

MCCALL'S FRAMEWORK FOR CLIMATE ACTION PLANNING



**Produced by Anna Lindquist, Graduate Student at
the McCall Outdoor Science School for the City of
McCall, Idaho**



Acknowledgements

CITY OF MCCALL

Bob Giles, Mayor

Jackie Aymon, Former Mayor

Anette Spickard, City Manager

Michelle Groenevelt, Community and Economic Development Director

Garrett Mapp, GIS Analyst

MCCALL OUTDOOR SCIENCE SCHOOL

Teresa Cohn, Research Associate Professor, Director, Taylor Wilderness Research Station

Mark Wolfenden, Assistant Research Professor

REGIONAL CONTACTS

Judy Anderson, Former member of McCall's Environmental Advisory Committee

Kelli Cooper, Environmental Education Specialist for the City of Moscow

Amy Parrish, Environmental Specialist for the City of Boise

Allison Marks, Planner II for Blaine County

Erica Linson, Sun Valley Institute

ICLEI-LOCAL GOVERNMENTS FOR SUSTAINABILITY USA

Tom Herrod, Senior Program Officer

FUNDING SOURCE

Blue Cross of Idaho Foundation

This report was prepared by Anna Lindquist, a graduate student at the University of Idaho McCall Outdoor Science School. The author would like to thank the City of McCall staff for providing much of the insight and local information necessary for the completion of this report.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
Key Findings	2
About This Report	4
CLIMATE CHANGE OVERVIEW	6
Greenhouse Gas Emissions	7
Local and Regional Impacts	8
Local Actions	10
THE CLIMATE ACTION PLANNING PROCESS: RECOMMENDATIONS ...	12
Milestone 1: Greenhouse Gas Emissions Inventories	16
Milestone 2: Reduction Targets	19
Milestone 3: Developing the Plan	21
Milestone 4: Implementing the Plan	25
Milestone 5: Monitoring and Evaluating	21
Leadership and Organizational Capacity	25
CONCLUSION	29
REFERENCES	30

EXECUTIVE SUMMARY

Anthropogenic climate change is now an accepted reality by a majority of scientists and the American public. While polar bears floating on small icebergs may have captured the public imagination as the face of climate change, even places like Idaho will not escape its effects. While climate change is a global crisis, action is now needed at all levels of government if there is a chance of mitigating and adapting to its effects. Over half of the world's population now lives in cities, and cities consume 78 percent of the world's energy and produce more than 60 percent of greenhouse emissions. Thus, climate change is now recognized as a significant planning challenge for large and small communities globally. Small mountain towns of the American West face particular challenges, such as decreased snowpack, longer wildfire seasons, and rising temperatures.

A community may choose to address climate change in several ways such as "green" plans, resilience plans, energy plans, and comprehensive plans. Similar to these, in the past several decades,

one of the most common protocols to follow has been to complete a climate action plan. A climate action plan outlines specific steps a community will take to address climate change,, and is both quantitative in its data collection, and place-based in its specificity. The intent of a climate action plan is to create a solid foundation, based on data and research, from which the City can begin to craft a plan to address climate change at the local level.

This report provides a first step in the development of a climate action plan. The report first offers an overview of the effects of climate change and greenhouse gases and then outlines what a climate action plan is, and compiles research done on the action plans of other cities in the region. This section should prove useful to the staff at the City of McCall, as well as its citizens as the community begins the climate action planning process.

KEY FINDINGS

The City of McCall is well positioned to take meaningful, long-term action in the realm of sustainability and resilience in the face of climate change. This report recommends the City follow these steps to complete the climate action planning process, following ICLEI—Local Governments for Sustainability Climate Mitigation Milestones:

Milestone 1



Figure 1: ICLEI's Climate Mitigation Milestones

- Assign a coordinator, or point of contact within the City to complete the LGO inventory, followed by the Community inventory.
- Continue to work with ICLEI—Local Governments for Sustainability, and consider becoming members to reap the full benefits of their technical assistance.
- Explore the option of working at the County level to complete data collection.

Milestone 2

- First, decide whether to focus on local government operations, community operations, or both.
- Set reasonable greenhouse gas emissions reduction goals that target specific emission sectors, such as energy, or transportation.
- Consult with ICLEI staff about the reasonableness and timeframe of these goals; additionally, use ICLEI’s ClearPath software for modeling and projections.
- Once goals are confirmed, establish a reasonable timeframe in which to complete them.

Milestone 3

- Establish a committee or advisory committee comprised of community partners and City staff.
- The committee will seek to gain an understanding of the public’s vision for local climate action through a communication and outreach process. Educational and recreational partnerships can be leveraged to both convey and collect information.
- The committee will narrow the scope of the climate action plan by reviewing the greenhouse gas emissions inventories, taking

- into consideration the public's desires as well as their own expertise on feasibility. ICLEI's scoping tool, and/or the City of Aspen's decision-making matrix can be utilized to facilitate.
- A draft climate action plan will be completed outlining the specific recommended actions, and will be presented to City Council for approval.

Milestone 4

- Answer the questions, "who will do the work, who will be responsible, and how will it be funded?"
- Continue to adapt actions based on City staff and community feedback.
- Review the timeline for implementation to accomplish goals within the given timeframe.

Milestone 5

- Complete a second greenhouse gas emissions inventory using ICLEI's ClearPath software.
- Coordinator and committee will review and update climate action goals as necessary.

ABOUT THIS REPORT

The City of McCall, Idaho is committed to a more sustainable future and addressing its contributions to climate change. To this end, the City began working with the University of Idaho's McCall Outdoor Science School in the spring of 2020 on a greenhouse gas emissions inventory for the city.

This report is a continuation of that work, and was developed by Anna Lindquist, a graduate student at the McCall Outdoor Science school, as part of a six-week internship, funded through a grant from Blue Cross of Idaho Foundation. Working under the Community and Economic Development Department, data collection progressed at the community and local government level for both a community-wide and local government operations scale inventory. Due to the level of quality data needed for an accurate emissions inventory, and the short span of this internship, only a draft inventory was completed. The results of that inventory can be found in the [Draft Greenhouse Gas Emissions Inventories](#) report. In conjunction with the inventory process, additional research explored the actions other cities are taking in response to climate change. Particular focus was given to cities of a similar population size to McCall, and also in the Western United States. The results of that research are contained in this paper.

CLIMATE CHANGE OVERVIEW

Naturally occurring gases dispersed in the atmosphere determine the Earth's climate by trapping solar radiation. This phenomenon is known as the greenhouse effect. Overwhelming evidence shows that human activities are increasing the concentration of greenhouse gases and changing the global climate. The most significant contributor is the burning of fossil fuels for transportation, electricity generation and other purposes, which introduces large amounts of carbon dioxide and other greenhouse gases into the atmosphere. Collectively, these gases intensify the natural greenhouse effect, causing global average surface and lower atmospheric temperatures to rise.

Because of anthropogenic climate change, McCall is projected to be affected by increased wildfires and decreased snowpack (explained in greater detail below) Other expected impacts in Idaho include an

increase in growing-season length, increased precipitation intensity, and changes in plant productivity.

Reducing fossil fuel use in the community, a means of reducing greenhouse gas emissions, can also offer community benefits. More efficient use of energy decreases utility and transportation costs for residents and businesses, for example. Retrofitting homes and businesses to be more efficient creates local jobs. In addition, money not spent on energy is more likely to be spent at local businesses and add to the local economy. Reducing fossil fuel use improves air quality, and increased opportunities for bicycling and walking improves residents' health.

