

# Valley County, Idaho

## Multi-Jurisdictional Hazard Mitigation Plan



Update 2020

**The Multi-Jurisdictional Hazard Mitigation Plan  
of  
Valley County, Idaho  
and the Cities of  
Cascade, Donnelly and McCall**

**Prepared for  
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## Executive Summary

The Valley County Hazard Multi-Jurisdictional Mitigation Plan (HMP) is an update to the 2011 Valley County Multi-Jurisdictional Hazard Mitigation Plan. Through a collaborative effort between the county, its jurisdictions, the University of Idaho (UI), and the Idaho Office of Emergency Management (IOEM), the planning update process took place over 2018-2019 and the plan was finalized in early 2020. Valley County Emergency Manager and Fire Chief Juan Bonilla led the Multi-jurisdictional Planning Committee. The Planning Committee was composed of members from the Valley County Office of Emergency Management and representatives from the communities, State and Federal agencies, and other organizations and stakeholders active within the county. As with the 2011 plan, four jurisdictions were actively engaged in the update process, including the cities of Cascade, Donnelly, McCall, and Valley County. Several other entities were involved as well, such as the three fire districts within the county and the Payette Lakes Recreation Water and Sewer District.

Members of the planning committee completed an initial hazard magnitude vs. frequency survey. The survey was replicated from the former plan to capture changes in the committee's priorities. Utility outages, winter storms, and wildland fires were ranked highest in both frequency and magnitude, with thunderstorms and floods following.

The update built on the former plan, but reorganized its structure to enhance the plan's usability. The update also comprehensively revised all sections of the plan to reflect current hazards, political and socioeconomic conditions, and incorporate best-available data. Major changes to the HMP include an updated and rewritten county profile, the inclusion of additional hazards, more detailed and comprehensive risk and vulnerability assessments for the hazards of focus, and the addition of new mitigation actions. The 2020 update also builds a strong foundation for annual review and monitoring of progress, allowing Valley County to maintain the HMP through the plan's five-year lifecycle.

Mitigation actions were reviewed and updated per feedback from the Planning Committee and responsible agencies and departments. Additional mitigation actions were included based on Committee and public input. These actions were scored and ranked to better prioritize efforts and resources towards the completion of listed mitigation actions.

Finally, under an agreement between IOEM and the Idaho Department of Lands (IDL), the Valley County Wildfire Protection Plan (CWPP) and its updates serve as the Wildfire Annex to the Valley County Multi-Jurisdictional Hazard Mitigation Plan. Located in Appendix H are both the 2019 updates to the CWPP, as well as the draft of the 2020 update of the plan. Additionally, the 2018 Wildfire Protection Plan: An Action Plan for Wildfire Mitigation in Valley County, Idaho is provided in Appendix I.

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## Acronyms

<b>Acronym</b>	<b>Definition</b>
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
CRS	Community Rating System
DEQ	Department of Environmental Quality
DMA	Disaster Mitigation Act of 2000
EMS	Emergency Medical System
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
HIFLD	Homeland Infrastructure Foundation-Level Data
HMP	Hazard Mitigation Plan
IDL	Idaho Department of Lands
IOEM	Idaho Office of Emergency Management
ITD	Idaho Transportation Department
LEPC	Local Emergency Planning Committee
MMI	Modified Mercalli Intensity
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NEHRP	National Earthquake Hazard Reduction Program
NFIP	National Flood Insurance Program
PDM	Pre-Disaster Mitigation Grant
PGA	Peak Ground Acceleration
P&Z	Planning & Zoning
USFS	U.S. Forest Service
UI	University of Idaho
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
WUI	Wildland Urban Interface

# 1 Introduction

## 1.1 Overview

The Valley County Multi-Jurisdictional Hazard Mitigation Plan (HMP) identifies both short and long-term policies and actions that help reduce risk and future losses from hazards. The term *hazard* is defined as any event with the potential to cause loss of life or property. Such events include natural hazards (such as earthquakes, floods, landslides, severe weather, and wildfire) and anthropogenic hazards (such as civil unrest and hazardous materials). Hazards then become disasters when communities are negatively impacted or overwhelmed by such events. To reduce the risk to disasters, hazard mitigation is implemented across the county and its communities. Hazard mitigation consists of cost-effective actions that are often divided into three categories:

- Policies and actions that keep the hazard away from people, property, and structures.
- Policies and actions that keep people, property, and structures away from hazards.
- Policies and actions that reduce the hazard impacts on people, property, and structures.

This plan identifies the vulnerabilities and risks from threats and hazards to the county and its communities and details the mitigation strategy that will be implemented over a five-year period. By implementing this plan, resources can more efficiently and effectively be targeted towards the hazards that pose the greatest risk. Other benefits of this plan include the following:

- Selection of Risk Reduction Actions – Hazard mitigation is a systematic process of identifying and analyzing the county’s risks. By setting clear goals and identifying and implementing mitigation strategies, the county can reduce losses from future hazards.
- Builds Local, State, & Federal Partnerships – The plan builds partnerships through two-way communication and collaboration by involving various stakeholders at the local, State, and Federal levels.
- Facilitates Sustainability – Risk and sustainability are linked, and without identifying and mitigating risks, the livelihood and continuance of the county and its communities is threatened. Enhancing resilience to hazards through sound mitigation practices enhances sustainability.
- Establishes Funding & Resource Priorities – By coordinating and consolidating mitigation actions undertaken in the county into a unified strategy, the plan helps prioritize and articulate the county’s and its communities’ needs to the public, other organizations and private enterprise, and agencies with stake in the county.
- Increase Hazard Awareness & Education – The hazard mitigation planning process increases education and awareness of hazards and risks in the county and its



Figure 1.1: Disaster Cycle

communities. This awareness helps individuals understand their risk, self-mitigate, and enhance their resilience. This can translate to support of mitigation actions in the county.

## 1.2 Legal Authority

The legal basis of hazard mitigation plans is the Stafford Act, as amended by the Disaster Mitigation Act (DMA) of 2000. The DMA emphasizes pre-disaster planning, and Section 322 of the Act specifically addresses hazard mitigation planning. The DMA requires state and local governments to prepare and maintain hazard mitigation plans to receive federal hazard mitigation project grants. This financial assistance can be sought pre- and post-disaster and is vital in all phases of emergency management. The requirements for an HMP are codified in Title 44, part 201, section 6 of the Code of Federal Regulations (44 CFR §201.6) and include criteria for six elements. Detailed criteria for each of the requirements can be found in Appendix B, as well as the relevant sections of the plan (see *1.4 Plan Organization*).

## 1.3 Hazard Mitigation Plan Update

Existing HMPs must be reviewed and updated as required by 44 CFR§201.6(c)(v). The revision must reflect changes in development, progress made in local mitigation efforts, and changes in hazard and mitigation priorities. The update then must be resubmitted for approval within five years to maintain eligibility for FEMA mitigation grant funding.

The former plan was originally completed and adopted in 2011 and expired in 2016. Through a collaborative effort between the county, its jurisdictions, the University of Idaho (UI), and the Idaho Office of Emergency Management (IOEM), the plan was updated in 2019. The update built on the former plan but reorganized its structure to enhance the plan’s usability. The update also comprehensively revised all sections of the plan to reflect current hazards, political and socioeconomic conditions, and incorporate best-available data. Each section summarizes the revisions made in the 2020 update.

## 1.4 Plan Organization

The plan is organized to be operational in nature:

1. Introduction – Provides an overview of mitigation, hazards, and the basis of HMPs.
2. Planning Process – Details the process undertaken for the 2019 plan update. This section identifies and details the planning committee, participating jurisdictions, and stakeholders.
3. County & Community Profiles – Provides an overview of the socioeconomic, demographic, and geographical character of the county and its communities.
4. Risk Assessment – Details identified hazards and risks facing the county. Hazard profiles include hazard descriptions; hazard extents, magnitudes, and past occurrences; population, structure, and structure value exposure; socioeconomic vulnerability assessments; loss estimates; and land use and future developments in relation to hazards.
5. Mitigation Strategy – Details the goals and actions to be implemented to reduce loss of life and property from hazards and risks identified in the risk assessment.

6. Mitigation Capabilities – This section details and describes the capabilities and resources the participating jurisdictions and organizations can leverage to implement hazard mitigation. This includes funding avenues and detailed National Flood Insurance Program (NFIP) information.
7. Plan Maintenance – Details the county’s commitment to maintaining the 2019 plan through the five-year lifecycle. The county will monitor, evaluate, and update the plan on a bi-annual basis, and engage the public throughout the process. This section also includes recommended updates for future plans.

## 2 Planning Process

### 2.1 Overview

The planning process is vital to the development and completion of a comprehensive HMP that best fits a county and its communities. As with almost all planning efforts, the plan is only as good as the process itself. A major component of the planning process is involvement and participation from representatives and stakeholders from the county, local communities, State and Federal agencies, and other organizations. Through the process, perspectives on hazards and risks, community assets, and mitigation needs are discussed and incorporated into the plan.

#### 2.1.1 Summary of Revisions

Major revisions include:

- Moved and reorganized the planning process section within the plan;
- Moved and revised the former plan's Introduction, Plan Organization, Plan Use, Purpose, and Scope sections to Section I. Introduction;
- Moved and revised the former plan's Mission Statement and Goals sections to Section II. Mitigation Strategy;
- Updated the planning committee to the 2019 participants;
- Revised the former plan's Planning Process section to reflect the 2020 update; and
- Moved the former plan's Plan Maintenance section to Section IV. Plan Maintenance.

#### 2.1.2 FEMA Requirements

This section adheres to and fulfills the following regulations:

- 44 CFR §201.6(b) – An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:
  - (i) – An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
  - (ii) – An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and nonprofit interests to be involved in the planning process; and
  - (iii) – Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.
- 44 CFR §201.6(c) – The plan shall include the following:
  - (i) – Documentation of the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

### 2.2 Plan Preparation & Development

The planning process consisted of the following phases:

- Plan Update Kick-Off – Plan development for the 2020 update began in January 2017. A kick-off meeting was held with the planning team to cover FEMA requirements and to propose a work plan.
- Plan Review & Evaluation – The former plan was reviewed and evaluated according to the FEMA Local Mitigation Review Tool (2011) and a more stringent and comprehensive evaluation matrix developed by Frazier et al. (2013). The review and evaluation results guided the risk assessment and mitigation strategy for the 2019 plan update by identifying the strengths and weaknesses of the former plan.
- Risk Assessment – Hazard occurrences and hazard impacts were collected for the county. Hazard profiles were updated to reflect current science around risk and vulnerability.
- Mitigation Strategy Review – The mitigation actions listed in the former plan were reviewed and their status determined by the responsible jurisdictions and organizations.
- Mitigation Strategy Update – New and additional mitigation actions were detailed and scored by the planning committee for inclusion into the 2019 plan update. Each jurisdiction was provided the opportunity to put forth mitigation actions for discussion and approval. Mitigation goals and objectives were likewise visited and updated as necessary.
- Public Involvement & Outreach – The public was engaged through news releases to local media, a mitigation-specific survey distributed online and in-person, and a formal public meeting. The draft plan was posted to the webpage developed for the 2020 update to provide opportunity for public comment and feedback.
- Plan Completion & Adoption – Following the compilation of all information, data, and analyses conducted throughout the planning process, drafts were distributed to the planning team and the public for review. Feedback and comments were incorporated in subsequent drafts. After the review and edit period, the plan was formally submitted to IOEM and FEMA for approval prior to formal adoption by the county, its communities, and other organizations.

### 2.3 Multi-Jurisdictional Participation & Coordination

The hazard mitigation planning process was built on the participation of each jurisdiction. All incorporated communities were invited to participate in the 2020 update through email and personal outreach by the UI planning team and Valley County Emergency Manager Juan Bonilla. Table 7.1 summarizes the participation of the jurisdictions with authority to adopt the plan following IOEM and FEMA review and approval. **The participating jurisdictions represent all of the incorporated jurisdictions in the County.**

Table 2.1 Jurisdictional Participation

Jurisdiction	2011 Participation & Adoption	2019 Participation & Adoption
Valley County	Yes	Yes
City of Cascade	Yes	Yes
City of Donnelly	Yes	Yes

## 2.4 The Planning Team & Stakeholder Participation

The planning team is the core group of individuals responsible for the development and update the plan. Comprised of local officials and subject matter experts, these individuals represent jurisdictions and organizations with the authority to implement the mitigation strategy over the plan's five-year life. These individuals and entities bring local knowledge and perspectives to the table that are vital in developing a comprehensive and cohesive HMP, although they might not have the authority to implement the mitigation strategy. The 2019 planning team was headed by Valley County Emergency Manager Juan Bonilla, and is detailed in Table 2.2.

Table 2.2 Update Planning Team Members

Jurisdiction	Name	Title & Department	Former Participation
Valley County	Juan Bonilla	Fire Chief, Emergency Manager	Yes
	John Coombs	Sheriff's Office, Captain	Yes
	Anne Guarino	Building Official, Building Dept.	Yes
	David Crawford	Valley County Information Technology	
	Elt Hasbrouck	Commissioner	-
	Cynda Herrick	Planning & Zoning, Floodplain Manager	
	John Lillehang	Fire Working Group, Member	Yes
	Jeff McFadden	Valley County Road Superintendent	
	Jason Speer	Sheriff's Office, Operations Lieutenant	
	Bill Willey	Commissioner	
City of Cascade	Randy Freeman	Police Dept., Chief	
	Steve Hull	Fire Chief	
	Rob Terry, Julie Crosby and Judith Nissula	Mayors	
City of Donnelly	Jayne Berheim	Donnelly Fire & EMS, EMS Coordinator	
	Cami Hedges (early stages), then Lori Clemens (later stages)	City Clerk	Yes (Hedges)
	Susan Dorris	Mayor	
	Franklin Yates	Donnelly Fire Dept., Assistant Fire Chief	
City of McCall	Jackie Aymon	Mayor	Yes
	Nate Coyle (early stages), then Anette Spickard (later stages)	City Managers	Yes (Coyle)
	Garrett deJong	McCall Fire Dept., Assistant Chief	
	Erin Greaves	Communication Manager	-
	Jay Scherer	Airport Manager	
	Justin Williams	Chief of Police	
SITPA	Tim Tevebaugh	Assistant Fire Warden	
	Ken Stump	Fire Warden	
WPA/FireWise	Stephanie Nelson		

In addition to each of the jurisdictions in the county being invited to participate in the planning process (which they did), the three rural fire districts within the County (Cascade, McCall and Donnelly) as well as the Payette Lakes Recreation Water and Sewer District were also invited to participate via communication by the Emergency Manager. These entities provided input and mitigation strategies that were included in the plan (see Section 5.7 “Special Districts” mitigation strategies). Additionally, all partners listed in Table 2.3, except for the IOEM subcontractor plan writers, were invited to participate by the Valley County Emergency Management and via public notices about the planning process.

Table 2.3 Stakeholders and other partners in planning process

Organization/Agency	Name	Title/Role	Former Participation
Idaho Office of Emergency Management	Susan Cleverley	Mitigation Division Chief	
	Dale Nalder	Area Field Officer	
	Lorrie Pahl	State Mitigation Planner	
	Ben Roeber	Division Chief	
St. Luke’s McCall	Nancy Romero	Emergency Management	
State University of New York (SUNY) Buffalo and then University of Idaho	Alexander Peterson	Mitigation Planner	
	Elizabeth Boyden	Mitigation Planner	
SUNY and then Georgetown University	Tim Frazier	Faculty member and risk Assessment/planning specialist	
University of Idaho	Karen Humes	Plan editor/coordinator	
US Bureau of Reclamation	Mike Wissenbach		
US Forest Service	James Bishop	Cascade National Forest, Fuels Specialist	
	Sean Johnson	Payette National Forest, Fire Staff	
	David Vining	Payette National Forest, Fire Mitigation Officer	
	Josh Warden	Boise & Cascade National Forest, Fire Mitigation Officer	

## 2.5 Planning Meetings

Several meetings were convened throughout the planning process to facilitate discussion amongst the planning team and other stakeholders with regards to hazards and mitigation. The following sections summarize these meetings. See Appendix E for sign-in sheets, agendas, and presentations.

### 2.5.1 January 2017 Kickoff Meeting

The kickoff meeting for the plan update was held on January 23, 2017 at the Donnelly Fire Station in Donnelly. The meeting was facilitated by Alexander Peterson, mitigation planner with the University of Idaho, and Chief Juan Bonilla, the county emergency manager. The meeting was attended by 18 members of the planning team. The meeting focused on introducing hazard mitigation, hazard mitigation plans, and the planning process. The requirements of HMPs as codified in the Code of Federal Regulations (CFR) were presented, and cost share requirements



of the Pre-Disaster Mitigation grant discussed. A brief review of the former plan included which jurisdictions and agencies participated and adopted the former plan and which hazards were profiled. A summary of the comprehensive evaluation conducted to identify the former plan's limitations was presented and discussed, followed by the participation and adoption requirements for communities and agencies in the 2017 update process.

#### 2.5.2 February 2017 Kickoff Meeting

The planning meeting held on February 22, 2017 focused on initializing the Phase I Risk Assessment and public outreach. The attending 24 planning team members completed the Phase I Risk Assessment survey and initial draft of the public opinion survey. The Phase I Risk Assessment carried forward the frequency-magnitude scoring system of the former plan, providing a baseline to conduct a comparative analysis on changes in hazard priorities and perceptions, while feedback on the public opinion survey provided guidance on revisions prior to distributing to the public.

#### 2.5.3 April 2017 Planning Meeting

A planning meeting was held on April 17, 2017 and attended by 15 members of the planning team. The planning meeting focused on reviewing the former mitigation strategy, including any progress made towards completing or implementing the actions, challenges that arose in implementing mitigation following the adoption of the former plan, and removing any actions that were no longer necessary. For those actions carried forward, the planning team discussed new estimated costs, timelines, and potential funding resources.

#### 2.5.4 July 2017 Planning Meeting

The July 2017 planning meeting was held from 9:00 AM to 12:00 PM on July 26<sup>th</sup> in Donnelly, and was attended by six members of the planning team. Discussion and activities revolved around match to date, public outreach, reviewing and revising the goals of the former mitigation strategy, as well as aligning the mitigation strategy with the risk assessment.

#### 2.5.5 November 2017 Planning Meeting & Conference Call

A conference call was held from 9:00 AM to 11:00 AM on Wednesday, November 29<sup>th</sup>. The call focused on a new timeline to complete the plan update, a review of the cost share documented, as well as jurisdictional participation to date. Progress to date was discussed, as was the need for continued public outreach and participation by additional jurisdictions and stakeholders. Also reviewed and discussed was how the planning team and the adopting jurisdictions will maintain, evaluate, and update the plan throughout its five-year lifecycle following approval and adoption, then planned for late 2019.

#### 2.5.6 March – August 2018

In March 2018, Dr. Tim Frazier visited Valley County to meet with the planning committee and provided a presentation to assist EM Juan Bonilla with the process of working with Valley County jurisdictions to review prior mitigation strategies and complete capabilities assessments. On March 21, a planning meeting was held in the City of McCall to discuss these inputs. The planning committee met again in June 2018 and August 2018.

### 2.5.7 November 2019

In November 2019, the Valley LEPC met to develop and prioritize new mitigation actions.

## 2.6 Public Involvement

Public involvement was integral to the plan update. Appendix E contains press releases, survey templates, and documentation of the public meetings.

Several press releases were distributed to local media to inform citizens of the update process, to solicit public review and comments on the draft plan, and to inform citizens of the date, time, and location of the public meeting held to discuss the mitigation strategies. Press releases were distributed at the following times:

- June 20, 2017 – Update announcement with details on the Pre-Disaster Mitigation grant funding the update, jurisdictional participation, a summary of the planning process and proposed revisions, and a link to the online opinion survey about risk perception for different hazards. The blank survey is provided in Appendix E and the responses are summarized in Sec 4.1
- August 2020 – inform public about availability of the draft plan for further public comment

## 2.7 Review & Incorporation of Existing Plans, Reports, Studies, & Technical Information

Several plans, policies, reports, and other documents were reviewed and incorporated into the 2011 plan. The 2020 update process revisited these documents to review and evaluate their applicability in 2019. Additional documents were also reviewed and incorporated in the 2019 plan update. Specific plans and reports used are summarized below. In Section 6.8, more details are provided on how each of these plans and several ordinance updates were used in the planning process.

### 2.7.1 Valley County Comprehensive Plan

The Valley County Comprehensive Plan references hazards in Chapter 5 with three goals and objectives to work towards mitigating against the hazards in which Valley County is at risk.

Goal I: To protect the health and safety of Valley County residents and visitors from the impacts of natural hazards.

Goal I Objectives:

1. Encourage appropriate agencies to disseminate information about radon gas with measures to reduce the risk to human health.
2. Continue Valley County's participation in the Federal Emergency Management Agency's (FEMA) flood insurance program.
  - a) Promote the program by providing information to the public, realtors, title companies, and lending institutions.

- b) Promote consideration by the Army Corps of Engineers to certify the dam on Lake Cascade for flood protection.
3. Retain existing regulations that prohibit or control construction, development, and filling in designated flood prone areas.
4. Encourage uses in floodplains which will incur or cause minimal damage if there is flooding.
5. Participate with Avalanche Forecast Center.
6. Continue to require engineering for all structures, except utility buildings, to protect against damage from earthquakes.

Goal II: To protect the health and safety of Valley County residents and visitors, structural and infrastructure assets, and wildlife/natural resources from wildfires and the aftermath of wildfires.

