

MONTANA'S RESILIENCE FRAMEWORK FOR COMMUNITIES

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COMMUNITIES

Montana Department of Commerce Community Development Division

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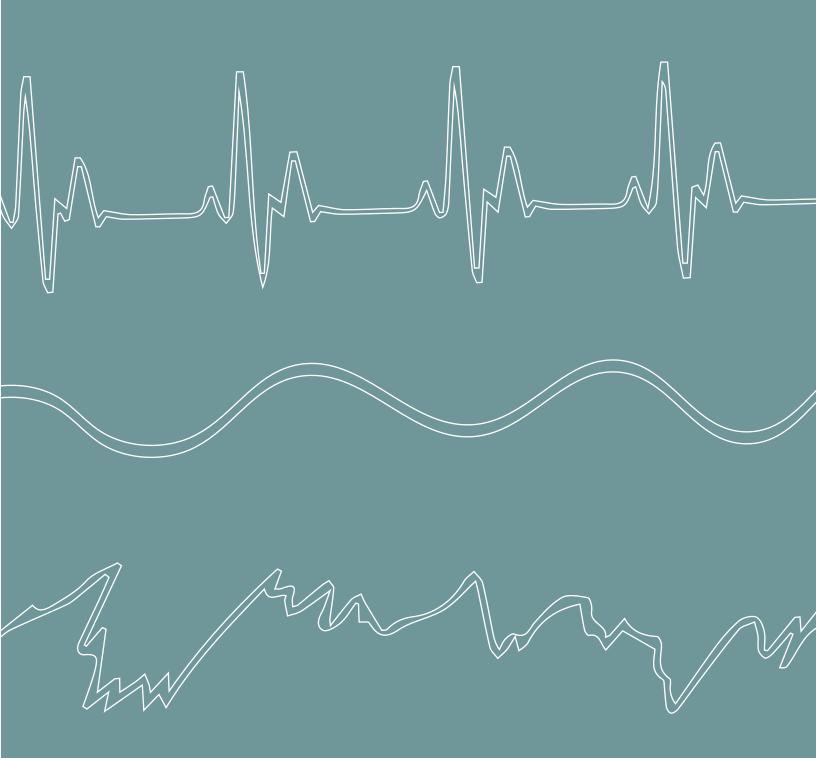
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CREATING A
RESILIENCE FRAMEWORK



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Executive Summary

The Montana's Resilience Framework provides a step-by-step process for communities to identify, assess and adapt to social, economic, and ecological disruptions. It provides clear instruction for communities to find opportunities to bounce forward with transition strategies that reduce future vulnerabilities and enhance their residents well-being. The intended users of this guide include local governments, community groups, or concerned citizens, any of which may initiate the resilience planning process.

Montana communities have experienced increasing frequency of shocks and stressors. Stressors include graying rural populations and aging infrastructure, unaffordable housing options, and an epidemic of opioid and methamphetamine abuse. Shocks may include sudden business closures, public health emergencies, and the increasing number of wildfires, floods, and other natural disasters.

By their very nature, shocks and stressors typically disrupt without notice. Resilient communities, however, do not wait until disaster strikes. Through community conversations and public engagement, research and planning, and development of practical solutions, resilient communities prepare for the unexpected. They build relationships and trust across public and private sectors. They identify opportunities and focus on local strategies. They coordinate effectively with state agencies and share knowledge and strategies with other communities.

Whether you are a local government official, a community group leader, or a concerned citizen, this Framework provides a road map for effective resilience planning. You may decide to develop an integrated, multi-sector community resilience plan, or you may prefer to embed resiliency into an existing or updated plan. Such plans may include growth or land-use policies, or strategic plan updates for specific sectors such as public health, transportation, utilities and infrastructure, food access and security, or pre-disaster mitigation.

Planning initiators are encouraged to begin a community conversation, then enlist a diverse Steering Committee and associated Working Groups. A resilience survey and workshop can map the community's financial and social assets and determine local priorities. The identified priorities may then be used as focal points for detailed research through a vulnerability assessment. These priorities and research findings will inform the development of action strategies. These are the key components of a draft resilience plan, which should be made available for public comment before being finalized. The final stages are implementation, continual assessment, and periodic updates.

While this framework addresses a broad range of stressors, shocks, and disruptions that face Montana communities, it especially addresses risks associated with natural disasters – wildfire, drought, flooding, and severe storms – which are projected to accelerate due to a warming global climate. Since the most effective way to mitigate these risks is for everyone to reduce greenhouse gas emissions, the framework also encourages communities to seek clean energy development strategies, including energy efficiency, carbon sequestration through land-use practices, and renewable energy production.

Facing a future with new and emerging threats such as cyber-attacks, climate change, social and political instability, and global pandemics, forward-thinking communities will address these challenges head on. They may even find unanticipated opportunities, including population growth as newcomers seek refuge in Montana from disruptions such as megafires, sea level rise, or another pandemic, which in turn may increase challenges such as unaffordable housing.

By taking appropriate precautions informed by the best available science, resilient communities are well positioned to bounce back from adversity and bounce forward into a socially supportive and economically sustainable future.



Introduction

Montana's Resilience Framework represents the thoughtful input from over 1,000 Montana citizens, non-profits, state and local governments, and private businesses. The purpose of the document is:

- 1) To facilitate community conversations about vulnerabilities and opportunities, share input gathered from community members, and engage them in a process to develop local solutions; and
- 2) Provide a step-by-step process for local communities looking to increase the resilience of their social, economic, and ecological systems.

This document is intended for use by a variety of government and non-government organizations. Likewise, it is designed for motivated, self-empowered individuals who wish to initiate a community resilience discussion, planning efforts, and implementation strategies. The process described in this document can be used as a stand-alone resilience strategy or added to an existing community planning document (i.e. zoning ordinances, building codes, hazard mitigation plans, growth policies).

Project History

Following extensive flooding and wildfire across Montana in 2011, 2013, and 2015, 45 of the state's 56 counties were designated federal natural disaster areas. With the assistance of Resilience AmeriCorps members funded through the federal Corporation for National and Community Service, the Montana Department of Commerce launched the Montana Ready Communities Initiative (MRCI) to address challenges related to natural disasters and other natural, social, and economic disruptions. In 2018, the Department organized 18 community resilience summits, convened 14 agency working group meetings, and surveyed more than 650 Montanans across every region about their concerns and priorities.

The MRCI has led to the development of action strategies for state agencies and this step-by-step guide for communities to develop their own local solutions.

What is Resilience?

Resilience is a term that is used in a wide range of disciplines, generally conveying a desire to bounce back or recover from traumatic, unpredictable, and high-impact events. The Rockefeller Foundation's 100 Resilient Cities Initiative defines resilience as, "The capacity of individuals, communities, and systems to survive, adapt, and grow amidst stressors and shocks."

The increasing frequency of natural and social disruptions has spurred government and civic leaders to do more to anticipate and prepare for a growing set of challenges. Rather than just bounce back from adversity, resilience communities recognize the need to bounce forward so that the next flood, wildfire, economic downturn, or public health emergency has a less traumatic impact. Through effective planning and implementation, they seek opportunities to strengthen community connections and open new economic doors.

Montana scientists say that the increasing frequency of natural disasters over the past decade is likely to accelerate even further due to a warming global climate. The Montana Climate Assessment projects that Montana temperatures will increase 5.6 - 9.8° Fahrenheit by the end of the century with major impacts to Montana agriculture, forests, waterways, and human health.

As society begins to pivot to energy sources that are less carbon intensive, resilient communities look to diversify their economies and make the clean energy transition on their own terms.

To bounce forward from adversity, the Kresge Foundation says that resilient communities must simultaneously:

- Anticipate and prepare for pressures and shocks that climate change and other large forces will introduce or worsen:
- Lessen overall demand for energy and increase the proportion derived from renewable energy sources; and
- Foster social cohesion by strengthening connections among individuals and networks, including all community sectors.

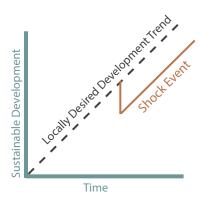
Disruption and Opportunity

Resilience planning prepares communities for future adverse events while seeking opportunities to improve economic, social, and human health conditions. Shocks and stressors are two types of disruption. Opportunities are found in forward-looking community action, based around principles of sustainable development.

Acute Shocks:

An acute shock refers to a high-impact, short-term event that may significantly affect basic services, public safety, or the environment. Shocks are commonly thought of as natural disasters, but also encompass economic and other social events

Examples: wildfires, industry/plant closure, flooding event, drought, public health crises, cyber attacks, downturn in commodity prices





Chronic Stressors

A chronic stressor refers to an ongoing environmental, social, or economic issue that results in an inefficient system of community cooperation. These stressors weaken the fabric of a community and magnify the effects of man-made or natural disasters.

Examples: poverty, lack of affordable housing, climate change, drug epidemic, lack of long-term planning



Shocks and Stressors Combined

The impact of a shock event is dependent on the underlying stressors and the magnitude of a stressor may be increased by the onset of a shock. Consider a community with high levels of poverty and poor floodplain management policies and planning. Both poverty and a lack of floodplain management are underlying stressors in this community. When a flood occurs, low-income and other vulnerable individuals may be disproportionately impacted through damage to homes and livelihoods. A flood increases the stressor of poverty post-storm and decreases the community's capacity to further develop in a way that is in line with their long-term goals.

If this community were to implement proper floodplain management systems and protect those most vulnerable, a flood event would pass by with little or no impact.

Sustainability and Resilience

Sustainability is a vital component of community resilience and is applicable to all five community sectors - built, natural, cultural, social, and economic. Rather than rebuild to a previous condition, we can view disruption as an opportunity to evaluate the community's economy, infrastructure, and social networks to reduce future exposure to disruption and to tap new resources to pursue a sustainable development path. For example, corporations and government agencies are increasing investments in rural land-use practices that sequester carbon and improve water management through on-farm soil health practices and forest stewardship. Energy efficiency improvements and development of renewable energy sources reduce vulnerability to grid failure and other large-scale disruptions, and they position rural communities to meet growing regional demand for low-carbon energy. Sustainable economic development diversifies the local economy and strengthens local self-reliance while protecting and restoring the natural environment.



A Resilient Community...

- ...is knowledgeable, healthy, and can meet basic needs of citizens.
- ...is socially cohesive and connected.
- ...has well-maintained and accessble infrastructure and services.
- ...effectively manages its natural assets.
- ...proactively plans for and considers adverse events.
- ...lessens its demand for energy while increasing the percentage used from renewable energy sources.

Terminology

Acute Shocks - a high-impact, short-term event that may significantly affect basic services, public safety or the environment

Adaptation - the process of change to become better suited for an environment (Climate Adaptation is the process of adapting to life in a changing climate – involves adjusting to actual or expected future climate conditions)

Chronic Stressors- an ongoing environmental, social, or economic issue that results in an inefficient system of community cooperation

Climate Change - change in global and regional climate patterns attributed largely to the increased levels of atmospheric carbon dioxide produced by combustion of fossil fuels

Mitigation - the action of reducing the severity of something (Climate Mitigation refers to efforts to reduce or prevent emission of greenhouse gases)

Steering Committee - a diverse group that coordinates the overall resilience planning process

Social Cohesion - the sense of belonging in a community; a level of cooperative relationships among community members that contributes to collective well-being

Sustainability - use of natural, social and economic resources to meet human needs without compromising the ability of future generations to meet their own needs.

Vulnerability - the state of being exposed to adversity or harm

Working Groups - consists of Steering Committee members and other resource experts, both in and outside of the community, who focus on specific resilience challenges or opportunities

STEP 01

Start the Community Conversation

Initiate the Conversation

The first step in resilience planning is to facilitate open and inclusive conversations in your community. A recent natural disaster or economic disruption may motivate community members to come together to discuss solutions. Building trust and early buy-in from community members will help ensure the success of the planning process.

The person or organization initiating the conversation about resilience may be best received if they are a member of the community themselves. However, it can be effective for the community initiator to bring in an outside expert, such as an industry trailblazer, university researcher, or elected leader from another Montana community, to share experiences, successes, and lessons learned elsewhere. AmeriCorps members may be available at little cost to the community to boost local capacity for event facilitation, research, fundraising, and coordination of volunteers.

Setting the Stage

Before scheduling the first meeting and initiating a process to strengthen community resilience, consider starting with a less formal educational or community service event, such as a food drive or tree planting day. Invite a guest speaker or show a documentary film at the public library about an issue of community concern.

For example, since 2016 more than 100 communities across Montana and other Northwest states have hosted multi-media presentations by U.S. Forest Service wildfire experts about the dramatic increase in highly destructive megafires -- wildfires over 100,000 acres - that burn homes, threaten lives and livelihoods, damage watersheds and infrastructure, and increase insurance premiums. These presentations have sparked community field trips and conversations about reducing wildfire risk through fire-smart neighborhood planning, collaborative forest management strategies, and conservation strategies to minimize new residential construction in the wildland-urban interface.

Community connections and trust are essential components of a resilient community, so be sure to prioritize inclusivity and transparency from the beginning. Everyone's voice is important, and it sets an inclusive tone when all are invited to the table. Here are a few ways you can make sure everyone feels welcome:

- Issue a press release or call a radio or newspaper reporter,
- Create a Facebook event,
- Ask community leaders to participate and spread the word,
- Announce events during public comment periods at city council or county commission
- meetings,
- Send an email invitation to local organizations, business groups, churches and schools, and
- Post flyers around town.

Be sure to allow for questions and open discussion during educational events. This will put new ideas on the table and can help identify community members willing to engage in a resilience planning process. Concerned citizens, local government staff, or community organizations who initiate the planning process would be wise to follow up with interested citizens and network with a variety of groups and businesses. Seek opportunities to engage students and youth who bring important perspectives to the conversation.

There are a wide variety of ways to frame initial community discussions about strengthening local resilience, but a few rules of thumb will help get the effort off on the right foot:

- Show your passion for promoting a healthy future for the community.
- Focus on specific challenges or opportunities that will resonate with many people.
- Keep it positive. Avoid the blame game and focus instead on reasonable solutions.
- Identify local values and assets as a foundation for future community well-being.
- Ask participants about their priorities and how they propose to meet their goals for the community.
- Discuss possible options for a process to strengthen community resilience or address specific challenges.
- End with a call to action: Outline ways that community members can get involved in resilience planning such as research, public outreach, or joining the Steering Committee or work group(s).

Starting the conversation may involve several community meetings or educational presentations before the next logical step becomes clear. Once you feel you have sufficient engagement and support, you're ready to assemble a community Steering Committee to coordinate a resilience planning process.

STEP 02

Assemble a Steering Committee

Committee Role

The next step to developing a local resilience plan is to formally identify a set of influential community stakeholders, government or non-government groups, and motivated, self-empowered individuals that will help to:

- Guide development of the plan.
- Advertise and mobilize community 2. stakeholder participation.
- Develop and/or guide the development of resilience strategies.
- 4. Implement identified resilience strategies.

The Steering Committee may be formed by a local government body or other representative group. Alternately, in the absence of a formal process initiated by local government, the committee may be selfselected, but should attempt to broadly reflect all community stakeholders. In addition to providing overall project coordination and engaging the community, the Steering Committee's role is to establish and oversee Working Groups to work on specific issues and to integrate their findings and recommendations into a single community resilience plan.

Sample Committee

Below is a sample list of stakeholders that would be helpful to have on a Steering Committee. This list should be expanded on and amended to fit the needs of your community and the unique economic and political systems you may have in place.

Business Leaders



Examples:

Chamber of Commerce **Downtown Association** Influential Businesses **Certified Regional** Development Corporation

Elected Officials



Examples:

Mayor **Tribal Representatives County Commisioner** State Representatives **School Board Members** City Council Sheriff

Health Professionals



Examples:

Hospitals Non-profits **Indian Health Services Public Health Professionals**

Ecological Specialists



Examples:

Watershed Groups **Conservation Districts** Non-Profits **Forest Service**

Informed Citizens



Examples:

Business Owners Educators Property Owners Students

Develop a Work Plan for the **Steering Committee**

The work plan below represents a possible outline for Steering Committee meetings. As the project evolves your work plan may look different than the one below. Resources, tools, and more detailed information to complete the sections mentioned are available in later sections of the Framework.



1. DEFINE THE PROJECT

The first goal of the steering committee is to define the plan's mission.

Outcomes:

- i. The Steering Committee has a firm understanding of what resilience is.
- ii. The Steering Committee has a clear mission statement that outlines what it hopes to achieve through the planning process.



2. ENGAGE THE COMMUNITY

Design a public outreach campaign to connect, inform, and get feedback from the local community.

Outcomes:

- i. The Steering Committee creates a formal outreach campaign.
- ii. The Steering Committee publicizes and implements the public outreach campaign.



3. IDENTIFY AND DEFINE Working Groups

Working Groups consist of Steering Committee members and other resource experts, both inside and outside of the community. The groups meet separately from the Steering Committee meetings to research, plan, and compile information to be used in the final resilience plan.

Outcomes:

- i. The Steering Committee assesses the outcome of the outreach campaign and determines priority focus areas.
- ii. The Steering Committee agrees on a set of Working Groups to address those priorities and designates people to lead and participate in the groups.

4. REVIEW WORKING GROUP RECOMMENDATIONS

After the Working Groups have met on their own to research specific vulnerabilities in the community, they will create recommendations. The Steering Committee will review and edit the Working Groups' recommendations and send back to the Working Groups if further edits are needed.

Outcome:

i. A finalized set of working group recommendations and resilience strategies.

5. DEVELOP A DRAFT PLAN FOR PUBLIC REVIEW

The Steering Committee creates an integrated document using the finalized set of working group recommendations. They develop a draft of the community resilience plan and make it available for public review and comment.

Outcomes:

- i. The Steering Committee creates a draft document.
- ii. Public comment is solicited, reviewed and incorporated as appropriate into a final plan.

6. IMPLEMENT AND UPDATE THE PLAN

The final goal of the steering committee is to determine an implementation strategy, including periodic review and updates.

Outcomes:

- i. If the Steering Committee was established through local government with decision-making authority, it presents the final plan to elected officials for adoption.
- ii. If the plan was developed outside local government and without any direct authority, the Steering Committee presents recommendations to appropriate officials for adoption.
- iii. The Steering Committee and/or local government recommend or approve a time-

The Steering Committee and Working Groups will be most effective if they represent a broad spectrum of the community, including interested individuals who participated in initial community conversations. It also is important to have community leaders involved in the development of these strategies to ensure that the recommended actions are feasible. Their joint efforts and dedication will be the backbone of your resilience plan.

Establish Working Groups

After reviewing issues, concerns, and topics discussed during the initial community conversations the Steering Committee may assemble Working Groups to develop strategies and action plans to address one or more community priorities.

Working Groups may be formed to generally address social, economic and ecological resilience, or they may address specific issues of concern. Examples of topics tackled by Working Groups in Montana communities include wildfire risk reduction, community food systems, watershed or floodplain restoration, economic development, energy conservation, public health, neighbor-to-neighbor support networks, and K-12 education.

Working Groups may include one or more members of the Steering Committee as well as other interested community members. Working Groups research, analyze, and compile information to be consolidated in the final resilience plan along with recommended strategies. The Working Groups may choose to highlight success stories and activities already underway in the community if relevant to their efforts.



Create an Action Plan for your Working Group

The Steering Committee and Working Groups play a complementary role in drafting the resilience framework. It is up to the Steering Committee to clearly define the role(s) of the Working Groups.

- The Steering Committee provides oversight and coordination while most of the work is done in Working Groups; or
- Most of the work is done by the Steering Committee itself, with specific tasks delegated to Working Groups.

In most cases, the Steering Committee should engage the broader community in the early stages of the project, as discussed in Step 3. Once Working Groups are established, in coordination with the Steering Committee, they should determine the scope of their duties and develop a work plan with assignments for each member or subcommittee including:

- 1) Review public input and survey results from Step 3 to determine local needs and priorities and identify community strengths, assets, and successes.
- 2) Assess community vulnerabilities and opportunities, as outlined in Step 4.
- 3) Evaluate existing community plans to cross-reference in the resilience plan and/or recommend for revision during the next update (Step 5).
- 4) Recommend resilience strategies and local solutions (Step 6).
- 5) Present recommendations to the Steering Committee to integrate into a draft plan for public review and comment.

You can find additional tools and guidelines for the Working Group process in Appendix 4.



STEP 03

Engage the Community to Identify Needs

Engage the Community

Engaging your community to identify specific needs can be done through a well-designed public outreach plan. The goal of public outreach is to solicit input from community members about local challenges, the impacts of shocks and stressors, community strengths and assets, and resources currently available to address these challenges and opportunities. A resilience plan should be designed for and by local community members and should address their needs and priorities.

Often, resources already exist that identify a community's vulnerabilities, needs, and existing assets. These resources should be referenced in combination with any input gathered during outreach.

THE PUBLIC OUTREACH PLAN

The public outreach plan is an informal document that outlines how the Steering Committee will gather input to guide the resilience plan. The public outreach plan should identify:

- Outreach platforms & how they will be utilized;
- 2. Community networks to leverage;
- 3. Community stakeholders to reach out to; and
- 4. Questions to include in a community survey.

Outreach Platforms

Members of your community access information in many different ways, so your public outreach efforts should include a variety of engagement strategies.

Reach out to community organizations to gather input from their members who may be able to identify sector-specific needs. These may include religious groups, social organizations, conservation organizations, and local non-profit groups among others. Their collective wisdom will help your Steering Committee develop a plan that benefits all community sectors. Identifying co-benefits of resilience planning will help inform community conversations and strengthen buy-in.

It is important to reach a wide and diverse set of stakeholders to design a resilience plan that involves all segments of your community's population. The resilience plan should represent all, even contradictory, viewpoints to be representative of the entire community.



Examples Platforms:

Open Houses - Plan and advertise an open house event to educate the community on resilience and your resilience initiative.

Community Survey - Develop a survey that can be distributed during meetings or on-line using a platform such as SurveyMonkey.com.

Press Meeting - Work with local media outlets to advertise the resilience survey and workshops to the public.

