systems to Protect Public Health; or BC Provincial Heat Alert and Response System (BC HARS) (2022)
19 Data derived from the Prairie Adaptation Research Collaborative (2023) - Climate Change Projections for Pincher Creek

2) Wildfire causes damage to homes and infrastructure

Description	An uncontrolled wildfire fire enters or starts in the Pincher Creek area and causes damage to homes and infrastructure
Climate Driver(s)	Hotter temperatures, drier summer conditions
Threshold	A wildfire occurs inside the boundaries of the Pincher Creek area
Historic Likelihood Score	**2 (Unlikely)**
Future Likelihood Score	**3 (Possible)**
Potential Consequences	• Injuries or fatalities • Damage to homes, buildings and infrastructure • Damage to parks and natural assets • Community evacuations and displacement • Forest/backcountry closures, reduced access to recreation • Economic disruption to forestry, agriculture and oil and gas sectors • Severe damage to Castle Mountain Resort due to the forest having only one exit
Consequence Score	**4 (High)**
Risk Score	**High**

Notes

Climate driver(s)

- Climate projections indicate an increase in summer temperatures, extreme heat, and dry conditions which contribute to wildfire risk

Threshold

- Conversations with Pincher Creek staff and survey results revealed that a wildfire event would have significant effects in Pincher Creek

Historic Likelihood

- Wildfires are relatively unlikely to occur in Pincher Creek, with higher risk areas to the west and in the mountains (Figure 9)[20]. Wildfire likelihood is higher in parts of the MD than in the Town.

Future Likelihood

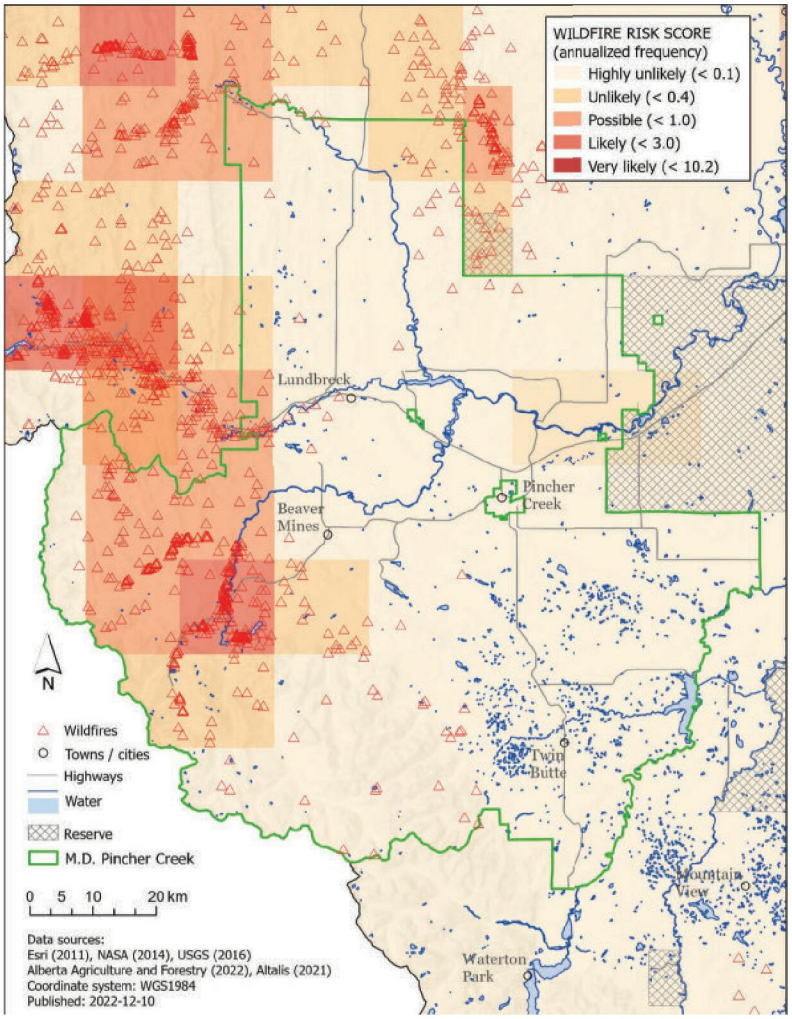
- Fire seasons are estimated to become more severe in a future warmer world. The length of the fire season is expected to increase by more than 20 days per year in the Northern hemisphere by the end of the century[21]

20 Historic likelihood defined using data from the Alberta Agriculture and Forestry - Historical Wildfire Database: https://wildfire.alberta.ca/resources/historical-data/historical-wildfire-database.aspx

21 Flannigan, M., Cantin, A. S., De Groot, W. J., Wotton, M., Newbery, A., & Gowman, L. M. (2013). Global wildland fire season severity in the 21st century. Forest Ecology and Management, 294, 54-61. https://doi.org/10.1016/j.foreco.2012.10.022

Figure 10:

Historic Wildfire Risk Map



3) Wildfire smoke reduces air quality causing local health impacts

Description	Smoke from wildfires enters the Pincher Creek area, reducing air quality and causing local health impacts
Climate Driver(s)	Hotter temperatures, drier summer conditions
Threshold	Visibility due to wildfire smoke falls below average (7km)
Historic Likelihood Score	**5 (Almost Certain)**
Future Likelihood Score	**5 (Almost Certain)**
Potential Consequences	• Health impacts (e.g., difficulty breathing, liver and kidney failure), particularly on vulnerable populations • Reduced outdoor recreation activities and quality of life (e.g., hiking, running, etc.) • Delays and/or cancellations of local events • Increased costs to install/upgrade filtration systems • Increased demand for emergency services and assistance
Consequence Score	**3 (Moderate)**
Risk Score	**High**

Notes

Climate driver(s)

- Climate projections indicate hotter maximum temperatures and more dry days

Threshold

- 7km is the average visibility from all wildfire smoke events that were recorded between 1956-2022

Historic Likelihood

- There were 233 occurrences between 1956-2022 where visibility fell below 7km due to wildfire smoke, about 3.5 occurrences per year (Figure 11)[22]

Future Likelihood

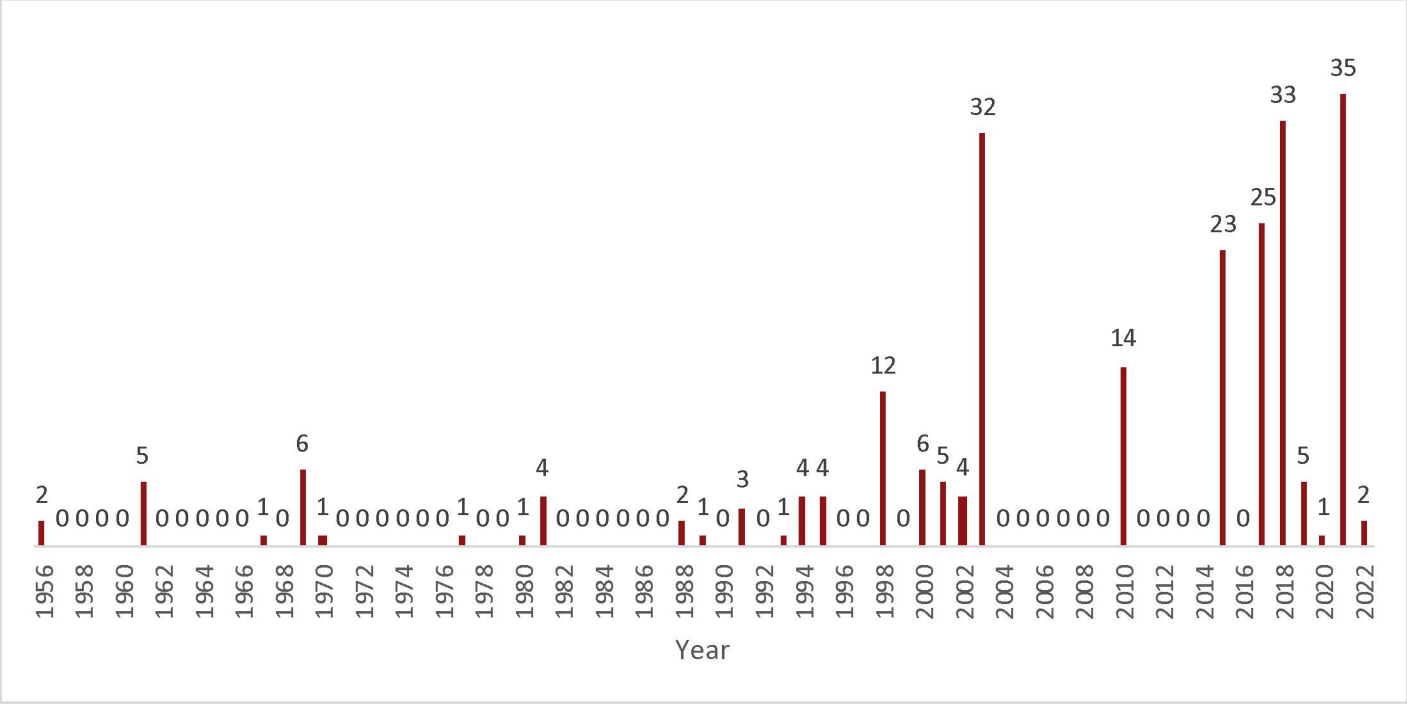
- Fire seasons are estimated to become more severe in a future warmer world. The length of the fire season is expected to increase by more than 20 days per year in the Northern hemisphere by the end of the century[23]

22 Data retrieved from Environment and Climate Change Canada (ECCC) (2023). Lethbridge data was used as it is the closest municipality to Pincher Creek for which information was available.

23 Flannigan, M., Cantin, A. S., De Groot, W. J., Wotton, M., Newbery, A., & Gowman, L. M. (2013). Global wildland fire season severity in the 21st century. *Forest Ecology and Management*, 294, 54-61. https://doi.org/10.1016/j.foreco.2012.10.022

Figure 11:

Historic occurrence of wildfire smoke events (visibility <7km) at Lethbridge (1956-2022)



4) Hailstorm damages homes and infrastructure

Description	A major hail event producing hailstones that reach 32mm in diameter damages homes and infrastructure in Pincher Creek
Climate Driver(s)	Severe storms
Threshold	A hailstorm with toonie-sized hailstones (32mm)
Historic Likelihood Score	**3 (Possible)**
Future Likelihood Score	**3 (Possible)**
Potential Consequences	• Evacuations / displacement • Health impacts (injuries/fatalities), particularly on vulnerable populations • Power outages • Increased cost/insurance • Increased demand for emergency services and assistance • Property damage (roofing, siding, windows, cars, etc.)
Consequence Score	**2 (low)**
Risk Score	**Low**

Notes

Climate driver(s)

- Climate projections indicate an increase in summer temperatures and extreme heat, which contribute to stronger thunderstorms that can produce large hail

Threshold

- 32mm (toonie-sized) hail incrementally damages the greatest number of roofing products[24]

Historic Likelihood

- 2 events with toonie-sized hail were recorded in Pincher Creek between 1982-2020, an average of 1 event every 19 years, or 5% annual probability[25]

Future Likelihood

- The localized and short duration nature of hailstorms makes it difficult to accurately predict future changes in frequency in the Pincher Creek area with meaningful confidence. The number of hailstorms is projected to be less frequent. However, when a hailstorm does occur, larger hail stone sizes are expected[26].

24 Marshall, T., Herzog, R., Morrison, S., & Smith, S. (2002). Hail damage threshold sizes for common roofing materials. 21st Conf. on Severe Local Storms, San Antonio, TX. Amer. Meteor. Soc. P,3. https://www.researchgate.net/publication/327022658_HAIL_DAMAGE_THRESHOLD_SIZES_FOR_COMMON_ROOFING_MATERIALS

25 Data retrieved from Environment and Climate Change Canada (ECCC) (2023).

26 Allen, J. T. (2018). Climate change and severe thunderstorms. In Oxford research encyclopedia of climate science. https://doi.org/10.1093/acrefore/9780190228620.013.62

5) Blizzard disrupts transportation

Description	A winter storm with blowing snow and wind reduces visibility
Climate Driver(s)	Severe storms, Warmer winters
Threshold	A blizzard occurs with winds of 40 km/hr or greater and widespread reductions in visibility to 400 metres or less, due to blowing snow[27]
Historic Likelihood Score	**5 (Almost Certain)**
Future Likelihood Score	**4 (Likely)***
Potential Consequences	• Health impacts (injuries/fatalities) • Impact on local events (delays/cancellations) • Disruption of transportation networks (roads, bridges, etc.) • Increased demand for emergency services and assistance • Reduced ability for emergency services to provide support/assistance
Consequence Score	**2 (Low)**
Risk Score	**Medium**

* Likelihood score was changed from 3 to 4 upon discussions with Pincher Creek staff. It was noted that blizzard events should be at least as likely as freezing rain events. Furthermore, blizzard projections are based off Lethbridge data which may not be as accurate.

Notes

Climate driver(s)

- Climate projections indicate fewer cold days and milder winters, which contribute to reduced blizzard risk

Threshold

- The criteria for a blizzard warning from Environment and Climate Change Canada is "when winds of 40 km/hour or greater are expected to cause widespread reductions in visibility to 400 metres or less, due to blowing snow, or blowing snow in combination with falling snow, for at least 4 hours"[28]

Historic Likelihood

- 64 blizzards were recorded at the Lethbridge weather station between 1953 and 2020, about 1 blizzard per year (Figure 12)[29].

Future Likelihood

- Climate projections indicate warmer temperatures which will reduce snowfall at lower elevations and may reduce the annual number of blizzard events.

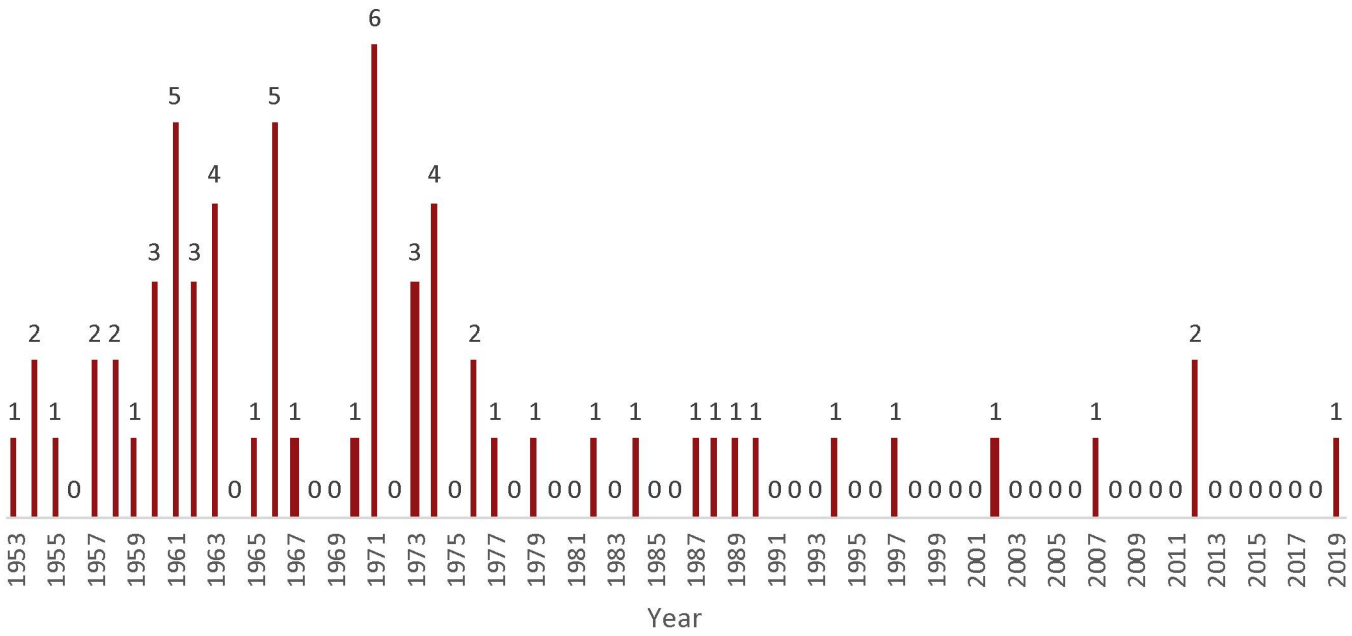
27 Based on Environment and Climate Change Canada *Criteria for public weather alerts*.

28 Environment and Climate Change Canada. (2020). *Criteria for public weather alerts*. Government of Canada. https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/public/criteria-alerts.html#snowFall

29 Data retrieved from Environment and Climate Change Canada (ECCC) (2023) from the Lethbridge weather station

Figure 12:

Historic occurrence of blizzards at Lethbridge (1953 - 2020)



6) Windstorm damages homes and infrastructure

Description	A windstorm occurs damaging homes and infrastructure
Climate Driver(s)	Severe storms
Threshold	A wind warning is issued by Environment and Climate Change Canada
Historic Likelihood Score	**5 (Almost Certain)**
Future Likelihood Score	**5 (Almost Certain)**
Potential Consequences	• Health impacts (injuries/fatalities) • Power outages • Impact on local events (delays/cancellations) • Damage to parks and natural assets • Insurance and repair costs • Reduced economic activity and deterrence of new residents moving to Pincher Creek • Increased demand for emergency services and assistance • Damage to and loss of information/communications infrastructure
Consequence Score	**2 (Low)**
Risk Score	**Medium**

Notes

Climate driver(s)

- Climate projections indicate an increase in summer temperatures and extreme heat, which contribute to stronger thunderstorms that can produce high winds

Threshold

- The criteria for a wind warning is "80 km/h or more sustained wind; and/or gusts to 100 km/h or more[30]"

Historic Likelihood

- 778 wind gusts to 100km/hour or more were recorded between 1960-2022, an average of about 17 windstorms per year (Figure 13)[31]

Future Likelihood

- 50-60% of extreme wind gust events (i.e., 90km/h wind speeds or greater) are associated with warmer temperatures[32]. With warming temperatures projected across Alberta, an increase in the future likelihood of a windstorm event is anticipated

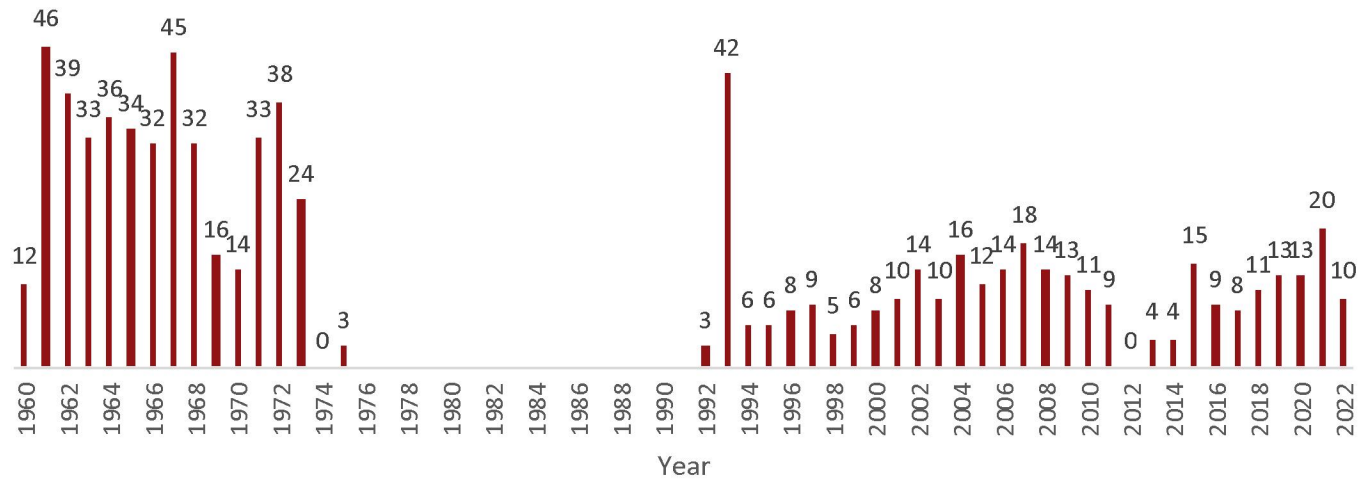
30 Environment and Climate Change Canada (ECCC). (2020. *Criteria for public weather alerts.* Government of Canada. https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/public/criteria-alerts.html#snowFall

31 Data retrieved from Environment and Climate Change Canada (ECCC) (2023)

32 Cheng, C. S. (2014). Evidence from the historical record to support projection of future wind regimes: An application to Canada. *Atmosphere-Ocean*, 52(3), 232-241. https://doi.org/10.1080/07055900.2014.902803

Figure 13:

Historic windstorm frequency (gusts exceeding 100km/h) at Pincher Creek (1960-2022)[33]



33 Note: No data was recorded between the years 1976 and 1991

7) Freezing rainstorm damages trees and disrupts transportation

Description	A freezing rain event occurs damaging trees and disrupting transportation
Climate Driver(s)	Warmer winters, severe storms
Threshold	A freezing rain warning is issued by Environment and Climate Change Canada
Historic Likelihood Score	**5 (Almost Certain)**
Future Likelihood Score	**5 (Almost Certain)**
Potential Consequences	• Health impacts (injuries/fatalities) from slips, trips, and falls, particularly on vulnerable populations and livestock • Power outages • Disruption of transportation networks • Damage to parks and natural assets • Insurance and repair costs • Increased demand for emergency services and assistance • Damage to and loss of information/communications infrastructure
Consequence Score	**2 (Low)**
Risk Score	**Medium**

Notes

Climate driver(s)

- Climate projections indicate more precipitation in the winter season and milder temperatures which contribute to freezing rain risk

Threshold

- A freezing rain warning is issued by Environment Canada "when freezing rain is expected to pose a hazard to transportation or property; or when freezing rain is expected for at least two hours."[34]

Historic Likelihood

- 86 freezing rain events were recorded between 1958-2022, about 1.3 events per year on average (Figure 14)[35]

Future Likelihood

- Freezing rain in western and central Canada – particularly in the Canadian Prairies – is projected to increase in frequency as a result of climate change[36]

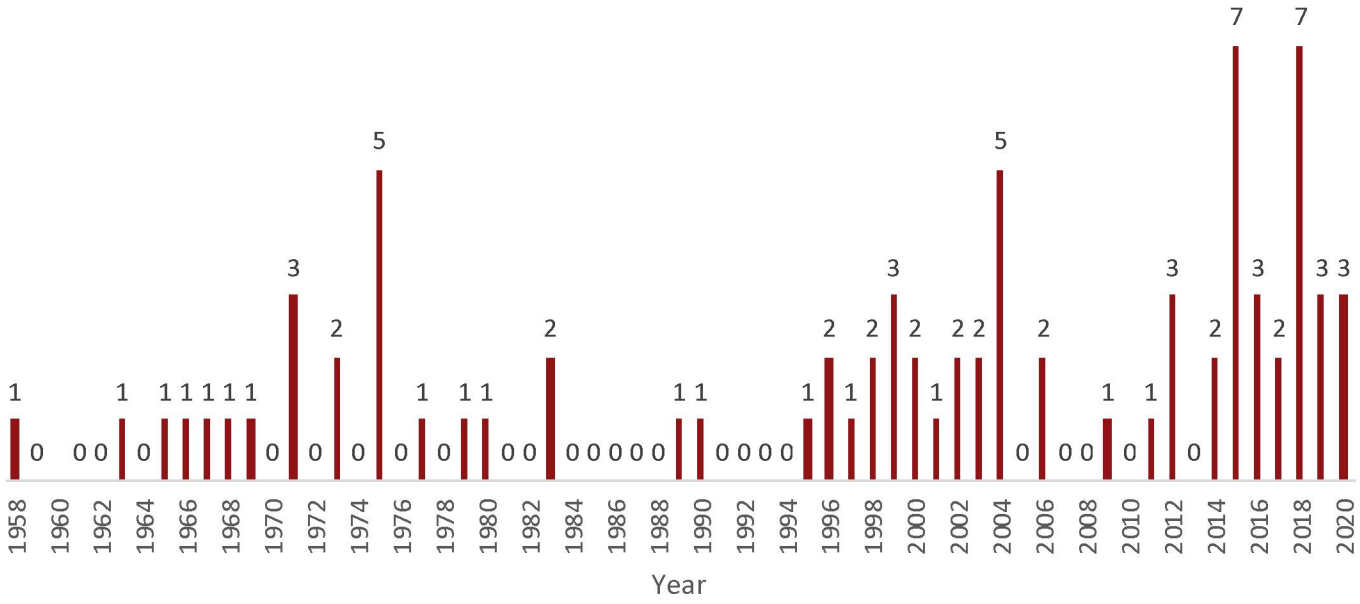
34 Environment and Climate Change Canada (ECCC). (2020. *Criteria for public weather alerts.* Government of Canada. https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/public/criteria-alerts.html#snowFall

35 Data retrieved from Environment and Climate Change Canada (ECCC) (2023). Lethbridge data was used as it is the closest municipality to Pincher Creek for which information was available.

36 McCray, C. D., Paquin, D., Thériault, J. M., & Bresson, É. (2022). A Multi‐Algorithm Analysis of Projected Changes to Freezing Rain Over North America in an Ensemble of Regional Climate Model Simulations. *Journal of Geophysical Research: Atmospheres*, 127(14), https://doi.org/10.1029/2022JD036935

Figure 14:

Historic occurrence of freezing rain events at Lethbridge (1958 - 2022)



8) River and creek flooding causes damage to homes and properties

Description	Heavy rainfall causes widespread flooding of local creeks and rivers, damaging local infrastructure
Climate Driver(s)	Severe storms, more heavy rainfall events
Threshold	Pincher Creek flow rate of about 270 cubic metres per second (m^3/s), about a 1:200 year event
Historic Likelihood Score	**1 (Rare)**
Future Likelihood Score	**2 (Unlikely)**
Potential Consequences	• Flooding of basements, homes and buildings in low-lying areas, and associated impacts on wellbeing and quality of life • Flooding of parks and natural assets • Evacuations / displacement • Reduced water quality from soil erosion and increased sedimentation • Costs to repair and clean up • Overwhelming of water treatment plants and critical infrastructure
Consequence Score	**4 (High)**
Risk Score	**High**

Notes

Climate driver(s)

- Climate projections indicate increased average annual precipitation levels and wet days

Threshold

- The 1995 flood was the flood of record on Pincher Creek with a peak discharge of 271 m^3/s[37]
- Flood map showing the 1:100-year period provided at Figure 15 below

Historic Likelihood

- The 1995 flood on Pincher Creek (271 m^3/s) was estimated to be about a 200-year event (Figure 15) [38]

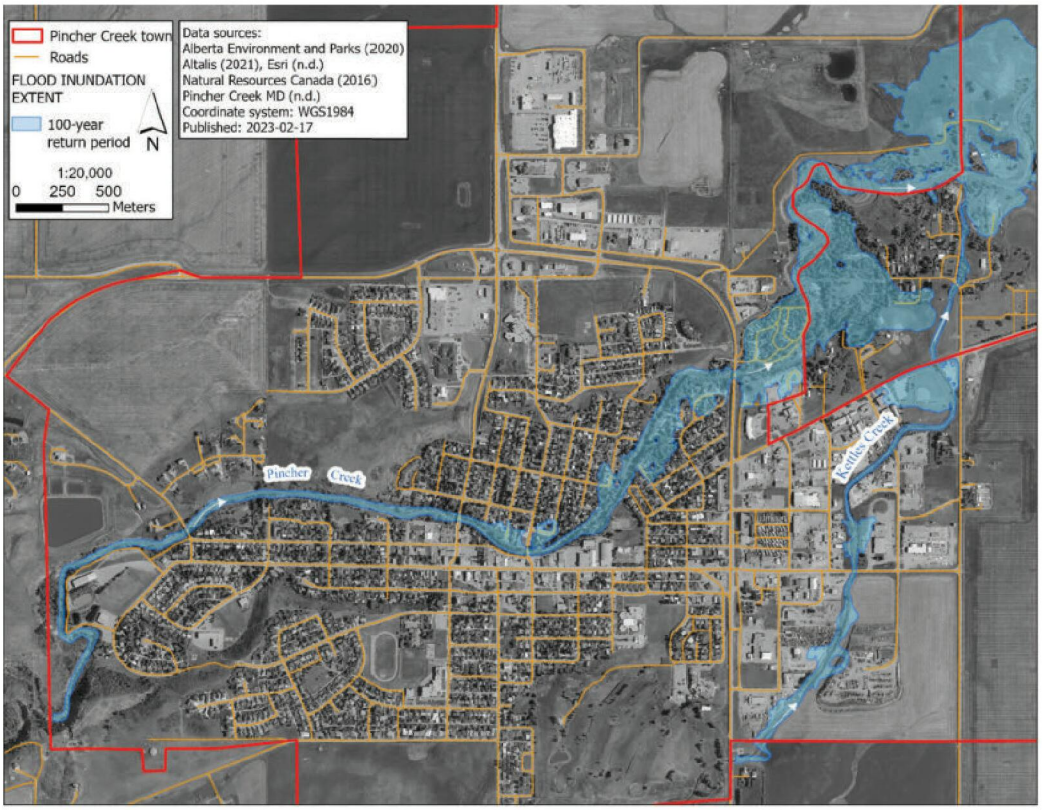
Future Likelihood

- Extreme rainfall and flooding is projected to increase as a result of climate change, and Pincher Creek is projected to have more wet days and extreme rainfall in the future[39]

37 Pincher Creek Flood Hazard Study (2020)
38 Pincher Creek Flood Hazard Study (2020)
39 Data from the Prairie Adaptation Research Collaborative (2023) - Climate Change Projections for Pincher Creek

Figure 15:

Flood map showing 100-year return period



9) Ongoing river and creek flooding

Description	Heavy rainfall causes frequent flooding of local creeks and rivers requiring an ongoing response
Climate Driver(s)	Severe storms, more heavy rainfall events
Threshold	Recurring river and creek flood events with a 1:10-year return period
Historic Likelihood Score	**4 (Likely)**
Future Likelihood Score	**5 (Almost Certain)**
Potential Consequences	• Inundation of some basements and other assets in low-lying areas • Strain on emergency response personnel and resources • Costs to repair and clean up
Consequence Score	**2 (Low)**
Risk Score	**Medium**

Notes

Climate driver(s)

- Climate projections indicate increased average annual precipitation levels and more heavy rainfall (wet days)

Threshold

- Flood map showing the 1:10-year return period on Pincher Creek provided at Figure 16 below

Historic Likelihood

- Event is expected to occur about every 10 years

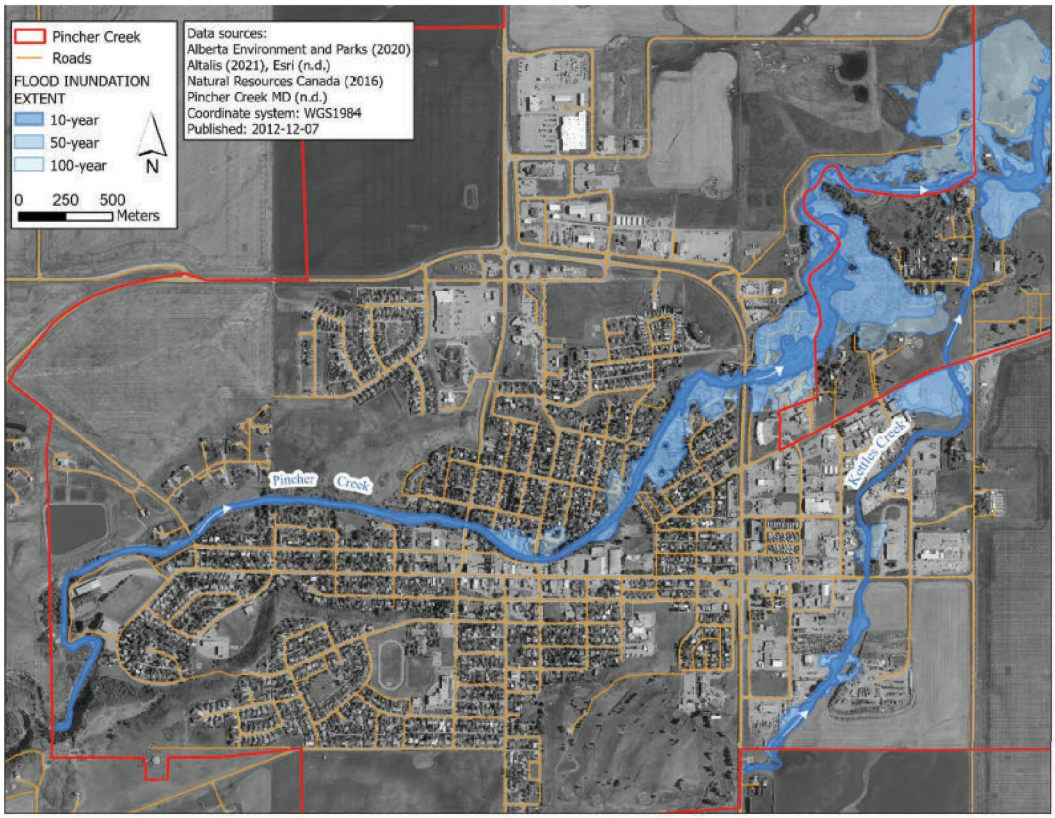
Future Likelihood

- Extreme rainfall and flooding is projected to increase as a result of climate change, and Pincher Creek is projected to have more wet days and extreme rainfall in the future[40]

