



CLIMATE  
SMART  
MISSOULA  
— CITY OF  
MISSOULA

## MISSOULA COMMUNITY CLIMATE SMART ACTION PLAN V1.0

July 2015

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# Missoula Community Climate Smart Action Plan v1.0

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Ronni Flannery, photo



## SECTION 1

### EXECUTIVE SUMMARY

Missoula is a community of passionate people willing to work hard to protect our quality of life and address the challenges of today. Climate change is one of the most critical issues we face, and Missoulians are stepping up to be a significant part of the climate solution. Local solutions by themselves may not change the trajectory of climate change, but efforts to create a thriving, resilient community help ensure a livable future. These and similar efforts in Missoula are gaining traction and are inspirational. Using this Community Climate Smart Action Plan as a guide, we will enhance the work that the City of Missoula and other entities, groups, and businesses are already doing. We are fortunate that the Missoula area boasts such an incredible resource in its networks and people-power. And we are fortunate that community leaders and members share a vision that protects our environment and health and encourages economic opportunities for all. This plan represents that vision.

Over the course of many meetings, community “summits,” and cross-sector conversations, a group of dedicated leaders have pulled together Missoula specific goals and strategies to work together to reduce our carbon footprint and build a more resilient community. The result is this Action Plan v1.0, a plan that is creative, positive, deepens relationships, enhances networks, and aims to get stuff done! The strength of the plan is housed in 12 focal areas for action—called “Buckets:” Education and Outreach; Green Building, Energy Efficiency and Conservation; Healthy, Thriving Community; Inventory and Metrics; Local Food and Agriculture; Renewable Energy; Smart Growth; Sustainable Economic Development; Transportation; Urban and Wildland Forests and Open Lands; Water Conservation and Protection; and Zero Waste. We invite you to keep reading to understand the origins of this plan, how we intend to move it forward, and just how each bucket is aligned to make a difference in our community and beyond.

**Lead authors** of this plan are Amy Cilimburg (Director, Climate Smart Missoula), Chase Jones (Energy Conservation Coordinator, City of Missoula), Beth Schenk (St. Patrick Hospital) and Caroline Lauer (City of Missoula). Additional contributors include members of the Climate Smart Leadership Team and various Missoula area leaders and experts. In addition to Chase, Amy, Beth and Caroline, the 2015 Leadership Team consists of community members Jill Alban, Bonnie Buckingham (Community Food and Agriculture Coalition), Amy Chadwick, Katie Deuel (Home ReSource), Karen Knudsen (Clark Fork Coalition), Bryan von Lossberg (Missoula City Council), Cherie Peacock (Latticework Sustainability Consulting), Nicky Phear (University of Montana), Meredith Printz (Missoula Community Foundation), Eva Rocke (University of Montana), and Molly White (Greenhouse Gas Management Institute).

**Support** for crafting this plan has come from the Bullitt Foundation, High Stakes Foundation, and Cinnabar Foundation. The City of Missoula and numerous organizations and businesses provided generous in-kind support.

**Find this plan** and the detailed Bucket Strategies at: [missoulaclimate.org](http://missoulaclimate.org).

**Thank you** and we look forward to many years of collaboration and action.





435 RYMAN MISSOULA, MONTANA 59802-4297 (406) 552-6001

July 30, 2015

Greetings and welcome to our Climate Smart Action Plan v1.0:

There's no question that the City of Missoula feels a sense of urgency around climate change and our responsibility to do our part to temper it. As such, we made a commitment in 2013 to our citizens to join in the effort to use less energy and generate fewer greenhouse gas emissions with our municipal Conservation and Climate Action Plan. That plan is being implemented and has our operations on the path to carbon neutrality by 2025.

During that process, I heard over and over that scaling up climate action and sustainability planning beyond municipal operations to encompass the entire community better prepares Missoula to be a healthy and resilient community for generations to come. This plan delivers on that notion. To that end, I enthusiastically endorse the Missoula Community's Climate Smart Action Plan v1.0.