Community Events - Present at community events to raise awareness of public outreach surveys and meetings.

Steering Committee Networks - Each Steering Committee member informs their network of contacts about public involvement opportunities.

Stakeholder List - Directly invite diverse stakeholders. Refer to the list in Appendix 1 to get started.

Resilience Workshop - Convene a formal gathering of stakeholders to discuss and define resilience challenges and opportunities.

Resilience Workshops

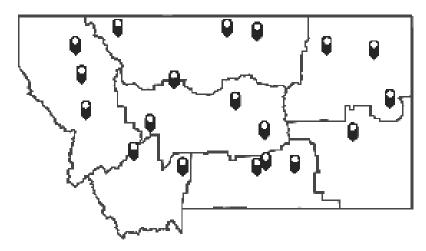
Resilience workshops are a great way to get indepth qualitative information on the shocks, stressors, assets, and resources in your community. Consider consulting the stakeholder identification list presented in Appendix 1 for ideas on whom to invite. Invite survey respondents to participate in an in-person workshop.

Materials and information on how to develop, advertise, and facilitate your own resilience workshop are available in Appendix 4.



Starting Point

In Summer 2018, the Montana Department of Commerce visited 18 Montana communities across the state and held public listening sessions to identify and prioritize shocks and stressors in the community.



HELENA JUNE 27 BILLINGS JULY 11 BUTTE JULY 23 PABLO JULY 23 MISSOULA JULY 24 **KALISPELL JULY 25 BROWNING JULY 26 GREAT FALLS JULY 26 HAVRE AUGUST 13**

FORT BELKNAP AUGUST 13 **GLASGOW AUGUST 14** POPLAR AUGUST 14 **GLENDIVE AUGUST 15 LEWISTOWN AUGUST 27 ROUNDUP AUGUST 27** MILES CITY AUGUST 28 **HARDIN AUGUST 28 BOZEMAN AUGUST 29**

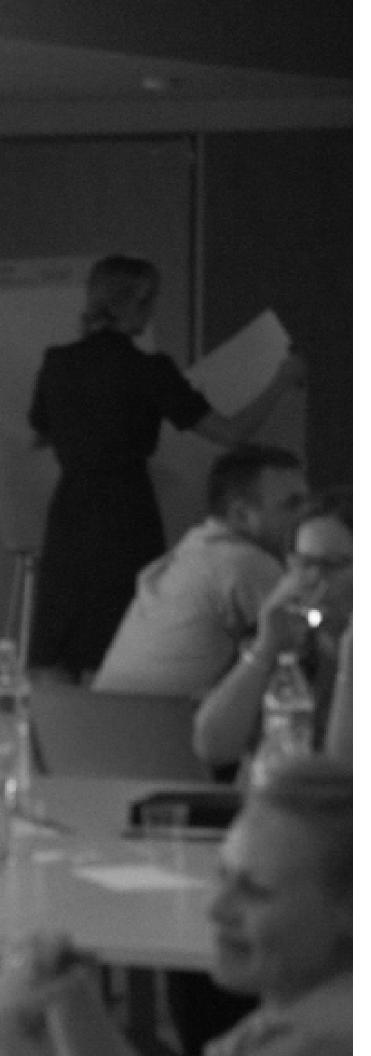
Summits

From June to September 2018, the Montana Department of Commerce worked with 950 stakeholders, including local elected officials, residents, community leaders, and local, state, and federal government employees across a variety of disciplines. Individuals from across the state, through surveys and summits, identified the most pressing shocks and stressors in local communities. Commerce solicited information on the resources in place to address the shocks and stressors and discussed existing community needs relevant to the resilience challenges identified.

Through this process, Commerce received input from individuals located in all 56 of Montana's counties and members of all eight tribal nations. Commerce engaged state agencies to identify existing resources.



- 295 Summit Attendees
 - **18** Resilience Summits
 - Workshops
 - 10 Individual Meetings
- 654 Survey Responses
 - 56 Montana Counties Reporting
 - 8 Tribal Nations Reporting



Resilience Survey

A survey is a great way to get input from a wide variety of individuals, especially those unable to attend a public meeting.

Appendix 2 provides a copy of the resilience survey the Montana Department of Commerce distributed to individuals across the state.

Consider re-creating a similar survey to identity shocks, stressors, existing community resources, and community needs specific to your area.

Your survey should ask residents to identify:

- 1. Shocks and Stressors in your community.
- 2. Current assets and efforts in place to address those shocks and stressors locally and regionally.
- 3. Personal and community priorities.

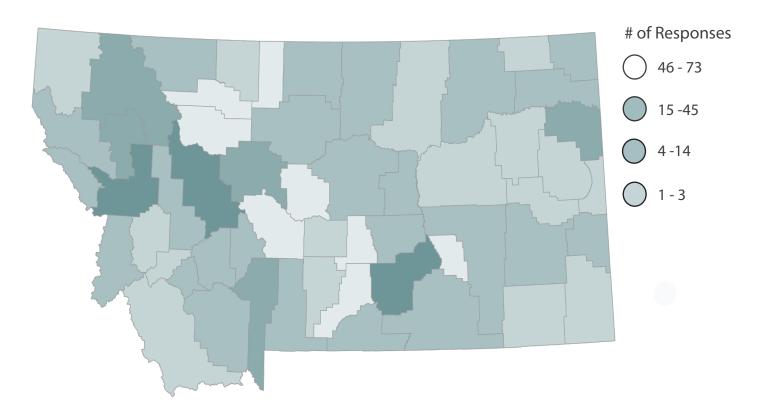
Once you've gathered public input on local concerns, community priorities, and goals, the next step is to conduct research regarding shocks and stressors. Creating a data-driven local vulnerability assessment is described in Step 04 with reference to a statewide vulnerability assessment available in Appendix 3.

2018 State Wide Resilience Survey

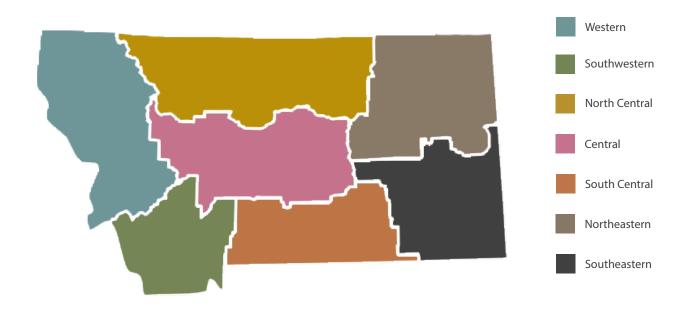
Montana is a large and sparsely populated state. Getting input from residents across this wide geographic expanse required a two-pronged outreach approach. In addition to the 18 community summits, a statewide survey cast a wide net for public input. The survey provided important information on what shocks and stressors individuals are experiencing in different regions of Montana and an idea of what types of resources were already available to address these challenges. With over 650 responses, the survey provided a robust and informative overview across seven regions. The figures below offer a heat map of community engagement, followed by a regional breakdown of major shocks and stressors identified from the survey.

Survey Responses by County

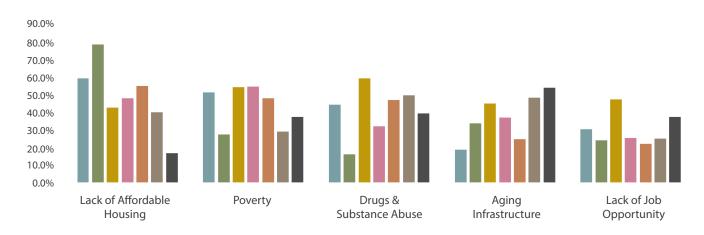
of Survey Responses by County



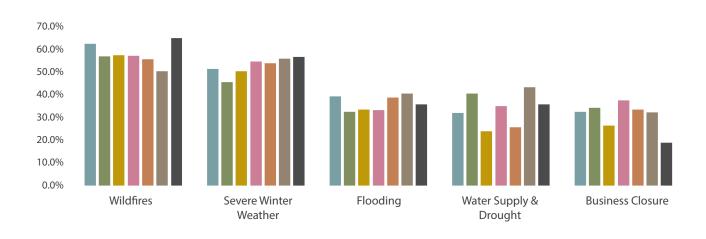
SURVEY RESULTS BY CLIMATE DIVISION



Q: In your opinion, which stressors have the largest impact in your community? Select the top three



Q: In your opinion, which shocks have the largest impact in your community? Select the top three



STEP 04

Assess Vulnerabilities

Vulnerability Assessment

After public input has helped the Steering Committee identify the community's most pressing challenges and vital assets, it's time to take an in-depth look. A vulnerability assessment is a data-driven narrative and visual overview of the shocks and stressors facing your community. Prioritize the shocks and stressors that came up often during outreach and conduct research to understand impacts, trends, and future projections. This assessment will serve as your foundation for developing resilience strategies in Step 06.

A helpful starting place is the statewide Montana Vulnerability Assessment, completed in 2019 (Appendix 3). The issues you evaluate may include some of the topics evaluated in the statewide assessment, and your committee may identify other issues of concern. The statewide assessment tracks some data trends across seven Montana regions, summarizing 23 shocks and stressors that Montana communities are experiencing.

Shocks

- Wildfires
- Severe Weather
- Flooding
- **Business Closure**
- Drought
- Infrastructure Aging and Failure
- **Boom-Bust Economies**
- Hazardous Material Exposure
- Missing and Murdered Indigenous Women
- Earthquakes
- Death in the Community
- Commodity Price Fluctuation and Agricultural Dependency

Stressors

- Lack of Affordable Housing
- Substance Use Disorder
- Skilled Workforce Availability
- Availability of Mental Health Services
- **Aging Population**
- Lack of Available Childcare
- Lack of Volunteerism
- Lack of Community Connections
- Poor Access to Technology
- Climate Change Impacts to Montana's Water, Forests, and Agriculture

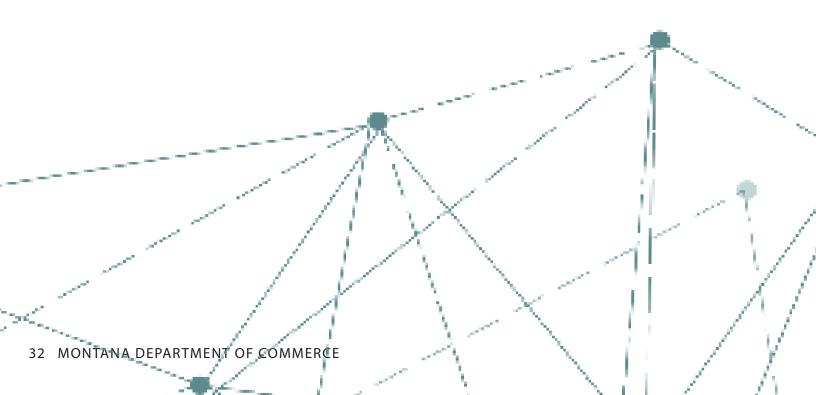
Many vulnerabilities in your community will have secondary impacts. For example, the Montana Climate Assessment documents that the earlier onset of snowmelt and spring runoff is reducing water availability in late summer, especially in snowmelt-dominated watersheds. Late-summer water shortages create a strain on farmers and ranchers who rely on the water table or stream-fed irrigation to survive. Likewise, it stresses cold-water fisheries, threatens recreation businesses, and the late-summer drought conditions increase wildfire risk. It is important to be aware of secondary impacts such as these when completing your assessment and prioritizing strategies.

Resources for Research

The Steering Committee and Working Groups can access many private, state, and federal information sources, including some listed below, but don't overlook local wisdom and experience. Ask for input and assistance from community members who have direct knowledge about the community and natural systems, including water, agriculture, forestry, tourism, housing, transportation, energy infrastructure, public health, emergency response, and economic development.

Keep your information well organized while preparing your assessment. For an efficient team effort, create shared spreadsheets for data management and research notes. The spreadsheet also will help you organize and track solutions as you develop specific resilience strategies in Step 06.

You can find state, federal, and non-governmental resilience resources in Appendix 6.



STEP 05

Evaluate Your Existing Community Plans

Categorize & Catalog

After establishing a set of goals, and before brainstorming new strategies to address community needs, take inventory of existing planning efforts within your jurisdiction. Many of the topics addressed in a resilience plan are addressed independently in other local planning documents. Appendix 5 has additional resources to help you leverage work that has already been done to address community needs and strengthen resilience.

Once you have compiled a set of existing planning documents, create a spreadsheet to track the issues, community needs, and goals that are addressed. Take note of issues addressed in these plans that may not have been discussed during public meetings. Add those additional topics to your list of resilience plan needs and goals.

The outcome of this step is an organized table or spreadsheet that outlines existing plans in your community and identifies where strategies proposed in those plans overlap with goals established for your community's resilience framework.

Potential Planning Documents

- Growth Policy (or Comprehensive Plan)
- Capital Improvement Plan
- Multi-hazard Mitigation Plan
- Community Wildfire Protection Plan
- Downtown Master Plan
- Climate Adaptation or Mitigation Plan
- Housing Plan
- Regional Economic Development Plans

Potential Assessments

- Montana Economic Developers Association & Montana Business Expansion and Retention project (MEDA BEAR)
- Community Health Improvement Plans & **Needs Assessments**
- Other relevant local plans or needs assessments

STEP 06

Prioritize
Resilience Needs
and Develop
Strategies

Prioritize Resilience Needs

The Steering Committee should now be ready to compile a set of:

- Comprehensive Goals,
- Community Needs,
- Significant Vulnerabilities, and
- Existing Strategies.

Establish your project priorities by determining which community concerns pose the greatest risks to the community's health, economy and well-being. Now it's time to develop a set of actionable strategies to recommend to government agencies and community partners.

Starting Point

The Steering Committee and Working Groups are encouraged to engage community leaders and other non-profit and business experts to help identify actionable strategies. Likewise, Working Groups may invite community members to review the vulnerability assessment, help prioritize community needs, and develop strategies. Consider inviting people who attended and joined earlier conversations. Have attendees brainstorm and categorize strategies that address a list of community needs over a variety of timeframes, from immediate to longterm. Remember, you are using all the earlier work done in Steps 01-05.

It is important to collaborate across community sectors during this process. Cross-sector coordination and communication will reduce redundancy and encourage co-beneficial strategies.

Depending on the scope of your plan and attendance at working group meetings, this step could take one or many meetings. The outcome of this step is a set of working group recommendations that outline strategies to advance each resilience goal.

Appendix 4 offers resources and tools to help facilitate quality discussion at your working group meetings.

Utilize Existing Networks

Resources listed in Step 04 and Appendix 6 provide access to strategies adopted by other communities and state governments. Other sources of innovative approaches and community strategies can be found through state agencies and existing Montana networks.

- 1. Resources available from the state to determine and implement resilience strategies can be accessed through the Montana Department of <u>Commerce Community Technical Assistance Program</u>
- 2. Resilience strategies recommended through the <u>2020 Montana Climate Solutions Plan</u> are available through the <u>Montana Department of Environmental Quality</u>
- 3. Best practices and peer support from other communities around the state can be tapped through the <u>Climate Smart Montana Network</u>, managed through the Institute on Ecosystems at Montana State University
- 4. Other private and public resources available to your community, including those listed in Chapter 4

Encourage your Working Groups to develop resilience strategies that support other community objectives. Integrated strategies include:

- Identify co-benefits that enhance multiple community sectors;
- Promote sustainable land-use practices;
- Diversify the local and regional economy;
- Protect vulnerable and at-risk populations; and
- Look for unanticipated opportunities during a disruptive period.

As Working Groups transition from identifying vulnerabilities to developing solutions, participants should feel excited about the future they are helping plan. Working cooperatively on tangible solutions provides an opportunity to lift spirits and inspire hope during times of uncertainty. The work done today is preparing your community for a more sustainable future. And that is something to take pride in!

Strategy Review

After completing your working group meetings and developing a set of recommendations, the next step is for each member and the group as a whole to review the strategies to make sure that:

- 1) The intentions of Working Group members are expressed correctly.
- 2) Recommendations are actionable, feasible, and relevant.
- 3) Internal review has been completed for content errors.

Your recommendations are now ready to submit to the Steering Committee for inclusion in a draft resilience plan for public review and comment.

STEP 07

Develop Your Plan

Resilience Plan

After completing the prior steps, your Steering Committee will be ready to finalize your community's resilience plan. While it is helpful to connect with other communities for inspiration and support, your plan will be unique to your community. You have already engaged community members to understand and identify their needs, assessed vulnerabilities, evaluated existing community plans, prioritized resilience needs, and developed actionable strategies. You may now compile all of that work into a well-organized and coherent resilience plan.

Check out these Montana community plans for inspiration and possible models for the look and feel of your plan.

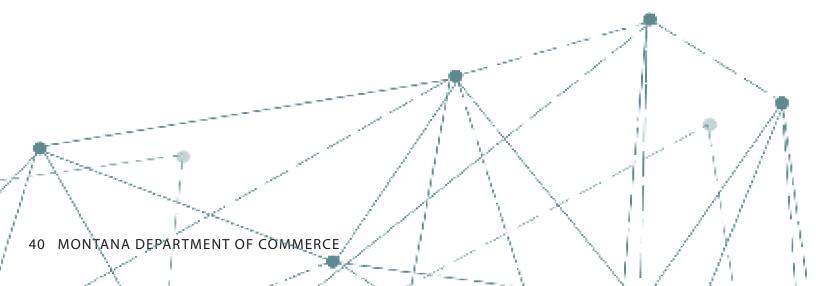
Example Frameworks:

Whitefish Climate Action Plan

Bozeman Climate Plan

Missoula County Resilience Plan

Helena Climate Change Task Force Action Plan



What to Include

While there are various ways to organize and present your plan, it should include these elements:

- 1) Executive Summary
- 2) Introduction
- 3) Community Visions & Priorities
- 4) Existing Community Plans
- 5) Vulnerability Assessment

- 6) Strategies
- 7) Implementation Plan
- 8) Conclusion
- 9) Appendices
- 10) References

Review your Plan

You want your plan to have innovative and actionable solutions with clearly identified outcomes, a timeline for next steps, and a system to measure progress. Does your plan address these

Strategies and Actions

How are you going to create change in your community?

Desired Outcomes

What will those changes look like?

Metrics

What are the indicators you will use to assess the changes?

Methods

How will you measure the changes on a regular basis?

Public Review

After drafting your plan and before officially publishing it, the final step is to invite public review. In addition to ensuring accuracy and assessing feasibility, the public review process will help build community ownership in the plan. It also will begin to engage community members in the critical implementation phase as they may raise practical questions, such as:

How will we raise the funds to invest in these strategies?

Do we need to adopt new public policies?

Who is responsible for carrying out this plan?

What is the role of local government and non-governmental partners?

Outlets for Public Review:

- Post a digital version of the draft online, or send it out in an email and ask for comments and edits. Make hard copies available at the library and county courthouse. Set a deadline for comments, typically 30-45 days.
- Hold a public comment session where people can review the document and give their suggestions.
- Distribute the draft to other communities who have previously engaged in resilience planning and ask for additional suggestions.

After receiving feedback from the public, discuss suggestions as a Steering Committee, make desired edits, and finalize.

STEP 08

Implement and Assess

Publish & Promote

You are now ready to publish the final plan and promote its use in your community.

Promotion Platforms

Consider using the following platforms to publicize the final plan and promote implementation by local government, economic and business organizations, and natural resource managers.

- 1) Print and distribute the document to key implementation partners identified during working group meeting.
- 2) Hold a public meeting to launch the document and distribute copies.
- 3) Post a digital version of the document on social media and partner websites. Encourage Steering Committee and Working Group members to do the same.
- 4) Distribute to surrounding communities currently engaged in resilience planning.

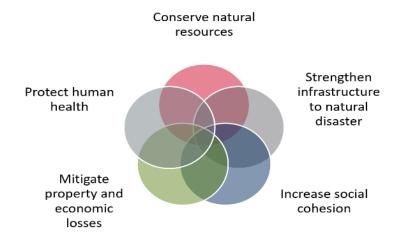
Outreach Materials

Although the full plan will likely be a fascinating page-turner, not everybody in your community is likely to read it cover to cover. Recruit someone with design skills to create condensed outreach materials to summarize your action plan. Infographics, brochures, and social media images can make your resilience plan accessible and digestible for all community members.

Consolidating your plan into simple, compelling graphics can be a challenge because resilience is inherently a multi-dimensional concept that integrates many issues, strategies, and partners.

The Bozeman resilience plan adopted in 2020 illustrates its overlapping strategies and benefits with a simple image.

Resiliency Goals



Source: Bozeman Climate Plan

Check out the Whitefish Road Map to Resilience trifold for additional inspiration.

Implementation Team

The original Steering Committee or a separate implementation committee should be designated to track progress implementing the action plan. The implementation team should include all partners with responsibilities under the plan. It is important to stay active during the implementation process to ensure continued community support.

Here are some tips to maintain momentum:

Schedule Regular Meetings

Meet quarterly, biannually, or annually to track progress and provide yearly updates to the community.

Select a Coordinator

The implementation team will be most effective if it designates a coordinator to maintain communications, schedule meetings, and check in with partners. The coordinator could be a local government staff member or the team may designate a non-profit organization to provide ongoing coordination. Or partners may choose to establish a new non-profit group.

Request Official Support

A letter of support or intent to implement from a local elected official and project partners is a great way for the community to hold itself accountable for implementing the strategies.

Update and Improve

Consider establishing a 5-year review to revise the plan. Use this opportunity to assess progress made to date, re-evaluate community needs, and refine strategies.

Pursue Grant Opportunities

If the implementation team has staff capacity or an AmeriCorps Vista member research grant opportunities and apply for funds to tackle projects. There are a wide variety of funding opportunities to invest in your community's future, and many of these resources will be more accessible because you have a formal community resilience plan.

Incorporate Strategies in Other Community Plans

Add the resilience plan as an appendix to your community growth policy. Include specific resilience strategies within your growth policy, capital improvements plan, economic development blueprint, and other planning documents.

Leverage your Plan

Think big! Once your framework has been accepted by the community and work has begun to implement strategies, you will find many opportunities to strengthen community cooperation, leverage funding opportunities, and network with other Montana communities. The completion of your community's resilience plan is just the beginning.