40 Data from the Prairie Adaptation Research Collaborative (2023) - Climate Change Projections for Pincher Creek

Figure 16:

Flood map showing 10-year return period



10) Dam flooding (overtopping) occurs across the District

Description	Prolonged rainfall causes small dams to overtop
Climate Driver(s)	Severe storms, more heavy rainfall events
Threshold	26 very wet days per year where 10mm of precipitation falls within 24 hours
Historic Likelihood Score	**2 (Unlikely)**
Future Likelihood Score	**3 (Possible)**
Potential Consequences	• Inundation of farms and cropland, disrupting livelihoods and economic activity (especially downstream of dams) • Dam maintenance and repair costs
Consequence Score	**3 (Moderate)**
Risk Score	**Medium**

Notes

Climate driver(s)

- Climate projections indicate increased average annual precipitation levels and wet days

Threshold

- Increased precipitation and wet days may lead to increased stress on, and overtopping of smaller dams across the region

Historic Likelihood

- Likelihood score determined based on historic values from the PARC Climate Projections Report

Future Likelihood

- The future likelihood is expected to increase. The number of very wet days where 10mm of precipitation falls annually is projected to increase from 24 days to 26 days[41]

41 Data from the Prairie Adaptation Research Collaborative (2023) - Climate Change Projections for Pincher Creek

11) Overland flooding of homes and property in urban areas

Description	A heavy rainfall event occurs in Pincher Creek and damages homes and property
Climate Driver(s)	Severe storms, more heavy rainfall events
Threshold	A 1:100-year rainfall event occurs within 24-hours
Historic Likelihood Score	**1 (rare)**
Future Likelihood Score	**2 (unlikely)**
Potential Consequences	• Inundation of homes and buildings (basement flooding especially on the North side of Pincher Creek) • Damage to buildings and infrastructure (slumping on the hills impacts road networks) • Damage to parks, natural assets and other local amenities • Damage and disruption to transportation networks (roads, bridges, etc.) and culverts
Consequence Score	**3 (Moderate)**
Risk Score	**Medium**

Notes

Climate driver(s)

- Climate projections indicate increased average annual precipitation levels and wet days

Threshold

- Stormwater design standards are generally based on the 1:100-year, 24-hour rainfall event

Historic Likelihood

- The 1:100-year 24-hour rainfall event has a 1% annual probability of occurrence, and is associated with 103mm of rainfal[42]

Future Likelihood

- Considering future climate change, the 1:100-year 24-hour rainfall event has an increased annual probability of occurrence, and is associated with 119mm of rainfall (a 20% increase from the historic value)[43]

42 Historic likelihood determined through data from the Computerized Tool for the Development of Intensity-Duration-Frequency (IDF) Curves Under Climate Change – Version 6.0. Available at: https://www.idf-cc-uwo.ca

43 Future likelihood determined through data from the Computerized Tool for the Development of Intensity-Duration-Frequency (IDF) Curves Under Climate Change – Version 6.0, using the time period 2051-2080 and SSP5.85 which is a scenario with an additional radiative forcing of 8.5 W/m3 by the year 2100. This scenario represents the upper boundary of the range of climate change scenarios described in the literature. Available at: https://www.idf-cc-uwo.ca

12) Prolonged drought affecting local farmers, ranchers, wildlife and vegetation

Description	A meteorological drought occurs affecting local farmers, ranchers, wildlife and vegetation
Climate Driver(s)	Hotter temperatures, drier summer conditions
Threshold	The Standardized Precipitation Evapotranspiration Index (SPEI) decreases to 0.59
Historic Likelihood Score	**3 (Possible)**
Future Likelihood Score	**3 (Possible)**
Potential Consequences	• Crop damages and reduced yield from crop harvests, disrupting livelihoods and economic activity (increased food prices, water restrictions, etc.) • Loss of or damage to plants, including sweetgrass and willow populations, affecting wildlife • Reduced water availability on farms and ranches (dugouts, sloughs) leading to operational constraints • Increased water demand
Consequence Score	**4 (High)**
Risk Score	**High**

Notes

Climate driver(s)

- Climate projections indicate more extreme heat, warmer maximum temperatures, and reduced summer precipitation

Threshold

- The Standardized Precipitation Evapotranspiration Index (SPEI) is a water balance index based on the monthly difference between precipitation and potential evapotranspiration[44]

Historic Likelihood

- Likelihood score based on the PARC climate projections report

Future Likelihood

- The SPEI is expected to stay relatively stable under future climate change - decreasing from 0.69 to 0.59 which is classified as "near normal"[45]

44 Data from the Prairie Adaptation Research Collaborative (2023) - Climate Change Projections for Pincher Creek
45 Data from the Prairie Adaptation Research Collaborative (2023) - Climate Change Projections for Pincher Creek

13) Water supply shortage reduces community service levels

Description	A decrease in water levels causes a shortage reducing community access
Climate Driver(s)	Hotter temperatures, drier summer conditions
Threshold	Average annual precipitation in the summer season decreases to 165mm
Historic Likelihood Score	**2 (Unlikely)**
Future Likelihood Score	**3 (Possible)**
Potential Consequences	• Reduced water availability leading to operational constraints and decreased livelihood (e.g., water restrictions) • Impacts to water-based recreational activities (e.g., pools, spray parks, fishing, etc.) • Increased maintenance costs or damage to irrigated parks and fields • Economic impacts especially to water reliant businesses (e.g., carwashes) and farmers
Consequence Score	**4 (High)***
Risk Score	**High**

* Consequence score changed from 3 to 4 through the climate risk evaluation process

Notes

Climate driver(s)

- Climate projections indicate more extreme heat, warmer maximum temperatures, and reduced summer precipitation

Threshold

- Summer precipitation and moisture levels affect water supply and availability

Historic Likelihood

- Likelihood score based on the PARC climate projections report

Future Likelihood

- Summer precipitation is expected to decrease from 176mm to 165mm in a future time period with 3° C of global warming[46]

46 Data from the Prairie Adaptation Research Collaborative (2023) - Climate Change Projections for Pincher Creek

14) Loss of winter recreation

Description	A shorter, warmer winter season reduces opportunities for winter recreation (skating, skiing, sledding, etc.)
Climate Driver(s)	Warmer winters
Threshold	The number of frost days decreases to 134 days per year
Historic Likelihood Score	**3 (Possible)**
Future Likelihood Score	**4 (Likely)**
Potential Consequences	• Reduced quality of life from loss of winter activities and sports • Reduced tourism visitation and expenditures (Castle Mountain gets about 100,000 visits per year) • Economic disruption, particularly from the collapse of the winter skiing industry • Increased strain on indoor recreation facilities
Consequence Score	**3 (Moderate)**
Risk Score	**High**

Notes

Climate driver(s)

- Climate projections indicate less frost days and warmer winter temperatures, which contributes to fewer opportunities for winter recreation

Threshold

- A frost day is a day where temperatures are 0°C or colder. Temperatures above 0°C can lead to reduced winter snowfall and recreational opportunities

Historic Likelihood

- Likelihood score based on the PARC climate projections report

Future Likelihood

- The number of frost days is expected to decrease from 198 days to 134 days under a future time period with 3° C of global warming[47]

47 Data from the Prairie Adaptation Research Collaborative (2023) - Climate Change Projections for Pincher Creek

15) Invasive weed outbreak affecting local ranchers and farmers

Description	An outbreak of invasive weeds affects local ranchers and farmers (e.g., Hawkweed, burdock, hoary cress)
Climate Driver(s)	Changing seasons and ecosystems, hotter temperatures
Threshold	The frost-free season is extended to 231 days
Historic Likelihood Score	**2 (Unlikely)**
Future Likelihood Score	**3 (Possible)**
Potential Consequences	• Diminished crop health and yield • Increased weed management costs • Impacts to food supply for cattle, economic costs and reduced livestock health
Consequence Score	**3 (Moderate)**
Risk Score	**Medium**

Notes

Climate driver(s)

- Climate projections indicate a longer frost-free season and warmer temperatures, which contributes to the growth and survival of pests and diseases

Threshold

- The frost-free season is the approximate length of the growing season during which there are no freezing temperatures. A longer frost-free season may encourage the growth of invasive weeds[48]

Historic Likelihood

- Likelihood score based on the PARC climate projections report

Future Likelihood

- The length of the frost-free season is projected to increase from 167 days to 231 days under a future climate change, with potential increased likelihood of invasive weed outbreaks[49]

48 See: Edmonton Metropolitan Region: Managing Invasive Species and Pests in a Changing Climate
49 Data from the Prairie Adaptation Research Collaborative (2023) - Climate Change Projections for Pincher Creek

16) Outbreak of invasive species or pest affecting local trees and forests

Description	A major outbreak of invasive pests (e.g., mountain pine beetle) affects local trees and forests
Climate Driver(s)	Changing seasons and ecosystems, warmer winters
Threshold	The number of very cold days where temperatures drop to -30°C decreases to 0.3 days
Historic Likelihood Score	**1 (Rare)**
Future Likelihood Score	**4 (Likely)**
Potential Consequences	• Damage to natural infrastructure (local parks and forests) • Reduced visual quality of the landscape • Increased tree management / maintenance costs • Negative impact to native wildlife
Consequence Score	**2 (Low)**
Risk Score	**Medium**

Notes

Climate driver(s)

- Climate projections indicate less frost days and warmer winter temperatures, which may contribute to the growth and survival of some pests and diseases

Threshold

- Cold temperatures help keep invasive species and pest populations in check[50]. Fewer cold days may lead to expansion of invasive species and pest populations

Historic Likelihood

- Likelihood score based on the PARC climate projections report

Future Likelihood

- The number of very cold days is expected to decrease from 3.4 days to 0.3 days per year under climate change[51]. Fewer cold days may lead to better overwintering survival rates for some invasive species and pest populations and increased likelihood of an outbreak

50 See: Edmonton Metropolitan Region: Managing Invasive Species and Pests in a Changing Climate
51 Data from the Prairie Adaptation Research Collaborative (2023) - Climate Change Projections for Pincher Creek

17) Vector-borne disease outbreak with public health risks

Description	A major outbreak of vector-born invasive pests (e.g., Lyme disease)
Climate Driver(s)	Warmer temperatures, longer frost-free season
Threshold	The frost-free season is extended to 231 days
Historic Likelihood Score	**2 (Unlikely)**
Future Likelihood Score	**3 (Possible)**
Potential Consequences	• Risk of mortality, morbidity, especially due new unknown vector-borne diseases that could emerge • Impacts to recreational access and disruption to livelihoods and economic activity (reduced tourism)
Consequence Score	**3 (Moderate)**
Risk Score	**Medium**

Notes

Climate driver(s)

- Climate projections indicate a longer frost-free season and warmer temperatures

Threshold

- The frost-free season is the approximate length of the growing season during which there are no freezing temperatures. A longer frost-free season will contribute to increased risk of some vector-borne diseases including Lyme disease[52]

Historic Likelihood

- Likelihood score based on the PARC climate projections report

Future Likelihood

- The length of the frost-free season is projected to increase from 167 days to 231 days under a future climate change, with potential increased likelihood of vector-borne diseases outbreak such Lyme disease[53]

52 See for example: Health Canada (2019). Increased risk of tick-borne diseases with climate change. Available at: https://www.canada.ca/en/public-health/services/reports-publications/canada-communicable-disease-report-ccdr/monthly-issue/2019-45/issue-4-april-4-2019/article-2-increased-risk-tick-borne-diseases-climate-change.html; or Prairie Climate Centre (2022) Lyme disease under climate change. Available at: https://climateatlas.ca/lyme-disease-under-climate-change

53 Data from the Prairie Adaptation Research Collaborative (2023) - Climate Change Projections for Pincher Creek

18) Changing ecosystems negatively affects wildlife and habitat

Description	Changing ecosystems negatively affects habitat quality and wildlife populations
Climate Driver(s)	Warmer temperatures, longer frost-free season, changing seasons and ecosystems
Threshold	The frost-free season is extended to 231 days
Historic Likelihood Score	**2 (Unlikely)**
Future Likelihood Score	**3 (Possible)**
Potential Consequences	• Changes in wildlife species distribution and composition in the Pincher Creek area • Loss or reduction in habitat for some wildlife species • Impacts to recreation use and quality of life (changes to visual quality of the landscape)
Consequence Score	**3 (Moderate)**
Risk Score	**Medium**

Notes

Climate driver(s)

- Climate projections indicate warmer temperatures and drier conditions overall in the Pincher Creek area. This climate will be more favourable for grassland ecosystem types, and regional ecosystems are projected to shift northward and upslope across Alberta as the climate warms (Figure 17)[54]

Threshold

- The frost-free season is the approximate length of the growing season during which there are no freezing temperatures[55]. A longer frost-free season is altering the composition of ecosystems across Alberta

Historic Likelihood

- Likelihood score based on the PARC climate projections report

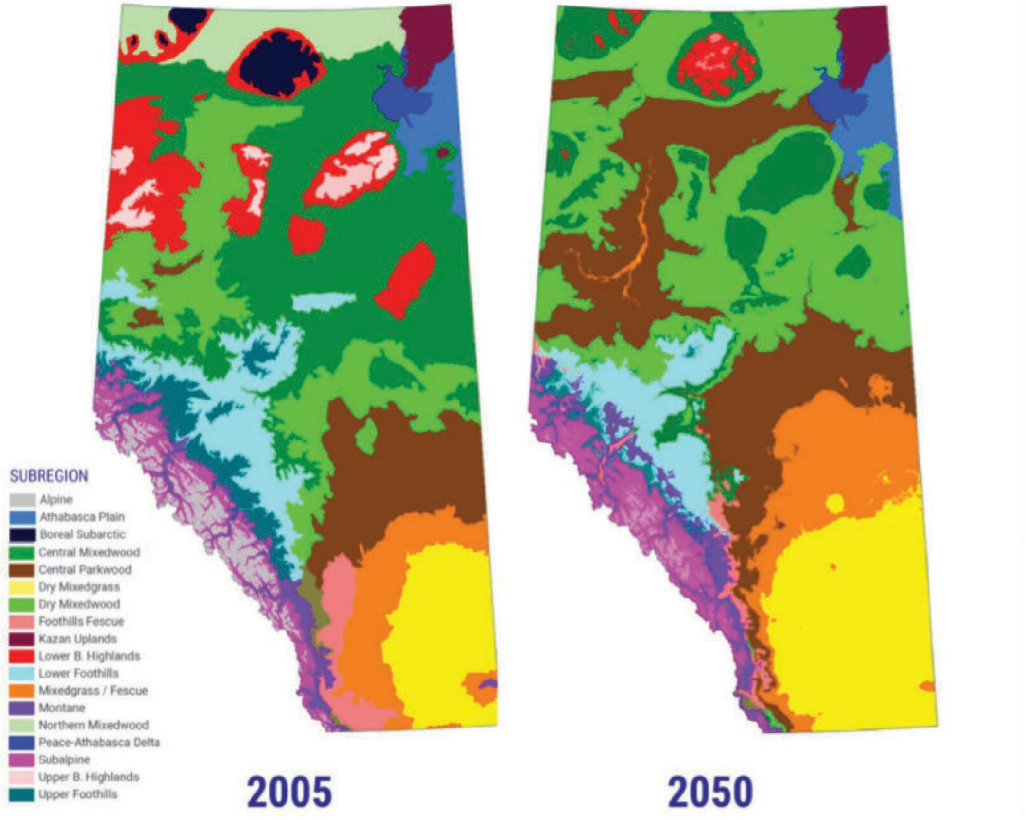
Future Likelihood

- The length of the frost-free season is projected to increase from 167 days to 231 days under a future climate change, with potential to alter local ecosystems and affect wildlife and habitat[56]

54 Schneider, R.R. 2013. Alberta's Natural Subregions under a changing climate: past, present and future. Alberta Biodiversity Monitoring Institute, Edmonton, AB
55 Threshold obtained from the definition of a frost-free season from the Prairie Climate Centre (2022)
56 Data from the Prairie Adaptation Research Collaborative (2023) - Climate Change Projections for Pincher Creek

Figure 17:

Map showing projected changes to Ecoregions in Alberta (2005 – 2050)



Appendix B: Complete Survey Results & Analysis

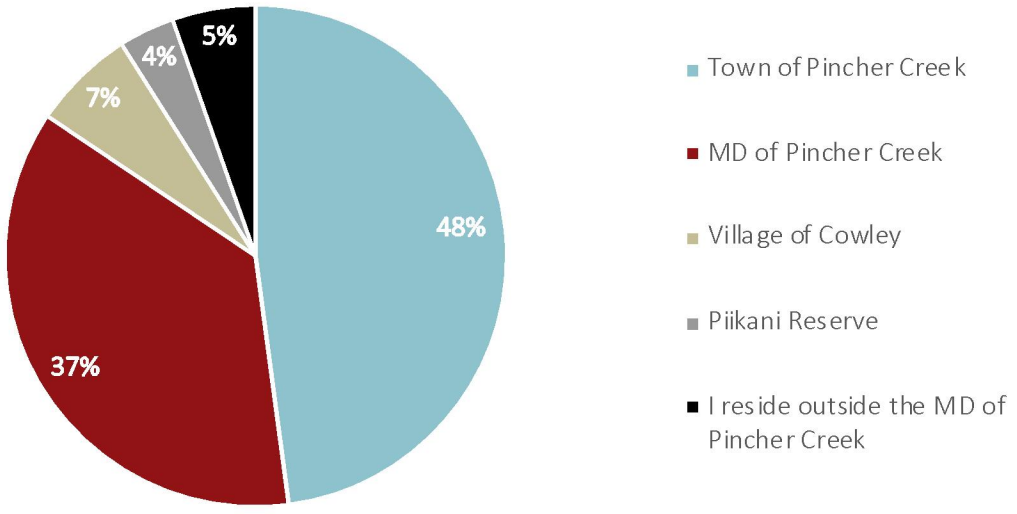
Survey Demographics

Place of residence

Results showed that the vast majority of survey respondents (48%) resided in the Town, followed by the MD (37%) (Figure 18). The remaining places of residence had a relatively equal distribution of survey respondents, ranging from 5-7%.

Figure 18:

Primary place of residence of survey respondents

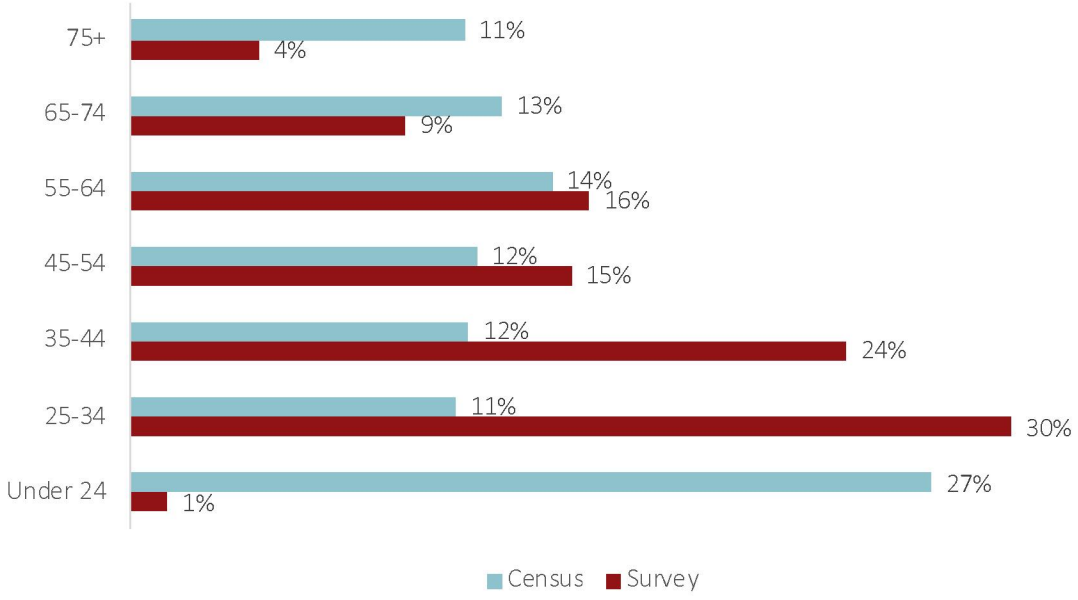


Place of residence

Figure 19 illustrates that most participants are relatively younger (under 35), with the 25-34 age category having the largest representation (30%). This finding is consistent with the overall population, although the largest age category (27%) consists of individuals under 24 years of age.

Figure 19:

Comparison of age categories between survey results and the population

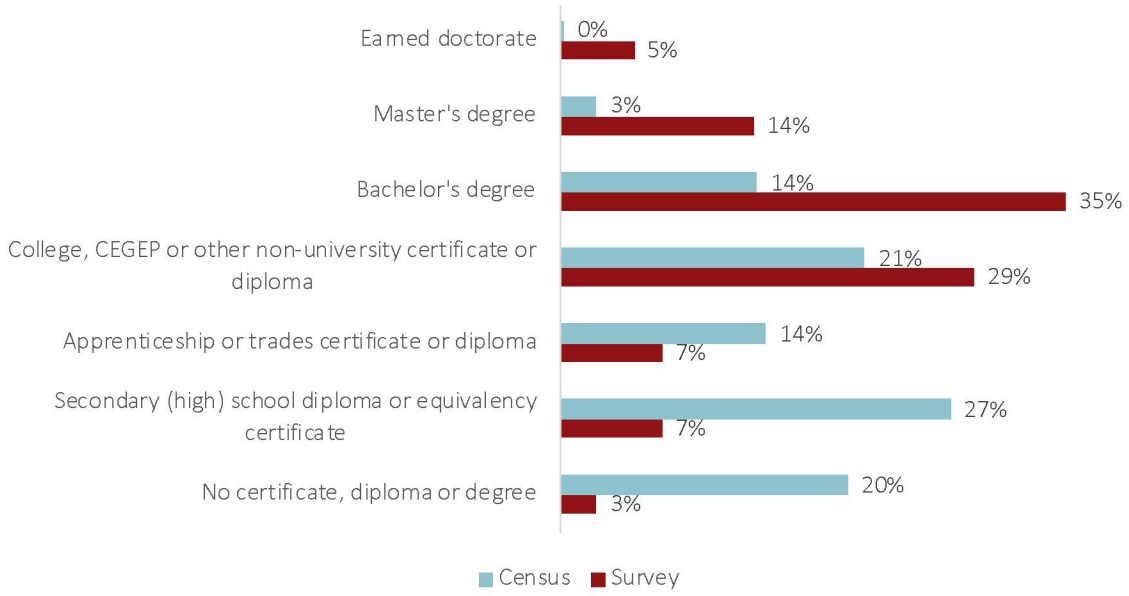


Education

The majority of the surveyed population are shown to have a post-secondary education (90%) as their highest level of educational attainment (Figure 20). This is different from the overall population as only 53% are educated beyond high school.

Figure 20:

Comparison of educational achievement between survey results and the population

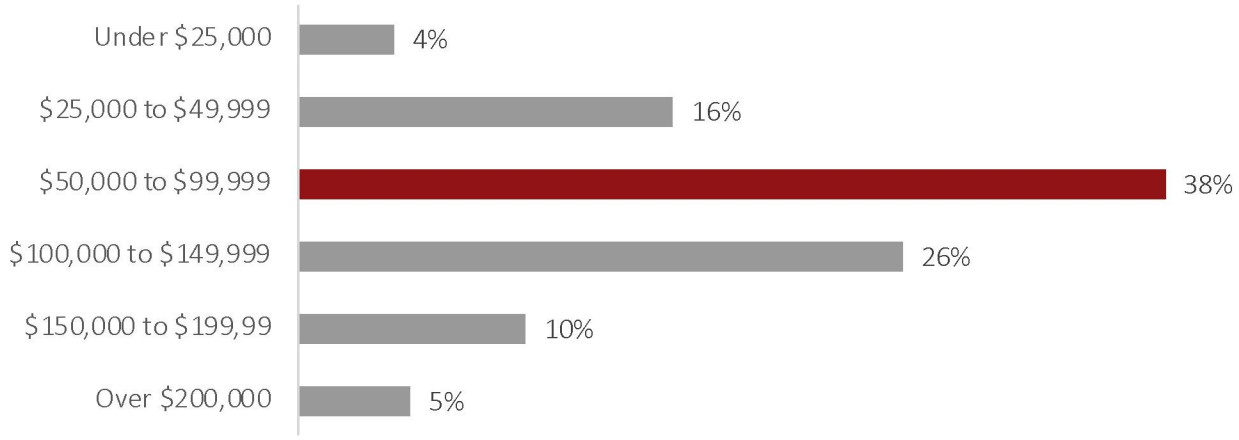


Income

The majority of survey respondents (38%) are shown to have an annual income (before tax) between $50,000 - $99,0000 (Figure 21). The trend follows an even distribution with the largest representation of participants in the median income brackets.

Figure 21:

Income ranges between survey respondents

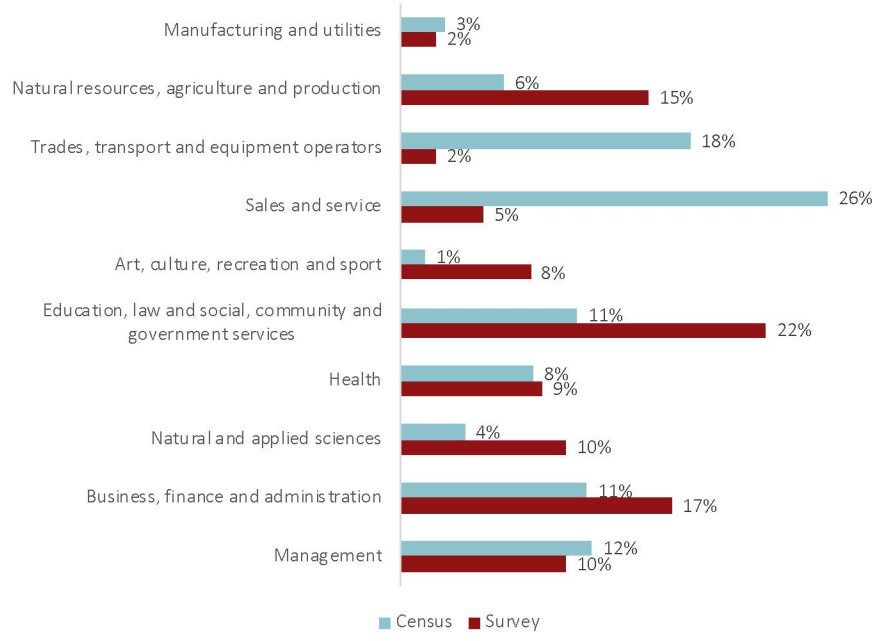


Occupation

The majority of survey respondents (22%) work in the Education, Law, and Social, Community and Government Services sector (Figure 22). This is a contrast to the overall population as 26% of Pincher Creek residents work in Sales and service. Additionally, most survey respondents (63%) do not work in the farming or ranching sector in Pincher Creek.

Figure 22:

Comparison of primary occupation between survey results and the population



Climate Change Impacts

The survey contained five key sections (hotter temperatures, warmer winters, drier summer conditions, severe storms, and changing seasons and ecosystems) which asked participants to identify the degree to which climate changes would impact the community. For each section, respondents were asked to rate the degree to which each impact would affect the community, ranging from 'no effect', to 'minor', 'moderate', or 'major' effect.

Importantly, the survey also asked participants about what they thought the most significant climate change-related impacts were, and how the community can increase resilience. Survey results are presented below for each survey section, followed by an overall summary of results.

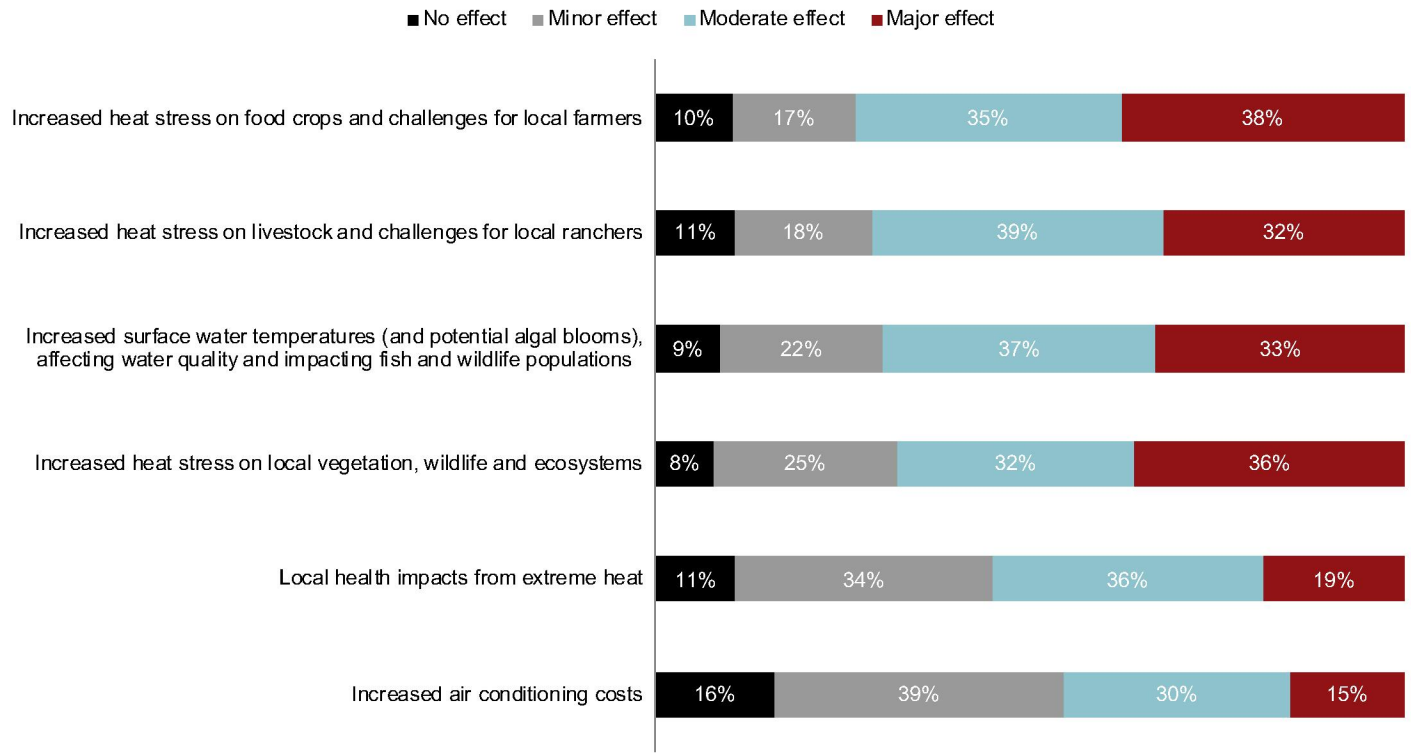
Hotter Temperatures

Figure 23 shows how survey respondents perceived the potential impacts of hotter temperatures in Pincher Creek. Increased heat stress on food crops and challenges for local farmers was the most concerning impact, with 73% of respondents either moderately or majorly concerned. Increased heat stress on livestock, increased surface water temperatures (and algal blooms), and increased heat stress on local vegetation, wildlife, and ecosystems were also relatively concerning impacts as 70% or more respondents indicated them to have a moderate or major effect on the community.

In contrast, increased air conditioning costs and local impacts from extreme heat (only 15% and 19% rated 'major effect', respectively) were the least concerning climate impacts, with over 45% of participants rating them to have little to no effect on Pincher Creek.