Goal II Objectives:

1. Recognize the Wildland-Urban Interface Wildfire Mitigation Plan portion of the All Hazard Mitigation Plan – commonly referred to as the County Wildfire Protection Plan (CWPP), an annually updated plan which includes a Wildfire Risk Assessment Map.
2. Utilize the Wildland Urban Interface Fire Protection Plan portion of the Subdivision Regulations to guide new and renewed applications toward recognizing wildland fire risk.
3. Encourage property owners to review the Wildfire Section of the All Hazard Mitigation Plan and reduce the wildland fire risk in their communities and areas of risk.
4. Encourage property owners in the WUI to be proactive and learn how to prepare and protect their homes and businesses from the threat of uncontrolled wildland fire. Each and every homeowner is personally responsible for creating and maintaining effective defensible space.

Goal III: To mitigate effects of disasters on Valley County residents and visitors, structural and infrastructure assets, and wildlife/natural resources from all hazards.

Goal III Objectives:

1. Participate with other communities in the West Central Mountains in developing the All Hazard Mitigation Plan.
2. Educate residents and visitors of potential hazards. Enlist first contact professions such as realtors, title companies, financial institutions, etc.

### 2.7.2 Valley County Emergency Operations Plan

The Valley County Emergency Operations Plan is currently in the process of being revised. See Section 6.10 for more information on its consideration in the HMP planning process.

### 2.7.3 Donnelly Comprehensive Plan

The Donnelly Comprehensive Plan states goals, objectives, and policies to provide guidance to city decision makers, planners, and project approvals.

Goal: Protect human life, health, and property from the impact of natural and manmade hazards.

Objective I Mitigate losses due to severe weather.

Policy 1 The Planning and Zoning Commission and City Council shall consider the risks associated with severe weather events when reviewing projects.

Policy 2 Inspect schools and other public buildings for snow-load resistance and retrofit when necessary.

Policy 3 Collaborate with neighboring cities, Valley County and Adams County to establish an east-west emergency transportation route.

Policy 4 Prioritize surfacing of secondary and access roads for all weather use.

Objective II Continue to participate in the National Flood Insurance Program.

Policy 5 Maintain current FEMA issued flood hazard maps for the city and surrounding Area of Impact.

Policy 6 The City shall discourage development in the 100-year floodplain.

Policy 7 Where possible, protect and restore wetland functionality and stabilize stream and river banks.

Objective III Reduce potential damage to community infrastructure and structures through implementation of earthquake mitigation techniques

Policy 8 Apply International Building Standards to all new public buildings to prevent damage from earthquakes.

Policy 9 Where feasible, retrofit public health and safety buildings to be compliant with International Building Standards to prevent damage from earthquakes.

The Implementation chapter of the plan lists the following actions to mitigate against hazards in the City of Donnelly:

Action 36 Identify and assess for safety at least one public building as a refugee center in the event of displacement of city residents due to a severe weather event.

Action 37 Update building codes for new and rebuilt public buildings consistent with International Building Standards for earthquake design.

Action 38 Assess seismic hazards for public buildings within the city.

Action 39 Where feasible, retrofit public buildings to be compliant with International Building Standards to prevent damage from earthquakes.

Action 40 Continue to participate in FEMA's National Flood Insurance Program and maintain accurate flood plain mapping for the city.

Action 41 Inspect schools and other public buildings for snow-load resistance and retrofit if necessary.

Action 42 Identify and pursue funding to implement the City of Donnelly and Valley County hazard mitigation activities as described in the Valley County Multi-Jurisdictional All Hazards Mitigation Plan (2010).

#### 2.7.4 City of McCall Comprehensive Plan

The City of McCall Comprehensive Plan was updated in January 2018. Under the section on Environment and Natural Resources (page 115), the following goals and policies are directly related to hazards mitigation planning:

Goal 9: Encourage approaches to development that will enhance the ability of people, wildlife, natural systems, and property to withstand and recover from natural disasters and other major disturbances.

Policy 9.1 Facilitate effective disaster mitigation by providing recommended updates to policies, programs and regulations as warranted, in preparation for natural disasters.

Additionally, Action Project E21 (page 158) is to conduct a hazard mitigation master plan to effectively assess and address hazard risks, in coordination with Valley County.

#### 2.7.5 West Central Mountains Economic Development Strategy

The West Central Mountains Economic Development Strategy does not mention hazards; however, the plan does set out the strategy for jobs, housing, transportation, infrastructure, education, and regional communication goals and strategies. In order to meet those goals a series of objectives and tactics are listed to lay out how goal will be accomplished.

#### 2.7.6 Risk Assessment for Valley County, December 2017

Results from a special report done by IOEM, FEMA and the Idaho Geologic Survey in December 2017: *A Risk Assessment Database Summary for Valley County and the Incorporated Cities of Cascade, Donnelly and McCall* were incorporated into the risk assessment portion of the plan (Section 4), including vulnerability analyses for floods, fires and earthquakes.

## 3 County & Community Profiles

### 3.1 Overview

Hazard mitigation within the county needs to be localized to maximize the reduction of losses to both life and property; therefore, it is pertinent to understand the characteristics of the county and its communities.

#### 3.1.1 Summary of Revisions

Major revisions made to this section in the 2020 update include:

- Reorganized and restructured into a discrete section
- Updated statistics and data where necessary
- Incorporated new and additional maps and figures where appropriate
- Value of critical infrastructure facilities adjusted per inflation and moved to risk assessment
- Public Safety section updated and moved to capabilities section

#### 3.1.2 FEMA Requirements

There are no CFR elements specific to this section.

### 3.2 Geographic Setting & Historical Context

Valley County is a rural county located in the west-central mountains of Idaho. The County is bounded by Idaho County on the north, Adams and Gem Counties on the west, Boise County on the south, and Custer and Lemhi Counties on the east. The County was established in February 1917 with Cascade as the county seat. The county contains the North Fork of the Payette River which extends thirty miles from Payette Lake south to Cascade. The Cascade Dam was completed on the Payette River in 1948; the Cascade Reservoir covers much of the north-eastern part of the County.

Valley County covers a huge area in central Idaho, from Long Valley and McCall east to the Middle Fork of the Salmon River. The South Fork of the Salmon divides the county in two, flowing north toward the main Salmon river, which is north across the border in Idaho County. The Payette River drains southward in the western part of the county.

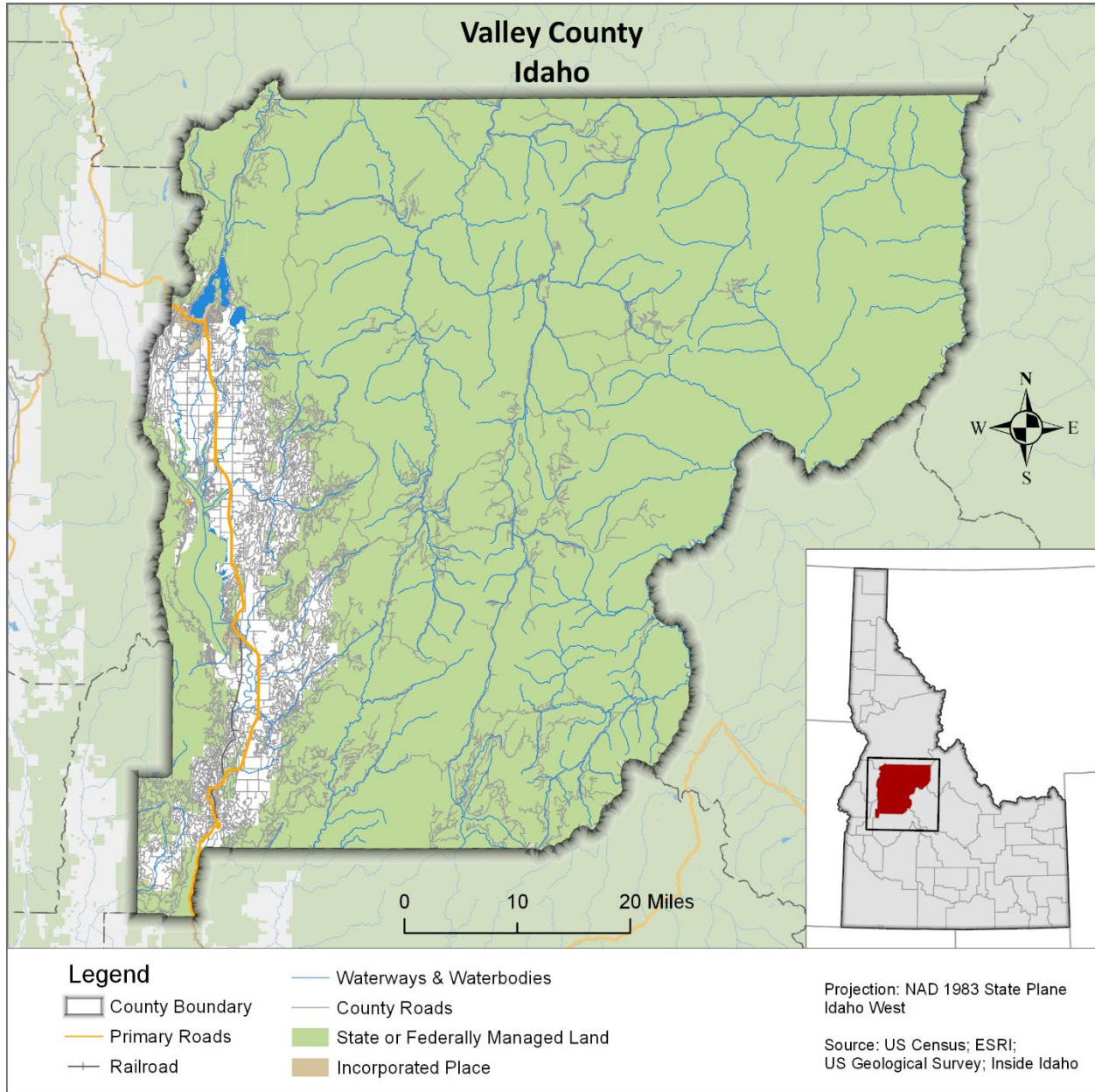
On the extreme northwest are accreted terrane rocks west of the Idaho suture zone. East of the suture are Cretaceous tonalities and orthogenesis of the Idaho batholith, which pass eastward to granodiorite that underlies the bulk of the county. A few inliers of Proterozoic and Paleozoic sedimentary rocks remain, as roof pendants to the batholith.

On the northeast is a down dropped block, the Thunder Mountain caldera, filled with Eocene Challis volcanic group rocks. North of this block of volcanic rocks is a northwest trending belt along Big Creek that exposes Mesoproterozoic Belt Supergroup strata and unique Neoproterozoic intrusive rocks.

Miocene and younger north-striking faults, part of the Basin and Range system, cut the batholith of the central part of the county, and form the Long Valley graben near Cascade Reservoir and Payette Lake.

Three major rock groups are exposed near McCall, Idaho. These include: The Cretaceous Idaho batholith, the Triassic-Jurassic metamorphosed island-arc sedimentary and volcanic rocks of the Seven Devils Group and the Miocene flood-basalt flows of the Columbia River Basalt Group.

Figure 3.1 Valley County, Idaho



### 3.3 Climate & Weather

Temperatures in Valley County normally reach into the 80's in the summer and drop as low as 0 in the winter. Temperatures are much cooler in the mountains. Precipitation in the mountains occurs year-round with a deep snowpack accumulating in the winter. Valley precipitation in the summer is seen with rain showers and thunderstorms.

The average snowfall in the Cascade area is approximately 12.5 inches from January through April and from October through December. Average precipitation in Cascade areas is 23.0 inches year-round. Humidity is higher in the morning hours than the afternoon hours in Valley County. McCall has snowy winters and mild summers. The average temperatures, precipitation, and snowfall for McCall, Idaho are listed in **Table 3.1**.

Table 3.1 McCall Idaho Climate Summary

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max Temp (F)	31	36	43	51	61	70	80	80	70	57	39	30	54
Average Min Temp (F)	13	13	20	27	34	40	43	41	34	27	21	13	27.2
Average Total Precip. (in)	2.91	2.4	2.48	2.01	2.52	2.24	0.83	0.83	1.22	1.81	3.15	3.35	25.75
Average Total Snowfall (in)	37	23	16	6	1	0	0	0	0	2	20	33	138

### 3.4 Demographics

The three incorporated cities within Valley County are Cascade, Donnelly, and McCall. McCall has the largest population of the three cities with a total population of 2,991. Cascade has a total population of 939, while Donnelly maintains a smaller total population of 152. The county’s population grew an astounding 32 percent from 7,651 in 2000 to 10,060 in 2008, as Tamarack Resort—featuring a ski area, a golf course, stores, and large housing developments—was built and the construction sector boomed. Then, Tamarack’s financial problems and the national recession led to a collapse of construction. The population fell to 9,515 by 2012. In the last few years, population again is growing and now exceeds the 2008 peak. Between 2006 and 2016, the county grew 11 percent from 9,480 to 10,496. **Table 2.2** summarizes some relevant demographic statistics for Valley County.

Recreation and tourism are important components of the local economy. At various times of the year the amount of people in the county increases due to tourists and residents of nearby counties seeking recreational opportunities.

Table 3.2 Selected Demographic Statistics (2018 Census)

Subject	Number	Percent
Total Population	10,401	100.00
Sex and Age		
Male	5,486	52.7
Female	4,915	47.3
Median Age (Years)	48.7	-
Relationship		
In Households	3,461	-
Households By Type		
Households	3,461	-
Family Households (Families)	2,370	-
With Own Children Under 18 Years	-	21.6



With People Over 60 Years	-	51.0
Husband-Wife Family	1,952	-
Average Household Size	2.95	-
Average Family Size	3.59	-

### 3.5 Economic Profile

Valley County’s economy once revolved around logging and mills, but over time those industries have declined. The county’s last mill, the Cascade Sawmill, closed in 2002. Today, about 40 individuals work in the logging industry; 25 years ago, about 100 did.

Today, tourism drives the economy. Leisure and hospitably sector provide 23 percent of total nonfarm employment. Tourism amenities—Payette Lake, rivers, Kelly’s Whitewater Park, ski areas, and fishing and hunting—attract retirees and other people to move into the area. The leisure and hospitality sectors employ about 1,700 people; 25 years ago, it employed 600.

Between 2000 and 2008, building at Tamarack Resort and throughout the county caused construction employment to double from 340 to 680. The financial crisis caused construction jobs to fall to 257 by 2013. In the last few years, construction activity has risen to about 370, near its 2000 level.

Valley County’s major employers include Cascade Hospital, Cascade School District, City of McCall, Franklin Building Supply, McCall-Donnelly School District, McCall Memorial Hospital, Ridley’s Family Market, Tamarack Resort, US Forest Service, and Valley County. Government employment—including schools and the US Forest Service (USFS)—is approximately 31 percent.

Valley County’s per capita income in 2016 was \$46,130, which was 117 percent of the state’s average and 94 percent of the national average. The relatively high number of retirees that moved into the county in recent years is a driver for the high per capita income despite the relatively low wages earned in the tourism sector.

### 3.6 Land Use & Development Trends

There are four basic designations for land use in Valley County, including Rural, Cities and City Areas of Impact, Villages (unincorporated communities), and Tourist Hubs.

The rural designation applies to all real property in the unincorporated areas of Valley County unless designated otherwise. Commercial and industrial uses are allowed in rural areas but are encouraged to locate in cities and city areas of impact, villages, and tourist hubs.

Cities and City Areas of Impact applies to all real property within incorporated city limits or within adopted areas of impact. Most commercial and industrial uses and multi-family residential uses may locate within this designation.

Villages applies to all real property within the small unincorporated communities known as Yellow Pine and Lake Fork. Commercial and industrial uses may be allowed in the villages in locations found to be compatible with nearby uses and with the existing village character.

Tourist Hubs applies to all real property for the tourist services located in the areas known as Tamarack Ski Resort, Smith’s Ferry, Clear Creek, West Mountain Lodge, Tamarack Falls Store, Big

Creek, Roseberry, Deadwood, Goldfork Hotsprings, Silver Creek Plunge, and Warm Lake. Expansion of services should be encouraged to locate in the tourist hubs.

According to the Valley County Comprehensive Plan, land use patterns have radically altered during the past decades away from the traditional agricultural-use pattern to one of recreation home and subdivision development. This rapidly evolving pattern, which places more demands on the environment and community and the former one, creates the need for a thoughtful response from the community to prevent future damages to the environment and community which attracted development here in the beginning. The plan also lists various objectives related to future development including, but not limited to:

- Discourage scattered, sprawling, haphazard suburban development by:
  - Controlling suburban development on open foothills.
  - Continuing to implement land use planning in order to avoid conflicts with noncompatible uses.
  - Encouraging development in timbered areas and in compact subdivisions thus facilitating better use of utilities, road maintenance, police, and fire protection.
- Emphasize natural beauty when designing projects, such as bridges, roadways, commercial buildings, subdivisions, and homes.
- Relate future county development to natural site advantages and limitations such as soil, slope, water table, view, flood hazards, and wind direction. Recognition of such factors will produce optimum development and prevent hazardous and costly conditions from developing.
- Local Officials Narrative on Development Trends for Valley County.
- Recent development includes Tamarack Ski Resort, new homes, roads, etc.
- Potential development includes several active conditional use permits.

Conditions that may affect the risks and vulnerabilities of Valley County include economic recession due to being reliant on the tourism industry. There is also a large number of second home ownership (78%). Therefore, making a large issue, the safety and security of those who are renting short-term rentals. Other issues include new roads to subdivisions and natural drainages being diverted or filled causing water issues.

### 3.7 Vegetative Cover

Vegetation in Valley County is a mix of both forestland and rangeland. The largest percentage of vegetation is forestland; including Douglas Fir, Lodgepole Pine, Subalpine species, Ponderosa Pine, Warm Mesic Shrub, Herbaceous Burn, Mountain Big Sagebrush, Basin and Wyoming Big Sagebrush, as well as various other forest species of trees and shrubs. Douglas-Fir is the dominant tree species with 23.2% of the trees being from the Douglas-Fir species.

Ample precipitation and soil conditions result in a relatively well vegetated ecosystem. As the areas of ample precipitation increase so does the abundance of conifer species, subalpine forest areas are seen in the highest elevations where precipitation and elevation provide more moisture during the growing season.

Much of Valley County’s vegetation and forestland is used in their local economy through timber production, livestock grazing, wildlife habitat, recreation, and watershed protection.

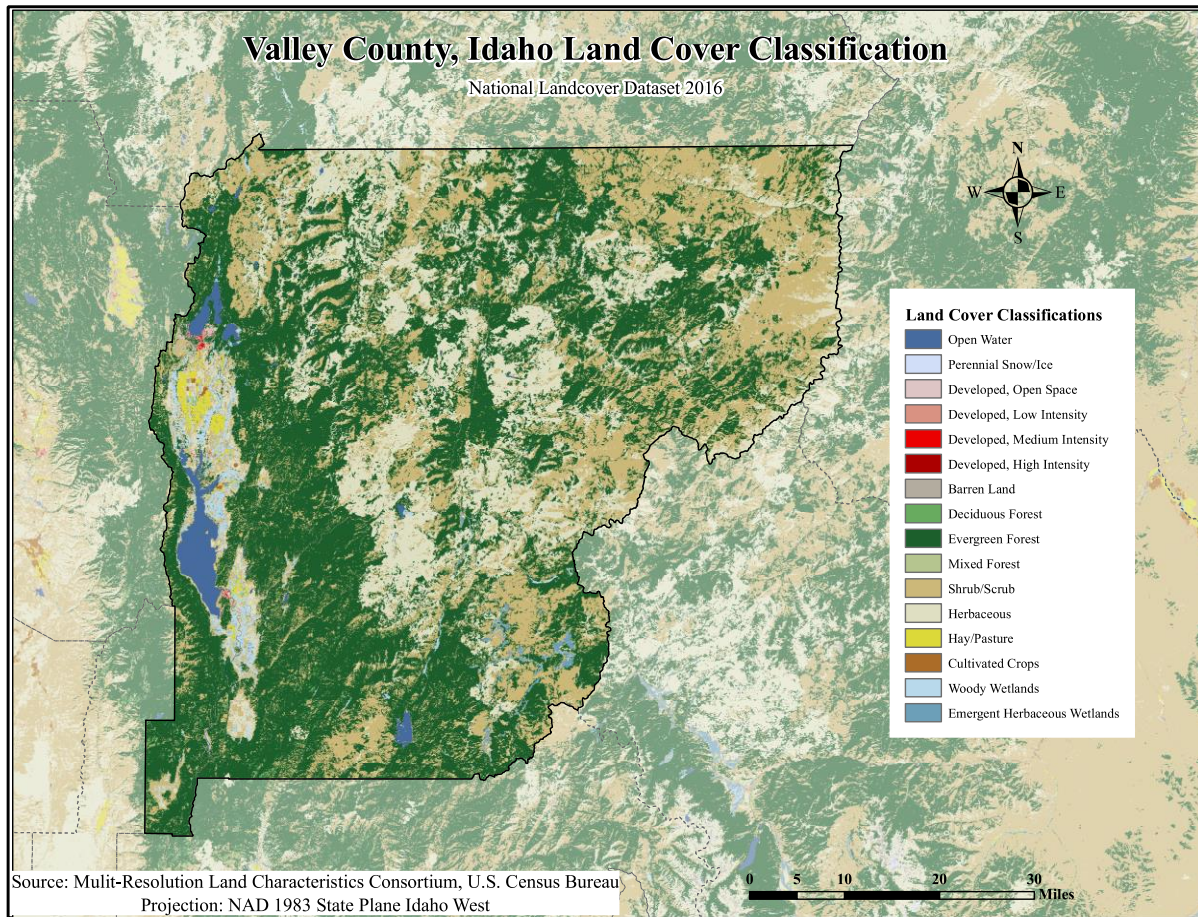
Table 3.3 Vegetative Cover Types

Cover Type	Acres	Percent of Area
Open Water	37219	1.55
Perennial Snow/Ice	21	>0.01
Developed, Open Space	7745	0.324
Developed, Low Intensity	2365	0.098
Developed, Medium Intensity	475	0.019
Developed, High Intensity	68	0.002
Barren Land	2669	0.111
Deciduous Forest	3986	0.166
Evergreen Forest	1118195	46.7
Mixed Forest	3041	0.127
Shrub/Scrub	701632	29.3
Herbaceous	452474	18.9
Hay/Pasture	10954	0.458
Cultivated Crops	1162	0.048
Woody Wetlands	35856	1.50

The County has a total area of 3,734 square miles of which about 1.5%, or 56 square miles, of the county is water. The federal government owns nearly 88% of the land in the County. Included in the federally owned and protected lands are three national forests; Boise National Forest, Payette National Forest, and Salmon National Forest. Recreation and tourism are important components of the local economy. At various times of the year the amount of people in the County increases due to tourists and residents of nearby counties seeking recreational opportunities.