Conclusion

Congratulations, you have helped your community take a major first step to make your community a more equitable and resilient place for future generations. While the future will continue to present unexpected challenges, your efforts to anticipate, prepare and determine your own destiny will open up exciting opportunities along the way. As the network of resilient communities continues to grow across the state, Montana will remain a wonderful place to call home!



Appendices

Appendix 1: Stakeholder Identification

Appendix 2: Example Survey

Appendix 3: Montana Vulnerability Assessment

Appendix 4: Materials for Workshops and Meetings

Appendix 5: Integrating Resilience into a Growth Policy

Appendix 6: Tools and Resources

APPENDIX 1: STAKEHOLDER IDENTIFICATION



Below is a starting point of groups and individuals to may reach out to, to gather input on your community. The list is not comprehensive and should be tailored to your local community.

American Red Cross

Association of Floodplain Managers

Banks, Credit Unions Bike Walk Montana

Certified Regional Development Corporations

Churches/Faith Centers
Conservation Districts

County Health Departments

Department of Environmental Quality Regional Of-

fices

Department of Emergency Services Local Emer-

gency Managers

Department of Natural Resources and Conserva-

tion Regional Offices

Department of Public Health & Human Services Re-

gional Offices

Education (schools, colleges)

Electric Cooperatives

Environmental Protection Agency Regional Offices

Farm Bureau Farmers Union

Food and Ag Development Centers

Food Banks

Homeless Shelters

Human Resources Development Councils

Humane Society

Job Services Offices

Land Trusts

League of Cities and Towns

Local Elected Officials (city and county) Local Emergency Planning Committees Local Housing Authorities
Local Planning Departments

Local Watershed Groups and Nonprofits

Local Chamber of Commerce

Media Outlets

Montana Association of Counties Montana Association of Planners

Montana Building Industry Association

Montana Community Foundation

Montana Economic Developers Association

Montana Healthcare Foundation Montana Infrastructure Coalition

Montana Watershed Coordination Council

MSU Extension Agents Northwestern Energy

Regional Fish Wildlife & Parks offices

Regional Montana Department of Transportation

Offices

Regional Tourism Offices, CVB, TBIDS

Small Business Development Center Network
Tribal Cultural/Historic Preservation groups

Tribal Government/Council Tribal Health Departments

USDA Farm Service Agency offices

USGS Utilities United Way Salvation Army

Workforce Development

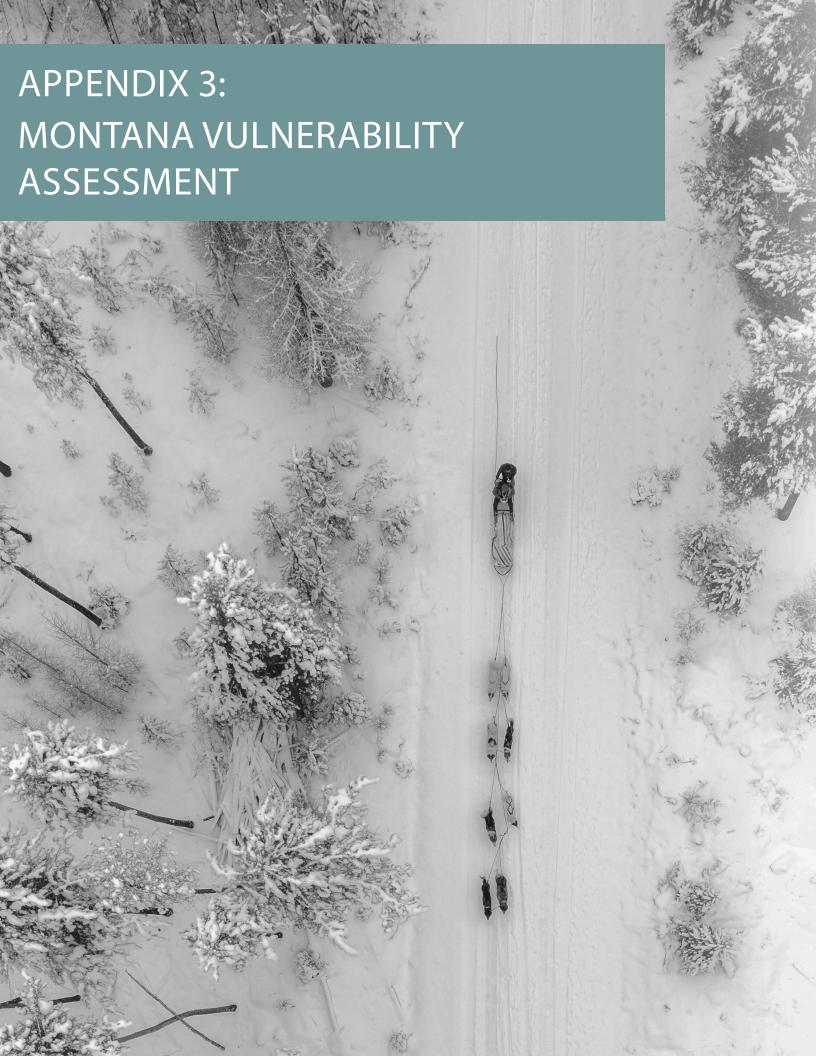
APPENDIX 2: EXAMPLE SURVEY



1. Identifying Stressors:				
In your opinion, which stressors have the largest impact in your community? Select the				
top 3.				
Poverty	Crime & Safety			
Poor Population Health	Homelessness			
Low Performing Education System	Lack of Affordable Housing			
Lack of Community Ties	Unemployment			
Lack of Job Opportunities	Vacant and Abandoned Properties			
Aging Infrastructure	Lack of Long-Term Planning			
Racial tension	Lack of Economic Diversity			
Drug Epidemic	Invasive Species			
Decline of Natural Environment	Poor Water Quality			
Climate Change	Energy Affordability			
Local Policies (Please specify in question 2)	Not Applicable			
Other (please specify)				
Please expand on any specific issues you have expand on any specific issues you have expand on any specific issues.	operienced or seen related to the stressors identified			
Please expand on any specific issues you have exabove.	operienced or seen related to the stressors identified			
	operienced or seen related to the stressors identified			
	operienced or seen related to the stressors identified			
above.	sperienced or seen related to the stressors identified			
above. 3. Identifying Shocks:				
above.				
3. Identifying Shocks: In your opinion, which shocks have the poten				
3. Identifying Shocks: In your opinion, which shocks have the poter community? Select the top 3.	ntial to have the largest impact in your			
3. Identifying Shocks: In your opinion, which shocks have the poter community? Select the top 3.	ntial to have the largest impact in your			
3. Identifying Shocks: In your opinion, which shocks have the poter community? Select the top 3. Wildfires Flooding	ntial to have the largest impact in your Business Closure Infrastructure Failure			
3. Identifying Shocks: In your opinion, which shocks have the poter community? Select the top 3. Wildfires Flooding Earthquakes	ntial to have the largest impact in your Business Closure Infrastructure Failure Hazardous Materials Exposure			
3. Identifying Shocks: In your opinion, which shocks have the poter community? Select the top 3. Wildfires Flooding Earthquakes Drought	ntial to have the largest impact in your Business Closure Infrastructure Failure Hazardous Materials Exposure Disease Outbreak			
3. Identifying Shocks: In your opinion, which shocks have the poter community? Select the top 3. Wildfires Flooding Earthquakes Drought Severe Winter Weather	ntial to have the largest impact in your Business Closure Infrastructure Failure Hazardous Materials Exposure Disease Outbreak Cyber Attacks			

 Please expand on any specific issues you above. 	u nave experienced or seen related to the shocks identified
 Local Support: Considering the previous questions, if you have 	have experienced these challenges in your life, which
community groups/institutions did you turn t	
Church or faith-based organizations	Non-profit organizations
Sport or hobby groups	Cultural affinity groups
Neighborhood-based organizations	Schools or colleges
Support groups	Family and friends
Government agencies or programs	Not Applicable
Other (please specify)	
6. Community Leadership:	
Which groups demonstrate strong leadersh	ip in your community?
Citizens	Local Government
Business	Religous Organizations
Non-profit/Philanthropy	Neighborhood Organizations
Educational Institutions	Not Applicable
Other (please specify)	
-	projects or efforts your community has implemented or is
planning to implement.	
In what ZIP code is your home located? ((enter 5-digit ZIP code)

9. P	lease select your a	age group:		
0	18 to 24		0	55 to 64
0	25 to 34		0	65 to 74
0	35 to 44		0	75 or older
0	45 to 54			
10.	Which race/ethnici	ty best describes you? (Optiona	ป)	
0	American Indian or Ala	askan Native	0	Hispanic
0	Asian / Pacific Islande	ſ	0	White / Caucasian
0	Black or African Ameri	can	0	Prefer not to answer
0	Multiple ethnicity / Oth	er (please specify)		
11.	Which of the follow	ving categories best describes y	our	ole in your community?
	Citizen			Private business owner or employee
	Local government emp	ployee		Non-profit organization employee
	State or federal govern	nment employee		Student
	Other (please specify)			
12. (Optional)				
Montana Ready Communities Initiative (MRCI) will be hosting multiple regional resilience summits in the coming months. If you are interested in participating in a summit, provide your name and contact				
information below.				
More information on these summits: https://comdev.mt.gov/Programs/MontanaReadyCommunities				
If you prefer to provide your contact information over email you can reach us <u>HERE</u>				
Nam	e			
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Ema	il Address			
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Montana Department of Commerce Community Development Division

301 S. Park Avenue - PO Box 200523 Helena, MT 59620-0523 406-841-2770 https://commerce.mt.gov/

INTRODUCTION

This vulnerability assessment is a data-driven narrative and visual overview of the shocks and stressors facing communities throughout the state of Montana. It provides readers with a systematic review of risk and can help a community identify actions needed to prepare for future events. This statewide vulnerability assessment was completed by the Montana Department of Commerce in 2019 and is available to help you prioritize the shocks and stressors in your own community.

The assessment provides data about specific vulnerabilities facing the state of Montana that were identified during public outreach summits held across the state in 2018. Vulnerabilities will look different in every community as shocks and stressors are specific to a community's geographic location, economy, development patterns, natural resources, and other specific factors.

The shocks and stressors identified in the survey include: lack of affordable housing, poverty, substance abuse, aging infrastructure, lack of job opportunity, wildfires, severe winter weather, flooding, water supply and drought, and business closure. From these ten vulnerabilities identified by summit participants, a team researched and compiled detailed data to supplement the survey results. The shocks and stressors discussed in the vulnerability assessment are below. Together, the survey and vulnerability assessment provides a robust and informative overview of risk for communities across the state.

Shocks

- Wildfires
- Severe Weather
- Flooding
- Business Closure
- Drought
- Infrastructure Aging and Failure
- **Boom-Bust Economies**
- Hazardous Material Exposure
- Missing and Murdered Indigenous Women
- Earthquakes
- Death in the Community
- Commodity Price Fluctuation and Agricultural Dependency

Stressors

- Lack of Affordable Housing
- Substance Use Disorder
- Skilled Workforce Availability
- Availability of Mental Health Services
- **Aging Population**
- Lack of Available Childcare
- Lack of Volunteerism
- Lack of Community Connections
- Poor Access to Technology
- Climate Change Impacts to Montana's Water, Forests, and Agriculture

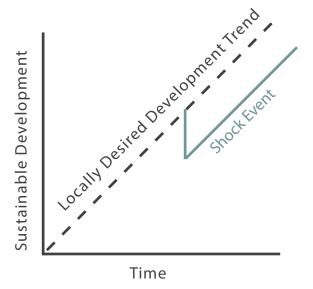
SHOCK EVENTS

An acute shock refers to a high-impact, short-term event that may significantly affect basic services, public safety or the environment. Shocks are commonly thought of as natural disasters, but also encompass economic and other social events.

Shock events in Montana include wildfires, business closures, death in a rural community, and many others. These events put an immediate strain on local resources and social well-being. When a wildfire burns miles of fencing on an eastern Montana ranch, the community must mobilize to rebuild or risk economic loss. When the largest employer leaves town, the community must work to diversify the local economy or risk population loss. When a community member dies in a tight-knit rural area, the community must search out mental health resources or risk symptoms of communal trauma. All of these events can stop a community in its tracks.

A shock can sidetrack a community's progress toward achieving local development goals. A locally desired development goal does not have to be intensive economic development. It can be to maintain a healthy and productive agricultural or ranching community, support local businesses and industry, or preserve community culture. Development goals may also aim to strengthen a recreation economy, attract modern technological industry, or grow the local population. Regardless of the goals, a community must inventory and prepare for possible shock events to ensure these events do not severely impede their progress.

The following section provides information on the shock events most frequently discussed during outreach.



WILDFIRES



Respondents to the state-wide resilience survey prioritized grassland and wild fires as the number one shock in their community. Wildland fires in Montana have burned nearly two million acres in the last five years. These events threaten the safety of individuals and their homes, negatively impact air and water quality, dampen local economies, and cost the state millions of dollars. Large forest fires typically occur in western portions of the state, but grassland fires in Eastern Montana have been just as forceful. In July 2003, the Missouri Breaks Complex in eastern Garfield County burned over 125,000 acres¹. These grassland fires can be especially harmful to ranchers when miles of fencing are destroyed, and their cattle suffer fire related health complications. In recent history, the 2012 and 2017 fire seasons collectively burned over 1.5 million acres of wildland in Montana and cost taxpayers nearly \$190 Million². Fig 1.1 outlines the cost and acreage burned during fire seasons in the past decade. Montana DES 2018 Pre-Disaster Mitigation Plan offers a more in depth look at wildland fire events in the state.

Air Quality

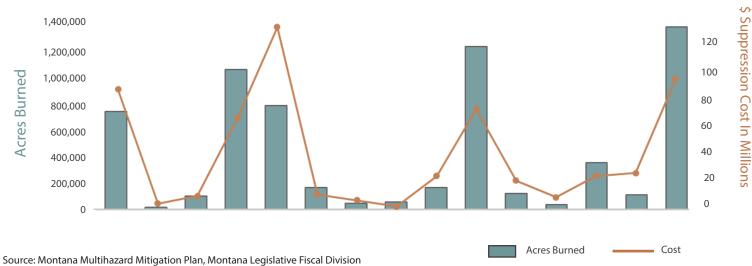
Wildfires have the potential to affect every Montana community, directly in the form of range or wildfire events and indirectly in the form of poor air and water quality. Wildland fires are a significant source of airborne particulate matter. Poor air quality from nearby wildfires can cause respiratory and cardiac issues, worsened asthma symptoms and increased risk of heart attack and stroke3. While some of the air pollution drifts in from California, Oregon and Idaho on easterly or northeasterly Pacific wind patterns, local air pollutants are also significant and pose serious health concerns to Montanans⁴.

Future Climate Trends

Based on an average of fires in the Western U.S., Montana's fire season is roughly 84 days longer than it was in the 1970s⁵. The 2017 Montana Climate Assessment (MCA) predicts "an increase in fire risk (i.e., probability of occurrence)—including an increase in size and possible frequency and/or severity (i.e., tree mortality)—is expected in the coming century as a result of a) prolonged fire

FIG 1.1 Cost and Severity of Montana's Wildfires

Acres Burned and Cost in Millions (2003 to 2017)



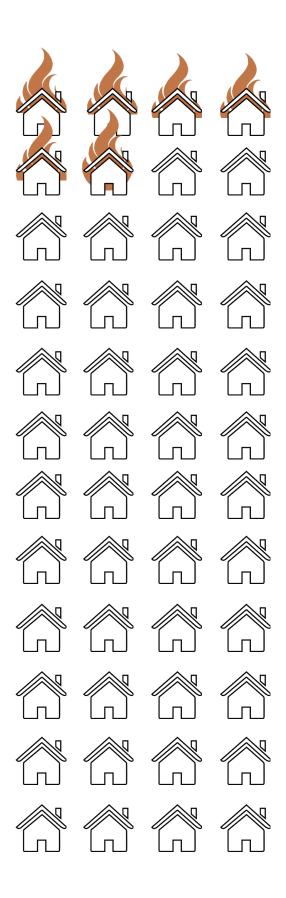
seasons due to increased temperatures, and b) increased fuel loads from past fire suppression."⁵ Prolonged fire seasons in the future will likely result in lengthened stretches of poor air quality, increased sedimentation and water pollution, negative economic impacts on tourism, small businesses and natural resource industries, and other potentially unseen events⁵.

Development Trends in the Wildland Urban Interface

In the last quarter century 1 in 8 of all new homes in Montana, more than 11,000, were built in areas with high wildfire hazard in western Montana, with around 31 percent of these being second homes⁶. Current development trends in the wildland urban interface (WUI) have outpaced development rates in areas of low fire hazard in Montana⁷. A study that quantified the liability of new development in the Wildland Urban Interface suggests that \$ 4 million in fire suppression liability is added to Montana each year from new home development alone⁷. The resilience of Montana's communities moving forward depends on thoughtful land use planning that acknowledges the inherent challenge of building in areas prone to wildfire.

"With less development in the WUI than some neighboring states but enormous potential for future development, Montana has a rare opportunity to ... proactively apply land use planning tools and strategies to manage development in fire-prone landscapes."

- Headwaters Economics Report 2017



SEVERE WEATHER



Respondents listed severe weather as the number two shock event with the potential to impact Montana communities. The term severe weather includes both winter and summer weather events such as heavy snowfall, extreme cold temperatures, ice storms, blizzards, extreme heat, tornados, high winds, hail, lightning, and thunderstorms. Montana Disaster and Emergency Service's Multi Hazard Mitigation Plan notes that "the entire state is considered equally vulnerable to severe winter weather" with regional variability in vulnerability to summer weather hazards8. Montana has experienced eight federal disaster declarations related to severe weather events since 20008. These eight winter storm, high wind, and tornado events resulted in roughly \$19.8 million of spent federal, state and local public assistance8.

Severe Winter Weather

Severe winter weather poses a serious indirect and direct threat to life for all Montanans, and significantly al-



\$5,110,518

Average Yearly Crop Losses from Severe Summer Weather in Montana

ters the seasonal functions of social and economic services and systems. Nationwide, there are an average of 100 deaths from severe winter weather, which is more than lightning, hurricanes, or tornados⁸. Around 70 percent of the lost lives related to severe winter weather in the U.S. are from the indirect impact of traffic accidents on snow and ice-covered roads8. Severe weather poses a major threat to vulnerable and isolated populations in the state via utility interruption, freezing pipes, and high cost of snow removal8. Severe winter weather in 2018 prompted the governor of Montana to declare a state of emergency on three reservations and in two Montana counties. This came after immense snow drifts, road closures and persistent below zero temperatures limited local populations access to critical community infrastructures including hospitals, food and energy suppliers, schools, and local government offices⁹. Severe winter weather events are a persistent and serious concern for all Montana communities.

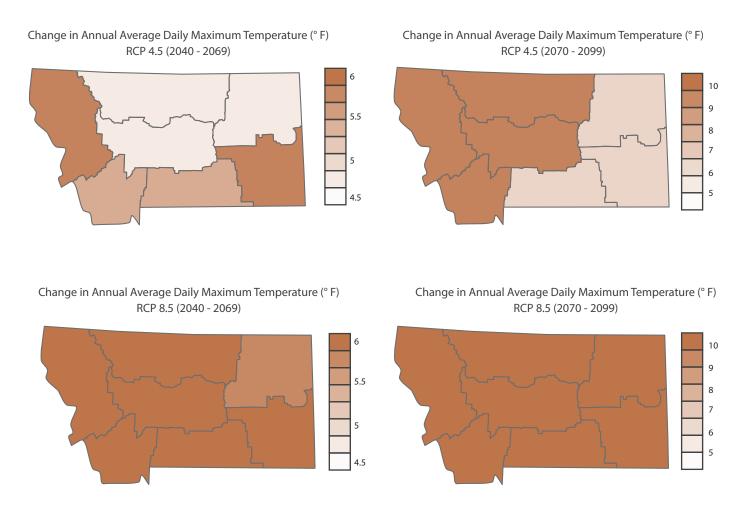
Severe Summer Weather

The term severe summer weather encompasses thunderstorms, high winds, hail, lightning, tornadoes, extreme heat and microbursts events that typically occur between May and October 8. From 1960 to 2017 these events have caused close to \$309 million in crop loss and \$499 million in property loss throughout the state and have resulted in over 800 injuries and 168 fatalities8. Increasing temperatures as a result of climate change are expected to increase the frequency and intensity of severe weather events in the future¹⁰.

Climate Change

Climate Change will likely have a significant impact on the frequency and intensity of severe weather events in Montana. Studies consistently suggest that the frequency and intensity of severe thunderstorms in the United States could increase as climate changes, and there is high agreement between climate studies that Montana will experience a significant increase in the length and severity of warm weather seasons moving forward 5810. Figure 1.2 displays the projected change in annual average daily maximum temperature in the coming century under greenhouse gas emission scenarios that (1) assume greenhouse gas emission patterns will peak in 2040 and decline toward the end of the century (RCP 4.5 "Stabilization") and (2) that greenhouse gas emissions will continue at a constant level through the end of the century (RCP 8.5 "Business as Usual). While the effect of general warming on the frequency and intensity of storms in the state is highly location dependent and requires further regionalized study, there is high consensus and confidence that most areas in the state will experience a significant increase in days over 95 degrees F and have a minimum of 4 degrees annual average daily temperature increase by the end of the century⁵. Though the intensity of warming is dependent on future greenhouse gas emissions, based on historic and predicted trends, warming will occur at some significant level regardless of changes to anthropogenic emission 58.

Fig 1.2 Projected Change in Average Annual Daily Maximum Temperature



Source: Montana Climate Assessment (2017)

FLOODING



Survey respondents ranked 'flooding' as the state's third most impactful shock event. Since 2008, Montana has received seven flooding related Major Disaster Declarations affecting 51 counties⁸. The federal government leveraged \$173 million in federal Stafford Act funding to address these events⁸. A multitude of flooding events, including regional flooding, ice-jam and flash floods are common in Montana. Montana's floods often follow high precipitation, severe weather, and ice jam events. Though less common, dam failures and rapid snowmelt flooding also occur. Modern climate and development trends have increased the impact and frequency of flooding events in recent years.