Figure 23:

Community perceptions of the effects of hotter temperatures on Pincher Creek

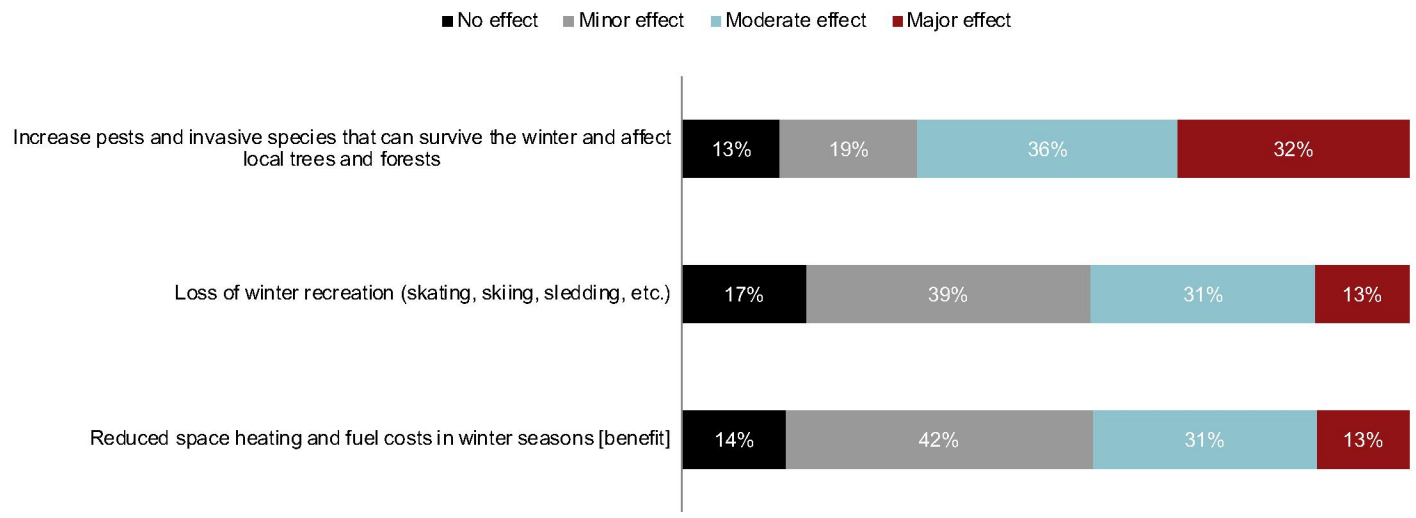


Warmer Winters

Figure 24 shows community perceptions of the potential impacts of extreme weather in Pincher Creek. Increased pests and invasive species that could survive the winter and affect local trees and forests received the greatest concern with almost 70% of respondents rating it to have a moderate or major impact on the community. Loss of winter recreation and reduced space heating costs were rated lower, with only 44% of respondents indicating both impacts to have a moderate or major effect.

Figure 24:

Community perceptions of the effects of warmer winters in Pincher Creek

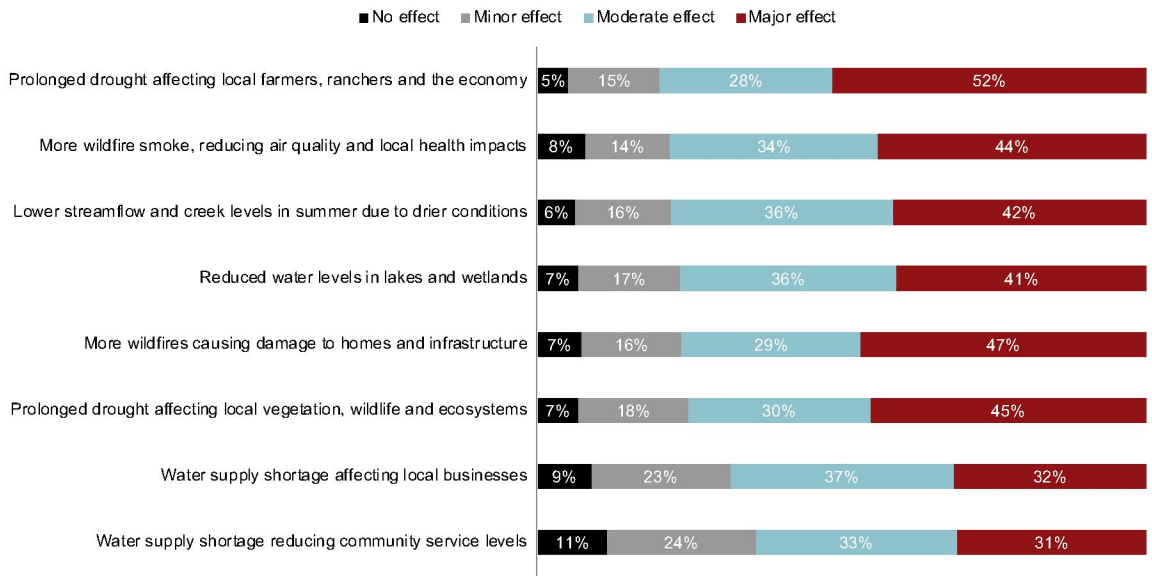


Drier Summer Conditions

Figure 25 shows community perceptions of impacts relating to drier summers on the community. Prolonged drought affecting farmers, ranchers, and the economy received the greatest concern, as more than half of participants rated the impact to have a major effect on Pincher Creek (80% of participants rated moderate or major impact). Wildfire smoke, lower streamflow, reduced water levels, wildfires, and prolonged drought affecting local vegetation, wildlife , and ecosystems were also concerning impacts, as 75% or more participants rated them to have a moderate or major effect on the community. Impacts relating to water shortages received slightly less concern with less than 70% of participants rating them to have a moderate or major effect.

Figure 25:

Community perceptions of the effects of drier summer conditions in Pincher Creek

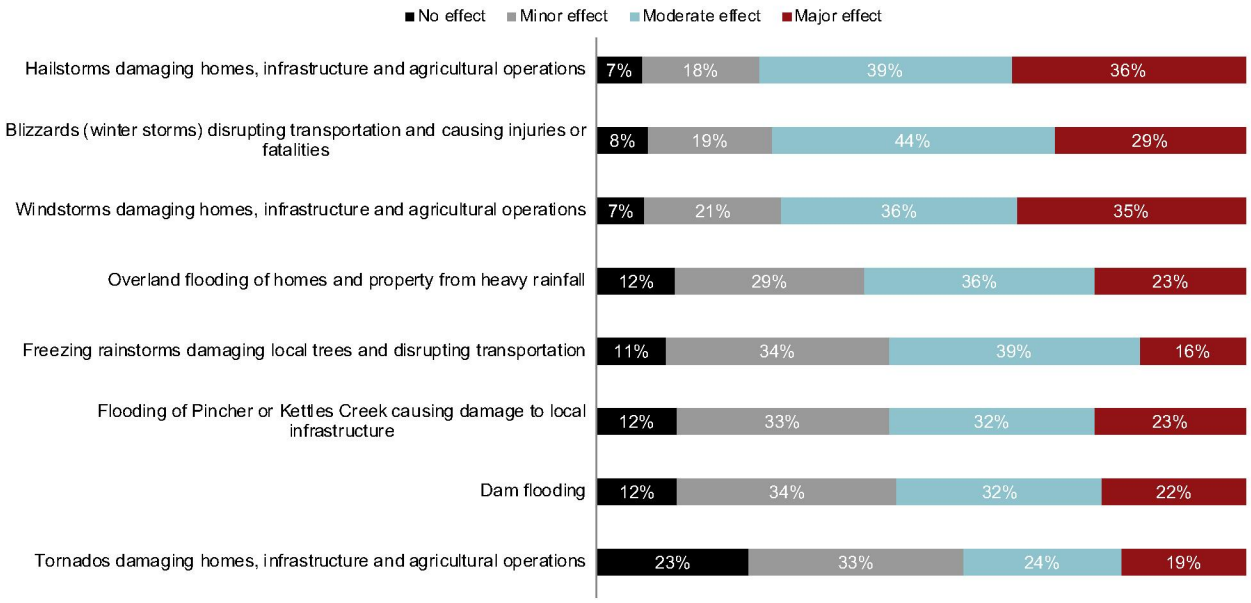


Severe Storms

Figure 26 shows community perceptions of impacts relating to severe storms on Pincher Creek. Hailstorms damaging homes, infrastructure, and agricultural operations received the most concern (75% of participants rated moderate or major effect), with blizzards and windstorms following closely behind (73% and 72% rated moderate or major effect, respectively). Freezing rain and flooding related impacts were slightly less concerning as less than 60% of participants rated these impacts to have a moderate or major effect on the community. The least concerning impact was tornadoes damaging homes, infrastructure, and agricultural operations (56% of participants rated the impact to have little to no effect on the community).

Figure 26:

Community perceptions of the effects of severe storms in Pincher Creek

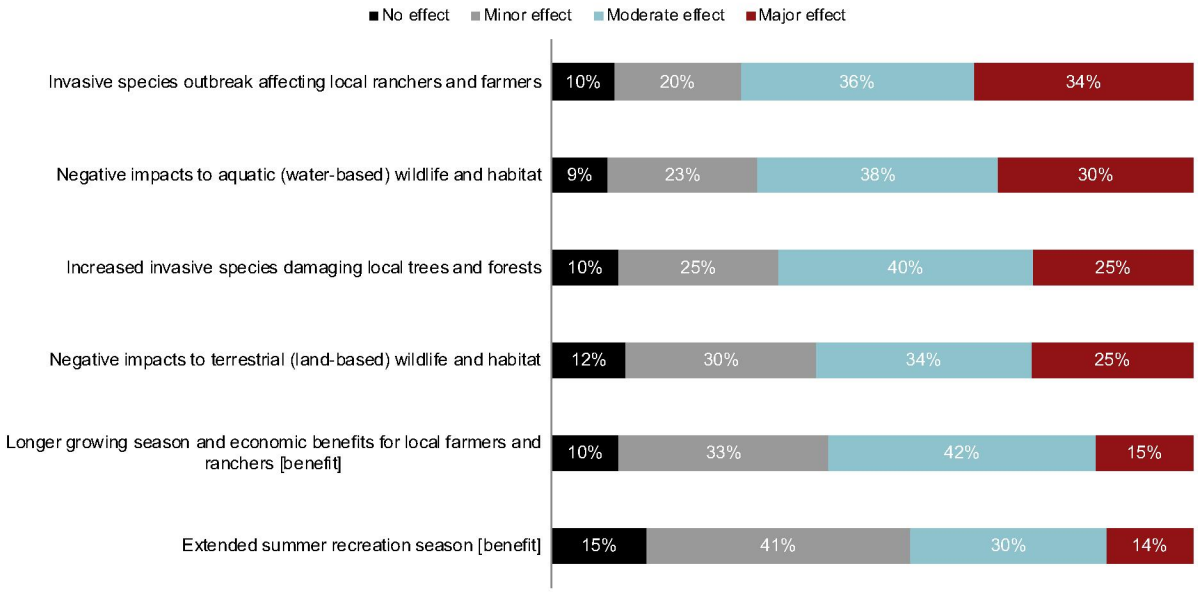


Changing Seasons and Ecosystems

Figure 27 outlines community perceptions of the potential impacts from changing seasons and ecosystems in Pincher Creek. Invasive species outbreak affecting local ranchers and farmers was the most concerning impact with 34% of participants indicating a 'major' effect, and 36% indicating a 'moderate' effect on the community. Negative impacts to aquatic wildlife and habitat, invasive species damaging local trees and forests, negative impacts to terrestrial wildlife, and a longer growing season were also identified as important impacts with more than half of participants identifying them as having either a moderate or major effect. An extended summer recreation season was the least concerning impact to participants, with 56% rating this to have little to no effect on the community.

Figure 27:

Community perceptions of the effects of changing seasons and ecosystems in Pincher Creek

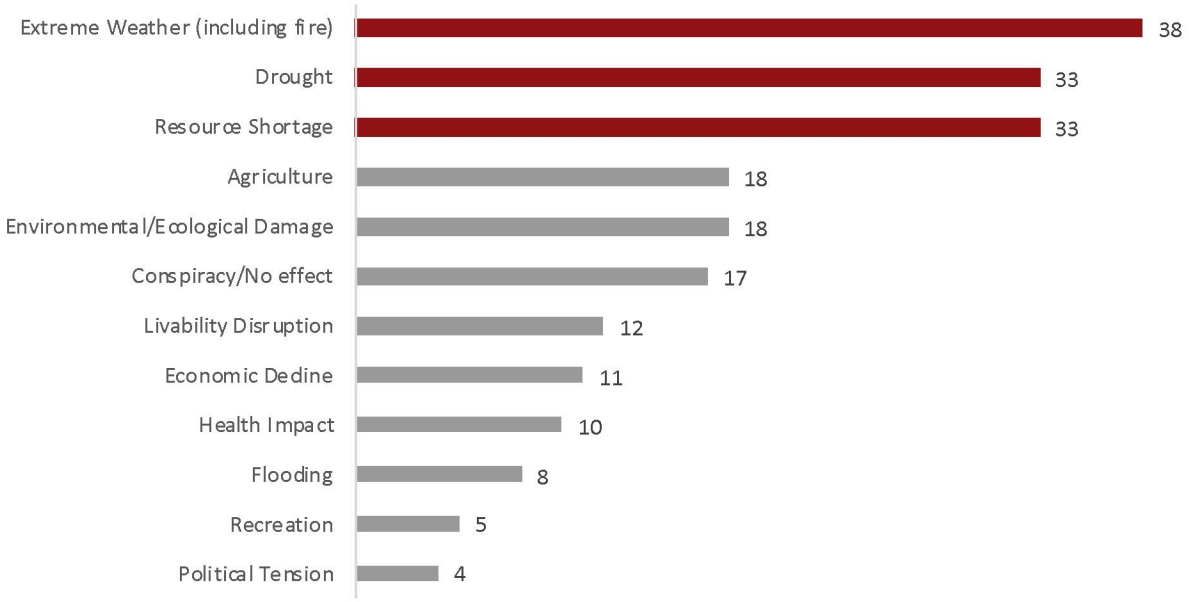


Climate Impact Summary

The survey also asked respondents to identify what they perceived to be the most significant impacts of a changing climate on Pincher Creek. 207 responses were recorded with extreme weather events, resource shortages, and droughts being the most concerning to participants. The complete results are shown in Figure 28 below.

Figure 28:

Open-ended response results for the most significant impacts in Pincher Creek



Climate Change Impacts and Demographics

Age and Climate Impacts

Table 6 compares how different age groups prioritized climate impacts in Pincher Creek. For this analysis, participants were separated into a 'younger population' (under 35 years of age) and an 'older population' (35+). Overall, the younger population were shown to be more concerned about flooding related impacts, including overland flooding from heavy rainfall, creek flooding, and dam flooding. Local health impacts from extreme heat, and freezing rainstorms were also other impacts of concern for this age category. In contrast, older populations were more concerned about reduced water levels, increased heat stress on crops for local farmers and ranchers, and increased air conditioning costs.

Table 6 — Perceptions of climate impacts in Pincher Creek between younger and older populations[57]

Impact	Overall 'Moderate' or 'Major' responses	Younger population ratings	Older population ratings
Prolonged drought affecting local farmers, ranchers and the economy	80%	78%	84%
More wildfire smoke, reducing air quality and local health impacts	78%	80%	81%
Lower streamflow and creek levels in summer	78%	78%	82%
Reduced water levels in lakes and wetlands	77%	70%	83%
More wildfires causing damage to homes and infrastructure	76%	84%	77%
Prolonged drought affecting local vegetation, wildlife and ecosystems	75%	80%	79%
Hailstorms damaging homes and infrastructure	75%	76%	80%
Increased heat stress on food crops and challenges for local farmers	73%	68%	80%
Blizzards disrupting transportation and causing injuries	73%	74%	74%
Windstorms damaging homes and infrastructure	72%	76%	74%

57 Red coloured cells indicate differences of 10% or more between younger and older populations

Table 6 — Perceptions of climate impacts in Pincher Creek between younger and older populations (Continued)

Impact	Overall 'Moderate' or 'Major' responses	Younger population ratings	Older population ratings
Increased heat stress on livestock and challenges for local ranchers	71%	70%	78%
Invasive species outbreak affecting local ranchers and farmers	71%	72%	73%
Increased surface water temperatures (and potential algal blooms)	70%	70%	76%
Water supply shortage affecting local businesses	68%	67%	74%
Negative impacts to aquatic (water-based) wildlife and habitat	68%	68%	69%
Increased heat stress on local vegetation, wildlife and ecosystems	68%	64%	73%
Increase pests and invasive species that can survive the winter and affect local trees and forests	68%	76%	72%
Increased invasive species damaging local trees and forests	65%	68%	66%
Water supply shortage reducing community service levels	64%	65%	67%
Overland flooding of homes and property from heavy rainfall	59%	72%	56%
Negative impacts to terrestrial (land-based) wildlife and habitat	59%	59%	60%
Longer growing season for local farmers and ranchers [benefit]	57%	60%	56%
Local health impacts from extreme heat	55%	68%	56%
Freezing rainstorms damaging local trees and disrupting transportation	55%	64%	53%
Creek Flooding causing damage to local infrastructure	55%	69%	50%
Dam flooding	54%	61%	51%
Increased air conditioning costs	45%	40%	52%
Extended summer recreation season [benefit]	44%	46%	44%
Loss of winter recreation (skating, skiing, sledding, etc.)	44%	46%	45%
Reduced space heating and fuel costs in winter seasons [benefit]	44%	42%	45%
Tornados damaging homes and infrastructure	44%	43%	44%

Primary Place of Residence and Climate Impacts

Table 7 compares how respondents from the town and MD prioritized climate impacts in Pincher Creek. Results indicated that respondents from the Town were relatively more concerned about local health impacts from extreme heat and loss of winter recreation. On the other hand, respondents from the MD indicated that reduced water levels, negative impacts to aquatic wildlife, and increased invasive species damaging local trees and forests to be the most concerning impacts.

Table 7 — Perceptions of climate impacts in Pincher Creek between the town and MD[58]

Impact	Overall 'Moderate' or 'Major' responses	Younger population ratings	Older population ratings
Prolonged drought affecting local farmers, ranchers and the economy	80%	77%	85%
More wildfire smoke, reducing air quality and local health impacts	78%	78%	79%
Lower streamflow and creek levels in summer	78%	78%	80%
Reduced water levels in lakes and wetlands	77%	73%	84%
More wildfires causing damage to homes and infrastructure	76%	77%	80%
Prolonged drought affecting local vegetation, wildlife and ecosystems	75%	77%	77%
Hailstorms damaging homes and infrastructure	75%	77%	83%
Increased heat stress on food crops and challenges for local farmers	73%	73%	82%
Blizzards disrupting transportation and causing injuries	73%	73%	74%
Windstorms damaging homes and infrastructure	72%	70%	74%
Increased heat stress on livestock and challenges for local ranchers	71%	73%	77%
Invasive species outbreak affecting local ranchers and farmers	71%	71%	74%
Increased surface water temperatures (and potential algal blooms)	70%	69%	77%
Water supply shortage affecting local businesses	68%	73%	66%
Negative impacts to aquatic (water-based) wildlife and habitat	68%	63%	75%

58 Red coloured cells indicate differences of 10% or more between Town and MD residents

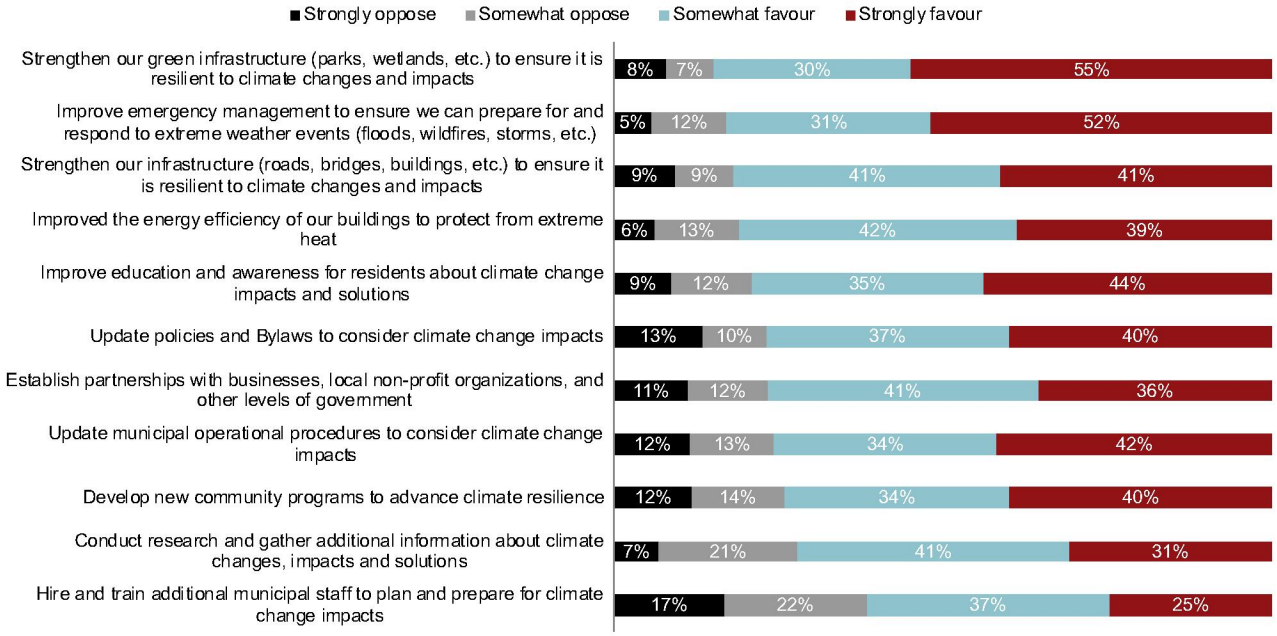
Impact	Overall 'Moderate' or 'Major' responses	Younger population ratings	Older population ratings
Increased heat stress on local vegetation, wildlife and ecosystems	68%	71%	70%
Increase pests and invasive species that can survive the winter and affect local trees and forests	68%	71%	72%
Increased invasive species damaging local trees and forests	65%	60%	70%
Water supply shortage reducing community service levels	64%	67%	61%
Overland flooding of homes and property from heavy rainfall	59%	59%	59%
Negative impacts to terrestrial (land-based) wildlife and habitat	59%	56%	59%
Longer growing season for local farmers and ranchers [benefit]	57%	56%	56%
Local health impacts from extreme heat	55%	64%	45%
Freezing rainstorms damaging local trees and disrupting transportation	55%	59%	52%
Creek Flooding causing damage to local infrastructure	55%	54%	56%
Dam flooding	54%	53%	49%
Increased air conditioning costs	45%	46%	44%
Extended summer recreation season [benefit]	44%	41%	44%
Loss of winter recreation (skating, skiing, sledding, etc.)	44%	48%	43%
Reduced space heating and fuel costs in winter seasons [benefit]	44%	46%	34%
Tornados damaging homes and infrastructure	44%	41%	43%

Climate Resilience Actions

The survey also asked participants to rate their level of support for a variety of local actions that could be implemented to increase community resilience to climate change, and to take advantage of potential climate change benefits (Figure 29). Strengthening green infrastructure (parks, wetlands, etc.) and improving emergency management to respond to extreme weather events were the most popular options, with more than half of participants strongly favoring both actions. Overall, the majority of participants (77% rated 'somewhat favor' or 'strongly favor') showed support to enhance climate resilience in Pincher Creek.

Figure 29:

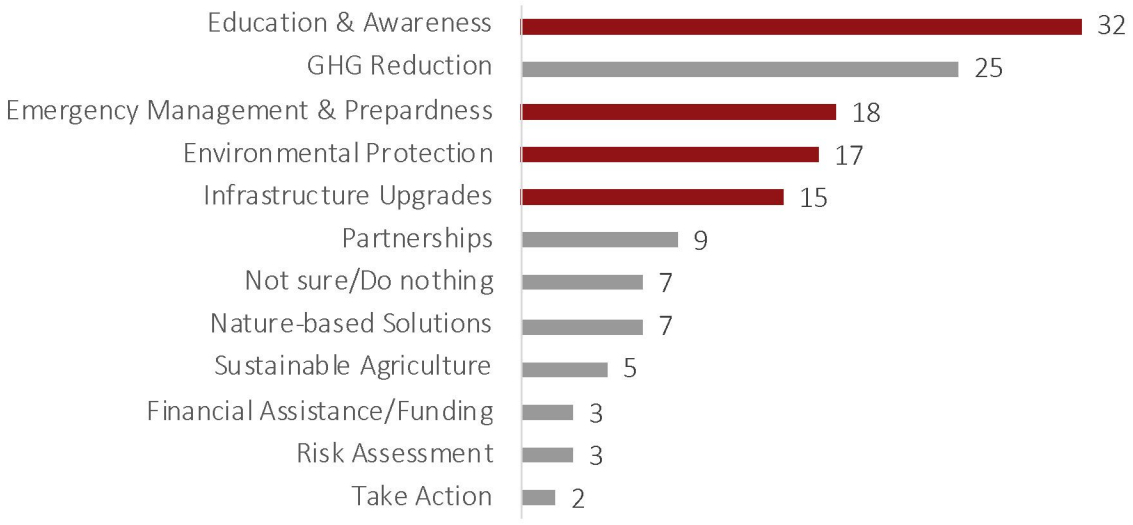
Level of support for climate resilience actions in Pincher Creek



Additionally, the survey also asked participants to write down the most important action they thought Pincher Creek could take to increase resilience across the community. A total of 143 responses were recorded and categorized into a variety of themes as shown in Figure 30 below. Overall, the most popular suggestions included enhancing education and awareness, emergency management and preparedness, environmental protection, and upgrading infrastructure. Actions pertaining to greenhouse gas (GHG) reduction are not included as they are focused on climate change mitigation rather than adaptation.

Figure 30:

Open ended response results for climate resilience actions



Appendix C: Prioritizing Identified Adaptation Actions

Due to human resource and financial constraints, well as competing priorities, it is unlikely that the MD and Town of Pincher Creek will be able to implement all identified adaptation actions. Consequently, it is necessary to evaluate and prioritize identified actions to determine those that are expected to perform best with respect to key decision criteria. A multi-criteria, cost-benefit analysis of each action was performed to enable the rank-ordering of actions both within each theme and across all themes. The decision criteria and calculations are explained below:

- Benefit-cost ratio = weighted average benefits / weighted average costs
- Weighted average benefits = [Effectiveness score x 3 + Co-benefit score x 1 + Equity score x 1 + Flexibility score x 1] / 4
- Weighted average costs = [Total cost score x 2 + Negative side-effects score x 1 + Feasibility score x 1] / 3

The total costs criterion and the effectiveness criterion have been assigned weights of, respectively, 2 and 3.

On the cost side, in addition to total costs (i.e., any required capital expenditures and ongoing annual expenses), the potential for negative side-effects—for example, increasing greenhouse gas emissions—is captured. Feasibility considers whether implementation is possible, given technological, legal and/or economic constraints. Acceptability captures whether the public and elected officials would accept and implement the action.

On the benefit side, the effectiveness of the action in achieving the stated adaptation goals is clearly important. But it is also important to capture equity and whether the action helps under-served and marginalized groups in the region. To help manage uncertainty about future levels of climate change, a higher priority should be given to actions that offer greater flexibility to be modified or scaled-up or down over time in response to new information. Finally, the potential for the action to generate co-benefits for the region in addition to reducing risk is captured.

The performance of each identified adaptation action with respect to each decision criterion was first scored by the consulting team using the 5-point scale shown in Table 8, then verified with the Pincher Creek project team and other stakeholders. The results are summarized in Table 9 through Table 13 below.

59 The total cost score is calculated as the sum of the identified investment cost and annual operating cost (times 10), normalized to fit the 1-5 scale.

Table 8 — Scoring rubric for evaluating adaptation actions

	Criteria	Very Low (1)	Low (2)	Medium (3)	High (4)	Very High (5)
Costs	**Investment costs**	<$10,000 [~$5,000]	$10,000–$50,000 [~$30,000]	$50,000–$100,000 [~$75,000]	$100,000–$500,000 [~$300,000]	>$500,000 [~$1,000,000]
Costs	**Annual operating costs**	<$10,000 [~$1,000]	$10,000–$50,000 [~$30,000]	$50,000–$100,000 [~$75,000]	$100,000–$200,000 [~$150,000]	>$200,000 [~$400,000]
Costs	**Negative Side-effects**	Little to no unintentional negative impacts and consequences		Unintentional negative impacts with moderate consequences		Unintentional negative impacts with significant consequences
Costs	**Feasibility**	Little to no technological knowledge, staff capacity, or public acceptance barriers prevent the action from being implemented successfully		Moderate technological knowledge, staff capacity, or public acceptance barriers prevent the action from being implemented successfully		Significant technological knowledge, staff capacity, or public acceptance barriers prevent the action from being implemented successfully
Benefits	**Effectiveness**	Minor reduction in priority climate risk		Moderate reduction in priority climate risk		Significant reduction in priority climate risk
Benefits	**Co-benefits**	Little to no cross-over and positive contribution to other City economic, social or environmental objectives, including greenhouse gas reduction		Modest cross-over and positive contribution to other City economic, social or environmental objectives, including greenhouse gas reduction		Significant cross-over and positive contribution to other City economic, social or environmental objectives, including greenhouse gas reduction
Benefits	**Equity**	Action benefits a narrow segment of the population or business community AND does not help disadvantaged and underserved segments of the population. [That is, the action only helps a small group of middle- to upper-income households]		Action benefits a wide segment of the population or business community OR helps disadvantaged and underserved segments of the population. [That is, the action either offers widespread benefits OR alleviates inequalities in the community]		Action benefits a wide segment of the population or business community AND helps disadvantaged and underserved segments of the population. [That is, everyone is made better-off, including underserved groups]
Benefits	**Flexibility**	Action and implementation strategy has little to no ability to be adjusted (brought forward or delayed, or scaled up or down)		Action and implementation strategy can be partially adjusted, but at moderate additional costs		Action and implementation strategy can be fully adjusted at minimal additional costs

Note: Investment and operating costs show the cost range, as well as an estimated average cost [in brackets]

Table 9 — Evaluation of Adaptation Actions: Health and Wellbeing

ID	Action	Weighted average benefits	Weighted average costs	Weighted benefit-cost ratio (BCR)	Rank of BCR across all adaptation actions
HW1	Support community gardening	4.25	1.38	3.09	9
HW2	Install outdoor water features	4.00	1.46	2.75	15
HW3	Upgrade the spray park	4.50	1.85	2.43	18
HW4	Purchase temporary shading structures	4.50	1.89	2.38	19
HW5	Install permanent shade structures	5.00	2.36	2.12	25
HW6	Adjust recreation programming during extreme heat and smoke events	3.75	1.84	2.03	26

Table 10 — Evaluation of Adaptation Actions: Disaster Resilience Theme

ID	Action	Weighted average benefits	Weighted average costs	Weighted benefit-cost ratio (BCR)	Rank of BCR across all adaptation actions
DR1	Update Land Use Bylaws to enhance flood protection	5.50	1.38	3.99	2
DR2	Develop a heat alert response plan	5.50	1.46	3.78	3
DR3	Develop a smoke alert response plan	5.50	1.46	3.78	3
DR4	Develop a homeowner climate change vulnerability assessment toolkit	4.75	1.46	3.26	7
DR5	Develop a Drought Response Plan that considers climate change	4.00	1.38	2.90	12
DR6	Enhance emergency preparedness education and communication	5.25	1.89	2.78	14
DR7	Conduct research to understand future wind patterns	5.50	2.12	2.59	16
DR8	Develop a plan for enhanced fire department response capabilities	5.25	2.04	2.57	17
DR9	Update development legislation with FireSmart revisions	4.50	2.04	2.20	24
DR10	Conduct forest fuel treatments and vegetation management	5.00	3.03	1.65	28
DR11	Retrofit designated emergency reception centres	6.25	3.93	1.59	30

Table 11 — Evaluation of Adaptation Actions: Infrastructure

ID	Action	Weighted average benefits	Weighted average costs	Weighted benefit-cost ratio (BCR)	Rank of BCR across all adaptation actions
IF 1	Develop a climate resilient procurement policy	5.75	1.33	4.31	1
IF 2	Apply research on climate resilient building materials and infrastructure appropriate for the Pincher Creek region	4.00	1.38	2.90	12
IF 3	Upgrade municipal buildings to provide better protection from extreme heat	6.00	4.26	1.41	30
IF 4	Upgrade and enhance flood mitigation infrastructure	6.25	4.93	1.27	33
IF 5	Install a solar covering on the Town water reservoir	4.25	3.73	1.14	34

Table 12 — Evaluation of Adaptation Actions: Parks and Environment

ID	Action	Weighted average benefits	Weighted average costs	Weighted benefit-cost ratio (BCR)	Rank of BCR across all adaptation actions
PE 1	Develop a Natural Asset Inventory and Management Plan	5.50	1.46	3.78	3
PE 2	Develop a water sharing agreement between that Town and MD	4.75	1.33	3.56	6
PE 3	Develop a Source Water Protection Plan	4.75	1.46	3.26	7
PE 4	Develop a Water Conservation, Efficiency and Productivity Plan	4.25	1.46	2.92	11
PE 5	Update the Water Utility Bylaw with an improved water pricing structure	4.75	2.00	2.38	20
PE 6	Enhance support for watershed planning and protection	4.25	1.84	2.31	21
PE 7	Develop a tree planting program	4.00	2.22	1.80	27
PE 8	Enhance irrigation infrastructure	3.75	2.70	1.39	31
PE 9	Enhance environmental monitoring	3.75	4.67	0.80	35

Table 13 — Evaluation of Adaptation Actions: Economy

ID	Action	Weighted average benefits	Weighted average costs	Weighted benefit-cost ratio (BCR)	Rank of BCR across all adaptation actions
EC 1	Provide climate resilience education materials to farmers and ranchers	4.25	1.38	3.09	9
EC 2	Develop a Tourism & Recreation Master Plan	4.75	2.12	2.24	22
EC 3	Improve accessibility to outdoor recreation	5.25	2.36	2.22	23
EC 4	Enhance marketing of the Pincher Creek region	3.00	2.18	1.38	32

All One Sky
FOUNDATION

ALL ONE SKY FOUNDATION is a not-for-profit, charitable organization established to help vulnerable populations at the crossroads of energy and climate change. We do this through education, research and community-led programs, focusing our efforts on adaptation to climate change and energy poverty. Our vision is a society in which ALL people can afford the energy they require to live in warm, comfortable homes, in communities that are resilient and adaptive to a changing climate.