The majority of private lands in the County are situated along Long Valley, Round Valley, and High Valley on the western edge of the County. Another smaller portion of private land is located in the back-country areas around Yellow Pine and the South Fork of the Salmon River.

Figure 3.2 Land Cover Classification from the 2016 National Land Cover Dataset



Elevations in Valley County range from 2,811 feet above sea level to 9,692 feet in the north central portion of the County. Ten percent of the population works in the agricultural, fishing, and hunting/forestry industry, with five percent working in wood products. Recreation, accommodations, and food services make up seven percent of the work force.

From the 1900's to 2001 logging was a major part of the economy. Numerous private mills sprang up in the 1900's. Boise Cascade Corporation's sawmill was the last to close; it ran its last log through the mill in October of 1977 and finally closed the mill in May of 2001.

In 1948 Cascade Dam was completed on the Payette River for retention of water for irrigation and flood control. The building of this dam covered some of the best farming and ranch land in the valley, thus reducing the amount of agricultural land available. The reservoir was renamed Lake Cascade and has become a renowned fishing and recreational lake in the County. The city of McCall, situated north of Lake Cascade along the Payette River, is now an all-season tourist destination for outdoor recreation. Especially popular is the Winter Carnival held in McCall each winter.

There are four basic designations for land use in Valley County, they are; rural, city/town, village (unincorporated communities), and tourist hubs.

### 3.8 Hydrology

Surface Water in Valley County consists of streams, rivers, and lakes. There are numerous lakes in Valley County, which are fed by the Payette River and the North and Middle Forks of the Salmon River, as well as various streams. Both the Middle Fork and the South Fork of the Salmon River also run through the County, as well as the Johnson River.

In the Cascade area the recharge of surface water is mainly through precipitation and spring snowmelt. Spring temperatures remain cool and this normally leads to small evapotranspiration rates which also lead to infiltrating waters that recharge the aquifers.

## 4 Risk Assessment

### 4.1 Overview

Risk assessments are key in aiding mitigation. A risk assessment identifies and characterizes hazards and the potential impacts to the county and its jurisdictions should a disaster occur. By undertaking a comprehensive risk assessment, local officials and decision makers can compare, evaluate, and prioritize mitigation actions to most effectively and efficiently reduce loss of life and property. The risk assessment also provides for more effective land use through zoning and planning, ultimately allowing for resilient growth across the jurisdictions.

Hazards that pose a risk to the county and its jurisdictions are many and varied, and this plan attempts to profile those that pose the most significant threat to the populations, infrastructure, and built environment. In Valley County, these hazards include: earthquakes, floods, severe weather, landslides, and wildfire. Note, however, that this is not an exhaustive list, and that additional hazard profiles should be drafted and appended to the plan when necessary.

Specifically, the Idaho Office of Emergency Management, together with FEMA Region 10 and the Idaho Geologic Survey, developed a special report for Valley County in December 2017 entitled *“A Risk Assessment Database Summary for Valley County and the Incorporated Cities of Cascade, Donnelly and McCall”*. This report is provided in Appendix G.

As part of this current planning process, a team from the University of Washington’s Institute of Hazard Mitigation Planning and Research (led by Dr. Himanshu Grover), computed probabilities of occurrence for risks from floods, earthquakes, volcanoes, tornado/wind risk and winter weather. These probabilities are discussed in the sections for each hazard and tables describing the risk assessment for the county and each participating jurisdiction are provided in Appendix F.

Additionally, as part of the public participation process described in Section 2, early in the planning process, the public was invited to fill out a survey to assess public perception of the risk for different hazards. Although the number of responses received was limited, the only two hazards that received more than one vote for “extremely threatening” were: extreme cold and winter storms. This is consistent with the quantitative analysis done by the University of Washington (UW) team, which placed all the county in the category of medium risk. The only hazard with a higher level of risk as calculated by the UW team, was earthquakes.

#### 4.1.2 Plan Requirements & Regulations

The 2019 plan update developed the risk assessment consistent with the process and requirements detailed by FEMA. This section satisfies the following requirements:

- 44 CFR §201.6(c) – The plan shall include the following:
  - (2) - A risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must

provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards. The risk assessment shall include:

- (i) – A description of the type, location, and extent of all-natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.
- (ii) – A description of the jurisdiction’s vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community. All plans approved after October 1, 2008 must also address NFIP insured structures that have been repetitively damaged by floods. The plan should describe vulnerability in terms of:
  - (A) The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas;
  - (B) An estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(ii)(A) this section and a description of the methodology used to prepare the estimate.
  - (C) Providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.
- (iii) – For multi-jurisdictional plans, the risk assessment section must assess each jurisdiction’s risks where they vary from the risks facing the entire planning area.

## 4.2 Earthquake

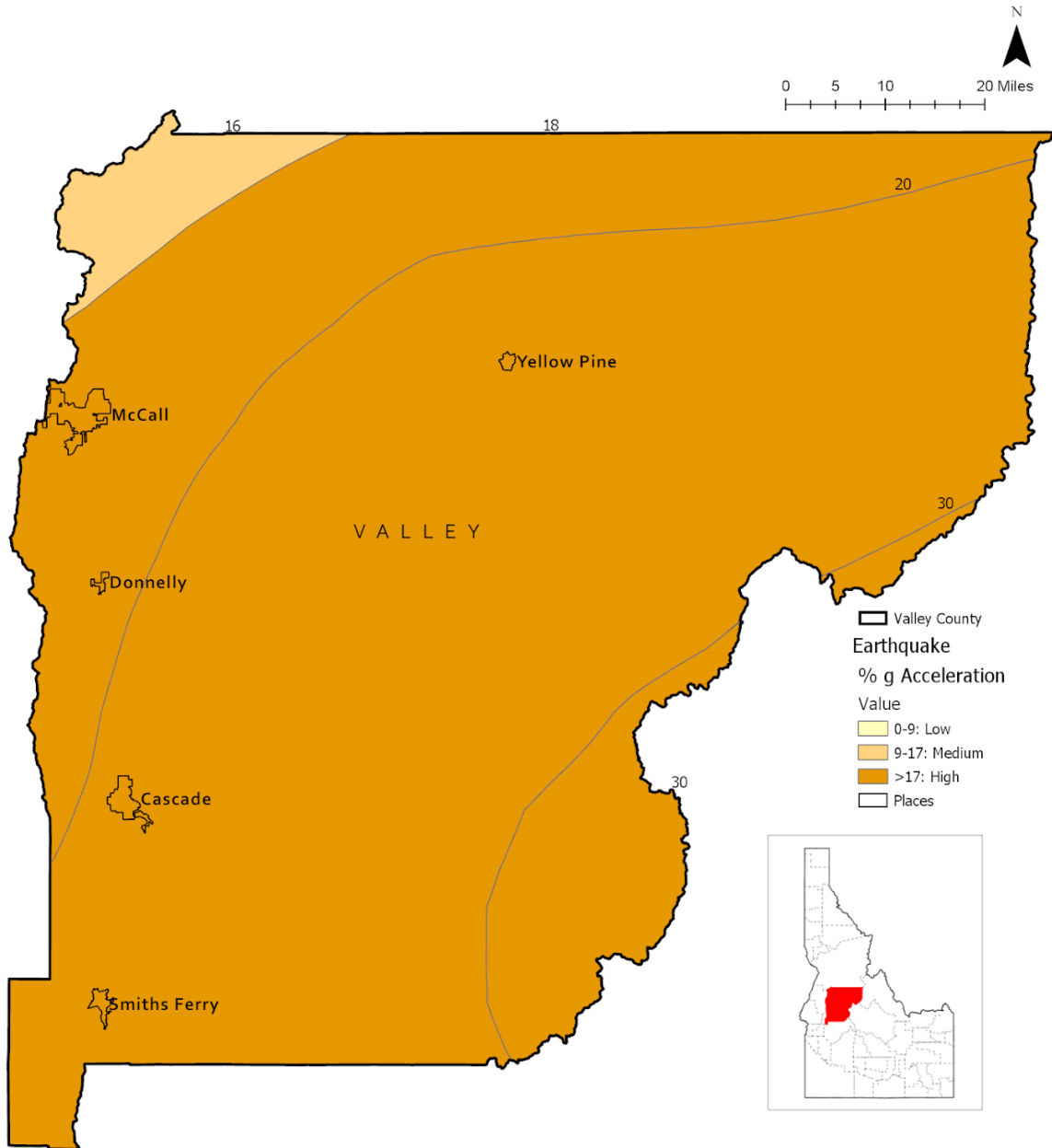
### 4.2.1 Hazard Vulnerability & Risk Summary

Using the estimates derived from FEMA’s HAZUS model, a standardized methodology for estimating potential losses from earthquakes, an estimated 58 buildings would be at least moderately damaged and the total economic loss estimated for an earthquake equivalent to a 100-year event would cost Valley County \$9,575,027. According to the 2018 Idaho State hazard Mitigation Plan (HMP), Valley County has 314 Critical facilities but less than 1% of those are in the Earthquake Area. The total number of building in 2018 in Valley County was 11,335 with a replacement cost value (RCV) of \$3,764,632,000.

The results shown in Table F.4 in Appendix F, and as mapped in the figure below, show nearly all of Valley County to be in the high risk category for earthquakes. The risk arises primarily from low to moderate magnitude regional events, as opposed to local geologic conditions.

Figure 4.1 Valley County Earthquake Hazard Map

## Earthquake Hazard



### 4.2.2 Hazard Description

An earthquake is the trembling of the ground resulting from the sudden shifting of rock beneath the earth's crust. Earthquakes are caused by a sudden slip on a fault, or the breaks and fractures where the earth's crust on either side has moved relative to the other. Such events cause waves of energy to radiate from the point of release, and cause the movement, shaking, and rolling felt during an earthquake event. The durations of earthquakes are normally limited to a few seconds



but can last for minutes in length. The resultant waves can travel hundreds to thousands of miles, causing damage to locations far from the epicenter.

Movements associated with earthquakes are classified as a foreshock, main shock, or aftershock. Foreshocks occur before the main shock, which is defined as the actual onset of the earthquake, while aftershocks occur after the onset of the main shock. Main shocks can occur immediately following foreshocks or can occur days to months after. Likewise, aftershocks can occur immediately following the main shock or much later. Aftershocks can be large, damaging events that further impact an area.

Earthquakes can be particularly damaging in Idaho. Geological and seismological studies show that earthquakes are likely in several active zones in Idaho and adjacent states. The state itself is ranked fifth in the nation for earthquake hazard, with only California, Nevada, Utah, and Alaska ranked higher. Idaho has experienced several damaging earthquakes over the past 100 years, with two notable events occurring in 1959 (Hebgen lake earthquake) and 1983 (Borah Peak earthquake). Both caused fatalities and millions in dollars in damage across the state.

Earthquakes can cause significant damage to structures, and can cause injury, loss of life, and impact the socioeconomic functioning of affected communities. The following influence damages associated with earthquakes:

- **Seismic Activity** – Varying between earthquake events, seismic activity ranges from localized, small points of energy release to widespread, large, and destructive releases. The length of earthquakes ranges from brief (a few seconds) to more than a minute. Earthquake epicenters can be shallow or deep, with depth influencing the type of seismic waves felt and their destructive potential.
- **Geology & Soil Types** – The underlying geology and soil type of an area influences the propagation of the seismic waves and their impact. Stable geologic types (such as solid bedrock) are less prone to destructive shaking than geologic types that are more unstable, such as fill soils. The siting of structures and communities strongly influences the nature and extent of earthquake damages.
- **Development & Development Quality** – The type and quality of development is vital in considering earthquake damages to a county or community. Isolated, small earthquakes in densely populated areas or areas with unreinforced masonry can be more devastating than a high-magnitude earthquake in a remote location or in an area with earthquake-appropriate building codes.
- **Time of Day** – Time of day determines the distribution of the population, and therefore the distribution of injuries and fatalities. Residences house more people in the evening and night, whereas business centers, schools, and other day-use locations house more people in the morning and afternoon. Day of the week is also important to consider, as people's work, travel, and activities vary between weekdays and weekends.

Secondary impacts, such as landslides, can also result from shaking. The following describes some of the types of damage stemming from an earthquake:

- **Shaking** – Ranging from minor to severe, minor shaking can cause objects to fall and other minimal damage, while severe shaking causing large structures to collapse and extensive damages. Unreinforced masonry and wood frame structures are most prone to earthquake damage. Non-structural falling hazards include loose or poorly secured objects, and include objects such as bookcases, wall hangings, and building facades. These objects can cause additional structural damage, and injury or fatality. Shaking can also rupture dams, destroy power and telephone lines, gas, sewer, or water mains, and can cause fires or other hazards that impair response and recovery efforts.
- **Ground Displacement** – The most dramatic visual evidence of an earthquake, ground displacement often occurs along a fault line. Ground can be thrust upward, subside, or move laterally given a severe enough earthquake. Damages from ground displacement is normally limited to utility lines and transportation infrastructure, though structures situated on fault lines can also be impacted.
- **Landslides & Avalanches** – Earthquakes often cause cascading hazards. Given conducive meteorological conditions (such as in-place snowpack or recent rain events), earthquakes can cause rock falls, landslides, or debris flows.
- **Liquefaction & Subsidence** – Liquefaction occurs when the energy released from an earthquake weakens the strength and stiffness of a soil, while subsidence is the caving in or sinking of an area. Fill and saturated soils are notably at risk of liquefaction, which can result in widespread structural damage. Liquefaction and subsidence can also impact surface and subsurface water flow, which can impair individual or community wells as well as cause flash flood-like water flow. These impacts can likewise impact septic systems, which create additional health risks.
- **Seiches** – Oscillating waves in an enclosed body of water caused by an earthquake are termed seiches. Although not commonly damaging given their rarity, seiches can resemble tsunami characteristics and destructive potential. Shoreline development along a lake in earthquake-prone areas are at risk of damage, as well as dams or flood mitigation structures such as levees. Seiches can also cause hydrothermal explosions.

Earthquakes are measured in both magnitude and intensity, where magnitude refers to the energy released at the source of the earthquake, and intensity refers to the strength of shaking produced by the earthquake at a discrete location. Where magnitude is derived from seismograph measurements, the effects on people, structure, and the environment determine intensity.

The most common measure of magnitude is the Richter scale. The Richter scale measures magnitude as a function of the amplitude of waves recorded by seismographs, with adjustments to account for variations in distances between recording stations and the epicenter. Magnitude is expressed in whole numbers and decimals, and is measured logarithmically; that is, each whole number step corresponds to the release of about 31 times more energy than the preceding whole number.

The most common measure of intensity is the Modified Mercalli Intensity (MMI) Scale. The scale, composed of increasing levels of intensity that range from imperceptible shaking to catastrophic destruction, is designated by Roman numerals. The scale does not have a mathematical basis; instead, it is an arbitrary ranking based on observed effects.

Table 4.1 Modified Mercalli Intensity Scale

Intensity	Description	Approximate Magnitude
I	Not felt except by a very few under especially favorable conditions.	1 to 2
II	Felt only by a few persons at rest, especially on upper floors of buildings.	2 to 3
III	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.	3 to 4
IV	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.	4
V	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.	4 to 5
VI	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.	5 to 6
VII	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.	6
VIII	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.	6 to 7
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.	7
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.	7 to 8
XI	Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly.	8

#### 4.2.3 Hazard Occurrence, Location & Extent

The severity or magnitude of an earthquake is measured on the Richter Scale (generally ranging from 2 to 10) with significant damage expected from seismic activity registering a 5.0 or higher. From 1900 to 1985 there were 18 earthquakes with a magnitude of 4.5 or higher. The 2018 Idaho State HMP identifies three of the larger earthquakes impacting Valley County as occurring in 1927, 1977, and 2005 (See **Table 3.2** for an expanded description).

Table 4.2 Notable Earthquake Occurrences, Valley County (per the 2018 Idaho State HMP)

Date	Magnitude	Description	Epicenter
1927	5	On Idaho-Oregon border, west of Cascade	Connor Creek

1977	4.5	Drywall, foundations cracked; ceiling beams separated	Cascade
2005	4	Between September and December 2005, thousands of small, very shallow earthquakes occurred	Alpha Swarm

#### 4.2.3.1 City of Cascade

City of Cascade is exposed to similar earthquake threat as the greater planning area.

#### 4.2.3.2 City of Donnelly

City of Donnelly is exposed to similar earthquake threat as the greater planning area.

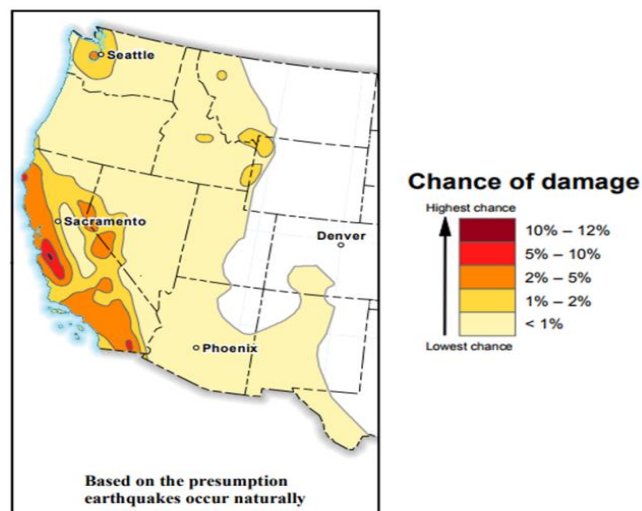
#### 4.2.3.3 City of McCall

City of McCall is exposed to similar earthquake threat as the greater planning area.

#### 4.2.4 Future Probability

Although predicting exact future occurrences of earthquakes is impossible, all of Valley County is characterized by a two percent chance over the next 50 years to exceed a VI on the MMI Scale (shown above). Should any of the participating jurisdictions experience shaking from an earthquake, it will likely be a result of a regional event. Furthermore, the USGS now produces one-year seismic hazard forecasts for both shaking intensity and damage.

Figure 4.2 USGS Seismic Forecast



### 4.3 Flood

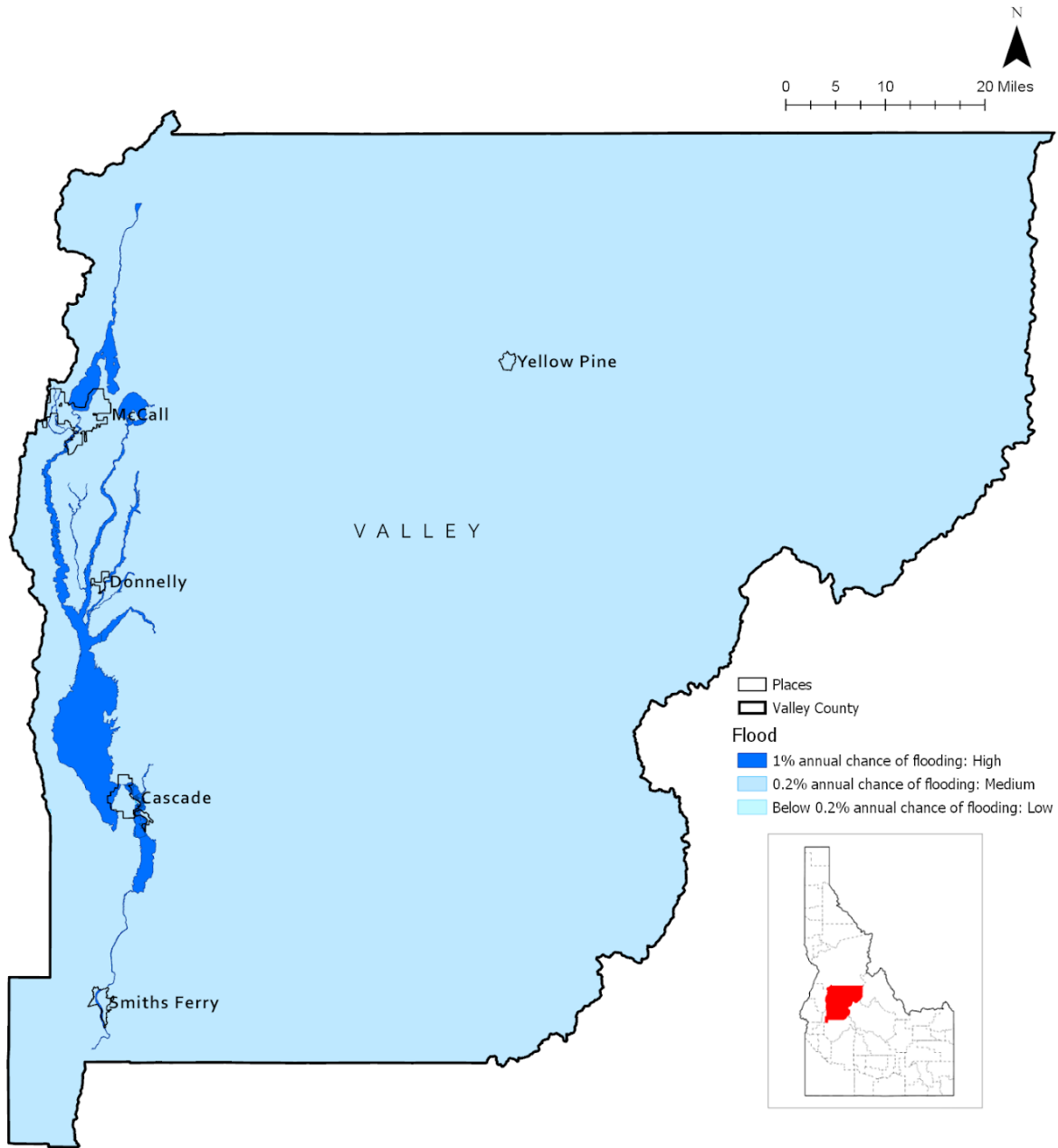
#### 4.3.1 Hazard Vulnerability & Risk Summary

Valley County’s population and structures are exposed to moderate to high flood risk. Flooding within Valley County occurs on an annual basis and is considered the “most serious and costly natural hazard” affecting the area. Some common causes of flooding include heavy rainfall, urban storm water overflow, rapid snowmelt, rising ground-water, riverine ice jams, fluctuating lake levels, and alluvial fan flooding. However, the three main flooding concerns for Valley County stem from flash flooding, river flooding, and dam failures. New FEMA FIRM maps were completed and adopted by the jurisdictions in 2019, but this was after the risk assessment for this report was completed. Thus, this risk assessment is based on the best available data just prior to that. Each jurisdiction has an updated floodplain ordinance, adopted just prior to or after the new FIRM maps that controls development within the floodplain zones delineated in the new FIRM maps.