Development Trends:

One form of flooding is a human-caused disaster resulting from impermeable development in flood-prone areas. Replacing natural systems and permeable surfaces with artificial ground cover and impermeable development increases run-off by decreasing the amount of water that soaks into the ground. Development in flood-prone areas is a two-fold stressor⁸. First, impermeable development in the floodplain puts human constructs in the expected path of flooding events; this further increases the flood risk of individual properties. Secondly, development limits the natural system's permeability, thereby increasing the flood risk of adjacent assets in

the area. Calculating the vulnerability of properties in the floodplain considers existing exposure of properties in the floodplain, expected future development in the floodplain, and the predicted natural conditions when considering climate change and development trends⁸.

Future Climate Trends:

The effect that climate change could have on flood frequency and intensity in Montana is uncertain. The Montana Climate Assessment reports a strong scientific consensus that climate change will have a significant impact on water systems and supply in the future. It will influence flood risk and will be location specific and difficult to predict. Global precipitation models show a generally increased frequency of extreme rain events⁵. Localized climate models predict that extreme precipitation events will likely increase in the northwestern U.S.⁵.

Flood After a Fire:

While the effect climate change could have on the frequency and intensity offlooding events in the future is uncertain, scientific consensus suggests that Montana's fire season will lengthen as climate trends continue. Increases in wildfire frequency and intensity will have a considerable direct impact on Montana communities and

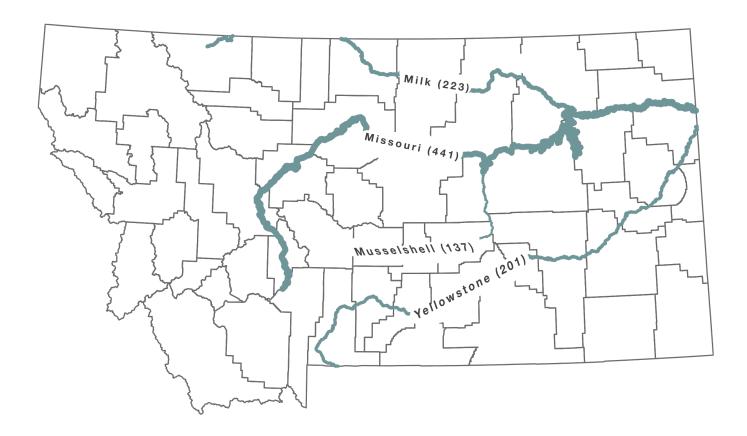


an indirect impact on flooding events¹¹. Landscapes that have experienced recent fire events have altered ground conditions. Under normal conditions, existing vegetation absorbs rainfall, slowing and reducing runoff¹¹. After a fire, the ground vegetation that facilitates precipitation absorption and buffering is absent, creating the conditions whereby flash flooding and mudslides occur at increased rates¹¹. As the water flows, it picks up ash and debris, creating dangerous debris flows while increasing the sedimentation and pollution of area waterways¹¹. An increase in wildfire frequency will create conditions that increase community vulnerability to future high-intensity flash flood and mudslide events.

Ice Jams:

Montana has recorded ~4,500 ice jam events since 1894, the most of any state8. An ice jam is a buildup of ice in a river that restricts the flow of water and causes backups that flood low-lying areas upstream of the jam. Flash flooding can occur downstream of the jam when a breach in jam releases a large quantity of stored water. Ice jams are most common during patterns of prolonged cold weather followed by rapid melt from unseasonably warm early spring and late winter weather8. Climate change's effect on the frequency and intensity of ice jam events is location dependent. Expected earlier spring run-off and increased regional temperature extremes may impact the prevalence of ice jams in the coming century8. The map below outlines the frequency of ice jam events on major streams in Montana in the past century.

Fig 1.3 Historic Frequency of Ice Jam Flooding 1894 to 2018 by River (# Number of Ice Jam Events)



BUSINESS **CLOSURE**



The economic resilience of a community depends on the availability of stable and productive employers and service providers. When an institution that either provides an essential service or employs a significant number of individuals in a community closes as a result of natural or economic factors, it sends a shock through that community.

Montana's moderate cost-of-living and property expenses make it one of the best places to start or continue running a business. Compared to the rest of the United States, Montana has the highest percentage of private sector residents employed in small businesses at 89.7 percent¹². These small businesses provide services and employment to Montanans and the health of Montana communities depends on their ability to withstand diverse economic and environmental challenges. Almost 40 percent of small businesses never reopen following a natural disaster event ¹³.

Just a few inches of water from a flood or structural damage following a wildfire can cause thousands of dollars in damages. Preparing for the worst can help a business and an economy, bounce back from catastrophe. An emergency continuity plan that includes authority delegation, incident management, policies, training and procedures will aid in giving employees foresight for the unthinkable 13. FEMA's resources on their website include involving continuity planning, including cost worksheets, sample emergency plans, mentoring guides, considerations for emergency supplies, and more ¹³. In addition to natural disasters, economic and political trends can also result in business closure. A 1968 military base realignment in Glasgow, Mont. resulted in extreme population decline. Though the Glasgow Airforce Base only employed 320 individuals in 1968, the loss of these jobs resulted in a nearly 40 percent population decline from 6,300 in 1968 to 3,700 in 1990 14. The population decline seen in Glasgow is experienced by many rural communities facing global and national economic changes beyond their control. When a large employer closes in a non-diverse economy, there is a significant loss in local income, which reduces the demand for surrounding service and real estate economies. While only a handful of individuals may lose their jobs initially, the ripple effect of losing these anchor jobs greatly affects both worker's spouses and employees of related service industries.

Economic Diversity

Rural communities usually feel the effects of a business closure more acutely because of less economic diversity and smaller population sizes¹⁵. There are many rural communities in Montana that have developed around singular industries, typically resource extraction and agricultural. When commodity prices fall, or national and global economies shift their demands away from certain goods, these communities face serious economic hardship. Changes in demand for coal and supply of timber in the past decade have resulted in several Montana mill and plant closures¹⁶. The loss of one large business in a non-diverse economy affects not only those directly employed by the business but, via the domino effect, nearly everyone in the local economy.

In terms of employment, almost 19 percent of Montana's jobs are in the government sector, and nearly 17 percent of the workforce is in the trade industry¹⁷. 17 percent of Montana's GDP comes from financial activities, 15 percent come from government, and 12 percent from trade¹⁷. Nearly 24 percent of Montana's GDP comes from manufacturing 17. Montana's economy has become more diversified since 1994, with growth away from mining, focusing more on retail trade, professional services and construction¹⁷.

New Business Entry

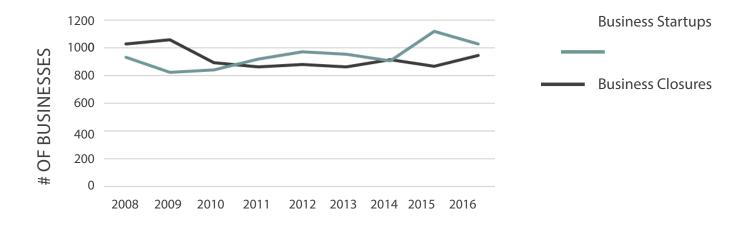
Business closure may have an egative effect on the local resilience of a community, but the same is true of national chain business entry into a local economy. Many summit attendees in rural communities noted that the entry of a "big-box" store in their town often displaced local small business. Empirical evidence suggests that "the entry and growth of big-box stores has a substantial negative impact on employment growth and survival of single unit and smaller chain stores that operate in the same detailed industry as the big-box"18.

Businesses on Native American Reservations

Unemployment rates are higher on reservations than they are in individual counties. The Blackfoot Reservation has a 12.4 percent unemployment rate compared to the surrounding area's 4.7 percent¹⁹. The discrepancy between reservation and border community unemployment can be partially attributed to the location of employers and businesses. Many available employment opportunities are concentrated outside the reservation. Reservation residents often travel to bordering communities for employment. In lieu of employers, a large proportion of the money earned on the reservation is spent in bordering communities. Both reservations and rural counties have experienced decreases in the labor force when residents leave the area permanently 19. Barriers to economic growth in Indian Country may be related to misunderstandings, mentoring needs, and lack of training or opportunities available on the reservations 20.

Fig 1.4 Montana Business Start-ups and Closures

by year, from 2008 to 2016

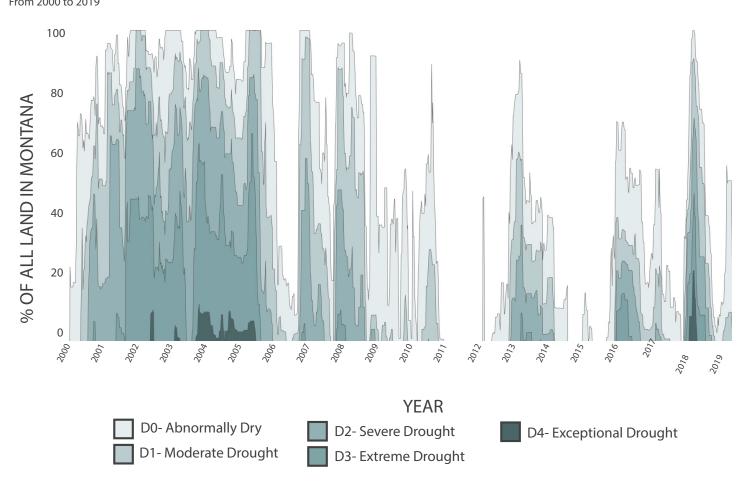


DROUGHT



Drought is not a short-term event that happens one year and ends the next, but instead an expression for water supply trends over time. In this framework, drought should be thought of as a shock event within the context of the long-term stressor of water supply trends. In this context, drought is referring to extended periods of below average precipitation that results in an inability of the water system to support the normal health of localized ecological (agricultural or natural), social and economic systems. A drought can be a short-term (3 or less months) or multi-year event and does not need to be continuous. It is common for a long-term drought event to be interrupted by a high or normal water year. The frequency and intensity of a drought is dependent of long term climatic, water use, and water supply trends as well as more variable short-term precipitation and weather events. Historically, droughts are a staple feature of the Montana landscape with extended drought events occurring in the 1930s, 1960s and 2000s ²⁰. Since 2000, the longest duration of drought in Montana occurred from May 16, 2000 to March 28, 2006 20. The most widespread and intense period of drought occurred during the week of September 12, 2017 where an "exceptional" drought affected 25.94 percent of land in the state and "moderate" drought or worse affected up to 91 percent of all land in Montana 20. Fig 1.5 outlines the intensity and geographic extent of droughts since 2000.

Fig 1.5 Percent Area of Drought in Montana From 2000 to 2019



Economy

Drought is the second most expensive natural disaster in the United States, with related economic losses making up nearly 24 percent of all losses from weather events 8. The 2017 drought event in Montana resulted in hundreds of millions of dollars in crop losses alone 8. Non-irrigated crop lands are the most at risk in drought conditions, but rangeland and irrigated agricultural lands also feel the effects. Drought conditions both indirectly and directly impact grazing conditions for livestock in the state. Directly, drought conditions reduce foraging quality and or cost for ranchers using irrigated hay production, dry land hay, rangeland or commodity crop feed and forage systems 5. The indirect impacts of drought on livestock include an increased prevalence of insect infestation, invasive weed species, and conditions suitable for grassland fires 5.

Tourism

The tourist economy in Montana could see a high impact from drought and water supply, with heavy reliance on the natural beauty of the state to draw in visitors that love the outdoors. Low surface water flows and increased water temperatures stress aquatic ecosystems, decreasing the opportunity for recreation such as fishing, boating, and other water related activities that support Montana's summer tourism market ²¹. Furthermore, the indirect impact of low moisture wildfire conditions as a result of drought poses a significant risk to Montana's summer tourist economy in the coming century. Non-resident spending in 2018 was around \$3 billion, from over 12 million people 22. This concept of drought impacting tourist activity can be seen in other states; low snow years in ski communities in Colorado reported losses of over \$150 million for ski resorts 22.

Development Trends

Drought and development affect both surface and ground water supply in Montana. The immediate effects of drought in Montana often reduce the supply of surface water for industrial, agricultural, and residential use and increase the demand on ground water resources in the state. As development in sensitive watersheds increases, the demand for ground and surface water in these ecosystems will also increase, further exacerbating the economic, social and ecological impacts of drought events. It is predicted that future demands on municipal water supplies will be concentrated in

the high-growth watersheds. If the population growth trends continue, the Montana Department of Natural Resources and Conservation "estimates that by 2035 demand for public water supplies and self-supplied domestic water will increase by 73,499 acre-feet, with 28,792 acre-feet consumed statewide over current withdrawal of 198,000 acre-feet and consumption of 86,000 acre-feet"²¹. More than 80 percent of the projected growth is expected to occur in the watersheds associated with Billings, Missoula, Kalispell, Bozeman, Butte-Silver Bow, Helena, and Great Falls²¹.

Climate Change

There is a high level of consensus and evidence that suggests drought conditions will likely continue and worsen in future years.

MONTANA CLIMATE ASSESSMENT FINDINGS 5:

- Multi-year and decadal-scale droughts have been, and will continue to be, a natural feature of Montana's climate [high agreement, robust evidence]
- -Rising temperatures will likely exacerbate drought when and where it occurs. [high agreement, medium evidence].
- -Changes in snowpack and runoff timing will likely increase the frequency and duration of drought during late summer and early fall. [high agreement, medium evidence]

Drought, Invasive Species, and Infestations

Drought conditions are conducive to the proliferation of invasive flora and fauna species in Montana. Periods of low precipitation lead to an increased competition for scare soil resources, studies in western states suggest that this competition favors exotic annual invasive species over native perennials²³. Warm, dry weather conditions provide more favorable reproductive environments on grasshopper population in which eggs hatch earlier²³. Grasshopper populations can double, triple, or quadruple with each successive drought year⁸. It is common for grasshoppers in a drought year to remove more vegetation than cattle in the same pasture.

INFRASTRUCTURE AGING & FAILURE



When infrastructure assets fail in Montana, communities experience loss of services, increased commute times, and general danger. Failure of hard infrastructure community assets such as bridges, water treatment facilities, dams, roads, energy systems or stormwater systems can pose a serious risk to resident, community, and environmental health 24. Soft infrastructure services (i.e. emergency care, law enforcement, public aid etc.) in Montana's community can also be temporarily limited by hard infrastructure failure 24. Montana's 2018 infrastructure report card, an annual report from the American Society of Civil Engineers 24, rated the overall quality of Montana's infrastructure system at a "C." A "C" rating implies that infrastructure systems in Montana "show general signs of deterioration and require attention. Some elements exhibit significant deficiencies in conditions and functionality, with increasing vulnerability to risk"²⁴. The shock of infrastructure failure is closely related to the stressor of aging infrastructure, this section will provide an overview of both 24.

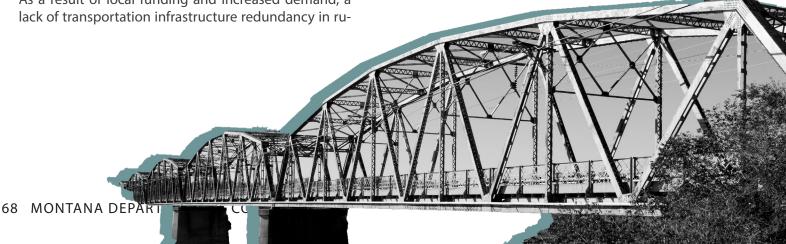
Bridge Failures, Road Closures & Drive Times

When transportation infrastructure in the state experiences a temporary decommission or unintended closure, Montana communities, especially those with already limited transportation infrastructure assets, are heavily impacted. After flooding events in 2011, Fergus county experienced millions of dollars in bridge damage, resulting in a 40-mile detour²⁴. During the same flood year, residents of Roundup experienced two flooding related route closures, turning a one-hour drive to the Billing's hospital system to a six-hour drive. As a result of local funding and increased demand, a lack of transportation infrastructure redundancy in ru-

ral Montana communities severely limits access to support services and aid in a disaster. Montana has identified needed repairs on 744 bridges; which the State estimates will cost \$301.1 million²⁵. Seismic and flooding events pose a serious concern to bridge infrastructure in Montana, but future bridges are being designed with these forces in mind²⁶.

Tourism Impact on Infrastructure Demand

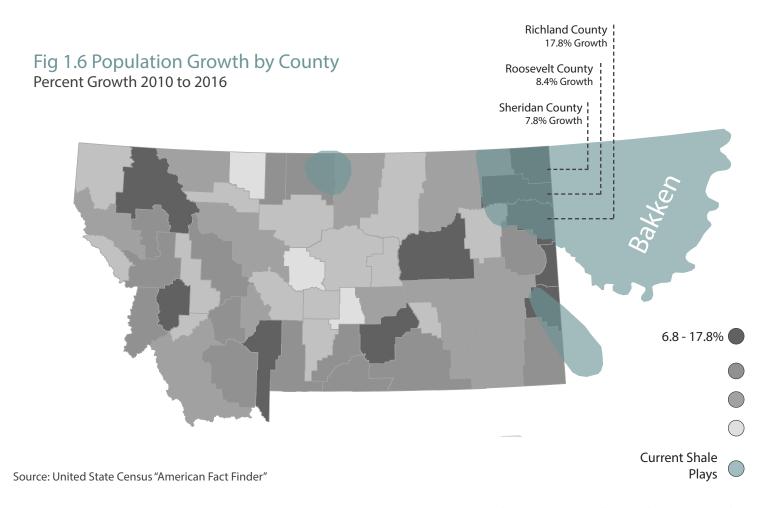
Anecdotal accounts of resident attitudes towards tourism development in Montana suggests that residents bear the burden of tourism-related infrastructure degradation and service use. In a 1994 University of Montana study of tourism impacts, officials from Kalispell "stated that they do not have the financial ability to adequately address solutions to their congestion" and that tourism was a burden on services and infrastructure in tourist communities across the state²². Similar concerns were expressed during Commerce's resilience outreach efforts in 2018. These qualitative accounts are useful and would benefit from quantitative support. Tourism generated \$3 billion for Montana in 2018²². Research that quantifies the impact of tourism on infrastructure and services across tourist communities may be helpful to inform state and local policy measures²².



BOOM-BUST ECONOMIES



Extractive industries have historically created economies of rapid growth and decline, known commonly as "boom-bust" economies. Respondents to public outreach noted that boom-bust economic trends were a shock to their community. A community's development around mineral, oil, or other energy resources consistently results in rapid population growth, increased job opportunities, and heavy demand on local community resources and services^{27 28}. Improvements in hydraulic fracturing technology, and high oil prices in 2008 brought rapid development to the Bakken formation in Northeastern Montana. Experts and statistics suggest the height of the "Bakken Boom" lasted until around 2014 in Montana, but there is no consensus that a bust cycle will or has begun 14 29. Between 2007 and 2012 over 70,000 jobs were created in the region³⁰. Fig 1.6 outlines the extent of the Bakken formation and population growth between 2010 and 2016 in Montana counties that experienced the impacts of oil development. During the economic boom, Richland County, MT contained over 50% of the active rigs in Montana²⁹. In addition to a population growth of 17.8% from 2010 and 2016, Richland County also saw an 80% increase in employment and a 108% increase in wages per worker²⁸. As population rapidly increases in these communities, housing prices and crimes rates have also increased which in turn has been shown to negatively impact child development²⁸. Historic busts have made communities reluctant to address these issues through investment in permanent social and housing infrastructure²⁸.



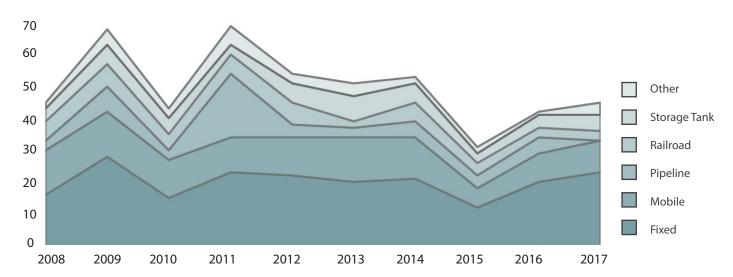
HAZARDOUS MATERIAL EXPOSURE

Though hazardous material releases frequently occur at fixed facilities, hazardous material incidents and transportation accidents often occur simultaneously in Montana and are grouped together for the purpose of this document. Hazardous materials are "explosives, flammable and combustible substances, poisons, and radioactive materials" that can cause death, serious injury, and long-lasting health effects as well as damage to buildings, homes, and other properties8. Between 2008 and 2017, 501 hazardous material releases occurred in Montana⁸. Fig 1.7 categorizes these events. Many towns in Montana developed around a central road or rail network, and future development trends continue to show increased growth around transportation corridors, which puts residents at an increased hazard risk.



FIG 1.7 Hazardous Material Incidents in Montana

by Release Type (2008 to 2017)



Source: Montana Multi-Hazard Mitigation Plan (2018)

MISSING AND MURDERED INDIGENOUS WOMEN



In 2018, at least 20 Indigenous American women from Montana went missing, only one was found³¹. Murdered Indigenous American women cases occur at ten times the national average for white women, though the exact number of missing Indigenous women is unknown. No federal or state entity tracks the numbers. There is a movement to help protect Indigenous women and children and draw attention to the tragedy of missing and murdered indigenous women³¹. Though no official database exists, the sovereign-bodies institute hosts a crowd-sourced database that logs occurrences of missing and murdered indigenous women³¹. Since 2015, there have been an average of 250-300 new missing and murdered indigenous women cases in the U.S. and Canada per year³¹. Summit attendees in and around tribal reservations regularly cited missing and murdered indigenous women as a top priority shock in their communities.