Contact: Jeff Zukiwsky
Email: jeff@allonesky.ca
Phone: 1.250.430.1551
809 49th Ave SW, PO Box 19012, Calgary, AB., T2S 1A0, Canada

www.allonesky.ca

AGENDA ITEM NO: 5.1

Town of Pincher Creek

REQUEST FOR DECISION

Council or Committee of the Whole

SUBJECT: Municipal Energy Management Year 2 presentation	
PRESENTED BY: Alexa Levair, Director of Operations	**DATE OF MEETING:** 8/2/2023

PURPOSE:

To present the results of the 2-year Municipal Energy Management program in partnership with the Municipal District of Pincher Creek funded in part by the Municipal Climate Change Action Center.

RECOMMENDATION:

That Council for the Town of Pincher Creek accept the Municipal Energy Management Year 2 presentation as information

BACKGROUND/HISTORY:

The Municipal Energy Project Lead position was created in May 2021 as part of the Municipal Climate Change Action Center (MCCAC) Municipal Energy Manager program that funded 80% of salary costs. The remaining 20% was covered by the Town of Pincher Creek and the M.D. of Pincher Creek No. 9 as a joint initiative. At the end of the 2-year project term, both Council's agreed to extend the position by an additional year (ending in May 2024) fully at the municipalities' expense.

Goals set out at the beginning of the program included:
- a 5% reduction in emissions from existing infrastructure
- development of a 2-year energy management plan
- adoption of Energy Plans and Policies

The Municipal Energy Project Lead has analyzed the buildings and fleets within both the Town and M.D. to determine projects to save energy costs, reduce emissions, and increase operational efficiency. Highlights include:
- A total of 94 energy conservation measures have been implemented
- $380,000 in grant funding received
- $543,000 in in project costs with only $163,000 in funding put forward by the municipalities
- Energy models and utility bill analyses have been conducted for measurement/tracking and verification purposes
- Achieved annual savings of $79,514 and 318 tonnes of green house gas emissions
- A climate resilience and adaptation plan has also been completed to support planning initiatives with the Town and M.D.

- Energy newsletters have been released to support and engage community members in energy education
- Energy lunch and learns were conducted for both Town and M.D. staff

Additional information can be found in the attached presentation.

Overall, administration feels that the program has elevated the Town and M.D.'s awareness of energy usage, reduced greenhouse gas emissions, and that both municipalities have benefited financially from cost savings resulting from increased energy efficiency.

ALTERNATIVES:
That Council for the Town of Pincher Creek requests additional information from administration.

IMPLICATIONS/SUPPORT OF PAST STUDIES OR PLANS:
N/A

FINANCIAL IMPLICATIONS:
As this is a summary report, no financial implications are directly related to the report, however, it is worth highlighting that through energy initiatives, the Town has reduced operating costs of existing facilities by approximately $80,000/year. These cost savings will help reduce the impacts on tax payers of increasing utility rates.

PUBLIC RELATIONS IMPLICATIONS:
By being a leader in environmental initiatives, such as reductions in energy usage and greenhouse gas emissions, the public can feel as though their community is making a difference in the world while also being fiscally responsible. This can further encourage residents to engage in their own environmental initiatives.

ATTACHMENTS:
Town Pincher Creek MEPL Presentation year 2 update - 3219

CONCLUSION/SUMMARY:
The goals set out at the beginning of the program have been exceeded with total emissions reductions of 8% (original goal of 5%) which equates to energy cost savings of $79,514/year. Grant funding of $380,000 has been received to support $543,000 in costs for a return on investment of only 2.1 years. A Climate Resiliency and Adaptation Plan has been completed. Community outreach programs have been developed to support community energy literacy and share success stories from the Municipal Program.

Signatures:

Department Head:

CAO:

Municipal Climate Change Action Centre

MUNICIPAL CLIMATE CHANGE ACTION CENTRE *MUNICIPAL ENERGY MANAGER PROGRAM: CLOSEOUT*

TOWN OF PINCHER CREEK ALBERTA

Town of Pincher Creek

August 2023

PURPOSE OF PRESENTATION

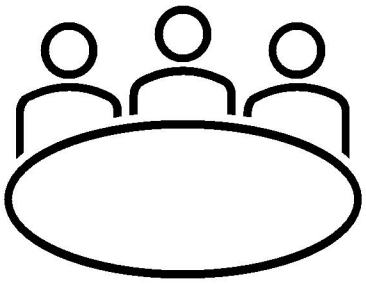
What's been done

Completing this year

Looking forward

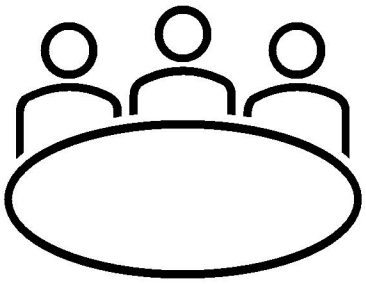
WHAT'S BEEN DONE?
ENERGY TEAM & PRELIMINARY TARGETS

- Indicators of Success:
  - Reduce MD/Town baseline 2019 GHG emissions by 5%
  - Development of Energy Management Plans to monitor effectiveness of Energy Conservation Measures
  - Adoption of Energy Plans & Energy Policy by MD & Town



WHAT'S BEEN DONE?
ENERGY TEAM & PRELIMINARY TARGETS

- Achievements
  - Reduce MD/Town baseline 2019 GHG emissions by 8%
  - Energy management assessment increased from 41% ->69% in Y2
  - Implemented 94 Energy conservation measures
  - Launched QUEST net zero accelerator program to support policy and plan development



WHAT'S BEEN DONE?
ENERGY SCANS & ENERGY MANAGEMENT PLANS

- Analyzed all facilities
- Full energy scans done on larger facilities;
  - Multi-Purpose Facility
  - Admin Building/PW Office & Shop
  - Water Treatment Plant
  - Community Hall
  - Airport Terminal and Shop
  - Community Recreation Facility

WHAT'S BEEN DONE?
ESTIMATED PROJECT SAVINGS

QUOTED COSTS: $548,000

$163,000 WITH REBATES

ESTIMATED ENERGY SAVINGS:

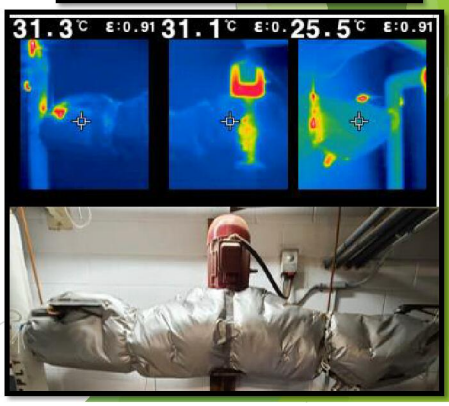
~60,067 $/YR

SIMPLE PAYBACK WITH FUNDING:

2.7 YRS

WHAT'S BEEN DONE?
ARENA AND POOL

- New Building Management System
- Insulated hot water piping
- New arena furnaces
- Gym lighting retrofit
- Endotherm additive
- REALice resurfacing technology
- Electric Vehicle Chargers



WHAT'S BEEN DONE?
Town Facilities

- Lebel lighting retrofit
- Lebel Window trial
- Re-commission daycare HVAC
- Community rec facility programmable thermostats
- Thermostat policy in all water facilities
- Utility bill adjustments
- Off-grid welcome signs
- Hot water tank replacement at Veterans campground

8/26

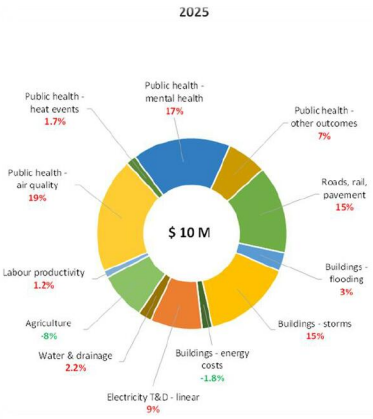
WHAT'S BEEN DONE?
MD FACILITIES

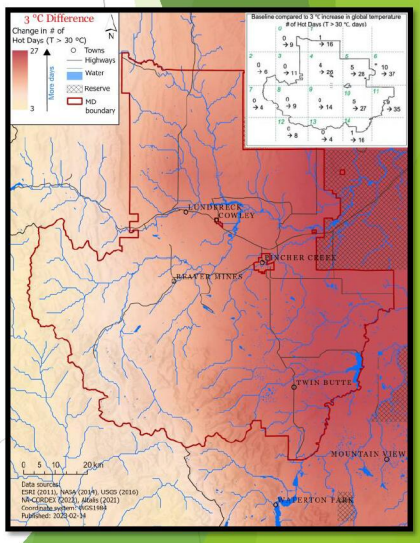
- Re-commission MD Administration building HVAC
- Endotherm boiler additive
- Programmable thermostats at PW shop
- Programmable thermostats at Airport terminal
- Lighting retrofit at airport terminal
- Lighting retrofit at PW Quanset, sand shed, bobby burns park
- EV Chargers at PW and Administration building
- Eco Center Solar

9/26

WHAT'S BEEN DONE?
CLIMATE ADAPTATION PLAN

- Team development with Town, MD, Piikani, and PC-REMO
- Staff and area showcase
- Climate Projections
- Survey (211 valid responses)
- Economic analysis on the cost of inaction
- Climate Risk analysis
  - Staff and stakeholder risk assessment
  - Open House (40 attendees)
- Adaptation plan
  - Staff and stakeholder plan development
  - Open House (20 attendees)
- Final Plan
- 2-page brochure



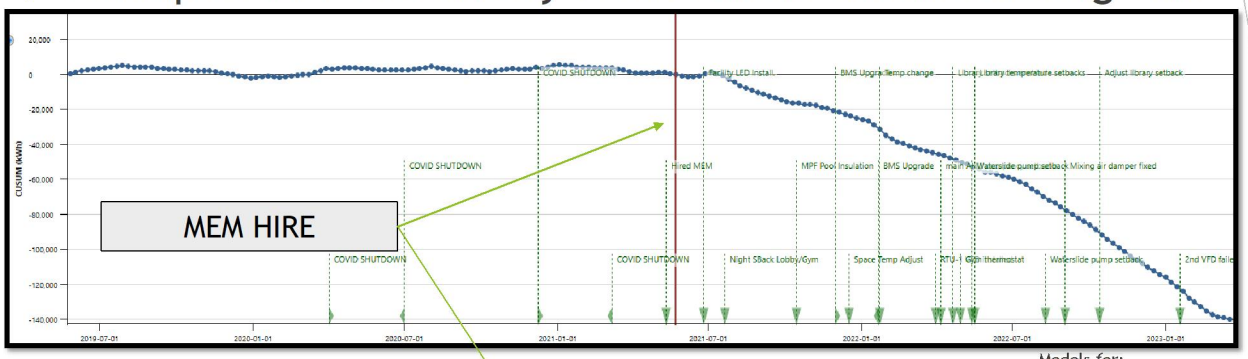


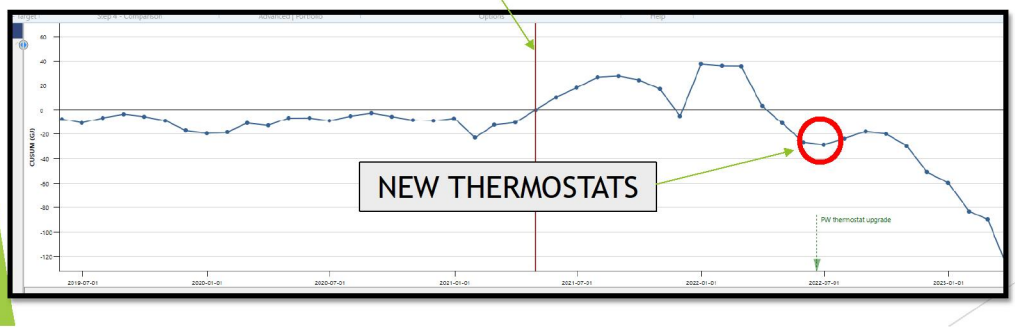
WHAT'S BEEN DONE?
EMPLOYEE & COMMUNITY ENGAGEMENT

- Monthly newsletters
- Energy lunch and learns
- Newspaper and social media stories
- Dedicated website pages
- Trade show
- Surveys
  - CEIP
  - Lebel solar

WHAT'S BEEN DONE?
ENERGY MODELS (MEASURE & VERIFY)

- Example: MPF Electricity & MD Public Works Building Gas





Models for:

- Arena Gas
- Arena Electricity
- MPF Gas
- MPF Electricity
- Admin/PW Office & Shop Electricity
- Admin Gas
- PW Office & Shop Gas
- Lebel Mansion Gas
- Lebel Mansion Electricity

WHAT'S BEEN DONE?
UTILITY BILL ANALYSIS (MEASURE & VERIFY)

QUOTED COSTS: $548,000

$163,000 WITH REBATES

ACTUAL ENERGY SAVINGS:

~79,514 $/YR

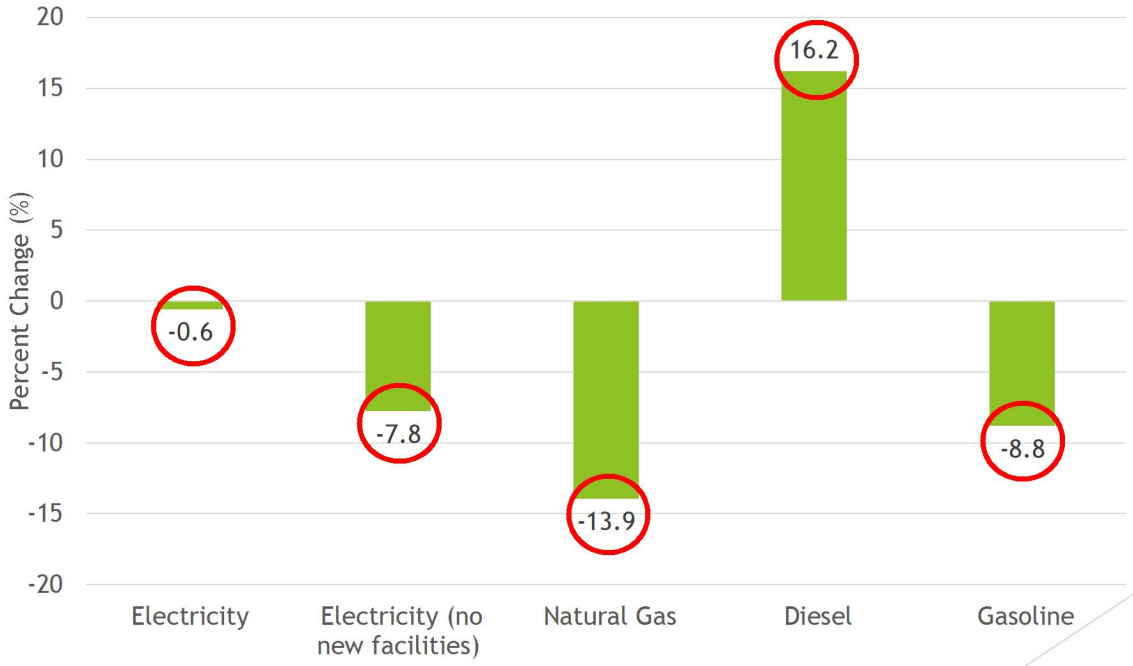
TOWN: **~74,126 $/YR**

MD: **~5,388 $/YR**

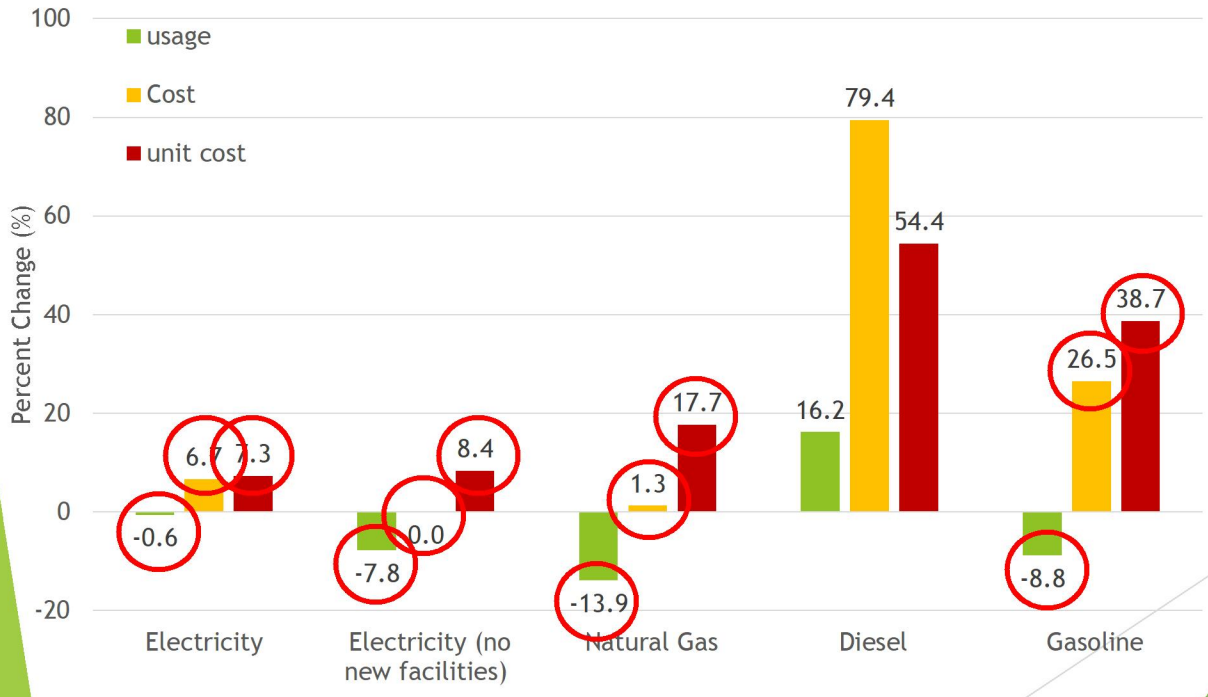
SIMPLE PAYBACK WITH FUNDING:

2.1 YRS

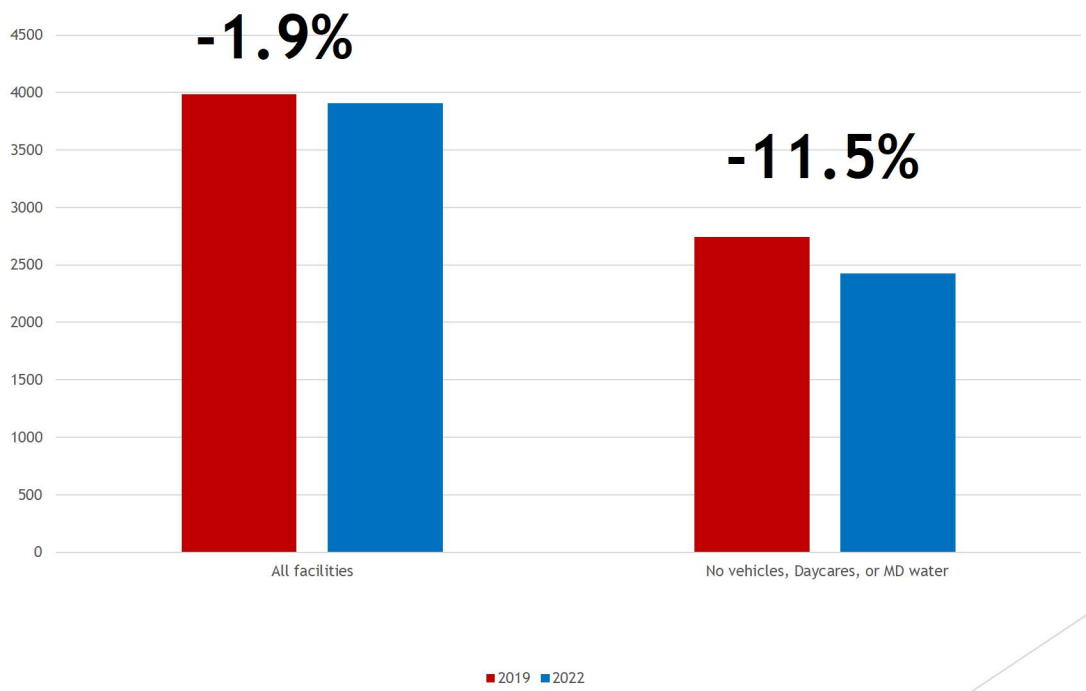
WHAT'S BEEN DONE?
ENERGY USAGE REDUCTION



WHAT'S BEEN DONE?
ENERGY PRICING



WHAT'S BEEN DONE?
GHG REDUCTION



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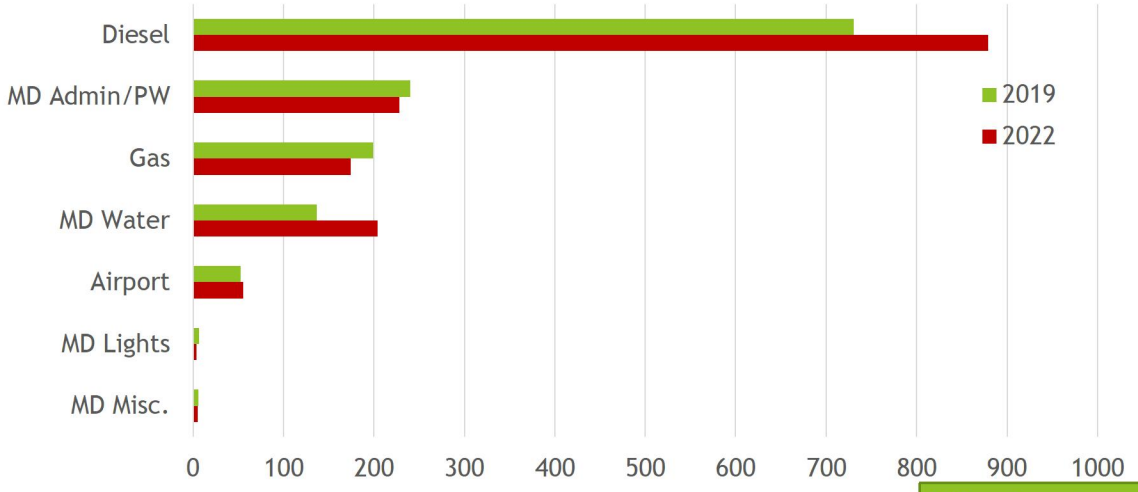
16/26

WHAT'S BEEN DONE?
GHG REDUCTION

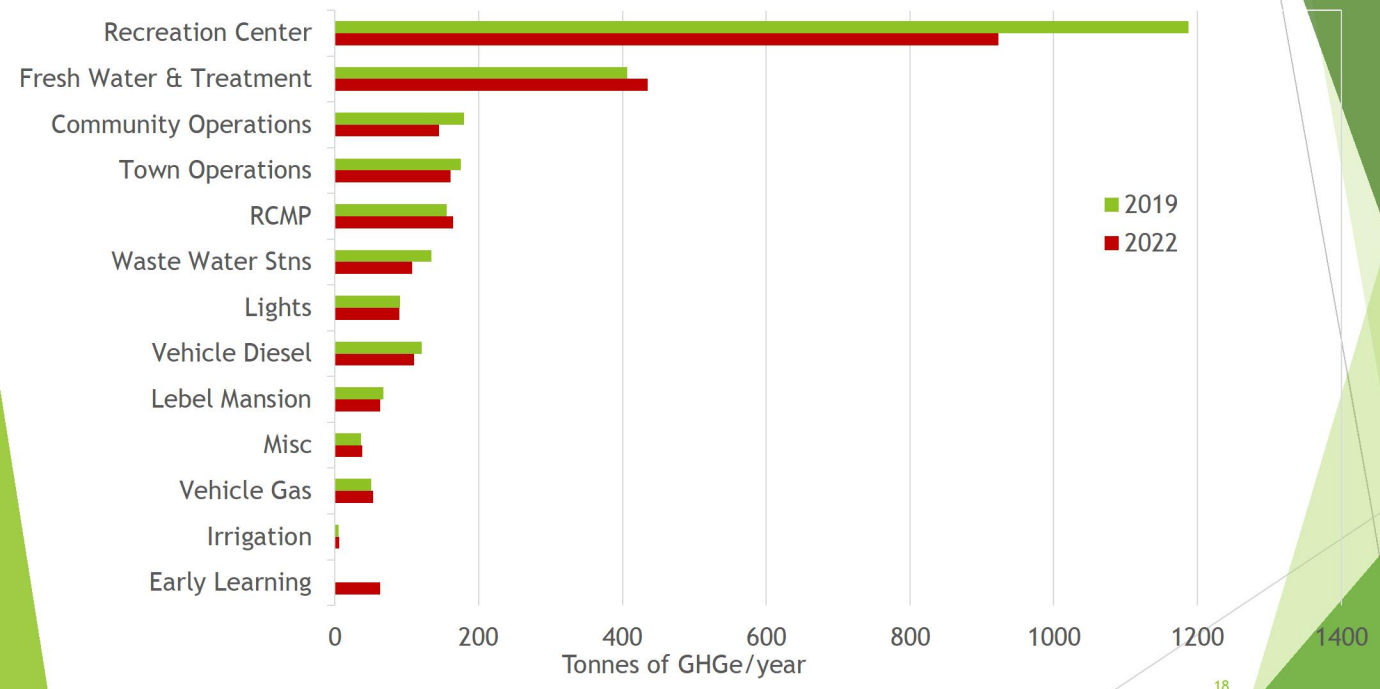


Why does it matter?

Carbon Pricing
- $20/ton CO2 in 2019
- Increasing $15 annually going forward (Currently $65/ton)
- $170/ton by 2030

17/26

WHAT'S BEEN DONE?
GHG REDUCTION



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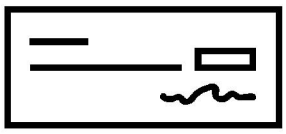
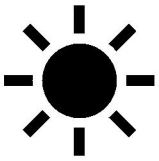
IN PROGRESS
ENERGY PROJECTS





- Lebel Solar
- Airport Solar
- Lebel Windows
- Multi purpose electrical tracking system
- Airport furnaces
- Public works furnace
- FCM application for Arena retrofits
- Pool and Arena Retrofits pending GICB grant acceptance

IN PROGRESS
NRCAN NET ZERO

Net-Zero Communities Accelerator Program

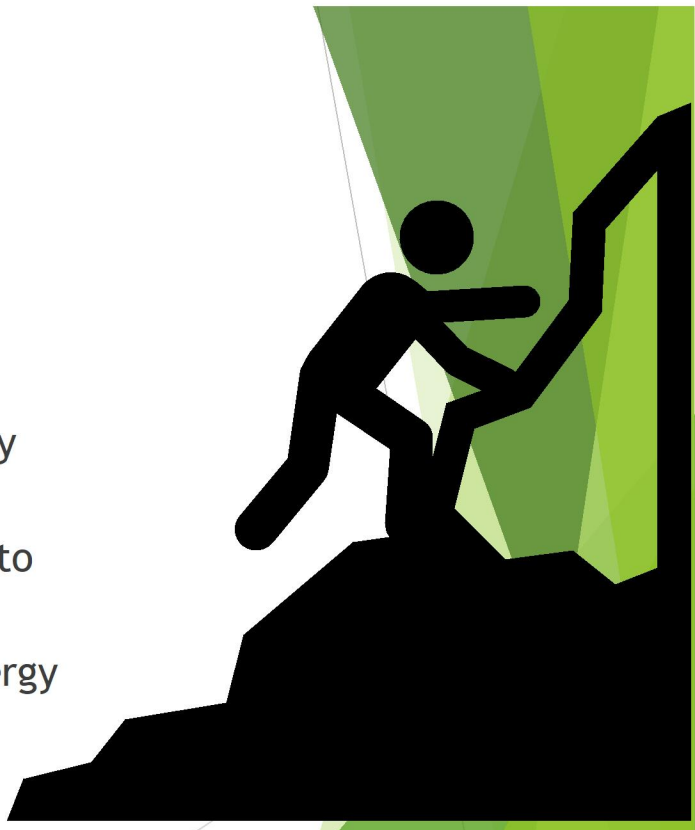
- MD and Town partnership
- Community energy and emissions plan
- Support policy development
- Support long term plan identification
- Develop capacity to leverage energy transition

QUEST · CIER · Community Energy Association · Éco-Ouest Eco-West · Municipal Climate Change Action Centre

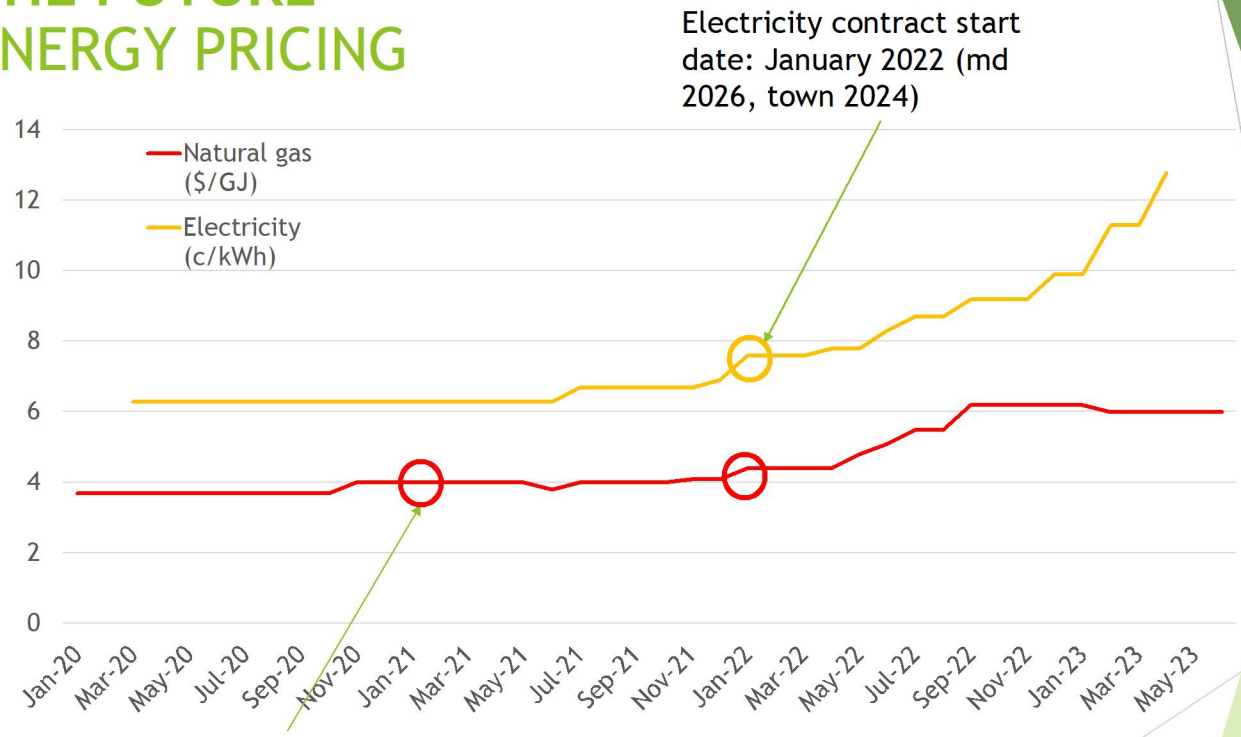
IN PROGRESS
CEIP DEVELOPMENT

IN PROGRESS
LONG TERM PLAN DEVELOPMENT

- Identify pathways for facilities to continue reducing costs and emissions
- Recommendations to improve future energy management
- Recommendations on investment pathway to community net zero
- Final report in the form of a long-term energy management plan



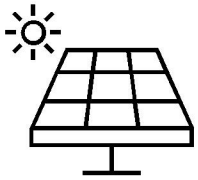
THE FUTURE ENERGY PRICING



THE FUTURE

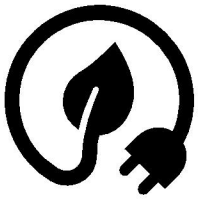
ENERGY PRICING

- Expected to reach $0.3/kWh this summer.
- Important to reduce exposure to these rising prices
- Present long-term contract renewal rates @ $0.11-0.12/kWh



Generation:

$0.10/kWh



Efficiency upgrades

$0.01-0.08/kWh

THE FUTURE

Climate adaptation

- Implementation requires a “champion” to push projects
- Piikani excited to continue working in partnership
  - Our project partnership is getting international renown
- PC-REMO sees value in keeping team together
- 35 adaptation measures identified
- Federal Government has $3.375 billion over 10 years in funding committed to adaptation projects

Questions

SUMMARY: What's been done?