Risk categories for flooding are shown for Valley County and participating jurisdictions in Table F.2 in Appendix F and are mapped below.

Figure 4.3 Valley County Flood Hazard Map

## Flood Hazard



### 4.3.2 Hazard Description

Thousands of floods occur each year, making it one of the most common hazards in all 50 states. Flooding is often a natural process where excess water overflows a waterway and inundates adjacent land (termed the floodplain). Flooding results from several different causes, including significant precipitation or snowmelt events, ice and debris jams on waterways, and structural

failures or breakages. An understanding of the role of atmospheric systems, the natural environment, and the built environment is key to understanding and mitigating flood-related losses.

Floods kill an average of 150 people per year nationwide, with most injuries and deaths occurring when people are swept away by flood currents. Floods also cause significant economic losses, with most damage resulting from the inundation of property by sediment-laden water. Faster moving floodwater can wash buildings off their foundations and sweep vehicles downstream. Pipelines, bridges, and other infrastructure are also at risk, and high water combined with flood debris can result in infrastructure damage and loss of use. Effects from flooding can also include floating fuel tanks, inundation of subdivisions, road washouts, and basement flooding—all of which can result in extensive damage. These damages predominately occur in the floodplain, which are those areas the excess water inundates.

Floodplains range from narrow and confined channels to wide and flat areas depending on the topographical features near the waterway. Floodplain characteristics contribute to the speed and characteristics of flooding. In narrow and confined channels, flooding is normally rapid but short duration, with deep and rapid floodwaters. In contrast, flooding can be relatively slow, shallow, and last for long periods in flat floodplains. Many factors influence the size of a flood, such as the size of the catchment area or watershed, topographic characteristics such as mountainous slopes and elevation changes, land-use characteristics or structural modifications, and the characteristics of meteorological events.

Natural flood events are often classified into the following:

- **Riverine Flood** – Perceived as the classic ‘flood’ event, riverine flooding occurs when the floodplain (the lowland areas adjacent to rivers and lakes) is inundated with water, usually caused by a weather system with prolonged or intense rainfall. Large-scale weather systems can cause both large and small rivers and streams to flood, notably if prolonged or intense rainfall is distributed over a wide area. Localized weather systems can also produce flooding, though normally such systems impact smaller rivers and streams. Riverine flooding can also result from snowmelt, which in turn can be a result of above-freezing temperatures and rain-on-snow events.
- **Flash Flood** – Characterized by a rapid rise in surface water levels, flash floods often have a high flow velocity and are capable of carrying large amounts of debris, such as trees and boulders, making flash flood events capable of extensive damage. Intense rainfall events in areas with steep watershed or stream gradients often results in flash floods, notable in the steep mountainous terrain found across Idaho. Dam or levee failure, wildfire, debris or ice jam breakage, and rapid snowmelt can cause flash floods, as all can release large volumes of stored water in a short period. Urban development also drives flash floods due to an increase of impervious surfaces, inadequate or failing drainage systems, and the channelization of rivers and streams.
- **Alluvial Fan Flood** – This type of flood occurs most commonly in the alluvial fans created by the meandering of streams and rivers and are the most prevalent flood type in arid

regions. Alluvial fans pose a significant flood risk due to active erosion, sedimentation, deposition, and unpredictability of flow paths. As the floodway fills with deposited sediment, the river or stream can quickly reach overbank flood stages and channelize a new floodway. Human activities often exacerbate flooding and erosion on alluvial fans by altering flow patterns and constructing impervious surfaces with the potential to carry high-velocity flows to lower portions of the fan.

- **Ice & Debris Jam Flood** – Similar in characteristics to riverine floods and flash floods, ice jams or debris can accumulate at obstruction points on a stream or river and restrict water flow upstream, causing the banks behind the obstruction to inundate. These jams can also break, resulting in a sudden large discharge of stored water to the downstream reaches. The formation of these jams is dependent on meteorological and other physical conditions, often occurring at natural channel constrictions and shallow points along the channel, where water is able to freeze. Human-built structures such as bridges can also act as obstruction points. Ice and debris jam flooding most often occurs in the fall, winter, and spring due to the formation and loss of ice. Flood damages from ice and debris jam breakages often exceed that caused by riverine flooding, as water elevations are higher and more unpredictable and floodwaters can carry debris.

Given the climatological characteristics of spring snowmelt, stream channels are defined by the long-term average spring high flow. Small flow peaks exceeding this level and the stream's occupation of the floodplain are relatively common events; however, above-average snowpack or above-average early-year temperatures regimes (e.g., prolonged warmth) can generate runoff volumes significantly greater than the conveyance ability of stream channels. Such events can result in widespread damages and losses, as snowmelt-driven floods tend to last for longer periods than other meteorologically-driven floods (from a period of several days to several weeks).

However, floods resulting from rainfall on frozen ground or rainfall associated with warm, regional frontal system that melts low and intermediate-altitude snow can be the most severe flood events. Rain-on-snow events quickly introduce large quantities of water into the stream channel system, overloading its capacity. These events can cause a swift rise in floodwaters, which can damage property and interrupt socioeconomic activity in downstream floodplains. In general, these flood events can be predicted 24 to 72 hours in advance.

The most commonly reported flood magnitude is the "base flood", or the flood magnitude with a one-percent chance of being equaled or exceeded in any given year (it was previously commonly referred to as the 100-year flood). It is important to note that this flood magnitude is statistically independent and can occur in consecutive years or within the same year. The floodplain pertaining to the base flood is often delineated and mapped to identify areas with significant flood risk; other statistical frequencies can also notate flood probabilities corresponding to a certain degree of risk (e.g., the 0.2 percent annual chance flood, also known as the 500-year flood). The base flood is often referred to as the regulatory flood, and the

corresponding floodplain is often termed the regulatory floodplain given the state and federal policies (e.g., the National Flood Insurance Program (NFIP) that regulate development within its area.

It is important to note the difference between the regulatory floodplain and the physical floodplain. The regulatory floodplain corresponds to an area delineated by FEMA where specific regulations apply. The regulatory floodplain is more limited than the physical floodplain, as the regulatory floodplain is delineated through surveys and modeling that cannot account for all waterways and waterbodies in the county. FEMA-mapped floodplain shows three regulatory flood zones:

- Zone X – Areas identified in a community’s Flood Insurance Study (FIS) as areas of moderate or minimal hazard from the principal source of flood in the area. However, buildings in these zones are at risk of flooding if severe, concentrated rainfall is coupled with inadequate local drainage systems. Flood insurance is available in participating communities but is not required by regulation in these zones.
- Zone A – Areas at risk to inundation by the one-percent annual chance flood event. Mandatory flood insurance purchase requirements apply. However, detailed hydraulic analyses have not been performed, and no base flood elevations (BFEs) or flood depths are shown.
- Zone AE – Areas subject to inundation by the one-percent annual chance flood event determined by detailed methods. Mandatory flood insurance purchase requirements apply. BFEs are shown within these zones.

#### 4.3.3 Hazard Occurrence, Location, Extent

Per the 2018 Idaho State HMP, participation in the NFIP is based on an agreement between a local government and the Federal Government that states if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to construction and other ground disturbing activities in mapped Special Flood Hazard Areas (SFHA), the Federal Government will make flood insurance available within the community as a financial protection against flood losses. While Valley County has only 2.0% of its total area (land and water) susceptible to a 1% rated flooding event, it does maintain more than 3% of its population within SFHA. Valley County also carries a state replacement cost value (RCV) of facilities within the SFHA at \$3,764,632,000.

Valley County had 48 National Flood Insurance Program (NFIP) policies with 1 claims and total loss payment of \$0. As defined by NFIP standards, Valley County had a total of 0 repetitive loss (RL) designated properties.

Table 4.3 NFIP Statistics for Valley County

Community Name	NFIP Status	CRS Status	Flood Claims	Claims Paid	Repetitive Loss Properties	Policies In-force	Insurance In-force Whole	Written Premium In-force
Valley County	Active	NA	1	0	0	48	-	-



Table 4.4 Historic Flood Occurrences

Date	Type	Declaration	Location	Casualties	Losses (Total for Idaho)
Jan. 1997	Flood	Northern and Central Floods (DR-1154)	Valley County, Statewide	-	\$19,404,105 in public assistance,
Apr. 14, 2002	Flash Flood	-	Valley & Boise Counties	-	-
Jun. 2010	Flood & Brown’s Pond Dam Failure	Northern State Flooding (DR-1927)	Valley and other counties	-	Preliminary damage estimates to roads over \$5 million
Mar. 2017	Severe weather, flood	Severe Storms, Flooding, Landslides and Mudslides (DR-4313)	Valley and other counties	-	\$10.5 million in damages

4.3.3.1 City of Cascade

City of Cascade is exposed to a higher flooding threat than the greater planning area.

4.3.3.2 City of Donnelly

City of Donnelly is exposed to a higher flooding threat than the greater planning area.

4.3.3.3 City of McCall

City of McCall is exposed to higher flooding threat than the greater planning area.

4.3.4 Future Probability

The probability of future floods across the multi-jurisdictional planning area is low to moderate. Low-magnitude flood events are expected to occur multiple times per year. The impacts of these events are slight and will likely amount to minor property damage or temporary traffic issues. This needs to be reevaluated periodically due to erratic national weather patterns taking place in the last five years likely due to climate change.

4.4 Severe Weather

4.4.1 Hazard Vulnerability & Risk Summary

The plan update did not identify any specific jurisdictions or special districts with significant deviation from the planning area’s overall risk to severe weather.

This section does not specifically address drought, for two reasons. First, Table G.12 in Appendix F indicates that the entire county and participating jurisdictions are in the low risk category for drought. Secondly, the hydrologic cycle of Valley County is driven by snowpack accrued in mountainous areas in the winter and released as runoff in the spring and summer. It is typical for the county and surrounding areas to experience long, hot summers with little rain. Lake Cascade is a large reservoir created in part to store snowmelt runoff. The agriculture that takes place in the lower valleys of the county is irrigated. Low snowpack years do cause some economic issues for ski resorts, but there are no actionable mitigation strategies other than diversifying the economic base of the county, which has been occurring in the last decades.

The primary impact of drought in Valley County is felt through the increased risk of wildfires. These risks are addressed in detail in the Community Wildfire Protection Plan, referenced in Section 4.6 below and included as an Appendix to this plan. For these reasons, the most recent IOEM Risk Report for Valley County (2017) and this plan do not deal explicitly with risk or mitigation actions for drought; rather, the dominant drought-related mitigation actions are listed under wildfire.

The information shown in Table F.8 (Tornado and Wind Risk) and Table F.10 (Winter Weather Risk), together with the maps below, show that the entirety of Valley County and its jurisdictions are in the low-med risk category for Tornados/Wind, the medium risk category for Winter Weather and the high risk category for Lightning.

Figure 4.4 Valley County Winter Weather Hazard Map

## Winter Weather Hazard



Figure 4.5 Valley County Lightning Hazard Map

## Lightning Hazard

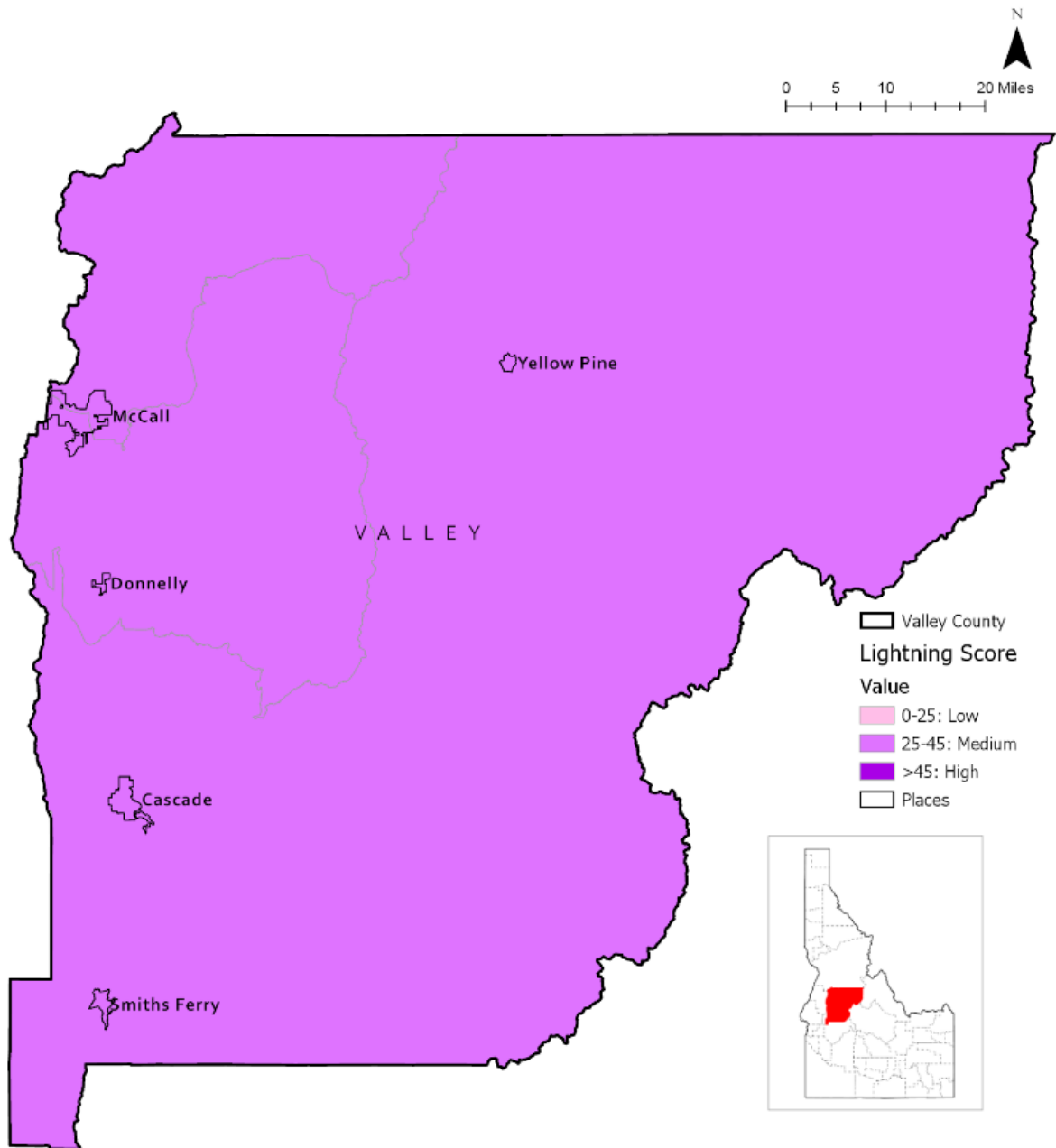
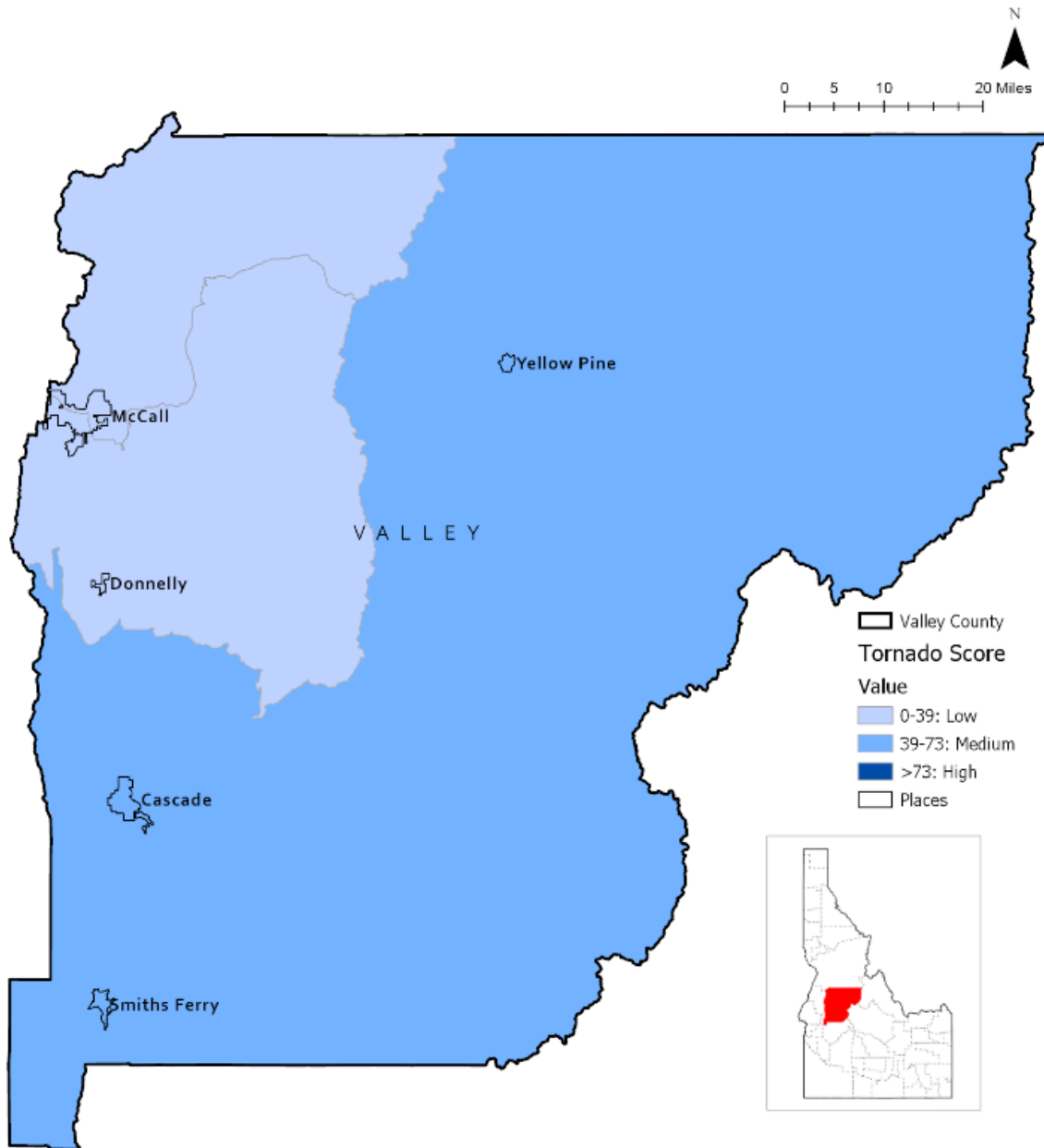


Figure 4.6 Valley County Tornado Hazard Map

## Tornado Hazard



### 4.4.2 Hazard Description

Severe weather is a serious hazard across Idaho, occurring with regular frequency and oftentimes damaging or disrupting intensity. Although the term “severe weather” is nebulous, the plan defines severe weather as any meteorological phenomenon with the potential to cause harm or injury to individuals, the built environment, or economic sectors. Such phenomena include (but are not limited to) high winds, lightning, tornados, winter storms, extreme heat and cold

temperatures, hydrometeorological events (e.g., hail and heavy rain), and thunderstorms. Often these events are coincidental, making delineation difficult.