Greenhouse Gas Emissions

The atmosphere is made of naturally occurring greenhouse gases, such as water vapor, and life on earth would not be possible without it. The gases in the atmosphere allow for short-wave radiation from the sun to pass through to the earth and be absorbed by its

surface and are used in such processes as photosynthesis. However, not all of this radiation is absorbed; some is re-emitted from the earth as long-wave radiation, which does not pass through the atmosphere as easily, and instead gets trapped by the gases in the atmosphere

The greenhouse effect

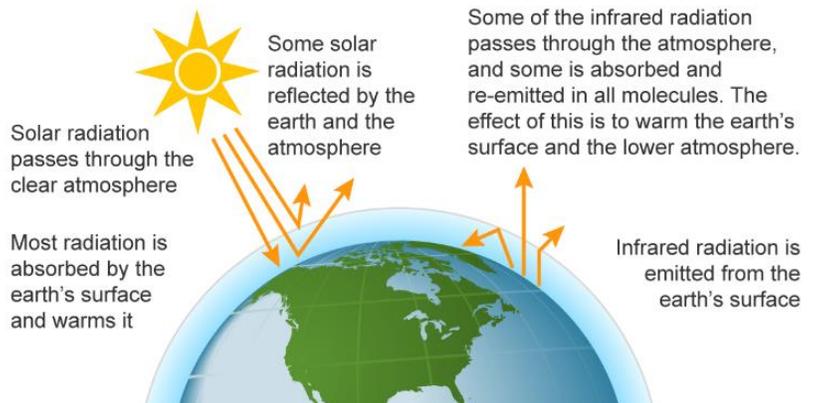


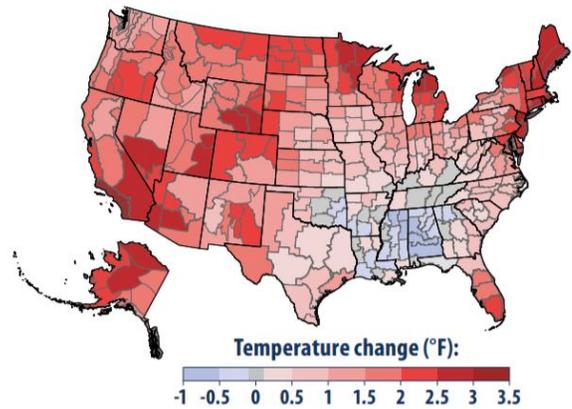
Figure 2: The greenhouse effect; Source: The U.S. Energy Information Administration

and warms the earth. Although the greenhouse effect is a natural part of Earth’s system, since the industrial revolution, atmospheric concentrations of greenhouse gases have been rising due to human activities.

Local and Regional Impacts

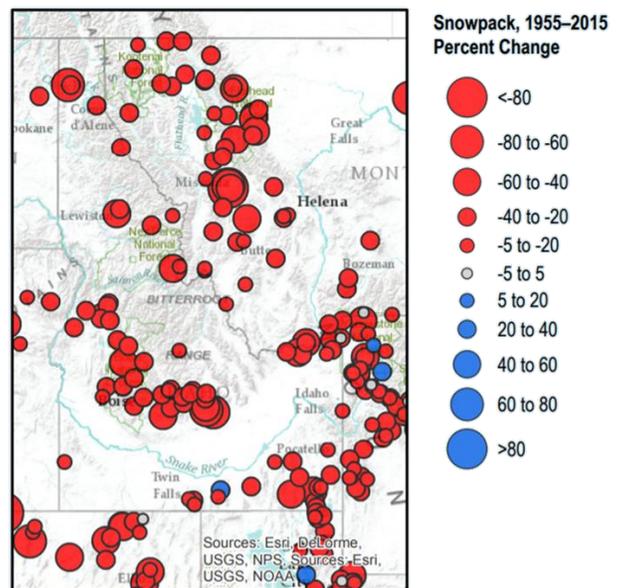
Regional studies have shown that Idaho can expect increasing temperatures and changing precipitation patterns in the years to come. Specifically, we can anticipate an increasing growing-season length, increasing areas burned by wildfires, and more precipitation falling as rain instead of snow. Natural resource managers in the state are increasingly concerned about water resource availability, extreme drought, more wildland fires, and changes in plant productivity.

As a place where people value a high quality of life, and as a destination for outdoor recreation, McCall is in danger of feeling these changes profoundly. McCall depends on snowpack not only for its water, but also for winter recreation, which brings an economic boost to the



Rising temperatures in the last century. The warming in Idaho has been similar to the average warming nationwide. Source: EPA, Climate Change Indicators in the United States.

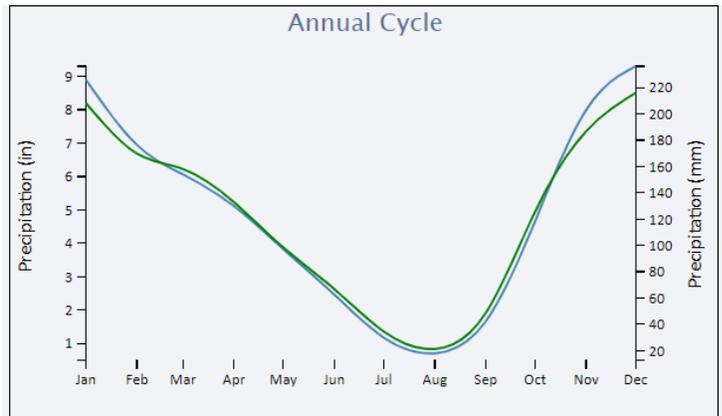
Figure 3: Warming Temperatures in the last Century; Source: U.S. Environmental Protection Agency



Trends in April snowpack, 1955–2013. The snowpack has declined at most monitoring sites in Idaho. Source: EPA.

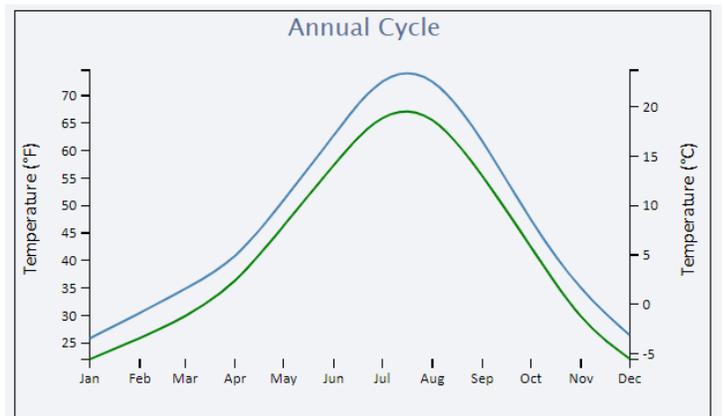
Figure 4: Snowpack in Idaho; Source: U.S. Environmental Protection Agency

region. Yet, as the graph on the right shows, overall snowpack in Idaho has been decreasing in the past few decades. Thus, in the future the region may experience a shorter skiing and winter tourism season. This decrease in snowpack is also detrimental to another key feature of McCall, Payette Lake, which is a natural lake fed by spring flow from the mountains. With rising temperatures, , spring runoff will peak sooner, leading to reduced flow in the summer, potentially affecting agriculture downstream, as well as the flora and fauna that depend on the lake for a stable ecosystem. This change in water variability, coupled with rising temperatures, has the potential to exacerbate the already visible effects of pine beetle or bark beetle tree kill in the area. Warmer winters will allow for more beetles to overwinter successfully, and target trees that are stressed due to climactic changes. Additionally, decreased soil moisture and rising temperatures are also correlated with increased wildfires, a constant concern for communities in the Western United States.



Ensemble average of monthly mean Precipitation for: 1) emission trajectory: High (RCP 8.5), 2050–2069 (blue line); 2) Historical, 1986–2005 (green line). Values are for the model grid cell containing: 44.911°N –116.099°E.