EARTHQUAKES



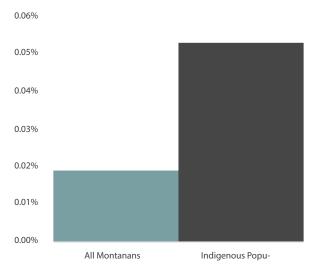
Large earthquakes occur relatively infrequently in Montana, with the last large seismic event happening over six decades ago⁸. Though Montana is one of the most seismically active states, the intensity and magnitude of these events is often small; small earthquakes occur in Montana at the rate of four or five a day8. Fatal and destructive events have occurred in the past century and have potential to occur in the future. Many of Montana's larger western cities, including Bozeman, Helena, and Kalispell, have a 100% exposure to earthquake events8. The state addresses the potential for dangerous seismic events through the adoption of the International Building Codes (IBC), 2012 edition, which outlines seismic provisions necessary for the development of commercial buildings in Montana. Currently, single family residences are exempt from the requirement of a building permit by law and only 46 jurisdictions within Montana are certified to enforce building codes8.

DEATH IN THE COMMUNITY



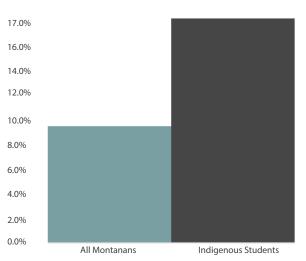
In smaller Montana communities, the impact of a death can cause serious and widespread strain on the mental health of area residents. Survey and summit respondents from tribal communities, and smaller Montana communities, reported frequent death as a persistent and pervasive shock and stressor in their communities³². Fig 1.8 and 1.9 show the disparities in motor vehicle death and youth suicide between Indigenous populations and the total Montana population. Summit attendees and survey respondents note that death puts a disproportionate strain on tribal communities because of frequency of loss, strong community ties, and a pre-existing stigma surrounding, and lack of resources to address, mental health in their communities.

Fig 1.8 Age-Adjusted Mortality Rate Due to Motor Vehicle Crashes



Source: Web-based Injury Statistics Query and Reporting (2011-2016)

Fig 1.9 Percentage of High School Students Who Attempted Suicide in 2016

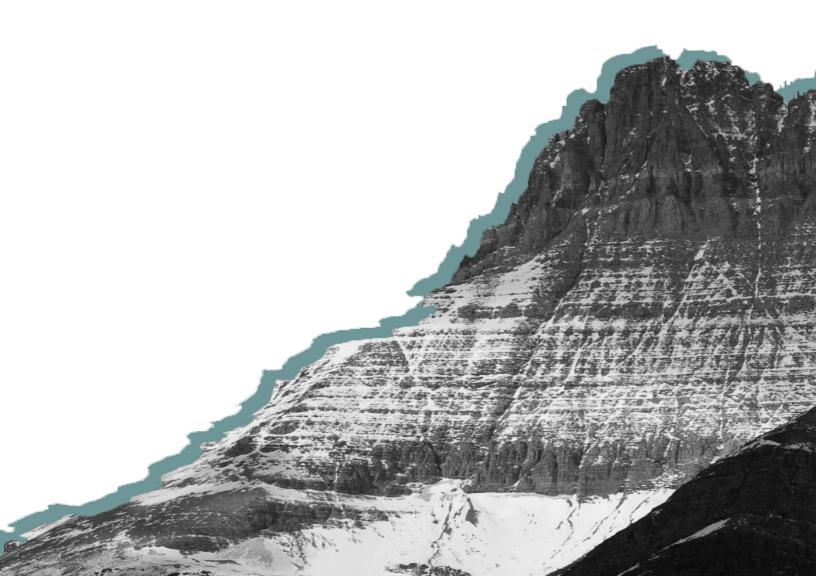


Source: MT 2017 Youth Risk Behavior Study

COMMODITY PRICES & AGRICULTURAL DEPENDENCY



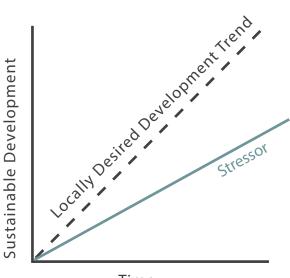
Seasonal changes in the price of agriculture commodities have been and will continue to be a mainstay of agricultural, mining, and resource extraction communities in Montana. Producers have learned to anticipate and prepare for regular changes in commodity prices through evolutions in production quantity, type, and methods. Still, the sometimes severe impact of extremely low commodity prices can seriously harm the economic vitality of non-diverse resource extraction and agricultural communities in the state. Changing commodity prices were listed as a common shock in agricultural and extractive industry communities across the state.

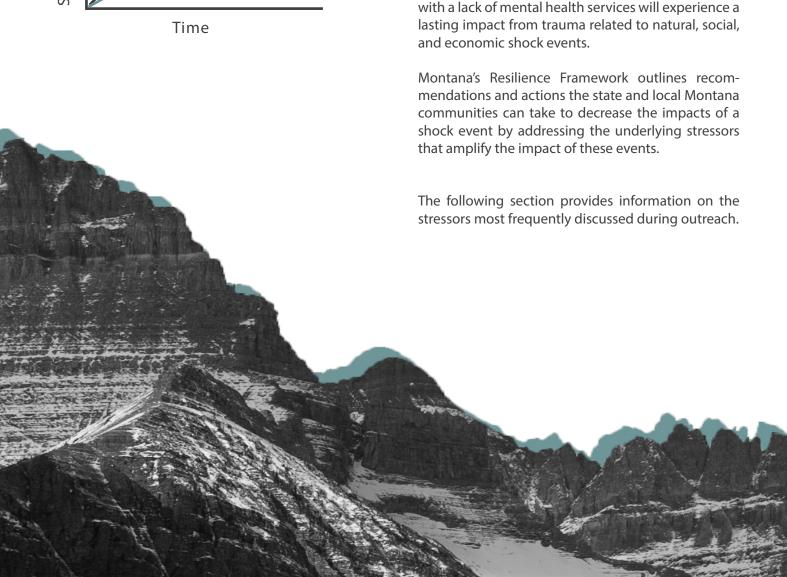


STRESSORS

A chronic stressor refers to an ongoing environmental, social, or economic issue that results in an inefficient system of community cooperation. These stressors weaken the fabric of a community and magnify the effects of man-made or natural disasters.

A chronic stressor in a community includes drug use, a lack of mental health services, a non-diverse economy and many others. These stressors divert resources away from a communities locally desired development goals and increase the impact of shock event when it happens. A community with a non-diverse economy will feel the impact of business closure more highly than one with many businesses. A community with high drug use diverts resources to behavioral health treatment and policing and has less resources to further long-term goals. A community with a lack of mental health services will experience a lasting impact from trauma related to natural, social, and economic shock events.





AFFORDABLE HOUSING



Affordable housing was listed as a community stressor by over half of resilience survey respondents. In the past 25 years, Montana has experienced above-average population growth and faster than average housing price growth. Currently, Montana owners and renters pay a higher percentage of their income on housing than in 1990. Housing is defined as "affordable" by the U.S. Department of Housing and Urban Development (HUD) when the combined cost of housing and related expenses does not exceed 30 percent of a household income (HUD)33. Many cities in Montana face difficulties developing enough affordable and livable housing stock for their residents³³. The table below shows housing price growth and housing supply growth between 2000 and 2015 in Montana communities relative to the rest of the country. The desirability of Montana's natural and cultural assets to out-of-state and income from non-wage sources individuals (e.g. retirees, venture capitalists, and telecommuters) greatly increases the demand for housing in Montana. Ironically, the same natural assets (i.e. Montana's mountains, streams, and forests) that lure these home-owners to Montana also limit the development potential and consequently

decrease the available housing supply in the state. Increased housing demand combined with constrained housing supply guides much of the increased housing costs seen in the state.

Second Homes and Affordability



Source: Neighborhood Scout 2019

FIG 1.10 Housing Price & Stock Trends

Based on 2000-2015 Montana Housing Data

	Percent change housing price index	Percentile rank	Percent change housing units	Percentile rank
Great Falls	52%	76th	7%	32nd
Butte-Silver Bow	55%	79th	4%	20th
Helena	65%	86th	19%	76th
Kalispell	67%	88th	36%	96th
Missoula	69%	88th	24%	85th
Billings	77%	92nd	20%	78th
Bozeman	78%	93rd	49%	99th

Source: BBER analysis of OFHEO Housing Price Index (CBSA), 2000 Census and 2015 American Community Survey

In 2000, over 5.8 percent of homes in Montana were second homes, the largest proportion of second home housing units in the country. By 2010, the share of second homes in Montana grew to 8 percent, the U.S. share grew to only 3.5 percent³⁴. During outreach, Montana communities surrounding Yellowstone and Glacier National Parks voiced concern over increased second home development in their communities. Focused second home development around national parks follows regional trends seen in Wyoming and national trends seen across the country. Wyoming counties surrounding Yellowstone National Park had second home ownership rates of up to 26.2 percent in 2002³⁴. A 2003 study of second home ownership in rural North Carolina communities surrounding Great Smokey Mountains found that second home development increased a nearby homes value by \$2,378, or 4.2 percent of \$56,245, the average value of a rural home³⁴. As the development of second homes continues in rural Montana communities, housing is becoming increasingly less affordable for long-term residents.

Housing Stock

Resilient housing is affordable, quality, and safe. Montana's housing stock is becoming more expensive, aging, and at an increased risk of natural disasters. Approximately 16 percent of Montana's 415,000 homes are vacant and 44 percent of them were built between 1970 and 1999³⁵. As housing stock ages, new homes are not being built quickly enough to keep up with demand. Even in communities such as Bozeman, Kalispell, and Missoula where housing stock is rapidly developing, the price of housing continues to rise³⁵. Increased prices in rapidly developing Montana communities implies that the increase in new housing stock is still not on par with demand. Even if a community had increased resources for housing development, natural constraints limit development in the state. Many areas open for development are also prone to natural disasters such as wildfires and floods. Montana has the highest percentage of homes at risk from wildfires at 28 percent and development trends are increasing this risk¹. Around 12.5 percent of new housing stock is development in fire-prone areas. 1 As the demand for housing increases, the State looks to land-use planning alternatives to increase the affordability, quality and safety of housing.



POVERTY & INEQUALITY



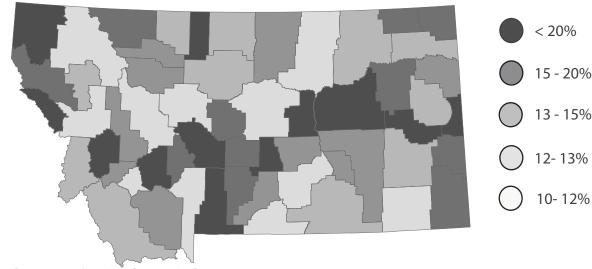
Montana had a state-wide poverty rate of 13 percent in 2018, which is statistically on par with the national rate of 12.3 percent¹⁴. Scarcity of resources like education or jobs can lead to a lower income, creating food or housing insecurities. In a state as large and as scarcely populated as Montana, it can be difficult to see the effects that income inequality has throughout the state, and inequality increases in more economically sensitive areas like reservations¹⁴. In the 2013-2017 American Community Survey estimated 35.8 percent of American Indians were living in poverty, compared to 12.6 percent of white Montanans¹⁴. Poverty was reported as a stressor for most towns and cities; it can make a lasting impact on communities, stretching resources and causing adverse childhood experiences (ACE). Rural communities often lack access to networks and resources that can help residents get out of poverty.

Food Insecurity

Food insecurity, the "inability to access food in a consistent manner."36 It creates physical and mental health challenges in Montana communities. Hunger and stress as a result of food insecurity can decrease work productivity, weaken immune systems, impair cognitive development and increase rates of hospitalization ³⁶. One out of every six children in Montana live in households that are considered 'food insecure.' 36 SNAP is a national program that helps Americans struggling with getting food due to economic reasons, in Montana 43.6 percent of the households that receive SNAP have children³⁷. Food insecurity is commonly a symptom of economic challenges including poverty and inequality but can also stem from geographic constraints. Food deserts are low income areas where residents have trouble getting to supermarkets within a reasonable time frame. Thirty of 56 counties in Montana are food deserts; six of the seven tribal reservations are also considered food deserts37.

Fig 1.11 Food Insecurity

%Percent Individuals Experiencing Food Insecurity by County



Homelessness

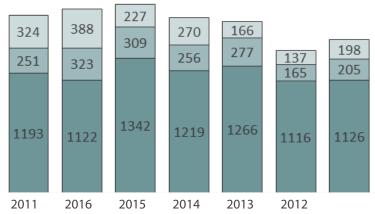
The Montana Council on Homelessness defines a homeless individual as someone "without safe, permanent and stable housing or at risk of losing housing"38. Income disparities, lack of transportation, domestic violence, adverse childhood experiences (ACEs) and substance abuse contribute to homelessness in Montana communities. Due to Montana's vastness, it can be difficult for housing insecure residents to gain access to the resources available to them. Along with homelessness, housing scarcity can make it difficult for people to access affordable housing within reasonable distance to their jobs or schools 38. In most areas of Montana, including Indian Country, access to affordable housing helps to alleviate stress related to living situations. Homelessness in Montana conducted a survey that found that even though American Indian populations made up 6.2 percent of the state population, they made up 20 percent of the overall state homeless population 38. Montana had an estimated 1,500 people experiencing homelessness in 2017; 205 of them were veterans, 106 were young adults, and 169 were family households 39. The 2017 estimate of unaccounted for homeless children and youth in Montana was around 3,000 39.

Income Inequality

Montana has one of the highest rates of income inequality in the United States. Since the 1970s, the poorest 20 percent of the state has only seen a household income increase of 13.2 percent⁴⁰. The richest 20 percent has seen a 43.7 percent increase in comparison while the middle class has only seen an increase of 23 percent in household income 40. On average, white women make \$2,000 more a year than American Indian women, and American Indian men make \$6,000 less than white men⁴¹. On average, Montana women earn 73 percent of the income that Montana men do⁴².

Fig 1.11 Montana's Homeless **Population**

of homeless individuals in Montana by year



Source: United States Interagency Council on Homelessness (2018)

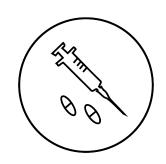
On average, an INDIGENOUS WOMEN with a MASTERS DEGREE earns about



\$52,000 - approximately the same as a WHITE MALE with an **ASSOCIATES DEGREE**

Source: National Women's Law Center (2018)

SUBSTANCE USE DISORDER



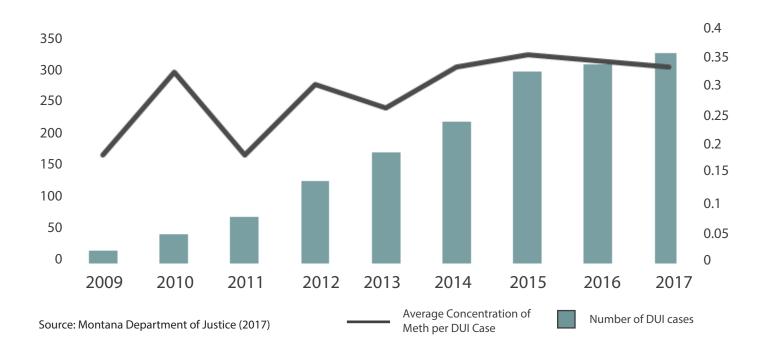
Substance use disorder is a high impact stressor that impacts almost every community in Montana. Even though the substances vary by region, the health effects can be the same. The state of Montana spends millions of dollars every year to address the health and human safety effects from meth alone, but there is no measure of how much is spent on attempting to repair the damage that substance use disorder leaves in our communities⁴³. When analyzing substance use, it is important to note the health disparities between different ethnic, socioeconomic, and geographic groups of people; substance use affects every Montana community differently. Around 64,000 adults in Montana have substance use disorder⁴³. Using inclusive and empathetic methods to understand abuse can lead to more success in decreasing substance use disorder across Montana.

Alcohol

Alcohol is the most abused substance in the state of Montana; its prevalence can be attributed to its easy accessibility, affordability, and the social acceptance of alcohol consumption⁴³. Native American populations use alcohol at a rate similar or less than that of white Americans, but the availability of resources to address alcohol abuse is less on reservations⁴⁴. Almost 20 percent of adults reported overconsumption and binge drinking within the last 30 days44. Alcohol abuse can directly lead to depression, stress, and mental distress, with secondary effects as serious as vehicle related injury or death. In Montana, 15 per 100,000 male deaths were alcohol related, compared to the national average of 5 per 100,000⁴⁵.

Fig 1.12 Meth Related DUI Cases

of meth DUI cases in the state and average concentration of substance (2009 to 2017)



Methamphetamines

Montana's use of methamphetamines has increased in the last decade; between 2011 and 2017 there was a 324% increase in methamphetamines found in DUI cases and a 375% increase in post mortem cases⁴³. DUI cases involving methamphetamine use in the state have increased from less than 50 in 2009 to more than 300 in 2017⁴³. Between 2010 and 2016, the number of children put into foster care due to parental substance use doubled, with around 60 percent of the cases involving methamphetamines⁴⁶. On average between 2015 and 2017, 24 people died each year from methamphetamine overdose⁴⁷. A trend in Montana over the past decade is an increase in methamphetamine cases, with under 400 cases in 2010 to 2.475 cases in 2017⁴³. Even though Montana has several treatment facilities specifically dedicated to meth abuse, getting treatment can be difficult as repeated methamphetamine use can lead to paranoia and delusions⁴⁷. Additionally, getting access to these treatment facilities can be difficult for Montanans who live in more rural communities and have less access to health resources⁴⁷.

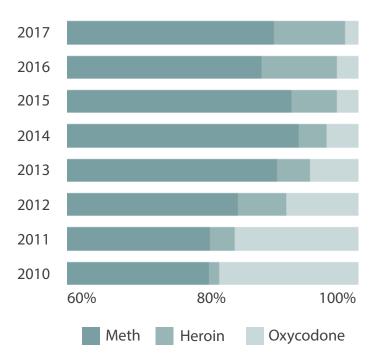
Opioids

As a drug class, opioids include heroin, prescription pain relievers, cocaine, and other drugs⁴⁸. Overall use of opioids in Montana is not as high as methamphetamines or alcohol, but there is still a significant impact left on community's opioid abuse. Forty-four percent of drug overdoses in Montana are from opioids, making it the deadliest substance in the state. In 2017, Montana saw 4.2 deaths per 100,000 by heroin, which is an increase from the 2010 data of 1 per 100,000⁴⁵. Between 2011 and 2017, there was a 1234 percent increase in controlled substance cases involving heroin⁴³. However, prescription abuse of opioids in Montana is one of the lowest in the United States, but Montana has seen periods where opioid misuse has surpassed that of the national average. Ninety opioid prescriptions per 100 patients were written in Montana which is higher than the national average of 70 per 100⁴⁸.

Tobacco

Commercial tobacco use is prevalent in Montana with around 1,600 tobacco related deaths each year⁴⁹. Each tobacco related death is considered preventable. There is a movement to decrease commercial tobacco use statewide from the elementary school level to reaching adults⁴⁹. Overall, 33 percent of Montana youth use a commercial tobacco product, with American Indian populations having a prevalence of 40 percent⁴⁹. Commercial tobacco is grown and produced differently than traditional tobacco, which is not associated with addiction or health impacts⁵⁰. Much like alcohol, tobacco related products are readily available and more culturally accepted than other substances, making it harder for addicts to break free. Seventy-five percent of the school districts in the state have tobacco-free policies that are comprehensive⁴⁹.

Fig 1.13 Drug Case Statistics in Montana Percent Growth 2010 to 2016



Source: Montana Department of Justice (2017)

SKILLED WORKFORCE

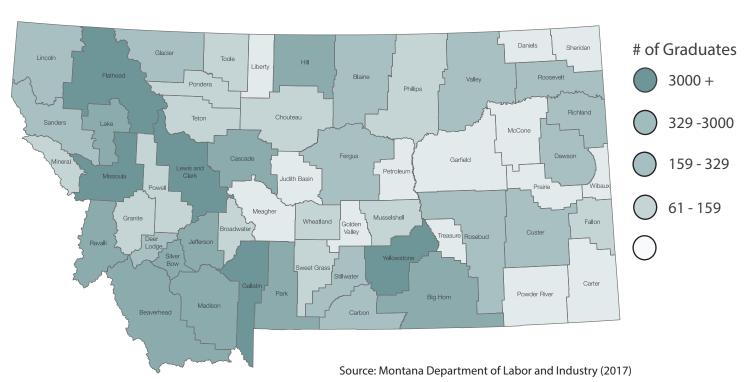


Recruiting and Retaining a Workforce

Several factors influence Montana's ability to recruit and retain a workforce, including an aging population and skills development. Working adults, ages 18-24, make up Montana's largest population range. However, the State's population is aging. Montana's 65+ age group is increasing and expected to increase faster in the next 20 years⁵¹. In 2018, many Montana counties experienced negative net migration within the 20-29 age range⁵¹. Rural communities are most impacted by youth out-migration. As Montana's population ages, fewer working-age individuals are available to fill necessary positions.

As Montana's population ages, there is a generally consistent demand for jobs that require skills development and training, and a predicted increase in demand for positions in the health care industry. While predictions suggest that a vast majority (69 percent) of future Montana jobs will require a high school diploma or more, the demand for skilled labor is projected to remain constant through 202566. Around 40 percent of Montana's 25+ population have a bachelor's degree or higher⁶⁵. The demand for registered nurses, nursing assistants, teachers, truck drivers and other skilled positions is currently outpacing the state's supply. Rural communities reported having difficulty recruiting these positions in lieu of housing and because of competition from urban communities in the state.

Fig 1.14 Graduates by County # of Graduates in a Location One Year After Graduation



Apprenticeship Programs

Montana, and dozens of business sponsors, work together on the Montana Registered Apprenticeship Program (MRAP)⁵². Apprenticeship programs pay students for the work they're doing while they participate in hands-on learning. Popular apprenticeship positions include welder, roofer, locksmith, paramedic, medical scribe, and other localized trades in demand. There are currently 1,820 active apprentices in Montana today ⁵². The number of apprenticeships has increased by over 30 percent in the past five years, and the proportion of women apprentices is six times higher in 2018 (18 percent of all apprentices) ⁵².