A plan with the goal of balancing environmental quality, economic development and social equity is simply smart and responsible. I plan to continue to work with Climate Smart Missoula to tap Missoula's top leadership for flagship engagement and support. Local action is both nimble and imperative in this global issue, and Missoula wants to be out in front of that movement. With this plan, we further commit to doing the right thing as a community.

Sincerely,

John Engen  
Mayor



## INTRODUCTION

### Overview

Missoula has long been a community that prides itself in addressing the challenges of today, with a vision to create an ever better tomorrow. As such, Missoulians recognize that the time to come together and act on climate change and sustainability is now. Community members increasingly are more informed and energized to work together on climate solutions, preparing ourselves and this region by building environmental and economic resiliency. Missoulians also understand that climate change poses a disproportionate risk to vulnerable populations, and therefore we orient this work towards well-established and important community equity and social justice goals.

This Climate Smart Action Plan v1.0 serves as Missoula’s collaborative response to climate change, outlining the values, vision, goals, and actionable steps to build environmental, economic, and social resilience and sustainability for and in our community. The plan is based on extensive public and private, cross sector input and expertise derived from a series of community conversations and “summits” convened by what is now called “Climate Smart Missoula” and the City of Missoula. It is admittedly all encompassing and aspirational – as the community and quality of life in Missoula demands. This plan intends to define, guide, and encourage climate action and sustainability. We hope to build community, strengthen networks, offer opportunities and leadership for those who don’t know where or how to participate, and foster new partnerships and innovative funding opportunities. And we hope to do this in creative, positive, and hopeful ways.

The Climate Smart Action Plan v1.0 builds on the foundation of the [City’s Conservation and Climate Action Plan](#) by scaling up beyond municipal operations to encompass and involve the entire community. It does this via mitigation and adaptation climate action and sustainability approaches in twelve focal areas or “buckets.” Missoulians recognize that our community does not end at the city limit – we are larger than current boundaries, including many residents and businesses not located within the City boundary. At present, this plan addresses the Missoula area. It has been developed with ideas and input from the many who call the Missoula community home, and the strategies contained herein are crafted to be applicable and effective as that boundary develops and evolves.

This plan will be augmented in Climate Smart Action Plan v2.0 with an inventory of community greenhouse gas emissions, as well as the development and tracking of key sustainability metrics or indicators. Climate Smart v1.0 intends to serve as the foundation for action and progress, but only as the first in a series of iterative blueprints for balancing the environmental quality, economic development and equity goals of the Missoula community. We aim to be an example to other communities in Montana and beyond.

### The Plan Crafters

This plan has been crafted by leaders from the City of Missoula and Climate Smart Missoula, with input from a wide array of community members over the past few years. Missoula area leaders have long been involved with efforts to build a more sustainable community and address climate change. Climate Smart Missoula grew out of these efforts. It acts as the hub that fosters partnerships and actions to address climate change in our community. We envision a vibrant and resilient Missoula that has a zero carbon footprint and the crucial networks to address future climate-related issues in an equitable way. Climate Smart Missoula evolved out of various workshops, municipal climate action planning efforts, summits, and other activities. It is a major initiative of the Missoula Community Foundation, where this effort is housed, and the City of Missoula, with significant and continued support from Mayor John



Engen. Climate Smart’s Leadership Team comes from the non-profit, city government, business, and academic arenas. See page 10 of this plan for more details.

**The Buckets**

This Climate Smart Action Plan v1.0 outlines actions and strategies in 12 community areas of focus or “buckets” that have been identified and developed over the course of Climate Smart Missoula and the City’s work. They are represented in Figure 1 below and connect to build and support a climate smart Missoula community. The buckets were defined via two community Climate Summits, workshops, several events, and extensive individual conversations with community leaders. Each is accompanied by specific climate action and sustainability strategies to guide Missoula area Climate Smart activities for years to come.