Figure 5: McCall's historical and projected precipitation under RCP 8.5 (Commonly known as the "business as usual" emissions scenario); Source: <https://gisclimatechange.ucar.edu/inspector>



Ensemble average of monthly mean Temperature for: 1) emission trajectory: High (RCP 8.5), 2050–2069 (blue line); 2) Historical, 1986–2005 (green line). Values are for the model grid cell containing: 44.911°N –116.099°E.

Figure 6: McCall's historical and projected temperature under RCP 8.5 (Commonly known as the "business as usual" emissions scenario); Source: <https://gisclimatechange.ucar.edu/inspector>

Finally, the health effects of climate change may also shift in the McCall area. Increasing temperatures and more particulate matter in the air due to wildfires may disproportionately affect our community's most vulnerable citizens'.

More information on greenhouse gas emissions, anthropogenic climate change and its regional effects can be found at the sources listed in the Reference section of this document.

Local Actions

In response to the problem of climate change, many communities in the United States are taking responsibility for addressing emissions at the local level. Since many of the major sources of greenhouse gas emissions are directly or indirectly controlled through local policies, local governments have a strong role to play in reducing greenhouse gas emissions within their boundaries. Through proactive measures involving land use patterns, transportation demand management, energy efficiency, green building, waste diversion, and more, local governments can dramatically reduce emissions in their communities. In addition, local governments are primarily responsible for the provision of emergency services and the mitigation of natural disaster impacts.



Figure 7: ICLEI Climate Mitigation Milestones

The City of McCall has recognized its role in contributing to increased greenhouse gas emissions, and thus has taken the first step with this report to begin to measure, and eventually complete a transparent, and publicly informed process to take action on climate change. In partnership with ICLEI—Local Governments for Sustainability, McCall has joined a large cohort of over 600 local governments in the United States in order to share knowledge and strategies for increasing sustainability. Through this association, McCall has access to shared knowledge, methodologies, and frameworks from which to begin the process of completing the milestones which will lead to identifying and reducing greenhouse gas emissions in the community. This report represents a significant a step in completing the process by providing a foundation from which the City of McCall can proceed.

Taking action on human caused climate change is aligned with the community values, projects, and policies that were put forth during the creation of the [2018 McCall Idaho Area Comprehensive Plan](#). Over 3,000 plan participants helped to identify the following values as central to the McCall community:

- *McCall's Mountain Character and Small Town Feel*
- *Access to Natural Resources and Abundance of Recreation Amenities*
- *A Family-Friendly Place*
- *Healthy Living*
- *An Intellectual Community*

Further assessment of the specific policies and projects contained within the Comprehensive Plan and their potential for greenhouse gas emissions reductions can be found in the Appendix of this document.

THE CLIMATE ACTION PLANNING PROCESS: RECOMMENDATIONS

The following section of this report outlines recommendations, categorized by ICLEI’s Climate Mitigation Milestones. These suggestions are sourced from research into the Greenhouse Gas Emissions Inventories, Climate Action Plans, Sustainability Plans, and Resilience Plans from other communities both in and outside of Idaho. This section will provide guidance for the City of McCall as it proceeds in the process of identifying and codifying the steps necessary to take action at the local level against climate change. Of course, this is not an exhaustive list, and as the City begins the process it will inevitably discover which course of action will lead to the most successful outcome for the community.

What is a Climate Action Plan?

For the past several decades, city leaders have been taking action at ground level, committing to campaigns and programs such as the Mayor’s Climate Protection Agreement and ICLEI’s Cities for Climate

Protection™. Arguably, because over half of the world's populations lives in cities, "the actions local governments take may determine the ultimate outcome of our response to climate change" (ICLEI-Local Governments for Sustainability USA, 2017). There are many opportunities and challenges that have emerged in this local frame, and, of course, every city is different.

The local version of the Kyoto Protocol or Paris Climate Agreement is often called a city climate action, or adaptation, plan (CAPs). Unlike national or state environmental standards, climate action plans are voluntarily taken on by local officials and will vary by local context and vision. Yet, typically most climate action plans consist of a few basic components:

1. An overview of climate change and its potential regional impacts
2. A greenhouse gas emissions inventory, and possibly a forecast of future greenhouse gas emissions
3. Greenhouse gas emissions reduction targets
4. Emissions reduction strategies and/or adaptation strategies
5. A plan for implementation of the strategies, including a timeline and assigned responsibilities
6. Continual monitoring and evaluation

However, this is simply the framework of a CAP on paper. The actual process of creating a CAP is iterative and can take from six months to a year. This is because a good CAP, in addition to receiving strong support from city leadership, also "engages multiple agencies, economic actors and community stakeholders", a process which takes time (UN-HABITAT, 2015). Many cities begin the process of creating a CAP by simply establishing their overall vision for mitigation and adaptation to climate change; this involves evaluating potential

challenges, and determining the city's capacity for action. Next, endorsements from the mayor or other senior leaderships are often key components; this increases buy-in for the project, and allows for a communications or outreach plan to assure targeted audiences that city leadership is committed. Additionally, cities will often review existing policies and programs to assess their capacity for inclusion in a climate action plan. This process of evaluating existing infrastructure, building community support, and visioning takes time. Indeed, a major obstacle for cities is that CAPs are a time consuming process in addition to local government staff's regular duties, and typically there is no one individual or department solely responsible for its creation or implementation.

It is also worth mentioning that one of the keystone pieces of a CAP, the greenhouse gas emissions inventory and reduction strategies, is technical and more challenging than many typical local-level projects. While organizations like ICLEI provide guidance, the methods used to collect these data are not uniform, making the emissions inventories from city to city difficult to compare. Additionally, some researchers argue that focusing on greenhouse gas emissions is not the most effective way for cities to combat climate change. One paper found that at the local level, heat management strategies such as green roofs, tree planting, and reducing waste heat production could be more successful in combating actual warming in urban areas, rather than a focus on carbon emissions. Truly, once in the atmosphere, greenhouse gases do not respect city limits, and thus it is seen by some to be futile to expend resources controlling them, when it is not clear that it will have a measurable result.

Despite these obstacles, it is still generally agreed that creating a CAP increases public awareness of the issues, helps to localize the global

problem of climate change, and indicates local officials' commitment to creating a sustainable future and community dialogue around long-term planning. From the research, we know that there are certain characteristics that go into a successful CAP; these include emphasizing the co-benefits of a plan, long term planning, aligning with existing policies, creating a timeline and delegating specific tasks to stakeholders. To that end, the city of McCall, Idaho, is well positioned to start envisioning a climate action plan of its own, having already done a lot of work towards long term planning and policy visioning, as well as engaging stakeholders in the community.

In 2018, the City of McCall completed a comprehensive plan titled McCall in Motion. The plan combined previous plans to encompass the city's overall vision and serve as its primary planning policy document for the City and surrounding Area of Impact. This plan took shape after extensive input from the community and resulted in not only a vision for the future of McCall, but also tangible goals and policies that align with those goals. While the plan does not specifically mention conducting a greenhouse gas assessment, or creating a CAP, a large number of its goals and policies speak to the City's willingness to mitigate its environmental impact. Thus, a large portion of the first step in creating a CAP has already been completed; the community has shown itself to be passionate about the continuing sustainable development in McCall, and the City leadership have shown a willingness to engage with them on the issues.

Milestone 1: Greenhouse Gas Emissions Inventories

The following section of this report outlines recommendations concerning completing the greenhouse gas emissions inventories that were started as part of this internship. A detailed overview of the greenhouse gas emissions inventory can be found in the accompanying report: Draft Greenhouse Gas Emissions Inventories.