Retaining workers

Due to the general decline of Montana's 20-29 age range, keeping workers in the state is as much of an issue as it is training workers. For example, Montana State University has over 10,000 Montana residents enrolled with a goal to keep them in state and improving

communities with their education after graduation. In a 2016 survey done post-graduation from Montana State, 62 percent or 1375 graduates were staying in Montana⁵¹. The most important factor for most graduates was the location of the organization or position, with the second most important factor as an opportunity for growth or to work with a specific company ⁵¹.

Labor Underutilization

There are several measures for the percentage of a population that is without work. Labor underutilization measures six categories that help to show where some populations' resources are not being used to their fullest potential. There are measures that account for the population that wants a job and is actively looking (U-3) or the percentage of workers who are discouraged and have stopped looking for work combined with the population who is currently unemployed (U-4)⁵³. Discouraged workers are those who believe that no jobs are available to them because they are not qualified⁵³. In 2018, Montana had around four percent of the available labor population in the category 'U-4'⁵³.



MENTAL HEALTH **SERVICES**



The rate of treatment for individuals with a mental illness or behavioral health disorder in Montana (47.5 percent) is statistically on par with the national average (42.7 percent)⁵⁴. Though individuals in the state experience treatment at the national average rate, the disparities in mental and behavioral health care access between rural and urban Montana communities is significant and not captured in that state-wide statistic. Access to behavioral and mental health services in rural or frontier communities is limited by availability of resources, stigma, economic issues, caregiver stress, isolation, and long travel distances 54. Many rural communities in Montana have no practicing mental health professionals. The table below outlines the number of licensed professionals by type of provider and county. A majority of the 56 counties in Montana have no practicing clinical psychologists, family therapists, or psychiatrists and over a quarter have no access to addiction counselors55. Fifty five out of Montana's 56

counties are considered "health professional shortage areas for Mental Health Professionals," Yellowstone county being the only exception⁵⁵.

Suicide

In 2014, Montana had the highest suicide rate out of any state in the country at 22.33 per 100,000 residents, or 220 people per year⁵⁶. The highest suicide rate for Montanans is within the American Indian population at 35.5 per 100,000, compared to 28.1 suicides per 100,000 in the state's Caucasian population⁵⁶. Between 2014 and 2016, 79 percent of the suicides in Montana were men⁵⁶. Out of all the suicides in that time period, 53 percent of the victims were between 35 and 64 years of age⁵⁶. The suicide rate for veterans in Montana is three times the national rate, at 65.7 per 100,000⁵⁶.

Fig 1.15 Mental & Behavioral Healthcare Providers in Montana # of providers by type (2017)

TYPE OF PROVIDER	TOTAL NUMBER IN MONTANA	COUNTIES WITH NONE PRACTICING
Licensed Addiction Counselors	599	18
Licensed Clinical Professional Counselors	1074	13
Licensed Clinical Social Workers	708	15
Licensed Marriage and Family Therapists	124	33
Dual Licensed (LAC pus Mental Health)	194	31
Licensed Clinical Psychologists	214	31
Psychiatric Nurse Practitioners	58	40
Psychiatrists	88	40

Source: Montana Heathcare Workforce Statewide Strategic Plan (2016)

In surveyed high school students across the state, nine percent of them reported attempting suicide at least once in the past year⁵⁶. The most common diagnosis for people who commit suicide is major depression, and the second most common is alcoholism⁵⁶.

Adverse Childhood Experiences:

Recent research on the effects of childhood abuse and neglect commonly utilizes a 10-question Adverse Childhood Experiences (ACE) assessment to quantify the level of abuse and neglect individuals have experienced. Robust research suggests a strong link between ACEs and "substance abuse, smoking, depression, chronic diseases such as diabetes and high blood pressure, poor work performance, intimate partner violence, and poor academic achievement"44. Montana has among the highest reported ACE scores in the U.S. 52 percent of Montana children aged 0 to 17 reported at least one ACE, with 17 percent having three or more ACEs⁵⁷. Compared with other states, children in Montana are the most likely to be living in a home with someone with alcohol or drug problems (19 percent) or with a mental illness (14 percent)⁵⁷. The most common ACE reported among Montana children, and nationwide, is economic hardship (28 percent)⁵⁷. There is a growing movement in the Montana public health sector to incorporate trauma-informed approaches to dealing with mental and behavioral health in the state

"Prevention of and recovery from the nation's worst health and social problems are likely to benefit from knowledge that many of these arise because of ACEs"

 - United Way "Adverse Childhood Experiences Report"⁶⁴





AGING POPULATION



Since 1930, Montana's aging population has increased every decade, with an expected almost 300,000 retirees' in 2030⁵¹. Between 1930 and 2010, the percentage of elderly people in Montana nearly tripled, and is expected to double between 2018 and 2030⁵¹. Factors leading to these aging population statistics include a longer life expectancy, a higher population of baby boomers entering retirement age, and an out-migration of Montana residents between the ages of 20-30¹⁴. Rural communities experience aging populations at a disproportionate rate in the state because of both out-migration of youth to other states and the internal migration of Montana youth from rural communities to larger cities in the state. Billings, Montana's largest city, is on the eastern side of the state and regularly attracts internal migration from youth in surrounding rural communities. An increased aging population combined with a decrease in younger populations increases the strain on local and State resources⁵¹. It is projected that in 2030, the elderly population of Montanan's will use a larger portion of the State's Medicaid budget than is currently being used⁵¹.

LACK OF AVAILABLE CHILDCARE



Available childcare refers to childcare that is affordable, quality and near those that need it. In areas of the state where the resources and instructors for childcare centers are in short supply, it can be difficult to find quality, affordable and accessible childcare providers. Almost 60 percent of Montana families have both parents in the workforce, meaning that those families must find safe and affordable childcare⁴⁰. There are just under 4,000 childcare workers in the state, but more than 75,000 children age 0-558. Childcare facilities in Montana only have the capacity to serve 40% of the children who need care⁵⁸. Certified childcare facilities are required to maintain reasonable instructor-student ratios. These ratio requirements, in combination with a high demand for childcare services make entry into Montana's childcare facilities competitive and costly⁵⁹. In a national ranking, Montana is placed at 32 out of 50 for child care costs. The average cost of childcare was \$8,307 in 2017; the 2018-2019 in-state tuition cost at Montana State University was \$7,27851. When annual childcare costs are higher than college tuition, it puts a strain on individuals at all income levels, but it most acutely burdens low to moderate income individuals. In 2016, the average single mother in Montana is estimated to have spent almost half of her annual income on childcare⁵⁹. Unaffordable childcare incentivizes some Montana care-givers (statistically women) to forgo work, which reduces a community's available workforce and increases the gender wage gap.

LACK OF VOLUNTEERISM



Many summit attendees and survey respondents were concerned that the younger generation of Montanan's is less involved in volunteerism that former generations. While Montana has faced a decreasing trend in volunteerism over the past decade, with a volunteer rate of 37.7% in 2006 and 32.4% in 2015, the state still has the 5th highest volunteer rate in the nation 60. As of 2006, the ranking of volunteer rate by age group in Montana was 1.) Baby Boomers (42.8%) 2.) College Students (37.9%) 3.) Ages 65 and Older (33.1%) 4.) Ages 16 to 24 (29.9%)60. While there is little evidence to support a positive trend between age and volunteerism at the state level, more research is required to measure the impact of youth out-migration on rural community volunteer rates in the state⁶⁰. Several groups in Montana rely on volunteers to support their daily procedures; for instance, 400 of the 435 fire departments in the state rely on volunteer firefighters to maintain numbers⁶¹. The main organization that people volunteered through was their religious organization, at 33 percent, with education or youth service at 25 percent⁶⁰.

LACK OF COMMUNITY CONNECTIONS



Communication is a key component to a resilient community. When a community is connected and communicating they can better coordinate and respond to a natural, social, or economic shock. Many communities during outreach noted that the individuals and institutions in their communities were sometimes not communicating and did not coordinate resources. A common concern in larger communities was that many of the active non-profits and service providers in the area did not coordinate activities and didn't know what each other were doing. Residents in these communities were also unsure of what resources are available.

ACCESS TO TECHNOLOGY



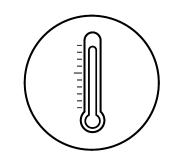
Montana is ranked as the least connected state in the nation, with the lowest percentage of individuals (74%) that can access 25+ mbps of wired broadband⁶². A broadband connection is important for the social and economic health of a modern rural community. Rural communities with broadband connections have access to the global economy, health services, and other benefits that accompany increased communication⁶². A study in rural Minnesota communities supports the idea that broadband is a necessary condition to advancing economic development and social cohesion in the 21st century, but broadband infrastructure alone is not sufficient and is only successful when implemented in the context of engaged community action and continual support from local leadership; similar lessons can be applied to Montana communities⁶³.

26%

Of Montanan's do not have access to 25+ mbps of wired broadband



CLIMATE CHANGE



In the next 100 years, increased temperatures as a result of climate change will effect nearly every feature of the natural environment, and by extension social and economic systems⁵. As temperatures increase, natural systems will evolve to adapt to changing conditions. These changing conditions are predicted to increase the frequency and intensity of natural disaster events in Montana and across the world and generally alter the way ecological systems function⁵. As ecological systems change, the interrelated social and economic systems must also adapt to function in the new reality⁵. In 2017 the Montana Climate Assessment outlined a set of key findings on the expected impacts of climate change on Montana's communities in the coming century⁵.

Montana Climate Assessment Key Findings

Changes to Montana's Climate

Montana is projected to continue to warm in all geographic locations, seasons, and under all emission scenarios throughout the 21st century. By mid century, Montana temperatures are projected to increase by approximately 4.5-6.0°F (2.5-3.3°C) depending on the emission scenario⁵. By the end-of-century, Montana temperatures are projected to increase 5.6-9.8°F (3.1-5.4°C) depending on the emission scenario⁵. [high agreement, robust evidence]

Impacts to Montana's Water

Earlier onset of snowmelt and spring runoff will reduce late-summer water availability in snowmelt-dominated watersheds⁵. [high agreement, robust evidence]

Groundwater demand will likely increase as elevated temperatures and changing seasonal availability of traditional surface-water sources (e.g., dry stock water ponds or inability of canal systems to deliver water in a timely manner) force water users to seek alternatives⁵. [high agreement, medium evidence]

Impacts to Montana's Forests

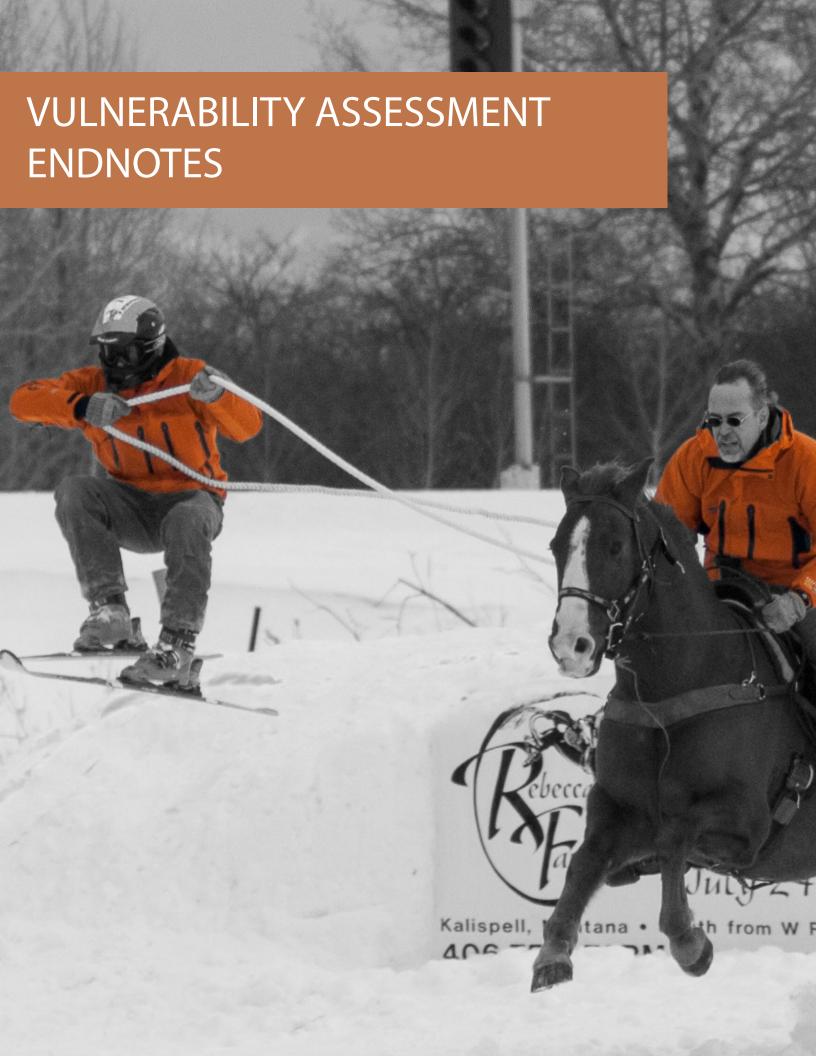
The speed and magnitude of climate change may mean that increased forest mortality and contractions in forest distribution will outpace any gains in forest growth and productivity over the long run, leading to a net loss of forested area in Montana⁵. [medium agreement, limited evidence]

Impacts to Montana's Agriculture

Decreasing mountain snowpack will continue to lead to decreased streamflow and less reliable irrigation capacity during the late growing season. Reduced irrigation capacity will have the greatest impact on hay, sugar beet, malt barley, market garden, and potato production across the state⁵. [high agreement, robust evidence]

Increases in temperature will allow winter annual weeds, such as cheatgrass, to increase in distribution and frequency in winter wheat cropland and rangeland. Their spread will result in decreased crop yields and forage productivity as well as increased rangeland wildfire frequency⁵. [high agreement, medium evidence]

Source: Montana Climate Assessment (2017). Reference the Montana Climate assessment for a complete list of key messages



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APPENDIX 4: MATERIALS FOR WORKSHOPS AND MEETINGS



WORKSHOP RESOURCES

Optional resources to hold your own community workshop.

AT LEAST ONE MONTH PRIOR TO THE EVENT:

- Set date and location for meeting
- Send out invitations and meeting announcement to regional contacts
- Send reminders two weeks prior, one week prior, and day before

WORKSHOP AGENDA EXAMPLE: (EACH WORKSHOP IS APPROXIMATELY 2.5 HOURS)

0:00 – Welcome, introductions, and goals for workshop

- Icebreaker question: Name, Organization, "What does it mean to be a Montanan?" in one word
- Project overview and Resiliency Framework
- Defining Resilience
- PowerPoint Presentation see Appendix 2.1 Edit the slides to include regional data and relevant case studies.

0:30 - Shocks and Stressors

- Large group activity to identify shocks and stresses
- Large sheet or whiteboard with listed shocks and stresses
- Brief definition of the list
- Participants use sticky dots to "vote" for the most relevant shocks and stresses in the community

1:00 – Sector Discussion (See Appendix 2.3 for an in-depth outline of these activities)

- Split into sector groups
- Shocks and Stressors worksheet see Appendix 2.4
- What happens when shocks and stresses combine?
- What local organizations and efforts have been effective?
- What are action items to address some of the gaps?

1:25 - Large group discussion on worksheet see Appendix 2.4

- Each sector group reports their findings
- Facilitate communications between sectors stakeholders to identify themes

2:10 - Open Discussion up to Q&A

2:30 - Meeting adjourned

WORKSHOP FOLLOW-UP

Meeting notes and worksheets should be compiled and organized by the hosting organization and distributed to the attendees by using the sign-in sheet. Strategies and action plans from each workshop may be developed at follow-up meetings.

SHOCKS & STRESSORS ACTIVITY

TIME: 70-85 MIN

RESOURCES NEEDED:

- White sticky easel pads
- Markers
- Circle dot stickers or small post-its

Facilitator will first define resilience, shocks and stressors and provide some examples.

- 1. Facilitator will ask participants to call out relevant shocks in their community (e.g. flood, severe winter weather) [5 min]
- 2. Facilitator writes each shock on the white sheet or board, leaving plenty of space between each
- 3. After group decides that list is complete, facilitator follows the same process for the list of stressors [5 min]
- 4. After both lists are complete, participants will use 6 stickers to "vote" for the top 3 shocks and top 3 stressors that have the greatest potential to impact their community
- 5. After 5 minutes of voting, facilitator will briefly discuss the results and circle the top shocks and stressors [10 min].

The voting period is a good time to take a short break and let people get snacks or use the restroom.

COMMUNITY SECTOR ACTIVITY

After a brief introduction of the six sectors, participants will self-assign themselves to sector groups for the next portion of the activity. We found it helpful to print out tokens with each of the sector names on them and distributing them across a set of tables so participants could visualize where each group was sitting. Each group will complete the worksheet guestions together. Use the following list to present the groups. Sectors may be combined for small workshops. [30 minutes]

WATERSHEDS & NATURAL RESOURCES:

Focus on the interaction between our built and natural environments. This includes the negative impact our built environment has on Montana's natural resources, as well as the effect that these resources may have on our infrastructure, water quality, and social wellbeing.

INFRASTRUCTURE:

Addresses the potential risks posed to Montana's interconnected network of critical services by engineering public infrastructure projects made with the foresight and risk aversion needed to bounce back from an acute shock.

HOUSING:

Provide safe, affordable, and decent housing for vulnerable members of our community; housing that promotes healthy community interaction while supplying safe and reliable shelter.

HEALTH & SOCIAL:

Integrate the efforts of public health, healthcare providers and facilities, and social service networks to promote the health and wellness needs of the whole community and create more resilient and sustainable systems for citizens.

ECONOMY:

To sustain and/or rebuild businesses, preserve or create jobs, and develop economic opportunities that result in sustainable and economically resilient communities that meet local needs.

COMMUNITY:

To build state and local capabilities and resources that facilitate holistic pre- and post-disaster recovery planning, effective implementation, and community resiliency and sustainability.

After discussion, a representative from each group will briefly report out on their responses [15-30 min]. Facilitator will take note of comments made on each of these sector sheets and move into the wrap-up. Ask participants for any closing thoughts or comments and thank them for attending. Remind them to write their email address on the sign-in sheet if they want to receive a summary of the discussion.

Montana Ready Communities Initiative Regional Summit Worksheet



Date:

Sector Group:

Of the shocks and stressors identified in the last activity, which are most relevent in your sector? What happends when these shocks and stresses combine in your sector? (Who is most impacted? How does this ripple out to the larger community?)

How are local community leaders currently working to address these shocks and stressors in your sector? Please note any specific resources or services to address these issues.

Considering the currently available support/services/ resources listed above, identify any gaps or areas for improvement.

COMMENT CARD

We offered comments card to offer attendees who didn't have a chance to participate in the formal conversations, had more input to share, and who wanted to receive updates on the planning process.

COMMENT FORM				
Contact Information (Optional)	Name:			
Phone:	E-Mail:			
Comment:				

WORKSHOP CHECKLIST

SET-UP CHECKLIST FOR WORKSHOP

Arrange tables and chairs (small groups is ideal)
Set up projector, laptop, power point presentation
Sign-in sheet with pen at front table
Agendas at sign-in table
Set out snacks and water
Set out sector worksheets
Name tents and markers
Set out additional resources and contact cards
Make sheet for parking lot questions/topics
Set up easel stands with white pads

MATERIALS TO BRING

Laptop
 Projector
Extension cord
Markers & Pens
Blank nametags
Sign-in sheet
Agendas
Snacks/water
Easel sticky sheets and easels
Worksheets for shocks/stressors
Sticky dots or post-its
Hard copies of presentation
Additional resources
Business cards
Audio recorder
Clicker for presentation
Comment cards

Tape (paint friendly)

FIRST WORKING GROUP MEETING

MEETING AGENDA EXAMPLE:

0:00 - Welcome, introductions

Make sure all attendees have 2-3 minutes to introduce themselves and describe what perspective they bring to the Working Groups. It is important to give everyone an opportunity to introduce themselves to foster an understanding of the individuals in the room.