Within Section 2 of this Climate Smart Action Plan v1.0 are comprehensive strategies for each bucket, including vision, goals, key activities (with, where possible, metrics and timetables), a snapshot of how these efforts address community climate and sustainability planning, and partners. These are also featured on the [Climate Smart Missoula website](#), which will serve as the dynamic “go to” place for continued updates, new activities, and the latest news; and will be linked and prominently featured on the City of Missoula’s Energy and Climate Action pages.

These bucket goals and strategies are ambitious. Clearly our success as a community will depend on partner involvement and support from a wide cross-sector of entities and individuals, on funding, and on our ability to work collaborate on improved policy.

No matter the challenges, opportunities, and enthusiasm for solutions, Climate Smart Missoula and the City of Missoula cannot tackle all these activities alone! Progress and success will only come with continued interconnection with local government, businesses, non-profits and community members, and by the diligent and strategic linking of crucial community partners around the connected concepts, projects and goals of each bucket. Figure 1 (right) demonstrates multiple connections between these buckets, and a depiction of Climate Smart Missoula, working closely with the City of Missoula, as the networking hub.



Figure 1. Climate Smart Missoula’s 12 connected “Buckets”

**Bucket Table**

The following table (next page) shares the vision, goals and top strategies for each of our 12 Buckets:



<b>TABLE 1. Visions, Goals, and Strategies for Climate Action in Twelve Buckets</b>			
<b>BUCKET</b>	<i>We envision...</i>	<i>GOAL. Our community will...</i>	<b>KEY STRATEGIES:</b>
<b>Education and Outreach</b>	... a knowledgeable Missoula community that is informed on the issues of climate change, understands the community's goal to be carbon neutral, and is aware of the various community networks that are addressing climate-related issues.	...build synergies among those motivated to take climate action, facilitate cross-sector collaboration, creating targeted education and policy changes.	<ul style="list-style-type: none"> <li>• Build on the interests, passions, and motivations of those committed to climate action</li> <li>• Target specific sectors for education about climate mitigation and resiliency</li> <li>• Educate and activate via community forums and community dialogue processes.</li> </ul>
<b>Green Building, Energy Efficiency and Conservation</b>	... a community where the built environment is part of the climate solution, where resident, business, non-profit, and government buildings are increasingly energy efficient, and where community members of all socio-economic status benefit.	... reduce greenhouse gas emissions that stem from buildings and develop a high demand for green buildings (new and retrofits) from all community sectors. We will verify that the community is making progress and that specific buildings are performing as designed.	<ul style="list-style-type: none"> <li>• Support Five Valleys High Performance Building Collaborative</li> <li>• Develop and encourage financing and funding opportunities</li> <li>• Initiate neighborhood energy efficiency and conservation projects</li> </ul>
<b>Healthy, Thriving Community</b>	... Missoula as a caring community, focusing on health, preparedness, and personal and community resilience to create a healthy place where people thrive, even in the midst of climate change stress.	... enhance our climate-related disaster and threats preparedness, educate Missoulians about the climate-health link, and build more resilient individuals and community.	<ul style="list-style-type: none"> <li>• Enhance community disaster and threats preparedness</li> <li>• Link health and climate change; work to address health issues.</li> <li>• Build personal and community resilience with equity in mind.</li> </ul>
<b>Inventory and Metrics</b>	... a vibrant and resilient Missoula community that has established the necessary metrics and carbon emissions inventory to track, report, and make progress toward Climate Smart Missoula goals	... create a framework for conducting a community wide carbon emissions inventory, establish the necessary infrastructure to complete successive inventory updates, and work with each Bucket to design metrics that can track the progress of projects and initiatives.	<ul style="list-style-type: none"> <li>• Conduct community carbon emissions inventory</li> <li>• Develop and track Bucket specific metrics</li> <li>• Create communication and education plan</li> <li>• Build Personal and Community Resilience</li> </ul>
<b>Local Food and Agriculture</b>	... a vibrant, affordable, and resilient local food and agriculture economy in the Missoula community with an educated consumer base that creates sufficient demand for local food.	... educate Missoulians about the importance of climate change's effect on local agriculture, assist farmers in food production and irrigation efficiencies, enhance our ability to use local foods, and protect our remaining agricultural land from future development.	<ul style="list-style-type: none"> <li>• Engage in comprehensive education</li> <li>• Expand local food distribution and establish food processing facilities</li> <li>• Promote the use of land planning tools</li> </ul>
<b>Renewable Energy</b>	... a Missoula area that is powered by renewable energy and where community members are engaged with and have control over affordable energy systems.	... significantly reduce our reliance on carbon-based fuels and increase the % of renewable energy in Missoula's energy budget. By 2050, generate enough renewable energy to supply the community's electrical energy needs.	<ul style="list-style-type: none"> <li>• Accelerate renewable energy projects for Missoula</li> <li>• Advocate for needed policy</li> <li>• Engage in education and outreach</li> </ul>