Greenhouse gas emissions inventories are done to establish a baseline for a community from which to set reduction targets and policies.

There are two basic scopes for an emissions inventory: Local Government Operations (LGO) and Community-wide. A LGO inventory only takes into account the greenhouse gas emissions which result from operations over which the City has direct control. For example, this includes the amount of electricity used by city facilities and street lights, emissions from fuel usage in city vehicles and employee commutes, and emissions associated with solid waste. This scope would also include emissions from any contracted work for city projects, and fuel use from off-road equipment. The Community-wide scope encompasses emissions from the entire City of McCall and Area of Impact. For example, this scope comprises solid waste, wastewater treatment, annual vehicle miles travelled, and more.

Rigorous data collection and record keeping is key to these inventories, and is arguably one of the hardest, and certainly most technical Milestones. However, this Milestone also provides the opportunity for community engagement, and allows citizens to become aware of the process when they provide data. Indeed, during the data collection process, every respondent to requests for information was helpful and seemed supportive of the City's action. However, there are

also many obstacles that make rigorous data collection difficult. For example, research conducted under this internship fell under the shadow of the COVID-19 pandemic, which meant that all communication with City staff and community contacts was done over the phone, video, or email. Additionally, lack of institutional knowledge about the inner workings of municipal operations also meant there was a steeper learning curve for an intern than there might have been for someone already familiar with the City's procedures, record keeping, and department responsibilities. Thus, as corroborated by the employees of several other cities in Idaho also working on greenhouse gas emissions data collection, having a coordinator at the local government level to facilitate data collection is more efficient. Of course, this report recognizes the obvious financial responsibility that goes along with funding such a position, or allocating time to an already existing staff position to complete such duties. Yet, going forward, the City of McCall may want to consider such an option for a more cost-effective delivery of a Climate Action Plan.

Once a point person is established to continue Milestone 1, that person can easily add to the data collected so far by entering it into ICLEI's ClearPath software. ICLEI staff, as climate action specialists, having successfully assisted many communities in completing greenhouse gas emissions inventories over the past few decades have a wealth of knowledge to pull from. The City of McCall should continue to use ICLEI as a resource, as well as the other communities in Idaho who are currently also working on greenhouse gas emissions inventories. These communities include, Boise, Moscow, and cities within Blaine County such as Ketchum, Hailey, and Sun Valley. Indeed, if there is an interest across the region, McCall could follow Blaine County's example and create a cohort of cities within Valley County with which to pursue

data collection for mutual use. Currently, each city within Blaine County has an long-term intern, who is working together with City and County guidance to collect and share data for greenhouse gas emissions inventories. This model makes a lot of sense for smaller communities, as similar sources of data are collected for each city—from similar service providers—yet as was found in collecting data for McCall’s inventory, service providers such as solid waste collection, propane, and electricity, do not always keep track of data at the City level when the population is small. Thus, this model could be followed in Valley County if interest exists in neighboring cities to create a more holistic data set, and to increase the impact of the actions which follow.

In whatever way the City decides to continue, completing the greenhouse gas emissions inventories should be a top priority, as they are the basis on which the rest of the Milestones build. Finishing the inventories will allow for projections on future emissions to be modeled in the ClearPath software, using data from projected population growth. In turn, this will facilitate decision making regarding how ambitiously the City wishes to take action to curb future emissions by setting reduction targets.

In summary, to complete Milestone 1, it is the recommendation of this report that the City of McCall:

- Assign a coordinator, or point of contact within the City to complete the LGO inventory, followed by the Community inventory.
- Continue to work with ICLEI—Local Governments for Sustainability, and consider becoming members to reap the full benefits of their technical assistance.

- Explore the option of working at the County level to complete data collection.

Milestone 2: Reduction Targets

After a baseline greenhouse gas emissions inventory is complete, the City can begin to analyze the results and determine which emissions sectors require targeted action. It is ultimately up to the City to decide how ambitiously they wish to reduce emissions, and whether they wish to set a reduction goal for both local government operations and community-wide operations, or just one; some cities develop goals first for the municipal level, and then expand to the larger community. Usually, the reduction target is expressed as a percentage of total emissions, and it set at a level which either maintains or reduces greenhouse gas emissions over a certain time frame. In setting an emission reduction targets it is necessary to assess the goal for reasonableness and to establish a timeframe in which it will be completed. The following are examples of the goals set by other cities to reduce their greenhouse gas emissions:

- Park City, Utah set a goal to reduce emissions 15 percent below 2005 levels by 2020.
- Aspen, Colorado set a goal of reducing emissions by 80 percent by 2050.
- In their Sustainability Action Plan, which specifically addresses municipal operations, the City of Ketchum, Idaho, set the goals of:
 - Upgrading municipal buildings towards a 50 percent reduction in energy usage by 2030, and ensuring that new buildings are carbon neutral by 2030.

- Eliminate emissions from municipal vehicles by 2030, as well as reducing municipal water use by 40 percent by 2025.
 - Become a zero-waste community by 2050.
- Moscow, Idaho set a target of 20 percent reduction in greenhouse gas emissions at the local government operations level from 2008 levels by 2020.

Each of these municipalities chose to target either community emissions or municipal emissions, or both, and within those targets, chose to focus on the specific sectors in which emissions were highest, and in which the most change could be affected.

From the data collected so far for the City of McCall inventories, it appears that the highest greenhouse gas emissions producing sectors are Water Treatment, specifically energy consumption, at the municipal operations level, and Energy Consumption at the community level. Therefore, setting specific emissions reduction goals for those sectors and researching the necessary actions needed to meet those goals, would be a good place to start in setting reduction targets. The co-benefits of reducing emissions in these sectors would be lower energy costs for both residential energy bills and municipal energy bills (and thus, saving taxpayer money). In the Appendix section of this report, there are lists of the policies and projects within the existing McCall in Motion Comprehensive Plan that may assist with greenhouse gas emissions reduction if implemented. Additionally, there is a list of detailed quantitative and qualitative measures adopted by other cities to reduce their greenhouse gas emissions.

In short, this report recommends the City take the following steps when beginning Milestone 2:

- First, decide whether to focus on local government operations, community operations, or both.
- Set reasonable greenhouse gas emissions reduction goals that target specific emission sectors, such as energy or transportation.
- Consult with ICLEI staff about the reasonableness and timeframe of these goals; additionally, use ICLEI's ClearPath software for modeling and projections.
- Once goals are confirmed, establish a reasonable timeframe in which to complete them.

Milestone 3: Developing the Plan

A City or County may take many take to reduce their contribution to greenhouse gas emissions once they have set a reduction target. A Climate Action Plan, however, highlights the specific steps a City or County plans to focus on to achieve a certain goal. These steps are developed based not only on the data that have been collected in an inventory, and analyzed by creating reduction targets, but also through dialogue with stakeholders in the community to establish shared ownership of the process. Thus, the first step in developing a plan is to decide whose input is going to be taken into account. Next, after gathering broad input from stakeholders and the larger community, it will be important to narrow the scope of the plan, and to decide on specific action steps.

All of the municipalities listed previously convened some sort of advisory committee made up of City Staff and community participants to help guide the planning process. Something similar to McCall's previously existing Environmental Advisory Committee could be implemented to serve this function. The Town of Jackson, Wyoming

formed an Energy Efficiency Advisory Board composed of town and county leadership, as well as technical staff and relevant community leaders to accomplish the goal of improving energy efficiency throughout government operations. This committee broke into sub-groups once data were collected to create action plans for each sector of emissions. Similarly, Aspen, Colorado's advisory committee was comprised of 15 community organizations and 5 city departments, including representatives from energy, transportation, forestry, community development, climate science and resilience. Creating a committee or advisory board creates a spirit of shared ownership in the process of creating a climate action plan, and ensures that the process is equitable and representative of the community.