- Energy usage/cost analysis
- GHG emissions inventory
- Inter-municipality Energy team
- $80,000 in annual energy savings
- $380,000 in grant funding achieved
- $5M in funding applications
- 94 ECM's implemented
- Energy modeling (measure & verify)
- Employee & community engagement
- Climate resiliency & adaptation plan
- Inter-municipality climate team

SUMMARY: What else is possible?

- Clean Energy Improvement Program (CEIP) implementation
- Climate adaptation implementation
- Sustainable Policy
- Sustainable energy budget
- Various funding/grant streams
- Sustainable energy project management

AGENDA ITEM NO: 6.1

Town of Pincher Creek

REQUEST FOR DECISION

Council or Committee of the Whole

SUBJECT: Snow Management Community Engagement Strategy	
PRESENTED BY: Alexa Levair, Director of Operations	**DATE OF MEETING:** 8/2/2023

PURPOSE:

To obtain Council's approval to conduct community engagement on the Town's Snow Management approaches.

RECOMMENDATION:

That Council for the Town of Pincher Creek approve the Snow Management Community Engagement Strategy as presented.

BACKGROUND/HISTORY:

At the July 5, 2023 Committee of the Whole meeting, Council directed administration to prepare a snow management engagement strategy which is attached to this Request for Decision.

Administration proposes a combination of a survey, open house, and focus groups to obtain valuable community feedback on all aspects of snow management within Pincher Creek.

Administration's original intention was to conduct the community engagement over the summer of 2023, however, the timeframe is no longer feasible. It is typically not valuable to conduct engagement or solicit feedback during the snow season, as the feedback tends to be more about individual events rather than the system as a whole. By conducting during the non-snow season, the Town will be provided with more holistic feedback.

Administration is currently without personnel who handle communications, which would be a critical part to the community engagement including assistance in drafting the survey and coordinating the focus groups.

Because of these above challenges, the intention is to draft all communication pieces in the winter of 2023/24 and conduct the community engagement in spring 2024.

ALTERNATIVES:

That Council for the Town of Pincher Creek direct administration to amend the Snow Management Community Engagement Strategy as discussed to be brought forward to a future meeting.

That Council for the Town of Pincher Creek decline community engagement for snow management.

IMPLICATIONS/SUPPORT OF PAST STUDIES OR PLANS:
Community feedback relating to snow management will be extremely valuable in drafting future policies and bylaws.

FINANCIAL IMPLICATIONS:
All community engagement for snow management will be within existing operating budgets.

PUBLIC RELATIONS IMPLICATIONS:
Soliciting feedback and involvement of the community will help ensure residents feel heard. By engaging multiple groups and having a variety of ways for opinions to be presented will help increase engagement and participation.

ATTACHMENTS:
2023 Snow Management Community Engagement Strategy - 3211

CONCLUSION/SUMMARY:
Administration supports the approval of the snow management community engagement strategy as presented.

Signatures:
Department Head:

CAO:

Snow Management Community Engagement Strategy

Presented to Pincher Creek Council: August 2, 2023

Importance of **Community Engagement**

Engagement helps build cooperative and trusting relationships between the Town and the community. It can provide us with early warning signs for a project or decision. It can serve as a sounding board for our proposed programs/initiatives. It provides the opportunity for communication between decision makers and the public, and it creates a credible channel through which accurate and timely information from the Town can be disseminated. It helps increase the public's understanding and support for the Town's goals.

The *Municipal Government Act* was amended to require municipalities to adopt Public Participation Policies by no later than 2018. Pincher Creek is currently guided by Public Participation Policy #166-23 which states:

> *Communication requires the sharing of information in both directions. The Town will endeavor to communicate effectively with the municipal residents and stakeholders regarding services, projects, policies and programs and in return residents and stakeholders will endeavor to avail themselves of the many opportunities to be informed of activities and information relating to them, their needs and responsibilities.*

What are we Engaging the Community About?

All aspects of the Town's **Snow Management**. This includes:

- Service Levels (increase / maintain / decrease)
  - Priority Routes
  - Sidewalks & Pathways
  - Response Times
  - Accessibility
- Tax Implications of Changes
- Resident / Business Snow Obligations
- Bylaw Enforcement
- Snow Removal Assistance Programs

Why are we Engaging the Community on Snow Management?

Snow Management impacts residents, visitors, and businesses each winter on a daily basis in many different ways. Pincher Creek Council desires to modernize Town policies relating to Snow Management which have not had a substantial review since 2013. In order to ensure that informed decisions can be made as the Town moves forward, Council desires extensive community engagement and feedback on the Topic of Snow Management.

Type of Community Engagement

	Inform	Consult	Involve
Community Responsibility	Learn	Participate	Partner
Techniques	Social Media Posts Information Booths Promotional Video Town Hall Meetings Website	**Surveys** **Focus Groups** Pop-Ups **Open Houses** Public Meetings Key Informant Interviews Coffee Klatches	Workshops Advisory Committees Task Forces

Implementation **Timeline**

Engagement **Opportunities**

The ideal community engagement will remove barriers to participation. To ensure all voices have an opportunity to be heard, it is recommended to proceed with a multi-approach engagement process:

Online Survey

All impacted community members will be encouraged to participate. This will include residents, visitors, and businesses. The online survey will be promoted:

- In *Shootin' the Breeze* newspaper
- On www.pinchercreek.ca
- Social Media advertising
- Utilities Newsletter
- Information business cards distributed throughout the community

Open House

Understanding that many residents prefer in-person communication, an open house will be scheduled with hard-copy versions of the online survey. In addition to the survey, the Open House will serve as an open communication to discuss concerns. It is recommended Councillors attend this Open House in collaboration with Administration. This Open House will be promoted:

- In *Shootin' the Breeze* newspaper
- On www.pinchercreek.ca
- Social Media advertising
- Utilities Newsletter

Focus Groups

To ensure that specific user groups' concerns are considered, focus groups shall be coordinated with administration to understand the impacts to their operations and their specific needs. Specialized focus groups will include:

- **Schools** (engaging the two school divisions within Pincher Creek to include bussing considerations)
- **Businesses** (engaging the Chamber to Commerce to facilitate business feedback and impacts to business operations)
- **Seniors** (engaging seniors' groups in the community including through the Pincher Creek Foundation and the Huddlestun Seniors Centre)

Feedback to the Community

The Town endeavors to provide the community with a summary of the results of the Snow Management engagement in order to 'close the loop' and keep the community informed. Survey respondents will have the opportunity to request the results of the community engagement be emailed to them directly.

AGENDA ITEM NO: 6.2

Town of Pincher Creek

REQUEST FOR DECISION

Council or Committee of the Whole

SUBJECT: Old RCMP Building Land Rezoning	
PRESENTED BY: Lisa Goss, Legislative Service Manager	**DATE OF MEETING:** 8/2/2023

PURPOSE:

To garner direction from Council regarding the rezoning of 655 and 659 Main Street and 656 Charlotte Street (Plan 552LK, Lots 102, 103 and 14 and Plan 460B Lot 103).

RECOMMENDATION:

That Council for the Town of Pincher Creek direct administration to prepare a Land Use Bylaw Amendment rezoning the following parcels to Direct Control;
656 Charlotte Street – Lot 14, Plan 552LK - Current Zoning Downtown/Retail Commercial - C1
655 Main Street – Lot 13, Plan 552LK - Current Zoning Transitional Commercial - C4
659 Main Street – Lot 103, Plan 460B - Current Zoning Downtown/Retail Commercial - C1
659 Main Street – Lot 102, Plan 552LK - Current Zoning Downtown/Retail Commercial - C1

BACKGROUND/HISTORY:

At the February 13, 2023 regular Council meeting direction was given to administration to proceed with demolition of the Old RCMP Building located at 659 Main Street.

On June 7, 2023 the motion was rescinded, so that prospective developers would be able to view the property from the perspective of being able to submit proposals for purchase and renovation of the building, in a manner which may suit the Town's needs. Further on June 7, the Committee of the Whole agreed to advertise for request for proposals for redevelopment at at 659 Main Street (Lot 102, Plan 552LK) 655 Main Street (Lot 13, Plan 522LK) 656 Charlotte Street (Lot 14, Plan 552LK) for housing and mixed use. In order to facilitate this direction the land could be rezoned to Direct Control to accommodate various types of uses as per Council directives.

The two samples of a Direct Control Bylaw which are attached are for information and discussion purpose only. Direction from Council is required for administration to create the Direct Control Bylaw with regards to regulation and control of the lots, what uses would be permitted and prohibited and any other information Council would like to see in the Bylaw which would assist administration in ensuring that the overall site is

developed in a manner that is suitable for its location and how it will interact with the immediate neighbouring sites.

ALTERNATIVES:
That Council for the Town of Pincher Creek receive the information regarding the rezoning of 655 and 659 Main Street and 656 Charlotte Street (Plan 552LK, Lots 102, 103 and 14 and Plan 460B Lot 103) as presented.

IMPLICATIONS/SUPPORT OF PAST STUDIES OR PLANS:
The December 1993 Downtown Pincher Creek Area Redevelopment Plan (Section 3.1(b) Sub-area 2B, with 21 lots, contains a mixture of retail, office, residential and public and institutional development....Although there is some potential for land assembly, any redevelopment is more likely to be incremental, given the large number of land owners.

FINANCIAL IMPLICATIONS:
Advertisement and administrative resources required, which may include public engagement above and beyond a public hearing for the DC Bylaw.

PUBLIC RELATIONS IMPLICATIONS:
Although the public hearing process is a requirement under the MGA for the Land Use Bylaw amendment, some form of public hearing should be held before rendering a decision on an application if received.

ATTACHMENTS:
2023.02.13 RFD - 3086 - Old RCMP Building Demolition - 3218
2023.06.07 RFD - 3170 - Old RCMP Building Demolition Discussion - 3218
3C-115 Overview of Direct Control Memo - Twn Pincher Cr Council - 3218
DIRECT CONTROL Bylaw SAMPLE draft - General-broad - 3218

CONCLUSION/SUMMARY:
Administration supports that Council for the Town of Pincher Creek provide direction to prepare a Land Use Bylaw Amendment to rezone 656 Charlotte Street (Lot 14, Plan 552LK), 655 Main Street (Lot 13, Plan 552LK), 659 Main Street (Lot 103, Plan 460B) and 659 Main Street (Lot 102, Plan 552LK) to Direct Control.

Signatures:
Department Head: Lisa Goss

CAO: Angie Lucas

AGENDA ITEM NO:

Town of Pincher Creek

REQUEST FOR DECISION

Council

SUBJECT: Old RCMP Building Demolition	
PRESENTED BY:	**DATE OF MEETING:** 2/13/2023

PURPOSE:
For Council to provide direction on the proposed demolition of the Old RCMP Building.

RECOMMENDATION:
That Council for the Town of Pincher Creek direct administration to proceed with demolition of the Old RCMP Building located at 659 Main Street.

BACKGROUND/HISTORY:
$200,000 has been approved in the 2023 Operating Budget for demolition of the Old RCMP Building located at 659 Main Street. Council has previously discussed preferences for both selling the property to a developer, but also to retain the land for future Town uses. Administration is seeking clarification on Council's desire for the property prior to proceeding with Request for Proposals for demolition.

The Old RCMP Building was built in approximately 1970 and was occupied by the RCMP until 2008 when they moved into their new building on Hunter Street in the north area of Town. Since the RCMP relocation, the building has been leased to various entities including McMann Youth Family and Community Services Association, the Food Bank, and most recently an Alberta COVID Testing Site.

The building has various maintenance concerns including foundation issues, HVAC reaching end of life, roof reaching end of life, windows reaching end of life, and presence of asbestos. Only absolutely necessary maintenance has been conducted on the building in the past 5+ years as it was anticipated to be demolished.

Demolition was previously approved in the 2020 Operating Budget but was delayed because of a request from the province to utilize Town owned space for the COVID Testing Centre.

ALTERNATIVES:
That Council for the Town of Pincher Creek direct administration to delay any action on the demolition of the Old RCMP Building until further direction is provided.

IMPLICATIONS/SUPPORT OF PAST STUDIES OR PLANS:
Demolishing the building would reduce the Town's operating costs associated with the building remaining in place but vacant. Selling the building and land would reduce future

options for the Town for the land such as Emergency Services expansion options and housing.

FINANCIAL IMPLICATIONS:
No additional costs will be incurred as the demolition of the Old RCMP Building has already been included and approved in the 2023 Budget.

PUBLIC RELATIONS IMPLICATIONS:
There is potential for public dissatisfaction with the choice to demolish rather than repurpose the facility, however, administration anticipates any public dismay to be minimal.

ATTACHMENTS:
None at this time.

CONCLUSION/SUMMARY:
Administration supports moving ahead with demolition of the Old RCMP Building.

Signatures:
Department Head: A Lerari

CAO: Laurie Wilgosh

AGENDA ITEM NO:

Town of Pincher Creek

REQUEST FOR DECISION

Council or Committee of the Whole

SUBJECT: Old RCMP Building Demolition Discussion	
PRESENTED BY:	**DATE OF MEETING:** 6/7/2023

PURPOSE:
To provide Council with information on the Old RCMP Building Demolition project.

RECOMMENDATION:
That Council for the Town of Pincher Creek discuss rescinding resolution 23-056 to proceed with the demolition of the Old RCMP Building located at 659 Main Street, in order that prospective developers may view the property to determine if the building can be renovated instead of demolished; and

That Council for the Town of Pincher Creek direct Administration to continue researching costs and drafting procurement documents for the Old RCMP Demolition project and bring the project back to Council prior to any procurement for demolition services, if it is determined these services are needed in the future.

BACKGROUND/HISTORY:
As part of the 2023 Budget, Council approved $200,000 for demolition of the Old RCMP Building. Administration sought additional clarification from Council in February 2023, at which time the following resolution was passed:

"That Council for the Town of Pincher Creek direct administration to proceed with demolition of the Old RCMP Building located at 659 Main Street."

Administration has been working closely with Stantec Consulting to prepare for procurement of demolition services, and to determine if the existing budget is sufficient in today's market, which has seen significant inflation costs. This process is on-going at this time.

However, Administration has received two emails (attached)from prospective developers interested in submitting a proposal for the property, one of which specifically requested that the building demolition project be halted.

Consideration should be given that the Old RCMP Building is located on two parcels of land, however, there is potential development opportunity on a total of 4 parcels of land (see attached map). Council should consider whether they desire to sell the

building (for potential renovation), or seek to sell 4 parcels of vacant land for more development options/opportunities.

Administration is seeking Council direction on the Old RCMP Building Demolition, as the current resolution indicates the demolition project is moving forward.

ALTERNATIVES:
That Council for the Town of Pincher Creek receive the information regarding the Old RCMP Building Demolition project as presented.

That Council for the Town of Pincher Creek agree to offer the Old RCMP Building (659 Main Street) for sale and advertise accordingly.

IMPLICATIONS/SUPPORT OF PAST STUDIES OR PLANS:
None at this time.

FINANCIAL IMPLICATIONS:
There are no line-items in the 2023 operating budget for on-going operation of the building. The building currently incurs monthly electrical and gas bills. Administration is attempting to keep the building in working order with minimal maintenance costs, however, some costs are unavoidable such as furnace repairs.

PUBLIC RELATIONS IMPLICATIONS:
Since receiving Council direction to proceed with demolition, Administration has declined to provide tours of the building and has taken it off the Town's list of properties for sale. Selecting individual developers to tour the building may create a sense of favoritism in the community if the opportunity is not presented publicly.

ATTACHMENTS:
Prospective Developer 1_Redacted - 3170
Prospective Developer 2_Redacted - 3170
Town Owned Lots for Potential Development - 3170

CONCLUSION/SUMMARY:
Administration is continuing with the demolition of the Old RCMP Building Project unless Council advises otherwise.

Signatures:
Department Head:

CAO: Angie Lucas

OLDMAN RIVER REGIONAL SERVICES COMMISSION

Memo

To: Mayor and Council - Town of Pincher Creek **File:** 3C-115

From: Steve Harty – ORRSC Senior Planner **Date:** 2023-07-21

Re: Overview of Direct Control districting

Section 641(1) of the MGA stipulates that the Council of a municipality that has adopted a municipal development plan, if it wishes to exercise particular control over the use and development of land or buildings within and area of the municipality may in its land use bylaw designate that area as a *Direct Control district*. This is achieved through a bylaw amendment with a public hearing process.

When a development application is filed for land under Direct Control, the application is forwarded directly to Council, which renders a decision on the application based on the merits of the case and having regards for any statutory plan that is in place. Usually, Council should hold some form of public hearing before rendering a decision. Depending on the wording of the bylaw, a favorable decision of Council can constitute the development permit or Council can direct the development authority to issue a formal permit on the terms and conditions prescribed by it in the resolution. A variant of this model might be that the Direct Control district bylaw itself includes provision in the text of the bylaw that sets out a general description of the types of uses Council would authorize, or that describes some very generally worded development standards that Council might like to impose.

Another form of a Direct Control district is where it may subdelegate permit application decision-making powers to the development authority with directions that it considers appropriate. This is sometimes done for uses considered permitted, while Council would decide upon those deemed discretionary in nature or where variances are required (refer to sample DC bylaw).

The main elements of a Direct Control district are as follows:

- It may be general in nature or purpose and Council may, subject to any applicable statutory plan, regulate and control the use or development of land or buildings in the district in any manner it considers necessary.
- Council, in the bylaw, may specify permitted and/or discretionary uses or any prohibited uses.
- The purpose of Direct Control is to typically deal with specific land or building situations that require unique control, development items either not specified or contemplated in the land use bylaw, or to impose specific standards or control beyond what a conventional district imposes.
- Direct Control gives Council the authority to decide on a development permit application and it can review each application on its own merits.
- Council can stipulate criteria/regulations for the district beyond what is often stipulated by a conventional district schedule (e.g., make it more restrictive or apply different rules).

- The development authority, may receive and with the direction of Council as stated in the text of the Direct Control bylaw, decide upon applications for permitted uses provided they conform to the standards of the bylaw. Council is often in the role of being the authority to approve discretionary uses or application for waivers of specified development standards.
- Pursuant to section 685(4)(a) of the Act, if a decision with respect to a development permit application is made by Council, there is no appeal to the Subdivision and Development Appeal Board.
- If Council delegates the processing and decision making of a development permit for a certain type of use to the development authority, then it may be appealed to the Subdivision and Development Appeal Board. The appeal is limited in scope to determining whether or not the development authority followed the directions of Council.

There are many practical and beneficial planning reasons as to why a Direct Control district may be used by the municipality to manage land use:

- The municipality may want to protect or allow an area, building or land for some development activity but they may also require specific development or infrastructure considerations that need to apply.
- To allow considerable flexibility for a land use at a specific location or enable a very specific land use to occur, while also protecting existing areas of the Town or adjacent land uses beyond what a conventional land use district might provide.
- Using Direct Control allows Council to apply more discretion or deal with sensitive development applications, rather than the development officer of MDSA. Council is involved in the public process to gather public input or opinions on potentially contentious or sensitive developments.
- Direct Control provides a means whereby Council may regulate and control the use, development or subdivision of land or buildings within a specific area of the municipality where the circumstances relating to the development or subdivision of a site are such that regulation and control by use of the other land use districts in the land use bylaw is inadequate considering long-range planning goals and the greater public interest.
- Direct Control often provides a useful tool to protect developments that are of important cultural, historical, or local importance by establishing restrictions or very specific rules about the use, or sometimes clearly prohibiting activities (such as doing additions, demolitions, etc.)

A Direct Control district (subject to a land use bylaw amendment) is for what is referred to as a *site specific redistricting*, it creates certain standards and uses for a specified parcel of land, as a conventional district in the bylaw, such as residential or commercial, may not be appropriate especially with the other conventional uses that may be allowed in the district. Thus, the Direct Control district can be used to tailor and impose specific regulations or standards for the use.

It is clear that the power conferred in section 641 of the MGA to exercise Direct Control delegates a very substantial degree of discretion to Council.

Hope this information is of assistance to you.

Enclosures (2): Sample DC bylaw
Map of subject town titles

SCHEDULE 'B'

DIRECT CONTROL – DC BYLAW NO. _____

INTENT: To provide a means whereby Council may regulate and control the use, development, or subdivision on a site-specific basis to the following lands:

Lot 14, Plan 552LK - 656 Charlotte Street

Lot 13, Plan 552LK - 655 Main Street

Lot 103, Plan 460B - 659 Main Street

Lot 102, Plan 552LK - 659 Main Street

as shown on Schedule 'A'. For the purposes of preserving the existing two-storey building (former RCMP office) and allowing opportunity for medium-density housing and potential mixed-use development in a form acceptable to Council, while also allowing development on the lots that conforms to Council's goals of supporting the viability of downtown through a mix of innovative housing, retail use, and professional or business services.

The development allowed is based on plans as approved by Council in consideration of the constraints of the site, compatibility with adjacent public, institutional, and commercial land uses, and on the basis the development must align with Council's vision and goals for the development of the site and the downtown area in general.

1. DEVELOPMENT CONTROL REGULATIONS

While this bylaw is in effect the following development control regulations shall apply and no development other than that prescribed for the following lots shall be undertaken unless otherwise approved by Council:

(a) Lot 102, Plan 552LK and Lot 103, Plan 460B **-** The existing building constructed in 1970 shall not be demolished and any use as outlined in Section 2, Permitted and Discretionary Uses, shall be approved by Council.

(b) Lot 13, Plan 552LK and Lot 14, Plan 552LK - The land uses, buildings and structures as stipulated in Section 2, Permitted and Discretionary Uses, may be considered in accordance with this bylaw.

2. PERMITTED AND DISCRETIONARY USES

Only those uses associated with the development of the lands as approved by Council and that preserve the character and use of the existing two-storey building as Council deems suitable:

PERMITTED USES	DISCRETIONARY USES
Accessory structures	Accessory buildings
Signs (in accordance with Schedule 5)	Accessory uses
Solar collectors roof or wall-mount, individual (see Schedule 4)	Apartment buildings
	Boarding Houses
	Hotels

PROHIBITED USES

- *Demolition of existing buildings*
- *No conversion of residential units to other uses without Council approval*

Any use which is not listed as either a Permitted or Discretionary Use or not authorized by Council is a Prohibited Use

DISCRETIONARY USES (cont'd)

Mixed-use: Commercial with residential
Multi-unit dwellings: Site built
Parking Lot
Retail stores
Short term rentals

In addition to those prescribed above, any use Council considers suitable may be considered.

3. MINIMUM LOT SIZE

The minimum lot size shall be as the existing titles for **Lot 13, Plan 552LK; Lot 14, Plan 552LK; Lot 102, Plan 552LK** and **Lot 103, Plan 460B,** or 0.06 ha (0.14 acres), unless otherwise approved by Council.

4. MINIMUM YARD SETBACK REQUIRMENTS

As authorized by Council.

5. MAXIMUM DENSITY AND SITE COVERAGE

(1) The maximum number of dwelling units is as authorized by Council.

(2) Unless otherwise authorized by Council, the maximum site coverage for all principal and accessory buildings combined is 80%.

6. ACCESSORY BUILDINGS AND STRUCTURES

(1) Any accessory buildings or structures shall not be located in a front yard or in the required setback from a public road or an easement.

(2) An accessory building or structure shall only be constructed after or in conjunction with an approved principal use or building on the parcel.

7. STANDARDS OF DEVELOPMENT

As Council, or the Development Officer acting as the Development Authority as delegated by Council, considers necessary having regard to Part 4.

8. SIGNS

Only those signs associated with the formal name of a housing development, business name, addressing, or directional signage as Council, or the Development Officer acting as the Development Authority, considers necessary and compatible, having regard to Part 5.

9. OTHER STANDARDS

- As Council requires.
- No demolition of the existing building constructed in 1970 located on Lot 102, Plan 552LK and Lot 103, Plan 460B shall occur without Council's approval.

10. APPROVAL PROCEDURE

(1) Before Council, or the Development Officer acting as the Development Authority as assigned by Council, considers an application for a use in the Direct Control district, they shall:

(a) cause notice to be issued by the Development Officer in accordance with Section 21 of the land use bylaw;

(b) hear any persons who claim to be affected by a decision on the application.

(2) Council, or the Development Officer acting as the Development Authority, may then approve the application with or without conditions, or refuse the application.

(3) As part of the development application review process, the application shall be circulated to municipal administration and planning staff to provide input and recommendations on any proposal.

11. OTHER REQUIREMENTS (AS MAY BE REQUIRED BY COUNCIL)

Council, may request the following standards and requirements be applied for any development permit application in this district:

(1) **Site, Layout, and Grading Plan** – that shows the property dimensions, building size and locations, outdoor storage areas, parking areas, utility easements, elevations and servicing areas.

(2) **Landscaping Plan** – that shows the front yard landscaping and fencing (height and type) on the property.

(3) **Refuse or Garbage** – shall be located and kept in a municipally approved waste receptacle container as per the Town of Pincher Creek Garbage Utility bylaw.

(4) **Servicing** – the developer shall be responsible for ensuring all required municipal servicing is provided for the development, including water, sewage, and drainage.

(a) Shallow utilities (e.g., gas, electricity, fibre optics, phone) as required shall also be provided by the developer to the municipality's or utility agencies' standards.

(b) Any utility right-of-ways or access easements as required shall be provided by the developer to the satisfaction of the Town of Pincher Creek.

(5) **Parking**

(a) Parking must be provided as required by Council and delineated on site, with Council having regard to, but not bound by, the parking standards of the Land Use Bylaw.

(b) If Parking is delegated to the Development Officer to decide, the required parking space size and number standards of the Land Use Bylaw shall apply.

(6) **Development Agreement** – the developer shall enter into a development agreement with the Town of Pincher Creek to satisfy any servicing requirements or standards as stipulated by the Town when required to do so by Council. All servicing and maintenance of the site shall be the responsibility of the owner which is to be stipulated in the development agreement as deemed necessary.

(7) **Site Plan** – If Council has requested a site plan be provided, the development may only be approved in accordance with overall conformity to an associated site plan as approved by town Council.

12. SUBDIVISION

(1) Notwithstanding the provisions of this bylaw, subdivision is limited to the form of the four existing titles, each 0.06 ha (0.14 acres) in size, unless Council otherwise grants permission for lots to be further subdivided or for building condominium unit titles to be created.

(2) The Municipal Development and Subdivision Authority, acting in the capacity of the Subdivision Authority, shall make decisions on subdivision applications as directed by Council.

13. DELEGATION OF AUTHORITY

(1) Council shall be the Development Authority to decide on development permit applications for the discretionary uses or application for waivers of development standards. Council may also decide on development permit applications for permitted uses.

(2) The Development Officer, pursuant to section 641(3) of the Municipal Government Act may, with the direction of Council, act as the Development Authority and receive and decide upon development permit applications for permitted uses provided they conform to the standards of the bylaw.

14. APPROVAL PROCEDURE

(1) Where the Development Officer as the Development Authority has been delegated the authority to decide upon development permit applications for permitted uses and has done so, then immediately upon issuance of the development permit the Development Officer shall cause a notice to be published online on the Town's website or in an online news-site for the community stating the location of the property for which the application has been made and the use approved.

(2) Before consideration of a development permit application for a proposal requiring waivers or discretionary use on the subject property, Council shall:

(a) cause a notice to be issued by the designated officer to any person likely to be affected;

(b) ensure that the notice contains the date and time that council will hear the application for discretionary uses or application for waivers of development standards;

(c) hear any person that claims to be affected by the decision on the application;

(d) Council may then approve the development application with or without conditions or refuse the application with reasons.

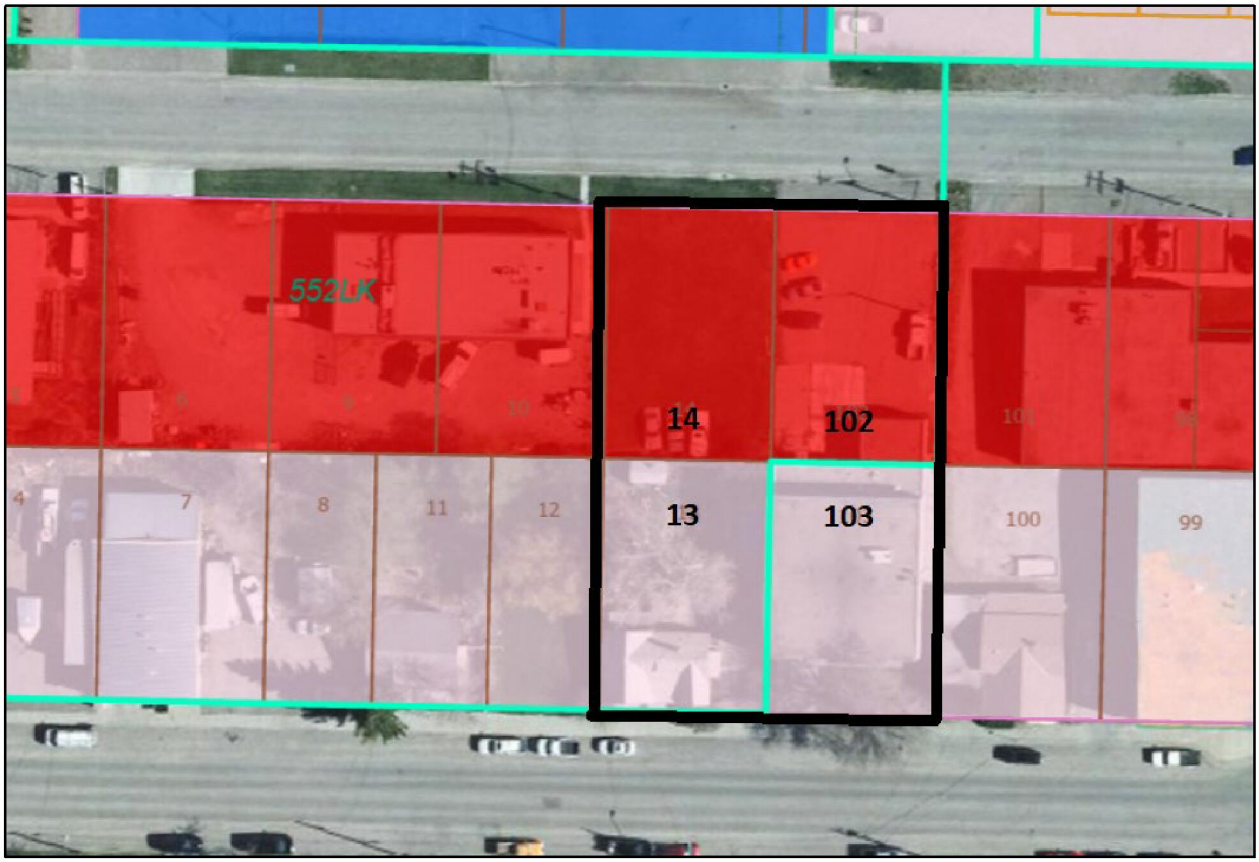
(3) Where Council has made a decision on a development permit application, the Development Officer acting on behalf of Council, shall cause a notice of the decision to be issued to the applicant and post a copy of the decision in the lobby of the town office.

15. APPEAL PROCEDURE

(1) Pursuant to section 685(4)(a) to the Municipal Government Act, if a decision with respect to a development permit application is made by Council, there is no appeal to the Subdivision and Development Appeal Board.

(2) If the Development Officer has been delegated the authority to decide upon development permit application as the Development Authority, then the appeal to the Subdivision and Development Appeal Board is limited to whether the Development Officer followed the direction of Council.