0:20 - Project Overview

- Presentation on what resilience is
- Presentation on the goals of the project (what are you doing)
- Overview of the public outreach process and results
- **Ouestions and Discussion**

0:50 – Establishing Community Needs

- Bring a printed out list of the community needs being addressed by the working group
- Have working group members pair up and discuss any topics missing from the list.
- Give working group members a chance to brainstorm and write down any community needs they would like to add to the list (10 min)
- Have every working group member report out any needs they think are relevant to add or edit (10-30 min)
- Write down additions on a white page or collective word document

1:30 - Setting Goals

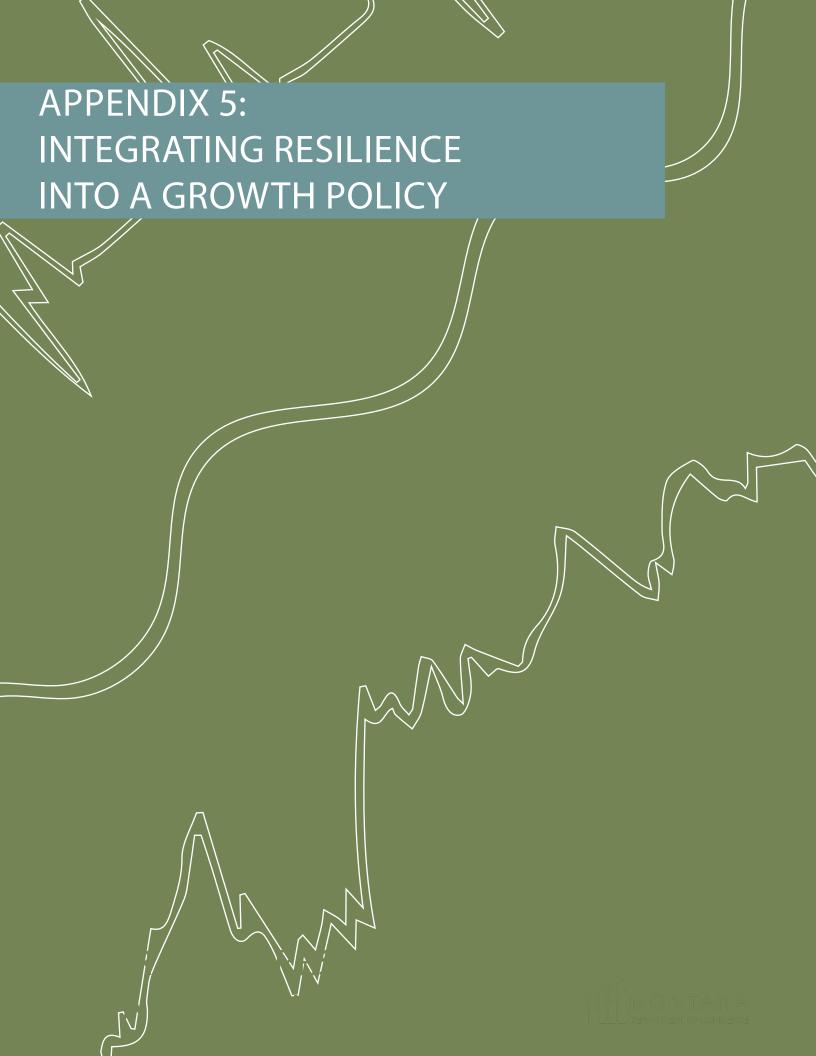
- Spilt the group into 3-5 subgroups
- Have each group work to categorize the community needs into a set of 3-5 goals (~10 min)
- Have each group report out their goals and note each down on a white board (10 20 min)

2:00 - Open Discussion up to Q&A

2:15 - Meeting adjourned

MEETING FOLLOW-UP

- Meeting notes should be compiled and organized by the hosting organization and distributed to the attendees
- The planning team should independently develop 3-5 goals based on working group input and ideas and have the working group further edit or approve the decided goals in the follow-up meeting
- The planning team should distribute the finalized set of community needs along with draft goals
- The planning team should work on identifying existing community plans to identify how existing planning efforts are already addressing the finalized list of community needs



OVERVIEW

This document is a guide on how to increase community resilience by incorporating resilience considerations into a community growth policy or comprehensive plan. The document provides tools, resources, and guidelines on best practices to follow when updating a community growth policy to address local resilience challenges.

Intended Audience

"Integrating Resilience into a Growth Policy" is intended to be used by local county, city, or town planning boards and private contracting firms to incorporate resilience considerations into a community growth policy.

Resources:

The Montana Department of Commerce Community Development Block Grant program provides matching grants to local governments for the preparation of Growth Policies and other planning documents mentioned in this publication. For more information contact:

CDBG Program - Housing and Public Facilities Commerce/ Community Development Division

301 South Park Avenue - P.O Box 200523 Helena, MT 59620-0523 Phone (406) 841-2770

Website: comdev.mt.gov



ELEMENTS OF A GROWTH POLICY

Benefits of Planning for Growth:

- Reduces increases in taxes and fees through more efficient provision of services
- Fosters wise and thoughtful investments in major public facilities, such as roads, water and sewer systems, solid waste, and fire protection
- Makes communities safer and healthier by encouraging well-designed streets, protecting water quality, and deterring development in unsuitable areas such as floodplains, wetlands, fault zones, and unstable slopes
- Helps make a community more attractive to investment by business and industry
- Protects special community values, such as historic, cultural, scenic, and natural features, or rural agricultural character
- Builds public consensus and a greater understanding of issues within the community
- Promotes affordable housing
- Ensures that adequate amounts of suitable land are available for residential, commercial, and industrial growth
- Maintains property values for residential, commercial, and industrial properties by preventing nearby incompatible or degrading uses

Referenced from the Montana Environmental Quality Council report "Planning for Growth in Montana"

Growth Policy Background

Montana's cities and towns have been authorized to adopt master plans or comprehensive plans since 1957 and counties since 1971. Prior to 1999, statue allowed the creation of these plans and provided suggested guidance on elements that could be included. In 1999, the Legislature passed a law that revised the name of comprehensive plans or master plans to "growth policies" and outlined a series of minimum requirements and elements that must be included in the plan. The goal of implementing minimum requirements to the growth policy was to increase its relevance and consistency when used as a device to indirectly regulate future community development. Montana's Environmental Quality Council (EQC) introduced the 1999 bill that included required components to the growth policy in hopes that growth policies would "provide a framework for implementation activities, including capital improvements planning and subdivision regulation."

Even with updated required components included in the growth policy, the development and adoption of a growth policy is optional. There is no penalty if a local government does not have a compliant growth policy in place. However, failure to adopt a growth policy can have implications on the community's ability to adopt or amend zoning regulations. Communities that fail to plan also miss out on many of the benefits outlined in the figure to the left. Foresight and planning are essential to addressing resilience challenges facing Montana's communities. This guide offers recommendations on how to increase your community's resilience by integrating relevant economic, environmental, and social considerations into your community's growth policy. Under the Montana statute, planning boards are the only public entities authorized to prepare growth policies.

REQUIRED COMPONENTS

Section 76-1-601, MCA identifies several elements that must be addressed as part one of the growth policy. The statute does not define the extent to which each element must be described. The required elements are:

- 1 Community goals and objectives;
- 2. Maps and text that describe the existing characteristics and features of the jurisdictional area (including information on land uses, population, housing needs, economic conditions, local services, public facilities, natural resources, and other characteristics);
- Projected trends for each of the above-listed elements for the life of the growth policy (except public facilities);
- 4. A description of the policies, regulations, and other tools to be implemented in order to achieve the goals and objectives of the growth policy;
- 5. A strategy for development, maintenance, and replacement of public infrastructure, including drinking water systems, wastewater treatment facilities, sewer systems, solid waste facilities, fire protection facilities, roads, and bridges;
- An implementation strategy that includes:
 - o a timetable for implementing the growth policy; o a list of conditions that will lead to a revision of the growth policy; o a timetable for reviewing the growth policy at least once every 5 years and revising the policy if necessary;
- 7. An explanation of how the governing body will coordinate and cooperate with other jurisdictions (i.e., cities with surrounding counties and vice versa); and

REQUIRED COMPONENTS

- 8. An explanation of how the governing body will evaluate and make decisions regarding proposed subdivisions with respect to the "public interest" criteria established in section 76-3-608 (3)(a), MCA. The public interest criteria are agriculture, agricultural water user facilities, local services, the natural environment, wildlife and wildlife habitat, and public health and safety;
- 9. A statement explaining how public hearings regarding proposed subdivisions will be conducted.
- 10. An evaluation of the potential for fire and wildland fire in the jurisdictional area that includes:
 - Delineation of the wildland-urban interface; and
 - Adoption of regulations that require:
 - -defensible space for structures;
 - -ingress and egress to facilitate fire suppression; and
 - -adequate water supplies for fire protection

POTENTIAL ELEMENTS

While the subjects outlined prior are required elements to the growth policy document, the current statute allows for growth policies to address relevant issues outside the scope of the required elements. This document outlines 1.) recommended items to add to the statutorily required elements outlined 2.) best practices when compiling the growth policy 3.) additional topics that would be beneficial for communities to address in their growth policy documents. 4.) other resources and best practices available for communities looking to address their community's unique shock and stressors within their growth policy.

The document is divided into sections that outline specific activities a community can participate in and information that is useful to add to a community's growth policy to increase local resilience to economic, environmental, and social shock events.

Expand on Required Elements

COMMUNITY INVENTORY & TRENDS

Montana statute requires that growth policies "inventory existing characteristics and features" through the use of maps and text, which includes information on land uses, populations, housing needs, economic conditions, local services, public facilities, natural resources, and other characteristics and features proposed by the planning board and adopted by the governing body. Growth policies must describe projected long-term trends for each of the inventory items and other elements proposed by the planning board and adopted by the governing body. The inventory and projection sections are usually completed together under each topic area. The following section outlines the required elements of the inventory and trends section and offers recommendations on items to include in these sections to increase a community's resilience to adverse shock events.



Mapping



Economic Conditions



Natural Resources

2.



Population

5.



Local Services

8.



Transportation

3.



Housing Needs

6.



Public Facilities



CDBG Requirements

AND USE MAPPING

A community's first step to create a growth policy is to obtain a comprehensive base map of the community. Creating a base map can assist in developing future maps and land use planning. Base maps include include base-layer attributes of the community and constraints to community development:

Examples of Base Layers:

- Transportation routes
- Platted streets
- Waterways
- City blocks
- Public and private property
- Boundaries of the planning area

Examples of Constraints:

- Floodplains
- High hazard areas
- Wetlands
- Steep slopes
- Shallow depth to groundwater
- Important wildlife habitats
- Distance to services

Base maps provide information that is essential to develop well-informed land use maps. The purpose of land use maps is to visualy display existing land-use patterns, constraints and opportunities and to provide direction for future development. Land use maps also help a community in meeting the statutory requirements that a growth policy contain maps and textures describing existing and projected land uses. Quality land use maps depend on quality complementary base maps. A community can better plan for projected growth that accknowledges and addresses the development constraints and hazards when these community features are outlined in the base maps and over laid with land use maps.

Base and land use maps are commonly compiled via GIS mapping, so the data between layers can be easily analyzed and manipulated. In addition to digital mapping, consider printing out a series of large scale land use maps with relevent constraint layers overlayed (i.e WUI, Floodplain) for continual reference by planners in your community.

INCORPORATING RESILIENCE

Account for Future Growth Potential:

Along with a base map of the current area, municipalities should consider planning for the future growth of their community and map out the area's surrounding the jurisdiction. Planning for growth ensures that the area can expand comfortably over time.

Mapping the Wildland Urban Interface:

The Wildfire-Urban Interface (WUI) is expanding as cities get larger, and areas get more prone to wildfires (US Forest Service 2015). In 2007 the state Legislature passed a bill that requires communities to provide "an evaluation of the potential for fire and wildland fire in the jurisdictional area that includes: a.) delineation of the wildland-urban interface; and b.) adoption of a regulation that requires: defensible space for structures, ingress, and egress to facilitate fire suppression, and adequate water supply for fire protection" within their growth policy. While it is required to provide an evaluation of the potential for fire in your community, it is within the power of the local jurisdiction to decide how extensively they address this within their growth policy. Consider mapping the full extent of the wildland-urban interface as an overlay on the land use map in your community. In communities prone to wildfire, all future development should acknowledge the current and future hazard conditions in their community. An overlay of a WUI map on your communities future and current land use map should be a staple feature that informs all future development in your jurisdiction.

Mapping Your Community's Floodplain:

The effects of climate change are altering the hazard risk for flooding events as well as wildfires (Source: Montana Climate Assessment). As with wildfire hazard mappings, communities should consider creating future and current land use maps with FEMA floodplain overlays to inform future development. As with development in the WUI, development in a designated floodplain has the potential to increase future hazard risk. As impermeable development continues in a flood or wildfire-prone area, the exposure risk for others in the community is also increased by means of increased runoff and increased fire fuel respectively. In addition to mapping current conditions of these hazard areas, future conditions as a result of climate change and continued development ought to be reflected in the community's base maps. Mapping activities that increase the communities awareness of flood risk can decrease community members' flood insurance costs under the National Flood Insurance Program's Community Rating System (Source: CRS Manual)

Other Elements to Indclude on your Base and Land Use Maps:



Vulnerable Populations

- Affordable housing developments
- Schools
- Hospitals
- Homeless shelters



Critical Facilities

- Energy infrastructure
- Wastewater treatment
- Landfills
- Data centers
- Healthcare facilities
- Government facilities
- Educational institutions

Potential Growth Policy Strategies and Actions:

- 1. Identify data needs to map current and future hazard conditions in the community
- 2. Update zoning code to reflect appropriate land uses within current and expected hazard areas.
- 3. Limit building in high-risk areas through the adoption and enforcement of stringent building codes
- 4. Create hazard maps that outline expected future conditions of wildfire, flooding, drought and other hazard risks with respect to climate change and development trends.
- 5. Create and distribute public-facing maps to educate the community on the hazards facing them directly

Best Practice: Hazard Ready Missoula provides public facing hazard data to residents of Missoula and offers resources and recommendations for individuals to increase their resilience source: hazardready.org/missoula/



Population projections are a critical element when planning for future conditions in a community. A community's population level and demographics can help determine future service demand, taxable income, future economic conditions, and other relevant factors to consider when planning for a community's development. This section generally includes visual data sections such as maps and tables that outline current and predicted demographic trends in the community. This mapping helps visualize cultural relationships with income, housing, employment, and other measurable variables.

INCORPORATING RESILIENCE

Distance to Services:

Consider adding data that maps community services such as health care, education, low-income assistance, mental health services, quality food, and open spaces with reference to demographic data such as income level. Consider adding concentric circles around these services on a GIS map to visualize distance with reference to income level by census block or household.

Demographic Trends to Consider:

Consider mapping the concentration of individuals by income level, race, or cultural distinction to develop an idea of emerging social development trends in your community and equip your staff with the tools to analyze and engage these trends with the community.

Vulnerable Populations in Hazard Areas:

Consider taking account of development trends by population demographics within the floodplain and wildland-urban interface. Use this data to map trends of population development in these areas to help inform policy and target resources to address this development and ensure the future safety of individuals living in these areas.

Potential Growth Policy Strategies and Actions:

- 1. Maintain data on demographic trends in relations to community services including: health care, open space, food, low-income assistance, etc.
- 2. Compile data on clustered demographic trends in the community
- 3. Compile data on development trends in high hazard areas and the demographics of individuals who are building in these areas.

The Montana Department of Commerce Census and Economic Information Center is an important source for population, economic, and housing data.

In 2018, the Montana Department of Commerce released a state-wide resilience survey to identify resilience challenges in communities across Montana. The most regularly reported stressor in this survey was "a lack of affordable housing," which over 50% of all respondents noted as the main stressor in their community. The housing element of a growth policy typically discusses the need for different housing types, current and projected market conditions, housing quality the location of housing in a community. Housing information is compiled by the U.S Census Bureau and the U.S Department of Housing and Urban Development.

INCORPORATING RESILIENCE

Distance to Services:

Consider access to existing and expected future development of services and when developing future land use maps for your community. In this section consider cataloging access to services for current and future housing developments.

Hazard Area Mapping:

Take inventory of housing developments in areas with flood or wildfire hazards in your community. Consider targeting flood education outreach to individuals living in hazard areas and working with the community to zone these parcels with uses more in line with public safety, such as open space, to limit dangerous development in the future.

Renovation of Historic Properties:

Consider taking inventory of historic properties in your community, developing historic overlay districts, and working with your local community, government, and developers to leverage federal and state incentives to preserve historic buildings when developing housing developments in your community.

Potential Growth Policy Strategies and Actions:

- Develop a housing plan for the community that outlines future housing development that addresses hazards, accessibility, historic preservation and access to community services *
- 2. Work to become a member of the "Certified Local Government" program/ work to develop historic preservation overlay districts
- 3. Target education and outreach to individuals within residentially zoned districts that experience flood or wildfire hazard risk.
- * The Montana Department of Commerce Community Development Block Grant (CDBG) Program has published a manual entitled Designing and Initiating a Small Community Housing Program. This book outlines information on coducting a housing needs assessment, and an easy step-by-step process for assembling a housing plan.



The economic condition section of the growth policy outlines a wide range of income and employment information for the community. This section outlines where the economy currently is, where it is moving, and where the local community wants it to be.

This section commonly outlines employment as either "primary" or "secondary" employment. Primary employment refers to a business that commonly provides services or goods to persons outside of the community, examples include mining, manufacturing, technological businesses, tourism, etc. Secondary employment refers to the services provided to individuals within the economy (ex. retail, food service, entertainment). The existence of secondary services usually depends on the original provision of primary services to drive the demand for local consumption.

The income element of the economic conditions section commonly utilizes graphs, charts, and maps to outline median household income and per capita income of community members.

INCORPORATING RESILIENCE

Economic Diversification:

Consider adding data that outlines the community's reliance on primary industries. A non-diverse economy might have one large primary employer that supports a myriad of secondary employers that may not be viable in the absence of the primary industry. A growth policy should address their reliance on a primary employer to support secondary businesses in the community and acknowledge alternatives to diversify the economy in the event the primary employer decrease its economic productivity.

Track Youth Retention and Migration

Consider tracking rates of youth migration in your community to identify areas where young people are either coming to your community to participate in areas where future population trends may not be able to sustain current economic outputs. The Montana Department of Labor and Industry and the U.S Census Bureau provide statistics on youth out-migration and workforce retention.

Acknowledge and Plan for Boom-Bust Cycles

If a significant primary employer in your community is reliant on global market trends such as mining, oil development, natural resource extraction, etc. consider a focus on planning for boom-bust cycles in your community's growth policy.

Account for Regional Economic Conditions

Consider taking account of regional economic trends to assess the role of your community in the regional economy and identify areas where the community could position itself in the future to meet the needs of the regional economy. For example, tourism economies in communities surrounding the national parks would benefit from a general trend analysis of visitor rate to communities in the region to capitalize on their community's niche role in the regional economy.

Hazard Area Mapping:

Forty percent of small businesses that close as the result of a natural disaster never re-open (FEMA). Consider inventorying businesses within flood and wildfire hazard areas in your community. Mapping the vulnerability of community businesses has many benefits. 1.) the local government can target outreach and resources for continuity planning to businesses with assets within designated hazard areas 2.) future land use maps can acknowledge the hazard and work with the community to find appropriate future land uses for the parcel (with an emphasis on open space preservation if possible) 3.) generally have the information to direct future community development outside of these areas.

Renovation of Historic Properties:

Consider taking inventory of historic properties in your community, developing historic overlay districts, and working with your local community, government, and developers to leverage federal and state incentives to preserve historic buildings when developing commercial real estate in the community.

Potential Growth Policy Strategies and Actions:

- 1. Identify and reach out to small business owners within the WUI and designated floodplain to provide resources and training regarding continuity planning and creating defensible spaces
- 2. Leverage a variety of state and federal tax incentives to promote business development in low-hazard, high need, and ample opportunity areas within your community
- 3. Track youth migration rates in your community and consider specific programs to promote retention and recruitment
- 4. Work with regional partners to develop tourism plans that spread the impact of the tourism economy across the region
- 5. Acknowledge the potential for boom-bust cycles associated with local resource extraction industries and develop an economic strategy to leverage the short-term income from the industry to diversify your local economy and ensure long-range economic vitality for future generations of your community.



An understanding of the availability of public, health, safety, recreation, and education services is critical to improving the resilience of a local community. Services referenced in this section generally include; fire protection, law enforcement, water and sewer services, public health, education, libraries, social services, parks and recreation, utilities including corridors and easements, and other governmental or non-governmental services considered of value to the community, but which are not identified as physical public infrastructure. MCA 76-1-601 (2) (e) defines requirements for a growth policy to outline a "strategy for development, maintenance, and replacement of public infrastructure, including drinking water systems, wastewater treatment facilities, sewer systems, solid waste facilities, fire protection facilities, roads, and bridges;" these considerations are typically addressed in a community capital improvement plan (CIP).

INCORPORATING RESILIENCE

Distance to Services:

Consider mapping the distance to services like health care, low-income assistance, social services, open space, and public facilities by census block area and transportation corridor, to visualize access to different services throughout your community.

Access to Mental & Behavioral Health Resources

While this section often mobilizes a level of service (LOS) ratio to outline the number of law enforcement individuals per capita or the number of individuals served by community services, consider adding a ratio that measures access to mental and behavioral health services in the community by the number of service providers.

Reliance on Volunteers

Consider working with local community service providers to get an inventory of volunteer rates within the organizations. Track the rates of volunteerism over time and consider outlining and community strategy to maintaining or increasing the level of volunteerism in the community.

Potential Growth Policy Strategies and Actions:

- 1. Encourage local service providers such as police, firefighters, and others to be trauma-informed to increase the quality of services and reduce unneeded conflict.
- 2. Track the reliance of community services on volunteers and develop a plan to increase the recruitment of volunteers to preserve consistent service provision.
- 3. Develop quantifiable service access goals. Examples: Aim to have statistically equal access to public services by demographics such as income and race.

al terms, the capital improvement needs, goals, and policies of the community. Montana statute at 76-1-601 (2) (e) requires that the growth policy include a strategy for the development, maintenance, and replacement of public infrastructure. This requirement is traditionally completed through a separate or coordinated capital improvements planning process. The Montana Department of Commerce offers the guide "Capital Improvements Planning: A Strategic Tool for Planning and Financing Public Infrastructure" to aid communities in the process.

Adequate public facilities are crucial for protecting public health and safety, supporting local growth and development, and enhancing the quality of life. The construction and proper maintenance and operation of public facilities is one of the greatest financial responsibilities placed upon Montana's municipalities and counties. These facilities should be planned to meet the unmet needs of the community and be resilient to the impact of natural or man-made disasters to ensure their long-range functionality and consistent provision of vital community services.

INCORPORATING RESILIENCE

Distance to Services:

Consider mapping or quantifying general distances between population demographics, neighborhoods, and public facilities to inform decisions that increase equality and access.

Hazard Area Mapping:

Consider explicitly mapping the public facilities within hazard areas. Use this data to inform strategies that reduce the facility's exposure to the hazard and potentially map out ways the development of parks and open space facilities can be used rather than impermeable development in hazard areas.

Renovation of Historic Properties:

Consider adding language that identifies historic properties to acquire for expanded public facilities in the future. Historic properties provide aesthetic, cultural, and economic benefits to the community, consider prioritizing the preservation of these properties when outlining locations for prospective publically owned facilities.

Potential Growth Policy Strategies and Actions:

- 1. Prioritize the development of parks and other open space public facilities in areas in the floodplain or with wildfire hazard to preserve the natural capacity of the landscape to respond to hazard events and limit future development in these areas.
- 3. Develop quantifiable facility access goals. Examples: Aim to have x acres of public land per resident, aim to have statistically equal access to public facilities and services by demographics such as income and race.