In addition to creating a group to work on the plan, broader public input can be gathered at this stage as well, which can be facilitated by the plan, or with the help of other partnerships. For example, the City of Whitefish, Montana participated in what they called "resilience dialogues" with committee members, city staff, officials at Glacier National Park, and climate experts. These dialogues were open to the community and simply started a conversation around climate change and local action. Additionally, the City's high school students interviewed long-term residents about the changes in weather and climate they have observed over time. The City of McCall could easily engage in something similar to these two activities by partnering with the local high school and the McCall Outdoor Science School. Another example of community outreach occurred in Park city, which partnered with their local mountain resort to host a Save Our Snow event to communicate to citizens the impact of climate change on snow. The snow at Brundage Mountain Resort and Little Ski Hill will undoubtedly be similarly impacted by climate change, and thus the City of McCall

could form a partnership when the time comes to both communicate important information and solicit the opinion of both residents and recreational visitors to the area in partnership with the ski hills. The City of McCall already clearly understands the importance of transparently engaging with its citizens in the planning process, as evidenced by the 2018 Comprehensive Plan. Comparable measures should be taken to engage the citizenry of McCall in a climate action process, both in Milestone 3, and throughout.

Next, it is necessary to decide the scope that will be addressed in the plan. The value of engaging in the public outreach process before deciding on the scope is that public interest can be taken into account when deciding on where to focus the most energy. ICLEI's Climate Action Plan Scoping tool which is a spreadsheet of questions used to assess a community's priorities, can help with this process. Completing this tool at the advisory committee level may help the City identify where to focus its energy going forward. Additionally, the City's existing 2018 Comprehensive Plan could also be referenced in this process to guide goal setting. Because the plan sought the input of many residents, and is still fairly recent, it could be used by the committee to remind them of the public's vision.

Another tool to define the scope of the project could be to follow Aspen, Colorado's example. The City of Aspen an advisory committee and listed every potential action the City could take to reduce emissions. Then, using the matrix listed below, prioritized certain actions for implementation in their 3 year action plan by measuring them against to following criteria:

- Have the potential to significantly reduce GHGs.
- Are innovative yet feasible.

- Could create desirable co-benefits.
- Complement existing plans and priorities.
- Are positioned at the nexus of building on past efforts, while setting the groundwork for those that will be necessary in the future.
- Are generally aligned across sectors.
- Fully capitalize on the variety of opportunities in each sector to avoid overreliance on any one.
- Represent a consensus from stakeholders who represent the full spectrum of sectors.

In conclusion, the City of McCall should start broadly to encourage creativity and community buy-in for the process, and then, with a group of engaged stakeholders, hone in on the actions needed for an effective climate action plan. Once the specifics are worked out, the City can draw on the template provided by ICLEI to create a draft climate action plan. The draft can then be reviewed by relevant partners and approved by City Council for implementation.

In summary, the following actions are recommended:

- Establish a committee or advisory committee comprised of community partners and City staff.
- The committee will gain an understanding of the public's vision for local climate action through a communication and outreach process. Educational and recreational partnerships can be leveraged to both convey and collect information.
- The committee will narrow the scope of the climate action plan by reviewing the greenhouse gas emissions inventories, taking into consideration the public's desires as well as their own expertise on feasibility. ICLEI's scoping tool, and/or the City of

Aspen's decision-making matrix can be utilized to facilitate the process.

- A draft climate action plan will be completed outlining the specific recommended actions, and will be presented to City Council for approval.

Milestone 4: Implementing the Plan

By the time a city has reached the point of implementing a climate action plan, a lot of thought and time has gone into its development. Thus, in order to ensure that a plan moves off the page it is imperative to answer the questions: "Who will do the work, who is responsible for moving items forward, and where does the funding come from?". These are the questions Carbondale, Colorado asked in their Energy and Climate Protection Plan, and the will also need to be answered by the City of McCall as is moves into Milestone 4.

The answer to "who will do the work" and "who is responsible" will be determined by the scope and direction of the approved climate action plan. If the City has decided to focus on local government operations, then they may want to follow the example of Park City, Utah and outline department specific carbon reduction plans. This included identifying parts of city code that may inhibit green building, as well as allowing for an increase in budget for greener city infrastructure and the purchasing of sustainable office products. In the context of both local government operations and the broader community, the City will need to rely on the previously established coordinator and advisory committee to check in with departments, residents, and visitors to ensure successful implementation of the plan. The responsibilities of these individuals include safeguarding the integrity of the plan, while

also remaining flexible to the needs of the community to adapt as necessary.

Fund the implementation of a climate action plan is the final essential hurdle. Examples of funding from other cities include the following:

- The Town of Jackson utilized a SPET Tax (specific purpose excise tax) to fund a non-profit, the Jackson Hole Energy Sustainability Project, to focus on community-based energy efficiency, education around renewable energy, and to work with the town on sustainability projects.
- Jackson also created an MOU with their County government, outlining a partnership of goals, responsibilities, and timelines for implementing energy conservation initiatives.
- The City of Walnut Creek, California applied a portion of its General Funds to implementing a climate action plan, as well as receiving grant funding from the Department of Energy's Energy Efficiency and Conservation Block Grant, and other state grants.
- Other grant opportunities can be found at the federal website: <https://toolkit.climate.gov/>

When the City of McCall reaches the point of implementation for this plan, the real work will begin. Therefore, to recap this section, it will be essential to do the following:

- Answer the questions, "who will do the work, who will be responsible, and how will it be funded?"
- Continue to adapt actions based on City staff and community feedback.
- Review the timeline for implementation to accomplish goals within the given timeframe.

Milestone 5: Monitoring and Evaluating

The main quantitative method of monitoring and evaluating the implementation of a climate action plan is to complete another greenhouse gas emissions inventory. By comparing the original inventory to one completed after steps have been taken to actively maintain or reduce greenhouse gas emissions, progress can be measured quantitatively. This comparison can be done by using ICLEI's ClearPath software.

It is at this stage that a community will want to reevaluate their original reduction targets, and either update them, or recommit to meeting their goals. ICLEI recommends completing an emissions inventory every 5 years or sooner. Thus, McCall should expect to evaluate its progress in the year 2025 at the latest. Of course, this could be done sooner, as in Aspen, Colorado which tracks their greenhouse gas emissions every 3 years. Other cities, such as Carbondale, Colorado, use other metrics of success, such as keeping track of the number of local jobs related to clean energy development, implementation, and education.

It is important to remember in this step, that while comparison to other cities can be useful, as Park City's climate action plan states: "Ultimately, the best comparison for Park City as it strives to reduce GHG emissions will be itself."

Leadership and Organizational Capacity

The following section of this report outlines ways in which other Cities have committed at the leadership and organizational level to climate action. These examples are intended to illustrate possible ways the City of McCall could also proceed.

- The City of Moscow, Idaho hired an AmeriCorps Sustainability intern to complete its first Greenhouse Gas Emissions Inventory in 2010 in partnership with ICLEI. Later, they created a position for an Environmental Education Specialist to continue this work.
- The City of Ketchum, Idaho has a Sustainability Advisory Committee, which includes a staff liaison, to provide guidance on environmental issues.
- The City of Whitefish, Montana hired an Energy Corps (division of AmeriCorps) coordinator to develop a greenhouse gas emissions inventory.
- The City of Boise has an Environmental Specialist, working within the Public Works Department, completing local government and community-wide greenhouse gas emissions inventories.
- Blaine County, Idaho has created a task force of City staff, interns, and non-profit organizations to further greenhouse gas emissions inventory data collection and the development of climate action plans.
- Carbondale, Colorado joined the United Nations Cities for Climate Protection Campaign, run by ICLEI.
- The following cities in Idaho have signed onto the Mayors Climate Protection Agreement: Bellevue, Boise, Hailey, Idaho Falls, Pocatello, Sandpoint, and Sun Valley.