- **Extreme Temperature** – Commonly referred to as a heat wave, extreme heat is a period of significant above-normal temperatures in a locality. Urban development amplifies extreme heat effects due the heat island effect. Extreme heat impacts human health through heat exhaustion, sunstroke, and heat cramps. Opposite extreme heat is extreme cold, which is classified as a period of significant below-normal temperatures in a locality. Winds of 10 mph or greater can amplify extreme cold impacts. Advisories are issued when wind chill temperatures reach -20 degrees F or lower with winds of 10 mph or higher for one hour or more. Similar to extreme heat, extreme cold is of greatest concern under persistence over an extended period. Extreme cold can be associated with the formation of ice and freezing which can result in flooding.
- **Hail** – Defined as precipitation in the form of irregular pellets or balls of ice more than 5 mm in diameter falling from a cumulonimbus cloud. Created by the vertical cycle of a wind and water in a storm mass (or cell), the ice accumulation that forms hail can reach sizes up to four inches in diameter (though hail of three-fourths of an inch or greater is sufficient to classify a thunderstorm as severe). Nationally, hail causes approximately \$1 billion in property and crop damage annually, as peak activity coincides with peak agricultural seasons. Severe hailstorms also cause considerable damage to buildings and automobiles, but rarely result in loss of life.
- **Lightning** – A product of the violent movement of air within a thunderstorm, the NWS defines lightning as “visible electrical discharge produced by a thunderstorm.” The discharge can occur within or between clouds, between clouds and air, between clouds and the earth’s surface, and between the earth’s surface and clouds. Lightning can be over five miles in length, generate temperatures above 50,000 degrees F, and carry 50,000 volts of electrical potential. Lightning strikes can be deadly, notably direct strikes where the person or structure is the direct path for lightning conduction to the ground. Side strikes are like a direct strike but diverts to an alternate path from the initial grounding point. Conducted strikes occur when the electrical current from the initial grounding point through a conductive material (such as electrical and electronic equipment). Lightning can also induce secondary discharges by altering the electrical potential between adjacent structures, through the earth’s surface, and in electrical equipment.
- **Straight-Line Wind** – A term used to distinguish between non-rotating and rotating winds (i.e., tornados). Generated by thunderstorms, straight-line winds reach speeds more than 100 miles per hour (mph). The NWS defines ‘high winds’ as sustained wind speeds of 40 mph or greater over a one-hour period or longer, or winds of 58 mph or greater over any period. Windstorms affect areas with significant tree stands, as well as areas with exposed property, major infrastructure, and aboveground utility lines. Of note are downbursts (also known as microbursts), which are a straight-line wind and are small areas of rapidly

descending rain and rain-cooled air beneath a thunderstorm with potential wind velocities equal to that of a strong tornado.

- **Thunderstorms** – Produced when unstable atmospheric conditions exist, and warm, moist air forced upward condenses to form cumulonimbus clouds. Most common in the spring and summer months during the afternoon and evening hours, thunderstorms persist an average of 10 to 20 minutes (though can persist much longer), during which they can produce heavy rain, hail, lightning, strong winds, and tornadoes. Thunderstorm types include dry thunderstorms, pulse severe thunderstorms, severe thunderstorms, and supercell thunderstorms. Dry thunderstorms are characterized by ‘dry lightning’, where lightning is observed but little to no precipitation reaches the earth’s surface due to evaporation into the dry air beneath the storm cell. Pulse severe thunderstorms are single-cell thunderstorms that produce brief periods of severe weather, such as a tornado, winds of at least 58 mph, and/or at least three-fourths of an inch hail size. A severe thunderstorm is one in which winds reach at least 40 mph and/or hail of at least one-half inch in size. Finally, a supercell thunderstorm is the most dangerous. These storms produce downbursts, large hail, and long-lived violent tornados.
- **Tornadoes** – The most concentrated and violent storms produced by the atmosphere. A tornado is a column (also known as a vortex) of air composed of rotating wind and strong vertical motion. Wind speeds within the vortex range between 40 and 300 mph, and the vortex itself can travel at speeds up to 70 mph over a distance between 10 and 200 miles (although shorter distances have been reported). Though damages are generally confined to a narrow path, tornadoes can devastate a large distance, and a single storm can produce multiple tornados.
- **Winter Storms** – Characterized by low/freezing temperatures, blowing snow, and ice. Like all severe storms, winter storms range in size, duration, and intensity, with potential to impact both large and localized areas. Severe winter storms deposit four or more inches of snow during a 12-hour period, or six inches during a 24-hour period. To be classified as a blizzard, winds must exceed 35 mph with temperatures below 20 degrees F. Particularly damaging are ice storms, characterized by cold rain freezing immediately on contact with a surface. In general, the principal hazards associated with severe winter storms are snow/ice accumulation, extreme cold, and reduction of visibility. Such storms can also disrupt transportation, power and communication lines, and halt everyday activities.

#### 4.4.3 Hazard Occurrence, Location & Extent

The overall 2018 Idaho State HMP designation for Valley County exposure to severe weather is high, due primarily to it being situated in winter storm patterns, the typical severity and duration of storms, proximity to higher elevations and the fact that it contains critical transportation corridors.

A search of the FEMA disaster data base of disaster declarations from 2013-2020 indicates that there were only two declared disasters that impacted Valley County in that time period. These

were both regional severe storms in the early and late springtime periods. They are described in the table below.

Table 4.5 Declared disasters impacting Valley County, Jan 2013- Sept 2020

<i>Dates</i>	<i>Disaster Declaration #</i>	<i>Nature of events</i>	<i>Damages</i>
Apr 7-13, 2019	DR-4443-ID	Five county area and Nez Perce Reservation impacted by severe storms, flooding, landslides and mudslides	\$3.1 M in damages to roads and bridges in 5 county area; no individual assistance requested.
Mar 6-28, 2017	DR-4313-ID	Nine county area in northern and central Idaho impacted by severe storms, flooding, landslides and mudslides due to frequent and intense rain events over a prolonged period	\$9.6M in damages to roads and bridges through the region; no individual assistance requested.

#### 4.4.3.1 City of Cascade

City of Cascade is exposed to similar severe weather threat as the greater planning area.

#### 4.4.3.2 City of Donnelly

City of Donnelly is exposed to similar severe weather as the greater planning area.

#### 4.4.3.2 City of McCall

City of McCall is exposed to similar severe weather the greater planning area.

#### 4.4.4 Future Probability

All of jurisdictions included in this plan are at risk to severe weather, and there is a certain high probability of continued severe weather occurrence within the planning area. Future climate change impacts could lead to more severe weather in the area which could force-multiply the primary hazards as well as potential secondary and tertiary ones. As mentioned in the flooding section of this document, increasing temperatures will lead to the melting of snow and ice in the mountain areas which will contribute to increased flooding disasters. According to the EPA, if there is less frequency of storms then drought conditions could occur which can lead to wildfires as well as failed agriculture.

### 4.5 Landslide

#### 4.5.1 Hazard Vulnerability & Risk Summary

Determining the probability of landslides is difficult because of the numerous factors that contribute to them. Landslides typically occur on slopes and in areas where they have taken place before. Idaho's geology, landscape, climate, soils, and other factors can be conducive to landslide activity and numerous small landslides occur each year in Idaho. The Idaho Geological Survey is engaged in a project to identify and map more than 3,000 landslides in the state since

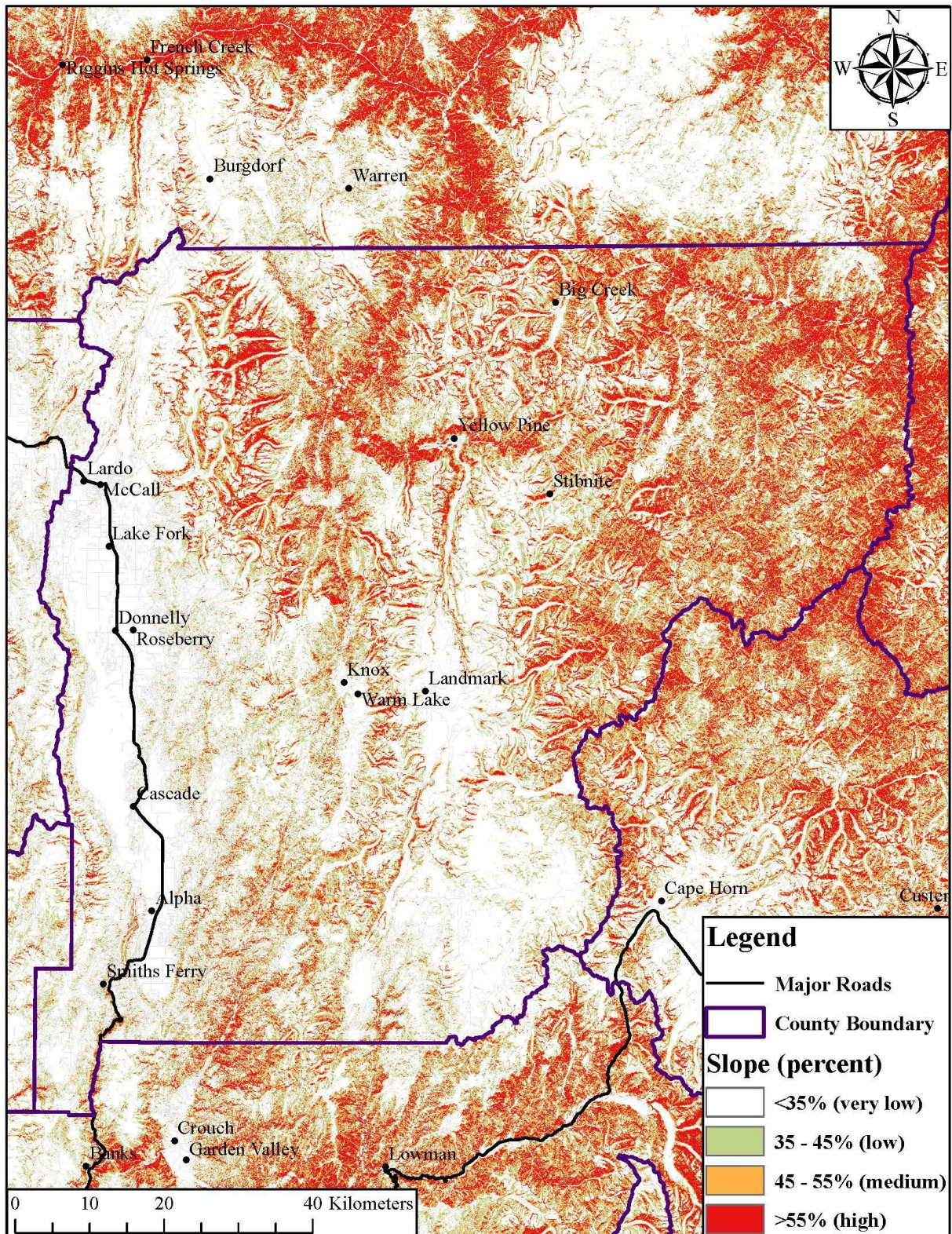


the time they began to record them, but results for this project were not available at the time of this report.

There is no widely accepted model for assessing exposure to landslides in this region, however, there is widespread agreement that it is a result of slope magnitude and stability of the geologic material. In lieu of comprehensive regional model, we use here some breakpoints related to slope values in order to map areas of Valley County susceptible to landslides based on slope values alone (see Figure 4.7 below). The risk categories are assigned based on observations in a report<sup>1</sup> by US Forest Service scientists who synthesized previous US Forest Service analyses of the occurrence of 860 landslides in the Clearwater-Nez Perce National Forest, which is a large national forest in Idaho that lies north and east of Valley county.

Although most of the population of Valley County lives in relatively flat areas of the county that are not prone to landslides, the County does contain mountainous areas with high risk of exposure to both landslides and snow avalanches. Transportation corridors in mountainous areas of nearby counties to the north and south of Valley County can also be vulnerable to landslides, impacting Valley County residents and the transportation of goods and services to Valley County.

Figure 4.7 Valley County Landslide Hazard Map



#### 4.5.2 Hazard Description

Defined by the U.S. Geological Survey as “movement of a mass of rock, debris, or earth down a slope, landslides are a type of mass wasting, which denotes any down-slope movement of soil and rock under the direct influence of gravity.” Landslides and mudslides are often triggered by preceding meteorological or human caused events such as heavy rainfall or excavation, mining and deforestation. Landslides occur on an annual basis in Valley County but are often in remote areas limiting the damage to service roads and utility infrastructure; however, these mass waste sites have a significant ecological impact and are estimated to cost tens of thousands of dollars in damages every year. Although gravity acting on an over-steepened slope is the primary reason for a landslide, there are other contributing factors:

- Erosion by rivers, glaciers, or ocean waves create over steepened slopes;
- Rock and soil slopes are weakened through saturation by snowmelt or heavy rains;
- Earthquakes create stresses that make weak slopes fail;
- Earthquakes of magnitude 4.0 and greater have been known to trigger landslides;
- Volcanic eruptions produce loose ash deposits, heavy rain, and debris flows;
- Excess weight from accumulation of rain or snow, stockpiling of rock or ore, from waste;
- Piles, or from man-made structures may stress weak slopes to failure and other structures; and
- Unsustainable deforestation or other loss of vegetative cover can contribute to landslides.

#### 4.5.3 Hazard Occurrence, Location & Extent

Table 4.6 Historic Landslide, State and Federal Declarations

Date	Type	Declaration	Location	Casualties	Losses
Nov. 1997	Landslide	Federal DR-1177	Valley and statewide	-	-
Mar. 6, 2017	Landslide, Severe Storms, Floods	State Disaster Proclamation ID-03-2017 and Federal DR-4313	Valley County and others	-	\$9 million +

##### 4.5.3.1 City of Cascade

City of Cascade is at low risk to landslide threat.

##### 4.5.3.2 City of Donnelly

City of Donnelly is at low risk to landslide threat.

##### 4.5.3.2 City of McCall

City of McCall is at low risk to landslide threat.

#### 4.5.4 Future Probability

Long-term climate change may result in an increase in precipitation and ground saturation and a rise in ground-water level, reducing the shear strength and increasing the weight of the soil. Additionally, erosion of streams and riverbanks as well as increases seismic activity could

exacerbate the occurrence of landslides. It is advisable to include a hazard overlay in future ordinance and zoning map updates that put forth specific development standards and criteria for more specific hazards like landslides as the factors that contribute to landslides are tending to increase and intensify in the next decade.

## 4.6 Wildfire

### 4.6.1 Hazard Vulnerability & Risk Summary

The 2018 Idaho State HMP notes that the hazard of wildfire is one that is significant not only in Idaho but in many areas of the United States. Wildfires can increase the probability of other natural disasters, specifically floods and mudflows. Valley County's overall population and structures are exposed to a range of low to high wildfire risk across the county.

With wildfires growing in severity and intensity throughout the west, this hazard is quickly becoming one of the costliest types of disasters in terms of damage to property and lives lost, reaching totals that had previously only been seen from damage associated with flooding, severe storms, and tropical storms. According to the National Interagency Fire Center, a clear trend has emerged over the last 30 years showing an increase in the number of wildfires, number of acres burned, and costs associated with fire suppression all rising, and in some categories, exponentially. Historically, wildfires were an integral part of regrowth and rejuvenation in western forest but due to encroachment from expanding urban areas, deforestation, a warming climate, and a shift in federal policy to extinguish every fire, the risks presented from modern-day wildfires is much greater than it has ever been.

- **Wildland-Urban Interface:** Within Valley County, over 1.2 million acres have burned from 1948 to 2000 with the average number of fires per year around 200 and the average fire size around 800 acres, according to the 2004 Valley County Wildland-Urban Interface Wildfire Mitigation Plan. The distinction of a wildfire being categorized as a natural occurrence instead of a natural disaster lies in the areas where wildland vegetation meets urban developments, known as the wildland-urban interface. In addition to the homes and other structures that lie inside the wildland-urban interface, several utilities have placed their infrastructure within these boundaries, subsequently increasing the risk and cost associated with damage from wildfires.

In a search of federal disaster declarations from 2013 to August 2020, Valley County has not been impacted by any disaster declarations involving wildfire.

### 4.6.2 Wildfire Annex

The county and participating jurisdictions have been very proactive in doing regular updates to their 2004 Wildland Urban Interface plan. Appendix H includes the 2019 update to the 2004 plan, as well as a draft version of the 2020 update. These updates include significant detail in the assessment of risk and vulnerability for every subdivision within the county.

Additionally, the *2018 Wildfire Protection Plan: An Action Plan for Wildfire Mitigation*, provided in Appendix I of this plan, goes into significant detail on mitigation strategies for wildfire. The detail in the combination of these reports acts as an annex to the Valley County Multi-Jurisdictional Hazard Mitigation Plan.

## 5 Mitigation Strategy

### 5.1 Overview

The mitigation strategy is a comprehensive effort to reduce or eliminate potential losses from the hazards identified by the planning team and detailed in the risk assessment (see *Risk Assessment*). The goals, objectives, and actions that comprise the strategy were carried forward from the former plan (with revisions where necessary), with additional goals, objectives, and actions developed through collaborative effort across the county that included its communities, various State and Federal agencies, and through public engagement.

#### 5.1.1 Summary of Revisions

Major revisions include:

- Moved the mitigation strategy forward in the plan organization;
- Reviewed and revised goals and objectives;
- Reviewed and revised all mitigation actions to reflect progress to date;
- Updated all mitigation actions with estimated cost, timelines, and potential funding avenues where possible/applicable;
- Removed mitigation actions no longer relevant or necessary; and
- Included additional mitigation actions.

#### 5.1.2 FEMA Requirements

This section adheres to and fulfills the following regulations:

- 44 CFR §201.6(c)(3) – A mitigation strategy that provides the jurisdiction’s blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs, and resources, and its ability to expand on and improve these existing tools.
  - (i) – A description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.
  - (ii) – A section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with emphasis on new and existing buildings and infrastructure. All plans approved by FEMA after October 1,2008, must also address the jurisdiction’s participation in the NFIP, and continued compliance with NFIP requirements, as appropriate.
  - (iii) – An action plan, describing how the action identified in paragraph (c)(3)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to cost benefit review of the proposed projects and their associated costs.
  - (iv) – For multijurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.

## 5.2 Mitigation Strategy Goals

Goals and objectives frame the mitigation strategy and are put forward and adopted by the planning team at the outset of the planning process. The 2020 plan update revisited and revised the goals included in the former plan to enhance their cogency and applicability to Valley County and its incorporated cities. The following seven goals guided the planning process and update of the mitigation strategy:

1. To minimize the area of land damaged and losses experienced because of hazards where these risks threaten communities in the county.
2. Prioritize the protection of people, structures, infrastructure, and unique ecosystems that contribute to our way of life and the sustainability of the local and regional economy.
3. Educate communities about the unique opportunities and challenges of pre- and post-disaster hazard mitigation, disaster response, and post-disaster recovery.
4. Establish mitigation priorities and develop mitigation strategies.
5. Strategically locate, plan, coordinate, and implement hazard reduction projects with emphasis on those projects to reduce exposure to multiple hazards.
6. Continue and enhance cooperation, coordination, and capabilities of agencies and partners within the county.
7. Ensure long-term viability of the county to support successful mitigation, response, and recovery through human resources.

### 5.2.1 Process for developing mitigation actions

Based on the risk assessment and concerns of the planning committee, the mitigation actions from the prior plan were each evaluated and updated. New mitigation actions were developed using the template provided in Appendix C and prioritized using the Staplee method using worksheets provided in Appendix D.

Special note: In addition to the mitigation actions listed in the sub-sections below for Valley County and participating cities, there are detailed mitigation actions for each jurisdiction for Wildfire listed in the special report entitled *“2018 Wildfire Protection Plan: An Action Plan for Wildfire Mitigation”*, provided as Appendix I of this plan.

## 5.3 Valley County Mitigation Actions & Implementation Plan

The following table shows the specific actions and projects to be implemented over the plan’s five-year life.