<b>BUCKET cont.</b>	<i>We envision...</i>	<b>GOAL: Our community will...</b>	<b>KEY STRATEGIES:</b>
<b>Smart Growth</b>	... a community that focuses growth inward toward existing infrastructure, neighborhoods, and public services to reduce our contribution to climate change and prepare us for its impacts.	... develop infrastructure and new growth that is sustainable, adaptable, and in the direction of existing services.	<ul style="list-style-type: none"> <li>• Utilize “Trails as Transportation” designation</li> <li>• Update parking management strategy</li> <li>• Create update parking management strategy</li> </ul>
<b>Sustainable Economic Development</b>	... a local economy that is increasingly prepared for forthcoming climatic challenges and opportunities, and that works for all people, the planet, and profits.	... develop and strengthen long-term economic strategies, policies, and financing for the Missoula area that fits the latest climate science, follows relevant resiliency recommendations, and builds social equity in our community.	<ul style="list-style-type: none"> <li>• Initiate a climate smart economic conversation</li> <li>• Develop funding mechanisms</li> <li>• Develop strategies for enhancing state level policy</li> </ul>
<b>Transportation</b>	... a safe, comprehensive transportation system that empowers people to choose active transportation, helping them to save money, breathe cleaner air, and reduce their carbon footprint, and that helps create a community that is resilient to economic volatility and growth.	... design and deliver education and outreach programs that reinforce “multi-modal” as an efficient, affordable, and sustainable way to meet our transportation, and we’ll work to reducing vehicle miles traveled, expand access to affordable public transit, and help build sustainable infrastructure for a promising future.	<ul style="list-style-type: none"> <li>• Reduce Vehicle Miles Traveled</li> <li>• Enhance expansive, Accessible, and affordable Public Transit</li> <li>• Develop safe, comprehensive transportation Infrastructure</li> </ul>
<b>Urban and Wildland Forest and Open Lands</b>	... that our surrounding forests and open lands, together with our urban forests, are healthy and adapted to local climate conditions, contribute to climate mitigation, and are supported by a broad sector of the community.	... work together to enhance forests and local habitats that are resilient and adapted to changing climate conditions so they can provide a broad array of goods and services including: shade and cool temperatures, carbon capture and storage, clean and abundant water, diverse wildlife habitat, and renewable wood products.	<ul style="list-style-type: none"> <li>• Support and Enhance our Urban Forestry</li> <li>• Re-plant and restore open space and public and private lands</li> <li>• Connect Forests and Water</li> <li>• Engage in Forest and Climate Education</li> </ul>
<b>Water Conservation and Protection</b>	... the Missoula area will have sustained quality and quality of water needed for human, animal and ecosystem health.	... enhance Missoula’s water resources and floodplains so they have the resiliency to withstand new pressures imposed by climate change and continue to provide clean water and ecosystem benefits to our community.	<ul style="list-style-type: none"> <li>• Enhance stream and wetland protection and restoration</li> <li>• Protect floodplains and wetlands to reduce flooding and enhance groundwater infiltration</li> <li>• Expand water-focused education initiatives</li> </ul>
<b>Zero Waste</b>	... a community that continually reduces its waste by reducing, reusing and recycling all materials possible, providing opportunities and incentives to do so for members of all socio-economic groups.	.... actively work to become a Zero Waste Community.	<ul style="list-style-type: none"> <li>• Build support for waste reduction across sectors</li> <li>• Investigate community waste behaviors and barriers to waste reduction</li> <li>• Foster community understanding of benefits of waste reduction</li> </ul>