CONCLUSION

The time for substantial measures to mitigate and adapt to climate change is now. Geographically, the City of McCall is situated where climate change will significantly impact the economy, health, and lifestyle of its citizens. With this report, and the accompanying [Draft Greenhouse Gas Emissions Inventories](#), the City of McCall now has the necessary tools to begin increasing its resilience to climate change at the local level. Climate action planning has been shown to motivate community action and enable focused policy-making and planning. Thus, the City should use the recommendations outlined in the main body of this report to begin crafting a place-based approach to climate action planning that will enhance its current and future citizens quality of life in a sustainable manner.

REFERENCES

Bailey, J. (2007). Lessons from the pioneers: Tackling global warming at the local level. Institute for Local Self-Reliance, Minneapolis, MN, 1–17.

Betsill, M.. (2010). Mitigating Climate Change in US Cities : Opportunities and obstacles Mitigating Climate Change in US Cities : opportunities and obstacles. 6(919435511), 393–406. Boswell, M. R., Greve, A. I., Seale, T. L., & Perkins, D. (2012). Climate Action Planning. In *Local Climate Action Planning*.

Center for Research on Environmental Decisions. (2009). *The Psychology of Climate Change Communication: A Guide for Scientists, Journalists, Educators, Political Aides, and the Interested Public*. New York

City of McCall (2018). *McCall In Motion: 2018 McCall Idaho Area Comprehensive Plan*.

eGRID Summary Tables 2018. Retrieved from: <https://www.epa.gov/energy/egrid-summary-tables>

Environmental Protection Agency Power Profiler. Retrieved from: <https://www.epa.gov/energy/power-profiler#/NWPP>

Explore Climate Anomalies, Variability, and Uncertainty in Space and Time with the Climate Inspector. (n.d.). Retrieved June 1, 2020, from: <https://gisclimatechange.ucar.edu/inspector>

ICLEI. (2019). *U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions* (Version 1.2, pp. 1-78, Protocol). ICLEI. doi:<http://icleiusa.org/ghg-protocols/>

ICLEI (n.d.). ClearPath [Computer software]. Retrieved from <https://clearpath.icleiusa.org/>

ICLEI-Local Governments for Sustainability USA: 2017. *Localizing the Paris Agreement*.

Idaho Power Sustainability Report, 2019. Retrieved from: https://docs.idahopower.com/pdfs/AboutUs/sustainabilityReport/Sustainability_Report_2019.pdf

Inventory of U.S. Greenhouse Gas Emissions and Sinks. (2020, April 13). Retrieved June 1, 2020, from <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>

Kiem, A. S., & Austin, E. K. (2013). Disconnect between science and end-users as a barrier to climate change adaptation. *Climate Research*, 58(1), 29–41.

- Leiserowitz, A., Maibach, E., Rosenthal, S., Kotcher, J., Bergquist, P., Ballew, M., Goldberg, M., & Gustafson, A. (2019). *Climate change in the American mind*: November 2019. Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.
- Millard-Ball, A. (2013). The Limits to Planning: Causal Impacts of City Climate Action Plans. *Journal of Planning Education and Research*, 33(1), 5–19.
- Petersen, S., Bell, J., Hauser, S., Morgan, H., Krosby, M., Rudd, D., Sharp, D., Dello, K., and Whitley Binder, L., 2017. Upper Snake River Climate Change Vulnerability Assessment. Upper Snake River Tribes Foundation and Member Tribes. Available: <http://www.uppersnakeivertribes.org/climate/>
- Scott Slovic and Paul Slovic (Eds.). *Numbers and Nerves: Information, Emotion, and Meaning in a World of Data* (Corvallis, OR: Oregon State University Press, 2015). 272 pp. ISBN 978-0-87071-776-5.
- Stone, B., Vargo, J., & Habeeb, D. (2012). Managing climate change in cities: Will climate action plans work? *Landscape and Urban Planning*, 107(3), 263–271.
- UN Habitat. (2015). *City Climate Action*. 1–38.
- van der Linden, S., Maibach, E., & Leiserowitz, A. (2015). Improving Public Engagement With Climate Change: Five “Best Practice” Insights From Psychological Science. *Perspectives on Psychological Science*, 10(6), 758–763.
- van der Linden, S. L., Leiserowitz, A. A., Feinberg, G. D., & Maibach, E. W. (2014). How to communicate the scientific consensus on climate change: plain facts, pie charts or metaphors? *Climatic Change*, 126(1–2), 255–262.
- What Climate Change Means for Idaho (2016, August). Retrieved May 1, 2020, from: <https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-id.pdf>
- Wheeler, Stephen M American Planning Association. *Journal of the American Planning Association*; Autumn 2008; 74, 4; ProQuest pg. 481
- Yalçın, M., & Lefèvre, B. (2012). Local Climate Action Plans in France: Emergence, Limitations and Conditions for Success. *Environmental Policy and Governance*, 22(2), 104–115.
- Zion Klos, P., Abatzoglou, J. T., Bean, A., Blades, J., Clark, M. A., Dodd, M., ... Walsh, C. (2015). Indicators of climate change in Idaho: An assessment framework for coupling biophysical change and social perception. *Weather, Climate, and Society*, 7(3), 238–254.

APPENDIX

- I. Resources
- II. McCall in Motion Comprehensive Plan
Policies to Reduce GHG Emissions
- III. McCall in Motion Comprehensive Plan
Projects to Reduce GHG Emissions
- IV. GHG Reduction Actions to Consider
- V. Excerpts from the City of Aspen's Climate
Action Plan

Resources

Plans from Other Cities

- Aspen's Climate Action Plan: A Roadmap to Our Sustainable Future
- City of Whitefish, Climate Action Plan
- Town of Carbondale Energy & Climate Protection Plan: Creating a Strong Carbondale Economy with Clean Energy
- 2016 Greenhouse Gas Benchmark Inventory, City of Moscow, Idaho
- Town of Jackson 40 X 20 Initiative: Action Plan
- Park City, Utah Community Carbon Footprint and Road Map for Reduction
- City of Walnut Creek, Climate Action Plan
- Boise's Energy Future: A community-wide clean energy plan, 2019

Other Resources

- <https://www.usmayors.org/mayors-climate-protection-center/>
- <https://toolkit.climate.gov/>
- <https://resourcecentre.c40.org/climate-action-planning-framework-home>
- <https://sustainabledevelopment.un.org/>
- <https://icleiusa.org/>