*Table 5.1 Valley County Mitigation Actions and Implementation Plan*

Valley County Action Items		Goals	Lead Agency, Partners	Estimated Timeline, Cost, & Resources	2019 Status & Priority	Mitigation Type
<b>General</b>						
1	Update Emergency Operating Plan	5, 6, 7	Valley County EM and Stakeholder agencies	<b>Timeline:</b> 1 year from completion of AHMP <b>Cost:</b> \$5,000 <b>Funding and/or Resources:</b> IOEM Planning section, SHSP	New <b>Priority:</b> High	Planning & Regulatory  Preparedness & Response
2	Provide signage for all hazards	5, 6	Valley County EM and Stakeholder agencies	<b>Timeline:</b> 2023 <b>Cost:</b> \$5,000 <b>Funding and/or Resources:</b> SHSP	New <b>Priority:</b> Med	Preparedness & Response
3	Survey and review current housing requirements for employee housing	7	Valley County Economic committee, Infrastructure agencies, County and City officials	<b>Timeline:</b> 2025 <b>Cost:</b> Unknown <b>Funding and/or Resources:</b> Unknown	New <b>Priority:</b> High	Planning & Regulatory  Preparedness & Response
4	Survey and review staffing shortages throughout county employment	3, 5, 6, 7	Valley County Economic committee, Infrastructure agencies, County and City officials	<b>Timeline:</b> 2025 <b>Cost:</b> Unknown <b>Funding and/or Resources:</b> Unknown	New <b>Priority:</b> High	Planning & Regulatory  Preparedness & Response
5	Survey and review staffing shortages throughout first responder employment	7	Emergency Manager, First responder agencies, County and City officials	<b>Timeline:</b> 2025 <b>Cost:</b> Unknown <b>Funding and/or Resources:</b> Unknown	New <b>Priority:</b> High	Preparedness & Response
<b>Extended Power Outage</b>						
6	Lease or build fiber optic connection out of valley and within County to augment existing WAN services provided by third parties.	5, 6, 7	Valley County, private sector partners include Frontier Communications, CenturyLink and Spark.	<b>Timeline:</b> 5 years <b>Cost:</b> Not provided <b>Funding and/or Resources:</b> Grant opportunities exist for critical infrastructure or possible levy option or fee and bond	New <b>Priority:</b> Moderate	
<b>Severe Weather</b>						
7	Inspect Schools and other public buildings for snow-load resistance and retrofit when necessary.	Plan Goals: 1, 2, 4 Specific: Valley County will develop methods to mitigate the losses due to severe weather in the County.	Valley County Building Department, Emergency Management	<b>Timeline:</b> 2022 <b>Cost:</b> \$35,000 <b>Funding and/or Resources:</b> Apply for a HMA Planning Grant to update the seismic section of the AHMP.	Ongoing <b>Priority:</b> Low	Structure & Infrastructure
8	Surfacing of secondary access routes for all weather use.	Plan Goals: 1, 2, 4 Specific: Valley County will develop methods to mitigate the losses due to severe weather in the County.	Valley County Road & Bridge, Emergency Management	<b>Timeline:</b> 2025 <b>Cost:</b> \$750,000 <b>Funding and/or Resources:</b> Apply for LHTAC Funding	Ongoing <b>Priority:</b> Moderate	Structure & Infrastructure



9	Work with Adams County to establish an east/west emergency evacuation route.	Plan Goals: 2, 6, 7 Specific: Valley County will develop methods to mitigate the losses due to severe weather in the County.	Emergency Management	<b>Timeline:</b> 2030 <b>Cost:</b> \$1 Million <b>Funding and/or Resources:</b> Apply for Federal Highway Funding	Ongoing <b>Priority:</b> Low	Planning & Regulatory  Preparedness & Response
10	Install Portable Digital Message Boards at the entrance to the canyons to warn of hazardous conditions.	Plan Goals: 1, 2, 3 Specific: Valley County will develop methods to mitigate the losses due to severe weather in the County.	Emergency Management, Valley County Sheriff's Office	<b>Timeline:</b> 2025 <b>Cost:</b> \$50,000 <b>Funding and/or Resources:</b> Apply for LHTAC funding	Ongoing <b>Priority:</b> Moderate	Preparedness & Response
11	Keep Smith Ferry Road open during the winter	Plan Goals: 2, 5, 6 Specific: Valley County will develop methods to mitigate the losses due to severe weather in the County.	Valley County Road Department	<b>Timeline:</b> Unknown <b>Cost:</b> Unknown <b>Funding and/or Resources:</b>	Ongoing <b>Priority:</b> Low	Preparedness & Response
<b>Flooding</b>						
12	Continue participation in the NFIP	Plan Goals: 1, 2, 3, 6 Specific: Valley County will continue to participate in the National Flood Insurance Program and develop actions that will reduce the damage to County infrastructure due to flash and stream flooding.	Valley County Floodplain Administrator	<b>Timeline:</b> <b>Cost:</b> No cost <b>Funding and/or Resources:</b>	Ongoing <b>Priority:</b> High	Planning & Regulatory
13	Identify all surface water drainage obstructions (bridges/culverts) in the county.	Plan Goals: 1, 2, 4, 5 Specific: Valley County will develop actions that will reduce the damage to County infrastructure due to flash and stream flooding.	Valley County Road & Bridge Department	<b>Timeline:</b> 2025 <b>Cost:</b> \$50,000 <b>Funding and/or Resources:</b> Apply for LHTAC funds to update Transportation Plan and create inventory	Ongoing <b>Priority:</b> High	Structure & Infrastructure
14	Establish a Flood Hazard Advisory Commission.	Plan Goals: 1, 2, 3, 4, 6 Specific: Valley County will continue to participate in the National Flood Insurance Program and develop actions that will reduce the damage to County infrastructure due to flash and stream flooding.	Valley County Commissioners	<b>Timeline:</b> 2023 <b>Cost:</b> No cost <b>Funding and/or Resources:</b> Unknown	Ongoing <b>Priority:</b> Low	Planning & Regulatory
15	Encourage development of acquisition and management strategies of floodplains for flood mitigation, water quality, and wildlife.	Plan Goals: 1, 2, 5, 6 Specific: Valley County will continue to participate in the National Flood Insurance Program and develop actions that will reduce the damage to	Valley County Commissioners	<b>Timeline:</b> 2023 <b>Cost:</b> \$50,000 <b>Funding and/or Resources:</b> Unknown	Ongoing, continuing effort, did update Comp Plan. Adopted new Flood Maps (FIRM) and ordinances. <b>Priority:</b> Low	Planning & Regulatory

County infrastructure due to flash and stream flooding.

**Geological**

16	Collect a HAZUS GIS inventory of critical facilities and assess the seismic risk to those facilities with HAZUS	Plan Goal: 1, 2, 4 Specific: Valley County will reduce potential damage to County infrastructure and structures through implementation of earthquake mitigation techniques.	Emergency Management, Valley County Building Department	<b>Timeline:</b> Unknown <b>Cost:</b> \$10,000 <b>Funding and/or Resources:</b> Apply for CI/KR Funds under the SHSP Investment	Ongoing <b>Priority:</b> High	Structure & Infrastructure
17	Inspect buildings, particularly unreinforced masonry, for earthquake stability.	Plan Goals: 1, 2, 4 Valley County will reduce potential damage to County infrastructure and structures through implementation of earthquake mitigation techniques.	Valley County Building Department	<b>Timeline:</b> Unknown <b>Cost:</b> No cost <b>Funding and/or Resources:</b> HMA Funding	Ongoing <b>Priority:</b> High	Structure & Infrastructure  Planning & Regulatory
18	Assess seismic hazard on public buildings.	Plan goals: 1, 2, 4 Specific: Valley County will reduce potential damage to County infrastructure and structures through implementation of earthquake mitigation techniques.	Valley County Building Department	<b>Timeline:</b> 2022 <b>Cost:</b> \$35,000 <b>Funding and/or Resources:</b> HMA Planning Grant to redo Seismic Section of AHMP	Ongoing <b>Priority:</b> High	Structure & Infrastructure
19	Establish a special task force to help schools reduce structural and nonstructural seismic hazards.	Plan goals: 1, 2, 4, 6 Specific: Valley County will reduce potential damage to County infrastructure and structures through implementation of earthquake mitigation techniques.	Valley County Commissioners, School districts	<b>Timeline:</b> Unknown <b>Cost:</b> No cost <b>Funding and/or Resources:</b> Unknown	Ongoing <b>Priority:</b> Low	Structure & Infrastructure  Planning & Regulatory
20	Inspect schools and other public buildings for snow-load resistance and retrofit necessary.	Plan Goals: 1, 2, 6 Specific: Valley County will reduce potential damage to County infrastructure and structures through implementation of earthquake mitigation techniques.	Valley County Commissioners	<b>Timeline:</b> 2023 <b>Cost:</b> \$50,000 <b>Funding and/or Resources:</b> HMA Funding	Ongoing <b>Priority:</b> Low	Planning & Regulatory  Structure & Infrastructure
21	Develop a landslide hazard identification study.	Plan Goals: 1, 2, 4, 6 Specific: Valley County will reduce the potential damage to property from landslides by adopting the International Building Code and standards for	Emergency Management, Idaho Geologic Survey, IOEM	<b>Timeline:</b> Unknown <b>Cost:</b> \$10,000 <b>Funding and/or Resources:</b> grant and/or work with universities or Idaho Geologic Survey	Ongoing. Adopted IRC and IBC at county levels. Need to do an assessment of landslide areas. <b>Priority:</b> High	Planning & Regulatory

		construction in landslide prone areas.				
22	Standardize practices for excavation, construction, and grading of roads.	Plan Goals: 1, 2, 7 Specific: Valley County will reduce the potential damage to property from landslides by adopting the International Building Code and standards for construction in landslide prone areas.	Valley County Commissioners, Valley Road Department	<b>Timeline:</b> Unknown <b>Cost:</b> \$25,000 <b>Funding and/or Resources:</b> Unknown	Ongoing <b>Priority:</b> High	Planning & Regulatory
<b>Biological</b>						
23	Maintain an active “fight the bite” public education program.	Plan Goal: 1, 2, 3 Specific: Valley County will seek to reduce the exposure of humans and animals to the West Nile Virus.	Health District and Emergency Services	<b>Timeline:</b> Continuous <b>Cost:</b> No Cost <b>Funding and/or Resources:</b> Unknown	Ongoing <b>Priority:</b> Low	Education Programs
<b>Structure Fire</b>						
24	Encouraging private property owners to install and maintain smoke detectors on all levels of residences and to place detectors in all bedrooms.	Plan Goals: 1, 2, 3 Specific: Valley County will seek to reduce losses from structure fires through working with private property owners.	Fire Districts	<b>Timeline:</b> 2023 <b>Cost:</b> \$65,000 <b>Funding and/or Resources:</b> Assistance to Fire Fighters Safety Grant Program	Ongoing <b>Priority:</b> High	Education Programs
25	Improve water supplies for fire-fighting countywide using existing bodies of water.	Plan Goals: 1, 2, 7 Specific Goal: Valley County will seek to reduce losses from structure fires through working with private property owners.	Fire Districts	<b>Timeline:</b> 2021 <b>Cost:</b> \$50,000 <b>Funding and/or Resources:</b> Unknown	Ongoing <b>Priority:</b> High	Structure & Infrastructure
<b>Hazardous Material</b>						
26	Conduct a hazardous materials flow study for US and State Highways running through the County.	Plan Goals: 1, 2, 4, 6 Specific: Valley County will seek to reduce losses from structure fires through working with private property owners.	Valley County Emergency Services, IOEM	<b>Timeline:</b> Unknown <b>Cost:</b> \$8,000 <b>Funding and/or Resources:</b> HMEP grant and conduct study	Ongoing <b>Priority:</b> Low	Preparedness & Response
<b>Riot/Demonstrations/Civil Disorder</b>						
27	Conduct a public education program to assist the citizens of the County in recognizing and reporting civil disobedience events to county law enforcement.	Plan Goals: 2, 3 Specific: Valley County will develop methods to identify and report civil disobedience activities.	Valley County Sheriff’s Office	<b>Timeline:</b> 2024 <b>Cost:</b> \$10,000 <b>Funding and/or Resources:</b> law enforcement grants to conduct public education.	Ongoing <b>Priority:</b> Moderate	Education Programs
<b>Terrorism</b>						

28	Conduct a County Terrorism Assessment.	Plan Goals: 1, 2, 4 Specific: Valley County will identify measures to protect critical County infrastructure and facilities from potential terror incidents.	Emergency Services	<b>Timeline:</b> 2020 <b>Cost:</b> \$100,000 <b>Funding and/or Resources:</b> Unknown	Ongoing <b>Priority:</b> High	Planning & Regulatory
<b>Other</b>						
29	Develop a program to promote “72 Hour” personal emergency kits.	Plan Goals: 2, 3 Specific: Improve safety in Valley County	Emergency Management	<b>Timeline:</b> Unknown <b>Cost:</b> No Cost <b>Funding and/or Resources:</b> Unknown	Ongoing <b>Priority:</b> Low	Preparedness & Response  Education
30	Develop a County GIS department.	Plan Goals: 1, 4, 6, 7 Specific: Improve safety in Valley County	Valley County Commissioners	<b>Timeline:</b> Continuous <b>Cost:</b> \$75,000/year <b>Funding and/or Resources:</b> Unknown	Ongoing <b>Priority:</b> High	Planning & Regulatory  Preparedness & Response
31	Develop a NIMS Resource Typing list of all emergency equipment and vehicles	Plan Goals: 7 Specific: Improve safety in Valley County	Emergency Management	<b>Timeline:</b> Unknown <b>Cost:</b> \$2,500 <b>Funding and/or Resources:</b> Include as a NIMS investment task in SHSP grant	Ongoing <b>Priority:</b> Low	Preparedness & Response
32	Formalize agreements to utilize County-owned snow groomers for rescue operations.	Plan Goals: 2, 5, 6, 7 Specific: Improve safety in Valley County	Valley County Commissioners	<b>Timeline:</b> 2020 <b>Cost:</b> No Cost <b>Funding and/or Resources:</b> Unknown	Ongoing <b>Priority:</b> High	Planning & Regulatory

### 5.3.1 Changes in Mitigation Priorities

The economy and development pattern of Valley County is dominated by tourism and is thus impacted by the general state of the U.S. economy. They have a high degree of second home ownership (78%). There have been a number of developments in Valley County since the last plan was approved, but most of these were already in the approval or beginning stages of development during the last planning process, and were thus already considered in the last plan. Completion of these slowed down for some years due to the 2008 recession, and they were completed later than originally expected. Thus priorities for prior mitigation strategies have not shifted significantly since the last plan. However, with the economy picking up again, there is pressure on home prices that makes affordable housing for county workers a challenge, which makes it difficult to recruit and retain experienced employees. These types of factors influenced the development of several new mitigation priorities. Priorities for new mitigation actions were set using the Staplee method. Worksheets used for this are included in Appendix D.

### 5.3.2 Completed & Removed Mitigation Actions & Projects

The following actions were completed prior to the 2020 update or were removed from the strategy during the 2020 update:

*Table 5.2 Valley County Completed and Removed Mitigation Actions*

<b>Mitigation Action</b>	<b>Status</b>	<b>Notes</b>
Request local power companies to take a more active role in connecting electrical power grids in the county.	Completed	The West Central Mountains Electrical Plan was developed by Idaho Power 2013/2014. Work with Idaho Power to Implement.

### 5.4 City of Cascade Mitigation Actions & Implementation Plan

The following table shows the specific actions and projects to be implemented over the plan's five-year life.

Table 5.3 City of Cascade Mitigation Actions and Implementation Plan

City of Cascade Action Item	Goals	Lead Agency, Partners	Estimated Timeline, Cost, & Resources	2019 Status & Priority	Mitigation Type	
<b>Flood</b>						
1	Seek Floodplain Manager Certification (prior); for this plan update this action is changed to <u>providing continuing education for floodplain manager</u>	7	City Building Inspector	<b>Timeline:</b> 2011 – Complete CFM Requirements <b>Cost:</b> No cost <b>Funding and/or Resources:</b> Unknown	Changed action from Floodplain Manager Certification to Floodplain Manager (City Building Inspector) Continuing Education	Planning & Regulatory
2	Review and Redraw City Floodplain Maps as necessary	1, 2, 7	Building Inspector	<b>Timeline:</b> Ongoing <b>Cost:</b> \$50,000 <b>Funding and/or Resources:</b> 2012– Seek Funding from FEMA 2013 – Conduct Mapping	Ongoing	Planning & Regulatory
3	Establish a Flood Hazard Advisory Commission	1, 2, 3, 7	City Council	<b>Timeline:</b> 2021 <b>Cost:</b> No cost <b>Funding and/or Resources:</b> 2011 – Establish Commission	Ongoing	Planning & Regulatory
4	Increase the size of the culverts under Highway 55	1, 2, 6	ITD and City Council	<b>Timeline:</b> 2022 <b>Cost:</b> \$500,000 <b>Funding and/or Resources:</b> 2011 – Apply for HMA Funding 2012 – Replace Culverts	Ongoing	Structure & Infrastructure
5	Protect the City Sewer System or remove from floodplain	1, 2, 5	Wastewater Department	<b>Timeline:</b> Recurring & Ongoing <b>Cost:</b> \$1M <b>Funding and/or Resources:</b> 2011- Conduct Flood Analysis	Ongoing	Structure & Infrastructure
6	Stormwater infrastructure needs to be improved to prevent current and future flooding. Cascade’s existing stormwater system is disconnected and undersized with the final outlet elevation too high. Deficiencies cause routine flooding in areas such as Pine St, Idaho St, Mill St, and SH-55.	1, 2, 5, 7	Cascade Public Works and DEQ	<b>Timeline:</b> TBD <b>Cost:</b> \$611,250 <b>Funding and/or Resources:</b> City’s General Fund, Highway User Fees, Hazard Mitigation Grant Programs, DEQ Grant Programs	New, HIGH priority	Structure & Infrastructure
<b>Severe Weather</b>						
7	Identify Evacuation Shelters Equip with Emergency Generators.	2, 7	Mayor/Public Works	<b>Timeline:</b> 2021 <b>Cost:</b> - \$10,000.00 <b>Funding and/or Resources:</b> Unknown	Ongoing	Preparedness & Response

City of Cascade Action Item	Goals	Lead Agency, Partners	Estimated Timeline, Cost, & Resources	2019 Status & Priority	Mitigation Type	
8	Request local power companies to take a more active role in connecting electrical power grids in the county.	2, 6	City Council	<b>Timeline:</b> 2021 <b>Cost:</b> Unknown <b>Funding and/or Resources:</b> with Power Company	Ongoing	Structure & Infrastructure
<b>Geological</b>						
9	Inspect buildings, Particularly unreinforced masonry, for earthquake stability.	1, 2, 3	Building Departments	<b>Timeline:</b> Ongoing <b>Cost:</b> No cost <b>Funding and/or Resources:</b> 2011 – Conduct Surveys 2012 – Select Projects and Engineer Solutions 2013 – Apply for HMA Funding	Ongoing	Planning & Regulatory
10	Assess seismic hazard on public buildings	1, 2, 4	Building Departments	<b>Timeline:</b> Ongoing <b>Cost:</b> \$35,000 <b>Funding and/or Resources:</b> 2011 – Apply for HMA funds to conduct Seismic Update of AHMP	Ongoing	Planning & Regulatory

#### 5.4.1 Changes in Mitigation Priorities

The City of Cascade did not experience significant development since the last plan and thus priorities for the implementation of prior mitigation strategies were not changed. However, due to recent economic conditions, there has been significant movement recently on purchases of undeveloped land and there is a large new development currently in the application process. This was considered by both the City of Cascade and the Cascade Rural Fire District in their consideration of mitigation strategies. There was one new mitigation action (stormwater infrastructure) identified at this time and was prioritized as a high, immediate priority for the City.

#### 5.4.2 Completed & Remove Mitigation Actions & Projects

The following actions were completed prior to the 2020 update or were removed from the strategy during the 2020 update:

*Table 5.4 City of Cascade Completed or Removed Mitigation Actions*

<b>Mitigation Action</b>	<b>Status</b>	<b>Notes</b>
Inspect schools and other public buildings for snow-load resistance and retrofit necessary	Completed	N/A

#### 5.5 City of Donnelly Mitigation Actions & Implementation Plan

The following table shows the specific actions and projects to be implemented over the plan's five-year life.



Table 5.5 City of Donnelly Mitigation Actions and Implementation Plan

City of Donnelly Action Item	Goals	Lead Agency, Partners	Estimated Timeline, Cost, & Resources	2019 Status & Priority	Mitigation Type	
<b>Flood</b>						
1	Implement Recommendation of US Army Corps of Engineers project 2-04-081 report for the City of Donnelly.	1, 2	City Council	<b>Timeline:</b> Ongoing <b>Cost:</b> Unknown <b>Funding and/or Resources:</b> 2011 – Begin Planning with Power Company	Ongoing Successful in continuing to participate in the NFIP <b>Priority:</b> High	Planning & Regulatory Structure & Infrastructure
2	Establish a Flood Hazard Advisory Commission	1, 2, 4	City Council	<b>Timeline:</b> Ongoing <b>Cost:</b> No cost <b>Funding and/or Resources:</b> 2011 – Establish Commission	Ongoing <b>Priority:</b> Low	Planning & Regulatory
<b>Severe Weather</b>						
3	Identify Evacuation Shelters Equip with Emergency Generators.	1, 2, 6	Mayor/Public Works	<b>Timeline:</b> 2022 <b>Cost:</b> Not provided <b>Funding and/or Resources:</b> 2011 – Work with City Council, Church, and Volunteer organizations	Ongoing <b>Priority:</b> High	Structure & Infrastructure Response and Preparedness
4	Inspect schools and other public buildings for snow-load resistance and retrofit necessary.	1, 2, 6	Building Departments, School District	<b>Timeline:</b> 2022 <b>Cost:</b> Not provided <b>Funding and/or Resources:</b> 2011 – Conduct Analysis	Ongoing City does not have a building inspector. Valley County does our inspections as needed <b>Priority:</b> Low	Structure & Infrastructure
5	Request local power companies to take a more active role in connecting electrical power grids in the county.	1, 2, 5, 6	City Council, utility providers	<b>Timeline:</b> Not provided <b>Cost:</b> Not provided <b>Funding and/or Resources:</b> 2011 – Begin Planning with Power Company	Completed West Central Mountains Electrical Plan was developed by Idaho Power 2013/2014. Work with Idaho Power to implement <b>Priority:</b> Low	Structure & Infrastructure
<b>Geological</b>						
6	Inspect buildings, Particularly unreinforced masonry, for earthquake stability.	1, 2, 4	Building Departments	<b>Timeline:</b> 2022 <b>Cost:</b> No Cost <b>Funding and/or Resources:</b> 2011 – Conduct Surveys 2012 – Select Projects and Engineer Solutions 2013 – Apply for HMA Funding	Ongoing City does not have a building inspector. Valley County does our inspections as needed <b>Priority:</b> High	Structure & Infrastructure

City of Donnelly Action Item	Goals	Lead Agency, Partners	Estimated Timeline, Cost, & Resources	2019 Status & Priority	Mitigation Type
7 Harden and Protect the City Water Supply	1, 2, 5	City Water Department	<b>Timeline:</b> 2022 <b>Cost:</b> \$3 million <b>Funding and/or Resources:</b> 2010 – Apply for HMA and DEQ Funding	Ongoing/Partially Completed New Well Supply Installed Working on other water infrastructure <b>Priority:</b> Low	Structure & Infrastructure

### 5.5.1 Changes in Mitigation Priorities

The City of Donnelly has not been impacted by the growth and development seen in some other areas of Valley County. Overall mitigation priorities did not change for the City of Donnelly between plan updates and there were no new actions added.