TOWN OF PINCHER CREEK



Land Use Bylaw No. 1547

Bylaw Amendment – Land Use Redesignation

Lot 14, Plan 552LK – From **Downtown /Retail Commercial – C2** to **Direct Control - DC**

Lot 13, Plan 552LK – From **Transitional Commercial – C2** to **Direct Control - DC**

Lot 103, Plan 460B – From **Transitional Commercial – C2** to **Direct Control - DC**

Lot 102, Plan 552LK – From **Downtown /Retail Commercial – C2** to **Direct Control - DC**

SCHEDULE 'B'

DIRECT CONTROL – DC BYLAW NO. _____

INTENT: To provide a means whereby Council may regulate and control the use, development, or subdivision on a site-specific basis to the following lands:

Lot 14, Plan 552LK - 656 Charlotte Street

Lot 13, Plan 552LK - 655 Main Street

Lot 103, Plan 460B - 659 Main Street

Lot 102, Plan 552LK - 659 Main Street

as shown on Schedule 'A'. For the purposes of using the existing two-storey building (former RCMP office) and allowing opportunity for medium-density housing and potential mixed-use commercial development in a form acceptable to Council, while also allowing development on the lots that conforms to Council's goals of supporting the viability of downtown through a mix of innovative housing, retail use, and professional or business services.

The development allowed is based on plans as approved by Council in consideration of the constraints of the site, compatibility with adjacent public, institutional, and commercial land uses, and on the basis the development must align with Council's vision and goals for the development of the site and the downtown area in general.

1. DEVELOPMENT CONTROL REGULATIONS

While this bylaw is in effect the following development control regulations shall apply and no development other than that prescribed for the following lots shall be undertaken unless otherwise approved by Council:

(a) Lot 102, Plan 552LK and Lot 103, Plan 460B **-** The existing building constructed in 1970 shall not be demolished and any use as outlined in Section 2, Permitted and Discretionary Uses, shall be approved by Council.

(b) Lot 13, Plan 552LK and Lot 14, Plan 552LK - The land uses, buildings and structures as stipulated in Section 2, Permitted and Discretionary Uses, may be considered in accordance with this bylaw.

2. PERMITTED AND DISCRETIONARY USES

Any use Council considers suitable may be considered as approved by Council.
Any use which is not authorized and approved by Council is a Prohibited Use.

3. MINIMUM LOT SIZE

The minimum lot size shall be as the existing titles for **Lot 13, Plan 552LK; Lot 14, Plan 552LK; Lot 102, Plan 552LK** and **Lot 103, Plan 460B,** or 0.06 ha (0.14 acres), unless otherwise approved by Council.

4. MINIMUM YARD SETBACK REQUIRMENTS

As authorized by Council.

5. MAXIMUM DENSITY AND SITE COVERAGE

The maximum number of dwelling units or other buildings and the maximum parcel site coverage is as authorized by Council.

6. ACCESSORY BUILDINGS AND STRUCTURES

(1) Any accessory buildings or structures shall not be located in a front yard or in the required setback from a public road or an easement.

(2) An accessory building or structure shall only be constructed after or in conjunction with an approved principal use or building on the parcel.

7. STANDARDS OF DEVELOPMENT

Any development standards as Council, being the Development Authority, considers necessary having regard to but not bound by Part 4.

8. APPROVAL PROCEDURE

(1) All submitted development permit applications shall be referred by the Development Officer to Council to decide upon.

(2) Before Council considers an application for a use in the Direct Control district, they shall:

(a) delegate that the Development Officer cause notice to be issued by the Development Officer in accordance with Section 21 of the land use bylaw; and

(b) hear any persons who claim to be affected by a decision on the application.

(3) Council may then approve the application with or without conditions or refuse the application.

(4) As part of the development application review process, the application shall be circulated to municipal administration and planning staff to provide input and recommendations on any proposal.

(5) Council shall delegate that the Development Officer issue a municipal development permit on Council's behalf with any conditions as imposed by Council.

9. OTHER APPLICATION REQUIREMENTS (AS MAY BE REQUIRED BY COUNCIL)

Prior to decision being made upon receipt of a development application proposal, Council may request any information, plans or studies be provided that it determines are necessary to make an informed decision on the application.

10. SUBDIVISION

(1) Notwithstanding the provisions of this bylaw, subdivision is limited to the form of the four existing titles, each 0.06 ha (0.14 acres) in size, unless Council otherwise grants permission for lots to be further subdivided or for building condominium unit titles to be created.

(2) The Municipal Development and Subdivision Authority, acting in the capacity of the Subdivision Authority, shall make decisions on subdivision applications as directed by Council.

11. DELEGATION OF AUTHORITY

Council shall be the Development Authority to decide on all development permit applications, including applications for waivers of any development standards established by Council if applicable.

12. APPROVAL PROCEDURE

(1) Before consideration of a development permit application Council shall:

(a) cause a notice to be issued by the Development Officer to any person likely to be affected;

(b) ensure that the notice contains the date and time that Council will hear the application for the proposed development;

(c) hear any person that claims to be affected by the decision on the application;

(d) Council may then approve the development application with or without conditions or refuse the application with reasons.

(2) Where Council has made a decision on a development permit application, the Development Officer acting on behalf of Council, shall cause a notice of the decision to be issued to the applicant and post a copy of the decision in the lobby of the town office or on the Town's website or social media site or both.

13. APPEAL PROCEDURE

(1) Pursuant to section 685(4)(a) to the Municipal Government Act, if a decision with respect to a development permit application in the Direct Controls district is made by Council, there is no appeal to the Subdivision and Development Appeal Board.

AGENDA ITEM NO: 8.1

Town of Pincher Creek

REQUEST FOR DECISION

Council or Committee of the Whole

SUBJECT: Council meeting September 25th, 2023	
PRESENTED BY: Angie Lucas, Chief Administrative Officer	**DATE OF MEETING:** 8/2/2023

PURPOSE:

The Alberta Municipalities Convention is scheduled to take place from September 26-29, 2023 in Edmonton. Members of Council will be driving up to Edmonton on September 25th or sooner and administration would like direction as to the status of the currently scheduled September 25th Regular Council Meeting, which conflicts with travel to Edmonton and possible early meetings on September 25th at the beginning of the convention.

RECOMMENDATION:

That Council for the Town of Pincher Creek agree to cancel the September 25, 2023 Council Meeting as quorum will not be met due to Council attendance at the Alberta Municipalities Convention taking place in Edmonton beginning on September 25, 2023.

BACKGROUND/HISTORY:

The Alberta Municipalities Convention is scheduled for September 26-29, 2023, with meeting opportunities for Council occurring from September 25th onwards and throughout the week of the Convention.

As the Convention starts early on Tuesday morning with formal training and meeting opportunities throughout the day it will be necessary for Council to drive to Edmonton on Monday September 25th at some point during the day or early evening.

The travel time to Edmonton may conflict with the ability for Councilors to attend the Regular Council meeting scheduled for Monday September 25th which creates the possibility that quorum is not met at the beginning of the meeting, which would include having a Council Agenda that has already been prepared and publicized with possible members of the public already listed to attend as delegations or for various items on the agenda.

ALTERNATIVES:

That Council for the Town of Pincher Creek commit to achieving quorum for the Regular Council meeting on September 25, 2023.

IMPLICATIONS/SUPPORT OF PAST STUDIES OR PLANS:

NA

FINANCIAL IMPLICATIONS:
NA

PUBLIC RELATIONS IMPLICATIONS:
There would only be one Regular Council meeting in September which would be on September 11th, 2023 if the September 25th Regular Council meeting is cancelled. The Committee of the Whole for that month is scheduled for September 6th.

ATTACHMENTS:
None at this time.

CONCLUSION/SUMMARY:
If Council would like the opportunity to drive to the Convention on Monday September 25th and attend any meetings or training opportunities on that day and during the evening before the official start of the Convention on Tuesday September 26th, it will be necessary to cancel the September 26th Regular Council meeting as quorum cannot be guaranteed.

Signatures:
Department Head: Angie Lucas

CAO: Angie Lucas

AGENDA ITEM NO: 8.2

Town of Pincher Creek

REQUEST FOR DECISION

Council or Committee of the Whole

SUBJECT: Courageous Companions Sponsorship Request	
PRESENTED BY: Angie Lucas, Chief Administrative Officer	**DATE OF MEETING:** 8/2/2023

PURPOSE:
To respond to the request for sponsorship request from Courageous Companions

RECOMMENDATION:
That Council for the Town of Pincher Creek agree to donate $_____ to Courageous Companions

BACKGROUND/HISTORY:
Courageous Companions is an extraordinary organization which provides certified service dogs to military veterans and first responders who suffer with physical and/or psychological injuries as a result of their service. Service dogs are provided at no charge, which is why Courageous Companions relies entirely on the support of individuals, service organizations and the business community. Please help by placing a sponsorship ad or message of support in our upcoming annual edition of Courageous K9 Magazine. In return, we will send you a full colour copy of the yearbook once it has been published. To learn more and to see our rates and stories from our last edition, please visit our website, www.courageousk9.ca. Without the support of the business community, this important publication would not be possible. We hope to count on your participation.

ALTERNATIVES:
accept as information

IMPLICATIONS/SUPPORT OF PAST STUDIES OR PLANS:
NA

FINANCIAL IMPLICATIONS:
The cost of the donation

PUBLIC RELATIONS IMPLICATIONS:
Its a great cause to support

ATTACHMENTS:
letter-1 - 3222
rates-1 - 3222

SAMPLE_PAGES

CONCLUSION/SUMMARY:
To respond to the request for sponsorship request from Courageous Companions

Signatures:
Department Head:

CAO:

Courageous Companions
Compagnons Courageux

Dear Prospective Advertiser:

Thank you so much for showing interest in the "Courageous K9" magazine for Courageous Companions. Courageous Companions is a non-profit charitable organization which provides to military service men and women, veterans, and first responders diagnosed with an operational stress injury to be paired and trained with a service dog. These dogs minimize the individual's functional limitations resulting from their injury. Courageous Companions is volunteer run and governed by a board of directors, most of whom have ties to the Canadian Armed Forces or First Responder field.

Each Service Dog undertakes specialized training to provide for the needs of the individual for whom they are being trained. The two are then trained together to become a service dog team. Service dogs are an additional treatment option to psychiatric and social support. The dogs have been shown to have a calming effect on PTSD sufferers. Among other effects, a service dog can provide the following:

- psychiatric support and interruptive behavior;
- deliberate disobedience to redirect the clients' behavior, then tactile stimulation to disrupt emotional overload;
- wakening the client from nightmares;
- deep pressure grounding for a calming effect;
- crowd control and panic prevention in public;
- arousal from fear paralysis or a disassociation spell;
- assisting a client to leave an area by finding an exit;
- allowing the client to feel calm enabling personal space expansion.

Courageous Companions provides all the funding related to acquisition, training, certification, equipment and transportation of the dog and person team. We depend on sponsorship and donations as the average cost of training, certifying, and maintaining the certification of a service dog is between $15,000 and $20,000. The initial training takes approximately two years to complete. By placing an advertisement, you will be helping to improve an individual's quality of life by providing them with a specially trained companion, specifically chosen to help reduce the effects of their post-traumatic stress injury.

Sincerely,

John Dugas (K9 Mia)
Chairman
Board of Directors
jdugas@courageouscompanions.ca


COURAGEOUS COMPANIONS
CANADA
COURAGEOUS K9

Chairman's Introduction

Welcome to the second release of Courageous K9, a magazine for Courageous Companions. The organizations that have supported this edition by advertising their businesses have greatly assisted us in continuing to fund, train and certify service dogs across Canada for our veterans and first responders. This is the second of five magazines that will be released over the next five years outlining service dog related materials. I hope you enjoy it.

Sincerely

John Dugas (K9 Bailey)
Chairman
Courageous Companions

Content

Visit us online at courageouscompanions.ca

twitter.com/CourageousK9

facebook.com/CourageousCompanions

Who We Are

Courageous Companions is a non-profit charitable organization which provides military service men and women, veterans, and first responders diagnosed with an operational stress injury to be trained with a service dog. These dogs minimize the individual's functional limitations resulting from their injury. Courageous Companions is volunteer run and governed by a board of directors, most of whom have ties to the Canadian Armed Forces or First Responder field.

Each Service Dog undertakes specialized training to provide for the needs of the individual for whom they are being trained. The two are then trained together to become a service dog team. Service dogs are an additional treatment option to psychiatric and social support. The dogs have been shown to have a calming effect on PTSD sufferers. Among other effects, a service dog can provide the following:

- psychiatric support;
- interruptive behavior;
- deliberate disobedience to redirect the clients' behavior, then tactile stimulation to disrupt emotional overload;
- wakening the client from nightmares;
- deep pressure for a calming effect;
- crowd control and panic prevention in public;
- arousal from fear paralysis or a disassociation spell;
- prevention or combating of emotional overload;
- assisting a client to leave an area by finding an exit;
- home sweep checks;
- ability to warn the client of hazards they may not be aware of;
- allowing the client to feel calm enabling personal space expansion.

Veterans with additional disabilities can be helped by dogs trained to do the following:

- detect seizures, high blood pressure, diabetes etc.;
- compensate for mobility issues i.e. prosthetic limbs, balance or bracing;
- assistive tasks, including but not limited to:
- transition from chair to bed;
- balance to retrieve objects;
- helping a person to rise or steady themselves;
- backpacking medical supplies & information speech impairment tasks;
- alerting their partner to the cry of someone in distress;
- alerting partner to a ringing doorbell;
- alerting partner to a smoke alarm & assisting them to the exit;
- harness work for an ambulatory partner. II

Courageous Companions provides all the funding related to acquisition, training, certification, equipment and transportation of the dog and person team.

Courageous Companions depends on sponsorship and donations to continue matching service dogs with those in need. The average cost of training, certifying, and maintaining the certification of a service dog is between $15, 000 and $20,000. The initial training takes approximately two years to complete.

As of 2019 Courageous Companions has provided over a 185 service men and women, veterans, and first responders in need. These service dogs have helped to decrease depression, need for medication, aggression and suicidal thoughts, and increase confidence, sense of belonging, patience, and emotional stability.

All donations go directly to improving the individual's quality of life by providing them with specially trained service dogs, specifically chosen to help reduce the effects of post-traumatic stress injury.

MSAR

MSAR is the certifying authority for Courageous Companions. Upon request, MSAR trains dogs for Courageous Companions and then provides the training and guidance for service dog teams. As the trainer and certifying authority, MSAR addresses the potential conflict by having the training for its teams separated from all certification activities; that is, those involved in the certification of a specific team have not been involved with either the person with a disability, nor the partner Service Dog.

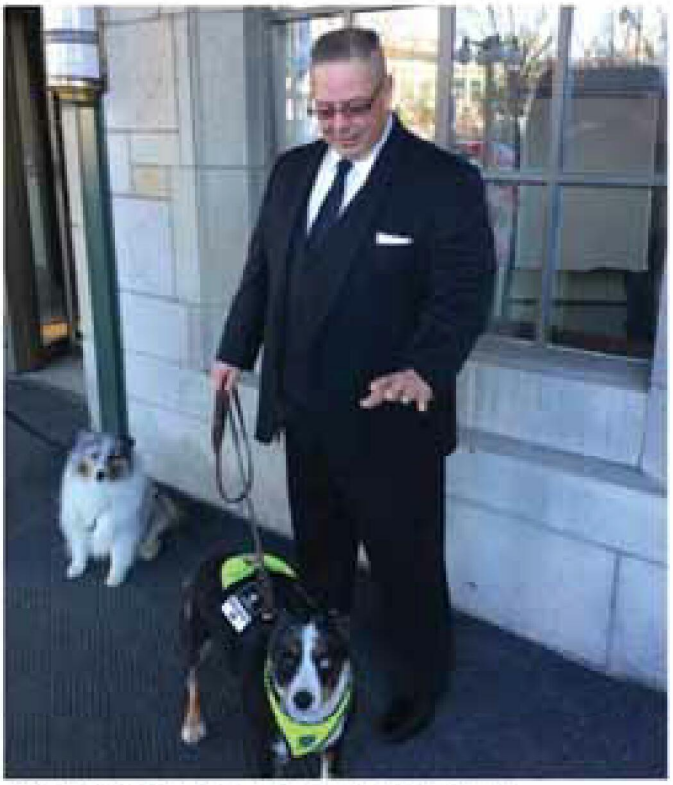
MSAR was started by George Leonard in partnership with Aboriginal elders, First Nation leadership, and dedicated volunteers to address the growing concern of missing Aboriginal persons. The Association is a non-governmental organization that is partnered with a registered charity in good standing. MSAR is the only agency directed by Aboriginal elders, advisors, and First Nation leadership. For the past 20 years, MSAR has been working on the research, development, and implementation of service dogs in all capacities—autism, dementia, PTSD, seizure dogs, therapy, bipolar, depression (and forms of), disability, and assistance. This practice has focused on the mental health service dogs, with over 500 dogs trained in over 200,000 hours of operational time. The program started with the Elite Therapy Dog program and expanded to service-dog status due to its dramatic positive results.

MSAR started the Courageous Companions program to start working specifically with PTSD soldiers after one of its members, a former Canadian Forces member, stepped forward and asked for assistance from the Association.

This innovative practice is provided by volunteer dog trainers and is not funded by Veterans Affairs Canada, Department of National Defense, or the Canadian Legion, although these bodies do endorse the program. Participants who are paired with a service dog are responsible for veterinary care and food costs.

MSAR started the first and largest service dog program for veterans and first responders as featured on W5 - K9 Comrades the most viewed show in W5 - CTV history, as well as Animal Planet (Collar of Duty), Canada Am, Good Morning America, Ice Road Truckers and all major news outlets broadcasting in Canada (including CNN).

MSAR Elite Service Dog program trains world class service dogs for any disability and some even one of a kind service dogs. MSAR was the first organization to have PTSD service dogs. And their founder was the first, first responder in Canada with a PTSD service dog. MSAR was the first service dog agency to advocate and push for a National Service Dog Standard. MSAR also has multiple dogs nominated and inducted into the Purina Animal Hall of Fame - K9 Stinky would be the best example as she was honored for saving 7 veterans lives suffering with PTSD.



MSAR Certified Master Dog Trainer George Leonard and his service dog K9 Bennie

Our Standards for Service Dog Training

All our service dogs are trained to MSAR Standards http://courageouscompanions.ca/wpcontent/uploads/2019/01/Training-and-Certification-Standard.pdf which has been recognized by the Canadian Armed Forces in DAOD 2005-0, Service Dogs and DAOD 2005-1, Service Dogs Access to Defense Establishments.

MSAR's standard was framed by a Standards Specialist in Ottawa who is the retired Director of Standards, Standards Council of Canada (SCC). The standard was prepared by eight members of a working group following public consultation.

The objectives of the MSAR standard are:

- Indicate the pre-requisites to be recognized as a team (that the person has a disability, and the service dog has special abilities [achieved through training] to help the person mitigate their challenges);
- Ensure the team is safe in public, and safe to the public;
- Ensure the ability of the team to function under normal conditions as well as unusual circumstances;
- Provide guidance to regulators on the factors to be considered and regulated; Promote the well-being of the service dog as well as the human-animal bond;
- give background (rationale) for the requirements provided;
- Be useful to trainers as a baseline to be achieved when training dogs as well as persons with a disability;
- Be useful as the basis for certification (of the team).

Our standard is composed of five sections covering various aspects of Persons with a Disability Teamed with a Service Dog; the five sections cover:

- Section 1 - General Requirements
- Section 2 - Performance in Public
- Section 3 - Performance (Enhanced)
- Section 4 - Requirements for Response to and Detection of Disability Related Incidents
- Section 5 - Requirements for the Care of the Service Dog

The MSAR standard was drafted in accordance with the rules of the International Organization for Standardization and the International Electrotechnical Commission, ISO/IEC Directives, Part 2, Rules for the structure and drafting of International Standards. It is written to present performance requirements to the greatest extent possible.

The MSAR Standard are public documents to ensure public safety when it comes to training and testing service dogs.

Our certification testing does not simply test obedience but ensures the dog will work for the handler during moments of duress, activation, etc., something most service dog testing with other organizations does not validate.

Our testing ranges between three and five days depending on the level of testing the team is doing and follows a minimum of one year of training together as a team. The dog also cannot be tested until it reaches a minimum of two years of age. Our certification test encompasses all aspect of assessment (obedience, task assessment, public access, etc. to ensure they are safe to operate in public.

Our testing is done over 3-5 days and in our professional opinion most other organizations comes no where near our assessment standard to effectively certify a dog and handler in the time frame it is administered.

Our test is based on feedback from the Department of National Defence in 2010 who wanted absolute assurance the team would be safe to the public while operating as a service dog team, knowing the condition of their PTSD disability and the specialized training soldiers undergo which could be result in a dangerous encounter when denied access or confronted.

Depending on the type of disability, triggers and activation associated with some of our program participants, Courageous Companions also conducts an off-leash certification.

- This certification requirement was verified after data analysis from an International PTSD Service Dog Study that MSAR Service Dogs was involved in.
- This study was done in 14 countries using 500 veteran and first responder service dog teams.
- Study data was reviewed by medical professionals who determined this type of certification is required in some circumstances.
- This certification test is five days long and done completely off leash where the dog must always remain within 6 feet of the handler throughout the test.

What is Post Traumatic Stress Disorder -PTSD

Post-traumatic stress disorder (PTSD) is a mental illness. It often involves exposure to trauma from single events that involve death or the threat of death or serious injury. PTSD may also be linked to ongoing emotional trauma, such as abuse in a relationship. Something is traumatic when it is very frightening, overwhelming and causes a lot of distress. Trauma is often unexpected, and many people say that they felt powerless to stop or change the event. Traumatic events may include crimes, natural disasters, accidents, war or conflict, sexual violence or other threats to life or safety. It could be an event or situation that you experience yourself or something that happens to others, including loved ones. PTSD causes intrusive symptoms such as re-experiencing the traumatic event. Many people have vivid nightmares, flashbacks, or thoughts of the event that seem to come from nowhere. They often avoid things that remind them of the event—for example, someone who was hurt in a car crash might avoid driving. PTSD can make people feel very nervous or 'on edge' all the time. Many feel startled very easily, have a hard time concentrating, feel irritable, or have problems sleeping well. They may often feel like something terrible is about to happen, even when they are safe. Some people feel very numb and detached. They may feel like things around them aren't real, feel disconnected from their body or thoughts, or have a hard time feeling emotions. People also experience a change in their thoughts and mood related to the traumatic event. For some people, alcohol or other drugs can be a way to cope with PTSD. (Source: Canadian Mental Health Association)

PTSD is marked by clear biological changes as well as psychological symptoms. PTSD is complicated by the fact that people with PTSD often may develop additional disorders such as depression, substance abuse, problems of memory and cognition, and other problems of physical and mental health. The disorder is also associated with impairment of the person's ability to function in social or family life, including occupational instability, marital problems and divorces, family discord, and difficulties in parenting.

MSAR Dog Trainer Paige Hawks and MSAR Service Dog Earl (Retired)

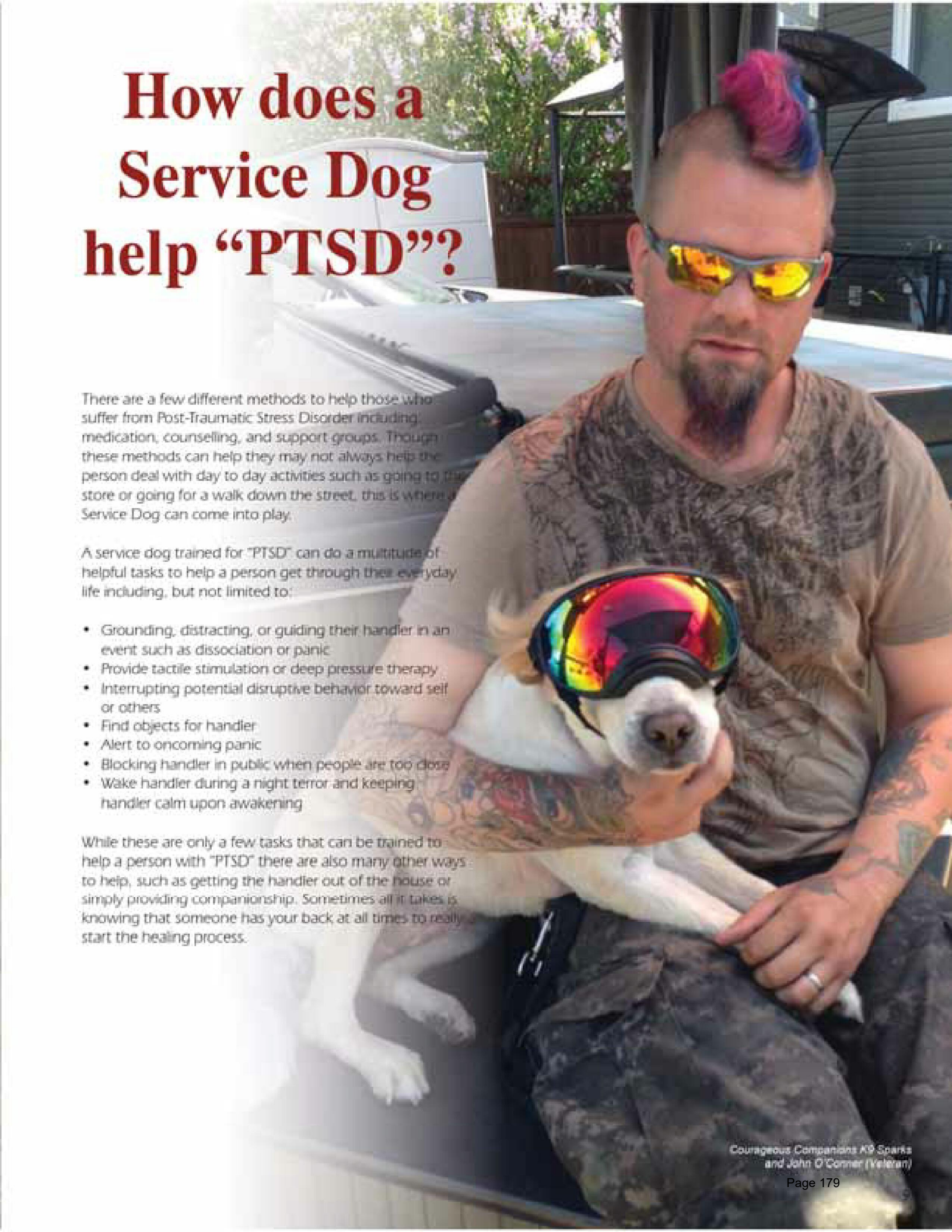
How does a Service Dog help "PTSD"?

There are a few different methods to help those who suffer from Post-Traumatic Stress Disorder including: medication, counselling, and support groups. Though these methods can help they may not always help the person deal with day to day activities such as going to the store or going for a walk down the street, this is where a Service Dog can come into play.

A service dog trained for "PTSD" can do a multitude of helpful tasks to help a person get through their everyday life including, but not limited to:

- Grounding, distracting, or guiding their handler in an event such as dissociation or panic
- Provide tactile stimulation or deep pressure therapy
- Interrupting potential disruptive behavior toward self or others
- Find objects for handler
- Alert to oncoming panic
- Blocking handler in public when people are too close
- Wake handler during a night terror and keeping handler calm upon awakening

While these are only a few tasks that can be trained to help a person with "PTSD" there are also many other ways to help, such as getting the handler out of the house or simply providing companionship. Sometimes all it takes is knowing that someone has your back at all times to really start the healing process.



Courageous Companions K9 Sparks and John O'Conner (Veteran)

International PTSD Service Dog Study

In 2016, MSAR announced the conclusion of an international study on training programs used for psychiatric service dogs. The study was conducted by an informal consortium of K9 trainers from thirteen different countries, including data from 500 service dog teams. The findings from this study will have a groundbreaking impact on MSAR's internationally recognized post-traumatic stress disorder (PTSD), psychiatric service dog program and will be reflected in MSAR's current and future discussions on developing a national standard for psychiatric service dogs.

PTSD is a complex condition and service dog training must reflect the different traumas and triggers that individuals may have. It has become clear that treating PTSD with a service dog requires a whole lifestyle change which must be reflected in the breed of service dog selected and the regimen used for pairing the service dog team. The consequences of failure are clear; poorly trained service dogs do significant damage to the handler relying on them as part of their treatment and represent a significant public liability risk through the possibility of dog on dog or dog on person violence.

MSAR continues to emphasize that a proper training and certification model is critical to the successful use of psychiatric service dogs as a therapeutic aid for our veterans and first responders dealing with PTSD in all its forms.

CATEGORIES OF PTSD

The PTSD Service Dog study determined that PTSD was broken into 6 categories.

1. Combat/ Operational – military
2. Visual/ Scents/Environmental (as seen by First Responders)
3. Complex PTSD – Childhood Trauma
4. Involuntary Muscle Agitation – Very rare
5. Forcible Confinement
6. Sexual/Psychological, Physical Abuse

PTSD SERVICE DOG MODELS

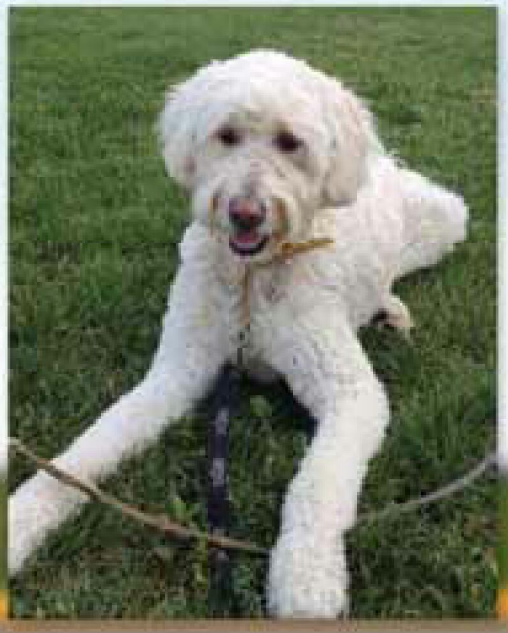
With these 6 categories in mind, the study determined the 4 Types of PTSD Service Dogs and PTSD Training Models.

1. Model 1 – Combat/ Operational
2. Model 2 – Visual/ Scents/Environmental
3. Model 3 – Involuntary Muscle Agitation
4. Model 4 – Complex PTSD, Forcible Confinement, Sexual / Physical Abuse and Self Harm/ Self Medication/ Addictions.

BREEDS SUITED FOR PTSD SERVICE DOGS

The study also concluded the best Breeds suited as PTSD Service dogs. This does not mean other breeds cannot be utilised. The study concluded the following breeds demonstrated the greatest amount of success for working in the field of PTSD.

1. Labradors
2. Golden Retrievers.
3. Poodles



Courageous Companions K9 Barney (PTSD Service Dog) - Golden Retriever

MSAR K9 Reddi (Guide Dog) - Standard Poodle

Courageous Companions K9 Chance (PTSD Service Dog) - Chocolate Labrador Retriever

Breed selection is determined by tasks, handler experience and work environment. What the study has determined is that dogs bred for guard work require confident handlers and are not recommended for psychiatric work - i.e. Shepherds, Mastiffs have a lead or follow mentality and can treat the handlers a resource or possession and protective traits become prevalent.

Examples:

- A person suffering from PTSD Sexual Assault will collapse upon themselves and the dog must be an anchor, provide compression and direct attention to the handler. Not protect the handler.
- A person suffering from PTSD from military conflict can be combative when approached, react in anger, and may bolt. Thus, the dog needs to interrupt and de-escalate the situation and redirect the handler's attention. Not protect the handler.

The process of the study revealed that the best method for dealing with PTSD is a complete medical treatment plan. For the purpose of simplicity, we have broken it down into an eight-point program.

1. Detailed and quality psychiatric support.
2. The introduction of medications as a stabilizer with the gradual removal of these medications as the patent improves.
3. Regulation of sleeping. Minimum 7-10 hours per day with addition of a 20-40-minute nap during the day as needed.
4. Support from key groups like family, friends, and peers.
5. The introduction of a professionally trained service dog to match specific PTSD Categories which reflects the disability of the patient.
6. A Natural diet of fresh foods including fruits, vegetables, meats and dairies with limited processed foods and the elimination of added sugars from the diet.
7. Daily physical activity consisting of 20-30 minutes of walking and weight lifting, 2-4 times per week.
8. Activities should be included into daily routines to build structures and a pattern of positive behaviour and a sense of control.

Choosing a Service Dog Provider

INSURANCE / STANDARDS / CERTIFICATION / AFTERCARE / SUPPORT (LEGAL, SCHOOL).