McCall in Motion Comprehensive Plan Policies to Reduce GHG Emissions

Element	Policy	Sectors of Potential of GHG Emissions Reduction	Aligned with Project in Action Matrix?
Community Character and Design	CCD 1.4: Ensure high-quality and sustainable design for public buildings and outdoor spaces. New public buildings should be attractive and meet the highest performance standards for energy and water conservation.	City buildings and facilities; reduction in energy usage. -Define "sustainable design" and "highest performance standards".	No
Community Character and Design	CCD 2.3: Protect and enhance McCall's treasured public places such as parks, plazas, and streetscapes. Where needed, enhance areas that lack distinctive visual character or where the character has faded.	Land use carbon offset	No
Community Character and Design	CCD 4.4: Continue to protect the surrounding natural landscape and the edges of the City by using a variety of techniques such as requiring clustering, creating conservation easements, or purchasing private property.	Land use carbon offset -How does the city currently go about deciding how/when/why to purchase private property and/or create conservation easements?	No
Land Use	LU 6.1: Support protection and enhancement of the open space surrounding the City within its Impact Area. Such protection is not limited to the physical protection of land, but includes the retention and development of working farms and participating in state and federal planning.	Land use carbon offset	Yes; LU Project 8: Review Shoreline Overlay Zone
Land Use	LU 6.4: Permanently protect and retain open space and environmentally sensitive areas through platting, conservation easements, or other appropriate tools.	Land use carbon offset	No
Land Use	LU 7.1: Incorporate urban agriculture uses into long-range planning efforts by supporting urban agricultural activities, farmers markets, and cottage industries.	Land use carbon offset and reduction in transportation emissions from out of boundary food transport.	Yes; LU Project 12: Develop form-based land use regulations for the CBD...
Land Use	LU 7.2: Support the creation and improvement of community gardens, community kitchens, and farmers' markets that sell locally and regionally grown foods.	Land use carbon offset and reduction in transportation emissions from out of boundary food transport.	No
Environment and Natural Resources	E2.3: Preserve and create natural riparian vegetation along the shoreline.	Land use carbon offset. Potential energy savings (cleaner water = less treatment?)	No
Environment and Natural Resources	E2.4: Limit the application of herbicides and fertilizers on manicured sod/lawn along shoreline.	Reduces emissions related to fertilizer production, and pollution in the lake.	No
Environment and Natural Resources	E5.1: Review, educate, and enforce codes for dark-sky lighting compliance.	Street lights and facilities; reduction in energy usage.	Yes; E Project 11: Review current dark-sky ordinance...
Environment and Natural Resources	E6.1: Regulate activities in natural resource areas that are deemed to be detrimental to the provision of food, water, and cover for fish and wildlife.	Land use carbon offset.	No
Environment and Natural Resources	E7.2: Utilize incentives, education, and public/private collaboration to increase energy conservation efforts throughout the community, including use of technological solutions and a reduction in consumption.	Buildings and facilities; reduction in energy usage	Yes; E Project 17: Develop a sustainability program... <i>(also could be listed with E Project 16: Encourage energy efficiency through programs...</i>
Environment and Natural Resources	E7.3: The City will serve as a role model to the community by utilizing new and emerging technologies for renewable energy.	Buildings and facilities; street and traffic lights; reduction in energy usage	No
Environment and Natural Resources	E 8.1: Achieve no net loss of tree canopy coverage and strive to increase the overall tree canopy to reduce storm runoff, absorb air pollutants, reduce noise, stabilize soil, and provide habitat.	Land use carbon offset.	Yes; E Project 15: Require configuration of development in environmentally sensitive areas to take into consideration... & E Project 20: Heritage Tree Inventory

Public Facilities, Utilities, and Services	PF 7.1: In partnership with Valley County, provide an adequate and cost-effective solid waste collection and disposal system that includes recycling, land reclamation, and composting.	Solid waste; reduction in production of tons of solid waste and associated energy costs to manage waste.	Yes; PF Project 9: Expand waste diversion services (<i>believe it is incorrectly labeled PF policy 9.1 in table</i>)
Transportation	T 1.2: When major roadway projects are implemented, opportunities to link them with other goals (e.g., green infrastructure, gateway treatments, public art) should be explored and incorporated when possible.	On and off road transportation emissions	No
Transportation	T 4.2: Provide expanded, reliable transit service to mixed-use areas, business parks, medium and high-density housing, educational facilities...tourist destinations, and other transit supportive land uses.	On and off road transportation emissions	Yes; T Project 6: Transit Hub; T Project 7: Water-based taxi; T Project 8: Route Frequency; T Project 9: Gondola or alternate transport modes from McCall to Brundage
Trails and Pathways	T&P 1.1: Increase connectivity, including year-round connectivity where possible, between neighborhoods and from neighborhoods to parks and greenways through the use of sidewalks, bicycle lanes, multi-use paths, and trails.	On and off road transportation emissions	Yes; T&P Project 1: Continue to develop and install wayfinding signage...
Trails and Pathways	T&P 2.1: Explore opportunities to connect parks, recreational facilities, trail heads, and open spaces through private property easements.	On and off road transportation emissions	No
Trails and Pathways	T&P 3.1: Complete the Valley County Pathway to connect the cities of McCall, Donnelly, and Cascade	On and off road transportation emissions	No
Parks and Recreation	PRO 1.4: Acquire, maintain, and improve public open space, wildlife natural areas, and parks.	Land use carbon offset.	Yes; PRO Project 3: Pursue the creation of a recreation corridor linking various sites through town...
Parks and Recreation	PRO 2.2: Create partnerships between the State, Valley County, the City of McCall, and other groups to develop guidelines for uses of Payette Lake and the surrounding lands, including state lands around the lake, and increase private education.	Off-road emissions; Water treatment	No
Parks and Recreation	PRO 2.4: Address motorized and non-motorized uses of the lake and points of access to the lake.	Off-road emissions; Water treatment	Yes; PRO Project 8: Explore features such as floating docks...
Airport Facilities	A 1.2: Operate and develop the airport in such a manner that it remains a safe and good neighbor by establishing land uses around the airport.	Land use carbon offset.	No
Airport Facilities	A 5.2: Maintain existing agricultural ground and open space in the vicinity of the airport, especially in key areas off the runway approach and departure corridors to reduce the safety risks for people and property on the ground and in the air.	Land use carbon offset.	No
Airport Facilities	A 6.4: Connect the airport to downtown and commercial areas with safe, multimodal transportation options.	On and off road transportation emissions	No

McCall in Motion Comprehensive Plan Projects to Reduce GHG Emissions

Element	Project	How much could this project reduce potential GHG emissions?	Lead Department
Community Character and Design	CCD Project 1: Revise the McCall Design Guidelines and Standards to preserve and promote the character of the McCall Area. Review the development code and revise as needed to promote or require energy efficiency, green infrastructure standards, renewable energy, and implement development standards that require retention of native vegetation where appropriate.	Medium reduction potential	CED
Community Character and Design	CCD Project 2: Develop a portfolio of recommended green design development standards to encourage developers to incorporate 'green' design in future projects. Incorporate 'green' design in the McCall development review process in or in certification program.	Medium reduction potential	CED
Land Use Project	LU Project 12: Develop form-based land use regulations for the CBD that emphasize pedestrian-friendly scale; inviting store fronts; rear and side yard parking; public spaces; and other features that attract and support pedestrian movement in the CBD.	Medium reduction potential	CED
Environment	E Project 4: New stormwater management facilities should be designed to serve multiple purposes in addition to stormwater retention and detention (such as ground water recharge, wildlife habitat, aesthetics, etc.)	Low reduction potential	PW
Environment	E Project 11: Review the current dark-sky lighting ordinance for consistency with dark-sky principle and current technology; identify possible updates. Consider amendments as necessary.	Low reduction potential	CED
Environment	E Project 16: Encourage energy efficiency through programs (such as current information and rebate and incentive support from local energy utility companies, the Department of Energy, and the Environmental Protection Agency) that encourage and/or reward citizens to use energy-efficient appliances, insulation, windows, etc. Help citizens become aware of costs and cost-savings in making changes.	High reduction potential	CED
Environment	E Project 17: Develop a sustainability program to recognize development projects in McCall that incorporate sustainable principles.	Low reduction potential	CED
Environment	E Project 18: Investigate negotiating with energy companies to increase reliance on renewable energy sources.	High reduction potential	?
Environment	E Project 19: Install electric vehicle charging stations at public facilities.	Medium reduction potential	CED
Environment	E Project 20: Use the Heritage Tree Inventory to create a monitoring system to create more effective mechanisms for establishing and protecting heritage trees on public and private property. Incentivize private development protection of large, healthy trees.	Low reduction potential	Parks and Recreation
Environment	E Project 21: Conduct a Hazard Mitigation Master Plan to effectively assess and address hazard risks.	No reduction potential	CED
Public Facilities	PF Project 1: Work closely with Payette Lake Recreational Water and Sewer District to ensure that planning, policy, and operational (fees, maintenance, etc.) master plans align.	Medium reduction potential	PW and CED
Public Facilities	PF Project 9: Expand waste diversion services: <ul style="list-style-type: none"> • Develop a curbside recycling program for McCall. • Develop more effective recycling practices for construction and demolition debris. • Promote composting at homes and businesses. • Improve recycling of materials in public spaces, in trash receptacles on city streets, and at public events. 	Low reduction potential	City Manager or CED
Transportation	T Project 6: As recommended in the Downtown Master Plan, pursue a transit hub at the southwest corner of the 2nd Street/Park Street intersection.	Medium reduction potential	TVT- CED is a partner
Transportation	T Project 8: Consider increasing the route and route frequency of transit to 30 minutes to make the service more accessible and attractive to residents and visitors.	No reduction potential	CED- City Council
Transportation	T Project 9: Explore the feasibility of a gondola or alternate transportation modes from McCall to Brundage Mountain Resort. Explore the feasibility of a bypass auto route around McCall to Brundage Mountain Resort.	Low reduction potential	VALLEY COUNTY IF IMPACT AREA- CITY IF CITY LIMITS.