### 5.5.2 Completed & Removed Mitigation Actions & Projects

The following actions were completed prior to the 2020 update or were removed from the strategy during the 2020 update:

*Table 5.6 City of Donnelly Completed or Removed Mitigation Actions*

<b>Mitigation Action</b>	<b>Status</b>	<b>Notes</b>
Review and Redraw City Floodplain Maps as necessary	Completed	N/A

### 5.6 City of McCall Mitigation Actions & Implementation Plan

The following table shows the specific actions and projects to be implemented over the plan's five-year life.

Table 5.7 City of McCall Mitigation Actions and Implementation Plan

City of McCall Action Item	Goals	Lead Agency, Partners	Estimated Timeline, Cost, & Resources	2019 Status & Priority	Mitigation Type	
<b>General</b>						
1	Implement City of McCall 2017 Area Comprehensive Plan Policy E 9.1: Create an All Hazards Mitigation Master Plan for City of McCall to assess and address hazard risks.	4, 6, 7	City of McCall, McCall Fire, McCall Donnelly School District, Homeowner Associations, Community & Civic Groups, Payette Lakes Recreational Water and Sewer District	<b>Timeline:</b> 2024 <b>Cost:</b> \$75,000-100,000 <b>Funding and/or Resources:</b> City General Funds, Hazard Mitigation Planning Grants, Water User Rates, Sewer User Rates, other partner contributions	New <b>Priority:</b> Moderate	Planning & Regulatory
<b>Geological</b>						
2	Inspect buildings, particularly unreinforced masonry, for earthquake stability.	1, 2, 4	Building Departments	<b>Timeline:</b> 2023 <b>Cost:</b> \$5,000 <b>Funding and/or Resources:</b> Search for grants & State and County aid	Ongoing	Structure & Infrastructure
<b>Wildland Fire</b>						
3	Upgrade water storage and fire flow capacity in City of McCall water pressure zones with deficiencies as identified in the 2017 City of McCall Water Master Plan	1, 2, 5	City of McCall Public Works	<b>Timeline:</b> 2028 <b>Cost:</b> \$9.9 Million <b>Funding and/or Resources:</b> Water User Rates, Municipal Bond, Hazard Mitigation Grants	New <b>Priority:</b> High	Structure & Infrastructure
<b>Severe Weather</b>						
4	Identify Evacuation Shelters Equip with Emergency Generators.	1, 2, 5	Mayor and Public Works	<b>Timeline:</b> Unknown <b>Cost:</b> No Cost <b>Funding and/or Resources:</b> Work with City Council, Church, and volunteer organizations.	Ongoing	Preparedness & Response
5	Inspect schools and other public buildings for snow-load resistance and retrofit necessary.	1, 2, 4, 6	Building Departments, School Districts	<b>Timeline:</b> Unknown <b>Cost:</b> No Cost <b>Funding and/or Resources:</b> Capital Improvement Plan (CIP) 2019-2023. School District Buildings are the responsibility of the district.	A licensed structural engineer is needed to perform these evaluations and make retrofit recommendations. No budget was allocated to procure the engineering analysis and no budget was allocated to make the retrofits during the 2011-2016 plan period.	Structure & Infrastructure

City of McCall Action Item	Goals	Lead Agency, Partners	Estimated Timeline, Cost, & Resources	2019 Status & Priority	Mitigation Type
6 Request local power companies to take a more active role in connecting electrical power grids in the county.	1, 2, 6, 7	City Council	<b>Timeline:</b> Unknown <b>Cost:</b> No Cost <b>Funding and/or Resources:</b> Begin Planning with Power Company	Ongoing	Preparedness & Response

### 5.6.1 Changes in Mitigation Priorities

Similarly to the county as a whole, dependence on the tourism tends to drive development in the City of McCall. Thus in the early years since the last plan there was a not a lot of new activity but in recent years there as been an increase in housing construction, but no new major shifts in land use or zoning. In coming years there is the potential for redevelopment of downtown area streets. Priorities for prior mitigation strategies did not change, however, two new mitigation actions were added. The priorities for these were assigned based on the Staplee method, with documentation of this provided in Appendix D.

### 5.6.2 Completed & Removed Mitigation Actions & Projects

The following actions were completed prior to the 2020 update or were removed from the strategy during the 2020 update:

*Table 5.8 City of McCall Completed or Removed Mitigation Actions*

Mitigation Action	Status	Notes
Review and Redraw City Floodplain Maps as necessary.	Completed	Completed in 2013
Establish a Flood Hazard Advisory Commission	Modified since last plan and Removed	Commission was not established. Instead City Council adopted Flood Control Regulations Ordinance 822 effective 3-16-2006 including adoption of 1989 FIRM maps. City Engineer is certified Flood Plain Manager and reviews all development applications.

### 5.7 Special Districts Mitigation Actions & Implementation Plan

The following two tables show the specific actions and projects to be implemented over the plan’s five-year life.

Table 5.9 Payette Lakes Recreation Water and Sewer District Mitigation Actions and Implementation Plan

Payette Lakes Recreation Water and Sewer District Action Items		Goals	Lead Agency, Partners	Estimated Timeline, Cost, & Resources	2019 Status & Priority	Mitigation Type
<b>Severe Weather</b>						
1	Identify Evacuation Shelters Equip with Emergency Generators.	1, 2, 7	Superintendent	<b>Timeline:</b> Unknown <b>Cost:</b> No Cost <b>Funding and/or Resources:</b> HMA Funding	Ongoing <b>Priority:</b> High	Preparedness & Response
<b>Geological</b>						
2	Inspect water and sewer systems for Earthquake stability	1, 2, 4	Superintendent	<b>Timeline:</b> Unknown <b>Cost:</b> No Cost <b>Funding and/or Resources:</b> HMA Funding	Ongoing	Structure & Infrastructure

Table 5.10 Rural Fire Districts Mitigation Actions and Implementation Plan

Cascade Rural Fire Districts Action Items		Goals	Lead Agency, Partners	Estimated Timeline, Cost, & Resources	2019 Status & Priority	Mitigation Type
<b>Fire</b>						
1	Backup generator for Cascade Rural Fire District. At this time there is no backup power established for this fire station.	1, 2, 7	Cascade Rural Fire District and Valley County	<b>Timeline:</b> 2020-2025 <b>Cost:</b> \$50,000 <b>Funding and/or Resources:</b> Unknown	New <b>Priority:</b> High	Preparedness & Response

### 5.7.1 Changes in Mitigation Priorities

Mitigation priorities as detailed in the strategy did not change between plan updates for Payette Lakes Recreation Water and Sewer District and no new mitigation actions were identified. The Cascade Fire District identified a new urgent need, which is a high priority even under current conditions but will be an even more pressing need if potential developments currently being discussed are approved and built out.

### 5.7.2 Completed & Removed Mitigation Actions & Projects

These districts did not complete or remove any mitigation actions from the strategy prior to or during the 2020 update.



## 6 Mitigation Capabilities

### 6.1 Overview

Each community has a unique set of capabilities, including authorities, policies, programs, staff, funding, and other resources available to accomplish mitigation and reduce long-term vulnerability. This section provides an overview of these capabilities, including state and federal capabilities that local officials can utilize in hazard mitigation, the National Flood Insurance Program (NFIP), and an assessment of the capability types completed by adopting jurisdictions.

#### 6.1.1 Summary of Revisions

The 2020 update incorporated this section into the plan. Points to note:

- Incorporated the former plan's Floodplain Management section;
- Reviewed and summarized relevant Federal and State planning and regulatory capabilities related to hazard mitigation;
- Reviewed and summarized county and community planning and regulatory capabilities related to hazard mitigation; and
- Incorporated National Flood Insurance Program (NFIP) statistics and discussion on jurisdictional participation and future compliance.

#### 6.1.2 FEMA Requirements

This section adheres to and fulfills the following regulations:

- 44 CFR §201.6(c)(3) – A mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs, and resources, and its ability to expand on and improve these existing tools.
  - (ii) – A section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with emphasis on new and existing buildings and infrastructure. All plans approved by FEMA after October 1, 2008, must also address the jurisdiction's participation in the NFIP, and continued compliance with NFIP requirements, as appropriate.
- 44 CFR §201.6(c)(4) – The plan shall include the following:
  - (ii) – A process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, where appropriate.

### 6.2 Federal & State Planning & Regulatory Capabilities

Several federal and state regulations and policies form the legal framework in which to implement Valley County's hazard mitigation goals and projects. A list of these regulations and plans is presented below:

- Federal
  - The Federal Civil Defense Act of 1950

- Public Law 96-342, The Improved Civil Defense Act of 1980
- Public Law 91-606, Disaster Relief Act
- Public Law 93-288, The Robert T. Stafford Disaster Relief Act of 1974.
- Presidential Executive Order 11988, Floodplain Management
- Presidential Executive Order 11990, Protection of Wetlands
- State of Idaho
  - Idaho State Code Title 46, Chapter 10, State Disaster Preparedness Act
  - Idaho State Code Title 39, Chapter 71, Hazardous Material Act
  - Idaho State Title 67, Chapter 65, Local Land Use Planning Act
  - Governor’s Executive Order 2000-04, April 20, 2000

### 6.3 National Flood Insurance Program Compliance

In response to the mounting flood-related losses over the 20th century, Congress passed the National Flood Insurance Act (NFIA) of 1968, which instituted the National Flood Insurance Program (NFIP). The NFIP made flood insurance available to communities that agreed to adopt and enforce floodplain management ordinances, through hazard mitigation planning, site design and construction standards, and land use regulations. The NFIP was based on the premise that populations located in flood-prone areas should bear a substantial portion of the cost to reduce community vulnerability and bear responsibility for a majority of losses should the community experience a flood disaster. The table below details the county’s and cities’ participation and policies in the NFIP.

Table 6.1 NFIP Statistics<sup>1</sup>

Community Name	NFIP Status	CRS Status	Flood Claims	Claims Paid	Repetitive Loss Properties	Policies In-force	Insurance In-force Whole	Written Premium In-force
Valley County	Yes	10	-	-	-	30	\$8,882,000.00	-
City of Cascade	Yes	-	-	-	-	1	\$522,100.00	-
City of Donnelly	Yes	-	-	-	-	-	-	-
City of McCall	Yes	-	-	-	-	3	\$980,000.00	-

The county and each of the jurisdictions participating in the plan, which include all incorporated cities in Valley County, all participate in the NFIP. They have also all adopted new FEMA floodplain maps in 2019. Valley County is in full compliance with the requirements of the NFIP. They strive to remain in compliance with the NFIP and promote continuing education for the Planning and Zoning Administrator who is also a Certified Floodplain Manager. In the City of Cascade, the City’s Building Inspector serves as the Flood Plain Administrator and continues to work with FEMA and the Idaho Department of Water Resources to stay current on regulations required by NFIP Program and attends regular continuing education. The City of Donnelly is

<sup>1</sup> Policy & Claim Statistics for Flood Insurance, Policy Statistics as of 05/31/2019, retrieved from <https://www.fema.gov/policy-claim-statistics-flood-insurance>

also in full compliance with the requirements of the NFIP. The City of McCall maintains compliance by maintaining current FEMA floodplain maps and ensuring that their zoning ordinance contains floodplain regulations required by the NFIP. The city engineer is a certified floodplain manager and our city planner attends annual floodplain training conferences. All development applications are reviewed for compliance with the floodplain overlay zone.

Concurrently with the development of this HMP, Valley County and several of its jurisdictions were also active in adopting new floodplain ordinances. Valley County also adopted the model Flood Damage Prevention Ordinance as recommended by the State of Idaho on January 7, 2019. In addition to this ordinance, Valley County has more restrictive standards that prevents most development, fill, and excavation in a floodplain. The City of Cascade adopted its Flood Damage Prevention Regulations Ordinance in January, 2019, Ordinance No. 696. The City of Donnelly also adopted the Flood Damage Prevention Ordinance as recommended by the State of Idaho on December 17, 2018.

#### 6.4 Valley County Mitigation Capabilities Assessment

The tables below were compiled from a questionnaire completed by county representatives. The tables detail the county’s mitigation-related capabilities that reduce hazard impacts or that can be used to implement hazard mitigation activities.

Table 6.2 Valley County Mitigation-Related Capabilities

Capability/Resource		Synopsis
<b>Administrative &amp; Technical</b>		
Administration	Dedicated planning commission	Yes. The Valley County P&Z Commission (P&Z) has five members appointed by the Board of County Commissioners. The Commissioners are chosen from throughout Valley County (VC) for a geographic representation. The P&Z is responsible from proposing amendments to the long-range Comprehensive Plan and making decisions on current land use applications. The P&Z recommends goals, objectives and implementation tactics in the Comprehensive Plan. A large part of the plan is to identify hazards and avoid them entirely. Many of the tactics are for mitigation of impacts or awareness of impacts. In making land use decisions, their job is to mitigate impacts.
	Local Emergency Planning Committee	-
	Dedicated maintenance programs to reduce risk	Yes, VC Building and Grounds maintains the VC campus in Cascade (shop and courthouse), road department facilities on Gold Dust, Lakefork Road Dept. shop, Materials Recovery Facility on Paddy Flat, and other facilities. VC Parks and Recreation department maintains the recreation facilities at snowmobile parking lots, campgrounds,

		groomer sheds, etc. Each of these departments maintain as needed to prevent harm to capital improvements. Specific programs, such as a Capital Improvement Program should be developed for these various facilities. The VC Road Department has a maintenance program for all county and backcountry roads, bridges, etc. This program includes culvert replacement and pavement. With the lack of funding in recent years it is more of an as needed maintenance program. A Capital Improvement Program would identify maintenance and improvements in a timely manner so that grants could be sought and awarded. The Road Department has a Master Transportation Plan.
	Mutual aid agreements (MAAs) and/or memorandums of understanding (MOUs)	Yes, through the Sheriff's office
Staff	Chief Building Official	Yes, The Building Official is new. She has been trained on International Building Codes. She attends various trainings as offered on things such as fire resistant structures and seismic codes.
	Floodplain Administrator	Yes, The Floodplain Administrator is a Certified Floodplain Manager. VC does not allow development in the floodplain, so identification of the floodplain and ability to interpret maps guarantees that there will be very little risk of flooding of assets in the future.
	Emergency Manager	Yes
	Community Planner	Yes, The Planning & Zoning Administrator is a Community Planner. Staff is trained on hazards and mitigations and can identify potential risks and hazards. VC does not allow development in the floodplain, so identification of the floodplain and ability to interpret maps guarantees that there will be very little risk of flooding of assets in the future.
Technical	Warning systems and/or services	Yes, Code Red alert
	Hazard data & information	Yes, The VC Road Department has historical information on roads that have been destroyed in the past.
<b>Education &amp; Outreach</b>		
Education	Active local citizen groups or non-profit organizations	Valley County Fire Working Group (interagency) and Payette Lake Watershed Advisory Group. The Valley Country Fire Working Group is an all jurisdiction membership that actively pursues education for property owners and agencies; and, on-site fuel reduction mitigation efforts.
	Ongoing public education or information programs	Yes, the Fire Working Group has regular public education sessions. They are going to do a 'Living with Fire in Valley County' series.
	Natural disaster or safety related school programs	Yes, Fire
<b>Financial</b>		
Funding Resources	Funding for capital improvement projects	No
	Authority to levy taxes for specific purposes	Yes, they levy a fee for solid waste, but have never taxed for hazard mitigation. There is a fee for building in a Wildland Urban Interface
	Funding through other federal funding programs	Yes, Road & Bridge Department
	Funding through any state funding programs	Yes, Road & Bridge Department
<b>Planning &amp; Regulatory</b>		

Planning & Plans	Comprehensive Plan	The Valley County Comprehensive Plan (2010) is currently being updated by the VC Planning and Zoning. Hazards are addressed in Chapter 5 with various hazard mitigation and implementation.
	Economic Development Plan	Yes, The West Central Mountains Economic Development Strategy (2016)
	Local Emergency Operations Plan	The Valley County Emergency Operations Plan (2010)
	Transportation Plan	Yes, the Valley County Master Transportation Plan, March 2008
	Stormwater Management Plan	No
	Community Wildfire Protection Plan	Yes
Building Codes, Permitting, & Inspections	Building codes	<p>State of Idaho building Codes 2016</p> <p>International Building Code, 2015 edition, published by the International Code Council.</p> <p>International Residential Code, parts I through IV and IX, including appendices G, J, and L, 2012; and, appendix Q - Tiny Houses, 2017 published by the International Code Council.</p> <p>International Energy Conservation Code, 2015 with 2012 amendments for residential portion, a copyrighted work owned by the International Code Council, Inc. (Ord. 18-01, 12-4-2017, eff. 1-1-2018)</p> <p>Idaho Code title 44, chapter 22 and section 44-2501 et seq., relating to manufactured homes.</p> <p>Uniform Code for Abatement of Dangerous Buildings, 1997, published by the International Conference of Building Officials.</p> <p>American Standard Specifications for Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped, ANSI A117.1-1992 (R 1971), published by the American National Standards Institute.</p> <p>University of Idaho publication "Ground and Roof Snow Loads for Idaho", 1986.</p> <p>8Elevators, Dumbwaiters, Escalators and Moving Walks, ANSI A17.1-1996, and ANSI A17.1b-1973, published by the American National Standards Institute. (Ord. 11-2, 4-11-2011)</p> <p>International Fire Code, 2015, published by the Building Officials and Code Administrators International, Inc., adopted by the Idaho Fire Marshal. (Ord. 18-01, 12-4-2017, eff. 1-1-2018)</p> <p>"Technical Guidance Manual for Individual and Subsurface Sewage Disposal", published by the State of Idaho Department of Health and Welfare, dated May 6, 1993, only as it relates to the construction of privy buildings.</p>
Land Use Planning & Ordinances	Zoning ordinance	Yes, Title 9 of the Valley County Code 1982 to Present where it states No development in a floodplain – Title 9 and Title 11 and No floodplain development, perhaps some FireWise landscaping requirements.
	Subdivision ordinance	Yes, from 1971 to present which allows 120' run to a cul-de-sac and two access points if possible. Roads can only cross floodplains on a direct route, no development in a floodplain.
	Floodplain ordinance	Yes, Title 9 and Title 11 of the Valley County Code. Title 9 contains an overlay prohibiting development in floodplains and Title 11 is the ordinance required to comply with NFIP (2017). There is a need to fully adopt the new FIRM maps.

Overall, members of the planning team identified funding and human resources as primary gaps and constraints in implementing hazard mitigation. New mitigation strategies focus on human resources to bridge the identified gap.

## 6.5 Cascade City Mitigation Capabilities Assessment

The tables below were compiled from a questionnaire completed by the city personnel. The tables detail the city’s mitigation-related capabilities that reduce hazard impacts or that can be used to implement hazard mitigation activities.

Table 6.3 Cascade City Capabilities Assessment

Capability/Resource		Synopsis
<b>Administrative &amp; Technical</b>		
Administration	Dedicated planning commission	Yes, The City has a P&Z Commission, as identified in the City Ordinance, that meets monthly.
	Local Emergency Planning Committee	Unknown
	Dedicated maintenance programs to reduce risk	Yes, The City’s Public Works crew consists of four (4) full time employees that oversee the City as a whole, including clearing stormwater drains, tree maintenance, water and wastewater systems. The City also has a Building Inspector / Code Enforcement Officer that continues to enforce City Codes.
	Mutual aid agreements (MAAs) and/or memorandums of understanding (MOUs)	No, The City does have an Contract with the Valley County Sheriff’s Department for additional law enforcement coverage.
	Chief Building Official Floodplain Administrator Emergency Manager Community Planner	Yes; receive hazard mitigation-related education and training Yes; receive hazard mitigation-related education and training Yes; receive hazard mitigation-related education and training Yes; receive hazard mitigation-related education and training
Staff	Civil Engineer	Yes, the City contracts with certified engineer. The City also contracts with other engineering services as required for specialty projects
	GIS Coordinator	Yes, the City contracts with a certified engineer and/or IRWA for GIS services. The City also works directly with Valley County’s GIS department.
Technical	Warning systems and/or services	Yes, via services provided by Cascade Rural Fire District, Valley County Sheriff Department and the Red Alert System...
	Hazard data & information	Yes, via services provided by Cascade Rural Fire District and Valley County Sheriff Department.
	Grant-writing expertise	Yes, The City, School and Cascade Medical Center share in the services of a full-time grant writer. The Grant Writer works directly with the City Engineer and other city staff to assess current and future needs of the City.
	Hazus expertise	Unknown
<b>Education &amp; Outreach</b>		
Education	Active local citizen groups or non-profit organizations	Cascade Schools Safety Committee, Cascade Rural Fire Protection District, Fire District, The Valley County Fire Working Group
	Ongoing public education or information programs	School District has ongoing effort to try to keep parents/families informed as it pertains to the children
	Natural disaster or safety related school programs	VCFWG provides a variety of educational opportunities throughout the Community. The initiatives directly support and encourage public awareness and positive social change that helps future mitigation actions.
	Storm Ready certification	No; However, Valley County participates in Code Red system which provides a voluntary sign up to receive notifications of emergency situations or critical community alerts.
	FireWise Community certification	An assessment of the FireWise Community Certification requirements and benefits would be appropriate.