## GETTING TO CLIMATE SMART ACTION PLAN v1.0

### Setting the Stage

As local communities strategically plan for a changing future, they can be the drivers for change both within and beyond their borders. Indeed, numerous institutions, entities, and groups in the Missoula area have made climate change action a priority by leading efforts to identify climate change related risks and threats to our community, as well as create organization-specific climate action and sustainability plans and goals focusing on climate mitigation and adaptation planning. Such efforts have been critical in providing leadership and examples for the Missoula community as well as for the State of Montana. While these efforts have moved the needle toward action and progress and have all been important milestones, this Climate Smart Action Plan v1.0 fulfills the unmet need of collaboration and planning together at a community-wide level. The resulting network and plan, convened by Climate Smart Missoula and the City of Missoula, is strong, active, resourceful and capable of supporting and achieving both individual organizational plans and goals, while simultaneously working together to implement action on a community-wide scale.

### Identified Risks and Threats to the Missoula area

We know that accelerating climate change poses risks to residents, businesses, our infrastructure and our natural systems. Indeed our community is already feeling the effects of warmer winters, drought, lower stream flows, extended wildfire seasons and resulting smoke and more. Some threats may appear obvious, with others less so.

This action plan is informed by the research and assessments conducted to date for the Missoula area, like ClimateWise described below, as well as information collected from an extensive network of cross sector experts through Climate Smart hosted Summits, outreach and community planning participation. Additionally, Climate Smart Missoula, in partnership with the City of Missoula, will continue to bring forward the best physical and social science related to climate to develop a set of metrics to inform future plan iterations and efforts moving forward, as well as to measure success.

### ClimateWise

The most comprehensive assessment of climate risks to Missoula County come from ClimateWise, a research and community workshop project conducted in 2011. Here we highlight some of the key findings. The full report is available at Headwaters Economics: [Climate change adaptation in Missoula County](#). Convened by the Clark Fork Coalition and developed by the Geos Institute, ClimateWise brought together over 100 public officials, conservationists, landowners, and specialists in forestry, wildlife, water, agriculture, business, engineering, public health, and other relevant sectors to identify the top five threats to Missoula's land, water, and community and identified strategies to address these.

The top risks:

1. Local impacts from global change: Climate refugees may relocate to the Missoula region. Growth will likely bring more buildings, infrastructure, traffic, and energy use, all which impacts our ability to reduce our carbon footprint.

### What is Mitigation? Resiliency?

**Mitigation:** Efforts to limit the magnitude and/or rate of global warming, usually by making reductions in greenhouse gas emissions or increasing the capacity of carbon sinks.

**Resiliency:** Efforts that increase our ability to anticipate and prepare for, and to survive and recover from, the effects of climate change.

The Rockefeller Foundation (2011) defines climate change resilience as: *the capacity of an individual, community, or institution to dynamically and effectively respond to shifting climate change risks and impacts, while continuing to function at an acceptable level.*



2. Increased wildfire severity and development of the wildland-urban interface: More people and property will be in the path of extreme wildfire.
3. Declining snowpack and decreased streamflow: Less water means increased conflict over the resource.
4. Increased flooding and impacts to water quality: Extreme weather and changes in runoff patterns can have extreme economic impacts.
5. Disruptions in native fish and wildlife populations: Habitat loss will harm fish and wildlife populations and impact recreation economies.