GHG Reduction Actions to Consider

Solid Waste

- Divert construction and demolition (C&D) waste: create a system for moving C&D waste to markets; adopt and enforce a requirement for C&D waste diversion; provide increased opportunities for deconstructed building materials to be salvaged and reused. (City of Aspen)
- Create incentives for recycling and disincentives for contaminating recycling loads. (City of Aspen)
- Allow for increase in budget for greener infrastructure and purchasing sustainable office products. (Park City)

Energy

- Recommend implementing sleep mode technology for second homes when unoccupied. (City of Aspen)
- Partner with energy companies to “provide convenient source of financing, rebates, information and technical information for residential and commercial customers.” (City of Carbondale)
- Perform energy audits on all city/county facilities to identify areas for upgrades and opportunities for conservation. Break down improvements into tiers (Town of Jackson):
 - First level improvements: (low cost/quick return) install caulking, weather stripping etc.
 - Second level: (medium cost/little long on return) replace windows and doors, as well as heating systems, etc.
 - Third level: (more expensive/longer return) install geothermal, solar systems, solar hot water, etc.

Transportation

- Locally source food for City sponsored functions when practical (City of Carbondale).
- Support efforts to turn waste cooking oil into biodiesel (City of Carbondale).

Other

- Self-guided green tour of the City, including strawbale construction, affordable housing, solar installations, EV charging stations, etc. (City of Carbondale).
- Participate in resilience dialogues in the community (City of Whitefish).

Excerpts from the City of Aspen's Climate Action Plan

Understanding the CAP's Recommendations

During the CAP process, the Advisory Committee identified over 250 potential actions for reducing the Aspen community's GHG emissions. Through a deliberative process, the Committee prioritized 46 of those actions for implementation over the next three years. Several criteria guided that decision-making and yielded implementation priorities that:

- Have the potential to significantly reduce GHGs
- Are innovative yet feasible
- Could create desirable co-benefits
- Complement existing plans and priorities
- Are positioned at the nexus of building on past efforts, while setting the groundwork for those that will be necessary in the future
- Are generally aligned across sectors
- Fully capitalize on the variety of opportunities in each sector to avoid overreliance on any one
- Represent a consensus from stakeholders, who represent the full spectrum of sectors

The following sections of the document address each GHG sector, presenting the actions that meet these criteria.



The CAP Advisory Committee is comprised of 40 community leaders representing 15 organizations and 5 City departments. Committee members provided expertise in energy, building science, transportation, waste, aviation, forestry, community development, public administration, business, climate science and resilience.



Considerations for Implementation

The publication of this CAP is a launch point for the real work of implementation. It is the intent of the partners that developed this Plan to begin implementation in 2018 and make significant progress by the end of 2020. The actions listed in this CAP and slated for implementation over the next three years build on past and existing efforts in each sector while setting the groundwork for the mid- and long-term actions that will be necessary to achieve the Aspen community's GHG reduction goals.

One of the reasons for developing the CAP in collaboration with a diversity of partners representing all GHG sectors was to cultivate a spirit of shared ownership around both achieving community wide goals and by association, for implementing actions. This is the community's plan — no single organization or department is solely responsible for full execution of the CAP. Rather, implementation is an all hands-on deck effort.

To foster successful implementation, the City of Aspen's Climate Action Department will:

- Continue convening the Advisory Committee as it develops an implementation strategy for each recommended action
- Provide research capacity and expertise to inform decision-making
- Compile and formalize the Advisory Committee's feedback into implementable strategies for execution
- Support entities and organizations leading implementation on all actions
- Assume a leadership role in implementing relevant and appropriate actions
- Maintain implementation timelines
- Establish necessary outreach efforts and engage entities and constituencies that can help guide and support successful implementation
- Measure progress in both action implementation, GHG trends and progress towards reduction goals
- Keep decision-makers, community members, and stakeholders informed on progress and results

Most broadly, the CAP is but one of many current planning efforts that could affect GHG emissions in Aspen and the Roaring Fork Valley. Accordingly, an underlying priority is coordination with those related efforts, plans, and priorities. Other key implementation principles are building on previous experiences and successes, remaining apprised of evolving best practices, maintaining a clear prioritization of actions, and regular evaluation and redesign once implementation begins. Linkages and overlap with priority actions in other sectors will also be addressed and leveraged. Successful implementation will be pursued using similar principles to how the CAP was developed: through collaborative development with stakeholders, by leveraging local expertise, building strong partnerships, employing capable staff, responding to supportive leaders, and actively engaging with community members.

APPENDIX A: How the CAP was Developed

The recommendations presented in the CAP culminate a year and a half of work by the Advisory Committee including experts in energy, building science, transportation, waste, aviation, forestry, community development, public administration, business, climate science, and resilience. Throughout the course of four facilitated, in-person meetings centered around extensive analysis performed by the City of Aspen's Climate Action Department, the Committee was able to select and recommend specific actions. Re-capping the four-meeting framework provides an overview about how the CAP was developed:

Advisory Committee Meeting 1:

- Reviewed GHG Inventory and GHG forecast to understand trends
- Defined what a successful CAP looks like
- Reviewed background information on each sector
- Discussed GHG reduction objectives in each sector
- Brainstormed list of 400+ possible actions

Meeting 2:

- Reviewed refined list of possible actions (original list of 400 was refined to 250 "feasible" actions)
- Identified co-benefits of the 250 actions
- Developed modeling assumptions for each action (for reduction potential modeling)

Meeting 3:

- Reviewed GHG reduction potential related to successful implementation of all actions
- Reviewed which actions have the highest reduction potential in each sector
- Discussed Toolkit concept

Meeting 4:

- Reviewed draft Toolkit
- Chose three to seven actions in each sector for implementation over next three years
- Finalized list of 46 priority actions for the Aspen CAP

The stakeholder engagement process began with the Advisory Committee defining what a successful CAP would look like. Aspen's CAP been designed around these measures of success:

- **Actionable**
- **Implementable**
- **Innovative**
- **Integrated**
- **Cross jurisdictional**
- **Meets GHG reduction goals**