	Public-private partnerships	VCFWG with homeowner groups, and the City follows Valley County EOP
<b>Financial</b>		
Funding Resources	Funding for capital improvement projects	City just started to allocate funding for capital improvement projects in the FY18/19 Budget. Funding mitigation would lessen the impact of repairing/replacing infrastructure.
	Authority to levy taxes for specific purposes	Exists, but has not been implemented in hazard mitigation
	Funding through other federal funding programs	N/A
	Impacts fees for new development	No
	Storm water utility fee	No
	Incur debt through general obligation bonds and/or special tax bonds	Yes
	Incur debt through private activities	No
	Funding through a Community Development Block Grant	N/A
	Other federal funding programs	N/A
	Funding through any state funding programs	Yes, through various foundations
<b>Planning &amp; Regulatory</b>		
Planning & Plans	Comprehensive Plan	Yes, 2018
	Capital Improvements Plan	Yes, 2019
	Economic Development Plan	Yes, see WCMEDC
	Local Emergency Operations Plan	Yes
	Transportation Plan	Yes 2020
	Stormwater Management Plan	Yes, see Transportation Plan
	Community Wildfire Protection Plan	Yes, there is a county wide wildfire protection plan
Building Codes, Permitting, & Inspections	Building codes	Yes, The City follows the Idaho Division of Building Safety and has adopted codes pursuant to them.
	ISO-rated fire dept.	Yes, 5
Land Use Planning & Ordinances	Zoning ordinance	Yes
	Subdivision ordinance	Yes
	Floodplain ordinance	Yes

## 6.6 City of Donnelly Mitigation Capabilities Assessment

Table 6.4 City of Donnelly Capabilities Assessment

	Capability/Resource	Synopsis
<b>Administrative &amp; Technical</b>		
Administration	Dedicated planning commission	Yes, The City has a P&Z Commission, as identified in the City Code 18.130
	Local Emergency Planning Committee	Participates in Valley County LEPC
	Dedicated maintenance programs to reduce risk	Yes, The City's Public Works Dept oversees City maintenance in these areas.
	Mutual aid agreements (MAAs) and/or memorandums of understanding (MOUs)	No, The City does not Contract with the Valley County Sheriff's Department for additional law enforcement coverage.

Staff	Chief Building Official	No
	Floodplain Administrator	No
	Emergency Manager	No
	Community Planner	No
	Civil Engineer	Yes, the City contracts with certified engineer. The City also contracts with other engineering services as required for specialty projects
Technical	GIS Coordinator	No. the City works directly with Valley County's GIS department.
	Warning systems and/or services	Yes, via services provided by Donnelly Rural Fire District, Valley County Sheriff Department and the Red Alert System...
	Hazard data & information	Yes, via services provided by Donnelly Rural Fire District and Valley County Sheriff Department.
	Grant-writing expertise	Yes, The City contracts with a grant-writer when necessary
	Hazus expertise	No
<b>Education &amp; Outreach</b>		
Education	Active local citizen groups or non-profit organizations	N/A
	Ongoing public education or information programs	N/A
	Natural disaster or safety related school programs	VCFWG provides a variety of educational opportunities throughout the Community. The initiatives directly support and encourage public awareness and positive social change that helps future mitigation actions.
	Storm Ready certification	No; However, Valley County participates in Code Red system which provides a voluntary sign up to receive notifications of emergency situations or critical community alerts.
	FireWise Community certification	An assessment of the FireWise Community Certification requirements and benefits would be appropriate.
	Public-private partnerships	VCFWG with homeowner groups, and the City follows Valley County EOP
<b>Financial</b>		
Funding Resources	Funding for capital improvement projects	City allocates funding for capital improvement projects in the annual city budget.
	Authority to levy taxes for specific purposes	N/A
	Funding through other federal funding programs	N/A
	Impacts fees for new development	N/A
	Storm water utility fee	No
	Incur debt through general obligation bonds and/or special tax bonds	Yes
	Incur debt through private activities	No
	Funding through a Community Development Block Grant	Yes
	Other federal funding programs	N/A
	Funding through any state funding programs	Yes
<b>Planning &amp; Regulatory</b>		
Planning & Plans	Comprehensive Plan	Yes, 2014
	Capital Improvements Plan	-
	Economic Development Plan	Yes, see WCMEDC
	Local Emergency Operations Plan	Yes
	Transportation Plan	Yes 2006 (new one anticipated to be complete in July 2020)
	Stormwater Management Plan	Yes



	Community Wildfire Protection Plan	Yes, there is a county wide wildfire protection plan
Building Codes, Permitting, & Inspections	Building codes	Yes
	ISO-rated fire dept.	Yes, 4
Land Use Planning & Ordinances	Zoning ordinance	Yes
	Subdivision ordinance	Yes
	Floodplain ordinance	Yes

## 6.7 City of McCall Mitigation Capabilities Assessment

The tables below were compiled from a questionnaire completed by the city personnel. The tables detail the city’s mitigation-related capabilities that reduce hazard impacts or that can be used to implement hazard mitigation activities.

Table 6.5 City of McCall Capabilities Assessment

	Capability/Resource	Synopsis
<b>Administrative &amp; Technical</b>		
Administration	Dedicated planning commission	Yes
	Local Emergency Planning Committee	No
	Dedicated maintenance programs to reduce risk	Yes
	Mutual aid agreements (MAAs) and/or memorandums of understanding (MOUs)	Yes. We have agreements for law enforcement and agreements for public works.
Staff	Chief Building Official	Yes
	Floodplain Administrator	Yes, city engineer
	Emergency Manager	No, the city budget is too small to create a stand-alone position, we rely on the Police Chief and the County’s Emergency Manager to fulfill this role.
	Community Planner	Yes, Planner reviews applications for compliance with city codes that address fire hazard mitigation, water supply, fire access, etc.
	Civil Engineer	Yes, PW Director and City Engineer are both licensed PE
	GIS Coordinator	Yes
	Warning systems and/or services	No
Technical	Hazard data & information	Yes, floodplain data
	Grant-writing expertise	Yes
	Hazus expertise	Yes
<b>Education &amp; Outreach</b>		
Education	Active local citizen groups or non-profit organizations	Yes, Valley County Fire Working Group for continue education and promotion of FireWise practices; continue support of the free woody debris disposal program
	Ongoing public education or information programs	Yes; Snow and ice removal; FireWise promotion; Woody Debris disposal; Noxious Weed removal; Raise public awareness of action items they can take to mitigate hazards on private property.
	Natural disaster or safety related school programs	Yes, Police department trains McCall Donnelly School District employees on prevention and response to active shooters, help public schools prevent and respond to threats, terrorism
	Storm Ready certification	No
	FireWise Community certification	Yes
	Public-private partnerships	Yes, Valley County Fire Working Group

<b>Financial</b>		
	Funding for capital improvement projects	The 5-year CIP budget incorporates identified projects from the City's various adopted master plans. The recently adopted plans contain specific mitigation actions which will be included in the 5-year CIP.
	Authority to levy taxes for specific purposes	Yes, Hazard Mitigation is not a specific category for taxation so any taxes used for those efforts will come from unrestricted general property tax funds and/or sales taxes.
	Fees for water, sewer, gas, or electric services	Yes – water only, Water infrastructure upgrades to support fire suppression
	Impacts fees for new development	Yes- water meter connections only
Funding Resources	Storm water utility fee	No, the city is not large enough to require an EPA MS4 Permit
	Incur debt through general obligation bonds and/or special tax bonds	Yes, If the Council decides to use debt instead of water user fees to finance the identified projects in the 2018 Water Master Plan.
	Incur debt through private activities	No
	Funding through a Community Development Block Grant	Yes, council would need to prioritize these kinds of projects above their current priority for affordable housing.
	Other federal funding programs	No, but absolutely will apply for federal funds to help us implement out mitigation strategies.
	Funding through any state funding programs	Yes
<b>Planning &amp; Regulatory</b>		
	Comprehensive Plan (2018)	Yes, McCall In Motion – McCall Area Comprehensive Plan. Adopted January 2018.
	Capital Improvements Plan	Yes, City of McCall Capital Improvement Plan. Adopted annually with each fiscal year budget that starts each October 1. We also have a separately adopted 20-year City of McCall Water System Master Plan that identifies capital improvements for the Water System. Adopted in December 2017 and approved by Idaho DEQ in March 2018.
Planning & Plans	Economic Development Plan	Yes, McCall In Motion – McCall Area Comprehensive Plan. Adopted January 2018.
	Local Emergency Operations Plan (2010)	No, we rely on County EOP
	Transportation Plan	Yes, McCall In Motion – McCall Area Transportation Master Plan. Adopted January 2018.
	Stormwater Management Plan	No
	Community Wildfire Protection Plan	Unknown
Building Codes, Permitting, & Inspections	Building codes	Yes, McCall City Code Title 2 and the IBC
	ISO-rated fire dept.	Yes, rated 3
	Zoning ordinance	Yes, Zoning Ordinance for the City of McCall adopted by Ordinance 821 on February 23, 2006. This is also referred to as Title 3 of the McCall City Code.
Land Use Planning & Ordinances	Subdivision ordinance	Yes, Subdivision and Development Ordinance for the City of McCall adopted by Ordinance 822 on February 23, 2006. It is also referred to as Title 9 of the McCall City Code.
	Floodplain ordinance	Yes, versions/years? Flood Control Regulations (Overlay Zone) as adopted by Ordinance 822 on February 23, 2006. It is referred to as Title 8 of the McCall City Code.

## 6.8 Other Planning Mechanisms

As noted in the Planning and Regulatory sections of the tables presented in Sections 6.4 - 6.8, various mechanisms exist for Valley County and the adopting jurisdictions to incorporate elements of the mitigation plan and/or mitigation actions items. The following tables assesses several of the major planning mechanisms for the county and its jurisdictions as it relates to hazard mitigation:

Table 6.6 Valley County Comprehensive Plan Planning Mechanism

<b>Valley County, Idaho Comprehensive Plan</b>	
<b>Date of Last Revision</b>	2018
<b>Author/Owner</b>	Valley County, Idaho
<b>Description</b>	Through the preparation of a Comprehensive Plan, residents can give some direction to the development (“building”) of their community.
<b>Relationship to Hazard Mitigation Planning</b>	The plan includes objectives in the Public Works, Housing, Land Use, Transportation, and Community Design sections related to natural hazard mitigation planning. The Hazardous Area section describes an extensive number of hazards that impact the County including flood, severe weather, landslides, and more. Additionally, in the Land Use section the County aims to continue the enforcement of the IBC 2000 which is also directly correlated to hazard mitigation. The County lists several ways to implement these objectives including adopting and administering zoning and subdivision ordinances, coordinating agency partnerships, requiring reviews of significant development proposals, and coordinating county programs.
<b>Thoughts for Future Hazard Mitigation Incorporation</b>	The County could include tactics in how to accomplish the objectives along with what offices or partnerships are working collaboratively toward the goal or objective.
<b>Incorporation into Hazard Mitigation Plan</b>	Plan content used for the capability assessment, county profile, and risk assessment. ‘Thoughts for Future Hazard Mitigation Incorporation’ may be used for the creation of new mitigation actions in this HMP update or future updates.

Table 6.7 Valley County Land Use Ordinances planning mechanism

<b>Valley County, Idaho Land Use Ordinances</b>	
<b>Date of Last Revision</b>	McCall City Code Title 2, State of Idaho Building Code, IBC Building Codes; Zoning, Subdivision and Development Ordinances (2006, McCall City Code Title 3)
<b>Author/Owner</b>	Valley County, Idaho
<b>Description</b>	The Building Code, Zoning & Development, and Subdivision Ordinances implement the County’s Comprehensive Plan policy through specific development standards and criteria.
<b>Relationship to Hazard Mitigation Planning</b>	The County has adopted the IRC, parts I-IV and IX; Natural resource impact mitigation including wildlife habitats, shorelines, floodplains, fire hazards, etc. are included as possible conditions of approval for “conditional” use permits; Appropriate information that sufficiently details

	proposed subdivision development within any special development area, such as a floodplain.
<b>Thoughts for Future Hazard Mitigation Incorporation</b>	The County could include a hazard overlay in future ordinance and zoning map updates that put forth specific development standards and criteria for more specific hazardous areas (e.g. landslides, steep slope, wildfire, seismic). Maps could be used from the HMP update for reference.
<b>Incorporation into Hazard Mitigation Plan</b>	Ordinance content used for the capabilities assessment, county profile, and risk assessment. 'Thoughts for Future Hazard Mitigation Incorporation' may be used for the creation of new mitigation actions in this HMP update or future updates.

Table 6.8 Valley County Flood Damage Prevention Ordinance planning mechanism

<b>Valley County, Flood Damage Prevention Ordinance</b>	
<b>Date of Last Revision</b>	2019
<b>Author/Owner</b>	Valley County, Idaho
<b>Description</b>	Building and construction standards for the flood prone areas in all unincorporated areas of Valley County, Idaho. Adopted the model Flood Damage Prevention Ordinance as recommended by the State of Idaho.
<b>Relationship to Hazard Mitigation Planning</b>	This ordinance puts forth provisions for flood hazard reduction including, but not limited to standards regarding construction materials and methods, subdivision proposals, the review of building permits, floodway development, and more. In addition to measures in state ordinance, Valley County has more restrictive standards that prevents most development, fill, and excavation in a floodplain
<b>Thoughts for Future Hazard Mitigation Incorporation</b>	The County could include a flood hazard overlay in future ordinance and zoning map updates to where these conditions apply. Maps could be used from the HMP update for reference.
<b>Incorporation into Hazard Mitigation Plan</b>	Ordinance content used for the capabilities assessment, county profile, and risk assessment. 'Thoughts for Future Hazard Mitigation Incorporation' may be used for the creation of new mitigation actions in this HMP update or future updates.

Table 6.9 City of McCall Comprehensive Plan Planning Mechanism

<b>City of McCall, Idaho Comprehensive Plan</b>	
<b>Date of Last Revision</b>	Jan 2018
<b>Author/Owner</b>	City of McCall, Idaho

<b>Description</b>	Through the preparation of a Comprehensive Plan, residents can give some direction to the development (“building”) of their community.
<b>Relationship to Hazard Mitigation Planning</b>	The plan includes objectives in the Public Works, Housing, Land Use, Transportation, and Community Design sections related to natural hazard mitigation planning. The Hazardous Area section describes an extensive number of hazards that impact the County including flood, severe weather, landslides, and more. Additionally, in the Land Use section the County aims to continue the enforcement of the IBC 2000 which is also directly correlated to hazard mitigation. The County lists several ways to implement these objectives including adopting and administering zoning and subdivision ordinances, coordinating agency partnerships, requiring reviews of significant development proposals, and coordinating county programs.
<b>Thoughts for Future Hazard Mitigation Incorporation</b>	The County could include tactics in how to accomplish the objectives along with what offices or partnerships are working collaboratively toward the goal or objective.
<b>Incorporation into Hazard Mitigation Plan</b>	Plan content used for the capability assessment, county profile, and risk assessment. ‘Thoughts for Future Hazard Mitigation Incorporation’ may be used for the creation of new mitigation actions in this HMP update or future updates.

Other planning and regulatory mechanisms within the county and its jurisdictions that relate to hazards mitigation in Valley county and its jurisdictions are noted below. In each case, the mechanisms were considered in plans to maintain or prior mitigation strategies, and in some cases, the development of new strategies. The current and planned revisions to these mechanisms will also assist the county in implementing and maintaining the HMP.

- The Emergency Operations Plan (EOP) informed several of the mitigation strategies updated or added in this HMP, such as the need for updated communications networks and more personnel involved in emergency operations, as well as affordable housing for these personnel. One of the mitigation actions in this HMP is to revise the EOP
- The City of Donnelly Comprehensive Plan, the goals of which are summarized in Section 2.7.3.
- The City of Donnelly Floodplain Ordinance, adopted in 2019.
- City of McCall Comprehensive Plan, adopted in January 2018, the goals of which that relate directly to hazard mitigation planning are described in Section 2.7.4. An action project in that plan is to develop a hazard mitigation plan for the city, in coordination with Valley County. This action is also listed among the mitigation strategies in this plan (Table 5.7)
- City of Cascade Comprehensive Plan, adopted in 2018.
- City of Cascade Floodplain Ordinance, adopted in 2019.

## 7 Plan Maintenance

### 7.1 Overview

The HMP is a living document that guides action over time, and it is vital the plan is actively engaged and maintained throughout its five-year lifecycle. As conditions change, new information becomes available, or actions are successfully implemented or challenged, plan adjustments may be necessary to maintain relevance and operability. This section describes the procedures to monitor, evaluate, and update the HMP in addition to continued public involvement in hazard mitigation.

#### 7.1.1 Summary of Revisions

Major revisions made to this section in the 2020 update include:

- Section IV. was reorganized into a discrete section;
- The procedures to monitor, evaluate, and update the plan were reviewed and revised; and
- The procedures for continued public participation were reviewed and revised.

#### 7.1.2 FEMA Requirements

This section adheres to and fulfills the following regulations:

- 44 CFR §201.6(c)(4) – The plan shall include the following:
  - (i) – A section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.
  - (iii) – A discussion on how the community will continue public participation in the plan maintenance process.

## 7.2 Plan Monitoring, Evaluation, & Update

Plan maintenance is the process the planning committee establishes to track the progress of the plan's implementation and to inform future plan updates within a five-year cycle. These procedures help ensure the mitigation strategy is implemented according to the plan; provide a foundation for ongoing hazard mitigation across all participating jurisdictions; standardize long-term monitoring of hazard and risk-related activities; help integrate mitigation into department roles; and maintain momentum through continued engagement and accountability.

Plan maintenance will primarily be coordinated and led by Valley County Emergency Management (or an official designee), and will be accomplished through annual meetings in addition to a five-year evaluation. Valley County Emergency Management (or an official designee) will schedule, publicize, and lead the annual meetings and the five-year evaluation, with additional coordination undertaken by the official designee of the adopting jurisdictions:

- Valley County – Floodplain Administrator, Road Dept representative
- City of McCall – City Manager
- City of Donnelly – Mayor
- City of Cascade – Mayor
- Representatives of each fire district (Cascade, Donnelly, McCall)

All meeting minutes, press releases, and other documentation of revisions should be kept on record by Valley County Emergency Management.

### 7.2.1 Monitoring Implementation

Plan monitoring refers to charting and tracking the implementation of the plan over time. During the annual meetings, the entities responsible for the mitigation strategy will report on the progress of implementation of actions (see Section II), noting both successes and challenges encountered or foreseen. Monitoring will be captured by the Valley County Emergency Manager and compiled into a report to be used in plan updates.

### 7.2.2 Evaluating Implementation

Evaluating means assessing the effectiveness of the plan at achieving its stated purpose and goals. During the annual meetings and the five-year plan evaluation and update, the planning committee in addition to all participating stakeholders will evaluate progress of the following items:

- The number of actions listed in the mitigation strategy completed (see *Section II. Mitigation Strategy*);
- Integration of hazard mitigation into other planning mechanisms; and
- Opportunities for new and additional mitigation actions.

The annual evaluation will be captured by the Valley County Emergency Manager and compiled into a report to be used in plan updates.

### 7.2.3 Updating the Plan

The plan must be reviewed and revised least once every five years to reflect changes in development, progress in local mitigation efforts, and changes in priorities. The Valley County Emergency Manager will be responsible for the five-year update. Prior to the five-year anniversary of plan adoption, the Emergency Manager will seek local, state, and/or federal funding to update the plan (if necessary), will initiate the plan update by convening the planning committee, and coordinate across the adopting jurisdictions and stakeholders to ensure participation and engagement. During the update process, the planning committee will revisit and update the following information:

- Local, state, and/or federal policy related to emergency management, with focus paid to hazard mitigation;
- Completed mitigation actions, identify new actions, and conduct a comprehensive evaluation of mitigation priorities and programs;
- Identify avenues for successful mitigation implementation, challenges and limitations encountered, and methods to overcome challenges;
- Review and update mitigation-related capabilities and resources specific to each adopting jurisdiction and participating stakeholder with roles in emergency management;
- Incorporate additional or updated demographic and socioeconomic data of the county and its jurisdictions;
- Review and incorporate any new planning documents, ordinances, codes, and regulations that have been developed by the county and its jurisdictions;

- Update the hazard profiles—specifically the risk and vulnerability assessments of each hazard and jurisdiction—noting any major changes to the hazard type, location, and extent, or mitigation projects that have altered vulnerability to the hazard;
- Local and regional hazard occurrences, specifically those with associated direct and/or indirect losses and repetitive/recurring losses to people, structures, and infrastructure; and
- Update and/or incorporate additional risk analysis models and data, such as an updated parcel data, new construction projects, development trends, population vulnerabilities, changing risk potential, etc.

### 7.3 Continued Public Participation

The Valley County Commissioners and Valley County Emergency Manager are jointly responsible for continued public involvement in hazard mitigation. Additionally, an official designee from each jurisdiction is responsible for coordinating continued public engagement over the five-year lifecycle of the plan:

- City of McCall – City Manager
- City of Donnelly – Mayor
- City of Cascade – Mayor

The designees will hold a public meeting as part of each annual monitoring/evaluation or when deemed necessary by the planning committee. The meetings will provide the public a forum for which they can express concerns, opinions, or ideas about the plan. The County Commissioner’s Offices will be responsible for using county resources to publicize the annual meetings and maintain public involvement through the county’s webpage and local newspapers. The public will have the opportunity to provide feedback about the plan at meetings of the County Board of Commissioners. In addition, copies of the plan will be kept at the County Courthouse. The plan includes contact information for Valley County Emergency Management, which is responsible for keeping track of public comments and incorporating public feedback into the plan when necessary.