Choose the best organization that fits your needs, there has been a recent influx of service dog providers since MSAR spot lighted the need for veterans on W5 - Canine Comrades. Most are still in the beginning stages and have limited understanding of service dogs and especially PTSD. MSAR started and developed our PTSD service dog program from a study conducted from the turn of the century, modelled on our Therapy, Facility and Emotional support dogs. MSAR has a solid background and years of research and development of service dogs - so ask what experience they have and proof of this.

Ask if the company has liability insurance and how much, generally you are looking for at least 2 million liability. It is not an easy process to get insurance for service dog providers and many are operating without insurance.

TALK TO THEIR CLIENTS - SEE THEIR DOGS.

We suggest that you go to their Facebook page and see what dogs they are promoting, many organizations only train a few dogs and some just purchase dogs and pass them along. See if they are promoting their dogs or stories from other people or organizations on the internet. Ask to see their dogs, talk to the people that have their dogs.

TRAINERS – CERTIFIED MASTER DOG TRAINER (CMDT).

What is their training system, their service dog standard? Who are their trainers and what is their background, do they have a trainer development course and require their trainers to be certified and insurance by their organization. What levels of service dog training do they have and what is required of you to become a certified service dog team. We recommend that you be skeptical if they offer you a dog already done, if there is limited training time and you are immediately certified. All our dogs are trained and placed with clients (times vary) from 1 year to 2 years of age and then the client must work and train with their dog for at least six months prior to challenging the certification test. Our tests take multiple days and really challenge the handler as a team to make sure the dog and handlers are working together to meet the needs of the disability and functioning in a safe public work environment.

LEVEL OF SERVICE DOG KNOWLEDGE.

Courageous Companions utilizes MSAR as its certifying authority and expertise encompassing service dogs and service dog training. MSAR has extensive background in the development of service dogs and PTSD service dogs. MSAR was the first provider to deliver PTSD service dogs and worked extensively with the Winnipeg Foundation to build a PTSD training model starting the training of service and working dogs centered around military, first responders and the client base of civilians dedicated to the principle of providing highly skilled and effective Certified Service Dogs to those whose lives depend on them.

ARE THEY TRYING TO SELL YOU SOMETHING?

For anyone that has applied to Courageous Companions they know that the first thing we try to do is talk you out of getting a service dog. It is a big responsibility and we want to make sure that adequate thought has been put into getting a dog, many people are desperate and will try anything. We slow down the process for the safety of the person and the dog to confirm that a service dog is needed. We receive hundreds of phone calls and emails a month. Only a few turn into program participants and receive a service dog. Sometimes people just want to ask and see if it fits for them, because how many times do people go looking for a service dog.

An example would be a person with PTSD that wants no public interaction and wants to be a fly on the wall, this is virtually impossible because of the person having an invisible disability - some people think that they are the trainer and not the handler of the dog. So this person would have regular interaction and sometimes even challenged as to why do you need a service dog - you're not blind. Courageous Companions asks for a full family and medical team evaluation to confirm that this is what is best for all before getting service dog.

SUPPORT.

Discuss with the organization what kind of support that they offer for ongoing training and recertification. Do you have a point of contact that can be reached should an emergency arise, have questions regarding care of the dog, travelling, housing, or employer issues related to having a service dog. Is there legal support should you be refused access?

In conclusion, take your time and research (google) the organization to find the right one that meets your needs. Ask lots of questions, be skeptical and remember what a huge responsibility service dog ownership is.

MSAR Master Dog Trainer Janet Priest and K9 Ben

Courageous Companions K9 Phelan and Courageous Companions Director Kyle Dalum (Veteran)

Service Dog Information

The information expressed relates to Canada, we are not discussing The United States of America.

- A Service Dog is a canine specifically trained to minimize functional limitations of a person with a disability.
- Service dogs may also be referred to as assistance dogs.
- Includes but not limited to guide, mobility, medical alert,
- medical response, hearing, psychiatric, autism and PTSD.
- Does not include therapy, emotional support / companion, facility dogs.

ACCESS & RIGHTS

Service dogs have access to any public space that the public is allowed to go - example a service dog is allowed in the restaurant with its handler but not in the kitchen where food is prepared. Dogs are allowed in any public transit, building - basically anywhere that the handler can go the dog can go, and many are allowed with the handler in the ambulance or hospital. Access in any condo no matter what the pet policy is, and employers must also allow the dog at work - with a few exceptions where the dog may be in danger or at risk of harm due to a harsh or dangerous work environment. An example would be a service dog is allowed with a veteran on base and at work but with a developed SOP (standard operating procedure) the dog would not be allowed in a metal fabrication shop or heavy vehicle repairs due to the dangers.

VISIBLE VS INVISIBLE.

One issue that people that are looking for a service dog must understand that with having an invisible disability such as PTSD - people will ask what the dog is for, not sure if it is for the handler or someone else and many of the questions can be intrusive and handlers must be taught how to handle this type of interaction with the public.

PUBLIC MAGNET

People have a natural draw to dogs and being in public with a dog has its challenges as people feel compelled to talk to you about their dog or your dog or even pat and engage with the service dog. This is also something that people have to be trained to handle and deal with being in public.

Types of Support Dogs

The following are not considered service dogs and do not have the same access rights.

EMOTIONAL SUPPORT ANIMAL - An emotional support animal (ESA) is a companion animal that does not have any specialized training, but provides comfort and support to a person with or without a disability. This type of dog does not have public access rights.

THERAPY DOG - Therapy dogs are personal pets who offer support and companionship to individuals or groups of individuals in long-term care facilities, hospitals, or even in schools. Many Therapy groups or facilities have their own therapy programs and acceptance is based on dog's temperament and the owner's ability to properly and safely handle their dog in a variety of situations. These dogs may or may not have training. This type of dog does not have pubic access rights, they are permitted at the assigned location.

FACILITY DOG - A specially trained dog that is working with a volunteer or professional. The work of a facility dog can include visitations or professional therapy in one or more locations. Public access is permitted only when the dog and handler, who is a trained volunteer or professional, is directly working with a client with a disability.

FAKE SERVICE DOGS - There are internet websites that offer registration to people for their "service dog". Unfortunately, people that are owner training or have a dog that may not qualify as a service dog (emotional support) purchase this gear and commence public access with their dog. Many without any formal training and assessment for the ability of the dog for public access or delivering on the tasks needed to be a service dog. The problem that arises is if something happens in public or to the public from one of these dogs; a legal case may be launched and then the problem will arise of the dog's training and if it is a real service dog. Most people and many agencies would not pass this type of audit and review. And for those that do not, they could be charged with having a fake service dog

Service Dog Trainer Sam Dubas and her MSAR Service Dog Molly

Owner-Trainer Service Dog Program

Courageous Companions' signature service is a training program where certified dog trainers help identify, select, train and partner a suitable K9 with a Handler. Another method to enter the service dog program is where individuals train their own K9 (called Owner-Trainers). The following information is meant to clarify and outline our policy for Owner-Trainers, and to provide information for individuals who may be considering applying to our programs under the Owner-Trainer path.

It is very important for any person thinking about the Owner-Trainer path to understand that this is a very challenging undertaking. Over their decades of operations, MSAR (the CCI certifying body) has found the general failure rate of the owner-trained teams' that are evaluated by MSAR is 80 percent. Comparatively speaking, teams that work with us through our signature service consistently achieve full certification.

Seeing how much time, money and effort was being spent on unsuccessful teams, we wanted to know why. Our certifying body conducted an internal audit, so we could discover why the failure rate is so high. There were many reasons why there is only about a 20% success rate for Owner-Trainer teams.

MEDICAL CONDITIONS

Consider in the general population, people have difficulties obedience training their dogs themselves and often go to obedience schools. This level of training is much lower than the standards expected of service dogs to operate in the public. Some people that have PTSD, anxiety or depression are unable to deal with the stresses of selecting, socializing, and training a dog in various settings. Canines innately detect this negative energy, which results in unstable dogs.

DUAL-ROLE CHALLENGES

A certified service dog must be able to undertake a minimum of 3 tasks to mitigate the disability of their handler. Owner-Trainers have found it very difficult to train their K9 to respond to their conditions or symptoms as the training requires the individual to be actively experiencing the condition. For example, some participants with PTSD have their K9 trained for nightmare interruption; a skill that is impossible to owner-train. The same is true for anxiety interruption, waking from medication induced sleep conditions, and many others K9 skills that are very helpful to a handler, but cannot be properly trained into the K9 by Owner-Trainers without a lot of help by a knowledgeable trainer.

TASK OVERLOAD

In order to imprint tasks, use treat training methods, and to know when to dole out affection in order to reinforce the proper and positive behaviours assistance is usually needed to foster learning and a safe environment. This is critical to producing stable and receptive working dogs. Further, working with end-users to establish realistic and responsible goal setting is an important part of the process.

COST

Many people think that the Owner-Trainer path will be more economical because they already have a K9. Unfortunately, this is not true. We have found that Owner-Trainer teams cost just as much, if not more than teams that enter through our signature service. Why is that? Because frequent training setbacks caused by the reasons mentioned above require additional resources to get the team back on track. Once a team joins the program we want to see them succeed, and that often means partnering them with a qualified trainer to make up the difference in skill set. This is costly, since we pay our trainers fair rates for their time and skill. (FYI – A service dog fully trained and partnered with their Handler under our signature service costs $15-$20K or more).

6 TYPES OF PTSD

Did you know that there are six types of PTSD? We specialize in training four of the six types of PTSD dogs to ensure the right fit for the handlers and their dogs. Owner-Trainers usually do not have the necessary trainer skills, have access to qualified mentors or a support system to help them train their dogs. A support network is also needed for ongoing success.

OUR OWNER-TRAINER PROGRAM ELIGIBILITY CRITERIA

It is important for individuals interested in undertaking the Owner-Trainer program understand that some breeds are more challenging to train as productive service dogs. This should be kept in mind, as the goal of undertaking this rigorous training program is to successfully graduate a productive and helpful service dog that will first and foremost help the Handler with their disability. Many individuals want to enter the program through the Owner-Trainer path because they have a pet that they already have a very strong bond with. An emotional bond with the K9 is a very important part of the trust relationship required for a successful service dog team. However, re-training and re-purposing the life of a pet into a service dog nearly always results in an unsatisfactory performing K9.

Research shows that there are ideal breeds to undertake the job of a service dog, and other breeds that are simply not suitable. Handlers' are free to enter our program with almost any type of dog; however, we have found the best breeds to work with are:

- Golden Retrievers
- Labrador Retrievers
- Poodles

Note: we will not allow any breed (or mixed breed) to enter the program that is banned in any Canadian jurisdiction

The dog must be a minimum of six months of age and not older than four years of age.

The dog must be spayed or neutered before working in public spaces prior to full certification being granted.

The initial assessment of the dog is done at pet friendly locations wherever pets are allowed. This assessment also includes the Public Access Test. Dogs exhibiting severe stress, fear or aggression are disqualified.

THE APPLICATION PROCESS

The next step in this process is that documentation is submitted to confirm that the individual has a disability. This information is protected under the province of The Freedom of Information and Protection of Privacy Act along with any other relevant information on the application form.

Step three encompasses a mandatory probationary period whereby the service dog team works in public spaces with an MSAR / Courageous Companions trainer for 20 one-hour sessions with the dog in a training harness. The goal of these training sessions is to rule out any signs of dog aggression, fear, or severe stress. Handlers' typically commit to participating in these training sessions once or twice a week over a three-month period.

Once the team has made it through the probationary period, the team must then take a Public Access Test. This test assesses the dog's ability to remain stable and focused on its handler even when various stimuli are introduced. The dog cannot express any fear-based aggression. Successful teams are issued a harness. Next comes six months of intensive training with a local dog trainer who is willing to work collaboratively with MSAR. This whole process takes anywhere from one year to a year and half, before a final certification test is administered.

SERVICE DOG TEAM CERTIFICATION

Fully certified teams undergo a 3 to 5-day testing period depending upon the nature of their disability, life altering injury, or chronic illness. This span of time builds in flexibility so as not to overwork the team or cause unnecessary stress or hardship.

RECERTIFICATION

Re-certification of service dog teams depends on the type of disability. For example, a dog trained to work with a handler who takes seizures is assessed annually. Whereas a dog that works with a handler with PTSD is assessed every three years. Help is available when needed.

CERTIFICATION CHALLENGE TEST

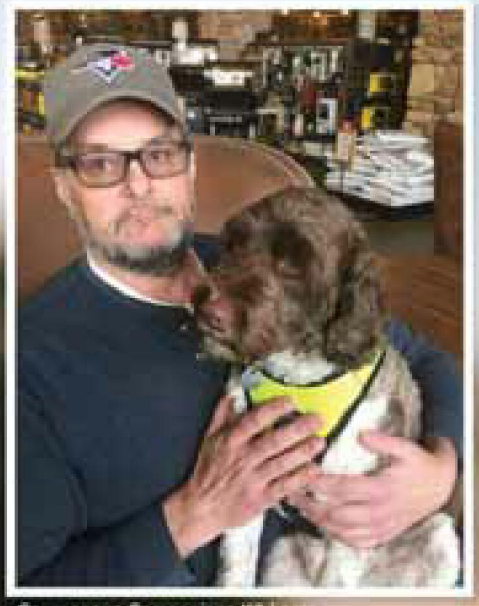
Individuals that believe they are ready to be evaluated over a three to five-day period may do so. In this case, the dog must be a minimum of two years of age.

OUR COMMITMENT TO QUALITY ASSURANCE AND CLIENT SATISFACTION

Courageous Companions and our certifying body MSAR are dedicated to offering ongoing support. As a result, a virtual video series has been developed which is comprised of 167 comprehensive videos that walk people through this process one-step at a time. These resources are particularly helpful for people who live in remote areas who cannot access a local trainer to assist them and/or those who cannot afford to pay a trainer.

We stand by our teams and truly want the Service Dog and Handler team to be successful.

Courageous Companions Director Julie Letal and K9 Chance (RCMP).



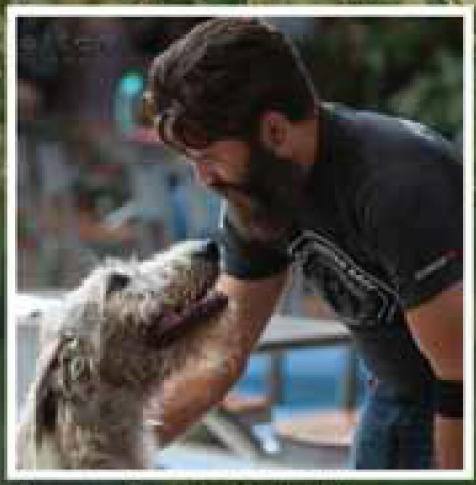
Courageous Companions K9 Leela and Ray Clouthier (Veteran).

Courageous Companions K9 Leeva and Trish Krauchar (First Responder).

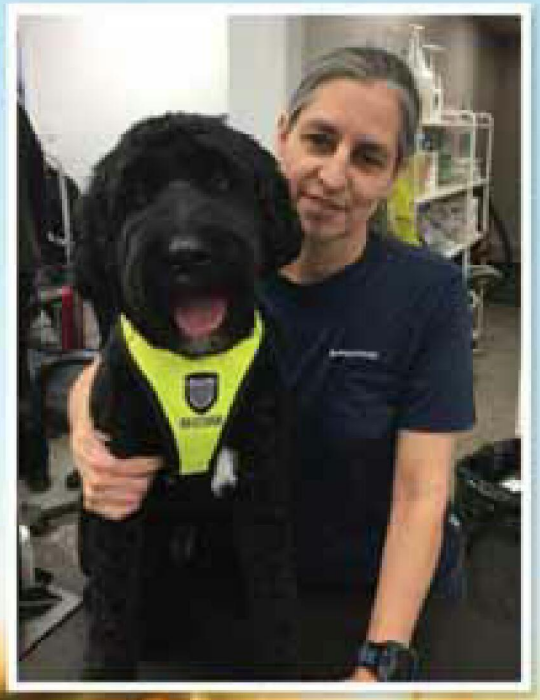
Courageous Companions K9 Flo and Keith Campeau (Veteran).

Courageous Companions K9 Hook and Elizabeth Durette (Veteran).

Chairman of Courageous Companions John Dugas (Veteran) and K9 Bailey.



Courageous Companions Director Kyle Dalum and K9 Phelan (Veteran).



Training

The initial training takes approximately two years to complete and is broken into four levels.

LEVEL 1 – DOG AND TRAINER

- Level 1 is where the dog is acquired and introduced to its trainer. For next 8-12 months, the dog lives with its trainer in a family setting, becoming familiar with residential pets and a family lifestyle. Training is slowly introduced based on the dogs age. If the dog is puppy, training does not normally start until six months of age. Foundation training begins with basic obedience;
    - Temperament testing.
    - Potty training.
    - Crate training.
    - Sit, stay, down, heel.
- As the dog matures the obedience training becomes more advanced and the puppy mental ability is challenged through a regulated training cycle by being exposed to increasingly more public settings.
    - Loading and unloading from a vehicle.
    - Sit, stay, down with distractions (dogs, food, etc).
    - Reaction to distracting sounds, cats, dogs, etc
    - Interaction with strangers
    - Heeling on and off leash.
    - Moving through doors, elevators, etc
- If there are any specific disability requirements the dog must learn for its future handler, task specific training begins at this level. During this level, the dog is normally spayed or neutered.

LEVEL 2 – PUBLIC ACCESS TESTING, HANDLER AND DOG TRAINING

- Level 2 is where the dog is paired with its handler and they undergo a Public Access Test (PAT) which is required to work in public spaces. The Service Dog team then undergoes five days of specific training where they learn to function as a team in a public setting. Upon completion of the Public Access Test and the five days of training they formally become a Service Dog Team in Training. Training done at this level includes, but is not limited to;
    - Loading and unloading from a vehicle.
    - Public access training (shopping, gym, transit).
    - Recall through areas with distractions, groups of people, past dogs with handlers.
    - Down/ stay with stationary and moving distractions.
    - Functioning with distractions (strangers, dogs, children, etc).
- They then go home and are expected to continue to bond and train for an additional 8-12 months, to prepare for certification testing. Depending on their location the Service Dog Team in Training is provided guidance from MSAR via telephone or visits. Some locations have Peer Groups that train weekly and new teams can train with these groups. Training over the next year focuses not only on obedience, but bonding as well.

LEVEL 3 – HANDLER AND DOG CERTIFICATION

- Level 3 is where the service dog team completes the final test for full certification. This process takes several days and a score of 90% or greater is required to pass. During this phase, the dog must be at least 2 years of age (neutered / spayed) and the team must have worked at Level 2 for a minimum of 6 months.

LEVEL 4 – RECERTIFICATION

- All teams must complete recertification minimum every 3 years. As people's disabilities may have changed the need and tasks of the dog it may require upgrading or fine tuning.

MSAR Certified Master Dog Trainer shares a moment with K9 Earl.

Process of How to Get a Service Dog

1. Consult with your medical team and evaluate the needs and see if a service dog will fit into your long-term treatment plan. If this is a go, you need a letter from your doctor (treating your PTSD or other disabilities). At the request of the medical teams we have developed a standard form that we provide since some doctors may not know what to write.

2. Call and discuss a service dog and your needs with either the Courageous Companions Intake Director or the MSAR Master Dog Trainer. This is a simple conversation to answer questions and provide some basic program details.

3. Interview / Assessment for need of dog is then done (in person or phone). This conversation is to determine the category of PTSD the person falls into, the tasks needed for the service dog, the breed of the service dog required, how much the person can participate (or even able to) in the training. This interview is done by both the Courageous Companions Intake Director and the MSAR Master Dog Trainer.

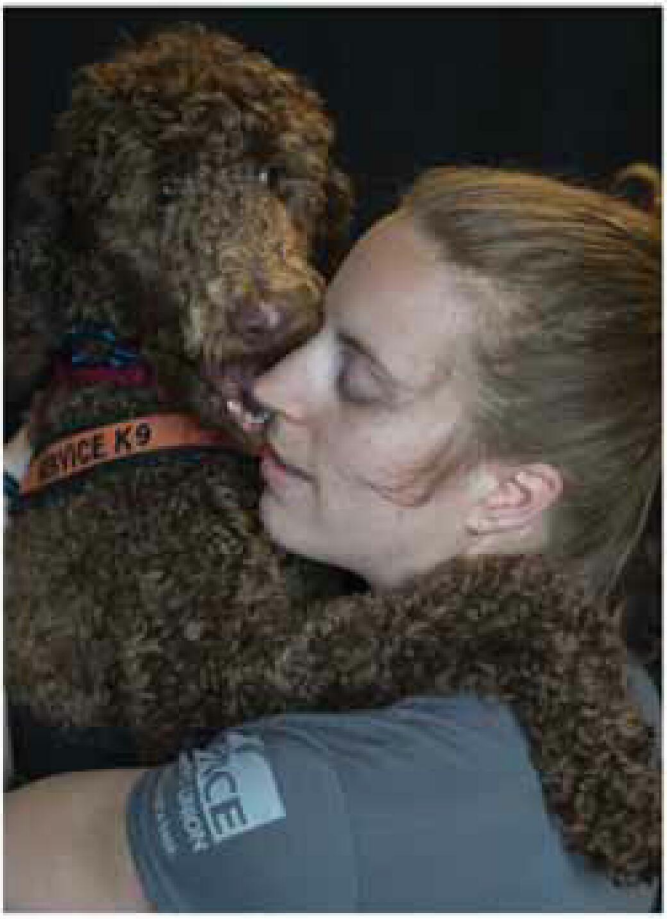
4. The MSAR trainers discuss the appropriate breed related to tasks, category and allergies.

5. The next step is that paperwork is then sent out for reading, consulting (medical and legal) and after any questions are addressed signed and the commitment is made.

6. The training team develops the training plan and the transition plan - the process to match the handler and service dog, this process varies in times.

7. The handler then either comes to our training center or we send a trainer / dog to train with them. We then develop a training support plan to get the team ready for final certification and testing (generally takes six months of the team working together prior to final testing and certification.

8. Acquiring a service dog from any organization is a long process and you should be prepared for to wait up to a year (minimum). You must have patience through this process.



Courageous Companions K9 Hadewych and Rachel Aaltink (First Responder - OPP)

Dog Trainer Spotlight – Yury Harczan

I have been working with MB Dog Rescues for close to fifteen years now, helping some of their dogs to become rehabilitated and worked with, in order to make them adoptable. Back in the fall of 2016, I really did not enjoy the career path I was on, so I decided to just get up and quit my job without knowing what I wanted to do next. While sitting in a very dim lit room with my two dogs on my lap, pretty much decompressing me at a stressful time, I decided that I needed to do something with dogs since they were making me feel at peace at a stressful time. So, I started off looking for any job I could find working with dogs. I was lucky enough to come across George Leonard from MSAR. We had a couple emails go back and forth, and then finally a phone conversation. We got together one afternoon for a quick interview, and then he invited me out to his Public Access training group the following week. After working with him for about 7 months, he was kind enough to put me through a couple of courses to help me get my degrees and become certified as a dog obedience trainer. I was then given my very first dog to be trained as a PTSD service dog. It was one of the most memorable times of my life. After learning so much about dogs through doing service dog training and taking the courses, I went back to my roots and started working a little bit with the rescues again, and decided to open my own obedience and Rehabilitation company. PAW & ORDER MB, is now a premier dog training company in Manitoba. I am the training consultant for eight different rescues, I am also the lead volunteer at Winnipeg Animal Services and have now been accredited with the position of dog training mentor in Manitoba, for "ABC Dog Training and Obedience" based out of California. I have been the speaker in dog behavior seminars for Canada Post, Canadian Border Services, many schools in the Winnipeg School Division and also with the universities.

Every day I get to wake up and work with several dogs. I can't tell you how much I enjoy my job, and I want to keep educating myself through taking different courses and working with all types of dogs and their owners. In the 26 months PAW & ORDER has been open, I have now surpassed helping 760 dogs in the Manitoba region.

Service Dog Harness

This is probably the most asked question..... "Where did you get your harness, and how can I get one?"

The Courageous Companions harness is exclusive to our dogs and not available to the general public. Early on in the program government and military agencies from multiple countries asked MSAR to find an exclusive and adaptable dog harness that cannot be acquired by the public.

MSAR has a long history of working with K9 Storm through their working dogs and through this relationship Courageous Companions incorporated the use of K9 Storm as it Service Dog Harness ...

K9 STORM INCORPORATED

K9 Storm was founded in 1998 by former Winnipeg Police Canine Handler, Jim Slater, as a result of his work with his Police Service Dog, Olaf. What started as one man's need to protect his own police dog with a custom-fit ballistic vest, has turned into a mission to provide functional high-end dog gear to the world. K9 Storm Gear is currently being used by special forces teams, police agencies, and search & rescue groups in over 32 countries, and is proud to be the exclusive provider of Fully Certified Service Dog Harnesses to Courageous Companions.

Distinctly Canadian, every piece of K9 Storm Gear is made and manufactured in Winnipeg, MB, and comes with a lifetime warranty. If you have any questions about K9 Storm Gear, please contact them directly or stop by the factory and say hello! All the best in 2019.

#StormThroughAnything

Constable Jim Slater and K9 Olaf
tracking a fleeing suspect in the first custom-fit K9 Storm Patrol Swat Vest.

Jim and his wife, Glori (VP of K9 Storm)
giving an explanation of the K9 Storm Patrol Swat Vest to Winnipeg Mayor, Brian Bowman.

Major John Hamilton (Retired) and K9 Tula

My name is Jon Hamilton and I am a retired Major with the Princess Patricia's Canadian Light Infantry (PPCLI). I joined the Canadian Armed Forces in September of 2000. I was posted to Edmonton to the 1st Battalion PPCLI in 2002. My first tour was in 2003 as a rifle platoon commander conducting defence and security tasks in Dubai as part of Op APOLLO. In January 2006, I deployed to Afghanistan where I commanded Reconnaissance Platoon as part of Task Force (TF) ORION on Op ARCHER. This tour was replete with intensive combat operations. I was involved in several battles to try and bring, at minimum, a tenuous peace to the Afghan people. We all faced a skillful and determined enemy with the Taliban and the foreign fighters that chose to support them. I was wounded in action on 3 August 2006 and had to return home just 20 days shy of completing my tour of duty. I received shrapnel wounds to my right foot after an impact of a recoilless rifle round during an assault on the infamous "White School" in the Panjawayi District. The most unfortunate part however was that I lost three of soldiers in the same attack. It is a day that is permanently imprinted on my soul and fills me with sadness for losing these wonderful human beings.

I deployed once again to Afghanistan in 2011, this time to Kabul on Op ATTENTION where I mentored an Afghan Colonel in charge of basic training for new Afghan National Army recruits. This capacity building endeavour was fraught with uncertainty as Improvised Explosive Devices (IEDs) and the suspect loyalty of some Afghan soldiers were a constant threat.

My life was never the same after August 3rd 2006. I did not have time to grieve with my comrades following this tour as after I left the hospitals, I immediately found myself posted to the other side of the country. Torn from the very men I had shared experiences with left me feeling numbness throughout my body, feeling very much alone with a sense of isolation, and disconnected with loved ones. Over the course of the next 11 years I suffered in silence until life presented itself in such a manner that I needed to get meaningful help.

I attended a program called Project Trauma Support an experiential program designed for Veterans, First Responders, and Corrections Officers who contend daily with PTSD. This program, developed by Dr. Manuela Joannou, impacted how I looked at life and gave me a renewed sense of self worth and purpose. It was indirectly through this program that I was introduced to Barb Leroux, an extraordinary woman who is now a very dear friend of mine, and Courageous Companions. It is because of Barb and Courageous Companions that I now have my sidekick and best friend, Tula.

Tula is a black English Lab who has improved my life and a gift I am truly grateful for. I bonded with Tula immediately. I felt an extremely strong connection to her since the day I received her picture from MSAR trainers Janet Priest and George Leonard, two expert dog trainers and amazing people. When working with her vest on, Tula makes going out in public and attending social events much easier and with less debilitating anxiety. When speaking with others, she creates a safe boundary which reduces my constant hypervigilance. In tune with my emotional state, Tula responds without prompt to comfort me by leaning her body into me and giving me "kisses." During days when life seems easier by staying in bed, I am awakened by her and reminded that life is precious and has purpose, neither of which can be realized by isolation. When at home and out of her vest, Tula becomes a puppy. Full of energy and a desire to play that makes me laugh and smile. She acknowledges and returns the love I have for her by never leaving myside. My shadow, my companion, my saviour and my friend.

My gratitude for Courageous Companions cannot be overstated. This wonderful organization has given me and many others the ability to experience life to the fullest in the company of a life long friend. Their selfless efforts to raise funds to support the sacrifices made by women and men in uniform and the consequences of service, is amongst the noblest of deeds citizens of our Great Nation can do. Further, I would like to recognize the more than generous donations provided by the Order of St. George that assists Courageous Companions in obtaining dogs and their training. Members of the Order are selfless humanitarians whose compassion has no bounds.

Major Jon Hamilton (Ret'd)


SERVICE K9

If it weren't for Talos

Thinking and writing about my last 5 years has proven to be very difficult as I'm the king of avoidance. But trying to express in words how far I've come, how much I've healed since Courageous Companions donated and brought Talos to me is complicated and emotional. I remember when I first spoke to Shirley Jew over the phone, I was hiding under a blanket. She was compassionate, and quickly realized that I needed support quickly. At the time, I was still in the military as a medical technician and working as a civilian paramedic. I was struggling to heal as daily exposure to trauma as a paramedic was ripping the scab off from traumatic experiences from Afghanistan. But one night, Shirley drove to Regina and brought Talos, a 14- month-old Dutch Shepard, into my life. One of the first thing I did was Google what the hell a Dutch Shepherd was and to find out what the meaning of the name Talos was. Turned out, Talos was ideally named after Talos in Greek mythology, who was the protector of the Europa. Rather fitting as he became my protector and we both share names from Greek mythology.

As it turned out, Talos is the single most emotionally receptive being I have ever known. The second he walks into a room he knows not only mine, but everyone's emotional status. When he knows I'm okay, he insists on taking care of anyone in need of support. This proved difficult being that working emergency health care is emotionally fatiguing on all its professionals. I found half of the health care field supportive of me getting a service dog, with the other half uncomfortable and seemed to distance themselves from me. Having a service dog immediately let me focus on myself in a healing way, but professionally, it was difficult. I was restricted from the type of patient care I was allowed to perform, which really limited where in the health region I could work. Some fellow staff members made formal complaints that I had a dog because they were scared, or blamed already existing respiratory problems on Talos. This led to more workplace restrictions. My military unit was supportive in the beginning, and I was, for the most part, able to continue working as I had, just with tales at my side, until a brigade commander didn't like that I had a service dog in the training area. So, in 3 days after that brigade commander saw me, I had massive medical restriction put on me to the point that it was no longer possible to work in the military.

Although it was exhausting always being the first person in my workplaces with a service dog and all the logistical harassment I faced, I would never consider not having Talos with me. He has been with me through incredibly dark periods, he's been a fearless adventure buddy, and Talos wants nothing more than to let people around him know that regardless what they are feeling, he is willing to be with you till you feel better. He has helped me through re-training to become a Teacher, so I can transition from health care to the education field. I know for sure all the fellow students and profs in university liked Talos far more than me. I am now at a place in my healing that I occasionally leave Talos at home (with his fur brothers… 3 cats that steal his bed in a heartbeat). But the second I come home Talos is at my side ready to do whatever we need to do; be it just cuddle with me, help with yard work, or go with me for another shift as a paramedic. I would go as far to say I likely wouldn't be alive right now if it weren't for Talos. -Apollo Bellisleif

MCpl Rob Cobb (Retired) and K9 Bear

My name is MCpl Rob Cobb, CD, retired. I'm 56 years old and from Newmarket, ON. I have PTSD and I have a service dog.

I started my career in the military in 1984 with the Navy as a Boatswain out of Halifax under a government work program. After a year, I transferred to the Army as a Vehicle Technician and was posted to Chilliwack, BC.

I left the military in 1988 to pursue a civilian career.

In 1997, I rejoined the military, picking up my former trade as a Vehicle Technician. I was posted to Petawawa, ON and served on two tours of duty, Golan Heights under the UN and Afghanistan under NATO. I was with the first rotation of soldiers to go to Afghanistan as part of the advance party.

In 2006, I was poste to Moose Jaw, SK with the Snowbirds, 431 SQN.

In 2010, I was posted to the EME school in Borden, ON, where I taught brakes and steering to new and senior Craftsmen. I medically released from the military in 2011 and moved back to Saskatchewan where I worked as a heavy-duty mechanic.

I currently reside in Regina, SK with my wife, Lisa, our dog, Ping, and my Service Dog, K9 Bear.