Sound transportation planning is critical to the economic, social, and environmental health of a community. In section 2, it is recommended to adopt an independent community transportation plan as an appendix to your community growth policy. Transportation planning requires specialized knowledge and studies to be conducted by professional engineers. This section generally outlines 1.) the level of service (LOS) provided by current transportation infrastructure 2.) physical condition of transportation infrastructure 3.) availability of bike paths and sidewalks 4.) connectivity of community hubs 5.) population forecasts and economic trends to predict future use of roads and other infrastructure 6.) the potential for public transportation services and other unique community considerations.

INCORPORATING RESILIENCE

Address Active Transportation

Consider adding data on the prevalence and utilization of active transportation walking and biking paths in the community.

Map Connectivity Corridors

Consider mapping the connectivity between different forms of active and vehicle transportation in the community. Map access to public services with respect to walkability. Services serving low-income individuals should be connected to residential areas by safe and walkable corridors.

Map Green Transportation-Related Infrastructure Developments

Consider mapping existing and areas for potential green infrastructure developments such as vegetated conveyances, permeable roads and paths, vegetated medians.

Wayfinding

Consider making wayfinding, in combination with active transportation, a priority in your community growth policy.

Potential Growth Policy Strategies and Actions:

- 1. Adopt a "Complete Streets" policy in your community
- 2. Connect trails and pedestrian infrastructure with wayfinding
- 3. Map and address critical transportation infrastructure junctions. Identify solutions to increase critical transportation infrastructure redundancy.

The physical and natural characteristics are some of the most important to understand and acknowledge when planning for future community development. A growth policy that acknowledges current and expected natural conditions and hazards can plan for growth that protects its residents from undue harm, financial damages, and environmental degradation. This section should include a catalog of physical characteristics such as topography, slope, geology, soils, vegetation, hydrology, wildlife, climate, flood, wildfires, earthquake, and other hazards. The overlay of this data will inform decision makers of areas that are suitable for inhabitation and future development.



Water Supply as a Constraint:

Consider adding a section that outlines the community's current and projected water supply trends. Unbridled development in areas with unplanned, decentralized water extraction can lead to severe water supply issues in the future. Section 2 outlines recommendations to include a water supply planning document as an appendix to the growth policy to address the issue of water supply and future development.

Climate Change Considerations:

Consider adding climate change data and projections when creating data on flooding, drought, wildfire and other natural hazards in the community.

Urban Vegetation:

Consider mapping urban vegetation and tree cover including an account of species and catalog of native plant species in the community. This map could outline tree cover in the community, locations of urban gardens or green space, and other relevant features of the community's urban vegetation.

Silence as a Resource:

Consider adding data on sound levels in community areas.

Potential Growth Policy Strategies and Actions:

- 1. Develop a strategic drought management plan in coordination with basin level governmental, non-profit, conservation, and interest groups
- 2. Work to develop an assessment of the local impact of climate change to your local jurisdiction
- 3. Preserve local culturally, environmentally, and economically important natural resources such as views, sounds, or ecosystems



IATURAL RESOURCE

DBG REQUIREMENT

Community Development Block Grants (CDBG) are administered by the Montana Department of Commerce. Montana's CDBG program requires that each local government that applies for a CDBG public facilities or housing project must conduct a planning process that considers and describes certain elements. The section below outlines elements you can add to your growth policy to meet CDBG requirements.

Federal statute requires that each CDBG recipient:

"identify its community development and housing needs, including the needs of low and moderate income persons, and the activities to be undertaken to meet such needs."

By adding a description of the following community characteristics, a community can use their growth policy to fulfill the CDBG application requirement above and could make the community's application for CDBG Public Facilities or Housing funding more competitive.

Add a description of:

- any geographic areas within the planning jurisdiction where low and moderate income persons are concentrated and any housing or community development needs which particularly affect those areas;
- the needs of particular groups of persons who generally fall within the low and moderate income category, such as seniors, single heads of households, homeless persons, or abused or neglected children residing in shelters or group homes, for public services or facilities; and
- any projects the local government is considering to assist lower income residents

Resources:

The Montana Department of Commerce Community Development Block Grant (CDBG) program provides matching grants to local governments for the preparation of Growth Policies and other planning documents mentioned in this publication. For More information contact:

CDBG Program - Housing and Public Facilities Commerce/ Community Development Division

301 South Park Avenue - P.O Box 200523 Helena, MT 59620-0523 Phone (406) 841-2770

Website:

comdev.mt.gov



ADDRESS SPECIFIC RESILIENCE NEEDS

Adding information that fully addresses resilience challenges in your community might be difficult within the scope of a growth policy. The breadth of information under a singular subject such as transportation, fire or flood protection, climate adaptation, or infrastructure improvements all warrant their own professionally developed and designed plans. When possible consider adding the following independent planning documents as appendices to your growth policy and referencing them within the document. Your updated growth policy can add pre-existing copies of these and other relevant plans to dive deeper into specific subjects your community would like to address as they develop.

Potential Appendices:

1. Pre-Disaster Mitigation Plan -

The Hazard Mitigation Act of 2000 requires states, counties, towns, and cities to have a regularly updated, FEMA approved mitigation plan in order to be eligible for non-emergency federal assistance. Hazard mitigation planning offers participants and local practitioners to identify, rank and plan to address the natural and man-made hazards in their community. Communities are encouraged to attach and reference a community pre-disaster mitigation plan within their growth policies to coordinate community growth with respect to expected hazards.

2. Drought Managment Plan -

The Montana Department of Natural Resources and Conservation is currently working to build off of local and national drought management planning efforts to promote basin-wide water supply planning across the state. Consider developing a drought management plan in your region and developing your growth policy with reference to the strategies and vulnerabilities identified in your drought management plan.

3. Community Wildfire Preparedness Plan (CWPP) -

Community Wildfire Preparedness Plans follow a similar process and offer a more focused hazard mitigation approach than that found in a pre-disaster mitigation plan. Consider undertaking a dual-planning process to create your community's hazard mitigation and CWPPs in coordination with one another while also referencing the plan and attaching it as an appendix in your community growth policy.

4. Climate Change Adaptation and/or Mitigation Plan -

Many Montana communities have developed plans to mitigate and adapt to the expected effects of climate change in the state. Consider developing a climate mitigation & adaptation plan for your community. Implement lessons learned and strategies from the climate planning process into your community's growth policy.

5. Affordable Housing Plan -

Affordable housing is a complex issue often referenced and discussed in a growth policy. However, the complexity of the subject can make it difficult to fully address the subject within the constraints of a growth policy. Consider coordinating the creation of your growth policy with strategies identified in an affordable housing plan to fully address affordable housing in your community.

6. Open Space & Recreation Plan -

Consider developing an Open Space and Recreation plan that addresses the economic, social, and ecological benefits of well-thought-out open space development in your community. Open Space plans should be developed in coordination with disaster mitigation and economic development plans to ensure the planned open space protects the natural flood mitigation capacity of the land and supports economically sound recreation opportunities.

7. Historic Preservation Plan -

Historic preservation plans can be powerful tools to help guide development towards culturally significant locations, reduce blight, support a community's cultural resilience, and utilize existing development. Consider referencing strategies developed in the context of a community historic preservation plan within the community growth policy to direct future development to historic districts and buildings.

8. Transportation & Economic Development Plans -

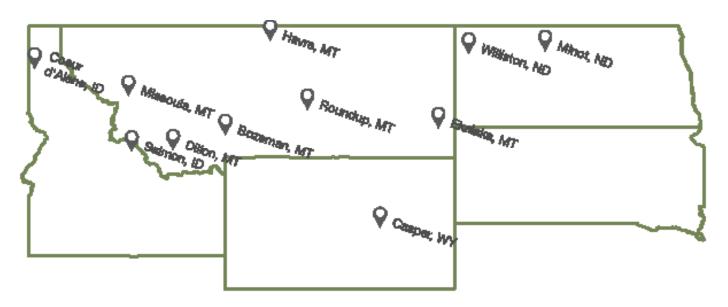
Utilize existing transportation and economic development plans to their greatest extent by incorporating findings and strategies from these plans within your community growth policy.

Example Strategies

EXAMPLE STRATEGIES FROM REGIONAL PLANS

The following section outlines a series of best practices for resilience strategies to include in your local growth policy. These strategies address environmental, social, and economic resilience challenges in ways that are both unique to the region and can be generally applied to communities of similar sizes in the area. The list of strategies is not comprehensive and aims to offer guidance of good language to use in your community's growth policy to address resilience challenges.

COMMUNITY PLANS REFERENCED:



CITY/TOWN	POPULATION	CITY/TOWN	POPULATION
BOZEMAN, MT	48,250	HAVRE, MT	9,846
CASPER, WY	59,324	MINOT, ND	48,743
COEUR D'ALENE, ID	44,137	MISSOULA, MT	73,340
DILLON, MT	4,257	ROUNDUP, MT	1,740
EKALAKA, MT	353	SALMON, ID	3,055
		WILLISTON, ND	26,426



Protect important wildlife habitats, and natural areas which provide for beneficial functions, such as floodplains

Generation of renewable energy including solar and wind power as an accessory use is encouraged with proper design and compatibility to adjacent uses.

Stormwater systems should be designed using Low Impact Development principles.

Encourage and support the creation of a broad range of housing types in proximity to services and transportation

Foster a diverse economy that will protect the economic climate for existing businesses and maintain opportunities for business expansion. options.

Discourage development in areas characterized by wetlands, flooding, high water table, steep slopes, landslide hazard, and wildland fire-prone areas.

Protect riparian corridors to provide wildlife habitat and movement areas, and to buffer all wetlands and water bodies.

Maintain and enhance floodplain capacity for conveying and storing floodwaters.



Encourage the development of greenspaces in the Downtown District. Potential greenspaces could include a Town Square Park, Riverfront Park and a "Rails to Trails" project which utilizes the abandoned railroad right-of-way, as well as pocket parks and plantings.

Preserve, enhance, and restore the unique and historic architectural fabric of the downtown..

Develop a system of parks, open space, recreation facilities and residential neighborhoods interconnected by pedestrian and bicycle trails and greenways.

Identify, acquire, and protect view corridors to Casper Mountain from the City and from Casper Mountain to the City. Within view corridors, limit signage, billboards and overhead utility lines.

Encourage the distribution of affordable housing in order to achieve a diversified community

Enhance the cohesiveness and identity of neighborhoods by encouraging a healthy mixture of commercial, employment, and cultural uses that support the everyday needs of residents in a neighborhood.



COEUR D'ALENE, ID

POPULATION: 44,137

Enforce minimal tree removal, substantial tree replacement, and suppress topping trees for new and existing development.

Encourage all participants to make open space a priority with every development and annexation.

Wherever possible, the natural terrain, drainage, and vegetation should be preserved with superior examples featured within parks and open spaces.

Areas susceptible to hazardous conditions (e.g. flooding, landslides, earthquakes, etc.) should be left in a natural state unless impacts are mitigated.

Encourage public/private partnerships to procure open space for the community while enhancing business opportunities.

Direct development of large chain warehouse ("big box") business outlets to zones that will protect neighborhoods.



DILLON, MT

POPULATION: 4,257

Enforce minimal tree removal, substantial tree replacement, and suppress topping trees for new and existing development.

Encourage all participants to make open space a priority with every development and annexation.

Wherever possible, the natural terrain, drainage, and vegetation should be preserved with superior examples featured within parks and open spaces.



EKALAKA, MT

POPULATION: 353

Discourage land development in floodplain areas. All residential structures are to be located at least 100 feet outside a designated 100-year floodplain, or 100 feet from a stream or lake edge in undesignated areas.

Encourage developers to dedicate to the property owner's association open space, wildlife habitat, and/or riparian areas within or in close proximity to a development to comply with parkland requirements.

Prepare and adopt a policy which can be provided to developers ahead of time to guide the review of telecommunications towers and wind farm applicants and permits.



Residential development should be discouraged within the 100-year floodplain and prohibited in the floodway or any area that includes the center of the channel of the stream or river or carries the majority of water during a flood.

Preserve hazardous areas (subject to geologic and flood hazards) as open space wherever possible.

Identify and protect the natural buffers along the Milk River and local drainage features.

Encourage the preservation of habitat areas for the benefit of the planning area's indigenous wildlife and quality of life of local residents.

The City should participate in periodic needs assessments and inventories to determine immediate and long-range affordable housing needs.

Encourage mixed use development.

Expand and support opportunities for value-added agriculture-based business.



Use greenway corridors as the element to link parks and open space areas.

Integrate trails into larger scale developments with connection to existing and proposed extensions of the Minot trail system.

Managing storm water using natural filtration and other ecologically based approaches to avoid down-stream flooding.



Partner with public health department and businesses to make active transportation a wellness issues

Update and implement Historic Preservation Plan and coordinate with downtown Master Plan.

Develop and update neighborhood plans based on historic design patterns that unify neighborhoods and foster a sense of belonging and identifies opportunities for outdoor amenities and public gathering spaces

Incentivize mixed-use development so that residences are within walking distance to grocery stores and other basic necessities.

Monitor the status of climate change by tracking available strategic indicators including, but not limited to, the following: temperature, precipitation, snowfall, days below freezing, fire energy, and installation of photovoltaic infrastructure.

Educate residents regarding mitigation techniques for fire-prone areas.

Promote and incentivize green building infrastructure, energy conservation, recycling, renewable energy (solar/geothermal), zero waste, etc. Also consider disincentives such as fees and pollution pricing.

Institute programs and projects to address sustainability and climate change such as repair of aging water mains, recycling and reuse of materials to achieve zero waste, water metering, etc.

Conduct a housing needs assessment to identify the demand for affordable housing, inventory developable land, market for downtown housing, and areas that can accommodate higher density multi-dwelling development, etc.

Acquire, restore and protect river and stream corridors and floodplains as open space whenever possible including corridors outside urban service areas.

Develop a river corridor plan to address land use, river access, open space, transportation, water quality, views and vistas and wildlife habitat.

Integrate opportunities to connect parks, schools and open space through trails and green space in various city plans.

Identify and protect appropriate locations for agricultural uses and value-added production.



Ensure new development is located in areas with minimal hazards.

Work with Musselshell County to find ways to address homes and businesses located in the floodplain

Develop an open space/parks plan for the floodplain properties to be purchased.



The City of Salmon should recognize all opportunities to work with and encourage local businesses and industries to utilize their operations as a resource for education for high school and university extensions, such as the study of geology and mines, reclamation, and the mitigation of environmental impacts.

The City of Salmon should actively support and promote the county's efforts to preserve productive agricultural lands as one of its most valuable natural resource-based industries. As part of this effort the City shall support and encourage the development of locally grown farm products, support and promote name face value for the sales of farm products, provide suitable locations in the city for the processing and sale of farm products, encourage and promote the utilization of sustainable natural resources, promote a sustainable regional economy and the preservation of productive agricultural lands and valuable natural resource based industries.

For a diverse and sustainable economy and to promote Salmon as a center for the study of geological, agricultural, and environmental sciences, the City of Salmon should actively promote outdoor recreational opportunities and tourism as one of its most valuable natural resource based industries, encourage the development of a wildlife education center, and explore the possibilities of promoting Salmon as a wildlife education center for the region.

The City should work with the appropriate agencies to encourage open space, including that land already designated as open space that provides fish and wildlife habitat, paying particular attention to waterways and wetland areas.

The City of Salmon should require development to take into account the following in considering site location and ultimate development standards: • protection of natural vegetation as much as possible; • minimizing soil disturbance; • wildfire mitigation standards; • noxious weeds; • water quality; • noise consideration; • possible pollution impacts; and • lighting impacts and concerns.

The City of Salmon should monitor, manage, and protect the watershed area in and around the city.

The City of Salmon's fish and wildlife resources are a local and national treasure, and the community recognizes a stewardship responsibility for their protection. Future development in the city limits will take place in this context.



Dedicate 6 percent of residential land to parks and open space, subject to acceptance by the Park District, and 10 percent for PUDs.

Follow best management practices to limit development in the 100-year flood plain; allow natural wetlands to perform their functions of storm-water retention and filtration.

Connect trail systems with existing trails and designated pedestrian/bicycle routes.

As the city grows, coordinate with the Park and Recreation District to identify potential trail corridors along preferred creeks and coulees and acquire contiguous land for the establishment of public greenways with trails.

As the city grows, coordinate with the Park and Recreation District to identify potential trail corridors along preferred creeks and coulees and acquire contiguous land for the establishment of public greenways with trails.

Seek funding to purchase designated open space areas or acquire them during the development process.

Encourage landscaping with drought-resistant plants on private property to reduce water dependency; provide information about plant species with low water needs. Encourage landscaping that utilizes resilient plant species; encourage landscaping that reduces water dependency; provide information about plant species with low water needs.

Pursue compact development to reduce auto dependency.

Preserve emergent wetlands and riparian habitat to retain and filter runoff from rooftops, streets, and parking surfaces.

Facilitate the creation of daycare centers and home daycares to address the current shortage of child care providers.

APPENDIX 6: TOOLS AND RESOURCE LIST

AFFORDABLE HOUSING

Land Banking; converting vacant properties into productive places

Individual Homebuyer Assistance, Grants, Rehabilitation, Building

Already occurring HUD programs in Montana

Homebuyer Education and Counseling in Montana

Disaster and Emergency Services Pre-Disaster Mitigation Grants

Council for Affordable and Rural Housing

Equitable Development Toolkit for Employer Assisted Housing

ACCESS TO TECHNOLOGY

Access Community Leadership and Concentrate Effort: Counties in Rural Minnesota for Broadband Use

Map of Internet Service Across Montana

Open Source Data of Montana

USDA Broadband Loan Access

ECONOMIC DIVERSITY

Creating Sustainable Destinations

Anaconda, MT Recreation Economy

Opportunity Zones and Opportunity Funds

Rural Partners with Main Street Montana

Montana Statewise Business Expansion and Retention Program

Encouraging Rural Tourism

Redeveloping Commercial Vacant Properties

ECONOMIC DIVERSITY
Michigan Main Street Economic Impacts
Building American Cities Toolkit
SKILLED WORKFORCE
Apprenticeship Tax Credit
SafetyFestMT Trainings and Certifications
Example: Pennsylvania Local Apprenticeship Trainings
Geography of Jobs for Future Growth
<u>Disaster and Emergency Services Pre-Disaster Mitigation Grants</u>
Council for Affordable and Rural Housing
MENTAL HEALTH
PAX Good Behavior Game Early Learning
Statistics and Facts on Suicide in Montana
National Alliance on Mental Health in Montana
Medicaid in Montana and Healthy Montana Kids
Montana Native Youth Suicide Reduction Plan
Example: The Healing Garden in Milwaukee
POVERTY AND INEQUALITY
Environmental Protection Agency Local Food Local Places Toolkit
Montana Co-Op Local Food Marketplace
Montana County Data for Food Insecurity
Medicaid in Montana and Healthy Montana Kids
Continuum of Care Program to End Homelessness
Food Access Research Atlas
6th Ward Garden Park in Helena MT Garden Education

<u>Financial Wellness Trainings</u>

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Montana Multi-Hazard Mitigation Plan

<u>Planning for Health Risks from Wildfires</u>

Wildfire Smoke and Public Health

Planning Tools to Reduce Montana's Wildfire Risk

Reducing Montana's Risk in the Wildlife-Urban Interface

FLOODING

National Flood Insurance Program Community Rating System

<u>Surface Water Assessment and Monitoring Program in Montana</u>

Community Resilience Floodplain Green Guide

INFRASTRUCTURE

<u>Treasure State Endowment Program (TSEP) Grants</u>

Montana Department of Revenue Energy Conservation Investments
Deduction

Midwest Assistance Program (MAP) for Infrastructure Solutions

<u>Environmental Protection Agency Community Reuse Property Prioritization Tool</u>

CLIMATE CHANGE AND ADAPTATION

Economics of Climate Adaptation

U.S. Climate Resilience Toolkit

ASSET BASED COMMUNITY DEVELOPMENT

Community Building Toolkit

VOLUNTEERISM

Universities across the state have volunteer programs, getting students involved in various projects, for example:

University of Montana

Montana State University

Carroll College

Encouraging EMT Volunteerism

CHILDCARE

Healthy Montana Kids Insurance Plan

AGING POPULATIONS

Montana State Aging Services

COMMUNITY CONNECTION

Montana Memory Project

Clues to Rural Community Survival

Community Organizing Handbook

Example: Inspiring Community Connection Through Community Development

Helena MT Using Events to Inspire Community Connections

SUBSTANCE ABUSE

Statistics on Drug Abuse in America

Meth Use in Montana

<u>Cascade of Care Model for Reducing Opioid Overdose</u>

Commercial Tobacco Use Prevention Starts at Home

Preventing Prescription Drug Abuse

Statistics on Social Interaction and Patterns of Addiction

Example: Community Prevention and Support Meetings in Helena MT

DROUGHT

Montana State Water Plan

Montana State Climate Assessment

Montana State Multi-Hazard Mitigation Plan

Montana Drought Monitor

Planning for Drought in Montana

Federal Resources

FEMA Building Resilient Infrastructure and Communities (BRIC)

NOAA's U.S. Climate Resilience Toolkit

U.S. Department of Health and Human Services – Community Resilience

Environmental Protection Agency Regional Resilience Toolkit

National Institute of Standards and Technology Community Resilience Planning Guide

Non-Governmental Resilience Resources

The Kresge Foundation: Community-Driven Climate Resilience Planning

EPA Regional Resilience Toolkit

Montana Climate Assessment

ClimateWise Vulnerability Assessments

Model Forest Policy Program

Georgetown University Adaptation Clearinghouse

Geos Institute Climate Ready Communities

National Institute of Standards and Technology Community Resilience Planning Guide

EcoAdapt Climate Adaptation Knowledge Exchange (CAKE)

NOAA's U.S. Climate Resilience Toolkit

State Resources

Department of Commerce, Community Development (technical assistance available)

Montana Office of Emergency Services, Disaster and Multi-Hazard Mitigation Plan

Department of Natural Resources and Conservation, Water Resources

Montana Department of Agriculture, Food and Ag Development Centers

Montana State University Extension

Montana Department of Labor and Industry, Office of Community Service

Montana Climate Assessment (MCA): Water, Forests and Agriculture (2017)

MCA: Climate Change and Human Health (2020)

MCA: Community Tools and Resources

Montana Climate Solutions Plan (2020)