### **Additional Identified Risks**

Additional work by this community over the past four years, including the City of Missoula, Missoula County, and Climate Smart Missoula efforts, has expanded and further developed this list. During the spring of 2015, the City and County, together with Climate Smart Missoula, attended a Sonoran Institute workshop to further address community risks and solutions. We have now added:

6. Impacts of increased heat and wildfire smoke to human physical and mental health, and to our community's economic drivers and natural systems.
7. Concern for an over reliance on fossil fuels, and considerations of energy price increases of future, and the need to broaden our energy options.
8. Additional economic impacts from climate change to our local food and agriculture systems, our recreation-based businesses, our health care system, community infrastructure, and more.

### **Additional Local Climate Planning Efforts**

In 2013, the City of Missoula passed its [Conservation and Climate Action Plan](#), which outlines its goals to streamline city operations, reduce costs, decrease energy use, and build a safer future for the City. While the City's Plan was a huge step for Missoula and is presently being implemented, it was intended to address the municipality only. It helps build momentum for this important next step, planning at a community wide scale.

Other entities and efforts are also taking bold steps, focusing on climate mitigation and adaptation planning and on sustainability practices and community response. For example:

- The University of Montana passed its [Climate Action Plan](#) in 2010, which outlines goals for achieving carbon neutrality by 2020, and is actively making great progress.
- St. Patrick Hospital, an affiliate hospital of Providence Health and Services in Western Montana, espouses a commitment to stewardship and sustainability in its Core Values. Since 2008, St. Patrick Hospital has measured its energy use, initiated a recycling program, won an EPA Energy Star award, and led education efforts on materials reuse and the presence of toxics in food and the environment. Their good work continues.
- The Confederated Salish and Kootenai Tribes crafted their [Climate Change Strategic Plan](#) in 2013 and are actively engaged in implementation.
- The City of Missoula is presently addressing climate change, sustainability, and equity in their growth policy update process, [Our Missoula](#).

These planning efforts and actions have cumulatively set the stage for dozens of local partners and hundreds of citizens to come together for *community scale* climate action and sustainability planning. This Climate Smart Action Plan v1.0 is the timely and very real result.



## More on Climate Smart Missoula

Climate Smart Missoula acts as a hub to ensure that our community is planning and acting on climate change. In a nutshell, it's a group of dedicated leaders working to implement and support real-time projects that make measurable differences for our one-of-a-kind community and landscape. As a new initiative of the [Missoula Community Foundation](#), we are working to raise funds for this work and increase our capacity in 2015 and beyond. Our efforts are featured on our [website](#) and on [Facebook](#).



### Our Goals:

- Measure, understand, and communicate greenhouse gas emissions for the Missoula area, with a goal of carbon neutrality by 2050.
- Serving as a hub, connect and support groups working on climate mitigation and adaptation.
- Prepare and respond to climate challenges by focusing on social equity and health, economic, and environmental vitality.
- Initiate strategic projects and actions that reduce our carbon footprint, build resiliency, and inspire further action.
- Help build and sustain a resilient community, able to adapt and respond to climate related challenges with hope, kindness, innovation, and well-being.

## NEXT STEPS AND IMPLEMENTATION

**Current State:** We have a detailed plan, informed by a long history of comprehensive community members, and supported by Missoula's Mayor and other local elected officials. We have the group, Climate Smart Missoula, which will drive this plan through support, resources, and project work and will ensure this does not become, as they say, "shelf art". Climate Smart has a Home and a Director.

### Our next major steps include:

- With the City of Missoula and two Energy Corp AmeriCorps Service Members, conduct a greenhouse gas inventory and resiliency metrics assessment for the Missoula area. When completed (summer 2016), this work will inform our priorities moving forward and we will update this plan accordingly.
- Initiate a "Summer Smart" project to better address heat and smoke in our community.
- Actively participate in events—from greening the River City Roots Festival to helping with the Montana Renewable Energy Association Clean Energy Fair.
- Engage in lively and creative education and awareness efforts.
- Build support, raise funds, and increase capacity.
- **Move the bucket strategies forward!**