My PTSD presented shortly after returning from Afghanistan in early 2004. It changed the way I did everything. Previously unlocked doors were locked, people were not encouraged to visit and outings became fewer and fewer. There was rage and depression and self-medication, confusion, self-doubt and paranoia. I poured all my energy into overworking, to try to stop my thoughts from racing. There were nightmares and hallucinations and flashbacks. There were multiple hospitalizations, both voluntarily and not.

I asked for help the day after I put my fist through the living room wall. I received inconsistent psychological help for more than nine years, due to staffing problems or postings, until 2014 when I found a Psychiatrist who, as a military veteran himself, understood what I was dealing with daily, who didn't judge or belittle my situation. Unfortunately, that doctor retired in 2015, leaving me, once again, without adequate mental healthcare. It wasn't until 2016, after spending more than 7 months total on the Mental Health ward, that I finally found both a psychologist and a psychiatrist to help me.

Around 2012-2013, I went to a Resiliency Seminar in Moose Jaw, SK. There I met George Leonard, Master Trainer, who was representing MSAR and Courageous Companions. He was there to give a presentation about service dogs and some of his dogs were there. It was remarkable how quiet and obedient they were. Up to that point in my life, I only knew dogs to be noisy and boisterous creatures that loved to fetch thrown balls. Impressed with the presentation and the proof of such trained dogs, I got George's contact information and had my doctor help me file an application for a service dog of my own. On December 12, 2015, I received a small black puppy, K9 Bear, that I would train with the assistance of my mentor, Shirley Jew, to be my service dog.

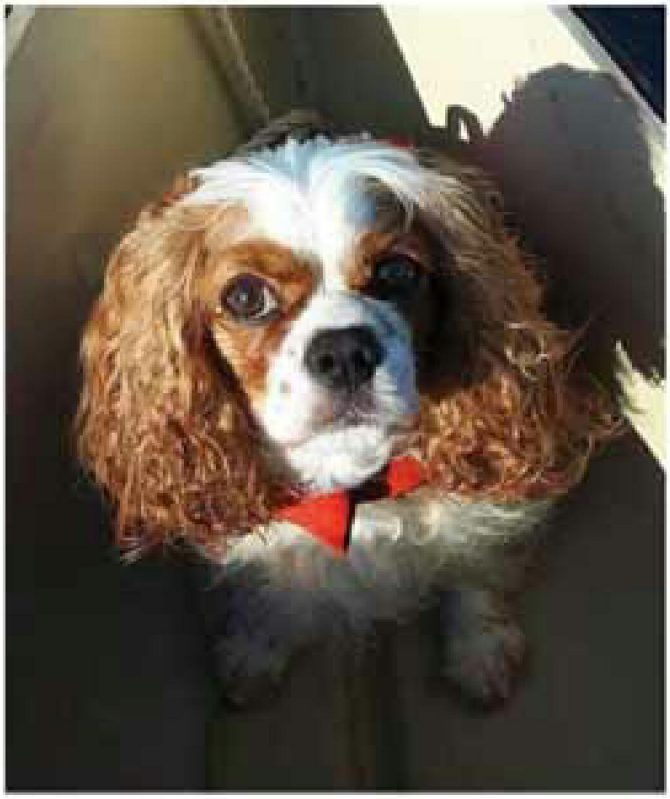
K9 Bear is a black Australian Labradoodle. He is my constant companion. With him, I feel more confidence and security in dealing with every day. I find that I am able to go to crowded places like the mall or the Farmers Market. He grounds me with his presence. He uses compression upon me when I'm highly stressed and becomes a physical barrier between me and other people, keeping me safe. He is a distraction from my PTSD symptoms and helps me sleep better at night.

Training him is an ongoing thing and I regularly go out to the mall or other public places to work on his public access skills. This keeps me busy and out into the real world.

Courageous Companions has been instrumental in how I deal with my PTSD and everyday challenges. I am able to do things that others take for granted, like going out to dinner or buying shoes or groceries. They have been supportive throughout this process of training and testing Bear with their knowledge and understanding.

My life has been renewed because of Bear.

Carol Molyneaux and K9 Molly



Born in BC into a military family I guess I was destined to follow in my Mother, Father and brothers footsteps. I joined the RCAF in March of 1986 as an Administration Officer. After various postings, exercises and taskings my trade evolved to Logistics.

Deployed to Afghanistan in March of 2008 I soon learned that in addition to my regular duties I was in charge of the morgue as well as ensuring deceased soldiers and their effects made it safely back home. I was also tasked with guiding the escorts to the Fallen through the very difficult repatriation task. This included what to expect from the time they left theater until they landed in Trenton ON and drove the long sad route to downtown Toronto's City Morgue. Those escorted had many questions...tough questions like "what do I say to his wife and children?" It was a very tough tour...we lost a lot of soldiers most in battle some due to suicide...the inner battle.

Returning from Deployment in Dec 2008 was tough...it's a huge challenge coming home. Normal doesn't seem so normal anymore. Then the flashbacks and nightmares started...you get afraid to fall asleep. PTSD took a huge toll on my life. Like others it killed my career and placed great strain on my family.

One day an OSIS Peer told me about Courageous Companions and MSAR and the incredible dedication of George Leonard to provide Veterans with Service Dogs. I already had a dog and couldn't cope with a second one... but that was okay. Courageous Companions sent me all the training goals and skills my dog Molly had to achieve to pass her Public Access ability Test and other tests.

After a year of hard work Molly and I were on a plane to Edmonton for more training and testing. I was a nervous wreck, but Molly now very skilled at reading me and helping me stay grounded, helped me get through a very intense week. Molly and I ended up getting fully certified as a Service Dog Team and my life is now beginning to expand.

Molly makes it possible for me to attend weekly OSIS Coffee group sessions, meet up with friends outside my house and other activities. Molly can sense when I get triggered and goes into action alerting me...pushing at me, grounding me and ensuring I know she's there.

I can't imagine life without my Service Dog. A year ago I didn't think I would be alive in 2017. Thank you, Courageous Companions and MSAR George Leonard, for all you do for Veterans and others who's lives are made better with a Service Dog.

Sincerely
Carol Molyneaux
Major (Retd)

Julie Letal and K9 Chance

I am a serving member of the RCMP in Alberta with over 17 years of policing experience. I have been involved in many very serious incidents which include investigating suicides, murders, fatalities domestic assaults, floods, fires, holding a child while the parents are trapped in a vehicle, watching life fade out of a person as I held them and the murder of 4 heroes in Mayerthorpe.

I was diagnosed with PTSD in 2005 when it was taboo to talk about it. I carried on the best I could until a member I knew was murdered in Moncton and everything came back 10-fold. I sought help and was sent to an OSI clinic (Operational stress injury clinic). Things were going well until I told them I was looking into getting a service dog! I was told I was done at the clinic even though the appointment before I was told I would be going into group sessions for a couple of months.

I received a service dog (puppy) in January 2016 and started the Owner Training Program with Courageous Companions but he became too protective of me. Medical Service dogs can not be protective of their handlers, so I retired him from service.

In October of 2017 I was paired with K9 Chance who was trained by MSAR Trainers and funded by Courageous Companions. To date, Chance has been awesome. She gets me out more and we are in the process of completing our level 2 training together and bonding! If it wasn't for Courageous Companions I'm not sure what would have happened! The invisible wounds are hard to explain to people. Especially at work, I am the first RCMP member to have a service dog at work in Alberta and it is an uphill battle but hoping with my battle it becomes easier for the next member.

Thank you, Courageous Companions, and MSAR for providing me with K9 Chance who has made a significant positive impact on my life.

Julie Letal
RCMP

Katherine Freeman and K9 Rory

I am a First Responder, Inter-faith Chaplain, Counsellor, and Disaster Management Supervisor. I have been involved at many International Disaster Responses in Nicaragua, El-Salvador and other Central American countries. I have responded to earthquakes, landslides, droughts, floods, wildfires, tornado's and other natural disasters. I have also been present during various political and civil uprisings/theatres of operation/para-military coups in other countries.

I was present in El-Salvador in the 1980's when over 70,000 civilians were tortured, assassinated, or went missing, known as the desaparesio (disappeared). This included Canadians who were doctors, Red Cross workers, priests, nuns and NGO charity workers who were tortured and murdered. A good friend was assassinated in his driveway in front of his small children on the way to school, because he was the head of the Human Rights Commission.

I was the Founder of a group providing counselling to Torture Survivors who met at the Calgary Children's Hospital for years. I have also tried to give back to my community by being involved in Disaster Management with the Red Cross.

I was a First Responder in New York City at 9/11 after the towers fell. My lungs were injured from inhaling all of the poisonous toxins at ground zero and other toxic sites, and my immune system was permanently compromised from trying to fight off the toxins in my body. I worked with the various fire fighters who had lost a comrade during the collapse of the towers offering grief counselling and Critical Incident Stress Management.

I have given workshops for schools and daycares on safety procedures during disasters, bombings and school shootings, and been a keynote speaker and presenter for those working with Victims of Violence.

I have worked with the emergency evacuation of communities in Northern Saskatchewan to Cold Lake AB during the Saskatchewan Wildfires, and provided assistance with the Red Cross Disaster Management team during the entire evacuation of Fort McMurray after the fire that devastated the city. I worked with the Canadian Red Cross in their role of helping to integrate refugee children from Refugee Camps in Turkey. Most of these children witnessed the complete destruction of their homes as they were bombed in Alepo. Some still carry the scars on their tiny bodies from the bombs, bullets and shrapnel.

I was a member of the Fire and First Responder Team in a small community in Alberta and I still provide specialized pastoral counselling for severe trauma and torture survivors. Last year, I attended the United Nations Sponsored Centre for Torture Survivors in Europe.

Needless to say, I don't leave my house or spend a minute alone without the vigilant support of my Service Dog, Rory-Michael. Because of physical injuries as a first responder, my hearing is failing, and I have severe lung complications. Rory is trained in sign language, alerts me to noises, brings life saving medicine for my lungs to prevent complete respiratory arrest, alerts me to silent asthma attacks, wakes me up from nightmares and turns the lights on, alerts me if I am shaking, performs deep compression and performs many other tasks to mitigate the horrors of PTSD.

Courageous Companions has helped in the on-going training of my Service Dog, Rory, and in helping me personally with their continued friendship, camaraderie and emotional support.

Katherine Freeman

Shirley Jew and K9 Snoopy

I was a Reserve Officer for two years prior to joining the Regular Forces. I had 16 years as a Mobile Support Equipment Operator (MSE Op), who completed my Airfield Specialist course (935.05) prior to remustering to Military Intelligence. While in CFB Borden, I volunteered with the Nuclear Biological Chemical Response Team (NBCRT) and had training in live agents, decontamination and how to operate in hazardous situations with inter-agencies. I finished off my time as an MSE Op in Edm with the Service Battalion. During those years, I was deployed on domestic operations from the Ice Storm to several G8 Summits, firefighting and one UN tour, to the Golan Heights (Sep 92-Mar 93).

As an Intelligence Operator since 2003, I was posted in Winnipeg, where I developed a strong knowledge in collation, publishing, strategic air and briefing skills. I received training in space applications and then the fighter world through the Tactical Fighter Intelligence Course and Exercise Wolf Safari. To round off training in the air world, I went to Trenton and then completed a Rotation in Camp Mirage (Dec 05- Jul 06). I was then posted to Ottawa as a collator with the AFG Intelligence Response Team (AIRT) and eventually became the Chief Collator. A year later I was posted to the National Defence Command Centre (NDCC), which is now the CF Integrated Command Centre (CFICC) where I learned to respond to natural disasters and possible emergencies that involve the Canadian Armed forces (CAF). On a daily basis, I was required to brief the team on situations that interest or those that may interest the Command Staff in the near future and produce products for distribution.

In Aug 2010, I was posted to 4 Wing Cold Lake, Air Intelligence and started deployment training for Afghanistan as a Senior Intelligence Analyst for the HERON UAV (Unmanned Aerial Vehicle) and deployed from Mar - Aug 2011, Kandahar, Afghanistan. Upon return from tour, I was attached to 409 Tactical Fighter Sqn as the Intelligence 2 i/c and was later diagnosed with Post Traumatic Stress Injury (PTSI) and transferred to the Readiness Training Flight (RTF) where I taught Chemical Biological Nuclear Defence (CBND), First Aid, Navigation and weapons training for the base. In 2014, I was transferred to CFB Edmonton and started my transition from the Regular Forces, back to the Reserves an instructor with Army Cadets in Onoway, AB.

Prior to all my injuries, I was very active in the sports community. I was one of the pioneers for Women's soccer and attended their first CISM (Le Counseil International Sport du Militaire) and played many other sports like ball hockey, broomball and martial arts. I was also an athletic trainer involved with regional, national sports within the CAF and selected as one of the trainers with CISM Tae kwon Do.

While at RTF in Cold Lake, I rescued a dog and my Captain suggested to have Snoopy trained as a Service K9 and we became the trial for the base. Prior to Snoopy, I had started to bunker and withdraw from life and suffered from night terrors, waking up and thinking we were under attack, checking the house in 30 seconds. I would get home from work and hide in my home, stopped working out and only socialized enough to not have questions asked. Since having Snoopy, I no longer have night terrors and can physically leave my home. At times when we are out and if there are too many people and noises, I zone out and she will pull me to a safe place to calm down. In a long line, she will stretch out to the length of the leash so no one can come up behind me when my hypervigilance ramps up. She always has my back, which allows me to be in public. When having my dark days, she will not leave my side and has gone 24 hours without relieving herself, because I could not get out of the bed. She saved my life and her unconditional love gives me a reason to keep fighting.

Shirley Jew

Barb Leroux and K9 Charlie

My name is Barb Leroux. I live in Ottawa, Ontario – our Nation's capital.

I currently work on Parliament Hill for the Senate of Canada. Prior to my work on parliament Hill I worked with the New West Minster Police Department, Victim Services and Penitentiary systems. My work on Parliament Hill however is where my life felt like it came tumbling down. There was a shooting on Parliament Hill back in 2014. Seems like yesterday. I heard sounds, gun shots echoing from the area of the Centre Block rotunda. My office was close enough to hear the voices of certain commands. The shots parroted - I didn't know what was happening.

Minutes later there was pounding on my office door. Was it the bad guy? Who was it? He was yelling – "open the door." Should I? Then, I heard a voice yelling my name. I must know him. I opened the door. Facing me was one of our Parliament Hill Security Team, and two sharpshooters with their guns. Our Security team started asking… no – he was yelling at me, yelling questions for me to answer. (I found out since then, they yell in the case the shooter was hiding in the office. Security would know if he was, by the way I answered the questions, and my body language.) I was shaking inside, and stuttering my words. They surrounded me, and shuffled me away from my office to three different places for security.

Things became a maze of questions in my mind. Does my family know I am okay? Is the shooter still out there? Am I really safe?

After 10 long hours of waiting, I was taken from the safety room and escorted to transportation, to go home. I'm alive. The shooter died. Life continued.

A long while later, I started having trouble walking up Parliament Hill, to my office. I was now more conscience of all the police with their guns visible.

All the control I thought I had over my life was slowly starting to dissolve. There were times I couldn't walk up the Hill to my office without calling my friend George from MSAR (www.msar.ca) to talk to me while I walked. There were times I would make by myself to my office, and then burst into tears. Many times I was reliving the fear from the shooting.

I felt broken. What's happening? Much later I was diagnosed with PTSI (Post Traumatic Stress Injury) I felt like my life was falling apart – yet I continued to do my daily routine and work – my mind always seemed preoccupied with other thoughts.

Now I would like you to meet my best friend Charlie. He is dedicated to me. He's like a shadow. He's there to comfort me when I am feeling down, he quietens me when I feel anxious, he brings a smile to me when I feel frustrated. He just seems to know what to do, at the right time. In case you haven't already guessed Charlie is my Service Dog. Through Courageous Companions he is being trained for certification. He services to my emotions, helps me slow down on my rollercoaster ride thoughts, depression, and my day to day life. He brings a peace in my, whirlwind world.

Charlie's in depth and continuous training is helping me see life more on the brighter side. We are dedicated to be together. I now realize the light at the end of the tunnel is not a train. If it weren't for Courageous Companions, and their dedication to quality training of Service Dogs, and raising funds to help broken people like myself, I don't want to say where I sadly think I would be right now.

Training for Charlie will be on-going because Courageous Companions is about quality, not quantity. With all the training for Charlie and passing tests constantly, Charlie will prove to be highly skilled in what he is being trained to do. A top notch service dog.

Here's something you might find interesting. Charlie is the very first working service dog on Parliament Hill. Yup, he made history, and I feel balanced.

Courageous Companions….. thank you for helping me, through Charlie, be able to have my life back. Thank you for the dedication, and care you have for our Veterans and First Responders. Thank you for the quality and high standards of training you stand by.

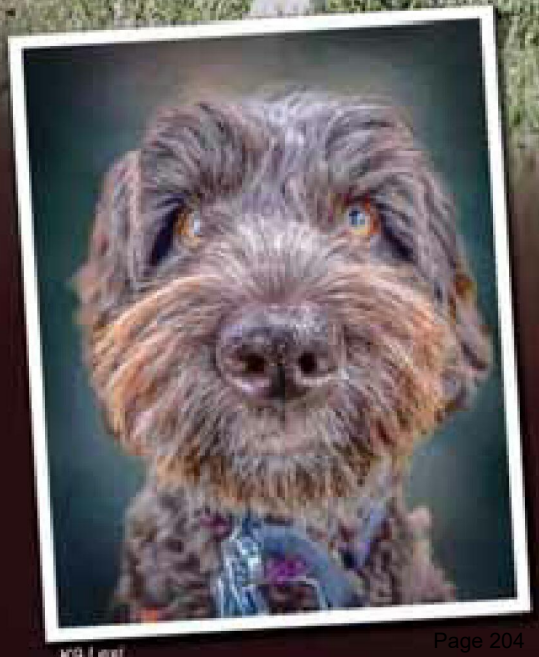
Barb Leroux

K9 Bailey

K9 Casey

K9 Chance

K9 Leela



K9 Lexi


K9 Elsie
K9 Sixx
K9 Max
K9 Mia
Retired
K9 Toby
Retired

Jason Burd and K9 Blaze

To all those who suffer from a Post Traumatic Stress injury and may benefit from my journey, I wanted to share some very important information. I hope that this will reach anyone with the desire to heal from a PTSI or who may feel stuck and need a new direction.

Healing from PTSI requires multiple interventions, and it is never a one size fits all. Individuals need different types of support to recover. A good family doctor, psychologist, psychiatrist and sometimes inpatient treatment are needed.

Over the span of the past number of years I have had over $100,000 in treatment and without question, I had made some degree of recovery. I will admit for a number of those years I would not have had the capacity to have a service dog. It was putting one foot in front of the other moving forward in what seemed inch by inch. At times, I fell flat on my face and didn't know if I could continue the fight. There is no way I would have made it this far without the support of an amazing team around me, including family and friends.

I joke about my sister being my service dog before I had Blaze. Being with her was the only way I could get out and function at all.

In 2016 I became a team with my incredible Standard Parti Poodle "Blaze". I received her because I won the "Elijah Harper service dog award." I really liked her name as it seemed fitting for a firefighter, but little did I know that she would blaze me a new trail. With Blaze by my side, I all of a sudden was able to do many things on my own. She opened up many doors and connected me with people who helped lead me down a very important path. In the fall of 2016 I went to my first peer support group meeting. I will never forget the immense pain I felt the first time I was there; I could barely get the words out of my mouth. I was able to unload some of the weight I was carrying, surrounded by "warriors" who not only understood but had similar stories. Never do we share details of our trauma at these meetings, but it's incredible how uplifting it is to sit across the table from someone and be able to say "me too" and realize you're not alone. I often speak about the psychological connection between Blaze and I. I then began to have the addition of human connection, which is also paramount to recovery. I fucked into an invitation to attend a "Soldier On" camp which was funded by "Boomers Legacy". This was the first time ever first responders could attend this event. Although it did not have any treatment component, this program really brought me out of isolation and again gave me the ability to connect with others who had physical and psychological injuries.

I continued to attend the peer support meetings and learned more about a program called Project Trauma Support (PTS). I was fortunate enough to be offered a spot to attend a cohort of their 6-day treatment programs in Perth Ontario.

This is a residential experiential program that is designed specifically for Warriors, and I arrived with an open mind to recover. On Monday they told us recovery was possible and that it could come like a light switch. I insisted in my head that this is impossible as I have never had that experience before. I can tell you by Thursday I realized I was wrong and I will never forget how I felt leaving on the last day. In fact, I don't even recall ever feeling so free of psychological and physical pain. This program was founded by an emergency physician, Dr. Manuela Joannou, who was inspired to develop this after a colleague (paramedic) passed away due to suicide as a result of PTSD.

I am certain you will not find another program like it or nearly as effective. People are attending from across Canada and experiencing the same results. In fact, they have realized the families need to understand individuals returning from this program will be different in a positive way. Family members need to adjust to their return. Having a new contributing member of the family takes many people by surprise. Please reach out directly to Projecttraumasupport.com and apply by clicking "Contact us"

If others feel more comfortable and have questions, they can reach out directly to me. I will be happy to answer any questions.

The Peer support program is growing as people are going through the program and I have attached a few photos showing their current locations. (A new one is opening in Newfoundland shortly as well) Everyone is on a different journey which means we are all on different levels of recovery. I work very hard every day to make the best of things and have found purpose through advocating for others and co-leading the weekly peer support meetings in Ottawa.

Blaze and I have accomplished a number of things in the past year.

- Blaze and I are featured on The discovery channel Animal planet, in a program called "Collar of Duty". (Season 1 Episode 2 :second half). This was a very unique experience. I have emerged through the darkness since this video was filmed. I now know what is meant by the concept "pain to purpose".
- I am engaged to be married to an amazing woman who completes me, Kristal. (Yes Blaze is a little jealous.)
- I have purchased/ sold and moved houses.
- I have attended parliament hill on numerous occasions to advocate and support Bill C-211(calling for a framework to support Military and First Responders with PTSI)
- Blaze and I have attended and spoken at numerous events and fundraisers to raise awareness of mental illness and PTSI, as well as funds for Courageous Companions.
- I started and successfully co-lead peer support meetings every Monday night in Ottawa. We now have over 60 members. These groups have amazing positive energy within a safe place where warriors talk about their journey, what seems to be working for them and what may not be.
- We learned many important life lessons at PTS in Perth. I am doing my very best to exercise these thought processes:
- More Love and Less Judgement in every part of my life
- Realizing people bring to the table what they can and often a person could be having a really bad day, a difficult life etc. Instead of judging I try to offer any help I can which can really have a positive impact.
- Being very diligent with my daily routine. The tools in my tool box are what allow me to be as functional as possible for everyone around me.

I am truly thankful for "Elijah Harper", MSAR Service dogs, George Leonard, Janet, Barb, and Courageous Companions.
Blaze completes me and allows me to be somewhat functional on a daily basis. She is now Level 3 off leash certified, I am super proud of both of us for all of our hard work, it certainly has paid off!!

Kind Regards Jason Burd /K9 Blaze
please contact me at fightingtheirlifenowithin@gmail.com or through Facebook. "The best thing to hold onto in life is each other". ~Audrey Hepburn

A PUBLICATION FOR COURAGEOUS COMPANIONS CANADA

Thank you for your interest in Courageous Companions. We thank all military personnel and first responders for their service. Many of the volunteers at Courageous Companions have experienced the trauma of operational injuries in service to our great nation and are therefore in a unique position to understand the challenges of stress injuries.

Courageous Companion service dogs are provided at no charge to our Veterans and First Responders. We rely entirely on individuals, businesses and service organizations like yours for funding.

Together we can really help veterans and first responders in need

Together with your financial support, we can provide more services to our injured Veterans and First Responders. Your support will be used to help rebuild the lives of those who have sacrificed for all of us.

Ad Sizes	Rates
Back Cover (8.25" x 10.625")	$2200
Inside Covers (8.25" x 10.625")	$1600
Full Page (8.25" x 10.625")	$1300
Half Page (7.5" x 4.75")	$870
Quarter Page (3.625" x 4.75")	$670
Banner (7.5" x 1.75")	$570
Eighth Page (3.625" x 2.25")	$395
Business Card (2.33" x 1.5")	$295

applicable taxes extra

A mission to help Military and First Responders

Courageous Companions provides quality trained certified Service Dogs to Military Veterans and First Responders who suffer with physical and/or psychological operational injuries as a result of their service.

One-Hundred Percent Volunteer Driven

a 100% volunteer driven organization that strives to restore dignity, rebuild confidence, and increase the quality of life for our brave men and women who serve in uniform.

Service Dogs Provided at No Cost

Courageous Companion service dogs are provided at no charge, which is why we rely entirely on the support from individuals and businesses and service organizations. A Courageous Companions Elite K-9 Service Dog is a specifically molded Service Dog trained to respond to the specific needs of an individual manifesting the symptoms of physical and/or physiological operational injuries.

Injured, Not Broken

Together we can give our Veterans and First Responders a chance to live whole again in our community with their heads held high. In our business we like to say "injured, not broken".

Thank you for choosing to help support the work at Courageous Companions!

I want to support Courageous Companions by placing an ad in Courageous K-9

PLEASE SELECT THE DESIRED AD : ALL ADS ARE IN FULL COLOUR ON GLOSS PAPER

☐ BACK COVER ☐ INSIDE COVERS ☐ FULL PAGE ☐ HALF PAGE ☐ QUARTER PAGE ☐ BANNER ☐ EIGHTH PAGE ☐ BUSINESS CARD

PLEASE SELECT THE DESIRED PAYMENT METHOD: ☐ VISA ☐ MASTERCARD ☐ AMEX ☐ INVOICE ME

CREDIT CARD# | | | | | | | | | | | | | | | EXP. DATE: /____

COMPANY: _____ **DATE:** _____

AUTHORIZED SIGNATURE: _____ **PRINT NAME:** _____

THANK YOU FOR YOUR SUPPORT! CALL 1-866-767-1731

FAX: 1-866-277-1994 | EMAIL: sponsor@courageousk9.ca

www.courageousk9.ca

AGENDA ITEM NO: 8.3

Town of Pincher Creek

REQUEST FOR DECISION

Council or Committee of the Whole

SUBJECT: CMR Huckleberry Festival - Event Sponsorship Request	
PRESENTED BY: Angie Lucas, Chief Administrative Officer	**DATE OF MEETING:** 8/2/2023

PURPOSE:

Castle Mountain Resort's Huckleberry Festival is an annual event and is taking place primarily on August 26th. The sponsorship package is attached here and our request is that the Town of Pincher Creek be willing to support our event, with a Silver Level Sponsorship of $500.

RECOMMENDATION:

That Council for the Town of Pincher Creek agree to donate $500 as a Silver Level Sponsorship to the Castle Mountain Resort's Huckleberry Festival.

BACKGROUND/HISTORY:

Castle Mountain Resort's Huckleberry Festival – our 27th annual event – returns this August, happening primarily on August 26. This annual gathering of family and friends represents one of the only days, outside of winter, that one of Castle's chairlift's are in operation, and draws more than 1500 visitors each and every year. While the highlight of the event is often considered to be scenic chairlift rides, Huckleberry Festival also features extensive activities within the base area, including our mountain vendor market, several kids' games, face painting, tons of live music (indoors and out), great food, and, of course, huckleberry picking! Access to our base area festival grounds has always been free, this year poised to be no exception.

ALTERNATIVES:

accept as information

IMPLICATIONS/SUPPORT OF PAST STUDIES OR PLANS:

NA

FINANCIAL IMPLICATIONS:

A $500 cost of donation

PUBLIC RELATIONS IMPLICATIONS:

Assists the Castle Mountain Resort.

ATTACHMENTS:

2023 Huckleberry Festival Sponsorship Package - 3226

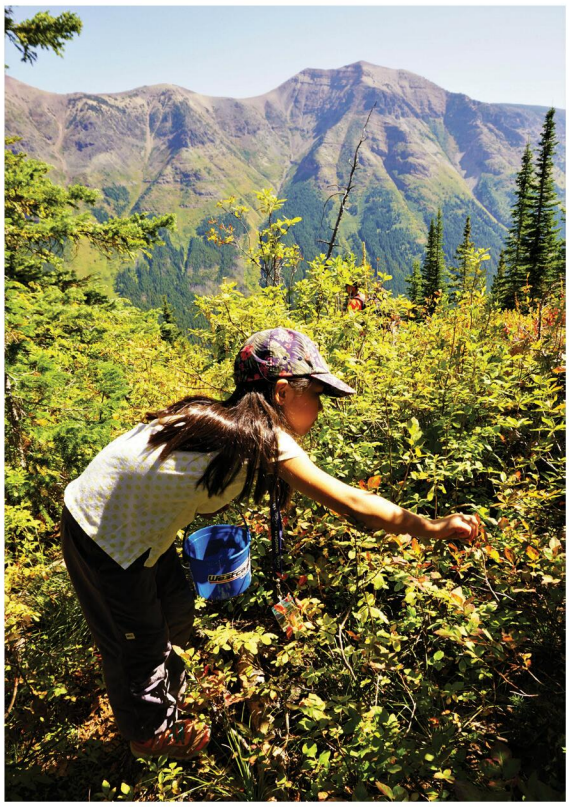
CONCLUSION/SUMMARY:
Sponsorship request for the Castle Mountain Resort's Huckleberry Festival.

Signatures:
Department Head: Angie Lucas

CAO: Angie Lucas

27TH ANNUAL HUCKLEBERRY FESTIVAL SPONSORSHIP PACKAGE

Castle Mountain Resort's Huckleberry Festival – our 27th annual event – returns this August, happening primarily on August 26. This annual gathering of family and friends represents one of the only days, outside of winter, that one of Castle's chairlifts are in operation, and draws more than 1500 visitors each and every year.



While the highlight of the event is often considered to be scenic chairlift rides, Huckleberry Festival also features extensive activities within the base area, including our mountain vendor market, several kids' games, face painting, tons of live music (indoors and out), great food, and, of course, huckleberry picking! Access to our base area festival grounds has always been free, this year poised to be no exception.

To help maintain free access to our base area festival grounds, we're seeking partners for this year's festival at the following levels:

Castle Mountain

SPONSORSHIP LEVELS

	GOLD $1000	SILVER $500	BRONZE $250
Base Area Entertainment Zone Naming Rights	X		
Dedicated Digital Screen Ad Space	X		
Custom Pre-Event Social Media Post	X		
Dedicated Sponsor Shoutout	X		
General Sponsorship Recognition Social Media Post	X	X	
Inclusion in General Sponsor Shoutouts	X	X	
Recognition on Event Program	X (Large Logo)	X (Medium Logo)	X (Printed Name)
Recognition on Sponsorship Slide on Digital Screen Network	X (Large Logo)	X (Medium Logo)	X (Printed Name)
Recognition on Event Poster	X (Large Logo)	X (Medium Logo)	X (Printed Name)
Recognition on Festival Welcome Banner	X (Large Logo)	X (Medium Logo)	X (Printed Name)
Complimentary Adult Scenic Chair Lift Tickets	8	4	0

Castle Mountain

Gold – $1000 (max. 2)

- Naming rights for one of two free base area entertainment zones
    - Choose from either:
        - Live Music Area
        - Kids Zone / Mountain Market
    - Includes recognition with a sandwich board at primary point of entry to the selected zone
- Dedicated ad space on CMR's indoor digital screen network, for the duration of the event.
- Custom pre-event social media post recognizing your sponsorship commitment (1 each on Facebook & Instagram)
- Dedicated sponsor shoutout (1 x) to occur during an outdoor live music intermission
- Inclusion in general sponsorship recognition social media post (1 each on Facebook & Instagram)
- Inclusion in general sponsor shoutouts (minimum 2 x) to occur during an outdoor live music intermission
- Large logo on printed event program
- Large logo included on sponsorship recognition slide, on CMR's digital screen network
- Large logo on event poster (printed and digital)
- Large logo included on festival area welcome banner
- 8 complimentary adult scenic chair ride tickets

Silver - $500 (max. 4)

- Inclusion in general sponsorship recognition social media post (1 each on Facebook & Instagram)
- Inclusion in event sponsor shoutouts (minimum 2 x) during outdoor live music intermissions
- Medium logo on printed event program
- Medium logo included on sponsorship recognition slide, on CMR's digital screen network
- Medium logo included on poster (printed and digital)
- Medium logo included on festival area welcome banner
- 4 complimentary adult scenic chair ride tickets

Bronze - $250 (max. 8)

- Company name on printed event program
- Company name included on sponsorship recognition slide, on CMR's digital screen network
- Company name included on event poster (printed and digital)
- Company name included on festival area welcome banner

We appreciate you taking the time to consider supporting this event. Should you have any questions, concerns, or additional ideas please do not hesitate to reach out to Corey Galarneau at sales@skicastle.ca or 403.627.5101 x 241.